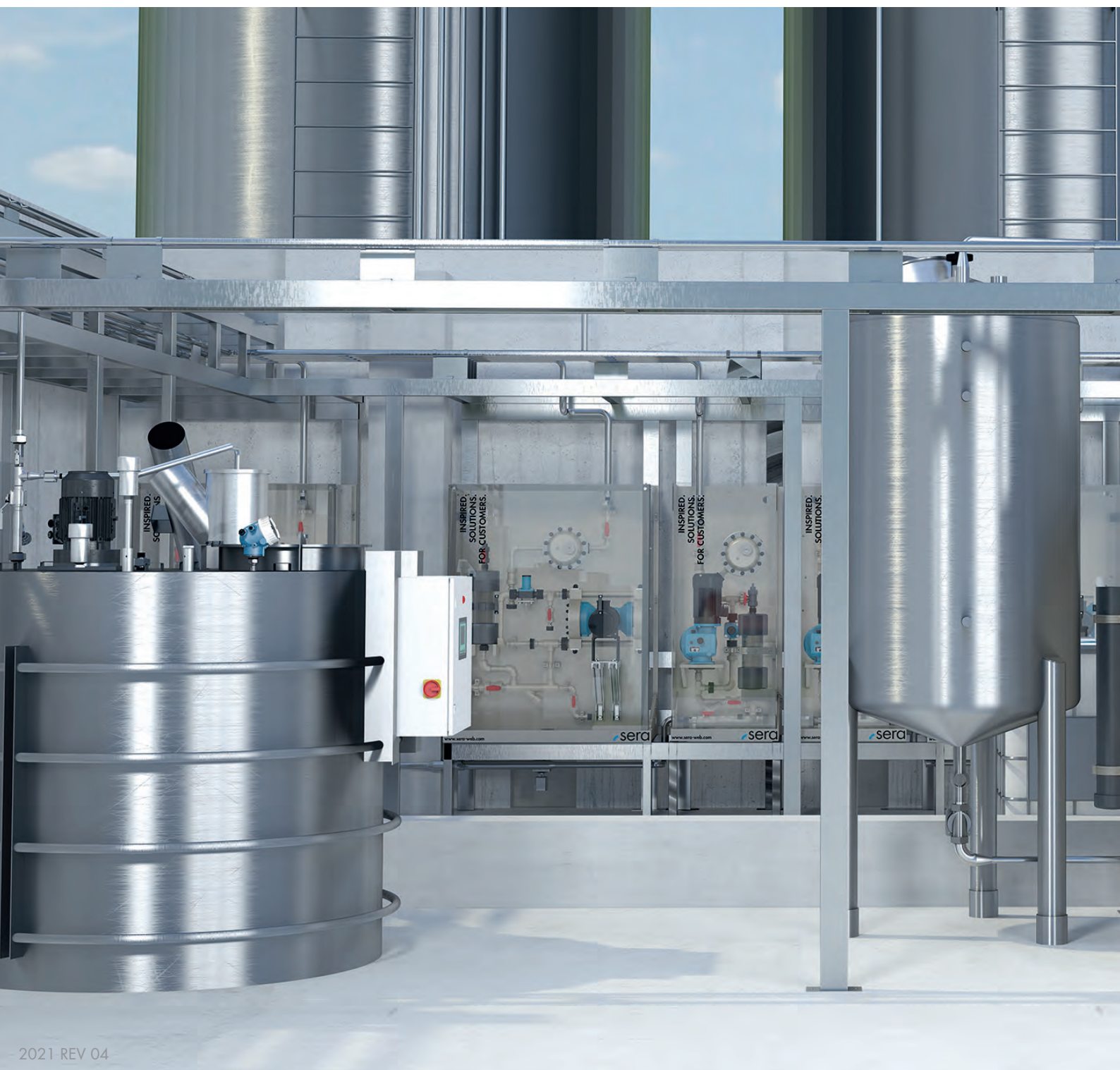


PRODUCT CATALOGUE DOSING TECHNOLOGY



2021-REV 04

Dosing systems - Dosing pumps - Fittings - Connection parts

PRODUCT CATALOGUE 2021



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DOSING SYSTEMS

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DOSING SYSTEMS

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DOSING UNITS, VERTICAL DESIGN



OVERVIEW

The most modern pump technology
 Standardized mounting plates
 Space-saving wall mounting
 Wide range of applications
 High safety standard
 Large range of capacity
 High dosing accuracy
 Easy to operate
 Low maintenance
 Complete range of accessories

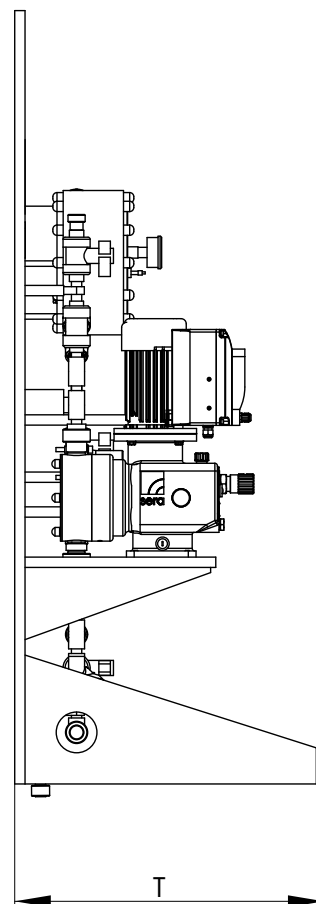
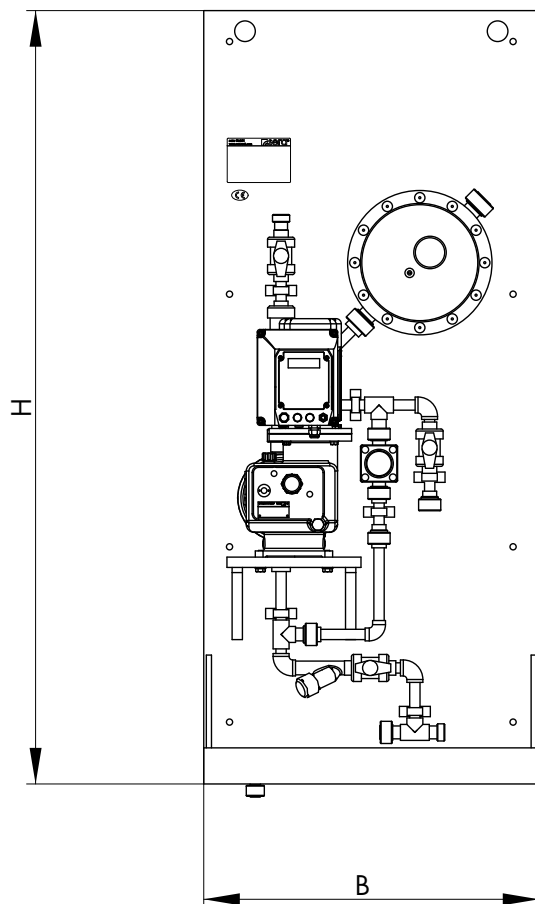
TECHNICAL DATA

UNIT DATA		CVD1(s)-60.1	CVD1(s)-550.1	CVD1(s)-1500.1
Flow capacity	l/h	0 - 60	0 - 550	0 - 1500
Permissible counter pressure	bar (max)	10	8	5
Permissible suction head	mWC (max)	3	3	3
Number of pumps	Quantity	1	1	1

ALLOCATION OF DOSING PUMPS

PUMP SERIES	CVD1(s)-60.1	CVD1(s)-550.1	CVD1(s)-1500.1
Solenoid diaphragm pumps 	C 204.1-2,4e C 204.1-7,0e C 204.1- 10e C 204.1- 35e	X	X
Stepper motor diaphragm pumps 	iSTEP S 20 iSTEP S 30 iSTEP S 40 iSTEP S 50	X	X
Diaphragm pumps 	C409.2-25e Pro+ ... C409.2-50e Pro+ RF409.2-2,4e ... RF 409.2-50e	C409.2-75e Pro+ ... C409.2-350e Pro+ RF409.2-75e ... RF 409.2-350e C410.2-280e ... C410.2-570e RF410.2-280e ... RF410.2-570e	C410.2-900e ... C410.2-1450e RF410.2-900e ... RF410.2-1450e
Multi-layer diaphragm pumps 	C409.2-11 ML Pro+ C409.2-17 ML Pro+ C409.2-45 ML Pro+ RF409.2-11 ML ... RF409.2-45 ML	C409.2-110 ML Pro+ C409.2-220 ML Pro+ RF409.2-110 ML ... RF409.2-220 ML C410.2-500 ML RF410.2-135 ML ... RF410.2-500 ML	RF410.2-1200 ML

DIMENSIONS



Application example

Basic design with
following options:

- Diaphragm pulsation damper
- Suction side with Shut-off valve and line strainer
- Feedback pipe from relief valve back to suction side

	H	B	T
CVD1 s - 60.1	1.000	650	600
CVD1 s - 550.1	1.000	650	600
CVD1 s - 1500.1	1.000	650	600
CVD1 - 60.1	1.500	650	600
CVD1 - 550.1	1.500	650	600
CVD1 - 1500.1	1.500	650	600

DOSING UNITS, VERTICAL DESIGN

BASIC DESIGNS

CVD 1 s

Dosing pump
2-way shut-off valve on the pressure side (Shut off/Emptying)
Diaphragm relief valve
Wall mounting plat made of PP (H=1.000mm, with drip pan)
Piping on pressure side made of PVC-U or PP
Seals made of EPDM or FPM

Connection suction side: External thread of pump's suction valve
Connection pressure side: External thread of final shut-off valve

Type	Price (EUR)
CVD 1 s - 60.1	🕒
CVD 1 s - 550.1	🕒
CVD 1 s - 1500.1	🕒

CVD 1

Dosing pump
2-way shut-off valve on the pressure side (Shut off/Emptying)
Diaphragm relief valve
Wall mounting plat made of PP (H=1.500mm, with drip pan)
Piping on pressure side made of PVC-U or PP
Seals made of EPDM or FPM

Connection suction side: External thread of pump's suction valve
Connection pressure side: External thread of final shut-off valve

Type	Price (EUR)
CVD 1 - 60.1	🕒
CVD 1 - 550.1	🕒
CVD 1 - 1500.1	🕒

OPTIONS

		Price [EUR]
Diaphragm pulsation damper	720.1 (up to 25 l/h)	▲
	721.2 (up to 50 l/h)	▲
	722.1 (up to 220 l/h)	▲
	723.1	▲
	713.1	▲
Suction side with shut-off valve and line strainer (not for design CVD1s)		▲
Feedback pipe from relief valve back to suction side (only in combination with suction side pipework)		▲
Multifunction device (priming aid/calibration pot)		▲

OPTIONS

			Price [EUR]
Protective cabinet			▲
Heating for protective cabinet			▲
Lighting for protective cabinet			▲
Splash guard (removable)			▲
Framework for loor mounting	Galvanized steel		▲
	Plastic		▲
Leckage sensor	without WHG-approval		▲
	with WHG-approval		▲
Shut-off valve for emptying of the drip pan			▲
Terminal box	RF-Pump		▲
	C-Pump	up to 0,37 kW	▲
	C-Pump	from 0,75 kW	▲
Terminal box (with power socket)	C-Pump	up to 0,37 kW	▲
	C-Pump	from 0,75 kW	▲
Power socket (each pump)	Shockproof socket (C-pumps)		▲
	CEE power socket (C-pumps with compact drive)		▲
ON-/OFF-Switch (not in association with terminal box or power socket)	409.2/410.2		▲
Protective roof for driving motor			▲

Further accessories on request

DOSING UNITS, VERTICAL DESIGN



OVERVIEW

The most modern pump technology
Standardized mounting plates
Space-saving wall mounting
Wide range of applications
High safety standard
Large range of capacity
High dosing accuracy
Easy to operate
Low maintenance
Complete range of accessories

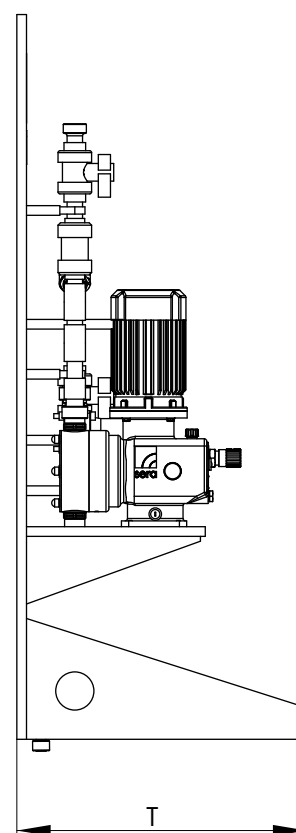
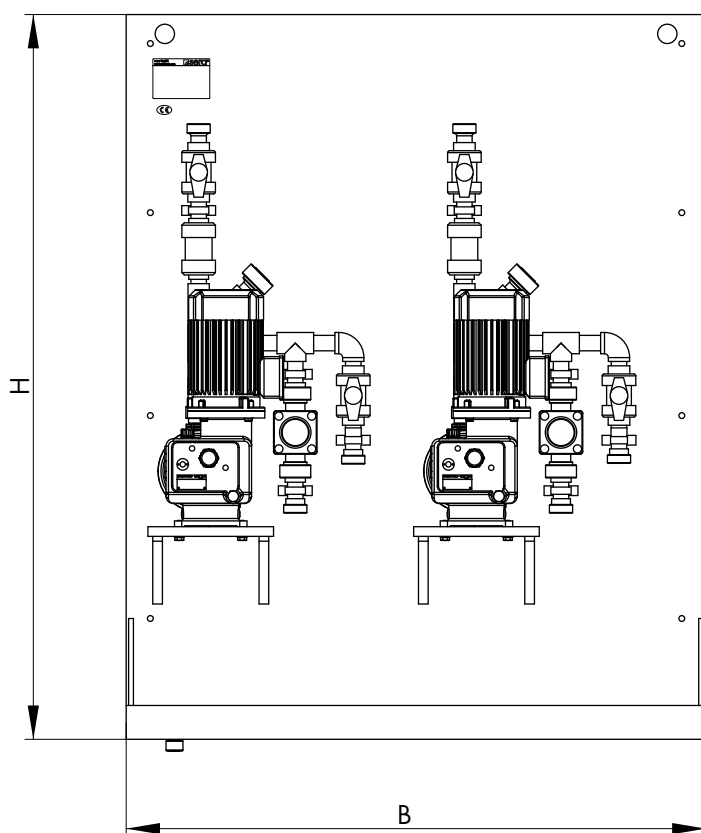
TECHNICAL DATA

UNIT DATA		CVD2-60.1	CVD2-550.1	CVD2-1500.1
Flow capacity	l/h	2x 0 - 60	2x 0 - 550	2x 0 - 1500
Permissible counter pressure	bar (max)	10	8	5
Permissible suction head	mWC (max)	3	3	3
Number of pumps	Quantity	2	2	2

ALLOCATION OF DOSING PUMPS

PUMP SERIES	CVD2-60.1	CVD2-550.1	CVD2-1500.1
Solenoid diaphragm pumps 	C 204.1-2,4e C 204.1-7,0e C 204.1- 10e C 204.1- 35e	X	X
Stepper motor diaphragm pumps 	iSTEP S 20 iSTEP S 30 iSTEP S 40 iSTEP S 50	X	X
Diaphragm pumps 	C409.2-25e Pro+ ... C409.2-50e Pro+ RF409.2-2,4e ... RF 409.2-50e	C409.2-75e Pro+ ... C409.2-350e Pro+ RF409.2-75e ... RF 409.2-350e C410.2-280e ... C410.2-570e RF410.2-280e ... RF410.2-570e	C410.2-900e ... C410.2-1450e RF410.2-900e ... RF410.2-1450e
Multi-layer diaphragm pumps 	C409.2-11 ML Pro+ C409.2-17 ML Pro+ C409.2-45 ML Pro+ RF409.2-11 ML ... RF409.2-45 ML	C409.2-110 ML Pro+ C409.2-220 ML Pro+ RF409.2-110 ML ... RF409.2-220 ML C410.2-500 ML RF410.2-135 ML ... RF410.2-500 ML	RF410.2-1200 ML

DIMENSIONS



Application example (basic design)

	H	B	T
CVD2 - 60.1	1.500	1.200	600
CVD2 - 550.1	1.500	1.200	600
CVD2 - 1500.1	1.500	1.200	600

DOSING UNITS, VERTICAL DESIGN

BASIC DESIGNS

CVD 2

2x Dosing pump
 2-way shut-off valve on the pressure side (Shut off/Emptying)
 Diaphragm relief valves
 Wall mounting plat made of PP (H=1.500mm, with drip pan)
 Piping on pressure side made of PVC-U or PP
 Seals made of EPDM or FPM

Connection suction side: External thread of pump's suction valve
 Connection pressure side: External thread of final shut-off valve

Type	Price (EUR)
CVD 2 - 60.1	🕒
CVD 2 - 550.1	🕒
CVD 2 - 1500.1	🕒

OPTIONS

			Price [EUR]
Diaphragm pulsation damper	720.1	(up to 25 l/h)	▲
	721.2	(up to 50 l/h)	▲
	722.1	(up to 220 l/h)	▲
	723.1		▲
	713.1		▲
Note: Use 2 dampers in case of 2 separate pressure sides			
Suction side with shut-off valve and line strainer (1x each pump)			▲
Suction side connecting piping (Pump 1 and pump 2)			▲
Feedback pipe from relief valve back to suction side (only in combination with suction side pipework; 1x each pump)			▲
Pressure side connecting piping (Pump 1 and pump 2)			▲
Multifunction device (priming aid/calibration pot)			▲

OPTIONS

			Price [EUR]
Protective cabinet			▲
Heating for protective cabinet			▲
Lighting for protective cabinet			▲
Splash guard (removable)			▲
Framework for loor mounting	Galvanized steel		▲
	Plastic		▲
Leckage sensor	without WHG-approval		▲
	with WHG-approval		▲
Shut-off valve for emptying of the drip pan			▲
Terminal box	RF-Pump		▲
	C-Pump	up to 0,37 kW	▲
	C-Pump	from 0,75 kW	▲
Terminal box (with power socket)	C-Pump	up to 0,37 kW	▲
	C-Pump	from 0,75 kW	▲
Power socket (each pump)	Shockproof socket (C-pumps)		▲
	CEE power socket (C-pumps with compact drive)		▲
ON-/OFF-Switch (not in association with terminal box or power socket)	409.2/410.2		▲
Protective roof for driving motor			▲
Dosing Hose, flexible stainless steel (1.4401, FEP) (see also chapter 4, connecting parts)	L=500mm, G3/4	Art.No.: 90049993	▲
	L=500mm, G1	Art.No.: 90049994	▲

Further accessories on request

COMPACT DOSING STATIONS



OVERVIEW

Standardized dosing tanks
Space-saving wall mounting
Wide range of applications
High safety standard
High quality materials
Easy to operate
Low maintenance
Complete range of accessories

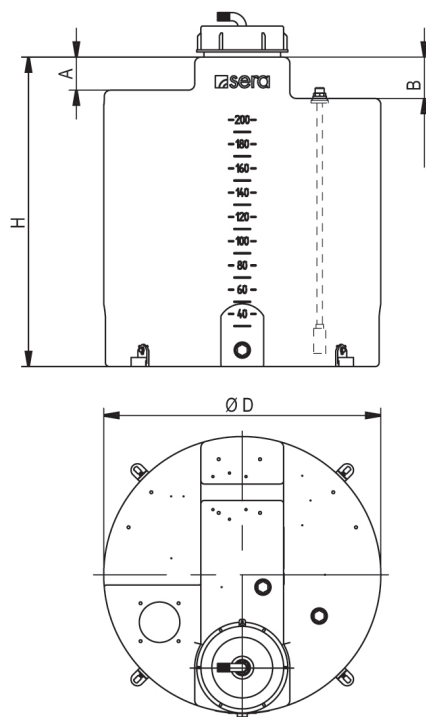
TECHNICAL DATA

UNIT DATA		CTD - ...						
		.. 40.1	.. 75.1	.. 100.1	.. 200.1	.. 300.1	.. 500.1	.. 1000.1
Tank volume	Litres	40	75	100	200	300	500	1.000
Flow capacity	l/h	0,4...35	0,4...180	0,4...180	0,4...570	0,4...570	0,4...570	0,4...570
Permissible counterpressure	bar (max)	10	10	10	10	10	10	10
Nominal width of suction lance	DN	5	5/10	5/10	5/10/15	5/10/15	5/10/15	5/10/15

ALLOCATION OF DOSING PUMPS

PUMP SERIES	CTD-40.1	CTD-75.1 ... CTD-1000.1
Solenoid diaphragm pumps 	C204.1-2,4e C204.1-7,0e C204.1- 10e C204.1- 35e	C204.1-2,4e C204.1-7,0e C204.1- 10e C204.1- 35e
Stepper motor diaphragm pumps 	X	iSTEP S 20 iSTEP S 30 iSTEP S 40 iSTEP S 50
Diaphragm pumps 	X	C409.2-25 Pro+ ... C409.2-350e Pro+ RF409.2-75e ... RF 409.2-350e C410.2-280e ... C410.2-570e RF410.2-280e ... RF410.2-570e
Multi-layer diaphragm pumps 	X	C409.2-11 ML Pro+ ... C409.2-220 ML Pro+ RF409.2-11 ML ... RF409.2-220 ML C410.2-500 ML RF410.2-135 ML ... RF410.2-500 ML

DIMENSIONS



	D	A	B	H
CTD - 40.1	420	70	70	425
CTD - 75.1	460	70	70	600
CTD - 100.1	460	70	70	760
CTD - 200.1	670	80	100	750
CTD - 300.1	670	80	100	1.030
CTD - 500.1	790	90	90	1.170
CTD - 1000.1	1080	110	100	1.290

BASIC DESIGNS

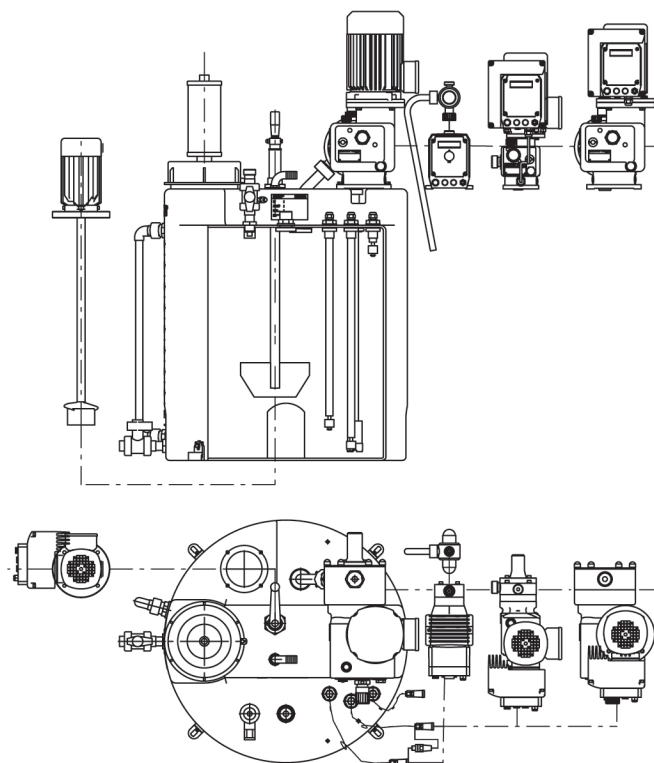
CTD

Dosing tank (PE-transparent) with litre scale and cover (DIN162)
 Suction lance with foot valve and sieve
 Ventilation- / exhaust bow with hose nozzle
 Brackets for floor mounting

Type	Preis (EUR)
CTD - 40.1	🔗
CTD - 75.1	🔗
CTD - 100.1	🔗
CTD - 200.1	🔗
CTD - 300.1	🔗
CTD - 500.1	🔗
CTD - 1000.1	🔗

COMPACT DOSING STATIONS

OPTIONS



			Price [EUR]
Dosing tank	PE-transparent		●
	PE-black		▲
	Fixing for floor mounting		●
Key lock	for screw cover		▲
Collecting basin	CBR -1		▲
	floor mounting		▲
	splash guard	(not with CTD-40.1, CTD-500.1 and CTD-1000.1)	▲
Gas-tight design	completely gas-tight system		▲
	chemical vapour lock	binder BM 1	▲
		binder BM 2	▲
Dissolving basket	not gas-tight	(not with CTD-40.1)	▲
Dosing pump	solenoid diaphragm pump	C 204.1	▲
	stepper motor diaphragm pump	iSTEP S	▲
	diaphragm pump	C 409.2 Pro+ / RF 409.2	▲
		C 410.2 / RF 410.2	▲
	multi-layer diaphragm pump	C 409.2 ML Pro+ / RF 409.2 ML	▲
		C 410.2 ML / RF 410.2 ML	▲

OPTIONS

			Preis [EUR]
Rührwerke	Handstampfmischer	nur für CTD 40.1 bis CTD-100.1	▲
	Handrührwerk	nur für CTD 200.1 bis CTD-500.1	▲
	Elektrowührwerk	nicht für CTD 40.1 und CTD-75.1	▲
Niveauschalter (Magnetschwimmer)	LSL (min.)		▲
	LSLL (min. - min.)		▲
	LSH (max.)		▲
Multifunktionsventil	für Dosierpumpen bis 50 l/h		▲
Befüllarmatur	DN15	Anschluss: Außengewinde G1	▲
	DN15	Anschluss: Außengewinde G1 1/2	▲
Behälterverschraubung	DN15	Anschluss: Außengewinde G1	▲
Füllstandsanzeige	nur für Behälter aus PE-schwarz		▲
Rückführleitung	z.B. Überströmventil einer Dosierpumpe		▲
PVC-Schlauch für Anschluss an ein Belüftungssystem (inkl. Schlauchschelle)	d20		▲
	d30	nur für CTD-500.1 und CTD-1000.1	▲
Entleerungsarmatur	DN15		▲
Steuerung			▲
Verkabelung			▲
Dosiertechnisches Equipment (DE)	für Behältermontage	(nicht für CTD-40.1)	Ⓒ
(Druckhalteventil, Pulsationsdämpfer, Absperrventil,...)	für Wandmontage		Ⓒ
Dosing Hose, flexible stainless steel (1.4401, FEP) (see also chapter 4, connecting parts)	L=500mm, G3/4	Art.No.: 90049993	
	L=500mm, G1	Art.No.: 90049994	

Weiteres Zubehör auf Anfrage

● basic version

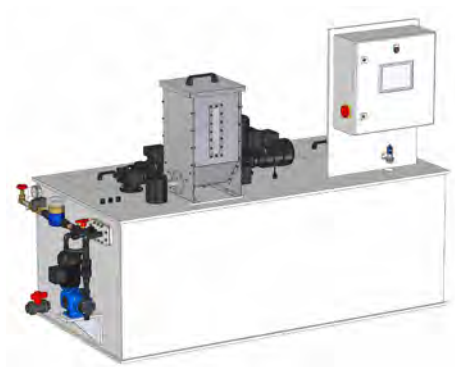
○ available without extra charge

▲ available with extra charge

✗ not available

Ⓒ on request

PREPARATION UNIT FOR POLYMERS



OVERVIEW

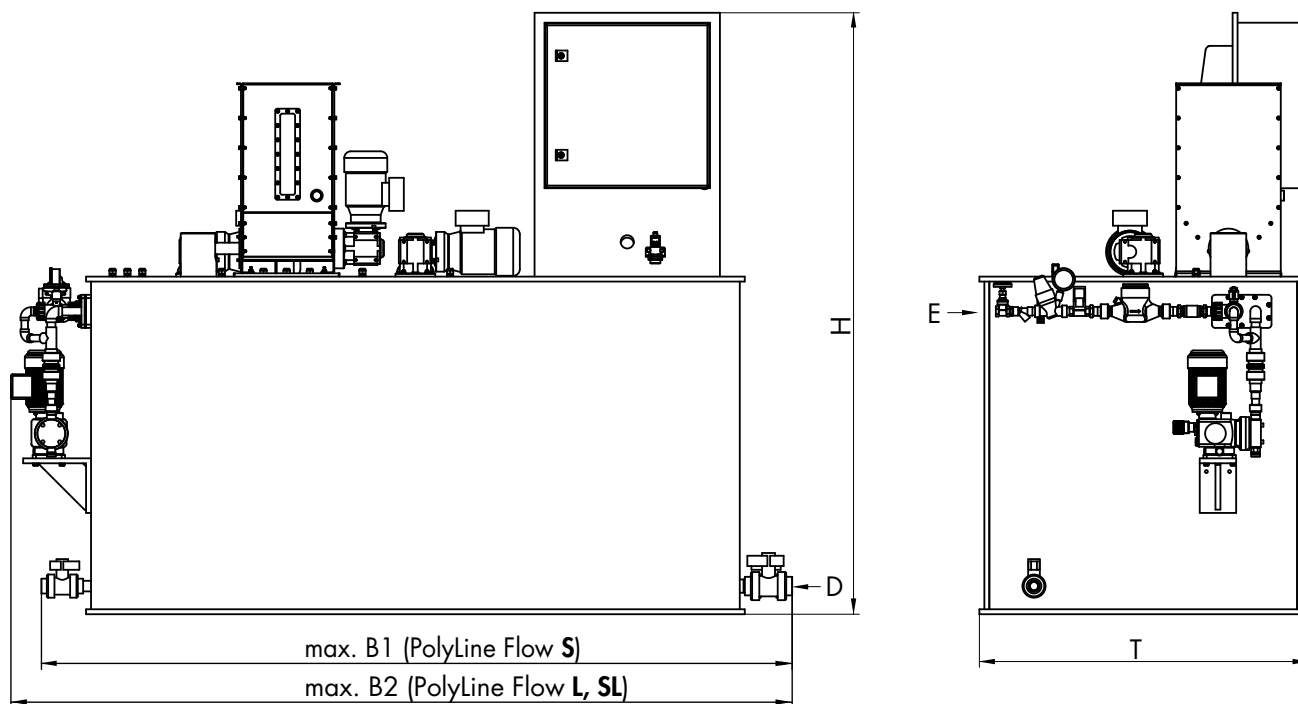
Fully automatic preparation of organic flocculent aid (pulverized and/or liquid)
 Process logic control (PLC)
 Selectable concentration of prepared solution
 Feeding device
 Dry material feeder with thermal protection zone
 Pump for liquid polymer (option)
 Dissolving water unit
 Electric agitators
 Performance graduation that meets the requirements

TECHNICAL DATA

DEFINITION of the types		
PolyLine ... S	S = solid	for preparation with polymer in powder form
PolyLine ... L	L = liquid	for preparation with liquid polymer
PolyLine ... SL	SL = solid/liquid	for preparation with polymer in powder form and/or liquid polymer

UNIT DATA			PolyLine Flow 500	PolyLine Flow 1000	PolyLine Flow 2000	PolyLine Flow 4000	PolyLine Flow 8000
Preparation capacity (at 45 min. maturing time)	l/h		500	1.000	2.000	4.000	8.000
Weight (empty)	kg	S	250	270	300	380	470
		L	230	240	280	360	450
		SL	270	290	340	410	520

ELECTRICAL DATA		PolyLine Flow ... S/L/SL
Supply voltage		~3/400 V /Hz + N + PE
Power consumption	approx. kW	2,0
Control voltage	V DC	24
Enclosure	Control cabinet	IP 54
	electr. consumer	IP 55

DIMENSIONS

	B1	B2	T	H*	D	E
PolyLine® Flow 500	2.240	2.340	990	1.550	DN25	DN15
PolyLine® Flow 1000	2.240	2.340	990	1.550	DN25	DN15
PolyLine® Flow 2000	2.270	2.360	990	1.820	DN32	DN15
PolyLine® Flow 4000	3.310	3.390	1.280	2.110	DN40	DN25
PolyLine® Flow 8000	4.330	4.470	1.570	2.330	DN50	DN25

* depending on the height of the dry material feeder (DMF)

PREPARATION UNIT FOR POLYMERS

BASIC DESIGNS

PolyLine Flow S

3-Chamber tank made of PP
Control (PLC) for fully automatic preparation
Dry material feeder (DMF) with hopper, 25 liters
Feeding device
2x electric agitator (low speed)
Level monitoring
Dissolving water unit
Language on display de/en

Type	Article-No.	Price (EUR)
PolyLine Flow 500 S	25004493	▲
PolyLine Flow 1000 S	25004525	▲
PolyLine Flow 2000 S	25004528	▲
PolyLine Flow 4000 S	25004531	▲
PolyLine Flow 8000 S	25004534	▲

PolyLine Flow L

3-Chamber tank made of PP
Control (PLC) for fully automatic preparation
Dosing pump for liquid polymer
Feeding device
2x electric agitator (low speed)
Level monitoring
Dissolving water unit
Language on display de/en

Type	Article-No.	Price (EUR)
PolyLine Flow 500 L	25004523	▲
PolyLine Flow 1000 L	25004526	▲
PolyLine Flow 2000 L	25004529	▲
PolyLine Flow 4000 L	25004532	▲
PolyLine Flow 8000 L	25004535	▲

PolyLine Flow SL

3-Chamber tank made of PP
Control (PLC) for fully automatic preparation
Dry material feeder (DMF) with hopper, 25 liters
Dosing pump for liquid polymer
Feeding device
2x electric agitator (low speed)
Level monitoring
Dissolving water unit
Language on display de/en

Type	Article-No.	Price (EUR)
PolyLine Flow 500 SL	25004524	▲
PolyLine Flow 1000 SL	25004527	▲
PolyLine Flow 2000 SL	25004530	▲
PolyLine Flow 4000 SL	25004533	▲
PolyLine Flow 8000 SL	25004536	▲

OPTIONS

Option	Type			Price [EUR]
3 rd Agitator	S, L, SL	chamber volume 500 - 2.000 litres		▲
		chamber volume 4.000 - 8.000 litres		▲
Low-level indicator for hopper	S, SL	(for DMF)		▲
Hopper Extension	S, SL	(for DMF)	expansion of volume: 25 litres	▲
Hopper extension + High level indicator for hopper	S, SL	(for DMF)		▲
Electric external vibrator	S, SL	(for DMF)	0,045kW, 230V, 50Hz, IP65, ISO-Kl. F	▲
Hopper loader	S, SL	incl. hose package and suction pipe		▲
Overflow	S, L, SL	chamber volume 500 - 2.000 litres		▲
		chamber volume 4.000 litres		▲
Overflow protection	S, L, SL			▲
Operating panel	S, L, SL	TOUCH	Display with Touchscreen - de/en	●
		Language	other languages possible	⌚
Signal exchange package	S, L, SL			▲
BUS-Connection	S, L, SL	PROFIBUS DP/Slave		▲
		industrial ethernet		▲
Special voltage	S, L, SL	for control and other electrical consumers		⌚

ACCESSORIES

			Price [EUR]
After-dilution station	Dilution of the preparation in a ratio of 1:10	2...6 m ³ / h	▲
		5...12 m ³ / h	▲
		8...20 m ³ / h	▲

PREPARATION UNIT FOR POLYMERS



OVERVIEW

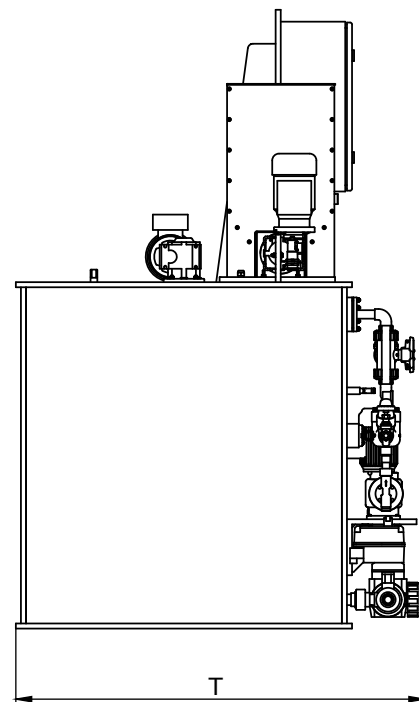
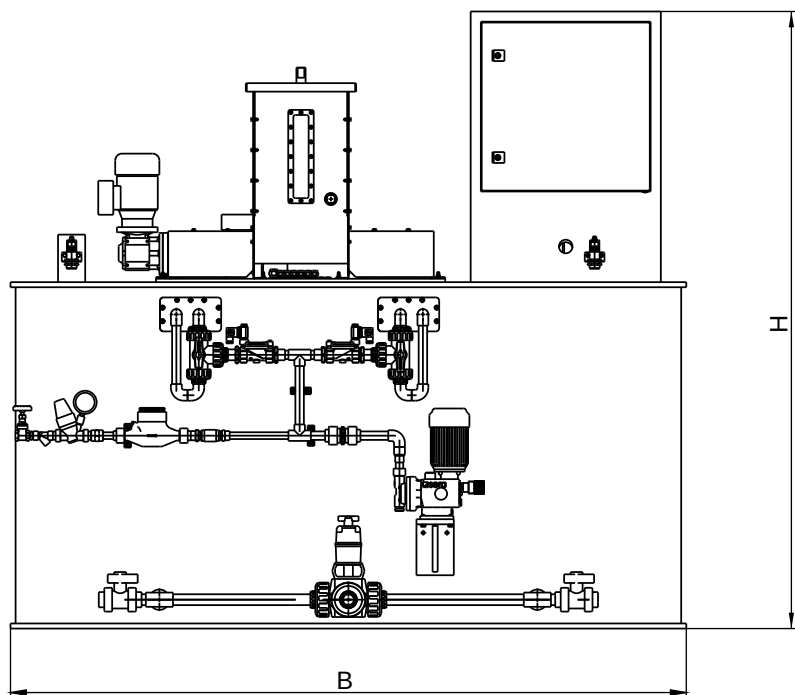
Fully automatic preparation of organic flocculent aid (pulverized and/or liquid)
 Process logic control (PLC)
 Selectable concentration of prepared solution
 Feeding device
 Dry material feeder with thermal protection zone
 Pump for liquid polymer (option)
 Dissolving water unit
 Electric agitators
 Performance graduation that meets the requirements

TECHNICAL DATA

DEFINITION of the types		
PolyLine ... S	S = solid	for preparation with polymer in powder form
PolyLine ... L	L = liquid	for preparation with liquid polymer
PolyLine ... SL	SL = solid/liquid	for preparation with polymer in powder form and/or liquid polymer

UNIT DATA		PolyLine Swing 500	PolyLine Swing 1000	PolyLine Swing 2000	PolyLine Swing 4000
Preparation capacity (at 30 min. maturing time)	l/h	500	1.000	2.000	4.000
Weight (empty)	kg	S	240	240	280
		L	230	230	260
		SL	260	260	295

ELECTRICAL DATA		PolyLine Swing ... S/L/SL	
Supply voltage		~3/400 V /Hz + N + PE	
Power consumption	approx. kW	2,0	
Control voltage	V DC	24	
Enclosure	control cabinet	IP 54	
	electr. consumer	IP 55	

DIMENSIONS

	B	T	H*	D	E
PolyLine® Swing 500	1.990	1.210	1.550	DN25	DN15
PolyLine® Swing 1000	1.990	1.220	1.820	DN32	DN15
PolyLine® Swing 2000	2.990	1.520	2.110	DN40	DN25
PolyLine® Swing 4000	4.000	1.820	2.330	DN50	DN25

* depending on the height of the dry material feeder (DMF)

PREPARATION UNIT FOR POLYMERS

BASIC DESIGNS

PolyLine Swing S

2-Chamber tank made of PP
Control (PLC) for fully automatic preparation
Dry material feeder (DMF) with hopper, 25 liters
Feeding device
2x electric agitator (low speed)
2x Level monitoring
Dissolving water unit
Language on display de/en

Type	Price (EUR)
PolyLine Swing 500 S	Ⓢ
PolyLine Swing 1000 S	Ⓢ
PolyLine Swing 2000 S	Ⓢ
PolyLine Swing 4000 S	Ⓢ

PolyLine Swing L

2-Chamber tank made of PP
Control (PLC) for fully automatic preparation
Dosing pump for liquid polymer
Feeding device
2x electric agitator (low speed)
2x Level monitoring
Dissolving water unit
Language on display de/en

Type	Price (EUR)
PolyLine Swing 500 L	Ⓢ
PolyLine Swing 1000 L	Ⓢ
PolyLine Swing 2000 L	Ⓢ
PolyLine Swing 4000 L	Ⓢ

PolyLine Swing SL

2-Chamber tank made of PP
Control (PLC) for fully automatic preparation
Dry material feeder (DMF) with hopper, 25 liters
Dosing pump for liquid polymer
Feeding device
2x electric agitator (low speed)
2x Level monitoring
Dissolving water unit
Language on display de/en

Type	Price (EUR)
PolyLine Swing 500 SL	Ⓢ
PolyLine Swing 1000 SL	Ⓢ
PolyLine Swing 2000 SL	Ⓢ
PolyLine Swing 4000 SL	Ⓢ

OPTIONS

Option	Type		Price [EUR]
Low-level indicator for hopper	S, SL	(for DMF)	▲
Hopper Extension	S, SL	(for DMF) expansion of volume: 25 litres	▲
Hopper extension + High level indicator for hopper	S, SL	(for DMF)	▲
Electric external vibrator	S, SL	(for DMF) 0,045kW, 230V, 50Hz, IP65, ISO-Kl. F	▲
Hopper loader	S, SL	incl. hose package and suction pipe	▲
Overflow	S, L, SL	chamber volume 500 - 2.000 litres	▲
		chamber volume 4.000 litres	▲
Overflow protection	S, L, SL		▲
Operating panel	S, L, SL	TOUCH Display with Touchscreen - de/en	●
		language other languages possible	⌚
Signal exchange package	S, L, SL		●
BUS-Connection	S, L, SL	PROFIBUS DP/Slave	▲
		Ind. Ethernet	▲
Special voltage	S, L, SL	for control and other electrical consumers	⌚

ACCESSORIES

		Price [EUR]
After-dilution station	Dilution of the preparation in a ratio of 1:10	2...6 m³ / h ▲
		5...12 m³ / h ▲
		8...20 m³ / h ▲

PREPARATION UNIT FOR POLYMERS



OVERVIEW

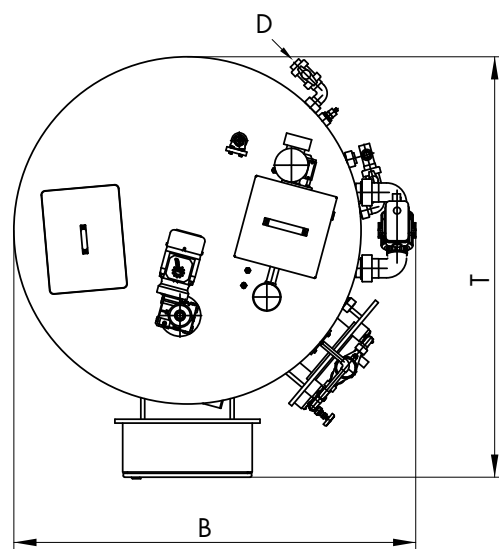
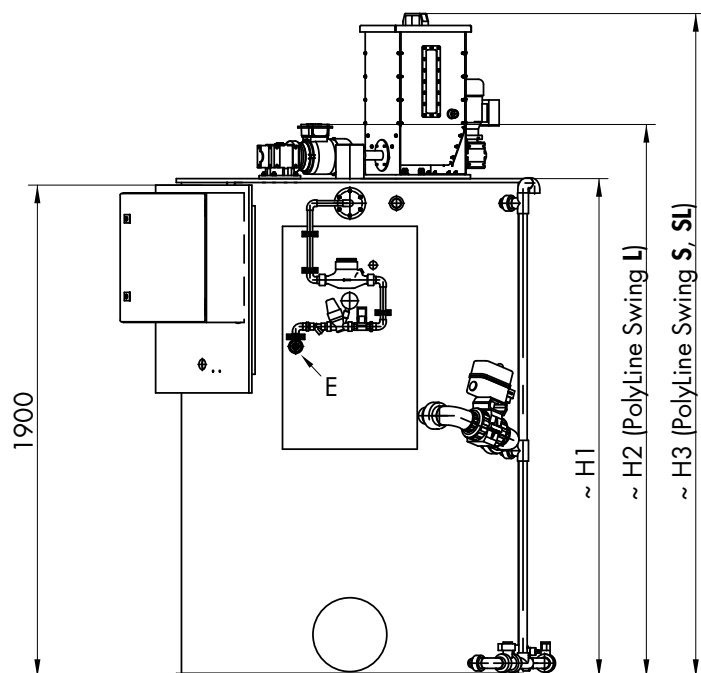
Fully automatic preparation of organic flocculent aid (pulverized and/or liquid)
 Process logic control (PLC)
 Selectable concentration of prepared solution
 Feeding device
 Dry material feeder with thermal protection zone
 Pump for liquid polymer (option)
 Dissolving water unit
 Electric agitator
 Performance graduation that meets the requirements

TECHNICAL DATA

DEFINITION of the types		
PolyLine ... S	S = solid	for preparation with polymer in powder form
PolyLine ... L	L = liquid	for preparation with liquid polymer
PolyLine ... SL	SL = solid/liquid	for preparation with polymer in powder form and/or liquid polymer

UNIT DATA			PolyLine Double 500	PolyLine Double 1000	PolyLine Double 2000
Preparation capacity (at 45 min. maturing time)	l/h		500	1.000	2.000
Weight (empty)	kg	S	200	240	325
		L	160	200	285
		SL	210	250	335

ELECTRICAL DATA		PolyLine Double ... S/L/SL	
Supply voltage		~3/400 V /Hz + N + PE	
Power consumption	approx. kW	2,0	
Control voltage	V DC	24	
Enclosure	control cabinet	IP 54	
	electr. consumer	IP 55	

DIMENSIONS

	B	T	H1	H2	H3*	D	E
PolyLine® Double 500	1.320	1.420	1.370	1.570	2.000	DN25	DN15
PolyLine® Double 1000	1.560	1.630	1.925	2.140	2.570	DN25	DN15
PolyLine® Double 2000	2.020	2.180	1.900	2.130	2.540	DN32	DN15

* depending on the height of the dry material feeder (DMF)

PREPARATION UNIT FOR POLYMERS

BASIC DESIGNS

PolyLine Double S

2-Chamber tank made of PP
Control (PLC) for fully automatic preparation
Dry material feeder (DMF) with hopper, 25 liters
Feeding device
Electric agitator (low speed)
Level monitoring
Dissolving water unit
Language on display de/en

Type	Article-No.	Price (EUR)
PolyLine Double 500 S	25004537	▲
PolyLine Double 1000 S	25004540	▲
PolyLine Double 2000 S	25004543	▲

PolyLine Double L

2-Chamber tank made of PP
Control (PLC) for fully automatic preparation
Dosing pump for liquid polymer
Feeding device
Electric agitator (low speed)
Level monitoring
Dissolving water unit
Language on display de/en

Type	Article-No.	Price (EUR)
PolyLine Double 500 L	25004538	▲
PolyLine Double 1000 L	25004541	▲
PolyLine Double 2000 L	25004544	▲

PolyLine Double SL

2-Chamber tank made of PP
Control (PLC) for fully automatic preparation
Dry material feeder (DMF) with hopper, 25 liters
Dosing pump for liquid polymer
Feeding device
Electric agitator (low speed)
Level monitoring
Dissolving water unit
Language on display de/en

Type	Article-No.	Price (EUR)
PolyLine Double 500 SL	25004539	▲
PolyLine Double 1000 SL	25004542	▲
PolyLine Double 2000 SL	25004545	▲

OPTIONS

Option	Type			Preis [EUR]
Low-level indicator for hopper	S, SL	(for DMF)		▲
Hopper Extension	S, SL	(for DMF)	Erweiterung des Volumens: 25 Liter	▲
Hopper extension + High level indicator for hopper	S, SL	(for DMF)		▲
Electric external vibrator	S, SL	(for DMF)	0,045kW, 230V, 50Hz, IP65, ISO-Kl. F	▲
Hopper loader	S, SL	incl. hose package and suction pipe		▲
Overflow protection	S, L, SL			▲
Operating panel	S, L, SL	TOUCH	Display with Touchscreen - de/en	●
		language	other languages possible	⌚
Signal exchange package	S, L, SL			●
BUS-Connection	S, L, SL	PROFIBUS DP/Slave		▲
		industrial Ethernet		▲
Special voltage	S, L, SL	for control and other electrical consumers		⌚

ACCESSORIES

		Price [EUR]
After-dilution station	Dilution of the preparation in a ratio of 1:10	2...6 m³ / h ▲
		5...12 m³ / h ▲
		8...20 m³ / h ▲

KKV DOSING SYSTEM



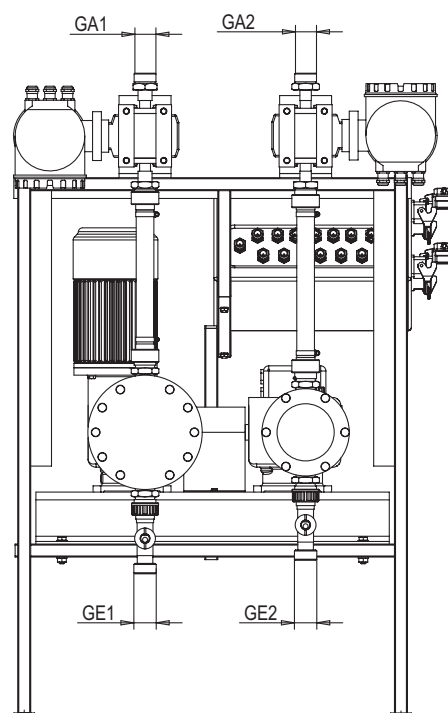
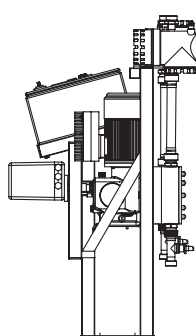
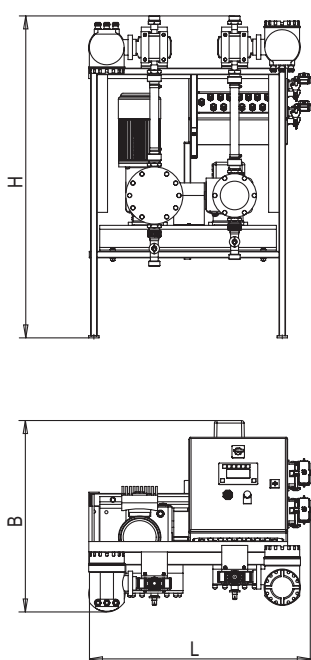
OVERVIEW

- Fully automatic operation
- Highest accuracy
- The most modern control- and pump technology
- High operational safety
- Easy to operate
- High lifetime
- Low maintenance
- Complete accessory programme

TECHNICAL DATA

ANLAGENDATEN			KKV-20,8.1
Total capacity (50/60Hz)	l/min		20,8
Chemical consumption	l/h	Colour	1.000
		Lye	250
Power consumption	kW		~1,0
Weight	kg		~170

DIMENSIONS



	L	B	H	dosage colour		dosage lye	
				GE1	GA1	GE2	GA2
KKV-20,8.1	860	740	1.240	G1 1/4	G1 1/4	G1 1/4	G1 1/4

ELEKTRICAL DATA / CONTROL TECHNOLOGY

Input	4 digital inputs (potential bonded)	release pump, release control, fast stop, pump flushing
	1 analogue input	0/4-20mA from external fill level controller or external fill level measurement (analog signal must be potential-free)
Output	4 potential free outputs	flush valve, drain valve, color ready, collective fault
Power supply	3 x 400V / 50Hz / N / PE	
Control voltage 1	230V / 50Hz	
Control voltage 2	24V DC	
Enclosure	IP54	

BASIC DESIGNS

KKV-Dosing system

Dosing pump type RF410.2-1100e/RK410.2-450e
 Driving motor with integrated frequency converter
 Mounted actuator (lye-dosage)
 Stroke frequency transmitter
 2x magneto-inductive flow controller
 2x capacitive sensor for fluid monitoring
 Mounted control (PLC) with operator panel
 System-wiring and -piping incl. mounting-frame

Type	Price (EUR)
KKV-20,8.1	

ACCESSORIES

		Price [EUR]
Diaphragm pressure-keeping valve	type 624.D	▲
Connection parts	for diaphragm pressure-keeping valve	▲
Suction basket	type 722	▲
Suction basket	type 724	▲
T-piece made of PVC, DN25		▲
PVC-hose with cross-textile ply	16/24	▲
	32/42	▲
Hose clamp	16/27	▲
	32/50	▲

DOSING TANK



OVERVIEW

UV-stabilized polyethylene
Food safe
Seamless
Assembly bridge, centred
Embossed litre scale
Connection for drain
Safe fixing
Lockable

TECHNICAL DATA

DOSING TANK		DTR-...						
		...40.2	...75.2	...100.2	...200.2	...300.2	...500.1	...1000.1
Content (volume)	Litres	40	75	100	200	300	500	1.000
Weight (empty)	kg	2,7	6,0	7,5	13,5	17,0	23,8	42,0

BASIC DESIGNS

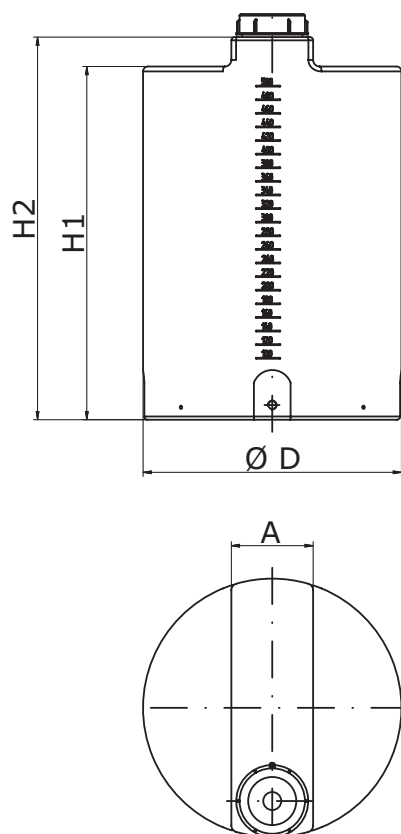
DTR

Dosing tank **PE-transparent**

Seal **EPDM**

Type	Article-No.	Price (EUR)
DTR - 40.2	90020788	☎
DTR - 75.2	90032463	☎
DTR - 100.2	90032464	☎
DTR - 200.2	90032213	☎
DTR - 300.2	90032216	☎
DTR - 500.1	90009622	☎
DTR - 1000.1	90009623	☎

DIMENSIONS

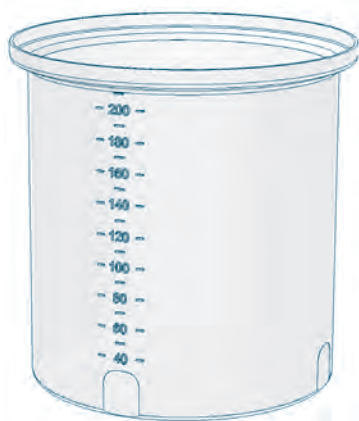


	D	H1	H2	A
DTR - 40.2	420	355	425	150
DTR - 75.2	460	530	600	130
DTR - 100.2	460	690	760	130
DTR - 200.2	670	670	750	200
DTR - 300.2	670	950	1.030	200
DTR - 500.1	790	1.090	1.180	250
DTR - 1000.1	1.080	1.260	1.330	370

ACCESSORIES

		Price [EUR]
Seals	EPDM	●
	FPM	▲
Level indicator	made of PVC-transparent	▲
Tank emptying	with shut-off valve DN15	⌚
	blind closed, DN15, G1	⌚
Tank screw connection	incl. connection seal	⌚
Colour	black (not transparent)	⌚
Reinforcing bridge	only with DTR-1000.1	⌚

COLLECTING BASINS



OVERVIEW

For tank size up to 1000 litres
UV-stabilized polyethylene
Food safe
Seamless
Embossed litre scale
Flat spots for the mounting of fittings

TECHNICAL DATA

GENERAL DATA		CBR-...						
		...60.1	...80.1	...120.1	...260.1	...400.1	...500.1	...1000.1
Content (volume)	Litres	60	80	120	260	400	500	1.000
For dosing tank	DTR-...	...40.2	...75.2	...100.2	...200.2	...300.2	...500.1	...1000.1
Weight (empty)	kg	3,6	5,0	6,7	10	16	19	34

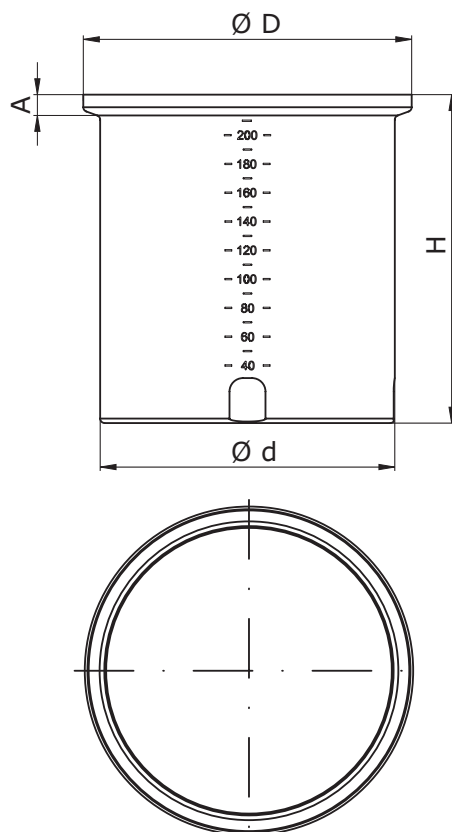
BASIC DESIGNS

PE

Collecting basins **PE-transparent**

Type	Article-No.	Price (EUR)
CBR - 60.1	90032796	🕒
CBR - 80.1	90028426	🕒
CBR - 120.1	90028427	🕒
CBR - 260.1	90032797	🕒
CBR - 400.1	90019776	🕒
CBR - 500.1	90028429	🕒
CBR - 1000.1	90028430	🕒

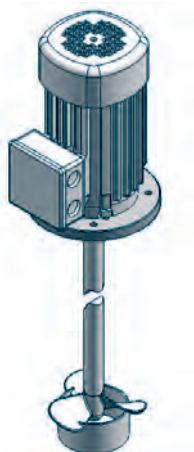
DIMENSIONS



	d	D	A	H
CBR - 60.1	500	×	×	350
CBR - 80.1	500	560	40	545
CBR - 120.1	500	560	40	705
CBR - 260.1	770	×	×	650
CBR - 400.1	770	860	45	960
CBR - 500.1	860	960	40	980
CBR - 1000.1	1.150	1.240	50	1.080

ELECTRIC AGITATOR

Fast stirrer



OVERVIEW

Speed up to 1500 rpm
Balanced agitator shaft
Suitable for continuous operation
Suitable for pass-through operation
Maintenance free
Impeller can be unbolted
Controllable (Option)
High quality materials
For viscosity ≤ 200 mPas
Max. density 1,2 kg/dm³

TECHNICAL DATA

GENERAL DATA		MU-...				
		100E1500.2	200E1500.2	300E1500.2	500E1500.1	1000E1500.1
for tank (type DTR, content)	Litres	100	200	300	400	1.000
Legth of agitator shaft	mm	564	572	807	974	1.069
Speed	min ⁻¹	1.500	1.500	1.500	1.500	1.500
Weight	kg	8,7	8,7	9,5	10	19

*) Synchronous speed

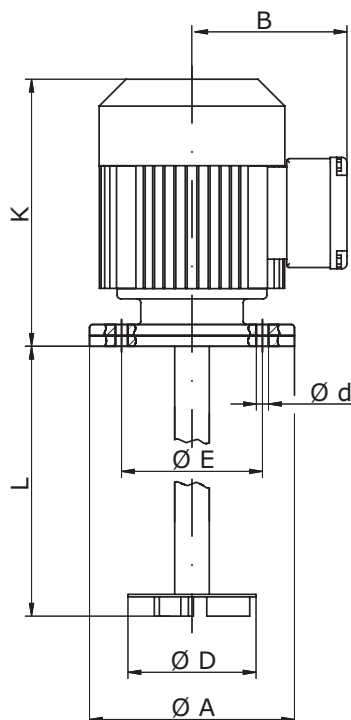
ELECTRICAL DATA		MU-...				
		100E1500.2	200E1500.2	300E1500.2	500E1500.1	1000E1500.1
Power		0,18	0,18	0,37	0,37	0,75
Voltage		230/400V, 50Hz				
Enclosure		IP 55				
ISO-Class		F				

BASIC DESIGNS

MU-...E1500...

Type	Article-No.	Price (EUR)
MU-100E1500.2	83001881	☉
MU-200E1500.2	83001834	☉
MU-300E1500.2	83001874	☉
MU-500E1500.1	83001886	☉
MU-1000E1500.1	83001917	☉

DIMENSIONS



	L	A	B	d	D	E	K
MU-100E1500.2	565	120	108	7	100	100	273
MU-200E1500.2	582	160	108	8,5	100	130	256
MU-300E1500.2	807	160	108	8,5	125	130	256
MU-500E1500.2	970	160	108	8,5	125	130	256
MU-1000E1500.2	1.062	200	123	11	150	165	324

OPTIONS/ACCESSORIES

		Price [EUR]
Materials	agitator shaft	1.4571
	mixing organ	1.4571
	agitator shaft	1.4571, PE-covered
	mixing organ	PVDF
Protection flange	made of plastic (PE)	●
	made of stainless steel	▲
Gas-tight design	(nicht bei Typ: MU-100E1500.2)	▲
Special voltage		⌚
Agitator traverse	for IBC-Container (Art.-No. 55002554)	▲
Fixing set	MU-100E1500.2	▲
	MU-100E1500.2	▲
	MU-100E1500.2	▲
	MU-100E1500.2	▲
	MU-100E1500.2	▲

ELECTRIC AGITATOR

Slow stirrer



ÜBERBLICK

Speed 180 min⁻¹ (constant)
 Balanced agitator shaft
 Suitable for continuous operation
 Maintenance-free
 Impeller(s) can be unbolted
 High quality materials
 For viscosity ≤ 500 mPas
 Max. density 1,2 kg/dm³

TECHNICAL DATA

GENERAL DATA		MU-...			
		200E180.1	300E180.1	500E180.1	1000E180.1
for tank (type DTR, content)	Litres	200	300	500	1000
Legth of agitator shaft	mm	573	823	975	1.075
Speed	min ⁻¹	180	180	180	180
Weight	kg	12,4	14,1	14,6	14,9

Agitators unsuitable for pass-through operation

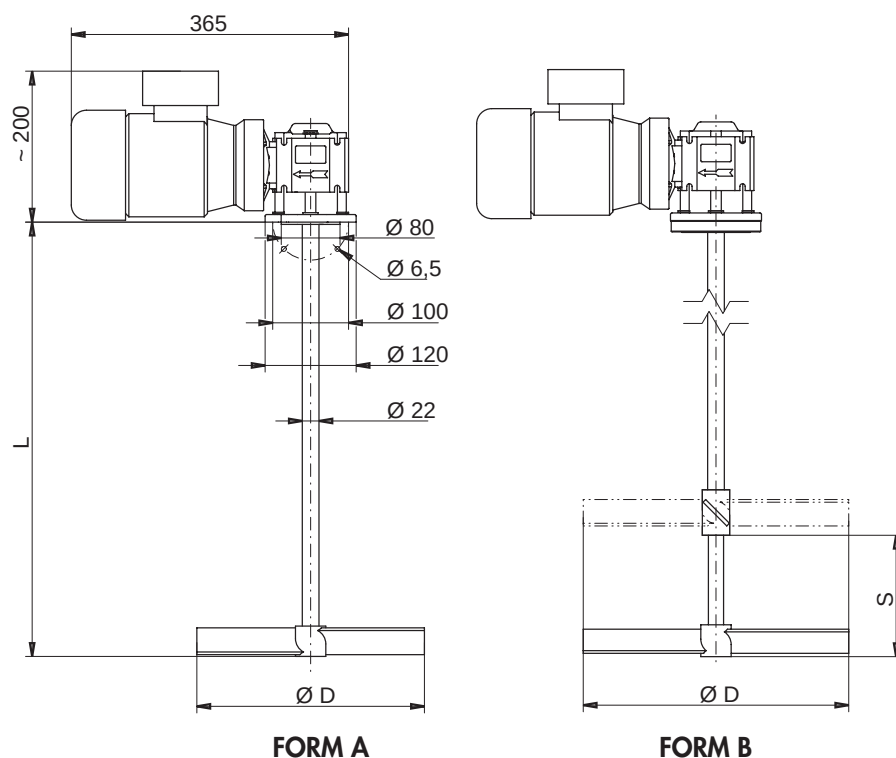
ELECTRICAL DATA		MU-...E180.1
Power		0,37 kW
Voltage		230/400V, 50Hz
Enclosure		IP 55
ISO-Class		F

BASIC DESIGNS

MU-...E180.1

Type	Article-No.	Price (EUR)
MU-200E180.1	83001926	⌚
MU-300E180.1	83001894	⌚
MU-500E180.1	83001893	⌚
MU-1000E180.1	83001892	⌚

DIMENSIONS

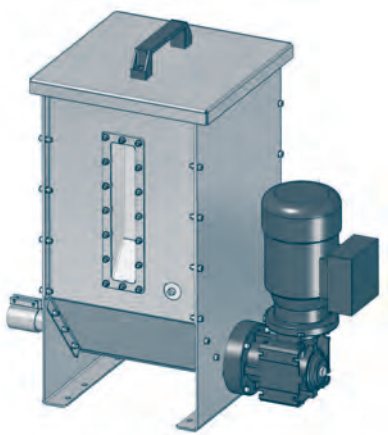


	FORM	L	D	S
MU-200E180.1	A	573	300	—
MU-300E180.1	B	823	300	150
MU-500E180.1	B	975	350	160
MU-1000E180.1	B	1.075	350	210

OPTIONS/ACCESSORIES

			Price [EUR]
Materials	shaft + mixing organ	1.4571	●
Gas-tight design	sealing flange made of PE		▲
	sealing flange made of 1.4571		▲
Special voltage			Ⓛ

DRY MATERIAL FEEDER



OVERVIEW

- Compact design
- Linear performance curves
- For pourable, non-bridging media
- High dosing accuracy
- Mounted-on ribbon pan
- Sealing between filling space and drive
- No-maintenance
- Easy to operate

TECHNICAL DATA

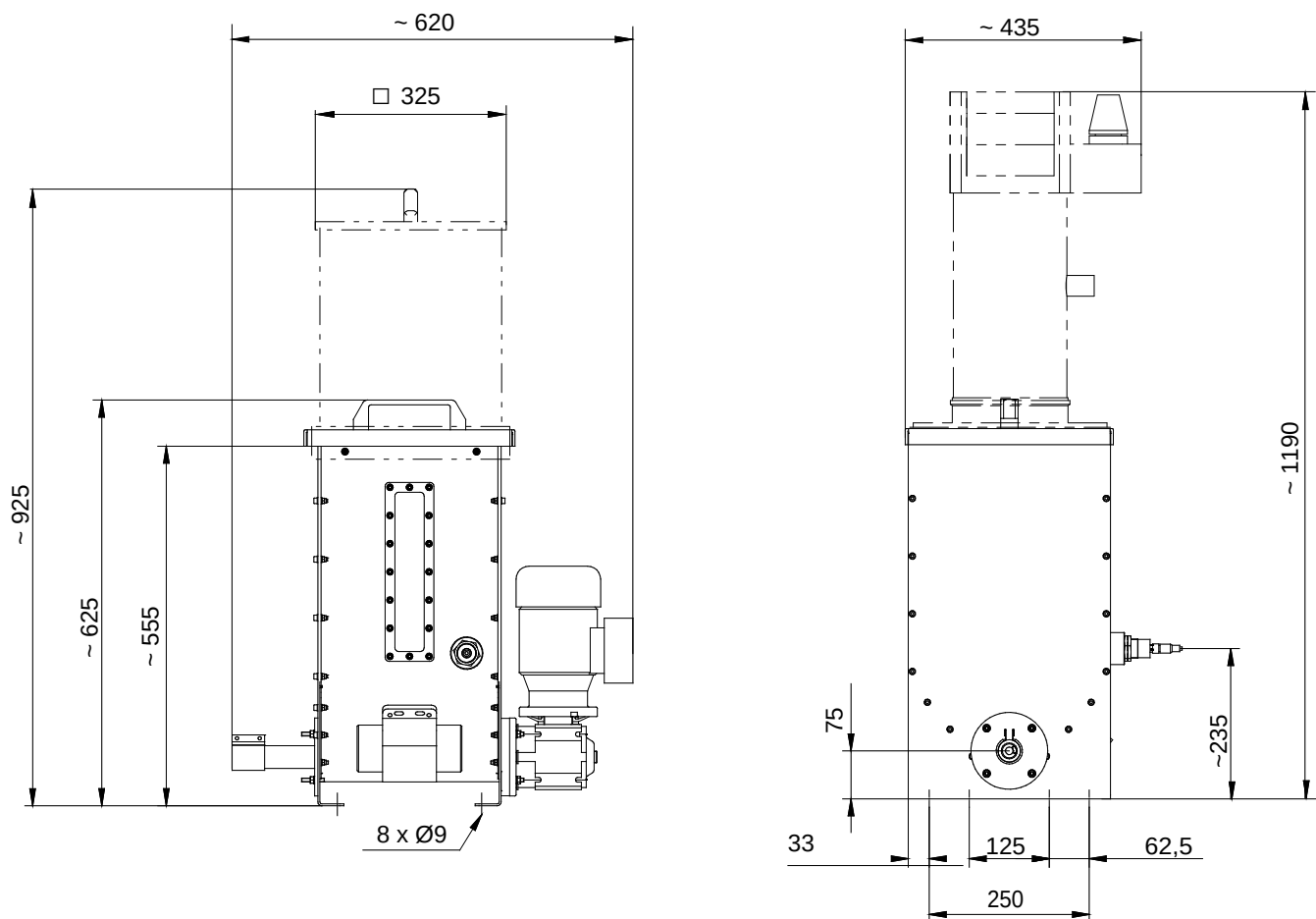
GENERAL DATA			DMF-5.2	DMF-20.2	DMF-50.2	DMF-200.2
Feed rate	l/h		5	20	50	200
Drive power	kW		0,09	0,18	0,09	0,18
Speed	min ⁻¹		17	68	17	68
Dry material	density	kg/ltr.	0,5...1,2	0,5...1,2	0,5...1,2	0,5...1,2
	grain size	mm	1,5	1,5	1,5	1,5
Vorratsvolumen	litres		35	35	35	35
Weight (empty)	kg		30	30	30	30

BASIC DESIGNS

DMF-... .2

Type		Price (EUR)
DMF-5.2	25002778	☎
DMF-20.2	25002745	☎
DMF-50.2	25002748	☎
DMF-200.2	25002780	☎

DIMENSIONS



OPTIONS/ACCESSORIES

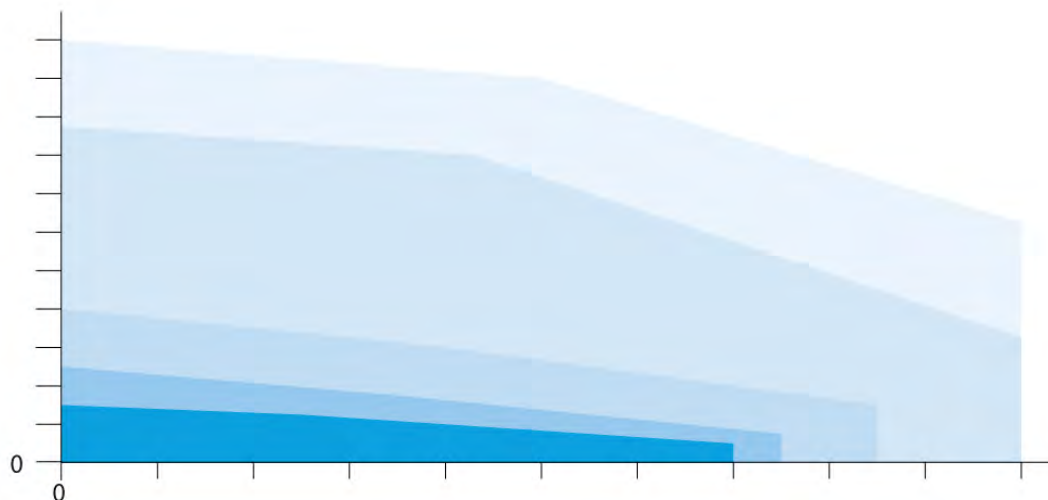
		Price [EUR]
Hopper extension	volume expansion: 25 litres	▲
Sensors	empty signal for hopper	▲
Electric external vibrator	0,045 kW, 230V, 50Hz, IP65, ISO-Class F	▲
Conveyor unit	incl. hose package and suction pipe	▲



DOSING PUMPS

PUMP PERFORMANCE CHART

Table to select the appropriate pump series



Solenoid diaphragm pump	
C 204.1	
l/h ¹⁾	bar
1,2	10
2,4	10
7	10
10	6
35	1,5

Stepper motor pumps	
iSTEP S	
l/h ¹⁾	bar
20	10
30	7
40	6
50	3

Diaphragm pumps				
RF 409.2				
C 409.2 Pro+				
RF 410.2				
C 410.2				
l/h ¹⁾	bar	bar	bar	bar
1,6	10	10	---	---
2,4	10	10	---	---
7	10	10	---	---
12	10	10	---	---
18	10	10	---	---
25	10	10	---	---
50	10	10	---	---
75	10	10	---	---
90	8	8	---	---
115	4	4	---	---
140	8	8	---	---
180	4	4	---	---
250	3	3	---	---
280	---	---	8	8
350	3	3	---	---
570	---	---	6	6
900	---	---	5	5
1.450	---	---	5	5

Multi-layer diaphragm pumps				
RF 409.2 ML				
C 409.2 ML Pro+				
RF 410.2 ML				
C 410.2 ML				
l/h ¹⁾	bar	bar	bar	bar
11	20	20	---	---
17	20	20	---	---
30	20	20	---	---
45	16	16	---	---
72	16	16	---	---
110	10	8	---	---
135	---	---	15	15
150	4	4	---	---
220	4	3	---	---
500	---	---	10	10
1.200	---	---	5	5

Piston diaphragm pumps			
RF 409.2 KM			
C 409.2 KM Pro+			
RF 410.2 KM			
l/h ¹⁾	bar	bar	bar
7,5	80	80	---
10	80	80	---
18	70	50	---
38	---	---	80
45	35	25	---
76	---	---	70
95	20	16	---
150	---	---	40
190	10	8	---
310	---	---	20
510	---	---	14
850	---	---	8

Piston pumps	
RF 409.2 K	
l/h ¹⁾	bar
8	140
12	140
18	80

Diaphragm feeding pumps	
ZX411.3	
l/h ¹⁾	bar
2.200	4
2.600	4
3.100	4

Air driven diaphragm pumps	
APB, APE	
l/min ¹⁾	bar
5	7
15	7
30	7
45	7
90	7
100	7
150	7
200	7
340	7
650	7
850	7

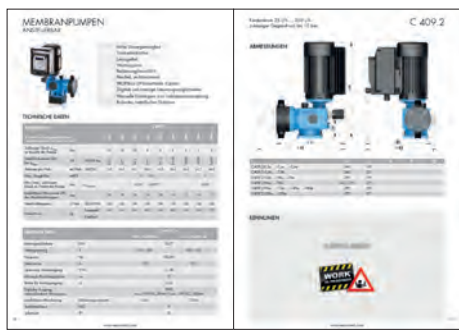
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NOTES

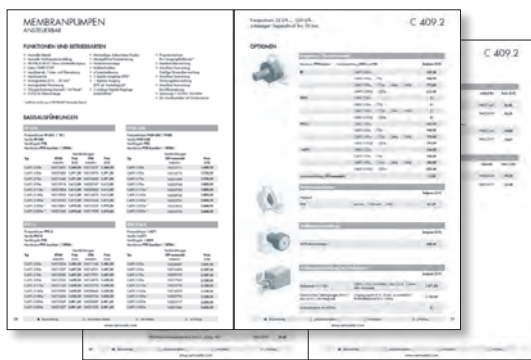
NAVIGATION

The possible options and various accessories are shown for each pump series, following the pumping data. Fittings for suction and pressure side installations are located directly behind them and are assigned appropriately to the pump types.



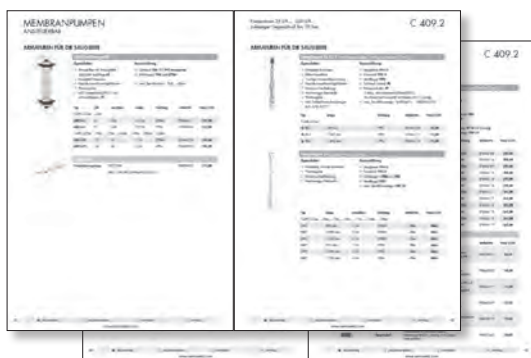
OVERVIEW

- Properties
- Technical data
- Electrical data
- Dimensions
- Characteristic curves



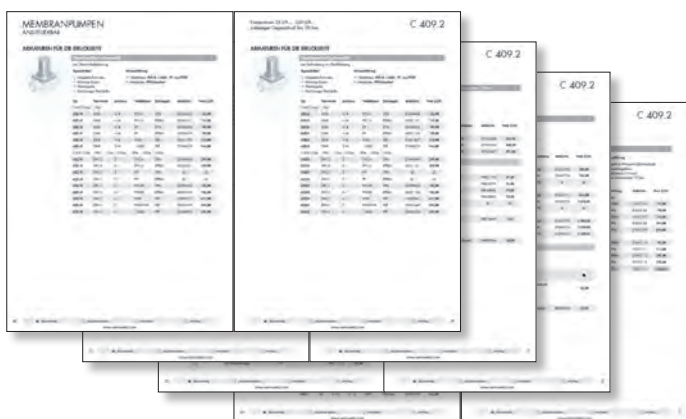
BASIC DESIGNS / OPTIONS

- Functions and operating modes (C-Pumps)
- Material designs
- Article-No./Prices
- Options for design of the respective pump
- Accessories to the pump



FITTINGS for the SUCTION SIDE

- Flow controller
- Multi function devices
- Suction lances (+Accessories)
- Foot valves
- Accessories



FITTINGS for the PRESSURE SIDE

- Diaphragm relief valves
- Diaphragm pressure keeping valves
- Multifunction valves
- Flow meter
- Pulsation damper (+Accessories)
- Dosing valves
- Injection fittings

24h EXPRESS DELIVERY



24h DELIVERY

Even in time-sensitive situations we are your reliable partner in the field of dosing technology. Therefore we offer a 24 hour delivery program for many products, so that you get your product as fast as possible if necessary.

Order until 12 o'clock and your new dosing pump, with delivery to Germany, will arrive the next day.
For delivery in the EU within two days.

This enables short reaction times in case of a failure to minimize the downtime of your systems.

Contact us:

express@sera-web.com
05673/999 1823

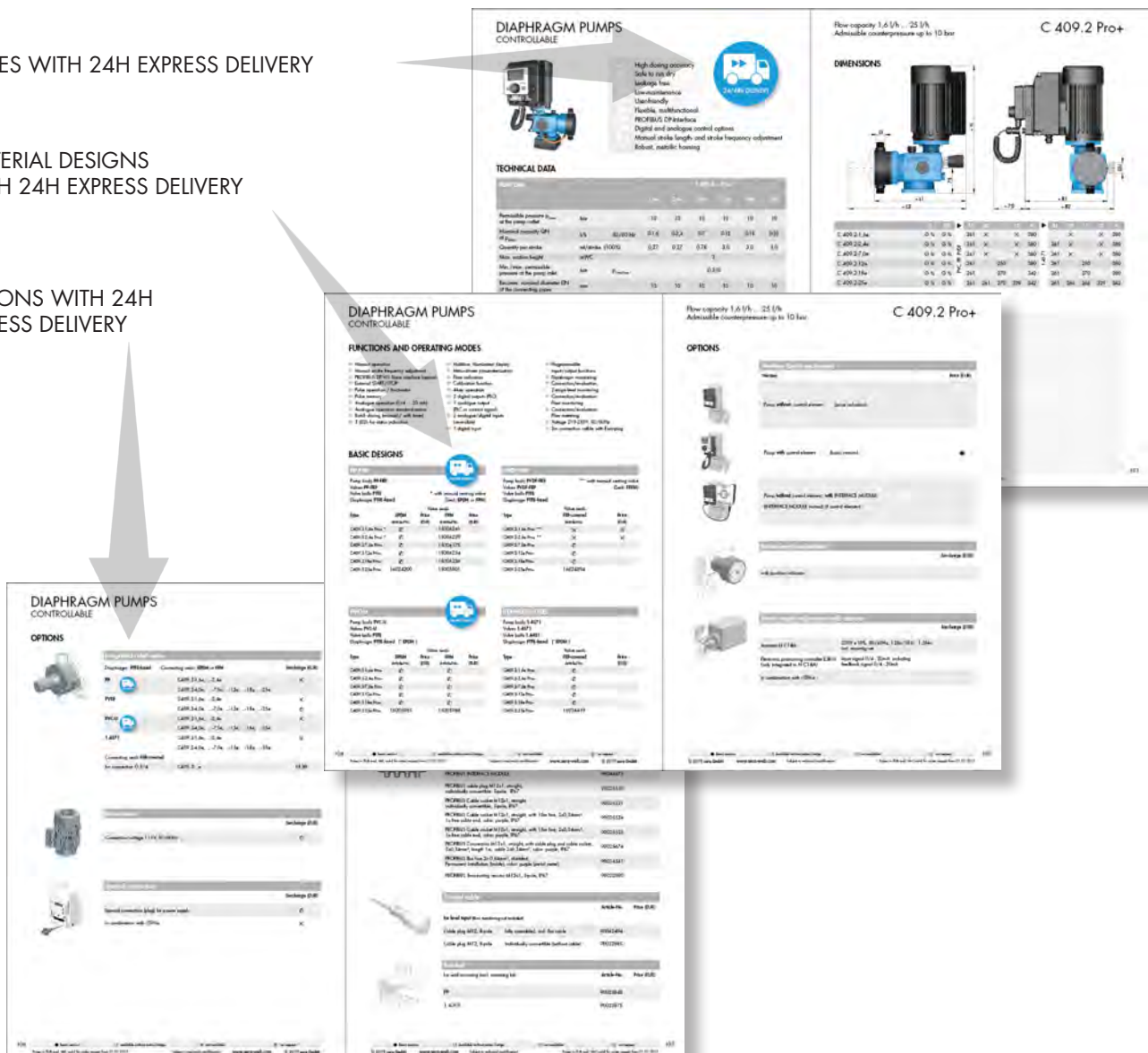
Further information:

www.sera-web.com/24h

SERIES WITH 24H EXPRESS DELIVERY

MATERIAL DESIGNS
WITH 24H EXPRESS DELIVERY

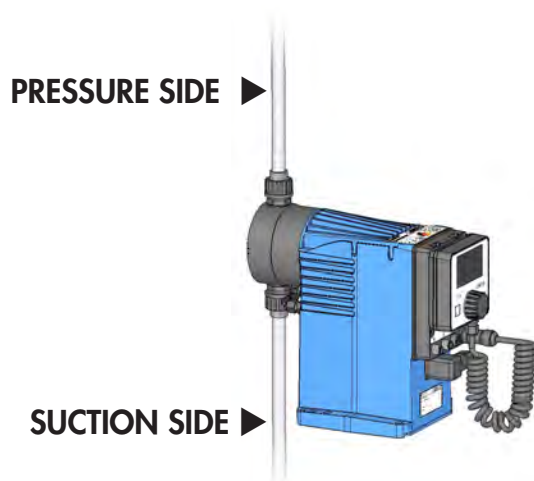
OPTIONS WITH 24H
EXPRESS DELIVERY



ALLOCATION OF FITTINGS

For each pump series an assignment for suction and pressure side fittings is made following the information pages. This assignment takes into account fittings that must at least be used with regard to their nominal width in order to ensure safe and trouble-free operation of the respective pumps when conveying water-like fluids. The use of valves with a larger nominal width is possible without problems in most cases.

When selecting the fittings, the installation instructions for dosing pumps must be observed or sera must be coordinated.



FITTINGS for pressure side installation

A	Diaphragm relief valve	for overpressure protection
B	Diaphragm pressure keeping valve	to prevent overdosing
C	Multifunction valve	pressure keeping- and relief valve in one fitting
D	Diaphragm pulsation damper	for damping the flow in the pressure line
E	Dosing valve	fitting for feeding the process line
F	Injection fitting	fitting for feeding the process line
G	Vent valve	for the elimination of air/gas inclusions in the suction line and pump body
H	Flow meter	for measuring and monitoring the flow (only for controllable pumps)
I	Shut-Off valve (Ball valve)*	

* available on request

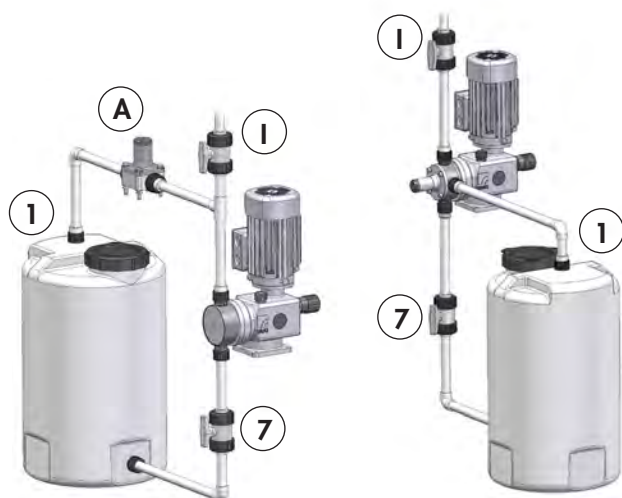
FITTINGS for suction side installation

1	Tank/Container	for storing the dosing medium
2	Multifunction vessel	usable as an priming aid and/or an calibration pot
3	Suction lance	for suction from different containers (with and without level switch)
4	Foot valve	with check valve to avoid idling of the suction line
5	Flow controller	for detecting the flow rate of the metering pump (only for controllable pumps)
6	Line strainer*	for collecting impurities in the medium
7	Shut-Off valve (Ball valve)*	

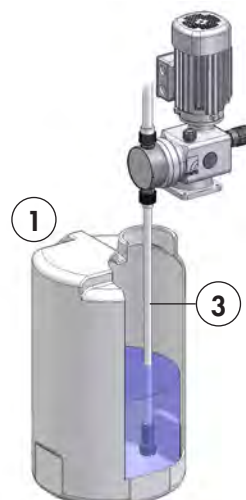
* available on request

INSTALLATION EXAMPLES

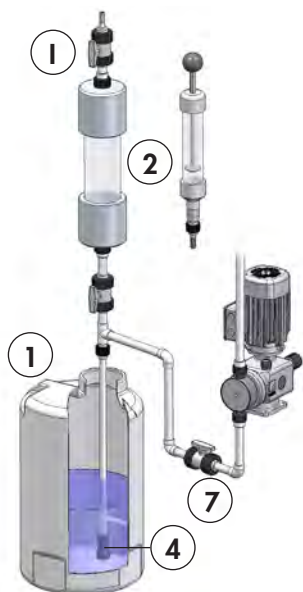
Provide for an overpressure protection



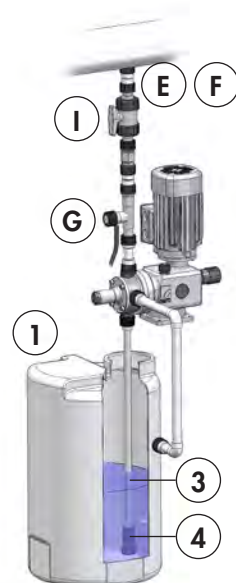
Avoid an emptying of the suction line



Suction via a siphon vessel



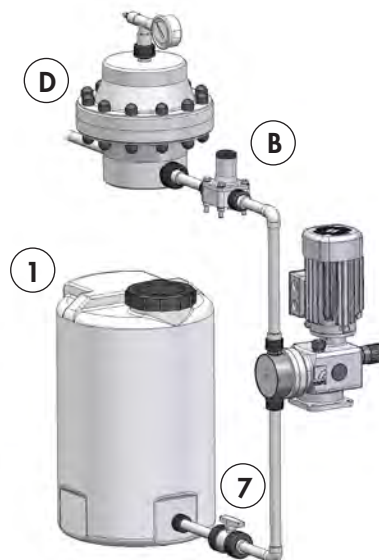
How to ensure suction free from air



Eliminating undesired siphoning



Damping of the pulsation



SOLENOID DIAPHRAGM PUMPS

CONTROLLABLE



OVERVIEW

- Compact design
- Low weight
- Safe to run dry
- Leakage-free
- Low-maintenance
- User-friendly
- High dosing accuracy
- Integrable into automatic processes
- Manual stroke length and stroke frequency adjustment
- Robust, corrosion-resistant housing



TECHNICAL DATA

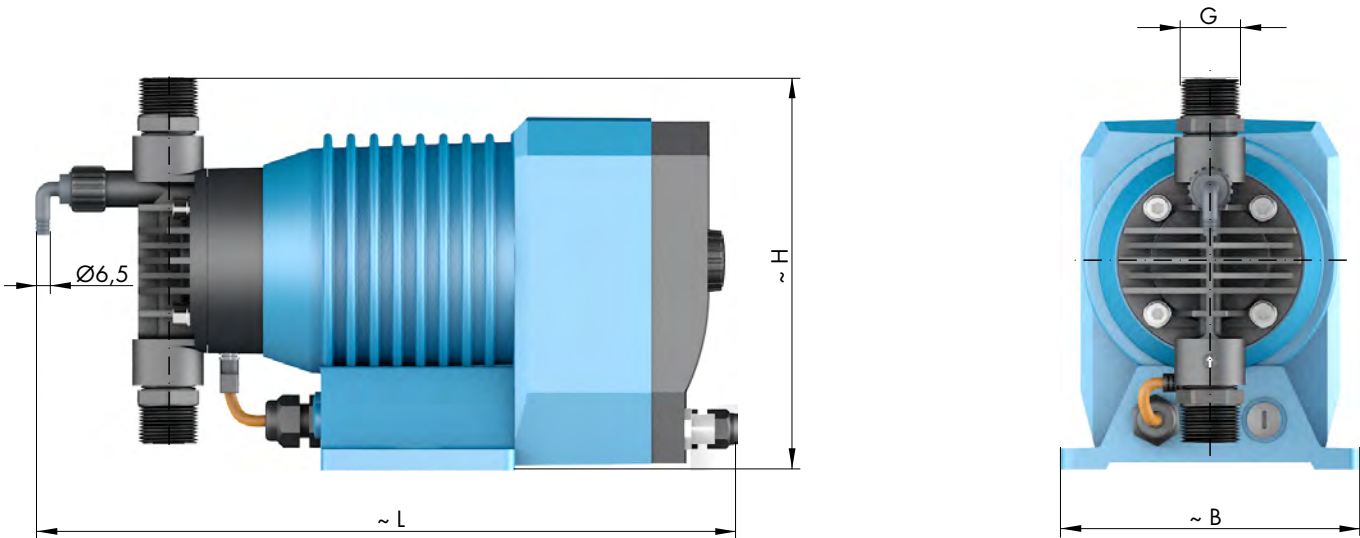
PUMP DATA			R 204.1-...				
			1,2e	2,4e	7,0e	10e	35e
Permissible pressure p_{2max} at the pump outlet	bar		10	10	10	6	1,5
Nominal capacity QN at p_{2max}	l/h	50/60 Hz	0-1,2	0-2,4	0-7	0-10	0-35
Quantity per stroke	ml/stroke (100%)		0,13	0,27	0,78	1,11	3,89
Max. suction height	mWC		2	2	3	3	3
Min./max. permissible pressure at the pump inlet	bar	$p_{1min/max}$	-0,2/0	-0,2/0	-0,3/0	-0,3/0	-0,3/0
Recommended nominal diameter DN of the connecting pipes	mm		5	5	5	5	10
Nominal stroke frequency	1/min	50/60 Hz	150	150	150	150	150
Weight approx.	kg		4,1	4,1	4,8	4,8	5,1

ELECTRICAL DATA		R 204.1-...e
Middle power draw	W	20
Nominal voltage	V	100 - 240
Frequency	Hz	50/60
Inlet voltage, control input	V DC	5...30
Minimum contact signal time	ms	55
Analogue input resistance	Ω	100
Current Consumption during stroke	A (at 230V)	max. 1,0
Recommended fuse	(circuit breaker)	C2A
Insulation class	ISO	F
Enclosure	IP	65

Flow capacity 1,2 l/h ... 35 l/h
Admissible counterpressure up to 10 bar

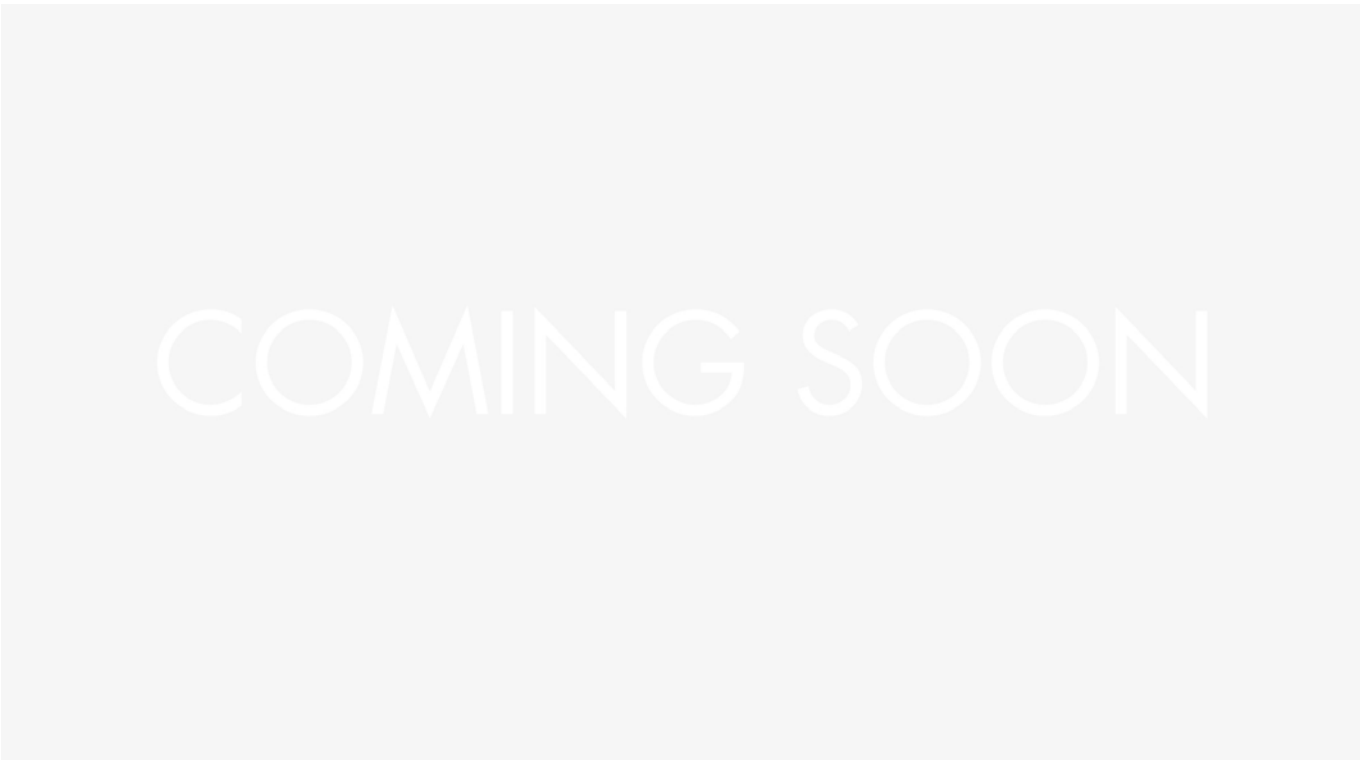
R 204.1

DIMENSIONS



	G		B	L	H		B	L	H		B	L	H
R 204.1-1,2e	G 3/4	PP-/PVDF-GFK	130	305	171	PVC, PP, PVDF	130	275	161	1.4571	130	275	161
R 204.1-2,4e	G 3/4		130	305	171		130	275	161		130	275	161
R 204.1-7,0e	G 3/4		130	305	171		130	275	161		130	275	161
R 204.1-10e	G 3/4		130	305	171		130	275	161		130	275	161
R 204.1-35e	G 3/4		130	275	166		130	275	171		130	275	167

CHARACTERISTIC CURVES



SOLENOID DIAPHRAGM PUMPS

CONTROLLABLE

FUNCTIONS AND OPERATING MODES

- Manual operation
- Manual stroke frequency adjustment (10%, 25%, 50%, 100%)
- External STOP
- Pulse operation 1:1
- Analogue operation (4 ... 20 mA)
- 3 LEDs for status indication
- 2-key operation
- 2 digital inputs (PLC or contact signal)
- 1 analogue input (4 ... 20 mA)
- 2-stage level monitoring
- Voltage 100 - 240 V, 50/60Hz
- 2m connection cable with Euro-plug

BASIC DESIGNS

PP-FRP



Pump body **PP-FRP**

Valves **PP-FRP**

Valve balls **PTFE**

Diaphragm **PTFE-faced**

* with manual venting valve
(Seal: **EPDM** or **FPM**)

Type	EPDM		FPM	
	Article-No.	Price (EUR)	Article-No.	Price (EUR)
R204.1-1,2e*	16009762	⌚	16007649	⌚
R204.1-2,4e*	16007838	⌚	16008838	⌚
R204.1-7,0e*	16008283	⌚	16008006	⌚
R204.1-10e*	16007836	⌚	16007816	⌚
R204.1-35e	16017102	⌚	16015365	⌚

PVC-U



Pump body **PVC-U**

Valves **PVC-U**

Valve balls **PTFE**

Diaphragm **PTFE-faced**

Type	EPDM		FPM	
	Article-No.	Price (EUR)	Article-No.	Price (EUR)
R204.1-1,2e	16010444	⌚	16007312	⌚
R204.1-2,4e	16010445	⌚	16012485	⌚
R204.1-7,0e	16014415	⌚	16012464	⌚
R204.1-10e	16013522	⌚	16008722	⌚
R204.1-35e	15006246	⌚	15006247	⌚

STAINLESS STEEL

Pump body **1.4571**

Valves **1.4571**

Valve balls **1.4401**

Diaphragm **PTFE-faced**

Type	Valve seals	
	FEP-covered Article-No.	Price (EUR)
R204.1-1,2e	15002348	⌚
R204.1-2,4e	15003031	⌚
R204.1-7,0e	15003384	⌚
R204.1-10e	16024904	⌚
R204.1-35e	15005382	⌚

OPTIONS



Special connection

Surcharge (EUR)

Special connection (plug) for power supply



in combination with cTÜVus



Control electronics (version: cTÜVus)

Surcharge (EUR)

Connection voltage: 100V - 120V +/-5%

Frequency: 60Hz

Connection cable: 2m incl. US/CAN plug



ACCESSORIES



Control cable

Article-No. Price (EUR)

for controlling the pump

Cable socket M12, 5-pole fully assembled, incl. 5m cable

90031246



Cable socket M12, 5-pole individually convertible (without cable)

90022878



for level input (level monitoring not included)

Cable socket M12, 3-pole fully assembled, inkl. 5m cable

90031245



Cable socket M12, 3-pole individually convertible (without cable)

90022877



Bracket

for wall mounting (incl. mounting kit)

Article-No. Price (EUR)

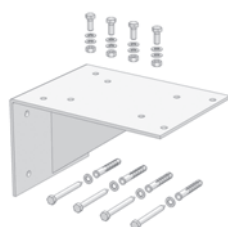
PP

90023844



1.4301

90023872



Connection pieces

Extensive range of connection / transition pieces and dosing hoses

Inserts and pipe sockets with union nuts, flange connections, hose screw connections, hose nozzles as well as dosing hoses and accessories.

to be found in **CHAPTER 4** of this catalog, from **page 442**



SOLENOID DIAPHRAGM PUMPS

CONTROLLABLE

FITTINGS FOR THE SUCTION SIDE



Suction lance S-01 (without level switch)

Properties

- Compact, robust design
- Maintenance-free
- Easy handling
- High-quality materials
- individual special lengths up to max. 1.500mm possible

Basic version

- Suction lance: **PVC-U**
- Foot valve: **PVC-U**
- Seals: **EPDM** or **FPM**
- Valve ball: **PTFE**
- max. flow rate: **200 l/h**
- Standard length: **650mm, 1.000mm und 1.250mm**

Type	Length	Connection	Seals	Article-No.	Price (EUR)
S-01	650 mm	G 3/4	EPDM	37606591	▲
S-01	1.000 mm	G 3/4	EPDM	37606592	▲
S-01	1.250 mm	G 3/4	EPDM	37606593	▲
S-01	max. 1.500 mm	G 3/4	EPDM	37600705	▲
S-01	650 mm	G 3/4	FPM	37606594	▲
S-01	1.000 mm	G 3/4	FPM	37606595	▲
S-01	1.250 mm	G 3/4	FPM	37606596	▲
S-01	max. 1.500 mm	G 3/4	FPM	37600817	▲



Suction lance SL-12.1 (with level switch, 2-stage with plug, 3-pole)

Properties

- Compact design
- Height-adjustable
- 2-stage level monitoring
- Flexible connection
- Easy handling
- High-quality materials
- Maintenance-free
- incl. hose connections 4/6, 6/8, 6/12

Basic version

- Suction lance: **PVC-U**
- Foot valve: **PVC-U**
- Valve ball: **PTFE**
- Hose (inboard): **PE**
- Level switch: **PP**
2-stage, normally closed (NC)
5m cable (from foot valve) with plug, M12, 3-pole
- max. flow rate: **14 l/h (4/6) ... 35 l/h (6/12)**

Type	Length	Seals	Article-No.	Price (EUR)
SL-12.1	600 mm	PTFE	37606120	▲
SL-12.1	1.000 mm	PTFE	37606117	▲
SL-12.1	1.200 mm	PTFE	37606118	▲

FITTINGS FOR THE SUCTION SIDE



Foot valve (Plastic)

Properties

- Compact design
- Easy installation
- High-quality materials
- Maintenance-free

Basic version

- Ball: **PTFE**
- Sieve: **ETFE**
- Mesh size: **1mm**

Type	DN	Connection	Material	Seals	Article-No.	Price (EUR)
781.1	8	G 3/4	PVDF/PVDF-GFK	FEP	30073008	▲



Foot valve (plastic)

Properties

- Compact design
- Easy installation
- High-quality materials
- Maintenance-free

Basic version

- Ball: **PTFE**
- Sieve: **ETFE**
- Mesh size: **1mm**

Type	DN	Connection	Material	Seals	Article-No.	Price (EUR)
731	8	G 3/4	PVC-U	EPDM	37601636	▲



Foot valve (Stainless steel)

Properties

- Compact design
- Easy installation
- High-quality materials
- Maintenance-free

Basic version

- Ball: **1.4401**
- Sieve: **ETFE**
- Mesh size: **1mm**

Type	DN	Connection	Material	Seals	Article-No.	Price (EUR)
731	8	G 3/4	1.4571	FEP	37601149	▲



Multi-function device

Properties

- Can be used as an priming aid and/or an calibration pot
- Compact design
- Flexible Connection
- Maintenance-free
- incl. glue joint (PVC-U) and welding joint (PP)

Basic version

- Housing: **PVC-U / PVC-transparent**
- Seals: **FPM or EPDM**
- max. operating pressure: **-0,5 ... +2 bar**

Type	DN	Connetion	Volume	Seals	Article-No.	Price (EUR)
MFD 60	8	G 3/4	0,5 Ltr.	EPDM	37606311	▲
MFD 60	8	G 3/4	0,5 Ltr.	FPM	37605864	▲

ACCESSORIES

37605682 ▲

SOLENOID DIAPHRAGM PUMPS

CONTROLLABLE

FITTINGS FOR THE PRESSURE SIDE



Flow controller

- IP65
- incl. 0,6m cable with cable socket M12, 5-pole (socket for pump connection)
- max. permissible operating pressure: **10 bar**

Type	Connection thread	Materials	Article-No.	Price (EUR)
R204.1-1,2e, ...-2,4e				
×			×	×
R204.1-7,0e, ...-10e				
8191.1		PVC-U/FPM	37602227	▲
		PP/FPM	37602175	▲
R204.1-35e				
8192.1		PVC-U/FPM	37602176	▲
		PP/FPM	37602177	▲

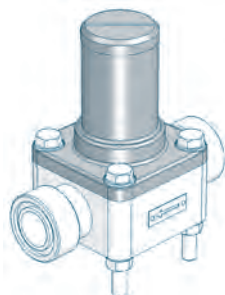


Flow meter

- IP65
- incl. 0,6m cable with cable socket M12, 5-pole (socket for pump connection)
- max. permissible operating pressure: **8 bar**

Type	Connection thread	Materials	Article-No.	Price (EUR)
R204.1-1,2e, ...-2,4e				
×			×	×
R204.1-7,0e, ...-10e				
8010.1		ECTFE/PP/FPM	37602337	▲
		ECTFE/PVC-U/FPM	37602339	▲
		ECTFE/PVDF/FPM	37602341	▲
R204.1-35e				
8011.1		ECTFE/PP/FPM	37602343	▲
		ECTFE/PVC-U/FPM	37602345	▲
		ECTFE/PVDF/FPM	37602348	▲

FITTINGS FOR THE PRESSURE SIDE



Diaphragm relief valve

for overpressure protection

Properties

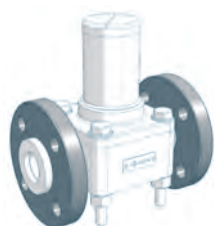
- Compact design
- Easy installation
- Maintenance-free
- High-quality materials

Basic version

- Valve body: **PVC-U, 1.4581, PP or PVDF**
- Diaphragm: **PTFE-faced**

Type	Nominal size	Connection	Valve body	Seals	Article-No.	Price (EUR)
620.10	DN8	G 3/4	PVC-U	FPM	37603632	▲
620.10	DN8	G 3/4	PVC-U	EPDM	36200101	▲
620.10	DN8	G 3/4	PP	FPM	37603630	▲
620.10	DN8	G 3/4	PP	EPDM	37603629	▲
620.10	DN8	G 3/4	PVDF	FEP	37601792	▲
620.10	DN8	G 3/4	1.4581	FEP	37600670	▲

OPTIONS

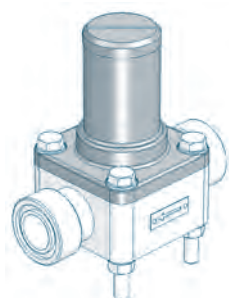


Type	Design	Loose flange	Surcharge [EUR]
620.10	PVC	Loose flange made of PVC-U	②
620.10	PP-FRP/PVDF-FRP	Loose flange made of PP with steel inlay	×
620.10	PP	Loose flange made of PP with steel inlay	▲
620.10	PVDF	Loose flange made of PP with steel inlay	▲

SOLENOID DIAPHRAGM PUMPS

CONTROLLABLE

FITTINGS FOR THE PRESSURE SIDE



Diaphragm pressure keeping valve

to prevent over-conveyance

Properties

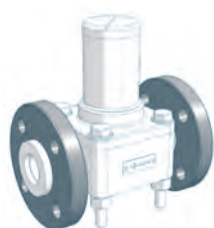
- Compact design
- Easy installation
- Maintenance-free
- High-quality materials

Basic version

- Valve body: **PVC-U, 1.4581, PP or PVDF**
- Diaphragm: **PTFE-faced**

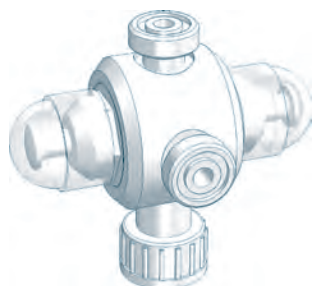
Type	Nominal size	Connection	Valve body	Seals	Article-No.	Price (EUR)
620.D	DN8	G 3/4	PVC-U	FPM	37600048	▲
620.D	DN8	G 3/4	PVC-U	EPDM	36201101	▲
620.D	DN8	G 3/4	PP	FPM	37600055	▲
620.D	DN8	G 3/4	PP	EPDM	36201105	▲
620.D	DN8	G 3/4	PVDF	FEP	37601827	▲
620.D	DN8	G 3/4	1.4581	FEP	37600525	▲

OPTIONS



Type	Design	Loose flange	Surcharge [EUR]
620.D	PVC	Loose flange made of PVC-U	④
620.D	PP-FRP/PVDF-FRP	Loose flange made of PP with steel inlay	×
620.D	PP	Loose flange made of PP with steel inlay	▲
620.D	PVDF	Loose flange made of PP with steel inlay	▲

FITTINGS FOR THE PRESSURE SIDE



Multi function valve

Properties

- Maximum operating pressure 10 bar
- Compact design
- Easy installation
- Maintenance-free
- Venting
- Overpressure protection for dosing pumps
- Prevention of over conveyance

Basic version

- Diaphragms: **PTFE-faced**
- Connection: **G^{3/4}**
- **Relief valve side**
Opening pressure: **2 up to 10 bar** (adjustable)
- **Pressure keeping valve side**
Holding pressure: **1,0 - 1,5 bar**

Type	Valve body	Seals	Article-No.	Price (EUR)
MFV 050	PVC-U	EPDM	37600973	▲
MFV 050	PVC-U	FPM	37600974	▲
MFV 050	PVC-U	FEP	37600975	▲
MFV 050	PP	EPDM	37600982	▲
MFV 050	PP	FPM	37600983	▲
MFV 050	PP	FEP	37600984	▲



Injection fitting

Properties

- incl. injection lance for better mixing
- Easy installation
- Any mounting position
- Maintenance-free
- High-quality materials

Basic version

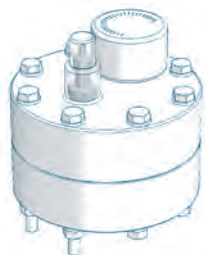
- Cone-type check valve (spring loaded)
- Shut-off ball valve
- Injection lance (L=150mm)
- max. operating pressure: 10 bar

Type	DN	Inlet	Outlet	Material	Seals	Article-No.	Price (EUR)
8061.1	10	G ³ / ₄	R ¹ / ₂	PVC-U	EPDM	37602105	▲
8061.1	10	G ³ / ₄	R ¹ / ₂	PVC-U	FPM	37602106	▲
8061.1	10	G ³ / ₄	R ¹ / ₂	PP	EPDM	37602107	▲
8061.1	10	G ³ / ₄	R ¹ / ₂	PP	FPM	37602108	▲
8061.1	10	G ³ / ₄	R ¹ / ₂	PVDF	FPM	37602109	▲

SOLENOID DIAPHRAGM PUMPS

CONTROLLABLE

FITTINGS FOR THE PRESSURE SIDE



Diaphragm pulsation damper (Plastic, PTFE-diaphragm, max. 10 bar)

Properties

- Any mounting position
- Easy installation
- Long service life
- Easy handling
- High-quality materials
- Low maintenance

Type	Connection	max. Pressure	Material	Diaphragm	Article-No.	Price (EUR)
720.1	G ½	10 bar	PVC-U	PTFE	37601848	▲
720.1	G ½	10 bar	PP	PTFE	37601856	▲
720.1	G ½	10 bar	PVDF	PTFE	37601857	▲

ACCESSORIES

Connection adapter



Thread connection	G3/4 male	PVC-U	EPDM	90021733	▲
Connction to pulsation damper	G1/2 male	PVC-U	FPM	90025079	▲
		PP	EPDM	90038083	▲
		PP	FPM	90038082	▲
		PVDF	FEP	Ⓛ	Ⓛ

Retaining clamp



(2 Piece each pulsation damper)	PP	d 16	90010649	▲
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Filling pump FLP 2 for filling device



with manometer, max. 7 bar incl. 2m hose and coupling for air valve	90009396	▲
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FITTINGS FOR THE PRESSURE SIDE



Diaphragm pulsation damper (Stainless steel, max. 10 bar)

Properties

- Any mounting position
- Easy installation
- Long service life
- Easy handling
- High-quality materials
- Low maintenance

Type	Connection	max.Pressure	Material	Diaphragm	Article-No.	Price (EUR)
810.1-0,16/10	G ½	10 bar	1.4571	Butyl	37603720	▲
810.1-0,16/10	G ½	10 bar	1.4571	FPM	37603724	▲
810.1-0,16/10	G ½	10 bar	1.4571	PTFE	×	×

ACCESSORIES



Filling- and pressure measuring device

(mounted on pulsation damper)

Design: Plastic	Manometer: 0-16 bar Measuring system: copper alloyed	●
Design: Stainless steel	Manometer: 0-16 bar, glycerine-damped Measuring system: copper alloyed Housing: 1.4301	▲



Filling pump FLP 2 for filling device

with manometer, max. 7 bar incl. 2m hose and coupling for air valve	90009396	▲
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SOLENOID DIAPHRAGM PUMPS

CONTROLLABLE

FITTINGS FOR THE PRESSURE SIDE



Dosing valve (Plastic)

Properties

- Compact design
- Any mounting position
- Maintenance-free
- High-quality materials

Basic version

- integrated injection lance
- Valve ball: **PTFE**
- Seals: **EPDM** or **FPM**
- Spring: **Hastelloy C4**

Type	DN	Inlet	Outlet	Material	Seal	Article-No.	Price (EUR)
691.2	8	G ¾	R ½	PVC-U	EPDM	37606318	▲
691.2	8	G ¾	R ½	PVC-U	FPM	37605769	▲
691.2	8	G ¾	R ½	PP-GFK	EPDM	37605768	▲
691.2	8	G ¾	R ½	PP-GFK	FPM	37606317	▲



Dosing valve (Plastic)

Properties

- Compact design
- Any mounting position
- Maintenance-free
- High-quality materials

Basic version

- Valve ball: **PTFE**
- Spring: **Hastelloy C4**

Type	DN	Inlet	Outlet	Material	Seal	Article-No.	Price (EUR)
691.1	8	G ¾	R ½	PVDF/-GFK	FEP	30072015	▲



Dosing valve (Stainless steel)

Properties

- Compact design
- Any mounting position
- Maintenance-free
- High-quality materials

Basic version

- Valve ball: **1.4401**
- Seals: **FEP-covered**
- Spring: **Hastelloy C4**

Type	DN	Inlet	Outlet	Material	Seal	Article-No.	Price (EUR)
691.1	8	G ¾	R ½	1.4571	FEP	37600493	▲

Flow capacity 1,2 l/h ... 35 l/h
Admissible counterpressure up to 10 bar

R 204.1

SOLENOID DIAPHRAGM PUMPS

CONTROLLABLE



OVERVIEW

- Safe to run dry
- Leakage free
- Low maintenance
- User friendly
- High dosing accuracy
- Flexible, multifunctional
- Digital and analogue control
- PROFIBUS DP-Interface (option)
- Manual stroke length- and stroke frequency adjustm.
- Robust, corrosion-resistant housing



TECHNICAL DATA

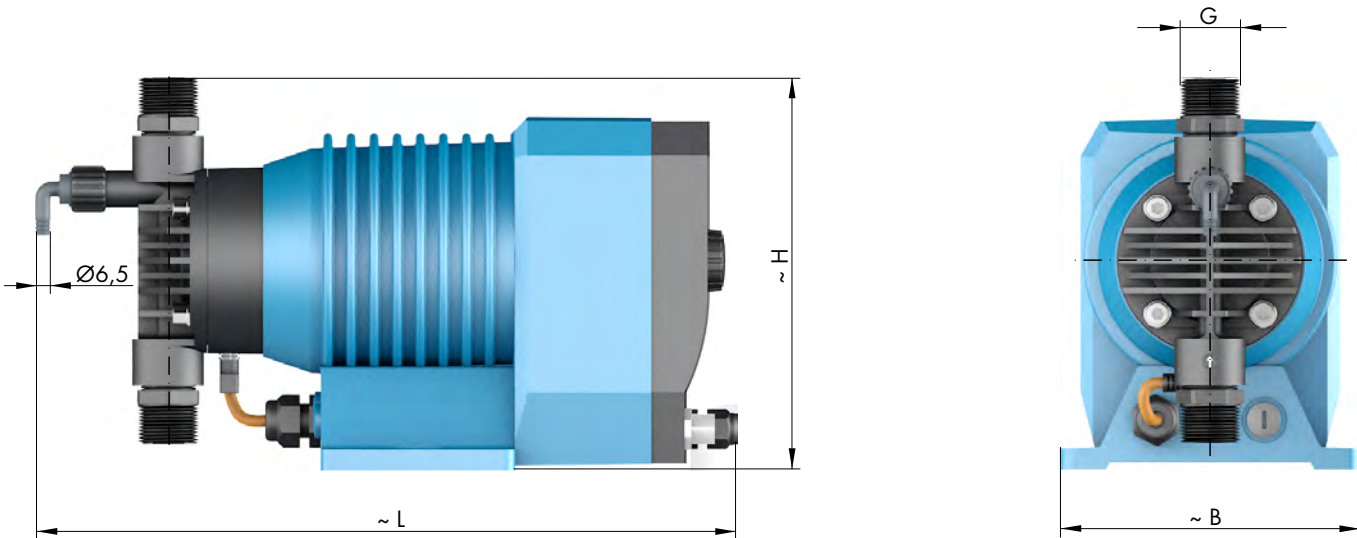
PUMP DATA			C 204.1-...				
			1,2e	2,4e	7,0e	10e	35e
Permissible pressure $p_{2max.}$ at the pump outlet	bar		10	10	10	6	1,5
Nominal capacity QN at $p_{2max.}$	l/h	50/60 Hz	0-1,2	0-2,4	0-7	0-10	0-35
Quantity per stroke	ml/stroke	(100%)	0,13	0,27	0,78	1,11	3,89
Max. suction height	mWC		2	2	3	3	3
Min./max. permissible pressure at the pump inlet	bar	$p_{1min/max.}$	-0,2/0	-0,2/0	-0,3/0	-0,3/0	-0,3/0
Recommended nominal diameter DN of the connecting pipes	mm		5	5	5	5	10
Nominal stroke frequency	1/min	50/60 Hz	150	150	150	150	150
Weight approx.	kg		4,1	4,1	4,8	4,8	5,1

ELECTRICAL DATA		C 204.1-...e
Middle power draw	W	33
Nominal voltage	V	100 - 240
Frequency	Hz	50/60
Inlet voltage, control input	V DC	5...30
Minimum contact signal time	ms	55
Analogue input resistance	Ω	100
Current Consumption during stroke	A (at 230V)	max. 1,0
Digital output internal/external supply		PNP max. 15V DC, 50mA / max. 30V DC, 350mA
Recommended fuse	(circuit breaker)	C2A
Insulation class	ISO	F
Enclosure	IP	65

Flow capacity 1,2 l/h ... 35 l/h
Admissible counterpressure up to 10 bar

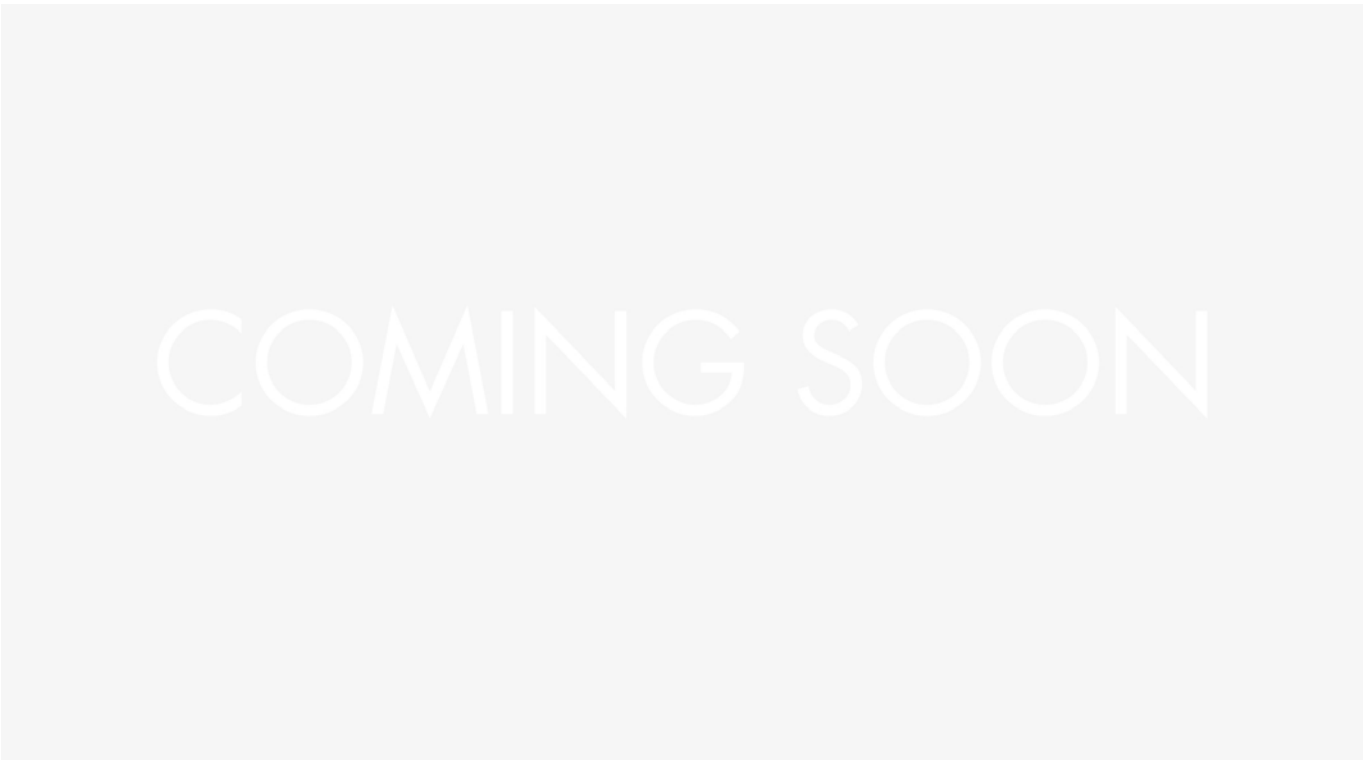
C 204.1

DIMENSIONS



	G		B	L	H		B	L	H		B	L	H
C 204.1-1,2e	G 3/4	PP-/PVDF-GFK	130	305	171	PVC, PP, PVDF	130	275	161	1.4571	130	275	161
C 204.1-2,4e	G 3/4		130	305	171		130	275	161		130	275	161
C 204.1-7,0e	G 3/4		130	305	171		130	275	161		130	275	161
C 204.1-10e	G 3/4		130	305	171		130	275	161		130	275	161
C 204.1-35e	G 3/4		130	275	166		130	275	171		130	275	167

CHARACTERISTIC CURVES



SOLENOID DIAPHRAGM PUMPS

CONTROLLABLE

FUNCTIONS AND OPERATING MODES

- Manual operation
- Manual stroke frequency adjustment
- PROFIBUS DP-VO Slave interface (option)
- External START/STOP
- Pulse operation / fractinator
- Pulse memory
- Analogue operation (0/4 ... 20 mA)*
- Analogue operation standardization
- Batch dosing (manual / with timer)*
- 3 LEDs for status indication
- Multiline, illuminated display
- Menu-driven parameterization
- Flow indication
- Calibration function
- 4-key operation
- 2 digital outputs (PLC)*
- 1 digital output (PLC or contact signal)*
- 2 analogue/digital inputs (reversible)*
- Programmable input/output functions*
- Diaphragm monitoring
- Connection/evaluation: 2-stage level monitoring
- Connection/evaluation: Flow monitoring
- Connection/evaluation: Flow metering
- Voltage 100 - 240 V, 50/60Hz
- 2m connection cable with Euro-plug
- incl. control cable, 8-pole, 5m

* inapplicable when supplied with PROFIBUS DP - interface (Option)

BASIC DESIGNS

PP-FRP

Pump body **PP-FRP**

Valves **PP-FRP**

Valve balls **PTFE**

Diaphragm **PTFE-faced**

* with manual venting valve
(Seal: **EPDM** or **FPM**)



Type	Valve seals			
	EPDM Article-No.	Price (EUR)	FPM Article-No.	Price (EUR)
C204.1-1,2e*	16018708	⌚	16019066	⌚
C204.1-2,4e*	16021043	⌚	16010191	⌚
C204.1-7,0e*	16010708	⌚	16009166	⌚
C204.1-10e*	16016021	⌚	16012364	⌚
C204.1-35e	16021542	⌚	16020675	⌚

PVDF-FRP

Pump body **PVDF-FRP**

Valves **PVDF-FRP**

Valve balls **PTFE**

Diaphragm **PTFE-faced**

* with manual venting valve
(Seal: **FFKM**)

Type	Valve seals		Price (EUR)
	FEP-covered		
	Article-No.		
C204.1-1,2e**	⌚		⌚
C204.1-2,4e**	⌚		⌚
C204.1-7,0e**	⌚		⌚
C204.1-10e**	⌚		⌚
C204.1-35e	15005698		⌚

PVC-U

Pump body **PVC-U**

Valves **PVC-U**

Valve balls **PTFE**

Diaphragm **PTFE-faced**



Type	Valve seals			
	EPDM Article-No.	Price (EUR)	FPM Article-No.	Price (EUR)
C204.1-1,2e	16016100	⌚	16016451	⌚
C204.1-2,4e	16016502	⌚	16012315	⌚
C204.1-7,0e	16015543	⌚	16014969	⌚
C204.1-10e	16017407	⌚	16012316	⌚
C204.1-35e	16023746	⌚	16023747	⌚

STAINLESS STEEL

Pump body **1.4571**

Valves **1.4571**

Valve balls **1.4401**

Diaphragm **PTFE-faced**

Type	Valve seals	Price (EUR)
	FEP-covered Article-No.	
C204.1-1,2e	⌚	⌚
C204.1-2,4e	15005135	⌚
C204.1-7,0e	15004609	⌚
C204.1-10e	15004834	⌚
C204.1-35e	15005721	⌚

OPTIONS



Special connection

Surcharge (EUR)

Special connection (plug) for power supply



in combination with cTÜVus



Control electronics (version: cTÜVus)

Surcharge (EUR)

Connection voltage: 100V - 120V +/-5%

Frequency: 60Hz

Connection cable: 2m incl. US/CAN plug



PROFIBUS

- PROFIBUS DP-V0 (Slave)
- Transmission speed: automatic 9,6 kbit/s ... 12 Mbit/s
- Connection to dosing pump: M12 cable socket, 5-pole, B-coded
- not in combination with cTÜVus

PROFIBUS

Article-No.

Price (EUR)

PROFIBUS DP-V0 (Slave) Interface



Accessories

PROFIBUS Y - distributor, M12x1, 5-pole, IP67

90025526



PROFIBUS T - distributor, M12x1, 5-pole, IP67

90022889



PROFIBUS Cable plug M12x1, straight, individually convertible, 5-pole, IP67

90025520



PROFIBUS Cable socket M12x1, straight, individually convertible, 5-pole, IP67

90025521



PROFIBUS Cable socket M12x1, straight, with 10m line, 2x0,34mm², 1x free cable end, color: purple, IP67

90025524



PROFIBUS Cable socket M12x1, straight, with 15m line, 2x0,34mm², 1x free cable end color: purple, IP67

90025525



PROFIBUS Connection M12x1, straight, with cable plug and cable socket, 2x0,34mm², length 1m, cable 2x0,34mm², color: purple, IP67

90025674



PROFIBUS Bus line 2x 0,64mm², shielded, Permanent installation inside, color: purple (serial meter)

90014541



PROFIBUS Terminating resistor M12x1, 5-polig, IP67

90022890



SOLENOID DIAPHRAGM PUMPS

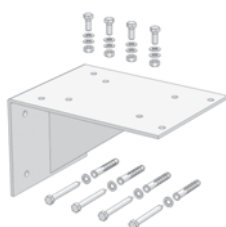
CONTROLLABLE

ACCESSORIES



Control cable

		Article-No.	Price (EUR)
for controlling the pump			
Cable socket M12, 8-pole	fully assembled, incl. 5m cable	90031247	▲
Cable socket M12, 8-pole	individually convertible (without cable)	90022879	▲
for level input (level monitoring not included)			
Cable socket M12, 3-pole	fully assembled, incl. 5m cable	90031245	▲
Cable socket M12, 3-pole	individually convertible (without cable)	90022877	▲



Bracket

	Article-No.	Price (EUR)
for wall mounting (incl. mounting kit)		
PP	90023844	▲
1.4301	90023872	▲



Connection pieces

Extensive range of connection / transition pieces and dosing hoses

Inserts and pipe sockets with union nuts, flange connections, hose screw connections, hose nozzles as well as dosing hoses and accessories.

to be found in **CHAPTER 4** of this catalog, from **page 442**

FITTINGS FOR THE SUCTION SIDE



Suction lance S-01 (without level switch)

Properties

- Compact, robust design
- Maintenance-free
- Easy handling
- High-quality materials
- individual special lengths up to max. 1.500mm possible

Basic version

- Suction lance: **PVC-U**
- Foot valve: **PVC-U**
- Seals: **EPDM** or **FPM**
- Valve ball: **PTFE**
- max. flow rate: **200 l/h**
- Standard length: **650mm, 1.000mm und 1.250mm**

Type	Length	Connection	Seals	Article-No.	Price (EUR)
S-01	650 mm	G ¾	EPDM	37606591	▲
S-01	1.000 mm	G ¾	EPDM	37606592	▲
S-01	1.250 mm	G ¾	EPDM	37606593	▲
S-01	max. 1.500 mm	G ¾	EPDM	37600705	▲
S-01	650 mm	G ¾	FPM	37606594	▲
S-01	1.000 mm	G ¾	FPM	37606595	▲
S-01	1.250 mm	G ¾	FPM	37606596	▲
S-01	max. 1.500 mm	G ¾	FPM	37600817	▲



Suction lance SL-12.1 (with level switch, 2-stage with plug, 3-pole)

Properties

- Compact design
- Height-adjustable
- 2-stage level monitoring
- Flexible connection
- Easy handling
- High-quality materials
- Maintenance-free
- incl. hose connections 4/6, 6/8, 6/12

Basic version

- Suction lance: **PVC-U**
- Foot valve: **PVC-U**
- Valve ball: **PTFE**
- Hose (inboard): **PE**
- Level switch: **PP**
2-stage, normally closed (NC)
5m cable (from foot valve) with plug, M12, 3-pole
- max. flow rate: **14 l/h (4/6) ... 35 l/h (6/12)**

Type	Length	Seals	Article-No.	Price (EUR)
SL-12.1	600 mm	PTFE	37606120	▲
SL-12.1	1.000 mm	PTFE	37606117	▲
SL-12.1	1.200 mm	PTFE	37606118	▲

SOLENOID DIAPHRAGM PUMPS

CONTROLLABLE

FITTINGS FOR THE SUCTION SIDE



Foot valve (Plastic)

Properties

- Compact design
- Easy installation
- High-quality materials
- Maintenance-free

Basic version

- Ball: **PTFE**
- Sieve: **ETFE**
- Mesh size: **1mm**

Type	DN	Connection	Material	Seals	Article-No.	Price (EUR)
781.1	8	G 3/4	PVDF/PVDF-GFK	FEP	30073008	▲



Foot valve (plastic)

Properties

- Compact design
- Easy installation
- High-quality materials
- Maintenance-free

Basic version

- Ball: **PTFE**
- Sieve: **ETFE**
- Mesh size: **1mm**

Type	DN	Connection	Material	Seals	Article-No.	Price (EUR)
731	8	G 3/4	PVC-U	EPDM	37601636	▲



Foot valve (Stainless steel)

Properties

- Compact design
- Easy installation
- High-quality materials
- Maintenance-free

Basic version

- Ball: **1.4401**
- Sieve: **ETFE**
- Mesh size: **1mm**

Type	DN	Connection	Material	Seals	Article-No.	Price (EUR)
731	8	G 3/4	1.4571	FEP	37601149	▲



Multi-function device

Properties

- Can be used as an priming aid and/or an calibration pot
- Compact design
- Flexible Connection
- Maintenance-free
- incl. glue joint (PVC-U) and welding joint (PP)

Basic version

- Housing: **PVC-U / PVC-transparent**
- Seals: **FPM or EPDM**
- max. operating pressure: **-0,5 ... +2 bar**

Type	DN	Connection	Volume	Seals	Article-No.	Price (EUR)
MFD 60	8	G 3/4	0,5 Ltr.	EPDM	37606311	▲
MFD 60	8	G 3/4	0,5 Ltr.	FPM	37605864	▲



ACCESSORIES

Hand vacuum pump	PVC/FPM	37605682	▲
(incl. 1,5m PVC-Hose d=12/21)			

FITTINGS FOR THE PRESSURE SIDE



Flow controller

- IP65
- incl. 0,6m cable with cable socket M12, 5-pole (socket for pump connection)
- max. permissible operating pressure: **10 bar**

Type	Connection thread	Materials	Article-No.	Price (EUR)
C204.1-1,2e ...-2,4e				
✕			✕	✕
C204.1-7,0e, ...-10e				
8191.1	Inlet: G¾ (internal)	PVC-U/FPM	37602227	▲
	Outlet: G¾ (external)	PP/FPM	37602175	▲
C204.1-35e				
8192.1	Inlet: G¾ (internal)	PVC-U/FPM	37602176	▲
	Outlet: G¾ (external)	PP/FPM	37602177	▲



Flow meter

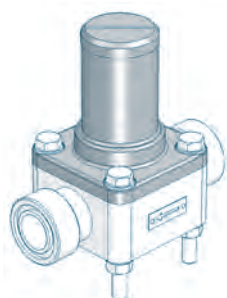
- IP65
- incl. 0,6m cable with cable socket M12, 5-pole (socket for pump connection)
- max. permissible operating pressure: **8 bar**

Type	Connection thread	Materials	Article-No.	Price (EUR)
C204.1-1,2e ...-2,4e				
×			×	×
C204.1-7,0e, ...-10e				
8010.1	Inlet: G¾ (internal) Outlet: G¾ (external)	ECTFE/PP/FPM	37602337	▲
		ECTFE/PVC-U/FPM	37602339	▲
		ECTFE/PVDF/FPM	37602341	▲
C204.1-35e				
8011.1	Inlet: G¾ (internal) Outlet: G¾ (external)	ECTFE/PP/FPM	37602343	▲
		ECTFE/PVC-U/FPM	37602345	▲
		ECTFE/PVDF/FPM	37602348	▲

SOLENOID DIAPHRAGM PUMPS

CONTROLLABLE

FITTINGS FOR THE PRESSURE SIDE



Diaphragm relief valve

for overpressure protection

Properties

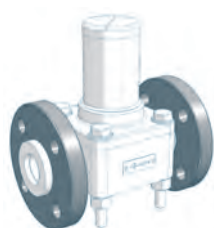
- Compact design
- Easy installation
- Maintenance-free
- High-quality materials

Basic version

- Valve body: **PVC-U, 1.4581, PP or PVDF**
- Diaphragm: **PTFE-faced**

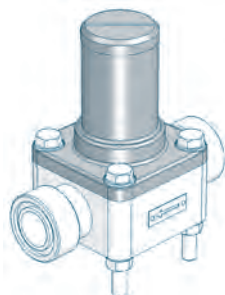
Type	Nominal size	Connection	Valve body	Seals	Article-No.	Price (EUR)
620.10	DN8	G 3/4	PVC-U	FPM	37603632	▲
620.10	DN8	G 3/4	PVC-U	EPDM	36200101	▲
620.10	DN8	G 3/4	PP	FPM	37603630	▲
620.10	DN8	G 3/4	PP	EPDM	37603629	▲
620.10	DN8	G 3/4	PVDF	FEP	37601792	▲
620.10	DN8	G 3/4	1.4581	FEP	37600670	▲

OPTIONS



Type	Design	Loose flange	Surcharge [EUR]
620.10	PVC	Loose flange made of PVC-U	④
620.10	PP-FRP/PVDF-FRP	Loose flange made of PP with steel inlay	×
620.10	PP	Loose flange made of PP with steel inlay	▲
620.10	PVDF	Loose flange made of PP with steel inlay	▲

FITTINGS FOR THE PRESSURE SIDE



Diaphragm pressure keeping valve

to prevent over-conveyance

Properties

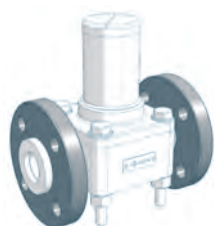
- Compact design
- Easy installation
- Maintenance-free
- High-quality materials

Basic version

- Valve body: **PVC-U, 1.4581, PP or PVDF**
- Diaphragm: **PTFE-faced**

Type	Nominal size	Connection	Valve body	Seals	Article-No.	Price (EUR)
620.D	DN8	G 3/4	PVC-U	FPM	37600048	▲
620.D	DN8	G 3/4	PVC-U	EPDM	36201101	▲
620.D	DN8	G 3/4	PP	FPM	37600055	▲
620.D	DN8	G 3/4	PP	EPDM	36201105	▲
620.D	DN8	G 3/4	PVDF	FEP	37601827	▲
620.D	DN8	G 3/4	1.4581	FEP	37600525	▲

OPTIONS

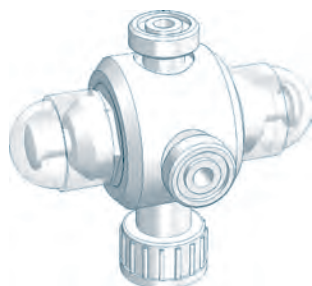


Type	Design	Loose flange	Surcharge [EUR]
620.D	PVC	Loose flange made of PVC-U	②
620.D	PP-FRP/PVDF-FRP	Loose flange made of PP with steel inlay	×
620.D	PP	Loose flange made of PP with steel inlay	▲
620.D	PVDF	Loose flange made of PP with steel inlay	▲

SOLENOID DIAPHRAGM PUMPS

CONTROLLABLE

FITTINGS FOR THE PRESSURE SIDE



Multi function valve

Properties

- Maximum operating pressure 10 bar
- Compact design
- Easy installation
- Maintenance-free
- Venting
- Overpressure protection for dosing pumps
- Prevention of over conveyance

Basic version

- Diaphragms: **PTFE-faced**
- Connection: **G^{3/4}**
- **Relief valve side**
Opening pressure: **2 up to 10 bar** (adjustable)
- **Pressure keeping valve side**
Holding pressure: **1,0 - 1,5 bar**

Type	Valve body	Seals	Article-No.	Price (EUR)
MFV 050	PVC-U	EPDM	37600973	▲
MFV 050	PVC-U	FPM	37600974	▲
MFV 050	PVC-U	FEP	37600975	▲
MFV 050	PP	EPDM	37600982	▲
MFV 050	PP	FPM	37600983	▲
MFV 050	PP	FEP	37600984	▲



Injection fitting

Properties

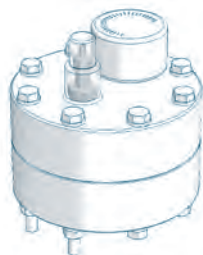
- incl. injection lance for better mixing
- Easy installation
- Any mounting position
- Maintenance-free
- High-quality materials

Basic version

- Cone-type check valve (spring loaded)
- Shut-off ball valve
- Injection lance (L=150mm)
- max. operating pressure: 10 bar

Type	DN	Inlet	Outlet	Material	Seals	Article-No.	Price (EUR)
8061.1	10	G 3/4	R 1/2	PVC-U	EPDM	37602105	▲
8061.1	10	G 3/4	R 1/2	PVC-U	FPM	37602106	▲
8061.1	10	G 3/4	R 1/2	PP	EPDM	37602107	▲
8061.1	10	G 3/4	R 1/2	PP	FPM	37602108	▲
8061.1	10	G 3/4	R 1/2	PVDF	FPM	37602109	▲

FITTINGS FOR THE PRESSURE SIDE



Diaphragm pulsation damper (Plastic, PTFE-diaphragm, max. 10 bar)

Properties

- Any mounting position
- Easy installation
- Long service life
- Easy handling
- High-quality materials
- Low maintenance

Type	Connection	max. Pressure	Material	Diaphragm	Article-No.	Price (EUR)
720.1	G ½	10 bar	PVC-U	PTFE	37601848	▲
720.1	G ½	10 bar	PP	PTFE	37601856	▲
720.1	G ½	10 bar	PVDF	PTFE	37601857	▲

ACCESSORIES

Connection adapter



Thread connection	G3/4 male	PVC-U	EPDM	90021733	▲
Connction to pulsation damper	G1/2 male	PVC-U	FPM	90025079	▲
		PP	EPDM	90038083	▲
		PP	FPM	90038082	▲
		PVDF	FEP	Ⓢ	Ⓢ

Retaining clamp



(2 Piece each pulsation damper)	PP	d 16	90010649	▲
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Filling pump FLP 2 for filling device



with manometer, max. 7 bar incl. 2m hose and coupling for air valve	90009396	▲
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SOLENOID DIAPHRAGM PUMPS

CONTROLLABLE

FITTINGS FOR THE PRESSURE SIDE



Diaphragm pulsation damper (Stainless steel, max. 10 bar)

Properties

- Any mounting position
- Easy installation
- Long service life
- Easy handling
- High-quality materials
- Low maintenance

Type	Connection	max.Pressure	Material	Diaphragm	Article-No.	Price (EUR)
810.1-0,16/10	G ½	10 bar	1.4571	Butyl	37603720	▲
810.1-0,16/10	G ½	10 bar	1.4571	FPM	37603724	▲
810.1-0,16/10	G ½	10 bar	1.4571	PTFE	×	×

ACCESSORIES



Filling- and pressure measuring device

(mounted on pulsation damper)

Design: Plastic	Manometer: 0-16 bar Measuring system: copper alloyed	●
Design: Stainless steel	Manometer: 0-16 bar, glycerine-damped Measuring system: copper alloyed Housing: 1.4301	▲
Filling pump FLP 2	for filling device	
with manometer, max. 7 bar incl. 2m hose and coupling for air valve	90009396	▲



FITTINGS FOR THE PRESSURE SIDE



Dosing valve (Plastic)

Properties

- Compact design
- Any mounting position
- Maintenance-free
- High-quality materials

Basic version

- integrated injection lance
- Valve ball: **PTFE**
- Seals: **EPDM** or **FPM**
- Spring: **Hastelloy C4**

Type	DN	Inlet	Outlet	Material	Seal	Article-No.	Price (EUR)
691.2	8	G ¾	R ½	PVC-U	EPDM	37606318	▲
691.2	8	G ¾	R ½	PVC-U	FPM	37605769	▲
691.2	8	G ¾	R ½	PP-GFK	EPDM	37605768	▲
691.2	8	G ¾	R ½	PP-GFK	FPM	37606317	▲



Dosing valve (Plastic)

Properties

- Compact design
- Any mounting position
- Maintenance-free
- High-quality materials

Basic version

- Valve ball: **PTFE**
- Spring: **Hastelloy C4**

Type	DN	Inlet	Outlet	Material	Seal	Article-No.	Price (EUR)
691.1	8	G ¾	R ½	PVDF/-GFK	FEP	30072015	▲



Dosing valve (Stainless steel)

Properties

- Compact design
- Any mounting position
- Maintenance-free
- High-quality materials

Basic version

- Valve ball: **1.4401**
- Seals: **FEP-covered**
- Spring: **Hastelloy C4**

Type	DN	Inlet	Outlet	Material	Seal	Article-No.	Price (EUR)
691.1	8	G ¾	R ½	1.4571	FEP	37600493	▲

STEPPER MOTOR DIAPHRAGM PUMPS

CONTROLLABLE



OVERVIEW

- Adjustment range 1:1000
- Controlled by a microprocessor
- Flow capacity 50 l/h
- Counterpressure up to 10 bar
- Slow Mode
- Timer- and batch-function
- Intuitive navigation
- Energy-efficient
- Remote control
- Robust, corrosion-resistant housing

TECHNICAL DATA

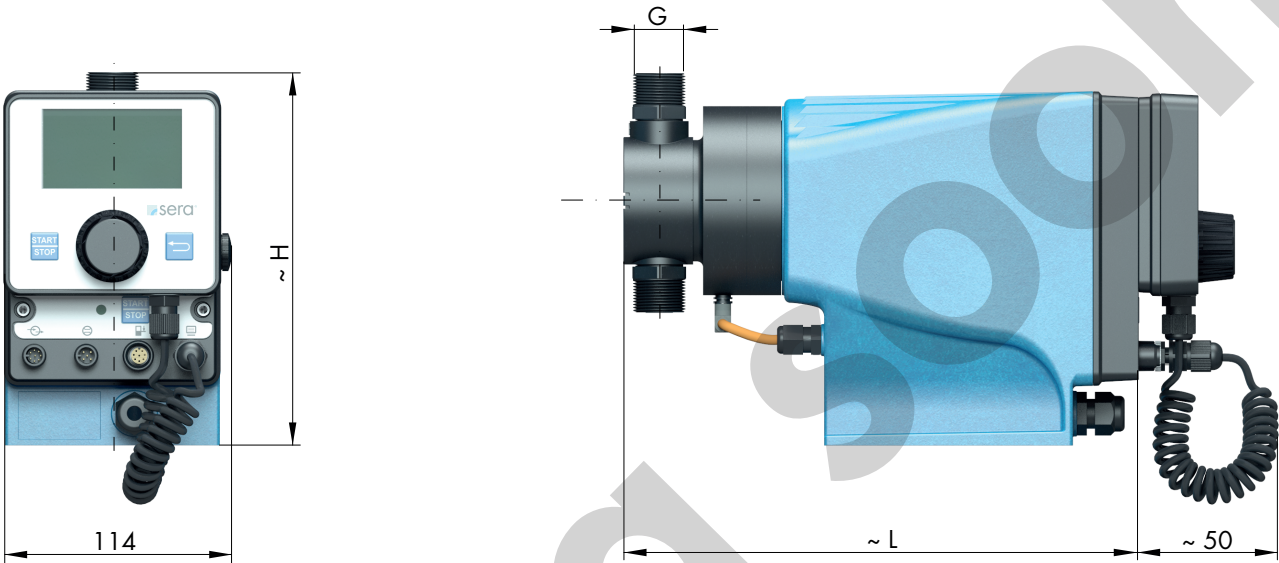
PUMP DATA			iSTEP XS 7	iSTEP XS 15
Permissible pressure $p_{2max.}$ at the pump outlet	bar		10	7
Nominal capacity QN at $p_{2max.}$	l/h		7	15
Capacity min. (1:1000)	l/h		0,007	0,015
Quantity per stroke	ml/Stroke	(100%)	0,61	1,47
Max. suction height	mWS		3	3
Min./max. permissible pressure at the pump inlet	bar	$p_{1min/max}$	-0,3/0,5	-0,3/0,5
Recommended nominal diameter DN of the connecting pipes	mm		3	5
Nominal stroke frequency	1/min		190	170
Weight approx.	kg	plastic	3,6	3,6
		stainless steel	4,0	4,0

ELECTRICAL DATA			iSTEP XS...
Power consumption	W		45
Voltage	V		100 - 240 AC
Frequency	Hz		50/60
Insulation class	ISO		F
Recommended fuse	(circuit breaker)		C10A
Enclosure			
Certifications			

Flow capacity 7 l/h ... 15 l/h
Admissible counterpressure up to 10 bar

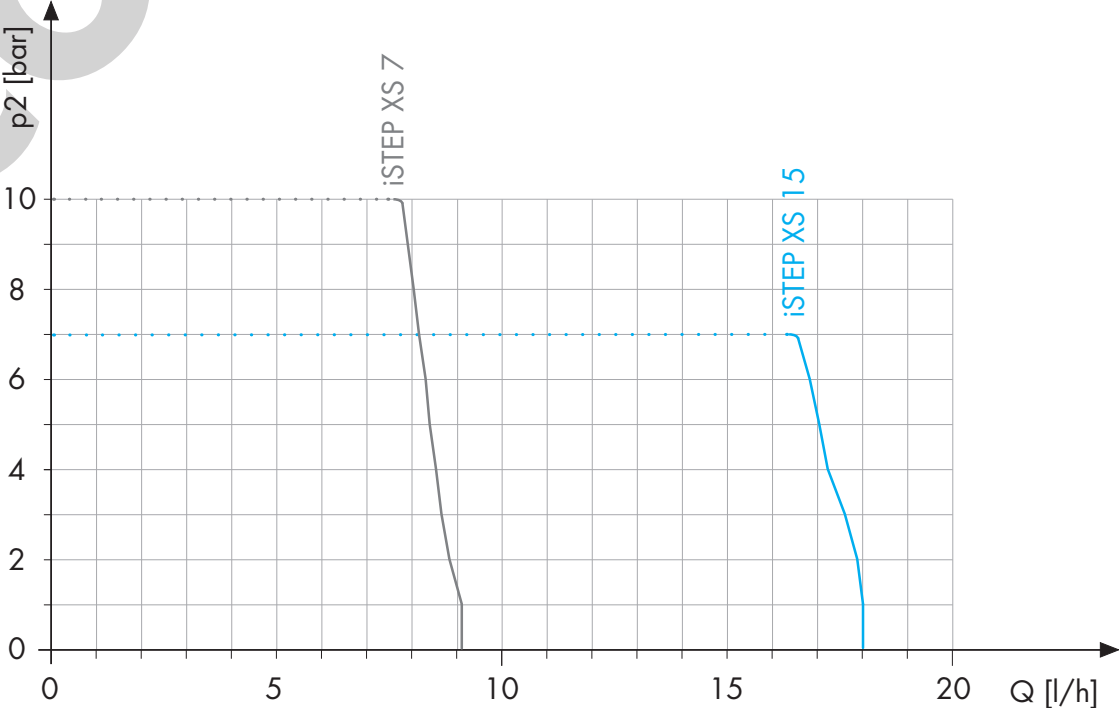
iSTEP

DIMENSIONS



	G		L	H		L	H
iSTEP XS 7	G 3/4	PP PVDF	260	187	PVC 1.4571	260	188
iSTEP XS 15	G 3/4		265	188		264	188

CHARACTERISTIC CURVES



STEPPER MOTOR DIAPHRAGM PUMPS

CONTROLLABLE

FUNCTIONS AND OPERATING MODES

- Extremely wide performance range
- Adjustment range 1:1000 thus optimally adoptable
- Low pulsation dosage
- Drive controlled by microprocessor
- Flexible remote control
- Slow mode for viscous media
- Energy-efficient drive technology
- Batch dosing with recipe memory
- Intuitive menu navigation incl. parameterization
- Pulse division or multiplication
- Weekly/daily timer operation
- 8 languages for the menu (de, en, es, fr, nl, cs, fi, tr)
- Certified accord. to TR (EAC)
- removable graphic display with back light
- 3 Inputs:
3 programmable as digital inputs or
2 programmable as analogue inputs 0/4...20mA
- 2 Digital outputs
- 1 Analogue output for 0/4...20 mA signal
- All outputs are free programmable
- Incl. 5m control cable (8-pole)
- Incl. 2m connection cable with Euro-plug

BASIC DESIGNS

PP				
	XS 7		XS 15	
Pump body	PP		PP-FRP	
Valves	PP		PP-FRP	
Valve balls	Ceramic		PTFE	
Diaphragm	PTFE-faced			
Valve seals				
Type	EPDM	Price	FPM	Price
	Article-No.	(EUR)	Article-No.	(EUR)
iSTEP XS 7	15006847	🕒	15006848	🕒
iSTEP XS 15	15006853	🕒	15006854	🕒

PVDF		
	XS 7	XS 15
Pump body	PVDF-FRP	
Valves	PVDF	
Valve balls	Ceramic	
Diaphragm	PTFE-faced	
	Valve seals	
Type	FEP-covered	Price
	Article-No.	(EUR)
iSTEP XS 7	15006851	⌚
iSTEP XS 15	15006857	⌚

PVC-U				
	XS 7		XS 15	
Pump body			PVC-U	
Valves			PVC-U	
Valve balls	Ceramic		PTFE	
Diaphragm			PTFE-faced	
Valve seals				
Type	EPDM	Price	FPM	Price
	Article-No.	(EUR)	Article-No.	(EUR)
iSTEP XS 7	15006849	🕒	15006850	🕒
iSTEP XS 15	15006855	🕒	15006856	🕒

STAINLESS STEEL		
	XS 7	XS 15
Pump body	1.4571	
Valves	1.4571	1.4571/1.4581
Valve balls	Ceramic	1.4401
Diaphragm	PTFE-faced	
	Valve seals	
Type	FEP-covered	Price
	Article-No.	(EUR)
iSTEP XS 7	15006852	⌚
iSTEP XS 15	15006858	⌚

OPTIONS



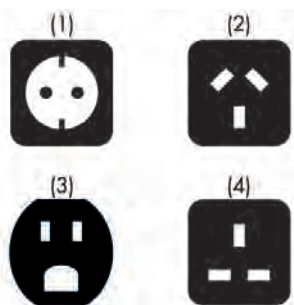
Versions (basic equipment)

Version Price (EUR)

Pump **without** control element (price reduction) ▼

Pump **with** control element (basic version) ●

Pump **without** control element; **with** INTERFACE MODULE
(INTERFACE MODULE instead of control element) ▲



Special connection

● different plug types for different, international standards

Type	Article-No.	Price (EUR)
Plug 1: CEE 7/4 „Euro-plug“	●	●
Plug 2: AS 3112	⌚	⌚
Plug 3: NEMA 5-15, 3-pole	⌚	⌚
Plug 4: BS 1363 „commonwealth-plug“	⌚	⌚

ACCESSORIES



Control element

Article-No. Price (EUR)

Control element (removeable)

90044844

▲

STEPPER MOTOR DIAPHRAGM PUMPS

CONTROLLABLE



INTERFACE MODULE - PROFINET -

- PROFINET INTERFACE MODULE
- PROFINET IO RT 2 Port (Ethernet Network Interface)
- Transmission speed: automatic 10Mbit/s, 100Mbit/s
- Connection to dosing pump: M12 cable socket, 4-pole, D-coded

Type		Article-No.	Price (EUR)
PROFINET INTERFACE MODULE		90044877	▲
PROFINET connection	length 1m	90050133	▲
	length 5m	90050134	▲
	length 10m	90050135	▲
PROFINET Connection	length 1m	90050136	▲
	length 5m	90050137	▲
	length 10m	90050138	▲



INTERFACE MODULE - PROFIBUS -

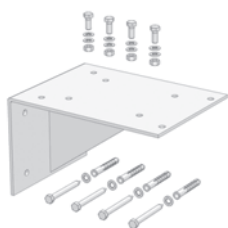
- PROFIBUS INTERFACE MODULE
- PROFIBUS DP-VO (Slave)
- Transmission speed: automatic 9,6 kbit/s ... 12 Mbit/s
- Connection to dosing pump: M12 cable socket, 5-pole, B-coded
- not in combination with cTÜVus

Type		Article-No.	Price (EUR)
PROFIBUS INTERFACE MODULE		90044875	▲
PROFIBUS cable plug M12x1, straight, individually convertible, 5-pole, IP67		90025520	▲
PROFIBUS Cable socket M12x1, straight, individually convertible, 5-pole, IP67		90025521	▲
PROFIBUS Cable socket M12x1, straight, with 10m line, 2x0,34mm², 1x free cable end, color: purple, IP67		90025524	▲
PROFIBUS Cable socket M12x1, straight, with 15m line, 2x0,34mm², 1x free cable end, color: purple, IP67		90025525	▲
PROFIBUS Connection M12x1, straight, with cable plug and cable socket, 2x0,34mm², length 1m, cable 2x0,34mm², color: purple, IP67		90025674	▲
PROFIBUS Bus line 2x 0,64mm², shielded, Permanent installation (inside), color: purple (serial meter)		90014541	▲
PROFIBUS Terminating resistor M12x1, 5-pole, IP67		90022890	▲



Control cable

		Article-No.	Price (EUR)
for level input (flow monitoring not included)			
Cable plug M12, 8-pole	fully assembled, incl. 5m cable	90042494	▲
Cable plug M12, 8-pole	Individually convertible (without cable)	90022885	▲



Bracket

for wall mounting (incl. mounting kit)

Article-No. Price (EUR)

PP

90023849



1.4301

90023876



Connection pieces

Extensive range of connection / transition pieces and dosing hoses

Inserts and pipe sockets with union nuts, flange connections, hose screw connections, hose nozzles as well as dosing hoses and accessories.

to be found in **CHAPTER 4** of this catalog, from **page 442**

FITTINGS FOR THE SUCTION SIDE



Multi-function device

Properties

- Can be used as an priming aid and/or an calibration pot
- Compact design
- Flexible Connection
- Maintenance-free
- incl. glue joint (PVC-U) and welding joint (PP)

Basic version

- Housing: **PVC-U / PVC-transparent**
- Seals: **FPM** or **EPDM**
- max. operating pressure: **-0,5 ... +2 bar**

Type	DN	Connetion	Volume	Seals	Article-No.	Price (EUR)
MFD 60	8	G $\frac{3}{4}$	0,5 Ltr.	EPDM	37606311	▲
MFD 60	8	G $\frac{3}{4}$	0,5 Ltr.	FPM	37605864	▲



ACCESSORIES

Hand vacuum pump

PVC/FPM

37605682



(incl. 1,5m PVC-Hose d=12/21)



Suction lance SL-12.1 (with level switch, 2-stage with plug, 8-pole)

Properties

- Compact design
- Height-adjustable
- 2-stage level monitoring
- Flexible connection
- Easy handling
- High-quality materials
- Maintenance-free
- incl. hose connection 4/6, 6/8, 6/12

Basic version

- Suction lance: **PVC-U**
- Foot valve: **PVC-U**
- Valve ball: **PTFE**
- Hose (inboard): **PE**
- Level swith: **PP**
2-stage, normally closed (NC)
5m cable (from foot valve) with plug, M12, 8-pole
- max. flow rate: **14 l/h (4/6) ... 35 l/h (6/12)**

Type	Length	Seals	Article-No.	Price (EUR)
SL-12.1	600 mm	PTFE	37606194	▲
SL-12.1	1.000 mm	PTFE	37606495	▲
SL-12.1	1.200 mm	PTFE	37606195	▲

STEPPER MOTOR DIAPHRAGM PUMPS

CONTROLLABLE

FITTINGS FOR THE SUCTION SIDE



Foot valve (Plastic)

Properties

- Compact design
- Easy installation
- High-quality materials
- Maintenance-free

Basic version

- Ball: **PTFE**
- Sieve: **ETFE**
- Mesh size: **1mm**

Type	DN	Connection	Material	Seals	Article-No.	Price (EUR)
781.1	8	G 3/4	PVDF/PVDF-GFK	FEP	30073008	▲



Foot valve (plastic)

Properties

- Compact design
- Easy installation
- High-quality materials
- Maintenance-free

Basic version

- Ball: **PTFE**
- Sieve: **ETFE**
- Mesh size: **1mm**

Type	DN	Connection	Material	Seals	Article-No.	Price (EUR)
731	8	G 3/4	PVC-U	EPDM	37601636	▲



Foot valve (Stainless steel)

Properties

- Compact design
- Easy installation
- High-quality materials
- Maintenance-free

Basic version

- Ball: **1.4401**
- Sieve: **ETFE**
- Mesh size: **1mm**

Type	DN	Connection	Material	Seals	Article-No.	Price (EUR)
731	8	G 3/4	1.4571	FEP	37601149	▲

FITTINGS FOR THE SUCTION SIDE



Flow controller

- IP65
- incl. 0,6m cable with cable socket M12, 5-pole (socket for pump connection)
- max. permissible operating pressure: **1 bar**

Type	Connection thread	Materials	Article-No.	Price (EUR)
8291.1	Inlet: G $\frac{3}{4}$ (internal) Outlet: G $\frac{3}{4}$ (external)	PVC-U/EPDM	37606037	▲
		PVC-U/FPM	37605916	▲



Flow meter

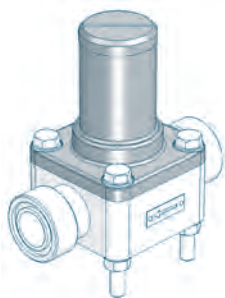
- IP65
- incl. 0,6m cable with cable socket M12, 5-pole (socket for pump connection)
- max. permissible operating pressure: **10 bar**
- can be used on suction and pressure side

Type	Connection thread	Materials	Article-No.	Price (EUR)
8011.1	Inlet: G $\frac{3}{4}$ (internal) Outlet: G $\frac{3}{4}$ (external)	ECTFE/PP/FPM	37602343	▲
		ECTFE/PVC-U/FPM	37602345	▲
		ECTFE/PVDF/FPM	37602348	▲

STEPPER MOTOR DIAPHRAGM PUMPS

CONTROLLABLE

FITTINGS FOR THE PRESSURE SIDE



Diaphragm relief valve

for overpressure protection

Properties

- Compact design
- Easy installation
- Maintenance-free
- High-quality materials

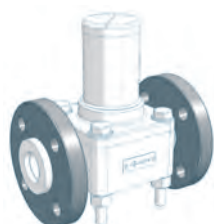
Basic version

- Valve body: **PVC-U, 1.4581, PP or PVDF**
- Diaphragm: **PTFE-faced**

Type	Nominal size	Connection	Valve body	Seals	Article-No.	Price (EUR)
620.10	DN8	G 3/4	PVC-U	FPM	37603632	▲
620.10	DN8	G 3/4	PVC-U	EPDM	36200101	▲
620.10	DN8	G 3/4	PP	FPM	37603630	▲
620.10	DN8	G 3/4	PP	EPDM	37603629	▲
620.10	DN8	G 3/4	PVDF	FEP	37601792	▲
620.10	DN8	G 3/4	1.4581	FEP	37600670	▲

OPTIONS

Type	Design	Loose flange	Surcharge [EUR]
620.10	PVC	Loose flange made of PVC-U	⌚
620.10	PP-FRP/PVDF-FRP	Loose flange made of PP with steel inlay	×
620.10	PP	Loose flange made of PP with steel inlay	▲
620.10	PVDF	Loose flange made of PP with steel inlay	▲



Diaphragm pressure keeping valve

to prevent over-conveyance

Properties

- Compact design
- Easy installation
- Maintenance-free
- High-quality materials

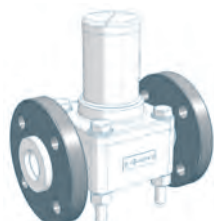
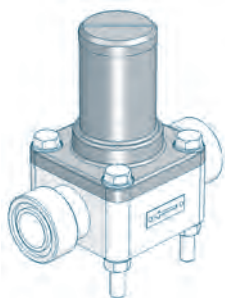
Basic version

- Valve body: **PVC-U, 1.4581, PP or PVDF**
- Diaphragm: **PTFE-faced**

Type	Nominal size	Connection	Valve body	Seals	Article-No.	Price (EUR)
620.D	DN8	G 3/4	PVC-U	FPM	37600048	▲
620.D	DN8	G 3/4	PVC-U	EPDM	36201101	▲
620.D	DN8	G 3/4	PP	FPM	37600055	▲
620.D	DN8	G 3/4	PP	EPDM	36201105	▲
620.D	DN8	G 3/4	PVDF	FEP	37601827	▲
620.D	DN8	G 3/4	1.4581	FEP	37600525	▲

OPTIONS

Type	Design	Loose flange	Surcharge [EUR]
620.D	PVC	Loose flange made of PVC-U	⌚
620.D	PP-FRP/PVDF-FRP	Loose flange made of PP with steel inlay	×
620.D	PP	Loose flange made of PP with steel inlay	▲
620.D	PVDF	Loose flange made of PP with steel inlay	▲



FITTINGS FOR THE PRESSURE SIDE



Dosing valve (Plastic)

Properties

- Compact design
- Any mounting position
- Maintenance-free
- High-quality materials

Basic version

- integrated injection lance
- Valve ball: **PTFE**
- Seals: **EPDM** or **FPM**
- Spring: **Hastelloy C4**

Type	DN	Inlet	Outlet	Material	Seal	Article-No.	Price (EUR)
691.2	8	G ¾	R ½	PVC-U	EPDM	37606318	▲
691.2	8	G ¾	R ½	PVC-U	FPM	37605769	▲
691.2	8	G ¾	R ½	PP-GFK	EPDM	37605768	▲
691.2	8	G ¾	R ½	PP-GFK	FPM	37606317	▲



Dosing valve (Plastic)

Properties

- Compact design
- Any mounting position
- Maintenance-free
- High-quality materials

Basic version

- Valve ball: **PTFE**
- Spring: **Hastelloy C4**

Type	DN	Inlet	Outlet	Material	Seal	Article-No.	Price (EUR)
691.1	8	G ¾	R ½	PVDF/-GFK	FEP	30072015	▲



Dosing valve (Stainless steel)

Properties

- Compact design
- Any mounting position
- Maintenance-free
- High-quality materials

Basic version

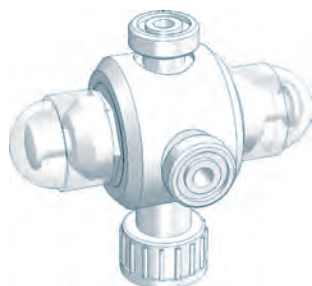
- Valve ball: **1.4401**
- Seals: **FEP-covered**
- Spring: **Hastelloy C4**

Type	DN	Inlet	Outlet	Material	Seal	Article-No.	Price (EUR)
691.1	8	G ¾	R ½	1.4571	FEP	37600493	▲

STEPPER MOTOR DIAPHRAGM PUMPS

CONTROLLABLE

FITTINGS FOR THE PRESSURE SIDE



Multi function valve

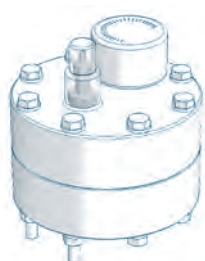
Properties

- Maximum operating pressure 10 bar
- Compact design
- Easy installation
- Maintenance-free
- Venting
- Overpressure protection for dosing pumps
- Prevention of over conveyance

Basic version

- Diaphragms: **PTFE-faced**
- Connection: **G^{3/4}**
- **Relief valve side**
Opening pressure: **2 up to 10 bar** (adjustable)
- **Pressure keeping valve side**
Holding pressure: **1,0 - 1,5 bar**

Type	Valve body	Seals	Article-No.	Price (EUR)
MFV 050	PVC-U	EPDM	37600973	▲
MFV 050	PVC-U	FPM	37600974	▲
MFV 050	PVC-U	FEP	37600975	▲
MFV 050	PP	EPDM	37600982	▲
MFV 050	PP	FPM	37600983	▲
MFV 050	PP	FEP	37600984	▲



Diaphragm pulsation damper (Plastic, PTFE-diaphragm, max. 10 bar)

Properties

- Any mounting position
- Easy installation
- Long service life
- Easy handling
- High-quality materials
- Low maintenance

Type	Connection	max. Pressure	Material	Diaphragm	Article-No.	Price (EUR)
720.1	G ½	10 bar	PVC-U	PTFE	37601848	▲
720.1	G ½	10 bar	PP	PTFE	37601856	▲
720.1	G ½	10 bar	PVDF	PTFE	37601857	▲

ACCESSORIES

Connection adapter

Thread connection G3/4 male
Connction to pulsation damper G1/2 male

PVC-U	EPDM	90021733	▲
PVC-U	FPM	90025079	▲
PP	EPDM	90038083	▲
PP	FPM	90038082	▲
PVDF	FEP	Ⓛ	Ⓛ

Retaining clamp

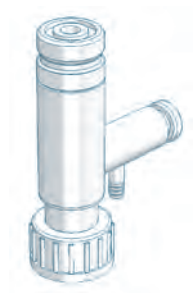
(2 Piece each pulsation damper)	PP	d 16	90010649	▲
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Filling pump FLP 2 for filling device

with manometer, max. 7 bar incl. 2m hose and coupling for air valve	90009396	▲
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FITTINGS FOR THE PRESSURE SIDE



Vent valve

Properties

- Compact design
- Easy installation
- Maintenance-free
- High-quality materials

Basic version

- Valve body: **PVC-U** or **PP**
- Valve ball: **PTFE**
- Seals: **FPM** or **EPDM**
- Connection: **G^{3/4}**
- Vent joint: **Hose nozzle d=6,5mm**

Type	Valve body	Seals	Article-No.	Price (EUR)
8152	PVC-U	EPDM	37605884	▲
8152	PVC-U	FPM	37600531	▲
8152	PP	EPDM	37605885	▲
8152	PP	FPM	37605853	▲

STEPPER MOTOR DIAPHRAGM PUMPS

CONTROLLABLE



OVERVIEW

Adjustment range 1:1000
Controlled by a microproces
Flow capacity 50 l/h
Counterpressure up to 10 bar
Slow Mode
Timer- and batch-function
Intuitive navigation
Energy-efficient
Remote control
Robust, corrosion-resistant housing



TECHNICAL DATA

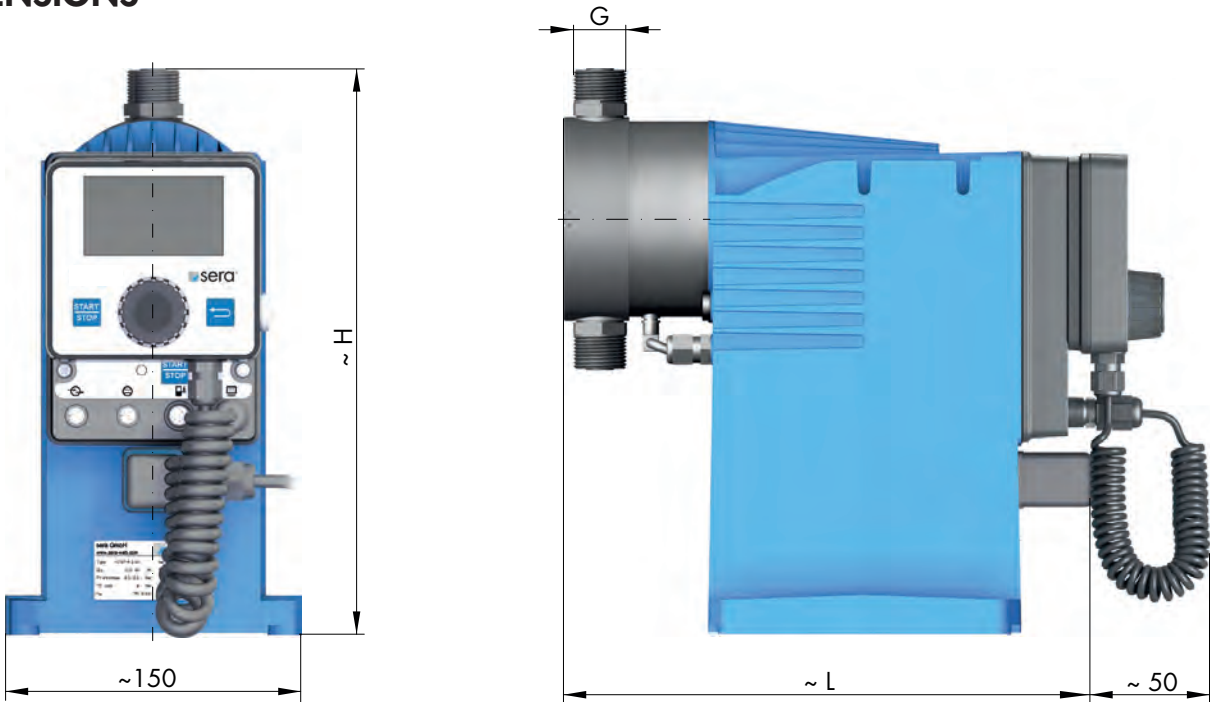
PUMP DATA			iSTEP S 20	iSTEP S 30	iSTEP S 40	iSTEP S 50
Permissible pressure p2max. at the pump outlet	bar		10	7	6	3
Nominal capacity QN at p2 max.	l/h	50/60 Hz	20	30	40	50
Capacity min. (1:1000)	l/h	50/60 Hz	0,02	0,03	0,04	0,05
Capacity min. (1:100)*	l/h	50/60 Hz	0,2	0,3	0,4	0,5
Quantity per stroke	ml/stroke	(100%)	1,75	3,33	3,51	4,39
Max. suction height	mWC		3	3	3	3
Min./max. permissible pressure at the pump inlet	bar	p _{1min/max}	-0,3/0,5	-0,3/0,5	-0,3/0,5	-0,3/0,5
Recommended nominal diameter DN of the connecting pipes	mm		5	5	5	8
Nominal stroke frequency	1/min	50/60 Hz	190	150	190	190
Weight approx.	kg	plastic	7,3	7,3	7,3	7,4
		stainless steel	7,9	8,5	8,5	8,7
		stainless steel (CIP)	9,0	11,7	11,7	11,8

ELECTRICAL DATA		iSTEP S...
Power consumption	W	75
Voltage	V	110 - 240 AC
Frequency	Hz	50/60
Insulation class	ISO	F
Recommended fuse	(circuit breaker)	C10A
Enclosure		IP65
Certifications		CE, TR

Flow capacity 20 l/h ... 50 l/h
 Admissible counterpressure up to 10 bar

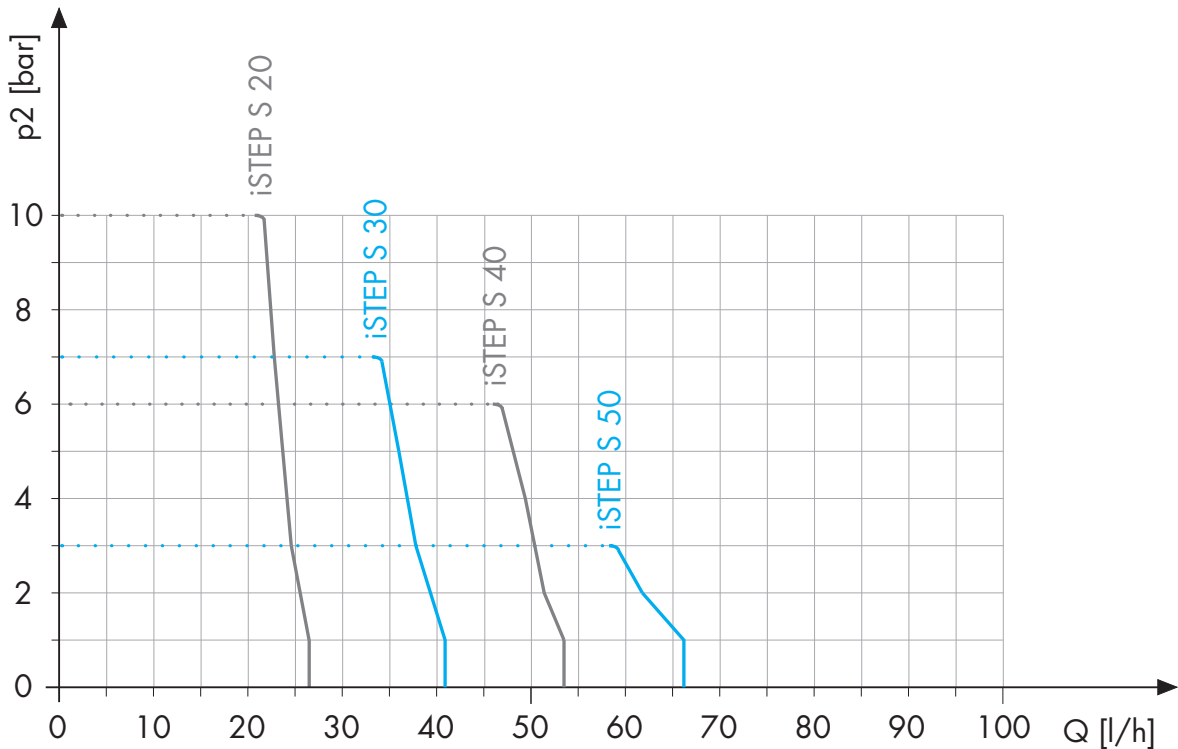
iSTEP

DIMENSIONS



G		PVC, PP, PVDF	L		1.4571	H	
iSTEP S 20	G 3/4		270	275		270	275
iSTEP S 30	G 3/4		275	282		275	282
iSTEP S 40	G 3/4		275	282		275	282
iSTEP S 50	G 3/4		275	286		275	286

CHARACTERISTIC CURVES



STEPPER MOTOR DIAPHRAGM PUMPS

CONTROLLABLE

FUNCTIONS AND OPERATING MODES

- Extremely wide performance range
- Adjustment range 1:1000 thus optimally adaptable
- Low pulsation dosage
- Drive controlled by microprocessor
- Flexible remote control
- Slow mode for viscous media
- Energy-efficient drive technology
- Batch dosing with recipe memory
- Intuitive menu navigation incl. parameterization
- Pulse division or multiplication
- Weekly/daily timer operation
- 8 languages for the menu (de, en, es, fr, nl, cs, fi, tr)
- Certified accord. to TR (EAC)
- removable graphic display with back light
- 3 Inputs:
3 programmable as digital inputs or
2 programmable as analogue inputs 0/4...20mA
- 2 Digital outputs
- 1 Analogue output for 0/4...20 mA signal
- All outputs are free programmable
- Incl. 5m control cable (8-pole)
- Incl. 2m connection cable with Euro-plug

BASIC DESIGNS

PP

Pump body **PP-FRP**
Valves **PP-FRP**
Valve balls **PTFE**
Diaphragm **PTFE-faced**



Type	Valve seals			
	EPDM Article-No.	Price (EUR)	FPM Article-No.	Price (EUR)
iSTEP S20	15004926	⌚	15004923	⌚
iSTEP S30	15004931	⌚	15004922	⌚
iSTEP S40	15005036	⌚	15005025	⌚
iSTEP S50	15004936	⌚	15004776	⌚

PVDF

Pump body **PVDF-FRP**
Valves **PVDF-FRP**
Valve balls **PTFE**
Diaphragm **PTFE-faced**

Type	Valve seals FEP-covered		Price (EUR)
	Article-No.		
iSTEP S20	15005070		⌚
iSTEP S30	15005071		⌚
iSTEP S40	15005072		⌚
iSTEP S50	15005073		⌚

PVC-U

Pump body **PVC-U**
Valves **PVC-U**
Valve balls **PTFE**
Diaphragm **PTFE-faced**



Type	Valve seals			
	EPDM Article-No.	Price (EUR)	FPM Article-No.	Price (EUR)
iSTEP S20	15004928	⌚	15004927	⌚
iSTEP S30	15004933	⌚	15004932	⌚
iSTEP S40	15005038	⌚	15005037	⌚
iSTEP S50	15004938	⌚	15004937	⌚

STAINLESS STEEL

Pump body **1.4571**
Valves **1.4571/1.4581**
Valve balls **1.4401**
Diaphragm **PTFE-faced**

Type	Valve seals FEP-covered		Price (EUR)
	Article-No.		
iSTEP S20	15005067		⌚
iSTEP S30	15005068		⌚
iSTEP S40	15005069		⌚
iSTEP S50	15005066		⌚

OPTIONS



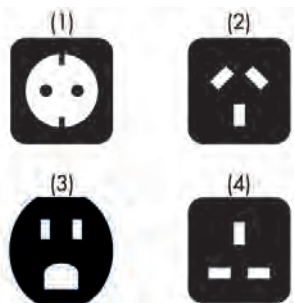
Versions (basic equipment)

Version Price (EUR)

Pump **without** control element (price reduction) ▼

Pump **with** control element (basic version) ●

Pump **without** control element; **with** INTERFACE MODULE
(INTERFACE MODULE instead of control element) ▲



Special connection

● different plug types for different, international standards

Type	Article-No.	Price (EUR)
Plug 1: CEE 7/4 „Euro-plug“	●	●
Plug 2: AS 3112	⌚	⌚
Plug 3: NEMA 5-15, 3-pole	⌚	⌚
Plug 4: BS 1363 „commonwealth-plug“	⌚	⌚

ACCESSORIES



Control element

Article-No. Price (EUR)

Control element (removeable)

90044844

▲

STEPPER MOTOR DIAPHRAGM PUMPS

CONTROLLABLE



INTERFACE MODULE - PROFINET -

- PROFINET INTERFACE MODULE
- PROFINET IO RT 2 Port (Ethernet Network Interface)
- Transmission speed: automatic 10Mbit/s, 100Mbit/s
- Connection to dosing pump: M12 cable socket, 4-pole, D-coded

Type		Article-No.	Price (EUR)
PROFINET INTERFACE MODULE		90044877	▲
PROFINET connection	length 1m	90050133	▲
	length 5m	90050134	▲
	length 10m	90050135	▲
PROFINET Connection	length 1m	90050136	▲
	length 5m	90050137	▲
	length 10m	90050138	▲



INTERFACE MODULE - PROFIBUS -

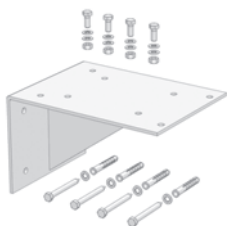
- PROFIBUS INTERFACE MODULE
- PROFIBUS DP-VO (Slave)
- Transmission speed: automatic 9,6 kbit/s ... 12 Mbit/s
- Connection to dosing pump: M12 cable socket, 5-pole, B-coded
- not in combination with cTÜVus

Type		Article-No.	Price (EUR)
PROFIBUS INTERFACE MODULE		90044875	▲
PROFIBUS cable plug M12x1, straight, individually convertible, 5-pole, IP67		90025520	▲
PROFIBUS Cable socket M12x1, straight, individually convertible, 5-pole, IP67		90025521	▲
PROFIBUS Cable socket M12x1, straight, with 10m line, 2x0,34mm², 1x free cable end, color: purple, IP67		90025524	▲
PROFIBUS Cable socket M12x1, straight, with 15m line, 2x0,34mm², 1x free cable end, color: purple, IP67		90025525	▲
PROFIBUS Connection M12x1, straight, with cable plug and cable socket, 2x0,34mm², length 1m, cable 2x0,34mm², color: purple, IP67		90025674	▲
PROFIBUS Bus line 2x 0,64mm², shielded, Permanent installation (inside), color: purple (serial meter)		90014541	▲
PROFIBUS Terminating resistor M12x1, 5-pole, IP67		90022890	▲



Control cable

		Article-No.	Price (EUR)
for level input (flow monitoring not included)			
Cable plug M12, 8-pole	fully assembled, incl. 5m cable	90042494	▲
Cable plug M12, 8-pole	Individually convertible (without cable)	90022885	▲



Bracket

for wall mounting (incl. mounting kit)

Article-No. Price (EUR)

PP

90023849



1.4301

90023876



Connection pieces

Extensive range of connection / transition pieces and dosing hoses

Inserts and pipe sockets with union nuts, flange connections, hose screw connections, hose nozzles as well as dosing hoses and accessories.

to be found in **CHAPTER 4** of this catalog, from **page 442**

FITTINGS FOR THE SUCTION SIDE



Multi-function device

Properties

- Can be used as an priming aid and/or an calibration pot
- Compact design
- Flexible Connection
- Maintenance-free
- incl. glue joint (PVC-U) and welding joint (PP)

Basic version

- Housing: **PVC-U / PVC-transparent**
- Seals: **FPM** or **EPDM**
- max. operating pressure: **-0,5 ... +2 bar**

Type	DN	Connetion	Volume	Seals	Article-No.	Price (EUR)
MFD 60	8	G $\frac{3}{4}$	0,5 Ltr.	EPDM	37606311	▲
MFD 60	8	G $\frac{3}{4}$	0,5 Ltr.	FPM	37605864	▲



ACCESSORIES

Hand vacuum pump	PVC/FPM	37605682	▲
(incl. 1,5m PVC-Hose d=12/21)			



Suction lance SL-12.1 (with level switch, 2-stage with plug, 8-pole)

Properties

- Compact design
- Height-adjustable
- 2-stage level monitoring
- Flexible connection
- Easy handling
- High-quality materials
- Maintenance-free
- incl. hose connection 4/6, 6/8, 6/12

Basic version

- Suction lance: **PVC-U**
- Foot valve: **PVC-U**
- Valve ball: **PTFE**
- Hose (inboard): **PE**
- Level swith: **PP**
2-stage, normally closed (NC)
5m cable (from foot valve) with plug, M12, 8-pole
- max. flow rate: **14 l/h (4/6) ... 35 l/h (6/12)**

Type	Length	Seals	Article-No.	Price (EUR)
iSTEP S20, ...S30				
SL-12.1	600 mm	PTFE	37606194	▲
SL-12.1	1.000 mm	PTFE	37606495	▲
SL-12.1	1.200 mm	PTFE	37606195	▲

STEPPER MOTOR DIAPHRAGM PUMPS

CONTROLLABLE

FITTINGS FOR THE SUCTION SIDE



Suction lance SL-02 (with level switch, 1- or 2-stage with plug, 8-pole)

Properties

- Compact, robust design
- Safe
- Easy handling
- 1-stage level switch
- Flexible connection
- High-quality materials
- Maintenance-free

Basic version

- Suction lance: **PVC-U**
- Foot valve: **PVDF-GFK**
- Valve ball: **PTFE**
- Suction basket: **PP**
- Level switch: **PP**
1- or 2-stage
5m cable (from foot valve) with plug, M12, 8-pole
- max. flow rate: **200 l/h**

Type	Level switch	Length	Connection	Seals	Article-No.	Price (EUR)
iSTEP S40, ...S50						
SL-02	1-stage	630 mm	G ¾	EPDM	37606579	▲
SL-02	1-stage	1.000 mm	G ¾	EPDM	37606581	▲
SL-02	1-stage	1.200 mm	G ¾	EPDM	37606583	▲
SL-02	1-stage	630 mm	G ¾	FPM	37606580	▲
SL-02	1-stage	1.000 mm	G ¾	FPM	37606582	▲
SL-02	1-stage	1.200 mm	G ¾	FPM	37606584	▲
SL-02	2-stage	630 mm	G ¾	EPDM	37606585	▲
SL-02	2-stage	1.000 mm	G ¾	EPDM	37606587	▲
SL-02	2-stage	1.200 mm	G ¾	EPDM	37606589	▲
SL-02	2-stage	630 mm	G ¾	FPM	37606586	▲
SL-02	2-stage	1.000 mm	G ¾	FPM	37606588	▲
SL-02	2-stage	1.200 mm	G ¾	FPM	37605974	▲



ACCESSORIES

Drum connection adapter

Connection	Material	Seal	Article-No.	Price (EUR)
for external thread G=S65x5 DIN2781	PP	EPDM	90011763	▲
	PP	FPM	90011762	▲
for internal thread (set) G=2 fine thread steel drum DIN-ISO 228-1	PP	EPDM	90046044	▲
G=v. Leer/tri-sure BCS 56x4 EN12708	PP	FPM	90046043	▲
for external thread G= DIN51	PP	EPDM	90011767	▲
	PP	FPM	90011766	▲
for wall duct G=2 Wall thickness S=max. 6mm	PP/PVC	EPDM	90011773	▲
	PP/PVC	FPM	90011772	▲
other adapters			Ⓢ	Ⓢ

FITTINGS FOR THE SUCTION SIDE



Foot valve (Plastic)

Properties

- Compact design
- Easy installation
- High-quality materials
- Maintenance-free

Basic version

- Ball: **PTFE**
- Sieve: **ETFE**
- Mesh size: **1mm**

Type	DN	Connection	Material	Seals	Article-No.	Price (EUR)
781.1	8	G 3/4	PVDF/PVDF-GFK	FEP	30073008	▲



Foot valve (plastic)

Properties

- Compact design
- Easy installation
- High-quality materials
- Maintenance-free

Basic version

- Ball: **PTFE**
- Sieve: **ETFE**
- Mesh size: **1mm**

Type	DN	Connection	Material	Seals	Article-No.	Price (EUR)
731	8	G 3/4	PVC-U	EPDM	37601636	▲



Foot valve (Stainless steel)

Properties

- Compact design
- Easy installation
- High-quality materials
- Maintenance-free

Basic version

- Ball: **1.4401**
- Sieve: **ETFE**
- Mesh size: **1mm**

Type	DN	Connection	Material	Seals	Article-No.	Price (EUR)
731	8	G 3/4	1.4571	FEP	37601149	▲

STEPPER MOTOR DIAPHRAGM PUMPS

CONTROLLABLE

FITTINGS FOR THE SUCTION SIDE



Flow controller

- IP65
- incl. 0,6m cable with cable socket M12, 5-pole (socket for pump connection)
- max. permissible operating pressure: **1 bar**

Type	Connection thread	Materials	Article-No.	Price (EUR)
8291.1	Inlet: G $\frac{3}{4}$ (internal) Outlet: G $\frac{3}{4}$ (external)	PVC-U/EPDM	37606037	▲
		PVC-U/FPM	37605916	▲

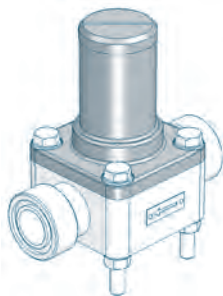


Flow meter

- IP65
- incl. 0,6m cable with cable socket M12, 5-pole (socket for pump connection)
- max. permissible operating pressure: **10 bar**
- can be used on suction and pressure side

Type	Connection thread	Materials	Article-No.	Price (EUR)
iSTEP S20 ... S40				
8011.1	Inlet: G¾ (internal) Outlet: G¾ (external)	ECTFE/PP/FPM	37602343	▲
		ECTFE/PVC-U/FPM	37602345	▲
		ECTFE/PVDF/FPM	37602348	▲
iSTEP S50				
8014.1	Inlet: G¾ (internal) Outlet: G¾ (external)	PVC-U/FPM	37602281	▲
		PVDF/FPM	37602311	▲

FITTINGS FOR THE PRESSURE SIDE



Diaphragm relief valve

for overpressure protection

Properties

- Compact design
- Easy installation
- Maintenance-free
- High-quality materials

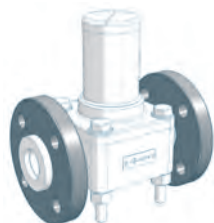
Basic version

- Valve body: **PVC-U, 1.4581, PP or PVDF**
- Diaphragm: **PTFE-faced**

Type	Nominal size	Connection	Valve body	Seals	Article-No.	Price (EUR)
620.10	DN8	G 3/4	PVC-U	FPM	37603632	▲
620.10	DN8	G 3/4	PVC-U	EPDM	36200101	▲
620.10	DN8	G 3/4	PP	FPM	37603630	▲
620.10	DN8	G 3/4	PP	EPDM	37603629	▲
620.10	DN8	G 3/4	PVDF	FEP	37601792	▲
620.10	DN8	G 3/4	1.4581	FEP	37600670	▲

OPTIONS

Type	Design	Loose flange	Surcharge [EUR]
620.10	PVC	Loose flange made of PVC-U	⌚
620.10	PP-FRP/PVDF-FRP	Loose flange made of PP with steel inlay	×
620.10	PP	Loose flange made of PP with steel inlay	▲
620.10	PVDF	Loose flange made of PP with steel inlay	▲



Diaphragm pressure keeping valve

to prevent over-conveyance

Properties

- Compact design
- Easy installation
- Maintenance-free
- High-quality materials

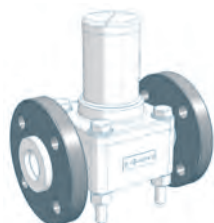
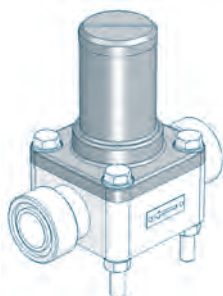
Basic version

- Valve body: **PVC-U, 1.4581, PP or PVDF**
- Diaphragm: **PTFE-faced**

Type	Nominal size	Connection	Valve body	Seals	Article-No.	Price (EUR)
620.D	DN8	G 3/4	PVC-U	FPM	37600048	▲
620.D	DN8	G 3/4	PVC-U	EPDM	36201101	▲
620.D	DN8	G 3/4	PP	FPM	37600055	▲
620.D	DN8	G 3/4	PP	EPDM	36201105	▲
620.D	DN8	G 3/4	PVDF	FEP	37601827	▲
620.D	DN8	G 3/4	1.4581	FEP	37600525	▲

OPTIONS

Type	Design	Loose flange	Surcharge [EUR]
620.D	PVC	Loose flange made of PVC-U	⌚
620.D	PP-FRP/PVDF-FRP	Loose flange made of PP with steel inlay	×
620.D	PP	Loose flange made of PP with steel inlay	▲
620.D	PVDF	Loose flange made of PP with steel inlay	▲



STEPPER MOTOR DIAPHRAGM PUMPS

CONTROLLABLE

FITTINGS FOR THE PRESSURE SIDE



Dosing valve (Plastic)

Properties

- Compact design
- Any mounting position
- Maintenance-free
- High-quality materials

Basic version

- integrated injection lance
- Valve ball: **PTFE**
- Seals: **EPDM** or **FPM**
- Spring: **Hastelloy C4**

Type	DN	Inlet	Outlet	Material	Seal	Article-No.	Price (EUR)
691.2	8	G 3/4	R 1/2	PVC-U	EPDM	37606318	▲
691.2	8	G 3/4	R 1/2	PVC-U	FPM	37605769	▲
691.2	8	G 3/4	R 1/2	PP-GFK	EPDM	37605768	▲
691.2	8	G 3/4	R 1/2	PP-GFK	FPM	37606317	▲



Dosing valve (Plastic)

Properties

- Compact design
- Any mounting position
- Maintenance-free
- High-quality materials

Basic version

- Valve ball: **PTFE**
- Spring: **Hastelloy C4**

Type	DN	Inlet	Outlet	Material	Seal	Article-No.	Price (EUR)
691.1	8	G 3/4	R 1/2	PVDF/-GFK	FEP	30072015	▲



Dosing valve (Stainless steel)

Properties

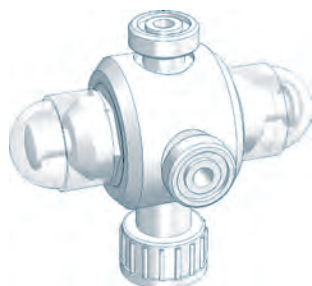
- Compact design
- Any mounting position
- Maintenance-free
- High-quality materials

Basic version

- Valve ball: **1.4401**
- Seals: **FEP-covered**
- Spring: **Hastelloy C4**

Type	DN	Inlet	Outlet	Material	Seal	Article-No.	Price (EUR)
691.1	8	G 3/4	R 1/2	1.4571	FEP	37600493	▲

FITTINGS FOR THE PRESSURE SIDE



Multi function valve

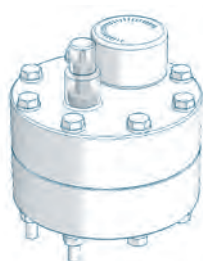
Properties

- Maximum operating pressure 10 bar
- Compact design
- Easy installation
- Maintenance-free
- Venting
- Overpressure protection for dosing pumps
- Prevention of over conveyance

Basic version

- Diaphragms: **PTFE-faced**
- Connection: **G^{3/4}**
- **Relief valve side**
Opening pressure: **2 up to 10 bar** (adjustable)
- **Pressure keeping valve side**
Holding pressure: **1,0 - 1,5 bar**

Type	Valve body	Seals	Article-No.	Price (EUR)
MFV 050	PVC-U	EPDM	37600973	▲
MFV 050	PVC-U	FPM	37600974	▲
MFV 050	PVC-U	FEP	37600975	▲
MFV 050	PP	EPDM	37600982	▲
MFV 050	PP	FPM	37600983	▲
MFV 050	PP	FEP	37600984	▲



Diaphragm pulsation damper (Plastic, PTFE-diaphragm, max. 10 bar)

Properties

- Any mounting position
- Easy installation
- Long service life
- Easy handling
- High-quality materials
- Low maintenance

Type	Connection	max. Pressure	Material	Diaphragm	Article-No.	Price (EUR)
iSTEP S20						
720.1	G ½	10 bar	PVC-U	PTFE	37601848	▲
720.1	G ½	10 bar	PP	PTFE	37601856	▲
720.1	G ½	10 bar	PVDF	PTFE	37601857	▲

ACCESSORIES

Connection adapter

Thread connection	G3/4 male	PVC-U	EPDM	90021733	▲
Connction to pulsation damper	G1/2 male	PVC-U	FPM	90025079	▲
		PP	EPDM	90038083	▲
		PP	FPM	90038082	▲
		PVDF	FEP	Ⓛ	Ⓛ

Retaining clamp

(2 Piece each pulsation damper)	PP	d 16	90010649	▲
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Filling pump FLP 2 for filling device

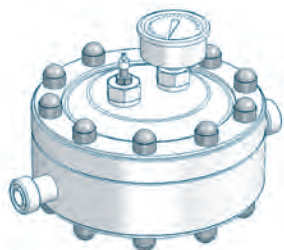
with manometer, max. 7 bar incl. 2m hose and coupling for air valve	90009396	▲
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STEPPER MOTOR DIAPHRAGM PUMPS

CONTROLLABLE

FITTINGS FOR THE PRESSURE SIDE



Diaphragm pulsation damper (Plastic, PTFE(-faced) diaphragm, max. 10 bar)

Properties

- Any mounting position
- Easy installation
- Long service life
- Easy handling
- High-quality materials
- Low maintenance
- Diaphragm: PTFE-faced

Type	Connection	max. Pressure	Material	Seals	Article-No.	Price (EUR)
iSTEP S30, ...S40, ...S50						
721.2	G 3/4	10 bar	PVC-U	EPDM	37602014	▲
721.2	G 3/4	10 bar	PVC-U	FPM	37602013	▲
721.2	G 3/4	10 bar	PP	EPDM	37603419	▲
721.2	G 3/4	10 bar	PP	FPM	37602017	▲
721.2	G 3/4	10 bar	PVDF	FEP	37604046	▲

ACCESSORIES



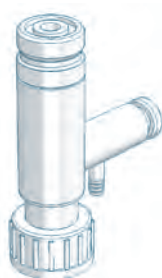
Filling pump FLP 2 for filling device

with manometer, max. 7 bar incl. 2m hose and coupling for air valve	90009396	▲
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Retaining clamp

(2 Piece each pulsation damper)	PP	d 25	90010651	▲
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Vent valve

Properties

- Compact design
- Easy installation
- Maintenance-free
- High-quality materials

Basic version

- Valve body: **PVC-U** or **PP**
- Valve ball: **PTFE**
- Seals: **FPM** or **EPDM**
- Connection: **G3/4**
- Vent joint: **Hose nozzle d=6,5mm**

Type	Valve body	Seals	Article-No.	Price (EUR)
8152	PVC-U	EPDM	37605884	▲
8152	PVC-U	FPM	37600531	▲
8152	PP	EPDM	37605885	▲
8152	PP	FPM	37605853	▲

Flow capacity 20 l/h ... 50 l/h
Admissible counterpressure up to 10 bar

iSTEP

DIAPHRAGM PUMPS

CONTROLLABLE



OVERVIEW

High dosing accuracy
Safe to run dry
Leakage free
Low-maintenance
User-friendly
Flexible, multifunctional
PROFIBUS DP-Interface
Digital and analogue control options
Manual stroke length- and stroke frequency adjustment
Robust, metallic housing



TECHNICAL DATA

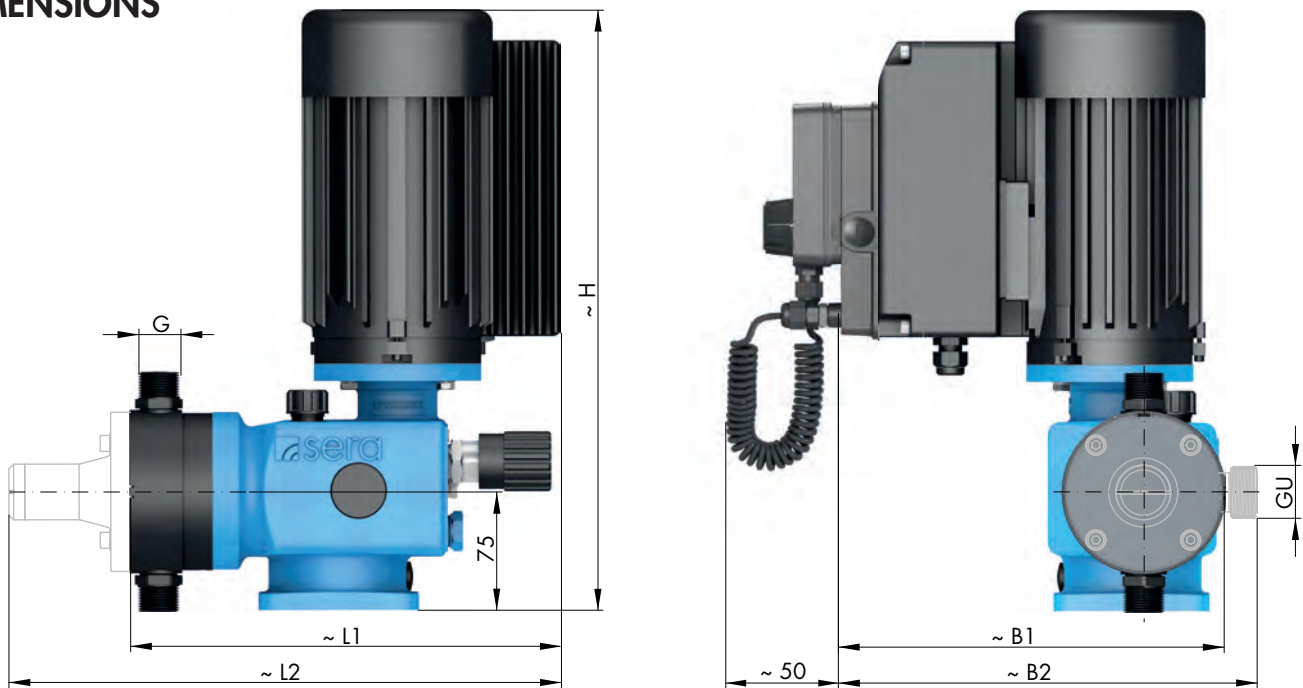
PUMP DATA			C 409.2-... Pro+					
			1,6e	2,4e	7,0e	12e	18e	25e
Permissible pressure $p_{2max.}$ at the pump outlet	bar		10	10	10	10	10	10
Nominal capacity QN at $p_{2max.}$	l/h	50/60 Hz	0-1,6	0-2,4	0-7	0-12	0-18	0-25
Quantity per stroke	ml/stroke (100%)		0,27	0,27	0,78	3,0	3,0	3,0
Max. suction height	mWC		3					
Min./max. permissible pressure at the pump inlet	bar	$p_{1min/max}$	-0,3/0					
Recomm. nominal diameter DN of the connecting pipes	mm		10	10	10	10	10	10
Nominal stroke frequency	1/min	50/60 Hz	100	150	150	67	100	150
Weight approx.	kg	plastic	11	11	11	11	11	8,5
		stainless st.						

ELECTRICAL DATA		C 409.2-1,6e Pro+ ... C 409.2-25e Pro+	
		230 V, 50/60 Hz	115 V, 50/60 Hz
Power consumption	kW	0,18	
Voltage	V	210 - 250	100 - 125
Frequency	Hz	50/60	
Inlet voltage, control input	V DC	5...30	
Minimum contact signal time	ms	55	
Analogue input resistance	Ω	39	
Digital output internal/external supply		PNP max. 24V DC, 30mA / max. 30V DC, 30mA	
Recommended fuse (circuit breaker)		C6A	C10A
Insulation class	ISO	F	
Enclosure	IP	55	

Flow capacity 1,6 l/h ... 25 l/h
Admissible counterpressure up to 10 bar

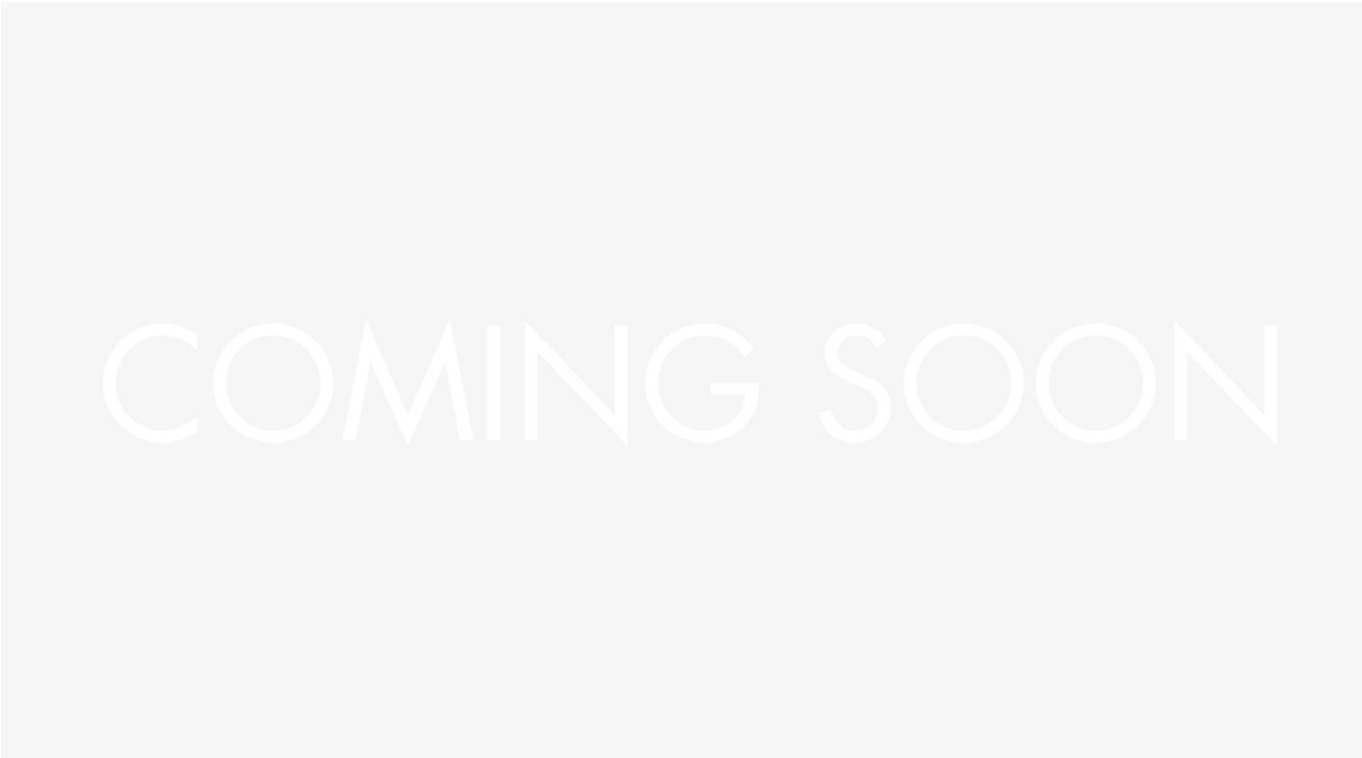
C 409.2 Pro+

DIMENSIONS



	G	GU		B1	B2	L1	L2	H		B1	B2	L1	L2	H
C 409.2-1,6e	G 3/4	G 3/4		261	X		X	380			X		X	380
C 409.2-2,4e	G 3/4	G 3/4		261	X		X	380		261	X		X	380
C 409.2-7,0e	G 3/4	G 3/4		261	X		X	380		261	X		X	380
C 409.2-12e	G 3/4	G 3/4		261		250		380	1.4571	261		250		380
C 409.2-18e	G 3/4	G 3/4		261		270		342		261		270		380
C 409.2-25e	G 3/4	G 3/4		261	261	270	329	342		261	266	268	329	342

CHARACTERISTIC CURVES



DIAPHRAGM PUMPS

CONTROLLABLE

FUNCTIONS AND OPERATING MODES

- Manual operation
- Manual stroke frequency adjustment
- PROFIBUS DP-VO Slave interface (option)
- External START/STOP
- Pulse operation / fractinator
- Pulse memory
- Analogue operation (0/4 ... 20 mA)
- Analogue operation standardization
- Batch dosing (manual / with timer)
- 3 LEDs for status indication
- Multiline, illuminated display
- Menu-driven parameterization
- Flow indication
- Calibration function
- 4-key operation
- 2 digital outputs (PLC)
- 1 analogue output (PLC or contact signal)
- 2 analogue/digital inputs (reversible)
- 1 digital input
- Programmable input/output functions
- Diaphragm monitoring
- Connection/evaluation: 2-stage level monitoring
- Connection/evaluation: Flow monitoring
- Connection/evaluation: Flow metering
- Voltage 210-250V, 50/60Hz
- 3m connection cable with Euro-plug

BASIC DESIGNS

PP-FRP

Pump body **PP-FRP**
Valves **PP-FRP**
Valve balls **PTFE**
Diaphragm **PTFE-faced**



* with manual venting valve
(Seal: **EPDM** or **FPM**)

Type	Valve seals			
	EPDM Article-No.	Price (EUR)	FPM Article-No.	Price (EUR)
C409.2-1,6e Pro+ *	15006426	⌚	15006241	⌚
C409.2-2,4e Pro+ *	15006427	⌚	15006239	⌚
C409.2-7,0e Pro+	15006428	⌚	15006175	⌚
C409.2-12e Pro+	15006415	⌚	15006234	⌚
C409.2-18e Pro+	15006362	⌚	15006236	⌚
C409.2-25e Pro+	16024200	⌚	15005801	⌚

PVDF-FRP

Pump body **PVDF-FRP** ** with manual venting valve
Valves **PVDF-FRP** (Seal: **FFKM**)
Valve balls **PTFE**
Diaphragm **PTFE-faced**

Type	Valve seals	
	FEP-covered Article-No.	Price (EUR)
C409.2-1,6e Pro+ **	×	×
C409.2-2,4e Pro+ **	×	×
C409.2-7,0e Pro+	⌚	⌚
C409.2-12e Pro+	⌚	⌚
C409.2-18e Pro+	⌚	⌚
C409.2-25e Pro+	16024394	⌚

PVC-U

Pump body **PVC-U**
Valves **PVC-U**
Valve balls **PTFE**
Diaphragm **PTFE-faced** (* **EPDM**)



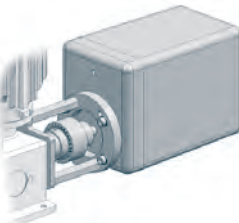
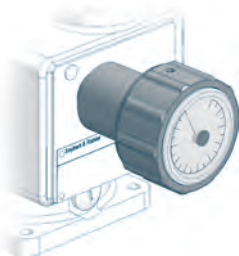
Type	Valve seals			
	EPDM Article-No.	Price (EUR)	FPM Article-No.	Price (EUR)
C409.2-1,6e Pro+	15006435	⌚	15006436	⌚
C409.2-2,4e Pro+	15006437	⌚	15006438	⌚
C409.2-7,0e Pro+	15006434	⌚	15006433	⌚
C409.2-12e Pro+	15006431	⌚	15006432	⌚
C409.2-18e Pro+	15006430	⌚	15006317	⌚
C409.2-25e Pro+	15005985	⌚	15005988	⌚

STAINLESS STEEL

Pump body **1.4571**
Valves **1.4571**
Valve balls **1.4401**
Diaphragm **PTFE-faced** (* **EPDM**)

Type	Valve seals	
	FEP-covered Article-No.	Price (EUR)
C409.2-1,6e Pro+	15006575	⌚
C409.2-2,4e Pro+	15006590	⌚
C409.2-7,0e Pro+	⌚	⌚
C409.2-12e Pro+	⌚	⌚
C409.2-18e Pro+	15006568	⌚
C409.2-25e Pro+	16024419	⌚

OPTIONS



Versions (basic equipment)

Version	Price (EUR)
Pump without control element (price reduction)	▼
Pump with control element (basic version)	●
Pump without control element; with INTERFACE MODULE (INTERFACE MODULE instead of control element)	▲

Stroke length adjustment

	Surcharge (EUR)
with position indicator	▲

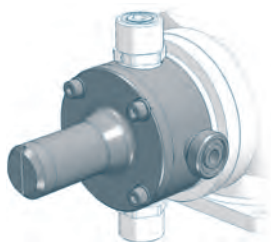
Stroke length adjustment with actuator

	Surcharge (EUR)
C409.2-1,6e ...-2,4e	
Actuator	×
C409.2-7,0e ... C409.2-25e	
Actuator N C1-BA	230V ±10%, 50/60Hz, 128s/10 U, 1,5Nm incl. mountig set ▲
Electronic positioning controller ESR-N (only integrated in N C1-BA)	Input signal 0/4 - 20mA including feedback signal 0/4 - 20mA ▲
in combination with cTÜVus	

DIAPHRAGM PUMPS

CONTROLLABLE

OPTIONS



Integrated relief valve

Diaphragm: **PTFE-faced** Connecting seals: **EPDM** or **FPM** **Surcharge (EUR)**

PP 	C409.2-1,6e, ...-2,4e	×
	C409.2-4,0e, ...-7,0e, ...-12e, ...-18e, ...-25e	▲
PVDF	C409.2-1,6e, ...-2,4e	×
	C409.2-4,0e, ...-7,0e, ...-12e, ...-18e, ...-25e	⌚
PVC-U 	C409.2-1,6e, ...-2,4e	×
	C409.2-4,0e, ...-7,0e, ...-12e, ...-18e, ...-25e	▲
1.4571	C409.2-1,6e, ...-2,4e	×
	C409.2-4,0e, ...-7,0e, ...-12e, ...-18e, ...-25e	▲

Connecting seals **FEP-covered**

for connection G 3/4	C409.2-...e	▲
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Drive motor

Surcharge (EUR)

Connection voltage 115V, 50/60Hz	⌚
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Special connection

Surcharge (EUR)

Special connection (plug) for power supply	⌚
in combination with cTÜVus	×



ACCESSORIES



Control element

Article-No. Price (EUR)

Control element (removeable)	90044844	▲
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Control cable

Article-No. Price (EUR)

for level input (flow monitoring not included)

Cable plug M12, 8-pole	fully assembled, incl. 5m cable	90042494	▲
Cable plug M12, 8-pole	Individually convertible (without cable)	90022885	▲





INTERFACE MODULE - PROFINET -

- PROFINET INTERFACE MODULE
- PROFINET IO RT 2 Port (Ethernet Network Interface)
- Transmission speed: automatic 10Mbit/s, 100Mbit/s
- Connection to dosing pump: M12 cable socket, 4-pole, D-coded

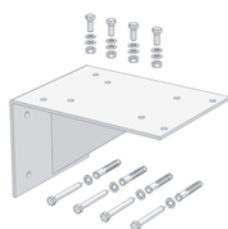
Type		Article-No.	Price (EUR)
PROFINET INTERFACE MODULE		90044877	▲
PROFINET connection	length 1m	90050133	▲
	length 5m	90050134	▲
	length 10m	90050135	▲
PROFINET Connection	length 1m	90050136	▲
	length 5m	90050137	▲
	length 10m	90050138	▲



INTERFACE MODULE - PROFIBUS -

- PROFIBUS INTERFACE MODULE
- PROFIBUS DP-V1 (Slave)
- Transmission speed: automatic 9,6 kbit/s ... 12 Mbit/s
- Connection to dosing pump: M12 cable socket, 5-pole, B-coded

Type		Article-No.	Price (EUR)
PROFIBUS INTERFACE MODULE		90044875	▲
PROFIBUS cable plug M12x1, straight, individually convertible, 5-pole, IP67		90025520	▲
PROFIBUS Cable socket M12x1, straight, individually convertible, 5-pole, IP67		90025521	▲
PROFIBUS Cable socket M12x1, straight, with 10m line, 2x0,34mm ² , 1x free cable end, color: purple, IP67		90025524	▲
PROFIBUS Cable socket M12x1, straight, with 15m line, 2x0,34mm ² , 1x free cable end, color: purple, IP67		90025525	▲
PROFIBUS Connection M12x1, straight, with cable plug and cable socket, 2x0,34mm ² , length 1m, cable 2x0,34mm ² , color: purple, IP67		90025674	▲
PROFIBUS Bus line 2x 0,64mm ² , shielded, Permanent installation (inside), color: purple (serial meter)		90014541	▲
PROFIBUS Terminating resistor M12x1, 5-pole, IP67		90022890	▲



Bracket

	Article-No.	Price (EUR)
for wall mounting (incl. mounting kit)		
PP	90023848	▲
1.4301	90023875	▲

DIAPHRAGM PUMPS

CONTROLLABLE

FITTINGS FOR THE SUCTION SIDE



Multi-function device

Properties

- Can be used as an priming aid and/or an calibration pot
- Compact design
- Flexible Connection
- Maintenance-free
- incl. glue joint (PVC-U) and welding joint (PP)

Basic version

- Housing: **PVC-U / PVC-transparent**
- Seals: **FPM** or **EPDM**
- max. operating pressure: **-0,5 ... +2 bar**

Type	DN	Connetion	Volume	Seals	Article-No.	Price (EUR)
MFD 60	8	G $\frac{3}{4}$	0,5 Ltr.	EPDM	37606311	▲
MFD 60	8	G $\frac{3}{4}$	0,5 Ltr.	FPM	37605864	▲



ACCESSORIES

Hand vacuum pump	PVC/FPM (incl. 1,5m PVC-Hose d=12/21)	37605682	▲
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Suction lance S-01 (without level switch)

Properties

- Compact, robust design
- Maintenance-free
- Easy handling
- High-quality materials
- individual special lengths up to max. 1.500mm possible

Basic version

- Suction lance: **PVC-U**
- Foot valve: **PVC-U**
- Seals: **EPDM** or **FPM**
- Valve ball: **PTFE**
- max. flow rate: **200 l/h**
- Standard length: **650mm, 1.000mm und 1.250mm**

Type	Length	Connection	Seals	Article-No.	Price (EUR)
S-01	650 mm	G $\frac{3}{4}$	EPDM	37606591	▲
S-01	1.000 mm	G $\frac{3}{4}$	EPDM	37606592	▲
S-01	1.250 mm	G $\frac{3}{4}$	EPDM	37606593	▲
S-01	max. 1.500 mm	G $\frac{3}{4}$	EPDM	37600705	▲
S-01	650 mm	G $\frac{3}{4}$	FPM	37606594	▲
S-01	1.000 mm	G $\frac{3}{4}$	FPM	37606595	▲
S-01	1.250 mm	G $\frac{3}{4}$	FPM	37606596	▲
S-01	max. 1.500 mm	G $\frac{3}{4}$	FPM	37600817	▲

FITTINGS FOR THE SUCTION SIDE



Suction lance SL-12.1 (with level switch, 2-stage with plug, 8-pole)

Properties

- Compact design
- Height-adjustable
- 2-stage level monitoring
- Flexible connection
- Easy handling
- High-quality materials
- Maintenance-free
- incl. hose connection
4/6, 6/8, 6/12

Basic version

- Suction lance: **PVC-U**
- Foot valve: **PVC-U**
- Valve ball: **PTFE**
- Hose (inboard): **PE**
- Level switch: **PP**
2-stage, normally closed (NC)
5m cable (from foot valve) with plug, M12, 8-pole
- max. flow rate: **14 l/h** (4/6) ... **35 l/h** (6/12)

Type	Length	Seals	Article-No.	Price (EUR)
SL-12.1	600 mm	PTFE	37606194	▲
SL-12.1	1.000 mm	PTFE	37606495	▲
SL-12.1	1.200 mm	PTFE	37606195	▲



Foot valve (Plastic)

Properties

- Compact design
- Easy installation
- High-quality materials
- Maintenance-free

Basic version

- Ball: **PTFE**
- Sieve: **ETFE**
- Mesh size: **1mm**

Type	DN	Connection	Material	Seals	Article-No.	Price (EUR)
781.1	8	G 3/4	PVDF/PVDF-GFK	FEP	30073008	▲



Foot valve (plastic)

Properties

- Compact design
- Easy installation
- High-quality materials
- Maintenance-free

Basic version

- Ball: **PTFE**
- Sieve: **ETFE**
- Mesh size: **1mm**

Type	DN	Connection	Material	Seals	Article-No.	Price (EUR)
731	8	G 3/4	PVC-U	EPDM	37601636	▲



Foot valve (Stainless steel)

Properties

- Compact design
- Easy installation
- High-quality materials
- Maintenance-free

Basic version

- Ball: **1.4401**
- Sieve: **ETFE**
- Mesh size: **1mm**

Type	DN	Connection	Material	Seals	Article-No.	Price (EUR)
731	8	G 3/4	1.4571	FEP	37601149	▲

DIAPHRAGM PUMPS

CONTROLLABLE

FITTINGS FOR THE PRESSURE SIDE



Flow controller

- IP65
- incl. 0,6m cable with cable socket M12, 5-pole (socket for pump connection)
- max. permissible operating pressure: **10 bar**

Type	Connection thread	Materials	Article-No.	Price (EUR)
C409.2-1,6e, ...-2,4e, ...-7,0e, ...-12e				
8191.1	Inlet: G¾ (internal)	PVC-U/FPM	37602227	▲
	Outlet: G¾ (external)	PP/FPM	37602175	▲
C409.2-18e, ...-25e				
8192.1	Inlet: G¾ (internal)	PVC-U/FPM	37602176	▲
	Outlet: G¾ (external)	PP/FPM	37602177	▲

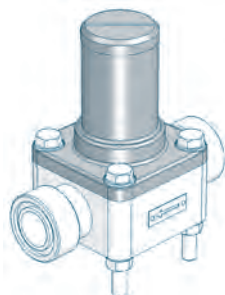


Flow meter

- IP65
- incl. 0,6m cable with cable socket M12, 5-pole (socket for pump connection)
- max. permissible operating pressure: **10 bar**
- can be used on suction and pressure side

Type	Connection thread	Materials	Article-No.	Price (EUR)
8012.1	Inlet: G¾ (internal) Outlet: G¾ (external)	PVC-U/FPM	37602277	▲
		PVDF/FPM	37602307	▲
Seals		EPDM		○

FITTINGS FOR THE PRESSURE SIDE



Diaphragm relief valve

for overpressure protection

Properties

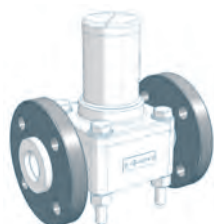
- Compact design
- Easy installation
- Maintenance-free
- High-quality materials

Basic version

- Valve body: **PVC-U, 1.4581, PP or PVDF**
- Diaphragm: **PTFE-faced**

Type	Nominal size	Connection	Valve body	Seals	Article-No.	Price (EUR)
620.10	DN8	G 3/4	PVC-U	FPM	37603632	▲
620.10	DN8	G 3/4	PVC-U	EPDM	36200101	▲
620.10	DN8	G 3/4	PP	FPM	37603630	▲
620.10	DN8	G 3/4	PP	EPDM	37603629	▲
620.10	DN8	G 3/4	PVDF	FEP	37601792	▲
620.10	DN8	G 3/4	1.4581	FEP	37600670	▲

OPTIONS

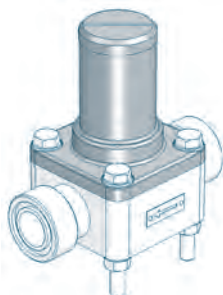


Type	Design	Loose flange	Surcharge [EUR]
620.10	PVC	Loose flange made of PVC-U	①
620.10	PP-FRP/PVDF-FRP	Loose flange made of PP with steel inlay	×
620.10	PP	Loose flange made of PP with steel inlay	▲
620.10	PVDF	Loose flange made of PP with steel inlay	▲

DIAPHRAGM PUMPS

CONTROLLABLE

FITTINGS FOR THE PRESSURE SIDE



Diaphragm pressure keeping valve

to prevent over-conveyance

Properties

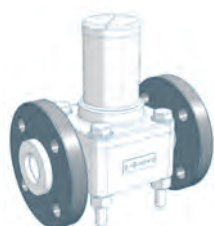
- Compact design
- Easy installation
- Maintenance-free
- High-quality materials

Basic version

- Valve body: **PVC-U, 1.4581, PP or PVDF**
- Diaphragm: **PTFE-faced**

Type	Nominal size	Connection	Valve body	Seals	Article-No.	Price (EUR)
620.D	DN8	G 3/4	PVC-U	FPM	37600048	▲
620.D	DN8	G 3/4	PVC-U	EPDM	36201101	▲
620.D	DN8	G 3/4	PP	FPM	37600055	▲
620.D	DN8	G 3/4	PP	EPDM	36201105	▲
620.D	DN8	G 3/4	PVDF	FEP	37601827	▲
620.D	DN8	G 3/4	1.4581	FEP	37600525	▲

OPTIONS



Type	Design	Loose flange	Surcharge [EUR]
620.D	PVC	Loose flange made of PVC-U	⊙
620.D	PP-FRP/PVDF-FRP	Loose flange made of PP with steel inlay	×
620.D	PP	Loose flange made of PP with steel inlay	▲
620.D	PVDF	Loose flange made of PP with steel inlay	▲



Multi function valve

Properties

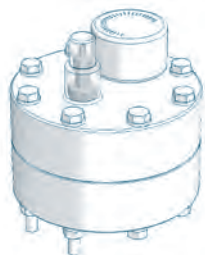
- Maximum operating pressure 10 bar
- Compact design
- Easy installation
- Maintenance-free
- Venting
- Overpressure protection for dosing pumps
- Prevention of over conveyance

Basic version

- Diaphragms: **PTFE-faced**
- Connection: **G3/4**
- **Relief valve side**
Opening pressure: **2 up to 10 bar** (adjustable)
- **Pressure keeping valve side**
Holding pressure: **1,0 - 1,5 bar**

Type	Valve body	Seals	Article-No.	Price (EUR)
MFV 050	PVC-U	EPDM	37600973	▲
MFV 050	PVC-U	FPM	37600974	▲
MFV 050	PVC-U	FEP	37600975	▲
MFV 050	PP	EPDM	37600982	▲
MFV 050	PP	FPM	37600983	▲
MFV 050	PP	FEP	37600984	▲

FITTINGS FOR THE PRESSURE SIDE



Diaphragm pulsation damper (Plastic, PTFE-diaphragm, max. 10 bar)

Properties

- Any mounting position
- Easy installation
- Long service life
- Easy handling
- High-quality materials
- Low maintenance

Type	Connection	max. Pressure	Material	Diaphragm	Article-No.	Price (EUR)
720.1	G ½	10 bar	PVC-U	PTFE	37601848	▲
720.1	G ½	10 bar	PP	PTFE	37601856	▲
720.1	G ½	10 bar	PVDF	PTFE	37601857	▲

ACCESSORIES

Connection adapter



Thread connection	G3/4 male	PVC-U	EPDM	90021733	▲
Connction to pulsation damper	G1/2 male	PVC-U	FPM	90025079	▲
		PP	EPDM	90038083	▲
		PP	FPM	90038082	▲
		PVDF	FEP	⌚	⌚

Retaining clamp



(2 Piece each pulsation damper)	PP	d 16	90010649	▲
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Filling pump FLP 2 for filling device



with manometer, max. 7 bar incl. 2m hose and coupling for air valve	90009396	▲
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DIAPHRAGM PUMPS

CONTROLLABLE

FITTINGS FOR THE PRESSURE SIDE



Diaphragm pulsation damper (Stainless steel, max. 10 bar)

Properties

- Any mounting position
- Easy installation
- Long service life
- Easy handling
- High-quality materials
- Low maintenance

Type	Connection	max.Pressure	Material	Diaphragm	Article-No.	Price (EUR)
810.1-0,16/10	G ½	10 bar	1.4571	Butyl	37603720	▲
810.1-0,16/10	G ½	10 bar	1.4571	FPM	37603724	▲
810.1-0,16/10	G ½	10 bar	1.4571	PTFE	×	×

ACCESSORIES

Filling- and pressure measuring device

(mounted on pulsation damper)

Design: Plastic	Manometer: 0-16 bar Measuring system: copper alloyed	●
Design: Stainless steel	Manometer: 0-16 bar, glycerine-damped Measuring system: copper alloyed Housing: 1.4301	▲

Filling pump FLP 2 for filling device

with manometer, max. 7 bar incl. 2m hose and coupling for air valve	90009396	▲
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Injection fitting

Properties

- incl. injection lance for better mixing
- Easy installation
- Any mounting position
- Maintenance-free
- High-quality materials

Basic version

- Cone-type check valve (spring loaded)
- Shut-off ball valve
- Injection lance (L=150mm)
- max. operating pressure: 10 bar

Type	DN	Inlet	Outlet	Material	Seals	Article-No.	Price (EUR)
8061.1	10	G ¾	R ½	PVC-U	EPDM	37602105	▲
8061.1	10	G ¾	R ½	PVC-U	FPM	37602106	▲
8061.1	10	G ¾	R ½	PP	EPDM	37602107	▲
8061.1	10	G ¾	R ½	PP	FPM	37602108	▲
8061.1	10	G ¾	R ½	PVDF	FPM	37602109	▲

FITTINGS FOR THE PRESSURE SIDE



Dosing valve (Plastic)

Properties

- Compact design
- Any mounting position
- Maintenance-free
- High-quality materials

Basic version

- integrated injection lance
- Valve ball: **PTFE**
- Seals: **EPDM** or **FPM**
- Spring: **Hastelloy C4**

Type	DN	Inlet	Outlet	Material	Seal	Article-No.	Price (EUR)
691.2	8	G ¾	R ½	PVC-U	EPDM	37606318	▲
691.2	8	G ¾	R ½	PVC-U	FPM	37605769	▲
691.2	8	G ¾	R ½	PP-GFK	EPDM	37605768	▲
691.2	8	G ¾	R ½	PP-GFK	FPM	37606317	▲



Dosing valve (Plastic)

Properties

- Compact design
- Any mounting position
- Maintenance-free
- High-quality materials

Basic version

- Valve ball: **PTFE**
- Spring: **Hastelloy C4**

Type	DN	Inlet	Outlet	Material	Seal	Article-No.	Price (EUR)
691.1	8	G ¾	R ½	PVDF/-GFK	FEP	30072015	▲



Dosing valve (Stainless steel)

Properties

- Compact design
- Any mounting position
- Maintenance-free
- High-quality materials

Basic version

- Valve ball: **1.4401**
- Seals: **FEP-covered**
- Spring: **Hastelloy C4**

Type	DN	Inlet	Outlet	Material	Seal	Article-No.	Price (EUR)
691.1	8	G ¾	R ½	1.4571	FEP	37600493	▲

DIAPHRAGM PUMPS

CONTROLLABLE



OVERVIEW

High dosing accuracy
Safe to run dry
Leakage free
Low-maintenance
User-friendly
Flexible, multifunctional
PROFIBUS DP-Interface
Digital and analogue control options
Manual stroke length- and stroke frequency adjustment
Robust, metallic housing



TECHNICAL DATA

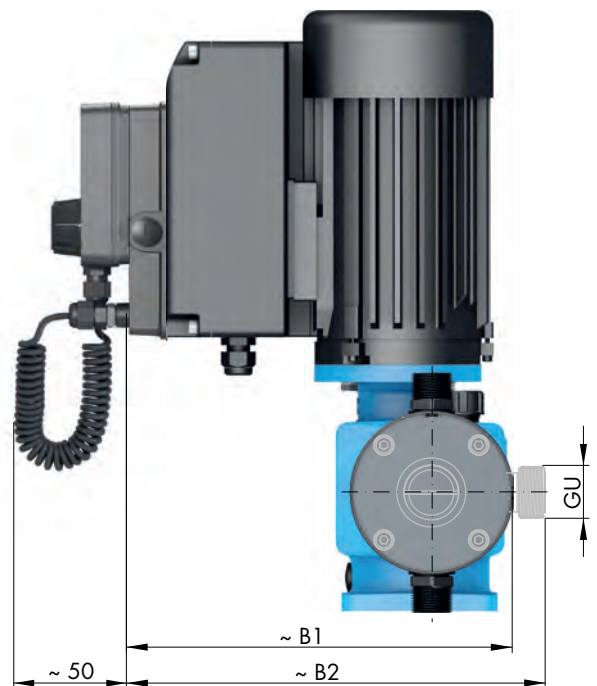
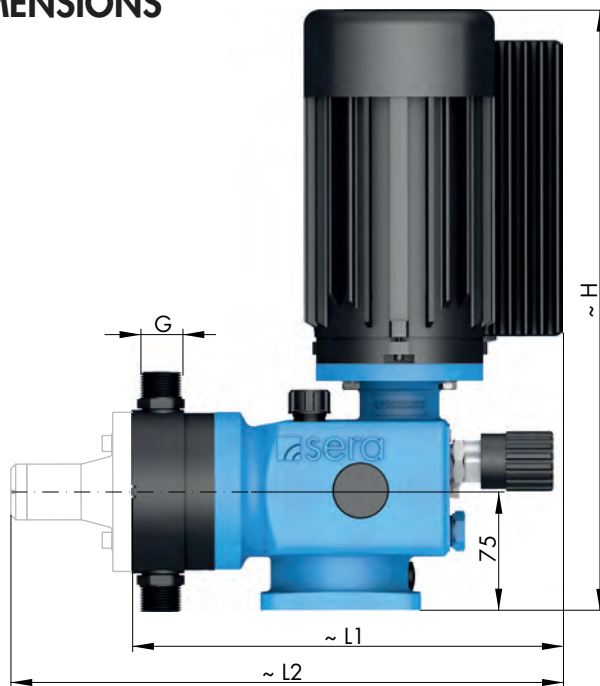
PUMP DATA			C 409.2-... Pro+							
(* 8mWS = performance losses of nominal capacity QN of 20-25%)			50e	75e	90e	115e	140e	180e	250e	350e
Permissible pressure $p_{2max.}$ at the pump outlet	bar		10	10	8	4	8	4	3	3
Nominal capacity QN at $p_{2max.}$	l/h	50/60 Hz	0-50	0-75	0-90	0-115	0-140	0-180	0-250	0-350
Quantity per stroke	ml/stroke	(100%)	8,3	8,3	15,0	19,2	15,6	20,0	41,7	38,9
Max. suction height	mWC				3	(8*)			3	
Min./max. permissible pressure at the pump inlet	bar	$p_{1min/max}$			-0,3/0	(-0,8/0*)			-0,3/0	
Recomm. nominal diameter DN of the connecting pipes	mm		15	15	15	15	15	15	15	15
Nominal stroke frequency	1/min	50/60 Hz	150	150	100	100	150	150	100	150
Weight approx.	kg	plastic	8,5	8,5	10,5	9,0	10,5	9,0	13,0	13,0
		stainless st.								

ELECTRICAL DATA		C 409.2-50e Pro+ ... C 409.2-350e Pro+	
		230 V, 50/60 Hz	115 V, 50/60 Hz
Power consumption	kW	(...-50e = 0,18 kW) 0,37	
Voltage	V	210 - 250	100 - 125
Frequency	Hz	50/60	
Inlet voltage, control input	V DC	5...30	
Minimum contact signal time	ms	55	
Analogue input resistance	Ω	39	
Digital output internal/external supply		PNP max. 24V DC, 30mA /max. 30V DC, 30mA	
Recommended fuse	(circuit breaker)	C6A	C10A
Insulation class	ISO	F	
Enclosure	IP	55	

Flow capacity 50 l/h ... 350 l/h
Admissible counterpressure up to 10 bar

C 409.2 Pro+

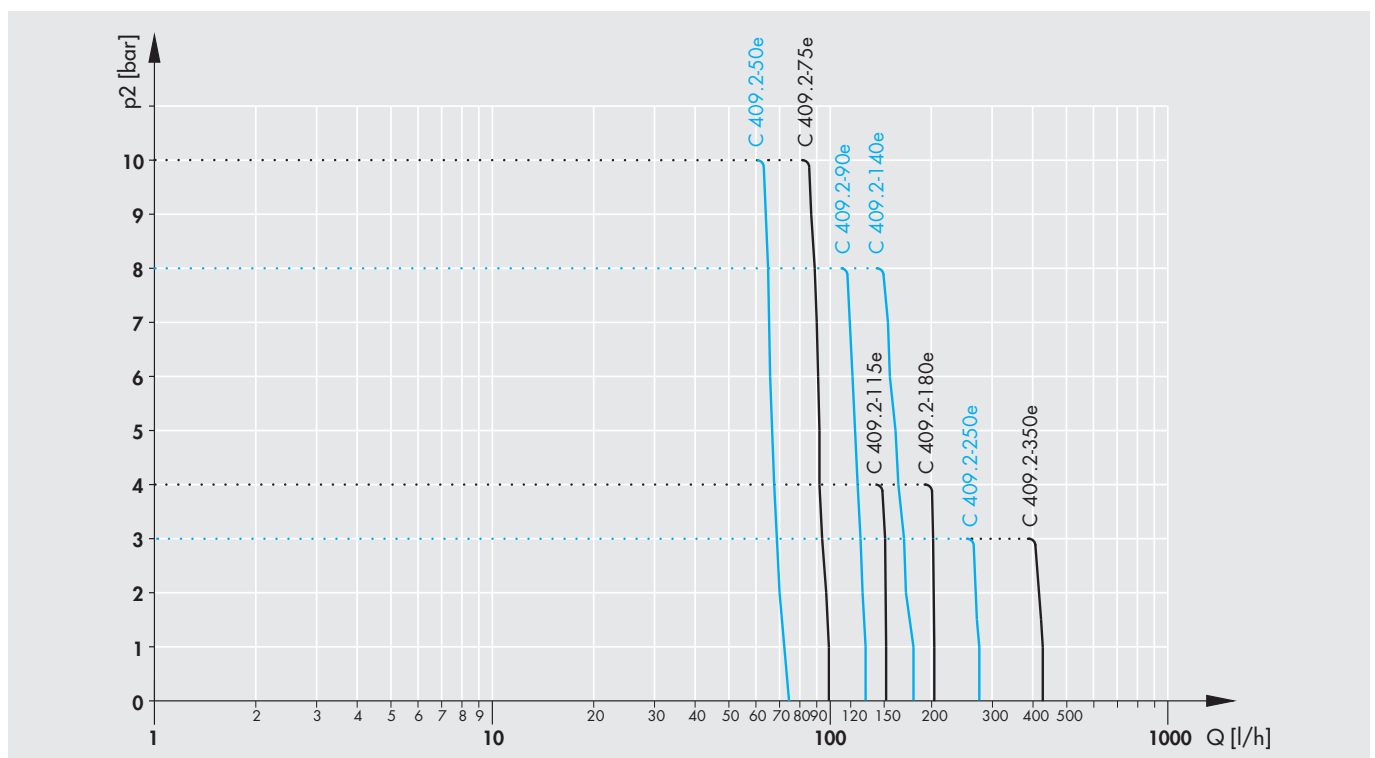
DIMENSIONS



	G	GU		B1	B2	L1	L2	H		B1	B2	L1	L2	H
C 409.2-50e, ...-75e	G 3/4	G 3/4	PVC, PP, PVDF	261	268	273	335	370	1.4571	261	266	271	335	370
C 409.2-90e, -115e, -140e, -180e	G 3/4	G1		261	284	276	346	370		261	265	274	346	370
C 409.2-250e, ...-350e	G1 1/4*	G1 1/4*		295	313	327	408	370		295	321	324	408	370

* PVC = G1

CHARACTERISTIC CURVES



DIAPHRAGM PUMPS

CONTROLLABLE

FUNCTIONS AND OPERATING MODES

- Manual operation
- Manual stroke frequency adjustment
- PROFIBUS DP-VO Slave interface (option)
- External START/STOP
- Pulse operation / fractinator
- Pulse memory
- Analogue operation (0/4 ... 20 mA)
- Analogue operation standardization
- Batch dosing (manual / with timer)
- 3 LEDs for status indication
- Multiline, illuminated display
- Menu-driven parameterization
- Flow indication
- Calibration function
- 4-key operation
- 2 digital outputs (PLC)
- 1 analogue output (PLC or contact signal)
- 2 analogue/digital inputs (reversible)
- 1 digital input
- Programmable input/output functions
- Diaphragm monitoring
- Connection/evaluation: 2-stage level monitoring
- Connection/evaluation: Flow monitoring
- Connection/evaluation: Flow metering
- Voltage 210-250V, 50/60Hz
- 3m connection cable with Euro-plug

BASIC DESIGNS

PP-FRP



Pump body **PP-FRP** (** PP)
Valves **PP-FRP**
Valve balls **PTFE**
Diaphragm **PTFE-faced** (* EPDM)

Type	Valve seals			
	EPDM Article-No.	Price (EUR)	FPM Article-No.	Price (EUR)
C409.2-50e Pro+	16024199	⌚	15005802	⌚
C409.2-75e Pro+	16024328	⌚	15005803	⌚
C409.2-90e Pro+	16024388	⌚	15005775	⌚
C409.2-115e Pro+ *	16024411	⌚	15005804	⌚
C409.2-140e Pro+	16024383	⌚	15005805	⌚
C409.2-180e Pro+ *	16024201	⌚	15005806	⌚
C409.2-250e Pro+ **	16024392	⌚	15005807	⌚
C409.2-350e Pro+ **	16024393	⌚	15005808	⌚

PVDF-FRP

Pump body **PVDF-FRP** (** PVDF)
Valves **PVDF-FRP**
Valve balls **PTFE**
Diaphragm **PTFE-faced** (* EPDM)

Type	Valve seals	
	FEP-covered Article-No.	Price (EUR)
C409.2-50e Pro+	⌚	⌚
C409.2-75e Pro+	⌚	⌚
C409.2-90e Pro+	⌚	⌚
C409.2-115e Pro+ *	⌚	⌚
C409.2-140e Pro+	⌚	⌚
C409.2-180e Pro+ *	⌚	⌚
C409.2-250e Pro+ **	16024409	⌚
C409.2-350e Pro+ **	16024410	⌚

PVC-U



Pump body **PVC-U**
Valves **PVC-U**
Valve balls **PTFE**
Diaphragm **PTFE-faced** (* EPDM)

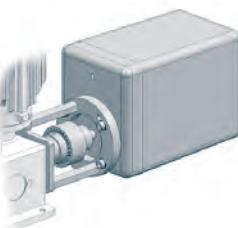
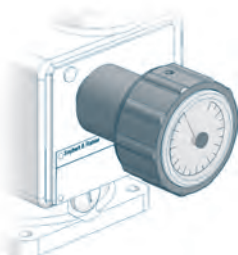
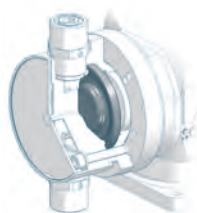
Type	Valve seals			
	EPDM Article-No.	Price (EUR)	FPM Article-No.	Price (EUR)
C409.2-50e Pro+	16024175	⌚	16024289	⌚
C409.2-75e Pro+	16024280	⌚	16024285	⌚
C409.2-90e Pro+	16024400	⌚	16024414	⌚
C409.2-115e Pro+ *	16024287	⌚	16024415	⌚
C409.2-140e Pro+	16024259	⌚	16024382	⌚
C409.2-180e Pro+ *	16024292	⌚	16024416	⌚
C409.2-250e Pro+	16024290	⌚	16024417	⌚
C409.2-350e Pro+	16024174	⌚	16024235	⌚

STAINLESS STEEL

Pump body **1.4571**
Valves **1.4571**
Valve balls **1.4401**
Diaphragm **PTFE-faced** (* EPDM)

Type	Valve seals	
	FEP-covered Article-No.	Price (EUR)
C409.2-50e Pro+	16024401	⌚
C409.2-75e Pro+	16024402	⌚
C409.2-90e Pro+	16024403	⌚
C409.2-115e Pro+ *	16024404	⌚
C409.2-140e Pro+	16024405	⌚
C409.2-180e Pro+ *	16024406	⌚
C409.2-250e Pro+	16024407	⌚
C409.2-350e Pro+	16024418	⌚

OPTIONS



Versions (basic equipment)

Version Price (EUR)

Pump **without** control element (price reduction)



Pump **with** control element (basic version)



Pump **without** control element; **with** INTERFACE MODULE
(INTERFACE MODULE instead of control element)



Working diaphragm

Surcharge (EUR)

Material

FPM only with ...-115e and ...-180e



Stroke length adjustment

Surcharge (EUR)

with position indicator



Stroke length adjustment with actuator

Surcharge (EUR)

Actuator N C1-BA 230V $\pm 10\%$, 50/60Hz, 128s/10 U, 1,5Nm
incl. mountig set



Electronic positioning controller ESR-N
(only integrated in N C1-BA) Input signal 0/4 - 20mA including
feedback signal 0/4 - 20mA



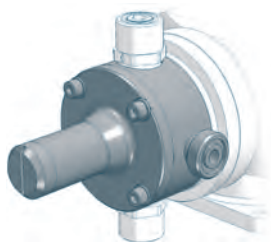
in combination with cTÜVus



DIAPHRAGM PUMPS

CONTROLLABLE

OPTIONS



Integrated relief valve

Diaphragm: **PTFE-faced** Connecting seals: **EPDM** or **FPM** **Surcharge (EUR)**

PP 	C409.2-50e, ...-75e	▲
	C409.2-90e, ...-115e, ...-140e, ...-180e	▲
	C409.2-250e, ...-350e	▲
PVDF	C409.2-50e, ...-75e	⌚
	C409.2-90e, ...-115e, ...-140e, ...-180e	⌚
	C409.2-250e, ...-350e	⌚
PVC-U 	C409.2-50e, ...-75e	▲
	C409.2-90e, ...-115e, ...-140e, ...-180e	▲
	C409.2-250e, ...-350e	▲
1.4571	C409.2-50e, ...-75e	▲
	C409.2-90e, ...-115e, ...-140e, ...-180e	▲
	C409.2-250e, ...-350e	▲

Connecting seals **FEP-covered**

for connection G 3/4	C409.2-50e up to ...-180e	▲
for connection G1 1/4	C409.2-250e, ...-350e	▲



Drive motor

Surcharge (EUR)

Connection voltage 115V, 50/60Hz	⌚
----------------------------------	---



Special connection

Surcharge (EUR)

Special connection (plug) for power supply	⌚
in combination with cTÜVus	×

ACCESSORIES



Control element

	Article-No.	Price (EUR)
Control element (removeable)	90044844	▲



INTERFACE MODULE - PROFINET -

- PROFINET INTERFACE MODULE
- PROFINET IO RT 2 Port (Ethernet Network Interface)
- Transmission speed: automatic 10Mbit/s, 100Mbit/s
- Connection to dosing pump: M12 cable socket, 4-pole, D-coded

Type		Article-No.	Price (EUR)
PROFINET INTERFACE MODULE		90044877	▲
	length 1 m	90050133	▲
PROFINET connection	length 5 m	90050134	▲
M12x1, straight, with cable plug and -socket, 4-pin, 2x2x0.34 mm², CAT5E, color green	length 10 m	90050135	▲
PROFINET Connection	length 1 m	90050136	▲
M12x1 - RJ45, straight, 4-pin, 2x2x0.34 mm², CAT5, color green	length 5 m	90050137	▲
	length 10 m	90050138	▲



INTERFACE MODULE - PROFIBUS -

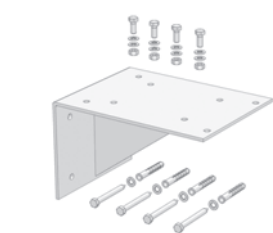
- PROFIBUS INTERFACE MODULE
- PROFIBUS DP-V1 (Slave)
- Transmission speed: automatic 9,6 kbit/s ... 12 Mbit/s
- Connection to dosing pump: M12 cable socket, 5-pole, B-coded

Type		Article-No.	Price (EUR)
PROFIBUS INTERFACE MODULE		90044875	▲
PROFIBUS cable plug M12x1, straight, individually convertible, 5-pole, IP67		90025520	▲
PROFIBUS Cable socket M12x1, straight, individually convertible, 5-pole, IP67		90025521	▲
PROFIBUS Cable socket M12x1, straight, with 10m line, 2x0,34mm², 1x free cable end, color: purple, IP67		90025524	▲
PROFIBUS Cable socket M12x1, straight, with 15m line, 2x0,34mm², 1x free cable end, color: purple, IP67		90025525	▲
PROFIBUS Connection M12x1, straight, with cable plug and cable socket, 2x0,34mm², length 1m, cable 2x0,34mm², color: purple, IP67		90025674	▲
PROFIBUS Bus line 2x 0,64mm², shielded, Permanent installation (inside), color: purple (serial meter)		90014541	▲
PROFIBUS Terminating resistor M12x1, 5-pole, IP67		90022890	▲

DIAPHRAGM PUMPS

CONTROLLABLE

ACCESSORIES



Control cable

		Article-No.	Price (EUR)
for level input (flow monitoring not included)			
Cable plug M12, 8-pole	fully assembled, incl. 5m cable	90042494	▲
Cable plug M12, 8-pole	Individually convertible (without cable)	90022885	▲

Bracket

		Article-No.	Price (EUR)
for wall mounting (incl. mounting kit)			
PP		90023848	▲
1.4301		90023875	▲

Connection pieces

Extensive range of connection / transition pieces and dosing hoses

Inserts and pipe sockets with union nuts, flange connections, hose screw connections, hose nozzles as well as dosing hoses and accessories.

to be found in **CHAPTER 4** of this catalog, from **page 442**

FITTINGS FOR THE SUCTION SIDE



Multi-function device

Properties

- Can be used as an priming aid and/or an calibration pot
- Compact design
- Flexible Connection
- Maintenance-free
- incl. glue joint (PVC-U) and welding joint (PP)

Basic version

- Housing: **PVC-U / PVC-transparent**
- Seals: **FPM** or **EPDM**
- max. operating pressure: **-0,5 ... +2 bar**

Type	DN	Connexion	Volume	Seals	Article-No.	Price (EUR)
MFD 570	15	G 1	2 Ltr.	EPDM	37606278	▲
MFD 570	15	G 1	2 Ltr.	FPM	37605992	▲



ACCESSORIES

Hand vacuum pump	PVC/FPM	37605682	▲
(incl. 1,5m PVC-Hose d=12/21)			



Suction lance S-01 (without level switch)

Properties

- Compact, robust design
- Maintenance-free
- Easy handling
- High-quality materials
- individual special lengths up to max. 1.500mm possible

Basic version

- Suction lance: **PVC-U**
- Foot valve: **PVC-U**
- Seals: **EPDM** or **FPM**
- Valve ball: **PTFE**
- max. flow rate: **200 l/h**
- Standard length: **650mm, 1.000mm und 1.250mm**

Type	Length	Connection	Seals	Article-No.	Price (EUR)
C409.2-50e, ...-75e, ...-90e, ...-115e, ...-140e, ...-180e					
S-01	650 mm	G ¾	EPDM	37606591	▲
S-01	1.000 mm	G ¾	EPDM	37606592	▲
S-01	1.250 mm	G ¾	EPDM	37606593	▲
S-01	max. 1.500 mm	G ¾	EPDM	37600705	▲
S-01	650 mm	G ¾	FPM	37606594	▲
S-01	1.000 mm	G ¾	FPM	37606595	▲
S-01	1.250 mm	G ¾	FPM	37606596	▲
S-01	max. 1.500 mm	G ¾	FPM	37600817	▲

DIAPHRAGM PUMPS

CONTROLLABLE

FITTINGS FOR THE SUCTION SIDE



Suction lance SL-02 (with level switch, 1- or 2-stage with plug, 8-pole)

Properties

- Compact, robust design
- Safe
- Easy handling
- 1-stage level switch
- Flexible connection
- High-quality materials
- Maintenance-free

Basic version

- Suction lance: **PVC-U**
- Foot valve: **PVDF-GFK**
- Valve ball: **PTFE**
- Suction basket: **PP**
- Level switch: **PP**
1- or 2-stage
5m cable (from foot valve) with plug, M12, 8-pole
- max. flow rate: **200 l/h**

Type	Level switch	Length	Connection	Seals	Article-No.	Price (EUR)
C409.2-50e, ...-75e, ...-90e, ...-115e, ...-140e, ...-180e						
SL-02	1-stage	630 mm	G ¾	EPDM	37606579	▲
SL-02	1-stage	1.000 mm	G ¾	EPDM	37606581	▲
SL-02	1-stage	1.200 mm	G ¾	EPDM	37606583	▲
SL-02	1-stage	630 mm	G ¾	FPM	37606580	▲
SL-02	1-stage	1.000 mm	G ¾	FPM	37606582	▲
SL-02	1-stage	1.200 mm	G ¾	FPM	37606584	▲
SL-02	2-stage	630 mm	G ¾	EPDM	37606585	▲
SL-02	2-stage	1.000 mm	G ¾	EPDM	37606587	▲
SL-02	2-stage	1.200 mm	G ¾	EPDM	37606589	▲
SL-02	2-stage	630 mm	G ¾	FPM	37606586	▲
SL-02	2-stage	1.000 mm	G ¾	FPM	37606588	▲
SL-02	2-stage	1.200 mm	G ¾	FPM	37605974	▲



ACCESSORIES

Drum connection adapter

Connection	Material	Seal	Article-No.	Price (EUR)
for external thread G=S65x5 DIN2781	PP	EPDM	90011763	▲
	PP	FPM	90011762	▲
for internal thread (set) G=2 fine thread steel drum DIN-ISO 228-1	PP	EPDM	90046044	▲
G=v. Leer/tri-sure BCS 56x4 EN12708	PP	FPM	90046043	▲
for external thread G= DIN51	PP	EPDM	90011767	▲
	PP	FPM	90011766	▲
for wall duct G=2 Wall thickness S=max. 6mm	PP/PVC	EPDM	90011773	▲
	PP/PVC	FPM	90011772	▲
other adapters			Ⓢ	Ⓢ

FITTINGS FOR THE SUCTION SIDE



Suction lance SLP-15x.1 (with level switch, 1- or 2-stage)

Properties

- Compact, robust design
- Easy handling
- 1- or 2-stage level monitoring
- Protective tube
- Maintenance free
- High quality materials
- Protection class IP65

Basic version

- Suction lance: **PVC-U**
- Foot valve: **PVC-U**
- Valve ball: **PTFE**
- Seals: **EPDM** or **FPM**
- Level switch: **PP**
1- or 2-stage, normally closed (NC)
cable gland: **M12x1,5**
- max. flow rate: **700 l/h**

Type	Level switch	Length	Material	Seals	Article-No.	Price (EUR)
C409.2-250e, ...-350e						

SLP-151.1	1-stage	750 mm	PVC-U	EPDM	37604108	▲
SLP-151.1	1-stage	750 mm	PVC-U	FPM	37604114	▲
SLP-151.1	1-stage	1.000 mm	PVC-U	EPDM	37604109	▲
SLP-151.1	1-stage	1.000 mm	PVC-U	FPM	37604115	▲
SLP-151.1	1-stage	1.250 mm	PVC-U	EPDM	37604110	▲
SLP-151.1	1-stage	1.250 mm	PVC-U	FPM	37604116	▲
SLP-152.1	2-stage	750 mm	PVC-U	EPDM	37604111	▲
SLP-152.1	2-stage	750 mm	PVC-U	FPM	37604117	▲
SLP-152.1	2-stage	1.000 mm	PVC-U	EPDM	37604112	▲
SLP-152.1	2-stage	1.000 mm	PVC-U	FPM	37604118	▲
SLP-152.1	2-stage	1.250 mm	PVC-U	EPDM	37604113	▲
SLP-152.1	2-stage	1.250 mm	PVC-U	FPM	37604119	▲

ACCESSORIES

Type	Designation	Article-No.	Price (EUR)
BCS 70x6 Di=50	Container screw connection for internal thread. Ventilation via tolerance of the inner diameter of the adapter or via separate ventilation of the container.	90028923	▲
G2 IBC	For IBC cover with G2 internal thread. Ventilation via adapter. Gas-tight design with „hose set“ possible.	90044282	▲
G2 universal	Bulkhead fitting with flat gasket (made of PVC-U). Ventilation via adapter. Gas-tight design with „hose set“ possible.	90044277	▲
Hose set	G3/4, d12, L=3m for gas tight container screwing for connection to On-site evacuation system	90044369	▲
Quiver	Quiver for storing/holding the suction lance (e.g. when changing containers)	90028919	▲
Control cable	Control cable for level input Cable plug M12x1, 8-pole, 5m length, loosely delivered	90042494	▲



DIAPHRAGM PUMPS

CONTROLLABLE

FITTINGS FOR THE PRESSURE SIDE



Flow controller

- IP65
- incl. 0,6m cable with cable socket M12, 5-pole (socket for pump connection)
- max. permissible operating pressure: **10 bar**

Type	Connection thread	Materials	Article-No.	Price (EUR)
C409.2-50e, ...-75e, ...-90e, ...-115e, ...-140e, ...-180e				
8192.1	Inlet: G¾ (internal)	PVC-U/FPM	37602176	▲
	Outlet: G¾ (external)	PP/FPM	37602177	▲
C409.2-250e, ...-350e				
8193.1	Inlet: G1 (internal)	PVC-U/FPM	37602178	▲
	Outlet: G1 (external)	PP/FPM	37602240	▲



Flow meter

- IP65
- incl. 0,6m cable with cable socket M12, 5-pole (socket for pump connection)
- max. permissible operating pressure: **10 bar**
- can be used on suction and pressure side

Type	Connection thread	Materials	Article-No.	Price (EUR)
C409.2-50e, ...-75e				
8013.1	Inlet: G¾ (internal)	PVC-U/FPM	37602279	▲
	Outlet: G¾ (external)	PVDF/FPM	37602309	▲
C409.2-90e, ...-115e, ...-140e, ...-180e				
8014.1	Inlet: G¾ (internal)	PVC-U/FPM	37602281	▲
	Outlet: G¾ (external)	PVDF/FPM	37602311	▲
C409.2-250e, ...-350e				
8015.1	Inlet: G1¼ (internal)	PVC-U/FPM	37602320	▲
	Outlet: G1¼ (external)	PVDF/FPM	37602332	▲
C409.2-25e ... C409.2-350e				
Seals		EPDM		○

FITTINGS FOR THE PRESSURE SIDE



Multi function valve

Properties

- Maximum operating pressure 10 bar
- Compact design
- Easy installation
- Maintenance-free
- Venting
- Overpressure protection for dosing pumps
- Prevention of over conveyance

Basic version

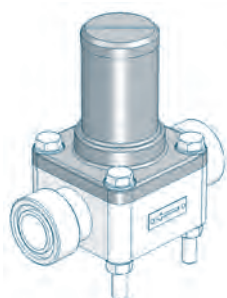
- Diaphragms: **PTFE-faced**
- Connection: **G $\frac{3}{4}$**
- **Relief valve side**
Opening pressure: **2 up to 10 bar** (adjustable)
- **Pressure keeping valve side**
Holding pressure: **1,0 - 1,5 bar**

Type	Valve body	Seals	Article-No.	Price (EUR)
C409.2-50e				
MFV 050	PVC-U	EPDM	37600973	▲
MFV 050	PVC-U	FPM	37600974	▲
MFV 050	PVC-U	FEP	37600975	▲
MFV 050	PP	EPDM	37600982	▲
MFV 050	PP	FPM	37600983	▲
MFV 050	PP	FEP	37600984	▲
C409.2-75e, ...-90e, ...-115e, ...-140e, ...-180e, ...-250e, ...-350e				
⌚			⌚	⌚

DIAPHRAGM PUMPS

CONTROLLABLE

FITTINGS FOR THE PRESSURE SIDE



Diaphragm relief valve

for overpressure protection

Properties

- Compact design
- Easy installation
- Maintenance-free
- High-quality materials

Basic version

- Valve body: **PVC-U, 1.4581, PP or PVDF**
- Diaphragm: **PTFE-faced**

Type	Nominal size	Connection	Valve body	Seals	Article-No.	Price (EUR)
------	--------------	------------	------------	-------	-------------	-------------

C409.2-50e

620.10	DN8	G 3/4	PVC-U	FPM	37603632	▲
620.10	DN8	G 3/4	PVC-U	EPDM	36200101	▲
620.10	DN8	G 3/4	PP	FPM	37603630	▲
620.10	DN8	G 3/4	PP	EPDM	37603629	▲
620.10	DN8	G 3/4	PVDF	FEP	37601792	▲
620.10	DN8	G 3/4	1.4581	FEP	37600670	▲

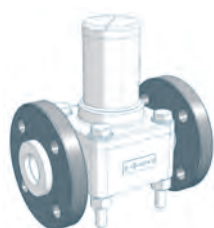
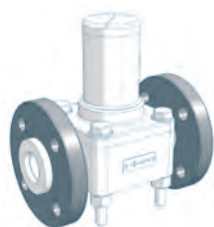
C409.2-75e, ...-90e, ...-115e, ...-140e, ...-180e, ...-250e, ...-350e

622.10	DN15	G 1	PVC-U	FPM	37604006	▲
622.10	DN15	G 1	PVC-U	EPDM	37603635	▲
622.10	DN15	G 1	PP	FPM	⌚	⌚
622.10	DN15	G 1	PP	EPDM	⌚	⌚
622.10	DN15	G 1	PP-GFK	FPM	37603634	▲
622.10	DN15	G 1	PP-GFK	EPDM	37600450	▲
622.10	DN15	G 1	PVDF	FEP	37600717	▲
622.10	DN15	G 1	PVDF-GFK	FEP	37601819	▲
622.10	DN15	G 1	1.4581	FEP	37600695	▲

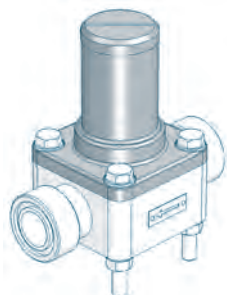
OPTIONS

Type	Design	Loose flange	Surcharge [EUR]
620.10	PVC	Loose flange made of PVC-U	⌚
620.10	PP-FRP/PVDF-FRP	Loose flange made of PP with steel inlay	×
620.10	PP	Loose flange made of PP with steel inlay	▲
620.10	PVDF	Loose flange made of PP with steel inlay	▲

Type	Design	Loose flange	Surcharge [EUR]
622.10	PVC	Loose flange made of PVC-U	▲
622.10	PP-FRP/PVDF-FRP	Loose flange made of PP with steel inlay	⌚
622.10	PP	Loose flange made of PP with steel inlay	▲
622.10	PVDF	Loose flange made of PP with steel inlay	▲



FITTINGS FOR THE PRESSURE SIDE



Diaphragm pressure keeping valve

to prevent over-conveyance

Properties

- Compact design
- Easy installation
- Maintenance-free
- High-quality materials

Basic version

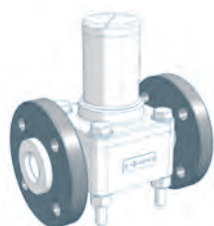
- Valve body: **PVC-U, 1.4581, PP or PVDF**
- Diaphragm: **PTFE-faced**

Type	Nominal size	Connection	Valve body	Seals	Article-No.	Price (EUR)
C409.2-50e						
620.D	DN8	G 3/4	PVC-U	FPM	37600048	▲
620.D	DN8	G 3/4	PVC-U	EPDM	36201101	▲
620.D	DN8	G 3/4	PP	FPM	37600055	▲
620.D	DN8	G 3/4	PP	EPDM	36201105	▲
620.D	DN8	G 3/4	PVDF	FEP	37601827	▲
620.D	DN8	G 3/4	1.4581	FEP	37600525	▲
C409.2-75e, ...-90e, ...-115e, ...-140e, ...-180e, ...-250e, ...-350e						
622.D	DN15	G 1	PVC-U	FPM	37600049	▲
622.D	DN15	G 1	PVC-U	EPDM	36221101	▲
622.D	DN15	G 1	PP	FPM	⌚	⌚
622.D	DN15	G 1	PP	EPDM	⌚	⌚
622.D	DN15	G 1	PP-GFK	FPM	37600056	▲
622.D	DN15	G 1	PP-GFK	EPDM	36221105	▲
622.D	DN15	G 1	PVDF	FEP	37602881	▲
622.D	DN15	G 1	PVDF-GFK	FEP	37601449	▲
622.D	DN15	G 1	1.4581	FEP	37600538	▲

OPTIONS

Type	Design	Loose flange	Surcharge [EUR]
620.D	PVC	Loose flange made of PVC-U	⌚
620.D	PP-FRP/PVDF-FRP	Loose flange made of PP with steel inlay	×
620.D	PP	Loose flange made of PP with steel inlay	▲
620.D	PVDF	Loose flange made of PP with steel inlay	▲

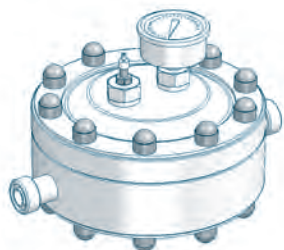
Type	Design	Loose flange	Surcharge [EUR]
622.D	PVC	Loose flange made of PVC-U	▲
622.D	PP-FRP/PVDF-FRP	Loose flange made of PP with steel inlay	⌚
622.D	PP	Loose flange made of PP with steel inlay	▲
622.D	PVDF	Loose flange made of PP with steel inlay	▲



DIAPHRAGM PUMPS

CONTROLLABLE

FITTINGS FOR THE PRESSURE SIDE



Diaphragm pulsation damper (Plastic, PTFE(-faced) diaphragm, max. 10 bar)

Properties

- Any mounting position
- Easy installation
- Long service life
- Easy handling
- High-quality materials
- Low maintenance
- Diaphragm: PTFE-faced

Type	Connection	max. Pressure	Material	Seals	Article-No.	Price (EUR)
------	------------	---------------	----------	-------	-------------	-------------

C409.2-50e

721.2	G ¾	10 bar	PVC-U	EPDM	37602014	▲
721.2	G ¾	10 bar	PVC-U	FPM	37602013	▲
721.2	G ¾	10 bar	PP	EPDM	37603419	▲
721.2	G ¾	10 bar	PP	FPM	37602017	▲
721.2	G ¾	10 bar	PVDF	FEP	37604046	▲

C409.2-75e, ...-90e, ...-115e, ...-140e, ...-180e

722.1	G 1	10 bar	PVC-U	EPDM	37600647	▲
722.1	G 1	10 bar	PVC-U	FPM	30100008	▲
722.1	G 1	10 bar	PP	EPDM	37600676	▲
722.1	G 1	10 bar	PP	FPM	30100009	▲
722.1	G 1	10 bar	PVDF	FEP	37601852	▲

C409.2-250e, ...-350e

723.1	G 1¼	10 bar	PVC-U	EPDM	37601002	▲
723.1	G 1¼	10 bar	PVC-U	FPM	30100011	▲
723.1	G 1¼	10 bar	PP	EPDM	37603271	▲
723.1	G 1¼	10 bar	PP	FPM	30100012	▲
723.1	G 1¼	10 bar	PVDF	FEP	37600918	▲

ACCESSORIES



Filling pump FLP 2 for filling device

with manometer, max. 7 bar incl. 2m hose and coupling for air valve	90009396	▲
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MPD 721.2, MPD 722.1

Retaining clamp

(2 Piece each pulsation damper)	PP	d 25	90010651	▲
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MPD 723.1

Bracket

for wall mounting	PP		90011722	▲
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FITTINGS FOR THE PRESSURE SIDE



Diaphragm pulsation damper (Stainless steel, max. 10 bar)

Properties

- Any mounting position
- Easy installation
- Long service life
- Easy handling
- High-quality materials
- Low maintenance

Type	Connection	max.Pressure	Material	Diaphragm	Article-No.	Price (EUR)
C409.2-50e						
810.1-0,16/10	G ½	10 bar	1.4571	Butyl	37603720	▲
810.1-0,16/10	G ½	10 bar	1.4571	FPM	37603724	▲
810.1-0,16/10	G ½	10 bar	1.4571	PTFE	×	×
C409.2-75e, ...-90e, ...-115e, ...-140e, ...-180e						
810.1-0,32/10	G ½	10 bar	1.4571	Butyl	37603721	▲
810.1-0,32/10	G ½	10 bar	1.4571	FPM	37603725	▲
810.1-0,32/10	G ½	10 bar	1.4571	PTFE	×	×
C409.2-250e, ...-350e						
810.1-0,75/10	G ½	10 bar	1.4571	Butyl	37603722	▲
810.1-0,75/10	G ½	10 bar	1.4571	FPM	37603726	▲
810.1-0,75/10	G ½	10 bar	1.4571	PTFE	37606307	▲

ACCESSORIES

Filling- and pressure measuring device

(mounted on pulsation damper)



Design: Plastic	Manometer: 0-16 bar Measuring system: copper alloyed	●
Design: Stainless steel	Manometer: 0-16 bar, glycerine-damped Measuring system: copper alloyed Housing: 1.4301	▲



Filling pump FLP 2	for filling device	
with manometer, max. 7 bar incl. 2m hose and coupling for air valve	90009396	▲

DIAPHRAGM PUMPS

CONTROLLABLE

FITTINGS FOR THE PRESSURE SIDE



Dosing valve (Plastic)

Properties

- Compact design
- Any mounting position
- Maintenance-free
- High-quality materials

Basic version

- integrated injection lance
- Valve ball: **PTFE**
- Seals: **EPDM** or **FPM**
- Spring: **Hastelloy C4**

Type	DN	Inlet	Outlet	Material	Seal	Article-No.	Price (EUR)
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C409.2-50e, ...-75e, ...-90e, ...-115e, ...-140e, ...-180e

691.2	8	G 3/4	R 1/2	PVC-U	EPDM	37606318	▲
691.2	8	G 3/4	R 1/2	PVC-U	FPM	37605769	▲
691.2	8	G 3/4	R 1/2	PP-GFK	EPDM	37605768	▲
691.2	8	G 3/4	R 1/2	PP-GFK	FPM	37606317	▲



Dosing valve (Plastic)

Properties

- Compact design
- Any mounting position
- Maintenance-free
- High-quality materials

Basic version

- Valve ball: **PTFE**
- Spring: **Hastelloy C4**

Type	DN	Inlet	Outlet	Material	Seal	Article-No.	Price (EUR)
------	----	-------	--------	----------	------	-------------	-------------

C409.2-50e, ...-75e, ...-90e, ...-115e, ...-140e, ...-180e

691.1	8	G 3/4	R 1/2	PVDF/-GFK	FEP	30072015	▲
C409.2-250e, ...-350e							
693.1	20	G 1 1/4	R 1 1/4	PP-GFK	EPDM	37604661	▲
693.1	20	G 1 1/4	R 1 1/4	PP-GFK	FPM	37603317	▲
693.1	20	G 1 1/4	R 1 1/4	PVDF-GFK	FEP	30072027	▲



Dosing valve (Stainless steel)

Properties

- Compact design
- Any mounting position
- Maintenance-free
- High-quality materials

Basic version

- Valve ball: **1.4401**
- Seals: **FEP-covered**
- Spring: **Hastelloy C4**

Type	DN	Inlet	Outlet	Material	Seal	Article-No.	Price (EUR)
------	----	-------	--------	----------	------	-------------	-------------

C409.2-50e, ...-75e, ...-90e, ...-115e, ...-140e, ...-180e

691.1	8	G 3/4	R 1/2	1.4571	FEP	37600493	▲
C409.2-250e, ...-350e							
692.1	15	G 1	R 1	1.4571	FEP	37600669	▲
693.1	20	G 1 1/4	R 1 1/4	1.4571	FEP	37600789	▲

Flow capacity 1,6 l/h ... 25 l/h
Admissible counterpressure up to 10 bar

C 409.2 Pro+

DIAPHRAGM PUMPS

CONTROLLABLE



OVERVIEW

- High dosing accuracy
- Safe to run dry
- Leakage free
- Low-maintenance
- User-friendly
- Flexible, multifunctional
- PROFIBUS DP-Interface
- Digital and analogue control options
- Manual stroke length- and stroke frequency adjustment
- Robust, metallic housing

TECHNICAL DATA

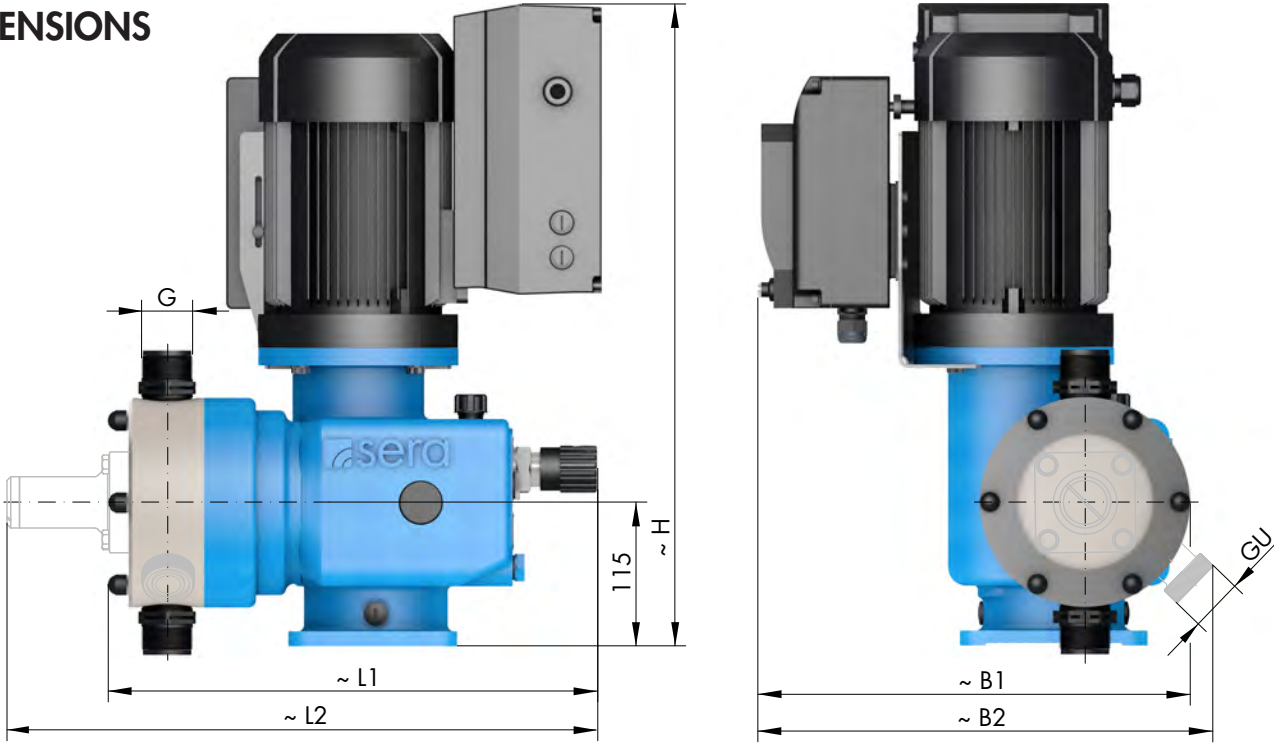
PUMP DATA			C 410.2-...			
			280e	570e	900e	1450e
Permissible pressure p_{2max} at the pump outlet	bar		8	6	5	5
Nominal capacity QN at p_{2max}	l/h	50/60 Hz	0-280	0-570	0-900	0-1.450
Quantity per stroke	ml/stroke	(100%)	46	98	155	245
Max. suction height	mWC		5	5	3	3
Min./max. permissible pressure at the pump inlet	bar	$p_{1min/max}$	-0,5/0	-0,5/0	-0,3/0	-0,3/0
Recommended nominal diameter DN of the connecting pipes	mm		15	15	20	25
Nominal stroke frequency	1/min	50 Hz	97	97	97	97
Weight approx.	kg	plastic	38	38	49	49
		stainless steel	45	45	64	64

ELECTRICAL DATA			C 410.2-...			
			280e	570e	900e	1450e
Power consumption	kW		0,75	0,75	1,5	1,5
Voltage	V		380-420			
Frequency	Hz		50/60			
Inlet voltage, control input	V DC		5...30			
Minimum contact signal time	ms		55			
Analogue input resistance	Ω		100			
Digital output internal/external supply			PNP max. 15V DC, 50mA /max. 30V DC, 350mA			
Recommended fuse	(circuit breaker)		C10A			
Insulation class	ISO		F			
Enclosure	IP		55			

Flow capacity 280 l/h ... 1.450 l/h
Admissible counterpressure up to 8 bar

C 410.2

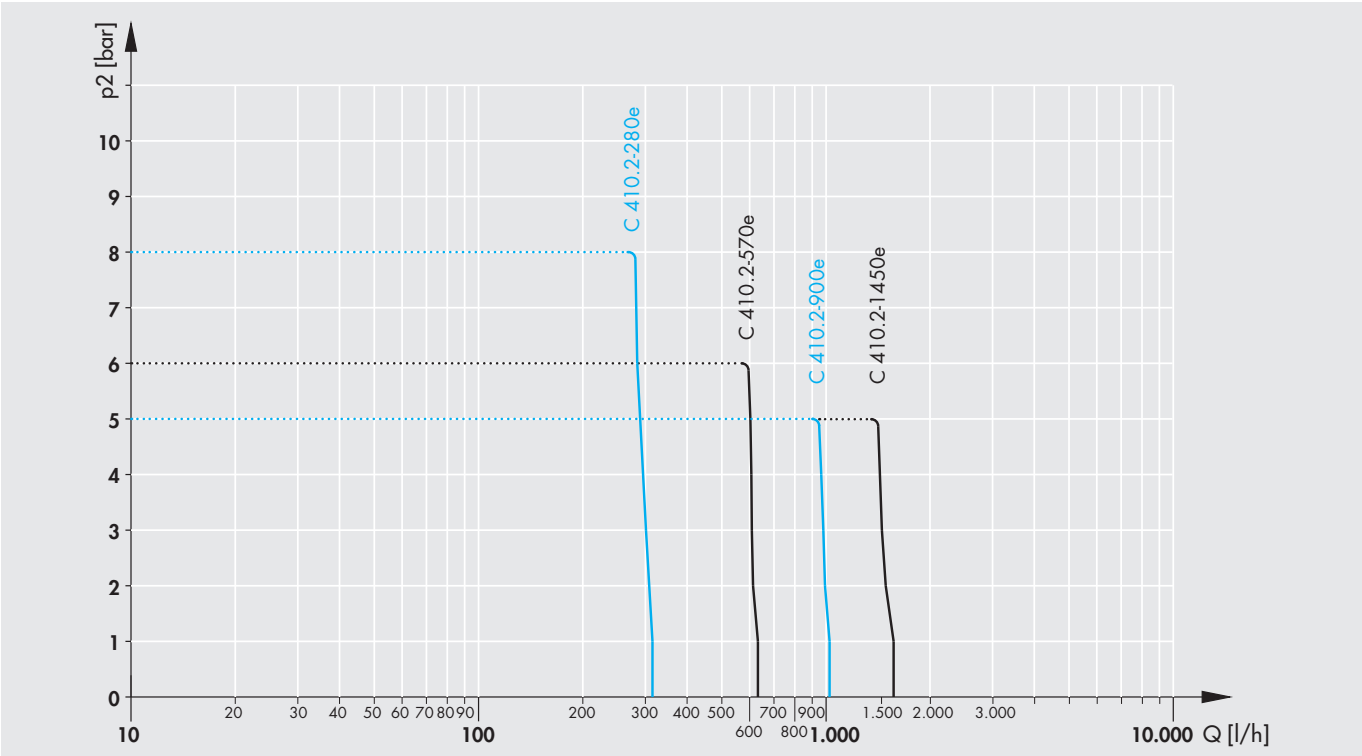
DIMENSIONS



	G	GU		B1	B2	L1	L2	H		B1	B2	L1	L2	H
C 410.2-280e	G1¼*	G1¼*	PVC, PP, PVDF	346	364	403	484	515	1.457 l	346	372	400	484	515
C 410.2-570e	G1¼*	G1¼*		346	364	403	484	515		346	372	400	484	515
C 410.2-900e	G1¼	×		372	×	428	×	540		372	×	425	×	540
C 410.2-1450e	G1¼	×		372	×	428	×	540		372	×	425	×	540

* PVC = G1

CHARACTERISTIC CURVES



DIAPHRAGM PUMPS

CONTROLLABLE

FUNCTIONS AND OPERATING MODES

- Manual operation
- Manual stroke frequency adjustment
- PROFIBUS DP-VO Slave interface (option)
- External START/STOP
- Pulse operation / fractinator
- Pulse memory
- Analogue operation (0/4 ... 20 mA)*
- Analogue operation standardization
- Batch dosing (manual / with timer)*
- 3 LEDs for status indication
- Speed control/Slow Mode
- Multiline, illuminated display
- Menu-driven parameterization
- Flow indication
- Calibration function
- 4-key operation
- 2 digital outputs (PLC)*
- 1 digital output (PLC or contact signal)*
- 2 analogue/digital inputs (reversible)*
- Programmable input-/output functions*
- Diaphragm monitoring
- Connection/evaluation: 2-stage level monitoring
- Connection/evaluation: Flow monitoring
- Connection/evaluation: Flow metering
- Voltage 3~380 -420V/N/PE, 50/60Hz
- 2m connection cable with CEE-plug, 5-pole

* inapplicable when supplied with PROFIBUS DP - interface (Option)

BASIC DESIGNS

PP

Pump body **PP**
Valves **PP-FRP**
Valve balls **PTFE**
Diaphragm **PTFE-faced**

Type	Valve seals			
	EPDM Article-No.	Price (EUR)	FPM Article-No.	Price (EUR)
C410.2-280e	16022724	⌚	16012455	⌚
C410.2-570e	16022405	⌚	16022218	⌚
C410.2-900e	16022638	⌚	16022685	⌚
C410.2-1450e	16022276	⌚	16022498	⌚

PVDF

Pump body **PVDF**
Valves **PVDF-FRP**
Valve balls **PTFE**
Diaphragm **PTFE-faced**

Type	Valve seals	
	FEP-covered Article-No.	Price (EUR)
C410.2-280e	16023757	⌚
C410.2-570e	16023758	⌚
C410.2-900e	16023759	⌚
C410.2-1450e	16023760	⌚

PVC-U

Pump body **PVC-U**
Valves **PVC-U**
Valve balls **PTFE**
Diaphragm **PTFE-faced**

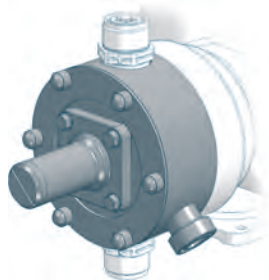
Type	Valve seals			
	EPDM Article-No.	Price (EUR)	FPM Article-No.	Price (EUR)
C410.2-280e	16022607	⌚	16023010	⌚
C410.2-570e	16022852	⌚	16022273	⌚
C410.2-900e	16022650	⌚	16022562	⌚
C410.2-1450e	16022649	⌚	16022526	⌚

STAINLESS STEEL

Pump body **1.4571**
Valves **1.4571/1.4581**
Valve balls **1.4401**
Diaphragm **PTFE-faced**

Type	Valve seals	
	FEP-covered Article-No.	Price (EUR)
C410.2-280e	16023761	⌚
C410.2-570e	16023056	⌚
C410.2-900e	16023662	⌚
C410.2-1450e	16023762	⌚

OPTIONS

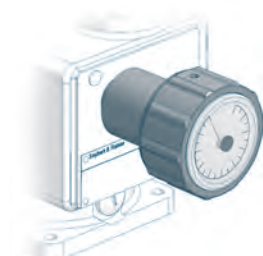


Integrated relief valve

Diaphragm: **PTFE-faced** Connecting seals: **EPDM** or **FPM** **Surcharge (EUR)**

PP	...410.2-280e, ...-570e	▲
PVC	...410.2-280e, ...-570e	▲
PVDF	...410.2-280e, ...-570e	Ⓞ
1.4571	...410.2-280e, ...-570e	▲
PP, PVDF, PVC-U, 1.4571	...410.2-900e, ...-1450e	×

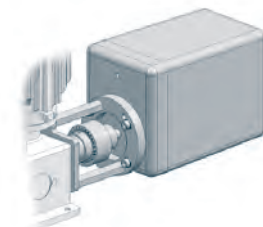
Connecting seals **FEP-covered** all types ▲



Stroke length adjustment

Surcharge (EUR)

with position indicator	...410.2-280e, -570e, 900e	▲
	...410.2-1450e	▲



Stroke length adjustment with actuator

Surcharge (EUR)

Actuator N1S	230V, 50/60Hz, 128s/10 U, 15Nm Potentiometer 1 kΩ (incl. mounting set)	▲
Electronic positioning controller ESR-N (only integrated in N1S)	Input signal 0/4 - 20mA including feedback signal 0/4 - 20mA	▲

DIAPHRAGM PUMPS

CONTROLLABLE

OPTIONS



PROFIBUS

- PROFIBUS DP-V0 (Slave)
- Transmission speed: automatic 9,6 kbit/s ... 12 Mbit/s
- Connection to dosing pump: M12 cable socket, 5-pole, B-coded
- not in combination with cTÜVus

PROFIBUS

Article-No.

Price (EUR)

PROFIBUS DP-V0 (Slave) Interface



Accessories

PROFIBUS Y - distributor, M12x1, 5-pole, IP67

90025526



PROFIBUS T - distributor, M12x1, 5-pole, IP67

90022889



PROFIBUS Cable plug M12x1, straight, individually convertible, 5-pole, IP67

90025520



PROFIBUS Cable socket M12x1, straight, individually convertible, 5-pole, IP67

90025521



PROFIBUS Cable socket M12x1, straight, with 10m line, 2x0,34mm², 1x free cable end, color: purple, IP67

90025524



PROFIBUS Cable socket M12x1, straight, with 15m line, 2x0,34mm², 1x free cable end color: purple, IP67

90025525



PROFIBUS Connection M12x1, straight, with cable plug and cable socket, 2x0,34mm², length 1m, cable 2x0,34mm², color: purple, IP67

90025674



PROFIBUS Bus line 2x 0,64mm², shielded, Permanent installation inside, color: purple (serial meter)

90014541



PROFIBUS Terminating resistor M12x1, 5-polig, IP67

90022890



ACCESSORIES



Control cable

Article-No.

Price (EUR)

for controlling the pump

Cable socket M12, 8-pole fully assembled, incl. 5m cable

90031247



Cable socket M12, 8-pole individually convertible (without cable)

90022879



for level input (level monitoring not included)

Cable socket M12, 3-pole fully assembled, inkl. 5m cable

90031245

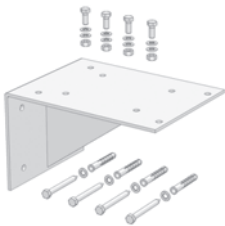


Cable socket M12, 3-pole individually convertible (without cable)

90022877



ACCESSORIES



Bracket

for wall mounting (incl. mounting kit)

Article-No. Price (EUR)

PP	90023849	▲
1.4301	90023876	▲



Connection pieces

Extensive range of connection / transition pieces and dosing hoses

Inserts and pipe sockets with union nuts, flange connections, hose screw connections, hose nozzles as well as dosing hoses and accessories.

to be found in **CHAPTER 4** of this catalog, from **page 442**

FITTINGS FOR THE SUCTION SIDE



Multi-function device

Properties

- Can be used as an priming aid and/or an calibration pot
- Compact design
- Flexible Connection
- Maintenance-free
- incl. glue joint (PVC-U) and welding joint (PP)

Basic version

- Housing: **PVC-U / PVC-transparent**
- Seals: **FPM** or **EPDM**
- max. operating pressure: **-0,5 ... +2 bar**

Type	DN	Connetion	Volume	Seals	Article-No.	Price (EUR)
C410.2-280e, ...-570e						
MFD 570	15	G1	2 Ltr.	EPDM	37606278	▲
MFD 570	15	G1	2 Ltr.	FPM	37605992	▲
C410.2-900e, ...-1450e						
MFD 1500	20	G1¼	5 Ltr.	EPDM	37606316	▲
MFD 1500	20	G1¼	5 Ltr.	FPM	37606315	▲

ACCESSORIES

Hand vacuum pump	PVC/FPM	37605682	▲
(incl. 1,5m PVC-Hose d=12/21)			



DIAPHRAGM PUMPS

CONTROLLABLE

FITTINGS FOR THE SUCTION SIDE



Flow meter

- IP65
- incl. 0,6m cable with cable socket M12, 5-pole (socket for pump connection)
- max. permissible operating pressure: **10 bar**
- can be used on suction and pressure side

Type	Connection thread	Materials	Article-No.	Price (EUR)
C410.2-280e				
8015.1	Inlet: G1 ¼ (internal) Outlet: G1 ¼ (external)	PVC-U/FPM	37602320	▲
		PVDF/FPM	37602332	▲
C410.2-570e				
8016.1	Inlet: G1 ¼ (internal) Outlet: G1 ¼ (external)	PVC-U/FPM	37602322	▲
		PVDF/FPM	🕒	🕒
C410.2-900e, ...-1450e				
8017.1	Inlet: G1 ¼ (internal) Outlet: G1 ¼ (external)	PVC-U/FPM	37602323	▲
		PVDF/FPM	37602335	▲
C410.2-280e ... C410.2-1450e				
Seals		EPDM		🕒



Foot valve (Plastic)

Properties

- Compact design
- Easy installation
- High-quality materials
- Maintenance-free

Basic version

- Ball: **PTFE**
- Sieve: **ETFE**
- Mesh size: **1mm**

Type	DN	Connection	Material	Seals	Article-No.	Price (EUR)
783.1	20	G 1 ¼	PP/PP-GFK	EPDM	37600552	▲
783.1	20	G 1 ¼	PP/PP-GFK	FPM	37600553	▲
783.1	20	G 1 ¼	PVDF/PVDF-GFK	FEP	30073018	▲



Foot valve (Stainless steel)

Properties

- Compact design
- Easy installation
- High-quality materials
- Maintenance-free

Basic version

- Ball: **1.4401**
- Sieve: **ETFE**
- Mesh size: **1mm**

Type	DN	Connection	Material	Seals	Article-No.	Price (EUR)
C410.2-280e, ...-570e						
732	15	G 1	1.4571	FEP	37603325	▲
C410.2-900e, ...-1450e						
733	20	G 1 ¼	1.4571	FEP	37603962	▲

FITTINGS FOR THE SUCTION SIDE



Suction lance SLP-15x.1 (with level switch, 1- or 2-stage)

Properties

- Compact, robust design
- Easy handling
- 1- or 2-stage level monitoring
- Protective tube
- Maintenance free
- High quality materials
- Protection class IP65

Basic version

- Suction lance: **PVC-U**
- Foot valve: **PVC-U**
- Valve ball: **PTFE**
- Seals: **EPDM** or **FPM**
- Level switch: **PP**
1- or 2-stage, normally closed (NC)
cable gland: **M12x1,5**
- max. flow rate: **700 l/h**

Type	Level switch	Length	Material	Seals	Article-No.	Price (EUR)
C410.2-280e, ...-570e						

SLP-151.1	1-stage	750 mm	PVC-U	EPDM	37604108	▲
SLP-151.1	1-stage	750 mm	PVC-U	FPM	37604114	▲
SLP-151.1	1-stage	1.000 mm	PVC-U	EPDM	37604109	▲
SLP-151.1	1-stage	1.000 mm	PVC-U	FPM	37604115	▲
SLP-151.1	1-stage	1.250 mm	PVC-U	EPDM	37604110	▲
SLP-151.1	1-stage	1.250 mm	PVC-U	FPM	37604116	▲
SLP-152.1	2-stage	750 mm	PVC-U	EPDM	37604111	▲
SLP-152.1	2-stage	750 mm	PVC-U	FPM	37604117	▲
SLP-152.1	2-stage	1.000 mm	PVC-U	EPDM	37604112	▲
SLP-152.1	2-stage	1.000 mm	PVC-U	FPM	37604118	▲
SLP-152.1	2-stage	1.250 mm	PVC-U	EPDM	37604113	▲
SLP-152.1	2-stage	1.250 mm	PVC-U	FPM	37604119	▲

ACCESSORIES

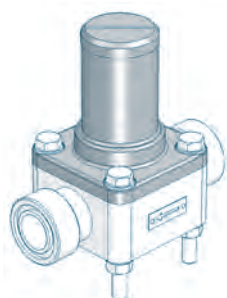
Type	Designation	Article-No.	Price (EUR)
BCS 70x6 Di=50	Container screw connection for internal thread. Ventilation via tolerance of the inner diameter of the adapter or via separate ventilation of the container.	90028923	▲
G2 IBC	For IBC cover with G2 internal thread. Ventilation via adapter. Gas-tight design with „hose set“ possible.	90044282	▲
G2 universal	Bulkhead fitting with flat gasket (made of PVC-U). Ventilation via adapter. Gas-tight design with „hose set“ possible.	90044277	▲
Hose set	G3/4, d12, L=3m for gas tight container screwing for connection to On-site evacuation system	90044369	▲
Quiver	Quiver for storing/holding the suction lance (e.g. when changing containers)	90028919	▲
Control cable	Control cable for level input Cable socket M12x1, 3-pole, 5m length, loosely delivered	90031245	▲



DIAPHRAGM PUMPS

CONTROLLABLE

FITTINGS FOR THE PRESSURE SIDE



Diaphragm relief valve

for overpressure protection

Properties

- Compact design
- Easy installation
- Maintenance-free
- High-quality materials

Basic version

- Valve body: **PVC-U, 1.4581, PP or PVDF**
- Diaphragm: **PTFE-faced**

Type	Nominal size	Connection	Valve body	Seals	Article-No.	Price (EUR)
------	--------------	------------	------------	-------	-------------	-------------

C410.2-280e, ...-570e

622.10	DN15	G 1	PVC-U	FPM	37604006	▲
622.10	DN15	G 1	PVC-U	EPDM	37603635	▲
622.10	DN15	G 1	PP	FPM	Ⓞ	Ⓞ
622.10	DN15	G 1	PP	EPDM	Ⓞ	Ⓞ
622.10	DN15	G 1	PP-GFK	FPM	37603634	▲
622.10	DN15	G 1	PP-GFK	EPDM	37600450	▲
622.10	DN15	G 1	PVDF	FEP	37600717	▲
622.10	DN15	G 1	PVDF-GFK	FEP	37601819	▲
622.10	DN15	G 1	1.4581	FEP	37600695	▲

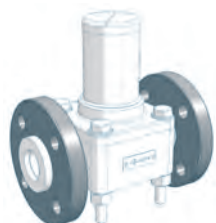
C410.2-900e

623.10	DN20	G 1¼	PVC-U	FPM	37600009	▲
623.10	DN20	G 1¼	PVC-U	EPDM	36230101	▲
623.10	DN20	G 1¼	PP	FPM	37600016	▲
623.10	DN20	G 1¼	PP	EPDM	36230105	▲
623.10	DN20	G 1¼	PVDF	FEP	37606304	▲

C410.2-1450e

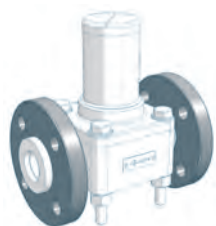
624.10	DN25	G 1½	PVC-U	FPM	37603639	▲
624.10	DN25	G 1½	PVC-U	EPDM	37603638	▲
624.10	DN25	G 1½	PP	FPM	37603637	▲
624.10	DN25	G 1½	PP	EPDM	37603636	▲
624.10	DN25	G 1½	PVDF	FEP	37603866	▲

FITTINGS FOR THE PRESSURE SIDE

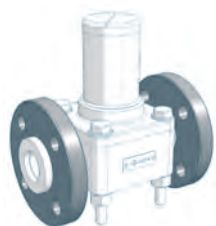


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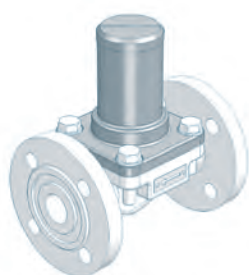
Type	Design	Loose flange	Surcharge [EUR]
622.10	PVC	Loose flange made of PVC-U	▲
622.10	PP-FRP/PVDF-FRP	Loose flange made of PP with steel inlay	⑦
622.10	PP	Loose flange made of PP with steel inlay	▲
622.10	PVDF	Loose flange made of PP with steel inlay	▲



Type	Design	Loose flange	Surcharge [EUR]
623.10	PVC	Loose flange made of PVC-U	▲
623.10	PP-FRP/PVDF-FRP	Loose flange made of PP with steel inlay	×
623.10	PP	Loose flange made of PP with steel inlay	▲
623.10	PVDF	Loose flange made of PP with steel inlay	▲



Type	Design	Loose flange	Surcharge [EUR]
624.10	PVC	Loose flange made of PVC-U	▲
624.10	PP-FRP/PVDF-FRP	Loose flange made of PP with steel inlay	×
624.10	PP	Loose flange made of PP with steel inlay	▲
624.10	PVDF	Loose flange made of PP with steel inlay	▲



Diaphragm relief valve (with fixed flanges)

for overpressure protection

Properties

- Compact design
- Easy installation
- Maintenance-free
- High-quality materials

Basic design

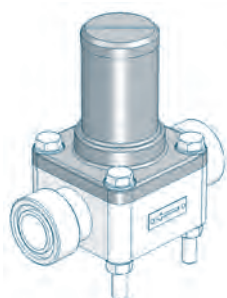
- Flanges acc. to **DIN 2501**
- Valve body: **1.4581** or **GG**
- Diaphragm: **PTFE-faced**

Type	Nominal size	Connection	Valve body	Article-No.	Price (EUR)
C410.2-900e					
623.10	DN20	DIN 2501	1.4581	36230104	▲
623.10	DN20	DIN 2501	GG	37600038	▲
C410.2-1450e					
624.10	DN25	DIN 2501	1.4581	36240104	▲
624.10	DN25	DIN 2501	GG	37600039	▲

DIAPHRAGM PUMPS

CONTROLLABLE

FITTINGS FOR THE PRESSURE SIDE



Diaphragm pressure keeping valve

to prevent over-conveyance

Properties

- Compact design
- Easy installation
- Maintenance-free
- High-quality materials

Basic version

- Valve body: **PVC-U, 1.4581, PP or PVDF**
- Diaphragm: **PTFE-faced**

Type	Nominal size	Connection	Valve body	Seals	Article-No.	Price (EUR)
------	--------------	------------	------------	-------	-------------	-------------

C410.2-280e, ...-570e

622.D	DN15	G 1	PVC-U	FPM	37600049	▲
622.D	DN15	G 1	PVC-U	EPDM	36221101	▲
622.D	DN15	G 1	PP	FPM	Ⓞ	Ⓞ
622.D	DN15	G 1	PP	EPDM	Ⓞ	Ⓞ
622.D	DN15	G 1	PP-GFK	FPM	37600056	▲
622.D	DN15	G 1	PP-GFK	EPDM	36221105	▲
622.D	DN15	G 1	PVDF	FEP	37602881	▲
622.D	DN15	G 1	PVDF-GFK	FEP	37601449	▲
622.D	DN15	G 1	1.4581	FEP	37600538	▲

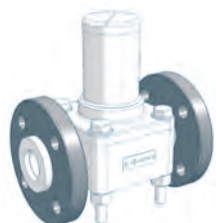
C410.2-900e

623.D	DN20	G 1¼	PVC-U	FPM	37600050	▲
623.D	DN20	G 1¼	PVC-U	EPDM	36231101	▲
623.D	DN20	G 1¼	PP	FPM	37600057	▲
623.D	DN20	G 1¼	PP	EPDM	36231105	▲
623.D	DN20	G 1¼	PVDF	FEP	37606309	▲

C410.2-1450e

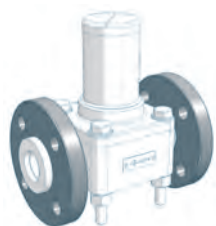
624.D	DN25	G 1½	PVC-U	FPM	37600051	▲
624.D	DN25	G 1½	PVC-U	EPDM	36241101	▲
624.D	DN25	G 1½	PP	FPM	37600058	▲
624.D	DN25	G 1½	PP	EPDM	36241105	▲
624.D	DN25	G 1½	PVDF	FEP	37606310	▲

FITTINGS FOR THE PRESSURE SIDE

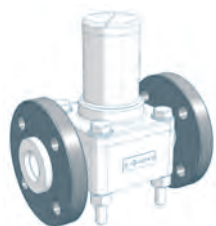


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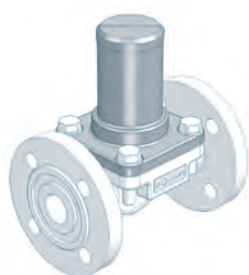
Type	Design	Loose flange	Surcharge [EUR]
622.D	PVC	Loose flange made of PVC-U	▲
622.D	PP-FRP/PVDF-FRP	Loose flange made of PP with steel inlay	②
622.D	PP	Loose flange made of PP with steel inlay	▲
622.D	PVDF	Loose flange made of PP with steel inlay	▲



Type	Design	Loose flange	Surcharge [EUR]
623.D	PVC	Loose flange made of PVC-U	▲
623.D	PP-FRP/PVDF-FRP	Loose flange made of PP with steel inlay	×
623.D	PP	Loose flange made of PP with steel inlay	▲
623.D	PVDF	Loose flange made of PP with steel inlay	▲



Type	Design	Loose flange	Surcharge [EUR]
624.D	PVC	Loose flange made of PVC-U	▲
624.D	PP-FRP/PVDF-FRP	Loose flange made of PP with steel inlay	×
624.D	PP	Loose flange made of PP with steel inlay	▲
624.D	PVDF	Loose flange made of PP with steel inlay	▲



Diaphragm pressure keeping valve (with fixed flanges)

to prevent over-conveyance

Properties

- Compact design
- Easy installation
- Maintenance-free
- High-quality materials

Basic design

- Flanges acc. to **DIN 2501**
- Valve body: **1.4581** or **GG**
- Diaphragm: **PTFE-faced**

Type	Nominal size	Connection	Valve body	Article-No.	Price (EUR)
C410.2-900e					
623.D	DN20	DIN 2501	1.4581	36231104	▲
623.D	DN20	DIN 2501	GG	37600080	▲
C410.2-1450e					
624.D	DN25	DIN 2501	1.4581	36241104	▲
624.D	DN25	DIN 2501	GG	37600081	▲

DIAPHRAGM PUMPS

CONTROLLABLE

FITTINGS FOR THE PRESSURE SIDE



Diaphragm pulsation damper (Plastic, with elastomere diaphragm, max. 10 bar)

Properties

- Any mounting position
- Easy installation
- Long service life
- Easy handling
- High-quality materials
- Low maintenance

Type	Connection	max. Pressure	Housing	Diaphragm Seals	Article-No.	Price (EUR)
713.1	G 1 1/4	10 bar	PVC-U	EPDM	30071038	▲
713.1	G 1 1/4	10 bar	PVC-U	FPM	30071039	▲
713.1	G 1 1/4	10 bar	PP	EPDM	30071040	▲
713.1	G 1 1/4	10 bar	PP	FPM	30071041	▲
713.1	G 1 1/4	10 bar	PVDF	EPDM	30071060	▲
713.1	G 1 1/4	10 bar	PVDF	FPM	30071061	▲

OPTIONS

Loose-type flanges	Design acc. to DIN 2501, incl. O-Rings				
PVC-design	Loose flange, PVC-U	DN20			▲
PP-/PVDF-design	Loose flange, PP with steel insert	DN20			▲

ACCESSORIES

Bracket	PP	90010913	▲
for wall mounting	1.4301	90010914	▲
	Steel (color treated)	90010915	▲
Filling pump FLP 2	for filling device		
with manometer, max. 7 bar incl. 2m hose and coupling for air valve		90009396	▲



FITTINGS FOR THE PRESSURE SIDE



Diaphragm pulsation damper (Stainless steel, max. 10 bar)

Properties

- Any mounting position
- Easy installation
- Long service life
- Easy handling
- High-quality materials
- Low maintenance

Type	Connection	max.Pressure	Material	Diaphragm	Article-No.	Price (EUR)
C410.2-280e						
810.1-0,75/10	G ½	10 bar	1.4571	Butyl	37603722	▲
810.1-0,75/10	G ½	10 bar	1.4571	FPM	37603726	▲
810.1-0,75/10	G ½	10 bar	1.4571	PTFE	37606307	▲
C410.2-570e, ...-900e, ...-1450e						
810.1-2,0/10	G ¾	10 bar	1.4571	Butyl	37603723	▲
810.1-2,0/10	G ¾	10 bar	1.4571	FPM	37603727	▲
810.1-2,0/10	G ¾	10 bar	1.4571	PTFE	37606308	▲

ACCESSORIES



Filling- and pressure measuring device

(mounted on pulsation damper)

Design: Plastic	Manometer: 0-16 bar Measuring system: copper alloyed	●
Design: Stainless steel	Manometer: 0-16 bar, glycerine-damped Measuring system: copper alloyed Housing: 1.4301	▲



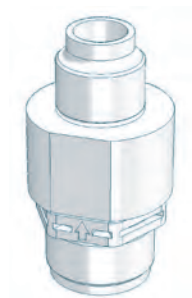
Filling pump FLP 2 for filling device

with manometer, max. 7 bar incl. 2m hose and coupling for air valve	90009396	▲
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DIAPHRAGM PUMPS

CONTROLLABLE

FITTINGS FOR THE PRESSURE SIDE



Dosing valve (Plastic)

Properties

- Compact design
- Any mounting position
- Maintenance-free
- High-quality materials

Basic version

- Valve ball: **PTFE**
- Spring: **Hastelloy C4**

Type	DN	Inlet	Outlet	Material	Seal	Article-No.	Price (EUR)
693.1	20	G 1 ¼	R 1 ¼	PP-GFK	EPDM	37604661	▲
693.1	20	G 1 ¼	R 1 ¼	PP-GFK	FPM	37603317	▲
693.1	20	G 1 ¼	R 1 ¼	PVDF-GFK	FEP	30072027	▲



Dosing valve (Stainless steel)

Properties

- Compact design
- Any mounting position
- Maintenance-free
- High-quality materials

Basic version

- Valve ball: **1.4401**
- Seals: **FEP-covered**
- Spring: **Hastelloy C4**

Type	DN	Inlet	Outlet	Material	Seal	Article-No.	Price (EUR)
C410.2-280e, ...-570e							
692.1	15	G 1	R 1	1.4571	FEP	37600669	▲
C410.2-900e, ...-1450e							
693.1	20	G 1 ¼	R 1 ¼	1.4571	FEP	37600789	▲

FITTINGS FOR THE PRESSURE SIDE



Injection fitting

Properties

- incl. injection lance for better mixing
- Easy installation
- Any mounting position
- Maintenance-free
- High-quality materials

Basic version

- Cone-type check valve (spring loaded)
- Shut-off ball valve
- Injection lance (L=150mm)
- max. operating pressure: 10 bar

Type	DN	Inlet	Outlet	Material	Seals	Article-No.	Price (EUR)
------	----	-------	--------	----------	-------	-------------	-------------

C410.2-280e, ...-570e

8062.1	15	G 1	R ¾	PVC-U	EPDM	37602110	▲
8062.1	15	G 1	R ¾	PVC-U	FPM	37602111	▲
8062.1	15	G 1	R ¾	PP	EPDM	37602112	▲
8062.1	15	G 1	R ¾	PP	FPM	37602113	▲
8062.1	15	G 1	R ¾	PVDF	FPM	37602114	▲

C410.2-900e, ...-1450e

8063.1	20	G 1¼	R 1	PVC-U	EPDM	37602115	▲
8063.1	20	G 1¼	R 1	PVC-U	FPM	37602116	▲
8063.1	20	G 1¼	R 1	PP	EPDM	37602117	▲
8063.1	20	G 1¼	R 1	PP	FPM	37602118	▲
8063.1	20	G 1¼	R 1	PVDF	FPM	37602119	▲

MULTI-LAYER DIAPHRAGM PUMPS

CONTROLLABLE



OVERVIEW

Multi-layer diaphragm technology
 High dosing accuracy
 Safe to run dry
 Leakage free
 Low-maintenance
 User-friendly
 Flexible, multifunctional
 Digital and analogue control options
 PROFIBUS DP-Interface
 Manual stroke length- and stroke frequency adjustment

TECHNICAL DATA

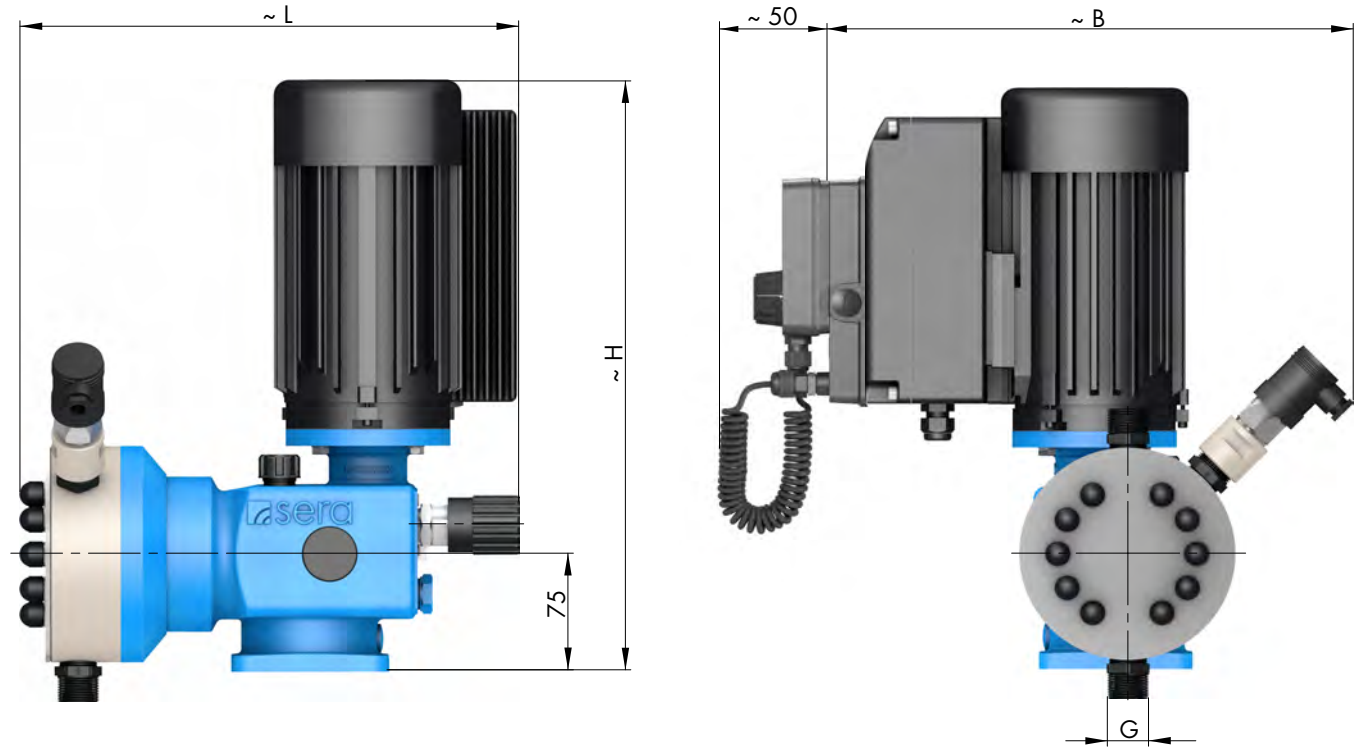
PUMP DATA			C 409.2-... ML Pro+							
			11 ML	17 ML	30 ML	45 ML	72 ML	110 ML	150 ML	220 ML
Permissible pressure p_{2max} at the pump outlet	bar	plastic	10	10	10	10	10	10	4	4
		stainless steel	20	20	16	16				
Nominal capacity QN at p_{2max}	l/h	50/60 Hz	0-11	0-17	0-30	0-45	0-72	0-110	0-150	0-220
Quantity per stroke	ml/stroke (100%)		1,8	1,8	5	5	5	12	25	24
Max. suction height	mWC		3	3	3	3	3	3	3	3
Min./max. permissible pressure at the pump inlet	bar	$p_{1min/max}$	-0,3/0	-0,3/0	-0,3/0	-0,3/0	-0,3/0	-0,3/0	-0,3/0	-0,3/0
Recommended nominal diameter of the connecting pipes	mm	DN	10	10	10	10	10	15	15	15
Nominal stroke frequency	1/min	50/60 Hz	100	150	100	150	100	150	100	150
Weight approx.	kg	plastic								
		stainless steel								

ELECTRICAL DATA		C 409.2-... ML Pro+	
		230 V, 50/60 Hz	115 V, 50/60 Hz
Power consumption	kW	0,37	
Voltage	V	210 - 250	100 - 125
Frequency	Hz	50/60	
Inlet voltage, control input	V DC	5...30	
Minimum contact signal time	ms	55	
Analogue input resistance	Ω	39	
Digital output internal/external supply		PNP max. 24V DC, 30mA /max. 30V DC, 30mA	
Recommended fuse (circuit breaker)		C6A	C10A
Insulation class	ISO	F	
Enclosure	IP	55	

Flow capacity 11 l/h ... 220 l/h
Admissible counterpressure up to 20 bar

C 409.2 ML Pro+

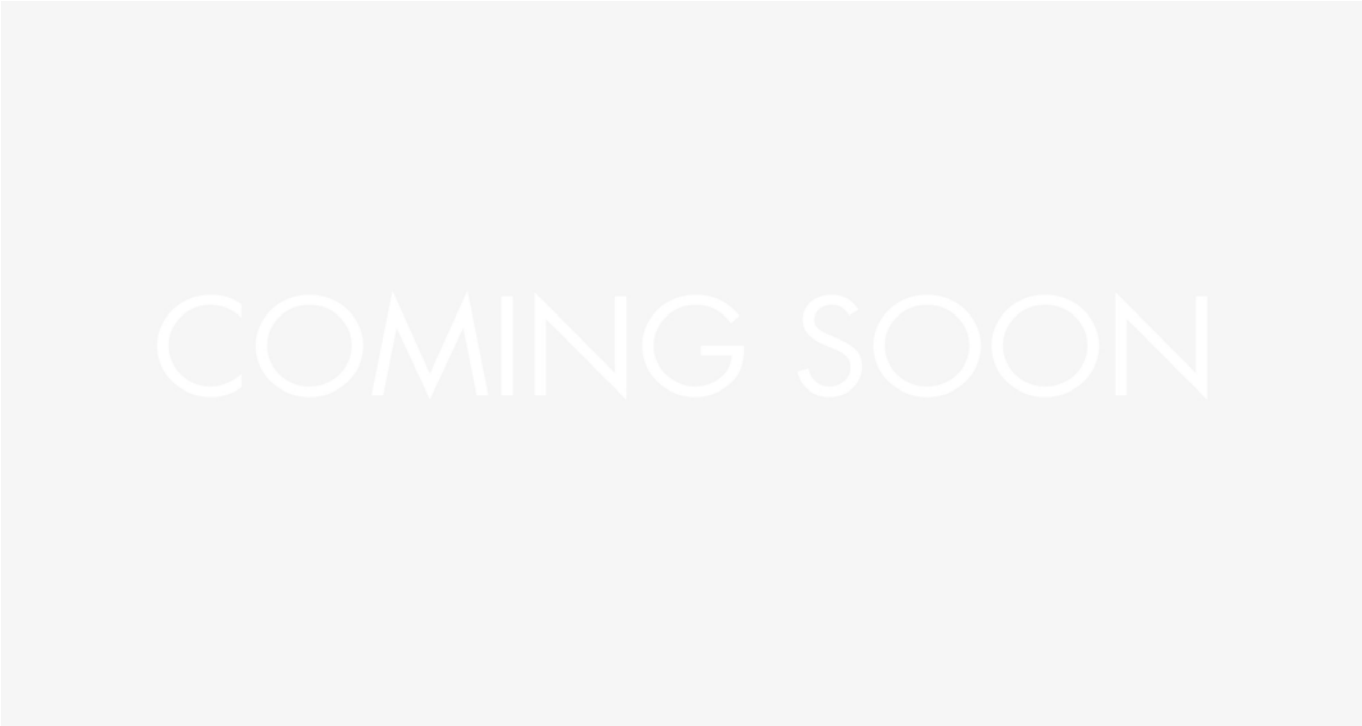
DIMENSIONS



	G		B	L	H		B	L	H
C 409.2-11 ML, ...-17 ML	G ¾	PVC, PP, PVDF	351	323	380	1.4571	334	308	380
C 409.2-30 ML, ...-45 ML	G ¾		355	323	380		338	305	380
C 409.2-72 ML, ...-110 ML	G ¾		359	327	380		342	314	380
C 409.2-150 ML, ...-220ML	G1 ¼*		373	344	380		356	339	380

* PVC = G1

CHARACTERISTIC CURVES



MULTI-LAYER DIAPHRAGM PUMPS

CONTROLLABLE

FUNCTIONS AND OPERATING MODES

- Manual operation
- Manual stroke frequency adjustment
- PROFIBUS DP-VO Slave interface (option)
- External START/STOP
- Pulse operation / fractinator
- Pulse memory
- Analogue operation (0/4 ... 20 mA)
- Analogue operation standardization
- Batch dosing (manual / with timer)
- 3 LEDs for status indication
- Multiline, illuminated display
- Menu-driven parameterization
- Flow indication
- Calibration function
- 4-key operation
- 2 digital outputs (PLC)
- 1 analogue output (PLC or contact signal)
- 2 analogue/digital inputs (reversible)
- 1 digital input
- Programmable input/output functions
- Diaphragm monitoring
- Connection/evaluation: 2-stage level monitoring
- Connection/evaluation: Flow monitoring
- Connection/evaluation: Flow metering
- Voltage 210-250V, 50/60Hz
- 3m connection cable with Euro-plug

BASIC DESIGNS

PP

Pump body **PP**
Valves **PP-FRP**
Valve balls **PTFE**
Multi-layer diaphragm **PTFE**

Type	Valve seals			
	EPDM Article-No.	Price (EUR)	FPM Article-No.	Price (EUR)
C409.2-11ML Pro+	16024343	⌚	15005809	⌚
C409.2-17ML Pro+	16024421	⌚	15005810	⌚
C409.2-30ML Pro+	⌚	⌚	15006244	⌚
C409.2-45ML Pro+	16024422	⌚	15005811	⌚
C409.2-72ML Pro+	⌚	⌚	15006243	⌚
C409.2-110ML Pro+	16024423	⌚	15005812	⌚
C409.2-150ML Pro+	⌚	⌚	15006242	⌚
C409.2-220ML Pro+	16024424	⌚	15005813	⌚

PVDF

Pump body **PVDF**
Valves **PVDF-FRP**
Valve balls **PTFE**
Multi-layer diaphragm **PTFE**

Type	Valve seals	
	FEP-covered Article-No.	Price (EUR)
C409.2-11ML Pro+	16024425	⌚
C409.2-17ML Pro+	16024426	⌚
C409.2-30ML Pro+	⌚	⌚
C409.2-45ML Pro+	16024427	⌚
C409.2-72ML Pro+	⌚	⌚
C409.2-110ML Pro+	⌚	⌚
C409.2-150ML Pro+	⌚	⌚
C409.2-220ML Pro+	16024429	⌚

PVC-U

Pump body **PVC-U**
Valves **PVC-U**
Valve balls **PTFE**
Multi-layer diaphragm **PTFE**

Type	Valve seals			
	EPDM Article-No.	Price (EUR)	FPM Article-No.	Price (EUR)
C409.2-11ML Pro+	16024430	⌚	16024256	⌚
C409.2-17ML Pro+	16024431	⌚	16024436	⌚
C409.2-30ML Pro+	⌚	⌚	⌚	⌚
C409.2-45ML Pro+	16024432	⌚	16024437	⌚
C409.2-72ML Pro+	⌚	⌚	⌚	⌚
C409.2-110ML Pro+	16024433	⌚	16024295	⌚
C409.2-150ML Pro+	⌚	⌚	⌚	⌚
C409.2-220ML Pro+	16024435	⌚	16024438	⌚

STAINLESS STEEL

Pump body **1.4571**
Valves **1.4571/1.4581**
Valve balls **1.4401**
Multi-layer diaphragm **PTFE**

Type	Valve seals	
	FEP-covered Article-No.	Price (EUR)
C409.2-11ML Pro+	16024247	⌚
C409.2-17ML Pro+	16024442	⌚
C409.2-30ML Pro+	⌚	⌚
C409.2-45ML Pro+	16024331	⌚
C409.2-72ML Pro+	⌚	⌚
C409.2-110ML Pro+	16024443	⌚
C409.2-150ML Pro+	⌚	⌚
C409.2-220ML Pro+	16024444	⌚

OPTIONS



Versions (basic equipment)

Version	Price (EUR)
---------	-------------

Pump without control element (price reduction)	▼
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Pump with control element (basic version)	●
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Pump without control element; with INTERFACE MODULE (INTERFACE MODULE instead of control element)	▲
--	---

Stroke length adjustment

Surcharge (EUR)

with position indicator	▲
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Stroke length adjustment with actuator

Surcharge (EUR)

Actuator N C1-BA	230V ±10%, 50/60Hz, 128s/10 U, 1,5Nm incl. mountig set	▲
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Electronic positioning controller ESR-N (only integrated in N C1-BA)	Input signal 0/4 - 20mA including feedback signal 0/4 - 20mA	▲
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in combination with cTÜVus

MULTI-LAYER DIAPHRAGM PUMPS

CONTROLLABLE

OPTIONS



Drive motor

Surcharge (EUR)

Connection voltage 115V, 50/60Hz



Special connection

Surcharge (EUR)

Special connection (plug) for power supply



in combination with cTÜVus



ACCESSORIES



Control element

Article-No.

Price (EUR)

Control element (removeable)

90044844



INTERFACE MODULE - PROFINET -

- PROFINET INTERFACE MODULE
- PROFINET IO RT 2 Port (Ethernet Network Interface)
- Transmission speed: automatic 10Mbit/s, 100Mbit/s
- Connection to dosing pump: M12 cable socket, 4-pole, D-coded

Type

Article-No.

Price (EUR)

PROFINET INTERFACE MODULE

90044877



PROFINET connection

length 1m

90050133



M12x1, straight, with cable plug and -socket, 4-pin, 2x2x0.34 mm², CAT5E, color green

length 5m

90050134



length 10m

90050135



PROFINET Connection

length 1m

90050136



M12x1 - RJ45, straight, 4-pin, 2x2x0.34 mm², CAT5, color green

length 5m

90050137



length 10m

90050138



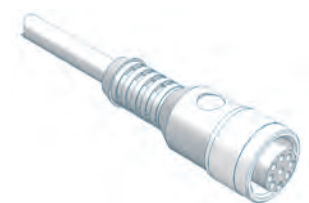
ACCESSORIES



INTERFACE MODULE - PROFIBUS -

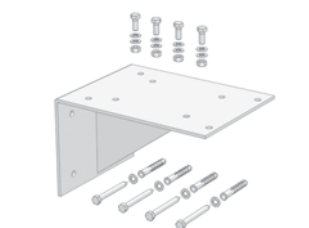
- PROFIBUS INTERFACE MODULE
- PROFIBUS DP-V1 (Slave)
- Transmission speed: automatic 9,6 kbit/s ... 12 Mbit/s
- Connection to dosing pump: M12 cable socket, 5-pole, B-coded

Type	Article-No.	Price (EUR)
PROFIBUS INTERFACE MODULE	90044875	▲
PROFIBUS cable plug M12x1, straight, individually convertible, 5-pole, IP67	90025520	▲
PROFIBUS Cable socket M12x1, straight, individually convertible, 5-pole, IP67	90025521	▲
PROFIBUS Cable socket M12x1, straight, with 10m line, 2x0,34mm ² , 1x free cable end, color: purple, IP67	90025524	▲
PROFIBUS Cable socket M12x1, straight, with 15m line, 2x0,34mm ² , 1x free cable end, color: purple, IP67	90025525	▲
PROFIBUS Connection M12x1, straight, with cable plug and cable socket, 2x0,34mm ² , length 1m, cable 2x0,34mm ² , color: purple, IP67	90025674	▲
PROFIBUS Bus line 2x 0,64mm ² , shielded, Permanent installation (inside), color: purple (serial meter)	90014541	▲
PROFIBUS Terminating resistor M12x1, 5-pole, IP67	90022890	▲



Control cable

	Article-No.	Price (EUR)
for level input (flow monitoring not included)		
Cable plug M12, 8-pole fully assembled, incl. 5m cable	90042494	▲
Cable plug M12, 8-pole Individually convertible (without cable)	90022885	▲



Bracket

	Article-No.	Price (EUR)
for wall mounting (incl. mounting kit)		
PP	90023848	▲
1.4301	90023875	▲



Connection pieces

Extensive range of connection / transition pieces and dosing hoses

Inserts and pipe sockets with union nuts, flange connections, hose screw connections, hose nozzles as well as dosing hoses and accessories.

to be found in **CHAPTER 4** of this catalog, from **page 442**

MULTI-LAYER DIAPHRAGM PUMPS

CONTROLLABLE

FITTINGS FOR THE SUCTION SIDE



Suction lance S-01 (without level switch)

Properties

- Compact, robust design
- Maintenance-free
- Easy handling
- High-quality materials
- individual special lengths up to max. 1.500mm possible

Basic version

- Suction lance: **PVC-U**
- Foot valve: **PVC-U**
- Seals: **EPDM** or **FPM**
- Valve ball: **PTFE**
- max. flow rate: **200 l/h**
- Standard length: **650mm, 1.000mm und 1.250mm**

Type	Length	Connection	Seals	Article-No.	Price (EUR)
C409.2-11ML, ...-17ML, ...-30ML, ...-45ML, ...-72ML, ...-110ML, ...-150ML					
S-01	650 mm	G 3/4	EPDM	37606591	▲
S-01	1.000 mm	G 3/4	EPDM	37606592	▲
S-01	1.250 mm	G 3/4	EPDM	37606593	▲
S-01	max. 1.500 mm	G 3/4	EPDM	37600705	▲
S-01	650 mm	G 3/4	FPM	37606594	▲
S-01	1.000 mm	G 3/4	FPM	37606595	▲
S-01	1.250 mm	G 3/4	FPM	37606596	▲
S-01	max. 1.500 mm	G 3/4	FPM	37600817	▲



Suction lance SL-12.1 (with level switch, 2-stage with plug, 8-pole)

Properties

- Compact design
- Height-adjustable
- 2-stage level monitoring
- Flexible connection
- Easy handling
- High-quality materials
- Maintenance-free
- incl. hose connection 4/6, 6/8, 6/12

Basic version

- Suction lance: **PVC-U**
- Foot valve: **PVC-U**
- Valve ball: **PTFE**
- Hose (inboard): **PE**
- Level switch: **PP**
2-stage, normally closed (NC)
5m cable (from foot valve) with plug, M12, 8-pole
- max. flow rate: **14 l/h (4/6) ... 35 l/h (6/12)**

Type	Length	Seals	Article-No.	Price (EUR)
C409.2-11ML, ...-17ML, ...-30ML				
SL-12.1	600 mm	PTFE	37606194	▲
SL-12.1	1.000 mm	PTFE	37606495	▲
SL-12.1	1.200 mm	PTFE	37606195	▲

FITTINGS FOR THE SUCTION SIDE



Suction lance SL-02 (with level switch, 1- or 2-stage with plug, 8-pole)

Properties

- Compact, robust design
- Safe
- Easy handling
- 1-stage level switch
- Flexible connection
- High-quality materials
- Maintenance-free

Basic version

- Suction lance: **PVC-U**
- Foot valve: **PVDF-GFK**
- Valve ball: **PTFE**
- Suction basket: **PP**
- Level switch: **PP**
1- or 2-stage
5m cable (from foot valve) with plug, M12, 8-pole
- max. flow rate: **200 l/h**

Type	Level switch	Length	Connection	Seals	Article-No.	Price (EUR)
C409.2-45ML, ...-72ML, ...-110ML, ...-150ML						
SL-02	1-stage	630 mm	G ¾	EPDM	37606579	▲
SL-02	1-stage	1.000 mm	G ¾	EPDM	37606581	▲
SL-02	1-stage	1.200 mm	G ¾	EPDM	37606583	▲
SL-02	1-stage	630 mm	G ¾	FPM	37606580	▲
SL-02	1-stage	1.000 mm	G ¾	FPM	37606582	▲
SL-02	1-stage	1.200 mm	G ¾	FPM	37606584	▲
SL-02	2-stage	630 mm	G ¾	EPDM	37606585	▲
SL-02	2-stage	1.000 mm	G ¾	EPDM	37606587	▲
SL-02	2-stage	1.200 mm	G ¾	EPDM	37606589	▲
SL-02	2-stage	630 mm	G ¾	FPM	37606586	▲
SL-02	2-stage	1.000 mm	G ¾	FPM	37606588	▲
SL-02	2-stage	1.200 mm	G ¾	FPM	37605974	▲



ACCESSORIES

Drum connection adapter

Connection	Material	Seal	Article-No.	Price (EUR)
for external thread G=S65x5 DIN2781	PP	EPDM	90011763	▲
	PP	FPM	90011762	▲
for internal thread (set) G=2 fine thread steel drum DIN-ISO 228-1	PP	EPDM	90046044	▲
G=v. Leer/tri-sure BCS 56x4 EN12708	PP	FPM	90046043	▲
for external thread G= DIN51	PP	EPDM	90011767	▲
	PP	FPM	90011766	▲
for wall duct G=2 Wall thickness S=max. 6mm	PP/PVC	EPDM	90011773	▲
	PP/PVC	FPM	90011772	▲
other adapters			🔗	🔗

MULTI-LAYER DIAPHRAGM PUMPS

CONTROLLABLE

FITTINGS FOR THE SUCTION SIDE



Suction lance SLP-15x.1 (with level switch, 1- or 2-stage)

Properties

- Compact, robust design
- Easy handling
- 1- or 2-stage level monitoring
- Protective tube
- Maintenance free
- High quality materials
- Protection class IP65

Basic version

- Suction lance: **PVC-U**
- Foot valve: **PVC-U**
- Valve ball: **PTFE**
- Seals: **EPDM** or **FPM**
- Level switch: **PP**
1- or 2-stage, normally closed (NC)
cable gland: **M12x1,5**
- max. flow rate: **700 l/h**

Type	Level switch	Length	Material	Seals	Article-No.	Price (EUR)
C409.2-220ML						
SLP-151.1	1-stage	750 mm	PVC-U	EPDM	37604108	▲
SLP-151.1	1-stage	750 mm	PVC-U	FPM	37604114	▲
SLP-151.1	1-stage	1.000 mm	PVC-U	EPDM	37604109	▲
SLP-151.1	1-stage	1.000 mm	PVC-U	FPM	37604115	▲
SLP-151.1	1-stage	1.250 mm	PVC-U	EPDM	37604110	▲
SLP-151.1	1-stage	1.250 mm	PVC-U	FPM	37604116	▲
SLP-152.1	2-stage	750 mm	PVC-U	EPDM	37604111	▲
SLP-152.1	2-stage	750 mm	PVC-U	FPM	37604117	▲
SLP-152.1	2-stage	1.000 mm	PVC-U	EPDM	37604112	▲
SLP-152.1	2-stage	1.000 mm	PVC-U	FPM	37604118	▲
SLP-152.1	2-stage	1.250 mm	PVC-U	EPDM	37604113	▲
SLP-152.1	2-stage	1.250 mm	PVC-U	FPM	37604119	▲

ACCESSORIES

Type	Designation	Article-No.	Price (EUR)
BCS 70x6 Di=50	Container screw connection for internal thread. Ventilation via tolerance of the inner diameter of the adapter or via separate ventilation of the container.	90028923	▲
G2 IBC	For IBC cover with G2 internal thread. Ventilation via adapter. Gas-tight design with „hose set“ possible.	90044282	▲
G2 universal	Bulkhead fitting with flat gasket (made of PVC-U). Ventilation via adapter. Gas-tight design with „hose set“ possible.	90044277	▲
Hose set	G3/4, d12, L=3m for gas tight container screwing for connection to On-site evacuation system	90044369	▲
Quiver	Quiver for storing/holding the suction lance (e.g. when changing containers)	90028919	▲
Control cable	Control cable for level input Cable plug M12x1, 8-pole, 5m length, loosely delivered	90042494	▲



FITTINGS FOR THE SUCTION SIDE



Foot valve (Plastic)

Properties

- Compact design
- Easy installation
- High-quality materials
- Maintenance-free

Basic version

- Ball: **PTFE**
- Sieve: **ETFE**
- Mesh size: **1mm**

Type	DN	Connection	Material	Seals	Article-No.	Price (EUR)
C409.2-11ML, ...-17ML, ...-30ML, ...-45ML, ...-72ML, ...-110ML, ...-150ML						
781.1	8	G 3/4	PVDF/PVDF-GFK	FEP	30073008	▲
C409.2-220ML						
783.1	20	G 1 1/4	PP/PP-GFK	EPDM	37600552	▲
783.1	20	G 1 1/4	PP/PP-GFK	FPM	37600553	▲
783.1	20	G 1 1/4	PVDF/PVDF-GFK	FEP	30073018	▲



Foot valve (plastic)

Properties

- Compact design
- Easy installation
- High-quality materials
- Maintenance-free

Basic version

- Ball: **PTFE**
- Sieve: **ETFE**
- Mesh size: **1mm**

Type	DN	Connection	Material	Seals	Article-No.	Price (EUR)
C409.2-11ML, ...-17ML, ...-30ML, ...-45ML, ...-72ML, ...-110ML, ...-150ML						
731	8	G 3/4	PVC-U	EPDM	37601636	▲
C409.2-220ML						
Ⓢ			PVC-U		Ⓢ	Ⓢ



Foot valve (Stainless steel)

Properties

- Compact design
- Easy installation
- High-quality materials
- Maintenance-free

Basic version

- Ball: **1.4401**
- Sieve: **ETFE**
- Mesh size: **1mm**

Type	DN	Connection	Material	Seals	Article-No.	Price (EUR)
C409.2-11ML, ...-17ML, ...-30ML, ...-45ML, ...-72ML, ...-110ML, ...-150ML						
731	8	G 3/4	1.4571	FEP	37601149	▲
C409.2-220ML						
732	15	G 1	1.4571	FEP	37603325	▲

MULTI-LAYER DIAPHRAGM PUMPS

CONTROLLABLE

FITTINGS FOR THE SUCTION SIDE



Multi-function device

Properties

- Can be used as an priming aid and/or an calibration pot
- Compact design
- Flexible Connection
- Maintenance-free
- incl. glue joint (PVC-U) and welding joint (PP)

Basic version

- Housing: **PVC-U / PVC-transparent**
- Seals: **FPM** or **EPDM**
- max. operating pressure: **-0,5 ... +2 bar**

Type	DN	Connexion	Volume	Seals	Article-No.	Price (EUR)
------	----	-----------	--------	-------	-------------	-------------

C409.2-11ML, ...-17ML, ...-30ML, ...-45ML

MFD 60	8	G¾	0,5 Ltr.	EPDM	37606311	▲
MFD 60	8	G¾	0,5 Ltr.	FPM	37605864	▲

C409.2-72ML, ...-110ML, ...-150ML, ...-220ML

MFD 570	15	G1	2 Ltr.	EPDM	37606278	▲
MFD 570	15	G1	2 Ltr.	FPM	37605992	▲

ACCESSORIES



Hand vacuum pump	PVC/FPM	37605682	▲
	(incl. 1,5m PVC-Hose d=12/21)		

FITTINGS FOR THE PRESSURE SIDE



Flow controller

- IP65
- incl. 0,6m cable with cable socket M12, 5-pole (socket for pump connection)
- max. permissible operating pressure: **10 bar**

Type	Connection thread	Materials	Article-No.	Price (EUR)
C409.2-11ML, ...-17ML, ...-30ML				
8191.1	Inlet: G¾ (internal) Outlet: G¾ (external)	PVC-U/FPM	37602227	▲
		PP/FPM	37602175	▲
C409.2-45ML, ...-72ML, ...-110ML, ...-150ML				
8192.1	Inlet: G¾ (internal) Outlet: G¾ (external)	PVC-U/FPM	37602176	▲
		PP/FPM	37602177	▲
C409.2-220ML				
8193.1	Inlet: G1 (internal) Outlet: G1 (external)	PVC-U/FPM	37602178	▲
		PP/FPM	37602240	▲



Flow meter

- IP65
- incl. 0,6m cable with cable socket M12, 5-pole (socket for pump connection)
- max. permissible operating pressure: **10 bar**
- can be used on suction and pressure side

Type	Connection thread	Materials	Article-No.	Price (EUR)
C409.2-11ML, ...-17ML, ...-30ML				
8012.1	Inlet: G¾ (internal) Outlet: G¾ (external)	PVC-U/FPM	37602277	▲
		PVDF/FPM	37602307	▲
8013.1	Inlet: G¾ (internal) Outlet: G¾ (external)	PVC-U/FPM	37602279	▲
		PVDF/FPM	37602309	▲
C409.2-110ML, ...-150ML				
8014.1	Inlet: G¾ (internal) Outlet: G¾ (external)	PVC-U/FPM	37602281	▲
		PVDF/FPM	37602311	▲
C409.2-220ML				
8015.1	Inlet: G1¼ (internal) Outlet: G1¼ (external)	PVC-U/FPM	37602320	▲
		PVDF/FPM	37602332	▲

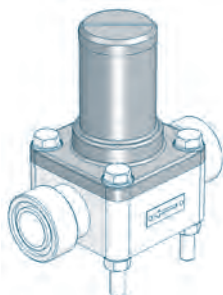
C409.2-11ML ... C409.2-220ML

Seals	EPDM	○
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MULTI-LAYER DIAPHRAGM PUMPS

CONTROLLABLE

FITTINGS FOR THE PRESSURE SIDE



Diaphragm relief valve

for overpressure protection

Properties

- Compact design
- Easy installation
- Maintenance-free
- High-quality materials

Basic version

- Valve body: **PVC-U, 1.4581, PP or PVDF**
- Diaphragm: **PTFE-faced**

Type	Nominal size	Connection	Valve body	Seals	Article-No.	Price (EUR)
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C409.2-11ML, ...-17ML, ...-30ML, ...-45ML

620.10	DN8	G 3/4	PVC-U	FPM	37603632	▲
620.10	DN8	G 3/4	PVC-U	EPDM	36200101	▲
620.10	DN8	G 3/4	PP	FPM	37603630	▲
620.10	DN8	G 3/4	PP	EPDM	37603629	▲
620.10	DN8	G 3/4	PVDF	FEP	37601792	▲
620.10	DN8	G 3/4	1.4581	FEP	37600670	▲

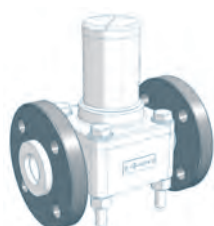
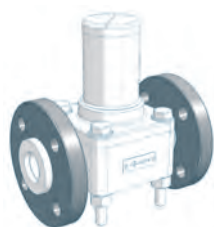
C409.2-72ML, ...-110ML, ...-150ML, ...-220ML

622.10	DN15	G 1	PVC-U	FPM	37604006	▲
622.10	DN15	G 1	PVC-U	EPDM	37603635	▲
622.10	DN15	G 1	PP	FPM	⌚	⌚
622.10	DN15	G 1	PP	EPDM	⌚	⌚
622.10	DN15	G 1	PP-GFK	FPM	37603634	▲
622.10	DN15	G 1	PP-GFK	EPDM	37600450	▲
622.10	DN15	G 1	PVDF	FEP	37600717	▲
622.10	DN15	G 1	PVDF-GFK	FEP	37601819	▲
622.10	DN15	G 1	1.4581	FEP	37600695	▲

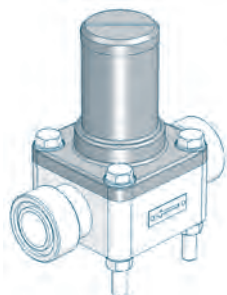
OPTIONS

Type	Design	Loose flange	Surcharge [EUR]
620.10	PVC	Loose flange made of PVC-U	⌚
620.10	PP-FRP/PVDF-FRP	Loose flange made of PP with steel inlay	×
620.10	PP	Loose flange made of PP with steel inlay	▲
620.10	PVDF	Loose flange made of PP with steel inlay	▲

Type	Design	Loose flange	Surcharge [EUR]
622.10	PVC	Loose flange made of PVC-U	▲
622.10	PP-FRP/PVDF-FRP	Loose flange made of PP with steel inlay	⌚
622.10	PP	Loose flange made of PP with steel inlay	▲
622.10	PVDF	Loose flange made of PP with steel inlay	▲



FITTINGS FOR THE PRESSURE SIDE



Diaphragm pressure keeping valve

to prevent over-conveyance

Properties

- Compact design
- Easy installation
- Maintenance-free
- High-quality materials

Basic version

- Valve body: **PVC-U, 1.4581, PP or PVDF**
- Diaphragm: **PTFE-faced**

Type	Nominal size	Connection	Valve body	Seals	Article-No.	Price (EUR)
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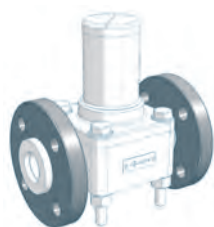
C409.2-11ML, ...-17ML, ...-30ML, ...-45ML

620.D	DN8	G ¾	PVC-U	FPM	37600048	▲
620.D	DN8	G ¾	PVC-U	EPDM	36201101	▲
620.D	DN8	G ¾	PP	FPM	37600055	▲
620.D	DN8	G ¾	PP	EPDM	36201105	▲
620.D	DN8	G ¾	PVDF	FEP	37601827	▲
620.D	DN8	G ¾	1.4581	FEP	37600525	▲

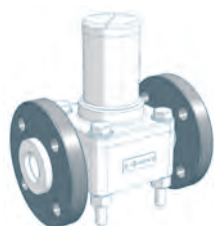
C409.2-72ML, ...-110ML, ...-150ML, ...-220ML

622.D	DN15	G 1	PVC-U	FPM	37600049	▲
622.D	DN15	G 1	PVC-U	EPDM	36221101	▲
622.D	DN15	G 1	PP	FPM	⌚	⌚
622.D	DN15	G 1	PP	EPDM	⌚	⌚
622.D	DN15	G 1	PP-GFK	FPM	37600056	▲
622.D	DN15	G 1	PP-GFK	EPDM	36221105	▲
622.D	DN15	G 1	PVDF	FEP	37602881	▲
622.D	DN15	G 1	PVDF-GFK	FEP	37601449	▲
622.D	DN15	G 1	1.4581	FEP	37600538	▲

OPTIONS



Type	Design	Loose flange	Surcharge [EUR]
620.D	PVC	Loose flange made of PVC-U	⌚
620.D	PP-FRP/PVDF-FRP	Loose flange made of PP with steel inlay	×
620.D	PP	Loose flange made of PP with steel inlay	▲
620.D	PVDF	Loose flange made of PP with steel inlay	▲

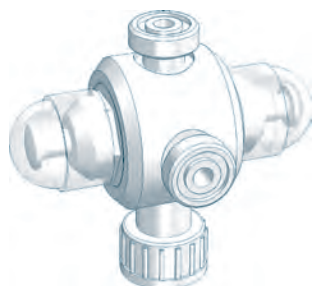


Type	Design	Loose flange	Surcharge [EUR]
622.D	PVC	Loose flange made of PVC-U	▲
622.D	PP-FRP/PVDF-FRP	Loose flange made of PP with steel inlay	⌚
622.D	PP	Loose flange made of PP with steel inlay	▲
622.D	PVDF	Loose flange made of PP with steel inlay	▲

MULTI-LAYER DIAPHRAGM PUMPS

CONTROLLABLE

FITTINGS FOR THE PRESSURE SIDE



Multi function valve

Properties

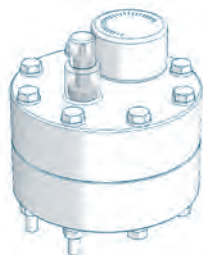
- Maximum operating pressure 10 bar
- Compact design
- Easy installation
- Maintenance-free
- Venting
- Overpressure protection for dosing pumps
- Prevention of over conveyance

Basic version

- Diaphragms: **PTFE-faced**
- Connection: **G^{3/4}**
- **Relief valve side**
Opening pressure: **2 up to 10 bar** (adjustable)
- **Pressure keeping valve side**
Holding pressure: **1,0 - 1,5 bar**

Type	Valve body	Seals	Article-No.	Price (EUR)
C409.2-11ML, ...-17ML				
MFV 050	PVC-U	EPDM	37600973	▲
MFV 050	PVC-U	FPM	37600974	▲
MFV 050	PVC-U	FEP	37600975	▲
MFV 050	PP	EPDM	37600982	▲
MFV 050	PP	FPM	37600983	▲
MFV 050	PP	FEP	37600984	▲
C409.2-30ML, ...-45ML, ...-72ML, ...-110ML, ...-150ML, ...-220ML				
⌚			⌚	⌚

FITTINGS FOR THE PRESSURE SIDE



Diaphragm pulsation damper (Plastic, PTFE-diaphragm, max. 10 bar)

Properties

- Any mounting position
- Easy installation
- Long service life
- Easy handling
- High-quality materials
- Low maintenance

Type	Connection	max. Pressure	Material	Diaphragm	Article-No.	Price (EUR)
C409.2-11ML, ...-17ML						
720.1	G ½	10 bar	PVC-U	PTFE	37601848	▲
720.1	G ½	10 bar	PP	PTFE	37601856	▲
720.1	G ½	10 bar	PVDF	PTFE	37601857	▲

ACCESSORIES

Connection adapter



Thread connection	G3/4 male	PVC-U	EPDM	90021733	▲
Connction to pulsation damper	G1/2 male	PVC-U	FPM	90025079	▲
		PP	EPDM	90038083	▲
		PP	FPM	90038082	▲
		PVDF	FEP	Ⓢ	Ⓢ

Retaining clamp



(2 Piece each pulsation damper)	PP	d 16	90010649	▲
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Filling pump FLP 2 for filling device

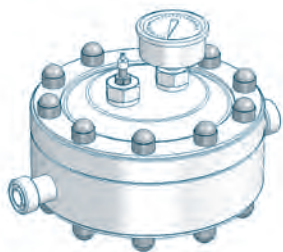


with manometer, max. 7 bar incl. 2m hose and coupling for air valve	90009396	▲
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MULTI-LAYER DIAPHRAGM PUMPS

CONTROLLABLE

FITTINGS FOR THE PRESSURE SIDE



Diaphragm pulsation damper (Plastic, PTFE(-faced) diaphragm, max. 10 bar)

Properties

- Any mounting position
- Easy installation
- Long service life
- Easy handling
- High-quality materials
- Low maintenance
- Diaphragm: PTFE-faced

Type	Connection	max. Pressure	Material	Seals	Article-No.	Price (EUR)
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C409.2-30ML, ...-45ML

721.2	G 3/4	10 bar	PVC-U	EPDM	37602014	▲
721.2	G 3/4	10 bar	PVC-U	FPM	37602013	▲
721.2	G 3/4	10 bar	PP	EPDM	37603419	▲
721.2	G 3/4	10 bar	PP	FPM	37602017	▲
721.2	G 3/4	10 bar	PVDF	FEP	37604046	▲

C409.2-72ML, ...-110ML, ...-150ML, ...-220ML

722.1	G 1	10 bar	PVC-U	EPDM	37600647	▲
722.1	G 1	10 bar	PVC-U	FPM	30100008	▲
722.1	G 1	10 bar	PP	EPDM	37600676	▲
722.1	G 1	10 bar	PP	FPM	30100009	▲
722.1	G 1	10 bar	PVDF	FEP	37601852	▲

ACCESSORIES



Retaining clamp

(2 Piece each pulsation damper)	PP	d 25	90010651	▲
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Filling pump FLP 2 for filling device

with manometer, max. 7 bar incl. 2m hose and coupling for air valve	90009396	▲
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FITTINGS FOR THE PRESSURE SIDE



Diaphragm pulsation damper (Stainless steel, max. 10 bar)

Properties

- Any mounting position
- Easy installation
- Long service life
- Easy handling
- High-quality materials
- Low maintenance

Type	Connection	max.Pressure	Material	Diaphragm	Article-No.	Price (EUR)
C409.2-11ML, ...-17ML, ...-30ML, ...-45ML						
810.1-0,16/10	G ½	10 bar	1.4571	Butyl	37603720	▲
810.1-0,16/10	G ½	10 bar	1.4571	FPM	37603724	▲
810.1-0,16/10	G ½	10 bar	1.4571	PTFE	×	×
C409.2-72ML, ...-110ML, ...-150ML						
810.1-0,32/10	G ½	10 bar	1.4571	Butyl	37603721	▲
810.1-0,32/10	G ½	10 bar	1.4571	FPM	37603725	▲
810.1-0,32/10	G ½	10 bar	1.4571	PTFE	×	×
C409.2-220ML						
810.1-0,75/10	G ½	10 bar	1.4571	Butyl	37603722	▲
810.1-0,75/10	G ½	10 bar	1.4571	FPM	37603726	▲
810.1-0,75/10	G ½	10 bar	1.4571	PTFE	37606307	▲

ACCESSORIES

Filling- and pressure measuring device

(mounted on pulsation damper)



Design: Plastic	Manometer: 0-16 bar Measuring system: copper alloyed	●
Design: Stainless steel	Manometer: 0-16 bar, glycerine-damped Measuring system: copper alloyed Housing: 1.4301	▲



Filling pump FLP 2	for filling device	
with manometer, max. 7 bar incl. 2m hose and coupling for air valve		90009396 ▲

MULTI-LAYER DIAPHRAGM PUMPS

CONTROLLABLE

FITTINGS FOR THE PRESSURE SIDE



Diaphragm pulsation damper (Stainless steel, max. 100-180 bar)

Properties

- Any mounting position
- Easy installation
- Long service life
- Easy handling
- High-quality materials
- Low maintenance

Type	Connection	max.Pressure	Material	Diaphragm	Article-No.	Price (EUR)
C409.2-11ML, ...-17ML, ...-30ML, ...-45ML						
810.1-0,16/180	G ½	180 bar	1.4571	Butyl	90008811	▲
810.1-0,16/180	G ½	180 bar	1.4571	FPM	90009498	▲
810.1-0,16/180	G ½	180 bar	1.4571	PTFE	×	×

ACCESSORIES



Filling- and pressure measuring device

Design: removeable
Manometer d63, plastic housing, measuring system: copper alloyed
incl. 2,5m filling hose, connection M14x1,5

0 - 25 bar	37601674	▲
0 - 100 bar	37601673	▲
0 - 250 bar	30066005	▲

FITTINGS FOR THE PRESSURE SIDE



Dosing valve (Plastic)

Properties

- Compact design
- Any mounting position
- Maintenance-free
- High-quality materials

Basic version

- integrated injection lance
- Valve ball: **PTFE**
- Seals: **EPDM** or **FPM**
- Spring: **Hastelloy C4**

Type	DN	Inlet	Outlet	Material	Seal	Article-No.	Price (EUR)
------	----	-------	--------	----------	------	-------------	-------------

C409.2-11ML, ...-17ML, ...-30ML, ...-45ML, ...-72ML, ...-110ML

691.2	8	G ¾	R ½	PVC-U	EPDM	37606318	▲
691.2	8	G ¾	R ½	PVC-U	FPM	37605769	▲
691.2	8	G ¾	R ½	PP-GFK	EPDM	37605768	▲
691.2	8	G ¾	R ½	PP-GFK	FPM	37606317	▲



Dosing valve (Plastic)

Properties

- Compact design
- Any mounting position
- Maintenance-free
- High-quality materials

Basic version

- Valve ball: **PTFE**
- Spring: **Hastelloy C4**

Type	DN	Inlet	Outlet	Material	Seal	Article-No.	Price (EUR)
------	----	-------	--------	----------	------	-------------	-------------

C409.2-11ML, ...-17ML, ...-30ML, ...-45ML, ...-72ML, ...-110ML

691.1	8	G ¾	R ½	PVDF-GFK	FEP	30072015	▲
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C409.2-150ML, ...-220ML

693.1	20	G 1 ¼	R 1 ¼	PP-GFK	EPDM	37604661	▲
693.1	20	G 1 ¼	R 1 ¼	PP-GFK	FPM	37603317	▲
693.1	20	G 1 ¼	R 1 ¼	PVDF-GFK	FEP	30072027	▲



Dosing valve (Stainless steel)

Properties

- Compact design
- Any mounting position
- Maintenance-free
- High-quality materials

Basic version

- Valve ball: **1.4401**
- Seals: **FEP-covered**
- Spring: **Hastelloy C4**

Type	DN	Inlet	Outlet	Material	Seal	Article-No.	Price (EUR)
------	----	-------	--------	----------	------	-------------	-------------

C409.2-11ML, ...-17ML, ...-30ML, ...-45ML, ...-72ML, ...-110ML

691.1	8	G ¾	R ½	1.4571	FEP	37600493	▲
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C409.2-150ML, ...-220ML

692.1	15	G 1	R 1	1.4571	FEP	37600669	525,00
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MULTI-LAYER DIAPHRAGM PUMPS

CONTROLLABLE

FITTINGS FOR THE PRESSURE SIDE



Injection fitting

Properties

- incl. injection lance for better mixing
- Easy installation
- Any mounting position
- Maintenance-free
- High-quality materials

Basic version

- Cone-type check valve (spring loaded)
- Shut-off ball valve
- Injection lance (L=150mm)
- max. operating pressure: 10 bar

Type	DN	Inlet	Outlet	Material	Seals	Article-No.	Price (EUR)
------	----	-------	--------	----------	-------	-------------	-------------

C409.2-11ML, ...-17ML, ...-30ML, ...-45ML, ...-72ML, ...-110ML

8061.1	10	G ¾	R ½	PVC-U	EPDM	37602105	▲
8061.1	10	G ¾	R ½	PVC-U	FPM	37602106	▲
8061.1	10	G ¾	R ½	PP	EPDM	37602107	▲
8061.1	10	G ¾	R ½	PP	FPM	37602108	▲
8061.1	10	G ¾	R ½	PVDF	FPM	37602109	▲

C409.2-150ML, ...-220ML

8062.1	15	G 1	R ¾	PVC-U	EPDM	37602110	▲
8062.1	15	G 1	R ¾	PVC-U	FPM	37602111	▲
8062.1	15	G 1	R ¾	PP	EPDM	37602112	▲
8062.1	15	G 1	R ¾	PP	FPM	37602113	▲
8062.1	15	G 1	R ¾	PVDF	FPM	37602114	▲

Flow capacity 11 l/h ... 220 l/h
Admissible counterpressure up to 20 bar

C 409.2 ML Pro+

MULTI-LAYER DIAPHRAGM PUMPS

CONTROLLABLE



OVERVIEW

- Multi-layer diaphragm technology
- High dosing accuracy
- Safe to run dry
- Leakage free
- Low-maintenance
- User-friendly
- Flexible, multifunctional
- Digital and analogue control options
- PROFIBUS DP-Interface
- Manual stroke length- and stroke frequency adjustment

TECHNICAL DATA

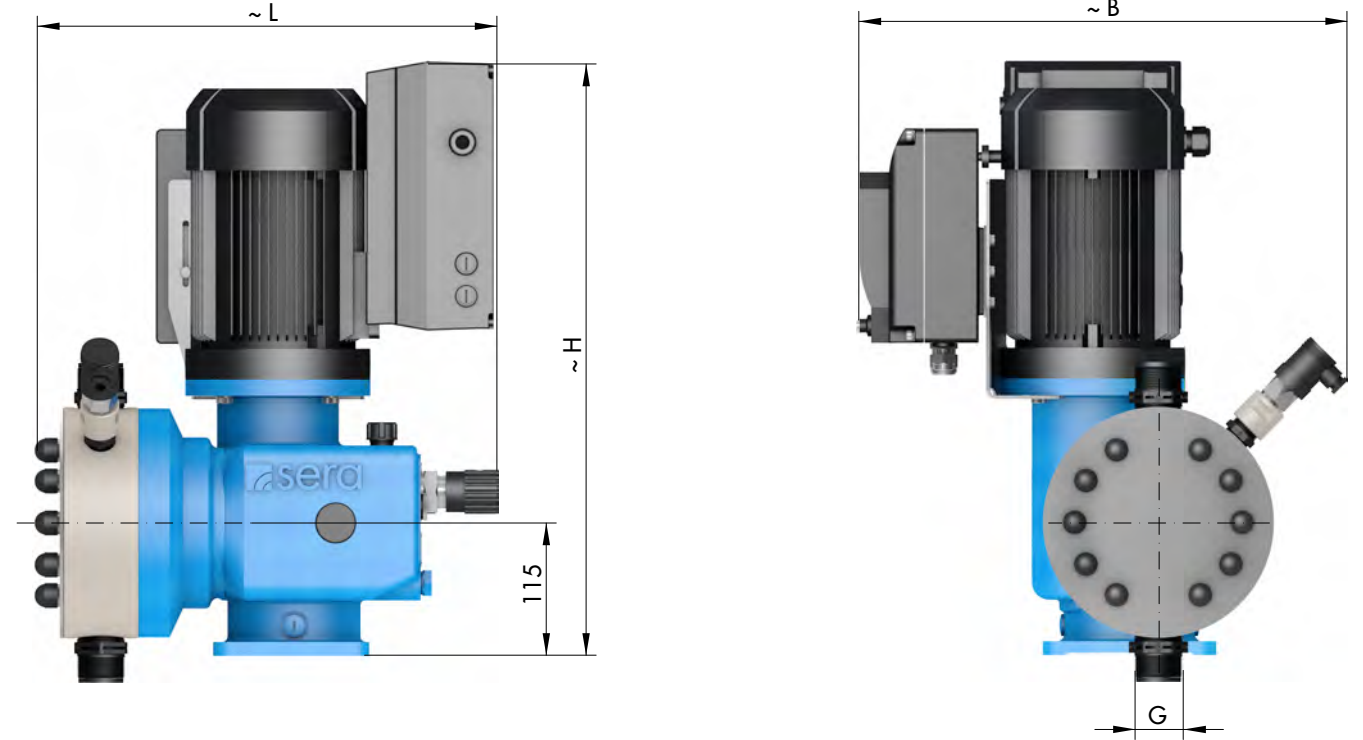
PUMP DATA			C 410.2-135 ML	C 410.2-500 ML	C 410.2-1200 ML
Permissible pressure at the pump outlet	bar	$p_{2max.}$	15	10	5
Nominal capacity QN at $p_{2max.}$	l/h	50/60 Hz	0-135	0-500	0-1200
Quantity per stroke	ml/stroke (100%)		23	85	206
Max. suction height	mWC		3	3	3
Min./max. permissible pressure at the pump inlet	bar	$p_{1min./max.}$	-0,3/0	-0,3/0	-0,3/0
Recommended nominal diameter DN of the connecting pipes	mm		15	15	20
Nominal stroke frequency	1/min	50/60 Hz	97	97	97
Weight approx.	kg	plastic	40	43	45
		stainless steel	42	45	47

ELECTRICAL DATA		C 410.2-135 ML C 410.2-500 ML	C 410.2-1200 ML
Power consumption	kW	0,75	1,5
Voltage	V	3 ~ 380 - 420	
Frequency	Hz	50/60	
Inlet voltage, control input	V DC	5...30	
Minimum contact signal time	ms	55	
Analogue input resistance	Ω	100	
Digital output internal/external supply		PNP max. 15V DC, 50mA / max. 30V DC, 350mA	
Recommended fuse	(circuit breaker)	C10A	
Insulation class	ISO	F	
Enclosure	IP	55	

Flow capacity 135 l/h ... 1.200 l/h
Admissible counterpressure up to 15 bar

C 410.2-...ML

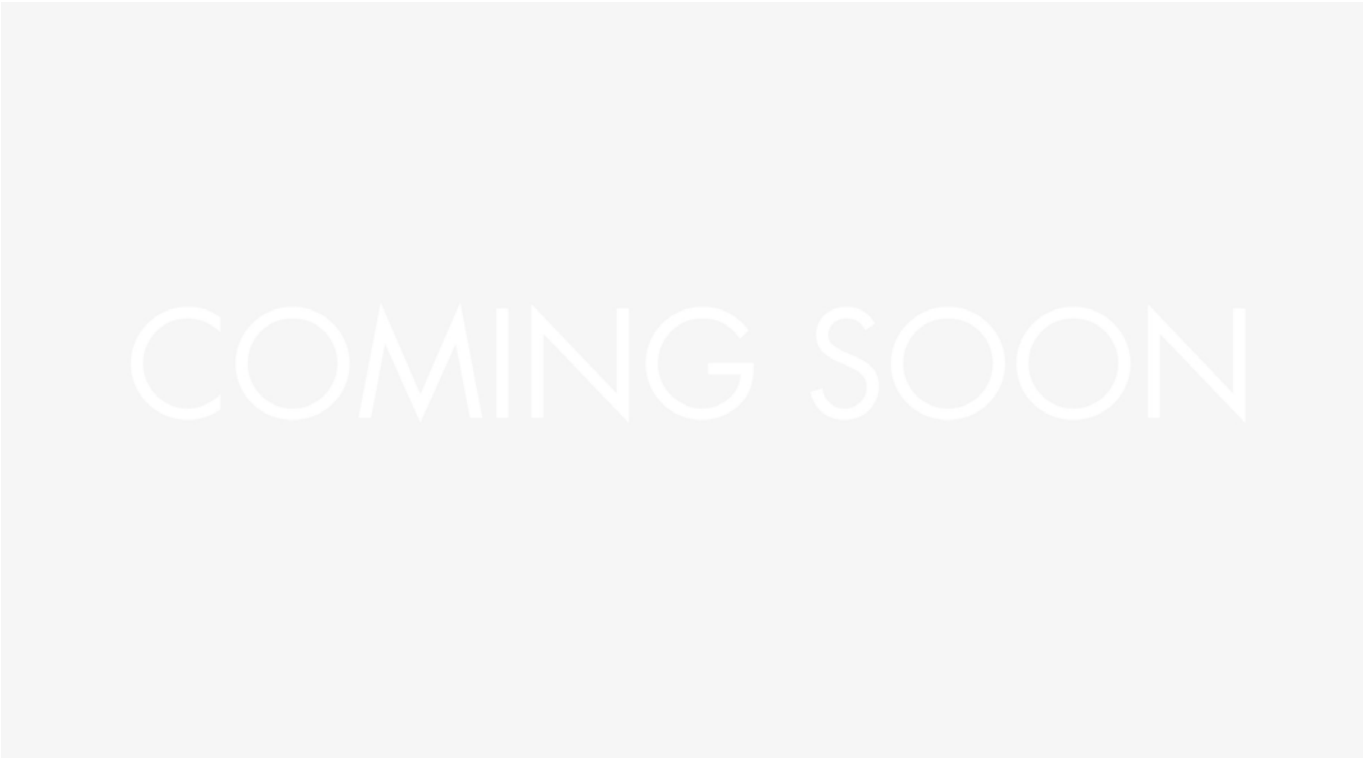
DIMENSIONS



G		▶	B L H			▶	B L H		
C 410.2-135 ML	G1¼*		405	425	520		405	425	520
C 410.2-500 ML	G1¼*		410	415	520		410	415	520
C 410.2-1200 ML	G1¼*		425	460	520		425	460	520

* PVC = G1

CHARACTERISTIC CURVES



MULTI-LAYER DIAPHRAGM PUMPS

CONTROLLABLE

FUNCTIONS AND OPERATING MODES

- Manual operation
- Manual stroke frequency adjustment
- PROFIBUS DP-VO Slave interface (option)
- External START/STOP
- Pulse operation / fractinator
- Pulse memory
- Analogue operation (0/4 ... 20 mA)*
- Analogue operation standardization
- Batch dosing (manual / with timer)*
- 3 LEDs for status indication
- Speed control/Slow Mode
- Multiline, illuminated display
- Menu-driven parameterization
- Flow indication
- Calibration function
- 4-key operation
- 2 digital outputs (PLC)*
- 1 digital output (PLC or contact signal)*
- 2 analogue/digital inputs (reversible)*
- Programmable input/output functions*
- Diaphragm monitoring
- Connection/evaluation: 2-stage level monitoring
- Connection/evaluation: Flow monitoring
- Connection/evaluation: Flow metering
- Voltage 3~380 -420V/N/PE, 50/60Hz
- 2m connection cable with CEE-plug, 5-pole

* inapplicable when supplied with PROFIBUS DP - interface (Option)

BASIC DESIGNS

PP

Pump body **PP**
Valves **PP-FRP**
Valve balls **PTFE**
Multi-layer diaphragm **PTFE**

Type	Valve seals			
	EPDM Article-No.	Price (EUR)	FPM Article-No.	Price (EUR)
C410.2-135ML	⓪	⓪	16022687	⓪
C410.2-500ML	16023782	⓪	16023783	⓪
C410.2-1200ML	⓪	⓪	16022064	⓪

PVDF

Pump body **PVDF**
Valves **PVDF-FRP**
Valve balls **PTFE**
Multi-layer diaphragm **PTFE**

Type	Valve seals	
	FEP-covered Article-No.	Price (EUR)
C410.2-135ML	⓪	⓪
C410.2-500ML	16023784	⓪
C410.2-1200ML	⓪	⓪

PVC-U

Pump body **PVC-U**
Valves **PVC-U**
Valve balls **PTFE**
Multi-layer diaphragm **PTFE**

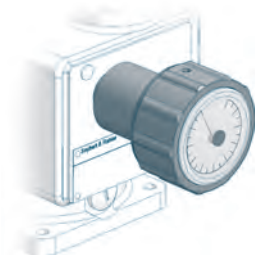
Type	Valve seals			
	EPDM Article-No.	Price (EUR)	FPM Article-No.	Price (EUR)
C410.2-135ML	⓪	⓪	⓪	⓪
C410.2-500ML	16023464	⓪	16023680	⓪
C410.2-1200ML	⓪	⓪	⓪	⓪

STAINLESS STEEL

Pump body **1.4571**
Valves **1.4571/1.4581**
Valve balls **1.4401**
Multi-layer diaphragm **PTFE**

Type	Valve seals	
	FEP-covered Article-No.	Price (EUR)
C410.2-135ML	⓪	⓪
C410.2-500ML	16023607	⓪
C410.2-1200ML	⓪	⓪

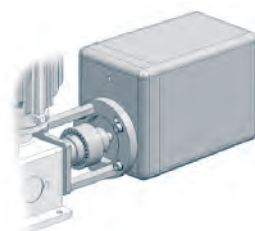
OPTIONS



Stroke length adjustment

Surcharge (EUR)

with position indicator



Stroke length adjustment with actuator

Surcharge (EUR)

Actuator N1S

230V, 50/60Hz, 128s/10 U, 15Nm
Potentiometer 1 k Ω (incl. mounting set)



Electronic positioning controller ESR-N
(only integrated in N1S)

Input signal 0/4 - 20mA including
feedback signal 0/4 - 20mA



PROFIBUS

- PROFIBUS DP-VO (Slave)
- Transmission speed: automatic 9,6 kbit/s ... 12 Mbit/s
- Connection to dosing pump: M12 cable socket, 5-pole, B-coded
- not in combination with cTÜVus

PROFIBUS

Article-No.

Price (EUR)

PROFIBUS DP-VO (Slave) Interface



Accessories

PROFIBUS Y - distributor, M12x1, 5-pole, IP67

90025526



PROFIBUS T - distributor, M12x1, 5-pole, IP67

90022889



PROFIBUS Cable plug M12x1, straight,
individually convertible, 5-pole, IP67

90025520



PROFIBUS Cable socket M12x1, straight,
individually convertible, 5-pole, IP67

90025521



PROFIBUS Cable socket M12x1, straight, with 10m line, 2x0,34mm²,
1x free cable end, color: purple, IP67

90025524



PROFIBUS Cable socket M12x1, straight, with 15m line, 2x0,34mm²,
1x free cable end color: purple, IP67

90025525



PROFIBUS Connection M12x1, straight, with cable plug and cable socket,
2x0,34mm², length 1m, cable 2x0,34mm², color: purple, IP67

90025674



PROFIBUS Bus line 2x 0,64mm², shielded,
Permanent installation inside, color: purple (serial meter)

90014541



PROFIBUS Terminating resistor M12x1, 5-polig, IP67

90022890



MULTI-LAYER DIAPHRAGM PUMPS

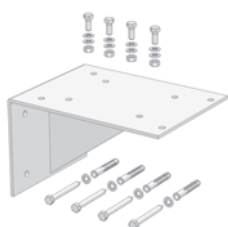
CONTROLLABLE

ACCESSORIES



Control cable

		Article-No.	Price (EUR)
for controlling the pump			
Cable socket M12, 8-pole	fully assembled, incl. 5m cable	90031247	▲
Cable socket M12, 8-pole	individually convertible (without cable)	90022879	▲
for level input (level monitoring not included)			
Cable socket M12, 3-pole	fully assembled, incl. 5m cable	90031245	▲
Cable socket M12, 3-pole	individually convertible (without cable)	90022877	▲



Bracket

		Article-No.	Price (EUR)
for wall mounting (incl. mounting kit)			
PP		90023849	▲
1.4301		90023876	▲



Connection pieces

Extensive range of connection / transition pieces and dosing hoses

Inserts and pipe sockets with union nuts, flange connections, hose screw connections, hose nozzles as well as dosing hoses and accessories.

to be found in **CHAPTER 4** of this catalog, from **page 442**

FITTINGS FOR THE SUCTION SIDE



Multi-function device

Properties

- Can be used as an priming aid and/or an calibration pot
- Compact design
- Flexible Connection
- Maintenance-free
- incl. glue joint (PVC-U) and welding joint (PP)

Basic version

- Housing: **PVC-U / PVC-transparent**
- Seals: **FPM** or **EPDM**
- max. operating pressure: **-0,5 ... +2 bar**

Type	DN	Connetion	Volume	Seals	Article-No.	Price (EUR)
------	----	-----------	--------	-------	-------------	-------------

C410.2-135ML, ...-500ML

MFD 570	15	G 1	2 Ltr.	EPDM	37606278	▲
MFD 570	15	G 1	2 Ltr.	FPM	37605992	▲

C410.2-1200 ML

MFD 1500	20	G 1 1/4	5 Ltr.	EPDM	37606316	▲
MFD 1500	20	G 1 1/4	5 Ltr.	FPM	37606315	▲



ACCESSORIES

Hand vacuum pump

PVC/FPM

37605682



(incl. 1,5m PVC-Hose d=12/21)



Foot valve (Plastic)

Properties

- Compact design
- Easy installation
- High-quality materials
- Maintenance-free

Basic version

- Ball: **PTFE**
- Sieve: **ETFE**
- Mesh size: **1mm**

Type	DN	Connection	Material	Seals	Article-No.	Price (EUR)
------	----	------------	----------	-------	-------------	-------------

783.1	20	G 1 1/4	PP/PP-GFK	EPDM	37600552	▲
783.1	20	G 1 1/4	PP/PP-GFK	FPM	37600553	▲
783.1	20	G 1 1/4	PVDF/PVDF-GFK	FEP	30073018	▲



Foot valve (Stainless steel)

Properties

- Compact design
- Easy installation
- High-quality materials
- Maintenance-free

Basic version

- Ball: **1.4401**
- Sieve: **ETFE**
- Mesh size: **1mm**

Type	DN	Connection	Material	Seals	Article-No.	Price (EUR)
------	----	------------	----------	-------	-------------	-------------

C410.2-135 ML, ...-500 ML

732	15	G 1	1.4571	FEP	37603325	▲
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C410.2-1200 ML

733	20	G 1 1/4	1.4571	FEP	37603962	▲
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MULTI-LAYER DIAPHRAGM PUMPS

CONTROLLABLE

FITTINGS FOR THE SUCTION SIDE



Suction lance S-01 (without level switch)

Properties

- Compact, robust design
- Maintenance-free
- Easy handling
- High-quality materials
- individual special lengths
up to max. 1.500mm possible

Basic version

- Suction lance: **PVC-U**
- Foot valve: **PVC-U**
- Seals: **EPDM** or **FPM**
- Valve ball: **PTFE**
- max. flow rate: **200 l/h**
- Standard length: **650mm, 1.000mm und 1.250mm**

Type	Length	Connection	Seals	Article-No.	Price (EUR)
C410.2-135 ML					
S-01	650 mm	G ¾	EPDM	37606591	▲
S-01	1.000 mm	G ¾	EPDM	37606592	▲
S-01	1.250 mm	G ¾	EPDM	37606593	▲
S-01	max. 1.500 mm	G ¾	EPDM	37600705	▲
S-01	650 mm	G ¾	FPM	37606594	▲
S-01	1.000 mm	G ¾	FPM	37606595	▲
S-01	1.250 mm	G ¾	FPM	37606596	▲
S-01	max. 1.500 mm	G ¾	FPM	37600817	▲

FITTINGS FOR THE SUCTION SIDE



Suction lance SL-02 (with level switch, 1- or 2-stage with plug, 3-pole)

Properties

- Compact, robust design
- Safe
- Easy handling
- 1-stage level switch
- Flexible connection
- High-quality materials
- Maintenance-free

Basic version

- Suction lance: **PVC-U**
- Foot valve: **PVDF-GFK**
- Valve ball: **PTFE**
- Suction basket: **PP**
- Level switch: **PP**
1- or 2-stage, normally closed (NC)
5m cable (from foot valve) with plug, M12, 3-pole
- max. flow rate: **200 l/h**

Type	Level switch	Length	Connection	Seals	Article-No.	Price (EUR)
C410.2-135 ML						
SL-02	1-stage	630 mm	G ¾	EPDM	37606372	▲
SL-02	1-stage	1.000 mm	G ¾	EPDM	37606567	▲
SL-02	1-stage	1.200 mm	G ¾	EPDM	37606568	▲
SL-02	1-stage	630 mm	G ¾	FPM	37606566	▲
SL-02	1-stage	1.000 mm	G ¾	FPM	37606078	▲
SL-02	1-stage	1.200 mm	G ¾	FPM	37606569	▲
SL-02	2-stage	630 mm	G ¾	EPDM	37606570	▲
SL-02	2-stage	1.000 mm	G ¾	EPDM	37606572	▲
SL-02	2-stage	1.200 mm	G ¾	EPDM	37606573	▲
SL-02	2-stage	630 mm	G ¾	FPM	37606571	▲
SL-02	2-stage	1.000 mm	G ¾	FPM	37606577	▲
SL-02	2-stage	1.200 mm	G ¾	FPM	37606574	▲



ACCESSORIES

Drum connection adapter

Connection	Material	Seal	Article-No.	Price (EUR)
for external thread G=S65x5 DIN2781	PP	EPDM	90011763	▲
	PP	FPM	90011762	▲
for internal thread (set) G=2 fine thread steel drum DIN-ISO 228-1	PP	EPDM	90046044	▲
G=v. Leer/tri-sure BCS 56x4 EN12708	PP	FPM	90046043	▲
for external thread G= DIN51	PP	EPDM	90011767	▲
	PP	FPM	90011766	▲
for wall duct G=2 Wall thickness S=max. 6mm	PP/PVC	EPDM	90011773	▲
	PP/PVC	FPM	90011772	▲
other adapters			Ⓢ	Ⓢ

MULTI-LAYER DIAPHRAGM PUMPS

CONTROLLABLE

FITTINGS FOR THE SUCTION SIDE



Suction lance SLP-15x.1 (with level switch, 1- or 2-stage)

Properties

- Compact, robust design
- Easy handling
- 1- or 2-stage level monitoring
- Protective tube
- Maintenance free
- High quality materials
- Protection class IP65

Basic version

- Suction lance: **PVC-U**
- Foot valve: **PVC-U**
- Valve ball: **PTFE**
- Seals: **EPDM** or **FPM**
- Level switch: **PP**
1- or 2-stage, normally closed (NC)
cable gland: **M12x1,5**
- max. flow rate: **700 l/h**

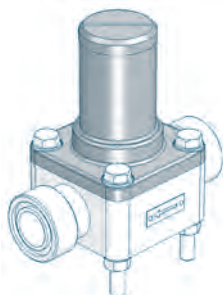
Type	Level switch	Length	Material	Seals	Article-No.	Price (EUR)
C410.2-500 ML						
SLP-151.1	1-stage	750 mm	PVC-U	EPDM	37604108	▲
SLP-151.1	1-stage	750 mm	PVC-U	FPM	37604114	▲
SLP-151.1	1-stage	1.000 mm	PVC-U	EPDM	37604109	▲
SLP-151.1	1-stage	1.000 mm	PVC-U	FPM	37604115	▲
SLP-151.1	1-stage	1.250 mm	PVC-U	EPDM	37604110	▲
SLP-151.1	1-stage	1.250 mm	PVC-U	FPM	37604116	▲
SLP-152.1	2-stage	750 mm	PVC-U	EPDM	37604111	▲
SLP-152.1	2-stage	750 mm	PVC-U	FPM	37604117	▲
SLP-152.1	2-stage	1.000 mm	PVC-U	EPDM	37604112	▲
SLP-152.1	2-stage	1.000 mm	PVC-U	FPM	37604118	▲
SLP-152.1	2-stage	1.250 mm	PVC-U	EPDM	37604113	▲
SLP-152.1	2-stage	1.250 mm	PVC-U	FPM	37604119	▲

ACCESSORIES

Type	Designation	Article-No.	Price (EUR)
BCS 70x6 Di=50	Container screw connection for internal thread. Ventilation via tolerance of the inner diameter of the adapter or via separate ventilation of the container.	90028923	▲
G2 IBC	For IBC cover with G2 internal thread. Ventilation via adapter. Gas-tight design with „hose set“ possible.	90044282	▲
G2 universal	Bulkhead fitting with flat gasket (made of PVC-U). Ventilation via adapter. Gas-tight design with „hose set“ possible.	90044277	▲
Hose set	G3/4, d12, L=3m for gas tight container screwing for connection to On-site evacuation system	90044369	▲
Quiver	Quiver for storing/holding the suction lance (e.g. when changing containers)	90028919	▲
Control cable	Control cable for level input Cable socket M12x1, 3-pole, 5m length, loosely delivered	90031245	▲



FITTINGS FOR THE PRESSURE SIDE



Diaphragm relief valve

for overpressure protection

Properties

- Compact design
- Easy installation
- Maintenance-free
- High-quality materials

Basic version

- Valve body: **PVC-U, 1.4581, PP or PVDF**
- Diaphragm: **PTFE-faced**

Type	Nominal size	Connection	Valve body	Seals	Article-No.	Price (EUR)
------	--------------	------------	------------	-------	-------------	-------------

C410.2-135 ML, ...-500 ML

622.10	DN15	G 1	PVC-U	FPM	37604006	▲
622.10	DN15	G 1	PVC-U	EPDM	37603635	▲
622.10	DN15	G 1	PP	FPM	Ⓢ	Ⓢ
622.10	DN15	G 1	PP	EPDM	Ⓢ	Ⓢ
622.10	DN15	G 1	PP-GFK	FPM	37603634	▲
622.10	DN15	G 1	PP-GFK	EPDM	37600450	▲
622.10	DN15	G 1	PVDF	FEP	37600717	▲
622.10	DN15	G 1	PVDF-GFK	FEP	37601819	▲
622.10	DN15	G 1	1.4581	FEP	37600695	▲

C410.2-1200 ML

623.10	DN20	G 1 1/4	PVC-U	FPM	37600009	▲
623.10	DN20	G 1 1/4	PVC-U	EPDM	36230101	▲
623.10	DN20	G 1 1/4	PP	FPM	37600016	▲
623.10	DN20	G 1 1/4	PP	EPDM	36230105	▲
623.10	DN20	G 1 1/4	PVDF	FEP	37606304	▲

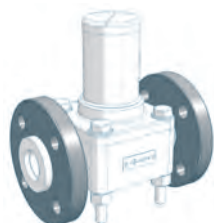
OPTIONS

C410.2-135 ML, ...-500 ML

Type	Design	Loose flange	Surcharge [EUR]
622.10	PVC	Loose flange made of PVC-U	▲
622.10	PP-FRP/PVDF-FRP	Loose flange made of PP with steel inlay	Ⓢ
622.10	PP	Loose flange made of PP with steel inlay	▲
622.10	PVDF	Loose flange made of PP with steel inlay	▲

C410.2-1200 ML

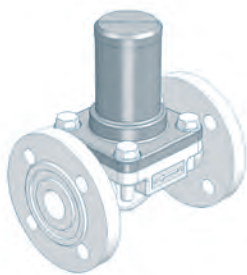
Type	Design	Loose flange	Surcharge [EUR]
623.10	PVC	Loose flange made of PVC-U	▲
623.10	PP-FRP/PVDF-FRP	Loose flange made of PP with steel inlay	×
623.10	PP	Loose flange made of PP with steel inlay	▲
623.10	PVDF	Loose flange made of PP with steel inlay	▲



MULTI-LAYER DIAPHRAGM PUMPS

CONTROLLABLE

FITTINGS FOR THE PRESSURE SIDE



Diaphragm relief valve (with fixed flanges)

for overpressure protection

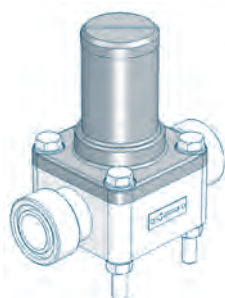
Properties

- Compact design
- Easy installation
- Maintenance-free
- High-quality materials

Basic design

- Flanges acc. to **DIN 2501**
- Valve body: **1.4581** or **GG**
- Diaphragm: **PTFE-faced**

Type	Nominal size	Connection	Valve body	Article-No.	Price (EUR)
C410.2-1200 ML					
623.10	DN20	DIN 2501	1.4581	36230104	▲
623.10	DN20	DIN 2501	GG	37600038	▲



Diaphragm pressure keeping valve

to prevent over-conveyance

Properties

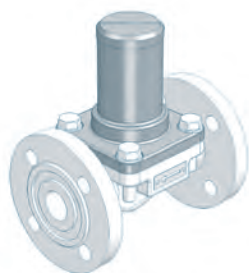
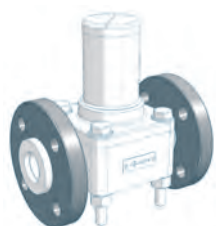
- Compact design
- Easy installation
- Maintenance-free
- High-quality materials

Basic version

- Valve body: **PVC-U, 1.4581, PP** or **PVDF**
- Diaphragm: **PTFE-faced**

Type	Nominal size	Connection	Valve body	Seals	Article-No.	Price (EUR)
C410.2-135 ML, ...-500 ML						
622.D	DN15	G 1	PVC-U	FPM	37600049	▲
622.D	DN15	G 1	PVC-U	EPDM	36221101	▲
622.D	DN15	G 1	PP	FPM	Ⓞ	Ⓞ
622.D	DN15	G 1	PP	EPDM	Ⓞ	Ⓞ
622.D	DN15	G 1	PP-GFK	FPM	37600056	▲
622.D	DN15	G 1	PP-GFK	EPDM	36221105	▲
622.D	DN15	G 1	PVDF	FEP	37602881	▲
622.D	DN15	G 1	PVDF-GFK	FEP	37601449	▲
622.D	DN15	G 1	1.4581	FEP	37600538	▲
C410.2-1200 ML						
623.D	DN20	G 1¼	PVC-U	FPM	37600050	▲
623.D	DN20	G 1¼	PVC-U	EPDM	36231101	▲
623.D	DN20	G 1¼	PP	FPM	37600057	▲
623.D	DN20	G 1¼	PP	EPDM	36231105	▲
623.D	DN20	G 1¼	PVDF	FEP	37606309	▲

FITTINGS FOR THE PRESSURE SIDE



OPTIONS

C410.2-135 ML, ...-500 ML

Type	Design	Loose flange	Surcharge [EUR]
622.D	PVC	Loose flange made of PVC-U	▲
622.D	PP-FRP/PVDF-FRP	Loose flange made of PP with steel inlay	⌚
622.D	PP	Loose flange made of PP with steel inlay	▲
622.D	PVDF	Loose flange made of PP with steel inlay	▲

C410.2-1200 ML

Type	Design	Loose flange	Surcharge [EUR]
623.D	PVC	Loose flange made of PVC-U	▲
623.D	PP-FRP/PVDF-FRP	Loose flange made of PP with steel inlay	×
623.D	PP	Loose flange made of PP with steel inlay	▲
623.D	PVDF	Loose flange made of PP with steel inlay	▲

Diaphragm pressure keeping valve (with fixed flanges)

to prevent over-conveyance

Properties

- Compact design
- Easy installation
- Maintenance-free
- High-quality materials

Basic design

- Flanges acc. to **DIN 2501**
- Valve body: **1.4581** or **GG**
- Diaphragm: **PTFE-faced**

Type	Nominal size	Connection	Valve body	Article-No.	Price (EUR)
C410.2-1200 ML					
623.D	DN20	DIN 2501	1.4581	36231104	▲
623.D	DN20	DIN 2501	GG	37600080	▲

MULTI-LAYER DIAPHRAGM PUMPS

CONTROLLABLE

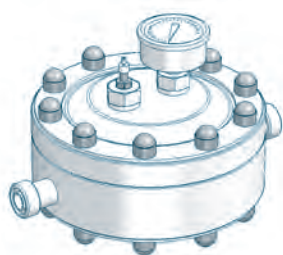
FITTINGS FOR THE PRESSURE SIDE



Flow meter

- IP65
- incl. 0,6m cable with cable socket M12, 5-pole (socket for pump connection)
- max. permissible operating pressure: **10 bar**
- can be used on suction and pressure side

Type	Connection thread	Materials	Article-No.	Price (EUR)
8016.1	Inlet: G $\frac{3}{4}$ (internal) Outlet: G $\frac{3}{4}$ (external)	PVC-U/FPM	37602322	▲
		PVDF/FPM	Ⓛ	Ⓛ



Diaphragm pulsation damper (Plastic, PTFE(-faced) diaphragm, max. 10 bar)

Properties

- Any mounting position
- Easy installation
- Long service life
- Easy handling
- High-quality materials
- Low maintenance
- Diaphragm: PTFE-faced

Type	Connection	max. Pressure	Material	Seals	Article-No.	Price (EUR)
C410.2-135 ML						
722.1	G 1	10 bar	PVC-U	EPDM	37600647	▲
722.1	G 1	10 bar	PVC-U	FPM	30100008	▲
722.1	G 1	10 bar	PP	EPDM	37600676	▲
722.1	G 1	10 bar	PP	FPM	30100009	▲
722.1	G 1	10 bar	PVDF	FEP	37601852	▲
C410.2-500 ML						
Ⓛ					Ⓛ	Ⓛ

ACCESSORIES



Filling pump FLP 2 for filling device

with manometer, max. 7 bar incl. 2m hose and coupling for air valve	90009396	▲
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Retaining clamp

(2 Piece each pulsation damper)	PP	d 25	90010651	▲
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FITTINGS FOR THE PRESSURE SIDE



Diaphragm pulsation damper (Plastic, with elastomere diaphragm, max. 10 bar)

Properties

- Any mounting position
- Easy installation
- Long service life
- Easy handling
- High-quality materials
- Low maintenance

Type	Connection	max. Pressure	Housing	Diaphragm Seals	Article-No.	Price (EUR)
C410.2-500 ML, ...-1200 ML						
713.1	G 1 ¼	10 bar	PVC-U	EPDM	30071038	▲
713.1	G 1 ¼	10 bar	PVC-U	FPM	30071039	▲
713.1	G 1 ¼	10 bar	PP	EPDM	30071040	▲
713.1	G 1 ¼	10 bar	PP	FPM	30071041	▲
713.1	G 1 ¼	10 bar	PVDF	EPDM	30071060	▲
713.1	G 1 ¼	10 bar	PVDF	FPM	30071061	▲

OPTIONS

Loose-type flanges

PVC-design	Loose flange, PVC-U	DN20	▲
PP-/PVDF-design	Loose flange, PP with steel insert	DN20	▲

ACCESSORIES

Bracket for wall mounting	PP	90010913	▲
	1.4301	90010914	▲
	Steel (color treated)	90010915	▲
Filling pump FLP 2		for filling device	
with manometer, max. 7 bar incl. 2m hose and coupling for air valve		90009396	▲



MULTI-LAYER DIAPHRAGM PUMPS

CONTROLLABLE

FITTINGS FOR THE PRESSURE SIDE



Diaphragm pulsation damper (Stainless steel, max. 10 bar)

Properties

- Any mounting position
- Easy installation
- Long service life
- Easy handling
- High-quality materials
- Low maintenance

Type	Connection	max.Pressure	Material	Diaphragm	Article-No.	Price (EUR)
C410.2-135 ML						
810.1-0,32/10	G ½	10 bar	1.4571	Butyl	37603721	▲
810.1-0,32/10	G ½	10 bar	1.4571	FPM	37603725	▲
810.1-0,32/10	G ½	10 bar	1.4571	PTFE	×	×
C410.2-500 ML						
810.1-2,0/10	G ¾	10 bar	1.4571	Butyl	37603723	▲
810.1-2,0/10	G ¾	10 bar	1.4571	FPM	37603727	▲
810.1-2,0/10	G ¾	10 bar	1.4571	PTFE	37606308	▲
C410.2-1200ML						
⌚					⌚	⌚

ACCESSORIES

Filling- and pressure measuring device

(mounted on pulsation damper)

Design: Plastic	Manometer: 0-16 bar Measuring system: copper alloyed	●
Design: Stainless steel	Manometer: 0-16 bar, glycerine-damped Measuring system: copper alloyed Housing: 1.4301	▲
Filling pump FLP 2	for filling device	
with manometer, max. 7 bar incl. 2m hose and coupling for air valve	90009396	▲



FITTINGS FOR THE PRESSURE SIDE



Diaphragm pulsation damper (Stainless steel, max. 100-180 bar)

Properties

- Any mounting position
- Easy installation
- Long service life
- Easy handling
- High-quality materials
- Low maintenance

Type	Connection	max.Pressure	Material	Diaphragm	Article-No.	Price (EUR)
------	------------	--------------	----------	-----------	-------------	-------------

RF410.2-135ML

810.1-0,32/160	G ½	160 bar	1.4571	Butyl	90010409	▲
810.1-0,32/160	G ½	160 bar	1.4571	FPM	90010983	▲
810.1-0,32/160	G ½	160 bar	1.4571	PTFE	×	×

RF410.2-500ML

810.1-2,0/100	G ¾	100 bar	1.4571	Butyl	37600314	▲
810.1-2,0/100	G ¾	100 bar	1.4571	FPM	37600149	▲
810.1-2,0/100	G ¾	100 bar	1.4571	PTFE	37606303	▲

RF410.2-1200ML



ACCESSORIES



Filling- and pressure measuring device

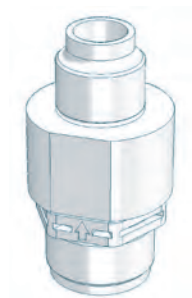
Design: removeable
Manometer d63, plastic housing, measuring system: copper alloyed
incl. 2,5m filling hose, connection M14x1,5

0 - 25 bar	37601674	▲
0 - 100 bar	37601673	▲
0 - 250 bar	30066005	▲

MULTI-LAYER DIAPHRAGM PUMPS

CONTROLLABLE

FITTINGS FOR THE PRESSURE SIDE



Dosing valve (Plastic)

Properties

- Compact design
- Any mounting position
- Maintenance-free
- High-quality materials

Basic version

- Valve ball: **PTFE**
- Spring: **Hastelloy C4**

Type	DN	Inlet	Outlet	Material	Seal	Article-No.	Price (EUR)
693.1	20	G 1 ¼	R 1 ¼	PP-GFK	EPDM	37604661	▲
693.1	20	G 1 ¼	R 1 ¼	PP-GFK	FPM	37603317	▲
693.1	20	G 1 ¼	R 1 ¼	PVDF-GFK	FEP	30072027	▲



Dosing valve (Stainless steel)

Properties

- Compact design
- Any mounting position
- Maintenance-free
- High-quality materials

Basic version

- Valve ball: **1.4401**
- Seals: **FEP-covered**
- Spring: **Hastelloy C4**

Type	DN	Inlet	Outlet	Material	Seal	Article-No.	Price (EUR)
C410.2-135 ML, ...-500 ML							
692.1	15	G 1	R 1	1.4571	FEP	37600669	▲
C410.2-1200 ML							
693.1	20	G 1 ¼	R 1 ¼	1.4571	FEP	37600789	▲

FITTINGS FOR THE PRESSURE SIDE



Injection fitting

Properties

- incl. injection lance for better mixing
- Easy installation
- Any mounting position
- Maintenance-free
- High-quality materials

Basic version

- Cone-type check valve (spring loaded)
- Shut-off ball valve
- Injection lance (L=150mm)
- max. operating pressure: 10 bar

Type	DN	Inlet	Outlet	Material	Seals	Article-No.	Price (EUR)
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C410.2-135 ML, ...500 ML

8062.1	15	G 1	R ¾	PVC-U	EPDM	37602110	▲
8062.1	15	G 1	R ¾	PVC-U	FPM	37602111	▲
8062.1	15	G 1	R ¾	PP	EPDM	37602112	▲
8062.1	15	G 1	R ¾	PP	FPM	37602113	▲
8062.1	15	G 1	R ¾	PVDF	FPM	37602114	▲

C410.2-1200 ML

8063.1	20	G 1¼	R 1	PVC-U	EPDM	37602115	▲
8063.1	20	G 1¼	R 1	PVC-U	FPM	37602116	▲
8063.1	20	G 1¼	R 1	PP	EPDM	37602117	▲
8063.1	20	G 1¼	R 1	PP	FPM	37602118	▲
8063.1	20	G 1¼	R 1	PVDF	FPM	37602119	▲

PISTON DIAPHRAGM PUMPS

CONTROLLABLE



OVERVIEW

- Multi-layer diaphragm technology
- High dosing accuracy
- Safe to run dry
- Leakage free
- Low-maintenance
- User-friendly
- Flexible, multifunctional
- Digital and analogue control options
- PROFIBUS DP-Interface
- Manual stroke length- and stroke frequency adjustment

TECHNICAL DATA

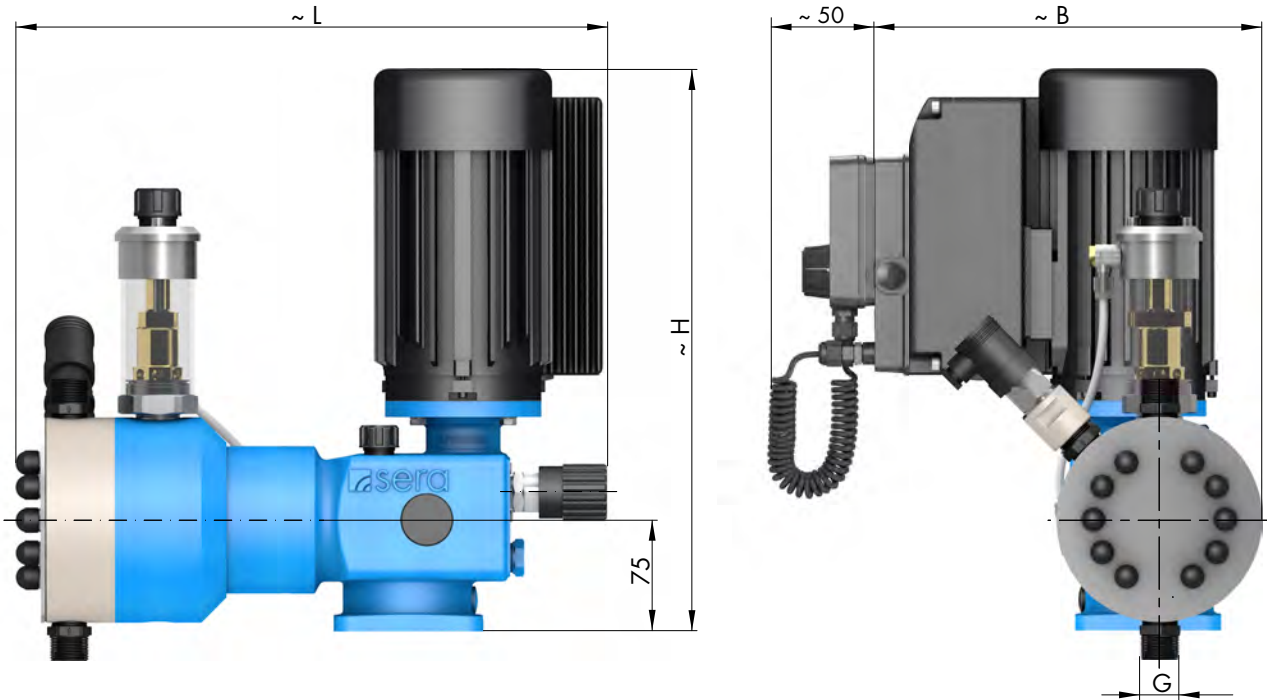
PUMP DATA			C 409.2-... KM Pro+					
			7,5KM	10KM	18KM	45KM	95KM	190KM
Permissible pressure $p_{2max.}$ at the pump outlet	bar	plastic	10	10	10	10	10	8
		stainless st.	80	80	50	25	16	8
Nominal capacity Q_N at $p_{2max.}$	l/h	50/60 Hz	0-7,5	0-10	0-18	0-45	0-95	0-190
Quantity per stroke	ml/stroke (100%)		1,25	1,1	2,0	5,0	10,6	21,1
Max. suction height	mWC		2	2	2	3	3	3
Min./max. permissible pressure at the pump inlet	bar	$p_{1min/max}$	-0,2/0	-0,2/0	-0,2/0	-0,3/0	-0,3/0	-0,3/0
Recommended nominal diameter DN of the connecting pipes	mm		10	10	10	10	15	15
Nominal stroke frequency	1/min	50/60 Hz	100	150	150	150	150	150
Weight approx.	kg	plastic	17	17	17	20	20	21
		stainless st.	19	19	19	23	23	24

ELECTRICAL DATA			C 409.2-... KM Pro+	
			230 V, 50/60 Hz	115 V, 50/60 Hz
Power consumption	kW		0,37	
Voltage	V		210 - 250	100 - 125
Frequency	Hz		50/60	
Inlet voltage, control input	V DC		5...30	
Minimum contact signal time	ms		55	
Analogue input resistance	Ω		39	
Digital output internal/external supply			PNP max. 24V DC, 30mA /max. 30V DC, 30mA	
Recommended fuse (circuit breaker)			C6A	C10A
Insulation class	ISO		F	
Enclosure	IP		55	

Flow capacity 7,5 l/h ... 190 l/h
Admissible counterpressure up to 80 bar

C 409.2 KM Pro+

DIMENSIONS



	G		B	L	H		B	L	H
C 409.2-7,5 KM Pro+	G ¾	PVC, PP, PVDF	269	350	364	1.4571	269	347	364
C 409.2-10 KM Pro+	G ¾		269	350	364		269	347	364
C 409.2-18 KM Pro+	G ¾		269	350	364		269	347	364
C 409.2-45 KM Pro+	G ¾		280	403	364		280	394	364
C 409.2-95 KM Pro+	G ¾		280	403	364		280	394	364
C 409.2-190 KM Pro+	G1¼*		280	403	364		280	394	364

* PVC = G1

CHARACTERISTIC CURVES

COMING SOON

PISTON DIAPHRAGM PUMPS

CONTROLLABLE

FUNCTIONS AND OPERATING MODES

- Manual operation
- Manual stroke frequency adjustment
- PROFIBUS DP-VO Slave interface (option)
- External START/STOP
- Pulse operation / fractinator
- Pulse memory
- Analogue operation (0/4 ... 20 mA)
- Analogue operation standardization
- Batch dosing (manual / with timer)
- 3 LEDs for status indication
- Multiline, illuminated display
- Menu-driven parameterization
- Flow indication
- Calibration function
- 4-key operation
- 2 digital outputs (PLC)
- 1 analogue output (PLC or contact signal)
- 2 analogue/digital inputs (reversible)
- 1 digital input
- Programmable input-/output functions
- Diaphragm monitoring
- Connection/evaluation: 2-stage level monitoring
- Connection/evaluation: Flow monitoring
- Connection/evaluation: Flow metering
- Voltage 210-250V, 50/60Hz
- 3m connection cable with Euro-plug

BASIC DESIGNS

PP

Pump body **PP**
 Valves **PP-FRP**
 Valve balls **PTFE**
 Multi-layer diaphragm **PTFE**

Type	Valve seals			
	EPDM Article-No.	Price (EUR)	FPM Article-No.	Price (EUR)
C409.2-7,5KM Pro+	16024445	Ⓢ	15005814	Ⓢ
C409.2-10KM Pro+	16024446	Ⓢ	15005815	Ⓢ
C409.2-18KM Pro+	16024447	Ⓢ	15005816	Ⓢ
C409.2-45KM Pro+	16024448	Ⓢ	15005817	Ⓢ
C409.2-95KM Pro+	16024449	Ⓢ	15005818	Ⓢ
C409.2-190KM Pro+	16024450	Ⓢ	15005819	Ⓢ

PVDF

Pump body **PVDF**
 Valves **PVDF-FRP**
 Valve balls **PTFE**
 Multi-layer diaphragm **PTFE**

Type	Valve seals	
	FEP-covered Article-No.	Price (EUR)
C409.2-7,5KM Pro+	16024451	Ⓢ
C409.2-10KM Pro+	16024452	Ⓢ
C409.2-18KM Pro+	16024453	Ⓢ
C409.2-45KM Pro+	16024454	Ⓢ
C409.2-95KM Pro+	Ⓢ	Ⓢ
C409.2-190KM Pro+	Ⓢ	Ⓢ

PVC-U

Pump body **PVC-U**
 Valves **PVC-U**
 Valve balls **PTFE**
 Multi-layer diaphragm **PTFE**

Type	Valve seals			
	EPDM Article-No.	Price (EUR)	FPM Article-No.	Price (EUR)
C409.2-7,5KM Pro+	16024461	Ⓢ	16024467	Ⓢ
C409.2-10KM Pro+	16024462	Ⓢ	16024468	Ⓢ
C409.2-18KM Pro+	16024463	Ⓢ	16024469	Ⓢ
C409.2-45KM Pro+	16024464	Ⓢ	16024470	Ⓢ
C409.2-95KM Pro+	16024465	Ⓢ	16024471	Ⓢ
C409.2-190KM Pro+	16024466	Ⓢ	16024472	Ⓢ

STAINLESS STEEL

Pump body **1.4571**
 Valves **1.4571/1.4581**
 Valve balls **1.4401**
 Multi-layer diaphragm **PTFE**

Type	Valve seals	
	FEP-covered Article-No.	Price (EUR)
C409.2-7,5KM Pro+	16024474	Ⓢ
C409.2-10KM Pro+	16024473	Ⓢ
C409.2-18KM Pro+	16024475	Ⓢ
C409.2-45KM Pro+	16024476	Ⓢ
C409.2-95KM Pro+	16024477	Ⓢ
C409.2-190KM Pro+	16024478	Ⓢ

OPTIONS

Versions (basic equipment)

Version	Price (EUR)
Pump without control element (price reduction)	▼
Pump with control element (basic version)	●
Pump without control element; with INTERFACE MODULE (INTERFACE MODULE instead of control element)	▲

Stroke length adjustment

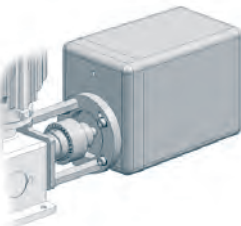
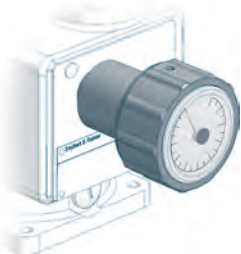
	Surcharge (EUR)
with position indicator	▲

Stroke length adjustment with actuator

	Surcharge (EUR)
Actuator N C1-BA 230V ±10%, 50/60Hz, 128s/10 U, 1,5Nm incl. mounting set	▲
Electronic positioning controller ESR-N (only integrated in N C1-BA) Input signal 0/4 - 20mA including feedback signal 0/4 - 20mA	▲
in combination with cTÜVus	

Drive motor

	Surcharge (EUR)
Connection voltage 115V, 50/60Hz	Ⓢ



PISTON DIAPHRAGM PUMPS

CONTROLLABLE

OPTIONS

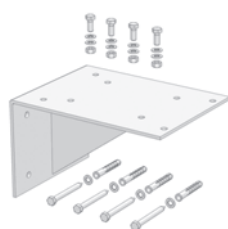


Special connection	
	Surcharge (EUR)
Special connection (plug) for power supply	⌚
in combination with cTÜVus	✗

ACCESSORIES



Control element		
	Article-No.	Price (EUR)
Control element (removeable)	90044844	▲



Bracket		
	Article-No.	Price (EUR)
for wall mounting (incl. mounting kit)		
PP	90023848	▲
1.4301	90023875	▲



Connection pieces	
Extensive range of connection / transition pieces and dosing hoses	
Inserts and pipe sockets with union nuts, flange connections, hose screw connections, hose nozzles as well as dosing hoses and accessories.	
to be found in CHAPTER 4 of this catalog, from page 442	

Flow capacity 7,5 l/h ... 190 l/h
Admissible counterpressure up to 80 bar

C 409.2 KM Pro+



INTERFACE MODULE - PROFINET -

- PROFINET INTERFACE MODULE
- PROFINET IO RT 2 Port (Ethernet Network Interface)
- Transmission speed: automatic 10Mbit/s, 100Mbit/s
- Connection to dosing pump: M12 cable socket, 4-pole, D-coded

Type		Article-No.	Price (EUR)
PROFINET INTERFACE MODULE		90044877	▲
PROFINET connection	length 1m	90050133	▲
	length 5m	90050134	▲
	length 10m	90050135	▲
PROFINET Connection	length 1m	90050136	▲
	length 5m	90050137	▲
	length 10m	90050138	▲



INTERFACE MODULE - PROFIBUS -

- PROFIBUS INTERFACE MODULE
- PROFIBUS DP-V1 (Slave)
- Transmission speed: automatic 9,6 kbit/s ... 12 Mbit/s
- Connection to dosing pump: M12 cable socket, 5-pole, B-coded

Type		Article-No.	Price (EUR)
PROFIBUS INTERFACE MODULE		90044875	▲
PROFIBUS cable plug M12x1, straight, individually convertible, 5-pole, IP67		90025520	▲
PROFIBUS Cable socket M12x1, straight, individually convertible, 5-pole, IP67		90025521	▲
PROFIBUS Cable socket M12x1, straight, with 10m line, 2x0,34mm ² , 1x free cable end, color: purple, IP67		90025524	▲
PROFIBUS Cable socket M12x1, straight, with 15m line, 2x0,34mm ² , 1x free cable end, color: purple, IP67		90025525	▲
PROFIBUS Connection M12x1, straight, with cable plug and cable socket, 2x0,34mm ² , length 1m, cable 2x0,34mm ² , color: purple, IP67		90025674	▲
PROFIBUS Bus line 2x 0,64mm ² , shielded, Permanent installation (inside), color: purple (serial meter)		90014541	▲
PROFIBUS Terminating resistor M12x1, 5-pole, IP67		90022890	▲



Control cable

		Article-No.	Price (EUR)
for level input (flow monitoring not included)			
Cable plug M12, 8-pole	fully assembled, incl. 5m cable	90042494	▲
Cable plug M12, 8-pole	Individually convertible (without cable)	90022885	▲

PISTON DIAPHRAGM PUMPS

CONTROLLABLE

FITTINGS FOR THE SUCTION SIDE



Suction lance S-01 (without level switch)

Properties

- Compact, robust design
- Maintenance-free
- Easy handling
- High-quality materials
- individual special lengths up to max. 1.500mm possible

Basic version

- Suction lance: **PVC-U**
- Foot valve: **PVC-U**
- Seals: **EPDM** or **FPM**
- Valve ball: **PTFE**
- max. flow rate: **200 l/h**
- Standard length: **650mm, 1.000mm und 1.250mm**

Type	Length	Connection	Seals	Article-No.	Price (EUR)
S-01	650 mm	G 3/4	EPDM	37606591	▲
S-01	1.000 mm	G 3/4	EPDM	37606592	▲
S-01	1.250 mm	G 3/4	EPDM	37606593	▲
S-01	max. 1.500 mm	G 3/4	EPDM	37600705	▲
S-01	650 mm	G 3/4	FPM	37606594	▲
S-01	1.000 mm	G 3/4	FPM	37606595	▲
S-01	1.250 mm	G 3/4	FPM	37606596	▲
S-01	max. 1.500 mm	G 3/4	FPM	37600817	▲



Suction lance SL-12.1 (with level switch, 2-stage with plug, 8-pole)

Properties

- Compact design
- Height-adjustable
- 2-stage level monitoring
- Flexible connection
- Easy handling
- High-quality materials
- Maintenance-free
- incl. hose connection 4/6, 6/8, 6/12

Basic version

- Suction lance: **PVC-U**
- Foot valve: **PVC-U**
- Valve ball: **PTFE**
- Hose (inboard): **PE**
- Level switch: **PP**
2-stage, normally closed (NC)
5m cable (from foot valve) with plug, M12, 8-pole
- max. flow rate: **14 l/h (4/6) ... 35 l/h (6/12)**

Type	Length	Seals	Article-No.	Price (EUR)
C409.2-7,5KM, ...-10KM, ...-18KM				
SL-12.1	600 mm	PTFE	37606194	▲
SL-12.1	1.000 mm	PTFE	37606495	▲
SL-12.1	1.200 mm	PTFE	37606195	▲

FITTINGS FOR THE SUCTION SIDE



Suction lance SL-02 (with level switch, 1- or 2-stage with plug, 8-pole)

Properties

- Compact, robust design
- Safe
- Easy handling
- 1-stage level switch
- Flexible connection
- High-quality materials
- Maintenance-free

Basic version

- Suction lance: **PVC-U**
- Foot valve: **PVDF-GFK**
- Valve ball: **PTFE**
- Suction basket: **PP**
- Level switch: **PP**
1- or 2-stage
5m cable (from foot valve) with plug, M12, 8-pole
- max. flow rate: **200 l/h**

Type	Level switch	Length	Connection	Seals	Article-No.	Price (EUR)
C409.2-45KM, ...-95KM, ...-190KM						
SL-02	1-stage	630 mm	G ¾	EPDM	37606579	▲
SL-02	1-stage	1.000 mm	G ¾	EPDM	37606581	▲
SL-02	1-stage	1.200 mm	G ¾	EPDM	37606583	▲
SL-02	1-stage	630 mm	G ¾	FPM	37606580	▲
SL-02	1-stage	1.000 mm	G ¾	FPM	37606582	▲
SL-02	1-stage	1.200 mm	G ¾	FPM	37606584	▲
SL-02	2-stage	630 mm	G ¾	EPDM	37606585	▲
SL-02	2-stage	1.000 mm	G ¾	EPDM	37606587	▲
SL-02	2-stage	1.200 mm	G ¾	EPDM	37606589	▲
SL-02	2-stage	630 mm	G ¾	FPM	37606586	▲
SL-02	2-stage	1.000 mm	G ¾	FPM	37606588	▲
SL-02	2-stage	1.200 mm	G ¾	FPM	37605974	▲



ACCESSORIES

Drum connection adapter

Connection	Material	Seal	Article-No.	Price (EUR)
for external thread G=S65x5 DIN2781	PP	EPDM	90011763	▲
	PP	FPM	90011762	▲
for internal thread (set) G=2 fine thread steel drum DIN-ISO 228-1	PP	EPDM	90046044	▲
G=v. Leer/tri-sure BCS 56x4 EN12708	PP	FPM	90046043	▲
for external thread G= DIN51	PP	EPDM	90011767	▲
	PP	FPM	90011766	▲
for wall duct G=2 Wall thickness S=max. 6mm	PP/PVC	EPDM	90011773	▲
	PP/PVC	FPM	90011772	▲
other adapters			Ⓢ	Ⓢ

PISTON DIAPHRAGM PUMPS

CONTROLLABLE

FITTINGS FOR THE SUCTION SIDE



Foot valve (Plastic)

Properties

- Compact design
- Easy installation
- High-quality materials
- Maintenance-free

Basic version

- Ball: **PTFE**
- Sieve: **ETFE**
- Mesh size: **1mm**

Type	DN	Connection	Material	Seals	Article-No.	Price (EUR)
781.1	8	G 3/4	PVDF/PVDF-GFK	FEP	30073008	▲



Foot valve (plastic)

Properties

- Compact design
- Easy installation
- High-quality materials
- Maintenance-free

Basic version

- Ball: **PTFE**
- Sieve: **ETFE**
- Mesh size: **1mm**

Type	DN	Connection	Material	Seals	Article-No.	Price (EUR)
731	8	G 3/4	PVC-U	EPDM	37601636	▲



Foot valve (Stainless steel)

Properties

- Compact design
- Easy installation
- High-quality materials
- Maintenance-free

Basic version

- Ball: **1.4401**
- Sieve: **ETFE**
- Mesh size: **1mm**

Type	DN	Connection	Material	Seals	Article-No.	Price (EUR)
731	8	G 3/4	1.4571	FEP	37601149	▲

Flow capacity 7,5 l/h ... 190 l/h
Admissible counterpressure up to 80 bar

C 409.2 KM Pro+

FITTINGS FOR THE SUCTION SIDE



Multi-function device

Properties

- Can be used as an priming aid and/or an calibration pot
- Compact design
- Flexible Connection
- Maintenance-free
- incl. glue joint (PVC-U) and welding joint (PP)

Basic version

- Housing: **PVC-U / PVC-transparent**
- Seals: **FPM or EPDM**
- max. operating pressure: **-0,5 ... +2 bar**

Type	DN	Connetion	Volume	Seals	Article-No.	Price (EUR)
C409.2-7,5KM, ...-10KM, ...-18KM, ...-45KM						
MFD 60	8	G $\frac{3}{4}$	0,5 Ltr.	EPDM	37606311	▲
MFD 60	8	G $\frac{3}{4}$	0,5 Ltr.	FPM	37605864	▲
C409.2-95KM, ...-190KM						
MFD 570	15	G1	2 Ltr.	EPDM	37606278	▲
MFD 570	15	G1	2 Ltr.	FPM	37605992	▲

ACCESSORIES



Hand vacuum pump	PVC/FPM		
	(incl. 1,5m PVC-Hose d=12/21)	37605682	▲

PISTON DIAPHRAGM PUMPS

CONTROLLABLE

FITTINGS FOR THE SUCTION SIDE



Flow controller

- IP65
- incl. 0,6m cable with cable socket M12, 5-pole (socket for pump connection)
- max. permissible operating pressure: **10 bar**

Type	Connection thread	Materials	Article-No.	Price (EUR)
C409.2-7,5KM, ...-10KM, ...-18KM				
8191.1	Inlet: G¾ (internal)	PVC-U/FPM	37602227	▲
	Outlet: G¾ (external)	PP/FPM	37602175	▲
C409.2-45KM, ...-95KM, ...-190KM				
8192.1	Inlet: G¾ (internal)	PVC-U/FPM	37602176	▲
	Outlet: G¾ (external)	PP/FPM	37602177	▲



Flow meter

- IP65
- incl. 0,6m cable with cable socket M12, 5-pole (socket for pump connection)
- max. permissible operating pressure: **10 bar**
- can be used on suction and pressure side

Type	Connection thread	Materials	Article-No.	Price (EUR)
C409.2-7,5KM, ...-10KM, ...-18KM				
8011.1	Inlet: G¾ (internal) Outlet: G¾ (external)	ECTFE/PP/FPM	37602343	▲
		ECTFE/PVC-U/FPM	37602345	▲
		ECTFE/PVDF/FPM	37602348	▲
C409.2-45KM				
8012.1	Inlet: G¾ (internal) Outlet: G¾ (external)	PVC-U/FPM	37602277	▲
		PVDF/FPM	37602307	▲
C409.2-95KM				
8013.1	Inlet: G¾ (internal) Outlet: G¾ (external)	PVC-U/FPM	37602279	▲
		PVDF/FPM	37602309	▲
C409.2-190KM				
8014.1	Inlet: G¾ (internal) Outlet: G¾ (external)	PVC-U/FPM	37602281	▲
		PVDF/FPM	37602311	▲

Flow capacity 7,5 l/h ... 190 l/h
Admissible counterpressure up to 80 bar

C 409.2 KM Pro+

FITTINGS FOR THE PRESSURE SIDE



Multi function valve

Properties

- Maximum operating pressure 10 bar
- Compact design
- Easy installation
- Maintenance-free
- Venting
- Overpressure protection for dosing pumps
- Prevention of over conveyance

Basic version

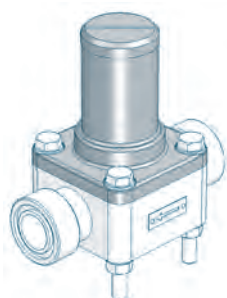
- Diaphragms: **PTFE-faced**
- Connection: **G^{3/4}**
- **Relief valve side**
Opening pressure: **2 up to 10 bar** (adjustable)
- **Pressure keeping valve side**
Holding pressure: **1,0 - 1,5 bar**

Type	Valve body	Seals	Article-No.	Price (EUR)
C409.2-7,5KM, ...-10KM, ...-18KM, ...-45KM				
MFV 050	PVC-U	EPDM	37600973	▲
MFV 050	PVC-U	FPM	37600974	▲
MFV 050	PVC-U	FEP	37600975	▲
MFV 050	PP	EPDM	37600982	▲
MFV 050	PP	FPM	37600983	▲
MFV 050	PP	FEP	37600984	▲
C409.2-95KM, ...-190KM				
⌚			⌚	⌚

PISTON DIAPHRAGM PUMPS

CONTROLLABLE

FITTINGS FOR THE PRESSURE SIDE



Diaphragm relief valve

for overpressure protection

Properties

- Compact design
- Easy installation
- Maintenance-free
- High-quality materials

Basic version

- Valve body: **PVC-U, 1.4581, PP or PVDF**
- Diaphragm: **PTFE-faced**

Type	Nominal size	Connection	Valve body	Seals	Article-No.	Price (EUR)
------	--------------	------------	------------	-------	-------------	-------------

C409.2-7,5KM, ...-10KM, ...-18KM, ...-45KM, ...-95KM

620.10	DN8	G ¾	PVC-U	FPM	37603632	▲
620.10	DN8	G ¾	PVC-U	EPDM	36200101	▲
620.10	DN8	G ¾	PP	FPM	37603630	▲
620.10	DN8	G ¾	PP	EPDM	37603629	▲
620.10	DN8	G ¾	PVDF	FEP	37601792	▲
620.10	DN8	G ¾	1.4581	FEP	37600670	▲

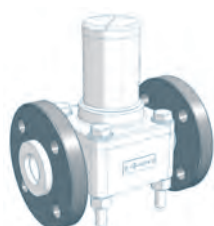
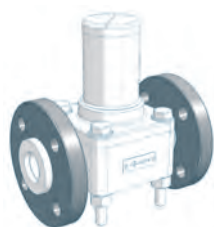
C409.2-190KM

622.10	DN15	G 1	PVC-U	FPM	37604006	▲
622.10	DN15	G 1	PVC-U	EPDM	37603635	▲
622.10	DN15	G 1	PP	FPM	Ⓞ	Ⓞ
622.10	DN15	G 1	PP	EPDM	Ⓞ	Ⓞ
622.10	DN15	G 1	PP-GFK	FPM	37603634	▲
622.10	DN15	G 1	PP-GFK	EPDM	37600450	▲
622.10	DN15	G 1	PVDF	FEP	37600717	▲
622.10	DN15	G 1	PVDF-GFK	FEP	37601819	▲
622.10	DN15	G 1	1.4581	FEP	37600695	▲

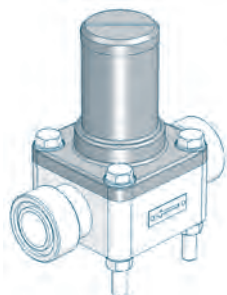
OPTIONS

Type	Design	Loose flange	Surcharge [EUR]
620.10	PVC	Loose flange made of PVC-U	Ⓞ
620.10	PP-FRP/PVDF-FRP	Loose flange made of PP with steel inlay	×
620.10	PP	Loose flange made of PP with steel inlay	▲
620.10	PVDF	Loose flange made of PP with steel inlay	▲

Type	Design	Loose flange	Surcharge [EUR]
622.10	PVC	Loose flange made of PVC-U	▲
622.10	PP-FRP/PVDF-FRP	Loose flange made of PP with steel inlay	Ⓞ
622.10	PP	Loose flange made of PP with steel inlay	▲
622.10	PVDF	Loose flange made of PP with steel inlay	▲



FITTINGS FOR THE PRESSURE SIDE



Diaphragm pressure keeping valve

to prevent over-conveyance

Properties

- Compact design
- Easy installation
- Maintenance-free
- High-quality materials

Basic version

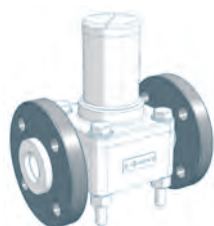
- Valve body: **PVC-U, 1.4581, PP or PVDF**
- Diaphragm: **PTFE-faced**

Type	Nominal size	Connection	Valve body	Seals	Article-No.	Price (EUR)
C409.2-7,5KM, ...-10KM, ...-18KM, ...-45KM, ...-95KM						
620.D	DN8	G 3/4	PVC-U	FPM	37600048	▲
620.D	DN8	G 3/4	PVC-U	EPDM	36201101	▲
620.D	DN8	G 3/4	PP	FPM	37600055	▲
620.D	DN8	G 3/4	PP	EPDM	36201105	▲
620.D	DN8	G 3/4	PVDF	FEP	37601827	▲
620.D	DN8	G 3/4	1.4581	FEP	37600525	▲
C409.2-190KM						
622.D	DN15	G 1	PVC-U	FPM	37600049	▲
622.D	DN15	G 1	PVC-U	EPDM	36221101	▲
622.D	DN15	G 1	PP	FPM	⌚	⌚
622.D	DN15	G 1	PP	EPDM	⌚	⌚
622.D	DN15	G 1	PP-GFK	FPM	37600056	▲
622.D	DN15	G 1	PP-GFK	EPDM	36221105	▲
622.D	DN15	G 1	PVDF	FEP	37602881	▲
622.D	DN15	G 1	PVDF-GFK	FEP	37601449	▲
622.D	DN15	G 1	1.4581	FEP	37600538	▲

OPTIONS



Type	Design	Loose flange	Surcharge [EUR]
620.D	PVC	Loose flange made of PVC-U	⌚
620.D	PP-FRP/PVDF-FRP	Loose flange made of PP with steel inlay	×
620.D	PP	Loose flange made of PP with steel inlay	▲
620.D	PVDF	Loose flange made of PP with steel inlay	▲

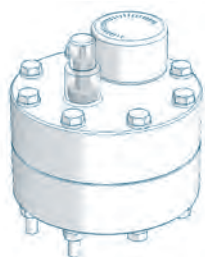


Type	Design	Loose flange	Surcharge [EUR]
622.D	PVC	Loose flange made of PVC-U	▲
622.D	PP-FRP/PVDF-FRP	Loose flange made of PP with steel inlay	⌚
622.D	PP	Loose flange made of PP with steel inlay	▲
622.D	PVDF	Loose flange made of PP with steel inlay	▲

PISTON DIAPHRAGM PUMPS

CONTROLLABLE

FITTINGS FOR THE PRESSURE SIDE



Diaphragm pulsation damper (Plastic, PTFE-diaphragm, max. 10 bar)

Properties

- Any mounting position
- Easy installation
- Long service life
- Easy handling
- High-quality materials
- Low maintenance

Type	Connection	max. Pressure	Material	Diaphragm	Article-No.	Price (EUR)
C409.2-7,5KM, ...-10KM, ...-18KM						
720.1	G ½	10 bar	PVC-U	PTFE	37601848	▲
720.1	G ½	10 bar	PP	PTFE	37601856	▲
720.1	G ½	10 bar	PVDF	PTFE	37601857	▲

ACCESSORIES

Connection adapter



Thread connection	G3/4 male	PVC-U	EPDM	90021733	▲
Connction to pulsation damper	G1/2 male	PVC-U	FPM	90025079	▲
		PP	EPDM	90038083	▲
		PP	FPM	90038082	▲
		PVDF	FEP	⌚	⌚

Retaining clamp



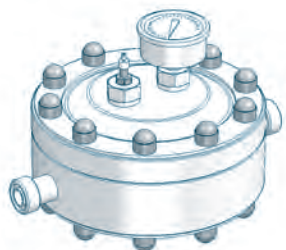
(2 Piece each pulsation damper)	PP	d 16	90010649	▲
---------------------------------	----	------	----------	---

Filling pump FLP 2 for filling device



with manometer, max. 7 bar incl. 2m hose and coupling for air valve	90009396	▲
---	----------	---

FITTINGS FOR THE PRESSURE SIDE



Diaphragm pulsation damper (Plastic, PTFE(-faced) diaphragm, max. 10 bar)

Properties

- Any mounting position
- Easy installation
- Long service life
- Easy handling
- High-quality materials
- Low maintenance
- Diaphragm: PTFE-faced

Type	Connection	max. Pressure	Material	Seals	Article-No.	Price (EUR)
------	------------	---------------	----------	-------	-------------	-------------

C409.2-45KM

721.2	G ¾	10 bar	PVC-U	EPDM	37602014	▲
721.2	G ¾	10 bar	PVC-U	FPM	37602013	▲
721.2	G ¾	10 bar	PP	EPDM	37603419	▲
721.2	G ¾	10 bar	PP	FPM	37602017	▲
721.2	G ¾	10 bar	PVDF	FEP	37604046	▲

C409.2-95KM, ...-190KM

722.1	G 1	10 bar	PVC-U	EPDM	37600647	▲
722.1	G 1	10 bar	PVC-U	FPM	30100008	▲
722.1	G 1	10 bar	PP	EPDM	37600676	▲
722.1	G 1	10 bar	PP	FPM	30100009	▲
722.1	G 1	10 bar	PVDF	FEP	37601852	▲

ACCESSORIES



Filling pump FLP 2 for filling device

with manometer, max. 7 bar incl. 2m hose and coupling for air valve	90009396	▲
---	----------	---



Retaining clamp

(2 Piece each pulsation damper)	PP	d 25	90010651	▲
---------------------------------	----	------	----------	---

PISTON DIAPHRAGM PUMPS

CONTROLLABLE

FITTINGS FOR THE PRESSURE SIDE



Diaphragm pulsation damper (Stainless steel, max. 10 bar)

Properties

- Any mounting position
- Easy installation
- Long service life
- Easy handling
- High-quality materials
- Low maintenance

Type	Connection	max.Pressure	Material	Diaphragm	Article-No.	Price (EUR)
C409.2-7,5KM, ...-10KM, ...-18KM, ...-45KM						
810.1-0,16/10	G ½	10 bar	1.4571	Butyl	37603720	▲
810.1-0,16/10	G ½	10 bar	1.4571	FPM	37603724	▲
810.1-0,16/10	G ½	10 bar	1.4571	PTFE	×	×
C409.2-95KM, ...-190KM						
810.1-0,32/10	G ½	10 bar	1.4571	Butyl	37603721	▲
810.1-0,32/10	G ½	10 bar	1.4571	FPM	37603725	▲
810.1-0,32/10	G ½	10 bar	1.4571	PTFE	×	×

ACCESSORIES

Filling- and pressure measuring device

(mounted on pulsation damper)

Design: Plastic	Manometer: 0-16 bar Measuring system: copper alloyed	●
Design: Stainless steel	Manometer: 0-16 bar, glycerine-damped Measuring system: copper alloyed Housing: 1.4301	▲
Filling pump FLP 2	for filling device	
with manometer, max. 7 bar incl. 2m hose and coupling for air valve		90009396 ▲



FITTINGS FOR THE PRESSURE SIDE



Diaphragm pulsation damper (Stainless steel, max. 100-180 bar)

Properties

- Any mounting position
- Easy installation
- Long service life
- Easy handling
- High-quality materials
- Low maintenance

Type	Connection	max.Pressure	Material	Diaphragm	Article-No.	Price (EUR)
C409.2-7,5KM, ...-10KM, ...-18KM, ...-45KM						
810.1-0,16/180	G ½	180 bar	1.4571	Butyl	90008811	▲
810.1-0,16/180	G ½	180 bar	1.4571	FPM	90009498	▲
810.1-0,16/180	G ½	180 bar	1.4571	PTFE	×	×
C409.2-95KM, ...-190KM						
810.1-0,32/160	G ½	160 bar	1.4571	Butyl	90010409	▲
810.1-0,32/160	G ½	160 bar	1.4571	FPM	90010983	▲
810.1-0,32/160	G ½	160 bar	1.4571	PTFE	×	×

ACCESSORIES



Filling- and pressure measuring device

Design: removeable
Manometer d63, plastic housing, measuring system: copper alloyed
incl. 2,5m filling hose, connection M14x1,5

0 - 25 bar	37601674	▲
0 - 100 bar	37601673	▲
0 - 250 bar	30066005	▲



Injection fitting

Properties

- incl. injection lance for better mixing
- Easy installation
- Any mounting position
- Maintenance-free
- High-quality materials

Basic version

- Cone-type check valve (spring loaded)
- Shut-off ball valve
- Injection lance (L=150mm)
- max. operating pressure: 10 bar

Type	DN	Inlet	Outlet	Material	Seals	Article-No.	Price (EUR)
8061.1	10	G ¾	R ½	PVC-U	EPDM	37602105	▲
8061.1	10	G ¾	R ½	PVC-U	FPM	37602106	▲
8061.1	10	G ¾	R ½	PP	EPDM	37602107	▲
8061.1	10	G ¾	R ½	PP	FPM	37602108	▲
8061.1	10	G ¾	R ½	PVDF	FPM	37602109	▲

PISTON DIAPHRAGM PUMPS

CONTROLLABLE

FITTINGS FOR THE PRESSURE SIDE



Dosing valve (Plastic)

Properties

- Compact design
- Any mounting position
- Maintenance-free
- High-quality materials

Basic version

- integrated injection lance
- Valve ball: **PTFE**
- Seals: **EPDM** or **FPM**
- Spring: **Hastelloy C4**

Type	DN	Inlet	Outlet	Material	Seal	Article-No.	Price (EUR)
691.2	8	G 3/4	R 1/2	PVC-U	EPDM	37606318	▲
691.2	8	G 3/4	R 1/2	PVC-U	FPM	37605769	▲
691.2	8	G 3/4	R 1/2	PP-GFK	EPDM	37605768	▲
691.2	8	G 3/4	R 1/2	PP-GFK	FPM	37606317	▲



Dosing valve (Plastic)

Properties

- Compact design
- Any mounting position
- Maintenance-free
- High-quality materials

Basic version

- Valve ball: **PTFE**
- Spring: **Hastelloy C4**

Type	DN	Inlet	Outlet	Material	Seal	Article-No.	Price (EUR)
691.1	8	G 3/4	R 1/2	PVDF/-GFK	FEP	30072015	▲



Dosing valve (Stainless steel)

Properties

- Compact design
- Any mounting position
- Maintenance-free
- High-quality materials

Basic version

- Valve ball: **1.4401**
- Seals: **FEP-covered**
- Spring: **Hastelloy C4**

Type	DN	Inlet	Outlet	Material	Seal	Article-No.	Price (EUR)
691.1	8	G 3/4	R 1/2	1.4571	FEP	37600493	▲

Flow capacity 7,5 l/h ... 190 l/h
Admissible counterpressure up to 80 bar

C 409.2 KM Pro+

DIAPHRAGM PUMPS



OVERVIEW

- High dosing accuracy
- Safe to run dry
- Leakage free
- Low-maintenance
- User-friendly
- Continuous, manual stroke length adjustment
- Motor suitable for operation with frequency converter
- Robust, metallic drive housing
- Compact design
- Low weight



TECHNICAL DATA

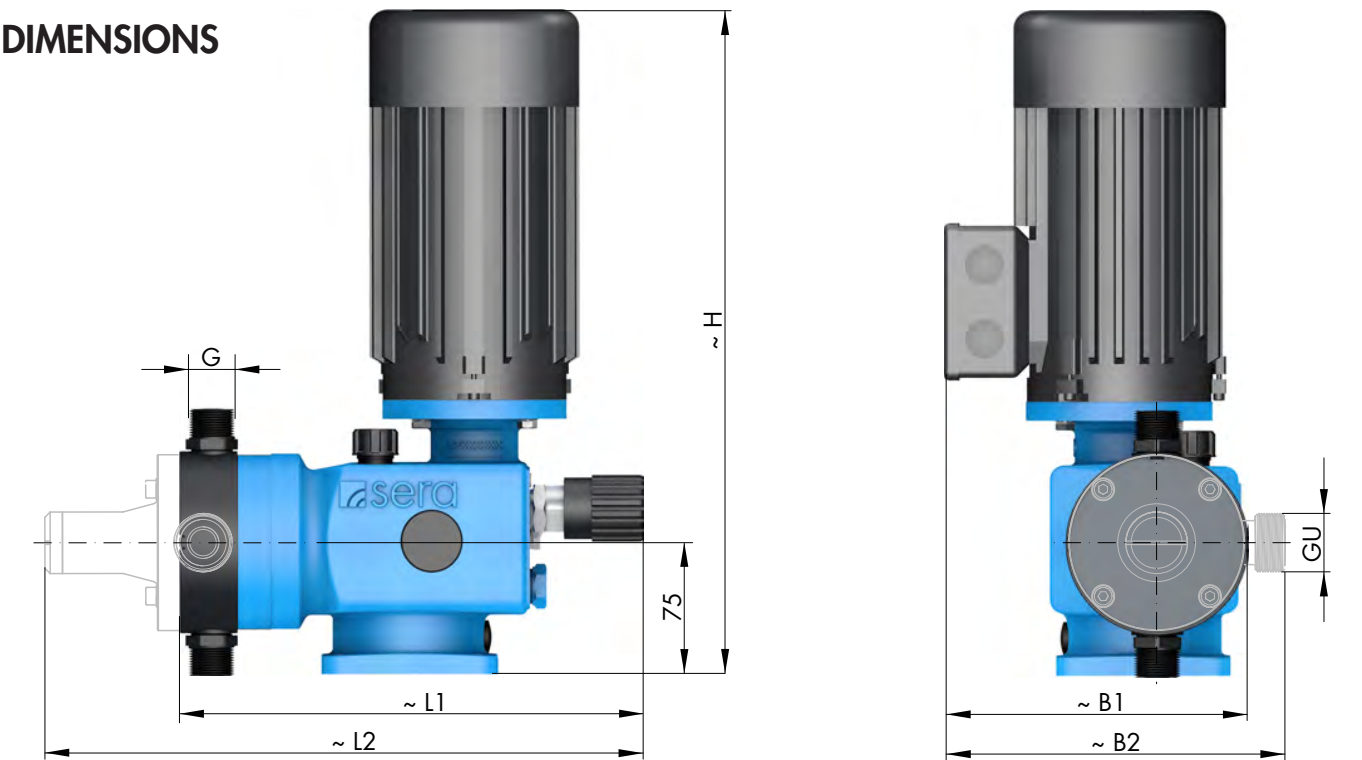
PUMP DATA			RF 409.2-...					
(* 8mWS = performance losses of nominal capacity QN of 20-25%)			1,6e	2,4e	7,0e	12e	18e	25e
Permissible pressure p_{2max} at the pump outlet	bar		10	10	10	10	10	10
Nominal capacity QN at p_{2max}	l/h	50 Hz	0-1,6	0-2,4	0-7,0	0-12	0-18	0-25
		60 Hz	0-1,9	0-2,9	0-8,4	0-14,4	0-21,5	0-30
Quantity per stroke	ml/stroke (100%)		0,27	0,27	0,78	2,0	3,0	2,8
Max. suction height	mWC				3			3 (8*)
Min./max. permissible pressure at the pump inlet	bar	$p_{1min/max}$			-0,3/0			-0,3/0 (-0,8/0*)
Recomm. nominal diameter DN of the connecting pipes	mm		5	5	5	10	10	10
Nominal stroke frequency	1/min	50 Hz	100	150	150	100	100	150
		60 Hz	120	180	180	120	120	180
Weight approx.	kg	plastic	9	9	9	9	9	9
		stainless steel	10	10	10	10	10	10

ELECTRICAL DATA		RF409.2-1,6e ... RF409.2-25e	
Power consumption	kW	0,18	
Voltage	V	230/400V 50Hz, 460V 60Hz	
Frequency	Hz	50/60	
Insulation class	ISO	F	
Enclosure	IP	55	

Flow capacity 1,6 l/h ... 30 l/h
Admissible counterpressure up to 10 bar

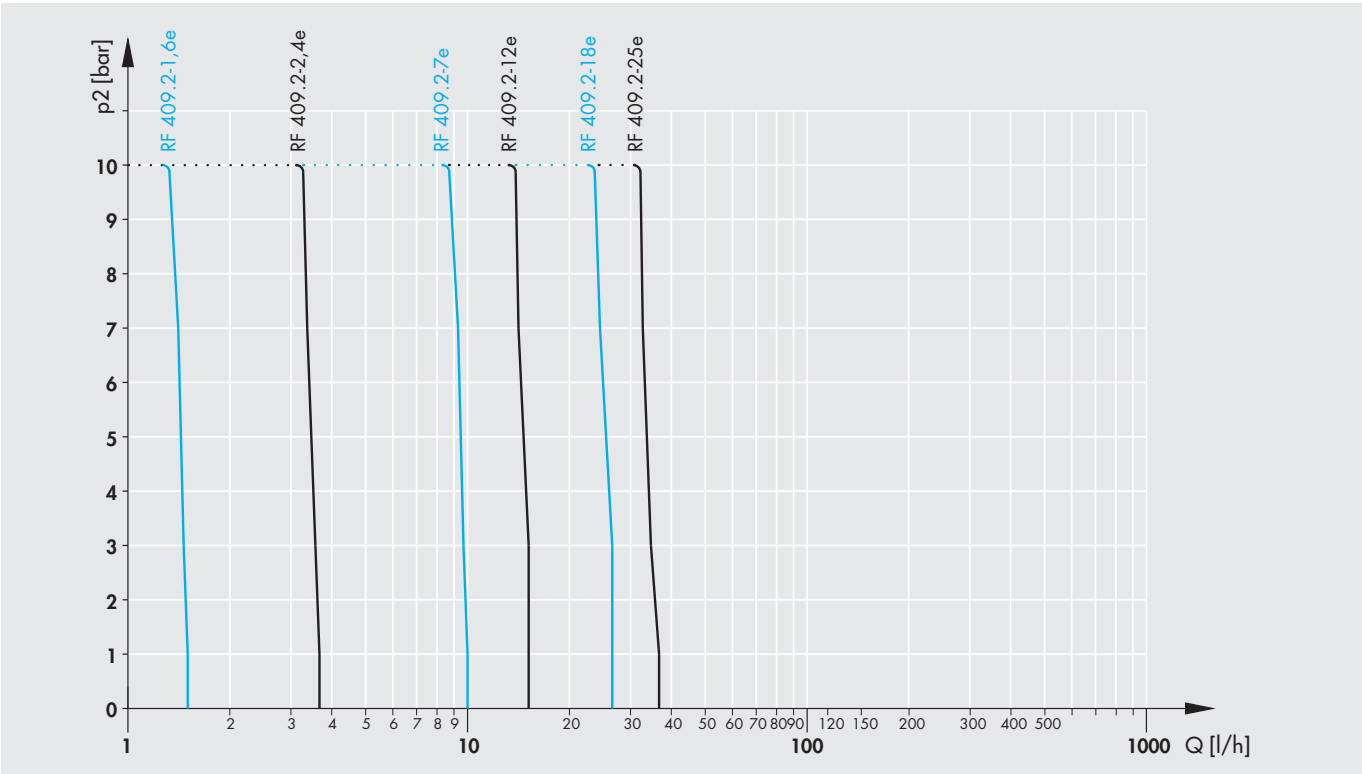
RF 409.2

DIMENSIONS



	G	GU		B1	B2	L1	L2	H		B1	B2	L1	L2	H
RF 409.2 -1,6e, ...-2,4e	G 3/4	×	PVC, PP, PVDF	175	×	310	×	330	1.4571	175	×	310	×	330
RF 409.2 -7,0e	G 3/4	G 3/4		175	175	285	345	330		175	174	285	345	330
RF 409.2 -12e, ... -18e, ... -25e	G 3/4	G 3/4		175	175	285	345	330		175	174	285	345	330

CHARACTERISTIC CURVES



DIAPHRAGM PUMPS

BASIC DESIGNS

PP-FRP

Pump body **PP-FRP**

Valves **PP-FRP**

Valve balls **PTFE**

Diaphragm **PTFE-faced**



24h DELIVERY

Type	Valve seals			
	EPDM Article-No.	Price (EUR)	FPM Article-No.	Price (EUR)
RF409.2-1,6e	16017692	⌚	16020532	⌚
RF409.2-2,4e	16018937	⌚	16023329	⌚
RF409.2-7,0e	16010428	⌚	16010429	⌚
RF409.2-12e	16011937	⌚	16011251	⌚
RF409.2-18e	16021420	⌚	16022063	⌚
RF409.2-25e	16015774	⌚	16007035	⌚

PVDF-FRP

Pump body **PVDF-FRP**

Valves **PVDF-FRP**

Valve balls **PTFE**

Diaphragm **PTFE-faced**

Type	Valve seals	
	FEP-covered Article-No.	Price (EUR)
RF409.2-1,6e	×	×
RF409.2-2,4e	×	×
RF409.2-7,0e	16023599	⌚
RF409.2-12e	16020686	⌚
RF409.2-18e	16023820	⌚
RF409.2-25e	16023821	⌚

PVC-U

Pump body **PVC-U**

Valves **PVC-U**

Valve balls **PTFE**

Diaphragm **PTFE-faced**



24h DELIVERY

Type	Valve seals			
	EPDM Article-No.	Price (EUR)	FPM Article-No.	Price (EUR)
RF409.2-1,6e	16020050	⌚	16020047	⌚
RF409.2-2,4e	16020147	⌚	16020785	⌚
RF409.2-7,0e	16024669	⌚	16024733	⌚
RF409.2-12e	16024654	⌚	16024614	⌚
RF409.2-18e	16024592	⌚	16024487	⌚
RF409.2-25e	16024676	⌚	16024633	⌚

STAINLESS STEEL

Pump body **1.4571**

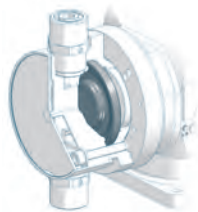
Valves **1.4571**

Valve balls **1.4401**

Diaphragm **PTFE-faced**

Type	Valve seals	
	FEP-covered Article-No.	Price (EUR)
RF409.2-1,6e	15006618	⌚
RF409.2-2,4e	16009811	⌚
RF409.2-7,0e	16017990	⌚
RF409.2-12e	16020559	⌚
RF409.2-18e	16023407	⌚
RF409.2-25e	16019308	⌚

OPTIONS



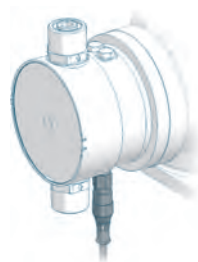
Working diaphragm

Surcharge (EUR)

Material

FPM

only with ...-115e and ...-180e



Diaphragm monitoring

Diaphragm rupture electrode, conductive, mounted on pump
(Evaluation via electrode relay, ER-104 (see accessories))

Surcharge (EUR)

MBE-02

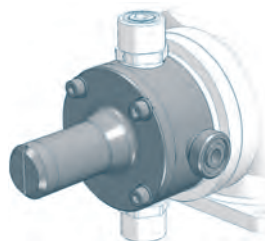
incl. connection cable

(length 2m)



Connection cable for EEXia-circuit

(blue, length 5m)



Integrated relief valve

Diaphragm: **PTFE-faced**

Connecting seals: **EPDM** or **FPM**

Surcharge (EUR)

PP



RF409.2-1,6e, ...-2,4e



RF409.2-4,0e, ...-7,0e, ...-12e, ...-18e, ...-25e



PVDF

RF409.2-1,6e, ...-2,4e



RF409.2-4,0e, ...-7,0e, ...-12e, ...-18e, ...-25e



PVC-U



RF409.2-1,6e, ...-2,4e



RF409.2-4,0e, ...-7,0e, ...-12e, ...-18e, ...-25e



1.4571

RF409.2-1,6e, ...-2,4e



RF409.2-4,0e, ...-7,0e, ...-12e, ...-18e, ...-25e



Connecting seals **FEP-covered**

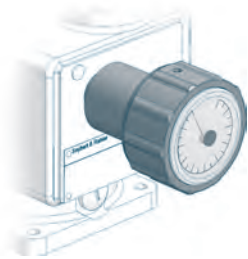
for connection G 3/4

RF409.2-...e



DIAPHRAGM PUMPS

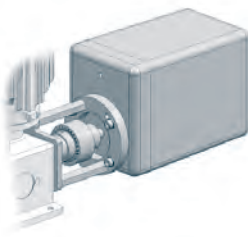
OPTIONS



Stroke length adjustment

Surcharge (EUR)

with position indicator



Stroke length adjustment with actuator

(version uL/CSA on request)

Surcharge (EUR)

RF409.2-1,6e ...-2,4e

Actuator



RF409.2-7,0e ... RF409.2-25e

Actuator N C1-BA

230V $\pm 10\%$, 50/60Hz, 128s/10 U, 1,5Nm
incl. mounting set



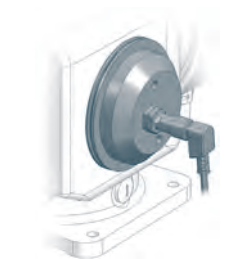
Elektronischer Stellungsregler ESR-N
(only integrated in N C1-BA)

Input signal 0/4 - 20mA including
feedback signal 0/4 - 20mA



Actuator D30D-10-Ex
II2G EExde IIC T4 acc. to ATEX95

400V, 50Hz, 10 U/min
incl. mounting set and base plate



Stroke frequency monitoring

Inductive contact

Surcharge (EUR)

10 - 60 V DC, three-wire, PNP



NAMUR-design, II2G EExia IIC T6 (acc. to ATEX95)



OPTIONS



Drive motor

- Please note: If one or several options 'drive motor' are required to fix the add. price of the drive, the calculation will be as follows: 'add. price special drive' plus the single options of the drive.
- Surcharge and availability must be requested from **sera**.

Surcharge special drive		Surcharge (EUR)
RF 409.2-1,6e, ...-2,4e, ...-7,0e, ...-12e, ...-18e, ...-25e		▲
Special voltage	(all types)	Ⓞ
Enclosure IP65	(all types)	▲
Protection roof	(all types)	▲
VIK design	(all types)	Ⓞ
Electrical acc. to uL/CSA	(all types)	Ⓞ

Single-phase alternating current motor, 230V/50Hz with capacitor

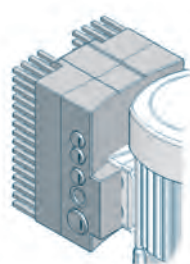
RF 409.2-1,6e, ...-2,4e, ...-7,0e, ...-12e, ...-18e, ...-25e	▲
--	---

II 2 G EExe II T4 (acc. to ATEX95)

RF 409.2-1,6e, ...-2,4e, ...-7,0e, ...-12e, ...-18e, ...-25e	▲
--	---

II2G EExde II C T4 (suitable for converter operation, 5-50Hz)

RF 409.2-1,6e, ...-2,4e, ...-7,0e, ...-12e, ...-18e, ...-25e	▲
--	---



Stroke frequency adjustment, electrical

Frequency converter (Series INVEOR) mounted on drive motor
Input 4-20 mA

		Surcharge (EUR)
1-phase		
200-230V ±10%, 50/60Hz	0,37 kW	▲
3-phase		
400-480V ±10%, 50/60Hz	0,55 kW	▲

Frequency converter accessories

	Article-No.	Price (EUR)
Operating module (incl. control cable)	90039445	▲
Communication cable for parameterization via PC	90042176	▲

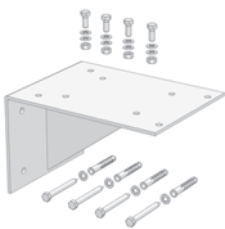
DIAPHRAGM PUMPS

ACCESSORIES



Diaphragm monitoring (evaluation)

		Article-No.	Price (EUR)
Electrode relay for mounting in control cabinet (for evaluating the diaphragm rupture electrode MBE-02 (see options))			
ER-104	auxiliary power 230 V AC	90022944	▲
ER-104	auxiliary power 24 V DC	90022945	▲
ER-142	auxiliary power 230 V AC II(1)G [Exia] II C	90200363	▲



Bracket

		Article-No.	Price (EUR)
for wall mounting (incl. mounting kit)			
PP		90023848	▲
1.4301		90023875	▲



Connection pieces

Extensive range of connection / transition pieces and dosing hoses

Inserts and pipe sockets with union nuts, flange connections, hose screw connections, hose nozzles as well as dosing hoses and accessories.

to be found in **CHAPTER 4** of this catalog, from **page 442**

FITTINGS FOR THE SUCTION SIDE



Multi-function device

Properties

- Can be used as an priming aid and/or an calibration pot
- Compact design
- Flexible Connection
- Maintenance-free
- incl. glue joint (PVC-U) and welding joint (PP)

Basic version

- Housing: **PVC-U / PVC-transparent**
- Seals: **FPM or EPDM**
- max. operating pressure: **-0,5 ... +2 bar**

Type	DN	Connetion	Volume	Seals	Article-No.	Price (EUR)
MFD 60	8	G¾	0,5 Ltr.	EPDM	37606311	▲
MFD 60	8	G¾	0,5 Ltr.	FPM	37605864	▲

ACCESSORIES

Hand vacuum pump	PVC/FPM	37605682	▲
(incl. 1,5m PVC-Hose d=12/21)			



FITTINGS FOR THE SUCTION SIDE



Suction lance S-01 (without level switch)

Properties

- Compact, robust design
- Maintenance-free
- Easy handling
- High-quality materials
- individual special lengths
up to max. 1.500mm possible

Basic version

- Suction lance: **PVC-U**
- Foot valve: **PVC-U**
- Seals: **EPDM** or **FPM**
- Valve ball: **PTFE**
- max. flow rate: **200 l/h**
- Standard length: **650mm, 1.000mm und 1.250mm**

Type	Length	Connection	Seals	Article-No.	Price (EUR)
S-01	650 mm	G 3/4	EPDM	37606591	▲
S-01	1.000 mm	G 3/4	EPDM	37606592	▲
S-01	1.250 mm	G 3/4	EPDM	37606593	▲
S-01	max. 1.500 mm	G 3/4	EPDM	37600705	▲
S-01	650 mm	G 3/4	FPM	37606594	▲
S-01	1.000 mm	G 3/4	FPM	37606595	▲
S-01	1.250 mm	G 3/4	FPM	37606596	▲
S-01	max. 1.500 mm	G 3/4	FPM	37600817	▲



Suction lance SL-12.1 (with level switch, 2-stage with plug, 3-pole)

Properties

- Compact design
- Height-adjustable
- 2-stage level monitoring
- Flexible connection
- Easy handling
- High-quality materials
- Maintenance-free
- incl. hose connections
4/6, 6/8, 6/12

Basic version

- Suction lance: **PVC-U**
- Foot valve: **PVC-U**
- Valve ball: **PTFE**
- Hose (inboard): **PE**
- Level switch: **PP**
2-stage, normally closed (NC)
5m cable (from foot valve) with plug, M12, 3-pole
- max. flow rate: **14 l/h (4/6) ... 35 l/h (6/12)**

Type	Length	Seals	Article-No.	Price (EUR)
SL-12.1	600 mm	PTFE	37606120	▲
SL-12.1	1.000 mm	PTFE	37606117	▲
SL-12.1	1.200 mm	PTFE	37606118	▲

DIAPHRAGM PUMPS

FITTINGS FOR THE SUCTION SIDE



Foot valve (Plastic)

Properties

- Compact design
- Easy installation
- High-quality materials
- Maintenance-free

Basic version

- Ball: **PTFE**
- Sieve: **ETFE**
- Mesh size: **1mm**

Type	DN	Connection	Material	Seals	Article-No.	Price (EUR)
781.1	8	G 3/4	PVDF/PVDF-GFK	FEP	30073008	▲



Foot valve (plastic)

Properties

- Compact design
- Easy installation
- High-quality materials
- Maintenance-free

Basic version

- Ball: **PTFE**
- Sieve: **ETFE**
- Mesh size: **1mm**

Type	DN	Connection	Material	Seals	Article-No.	Price (EUR)
731	8	G 3/4	PVC-U	EPDM	37601636	▲



Foot valve (Stainless steel)

Properties

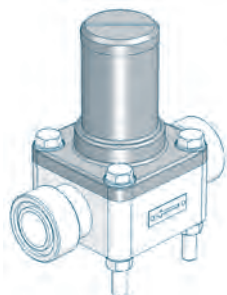
- Compact design
- Easy installation
- High-quality materials
- Maintenance-free

Basic version

- Ball: **1.4401**
- Sieve: **ETFE**
- Mesh size: **1mm**

Type	DN	Connection	Material	Seals	Article-No.	Price (EUR)
731	8	G 3/4	1.4571	FEP	37601149	▲

FITTINGS FOR THE PRESSURE SIDE



Diaphragm relief valve

for overpressure protection

Properties

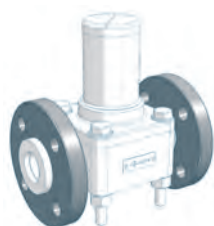
- Compact design
- Easy installation
- Maintenance-free
- High-quality materials

Basic version

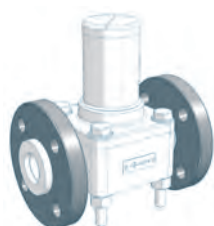
- Valve body: **PVC-U, 1.4581, PP or PVDF**
- Diaphragm: **PTFE-faced**

Type	Nominal size	Connection	Valve body	Seals	Article-No.	Price (EUR)
620.10	DN8	G 3/4	PVC-U	FPM	37603632	▲
620.10	DN8	G 3/4	PVC-U	EPDM	36200101	▲
620.10	DN8	G 3/4	PP	FPM	37603630	▲
620.10	DN8	G 3/4	PP	EPDM	37603629	▲
620.10	DN8	G 3/4	PVDF	FEP	37601792	▲
620.10	DN8	G 3/4	1.4581	FEP	37600670	▲

OPTIONS



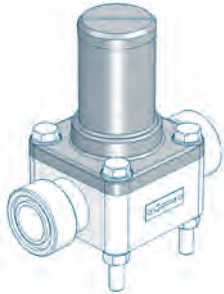
Type	Design	Loose flange	Surcharge [EUR]
620.10	PVC	Loose flange made of PVC-U	⌚
620.10	PP-FRP/PVDF-FRP	Loose flange made of PP with steel inlay	×
620.10	PP	Loose flange made of PP with steel inlay	▲
620.10	PVDF	Loose flange made of PP with steel inlay	▲



Type	Design	Loose flange	Surcharge [EUR]
622.10	PVC	Loose flange made of PVC-U	▲
622.10	PP-FRP/PVDF-FRP	Loose flange made of PP with steel inlay	⌚
622.10	PP	Loose flange made of PP with steel inlay	▲
622.10	PVDF	Loose flange made of PP with steel inlay	▲

DIAPHRAGM PUMPS

FITTINGS FOR THE PRESSURE SIDE



Diaphragm pressure keeping valve

to prevent over-conveyance

Properties

- Compact design
- Easy installation
- Maintenance-free
- High-quality materials

Basic version

- Valve body: **PVC-U, 1.4581, PP or PVDF**
- Diaphragm: **PTFE-faced**

Type	Nominal size	Connection	Valve body	Seals	Article-No.	Price (EUR)
620.D	DN8	G 3/4	PVC-U	FPM	37600048	▲
620.D	DN8	G 3/4	PVC-U	EPDM	36201101	▲
620.D	DN8	G 3/4	PP	FPM	37600055	▲
620.D	DN8	G 3/4	PP	EPDM	36201105	▲
620.D	DN8	G 3/4	PVDF	FEP	37601827	▲
620.D	DN8	G 3/4	1.4581	FEP	37600525	▲

OPTIONS

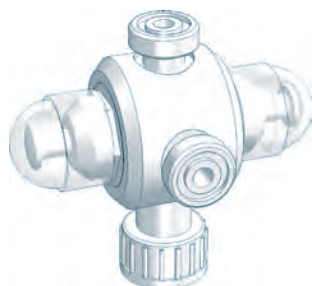


Type	Design	Loose flange	Surcharge [EUR]
620.D	PVC	Loose flange made of PVC-U	⌚
620.D	PP-FRP/PVDF-FRP	Loose flange made of PP with steel inlay	×
620.D	PP	Loose flange made of PP with steel inlay	▲
620.D	PVDF	Loose flange made of PP with steel inlay	▲



Type	Design	Loose flange	Surcharge [EUR]
622.D	PVC	Loose flange made of PVC-U	▲
622.D	PP-FRP/PVDF-FRP	Loose flange made of PP with steel inlay	⌚
622.D	PP	Loose flange made of PP with steel inlay	▲
622.D	PVDF	Loose flange made of PP with steel inlay	▲

FITTINGS FOR THE PRESSURE SIDE



Multi function valve

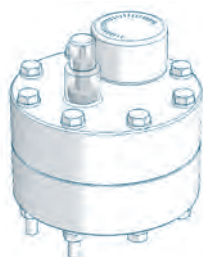
Properties

- Maximum operating pressure 10 bar
- Compact design
- Easy installation
- Maintenance-free
- Venting
- Overpressure protection for dosing pumps
- Prevention of over conveyance

Basic version

- Diaphragms: **PTFE-faced**
- Connection: **G^{3/4}**
- **Relief valve side**
Opening pressure: **2 up to 10 bar** (adjustable)
- **Pressure keeping valve side**
Holding pressure: **1,0 - 1,5 bar**

Type	Valve body	Seals	Article-No.	Price (EUR)
MFV 050	PVC-U	EPDM	37600973	▲
MFV 050	PVC-U	FPM	37600974	▲
MFV 050	PVC-U	FEP	37600975	▲
MFV 050	PP	EPDM	37600982	▲
MFV 050	PP	FPM	37600983	▲
MFV 050	PP	FEP	37600984	▲



Diaphragm pulsation damper (Plastic, PTFE-diaphragm, max. 10 bar)

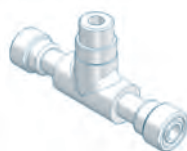
Properties

- Any mounting position
- Easy installation
- Long service life
- Easy handling
- High-quality materials
- Low maintenance

Type	Connection	max. Pressure	Material	Diaphragm	Article-No.	Price (EUR)
720.1	G ½	10 bar	PVC-U	PTFE	37601848	▲
720.1	G ½	10 bar	PP	PTFE	37601856	▲
720.1	G ½	10 bar	PVDF	PTFE	37601857	▲

ACCESSORIES

Connection adapter



Thread connection	G3/4 male	PVC-U	EPDM	90021733	▲
Connction to pulsation damper	G1/2 male	PVC-U	FPM	90025079	▲
		PP	EPDM	90038083	▲
		PP	FPM	90038082	▲
		PVDF	FEP	⌚ ⌚	⌚ ⌚

Retaining clamp



(2 Piece each pulsation damper)	PP	d 16	90010649	▲
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Filling pump FLP 2 for filling device



with manometer, max. 7 bar incl. 2m hose and coupling for air valve	90009396	▲
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DIAPHRAGM PUMPS

FITTINGS FOR THE PRESSURE SIDE



Diaphragm pulsation damper (Stainless steel, max. 10 bar)

Properties

- Any mounting position
- Easy installation
- Long service life
- Easy handling
- High-quality materials
- Low maintenance

Type	Connection	max.Pressure	Material	Diaphragm	Article-No.	Price (EUR)
810.1-0,16/10	G ½	10 bar	1.4571	Butyl	37603720	▲
810.1-0,16/10	G ½	10 bar	1.4571	FPM	37603724	▲
810.1-0,16/10	G ½	10 bar	1.4571	PTFE	×	×

ACCESSORIES

Filling- and pressure measuring device

(mounted on pulsation damper)



Design: Plastic	Manometer: 0-16 bar Measuring system: copper alloyed	●
Design: Stainless steel	Manometer: 0-16 bar, glycerine-damped Measuring system: copper alloyed Housing: 1.4301	▲

Filling pump FLP 2 for filling device



with manometer, max. 7 bar incl. 2m hose and coupling for air valve	90009396	▲
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Injection fitting

Properties

- incl. injection lance for better mixing
- Easy installation
- Any mounting position
- Maintenance-free
- High-quality materials

Basic version

- Cone-type check valve (spring loaded)
- Shut-off ball valve
- Injection lance (L=150mm)
- max. operating pressure: 10 bar



Type	DN	Inlet	Outlet	Material	Seals	Article-No.	Price (EUR)
8061.1	10	G ¾	R ½	PVC-U	EPDM	37602105	▲
8061.1	10	G ¾	R ½	PVC-U	FPM	37602106	▲
8061.1	10	G ¾	R ½	PP	EPDM	37602107	▲
8061.1	10	G ¾	R ½	PP	FPM	37602108	▲
8061.1	10	G ¾	R ½	PVDF	FPM	37602109	▲

FITTINGS FOR THE PRESSURE SIDE



Dosing valve (Plastic)

Properties

- Compact design
- Any mounting position
- Maintenance-free
- High-quality materials

Basic version

- integrated injection lance
- Valve ball: **PTFE**
- Seals: **EPDM** or **FPM**
- Spring: **Hastelloy C4**

Type	DN	Inlet	Outlet	Material	Seal	Article-No.	Price (EUR)
691.2	8	G 3/4	R 1/2	PVC-U	EPDM	37606318	▲
691.2	8	G 3/4	R 1/2	PVC-U	FPM	37605769	▲
691.2	8	G 3/4	R 1/2	PP-GFK	EPDM	37605768	▲
691.2	8	G 3/4	R 1/2	PP-GFK	FPM	37606317	▲



Dosing valve (Plastic)

Properties

- Compact design
- Any mounting position
- Maintenance-free
- High-quality materials

Basic version

- Valve ball: **PTFE**
- Spring: **Hastelloy C4**

Type	DN	Inlet	Outlet	Material	Seal	Article-No.	Price (EUR)
691.1	8	G 3/4	R 1/2	PVDF/-GFK	FEP	30072015	▲



Dosing valve (Stainless steel)

Properties

- Compact design
- Any mounting position
- Maintenance-free
- High-quality materials

Basic version

- Valve ball: **1.4401**
- Seals: **FEP-covered**
- Spring: **Hastelloy C4**

Type	DN	Inlet	Outlet	Material	Seal	Article-No.	Price (EUR)
691.1	8	G 3/4	R 1/2	1.4571	FEP	37600493	▲

DIAPHRAGM PUMPS



OVERVIEW

High dosing accuracy
 Safe to run dry
 Leakage free
 Low-maintenance
 User-friendly
 Compact design
 Low weight
 Continuous, manual stroke length adjustment
 Motor suitable for operation with frequency converter
 Robust, metallic drive housing



TECHNICAL DATA

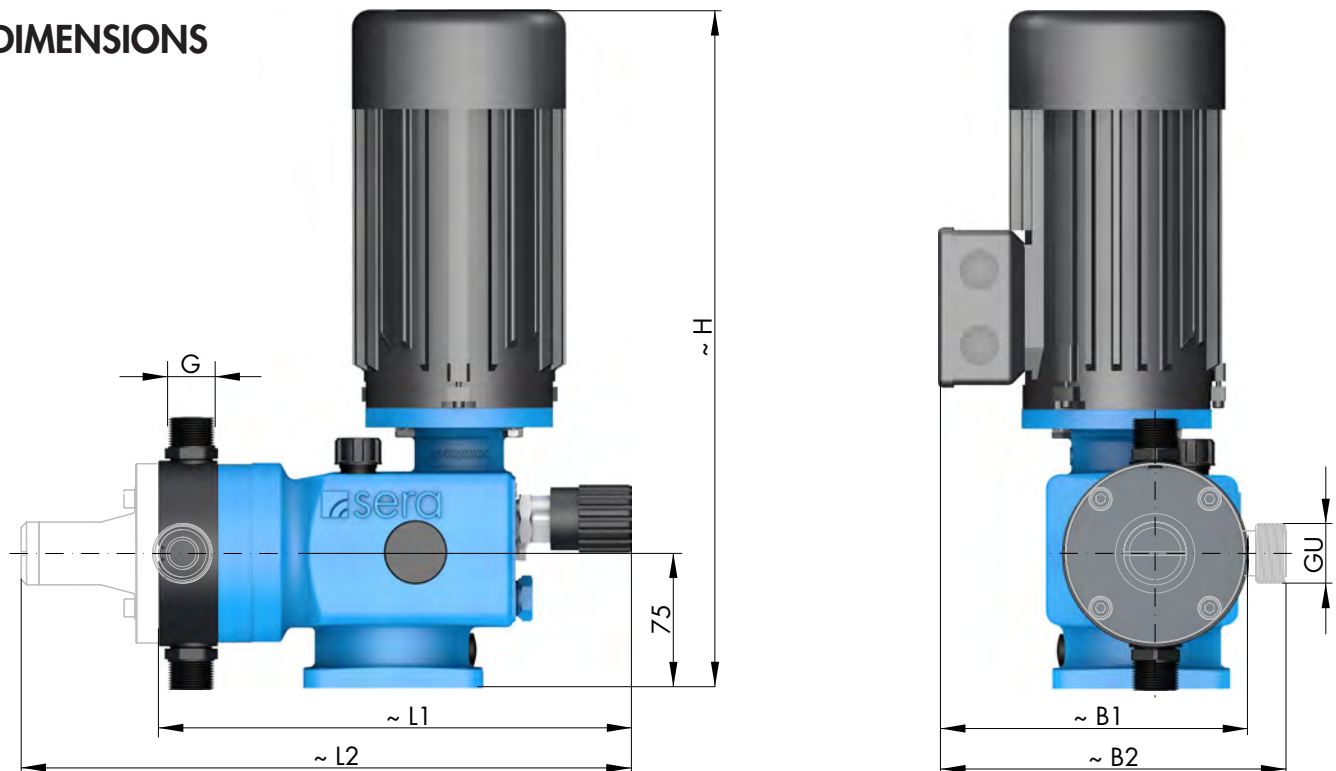
PUMP DATA			RF 409.2-...						
(* 8mWS = performance losses of nominal capacity QN of 20-25%)			50e	75e	90e	115e	140e	180e	250e 350e
Permissible pressure p_{2max} at the pump outlet	bar		10	10	8	4	8	4	3 3
Nominal capacity QN at p_{2max}	l/h	50 Hz	0-50	0-75	0-90	0-115	0-140	0-180	0-250 0-350
		60 Hz	0-60	0-90	0-108	0-138	0-168	0-216	0-300 1
Quantity per stroke	ml/stroke (100%)		8,3	8,3	15,0	19,2	15,6	20,0	41,7 38,9
Max. suction height	mWC		3 (8 *)						3
Min./max. permissible pressure at the pump inlet	bar	$p_{1min/max}$	-0,3/0 (-0,8/0)						-0,3/0
Recomm. nominal diameter DN of the connecting pipes	mm		10	15	15	15	15	15	15 15
Nominal stroke frequency	1/min	50 Hz	100	150	100	100	150	150	100 150
		60 Hz	120	180	120	120	180	180	120 -
Weight approx.	kg	plastic	9	9	11	10	11	10	13 13
		stainless steel	10	10	13	13	13	13	21 21

ELECTRICAL DATA		RF409.2-50e ... RF409.2-350e	
Power consumption	kW	0,37	
Voltage	V	230/400V 50Hz, 460V 60Hz	
Frequency	Hz	50/60	
Insulation class	ISO	F	
Enclosure	IP	55	

Flow capacity 50 l/h ... 350 l/h
Admissible counterpressure up to 10 bar

RF 409.2

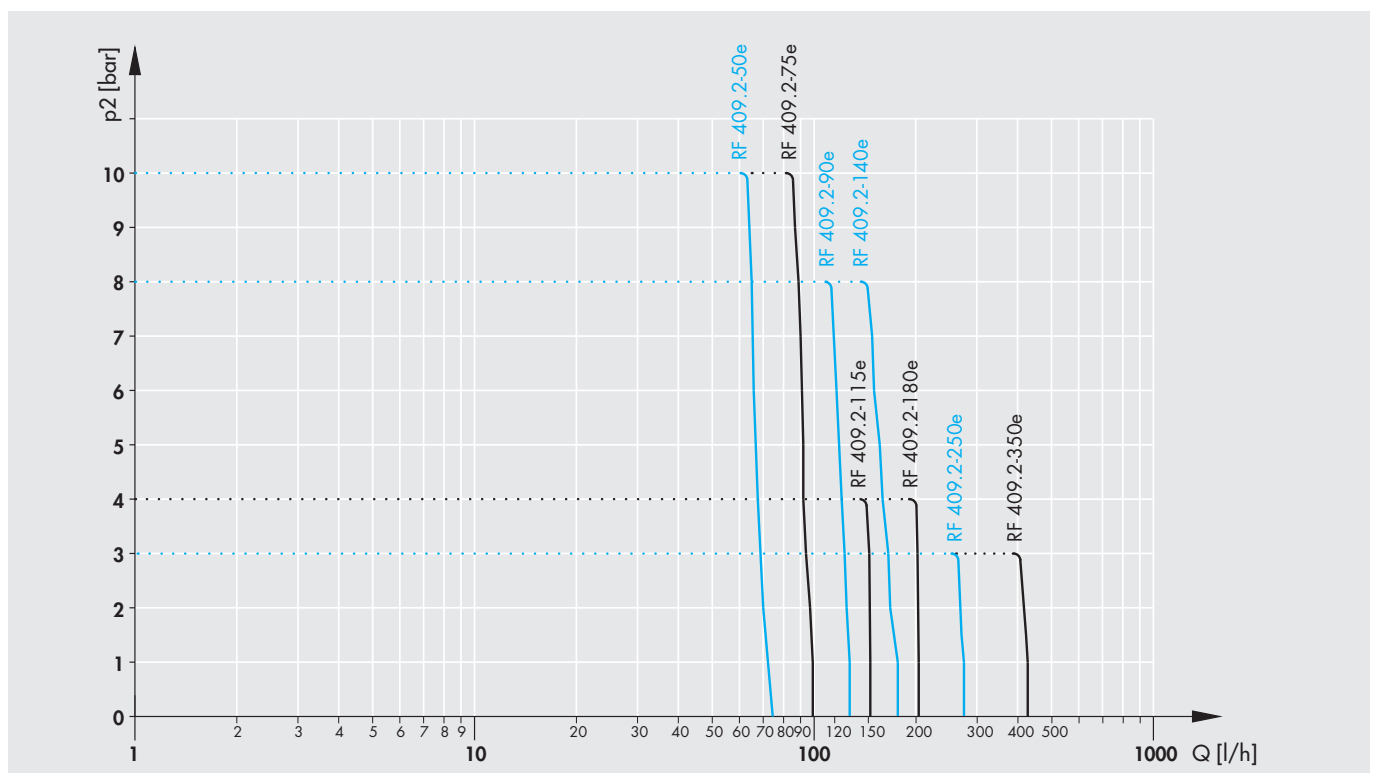
DIMENSIONS



	G	GU		B1	B2	L1	L2	H		B1	B2	L1	L2	H
RF 409.2 -50e, ...-75e	G 3/4	G 3/4	▶	185	185	295	360	370	▶	185	185	295	360	370
RF 409.2 -90e, ...-140e	G 3/4	G1		185	210	300	370	370		185	210	300	370	370
RF 409.2 -115e, ...-180e	G 3/4	G1		185	210	300	370	370		185	210	300	370	370
RF 409.2 -250e, ...-350e	G1 1/4 *	G1 1/4 *		220	245	355	435	370		220	245	355	435	370

* PVC = G1

CHARACTERISTIC CURVES



DIAPHRAGM PUMPS

BASIC DESIGNS

PP-FRP

Pump body **PP-FRP** (** PP)
Valves **PP-FRP**
Valve balls **PTFE**
Diaphragm **PTFE-faced** (* EPDM)



Type	Valve seals			
	EPDM Article-No.	Price (EUR)	FPM Article-No.	Price (EUR)
RF409.2-50e	16007308	⌚	16007034	⌚
RF409.2-75e	16007307	⌚	16014197	⌚
RF409.2-90e	16011246	⌚	16009081	⌚
RF409.2-115e *	16015359	⌚	16023330	⌚
RF409.2-140e	16010443	⌚	16009367	⌚
RF409.2-180e *	16019736	⌚	16023331	⌚
RF409.2-250e **	16008444	⌚	16018774	⌚
RF409.2-350e **	16020565	⌚	16022763	⌚

PVDF-FRP

Pump body **PVDF-FRP** (**PVDF)
Valves **PVDF-FRP**
Valve balls **PTFE**
Diaphragm **PTFE-faced** (* EPDM)

Type	Valve seals	
	FEP-covered Article-No.	Price (EUR)
RF409.2-50e	⌚	⌚
RF409.2-75e	⌚	⌚
RF409.2-90e	⌚	⌚
RF409.2-115e *	⌚	⌚
RF409.2-140e	⌚	⌚
RF409.2-180e *	⌚	⌚
RF409.2-250e **	16015244	⌚
RF409.2-350e **	16023826	⌚

PVC-U

Pump body **PVC-U**
Valves **PVC-U**
Valve balls **PTFE**
Diaphragm **PTFE-faced** (* EPDM)



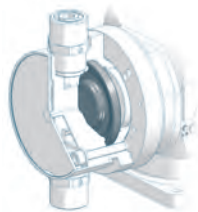
Type	Valve seals			
	EPDM Article-No.	Price (EUR)	FPM Article-No.	Price (EUR)
RF409.2-50e	16010672	⌚	16023396	⌚
RF409.2-75e	16017474	⌚	16006655	⌚
RF409.2-90e	16013887	⌚	16014980	⌚
RF409.2-115e *	16015017	⌚	16023429	⌚
RF409.2-140e	16014772	⌚	16006656	⌚
RF409.2-180e *	16014149	⌚	16019177	⌚
RF409.2-250e	16021233	⌚	16006122	⌚
RF409.2-350e	16021456	⌚	16020207	⌚

STAINLESS STEEL

Pump body **1.4571**
Valves **1.4571**
Valve balls **1.4401**
Diaphragm **PTFE-faced** (* EPDM)

Type	Valve seals	
	FEP-covered Article-No.	Price (EUR)
RF409.2-50e	16010202	⌚
RF409.2-75e	16012323	⌚
RF409.2-90e	16013994	⌚
RF409.2-115e *	16023827	⌚
RF409.2-140e	16011171	⌚
RF409.2-180e *	16006885	⌚
RF409.2-250e	16021036	⌚
RF409.2-350e	16022917	⌚

OPTIONS



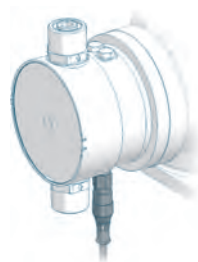
Working diaphragm

Surcharge (EUR)

Material

FPM

only with ...-115e and ...-180e



Diaphragm monitoring

Diaphragm rupture electrode, conductive, mounted on pump
(Evaluation via electrode relay, ER-104 (see accessories))

Surcharge (EUR)

MBE-02

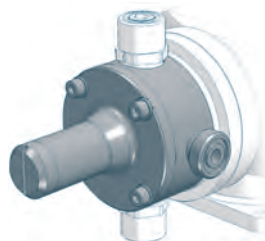
incl. connection cable

(length 2m)



Connection cable for EEXia-circuit

(blue, length 5m)



Integrated relief valve

Diaphragm: **PTFE-faced**

Connecting seals: **EPDM** or **FPM**

Surcharge (EUR)

PP



RF 409.2-50e, ...-75e



RF 409.2-90e, ...-115e, ...-140e, ...-180e



RF 409.2-250e, ...-350e



PVDF

RF 409.2-50e, ...-75e



RF 409.2-90e, ...-115e, ...-140e, ...-180e



RF 409.2-250e, ...-350e



PVC-U



RF 409.2-50e, ...-75e



RF 409.2-90e, ...-115e, ...-140e, ...-180e



RF 409.2-250e, ...-350e



1.4571

RF 409.2-50e, ...-75e



RF 409.2-90e, ...-115e, ...-140e, ...-180e



RF 409.2-250e, ...-350e



Connecting seals **FEP-covered**

for connection G 3/4

RF 409.2-7,0e, up to and including ...-180e



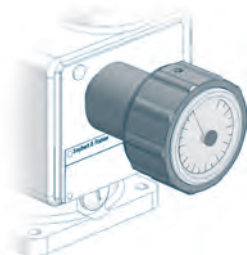
for connection G1 1/4

RF 409.2-250e, ...-350e



DIAPHRAGM PUMPS

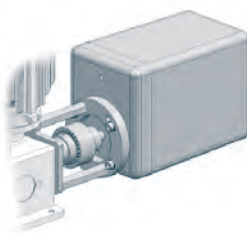
OPTIONS



Stroke length adjustment

Surcharge (EUR)

with position indicator



Stroke length adjustment with actuator

(version UL/CSA on request)

Surcharge (EUR)

Actuator N C1-BA	230V $\pm 10\%$, 50/60Hz, 128s/10 U, 1,5Nm incl. mounting set	▲
Elektronischer Stellungsregler ESR-N (only integrated in N C1-BA)	Input signal 0/4 - 20mA including feedback signal 0/4 - 20mA	▲
Actuator D30D-10-Ex II2G EExde IIC T4 acc. to ATEX95	400V, 50Hz, 10 U/min incl. mounting set and base plate	▲



Stroke frequency monitoring

Inductive contact

Surcharge (EUR)

10 - 60 V DC, three-wire, PNP	▲
NAMUR-design, II2G EExia IIC T6 (acc. to ATEX95)	▲

OPTIONS



Drive motor

- Please note: If one or several options 'drive motor' are required to fix the add. price of the drive, the calculation will be as follows: 'add. price special drive' plus the single options of the drive.
- Surcharge and availability must be requested from **sera**.

Surcharge special drive		Surcharge (EUR)
RF 409.2-50e, ...-75e, ...-90e, ...-115e, ..140e ...-180e, ..250e, ..350e		▲
Special voltage	(all types)	Ⓞ
Enclosure IP65	(all types)	▲
Protection roof	(all types)	▲
VIK design	(all types)	Ⓞ
Electrical acc. to uL/CSA	(all types)	Ⓞ

Single-phase alternating current motor, 230V/50Hz with capacitor

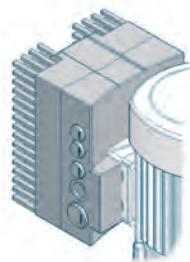
RF 409.2-50e, ...-75e, ...-90e, ...-115e, ..140e ...-180e, ..250e, ..350e	▲
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II 2 G EExe II T4 (acc. to ATEX95)

RF 409.2-50e, ...-75e, ...-90e, ...-115e, ..140e ...-180e, ..250e, ..350e	▲
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II2G EExde II C T4 (suitable for converter operation, 5-50Hz)

RF 409.2-50e, ...-75e, ...-90e, ...-115e, ..140e ...-180e, ..250e, ..350e	▲
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Stroke frequency adjustment, electrical

Frequency converter (Series INVEOR) mounted on drive motor
Input 4-20 mA

		Surcharge (EUR)
1-phase		
200-230V ±10%, 50/60Hz	0,37 kW	▲
3-phase		
400-480V ±10%, 50/60Hz	0,55 kW	▲

Frequency converter accessories	Article-No.	Price (EUR)
Operating module (incl. control cable)	90039445	▲
Communication cable for parameterization via PC	90042176	▲

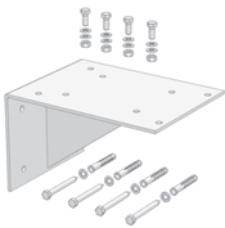
DIAPHRAGM PUMPS

ACCESSORIES



Diaphragm monitoring (evaluation)

		Article-No.	Price (EUR)
Electrode relay for mounting in control cabinet (for evaluating the diaphragm rupture electrode MBE-02 (see options))			
ER-104	auxiliary power 230 V AC	90022944	▲
ER-104	auxiliary power 24 V DC	90022945	▲
ER-142	auxiliary power 230 V AC II(1)G [EExia] II C	90200363	▲



Bracket

		Article-No.	Price (EUR)
for wall mounting (incl. mounting kit)			
PP		90023848	▲
1.4301		90023875	▲

FITTINGS FOR THE SUCTION SIDE



Multi-function device

Properties

- Can be used as an priming aid and/or an calibration pot
- Compact design
- Flexible Connection
- Maintenance-free
- incl. glue joint (PVC-U) and welding joint (PP)

Basic version

- Housing: **PVC-U / PVC-transparent**
- Seals: **FPM or EPDM**
- max. operating pressure: **-0,5 ... +2 bar**

Type	DN	Connexion	Volume	Seals	Article-No.	Price (EUR)
RF409.2-50e						
MFD 60	8	G¾	0,5 Ltr.	EPDM	37606311	▲
MFD 60	8	G¾	0,5 Ltr.	FPM	37605864	▲
RF409.2-75e, ...-90e, ...-115e, ...-140e, ...-180e, ...-250e, ...-350e						
MFD 570	15	G1	2 Ltr.	EPDM	37606278	▲
MFD 570	15	G1	2 Ltr.	FPM	37605992	▲

ACCESSORIES

Hand vacuum pump	PVC/FPM (incl. 1,5m PVC-Hose d=12/21)	37605682	▲
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FITTINGS FOR THE SUCTION SIDE



Suction lance S-01 (without level switch)

Properties

- Compact, robust design
- Maintenance-free
- Easy handling
- High-quality materials
- individual special lengths
up to max. 1.500mm possible

Basic version

- Suction lance: **PVC-U**
- Foot valve: **PVC-U**
- Seals: **EPDM** or **FPM**
- Valve ball: **PTFE**
- max. flow rate: **200 l/h**
- Standard length: **650mm, 1.000mm und 1.250mm**

Type	Length	Connection	Seals	Article-No.	Price (EUR)
RF409.2-50e, ...-75e, ...-90e, ...-115e, ...-140e, ...-180e					
S-01	650 mm	G ¾	EPDM	37606591	▲
S-01	1.000 mm	G ¾	EPDM	37606592	▲
S-01	1.250 mm	G ¾	EPDM	37606593	▲
S-01	max. 1.500 mm	G ¾	EPDM	37600705	▲
S-01	650 mm	G ¾	FPM	37606594	▲
S-01	1.000 mm	G ¾	FPM	37606595	▲
S-01	1.250 mm	G ¾	FPM	37606596	▲
S-01	max. 1.500 mm	G ¾	FPM	37600817	▲

DIAPHRAGM PUMPS

FITTINGS FOR THE SUCTION SIDE



Suction lance SL-02 (with level switch, 1- or 2-stage with plug, 3-pole)

Properties

- Compact, robust design
- Safe
- Easy handling
- 1-stage level switch
- Flexible connection
- High-quality materials
- Maintenance-free

Basic version

- Suction lance: **PVC-U**
- Foot valve: **PVDF-GFK**
- Valve ball: **PTFE**
- Suction basket: **PP**
- Level switch: **PP**
1- or 2-stage, normally closed (NC)
5m cable (from foot valve) with plug, M12, 3-pole
- max. flow rate: **200 l/h**

Type	Level switch	Length	Connection	Seals	Article-No.	Price (EUR)
RF409.2-50e, ...-75e, ...-90e, ...-115e, ...-140e, ...-180e						
SL-02	1-stage	630 mm	G ¾	EPDM	37606372	▲
SL-02	1-stage	1.000 mm	G ¾	EPDM	37606567	▲
SL-02	1-stage	1.200 mm	G ¾	EPDM	37606568	▲
SL-02	1-stage	630 mm	G ¾	FPM	37606566	▲
SL-02	1-stage	1.000 mm	G ¾	FPM	37606078	▲
SL-02	1-stage	1.200 mm	G ¾	FPM	37606569	▲
SL-02	2-stage	630 mm	G ¾	EPDM	37606570	▲
SL-02	2-stage	1.000 mm	G ¾	EPDM	37606572	▲
SL-02	2-stage	1.200 mm	G ¾	EPDM	37606573	▲
SL-02	2-stage	630 mm	G ¾	FPM	37606571	▲
SL-02	2-stage	1.000 mm	G ¾	FPM	37606577	▲
SL-02	2-stage	1.200 mm	G ¾	FPM	37606574	▲



ACCESSORIES

Drum connection adapter

Connection	Material	Seal	Article-No.	Price (EUR)
for external thread G=S65x5 DIN2781	PP	EPDM	90011763	▲
	PP	FPM	90011762	▲
for internal thread (set) G=2 fine thread steel drum DIN-ISO 228-1	PP	EPDM	90046044	▲
G=v. Leer/tri-sure BCS 56x4 EN12708	PP	FPM	90046043	▲
for external thread G= DIN51	PP	EPDM	90011767	▲
	PP	FPM	90011766	▲
for wall duct G=2 Wall thickness S=max. 6mm	PP/PVC	EPDM	90011773	▲
	PP/PVC	FPM	90011772	▲
other adapters			Ⓢ	Ⓢ

FITTINGS FOR THE SUCTION SIDE



Suction lance SLP-15x.1 (with level switch, 1- or 2-stage)

Properties

- Compact, robust design
- Easy handling
- 1- or 2-stage level monitoring
- Protective tube
- Maintenance free
- High quality materials
- Protection class IP65

Basic version

- Suction lance: **PVC-U**
- Foot valve: **PVC-U**
- Valve ball: **PTFE**
- Seals: **EPDM** or **FPM**
- Level switch: **PP**
1- or 2-stage, normally closed (NC)
cable gland: **M12x1,5**
- max. flow rate: **700 l/h**

Type	Level switch	Length	Material	Seals	Article-No.	Price (EUR)
RF409.2-250e, ...-350e						
SLP-151.1	1-stage	750 mm	PVC-U	EPDM	37604108	▲
SLP-151.1	1-stage	750 mm	PVC-U	FPM	37604114	▲
SLP-151.1	1-stage	1.000 mm	PVC-U	EPDM	37604109	▲
SLP-151.1	1-stage	1.000 mm	PVC-U	FPM	37604115	▲
SLP-151.1	1-stage	1.250 mm	PVC-U	EPDM	37604110	▲
SLP-151.1	1-stage	1.250 mm	PVC-U	FPM	37604116	▲
SLP-152.1	2-stage	750 mm	PVC-U	EPDM	37604111	▲
SLP-152.1	2-stage	750 mm	PVC-U	FPM	37604117	▲
SLP-152.1	2-stage	1.000 mm	PVC-U	EPDM	37604112	▲
SLP-152.1	2-stage	1.000 mm	PVC-U	FPM	37604118	▲
SLP-152.1	2-stage	1.250 mm	PVC-U	EPDM	37604113	▲
SLP-152.1	2-stage	1.250 mm	PVC-U	FPM	37604119	▲

ACCESSORIES

Type	Designation	Article-No.	Price (EUR)
BCS 70x6 Di=50	Container screw connection for internal thread. Ventilation via tolerance of the inner diameter of the adapter or via separate ventilation of the container.	90028923	▲
G2 IBC	For IBC cover with G2 internal thread. Ventilation via adapter. Gas-tight design with „hose set“ possible.	90044282	▲
G2 universal	Bulkhead fitting with flat gasket (made of PVC-U). Ventilation via adapter. Gas-tight design with „hose set“ possible.	90044277	▲
Hose set	G3/4, d12, L=3m for gas tight container screwing for connection to On-site evacuation system	90044369	▲
Quiver	Quiver for storing/holding the suction lance (e.g. when changing containers)	90028919	▲
Control cable	Control cable for level input Cable socket M12x1, 3-pole, 5m length, loosely delivered	90031245	▲



DIAPHRAGM PUMPS

FITTINGS FOR THE SUCTION SIDE



Foot valve (Plastic)

Properties

- Compact design
- Easy installation
- High-quality materials
- Maintenance-free

Basic version

- Ball: **PTFE**
- Sieve: **ETFE**
- Mesh size: **1mm**

Type	DN	Connection	Material	Seals	Article-No.	Price (EUR)
RF409.2-50e, ...-75e, ...-90e, ...-115e, ...-140e, ...-180e						
781.1	8	G 3/4	PVDF/PVDF-GFK	FEP	30073008	▲
RF409.2-250e, ...-350e						
783.1	20	G 1 1/4	PP/PP-GFK	EPDM	37600552	▲
783.1	20	G 1 1/4	PP/PP-GFK	FPM	37600553	▲
783.1	20	G 1 1/4	PVDF/PVDF-GFK	FEP	30073018	▲



Foot valve (plastic)

Properties

- Compact design
- Easy installation
- High-quality materials
- Maintenance-free

Basic version

- Ball: **PTFE**
- Sieve: **ETFE**
- Mesh size: **1mm**

Type	DN	Connection	Material	Seals	Article-No.	Price (EUR)
RF409.2-50e, ...-75e, ...-90e, ...-115e, ...-140e, ...-180e						
731	8	G 3/4	PVC-U	EPDM	37601636	▲



Foot valve (Stainless steel)

Properties

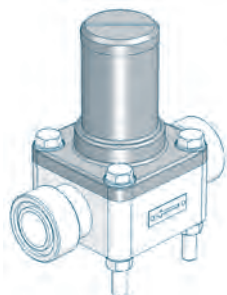
- Compact design
- Easy installation
- High-quality materials
- Maintenance-free

Basic version

- Ball: **1.4401**
- Sieve: **ETFE**
- Mesh size: **1mm**

Type	DN	Connection	Material	Seals	Article-No.	Price (EUR)
RF409.2-50e, ...-75e, ...-90e, ...-115e, ...-140e, ...-180e						
731	8	G 3/4	1.4571	FEP	37601149	▲
RF409.2-250e, ...-350e						
732	15	G 1	1.4571	FEP	37603325	▲

FITTINGS FOR THE PRESSURE SIDE



Diaphragm relief valve

for overpressure protection

Properties

- Compact design
- Easy installation
- Maintenance-free
- High-quality materials

Basic version

- Valve body: **PVC-U, 1.4581, PP or PVDF**
- Diaphragm: **PTFE-faced**

Type	Nominal size	Connection	Valve body	Seals	Article-No.	Price (EUR)
------	--------------	------------	------------	-------	-------------	-------------

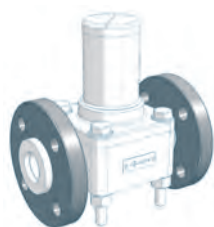
RF409.2-50e

620.10	DN8	G 3/4	PVC-U	FPM	37603632	▲
620.10	DN8	G 3/4	PVC-U	EPDM	36200101	▲
620.10	DN8	G 3/4	PP	FPM	37603630	▲
620.10	DN8	G 3/4	PP	EPDM	37603629	▲
620.10	DN8	G 3/4	PVDF	FEP	37601792	▲
620.10	DN8	G 3/4	1.4581	FEP	37600670	▲

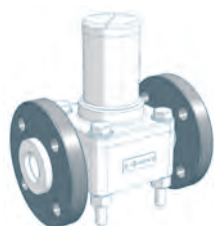
RF409.2-75e, ...-90e, ...-115e, ...-140e, ...-180e, ...-250e, ...-350e

622.10	DN15	G 1	PVC-U	FPM	37604006	▲
622.10	DN15	G 1	PVC-U	EPDM	37603635	▲
622.10	DN15	G 1	PP	FPM	Ⓞ	Ⓞ
622.10	DN15	G 1	PP	EPDM	Ⓞ	Ⓞ
622.10	DN15	G 1	PP-GFK	FPM	37603634	▲
622.10	DN15	G 1	PP-GFK	EPDM	37600450	▲
622.10	DN15	G 1	PVDF	FEP	37600717	▲
622.10	DN15	G 1	PVDF-GFK	FEP	37601819	▲
622.10	DN15	G 1	1.4581	FEP	37600695	▲

OPTIONS



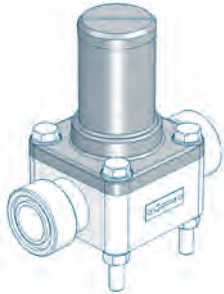
Type	Design	Loose flange	Surcharge [EUR]
620.10	PVC	Loose flange made of PVC-U	Ⓞ
620.10	PP-FRP/PVDF-FRP	Loose flange made of PP with steel inlay	×
620.10	PP	Loose flange made of PP with steel inlay	▲
620.10	PVDF	Loose flange made of PP with steel inlay	▲



Type	Design	Loose flange	Surcharge [EUR]
622.10	PVC	Loose flange made of PVC-U	▲
622.10	PP-FRP/PVDF-FRP	Loose flange made of PP with steel inlay	Ⓞ
622.10	PP	Loose flange made of PP with steel inlay	▲
622.10	PVDF	Loose flange made of PP with steel inlay	▲

DIAPHRAGM PUMPS

FITTINGS FOR THE PRESSURE SIDE



Diaphragm pressure keeping valve

to prevent over-conveyance

Properties

- Compact design
- Easy installation
- Maintenance-free
- High-quality materials

Basic version

- Valve body: **PVC-U, 1.4581, PP or PVDF**
- Diaphragm: **PTFE-faced**

Type	Nominal size	Connection	Valve body	Seals	Article-No.	Price (EUR)
RF409.2-50e						
620.D	DN8	G 3/4	PVC-U	FPM	37600048	▲
620.D	DN8	G 3/4	PVC-U	EPDM	36201101	▲
620.D	DN8	G 3/4	PP	FPM	37600055	▲
620.D	DN8	G 3/4	PP	EPDM	36201105	▲
620.D	DN8	G 3/4	PVDF	FEP	37601827	▲
620.D	DN8	G 3/4	1.4581	FEP	37600525	▲
RF409.2-75e, ...-90e, ...-115e, ...-140e, ...-180e, ...-250e, ...-350e						
622.D	DN15	G 1	PVC-U	FPM	37600049	▲
622.D	DN15	G 1	PVC-U	EPDM	36221101	▲
622.D	DN15	G 1	PP	FPM	⌚	⌚
622.D	DN15	G 1	PP	EPDM	⌚	⌚
622.D	DN15	G 1	PP-GFK	FPM	37600056	▲
622.D	DN15	G 1	PP-GFK	EPDM	36221105	▲
622.D	DN15	G 1	PVDF	FEP	37602881	▲
622.D	DN15	G 1	PVDF-GFK	FEP	37601449	▲
622.D	DN15	G 1	1.4581	FEP	37600538	▲

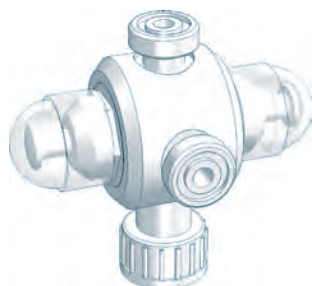
OPTIONS

Type	Design	Loose flange	Surcharge [EUR]
620.D	PVC	Loose flange made of PVC-U	⌚
620.D	PP-FRP/PVDF-FRP	Loose flange made of PP with steel inlay	×
620.D	PP	Loose flange made of PP with steel inlay	▲
620.D	PVDF	Loose flange made of PP with steel inlay	▲

Type	Design	Loose flange	Surcharge [EUR]
622.D	PVC	Loose flange made of PVC-U	▲
622.D	PP-FRP/PVDF-FRP	Loose flange made of PP with steel inlay	⌚
622.D	PP	Loose flange made of PP with steel inlay	▲
622.D	PVDF	Loose flange made of PP with steel inlay	▲



FITTINGS FOR THE PRESSURE SIDE



Multi function valve

Properties

- Maximum operating pressure 10 bar
- Compact design
- Easy installation
- Maintenance-free
- Venting
- Overpressure protection for dosing pumps
- Prevention of over conveyance

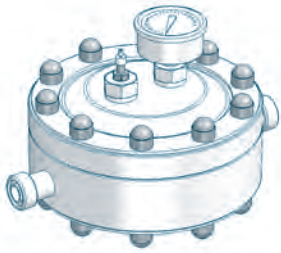
Basic version

- Diaphragms: **PTFE-faced**
- Connection: **G^{3/4}**
- **Relief valve side**
Opening pressure: **2 up to 10 bar** (adjustable)
- **Pressure keeping valve side**
Holding pressure: **1,0 - 1,5 bar**

Type	Valve body	Seals	Article-No.	Price (EUR)
RF409.2-50e				
MFV 050	PVC-U	EPDM	37600973	▲
MFV 050	PVC-U	FPM	37600974	▲
MFV 050	PVC-U	FEP	37600975	▲
MFV 050	PP	EPDM	37600982	▲
MFV 050	PP	FPM	37600983	▲
MFV 050	PP	FEP	37600984	▲
RF409.2-75e, ...-90e, ...-115e, -140e, ...-180e, ...-250e, ...-350e				
⌚			⌚	⌚

DIAPHRAGM PUMPS

FITTINGS FOR THE PRESSURE SIDE



Diaphragm pulsation damper (Plastic, PTFE(-faced) diaphragm, max. 10 bar)

Properties

- Any mounting position
- Easy installation
- Long service life
- Easy handling
- High-quality materials
- Low maintenance
- Diaphragm: PTFE-faced

Type	Connection	max. Pressure	Material	Seals	Article-No.	Price (EUR)
RF409.2-50e						
721.2	G 3/4	10 bar	PVC-U	EPDM	37602014	▲
721.2	G 3/4	10 bar	PVC-U	FPM	37602013	▲
721.2	G 3/4	10 bar	PP	EPDM	37603419	▲
721.2	G 3/4	10 bar	PP	FPM	37602017	▲
721.2	G 3/4	10 bar	PVDF	FEP	37604046	▲
RF409.2-75e, ...-90e, ...-115e, ...-140e, ...-180e						
722.1	G 1	10 bar	PVC-U	EPDM	37600647	▲
722.1	G 1	10 bar	PVC-U	FPM	30100008	▲
722.1	G 1	10 bar	PP	EPDM	37600676	▲
722.1	G 1	10 bar	PP	FPM	30100009	▲
722.1	G 1	10 bar	PVDF	FEP	37601852	▲
RF409.2-250e, ...-350e						
723.1	G 1 1/4	10 bar	PVC-U	EPDM	37601002	▲
723.1	G 1 1/4	10 bar	PVC-U	FPM	30100011	▲
723.1	G 1 1/4	10 bar	PP	EPDM	37603271	▲
723.1	G 1 1/4	10 bar	PP	FPM	30100012	▲
723.1	G 1 1/4	10 bar	PVDF	FEP	37600918	▲

ACCESSORIES



Filling pump FLP 2 for filling device

with manometer, max. 7 bar incl. 2m hose and coupling for air valve	90009396	▲
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MPD 721.2, MPD 722.1

Retaining clamp

(2 Piece each pulsation damper)	PP	d 25	90010651	▲
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MPD 723.1

Bracket

for wall mounting	PP	90011722	▲
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FITTINGS FOR THE PRESSURE SIDE



Diaphragm pulsation damper (Stainless steel, max. 10 bar)

Properties

- Any mounting position
- Easy handling
- Easy installation
- High-quality materials
- Long service life
- Low maintenance

Type	Connection	max.Pressure	Material	Diaphragm	Article-No.	Price (EUR)
RF409.2-50e						
810.1-0,16/10	G ½	10 bar	1.4571	Butyl	37603720	▲
810.1-0,16/10	G ½	10 bar	1.4571	FPM	37603724	▲
810.1-0,16/10	G ½	10 bar	1.4571	PTFE	×	×
RF409.2-75e, ...-90e, ...-115e, ...-140e, ...-180e						
810.1-0,32/10	G ½	10 bar	1.4571	Butyl	37603721	▲
810.1-0,32/10	G ½	10 bar	1.4571	FPM	37603725	▲
810.1-0,32/10	G ½	10 bar	1.4571	PTFE	×	×
RF409.2-250e, ...-350e						
810.1-0,75/10	G ½	10 bar	1.4571	Butyl	37603722	▲
810.1-0,75/10	G ½	10 bar	1.4571	FPM	37603726	▲
810.1-0,75/10	G ½	10 bar	1.4571	PTFE	37606307	▲

ACCESSORIES

Filling- and pressure measuring device

(mounted on pulsation damper)



Design: Plastic	Manometer: 0-16 bar Measuring system: copper alloyed	●
Design: Stainless steel	Manometer: 0-16 bar, glycerine-damped Measuring system: copper alloyed Housing: 1.4301	▲

Filling pump FLP 2 for filling device



with manometer, max. 7 bar incl. 2m hose and coupling for air valve	90009396	▲
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DIAPHRAGM PUMPS

FITTINGS FOR THE PRESSURE SIDE



Dosing valve (Plastic)

Properties

- Compact design
- Any mounting position
- Maintenance-free
- High-quality materials

Basic version

- integrated injection lance
- Valve ball: **PTFE**
- Seals: **EPDM** or **FPM**
- Spring: **Hastelloy C4**

Type	DN	Inlet	Outlet	Material	Seal	Article-No.	Price (EUR)
RF409.2-50e, ...-75e, ...-90e, ...-115e, ...-140e, ...-180e							
691.2	8	G ¾	R ½	PVC-U	EPDM	37606318	▲
691.2	8	G ¾	R ½	PVC-U	FPM	37605769	▲
691.2	8	G ¾	R ½	PP-GFK	EPDM	37605768	▲
691.2	8	G ¾	R ½	PP-GFK	FPM	37606317	▲



Dosing valve (Plastic)

Properties

- Compact design
- Any mounting position
- Maintenance-free
- High-quality materials

Basic version

- Valve ball: **PTFE**
- Spring: **Hastelloy C4**

Type	DN	Inlet	Outlet	Material	Seal	Article-No.	Price (EUR)
RF409.2-50e, ...-75e, ...-90e, ...-115e, ...-140e, ...-180e							
691.1	8	G ¾	R ½	PVDF-GFK	FEP	30072015	▲
RF409.2-250e, ...-350e							
693.1	20	G 1 ¼	R 1 ¼	PP-GFK	EPDM	37604661	▲
693.1	20	G 1 ¼	R 1 ¼	PP-GFK	FPM	37603317	▲
693.1	20	G 1 ¼	R 1 ¼	PVDF-GFK	FEP	30072027	▲



Dosing valve (Stainless steel)

Properties

- Compact design
- Any mounting position
- Maintenance-free
- High-quality materials

Basic version

- Valve ball: **1.4401**
- Seals: **FEP-covered**
- Spring: **Hastelloy C4**

Type	DN	Inlet	Outlet	Material	Seal	Article-No.	Price (EUR)
RF409.2-50e, ...-75e, ...-90e, ...-115e, ...-140e, ...-180e							
691.1	8	G ¾	R ½	1.4571	FEP	37600493	▲
RF409.2-250e, ...-350e							
692.1	15	G 1	R 1	1.4571	FEP	37600669	▲
693.1	20	G 1 ¼	R 1 ¼	1.4571	FEP	37600789	▲

FITTINGS FOR THE PRESSURE SIDE



Injection fitting

Properties

- incl. injection lance for better mixing
- Easy installation
- Any mounting position
- Maintenance-free
- High-quality materials

Basic version

- Cone-type check valve (spring loaded)
- Shut-off ball valve
- Injection lance (L=150mm)
- max. operating pressure: 10 bar

Type	DN	Inlet	Outlet	Material	Seals	Article-No.	Price (EUR)
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RF409.2-50e, ...-75e, ...-90e, ...-115e, ...-140e, ...-180e

8061.1	10	G ¾	R ½	PVC-U	EPDM	37602105	▲
8061.1	10	G ¾	R ½	PVC-U	FPM	37602106	▲
8061.1	10	G ¾	R ½	PP	EPDM	37602107	▲
8061.1	10	G ¾	R ½	PP	FPM	37602108	▲
8061.1	10	G ¾	R ½	PVDF	FPM	37602109	▲

RF409.2-250e, ...-350e

8062.1	15	G 1	R ¾	PVC-U	EPDM	37602110	▲
8062.1	15	G 1	R ¾	PVC-U	FPM	37602111	▲
8062.1	15	G 1	R ¾	PP	EPDM	37602112	▲
8062.1	15	G 1	R ¾	PP	FPM	37602113	▲
8062.1	15	G 1	R ¾	PVDF	FPM	37602114	▲

DIAPHRAGM PUMPS



OVERVIEW

- High dosing accuracy
- Safe to run dry
- Leakage free
- Low-maintenance
- User-friendly
- Continuous, manual stroke length adjustment
- Motor suitable for operation with frequency converter
- Robust, metallic drive housing
- Compact design
- Low weight

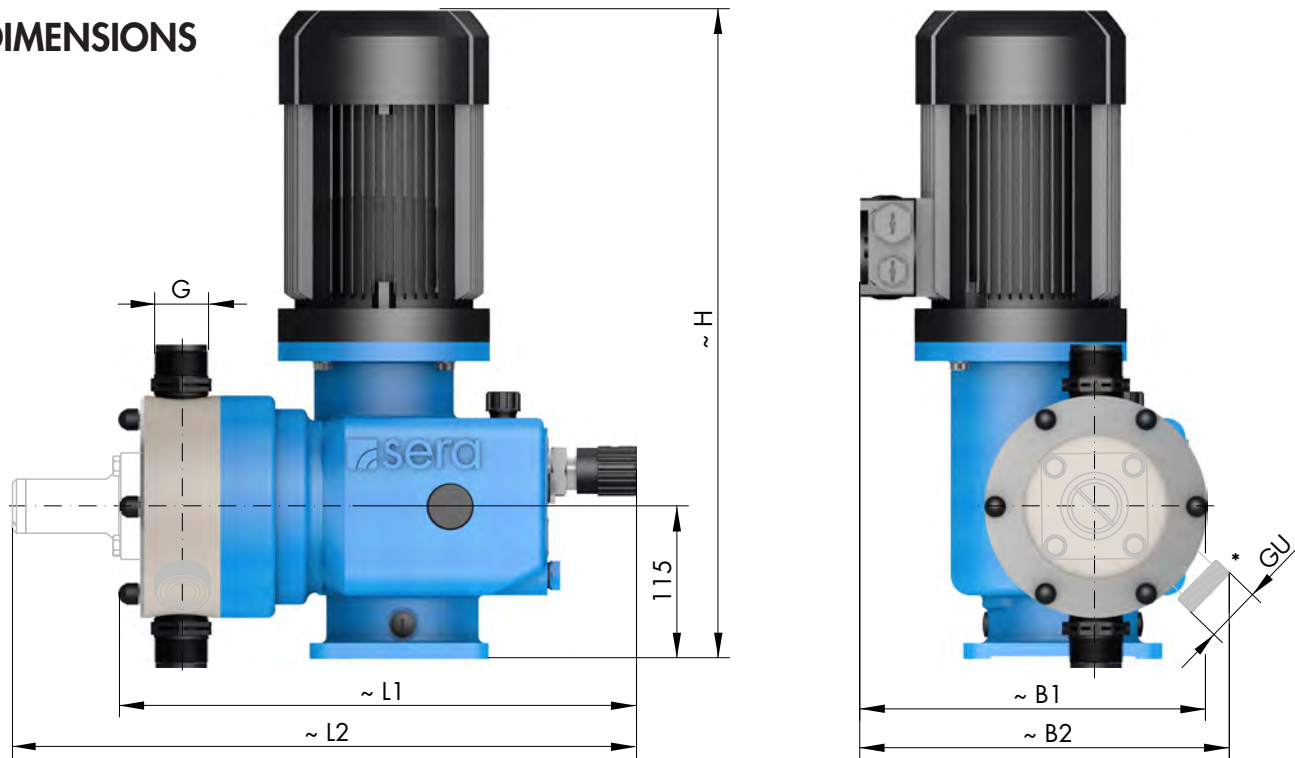
TECHNICAL DATA

PUMP DATA			RF 410.2-...			
			280e	570e	900e	1450e
Permissible pressure p_{2max} at the pump outlet	bar		8	6	5	5 *
Nominal capacity QN at p_{2max}	l/h	50 Hz	0-280	0-570	0-900	0-1.450
		60 Hz	0-336	0-684	0-1.080	0-1.740
Quantity per stroke	ml/stroke	(100%)	46	98	155	245
Max. suction height	mWC		5	5	3	3
Min./max. permissible pressure at the pump inlet	bar	$p_{1min/max}$	-0,5/0	-0,5/0	-0,3/0	-0,3/0
Recommended nominal diameter DN of the connecting pipes	mm		15	15	20	25
Nominal stroke frequency	1/min	50 Hz	97	97	97	97
		60 Hz	116	116	116	—
Weight approx.	kg	plastic	35	35	37	41
		stainless steel	42	42	52	59

* at 60 Hz is the permissible pressure 3,5 bar

ELECTRICAL DATA		RF 410.2-...			
		280e	570e	900e	1450e
Power consumption	kW	0,75	0,75	1,1	1,5
Voltage	V	230/400V 50Hz, 460V 60Hz			
Frequency	Hz	50/60			
Insulation class	ISO	F			
Enclosure	IP	55			

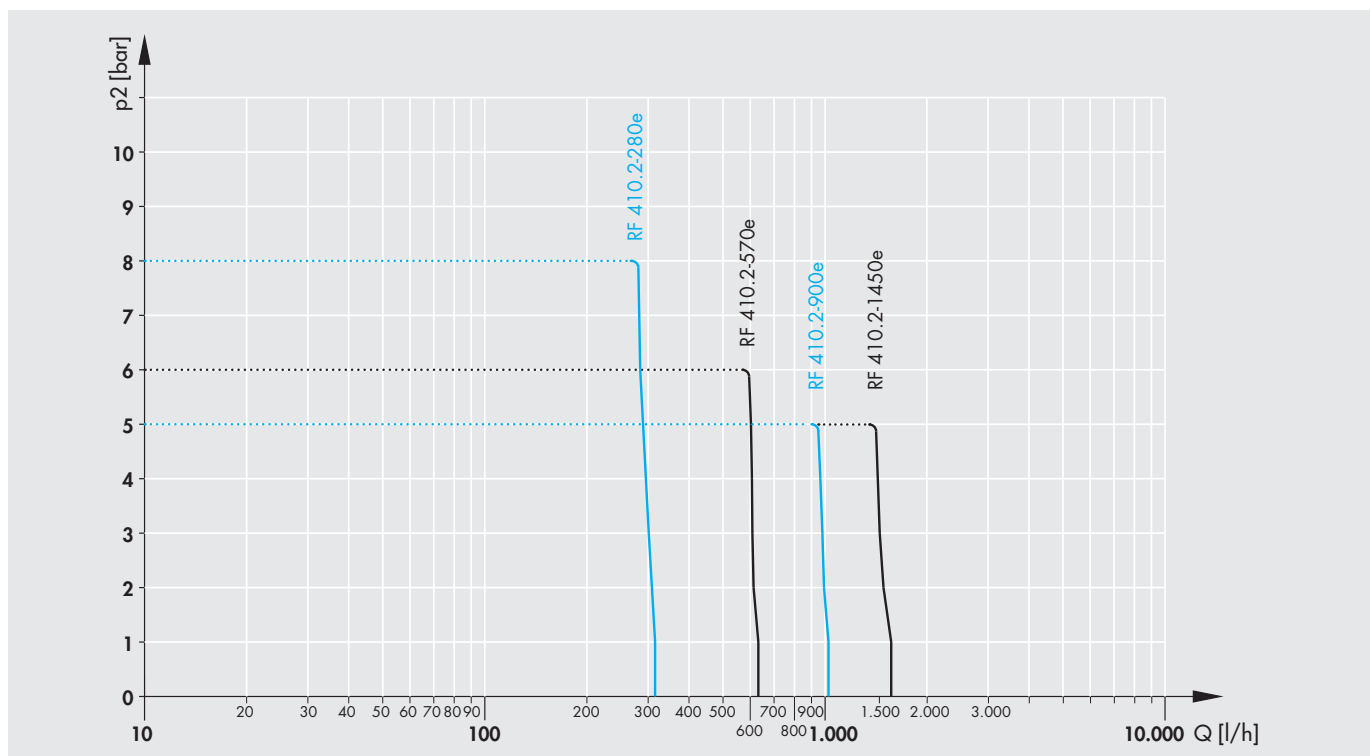
DIMENSIONS



	G	GU		B1	B2	L1	L2	H		B1	B2	L1	L2	H
RF 410.2-280e	G1¼*	G1¼*	PVC, PP, PVDF	261	279	403	484	510	1.4571	261	287	400	484	510
RF 410.2-570e	G1¼*	G1¼*		261	279	403	484	510		261	287	400	484	510
RF 410.2-900e	G1¼	×		287	×	428	×	510		278	×	425	×	510
RF 410.2-1450e	G1¼	×		297	×	428	×	550		297	×	425	×	550

* PVC = G1

CHARACTERISTIC CURVES



DIAPHRAGM PUMPS

BASIC DESIGNS

PP

Pump body **PP**
Valves **PP-FRP**
Valve balls **PTFE**
Diaphragm **PTFE-faced**

Type	EPDM Article-No.	Valve seals		Price (EUR)
		Price (EUR)	FPM Article-No.	
RF410.2-280e	16017347	⌚	16006793	⌚
RF410.2-570e	16006711	⌚	16007252	⌚
RF410.2-900e	16013635	⌚	16013926	⌚
RF410.2-1450e	16010632	⌚	16018420	⌚

PVDF

Pump body **PVDF**
Valves **PVDF-FRP**
Valve balls **PTFE**
Diaphragm **PTFE-faced**

Type	Valve seals		Price (EUR)
	FEP-covered Article-No.		
RF410.2-280e	16023909		⌚
RF410.2-570e	16023910		⌚
RF410.2-900e	16014495		⌚
RF410.2-1450e	16023677		⌚

PVC-U

Pump body **PVC-U**
Valves **PVC-U**
Valve balls **PTFE**
Diaphragm **PTFE-faced**

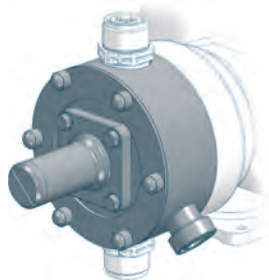
Type	EPDM Article-No.	Valve seals		Price (EUR)
		Price (EUR)	FPM Article-No.	
RF410.2-280e	16009107	⌚	16013181	⌚
RF410.2-570e	16013411	⌚	16007243	⌚
RF410.2-900e	16012282	⌚	16013170	⌚
RF410.2-1450e	16021259	⌚	16016460	⌚

STAINLESS STEEL

Pump body **1.4571**
Valves **1.4571/1.4581**
Valve balls **1.4401**
Diaphragm **PTFE-faced**

Type	Valve seals		Price (EUR)
	FEP-covered Article-No.		
RF410.2-280e	16012324		⌚
RF410.2-570e	16014802		⌚
RF410.2-900e	16008500		⌚
RF410.2-1450e	16019211		⌚

OPTIONS

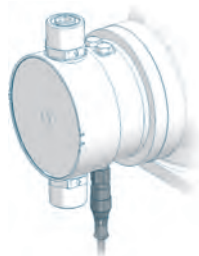


Integrated relief valve

Diaphragm: **PTFE-faced** Connecting seals: **EPDM** or **FPM** **Surcharge (EUR)**

PP	...410.2-280e, ...-570e	▲
PVC	...410.2-280e, ...-570e	▲
PVDF	...410.2-280e, ...-570e	Ⓢ
1.4571	...410.2-280e, ...-570e	▲
PP, PVDF, PVC-U, 1.4571	...410.2-900e, ...-1450e	×

Connecting seals **FEP-covered** all types ▲

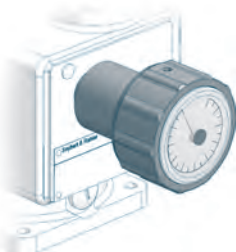


Diaphragm monitoring

Diaphragm rupture electrode, conductive, mounted on pump
(Evaluation via electrode relay, ER-104 (see accessories)) **Surcharge (EUR)**

MBE-02 incl. connection cable (length 2m) ▲

Connection cable for EEXia-circuit (blue, length 5m) ▲

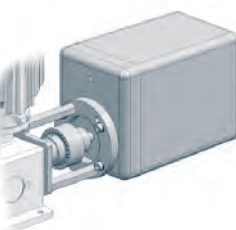


Stroke length adjustment

Surcharge (EUR)

with position indicator ...410.2-280e, -570e, 900e ▲

...410.2-1450e ▲



Stroke length adjustment with actuator

(version uL/CSA on request)

Surcharge (EUR)

Actuator N1S 230V, 50/60Hz, 128s/10 U, 15Nm
Potentiometer 1 kΩ (incl. mounting set) ▲

Electronic positioning controller ESR-N
(only integrated in N1S) Input signal 0/4 - 20mA including
feedback signal 0/4 - 20mA ▲

Actuator D30D-10-Ex 400V, 50Hz, 10 U/min
II2G EExde IIC T4 acc. to ATEX95 incl. mounting set and base plate ▲



Stroke frequency monitoring

Inductive contact **Surcharge (EUR)**

10 - 60 V DC, three-wire, PNP ▲

NAMUR-design, II2G EExia IIC T6 (acc. to ATEX95) ▲

DIAPHRAGM PUMPS

OPTIONS



Drive motor

- Please note: If one or several options 'drive motor' are required to fix the add. price of the drive, the calculation will be as follows: 'add. price special drive' plus the single options of the drive.
- Surcharge and availability must be requested from **sera**.

Surcharge special drive		Surcharge (EUR)
RF 410.2-280e, ...-570e, ...-900e		▲
RF 410.2-1450e		▲
Special voltage	(all types)	Ⓞ
Enclosure IP65	(all types)	▲
Protection roof	(all types)	▲
VIK design	(all types)	Ⓞ
Electrical acc. to uL/CSA	(all types)	Ⓞ

Single-phase alternating current motor, 230V/50Hz with capacitor

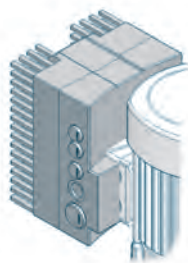
RF 410.2-280e, ...-570e, ...-900e	▲
RF 410.2-1450e	▲

II2G EExe II T4 (acc. to ATEX95)

R 410.2-280e, ...-570e	▲
R 410.2-900e	▲
R 410.2-1450e	▲

II2G EExde II C T4 (suitable for converter operation, 5-50Hz)

RF 410.2-280e, ...-570e	▲
RF 410.2-900e	▲
RF 410.2-1450e	▲



Stroke frequency adjustment, electrical

Frequency converter (Series INVEOR) mounted on drive motor
Input 4-20 mA

			Surcharge (EUR)
3-phase			
400-480V ±10%, 50/60Hz	0,75 kW	RF410.2-280e, ...-570e	▲
3-phase			
400-480V ±10%, 50/60Hz	1,5 kW	RF410.2-900e, ...-1450e	▲

90039445	▲
90042176	▲

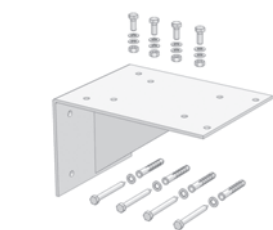
ACCESSORIES



Diaphragm monitoring (evaluation)

Electrode relay for mounting in control cabinet
(for evaluating the diaphragm rupture electrode MBE-02 (see options))

		Article-No.	Price (EUR)
ER-104	auxiliary power 230 V AC	90022944	▲
ER-104	auxiliary power 24 V DC	90022945	▲
ER-142	auxiliary power 230 V AC II(1)G [Exia] II C	90200363	▲



Bracket

for wall mounting (incl. mounting kit)

	Article-No.	Price (EUR)
PP	90023849	▲
1.4301	90023876	▲



Connection pieces

Extensive range of connection / transition pieces and dosing hoses

Inserts and pipe sockets with union nuts, flange connections, hose screw connections, hose nozzles as well as dosing hoses and accessories.

to be found in **CHAPTER 4** of this catalog, from **page 442**

DIAPHRAGM PUMPS

FITTINGS FOR THE SUCTION SIDE



Foot valve (Plastic)

Properties

- Compact design
- Easy installation
- High-quality materials
- Maintenance-free

Basic version

- Ball: **PTFE**
- Sieve: **ETFE**
- Mesh size: **1mm**

Type	DN	Connection	Material	Seals	Article-No.	Price (EUR)
783.1	20	G 1 ¼	PP/PP-GFK	EPDM	37600552	▲
783.1	20	G 1 ¼	PP/PP-GFK	FPM	37600553	▲
783.1	20	G 1 ¼	PVDF/PVDF-GFK	FEP	30073018	▲



Foot valve (Stainless steel)

Properties

- Compact design
- Easy installation
- High-quality materials
- Maintenance-free

Basic version

- Ball: **1.4401**
- Sieve: **ETFE**
- Mesh size: **1mm**

Type	DN	Connection	Material	Seals	Article-No.	Price (EUR)
RF410.2-280e, ...-570e						
732	15	G 1	1.4571	FEP	37603325	▲
RF410.2-900e, ...-1450e						
733	20	G 1 ¼	1.4571	FEP	37603962	▲

FITTINGS FOR THE SUCTION SIDE



Multi-function device

Properties

- Can be used as an priming aid and/or an calibration pot
- Compact design
- Flexible Connection
- Maintenance-free
- incl. glue joint (PVC-U) and welding joint (PP)

Basic version

- Housing: **PVC-U / PVC-transparent**
- Seals: **FPM** or **EPDM**
- max. operating pressure: **-0,5 ... +2 bar**

Type	DN	Connetion	Volume	Seals	Article-No.	Price (EUR)
RF410.2-280e, ...-570e						
MFD 570	15	G1	2 Ltr.	EPDM	37606278	▲
MFD 570	15	G1	2 Ltr.	FPM	37605992	▲
RF410.2-900e, ...-1450e						
MFD 1500	20	G1 ¼	5 Ltr.	EPDM	37606316	▲
MFD 1500	20	G1 ¼	5 Ltr.	FPM	37606315	▲

ACCESSORIES



Hand vacuum pump	PVC/FPM	37605682	▲
(incl. 1,5m PVC-Hose d=12/21)			

DIAPHRAGM PUMPS

FITTINGS FOR THE SUCTION SIDE



Suction lance SLP-15x.1 (with level switch, 1- or 2-stage)

Properties

- Compact, robust design
- Easy handling
- 1- or 2-stage level monitoring
- Protective tube
- Maintenance free
- High quality materials
- Protection class IP65

Basic version

- Suction lance: **PVC-U**
- Foot valve: **PVC-U**
- Valve ball: **PTFE**
- Seals: **EPDM** or **FPM**
- Level switch: **PP**
1- or 2-stage, normally closed (NC)
cable gland: **M12x1,5**
- max. flow rate: **700 l/h**

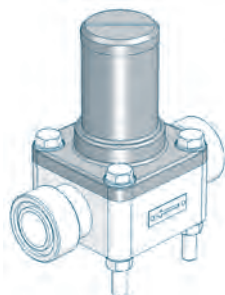
Type	Level switch	Length	Material	Seals	Article-No.	Price (EUR)
RF410.2-280e, ...-570e						
SLP-151.1		750 mm	PVC-U	EPDM	37604108	▲
SLP-151.1		750 mm	PVC-U	FPM	37604114	▲
SLP-151.1		1.000 mm	PVC-U	EPDM	37604109	▲
SLP-151.1		1.000 mm	PVC-U	FPM	37604115	▲
SLP-151.1		1.250 mm	PVC-U	EPDM	37604110	▲
SLP-151.1		1.250 mm	PVC-U	FPM	37604116	▲
SLP-152.1		750 mm	PVC-U	EPDM	37604111	▲
SLP-152.1		750 mm	PVC-U	FPM	37604117	▲
SLP-152.1		1.000 mm	PVC-U	EPDM	37604112	▲
SLP-152.1		1.000 mm	PVC-U	FPM	37604118	▲
SLP-152.1		1.250 mm	PVC-U	EPDM	37604113	▲
SLP-152.1		1.250 mm	PVC-U	FPM	37604119	▲

ACCESSORIES

Type	Designation	Article-No.	Price (EUR)
BCS 70x6 Di=50	Container screw connection for internal thread. Ventilation via tolerance of the inner diameter of the adapter or via separate ventilation of the container.	90028923	▲
G2 IBC	For IBC cover with G2 internal thread. Ventilation via adapter. Gas-tight design with „hose set“ possible.	90044282	▲
G2 universal	Bulkhead fitting with flat gasket (made of PVC-U). Ventilation via adapter. Gas-tight design with „hose set“ possible.	90044277	▲
Hose set	G3/4, d12, L=3m for gas tight container screwing for connection to On-site evacuation system	90044369	▲
Quiver	Quiver for storing/holding the suction lance (e.g. when changing containers)	90028919	▲
Control cable	Control cable for level input Cable socket M12x1, 3-pole, 5m length, loosely delivered	90031245	▲



FITTINGS FOR THE PRESSURE SIDE



Diaphragm relief valve

for overpressure protection

Properties

- Compact design
- Easy installation
- Maintenance-free
- High-quality materials

Basic version

- Valve body: **PVC-U, 1.4581, PP or PVDF**
- Diaphragm: **PTFE-faced**

Type	Nominal size	Connection	Valve body	Seals	Article-No.	Price (EUR)
------	--------------	------------	------------	-------	-------------	-------------

RF410.2-280e, ...-570e

622.10	DN15	G 1	PVC-U	FPM	37604006	▲
622.10	DN15	G 1	PVC-U	EPDM	37603635	▲
622.10	DN15	G 1	PP	FPM	Ⓢ	Ⓢ
622.10	DN15	G 1	PP	EPDM	Ⓢ	Ⓢ
622.10	DN15	G 1	PP-GFK	FPM	37603634	▲
622.10	DN15	G 1	PP-GFK	EPDM	37600450	▲
622.10	DN15	G 1	PVDF	FEP	37600717	▲
622.10	DN15	G 1	PVDF-GFK	FEP	37601819	▲
622.10	DN15	G 1	1.4581	FEP	37600695	▲

RF410.2-900e

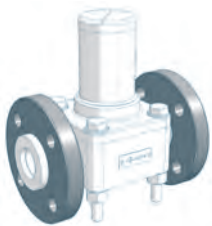
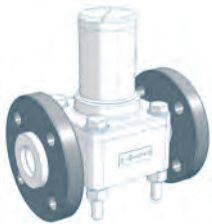
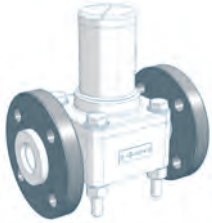
623.10	DN20	G 1¼	PVC-U	FPM	37600009	▲
623.10	DN20	G 1¼	PVC-U	EPDM	36230101	▲
623.10	DN20	G 1¼	PP	FPM	37600016	▲
623.10	DN20	G 1¼	PP	EPDM	36230105	▲
623.10	DN20	G 1¼	PVDF	FEP	37606304	▲

RF410.2-1450e

624.10	DN25	G 1½	PVC-U	FPM	37603639	▲
624.10	DN25	G 1½	PVC-U	EPDM	37603638	▲
624.10	DN25	G 1½	PP	FPM	37603637	▲
624.10	DN25	G 1½	PP	EPDM	37603636	▲
624.10	DN25	G 1½	PVDF	FEP	37603866	▲

DIAPHRAGM PUMPS

FITTINGS FOR THE PRESSURE SIDE

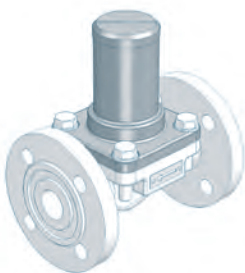


OPTIONS

Type	Design	Loose flange	Surcharge [EUR]
622.10	PVC	Loose flange made of PVC-U	▲
622.10	PP-FRP/PVDF-FRP	Loose flange made of PP with steel inlay	⌚
622.10	PP	Loose flange made of PP with steel inlay	▲
622.10	PVDF	Loose flange made of PP with steel inlay	▲

Type	Design	Loose flange	Surcharge [EUR]
623.10	PVC	Loose flange made of PVC-U	▲
623.10	PP-FRP/PVDF-FRP	Loose flange made of PP with steel inlay	×
623.10	PP	Loose flange made of PP with steel inlay	▲
623.10	PVDF	Loose flange made of PP with steel inlay	▲

Type	Design	Loose flange	Surcharge [EUR]
624.10	PVC	Loose flange made of PVC-U	▲
624.10	PP-FRP/PVDF-FRP	Loose flange made of PP with steel inlay	×
624.10	PP	Loose flange made of PP with steel inlay	▲
624.10	PVDF	Loose flange made of PP with steel inlay	▲



Diaphragm relief valve (with fixed flanges)

for overpressure protection

Properties

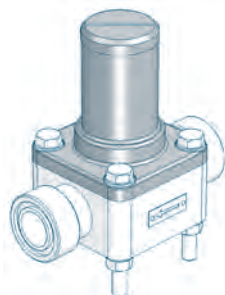
- Compact design
- Easy installation
- Maintenance-free
- High-quality materials

Basic design

- Flanges acc. to **DIN 2501**
- Valve body: **1.4581** or **GG**
- Diaphragm: **PTFE-faced**

Type	Nominal size	Connection	Valve body	Article-No.	Price (EUR)
RF410.2-900e					
623.10	DN20	DIN 2501	1.4581	36230104	▲
623.10	DN20	DIN 2501	GG	37600038	▲
RF410.2-1450e					
624.10	DN25	DIN 2501	1.4581	36240104	▲
624.10	DN25	DIN 2501	GG	37600039	▲

FITTINGS FOR THE PRESSURE SIDE



Diaphragm pressure keeping valve

to prevent over-conveyance

Properties

- Compact design
- Easy installation
- Maintenance-free
- High-quality materials

Basic version

- Valve body: **PVC-U, 1.4581, PP or PVDF**
- Diaphragm: **PTFE-faced**

Type	Nominal size	Connection	Valve body	Seals	Article-No.	Price (EUR)
------	--------------	------------	------------	-------	-------------	-------------

RF410.2-280e, ...-570e

622.D	DN15	G 1	PVC-U	FPM	37600049	▲
622.D	DN15	G 1	PVC-U	EPDM	36221101	▲
622.D	DN15	G 1	PP	FPM	Ⓢ	Ⓢ
622.D	DN15	G 1	PP	EPDM	Ⓢ	Ⓢ
622.D	DN15	G 1	PP-GFK	FPM	37600056	▲
622.D	DN15	G 1	PP-GFK	EPDM	36221105	▲
622.D	DN15	G 1	PVDF	FEP	37602881	▲
622.D	DN15	G 1	PVDF-GFK	FEP	37601449	▲
622.D	DN15	G 1	1.4581	FEP	37600538	▲

RF410.2-900e

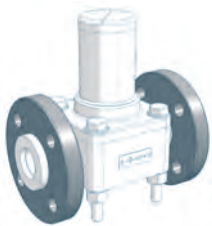
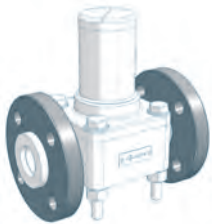
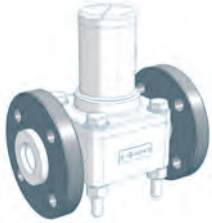
623.D	DN20	G 1¼	PVC-U	FPM	37600050	▲
623.D	DN20	G 1¼	PVC-U	EPDM	36231101	▲
623.D	DN20	G 1¼	PP	FPM	37600057	▲
623.D	DN20	G 1¼	PP	EPDM	36231105	▲
623.D	DN20	G 1¼	PVDF	FEP	37606309	▲

RF410.2-1450e

624.D	DN25	G 1½	PVC-U	FPM	37600051	▲
624.D	DN25	G 1½	PVC-U	EPDM	36241101	▲
624.D	DN25	G 1½	PP	FPM	37600058	▲
624.D	DN25	G 1½	PP	EPDM	36241105	▲
624.D	DN25	G 1½	PVDF	FEP	37606310	▲

DIAPHRAGM PUMPS

FITTINGS FOR THE PRESSURE SIDE

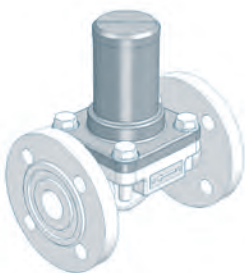


OPTIONS

Type	Design	Loose flange	Surcharge [EUR]
622.D	PVC	Loose flange made of PVC-U	▲
622.D	PP-FRP/PVDF-FRP	Loose flange made of PP with steel inlay	Ⓢ
622.D	PP	Loose flange made of PP with steel inlay	▲
622.D	PVDF	Loose flange made of PP with steel inlay	▲

Type	Design	Loose flange	Surcharge [EUR]
623.D	PVC	Loose flange made of PVC-U	▲
623.D	PP-FRP/PVDF-FRP	Loose flange made of PP with steel inlay	×
623.D	PP	Loose flange made of PP with steel inlay	▲
623.D	PVDF	Loose flange made of PP with steel inlay	▲

Type	Design	Loose flange	Surcharge [EUR]
624.D	PVC	Loose flange made of PVC-U	▲
624.D	PP-FRP/PVDF-FRP	Loose flange made of PP with steel inlay	×
624.D	PP	Loose flange made of PP with steel inlay	▲
624.D	PVDF	Loose flange made of PP with steel inlay	▲



Diaphragm pressure keeping valve (with fixed flanges)

to prevent over-conveyance

Properties

- Compact design
- Easy installation
- Maintenance-free
- High-quality materials

Basic design

- Flanges acc. to **DIN 2501**
- Valve body: **1.4581** or **GG**
- Diaphragm: **PTFE-faced**

Type	Nominal size	Connection	Valve body	Article-No.	Price (EUR)
RF410.2-900e					
623.D	DN20	DIN 2501	1.4581	36231104	▲
623.D	DN20	DIN 2501	GG	37600080	▲
RF410.2-1450e					
624.D	DN25	DIN 2501	1.4581	36241104	▲
624.D	DN25	DIN 2501	GG	37600081	▲

FITTINGS FOR THE PRESSURE SIDE



Diaphragm pulsation damper (Plastic, with elastomere diaphragm, max. 10 bar)

Properties

- Any mounting position
- Easy installation
- Long service life
- Easy handling
- High-quality materials
- Low maintenance

Type	Connection	max. Pressure	Housing	Diaphragm Seals	Article-No.	Price (EUR)
713.1	G 1 1/4	10 bar	PVC-U	EPDM	30071038	▲
713.1	G 1 1/4	10 bar	PVC-U	FPM	30071039	▲
713.1	G 1 1/4	10 bar	PP	EPDM	30071040	▲
713.1	G 1 1/4	10 bar	PP	FPM	30071041	▲
713.1	G 1 1/4	10 bar	PVDF	EPDM	30071060	▲
713.1	G 1 1/4	10 bar	PVDF	FPM	30071061	▲

OPTIONS

Loose-type flanges

PVC-design	Loose flange, PVC-U	DN20	▲
PP-/PVDF-design	Loose flange, PP with steel insert	DN20	▲

ACCESSORIES

Bracket for wall mounting	PP	90010913	▲
	1.4301	90010914	▲
	Steel (color treated)	90010915	▲
Bilge pump FLP 2 with manometer, max. 7 bar incl. 2m hose and coupling for air valve	for filling device		
	Steel (color treated)	90009396	▲



DIAPHRAGM PUMPS

FITTINGS FOR THE PRESSURE SIDE



Diaphragm pulsation damper (Stainless steel, max. 10 bar)

Properties

- Any mounting position
- Easy installation
- Long service life
- Easy handling
- High-quality materials
- Low maintenance

Type	Connection	max.Pressure	Material	Diaphragm	Article-No.	Price (EUR)
RF410.2-280e						
810.1-0,75/10	G ½	10 bar	1.4571	Butyl	37603722	▲
810.1-0,75/10	G ½	10 bar	1.4571	FPM	37603726	▲
810.1-0,75/10	G ½	10 bar	1.4571	PTFE	37606307	▲
RF410.2-570e, ...-900e						
810.1-2,0/10	G ¾	10 bar	1.4571	Butyl	37603723	▲
810.1-2,0/10	G ¾	10 bar	1.4571	FPM	37603727	▲
810.1-2,0/10	G ¾	10 bar	1.4571	PTFE	37606308	▲
RF410.2-1450e						
Ⓛ					Ⓛ	Ⓛ

ACCESSORIES

Filling- and pressure measuring device

(mounted on pulsation damper)

Design: Plastic	Manometer: 0-16 bar Measuring system: copper alloyed	●
Design: Stainless steel	Manometer: 0-16 bar, glycerine-damped Measuring system: copper alloyed Housing: 1.4301	▲
Filling pump FLP 2 for filling device		
with manometer, max. 7 bar incl. 2m hose and coupling for air valve		90009396 ▲



FITTINGS FOR THE PRESSURE SIDE



Dosing valve (Plastic)

Properties

- Compact design
- Any mounting position
- Maintenance-free
- High-quality materials

Basic version

- Valve ball: **PTFE**
- Spring: **Hastelloy C4**

Type	DN	Inlet	Outlet	Material	Seal	Article-No.	Price (EUR)
693.1	20	G 1 ¼	R 1 ¼	PP-GFK	EPDM	37604661	▲
693.1	20	G 1 ¼	R 1 ¼	PP-GFK	FPM	37603317	▲
693.1	20	G 1 ¼	R 1 ¼	PVDF-GFK	FEP	30072027	▲



Dosing valve (Stainless steel)

Properties

- Compact design
- Any mounting position
- Maintenance-free
- High-quality materials

Basic version

- Valve ball: **1.4401**
- Seals: **FEP-covered**
- Spring: **Hastelloy C4**

Type	DN	Inlet	Outlet	Material	Seal	Article-No.	Price (EUR)
RF410.2-280e, ...-570e							
692.1	15	G 1	R 1	1.4571	FEP	37600669	▲
RF410.2-900e, ...-1450e							
693.1	20	G 1 ¼	R 1 ¼	1.4571	FEP	37600789	▲



Injection fitting

Properties

- incl. injection lance for better mixing
- Easy installation
- Any mounting position
- Maintenance-free
- High-quality materials

Basic version

- Cone-type check valve (spring loaded)
- Shut-off ball valve
- Injection lance (L=150mm)
- max. operating pressure: 10 bar

Type	DN	Inlet	Outlet	Material	Seals	Article-No.	Price (EUR)
RF410.2-280e, ...-570e							
8062.1	15	G 1	R ¾	PVC-U	EPDM	37602110	▲
8062.1	15	G 1	R ¾	PVC-U	FPM	37602111	▲
8062.1	15	G 1	R ¾	PP	EPDM	37602112	▲
8062.1	15	G 1	R ¾	PP	FPM	37602113	▲
8062.1	15	G 1	R ¾	PVDF	FPM	37602114	▲
RF410.2-900e, ...-1450e							
8063.1	20	G 1 ¼	R 1	PVC-U	EPDM	37602115	▲
8063.1	20	G 1 ¼	R 1	PVC-U	FPM	37602116	▲
8063.1	20	G 1 ¼	R 1	PP	EPDM	37602117	▲
8063.1	20	G 1 ¼	R 1	PP	FPM	37602118	▲
8063.1	20	G 1 ¼	R 1	PVDF	FPM	37602119	▲

MULTI-LAYER DIAPHRAGM PUMPS



OVERVIEW

- Multi-layer diaphragm technology
- High dosing accuracy
- Compact design
- Safe to run dry
- Leakage free
- Low-maintenance
- User-friendly
- Motor suitable for operation with frequency converter
- Continuous, manual stroke length adjustment
- Robust, metallic drive housing

TECHNICAL DATA

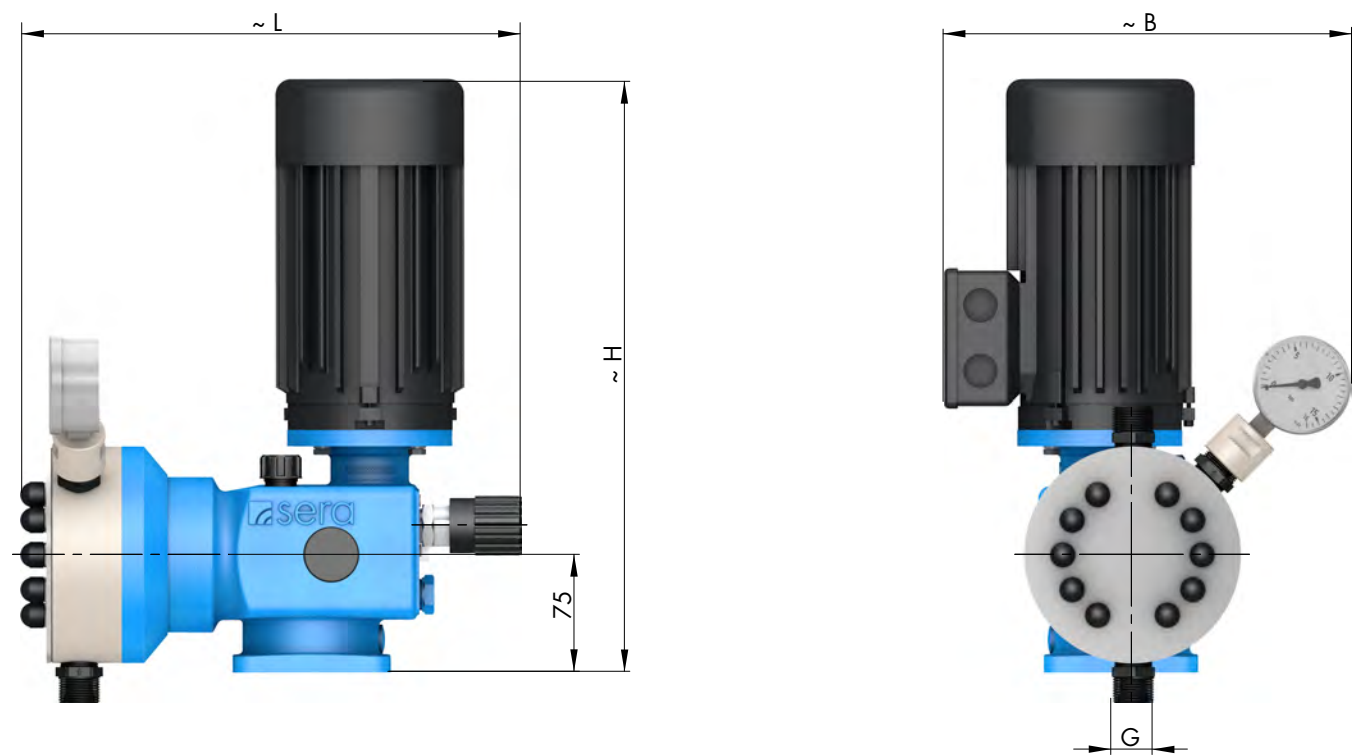
PUMP DATA			RF 409.2-... ML							
			11 ML	17 ML	30 ML	45 ML	72 ML	110 ML	150 ML	220 ML
Permissible pressure $p_{2max.}$ at the pump outlet	bar	plastic	10	10	10	10	10	10	4	4
		stainless steel	20	20	16	16				
Nominal capacity QN at $p_{2max.}$	l/h	50 Hz	0-11	0-17	0-30	0-45	0-72	0-110	0-150	0-220
		60 Hz	0-13	0-20	0-36	0-54	0-86	0-132	0-180	0-264
Quantity per stroke	ml/stroke (100%)		1,8	1,8	5	5	12	12	25	24
Max. suction height	mWC		3	3	3	3	3	3	3	3
Min./max. permissible pressure at the pump inlet	bar	$p_{1min/max}$	-0,3/0	-0,3/0	-0,3/0	-0,3/0	-0,3/0	-0,3/0	-0,3/0	-0,3/0
Recommended nominal diameter of the connecting pipes	mm	DN	10	10	10	10	15	15	15	15
Nominal stroke frequency	1/min	50 Hz	100	150	100	150	100	150	100	150
		60 Hz	120	180	120	180	120	180	120	180
Weight approx.	kg	plastic	14	14	15	15	16	16	18	18
		stainless steel	16	16	17	17	18	18	24	24

ELECTRICAL DATA		RF 409.2-... ML
Power consumption	kW	0,37
Voltage	V	230/400V 50Hz, 460V 60Hz
Frequency	Hz	50/60
Insulation class	ISO	F
Enclosure	IP	55

Flow capacity 11 l/h ... 220 l/h
 Admissible counterpressure up to 20 bar

RF 409.2-...ML

DIMENSIONS



	G		B	L	H		B	L	H
RF 409.2-11 ML, ...-17ML	G ¾	PVC, PP, PVDF	275	323	380	1.4571	275	310	380
RF 409.2-30 ML, ...-45 ML	G ¾		279	323	380		279	309	380
RF 409.2-72 ML, ...-110 ML	G ¾		282	327	380		282	316	380
RF 409.2-150 ML, ...-220 ML	G1¼*		296	344	380		296	341	380

* PVC = G1

CHARACTERISTIC CURVES



MULTI-LAYER DIAPHRAGM PUMPS

BASIC DESIGNS

PP

Pump body **PP**
Valves **PP-FRP**
Valve balls **PTFE**
Multi-layer diaphragm **PTFE**

Type	EPDM Article-No.	Valve seals		Price (EUR)
		Price (EUR)	FPM Article-No.	
RF409.2-11ML	16023828	☉	16023255	☉
RF409.2-17ML	16023625	☉	16023332	☉
RF409.2-30ML	☉	☉	16023261	☉
RF409.2-45ML	16023626	☉	16020639	☉
RF409.2-72ML	☉	☉	16022525	☉
RF409.2-110ML	16023829	☉	16017559	☉
RF409.2-150ML	☉	☉	16020259	☉
RF409.2-220ML	16023085	☉	16015875	☉

PVDF

Pump body **PVDF**
Valves **PVDF-FRP**
Valve balls **PTFE**
Multi-layer diaphragm **PTFE**

Type	Valve seals		Price (EUR)
	FEP-covered Article-No.		
RF409.2-11ML	16023830	☉	
RF409.2-17ML	16023831	☉	
RF409.2-30ML	☉	☉	
RF409.2-45ML	16023401	☉	
RF409.2-72ML	☉	☉	
RF409.2-110ML	☉	☉	
RF409.2-150ML	☉	☉	
RF409.2-220ML	16023832	☉	

PVC-U

Pump body **PVC-U**
Valves **PVC-U**
Valve balls **PTFE**
Multi-layer diaphragm **PTFE**

Type	EPDM Article-No.	Valve seals		Price (EUR)
		Price (EUR)	FPM Article-No.	
RF409.2-11ML	16022134	☉	16019499	☉
RF409.2-17ML	16023833	☉	16023837	☉
RF409.2-30ML	16021424	☉	☉	☉
RF409.2-45ML	16023834	☉	16020760	☉
RF409.2-72ML	☉	☉	☉	☉
RF409.2-110ML	16023835	☉	16023838	☉
RF409.2-150ML	☉	☉	16019518	☉
RF409.2-220ML	16023836	☉	16016932	☉

STAINLESS STEEL

Pump body **1.4571**
Valves **1.4571/1.4581**
Valve balls **1.4401**
Multi-layer diaphragm **PTFE**

Type	Valve seals		Price (EUR)
	FEP-covered Article-No.		
RF409.2-11ML	16017227	☉	
RF409.2-17ML	16023200	☉	
RF409.2-30ML	☉	☉	
RF409.2-45ML	16016292	☉	
RF409.2-72ML	☉	☉	
RF409.2-110ML	16023097	☉	
RF409.2-150ML	☉	☉	
RF409.2-220ML	16016934	☉	

OPTIONS



Diaphragm monitoring

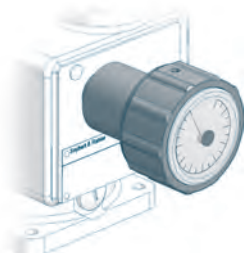
Basic version: optical diaphragm rupture indication with manometer

Surcharge (EUR)

Pressure switch IP65



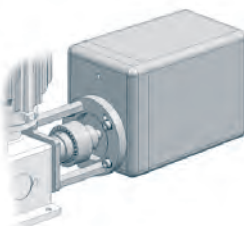
Pressure switch II2G EExde IIC T5 or T6 (acc. to ATEX95)



Stroke length adjustment

Surcharge (EUR)

with position indicator



Stroke length adjustment with actuator

(version uL/CSA on request)

Surcharge (EUR)

Actuator N C1-BA

230V $\pm 10\%$, 50/60Hz, 128s/10 U, 1,5Nm
incl. mounting set



Electronic positioning controller ESR-N
(only integrated in N C1-BA)

Input signal 0/4 - 20mA including
feedback signal 0/4 - 20mA



Actuator D30D-10-Ex
II2G EExde IIC T4 acc. to ATEX95

400V, 50Hz, 10 U/min
incl. mounting set and base plate



Stroke frequency monitoring

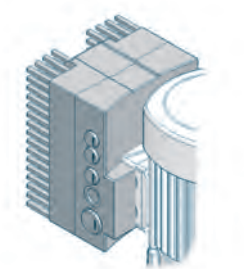
Inductive contact

Surcharge (EUR)

10 - 60 V DC, three-wire, PNP



NAMUR-design, II2G EExia IIC T6 (acc. to ATEX95)



Stroke frequency adjustment, electrical

Frequency converter (Series INVEOR) mounted on drive motor
Input 4-20 mA

Surcharge (EUR)

1-phase

200-230V $\pm 10\%$, 50/60Hz

0,37 kW



3-phase

400-480V $\pm 10\%$, 50/60Hz

0,55 kW



Frequency converter accessories

Article-No.

Price (EUR)

Operating module (incl. control cable)

90039445



Communication cable for parameterization via PC

90042176



MULTI-LAYER DIAPHRAGM PUMPS

OPTIONS



Drive motor

- Please note: If one or several options 'drive motor' are required to fix the add. price of the drive, the calculation will be as follows: 'add. price special drive' plus the single options of the drive.
- Surcharge and availability must be requested from **sera**.

Surcharge special drive

Surcharge (EUR)

(all types)



Special voltage (all types)

Enclosure IP65 (all types)



Protection roof (all types)



VIK design (all types)

Electrical acc. to UL/CSA (all types)

Single-phase alternating current motor, 230V/50Hz with capacitor

(all types)



II2G EExe II T4 (acc. to ATEX95)

(all types)

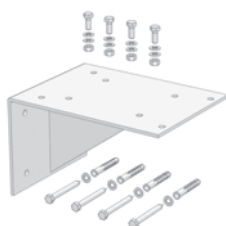


II2G EExde II C T4 (with PTC resistor, suitable for converter operation, 5-50Hz)

(all types)



ACCESSORIES



Bracket

for wall mounting (incl. mounting kit)

Article-No.

Price (EUR)

PP

90023848



1.4301

90023875



Connection pieces

Extensive range of connection / transition pieces and dosing hoses

Inserts and pipe sockets with union nuts, flange connections, hose screw connections, hose nozzles as well as dosing hoses and accessories.

to be found in **CHAPTER 4** of this catalog, from **page 442**

FITTINGS FOR THE SUCTION SIDE



Multi-function device

Properties

- Can be used as an priming aid and/or an calibration pot
- Compact design
- Flexible Connection
- Maintenance-free
- incl. glue joint (PVC-U) and welding joint (PP)

Basic version

- Housing: **PVC-U / PVC-transparent**
- Seals: **FPM** or **EPDM**
- max. operating pressure: **-0,5 ... +2 bar**

Type	DN	Connetion	Volume	Seals	Article-No.	Price (EUR)
RF409.2-11ML, ...-17ML, ...-30ML, ...-45ML, ...-72MB						
MFD 60	8	G $\frac{3}{4}$	0,5 Ltr.	EPDM	37606311	▲
MFD 60	8	G $\frac{3}{4}$	0,5 Ltr.	FPM	37605864	▲
RF409.2-110ML, ...-150ML, ...-220ML						
MFD 570	15	G1	2 Ltr.	EPDM	37606278	▲
MFD 570	15	G1	2 Ltr.	FPM	37605992	▲



ACCESSORIES

Hand vacuum pump	PVC/FPM	37605682	▲
(incl. 1,5m PVC-Hose d=12/21)			

MULTI-LAYER DIAPHRAGM PUMPS

FITTINGS FOR THE SUCTION SIDE



Suction lance S-01 (without level switch)

Properties

- Compact, robust design
- Maintenance-free
- Easy handling
- High-quality materials
- individual special lengths up to max. 1.500mm possible

Basic version

- Suction lance: **PVC-U**
- Foot valve: **PVC-U**
- Seals: **EPDM** or **FPM**
- Valve ball: **PTFE**
- max. flow rate: **200 l/h**
- Standard length: **650mm, 1.000mm und 1.250mm**

Type	Length	Connection	Seals	Article-No.	Price (EUR)
RF409.2-11ML, ...-17ML, ...-30ML, ...-45ML, ...-72ML, ...-110ML, ...-150ML					
S-01	650 mm	G ¾	EPDM	37606591	▲
S-01	1.000 mm	G ¾	EPDM	37606592	▲
S-01	1.250 mm	G ¾	EPDM	37606593	▲
S-01	max. 1.500 mm	G ¾	EPDM	37600705	▲
S-01	650 mm	G ¾	FPM	37606594	▲
S-01	1.000 mm	G ¾	FPM	37606595	▲
S-01	1.250 mm	G ¾	FPM	37606596	▲
S-01	max. 1.500 mm	G ¾	FPM	37600817	▲



Suction lance SL-12.1 (with level switch, 2-stage with plug, 3-pole)

Properties

- Compact design
- Height-adjustable
- 2-stage level monitoring
- Flexible connection
- Easy handling
- High-quality materials
- Maintenance-free
- incl. hose connections 4/6, 6/8, 6/12

Basic version

- Suction lance: **PVC-U**
- Foot valve: **PVC-U**
- Valve ball: **PTFE**
- Hose (inboard): **PE**
- Level switch: **PP**
 - 2-stage, normally closed (NC)
 - 5m cable (from foot valve) with plug, M12, 3-pole
- max. flow rate: **14 l/h (4/6) ... 35 l/h (6/12)**

Type	Length	Seals	Article-No.	Price (EUR)
RF409.2-11ML, ...-17ML, ...-30ML				
SL-12.1	600 mm	PTFE	37606120	▲
SL-12.1	1.000 mm	PTFE	37606117	▲
SL-12.1	1.200 mm	PTFE	37606118	▲

FITTINGS FOR THE SUCTION SIDE



Suction lance SL-02 (with level switch, 1- or 2-stage with plug, 3-pole)

Properties

- Compact, robust design
- Safe
- Easy handling
- 1-stage level switch
- Flexible connection
- High-quality materials
- Maintenance-free

Basic version

- Suction lance: **PVC-U**
- Foot valve: **PVDF-GFK**
- Valve ball: **PTFE**
- Suction basket: **PP**
- Level switch: **PP**
1- or 2-stage, normally closed (NC)
5m cable (from foot valve) with plug, M12, 3-pole
- max. flow rate: **200 l/h**

Type	Level switch	Length	Connection	Seals	Article-No.	Price (EUR)
------	--------------	--------	------------	-------	-------------	-------------

RF409.2-11ML, ...-17ML, ...-30ML, ...-45ML, ...-72ML, ...-110ML, ...-150ML

SL-02	1-stage	630 mm	G ¾	EPDM	37606372	▲
SL-02	1-stage	1.000 mm	G ¾	EPDM	37606567	▲
SL-02	1-stage	1.200 mm	G ¾	EPDM	37606568	▲
SL-02	1-stage	630 mm	G ¾	FPM	37606566	▲
SL-02	1-stage	1.000 mm	G ¾	FPM	37606078	▲
SL-02	1-stage	1.200 mm	G ¾	FPM	37606569	▲
SL-02	2-stage	630 mm	G ¾	EPDM	37606570	▲
SL-02	2-stage	1.000 mm	G ¾	EPDM	37606572	▲
SL-02	2-stage	1.200 mm	G ¾	EPDM	37606573	▲
SL-02	2-stage	630 mm	G ¾	FPM	37606571	▲
SL-02	2-stage	1.000 mm	G ¾	FPM	37606577	▲
SL-02	2-stage	1.200 mm	G ¾	FPM	37606574	▲



ACCESSORIES

Drum connection adapter

Connection	Material	Seal	Article-No.	Price (EUR)
for external thread G=S65x5 DIN2781	PP	EPDM	90011763	▲
	PP	FPM	90011762	▲
for internal thread (set) G=2 fine thread steel drum DIN-ISO 228-1	PP	EPDM	90046044	▲
G=v. Leer/tri-sure BCS 56x4 EN12708	PP	FPM	90046043	▲
for external thread G= DIN51	PP	EPDM	90011767	▲
	PP	FPM	90011766	▲
for wall duct G=2 Wall thickness S=max. 6mm	PP/PVC	EPDM	90011773	▲
	PP/PVC	FPM	90011772	▲
other adapters			Ⓢ	Ⓢ

MULTI-LAYER DIAPHRAGM PUMPS

FITTINGS FOR THE SUCTION SIDE



Suction lance SLP-15x.1 (with level switch, 1- or 2-stage)

Properties

- Compact, robust design
- Easy handling
- 1- or 2-stage level monitoring
- Protective tube
- Maintenance free
- High quality materials
- Protection class IP65

Basic version

- Suction lance: **PVC-U**
- Foot valve: **PVC-U**
- Valve ball: **PTFE**
- Seals: **EPDM** or **FPM**
- Level switch: **PP**
1- or 2-stage, normally closed (NC)
cable gland: **M12x1,5**
- max. flow rate: **700 l/h**

Type	Level switch	Length	Material	Seals	Article-No.	Price (EUR)
RF409.2-220ML						
SLP-151.1	1-stage	750 mm	PVC-U	EPDM	37604108	▲
SLP-151.1	1-stage	750 mm	PVC-U	FPM	37604114	▲
SLP-151.1	1-stage	1.000 mm	PVC-U	EPDM	37604109	▲
SLP-151.1	1-stage	1.000 mm	PVC-U	FPM	37604115	▲
SLP-151.1	1-stage	1.250 mm	PVC-U	EPDM	37604110	▲
SLP-151.1	1-stage	1.250 mm	PVC-U	FPM	37604116	▲
SLP-152.1	2-stage	750 mm	PVC-U	EPDM	37604111	▲
SLP-152.1	2-stage	750 mm	PVC-U	FPM	37604117	▲
SLP-152.1	2-stage	1.000 mm	PVC-U	EPDM	37604112	▲
SLP-152.1	2-stage	1.000 mm	PVC-U	FPM	37604118	▲
SLP-152.1	2-stage	1.250 mm	PVC-U	EPDM	37604113	▲
SLP-152.1	2-stage	1.250 mm	PVC-U	FPM	37604119	▲

ACCESSORIES

Type	Designation	Article-No.	Price (EUR)
BCS 70x6 Di=50	Container screw connection for internal thread. Ventilation via tolerance of the inner diameter of the adapter or via separate ventilation of the container.	90028923	▲
G2 IBC	For IBC cover with G2 internal thread. Ventilation via adapter. Gas-tight design with „hose set“ possible.	90044282	▲
G2 universal	Bulkhead fitting with flat gasket (made of PVC-U). Ventilation via adapter. Gas-tight design with „hose set“ possible.	90044277	▲
Hose set	G3/4, d12, L=3m for gas tight container screwing for connection to On-site evacuation system	90044369	▲
Quiver	Quiver for storing/holding the suction lance (e.g. when changing containers)	90028919	▲
Control cable	Control cable for level input Cable socket M12x1, 3-pole, 5m length, loosely delivered	90031245	▲



FITTINGS FOR THE SUCTION SIDE



Foot valve (Plastic)

Properties

- Compact design
- High-quality materials
- Easy installation
- Maintenance-free

Basic version

- Ball: **PTFE**
- Sieve: **ETFE**
- Mesh size: **1mm**

Type	DN	Connection	Material	Seals	Article-No.	Price (EUR)
RF409.2-11ML, ...-17ML, ...-30ML, ...-45ML, ...-72ML, ...-110ML, ...-150ML						
781.1	8	G ¾	PVDF/PVDF-GFK	FEP	30073008	▲
RF409.2-220ML						
783.1	20	G 1 ¼	PP/PP-GFK	EPDM	37600552	▲
783.1	20	G 1 ¼	PP/PP-GFK	FPM	37600553	▲
783.1	20	G 1 ¼	PVDF/PVDF-GFK	FEP	30073018	▲



Foot valve (plastic)

Properties

- Compact design
- High-quality materials
- Easy installation
- Maintenance-free

Basic version

- Ball: **PTFE**
- Sieve: **ETFE**
- Mesh size: **1mm**

Type	DN	Connection	Material	Seals	Article-No.	Price (EUR)
RF409.2-11ML, ...-17ML, ...-30ML, ...-45ML, ...-72ML, ...-110ML, ...-150ML						
731	8	G ¾	PVC-U	EPDM	37601636	▲
RF409.2-72ML, ...-110ML, ...-150ML, ...-220ML						
Ⓢ			PVC-U		Ⓢ	Ⓢ



Foot valve (Stainless steel)

Properties

- Compact design
- High-quality materials
- Easy installation
- Maintenance-free

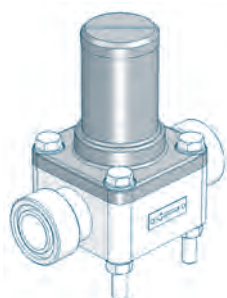
Basic version

- Ball: **1.4401**
- Sieve: **ETFE**
- Mesh size: **1mm**

Type	DN	Connection	Material	Seals	Article-No.	Price (EUR)
RF409.2-11ML, ...-17ML, ...-30ML, ...-45ML						
731	8	G ¾	1.4571	FEP	37601149	▲
RF409.2-72ML, ...-110ML, ...-150ML, ...-220ML						
732	15	G 1	1.4571	FEP	37603325	▲

MULTI-LAYER DIAPHRAGM PUMPS

FITTINGS FOR THE PRESSURE SIDE



Diaphragm relief valve

for overpressure protection

Properties

- Compact design
- Easy installation
- Maintenance-free
- High-quality materials

Basic version

- Valve body: **PVC-U, 1.4581, PP or PVDF**
- Diaphragm: **PTFE-faced**

Type	Nominal size	Connection	Valve body	Seals	Article-No.	Price (EUR)
------	--------------	------------	------------	-------	-------------	-------------

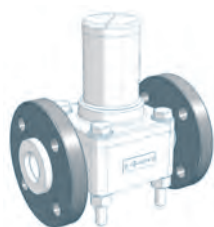
RF409.2-11ML, ...-17ML, ...-45ML

620.10	DN8	G 3/4	PVC-U	FPM	37603632	▲
620.10	DN8	G 3/4	PVC-U	EPDM	36200101	▲
620.10	DN8	G 3/4	PP	FPM	37603630	▲
620.10	DN8	G 3/4	PP	EPDM	37603629	▲
620.10	DN8	G 3/4	PVDF	FEP	37601792	▲
620.10	DN8	G 3/4	1.4581	FEP	37600670	▲

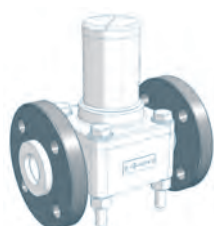
RF409.2-72ML, ...-220ML

622.10	DN15	G 1	PVC-U	FPM	37604006	▲
622.10	DN15	G 1	PVC-U	EPDM	37603635	▲
622.10	DN15	G 1	PP	FPM	⌚	⌚
622.10	DN15	G 1	PP	EPDM	⌚	⌚
622.10	DN15	G 1	PP-GFK	FPM	37603634	▲
622.10	DN15	G 1	PP-GFK	EPDM	37600450	▲
622.10	DN15	G 1	PVDF	FEP	37600717	▲
622.10	DN15	G 1	PVDF-GFK	FEP	37601819	▲
622.10	DN15	G 1	1.4581	FEP	37600695	▲

OPTIONS

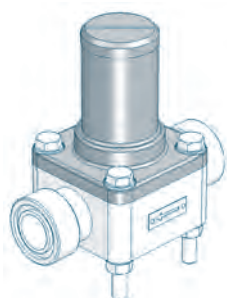


Type	Design	Loose flange	Surcharge [EUR]
620.10	PVC	Loose flange made of PVC-U	⌚
620.10	PP-FRP/PVDF-FRP	Loose flange made of PP with steel inlay	×
620.10	PP	Loose flange made of PP with steel inlay	▲
620.10	PVDF	Loose flange made of PP with steel inlay	▲



Type	Design	Loose flange	Surcharge [EUR]
622.10	PVC	Loose flange made of PVC-U	▲
622.10	PP-FRP/PVDF-FRP	Loose flange made of PP with steel inlay	⌚
622.10	PP	Loose flange made of PP with steel inlay	▲
622.10	PVDF	Loose flange made of PP with steel inlay	▲

FITTINGS FOR THE PRESSURE SIDE



Diaphragm pressure keeping valve

to prevent over-conveyance

Properties

- Compact design
- Easy installation
- Maintenance-free
- High-quality materials

Basic version

- Valve body: **PVC-U, 1.4581, PP or PVDF**
- Diaphragm: **PTFE-faced**

Type	Nominal size	Connection	Valve body	Seals	Article-No.	Price (EUR)
------	--------------	------------	------------	-------	-------------	-------------

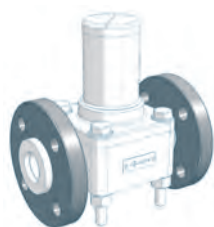
RF409.2-11ML, ...-17ML, ...-45ML

620.D	DN8	G 3/4	PVC-U	FPM	37600048	▲
620.D	DN8	G 3/4	PVC-U	EPDM	36201101	▲
620.D	DN8	G 3/4	PP	FPM	37600055	▲
620.D	DN8	G 3/4	PP	EPDM	36201105	▲
620.D	DN8	G 3/4	PVDF	FEP	37601827	▲
620.D	DN8	G 3/4	1.4581	FEP	37600525	▲

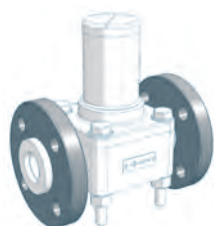
RF409.2-72ML, ...-220ML

622.D	DN15	G 1	PVC-U	FPM	37600049	▲
622.D	DN15	G 1	PVC-U	EPDM	36221101	▲
622.D	DN15	G 1	PP	FPM	⌚	⌚
622.D	DN15	G 1	PP	EPDM	⌚	⌚
622.D	DN15	G 1	PP-GFK	FPM	37600056	▲
622.D	DN15	G 1	PP-GFK	EPDM	36221105	▲
622.D	DN15	G 1	PVDF	FEP	37602881	▲
622.D	DN15	G 1	PVDF-GFK	FEP	37601449	▲
622.D	DN15	G 1	1.4581	FEP	37600538	▲

OPTIONS



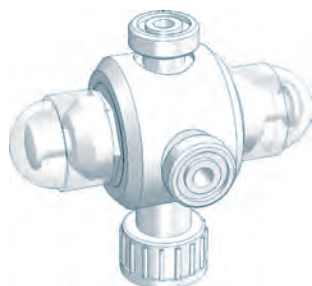
Type	Design	Loose flange	Surcharge [EUR]
620.D	PVC	Loose flange made of PVC-U	⌚
620.D	PP-FRP/PVDF-FRP	Loose flange made of PP with steel inlay	×
620.D	PP	Loose flange made of PP with steel inlay	▲
620.D	PVDF	Loose flange made of PP with steel inlay	▲



Type	Design	Loose flange	Surcharge [EUR]
622.D	PVC	Loose flange made of PVC-U	▲
622.D	PP-FRP/PVDF-FRP	Loose flange made of PP with steel inlay	⌚
622.D	PP	Loose flange made of PP with steel inlay	▲
622.D	PVDF	Loose flange made of PP with steel inlay	▲

MULTI-LAYER DIAPHRAGM PUMPS

FITTINGS FOR THE PRESSURE SIDE



Multi function valve

Properties

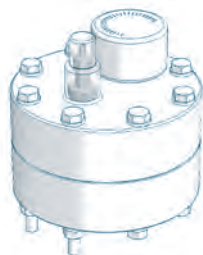
- Maximum operating pressure 10 bar
- Compact design
- Easy installation
- Maintenance-free
- Venting
- Overpressure protection for dosing pumps
- Prevention of over conveyance

Basic version

- Diaphragms: **PTFE-faced**
- Connection: **G^{3/4}**
- **Relief valve side**
Opening pressure: **2 up to 10 bar** (adjustable)
- **Pressure keeping valve side**
Holding pressure: **1,0 - 1,5 bar**

Type	Valve body	Seals	Article-No.	Price (EUR)
RF409.2-11ML, ...-17ML, ...-45ML				
MFV 050	PVC-U	EPDM	37600973	▲
MFV 050	PVC-U	FPM	37600974	▲
MFV 050	PVC-U	FEP	37600975	▲
MFV 050	PP	EPDM	37600982	▲
MFV 050	PP	FPM	37600983	▲
MFV 050	PP	FEP	37600984	▲
RF409.2-72ML, ...-220ML				
Ⓢ			Ⓢ	Ⓢ

FITTINGS FOR THE PRESSURE SIDE



Diaphragm pulsation damper (Plastic, PTFE-diaphragm, max. 10 bar)

Properties

- Any mounting position
- Easy installation
- Long service life
- Easy handling
- High-quality materials
- Low maintenance

Type	Connection	max. Pressure	Material	Diaphragm	Article-No.	Price (EUR)
RF409.2-11ML, ...-17ML						
720.1	G ½	10 bar	PVC-U	PTFE	37601848	▲
720.1	G ½	10 bar	PP	PTFE	37601856	▲
720.1	G ½	10 bar	PVDF	PTFE	37601857	▲

ACCESSORIES

Connection adapter



Thread connection	G3/4 male	PVC-U	EPDM	90021733	▲
Connction to pulsation damper	G1/2 male	PVC-U	FPM	90025079	▲
		PP	EPDM	90038083	▲
		PP	FPM	90038082	▲
		PVDF	FEP	⌚	⌚

Retaining clamp



(2 Piece each pulsation damper)	PP	d 16	90010649	▲
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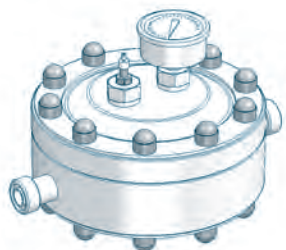
Filling pump FLP 2 for filling device



with manometer, max. 7 bar incl. 2m hose and coupling for air valve	90009396	▲
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MULTI-LAYER DIAPHRAGM PUMPS

FITTINGS FOR THE PRESSURE SIDE



Diaphragm pulsation damper (Plastic, PTFE(-faced) diaphragm, max. 10 bar)

Properties

- Any mounting position
- Easy installation
- Long service life
- Easy handling
- High-quality materials
- Low maintenance
- Diaphragm: PTFE-faced

Type	Connection	max. Pressure	Material	Seals	Article-No.	Price (EUR)
------	------------	---------------	----------	-------	-------------	-------------

RF409.2-45ML

721.2	G 3/4	10 bar	PVC-U	EPDM	37602014	▲
721.2	G 3/4	10 bar	PVC-U	FPM	37602013	▲
721.2	G 3/4	10 bar	PP	EPDM	37603419	▲
721.2	G 3/4	10 bar	PP	FPM	37602017	▲
721.2	G 3/4	10 bar	PVDF	FEP	37604046	▲

RF409.2-72ML, ...-220ML

722.1	G 1	10 bar	PVC-U	EPDM	37600647	▲
722.1	G 1	10 bar	PVC-U	FPM	30100008	▲
722.1	G 1	10 bar	PP	EPDM	37600676	▲
722.1	G 1	10 bar	PP	FPM	30100009	▲
722.1	G 1	10 bar	PVDF	FEP	37601852	▲

ACCESSORIES



Filling pump FLP 2 for filling device

with manometer, max. 7 bar incl. 2m hose and coupling for air valve	90009396	▲
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Retaining clamp

(2 Piece each pulsation damper)	PP	d 25	90010651	▲
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FITTINGS FOR THE PRESSURE SIDE



Diaphragm pulsation damper (Stainless steel, max. 10 bar)

Properties

- Any mounting position
- Easy installation
- Long service life
- Easy handling
- High-quality materials
- Low maintenance

Type	Connection	max.Pressure	Material	Diaphragm	Article-No.	Price (EUR)
RF409.2-11ML, ...-17ML, ...-45ML						
810.1-0,16/10	G ½	10 bar	1.4571	Butyl	37603720	▲
810.1-0,16/10	G ½	10 bar	1.4571	FPM	37603724	▲
810.1-0,16/10	G ½	10 bar	1.4571	PTFE	×	×
RF409.2-72ML, ...-110ML						
810.1-0,32/10	G ½	10 bar	1.4571	Butyl	37603721	▲
810.1-0,32/10	G ½	10 bar	1.4571	FPM	37603725	▲
810.1-0,32/10	G ½	10 bar	1.4571	PTFE	×	×
RF409.2-220ML						
810.1-0,75/10	G ½	10 bar	1.4571	Butyl	37603722	▲
810.1-0,75/10	G ½	10 bar	1.4571	FPM	37603726	▲
810.1-0,75/10	G ½	10 bar	1.4571	PTFE	37606307	▲

ACCESSORIES

Filling- and pressure measuring device

(mounted on pulsation damper)



Design: Plastic	Manometer: 0-16 bar Measuring system: copper alloyed	●
Design: Stainless steel	Manometer: 0-16 bar, glycerine-damped Measuring system: copper alloyed Housing: 1.4301	▲

Filling pump FLP 2 for filling device



with manometer, max. 7 bar incl. 2m hose and coupling for air valve	90009396	▲
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MULTI-LAYER DIAPHRAGM PUMPS

FITTINGS FOR THE PRESSURE SIDE



Diaphragm pulsation damper (Stainless steel, max. 100-180 bar)

Properties

- Any mounting position
- Easy installation
- Long service life
- Easy handling
- High-quality materials
- Low maintenance

Type	Connection	max.Pressure	Material	Diaphragm	Article-No.	Price (EUR)
RF409.2-11ML, ...-17ML, ...-45ML						
810.1-0,16/180	G ½	180 bar	1.4571	Butyl	90008811	▲
810.1-0,16/180	G ½	180 bar	1.4571	FPM	90009498	▲
810.1-0,16/180	G ½	180 bar	1.4571	PTFE	×	×
RF409.2-72ML, ...-110ML						
810.1-0,32/160	G ½	160 bar	1.4571	Butyl	90010409	▲
810.1-0,32/160	G ½	160 bar	1.4571	FPM	90010983	▲
810.1-0,32/160	G ½	160 bar	1.4571	PTFE	×	×
RF409.2-220ML						
810.1-0,75/140	G ½	140 bar	1.4571	Butyl	37600313	▲
810.1-0,75/140	G ½	140 bar	1.4571	FPM	37600148	▲
810.1-0,75/140	G ½	140 bar	1.4571	PTFE	37606302	▲

ACCESSORIES



Filling- and pressure measuring device

Design: removeable
Manometer d63, plastic housing, measuring system: copper alloyed
incl. 2,5m filling hose, connection M14x1,5

0 - 25 bar	37601674	▲
0 - 100 bar	37601673	▲
0 - 250 bar	30066005	▲

FITTINGS FOR THE PRESSURE SIDE



Dosing valve (Plastic)

Properties

- Compact design
- Any mounting position
- Maintenance-free
- High-quality materials

Basic version

- integrated injection lance
- Valve ball: **PTFE**
- Seals: **EPDM** or **FPM**
- Spring: **Hastelloy C4**

Type	DN	Inlet	Outlet	Material	Seal	Article-No.	Price (EUR)
------	----	-------	--------	----------	------	-------------	-------------

RF409.2-11ML, ...-17ML, ...-45ML, ...-72ML, ...-110ML

691.2	8	G ¾	R ½	PVC-U	EPDM	37606318	▲
691.2	8	G ¾	R ½	PVC-U	FPM	37605769	▲
691.2	8	G ¾	R ½	PP-GFK	EPDM	37605768	▲
691.2	8	G ¾	R ½	PP-GFK	FPM	37606317	▲

RF409.2-220ML

×						×	×
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Dosing valve (Plastic)

Properties

- Compact design
- Any mounting position
- Maintenance-free
- High-quality materials

Basic version

- Valve ball: **PTFE**
- Spring: **Hastelloy C4**

Type	DN	Inlet	Outlet	Material	Seal	Article-No.	Price (EUR)
------	----	-------	--------	----------	------	-------------	-------------

RF409.2-11ML, ...-17ML, ...-45ML, ...-72ML, ...-110ML

691.1	8	G ¾	R ½	PVDF/-GFK	FEP	30072015	▲
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RF409.2-220ML

693.1	20	G 1¼	R 1¼	PP-GFK	EPDM	37604661	▲
693.1	20	G 1¼	R 1¼	PP-GFK	FPM	37603317	▲
693.1	20	G 1¼	R 1¼	PVDF-GFK	FEP	30072027	▲



Dosing valve (Stainless steel)

Properties

- Compact design
- Any mounting position
- Maintenance-free
- High-quality materials

Basic version

- Valve ball: **1.4401**
- Seals: **FEP-covered**
- Spring: **Hastelloy C4**

Type	DN	Inlet	Outlet	Material	Seal	Article-No.	Price (EUR)
------	----	-------	--------	----------	------	-------------	-------------

RF409.2-11ML, ...-17ML, ...-45ML, ...-72ML, ...-110ML

691.1	8	G ¾	R ½	1.4571	FEP	37600493	▲
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RF409.2-220ML

692.1	15	G 1	R 1	1.4571	FEP	37600669	52▲00
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MULTI-LAYER DIAPHRAGM PUMPS

FITTINGS FOR THE PRESSURE SIDE



Injection fitting

Properties

- incl. injection lance for better mixing
- Easy installation
- Any mounting position
- Maintenance-free
- High-quality materials

Basic version

- Cone-type check valve (spring loaded)
- Shut-off ball valve
- Injection lance (L=150mm)
- max. operating pressure: 10 bar

Type	DN	Inlet	Outlet	Material	Seals	Article-No.	Price (EUR)
RF409.2-11ML, ...-17ML, ...-45ML, ...-72ML, ...-110ML							
8061.1	10	G ¾	R ½	PVC-U	EPDM	37602105	▲
8061.1	10	G ¾	R ½	PVC-U	FPM	37602106	▲
8061.1	10	G ¾	R ½	PP	EPDM	37602107	▲
8061.1	10	G ¾	R ½	PP	FPM	37602108	▲
8061.1	10	G ¾	R ½	PVDF	FPM	37602109	▲
RF409.2-220ML							
8062.1	15	G 1	R ¾	PVC-U	EPDM	37602110	▲
8062.1	15	G 1	R ¾	PVC-U	FPM	37602111	▲
8062.1	15	G 1	R ¾	PP	EPDM	37602112	▲
8062.1	15	G 1	R ¾	PP	FPM	37602113	▲
8062.1	15	G 1	R ¾	PVDF	FPM	37602114	▲

Flow capacity 11 l/h ... 220 l/h
Admissible counterpressure up to 20 bar

RF 409.2-...ML

MULTI-LAYER DIAPHRAGM PUMPS



OVERVIEW

Multi-layer diaphragm technology
 High dosing accuracy
 Compact design
 Safe to run dry
 Leakage free
 Low-maintenance
 User-friendly
 Motor suitable for operation with frequency converter
 Continuous, manual stroke length adjustment
 Robust, metallic drive housing

TECHNICAL DATA

PUMP DATA			RF 410.2-135 ML	RF 410.2-500 ML	RF 410.2-1200 ML
Permissible pressure p_{2max} at the pump outlet	bar	plastic	10	10	5 *
		stainless steel	15		
Nominal capacity QN at p_{2max}	l/h	50 Hz	0-135	0-500	0-1200
		60 Hz	0-162	0-600	0-1440
Quantity per stroke	ml/stroke (100%)				
Max. suction height	mWC		3	3	3
Min./max. permissible pressure at the pump inlet	bar	$P_{1min/max}$	-0,3/0	-0,3/0	-0,3/0
Recommended nominal diameter DN of the connecting pipes	mm		15	15	20
Nominal stroke frequency	1/min	50 Hz	97	97	97
		60 Hz	116	116	—
Weight approx.	kg	plastic	36	38	41
		stainless steel	43	46	57

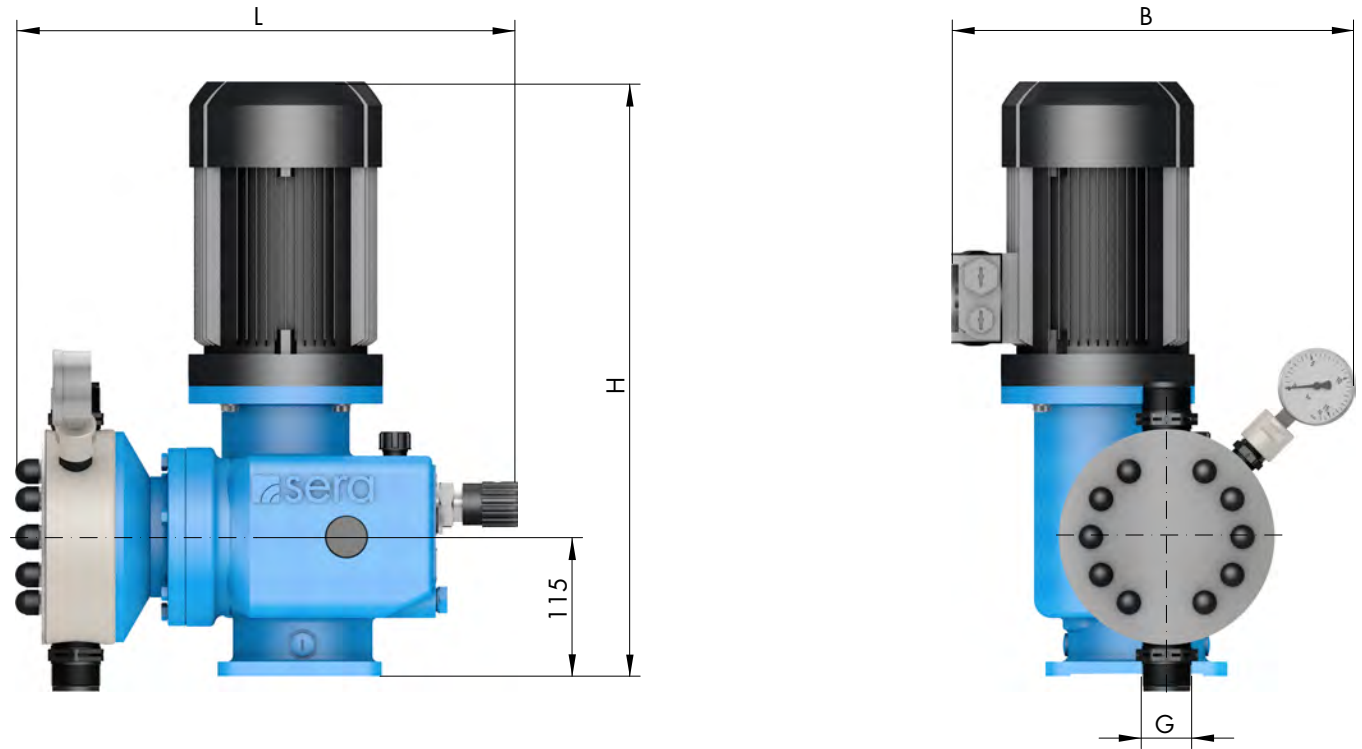
* at 60 Hz is the permissible pressure 3,5 bar

ELECTRICAL DATA			RF 410.2-135 ML	RF 410.2-500 ML	RF 410.2-1200 ML
Power consumption	kW		0,75	1,1	1,5
Nominal voltage	V		230/400V 50Hz, 460V 60Hz		
Frequency	Hz		50/60		
Insulation class	ISO		F		
Enclosure	IP		55		

Flow capacity 135 l/h ... 1.200 l/h
Admissible counterpressure up to 15 bar

RF 410.2-...ML

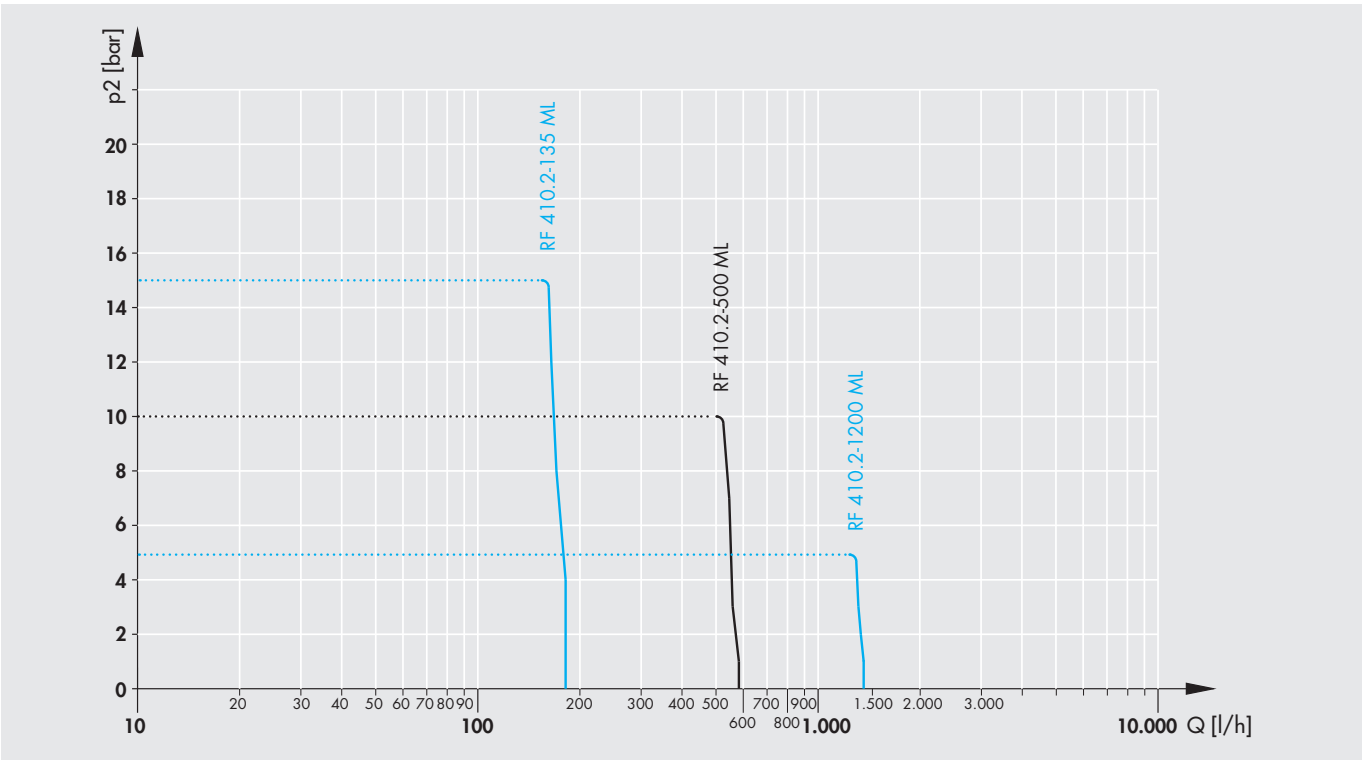
DIMENSIONS



	G		B	L	H		B	L	H
RF 410.2-135 ML	G1¼ *	PVC, PP, PVDF	347	426	535	1.4571	347	423	535
RF 410.2-500 ML	G1¼ *		357	414	535		357	404	535
RF 410.2-1200 ML	G1¼		382	458	575		382	433	575

* PVC = G1

CHARACTERISTIC CURVES



MULTI-LAYER DIAPHRAGM PUMPS

BASIC DESIGNS

PP

Pump body **PP**
Valves **PP-FRP**
Valve balls **PTFE**
Multi-layer diaphragm **PTFE**

Type	EPDM Article-No.	Valve seals		Price (EUR)
		Price (EUR)	FPM Article-No.	
RF410.2-135ML	16022681	Ⓢ	16020640	Ⓢ
RF410.2-500ML	16015806	Ⓢ	16023277	Ⓢ
RF410.2-1200ML	16023839	Ⓢ	16022305	Ⓢ

PVDF

Pump body **PVDF**
Valves **PVDF-FRP**
Valve balls **PTFE**
Multi-layer diaphragm **PTFE**

Type	Valve seals		Price (EUR)
	FEP-covered Article-No.		
RF410.2-135ML	16023840		Ⓢ
RF410.2-500ML	16023591		Ⓢ
RF410.2-1200ML	16022990		Ⓢ

PVC-U

Pump body **PVC-U**
Valves **PVC-U**
Valve balls **PTFE**
Multi-layer diaphragm **PTFE**

Type	EPDM Article-No.	Valve seals		Price (EUR)
		Price (EUR)	FPM Article-No.	
RF410.2-135ML	16023842	Ⓢ	16023845	Ⓢ
RF410.2-500ML	16023843	Ⓢ	16023535	Ⓢ
RF410.2-1200ML	16023844	Ⓢ	16023846	Ⓢ

STAINLESS STEEL

Pump body **1.4571**
Valves **1.4571/1.4581**
Valve balls **1.4401**
Multi-layer diaphragm **PTFE**

Type	Valve seals		Price (EUR)
	FEP-covered Article-No.		
RF410.2-135ML	16020416		Ⓢ
RF410.2-500ML	16015610		Ⓢ
RF410.2-1200ML	16021672		Ⓢ

OPTIONS

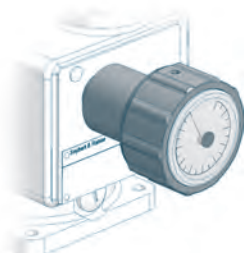


Diaphragm monitoring

Basic version: optical diaphragm rupture indication with manometer **Surcharge (EUR)**

Pressure switch IP65 ▲

Pressure switch II2G EExde IIC T5 or T6 (acc. to ATEX95) ▲



Stroke length adjustment

Surcharge (EUR)

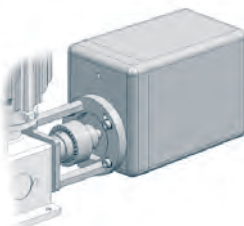
with position indicator

RF410.2-135ML, ...-500ML

▲

RF410.2-1200ML

▲



Stroke length adjustment with actuator

(version uL/CSA on request)

Surcharge (EUR)

Actuator N1S

230V, 50/60Hz, 128s/10 U, 15Nm
Potentiometer 1 kΩ (incl. mounting set)

▲

Electronic positioning controller ESR-N
(only integrated in N1S)

Input signal 0/4 - 20mA including
feedback signal 0/4 - 20mA

▲

Actuator D30D-10-Ex
II2G EExde IIC T4 acc. to ATEX95

400V, 50Hz, 10 U/min
incl. mounting set and base plate

▲



Stroke frequency monitoring

Inductive contact

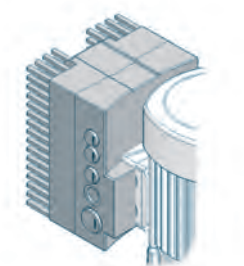
Surcharge (EUR)

10 - 60 V DC, three-wire, PNP

▲

NAMUR-design, II2G EExia IIC T6 (acc. to ATEX95)

▲



Stroke frequency adjustment, electrical

Frequency converter (Series INVEOR) mounted on drive motor
Input 4-20 mA

Surcharge (EUR)

3-phase

400-480V ±10%, 50/60Hz

0,75 kW

RF410.2-135ML

▲

3-phase

400-480V ±10%, 50/60Hz

1,5 kW

RF410.2-500ML, ...-1200ML

▲

Frequency converter accessories

Article-No.

Price (EUR)

Operating module (incl. control cable)

90039445

▲

Communication cable for parameterization via PC

90042176

▲

MULTI-LAYER DIAPHRAGM PUMPS

OPTIONS



Drive motor

- Please note: If one or several options 'drive motor' are required to fix the add. price of the drive, the calculation will be as follows: 'add. price special drive' plus the single options of the drive.
- Surcharge and availability must be requested from **sera**.

Surcharge special drive		Surcharge (EUR)
RF 410.2-135ML, ...-500ML		▲
RF 410.2-1200ML		▲
Special voltage	(all types)	Ⓢ
Enclosure IP65	(all types)	▲
Protection roof	(all types)	▲
VIK design	(all types)	Ⓢ
Electrical acc. to uL/CSA	(all types)	Ⓢ

Single-phase alternating current motor, 230V/50Hz with capacitor

RF 410.2-135ML, ...-500ML	▲
RF 410.2-1200ML	▲

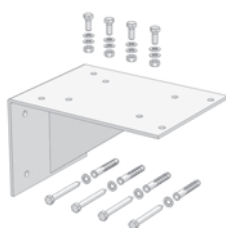
II2G EExe II T4 (acc. to ATEX95)

R 410.2-135ML	▲
R 410.2-500ML	▲
R 410.2-1200ML	▲

II2G EExde II C T4 (suitable for converter operation, 5-50Hz)

RF 410.2-135ML	▲
RF 410.2-500ML	▲
RF 410.2-1200ML	▲

ACCESSORIES



Bracket

for wall mounting (incl. mounting kit)	Article-No.	Price (EUR)
PP	90023849	▲
1.4301	90023876	▲



Connection pieces

Extensive range of connection / transition pieces and dosing hoses

Inserts and pipe sockets with union nuts, flange connections, hose screw connections, hose nozzles as well as dosing hoses and accessories.

to be found in **CHAPTER 4** of this catalog, from **page 442**

FITTINGS FOR THE SUCTION SIDE



Multi-function device

Properties

- Can be used as an priming aid and/or an calibration pot
- Compact design
- Flexible Connection
- Maintenance-free
- incl. glue joint (PVC-U) and welding joint (PP)

Basic version

- Housing: **PVC-U / PVC-transparent**
- Seals: **FPM** or **EPDM**
- max. operating pressure: **-0,5 ... +2 bar**

Type	DN	Connetion	Volume	Seals	Article-No.	Price (EUR)
------	----	-----------	--------	-------	-------------	-------------

RF410.2-135ML, ...500ML

MFD 570	15	G 1	2 Ltr.	EPDM	37606278	▲
MFD 570	15	G 1	2 Ltr.	FPM	37605992	▲

RF410.2-1200ML

MFD 1500	20	G 1 ¼	5 Ltr.	EPDM	37606316	▲
MFD 1500	20	G 1 ¼	5 Ltr.	FPM	37606315	▲

ACCESSORIES

Hand vacuum pump	PVC/FPM	37605682	▲
(incl. 1,5m PVC-Hose d=12/21)			



Foot valve (Plastic)

Properties

- Compact design
- Easy installation
- High-quality materials
- Maintenance-free

Basic version

- Ball: **PTFE**
- Sieve: **ETFE**
- Mesh size: **1mm**

Type	DN	Connection	Material	Seals	Article-No.	Price (EUR)
------	----	------------	----------	-------	-------------	-------------

783.1	20	G 1 ¼	PP/PP-GFK	EPDM	37600552	▲
783.1	20	G 1 ¼	PP/PP-GFK	FPM	37600553	▲
783.1	20	G 1 ¼	PVDF/PVDF-GFK	FEP	30073018	▲



Foot valve (Stainless steel)

Properties

- Compact design
- Easy installation
- High-quality materials
- Maintenance-free

Basic version

- Ball: **1.4401**
- Sieve: **ETFE**
- Mesh size: **1mm**

Type	DN	Connection	Material	Seals	Article-No.	Price (EUR)
------	----	------------	----------	-------	-------------	-------------

RF410.2-135ML, ...500ML

732	15	G 1	1.4571	FEP	37603325	▲
------------	----	-----	--------	-----	----------	---

RF410.2-1200ML

733	20	G 1 ¼	1.4571	FEP	37603962	▲
------------	----	-------	--------	-----	----------	---

MULTI-LAYER DIAPHRAGM PUMPS

FITTINGS FOR THE SUCTION SIDE



Suction lance S-01 (without level switch)

Properties

- Compact, robust design
- Maintenance-free
- Easy handling
- High-quality materials
- individual special lengths
up to max. 1.500mm possible

Basic version

- Suction lance: **PVC-U**
- Foot valve: **PVC-U**
- Seals: **EPDM** or **FPM**
- Valve ball: **PTFE**
- max. flow rate: **200 l/h**
- Standard length: **650mm, 1.000mm und 1.250mm**

Type	Length	Connection	Seals	Article-No.	Price (EUR)
RF410.2-135ML					
S-01	650 mm	G ¾	EPDM	37606591	▲
S-01	1.000 mm	G ¾	EPDM	37606592	▲
S-01	1.250 mm	G ¾	EPDM	37606593	▲
S-01	max. 1.500 mm	G ¾	EPDM	37600705	▲
S-01	650 mm	G ¾	FPM	37606594	▲
S-01	1.000 mm	G ¾	FPM	37606595	▲
S-01	1.250 mm	G ¾	FPM	37606596	▲
S-01	max. 1.500 mm	G ¾	FPM	37600817	▲

FITTINGS FOR THE SUCTION SIDE



Suction lance SL-02 (with level switch, 1- or 2-stage with plug, 3-pole)

Properties

- Compact, robust design
- Safe
- Easy handling
- 1-stage level switch
- Flexible connection
- High-quality materials
- Maintenance-free

Basic version

- Suction lance: **PVC-U**
- Foot valve: **PVDF-GFK**
- Valve ball: **PTFE**
- Suction basket: **PP**
- Level switch: **PP**
1- or 2-stage, normally closed (NC)
5m cable (from foot valve) with plug, M12, 3-pole
- max. flow rate: **200 l/h**

Type	Level switch	Length	Connection	Seals	Article-No.	Price (EUR)
------	--------------	--------	------------	-------	-------------	-------------

RF410.2-135ML

SL-02	1-stage	630 mm	G ¾	EPDM	37606372	▲
SL-02	1-stage	1.000 mm	G ¾	EPDM	37606567	▲
SL-02	1-stage	1.200 mm	G ¾	EPDM	37606568	▲
SL-02	1-stage	630 mm	G ¾	FPM	37606566	▲
SL-02	1-stage	1.000 mm	G ¾	FPM	37606078	▲
SL-02	1-stage	1.200 mm	G ¾	FPM	37606569	▲
SL-02	2-stage	630 mm	G ¾	EPDM	37606570	▲
SL-02	2-stage	1.000 mm	G ¾	EPDM	37606572	▲
SL-02	2-stage	1.200 mm	G ¾	EPDM	37606573	▲
SL-02	2-stage	630 mm	G ¾	FPM	37606571	▲
SL-02	2-stage	1.000 mm	G ¾	FPM	37606577	▲
SL-02	2-stage	1.200 mm	G ¾	FPM	37606574	▲



ACCESSORIES

Drum connection adapter

Connection	Material	Seal	Article-No.	Price (EUR)
for external thread G=S65x5 DIN2781	PP	EPDM	90011763	▲
	PP	FPM	90011762	▲
for internal thread (set) G=2 fine thread steel drum DIN-ISO 228-1	PP	EPDM	90046044	▲
G=v. Leer/tri-sure BCS 56x4 EN12708	PP	FPM	90046043	▲
for external thread G= DIN51	PP	EPDM	90011767	▲
	PP	FPM	90011766	▲
for wall duct G=2 Wall thickness S=max. 6mm	PP/PVC	EPDM	90011773	▲
	PP/PVC	FPM	90011772	▲
other adapters			Ⓢ	Ⓢ

MULTI-LAYER DIAPHRAGM PUMPS

FITTINGS FOR THE SUCTION SIDE



Suction lance SLP-15x.1 (with level switch, 1- or 2-stage)

Properties

- Compact, robust design
- Easy handling
- 1- or 2-stage level monitoring
- Protective tube
- Maintenance free
- High quality materials
- Protection class IP65

Basic version

- Suction lance: **PVC-U**
- Foot valve: **PVC-U**
- Valve ball: **PTFE**
- Seals: **EPDM** or **FPM**
- Level switch: **PP**
1- or 2-stage, normally closed (NC)
cable gland: **M12x1,5**
- max. flow rate: **700 l/h**

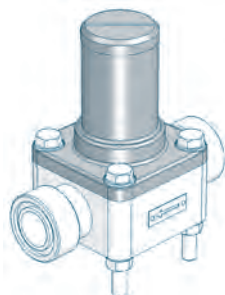
Type	Level switch	Length	Material	Seals	Article-No.	Price (EUR)
RF410.2-500ML						
SLP-151.1	1-stage	750 mm	PVC-U	EPDM	37604108	▲
SLP-151.1	1-stage	750 mm	PVC-U	FPM	37604114	▲
SLP-151.1	1-stage	1.000 mm	PVC-U	EPDM	37604109	▲
SLP-151.1	1-stage	1.000 mm	PVC-U	FPM	37604115	▲
SLP-151.1	1-stage	1.250 mm	PVC-U	EPDM	37604110	▲
SLP-151.1	1-stage	1.250 mm	PVC-U	FPM	37604116	▲
SLP-152.1	2-stage	750 mm	PVC-U	EPDM	37604111	▲
SLP-152.1	2-stage	750 mm	PVC-U	FPM	37604117	▲
SLP-152.1	2-stage	1.000 mm	PVC-U	EPDM	37604112	▲
SLP-152.1	2-stage	1.000 mm	PVC-U	FPM	37604118	▲
SLP-152.1	2-stage	1.250 mm	PVC-U	EPDM	37604113	▲
SLP-152.1	2-stage	1.250 mm	PVC-U	FPM	37604119	▲

ACCESSORIES

Type	Designation	Article-No.	Price (EUR)
BCS 70x6 Di=50	Container screw connection for internal thread. Ventilation via tolerance of the inner diameter of the adapter or via separate ventilation of the container.	90028923	▲
G2 IBC	For IBC cover with G2 internal thread. Ventilation via adapter. Gas-tight design with „hose set“ possible.	90044282	▲
G2 universal	Bulkhead fitting with flat gasket (made of PVC-U). Ventilation via adapter. Gas-tight design with „hose set“ possible.	90044277	▲
Hose set	G3/4, d12, L=3m for gas tight container screwing for connection to On-site evacuation system	90044369	▲
Quiver	Quiver for storing/holding the suction lance (e.g. when changing containers)	90028919	▲
Control cable	Control cable for level input Cable socket M12x1, 3-pole, 5m length, loosely delivered	90031245	▲



FITTINGS FOR THE PRESSURE SIDE



Diaphragm relief valve

for overpressure protection

Properties

- Compact design
- Easy installation
- Maintenance-free
- High-quality materials

Basic version

- Valve body: **PVC-U, 1.4581, PP or PVDF**
- Diaphragm: **PTFE-faced**

Type	Nominal size	Connection	Valve body	Seals	Article-No.	Price (EUR)
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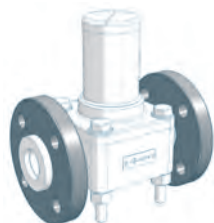
RF410.2-135ML, ...-500ML

622.10	DN15	G 1	PVC-U	FPM	37604006	▲
622.10	DN15	G 1	PVC-U	EPDM	37603635	▲
622.10	DN15	G 1	PP	FPM	Ⓢ	Ⓢ
622.10	DN15	G 1	PP	EPDM	Ⓢ	Ⓢ
622.10	DN15	G 1	PP-GFK	FPM	37603634	▲
622.10	DN15	G 1	PP-GFK	EPDM	37600450	▲
622.10	DN15	G 1	PVDF	FEP	37600717	▲
622.10	DN15	G 1	PVDF-GFK	FEP	37601819	▲
622.10	DN15	G 1	1.4581	FEP	37600695	▲

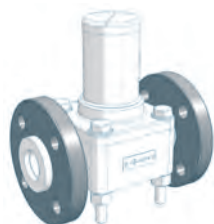
RF410.2-1200ML

623.10	DN20	G 1 1/4	PVC-U	FPM	37600009	▲
623.10	DN20	G 1 1/4	PVC-U	EPDM	36230101	▲
623.10	DN20	G 1 1/4	PP	FPM	37600016	▲
623.10	DN20	G 1 1/4	PP	EPDM	36230105	▲
623.10	DN20	G 1 1/4	PVDF	FEP	37606304	▲

OPTIONS



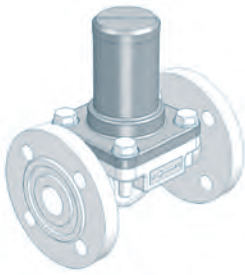
Type	Design	Loose flange	Surcharge [EUR]
622.10	PVC	Loose flange made of PVC-U	▲
622.10	PP-FRP/PVDF-FRP	Loose flange made of PP with steel inlay	Ⓢ
622.10	PP	Loose flange made of PP with steel inlay	▲
622.10	PVDF	Loose flange made of PP with steel inlay	▲



Type	Design	Loose flange	Surcharge [EUR]
623.10	PVC	Loose flange made of PVC-U	▲
623.10	PP-FRP/PVDF-FRP	Loose flange made of PP with steel inlay	×
623.10	PP	Loose flange made of PP with steel inlay	▲
623.10	PVDF	Loose flange made of PP with steel inlay	▲

MULTI-LAYER DIAPHRAGM PUMPS

FITTINGS FOR THE PRESSURE SIDE



Diaphragm relief valve (with fixed flanges)

for overpressure protection

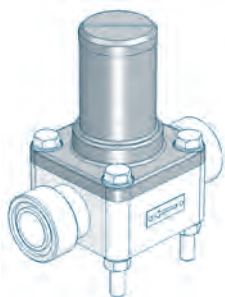
Properties

- Compact design
- Easy installation
- Maintenance-free
- High-quality materials

Basic design

- Flanges acc. to **DIN 2501**
- Valve body: **1.4581** or **GG**
- Diaphragm: **PTFE-faced**

Type	Nominal size	Connection	Valve body	Article-No.	Price (EUR)
RF410.2-1200ML					
623.10	DN20	DIN 2501	1.4581	36230104	▲
623.10	DN20	DIN 2501	GG	37600038	▲



Diaphragm pressure keeping valve

to prevent over-conveyance

Properties

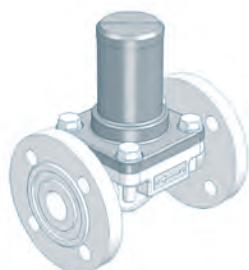
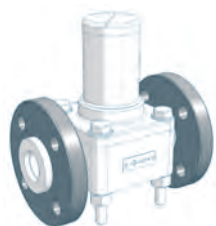
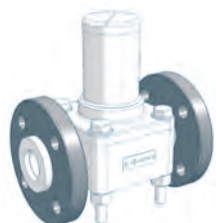
- Compact design
- Easy installation
- Maintenance-free
- High-quality materials

Basic version

- Valve body: **PVC-U, 1.4581, PP** or **PVDF**
- Diaphragm: **PTFE-faced**

Type	Nominal size	Connection	Valve body	Seals	Article-No.	Price (EUR)
RF410.2-135ML, ...-500ML						
622.D	DN15	G 1	PVC-U	FPM	37600049	▲
622.D	DN15	G 1	PVC-U	EPDM	36221101	▲
622.D	DN15	G 1	PP	FPM	Ⓢ	Ⓢ
622.D	DN15	G 1	PP	EPDM	Ⓢ	Ⓢ
622.D	DN15	G 1	PP-GFK	FPM	37600056	▲
622.D	DN15	G 1	PP-GFK	EPDM	36221105	▲
622.D	DN15	G 1	PVDF	FEP	37602881	▲
622.D	DN15	G 1	PVDF-GFK	FEP	37601449	▲
622.D	DN15	G 1	1.4581	FEP	37600538	▲
RF410.2-1200ML						
623.D	DN20	G 1¼	PVC-U	FPM	37600050	▲
623.D	DN20	G 1¼	PVC-U	EPDM	36231101	▲
623.D	DN20	G 1¼	PP	FPM	37600057	▲
623.D	DN20	G 1¼	PP	EPDM	36231105	▲
623.D	DN20	G 1¼	PVDF	FEP	37606309	▲

FITTINGS FOR THE PRESSURE SIDE



OPTIONS

Type	Design	Loose flange	Surcharge [EUR]
622.D	PVC	Loose flange made of PVC-U	▲
622.D	PP-FRP/PVDF-FRP	Loose flange made of PP with steel inlay	⌚
622.D	PP	Loose flange made of PP with steel inlay	▲
622.D	PVDF	Loose flange made of PP with steel inlay	▲

Type	Design	Loose flange	Surcharge [EUR]
623.D	PVC	Loose flange made of PVC-U	▲
623.D	PP-FRP/PVDF-FRP	Loose flange made of PP with steel inlay	×
623.D	PP	Loose flange made of PP with steel inlay	▲
623.D	PVDF	Loose flange made of PP with steel inlay	▲

Diaphragm pressure keeping valve (with fixed flanges)

to prevent over-conveyance

Properties

- Compact design
- Easy installation
- Maintenance-free
- High-quality materials

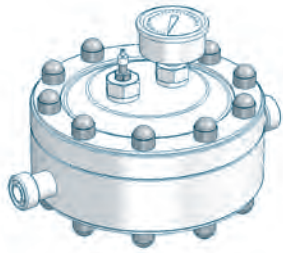
Basic design

- Flanges acc. to **DIN 2501**
- Valve body: **1.4581** or **GG**
- Diaphragm: **PTFE-faced**

Type	Nominal size	Connection	Valve body	Article-No.	Price (EUR)
RF410.2-1200ML					
623.D	DN20	DIN 2501	1.4581	36231104	▲
623.D	DN20	DIN 2501	GG	37600080	▲

MULTI-LAYER DIAPHRAGM PUMPS

FITTINGS FOR THE PRESSURE SIDE



Diaphragm pulsation damper (Plastic, PTFE(-faced) diaphragm, max. 10 bar)

Properties

- Any mounting position
- Easy installation
- Long service life
- Easy handling
- High-quality materials
- Low maintenance
- Diaphragm: PTFE-faced

Type	Connection	max. Pressure	Material	Seals	Article-No.	Price (EUR)
RF410.2-135ML						
722.1	G 1	10 bar	PVC-U	EPDM	37600647	▲
722.1	G 1	10 bar	PVC-U	FPM	30100008	▲
722.1	G 1	10 bar	PP	EPDM	37600676	▲
722.1	G 1	10 bar	PP	FPM	30100009	▲
722.1	G 1	10 bar	PVDF	FEP	37601852	▲
RF410.2-500ML						
⌚					⌚	⌚

ACCESSORIES



Filling pump FLP 2 for filling device

with manometer, max. 7 bar incl. 2m hose and coupling for air valve	90009396	▲
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Retaining clamp

(2 Piece each pulsation damper)	PP	d 25	90010651	▲
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FITTINGS FOR THE PRESSURE SIDE



Diaphragm pulsation damper (Plastic, with elastomere diaphragm, max. 10 bar)

Properties

- Any mounting position
- Easy installation
- Long service life
- Easy handling
- High-quality materials
- Low maintenance

Type	Connection	max. Pressure	Housing	Diaphragm Seals	Article-No.	Price (EUR)
RF410.2-500ML, ...-1200ML						
713.1	G 1 1/4	10 bar	PVC-U	EPDM	30071038	▲
713.1	G 1 1/4	10 bar	PVC-U	FPM	30071039	▲
713.1	G 1 1/4	10 bar	PP	EPDM	30071040	▲
713.1	G 1 1/4	10 bar	PP	FPM	30071041	▲
713.1	G 1 1/4	10 bar	PVDF	EPDM	30071060	▲
713.1	G 1 1/4	10 bar	PVDF	FPM	30071061	▲

OPTIONS

Loose-type flanges

PVC-design	Loose flange, PVC-U	DN20	▲
PP-/PVDF-design	Loose flange, PP with steel insert	DN20	▲

ACCESSORIES

Bracket	PP	90010913	▲
for wall mounting	1.4301	90010914	▲
	Steel (color treated)	90010915	▲

Filling pump FLP 2

for filling device			
with manometer, max. 7 bar incl. 2m hose and coupling for air valve	90009396	▲	



MULTI-LAYER DIAPHRAGM PUMPS

FITTINGS FOR THE PRESSURE SIDE



Diaphragm pulsation damper (Stainless steel, max. 10 bar)

Properties

- Any mounting position
- Easy installation
- Long service life
- Easy handling
- High-quality materials
- Low maintenance

Type	Connection	max.Pressure	Material	Diaphragm	Article-No.	Price (EUR)
RF410.2-135ML						
810.1-0,32/10	G ½	10 bar	1.4571	Butyl	37603721	▲
810.1-0,32/10	G ½	10 bar	1.4571	FPM	37603725	▲
810.1-0,32/10	G ½	10 bar	1.4571	PTFE	×	×
RF410.2-500ML						
810.1-2,0/10	G ¾	10 bar	1.4571	Butyl	37603723	▲
810.1-2,0/10	G ¾	10 bar	1.4571	FPM	37603727	▲
810.1-2,0/10	G ¾	10 bar	1.4571	PTFE	37606308	▲
RF410.2-1200ML						
⌚					⌚	⌚

ACCESSORIES

Filling- and pressure measuring device

(mounted on pulsation damper)

Design: Plastic	Manometer: 0-16 bar Measuring system: copper alloyed	●
Design: Stainless steel	Manometer: 0-16 bar, glycerine-damped Measuring system: copper alloyed Housing: 1.4301	▲
Filling pump FLP 2 for filling device		
with manometer, max. 7 bar incl. 2m hose and coupling for air valve		90009396 ▲



FITTINGS FOR THE PRESSURE SIDE



Diaphragm pulsation damper (Stainless steel, max. 100-180 bar)

Properties

- Any mounting position
- Easy installation
- Long service life
- Easy handling
- High-quality materials
- Low maintenance

Type	Connection	max.Pressure	Material	Diaphragm	Article-No.	Price (EUR)
------	------------	--------------	----------	-----------	-------------	-------------

RF410.2-135ML

810.1-0,32/160	G ½	160 bar	1.4571	Butyl	90010409	▲
810.1-0,32/160	G ½	160 bar	1.4571	FPM	90010983	▲
810.1-0,32/160	G ½	160 bar	1.4571	PTFE	×	×

RF410.2-500ML

810.1-2,0/100	G ¾	100 bar	1.4571	Butyl	37600314	▲
810.1-2,0/100	G ¾	100 bar	1.4571	FPM	37600149	▲
810.1-2,0/100	G ¾	100 bar	1.4571	PTFE	37606303	▲

RF410.2-1200ML



ACCESSORIES

Filling- and pressure measuring device

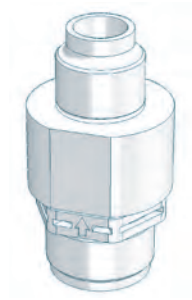
Design: removeable
Manometer d63, plastic housing, measuring system: copper alloyed
incl. 2,5m filling hose, connection M14x1,5



0 - 25 bar	37601674	▲
0 - 100 bar	37601673	▲
0 - 250 bar	30066005	▲

MULTI-LAYER DIAPHRAGM PUMPS

FITTINGS FOR THE PRESSURE SIDE



Dosing valve (Plastic)

Properties

- Compact design
- Any mounting position
- Maintenance-free
- High-quality materials

Basic version

- Valve ball: **PTFE**
- Spring: **Hastelloy C4**

Type	DN	Inlet	Outlet	Material	Seal	Article-No.	Price (EUR)
693.1	20	G 1 ¼	R 1 ¼	PP-GFK	EPDM	37604661	▲
693.1	20	G 1 ¼	R 1 ¼	PP-GFK	FPM	37603317	▲
693.1	20	G 1 ¼	R 1 ¼	PVDF-GFK	FEP	30072027	▲



Dosing valve (Stainless steel)

Properties

- Compact design
- Any mounting position
- Maintenance-free
- High-quality materials

Basic version

- Valve ball: **1.4401**
- Seals: **FEP-covered**
- Spring: **Hastelloy C4**

Type	DN	Inlet	Outlet	Material	Seal	Article-No.	Price (EUR)
RF410.2-135ML, ...-500ML							
692.1	15	G 1	R 1	1.4571	FEP	37600669	▲
RF410.2-1200ML							
693.1	20	G 1 ¼	R 1 ¼	1.4571	FEP	37600789	▲

FITTINGS FOR THE PRESSURE SIDE



Injection fitting

Properties

- incl. injection lance for better mixing
- Easy installation
- Any mounting position
- Maintenance-free
- High-quality materials

Basic version

- Cone-type check valve (spring loaded)
- Shut-off ball valve
- Injection lance (L=150mm)
- max. operating pressure: 10 bar

Type	DN	Inlet	Outlet	Material	Seals	Article-No.	Price (EUR)
------	----	-------	--------	----------	-------	-------------	-------------

RF410.2-135ML, ...500ML

8062.1	15	G 1	R ¾	PVC-U	EPDM	37602110	▲
8062.1	15	G 1	R ¾	PVC-U	FPM	37602111	▲
8062.1	15	G 1	R ¾	PP	EPDM	37602112	▲
8062.1	15	G 1	R ¾	PP	FPM	37602113	▲
8062.1	15	G 1	R ¾	PVDF	FPM	37602114	▲

RF410.2-1200ML

8063.1	20	G 1¼	R 1	PVC-U	EPDM	37602115	▲
8063.1	20	G 1¼	R 1	PVC-U	FPM	37602116	▲
8063.1	20	G 1¼	R 1	PP	EPDM	37602117	▲
8063.1	20	G 1¼	R 1	PP	FPM	37602118	▲
8063.1	20	G 1¼	R 1	PVDF	FPM	37602119	▲

PISTON DIAPHRAGM PUMPS



OVERVIEW

- Multi-layer diaphragm technology
- High dosing accuracy
- Safe to run dry
- Leakage free
- Low-maintenance
- User-friendly
- Motor suitable for operation with frequency converter
- Continuous, manual stroke length adjustment
- High-quality materials
- Robust, metallic drive housing

TECHNICAL DATA

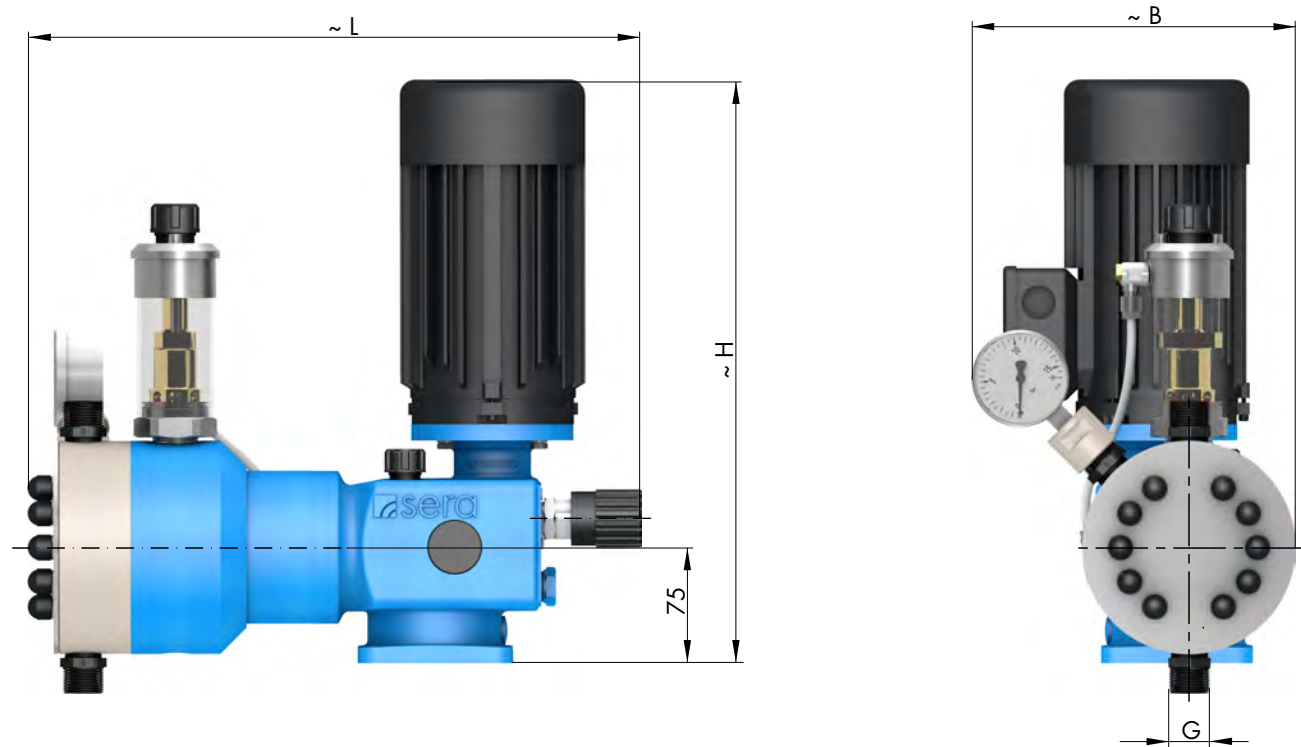
PUMP DATA			RF 409.2-... KM					
			7,5 KM	10 KM	18 KM	45 KM	95 KM	190 KM
Permissible pressure p_{2max} at the pump outlet	bar	plastic	10	10	10	10	10	10
		stainless steel	80	80	70	35	20	10
Nominal capacity QN at p_{2max}	l/h	50 Hz	0-7,5	0-10	0-18	0-45	0-95	0-190
		60 Hz	0-9,0	0-12	0-21	0-54	0-114	—
Quantity per stroke	ml/stroke	(100%)	1,25	1,1	2,0	5,0	10,6	21,1
Max. suction height	mWC		2	2	2	3	3	3
Min./max. permissible pressure at the pump inlet	bar	$p_{1min/max}$	-0,2/0	-0,2/0	-0,2/0	-0,3/0	-0,3/0	-0,3/0
Recommended nominal diameter DN of the connecting pipes	mm		10	10	10	10	15	15
Nominal stroke frequency	1/min	50 Hz	100	150	150	150	150	150
		60 Hz	120	180	180	180	180	180
Weight approx.	kg	plastic	15	15	15	18	18	18
		stainless steel	17	17	17	21	21	21

ELECTRICAL DATA		RF 409.2-... KM
Power consumption	kW	0,37
Voltage	V	230/400V 50Hz, 460V 60Hz
Frequency	Hz	50/60
Insulation class	ISO	F
Enclosure	F	55

Flow capacity 7,5 l/h ... 190 l/h
Admissible counterpressure up to 80 bar

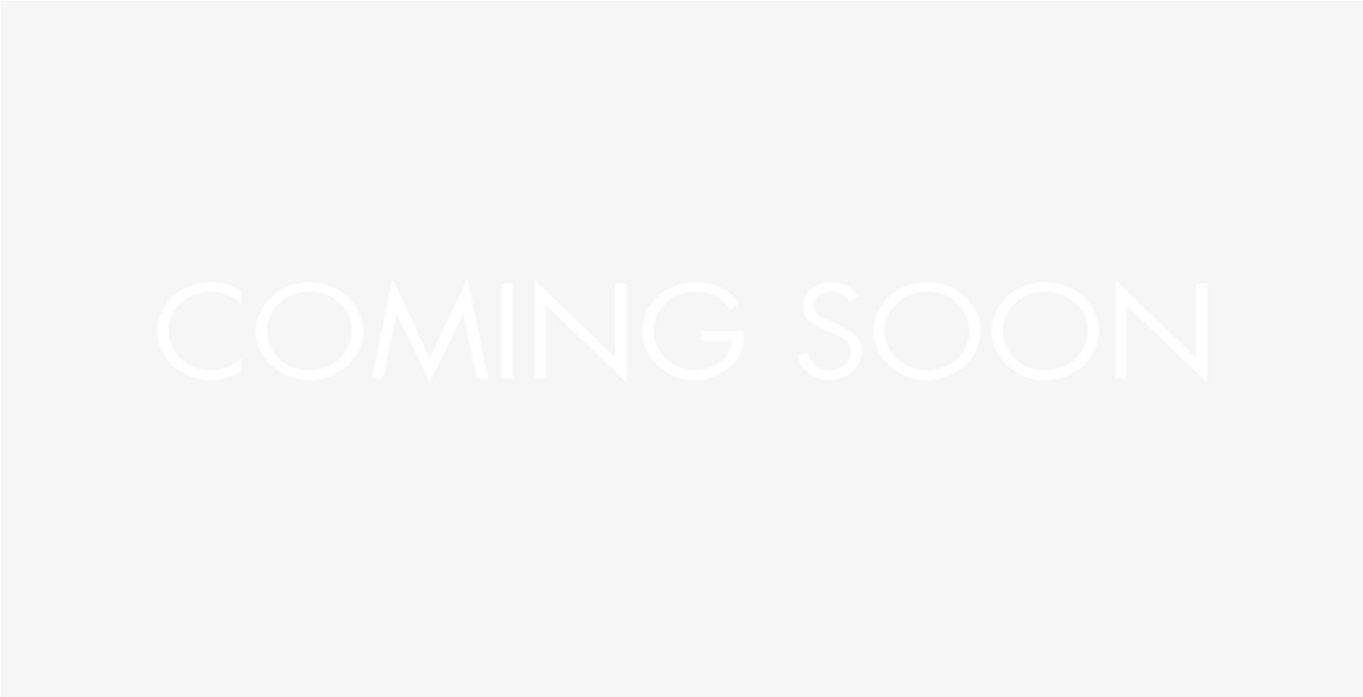
RF 409.2-...KM

DIMENSIONS



	G		B	L	H		B	L	H
RF 409.2-7,5 KM	G ¾	PVC, PP, PVDF	191	350	364	1.4571	191	347	364
RF 409.2-10 KM	G ¾		191	350	364		191	347	364
RF 409.2-18 KM	G ¾		191	350	364		191	347	364
RF 409.2-45 KM	G ¾		210	403	364		210	394	364
RF 409.2-95 KM	G ¾		210	403	364		210	394	364
RF 409.2-190 KM	G ¾		210	403	364		210	394	364

CHARACTERISTIC CURVES



PISTON DIAPHRAGM PUMPS

BASIC DESIGNS

PP

Pump body **PP**
 Valves **PP-FRP**
 Valve balls **PTFE**
 Multi-layer diaphragm **PTFE**

Type	EPDM Article-No.	Valve seals		Price (EUR)
		Price (EUR)	FPM Article-No.	
RF409.2-7,5KM	16023848	Ⓢ	16023278	Ⓢ
RF409.2-10KM	16023849	Ⓢ	16023246	Ⓢ
RF409.2-18KM	16023850	Ⓢ	16023279	Ⓢ
RF409.2-45KM	16023851	Ⓢ	16023247	Ⓢ
RF409.2-95KM	16023852	Ⓢ	16023265	Ⓢ
RF409.2-190KM	16023692	Ⓢ	16022281	Ⓢ

PVDF

Pump body **PVDF**
 Valves **PVDF-FRP**
 Valve balls **PTFE**
 Multi-layer diaphragm **PTFE**

Type	Valve seals		Price (EUR)
	FEP-covered Article-No.		
RF409.2-7,5KM	16023853	Ⓢ	
RF409.2-10KM	16023854	Ⓢ	
RF409.2-18KM	16023855	Ⓢ	
RF409.2-45KM	16023668	Ⓢ	
RF409.2-95KM	Ⓢ	Ⓢ	
RF409.2-190KM	Ⓢ	Ⓢ	

PVC-U

Pump body **PVC-U**
 Valves **PVC-U**
 Valve balls **PTFE**
 Multi-layer diaphragm **PTFE**

Type	EPDM Article-No.	Valve seals		Price (EUR)
		Price (EUR)	FPM Article-No.	
RF409.2-7,5KM	16023857	Ⓢ	16023863	Ⓢ
RF409.2-10KM	16023858	Ⓢ	16023864	Ⓢ
RF409.2-18KM	16023860	Ⓢ	16023865	Ⓢ
RF409.2-45KM	16023861	Ⓢ	16022551	Ⓢ
RF409.2-95KM	16023862	Ⓢ	16023866	Ⓢ
RF409.2-190KM	16023489	Ⓢ	16023867	Ⓢ

STAINLESS STEEL

Pump body **1.4571**
 Valves **1.4571/1.4581**
 Valve balls **1.4401**
 Multi-layer diaphragm **PTFE**

Type	Valve seals		Price (EUR)
	FEP-covered Article-No.		
RF409.2-7,5KM	16021275	Ⓢ	
RF409.2-10KM	16023868	Ⓢ	
RF409.2-18KM	16023420	Ⓢ	
RF409.2-45KM	16023663	Ⓢ	
RF409.2-95KM	16020303	Ⓢ	
RF409.2-190KM	16023375	Ⓢ	

OPTIONS



Diaphragm monitoring

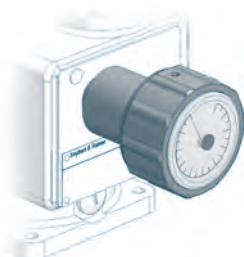
Basic version: optical diaphragm rupture indication with manometer

Surcharge (EUR)

Pressure switch IP65



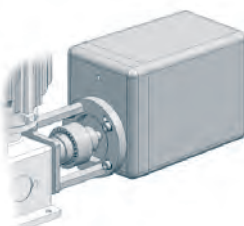
Pressure switch II2G EExde IIC T5 or T6 (acc. to ATEX95)



Stroke length adjustment

Surcharge (EUR)

with position indicator



Stroke length adjustment with actuator

(version uL/CSA on request)

Surcharge (EUR)

Actuator N C1-BA

230V $\pm 10\%$, 50/60Hz, 128s/10 U, 1,5Nm
incl. mounting set



Electronic positioning controller ESR-N
(only integrated in N C1-BA)

Input signal 0/4 - 20mA including
feedback signal 0/4 - 20mA



Actuator D30D-10-Ex
II2G EExde IIC T4 acc. to ATEX95

400V, 50Hz, 10 U/min
incl. mounting set and base plate



Stroke frequency monitoring

Inductive contact

Surcharge (EUR)

10 - 60 V DC, three-wire, PNP



NAMUR-design, II2G EExia IIC T6 (acc. to ATEX95)



PISTON DIAPHRAGM PUMPS

OPTIONS



Drive motor

- Please note: If one or several options 'drive motor' are required to fix the add. price of the drive, the calculation will be as follows: 'add. price special drive' plus the single options of the drive.
- Surcharge and availability must be requested from **sera**.

Surcharge special drive	Surcharge (EUR)
(all types)	▲

Special voltage	(all types)	
Enclosure IP65	(all types)	▲
Protection roof	(all types)	▲
VIK design	(all types)	
Electrical acc. to UL/CSA	(all types)	

Single-phase alternating current motor, 230V/50Hz with capacitor

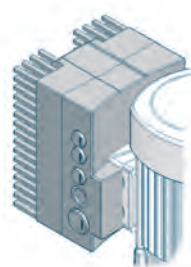
(all types)	▲
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II2G EExe II T4 (acc. to ATEX95)

(all types)	▲
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II2G EExde II C T4 (with PTC resistor, suitable for converter operation, 5-50Hz)

(all types)	▲
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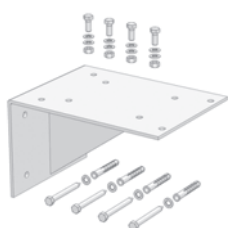
Stroke frequency adjustment, electrical

Frequency converter (Series INVEOR) mounted on drive motor
Input 4-20 mA

		Surcharge (EUR)
1-phase		
200-230V ±10%, 50/60Hz	0,37 kW	▲
3-phase		
400-480V ±10%, 50/60Hz	0,55 kW	▲

Frequency converter accessories	Article-No.	Price (EUR)
Operating module (incl. control cable)	90039445	▲
Communication cable for parameterization via PC	90042176	▲

ACCESSORIES



Bracket

for wall mounting (incl. mounting kit)	Article-No.	Price (EUR)
PP	90023848	▲
1.4301	90023875	▲



Connection pieces

Extensive range of connection / transition pieces and dosing hoses

Inserts and pipe sockets with union nuts, flange connections, hose screw connections, hose nozzles as well as dosing hoses and accessories.

to be found in **CHAPTER 4** of this catalog, from **page 442**

FITTINGS FOR THE SUCTION SIDE



Suction lance S-01 (without level switch)

Properties

- Compact, robust design
- Maintenance-free
- Easy handling
- High-quality materials
- individual special lengths up to max. 1.500mm possible

Basic version

- Suction lance: **PVC-U**
- Foot valve: **PVC-U**
- Seals: **EPDM** or **FPM**
- Valve ball: **PTFE**
- max. flow rate: **200 l/h**
- Standard length: **650mm, 1.000mm und 1.250mm**

Type	Length	Connection	Seals	Article-No.	Price (EUR)
S-01	650 mm	G 3/4	EPDM	37606591	▲
S-01	1.000 mm	G 3/4	EPDM	37606592	▲
S-01	1.250 mm	G 3/4	EPDM	37606593	▲
S-01	max. 1.500 mm	G 3/4	EPDM	37600705	▲
S-01	650 mm	G 3/4	FPM	37606594	▲
S-01	1.000 mm	G 3/4	FPM	37606595	▲
S-01	1.250 mm	G 3/4	FPM	37606596	▲
S-01	max. 1.500 mm	G 3/4	FPM	37600817	▲



Suction lance SL-12.1 (with level switch, 2-stage with plug, 3-pole)

Properties

- Compact design
- Height-adjustable
- 2-stage level monitoring
- Flexible connection
- Easy handling
- High-quality materials
- Maintenance-free
- incl. hose connections 4/6, 6/8, 6/12

Basic version

- Suction lance: **PVC-U**
- Foot valve: **PVC-U**
- Valve ball: **PTFE**
- Hose (inboard): **PE**
- Level switch: **PP**
2-stage, normally closed (NC)
5m cable (from foot valve) with plug, M12, 3-pole
- max. flow rate: **14 l/h (4/6) ... 35 l/h (6/12)**

Type	Length	Seals	Article-No.	Price (EUR)
RF409.2-7,5KM, ...-10KM, ...-18KM				
SL-12.1	600 mm	PTFE	37606120	▲
SL-12.1	1.000 mm	PTFE	37606117	▲
SL-12.1	1.200 mm	PTFE	37606118	▲

PISTON DIAPHRAGM PUMPS

FITTINGS FOR THE SUCTION SIDE



Suction lance SL-02 (with level switch, 1- or 2-stage with plug, 3-pole)

Properties

- Compact, robust design
- Safe
- Easy handling
- 1-stage level switch
- Flexible connection
- High-quality materials
- Maintenance-free

Basic version

- Suction lance: **PVC-U**
- Foot valve: **PVDF-GFK**
- Valve ball: **PTFE**
- Suction basket: **PP**
- Level switch: **PP**
1- or 2-stage, normally closed (NC)
5m cable (from foot valve) with plug, M12, 3-pole
- max. flow rate: **200 l/h**

Type	Level switch	Length	Connection	Seals	Article-No.	Price (EUR)
RF410.2-135ML						
SL-02	1-stage	630 mm	G ¾	EPDM	37606372	▲
SL-02	1-stage	1.000 mm	G ¾	EPDM	37606567	▲
SL-02	1-stage	1.200 mm	G ¾	EPDM	37606568	▲
SL-02	1-stage	630 mm	G ¾	FPM	37606566	▲
SL-02	1-stage	1.000 mm	G ¾	FPM	37606078	▲
SL-02	1-stage	1.200 mm	G ¾	FPM	37606569	▲
SL-02	2-stage	630 mm	G ¾	EPDM	37606570	▲
SL-02	2-stage	1.000 mm	G ¾	EPDM	37606572	▲
SL-02	2-stage	1.200 mm	G ¾	EPDM	37606573	▲
SL-02	2-stage	630 mm	G ¾	FPM	37606571	▲
SL-02	2-stage	1.000 mm	G ¾	FPM	37606577	▲
SL-02	2-stage	1.200 mm	G ¾	FPM	37606574	▲



ACCESSORIES

Drum connection adapter

Connection	Material	Seal	Article-No.	Price (EUR)
for external thread G=56.5x5 DIN2781	PP	EPDM	90011763	▲
	PP	FPM	90011762	▲
for internal thread (set) G=2 fine thread steel drum DIN-ISO 228-1	PP	EPDM	90046044	▲
G=v. Leer/tri-sure BCS 56x4 EN12708	PP	FPM	90046043	▲
for external thread G= DIN51	PP	EPDM	90011767	▲
	PP	FPM	90011766	▲
for wall duct G=2	PP/PVC	EPDM	90011773	▲
Wall thickness S=max. 6mm	PP/PVC	FPM	90011772	▲
other adapters			Ⓢ	Ⓢ

FITTINGS FOR THE SUCTION SIDE



Foot valve (Plastic)

Properties

- Compact design
- Easy installation
- High-quality materials
- Maintenance-free

Basic version

- Ball: **PTFE**
- Sieve: **ETFE**
- Mesh size: **1mm**

Type	DN	Connection	Material	Seals	Article-No.	Price (EUR)
781.1	8	G 3/4	PVDF/PVDF-GFK	FEP	30073008	▲



Foot valve (plastic)

Properties

- Compact design
- Easy installation
- High-quality materials
- Maintenance-free

Basic version

- Ball: **PTFE**
- Sieve: **ETFE**
- Mesh size: **1mm**

Type	DN	Connection	Material	Seals	Article-No.	Price (EUR)
731	8	G 3/4	PVC-U	EPDM	37601636	▲



Foot valve (Stainless steel)

Properties

- Compact design
- Easy installation
- High-quality materials
- Maintenance-free

Basic version

- Ball: **1.4401**
- Sieve: **ETFE**
- Mesh size: **1mm**

Type	DN	Connection	Material	Seals	Article-No.	Price (EUR)
731	8	G 3/4	1.4571	FEP	37601149	▲

PISTON DIAPHRAGM PUMPS

FITTINGS FOR THE SUCTION SIDE



Multi-function device

Properties

- Can be used as an priming aid and/or an calibration pot
- Compact design
- Flexible Connection
- Maintenance-free
- incl. glue joint (PVC-U) and welding joint (PP)

Basic version

- Housing: **PVC-U / PVC-transparent**
- Seals: **FPM or EPDM**
- max. operating pressure: **-0,5 ... +2 bar**

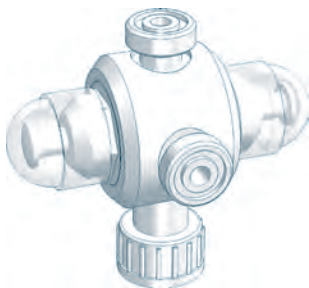
Type	DN	Connexion	Volume	Seals	Article-No.	Price (EUR)
RF409.2-7,5KM, ...-10KM, ...-18KM, ...-45KM						
MFD 60	8	G $\frac{3}{4}$	0,5 Ltr.	EPDM	37606311	▲
MFD 60	8	G $\frac{3}{4}$	0,5 Ltr.	FPM	37605864	▲
RF409.2-95KM, ...-190KM						
MFD 570	15	G1	2 Ltr.	EPDM	37606278	▲
MFD 570	15	G1	2 Ltr.	FPM	37605992	▲

ACCESSORIES



Hand vacuum pump	PVC/FPM			
	(incl. 1,5m PVC-Hose d=12/21)		37605682	▲

FITTINGS FOR THE PRESSURE SIDE



Multi function valve

Properties

- Maximum operating pressure 10 bar
- Compact design
- Easy installation
- Maintenance-free
- Venting
- Overpressure protection for dosing pumps
- Prevention of over conveyance

Basic version

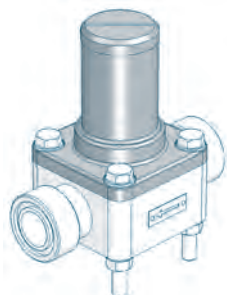
- Diaphragms: **PTFE-faced**
- Connection: **G $\frac{3}{4}$**
- **Relief valve side**
Opening pressure: **2 up to 10 bar** (adjustable)
- **Pressure keeping valve side**
Holding pressure: **1,0 - 1,5 bar**

Type	Valve body	Seals	Article-No.	Price (EUR)
RF409.2-7,5KM, ...-10KM, ...-18KM, ...-45KM				
MFV 050	PVC-U	EPDM	37600973	▲
MFV 050	PVC-U	FPM	37600974	▲
MFV 050	PVC-U	FEP	37600975	▲
MFV 050	PP	EPDM	37600982	▲
MFV 050	PP	FPM	37600983	▲
MFV 050	PP	FEP	37600984	▲

RF409.2-95KM, ...-190KM



FITTINGS FOR THE PRESSURE SIDE



Diaphragm relief valve

for overpressure protection

Properties

- Compact design
- Easy installation
- Maintenance-free
- High-quality materials

Basic version

- Valve body: **PVC-U, 1.4581, PP or PVDF**
- Diaphragm: **PTFE-faced**

Type	Nominal size	Connection	Valve body	Seals	Article-No.	Price (EUR)
------	--------------	------------	------------	-------	-------------	-------------

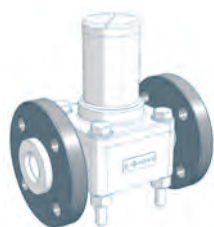
RF409.2-7,5KM, ...-10KM, ...-18KM, ...-45KM, ...-95KM

620.10	DN8	G 3/4	PVC-U	FPM	37603632	▲
620.10	DN8	G 3/4	PVC-U	EPDM	36200101	▲
620.10	DN8	G 3/4	PP	FPM	37603630	▲
620.10	DN8	G 3/4	PP	EPDM	37603629	▲
620.10	DN8	G 3/4	PVDF	FEP	37601792	▲
620.10	DN8	G 3/4	1.4581	FEP	37600670	▲

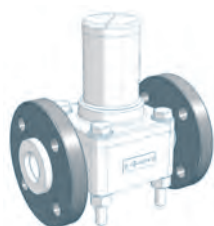
RF409.2-190KM

622.10	DN15	G 1	PVC-U	FPM	37604006	▲
622.10	DN15	G 1	PVC-U	EPDM	37603635	▲
622.10	DN15	G 1	PP	FPM	⌚	⌚
622.10	DN15	G 1	PP	EPDM	⌚	⌚
622.10	DN15	G 1	PP-GFK	FPM	37603634	▲
622.10	DN15	G 1	PP-GFK	EPDM	37600450	▲
622.10	DN15	G 1	PVDF	FEP	37600717	▲
622.10	DN15	G 1	PVDF-GFK	FEP	37601819	▲
622.10	DN15	G 1	1.4581	FEP	37600695	▲

OPTIONS



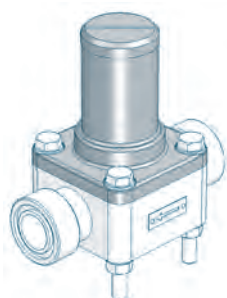
Type	Design	Loose flange	Surcharge [EUR]
620.10	PVC	Loose flange made of PVC-U	⌚
620.10	PP-FRP/PVDF-FRP	Loose flange made of PP with steel inlay	×
620.10	PP	Loose flange made of PP with steel inlay	▲
620.10	PVDF	Loose flange made of PP with steel inlay	▲



Type	Design	Loose flange	Surcharge [EUR]
622.10	PVC	Loose flange made of PVC-U	▲
622.10	PP-FRP/PVDF-FRP	Loose flange made of PP with steel inlay	⌚
622.10	PP	Loose flange made of PP with steel inlay	▲
622.10	PVDF	Loose flange made of PP with steel inlay	▲

PISTON DIAPHRAGM PUMPS

FITTINGS FOR THE PRESSURE SIDE



Diaphragm pressure keeping valve

to prevent over-conveyance

Properties

- Compact design
- Easy installation
- Maintenance-free
- High-quality materials

Basic version

- Valve body: **PVC-U, 1.4581, PP or PVDF**
- Diaphragm: **PTFE-faced**

Type	Nominal size	Connection	Valve body	Seals	Article-No.	Price (EUR)
------	--------------	------------	------------	-------	-------------	-------------

RF409.2-7,5KM, ...-10KM, ...-18KM, ...-45KM, ...-95KM

620.D	DN8	G 3/4	PVC-U	FPM	37600048	▲
620.D	DN8	G 3/4	PVC-U	EPDM	36201101	▲
620.D	DN8	G 3/4	PP	FPM	37600055	▲
620.D	DN8	G 3/4	PP	EPDM	36201105	▲
620.D	DN8	G 3/4	PVDF	FEP	37601827	▲
620.D	DN8	G 3/4	1.4581	FEP	37600525	▲

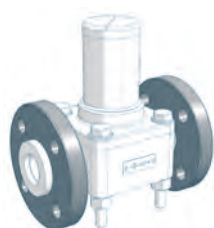
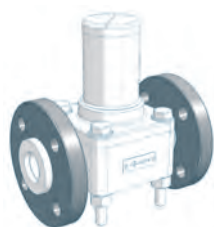
RF409.2-190KM

622.D	DN15	G 1	PVC-U	FPM	37600049	▲
622.D	DN15	G 1	PVC-U	EPDM	36221101	▲
622.D	DN15	G 1	PP	FPM	Ⓞ	Ⓞ
622.D	DN15	G 1	PP	EPDM	Ⓞ	Ⓞ
622.D	DN15	G 1	PP-GFK	FPM	37600056	▲
622.D	DN15	G 1	PP-GFK	EPDM	36221105	▲
622.D	DN15	G 1	PVDF	FEP	37602881	▲
622.D	DN15	G 1	PVDF-GFK	FEP	37601449	▲
622.D	DN15	G 1	1.4581	FEP	37600538	▲

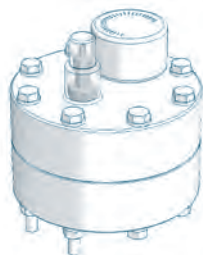
OPTIONS

Type	Design	Loose flange	Surcharge [EUR]
620.D	PVC	Loose flange made of PVC-U	Ⓞ
620.D	PP-FRP/PVDF-FRP	Loose flange made of PP with steel inlay	×
620.D	PP	Loose flange made of PP with steel inlay	▲
620.D	PVDF	Loose flange made of PP with steel inlay	▲

Type	Design	Loose flange	Surcharge [EUR]
622.D	PVC	Loose flange made of PVC-U	▲
622.D	PP-FRP/PVDF-FRP	Loose flange made of PP with steel inlay	Ⓞ
622.D	PP	Loose flange made of PP with steel inlay	▲
622.D	PVDF	Loose flange made of PP with steel inlay	▲



FITTINGS FOR THE PRESSURE SIDE



Diaphragm pulsation damper (Plastic, PTFE-diaphragm, max. 10 bar)

Properties

- Any mounting position
- Easy installation
- Long service life
- Easy handling
- High-quality materials
- Low maintenance

Type	Connection	max. Pressure	Material	Diaphragm	Article-No.	Price (EUR)
RF409.2-7,5KM, ...-10KM, ...-18KM						
720.1	G ½	10 bar	PVC-U	PTFE	37601848	▲
720.1	G ½	10 bar	PP	PTFE	37601856	▲
720.1	G ½	10 bar	PVDF	PTFE	37601857	▲

ACCESSORIES

Connection adapter



Thread connection	G3/4 male	PVC-U	EPDM	90021733	▲
Connction to pulsation damper	G1/2 male	PVC-U	FPM	90025079	▲
		PP	EPDM	90038083	▲
		PP	FPM	90038082	▲
		PVDF	FEP	⌚	⌚

Retaining clamp



(2 Piece each pulsation damper)	PP	d 16	90010649	▲
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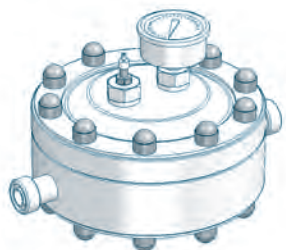
Filling pump FLP 2 for filling device



with manometer, max. 7 bar incl. 2m hose and coupling for air valve	90009396	▲
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PISTON DIAPHRAGM PUMPS

FITTINGS FOR THE PRESSURE SIDE



Diaphragm pulsation damper (Plastic, PTFE(-faced) diaphragm, max. 10 bar)

Properties

- Any mounting position
- Easy installation
- Long service life
- Easy handling
- High-quality materials
- Low maintenance
- Diaphragm: PTFE-faced

Type	Connection	max. Pressure	Material	Seals	Article-No.	Price (EUR)
------	------------	---------------	----------	-------	-------------	-------------

RF409.2-45KM

721.2	G 3/4	10 bar	PVC-U	EPDM	37602014	▲
721.2	G 3/4	10 bar	PVC-U	FPM	37602013	▲
721.2	G 3/4	10 bar	PP	EPDM	37603419	▲
721.2	G 3/4	10 bar	PP	FPM	37602017	▲
721.2	G 3/4	10 bar	PVDF	FEP	37604046	▲

RF409.2-95KM, ...-190KM

722.1	G 1	10 bar	PVC-U	EPDM	37600647	▲
722.1	G 1	10 bar	PVC-U	FPM	30100008	▲
722.1	G 1	10 bar	PP	EPDM	37600676	▲
722.1	G 1	10 bar	PP	FPM	30100009	▲
722.1	G 1	10 bar	PVDF	FEP	37601852	▲

ACCESSORIES



Filling pump FLP 2 for filling device

with manometer, max. 7 bar incl. 2m hose and coupling for air valve	90009396	▲
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Retaining clamp

(2 Piece each pulsation damper)	PP	d 25	90010651	▲
---------------------------------	----	------	----------	---

FITTINGS FOR THE PRESSURE SIDE



Diaphragm pulsation damper (Stainless steel, max. 10 bar)

Properties

- Any mounting position
- Easy installation
- Long service life
- Easy handling
- High-quality materials
- Low maintenance

Type	Connection	max.Pressure	Material	Diaphragm	Article-No.	Price (EUR)
RF409.2-7,5KM, ...-10KM, ...-18KM, ...-45KM						
810.1-0,16/10	G ½	10 bar	1.4571	Butyl	37603720	▲
810.1-0,16/10	G ½	10 bar	1.4571	FPM	37603724	▲
810.1-0,16/10	G ½	10 bar	1.4571	PTFE	×	×
RF409.2-95KM, ...-190KM						
810.1-0,32/10	G ½	10 bar	1.4571	Butyl	37603721	▲
810.1-0,32/10	G ½	10 bar	1.4571	FPM	37603725	▲
810.1-0,32/10	G ½	10 bar	1.4571	PTFE	×	×

ACCESSORIES

Filling- and pressure measuring device

(mounted on pulsation damper)



Design: Plastic	Manometer: 0-16 bar Measuring system: copper alloyed	●
Design: Stainless steel	Manometer: 0-16 bar, glycerine-damped Measuring system: copper alloyed Housing: 1.4301	▲
Filling pump FLP 2 for filling device		
with manometer, max. 7 bar incl. 2m hose and coupling for air valve		90009396 ▲



PISTON DIAPHRAGM PUMPS

FITTINGS FOR THE PRESSURE SIDE



Diaphragm pulsation damper (Stainless steel, max. 100-180 bar)

Properties

- Any mounting position
- Easy installation
- Long service life
- Easy handling
- High-quality materials
- Low maintenance

Type	Connection	max.Pressure	Material	Diaphragm	Article-No.	Price (EUR)
RF409.2-7,5KM, ...-10KM, ...-18KM, ...-45KM						
810.1-0,16/180	G ½	180 bar	1.4571	Butyl	90008811	▲
810.1-0,16/180	G ½	180 bar	1.4571	FPM	90009498	▲
810.1-0,16/180	G ½	180 bar	1.4571	PTFE	×	×
RF409.2-95KM, ...-190KM						
810.1-0,32/160	G ½	160 bar	1.4571	Butyl	90010409	▲
810.1-0,32/160	G ½	160 bar	1.4571	FPM	90010983	▲
810.1-0,32/160	G ½	160 bar	1.4571	PTFE	×	×

ACCESSORIES



Filling- and pressure measuring device

Design: removeable
Manometer d63, plastic housing, measuring system: copper alloyed
incl. 2,5m filling hose, connection M14x1,5

0 - 25 bar	37601674	▲
0 - 100 bar	37601673	▲
0 - 250 bar	30066005	▲



Injection fitting

Properties

- incl. injection lance for better mixing
- Easy installation
- Any mounting position
- Maintenance-free
- High-quality materials

Basic version

- Cone-type check valve (spring loaded)
- Shut-off ball valve
- Injection lance (L=150mm)
- max. operating pressure: 10 bar

Type	DN	Inlet	Outlet	Material	Seals	Article-No.	Price (EUR)
8061.1	10	G ¾	R ½	PVC-U	EPDM	37602105	▲
8061.1	10	G ¾	R ½	PVC-U	FPM	37602106	▲
8061.1	10	G ¾	R ½	PP	EPDM	37602107	▲
8061.1	10	G ¾	R ½	PP	FPM	37602108	▲
8061.1	10	G ¾	R ½	PVDF	FPM	37602109	▲

FITTINGS FOR THE PRESSURE SIDE



Dosing valve (Plastic)

Properties

- Compact design
- Any mounting position
- Maintenance-free
- High-quality materials

Basic version

- integrated injection lance
- Valve ball: **PTFE**
- Seals: **EPDM** or **FPM**
- Spring: **Hastelloy C4**

Type	DN	Inlet	Outlet	Material	Seal	Article-No.	Price (EUR)
691.2	8	G 3/4	R 1/2	PVC-U	EPDM	37606318	▲
691.2	8	G 3/4	R 1/2	PVC-U	FPM	37605769	▲
691.2	8	G 3/4	R 1/2	PP-GFK	EPDM	37605768	▲
691.2	8	G 3/4	R 1/2	PP-GFK	FPM	37606317	▲



Dosing valve (Plastic)

Properties

- Compact design
- Any mounting position
- Maintenance-free
- High-quality materials

Basic version

- Valve ball: **PTFE**
- Spring: **Hastelloy C4**

Type	DN	Inlet	Outlet	Material	Seal	Article-No.	Price (EUR)
691.1	8	G 3/4	R 1/2	PVDF/-GFK	FEP	30072015	▲



Dosing valve (Stainless steel)

Properties

- Compact design
- Any mounting position
- Maintenance-free
- High-quality materials

Basic version

- Valve ball: **1.4401**
- Seals: **FEP-covered**
- Spring: **Hastelloy C4**

Type	DN	Inlet	Outlet	Material	Seal	Article-No.	Price (EUR)
691.1	8	G 3/4	R 1/2	1.4571	FEP	37600493	▲

PISTON DIAPHRAGM PUMPS



OVERVIEW

- Multi-layer diaphragm technology
- High dosing accuracy
- Safe to run dry
- Leakage free
- Low-maintenance
- User-friendly
- Motor suitable for operation with frequency converter
- Continuous, manual stroke length adjustment
- High-quality materials
- Robust, metallic drive housing

TECHNICAL DATA

PUMP DATA			RF 410.2-... KM					
			38 KM	76 KM	150 KM	310 KM	510 KM	850 KM
Permissible pressure p_{2max} at the pump outlet	bar	plastic	10	10	10	10	10 *	8
		stainless steel	80	70	40	20	14 *	8
Nominal capacity QN at p_{2max}	l/h	50 Hz	0-38	0-76	0-150	0-310	0-510	0-850
		60 Hz	0-45	0-90	0-180	0-372	0-610	0-1.020
Quantity per stroke	ml/stroke (100%)		6,5	13	25,8	53,3	87,6	186,4
Max. suction height	mWC		2	2	3	3	3	3
Min./max. permissible pressure at the pump inlet	bar	$p_{1min/max}$	-0,2/0	-0,2/0	-0,3/0	-0,3/0	-0,3/0	-0,3/0
Recommended nominal diameter of the connecting pipes	mm	DN	8	8	15	15	15	20
Nominal stroke frequency	1/min	50 Hz	97	97	97	97	97	76
		60 Hz	116	116	116	116	—	92
Weight approx.	kg	plastic	54	54	54	54	54	64
		stainless steel	60	60	60	60	60	82

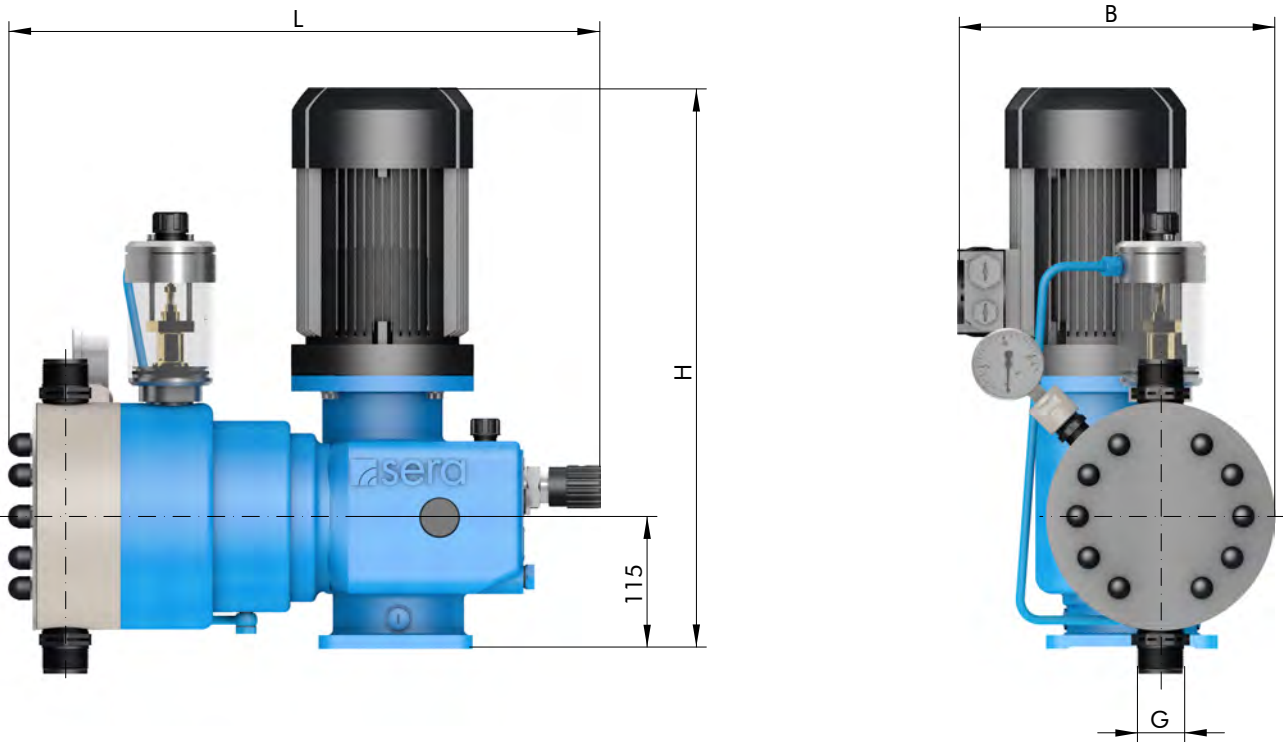
* at 60 Hz is the permissible pressure 8 bar

ELECTRICAL DATA		RF 410.2-... KM	
		38 KM ... 76 KM	150 KM ... 850 KM
Power consumption	kW	0,75	1,5
Voltage	V	230/400V 50Hz, 460V 60Hz	
Frequency	Hz	50/60	
Insulation class	ISO	F	
Enclosure	F	55	

Flow capacity 38 l/h ... 1.020 l/h
Admissible counterpressure up to 80 bar

RF 410.2-...KM

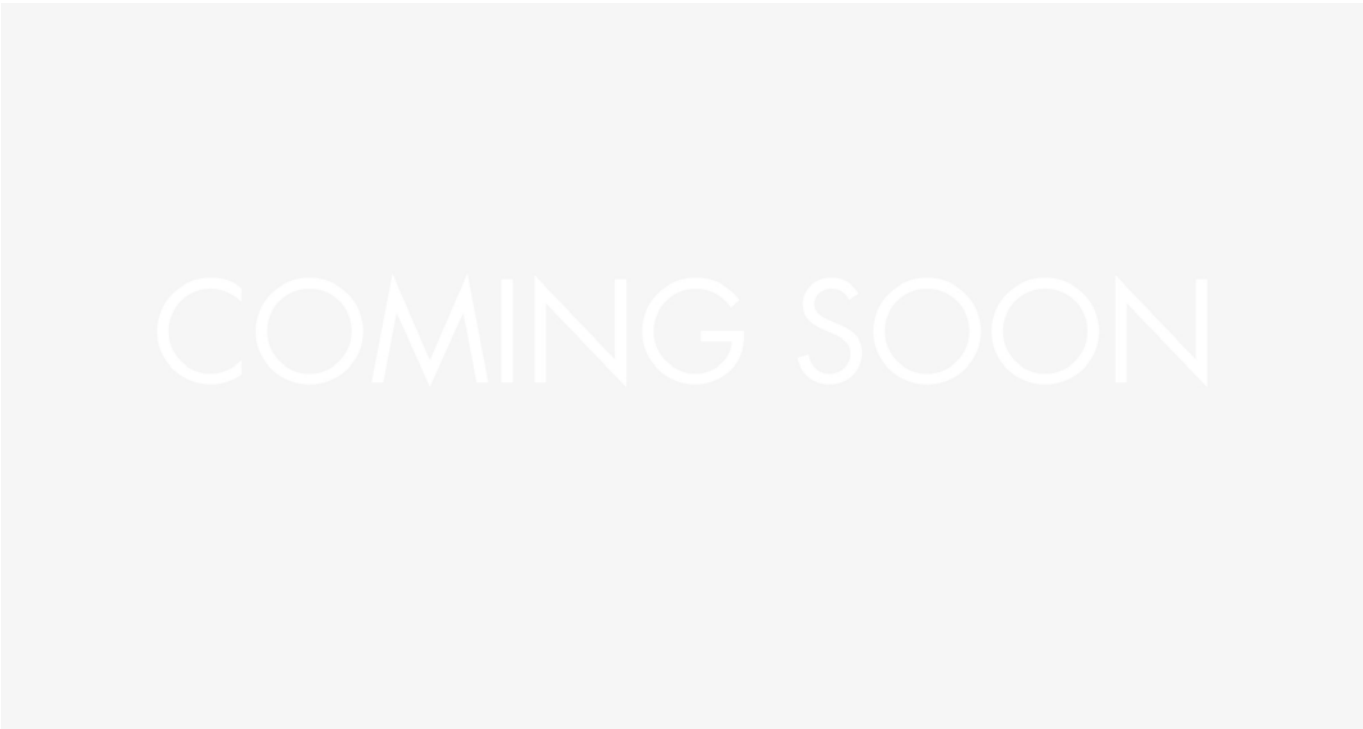
DIMENSIONS



	G		B	L	H		B	L	H
RF 410.2-38 KM, ...-76 KM	G ¾	PVC, PP, PVDF	280	495	490	1.4571	280	495	490
RF 410.2-150 KM	G 1¼ *		305	533	535		305	514	535
RF 410.2-310 KM	G 1¼ *		305	533	535		305	514	535
RF 410.2-510 KM	G 1¼		305	533	535		305	514	535
RF 410.2-850 KM	G 1¼		330	580	535		330	559	535

* PVC = G1

CHARACTERISTIC CURVES



PISTON DIAPHRAGM PUMPS

BASIC DESIGNS

PP

Pump body **PP**
Valves **PP-FRP**
Valve balls **PTFE**
Multi-layer diaphragm **PTFE**

Type	EPDM Article-No.	Valve seals		Price (EUR)
		Price (EUR)	FPM Article-No.	
RF410.2-38KM	☉	☉	16023269	☉
RF410.2-76KM	☉	☉	16023275	☉
RF410.2-150KM	16023869	☉	16023248	☉
RF410.2-310KM	16023507	☉	16023280	☉
RF410.2-510KM	16023870	☉	16023249	☉
RF410.2-850KM	16023908	☉	16019644	☉

PVDF

Pump body **PVDF**
Valves **PVDF-FRP**
Valve balls **PTFE**
Multi-layer diaphragm **PTFE**

Type	Valve seals FEP-covered Article-No.	Price (EUR)
RF410.2-38KM	☉	☉
RF410.2-76KM	☉	☉
RF410.2-150KM	16023871	☉
RF410.2-310KM	16023872	☉
RF410.2-510KM	16023873	☉
RF410.2-850KM	16023874	☉

PVC-U

Pump body **PVC-U**
Valves **PVC-U**
Valve balls **PTFE**
Multi-layer diaphragm **PTFE**

Type	EPDM Article-No.	Valve seals		Price (EUR)
		Price (EUR)	FPM Article-No.	
RF410.2-38KM	☉	☉	☉	☉
RF410.2-76KM	☉	☉	☉	☉
RF410.2-150KM	16023875	☉	16023877	☉
RF410.2-310KM	16023508	☉	16023509	☉
RF410.2-510KM	16023876	☉	16023878	☉
RF410.2-850KM	16015172	☉	16014805	☉

STAINLESS STEEL

Pump body **1.4571**
Valves **1.4571/1.4581**
Valve balls **1.4401**
Multi-layer diaphragm **PTFE**

Type	Valve seals FEP-covered Article-No.	Price (EUR)
RF410.2-38KM	☉	☉
RF410.2-76KM	☉	☉
RF410.2-150KM	16014699	☉
RF410.2-310KM	16023681	☉
RF410.2-510KM	16023510	☉
RF410.2-850KM	16016067	☉

OPTIONS



Diaphragm monitoring

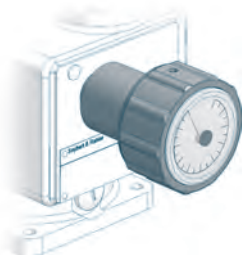
Basic version: optical diaphragm rupture indication with manometer

Surcharge (EUR)

Pressure switch IP65



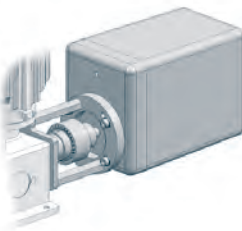
Pressure switch II2G EExde IIC T5 or T6 (acc. to ATEX95)



Stroke length adjustment

Surcharge (EUR)

with position indicator



Stroke length adjustment with actuator

(version uL/CSA on request)

Surcharge (EUR)

Actuator N1S

230V, 50/60Hz, 128s/10 U, 15Nm
Potentiometer 1 kΩ (incl. mounting set)



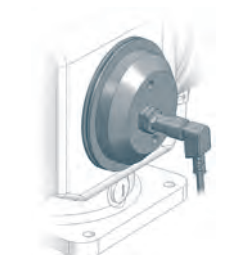
Electronic positioning controller ESR-N
(only integrated in N1S)

Input signal 0/4 - 20mA including
feedback signal 0/4 - 20mA



Actuator D30D-10-Ex
II2G EExde IIC T4 acc. to ATEX95

400V, 50Hz, 10 U/min
incl. mounting set and base plate



Stroke frequency monitoring

Inductive contact

Surcharge (EUR)

10 - 60 V DC, three-wire, PNP



NAMUR-design, II2G EExia IIC T6 (acc. to ATEX95)



PISTON DIAPHRAGM PUMPS

OPTIONS



Drive motor

- Please note: If one or several options 'drive motor' are required to fix the add. price of the drive, the calculation will be as follows: 'add. price special drive' plus the single options of the drive.
- Surcharge and availability must be requested from **sera**.

Surcharge special drive	Surcharge (EUR)
(all types)	▲

Special voltage	(all types)	Ⓞ
Enclosure IP65	(all types)	▲
Protection roof	(all types)	▲
VIK design	(all types)	Ⓞ
Electrical acc. to UL/CSA	(all types)	Ⓞ

Single-phase alternating current motor, 230V/50Hz with capacitor

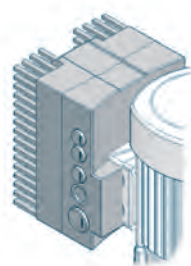
(all types)	▲
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II2G EExe II T4 (acc. to ATEX95)

(all types)	▲
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II2G EExde II C T4 (with PTC resistor, suitable for converter operation, 5-50Hz)

(all types)	▲
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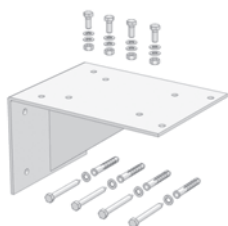
Stroke frequency adjustment, electrical

Frequency converter (Series INVEOR) mounted on drive motor
Input 4-20 mA

	Aufpreis (EUR)
3-phase	
400-480V ±10%, 50/60Hz	1,5 kW ▲

Frequency converter accessories	Article-No.	Price (EUR)
Operating module (incl. control cable)	90039445	▲
Communication cable for parameterization via PC	90042176	▲

ACCESSORIES



Bracket

for wall mounting (incl. mounting kit)

Article-No.

Price (EUR)

PP

90023849



1.4301

90023876



Connection pieces

Extensive range of connection / transition pieces and dosing hoses

Inserts and pipe sockets with union nuts, flange connections, hose screw connections, hose nozzles as well as dosing hoses and accessories.

to be found in **CHAPTER 4** of this catalog, from **page 442**

FITTINGS FOR THE SUCTION SIDE



Multi-function device

Properties

- Can be used as an priming aid and/or an calibration pot
- Compact design
- Flexible Connection
- Maintenance-free
- incl. glue joint (PVC-U) and welding joint (PP)

Basic version

- Housing: **PVC-U / PVC-transparent**
- Seals: **FPM or EPDM**
- max. operating pressure: **-0,5 ... +2 bar**

Type	DN	Connection	Volume	Seals	Article-No.	Price (EUR)
------	----	------------	--------	-------	-------------	-------------

RF410.2-38KM

MFD 60	8	G $\frac{3}{4}$	0,5 Ltr.	EPDM	37606311	▲
MFD 60	8	G $\frac{3}{4}$	0,5 Ltr.	FPM	37605864	▲

RF410.2-76KM, ...-150KM, ...-310KM, ...-510KM

MFD 570	15	G1	2 Ltr.	EPDM	37606278	▲
MFD 570	15	G1	2 Ltr.	FPM	37605992	▲

RF410.2-850KM

MFD 1500	20	G1 $\frac{1}{4}$	5 Ltr.	EPDM	37606316	▲
MFD 1500	20	G1 $\frac{1}{4}$	5 Ltr.	FPM	37606315	▲

ACCESSORIES

Hand vacuum pump

PVC/FPM

37605682



(incl. 1,5m PVC-Hose d=12/21)



PISTON DIAPHRAGM PUMPS

FITTINGS FOR THE SUCTION SIDE



Suction lance S-01 (without level switch)

Properties

- Compact, robust design
- Maintenance-free
- Easy handling
- High-quality materials
- individual special lengths
up to max. 1.500mm possible

Basic version

- Suction lance: **PVC-U**
- Foot valve: **PVC-U**
- Seals: **EPDM** or **FPM**
- Valve ball: **PTFE**
- max. flow rate: **200 l/h**
- Standard length: **650mm, 1.000mm und 1.250mm**

Type	Length	Connection	Seals	Article-No.	Price (EUR)
RF410.2-38KM, ...-76KM, ...-150KM					
S-01	650 mm	G ¾	EPDM	37606591	▲
S-01	1.000 mm	G ¾	EPDM	37606592	▲
S-01	1.250 mm	G ¾	EPDM	37606593	▲
S-01	max. 1.500 mm	G ¾	EPDM	37600705	▲
S-01	650 mm	G ¾	FPM	37606594	▲
S-01	1.000 mm	G ¾	FPM	37606595	▲
S-01	1.250 mm	G ¾	FPM	37606596	▲
S-01	max. 1.500 mm	G ¾	FPM	37600817	▲

FITTINGS FOR THE SUCTION SIDE



Suction lance SL-02 (with level switch, 1- or 2-stage with plug, 3-pole)

Properties

- Compact, robust design
- Safe
- Easy handling
- 1-stage level switch
- Flexible connection
- High-quality materials
- Maintenance-free

Basic version

- Suction lance: **PVC-U**
- Foot valve: **PVDF-GFK**
- Valve ball: **PTFE**
- Suction basket: **PP**
- Level switch: **PP**
1- or 2-stage, normally closed (NC)
5m cable (from foot valve) with plug, M12, 3-pole
- max. flow rate: **200 l/h**

Type	Level switch	Length	Connection	Seals	Article-No.	Price (EUR)
------	--------------	--------	------------	-------	-------------	-------------

RF410.2-38KM, ...-76KM, ...-150KM

SL-02	1-stage	630 mm	G ¾	EPDM	37606372	▲
SL-02	1-stage	1.000 mm	G ¾	EPDM	37606567	▲
SL-02	1-stage	1.200 mm	G ¾	EPDM	37606568	▲
SL-02	1-stage	630 mm	G ¾	FPM	37606566	▲
SL-02	1-stage	1.000 mm	G ¾	FPM	37606078	▲
SL-02	1-stage	1.200 mm	G ¾	FPM	37606569	▲
SL-02	2-stage	630 mm	G ¾	EPDM	37606570	▲
SL-02	2-stage	1.000 mm	G ¾	EPDM	37606572	▲
SL-02	2-stage	1.200 mm	G ¾	EPDM	37606573	▲
SL-02	2-stage	630 mm	G ¾	FPM	37606571	▲
SL-02	2-stage	1.000 mm	G ¾	FPM	37606577	▲
SL-02	2-stage	1.200 mm	G ¾	FPM	37606574	▲



ACCESSORIES

Drum connection adapter

Connection	Material	Seal	Article-No.	Price (EUR)
for external thread G=S65x5 DIN2781	PP	EPDM	90011763	▲
	PP	FPM	90011762	▲
for internal thread (set) G=2 fine thread steel drum DIN-ISO 228-1	PP	EPDM	90046044	▲
G=v. Leer/tri-sure BCS 56x4 EN12708	PP	FPM	90046043	▲
for external thread G= DIN51	PP	EPDM	90011767	▲
	PP	FPM	90011766	▲
for wall duct G=2 Wall thickness S=max. 6mm	PP/PVC	EPDM	90011773	▲
	PP/PVC	FPM	90011772	▲
other adapters			Ⓢ	Ⓢ

PISTON DIAPHRAGM PUMPS

FITTINGS FOR THE SUCTION SIDE



Suction lance SLP-15x.1 (with level switch, 1- or 2-stage)

Properties

- Compact, robust design
- Easy handling
- 1- or 2-stage level monitoring
- Protective tube
- Maintenance free
- High quality materials
- Protection class IP65

Basic version

- Suction lance: **PVC-U**
- Foot valve: **PVC-U**
- Valve ball: **PTFE**
- Seals: **EPDM** or **FPM**
- Level switch: **PP**
1- or 2-stage, normally closed (NC)
cable gland: **M12x1,5**
- max. flow rate: **700 l/h**

Type	Level switch	Length	Material	Seals	Article-No.	Price (EUR)
RF410.2-310KM, ...-510KM						
SLP-151.1	1-stage	750 mm	PVC-U	EPDM	37604108	▲
SLP-151.1	1-stage	750 mm	PVC-U	FPM	37604114	▲
SLP-151.1	1-stage	1.000 mm	PVC-U	EPDM	37604109	▲
SLP-151.1	1-stage	1.000 mm	PVC-U	FPM	37604115	▲
SLP-151.1	1-stage	1.250 mm	PVC-U	EPDM	37604110	▲
SLP-151.1	1-stage	1.250 mm	PVC-U	FPM	37604116	▲
SLP-152.1	2-stage	750 mm	PVC-U	EPDM	37604111	▲
SLP-152.1	2-stage	750 mm	PVC-U	FPM	37604117	▲
SLP-152.1	2-stage	1.000 mm	PVC-U	EPDM	37604112	▲
SLP-152.1	2-stage	1.000 mm	PVC-U	FPM	37604118	▲
SLP-152.1	2-stage	1.250 mm	PVC-U	EPDM	37604113	▲
SLP-152.1	2-stage	1.250 mm	PVC-U	FPM	37604119	▲

ACCESSORIES

Type	Designation	Article-No.	Price (EUR)
BCS 70x6 Di=50	Container screw connection for internal thread. Ventilation via tolerance of the inner diameter of the adapter or via separate ventilation of the container.	90028923	▲
G2 IBC	For IBC cover with G2 internal thread. Ventilation via adapter. Gas-tight design with „hose set“ possible.	90044282	▲
G2 universal	Bulkhead fitting with flat gasket (made of PVC-U). Ventilation via adapter. Gas-tight design with „hose set“ possible.	90044277	▲
Hose set	G3/4, d12, L=3m for gas tight container screwing for connection to On-site evacuation system	90044369	▲
Quiver	Quiver for storing/holding the suction lance (e.g. when changing containers)	90028919	▲
Control cable	Control cable for level input Cable socket M12x1, 3-pole, 5m length, loosely delivered	90031245	▲



Flow capacity 38 l/h ... 1.020 l/h
Admissible counterpressure up to 80 bar

RF 410.2-...KM



Foot valve (Plastic)

Properties

- Compact design
- Easy installation
- High-quality materials
- Maintenance-free

Basic version

- Ball: **PTFE**
- Sieve: **ETFE**
- Mesh size: **1mm**

Type	DN	Connection	Material	Seals	Article-No.	Price (EUR)
RF410.2-150KM, ...-310KM, ...-510KM						
783.1	20	G 1 1/4	PP/PP-GFK	EPDM	37600552	▲
783.1	20	G 1 1/4	PP/PP-GFK	FPM	37600553	▲
783.1	20	G 1 1/4	PVDF/PVDF-GFK	FEP	30073018	▲

RF410.2-850KM

×

×

×



Foot valve (Stainless steel)

Properties

- Compact design
- Easy installation
- High-quality materials
- Maintenance-free

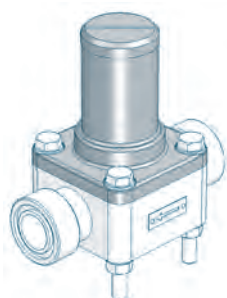
Basic version

- Ball: **1.4401**
- Sieve: **ETFE**
- Mesh size: **1mm**

Type	DN	Connection	Material	Seals	Article-No.	Price (EUR)
RF410.2-150KM, ...-310KM, ...-510KM						
732	15	G 1	1.4571	FEP	37603325	▲
RF410.2-850KM						
733	20	G 1 1/4	1.4571	FEP	37603962	▲

PISTON DIAPHRAGM PUMPS

FITTINGS FOR THE PRESSURE SIDE



Diaphragm relief valve

for overpressure protection

Properties

- Compact design
- Easy installation
- Maintenance-free
- High-quality materials

Basic version

- Valve body: **PVC-U, 1.4581, PP or PVDF**
- Diaphragm: **PTFE-faced**

Type	Nominal size	Connection	Valve body	Seals	Article-No.	Price (EUR)
------	--------------	------------	------------	-------	-------------	-------------

RF410.2-38KM

620.10	DN8	G 3/4	PVC-U	FPM	37603632	▲
620.10	DN8	G 3/4	PVC-U	EPDM	36200101	▲
620.10	DN8	G 3/4	PP	FPM	37603630	▲
620.10	DN8	G 3/4	PP	EPDM	37603629	▲
620.10	DN8	G 3/4	PVDF	FEP	37601792	▲
620.10	DN8	G 3/4	1.4581	FEP	37600670	▲

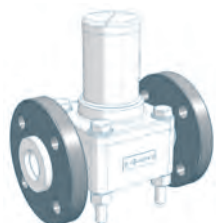
RF410.2-76KM, ...-150KM, ...-310KM, ...-510KM

622.10	DN15	G 1	PVC-U	FPM	37604006	▲
622.10	DN15	G 1	PVC-U	EPDM	37603635	▲
622.10	DN15	G 1	PP	FPM	⓪	⓪
622.10	DN15	G 1	PP	EPDM	⓪	⓪
622.10	DN15	G 1	PP-GFK	FPM	37603634	▲
622.10	DN15	G 1	PP-GFK	EPDM	37600450	▲
622.10	DN15	G 1	PVDF	FEP	37600717	▲
622.10	DN15	G 1	PVDF-GFK	FEP	37601819	▲
622.10	DN15	G 1	1.4581	FEP	37600695	▲

RF410.2-850KM

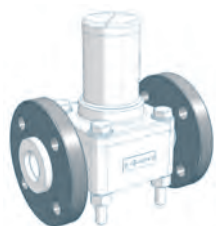
623.10	DN20	G 1 1/4	PVC-U	FPM	37600009	▲
623.10	DN20	G 1 1/4	PVC-U	EPDM	36230101	▲
623.10	DN20	G 1 1/4	PP	FPM	37600016	▲
623.10	DN20	G 1 1/4	PP	EPDM	36230105	▲
623.10	DN20	G 1 1/4	PVDF	FEP	37606304	▲

FITTINGS FOR THE PRESSURE SIDE

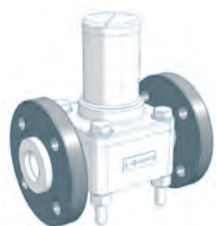


OPTIONS

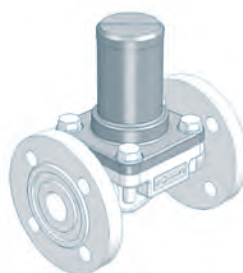
Type	Design	Loose flange	Surcharge [EUR]
620.10	PVC	Loose flange made of PVC-U	⌚
620.10	PP-FRP/PVDF-FRP	Loose flange made of PP with steel inlay	✕
620.10	PP	Loose flange made of PP with steel inlay	▲
620.10	PVDF	Loose flange made of PP with steel inlay	▲



Type	Design	Loose flange	Surcharge [EUR]
622.10	PVC	Loose flange made of PVC-U	▲
622.10	PP-FRP/PVDF-FRP	Loose flange made of PP with steel inlay	⌚
622.10	PP	Loose flange made of PP with steel inlay	▲
622.10	PVDF	Loose flange made of PP with steel inlay	▲



Type	Design	Loose flange	Surcharge [EUR]
623.10	PVC	Loose flange made of PVC-U	▲
623.10	PP-FRP/PVDF-FRP	Loose flange made of PP with steel inlay	✕
623.10	PP	Loose flange made of PP with steel inlay	▲
623.10	PVDF	Loose flange made of PP with steel inlay	▲



Diaphragm relief valve (with fixed flanges)

for overpressure protection

Properties

- Compact design
- Easy installation
- Maintenance-free
- High-quality materials

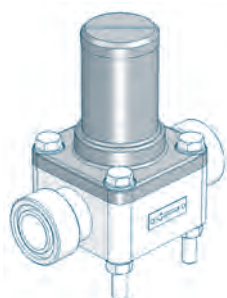
Basic design

- Flanges acc. to **DIN 2501**
- Valve body: **1.4581** or **GG**
- Diaphragm: **PTFE-faced**

Type	Nominal size	Connection	Valve body	Article-No.	Price (EUR)
RF410.2-850KM					
623.10	DN20	DIN 2501	1.4581	36230104	▲
623.10	DN20	DIN 2501	GG	37600038	▲

PISTON DIAPHRAGM PUMPS

FITTINGS FOR THE PRESSURE SIDE



Diaphragm pressure keeping valve

to prevent over-conveyance

Properties

- Compact design
- Easy installation
- Maintenance-free
- High-quality materials

Basic version

- Valve body: **PVC-U, 1.4581, PP or PVDF**
- Diaphragm: **PTFE-faced**

Type	Nominal size	Connection	Valve body	Seals	Article-No.	Price (EUR)
------	--------------	------------	------------	-------	-------------	-------------

RF410.2-38KM

620.D	DN8	G ¾	PVC-U	FPM	37600048	▲
620.D	DN8	G ¾	PVC-U	EPDM	36201101	▲
620.D	DN8	G ¾	PP	FPM	37600055	▲
620.D	DN8	G ¾	PP	EPDM	36201105	▲
620.D	DN8	G ¾	PVDF	FEP	37601827	▲
620.D	DN8	G ¾	1.4581	FEP	37600525	▲

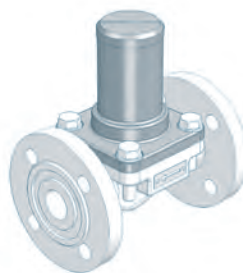
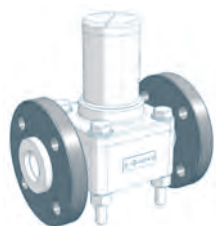
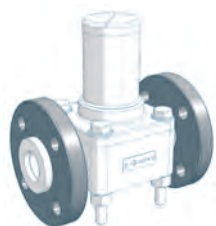
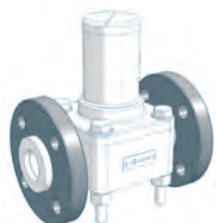
RF410.2-150KM, ...-310KM, ...-510KM

622.D	DN15	G 1	PVC-U	FPM	37600049	▲
622.D	DN15	G 1	PVC-U	EPDM	36221101	▲
622.D	DN15	G 1	PP	FPM	⓪	⓪
622.D	DN15	G 1	PP	EPDM	⓪	⓪
622.D	DN15	G 1	PP-GFK	FPM	37600056	▲
622.D	DN15	G 1	PP-GFK	EPDM	36221105	▲
622.D	DN15	G 1	PVDF	FEP	37602881	▲
622.D	DN15	G 1	PVDF-GFK	FEP	37601449	▲
622.D	DN15	G 1	1.4581	FEP	37600538	▲

RF410.2-850KM

623.D	DN20	G 1¼	PVC-U	FPM	37600050	▲
623.D	DN20	G 1¼	PVC-U	EPDM	36231101	▲
623.D	DN20	G 1¼	PP	FPM	37600057	▲
623.D	DN20	G 1¼	PP	EPDM	36231105	▲
623.D	DN20	G 1¼	PVDF	FEP	37606309	▲

FITTINGS FOR THE PRESSURE SIDE



OPTIONS

Type	Design	Loose flange	Surcharge [EUR]
620.D	PVC	Loose flange made of PVC-U	⌚
620.D	PP-FRP/PVDF-FRP	Loose flange made of PP with steel inlay	✕
620.D	PP	Loose flange made of PP with steel inlay	▲
620.D	PVDF	Loose flange made of PP with steel inlay	▲

Type	Design	Loose flange	Surcharge [EUR]
622.D	PVC	Loose flange made of PVC-U	▲
622.D	PP-FRP/PVDF-FRP	Loose flange made of PP with steel inlay	⌚
622.D	PP	Loose flange made of PP with steel inlay	▲
622.D	PVDF	Loose flange made of PP with steel inlay	▲

Type	Design	Loose flange	Surcharge [EUR]
623.D	PVC	Loose flange made of PVC-U	▲
623.D	PP-FRP/PVDF-FRP	Loose flange made of PP with steel inlay	✕
623.D	PP	Loose flange made of PP with steel inlay	▲
623.D	PVDF	Loose flange made of PP with steel inlay	▲

Diaphragm pressure keeping valve (with fixed flanges)

to prevent over-conveyance

Properties

- Compact design
- Easy installation
- Maintenance-free
- High-quality materials

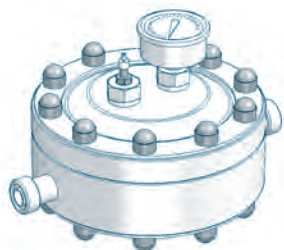
Basic design

- Flanges acc. to **DIN 2501**
- Valve body: **1.4581** or **GG**
- Diaphragm: **PTFE-faced**

Type	Nominal size	Connection	Valve body	Article-No.	Price (EUR)
RF410.2-850KM					
623.D	DN20	DIN 2501	1.4581	36231104	▲
623.D	DN20	DIN 2501	GG	37600080	▲

PISTON DIAPHRAGM PUMPS

FITTINGS FOR THE PRESSURE SIDE



Diaphragm pulsation damper (Plastic, PTFE(-faced) diaphragm, max. 10 bar)

Properties

- Any mounting position
- Easy installation
- Long service life
- Easy handling
- High-quality materials
- Low maintenance
- Diaphragm: PTFE-faced

Type	Connection	max. Pressure	Material	Seals	Article-No.	Price (EUR)
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RF410.2-38KM

721.2	G ¾	10 bar	PVC-U	EPDM	37602014	▲
721.2	G ¾	10 bar	PVC-U	FPM	37602013	▲
721.2	G ¾	10 bar	PP	EPDM	37603419	▲
721.2	G ¾	10 bar	PP	FPM	37602017	▲
721.2	G ¾	10 bar	PVDF	FEP	37604046	▲

RF410.2-76KM, ...-150KM, ...-310KM, ...-510KM

723.1	G 1¼	10 bar	PVC-U	EPDM	37601002	▲
723.1	G 1¼	10 bar	PVC-U	FPM	30100011	▲
723.1	G 1¼	10 bar	PP	EPDM	37603271	▲
723.1	G 1¼	10 bar	PP	FPM	30100012	▲
723.1	G 1¼	10 bar	PVDF	FEP	37600918	▲

ACCESSORIES



Filling pump FLP 2 for filling device

with manometer, max. 7 bar incl. 2m hose and coupling for air valve	90009396	▲
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721.2

Retaining clamp

(2 Piece each pulsation damper)	PP	d 25	
			90010651 ▲



723.1

Bracket

for wall mounting	PP		90011722 ▲
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FITTINGS FOR THE PRESSURE SIDE



Diaphragm pulsation damper (Plastic, with elastomere diaphragm, max. 10 bar)

Properties

- Any mounting position
- Easy installation
- Long service life
- Easy handling
- High-quality materials
- Low maintenance

Type	Connection	max. Pressure	Housing	Diaphragm Seals	Article-No.	Price (EUR)
RF410.2-850KM						
713.1	G 1 ¼	10 bar	PVC-U	EPDM	30071038	▲
713.1	G 1 ¼	10 bar	PVC-U	FPM	30071039	▲
713.1	G 1 ¼	10 bar	PP	EPDM	30071040	▲
713.1	G 1 ¼	10 bar	PP	FPM	30071041	▲
713.1	G 1 ¼	10 bar	PVDF	EPDM	30071060	▲
713.1	G 1 ¼	10 bar	PVDF	FPM	30071061	▲

OPTIONS

Loose-type flanges

PVC-design	Loose flange, PVC-U	DN20	▲
PP-/PVDF-design	Loose flange, PP with steel insert	DN20	▲

ACCESSORIES

Bracket	PP	90010913	▲
for wall mounting	1.4301	90010914	▲
	Steel (color treated)	90010915	▲

Filling pump FLP 2

for filling device			
with manometer, max. 7 bar incl. 2m hose and coupling for air valve	90009396	▲	



PISTON DIAPHRAGM PUMPS

FITTINGS FOR THE PRESSURE SIDE



Diaphragm pulsation damper (Stainless steel, max. 10 bar)

Properties

- Any mounting position
- Easy installation
- Long service life
- Easy handling
- High-quality materials
- Low maintenance

Type	Connection	max.Pressure	Material	Diaphragm	Article-No.	Price (EUR)
RF410.2-38KM						
810.1-0,32/10	G ½	10 bar	1.4571	Butyl	37603721	▲
810.1-0,32/10	G ½	10 bar	1.4571	FPM	37603725	▲
810.1-0,32/10	G ½	10 bar	1.4571	PTFE	×	×
RF410.2-150KM, ...-310KM, ...-510KM						
810.1-0,75/10	G ½	10 bar	1.4571	Butyl	37603722	▲
810.1-0,75/10	G ½	10 bar	1.4571	FPM	37603726	▲
810.1-0,75/10	G ½	10 bar	1.4571	PTFE	37606307	▲
RF410.2-850KM						
810.1-2,0/10	G ¾	10 bar	1.4571	Butyl	37603723	▲
810.1-2,0/10	G ¾	10 bar	1.4571	FPM	37603727	▲
810.1-2,0/10	G ¾	10 bar	1.4571	PTFE	37606308	▲

ACCESSORIES

Filling- and pressure measuring device

(mounted on pulsation damper)

Design: Plastic	Manometer: 0-16 bar Measuring system: copper alloyed	●
Design: Stainless steel	Manometer: 0-16 bar, glycerine-damped Measuring system: copper alloyed Housing: 1.4301	▲

Filling pump FLP 2 for filling device

with manometer, max. 7 bar incl. 2m hose and coupling for air valve	90009396	▲
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FITTINGS FOR THE PRESSURE SIDE



Diaphragm pulsation damper (Stainless steel, max. 100-180 bar)

Properties

- Any mounting position
- Easy installation
- Long service life
- Easy handling
- High-quality materials
- Low maintenance

Type	Connection	max.Pressure	Material	Diaphragm	Article-No.	Price (EUR)
RF410.2-38KM						
810.1-0,32/160	G ½	160 bar	1.4571	Butyl	90010409	▲
810.1-0,32/160	G ½	160 bar	1.4571	FPM	90010983	▲
810.1-0,32/160	G ½	160 bar	1.4571	PTFE	×	×
RF410.2-76KM, ...-150KM, ...-310KM, ...-510KM						
810.1-0,75/140	G ½	140 bar	1.4571	Butyl	37600313	▲
810.1-0,75/140	G ½	140 bar	1.4571	FPM	37600148	▲
810.1-0,75/140	G ½	140 bar	1.4571	PTFE	37606302	▲
RF410.2-850KM						
810.1-2,0/100	G ¾	100 bar	1.4571	Butyl	37600314	▲
810.1-2,0/100	G ¾	100 bar	1.4571	FPM	37600149	▲
810.1-2,0/100	G ¾	100 bar	1.4571	PTFE	37606303	▲

ACCESSORIES



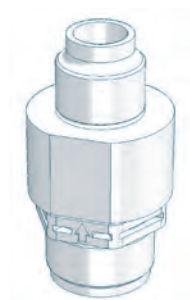
Filling- and pressure measuring device

Design: removeable
Manometer d63, plastic housing, measuring system: copper alloyed
incl. 2,5m filling hose, connection M14x1,5

0 - 25 bar	37601674	▲
0 - 100 bar	37601673	▲
0 - 250 bar	30066005	▲

PISTON DIAPHRAGM PUMPS

FITTINGS FOR THE PRESSURE SIDE



Dosing valve (Plastic)

Properties

- Compact design
- Any mounting position
- Maintenance-free
- High-quality materials

Basic version

- Valve ball: **PTFE**
- Spring: **Hastelloy C4**

Type	DN	Inlet	Outlet	Material	Seal	Article-No.	Price (EUR)
RF410.2-38KM							
691.1	8	G 3/4	R 1/2	PVDF/-GFK	FEP	30072015	▲
RF410.2-76KM, ...-150KM, ...-310KM, ...-510KM							
693.1	20	G 1 1/4	R 1 1/4	PP-GFK	EPDM	37604661	▲
693.1	20	G 1 1/4	R 1 1/4	PP-GFK	FPM	37603317	▲
693.1	20	G 1 1/4	R 1 1/4	PVDF-GFK	FEP	30072027	▲



Dosing valve (Stainless steel)

Properties

- Compact design
- Any mounting position
- Maintenance-free
- High-quality materials

Basic version

- Valve ball: **1.4401**
- Seals: **FEP-covered**
- Spring: **Hastelloy C4**

Type	DN	Inlet	Outlet	Material	Seal	Article-No.	Price (EUR)
RF410.2-38KM							
691.1	8	G 3/4	R 1/2	1.4571	FEP	37600493	▲
RF410.2-76KM, ...-150KM, ...-310KM, ...-510KM							
692.1	15	G 1	R 1	1.4571	FEP	37600669	52▲00
RF410.2-850KM							
693.1	20	G 1 1/4	R 1 1/4	1.4571	FEP	37600789	▲

FITTINGS FOR THE PRESSURE SIDE



Injection fitting

Properties

- incl. injection lance for better mixing
- Easy installation
- Any mounting position
- Maintenance-free
- High-quality materials

Basic version

- Cone-type check valve (spring loaded)
- Shut-off ball valve
- Injection lance (L=150mm)
- max. operating pressure: 10 bar

Type	DN	Inlet	Outlet	Material	Seals	Article-No.	Price (EUR)
------	----	-------	--------	----------	-------	-------------	-------------

RF410.2-38KM

8061.1	10	G ¾	R ½	PVC-U	EPDM	37602105	▲
8061.1	10	G ¾	R ½	PVC-U	FPM	37602106	▲
8061.1	10	G ¾	R ½	PP	EPDM	37602107	▲
8061.1	10	G ¾	R ½	PP	FPM	37602108	▲
8061.1	10	G ¾	R ½	PVDF	FPM	37602109	▲

RF410.2-76KM, ...-150KM, ...-310KM, ...-510KM

8062.1	15	G 1	R ¾	PVC-U	EPDM	37602110	▲
8062.1	15	G 1	R ¾	PVC-U	FPM	37602111	▲
8062.1	15	G 1	R ¾	PP	EPDM	37602112	▲
8062.1	15	G 1	R ¾	PP	FPM	37602113	▲
8062.1	15	G 1	R ¾	PVDF	FPM	37602114	▲

RF410.2-850KM

8063.1	20	G 1¼	R 1	PVC-U	EPDM	37602115	▲
8063.1	20	G 1¼	R 1	PVC-U	FPM	37602116	▲
8063.1	20	G 1¼	R 1	PP	EPDM	37602117	▲
8063.1	20	G 1¼	R 1	PP	FPM	37602118	▲
8063.1	20	G 1¼	R 1	PVDF	FPM	37602119	▲

PISTON PUMPS



OVERVIEW

- Wide pressure range
- High operational reliability
- High dosing accuracy
- Low-maintenance
- User-friendly
- Integrateable in automatic processes
- Continuous, manual stroke length adjustment
- Motor suitable for operation with frequency converter
- High-quality materials
- Robust, metallic drive housing

TECHNICAL DATA

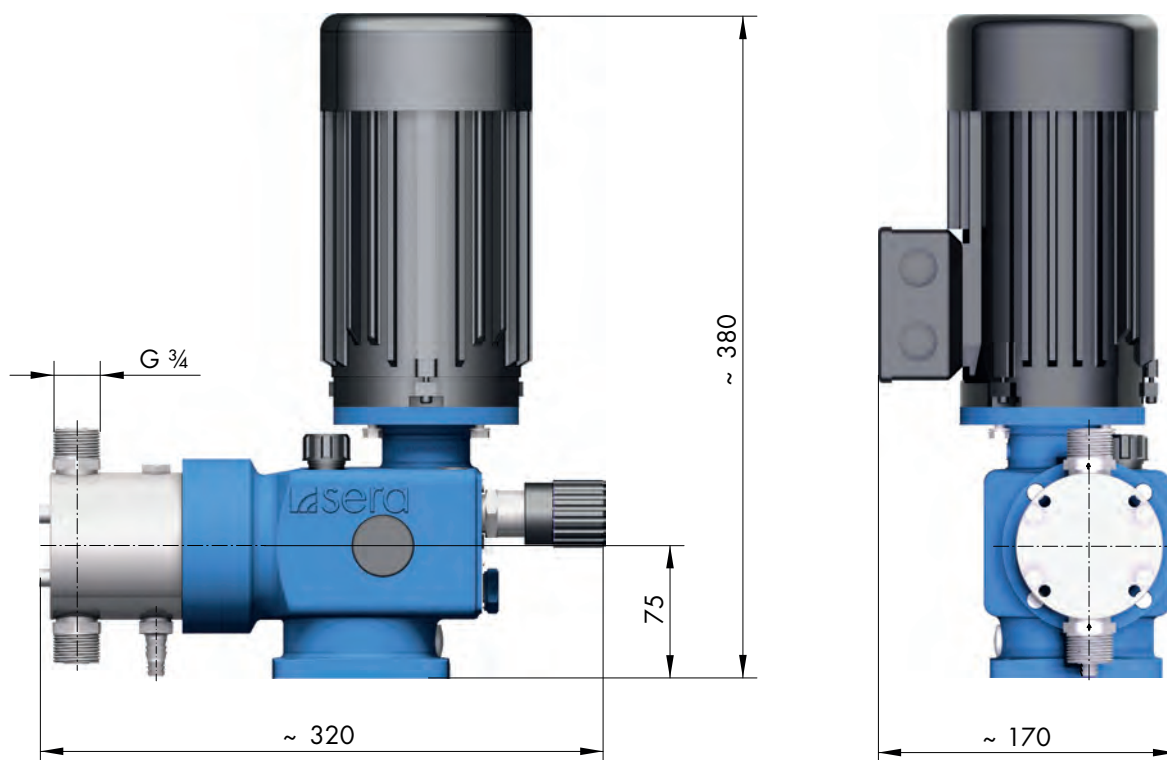
PUMP DATA			RF 409.2-8 K	RF 409.2-12 K	RF 409.2-18 K
Permissible pressure $p_{2max.}$ at the pump outlet	bar		140	140	80
Nominal capacity QN at $p_{2max.}$	l/h	50 Hz	8	12	18
		60 Hz	10	14	22
Quantity per stroke	ml/stroke	(100%)	1,3	1,3	3,0
Max. suction height	mWC		3	3	3
Min./max. permissible pressure at the pump inlet	bar	$p_{1min/max}$	-0,3/0	-0,3/0	-0,3/0
Recommended nominal diameter DN of the connecting pipes	mm		8	8	8
Nominal stroke frequency	1/min	50 Hz	100	150	100
		60 Hz	120	180	120
Weight approx	kg		12	12	12

ELECTRICAL DATA		RF 409.2-... K
Power consumption	kW	0,37
0	V	230/400V 50Hz, 460V 60Hz
Frequency	Hz	50/60
Protection category	IP	55

Flow capacity 8 l/h ... 22 l/h
Admissible counterpressure up to 140 bar

RF 409.2-...K

DIMENSIONS



CHARACTERISTIC CURVES

COMING SOON

PISTON PUMPS

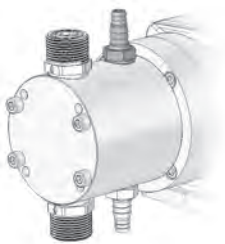
BASIC DESIGNS

STAINLESS STEEL

Pump body **1.4122V**
 Valves **1.4571/1.4581**
 Valve balls **1.4401**
 Kolben **1.4571**
 Kolbendichtung **PE**

Type	Valve seals	Price (EUR)
	EPDM Article-No.	
RF409.2-8 K	15005447	🕒
RF409.2-12 K	15005448	🕒
RF409.2-18 K	15005449	🕒

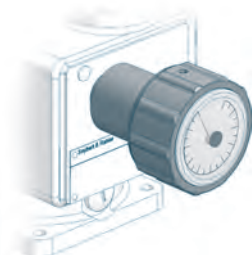
OPTIONS



Flushing joint

Surcharge (EUR)

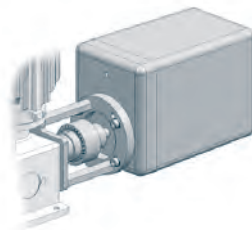
additional flushing joint (with hose nozzle d=10mm)



Stroke length adjustment

Surcharge (EUR)

with position indicator



Stroke length adjustment with actuator

(version uL/CSA on request)

Surcharge (EUR)

Actuator N C1-BA	230V ±10%, 50/60Hz, 128s/10 U, 1,5Nm incl. mounting set	▲
Electronic positioning controller ESR-N (only integrated in N C1-BA)	Input signal 0/4 - 20mA including feedback signal 0/4 - 20mA	▲
Actuator D30D-10-Ex II2G EExde IIC T4 acc. to ATEX95	400V, 50Hz, 10 U/min incl. mounting set and base plate	▲

OPTIONS



Stroke frequency monitoring

Inductive contact Surcharge (EUR)

10 - 60 V DC, three-wire, PNP ▲

NAMUR-design, II2G EExia IIC T6 (acc. to ATEX95) ▲



Drive motor

- Please note: If one or several options 'drive motor' are required to fix the add. price of the drive, the calculation will be as follows: 'add. price special drive' plus the single options of the drive.
- Surcharge and availability must be requested from **sera**.

Surcharge special drive Surcharge (EUR)

(all types) ▲

Special voltage (all types) ⌚

Enclosure IP65 (all types) ▲

Protection roof (all types) ▲

VIK design (all types) ⌚

Electrical acc. to UL/CSA (all types) ⌚

Single-phase alternating current motor, 230V/50Hz with capacitor

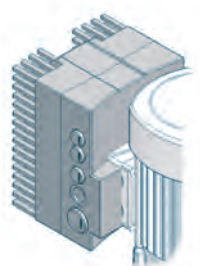
(all types) ▲

II2G EExe II T4 (acc. to ATEX95)

(all types) ▲

II2G EExde II C T4 (with PTC resistor, suitable for converter operation, 5-50Hz)

(all types) ▲



Stroke frequency adjustment, electrical

Frequency converter (Series INVEOR) mounted on drive motor
Input 4-20 mA

Surcharge (EUR)

1-phase
200-230V ±10%, 50/60Hz 0,37 kW ▲

3-phase
400-480V ±10%, 50/60Hz 0,55 kW ▲

Frequency converter accessories

Article-No. Price (EUR)

Operating module (incl. control cable) 90039445 ▲

Communication cable for parameterization via PC 90042176 ▲

PISTON PUMPS

ACCESSORIES



Bracket		
for wall mounting (incl. mounting kit)	Article-No.	Price (EUR)
PP	90023848	▲
1.4301	90023875	▲

Connection pieces		
Extensive range of connection / transition pieces and dosing hoses		
Inserts and pipe sockets with union nuts, flange connections, hose screw connections, hose nozzles as well as dosing hoses and accessories.		
to be found in CHAPTER 4 of this catalog, from page 442		

FITTINGS FOR THE SUCTION SIDE



Suction lance S-01 (without level switch)

Properties

- Compact, robust design
- Maintenance-free
- Easy handling
- High-quality materials
- individual special lengths up to max. 1.500mm possible

Basic version

- Suction lance: **PVC-U**
- Foot valve: **PVC-U**
- Seals: **EPDM** or **FPM**
- Valve ball: **PTFE**
- max. flow rate: **200 l/h**
- Standard length: **650mm, 1.000mm und 1.250mm**

Type	Length	Connection	Seals	Article-No.	Price (EUR)
S-01	650 mm	G 3/4	EPDM	37606591	▲
S-01	1.000 mm	G 3/4	EPDM	37606592	▲
S-01	1.250 mm	G 3/4	EPDM	37606593	▲
S-01	max. 1.500 mm	G 3/4	EPDM	37600705	▲
S-01	650 mm	G 3/4	FPM	37606594	▲
S-01	1.000 mm	G 3/4	FPM	37606595	▲
S-01	1.250 mm	G 3/4	FPM	37606596	▲
S-01	max. 1.500 mm	G 3/4	FPM	37600817	▲



Suction lance SL-12.1 (with level switch, 2-stage with plug, 3-pole)

Properties

- Compact design
- Height-adjustable
- 2-stage level monitoring
- Flexible connection
- Easy handling
- High-quality materials
- Maintenance-free
- incl. hose connections 4/6, 6/8, 6/12

Basic version

- Suction lance: **PVC-U**
- Foot valve: **PVC-U**
- Valve ball: **PTFE**
- Hose (inboard): **PE**
- Level switch: **PP**
2-stage, normally closed (NC)
5m cable (from foot valve) with plug, M12, 3-pole
- max. flow rate: **14 l/h (4/6) ... 35 l/h (6/12)**

Type	Length	Seals	Article-No.	Price (EUR)
SL-12.1	600 mm	PTFE	37606120	▲
SL-12.1	1.000 mm	PTFE	37606117	▲
SL-12.1	1.200 mm	PTFE	37606118	▲

PISTON PUMPS

FITTINGS FOR THE SUCTION SIDE



Suction lance SL-02 (with level switch, 1- or 2-stage with plug, 3-pole)

Properties

- Compact, robust design
- Safe
- Easy handling
- 1-stage level switch
- Flexible connection
- High-quality materials
- Maintenance-free

Basic version

- Suction lance: **PVC-U**
- Foot valve: **PVDF-GFK**
- Valve ball: **PTFE**
- Suction basket: **PP**
- Level switch: **PP**
1- or 2-stage, normally closed (NC)
5m cable (from foot valve) with plug, M12, 3-pole
- max. flow rate: **200 l/h**

Type	Level switch	Length	Connection	Seals	Article-No.	Price (EUR)
SL-02	1-stage	630 mm	G ¾	EPDM	37606372	▲
SL-02	1-stage	1.000 mm	G ¾	EPDM	37606567	▲
SL-02	1-stage	1.200 mm	G ¾	EPDM	37606568	▲
SL-02	1-stage	630 mm	G ¾	FPM	37606566	▲
SL-02	1-stage	1.000 mm	G ¾	FPM	37606078	▲
SL-02	1-stage	1.200 mm	G ¾	FPM	37606569	▲
SL-02	2-stage	630 mm	G ¾	EPDM	37606570	▲
SL-02	2-stage	1.000 mm	G ¾	EPDM	37606572	▲
SL-02	2-stage	1.200 mm	G ¾	EPDM	37606573	▲
SL-02	2-stage	630 mm	G ¾	FPM	37606571	▲
SL-02	2-stage	1.000 mm	G ¾	FPM	37606577	▲
SL-02	2-stage	1.200 mm	G ¾	FPM	37606574	▲

ACCESSORIES



Drum connection adapter

Connection	Material	Seal	Article-No.	Price (EUR)
for external thread G=565x5 DIN2781	PP	EPDM	90011763	▲
	PP	FPM	90011762	▲
for internal thread (set) G=2 fine thread steel drum DIN-ISO 228-1	PP	EPDM	90046044	▲
G=v. Leer/tri-sure BCS 56x4 EN12708	PP	FPM	90046043	▲
for external thread G= DIN51	PP	EPDM	90011767	▲
	PP	FPM	90011766	▲
for wall duct G=2 Wall thickness S=max. 6mm	PP/PVC	EPDM	90011773	▲
	PP/PVC	FPM	90011772	▲
other adapters			🔗	🔗

FITTINGS FOR THE SUCTION SIDE



Foot valve (Plastic)

Properties

- Compact design
- Easy installation
- High-quality materials
- Maintenance-free

Basic version

- Ball: **PTFE**
- Sieve: **ETFE**
- Mesh size: **1mm**

Type	DN	Connection	Material	Seals	Article-No.	Price (EUR)
781.1	8	G 3/4	PVDF/PVDF-GFK	FEP	30073008	▲



Foot valve (plastic)

Properties

- Compact design
- Easy installation
- High-quality materials
- Maintenance-free

Basic version

- Ball: **PTFE**
- Sieve: **ETFE**
- Mesh size: **1mm**

Type	DN	Connection	Material	Seals	Article-No.	Price (EUR)
731	8	G 3/4	PVC-U	EPDM	37601636	▲



Foot valve (Stainless steel)

Properties

- Compact design
- Easy installation
- High-quality materials
- Maintenance-free

Basic version

- Ball: **1.4401**
- Sieve: **ETFE**
- Mesh size: **1mm**

Type	DN	Connection	Material	Seals	Article-No.	Price (EUR)
731	8	G 3/4	1.4571	FEP	37601149	▲



Multi-function device

Properties

- Can be used as an priming aid and/or an calibration pot
- Compact design
- Flexible Connection
- Maintenance-free
- incl. glue joint (PVC-U) and welding joint (PP)

Basic version

- Housing: **PVC-U / PVC-transparent**
- Seals: **FPM or EPDM**
- max. operating pressure: **-0,5 ... +2 bar**

Type	DN	Connetion	Volume	Seals	Article-No.	Price (EUR)
MFD 60	8	G3/4	0,5 Ltr.	EPDM	37606311	▲
MFD 60	8	G3/4	0,5 Ltr.	FPM	37605864	▲



ACCESSORIES

Hand vacuum pump	PVC/FPM	37605682	▲
(incl. 1,5m PVC-Hose d=12/21)			

PISTON PUMPS

FITTINGS FOR THE PRESSURE SIDE



Diaphragm pulsation damper (Stainless steel, max. 10 bar)

Properties

- Any mounting position
- Easy installation
- Long service life
- Easy handling
- High-quality materials
- Low maintenance

Type	Connection	max.Pressure	Material	Diaphragm	Article-No.	Price (EUR)
810.1-0,16/10	G ½	10 bar	1.4571	Butyl	37603720	▲
810.1-0,16/10	G ½	10 bar	1.4571	FPM	37603724	▲
810.1-0,16/10	G ½	10 bar	1.4571	PTFE	×	×

ACCESSORIES



Filling- and pressure measuring device

(mounted on pulsation damper)

Design: Plastic	Manometer: 0-16 bar Measuring system: copper alloyed	●
Design: Stainless steel	Manometer: 0-16 bar, glycerine-damped Measuring system: copper alloyed Housing: 1.4301	▲
Filling pump FLP 2	for filling device	
with manometer, max. 7 bar incl. 2m hose and coupling for air valve	90009396	▲



FITTINGS FOR THE PRESSURE SIDE



Diaphragm pulsation damper (Stainless steel, max. 100-180 bar)

Properties

- Any mounting position
- Easy installation
- Long service life
- Easy handling
- High-quality materials
- Low maintenance

Type	Connection	max.Pressure	Material	Diaphragm	Article-No.	Price (EUR)
810.1-0,16/180	G ½	180 bar	1.4571	Butyl	90608820	▲
810.1-0,16/180	G ½	180 bar	1.4571	FPM	90609728	▲
810.1-0,16/180	G ½	180 bar	1.4571	PTFE	×	×

ACCESSORIES



Filling- and pressure measuring device

Design: removeable
Manometer d63, plastic housing, measuring system: copper alloyed
incl. 2,5m filling hose, connection M14x1,5

0 - 25 bar	37601674	▲
0 - 100 bar	37601673	▲
0 - 250 bar	30066005	▲



Dosing valve (Stainless steel)

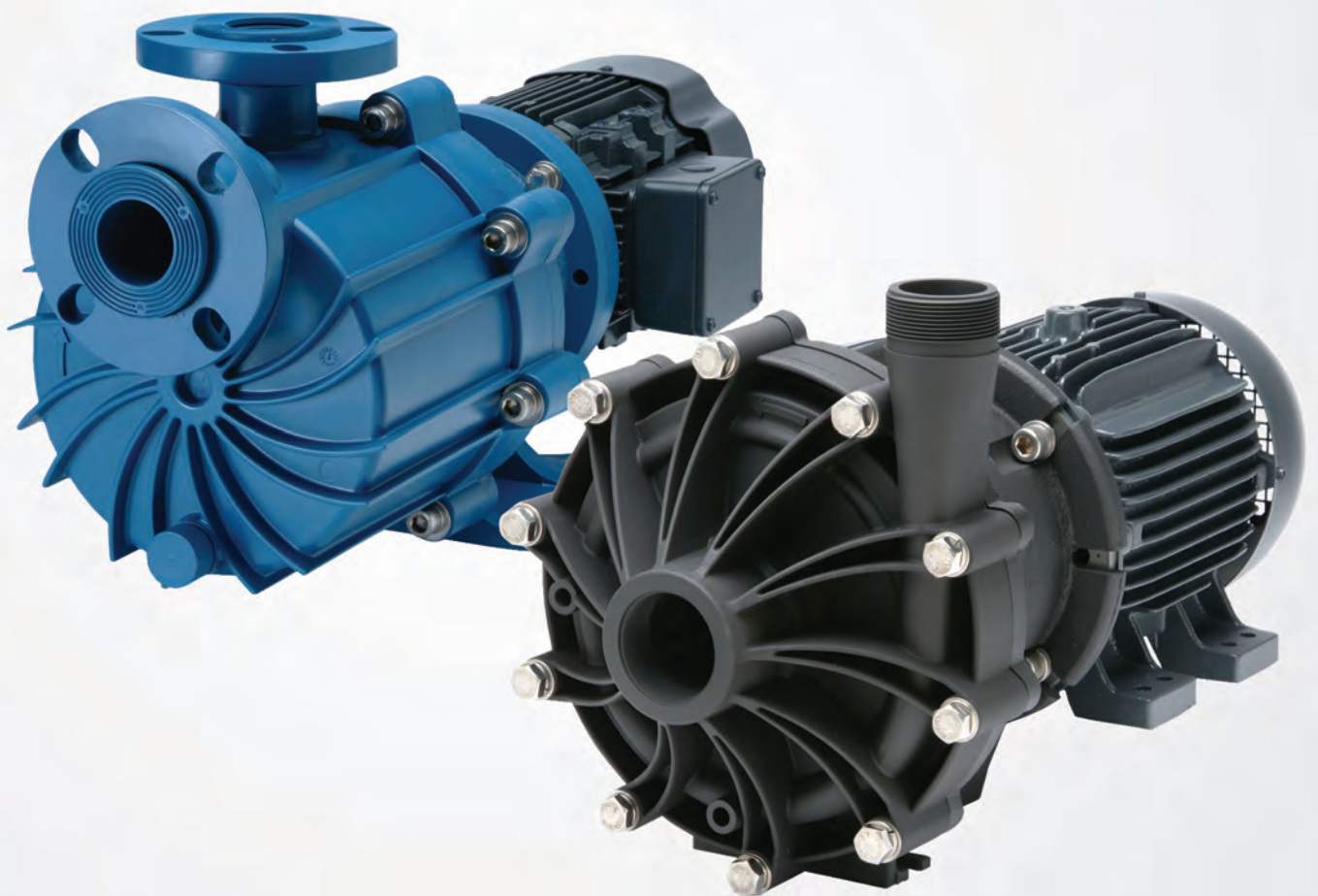
Properties

- Compact design
- Any mounting position
- Maintenance-free
- High-quality materials

Basic version

- Valve ball: **1.4401**
- Seals: **FEP-covered**
- Spring: **Hastelloy C4**

Type	DN	Inlet	Outlet	Material	Seal	Article-No.	Price (EUR)
691.1	8	G ¾	R ½	1.4571	FEP	37600493	▲



FEEDING PUMPS

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Magnetic-drive centrifugal pumps

UC Series

425



Drum pumps

PF Series

EF Series

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High performance hose pumps

I Series

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DIAPHRAGM FEEDING PUMPS



OVERVIEW

- Safe to run dry
- Leakage free
- Low-maintenance
- Low operating costs
- High-quality materials
- User-friendly
- Integrateable in automatic processes
- Manual stroke frequency adjustment (Type ZXRI)
- Compact design
- Robust, metallic drive housing

TECHNICAL DATA

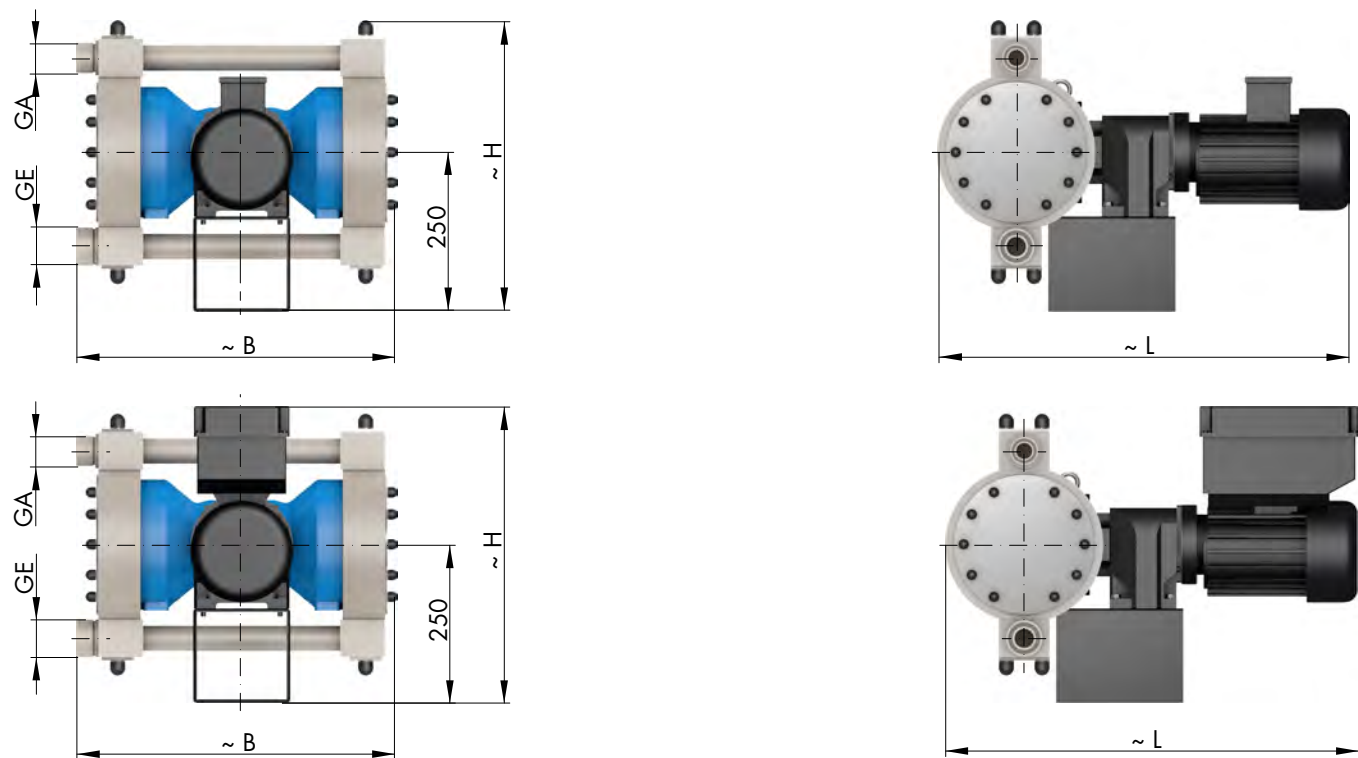
PUMP DATA			ZX..411.3-2200e		ZX..411.3-2600e		ZX..411.3-3100e	
			ZXM	ZXR...	ZXM	ZXR..	ZXM	ZXR...
Permissible pressure $p_{2max.}$ at the pump outlet	bar		4					
Nominal capacity QN at $p_{2max.}$	l/h	50 Hz	2.200	230-2.200	2.600	230-2.600	3.100	230-3.100
		60 Hz	2.640	230-2.200	3.120	230-2.600	–	230-3.100
Max. suction height	mWC	ZX...(e)	8					
		ZX...						
Min./max. permissible pressure at the pump inlet	$p_{1min/max}$ bar	ZX...(e)	-0,8/0					
		ZX...						
Recommended nominal diameter DN of the connecting pipes	mm	Inlet	32					
		Outlet	25					
Nominal stroke frequency	1/min	50 Hz	92	84	103	110	128	123
		60 Hz	110	–	123	110	–	123
Weight approx.	kg	plastic	67	72	72	75	73	76
		stainless steel	95	100	100	107	106	109

ELECTRICAL DATA		ZXM 411.3-... e	ZXRF 411.3-... e	ZXRI 411.3-... e
Power consumption	kW	0,75	1,1	1,1
Voltage	V	230/400V 50Hz, 460V 60Hz		
Frequency	Hz	50/60		
Protection category	IP	65	65	55

Flow capacity 2.200 l/h ... 3.100 l/h
Admissible counterpressure up to 4 bar

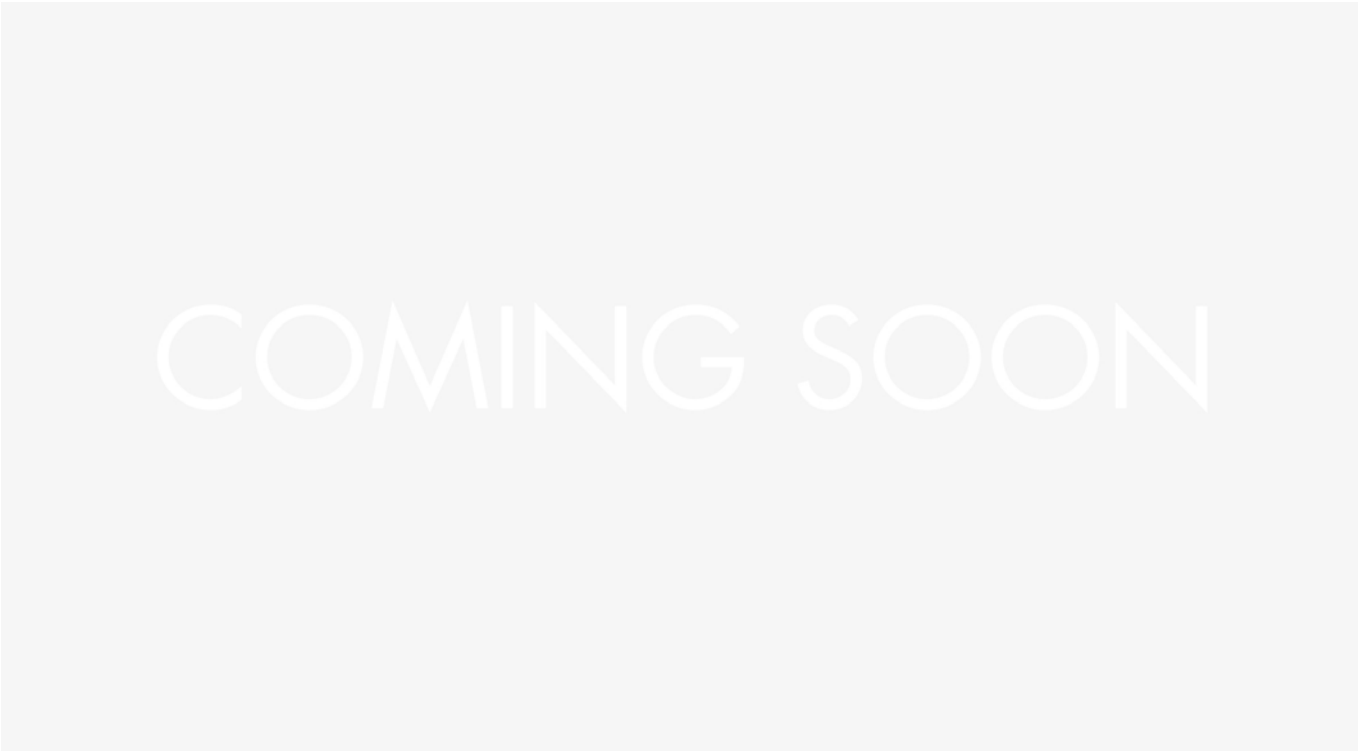
ZX 411.3

DIMENSIONS



	GE	GA		B	L	H		B	L	H
ZXM... / ZXRf 411.3-2200e	G2	G1½	PVC, PP, PVDF	525	589	506	PP-GFK, PVDF-GFK	504	603	457
ZXM... / ZXRf 411.3-2600e	G2	G1½		525	589	506		504	603	457
ZXM... / ZXRf 411.3-3100e	G2	G1½		525	589	506		504	603	457
ZXRI 411.3-2200e	G2	G1½		525	634	506		504	648	459
ZXRI 411.3-2600e	G2	G1½		525	634	506		504	648	459
ZXRI 411.3-3100e	G2	G1½		525	634	506		504	648	459

CHARACTERISTIC CURVES



DIAPHRAGM FEEDING PUMPS

BASIC DESIGNS

PP

Pump body **PP**
Valves **PP-FRP**
Valve balls **PTFE**
Diaphragm **PTFE-faced**

Type	EPDM Article-No.	Valve seals		Price (EUR)
		Price (EUR)	FPM Article-No.	
ZXM411.3-2200e	16019656	☉	16010329	☉
ZXM411.3-2600e	16023879	☉	16023880	☉
ZXM411.3-3100e	15002457	☉	16009886	☉
ZXRI411.3-2200e	16010928	☉	16010596	☉
ZXRI411.3-2600e	16014138	☉	16021622	☉
ZXRI411.3-3100e	16009648	☉	16017716	☉

PVDF

Pump body **PVDF**
Valves **PVDF-FRP**
Valve balls **PTFE**
Diaphragm **PTFE-faced**

Type	Valve seals		Price (EUR)
	FEP-covered Article-No.		
ZXM 411.3-2200e	☉		☉
ZXM 411.3-2600e	☉		☉
ZXM 411.3-3100e	☉		☉
ZXRI 411.3-2200e	☉		☉
ZXRI 411.3-2600e	☉		☉
ZXRI 411.3-3100e	☉		☉

PVC-U

Pump body **PVC-U**
Valves **PVC-U**
Valve balls **PTFE**
Diaphragm **PTFE-faced**

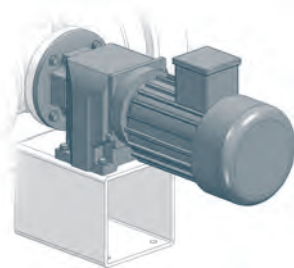
Type	EPDM Article-No.	Valve seals		Price (EUR)
		Price (EUR)	FPM Article-No.	
ZXM411.3-2200e	16023563	☉	16023881	☉
ZXM411.3-2600e	16023882	☉	16023882	☉
ZXM411.3-3100e	16012761	☉	16012761	☉
ZXRI411.3-2200e	16012775	☉	16009368	☉
ZXRI411.3-2600e	16023506	☉	16018788	☉
ZXRI411.3-3100e	16018059	☉	16012782	☉

STAINLESS STEEL

Pump body **1.4571**
Valves **1.4571/1.4581**
Valve balls **1.4401**
Diaphragm **PTFE-faced**

Type	Valve seals		Price (EUR)
	FEP-covered Article-No.		
ZXM 411.3-2200e	16023884		☉
ZXM 411.3-2600e	16023885		☉
ZXM 411.3-3100e	16010746		☉
ZXRI 411.3-2200e	16010284		☉
ZXRI 411.3-2600e	16023886		☉
ZXRI 411.3-3100e	16013679		☉

OPTIONS



Drive motor

- Please note: If one or several options 'drive motor' are required to fix the add. price of the drive, the calculation will be as follows: 'add. price special drive' plus the single options of the drive.
- Surcharge and availability must be requested from **sera**.

Surcharge special drive

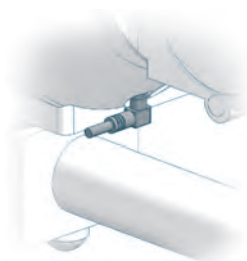
Surcharge (EUR)

(all types)

Special voltage	ZXM 411.3-...	⌚
	ZXRI 411.3-...	⌚
Enclosure IP65	ZXM 411.3-...	▲
	ZXRI 411.3-...	⌚
Protection roof	ZXM 411.3-...	▲
	ZXRI 411.3-...	⌚
VIK design	ZXM 411.3-...	▲
	ZXRI 411.3-...	⌚
II2G EExe II T3 (acc. to ATEX95)	ZXM 411.3-...	▲
	ZXRI 411.3-...	×
II2G EExe II T4 (acc. to ATEX95)	ZXM 411.3-...	⌚
	ZXRI 411.3-...	×

Drives for frequency converter operation

with PTC resistor, 5-50/60Hz	ZXM 411.3-...	▲
	ZXRI 411.3-...	●
with PTC resistor, 5-50/60Hz II2G EExde II C T4 acc. to ATEX95	ZXM 411.3-...	⌚
	ZXRI 411.3-...	×

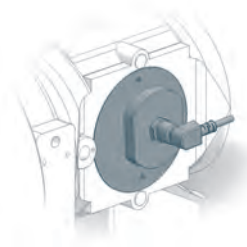


Diaphragm monitoring

Diaphragm rupture electrode, conductive, mounted on pump
(Evaluation via electrode relay, ER-104 (see accessories))

Surcharge (EUR)

MBE-02	incl. connection cable	(length 2m)	▲
Connection cable for EEXia-circuit		(blue, length 5m)	▲



Stroke frequency monitoring

Inductive contact

Surcharge (EUR)

10 - 60 V DC, three-wire, PNP	▲
NAMUR-design, II2G EExia IIC T6 (acc. to ATEX95)	▲

DIAPHRAGM FEEDING PUMPS

ACCESSORIES



Diaphragm monitoring (evaluation)

Electrode relay for mounting in control cabinet (for evaluating the diaphragm rupture electrode MBE-02 (see options))			Article-No.	Price (EUR)
ER-104	auxiliary power 230 V AC		90022944	▲
ER-104	auxiliary power 24 V DC		90022945	▲
ER-142	auxiliary power 230 V AC	II(1)G [Exia] II C	90200363	▲

FITTINGS FOR THE SUCTION SIDE



Priming Aid/Siphon vessel

Properties

- Improvement of the priming behavior
- Easy handling
- High-quality materials
- Easy installation

Basic version

- Material: **PVC-U / PVC-transparent**
- Seals: **EPDM** or **FPM**
- Shut-Off fitting with filling-/venting joint
Hose nozzle d=12mm
- incl. holding clamp (1 piece)
- max. operating pressure: **-1 ... +2 bar**

Type	DN	Connection	Seals	Article-No.	Price (EUR)
⌚				⌚	⌚



Foot valve (Plastic)

Properties

- Compact design
- Easy installation
- High-quality materials
- Maintenance-free

Basic version

- Ball: **PTFE**
- Sieve: **ETFE**
- Mesh size: **1mm**

Type	DN	Connection	Material	Seals	Article-No.	Price (EUR)
⌚					⌚	⌚



Foot valve (Stainless steel)

Properties

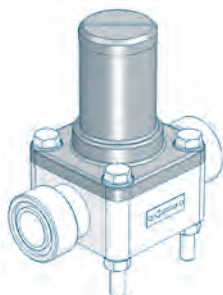
- Compact design
- Easy installation
- High-quality materials
- Maintenance-free

Basic version

- Ball: **1.4401**
- Sieve: **ETFE**
- Mesh size: **1mm**

Type	DN	Connection	Material	Seals	Article-No.	Price (EUR)
⌚					⌚	⌚

FITTINGS FOR THE PRESSURE SIDE



Diaphragm relief valve

for overpressure protection

Properties

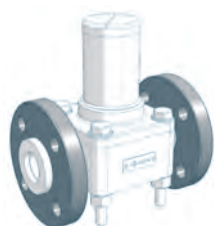
- Compact design
- Easy installation
- Maintenance-free
- High-quality materials

Basic version

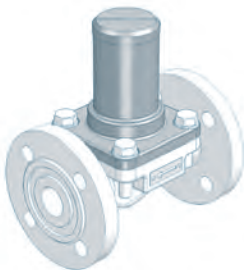
- Valve body: **PVC-U, 1.4581, PP or PVDF**
- Diaphragm: **PTFE-faced**

Type	Nominal size	Connection	Valve body	Seals	Article-No.	Price (EUR)
624.10	DN25	G 1½	PVC-U	FPM	37603639	▲
624.10	DN25	G 1½	PVC-U	EPDM	37603638	▲
624.10	DN25	G 1½	PP	FPM	37603637	▲
624.10	DN25	G 1½	PP	EPDM	37603636	▲
624.10	DN25	G 1½	PVDF	FEP	37603866	▲
624.10	DN25	G 1½	1.4581	FEP	×	×

OPTIONS



Type	Design	Loose flange	Surcharge [EUR]
624.10	PVC	Loose flange made of PVC-U	▲
624.10	PP-FRP/PVDF-FRP	Loose flange made of PP with steel inlay	×
624.10	PP	Loose flange made of PP with steel inlay	▲
624.10	PVDF	Loose flange made of PP with steel inlay	▲



Diaphragm pressure keeping valve (with fixed flanges)

to prevent over-conveyance

Properties

- Compact design
- Easy installation
- Maintenance-free
- High-quality materials

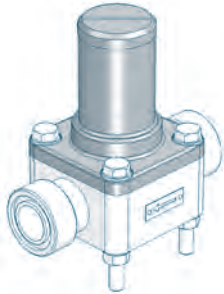
Basic design

- Flanges acc. to **DIN 2501**
- Valve body: **1.4581 or GG**
- Diaphragm: **PTFE-faced**

Type	Nominal size	Connection	Valve body	Article-No.	Price (EUR)
624.10	DN25	DIN 2501	1.4581	36240104	▲
624.10	DN25	DIN 2501	GG	37600039	▲

DIAPHRAGM FEEDING PUMPS

FITTINGS FOR THE PRESSURE SIDE



Diaphragm pressure keeping valve

to prevent over-conveyance

Properties

- Compact design
- Easy installation
- Maintenance-free
- High-quality materials

Basic version

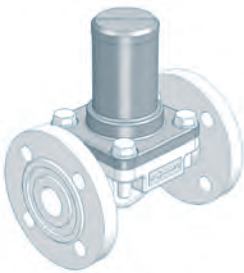
- Valve body: **PVC-U, 1.4581, PP or PVDF**
- Diaphragm: **PTFE-faced**

Type	Nominal size	Connection	Valve body	Seals	Article-No.	Price (EUR)
624.D	DN25	G 1½	PVC-U	FPM	37600051	▲
624.D	DN25	G 1½	PVC-U	EPDM	36241101	▲
624.D	DN25	G 1½	PP	FPM	37600058	▲
624.D	DN25	G 1½	PP	EPDM	36241105	▲
624.D	DN25	G 1½	PVDF	FEP	37606310	▲
624.D	DN25	G 1½	1.4581	FEP	×	×

OPTIONS



Type	Design	Loose flange	Surcharge [EUR]
624.D	PVC	Loose flange made of PVC-U	▲
624.D	PP-FRP/PVDF-FRP	Loose flange made of PP with steel inlay	×
624.D	PP	Loose flange made of PP with steel inlay	▲
624.D	PVDF	Loose flange made of PP with steel inlay	▲



Diaphragm pressure keeping valve (with fixed flanges)

to prevent over-conveyance

Properties

- Compact design
- Easy installation
- Maintenance-free
- High-quality materials

Basic design

- Flanges acc. to **DIN 2501**
- Valve body: **1.4581 or GG**
- Diaphragm: **PTFE-faced**

Type	Nominal size	Connection	Valve body	Article-No.	Price (EUR)
624.D	DN25	DIN 2501	1.4581	36241104	▲
624.D	DN25	DIN 2501	GG	37600081	▲

FITTINGS FOR THE PRESSURE SIDE



Diaphragm pulsation damper (Plastic, with elastomere diaphragm, max. 10 bar)

Properties

- Any mounting position
- Easy installation
- Long service life
- Easy handling
- High-quality materials
- Low maintenance

Type	Connection	max. Pressure	Housing	Diaphragm Seals	Article-No.	Price (EUR)
713.1	G 1 1/4	10 bar	PVC-U	EPDM	30071038	▲
713.1	G 1 1/4	10 bar	PVC-U	FPM	30071039	▲
713.1	G 1 1/4	10 bar	PP	EPDM	30071040	▲
713.1	G 1 1/4	10 bar	PP	FPM	30071041	▲
713.1	G 1 1/4	10 bar	PVDF	EPDM	30071060	▲
713.1	G 1 1/4	10 bar	PVDF	FPM	30071061	▲

OPTIONS

Loose-type flanges

Design acc. to DIN 2501, incl. O-Rings

PVC-design	Loose flange, PVC-U	DN20	▲
PP-/PVDF-design	Loose flange, PP with steel insert	DN20	▲

ACCESSORIES

Bracket

PP

90010913

▲

for wall mounting

1.4301

90010914

▲

Steel (color treated)

90010915

▲

Filling pump FLP 2

for filling device

with manometer, max. 7 bar incl. 2m hose and coupling for air valve

90009396

▲



Dosing valve (Plastic)

Properties

- Compact design
- Any mounting position
- Maintenance-free
- High-quality materials

Basic version

- Valve ball: PTFE
- Spring: Hastelloy C4

Type	DN	Inlet	Outlet	Material	Seal	Article-No.	Price (EUR)
⌚						⌚	⌚

AIR DRIVEN DIAPHRAGM PUMPS

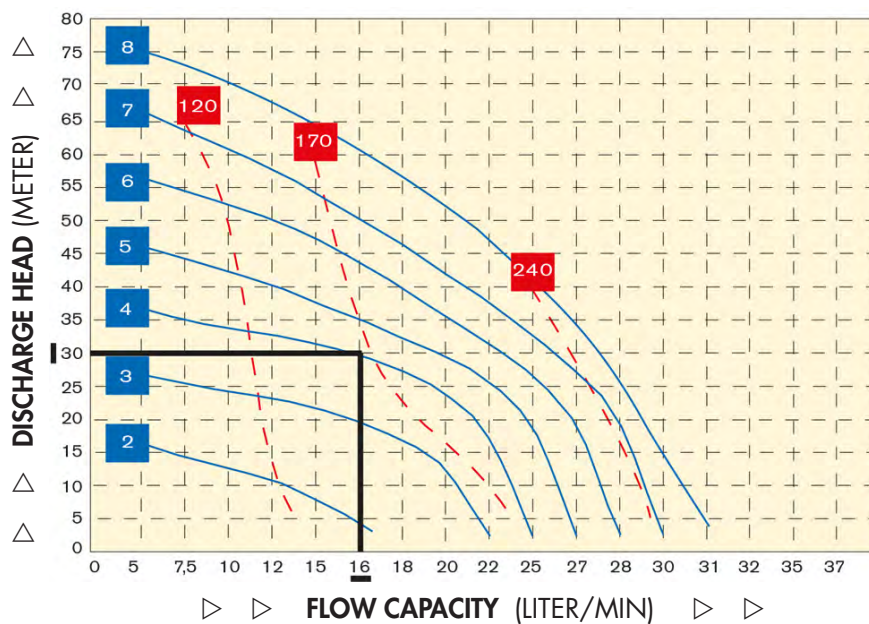
APB-/APE-SERIES



OVERVIEW

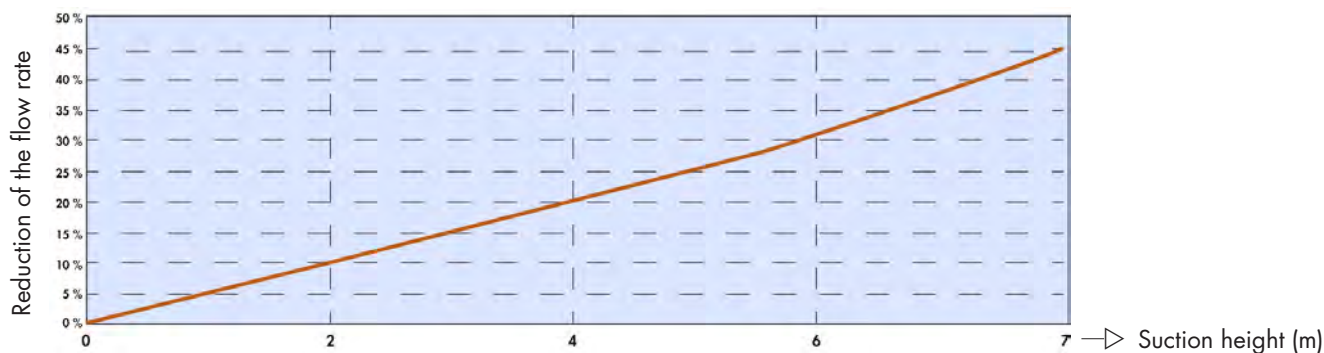
Type	max. Flow capacity [Litres/min.]	CONNECTION Suction-/Pressure side	CONNECTION Air supply	max. permissible Counterpressure [bar]
AP... - 5	6	G 1/4	G 1/8	8
AP... - 15	17	G 3/8		
AP... - 30	35	G 1/2	G 1/4	
AP... - 45	60		G 3/8	
AP... - 100	110	G1		
AP... - 150	160			
AP... - 340	340	G1 1/2		
AP... - 650	600	G2		
AP... - 850	800	G3		

AIR DRIVEN DIAPHRAGM PUMPS

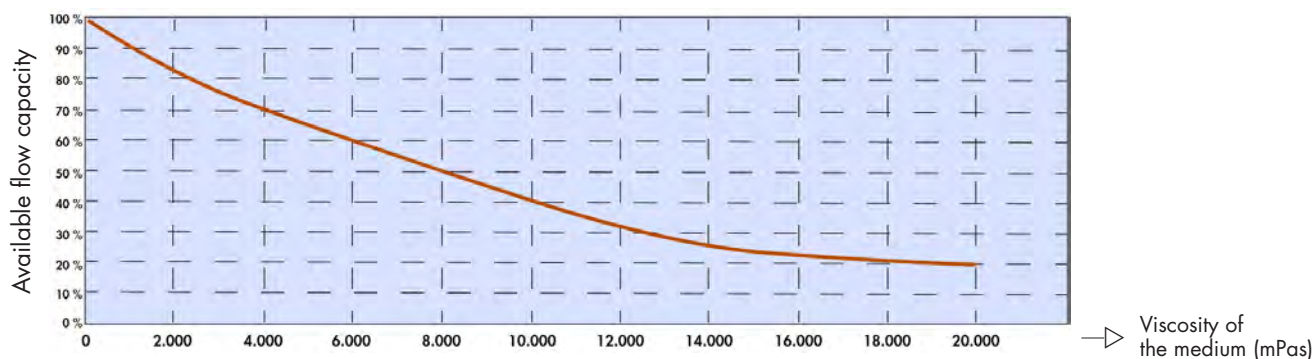


- Air supply pressure (bar)**
- Air consumption (NI/min.)**
- Example:**
 - Flow rate **16 L/min**
 - Discharge head appr. **30 m**
 - Air supply pressure **4 bar**
 - Air consumption **170 NI/min**

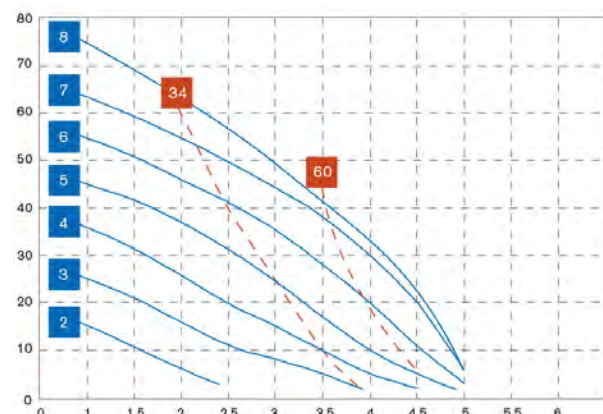
REDUCTION OF THE FLOW RATE BY SUCTION HEAD



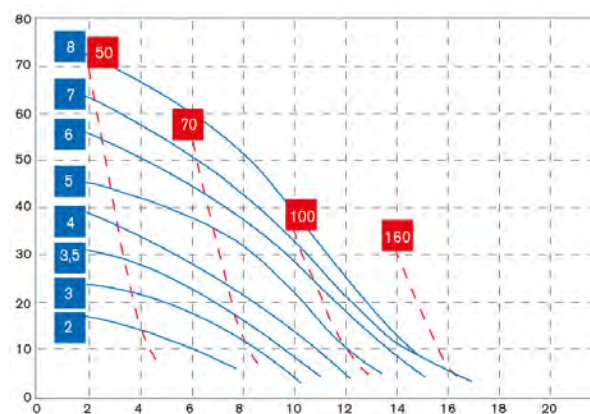
REDUCTION OF THE FLOW CAPACITY BY VISCOSITY OF THE MEDIUM



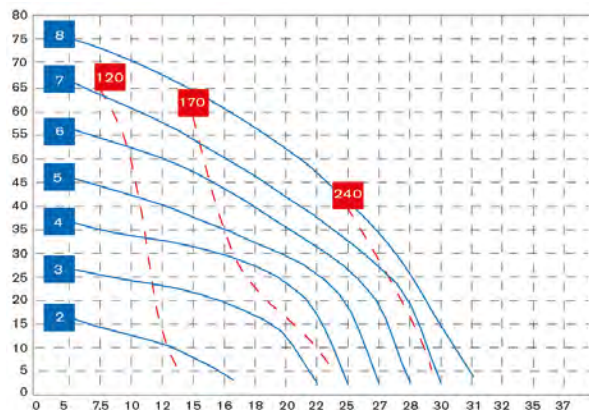
AP...-5



AP...-15



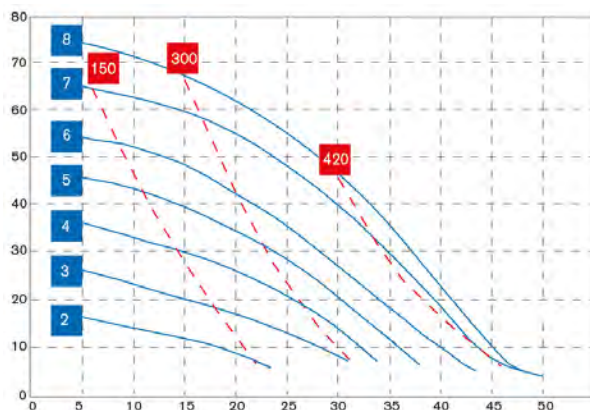
AP...-30



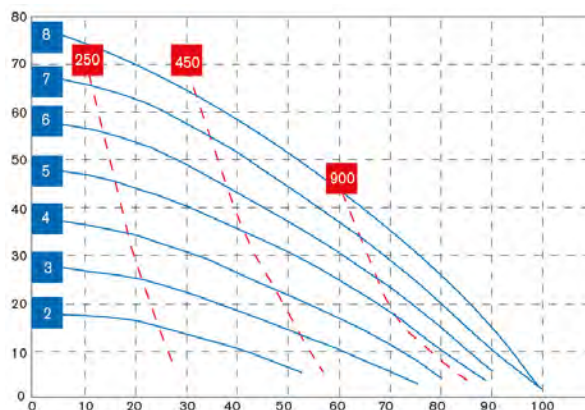
Note:

The curves and performance values refer to pumps with submerged suction and a free delivery outlet with water at 20°C, and vary according to the construction material.

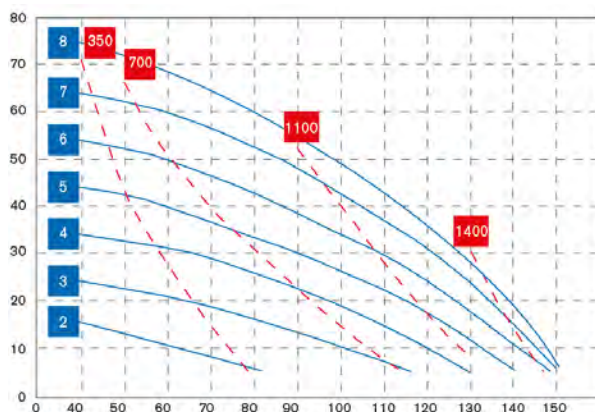
AP...-45



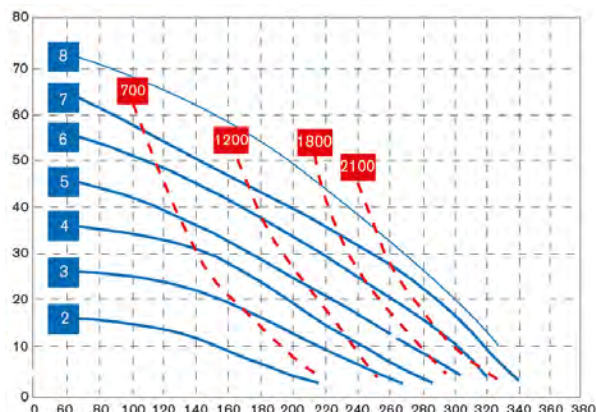
AP...-100



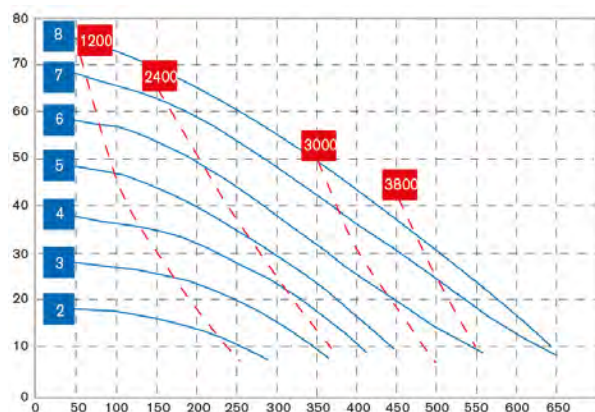
AP...-150



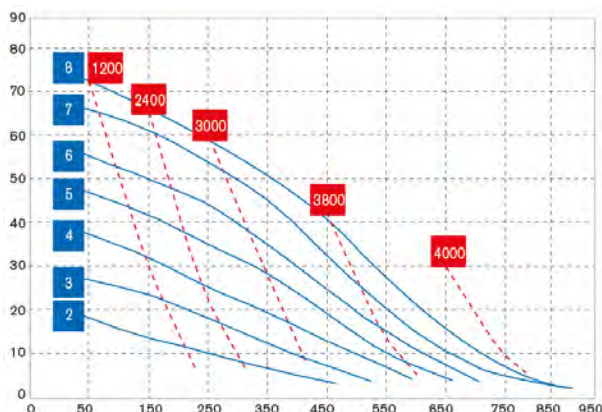
AP...-340



AP...-650



AP...-850



AIR DRIVEN DIAPHRAGM PUMPS



OVERVIEW

- Cost-effective
- Leakage free
- Safe against overpressure
- Low maintenance continuous duty
- Design according to ATEX
- Safe to run dry
- Dry priming
- High quality materials
- Robust
- Silicone free

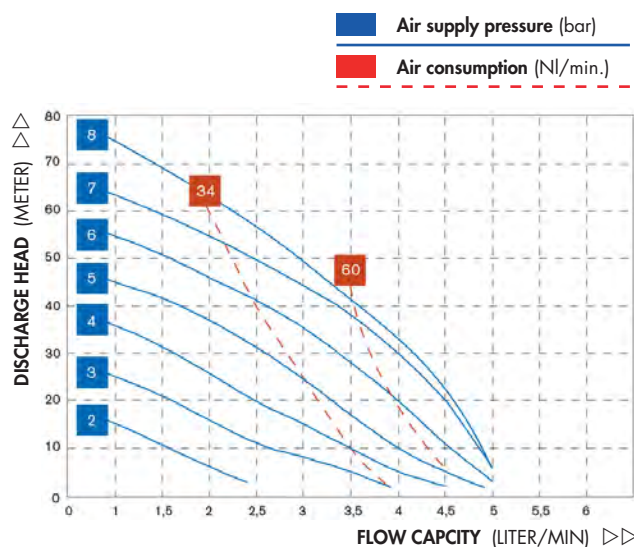
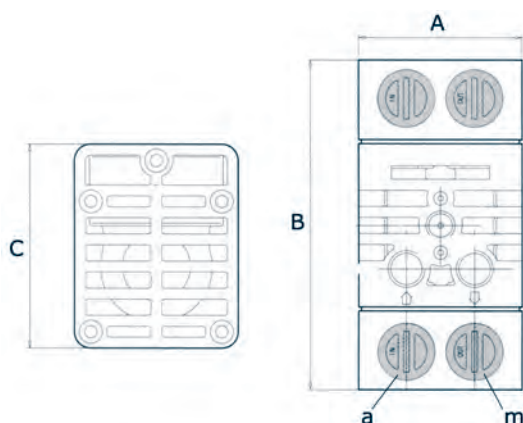
TECHNICAL DATA

Type	ATEX95	max. flow capacity [Litres/min.]	max. permissible counterpressure [bar]	Air supply pressure min - max [bar]	Air supply connection	max. suction height dry [m]	wet [m]
APB-5	II 3G EEx c IIB T4	6	8	2-8	G 1/8	3	9,5
APE-5	II 2G EEx c IIB T4	6	8	2-8	G 1/8	3	9,5

BASIC DESIGNS

Type	Pump body	Diaphragm	Valve seats	Valve balls	Valve seals	Article-No.	Price (EUR)	Wearing parts kit Article-No.	Price (EUR)
APB-5	PP	NBR/PTFE	PP	Boroglas	PTFE	15000924	▲	90039652	▲
APE-5	PP-CFK	NBR/PTFE	PP/PPS-V	Boroglas	PTFE	15004578	▲	90039652	▲

DIMENSIONS



Type	Connections	m/a	Material	A	B	C	Weight (kg)
AP..-5	G 1/4		Plastic	60	121	75	0,5

CONNECTION Suction-/Pressure side: **G 1/4 (f)**

Max. flow capacity 6 l/min

Admissible counterpressure up to 8 bar

AP...-5

ACCESSORIES



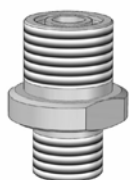
Compressed air supply unit

- Filter pressure controller
- Shut-off and check valve
- Fittings

- incl. 5m pneumatic hose

* design for hazardous areas on request

		Article-No.	Price (EUR)
without solenoid valve		90019599	▲
for APB-Design	24 V	90020022	▲
with solenoid valve (incl. double nipple)*	230 V	90020015	▲
for APE-Design	24 V	90020022	▲
with solenoid valve (incl. double nipple)*	230 V	90020015	▲

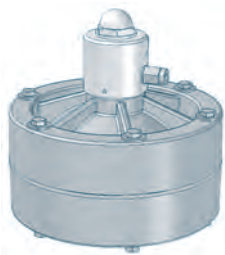


Connection adapter

- two pieces are required per pump

Pump connection	Adapter connections	Material	Seals	Article-No.	Price (EUR)
G 1/4	G1/4 - G3/4	PP	EPDM	90044748	▲
G 1/4	G1/4 - G3/4	PP	FPM	90044753	▲
G 1/4	G1/4 - G3/4	1.4571	FEP	90044759	▲

FITTINGS FOR THE PRESSURE SIDE



Diaphragm pulsation damper

Properties

- Compact design
- Any mounting direction
- Maintenance free
- High quality materials

Type	Ex-Zone	Connection	Housing	Diaphragm	Article-No.	Price (EUR)
APB-5						
MPD-25.1	II 3G EEx c IIB T4	G 3/4	PP	HytreI-PTFE	37602429	▲
MPD-25.1	II 3G EEx c IIB T4	G 3/4	PVDF	Santo-PTFE	Ⓢ	▲
MPD-25.1	II 3G EEx c IIB T4	G 3/4	PPS-V	HytreI-PTFE	37602431	▲
APE-5						
MPD-25.1	II 2G EEx c IIB T4	G 3/4	PP-CFK	HytreI-PTFE	Ⓢ	▲
MPD-25.1	II 2G EEx c IIB T4	G 3/4	PVDF-CFK	Santo-PTFE	37603757	▲

AIR DRIVEN DIAPHRAGM PUMPS



OVERVIEW

- Cost-effective
- Leakage free
- Safe against overpressure
- Low maintenance continuous duty
- Design according to ATEX
- Safe to run dry
- Dry priming
- High quality materials
- Robust
- Silicone free

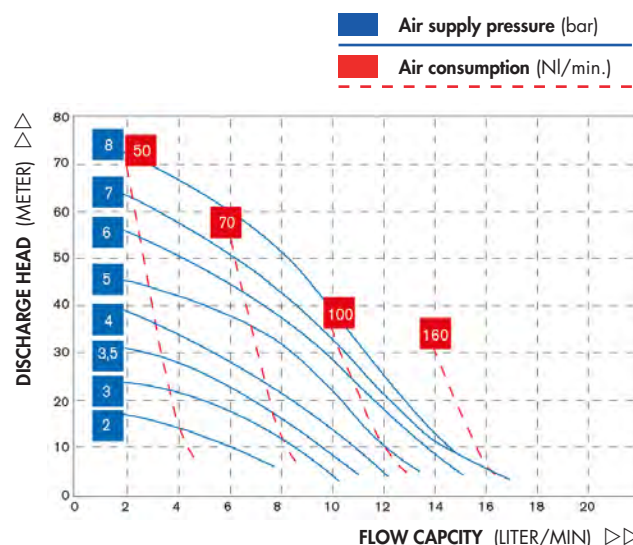
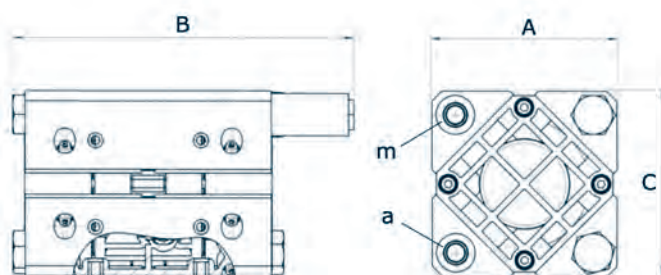
TECHNICAL DATA

Type	ATEX95	max. flow capacity [Litres/min.]	max. permissible counterpressure [bar]	Air supply pressure min - max [bar]	Air supply connection	max. suction height dry [m]	wet [m]
APB-15	II 3G EEx c IIB T4	16	8	2-8	G 1/8	3	9,5
APE-15	II 2G EEx c IIB T4	16	8	2-8	G 1/8	3	9,5

BASIC DESIGNS

Type	Pump body	Diaphragm	Valve seats	Valve balls	Valve seals	Article-No.	Price (EUR)	Wearing parts kit Article-No.	Price (EUR)
APB-15	PP	NBR/PTFE	PP	PTFE	FPM	15002250	▲	90039653	▲
APB-15	PP	NBR/PTFE	PP	PTFE	EPDM	fehlt	▲	90039655	▲
APB-15	ECTFE	NBR/PTFE	ECTFE	PTFE	FPM	15001645	▲	90039656	▲
APE-15	PP-CFK	NBR/PTFE	PP	PTFE	FPM	15000961	▲	90039653	▲
APE-15	PP-CFK	NBR/PTFE	PP	PTFE	EPDM	15000962	▲	90039655	▲
APE-15	ECTFE	NBR/PTFE	ECTFE	PTFE	FPM	15004579	▲	90039656	▲

DIMENSIONS



Type	Connections	m/a	Material	A	B	C	Weight (kg)
AP..-15	G 3/8		Plastic	105	194	105	1,0 PP (1,5 ECTFE)

CONNECTION Suction-/Pressure side: **G 3/8 (f)**
 Max. flow capacity 17 l/min
 Admissible counterpressure up to 8 bar

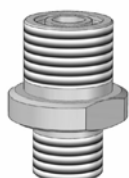
AP...-15

ACCESSORIES



Compressed air supply unit

● Filter pressure controller ● Shut-off and check valve ● Fittings		● incl. 5m pneumatic hose		
		* design for hazardous areas on request	Article-No.	Price (EUR)
without solenoid valve			90019997	▲
for APB-Design		24 V	90020023	▲
with solenoid valve (incl. double nipple)*		230 V	90020016	▲
for APE-Design		24 V	90020023	▲
with solenoid valve (incl. double nipple)*		230 V	90020016	▲



Connection adapter

● two pieces are required per pump					
Pump connection	Adapter connections	Material	Seals	Article-No.	Price (EUR)
G 3/8	G3/8 - G3/4	PP	EPDM	90044748	▲
G 3/8	G3/8 - G3/4	PP	FPM	90044753	▲
G 3/8	G3/8 - G3/4	1.4571	FEP	90044760	▲

FITTINGS FOR THE PRESSURE SIDE



Diaphragm pulsation damper

Properties

- Compact design
- Any mounting direction
- Maintenance free
- High quality materials

Type	Ex-Zone	Connection	Housing	Diaphragm	Article-No.	Price (EUR)
APB-15						
MPD-25.1	II 3G EEx c IIB T4	G 3/4	PP	HytreI-PTFE	37602429	▲
MPD-25.1	II 3G EEx c IIB T4	G 3/4	PVDF	Santo-PTFE	Ⓢ	▲
MPD-25.1	II 3G EEx c IIB T4	G 3/4	PPS-V	HytreI-PTFE	37602431	▲
APE-15						
MPD-25.1	II 2G EEx c IIB T4	G 3/4	PP-CFK	HytreI-PTFE	Ⓢ	▲
MPD-25.1	II 2G EEx c IIB T4	G 3/4	PVDF-CFK	Santo-PTFE	37603757	▲

AIR DRIVEN DIAPHRAGM PUMPS



OVERVIEW

- Cost-effective
- Leakage free
- Safe against overpressure
- Low maintenance continuous duty
- Design according to ATEX
- Safe to run dry
- Dry priming
- High quality materials
- Robust
- Silicone free

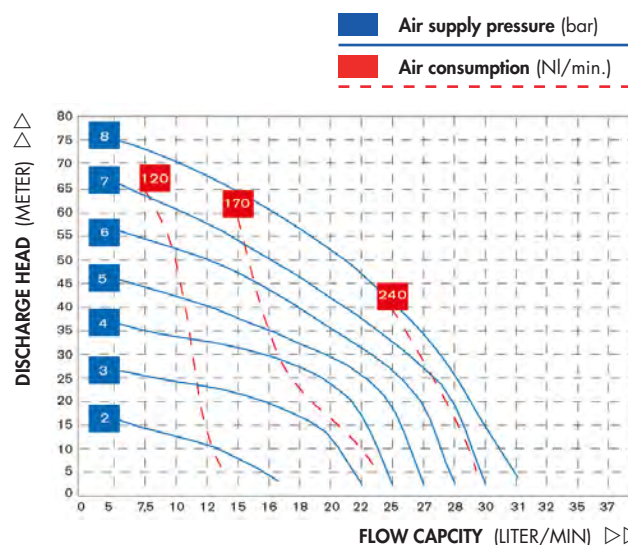
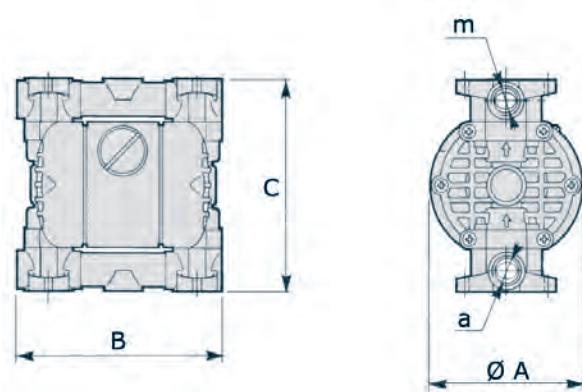
TECHNICAL DATA

Type	ATEX95	max. flow capacity [Litres/min.]	max. permissible counterpressure [bar]	Air supply pressure min - max [bar]	Air supply connection	max. suction height dry [m]	wet [m]
APB-30	II 3G EEx c IIB T4	35	8	2-8	G 1/4	4	9,5
APE-30	II 2G EEx c IIB T4	35	8	2-8	G 1/4	4	9,5

BASIC DESIGNS

Type	Pump body	Diaphragm	Valve seats	Valve balls	Valve seals	Article-No.	Price (EUR)	Wearing parts kit Article-No.	Price (EUR)
APB-30	PP	Santo-PTFE	PP	PTFE	PTFE	15004560	▲	90039657	▲
APB-30	PVDF	Santo-PTFE	PVDF	PTFE	PTFE	15004561	▲	90039658	▲
APB-30	AISI 316	Santo-PTFE	AISI 316	AISI 316	PTFE	15004562	▲	90039659	▲
APE-30	PP-CFK	Santo-PTFE	PP	PTFE	PTFE	15004580	▲	90039657	▲
APE-30	PVDF	Santo-PTFE	PVDF	PTFE	PTFE	15004581	▲	90039658	▲
APE-30	AISI 316	Santo-PTFE	AISI 316	PTFE	PTFE	15004582	▲	90042269	▲

DIMENSIONS



Type	Connections	m/a	Material	A	B	C	Weight (kg)
AP...30	G 1/2		Plastic	80	165	168	1,6 PP (1,9 PVDF)
			Metal	80	165	168	3,8 AISI316

CONNECTION Suction-/Pressure side: **G 1/2 (f)**
 Max. flow capacity 35 l/min
 Admissible counterpressure up to 8 bar

AP...-30

ACCESSORIES



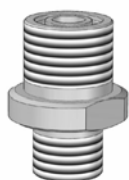
Compressed air supply unit

- Filter pressure controller
- Shut-off and check valve
- Fittings

- incl. 5m pneumatic hose

* design for hazardous areas on request

		Article-No.	Price (EUR)
without solenoid valve		90019998	▲
for APB-Design	24 V	90020024	▲
with solenoid valve (incl. double nipple)*	230 V	90020017	▲
for APE-Design	24 V	Ⓢ	
with solenoid valve (incl. double nipple)*	230 V	Ⓢ	

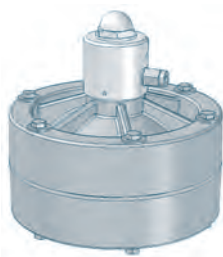


Connection adapter

- two pieces are required per pump

Pump connection	Adapter connections	Material	Seals	Article-No.	Price (EUR)
G 1/2	G1/2 - G3/4	PP	EPDM	90044750	▲
G 1/2	G1/2 - G3/4	PP	FPM	90044755	▲
G 1/2	G1/2 - G3/4	1.4571	FEP	90044761	▲

FITTINGS FOR THE PRESSURE SIDE



Diaphragm pulsation damper

Properties

- Compact design
- Any mounting direction
- Maintenance free
- High quality materials

Type	Ex-Zone	Connection	Housing	Diaphragm	Article-No.	Price (EUR)
APB-30						
MPD-25.1	II 3G EEx c IIB T4	G 3/4	PP	HytreI-PTFE	37602429	▲
MPD-25.1	II 3G EEx c IIB T4	G 3/4	PVDF	Santo-PTFE	Ⓢ	▲
MPD-25.1	II 3G EEx c IIB T4	G 3/4	PPS-V	HytreI-PTFE	37602431	▲
APE-30						
MPD-25.1	II 2G EEx c IIB T4	G 3/4	PP-CFK	HytreI-PTFE	Ⓢ	▲
MPD-25.1	II 2G EEx c IIB T4	G 3/4	PVDF-CFK	Santo-PTFE	37603757	▲

AIR DRIVEN DIAPHRAGM PUMPS



OVERVIEW

- Cost-effective
- Leakage free
- Safe against overpressure
- Low maintenance continuous duty
- Design according to ATEX
- Safe to run dry
- Dry priming
- High quality materials
- Robust
- Silicone free

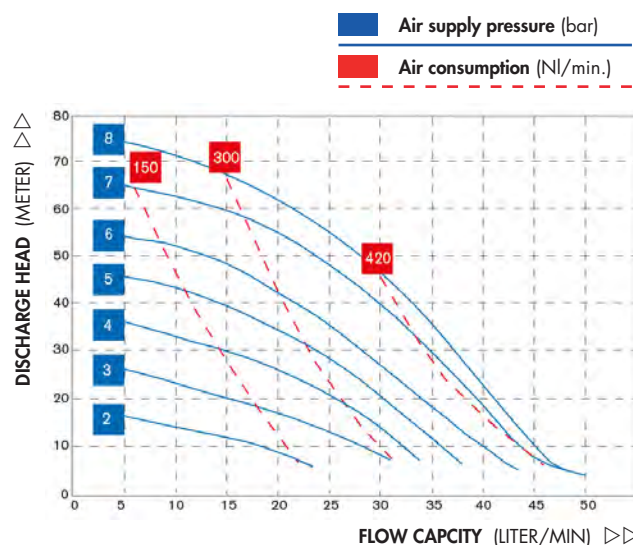
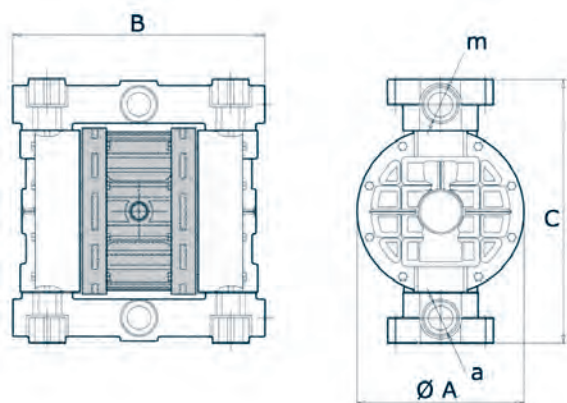
TECHNICAL DATA

Type	ATEX95	max. flow capacity [Litres/min.]	max. permissible counterpressure [bar]	Air supply pressure min - max [bar]	Air supply connection	max. suction height dry [m]	wet [m]
APB-45	II 3G EEx c IIB T4	60	8	2-8	G 3/8	4	9,5
APE-45	II 2G EEx c IIB T4	60	8	2-8	G 3/8	4	9,5

BASIC DESIGNS

Type	Pump body	Diaphragm	Valve seats	Valve balls	Valve seals	Article-No.	Price (EUR)	Wearing parts kit Article-No.	Price (EUR)
APB-45	PP	Santo-PTFE	PP	PTFE	PTFE	15004563	▲	90039660	▲
APB-45	PVDF	Santo-PTFE	PVDF	PTFE	PTFE	15004564	▲	90039664	▲
APB-45	AISI 316	Santo-PTFE	AISI 316	AISI 316	PTFE	15004197	▲	90039667	▲
APE-45	PP-CFK	Santo-PTFE	PP	PTFE	PTFE	15004583	▲	90039660	▲
APE-45	PVDF	Santo-PTFE	PVDF	PTFE	PTFE	15004584	▲	90039664	▲
APE-45	AISI 316	Santo-PTFE	AISI 316	PTFE	PTFE	15004585	▲	90042270	▲

DIMENSIONS



Type	Connections	m/a	Material	A	B	C	Weight (kg)
APB-45	G 1/2		Plastic	153	247	241	3,6 PP (4,2 PVDF)
			Metal	153	230	232	6,5 AISI316

CONNECTION Suction-/Pressure side: **G 1/2 (f)**
 Max. flow capacity 60 l/min
 Admissible counterpressure up to 8 bar

AP...-45

ACCESSORIES



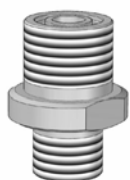
Compressed air supply unit

- Filter pressure controller
- Shut-off and check valve
- Fittings

- incl. 5m pneumatic hose

* design for hazardous areas on request

		Article-No.	Price (EUR)
without solenoid valve		90019600	▲
for APB-Design	24 V	90020025	▲
with solenoid valve (incl. double nipple)*	230 V	90020018	▲
for APE-Design	24 V	Ⓢ	
with solenoid valve (incl. double nipple)*	230 V	Ⓢ	

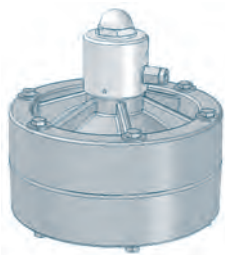


Connection adapter

- two pieces are required per pump

Pump connection	Adapter connections	Material	Seals	Article-No.	Price (EUR)
G 1/2	G1/2 - G3/4	PP	EPDM	90044750	▲
G 1/2	G1/2 - G3/4	PP	FPM	90044755	▲
G 1/2	G1/2 - G3/4	1.4571	FEP	90044761	▲

FITTINGS FOR THE PRESSURE SIDE



Diaphragm pulsation damper

Properties

- Compact design
- Any mounting direction
- Maintenance free
- High quality materials

Type	Ex-Zone	Connection	Housing	Diaphragm	Article-No.	Price (EUR)
APB-45						
MPD-150	II 3G EEx c IIB T4	G 1	PP	HytreI-PTFE	37601310	▲
MPD-150	II 3G EEx c IIB T4	G 1	PVDF	Santo-PTFE	Ⓢ	▲
MPD-150	II 3G EEx c IIB T4	G 1	PPS-V	HytreI-PTFE	Ⓢ	▲
APE-45						
MPD-150	II 2G EEx c IIB T4	G 1	PP-CFK	HytreI-PTFE	37605559	▲
MPD-150	II 2G EEx c IIB T4	G 1	PVDF-CFK	Santo-PTFE	37603480	▲

AIR DRIVEN DIAPHRAGM PUMPS



OVERVIEW

- Cost-effective
- Leakage free
- Safe against overpressure
- Low maintenance continuous duty
- Design according to ATEX
- Safe to run dry
- Dry priming
- High quality materials
- Robust
- Silicone free

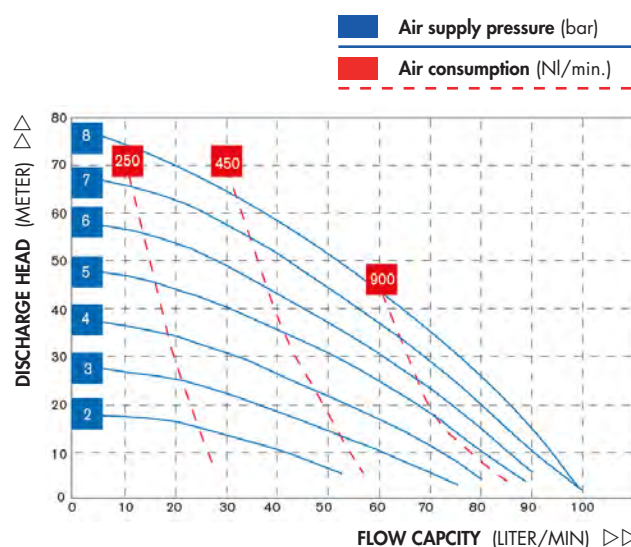
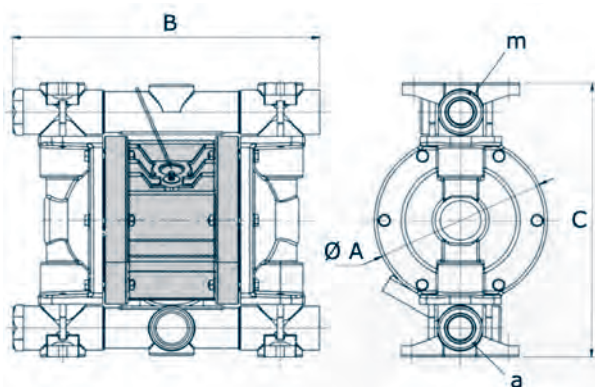
TECHNICAL DATA

Type	ATEX95	max. flow capacity [Litres/min.]	max. permissible counterpressure [bar]	Air supply pressure min - max [bar]	Air supply connection	max. suction height dry [m]	wet [m]
APB-100	II 3G EEx c IIB T4	110	8	2-8	G 3/8	4	9,5
APE-100	II 2G EEx c IIB T4	110	8	2-8	G 3/8	4	9,5

BASIC DESIGNS

Type	Pump body	Diaphragm	Valve seats	Valve balls	Valve seals	Article-No.	Price (EUR)	Wearing parts kit Article-No.	Price (EUR)
APB-100	PP	Santo-PTFE	PP	PTFE	PTFE	15004540	▲	90039668	▲
APB-100	PVDF	Santo-PTFE	PVDF	PTFE	PTFE	15004565	▲	90039669	▲
APE-100	PP-CFK	Santo-PTFE	PP	PTFE	PTFE	15004586	▲	90039668	▲
APE-100	PVDF	Santo-PTFE	PVDF	PTFE	PTFE	15004587	▲	90039669	▲

DIMENSIONS



Type	Connections	m/a	Material	A	B	C	Weight (kg)
APB-100	G 1		Plastic	170	308	274	5,0 (PP), 6,5 (PVDF)

CONNECTION Suction-/Pressure side: **G1 (f)**
 Max. flow capacity 110 l/min
 Admissible counterpressure up to 8 bar

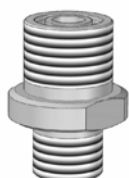
AP...-100

ACCESSORIES



Compressed air supply unit

● Filter pressure controller	● incl. 5m pneumatic hose		
● Shut-off and check valve			
● Fittings	* design for hazardous areas on request	Article-No.	Price (EUR)
without solenoid valve		90031418	▲
for APB-Design	24 V	90031420	▲
with solenoid valve (incl. double nipple)*	230 V	90031419	▲
for APE-Design	24 V	Ⓢ	
with solenoid valve (incl. double nipple)*	230 V	Ⓢ	



Connection adapter

● two pieces are required per pump					
Pump connection	Adapter connections	Material	Seals	Article-No.	Price (EUR)
G 1	G1 - G1 1/4	PP	EPDM	90044751	▲
G 1	G1 - G1 1/4	PP	FPM	90044757	▲
G 1	G1 - G1 1/4	1.4571	FEP	90044762	▲

FITTINGS FOR THE PRESSURE SIDE



Diaphragm pulsation damper

Properties

- Compact design
- Maintenance free
- Any mounting direction
- High quality materials

Type	Ex-Zone	Connection	Housing	Diaphragm	Article-No.	Price (EUR)
APB-100						
MPD-150	II 3G EEx c IIB T4	G 1	PP	HytreI-PTFE	37601310	▲
MPD-150	II 3G EEx c IIB T4	G 1	PVDF	Santo-PTFE	Ⓢ	▲
MPD-150	II 3G EEx c IIB T4	G 1	PPS-V	HytreI-PTFE	Ⓢ	▲
APE-100						
MPD-150	II 2G EEx c IIB T4	G 1	PP-CFK	HytreI-PTFE	37605559	▲
MPD-150	II 2G EEx c IIB T4	G 1	PVDF-CFK	Santo-PTFE	37603480	▲

AIR DRIVEN DIAPHRAGM PUMPS



OVERVIEW

- Cost-effective
- Leakage free
- Safe against overpressure
- Low maintenance continuous duty
- Design according to ATEX
- Safe to run dry
- Dry priming
- High quality materials
- Robust
- Silicone free

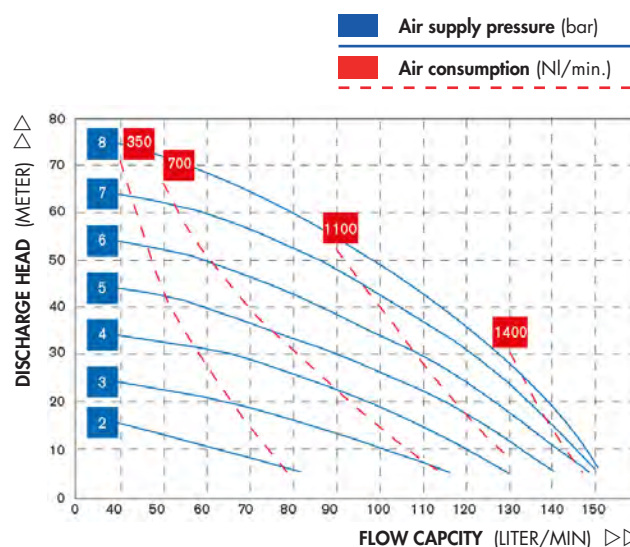
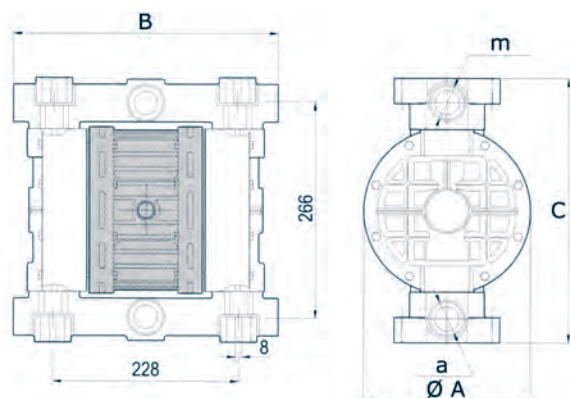
TECHNICAL DATA

Type	ATEX95	max. flow capacity [Litres/min.]	max. permissible counterpressure [bar]	Air supply pressure min - max [bar]	Air supply connection	max. suction height dry [m]	wet [m]
APB-150	II 3G EEx c IIB T4	160	8	2-8	G 3/8	4	9,5
APE-150	II 2G EEx c IIB T4	160	8	2-8	G 3/8	4	9,5

BASIC DESIGNS

Type	Pump body	Diaphragm	Valve seats	Valve balls	Valve seals	Article-No.	Price (EUR)	Wearing parts kit Article-No.	Price (EUR)
APB-150	PP	Santo-PTFE	PP	PTFE	PTFE	15004509	▲	90039670	▲
APB-150	PVDF	Santo-PTFE	PVDF	PTFE	PTFE	15004566	▲	90039671	▲
APB-150	AISI 316	Santo-PTFE	AISI 316	AISI 316	PTFE	15004567	▲	90039672	▲
APE-150	PP-CFK	Santo-PTFE	PP	PTFE	PTFE	15004588	▲	90039670	▲
APE-150	PVDF	Santo-PTFE	PVDF	PTFE	PTFE	15004589	▲	90039671	▲
APE-150	AISI 316	Santo-PTFE	AISI 316	PTFE	PTFE	15004590	▲	90042271	▲

DIMENSIONS



Type	Connections	m/a	Material	A	B	C	Weight (kg)
AP..-150	G 1		Plastic	202	325	329	7,5 PP (8,5 PVDF)
			Metal	202	325	329	11,0 AISI316

CONNECTION Suction-/Pressure side: **G1 (f)**
 Max. flow capacity 160 l/min
 Admissible counterpressure up to 8 bar

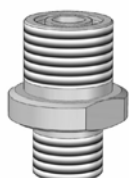
AP...-150

ACCESSORIES



Compressed air supply unit

● Filter pressure controller	● incl. 5m pneumatic hose		
● Shut-off and check valve			
● Fittings	* design for hazardous areas on request	Article-No.	Price (EUR)
without solenoid valve		90031418	▲
for APB-Design	24 V	90031420	▲
with solenoid valve (incl. double nipple)*	230 V	90031419	▲
for APE-Design	24 V	Ⓢ	
with solenoid valve (incl. double nipple)*	230 V	Ⓢ	



Connection adapter

● two pieces are required per pump					
Pump connection	Adapter connections	Material	Seals	Article-No.	Price (EUR)
G 1	G1 - G1 1/4	PP	EPDM	90044751	▲
G 1	G1 - G1 1/4	PP	FPM	90044757	▲
G 1	G1 - G1 1/4	1.4571	FEP	90044762	▲

FITTINGS FOR THE PRESSURE SIDE



Diaphragm pulsation damper

Properties

- Compact design
- Maintenance free
- Any mounting direction
- High quality materials

Type	Ex-Zone	Connection	Housing	Diaphragm	Article-No.	Price (EUR)
APB-150						
MPD-150	II 3G EEx c IIB T4	G 1	PP	HytreI-PTFE	37601310	▲
MPD-150	II 3G EEx c IIB T4	G 1	PVDF	Santo-PTFE	Ⓢ	▲
MPD-150	II 3G EEx c IIB T4	G 1	PPS-V	HytreI-PTFE	Ⓢ	▲
APE-150						
MPD-150	II 2G EEx c IIB T4	G 1	PP-CFK	HytreI-PTFE	37605559	▲
MPD-150	II 2G EEx c IIB T4	G 1	PVDF-CFK	Santo-PTFE	37603480	▲

AIR DRIVEN DIAPHRAGM PUMPS



OVERVIEW

- Cost-effective
- Leakage free
- Safe against overpressure
- Low maintenance continuous duty
- Design according to ATEX
- Safe to run dry
- Dry priming
- High quality materials
- Robust
- Silicone free

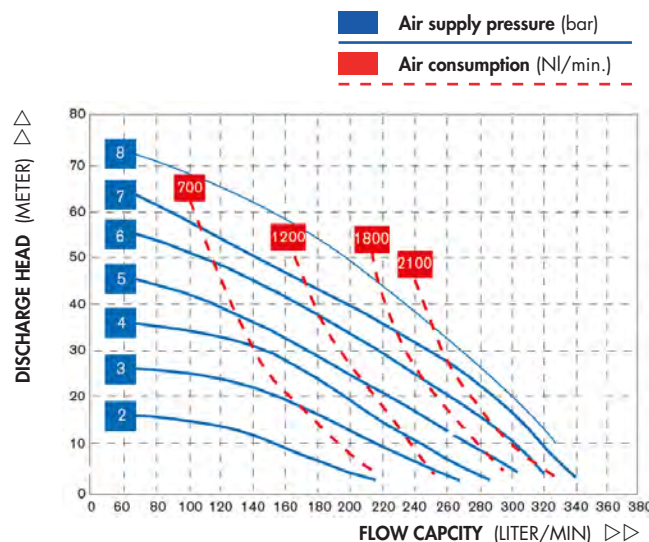
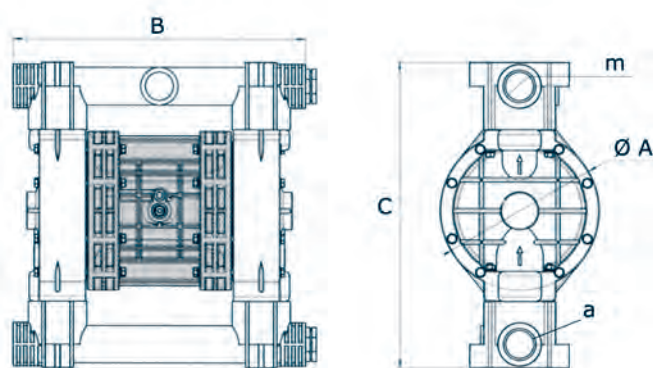
TECHNICAL DATA

Type	ATEX95	max. flow capacity [Litres/min.]	max. permissible counterpressure [bar]	Air supply pressure min - max [bar]	Air supply connection	max. suction height dry [m]	wet [m]
APB-340	II 3G EEx c IIB T4	340	8	2-8	G 1/2	4	9,5
APE-340	II 2G EEx c IIB T4	340	8	2-8	G 1/2	4	9,5

BASIC DESIGNS

Type	Pump body	Diaphragm	Valve seats	Valve balls	Valve seals	Article-No.	Price (EUR)	Wearing parts kit Article-No.	Price (EUR)
APB-340	PP	Santo-PTFE	PP	PTFE	PTFE	15004568	▲	90039673	▲
APB-340	PVDF	Santo-PTFE	PVDF	PTFE	PTFE	15004569	▲	90039674	▲
APB-340	AISI 316	Santo-PTFE	AISI 316	AISI 316	PTFE	15004570	▲	90039675	▲
APE-340	PP-CFK	Santo-PTFE	PP	PTFE	PTFE	15004591	▲	90039673	▲
APE-340	PVDF	Santo-PTFE	PVDF	PTFE	PTFE	15004592	▲	90039674	▲
APE-340	AISI 316	Santo-PTFE	AISI 316	PTFE	PTFE	15004593	▲	90042272	▲

DIMENSIONS



Type	Connections	m/a	Material	A	B	C	Weight (kg)
AP..340	G 1 1/2		Plastic	254	493	493	16,0 (PP)
			Metal	254	493	493	32,0 (AISI316)

CONNECTION Suction-/Pressure side: **G1 1/2 (f)**
 Max. flow capacity 340 l/min
 Admissible counterpressure up to 8 bar

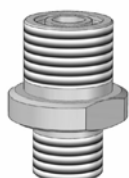
AP...-340

ACCESSORIES



Compressed air supply unit

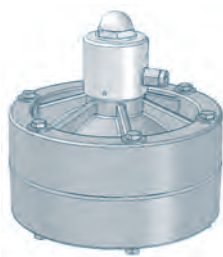
● Filter pressure controller ● Shut-off and check valve ● Fittings	● incl. 5m pneumatic hose		
	* design for hazardous areas on request	Article-No.	Price (EUR)
without solenoid valve		90019999	▲
for APB-Design	24 V	90020027	▲
with solenoid valve (incl. double nipple)*	230 V	90020020	▲
for APE-Design	24 V	Ⓢ	
with solenoid valve (incl. double nipple)*	230 V	Ⓢ	



Connection adapter

	● two pieces are required per pump				
Pump connection	Adapter connections	Material	Seals	Article-No.	Price (EUR)
G 1 1/2	G1 1/2 - G2 1/4	PP	EPDM	90044752	▲
G 1 1/2	G1 1/2 - G2 1/4	PP	FPM	90044758	▲
G 1 1/2	G1 1/2 - G2 1/4	1.4571	FEP	90044763	▲

FITTINGS FOR THE PRESSURE SIDE



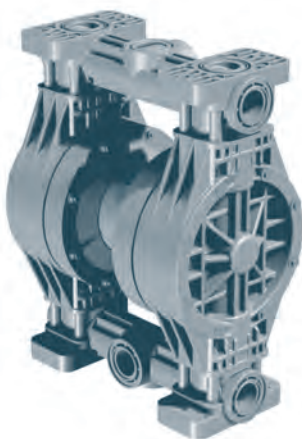
Diaphragm pulsation damper

Properties

- Compact design
- Any mounting direction
- Maintenance free
- High quality materials

Type	Ex-Zone	Connection	Housing	Diaphragm	Article-No.	Price (EUR)
APB-340						
MPD-340	II 3G EEx c IIB T4	G1 1/2	PP	HytreI-PTFE	37601314	▲
MPD-340	II 3G EEx c IIB T4	G1 1/2	PVDF	Santo-PTFE	37606670	▲
MPD-340	II 3G EEx c IIB T4	G1 1/2	PPS-V	HytreI-PTFE	Ⓢ	▲
APE-340						
MPD-340	II 2G EEx c IIB T4	G1 1/2	PP-CFK	HytreI-PTFE	37604859	▲
MPD-340	II 2G EEx c IIB T4	G1 1/2	PVDF-CFK	Santo-PTFE	37605763	▲

AIR DRIVEN DIAPHRAGM PUMPS



OVERVIEW

- Cost-effective
- Leakage free
- Safe against overpressure
- Low maintenance continuous duty
- Design according to ATEX
- Safe to run dry
- Dry priming
- High quality materials
- Robust
- Silicone free

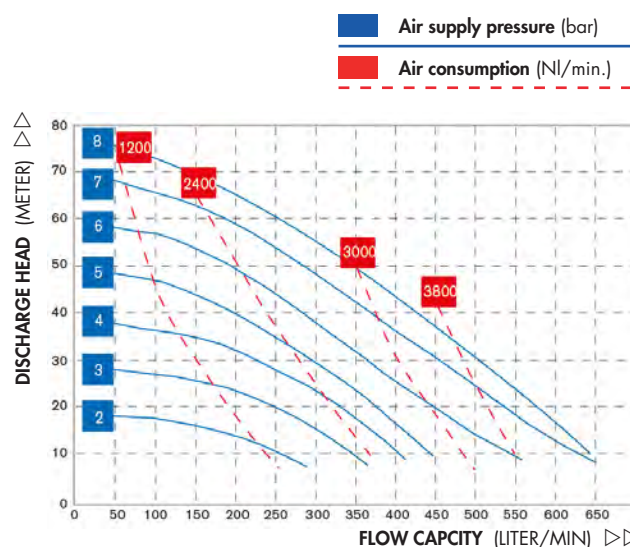
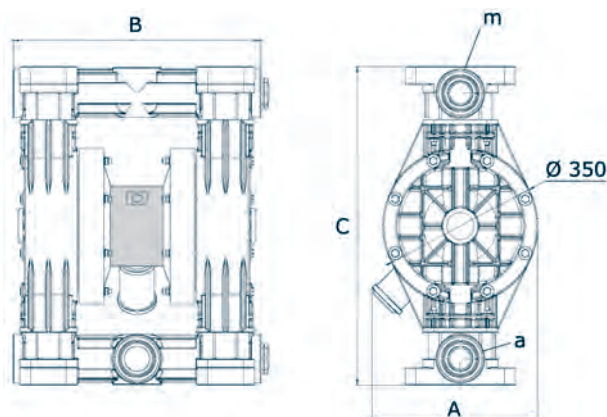
TECHNICAL DATA

Type	ATEX95	max. flow capacity [Litres/min.]	max. permissible counterpressure [bar]	Air supply pressure min - max [bar]	Air supply connection	max. suction height dry [m]	wet [m]
APB-650	II 3G EEx c IIB T4	600	8	2-8	G 1/2	5	9,5
APE-650	II 2G EEx c IIB T4	600	8	2-8	G 1/2	5	9,5

BASIC DESIGNS

Type	Pump body	Diaphragm	Valve seats	Valve balls	Valve seals	Article-No.	Price (EUR)	Wearing parts kit Article-No.	Price (EUR)
APB-650	PP	Santo-PTFE	PP	PTFE	PTFE	15004571	▲	90039676	▲
APB-650	PVDF	Santo-PTFE	PVDF	PTFE	PTFE	15004572	▲	90039677	▲
APB-650	AISI 316	Santo-PTFE	AISI 316	AISI 316	PTFE	15004573	▲	90039678	▲
APE-650	PP-CFK	Santo-PTFE	PP	PTFE	PTFE	15004594	▲	90039676	▲
APE-650	PVDF	Santo-PTFE	PVDF	PTFE	PTFE	15004595	▲	90039677	▲
APE-650	AISI 316	Santo-PTFE	AISI 316	PTFE	PTFE	15004596	▲	90042273	▲

DIMENSIONS



Type	Connections	m/a	Material	A	B	C	Weight (kg)
AP..-650	G 2		Plastic	400	590	650	45 (PP), 52 (PVDF)
			Metal	404	470	705	54 (AISI316)

CONNECTION Suction-/Pressure side: **G2 (f)**
 Max. flow capacity 600 l/min
 Admissible counterpressure up to 8 bar

AP...-650

ACCESSORIES



Compressed air supply unit

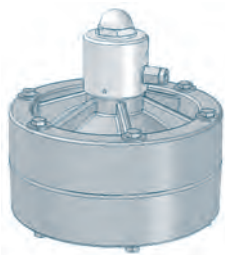
- Filter pressure controller
- Shut-off and check valve
- Fittings

- incl. 5m pneumatic hose

* design for hazardous areas on request

		Article-No.	Price (EUR)
without solenoid valve		Ⓢ	
for APB-Design	24 V	Ⓢ	
with solenoid valve (incl. double nipple)*	230 V	Ⓢ	
for APE-Design	24 V	Ⓢ	
with solenoid valve (incl. double nipple)*	230 V	Ⓢ	

FITTINGS FOR THE PRESSURE SIDE



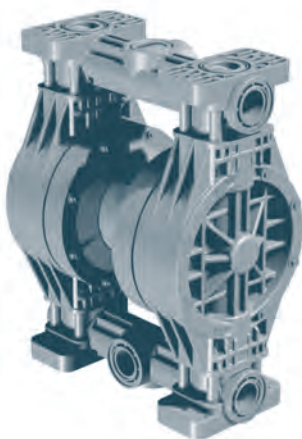
Diaphragm pulsation damper

Properties

- Compact design
- Any mounting direction
- Maintenance free
- High quality materials

Type	Ex-Zone	Connection	Housing	Diaphragm	Article-No.	Price (EUR)
APB-650						
MPD-650.1	II 3G EEx c IIB T4	G 2	PP	Hytrel-PTFE	37601318	▲
MPD-650.1	II 3G EEx c IIB T4	G 2	PVDF	Santo-PTFE	Ⓢ	▲
MPD-650.1	II 3G EEx c IIB T4	G 2	Aluminium	Hytrel-PTFE	Ⓢ	▲
MPD-650.1	II 3G EEx c IIB T4	G 2	AISI 316	Hytrel-PTFE	Ⓢ	▲
APE-650						
Ⓢ					Ⓢ	Ⓢ

AIR DRIVEN DIAPHRAGM PUMPS



OVERVIEW

- Cost-effective
- Leakage free
- Safe against overpressure
- Low maintenance continuous duty
- Design according to ATEX
- Safe to run dry
- Dry priming
- High quality materials
- Robust
- Silicone free

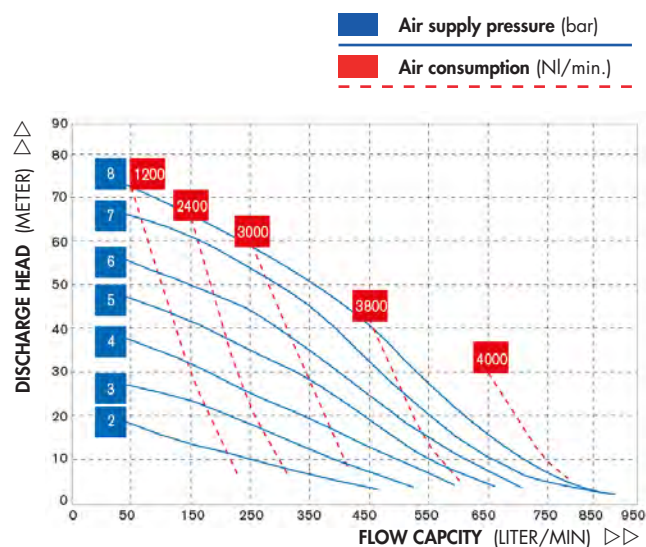
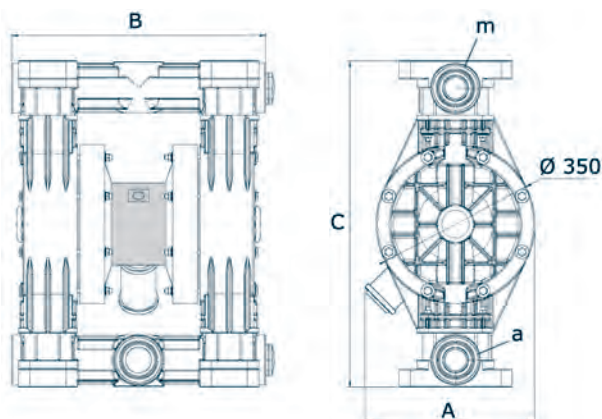
TECHNICAL DATA

Type	ATEX95	max. flow capacity [Litres/min.]	max. permissible counterpressure [bar]	Air supply pressure min - max [bar]	Air supply connection	max. suction height dry [m]	wet [m]
APB-850	II 3G EEx c IIB T4	800	8	2-8	G 1/2	4	9,5
APE-850	II 2G EEx c IIB T4	800	8	2-8	G 1/2	4	9,5

BASIC DESIGNS

Type	Pump body	Diaphragm	Valve seats	Valve balls	Valve seals	Article-No.	Price (EUR)	Wearing parts kit Article-No.	Price (EUR)
APB-850	PP	Santo-PTFE	PP	PTFE	FPM	15004574	▲	90039680	▲
APB-850	PP	Santo-PTFE	PP	PTFE	EPDM	15004575	▲	90039681	▲
APB-850	PVDF	Santo-PTFE	PVDF	PTFE	FPM	15004576	▲	90039682	▲
APB-850	AISI 316	Santo-PTFE	AISI 316	AISI 316	PTFE	15004577	▲	90039684	▲
APE-850	PP-CFK	Santo-PTFE	PP	PTFE	FPM	15004597	▲	90039680	▲
APE-850	PP-CFK	Santo-PTFE	PP	PTFE	EPDM	15004598	▲	90039681	▲
APE-850	PVDF	Santo-PTFE	PVDF	PTFE	FPM	15004599	▲	90039682	▲
APE-850	AISI 316	Santo-PTFE	AISI 316	PTFE	PTFE	15004600	▲	90042274	▲

DIMENSIONS



Type	Connections	m/a	Material	A	B	C	Weight (kg)
AP..-850	G 3		Plastic	404	585	726	50 (PP), 67 (PVDF)
			Metal	350	580	806	71 (AISI316)

CONNECTION Suction-/Pressure side: **G3 (f)**
 Max. flow capacity 800 l/min
 Admissible counterpressure up to 8 bar

AP...-850

ACCESSORIES



Compressed air supply unit

- Filter pressure controller
- Shut-off and check valve
- Fittings

- incl. 5m pneumatic hose

* design for hazardous areas on request

		Article-No.	Price (EUR)
without solenoid valve		⌚	
for APB-Design	24 V	⌚	
with solenoid valve (incl. double nipple)*	230 V	⌚	
for APE-Design	24 V	⌚	
with solenoid valve (incl. double nipple)*	230 V	⌚	

FITTINGS FOR THE PRESSURE SIDE



Diaphragm pulsation damper

Properties

- Compact design
- Any mounting direction
- Maintenance free
- High quality materials

Type	Ex-Zone	Connection	Housing	Diaphragm	Article-No.	Price (EUR)
APB-850						
MPD-850.1	II 3G EEx c IIB T4	G 3	PP	Hytrel-PTFE	37601805	▲
MPD-850.1	II 3G EEx c IIB T4	G 3	PVDF	Santo-PTFE	⌚	▲
MPD-850.1	II 3G EEx c IIB T4	G 3	Aluminium	Hytrel-PTFE	⌚	▲
MPD-850.1	II 3G EEx c IIB T4	G 3	AISI 316	Hytrel-PTFE	⌚	⌚
APE-850						
⌚					⌚	⌚

MAGNETIC-DRIVE CENTRIFUGAL PUMPS

DB-/SP-SERIES



FINISH THOMPSON INC.

sera | EXCELLENCE
PARTNER PRODUCT

INSPIRED. SOLUTIONS. FOR CUSTOMERS.

MAGNETIC-DRIVE CENTRIFUGAL PUMPS

APPLICATIONS DB- AND SP-SERIES

- Chemical processes
- Metal plating/working
- Wastewater treatment
- Electronics manufacturing
- OEM equipment supply
- DI & High purity water
- Fume scrubbing
- Mining
- Paper mills
- Pharmaceutical
- Chillers

APPLICATIONS SP-SERIES

- Sumps
- Underground storage tanks
- Rail cars and tanker trucks
- Over-the-wall applications
- Double containment tanks
- Piping systems that tend to have trapped or entrained air.

PROPERTIES AT A GLANCE

DB- AND SP-SERIES

- Close-coupled design
- Material PP or PVDF
- Neodymium magnets on every model
- Replaceable shaft and bushing
- ISO 1940 G2.5 balancing
- Mounts to NEMA and IEC motor frames
- Easy Set measurement-free outer drive
- Mounts to motor without disassembly
- Back pullout design
- CE certified
- ATEX 2014/34/EU available (DB only)

SPECIFICATIONS

- Up to 70% operating efficiency
- Working pressure up to 6,2 bar (90 psi)
- Maximum viscosity
DB-Series: over 150 cP
SP-Series: over 50 cP
- Maximum temperature
PP: up to 82° C (180° F)
PVDF: up to 104° C (220° F)

TECHNICAL DATA

- SP retains fluid for re-priming when shut off without a check valve
- SP lifts up to 25 feet (7.6 meters)**
- SP primes up to 18 feet (5.5 meters) in 90 seconds***

** lift determined on fresh, cold water

*** with maximum diameter impeller



Flow capacity DB (SP) up to max. 50,7 (47,9) m³/h
 Discharge head DB (SP) up to 41,7 (37,9) m

DB/SP

DB - SERIES

flooded suction



The standard for hydraulic efficiency and corrosive fluid handling

- Extreme dry run capability
- Designs according to ATEX 2014/34/EU
- PP or PVDF corrosion resistant construction
- Horizontal or vertical installation (with IEC motor only)
- Specific gravity handling over 1.8 kg/dm³

SP - SERIES

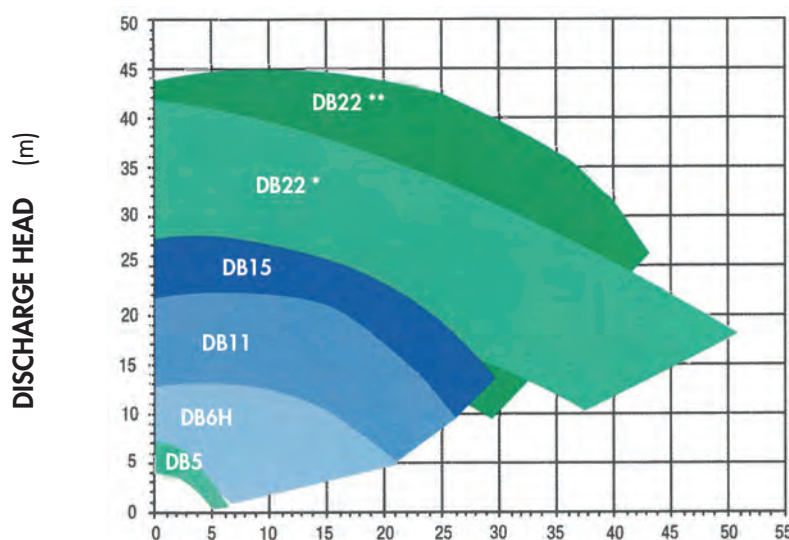
self-priming



The most innovative and versatile mag-drive centrifugal pump

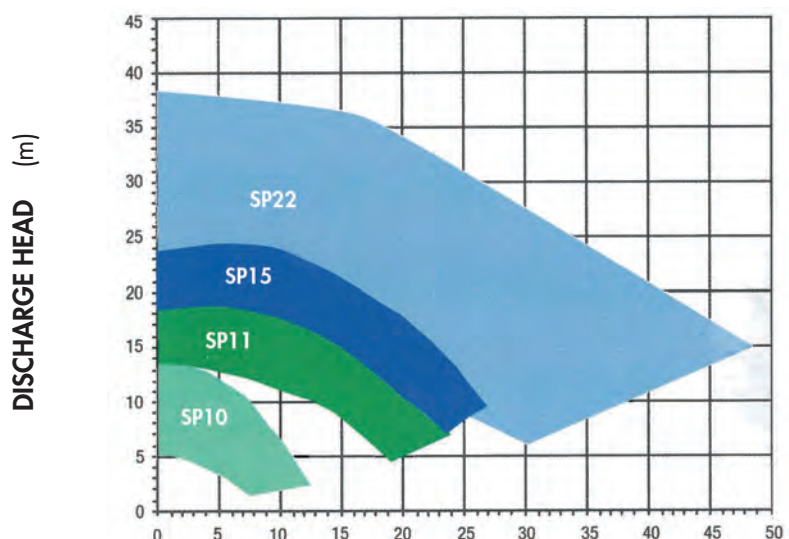
- Big on power - short on energy consumption
- Deep-lift capabilities - up to 7,6 meters
- Lightning fast priming - 5,5 meters in 90 sec.
- Easy to operate
- No seal replacement and no leaks
- Corrosion-resistant materials handle the most difficult applications

DB SERIES



SP SERIES

(curves based on flooded suction)



MAGNETIC-DRIVE CENTRIFUGAL PUMPS



OVERVIEW

- 5 years warranty
- Extreme dry run capability
- Neodymium magnets on every model
- Easy Set measurement-free outer drive
- Close-coupled design
- Design according to ATEX 2014/34/EU
- Horizontal or vertical installation
- ISO 1940 G2.5 balancing
- High quality materials
- Material PP or PVDF

TECHNICAL DATA

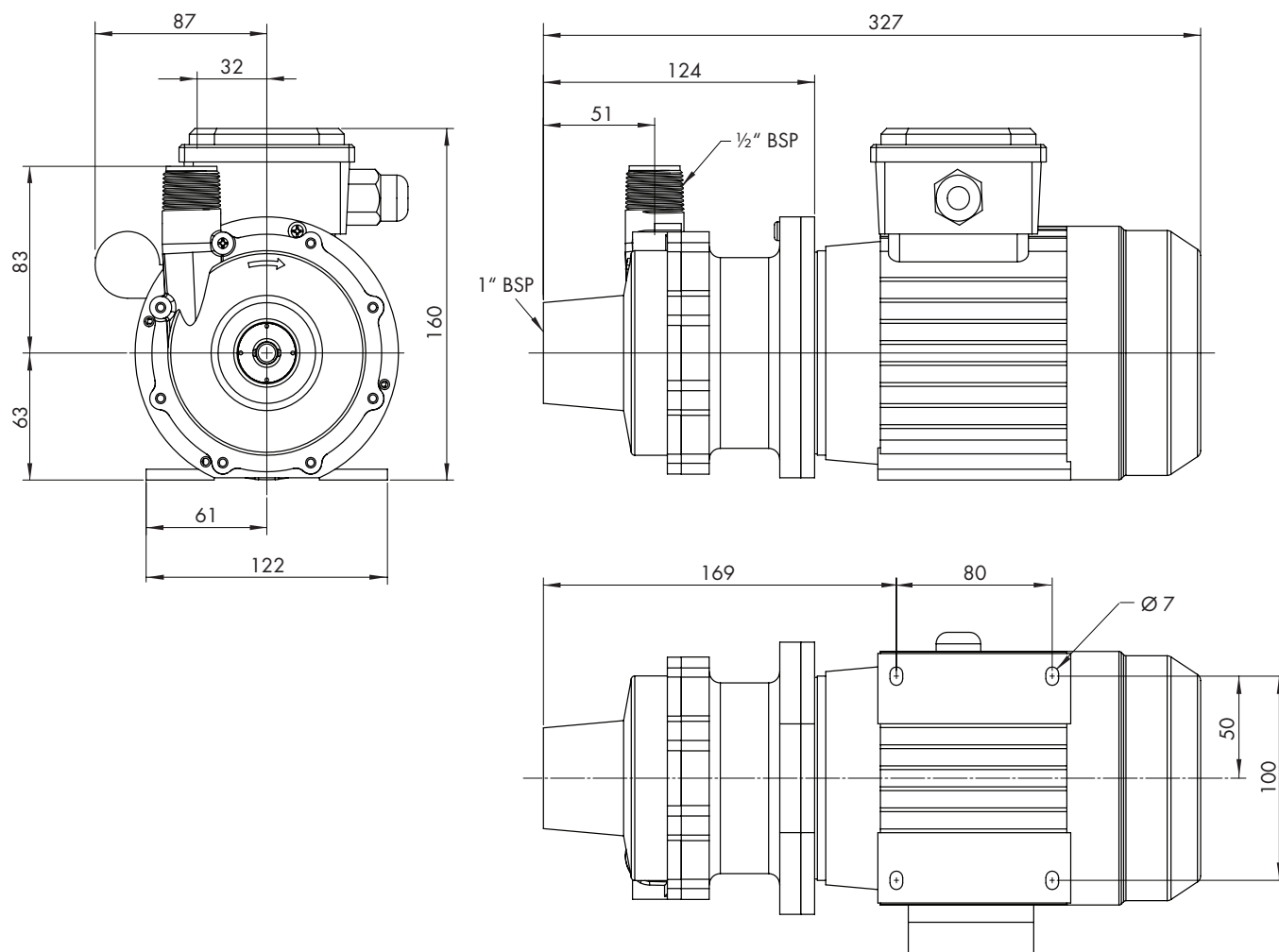
PUMP DATA			DB5
Impeller	Diameter	[mm]	76,2
Flow quantity Q_N	min.	[Litre/min]	1
	max.	[Litre/min]	60
		[m ³ /h]	3,6
Discharge head	max. H	[mWC]	7,5
System pressure	max.	[bar]	4,1
Density	max.	[kg/dm ³]	1,8
Viscosity	max.	[cP]	50
Temperature	max. [°C]	PP	82
		PVDF	104
Weight	approx. [kg]	PP	0,65
		PVDF	0,80

MOTOR DATA			DB5
Nominal speed	[rpm]		2.900
Power consumption	[kW]		0,18
Nominal voltage	[V]		230/400
Frequency	[Hz]		50
Enclosure	[IP]		55
Isolation class			F
Motor-Size	[BG]		63
Weight (without pump)	approx. [kg]		5,1

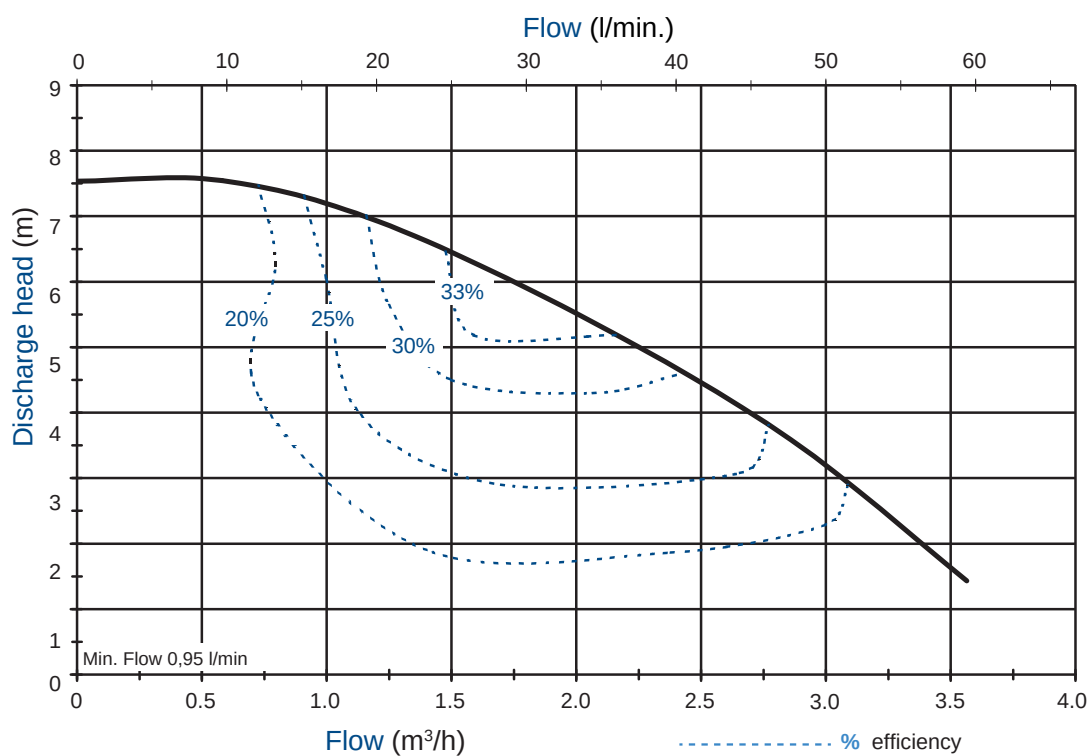
max. flow capacity 3,6 m³/h
Discharge head up to 7,5 m

DB5

DIMENSIONS



CHARACTERISTIC CURVES



MAGNETIC-DRIVE CENTRIFUGAL PUMPS

BASIC DESIGNS

PP			PVDF		
Pump housing	PP-FRP		Pump housing	PVDF-FRP	
Impeller	PP-FRP		Impeller	PVDF-FRP	
Slide bearing	Carbon		Slide bearing	Oxide ceramic	
O-Rings	EPDM		O-Rings	FKM	
Drive motor	0,18 kW (Standard)		Drive motor	0,18 kW (Standard)	
Type	Article-No.	Price (EUR)	Type	Article-No.	Price (EUR)
DB5P	15006576	⌚	DB5V	15006577	⌚



Surcharge [EUR]

3-Phase-DC motor, 230/400V DC, 50Hz, 3x PTC

BG 63	0,18 kW	(included in the basic design)	●
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1-Phase-AC motor, 230V/50Hz

BG 63	0,18 kW		▲
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II2G EExe II T4 (according to ATEX95)

BG 63	0,18 kW		⌚
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Further drive motors possible on request.

ACCESSORIES



Diaphragm valve, manually

- reliable diaphragm valve
- good control characteristics
- optical position indicator
- Valve accessories on request (e.g. stroke limitation, pneumatic drive, limit switch, solenoid pilot valve, manual override)

							Article-No.	Price (EUR)
Diaphragm valve	1/2"	DN15	Socket	d20	PP	EPDM	37607414	▲
Diaphragm valve	1/2"	DN15	Socket	d20	PVDF	FPM	37607491	▲

max. flow capacity 3,6 m³/h
Discharge head up to 7,5 m

DB5

MAGNETIC-DRIVE CENTRIFUGAL PUMPS



OVERVIEW

- 5 years warranty
- Extreme dry run capability
- Neodymium magnets on every model
- Easy Set measurement-free outer drive
- Close-coupled design
- Design according to ATEX 2014/34/EU
- Horizontal or vertical installation
- ISO 1940 G2.5 balancing
- High quality materials
- Material PP or PVDF

TECHNICAL DATA

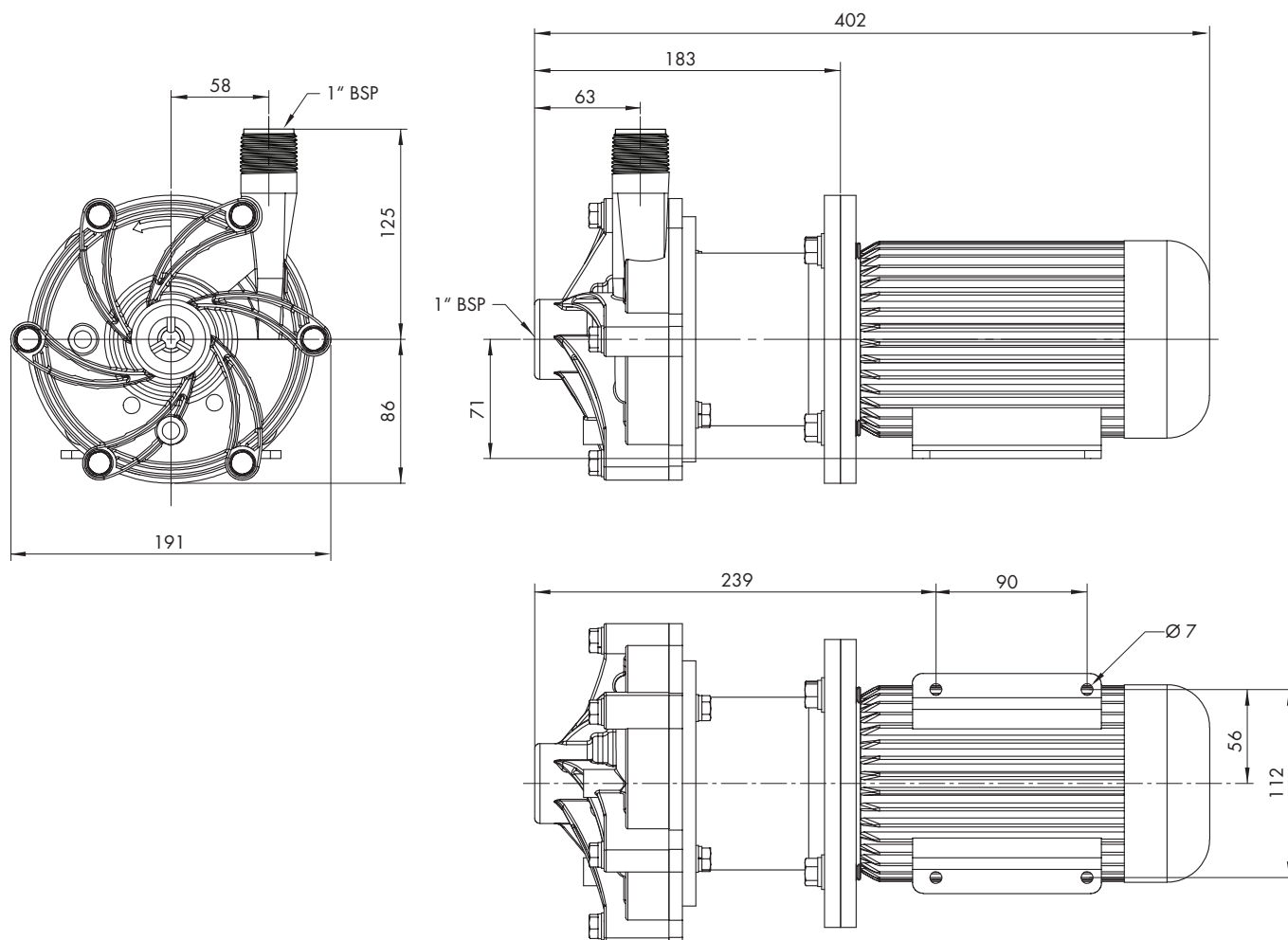
PUMP DATA			DB6H
Impeller	Diameter	[mm]	106
Flow quantity Q_N	min.	[Litre/min]	1,9
	max.	[Litre/min]	241
		[m ³ /h]	9,5
Discharge head	max. H	[mWC]	14,5
System pressure	max.	[bar]	5,5
Density	max.	[kg/dm ³]	1,8
Viscosity	max.	[cP]	150
Temperature	max. [°C]	PP	82
		PVDF	104
Weight	approx. [kg]	PP	3,4
		PVDF	3,9

MOTOR DATA			DB6H
Nominal speed	[rpm]		2.900
Power consumption	[kW]		0,37
Nominal voltage	[V]		230/400
Frequency	[Hz]		50
Enclosure	[IP]		55
Isolation class			F
Motor-Size	[BG]		71
Weight (without pump)	approx. [kg]		6,0

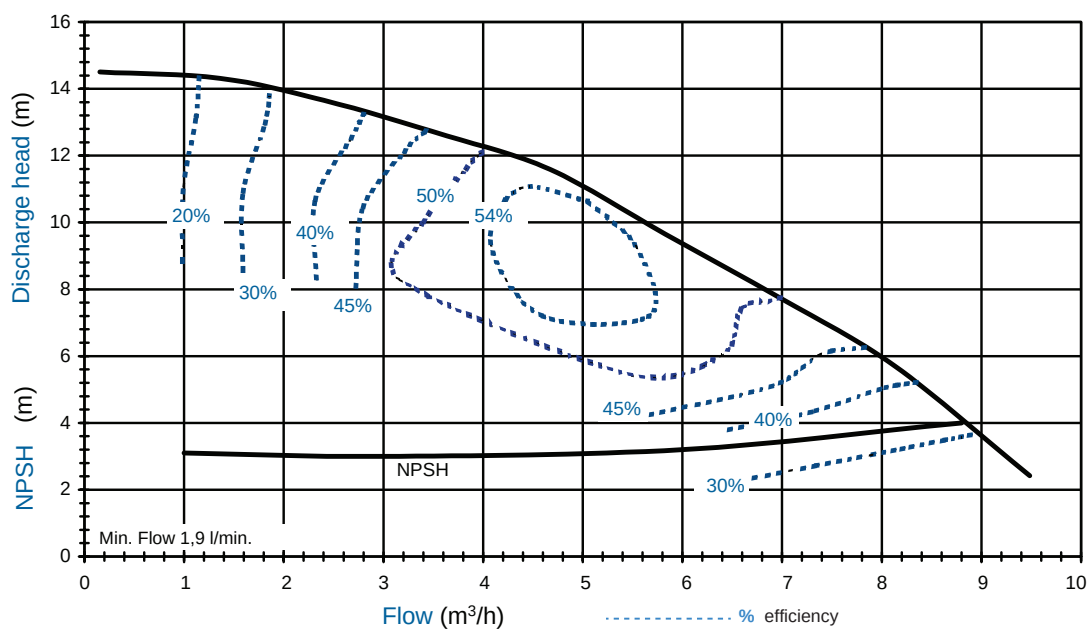
max. flow capacity 9,5 m³/h
Discharge head up to 14,5 m

DB6H

DIMENSIONS



CHARACTERISTIC CURVES



MAGNETIC-DRIVE CENTRIFUGAL PUMPS

BASIC DESIGNS

PP			PVDF		
Pump housing	PP-FRP		Pump housing	PVDF-FRP	
Impeller	PP-FRP		Impeller	PVDF-FRP	
Slide bearing	Carbon		Slide bearing	Oxide ceramic	
O-Rings	EPDM		O-Rings	FKM	
Drive motor	0,37 kW (Standard)		Drive motor	0,37 kW (Standard)	
Type	Article-No.	Price (EUR)	Type	Article-No.	Price (EUR)
DB6HP	15006578	🕒	DB6HV	15006579	🕒

DRIVE MOTOR



Surcharge [EUR]

3-Phase-DC motor, 230/400V DC, 50Hz, 3x PTC

BG 71	0,37 kW	(included in the basic design)	●
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1-Phase-AC motor, 230V/50Hz

BG 71	0,37 kW		▲
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II2G EExe II T4 (according to ATEX95)

BG 71	0,37 kW		🕒
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Further drive motors possible on request.

ACCESSORIES



Diaphragm valve, manually

- reliable diaphragm valve
- good control characteristics
- optical position indicator
- Valve accessories on request (e.g. stroke limitation, pneumatic drive, limit switch, solenoid pilot valve, manual override)

						Article-No.	Price (EUR)
Diaphragm valve	1"	DN25	Socket d32	PP	EPDM	37607488	▲
Diaphragm valve	1"	DN25	Socket d32	PVDF	FPM	37607493	▲

max. flow capacity 9,5 m³/h
Discharge head up to 14,5 m

DB6H

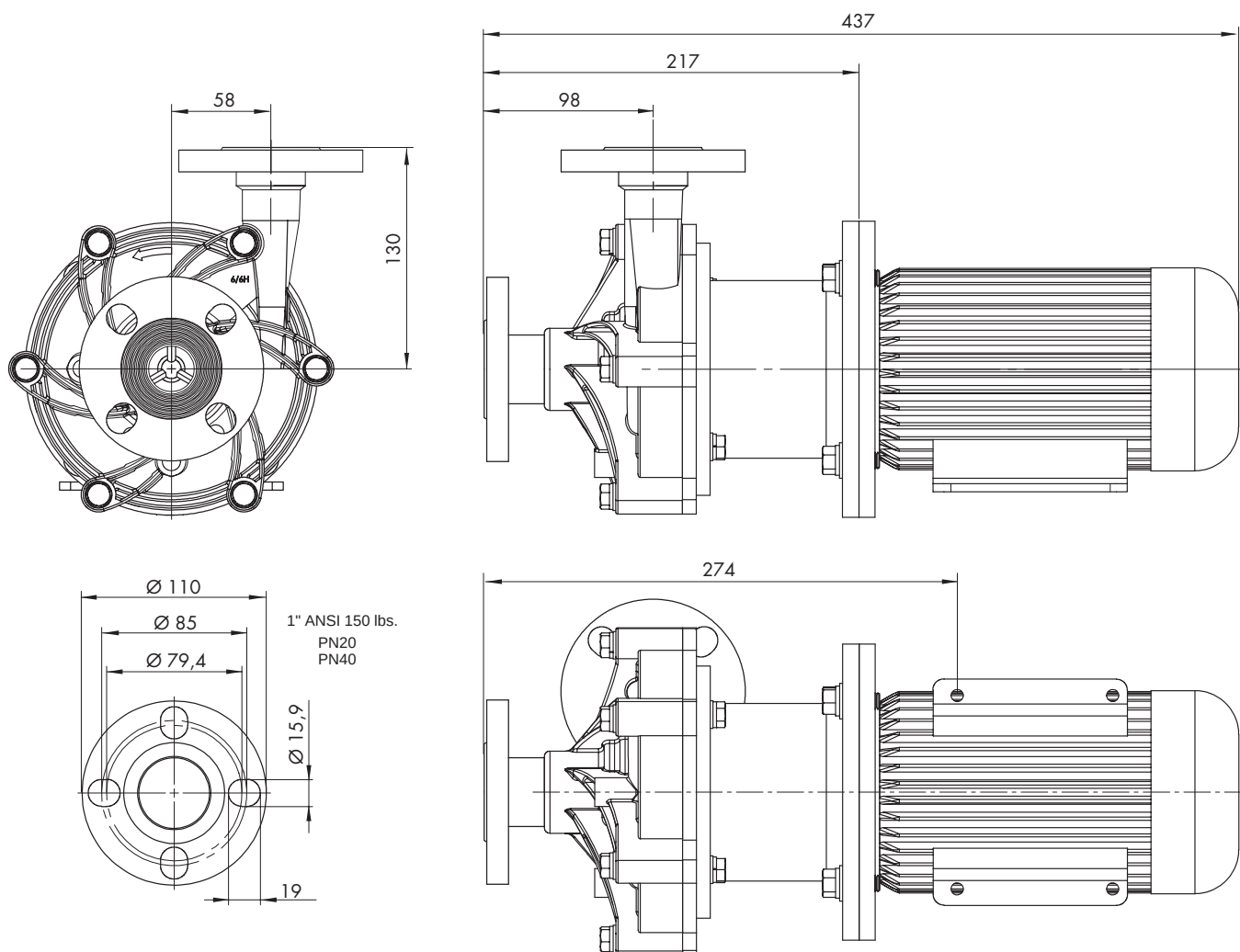
OPTIONS



Flange connection

			Surcharge [EUR]
FRP flange	ANSI 150/PN20/40	PP	▲
		PVDF	▲
Steel reinforced flange	ANSI 150/PN20/40	PP	▲
		PVDF	▲

DIMENSIONS



MAGNETIC-DRIVE CENTRIFUGAL PUMPS



OVERVIEW

- 5 years warranty
- Extreme dry run capability
- Neodymium magnets on every model
- Easy Set measurement-free outer drive
- Close-coupled design
- Design according to ATEX 2014/34/EU
- Horizontal or vertical installation
- ISO 1940 G2.5 balancing
- High quality materials
- Material PP or PVDF

TECHNICAL DATA

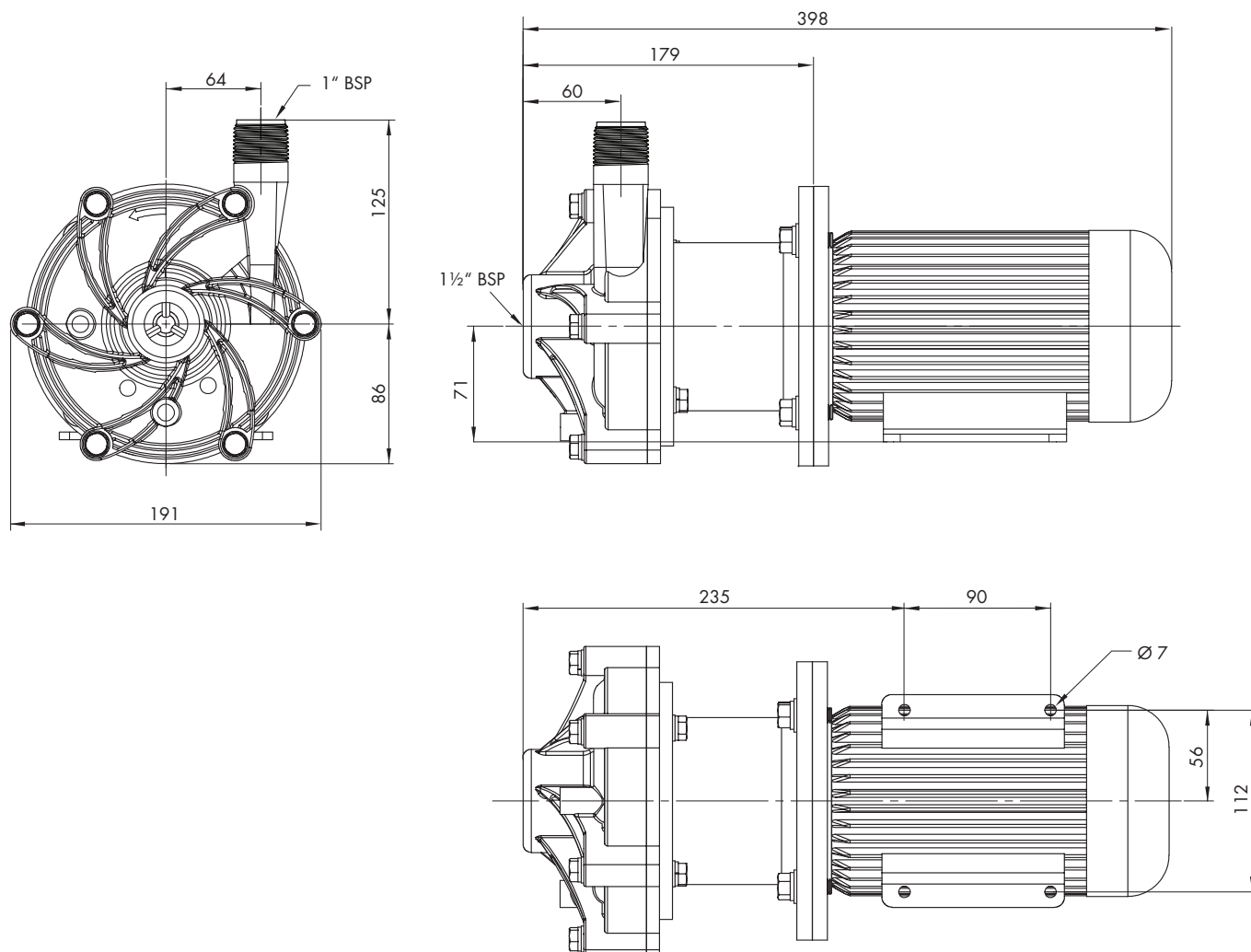
PUMP DATA			DB8
Impeller	Diameter	[mm]	106
Flow quantity Q_N	min.	[Litre/min]	1,9
	max.	[Litre/min]	235
		[m ³ /h]	14,1
Discharge head	max. H	[mWC]	14,1
System pressure	max.	[bar]	5,5
Density	max.	[kg/dm ³]	1,8
Viscosity	max.	[cP]	150
Temperature	max. [°C]	PP	82
		PVDF	104
Weight	approx. [kg]	PP	4,2
		PVDF	5,5

MOTOR DATA			DB8
Nominal speed	[rpm]		2.900
Power consumption	[kW]		0,55
Nominal voltage	[V]		230/400
Frequency	[Hz]		50
Enclosure	[IP]		55
Isolation class			F
Motor-Size	[BG]		71
Weight (without pump)	approx. [kg]		7,0

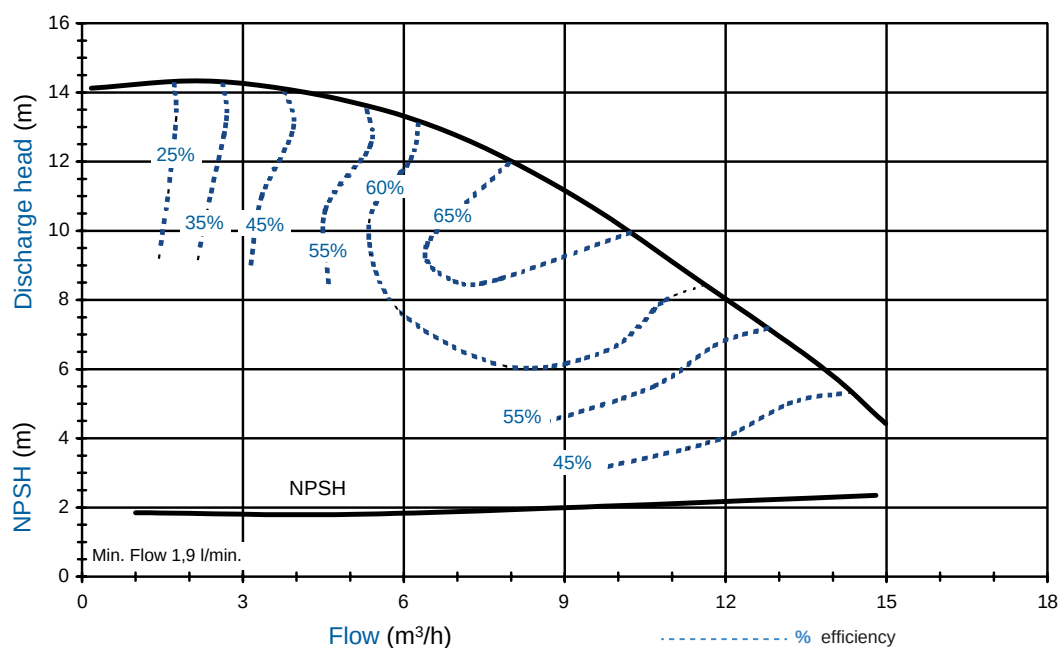
max. flow capacity 14,1 m³/h
Discharge head up to 14,1 m

DB8

DIMENSIONS



CHARACTERISTIC CURVES



MAGNETIC-DRIVE CENTRIFUGAL PUMPS

BASIC DESIGNS

PP			PVDF		
Pump housing	PP-FRP		Pump housing	PVDF-FRP	
Impeller	PP-FRP		Impeller	PVDF-FRP	
Slide bearing	Carbon		Slide bearing	Oxide ceramic	
O-Rings	EPDM		O-Rings	FKM	
Drive motor	0,55 kW (Standard)		Drive motor	0,55 kW (Standard)	
Type	Article-No.	Price (EUR)	Type	Article-No.	Price (EUR)
DB8P	15006580	🕒	DB8V	15006581	🕒

DRIVE MOTOR



Surcharge [EUR]

3-Phase-DC motor, 230/400V DC, 50Hz, 3x PTC

BG 71	0,55 kW	(included in the basic design)	●
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1-Phase-AC motor, 230V/50Hz

BG 71	0,55 kW		▲
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II2G EExe II T4 (according to ATEX95)

BG 71	0,55 kW		🕒
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Further drive motors possible on request.

ACCESSORIES



Diaphragm valve, manually

- reliable diaphragm valve
- good control characteristics
- optical position indicator
- Valve accessories on request (e.g. stroke limitation, pneumatic drive, limit switch, solenoid pilot valve, manual override)

						Article-No.	Price (EUR)
Diaphragm valve	1"	DN25	Socket	d32	PP	EPDM	37607488
Diaphragm valve	1"	DN25	Socket	d32	PVDF	FPM	37607493

max. flow capacity 14,1 m³/h
Discharge head up to 14,1 m

DB8

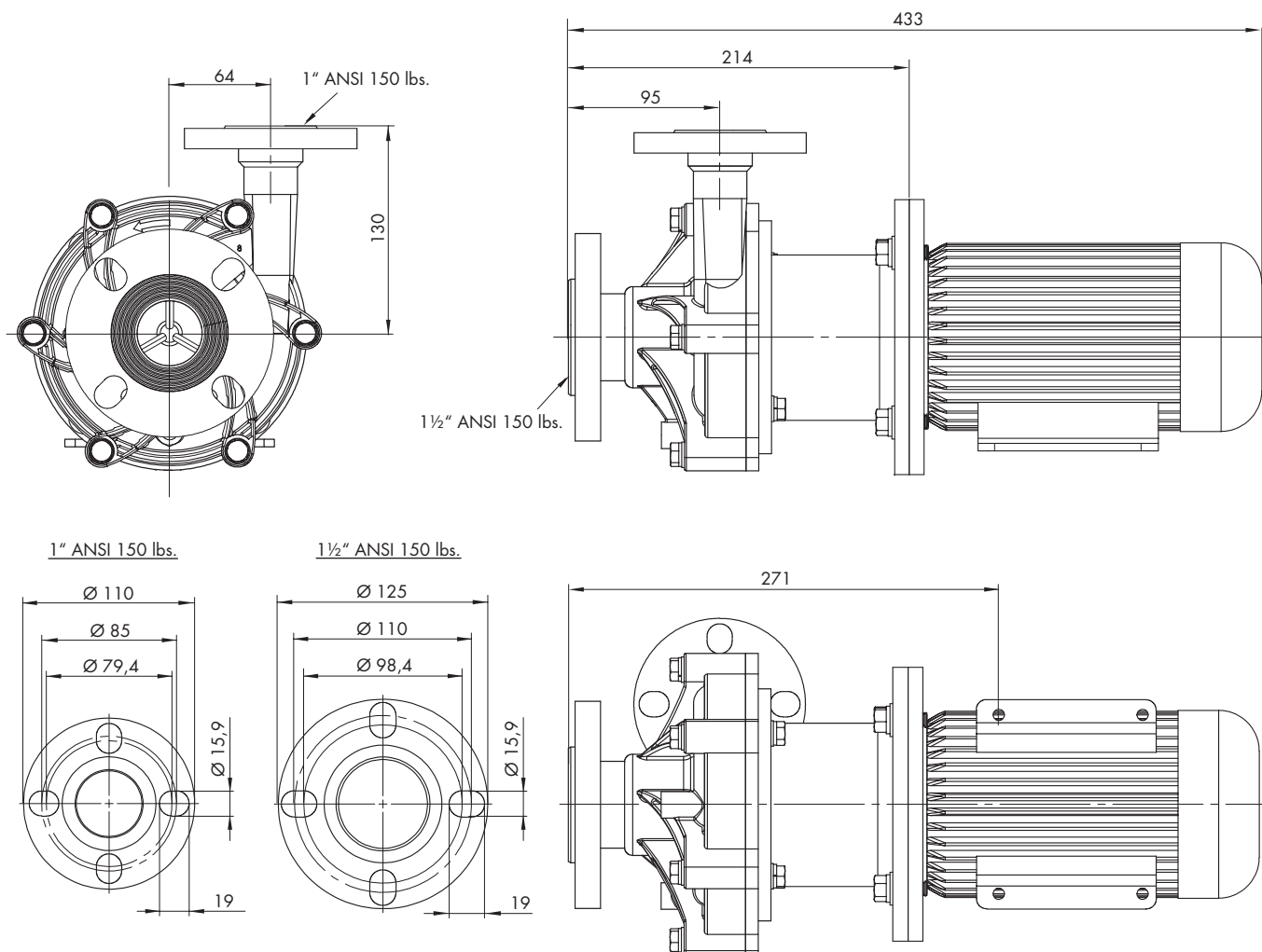
OPTIONS



Flange connection

			Surcharge [EUR]
FRP flange	ANSI 150/PN20/40	PP	▲
		PVDF	▲
Steel reinforced flange	ANSI 150/PN20/40	PP	▲
		PVDF	▲

DIMENSIONS



MAGNETIC-DRIVE CENTRIFUGAL PUMPS



OVERVIEW

- 5 years warranty
- Extreme dry run capability
- Neodymium magnets on every model
- Easy Set measurement-free outer drive
- Close-coupled design
- Design according to ATEX 2014/34/EU
- Horizontal or vertical installation
- ISO 1940 G2.5 balancing
- High quality materials
- Material PP or PVDF

TECHNICAL DATA

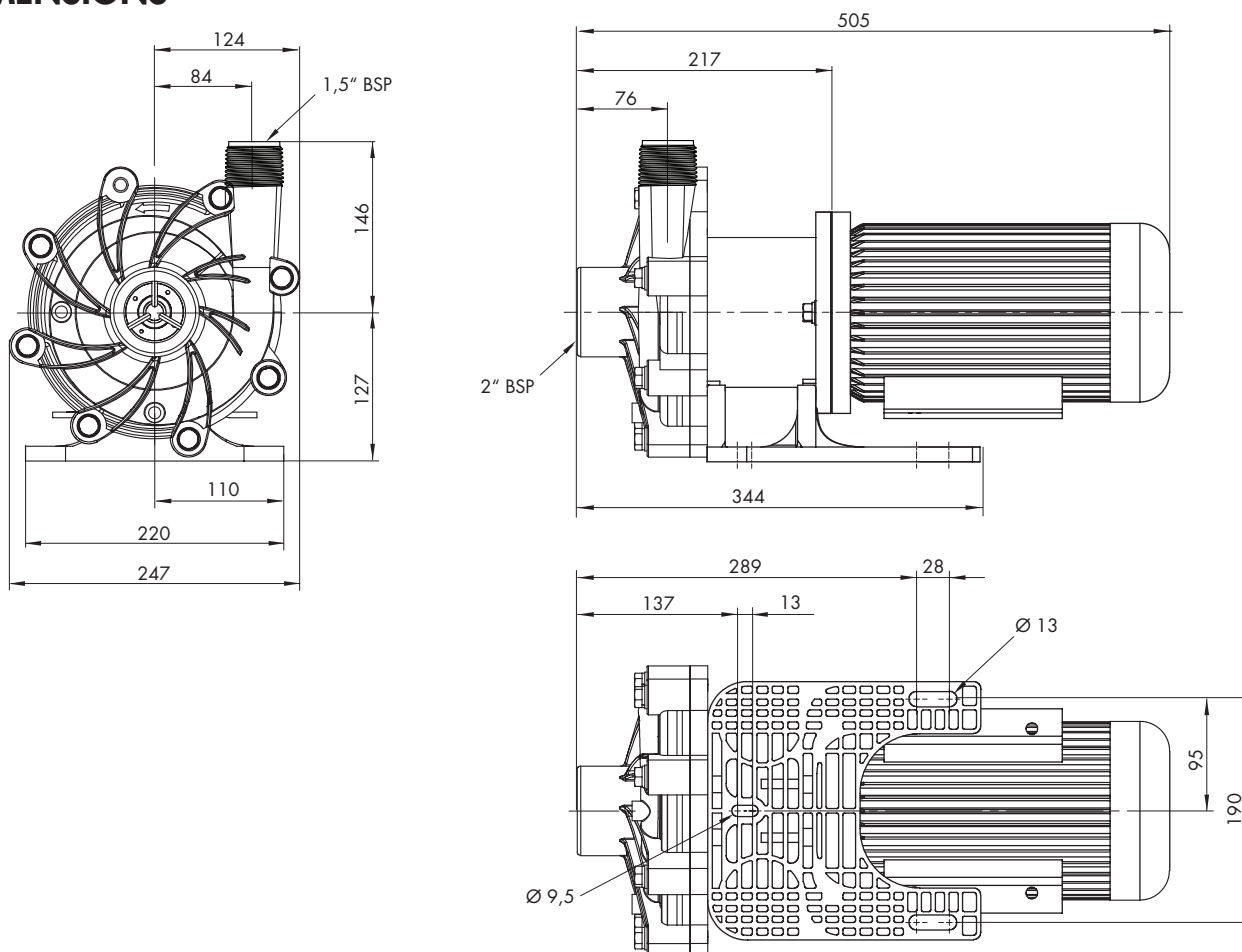
PUMP DATA			DB11
Impeller	Diameter	[mm]	133
Flow quantity Q_N	min.	[Litre/min]	17
	max.	[Litre/min]	447
		[m ³ /h]	26,8
Discharge head	max. H	[mWC]	23
System pressure	max.	[bar]	6,2
Density	max.	[kg/dm ³]	1,8
Viscosity	max.	[cP]	150
Temperature	max. [°C]	PP	82
		PVDF	104
Weight	approx. [kg]	PP	10,1
		PVDF	11,1

MOTOR DATA			DB11
Nominal speed	[rpm]		2.900
Power consumption	[kW]		1,5
Nominal voltage	[V]		230/400
Frequency	[Hz]		50
Enclosure	[IP]		55
Isolation class			F
Motor-Size	[BG]		90
Weight (without pump)	approx. [kg]		17,7

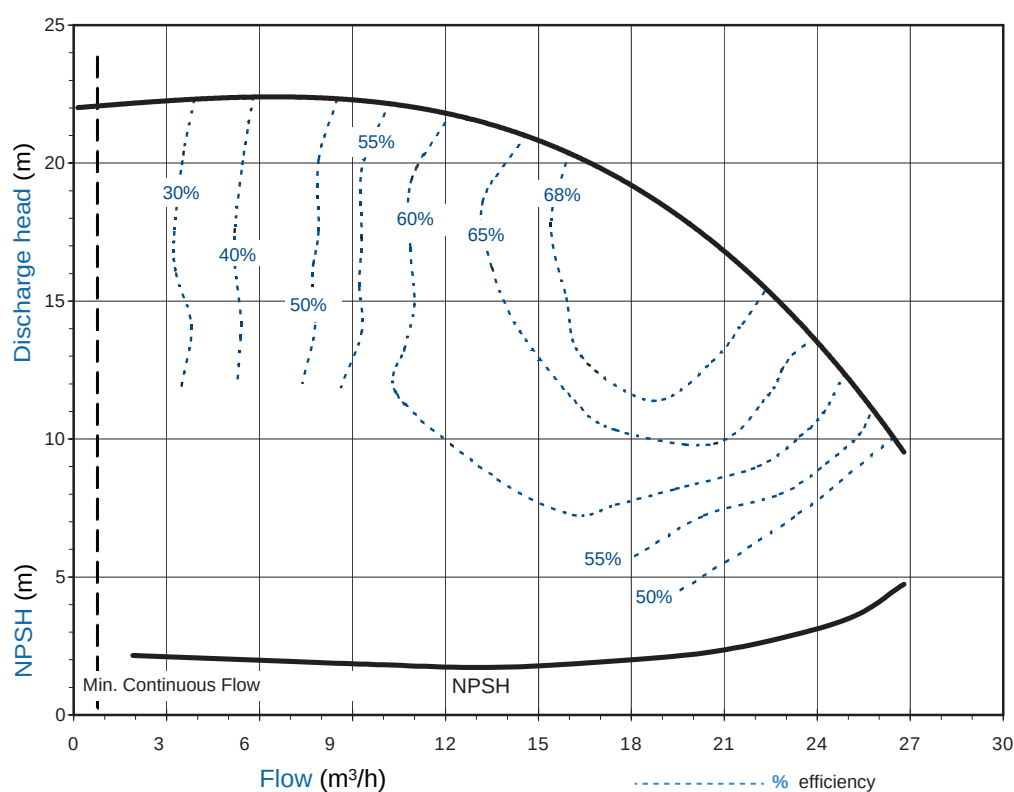
max. flow capacity 26,8 m³/h
Discharge head up to 23 m

DB11

DIMENSIONS



CHARACTERISTIC CURVES



MAGNETIC-DRIVE CENTRIFUGAL PUMPS

BASIC DESIGNS

PP			PVDF		
Pump housing	PP-FRP		Pump housing	PVDF-FRP	
Impeller	PP-FRP		Impeller	PVDF-FRP	
Slide bearing	Carbon		Slide bearing	Oxide ceramic	
O-Rings	EPDM		O-Rings	FKM	
Drive motor	1,5 kW (Standard)		Drive motor	1,5 kW (Standard)	
Type	Article-No.	Price (EUR)	Type	Article-No.	Price (EUR)
DB11V	15006582	🕒	DB11V	15006583	🕒

DRIVE MOTOR



Surcharge [EUR]

3-Phase-DC motor, 230/400V DC, 50Hz, 3x PTC

BG 90	1,5 kW	(included in the basic design)	●
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1-Phase-AC motor, 230V/50Hz

BG 90	1,5 kW		▲
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II2G EExe II T4 (according to ATEX95)

BG 90	1,5 kW		🕒
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Further drive motors possible on request.

ACCESSORIES



Diaphragm valve, manually

- reliable diaphragm valve
- good control characteristics
- optical position indicator
- Valve accessories on request (e.g. stroke limitation, pneumatic drive, limit switch, solenoid pilot valve, manual override)

						Article-No.	Price (EUR)
Diaphragm valve	1 1/2"	DN40	Socket	d50	PP	EPDM	37607489
Diaphragm valve	1 1/2"	DN40	Socket	d50	PVDF	FPM	37607494

max. flow capacity 26,8 m³/h
Discharge head up to 23 m

DB11

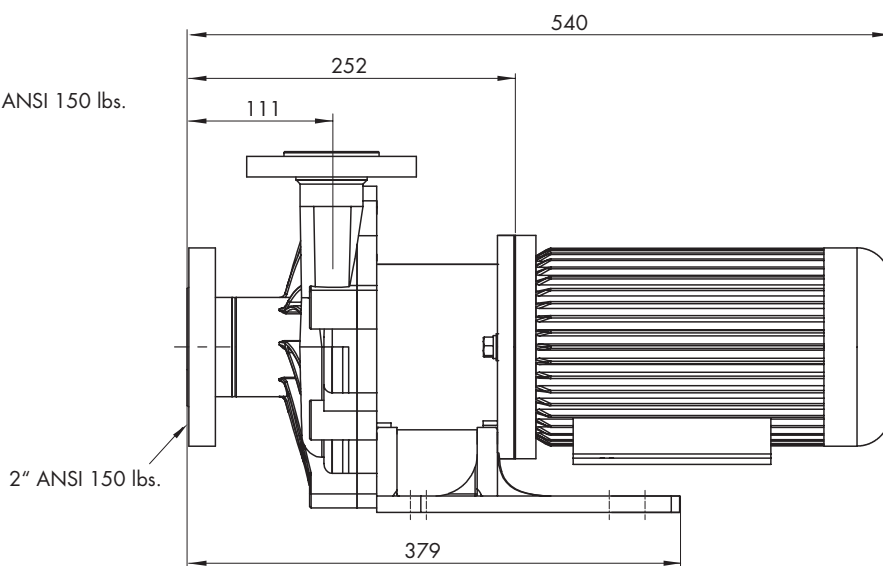
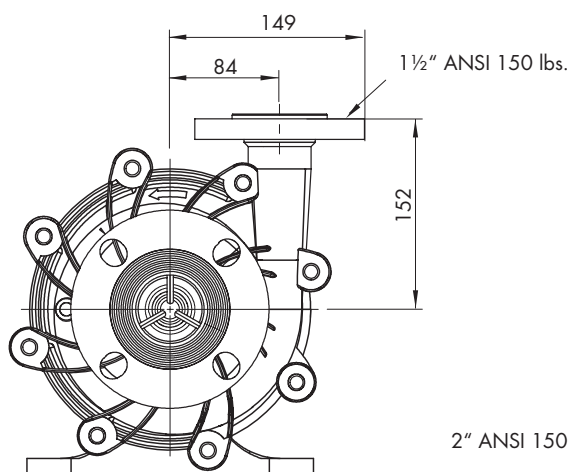
OPTIONS



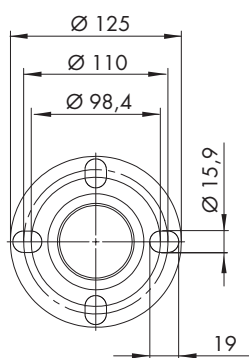
Flange connection

			Surcharge [EUR]
FRP flange	ANSI 150/PN20/40	PP	▲
		PVDF	▲
Steel reinforced flange	ANSI 150/PN20/40	PP	▲
		PVDF	▲

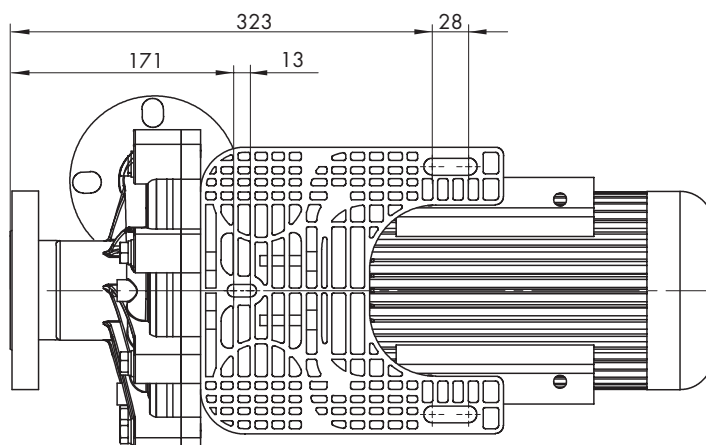
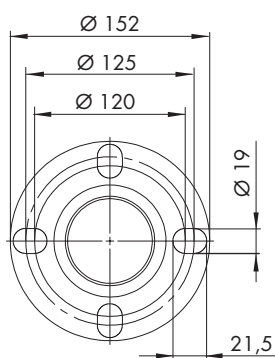
DIMENSIONS



1 1/2" ANSI 150 lbs.



2" ANSI 150 lbs.



MAGNETIC-DRIVE CENTRIFUGAL PUMPS



OVERVIEW

- 5 years warranty
- Extreme dry run capability
- Neodymium magnets on every model
- Easy Set measurement-free outer drive
- Close-coupled design
- Design according to ATEX 2014/34/EU
- Horizontal or vertical installation
- ISO 1940 G2.5 balancing
- High quality materials
- Material PP or PVDF

TECHNICAL DATA

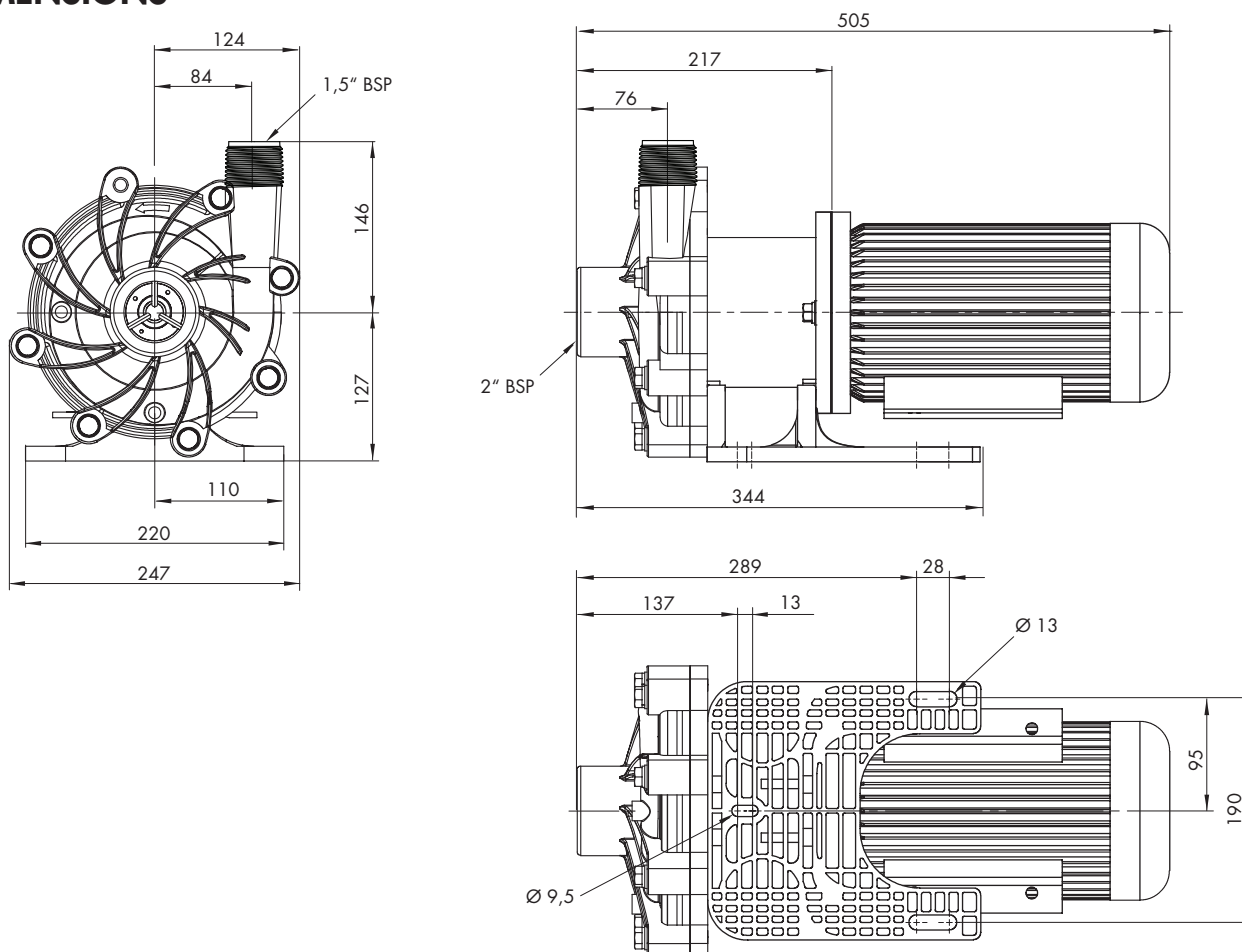
PUMP DATA			DB15
Impeller	Diameter	[mm]	146
Flow quantity Q_N	min.	[Litre/min]	17
	max.	[Litre/min]	483
		[m ³ /h]	29
Discharge head	max. H	[mWC]	27
System pressure	max.	[bar]	6,2
Density	max.	[kg/dm ³]	1,8
Viscosity	max.	[cP]	150
Temperature	max. [°C]	PP	82
		PVDF	104
Weight	approx. [kg]	PP	10,1
		PVDF	11,1

MOTOR DATA			DB15
Nominal speed	[rpm]		2.900
Power consumption	[kW]		2,2
Nominal voltage	[V]		230/400
Frequency	[Hz]		50
Enclosure	[IP]		55
Isolation class			F
Motor-Size	[BG]		90
Weight (without pump)	approx. [kg]		21,1

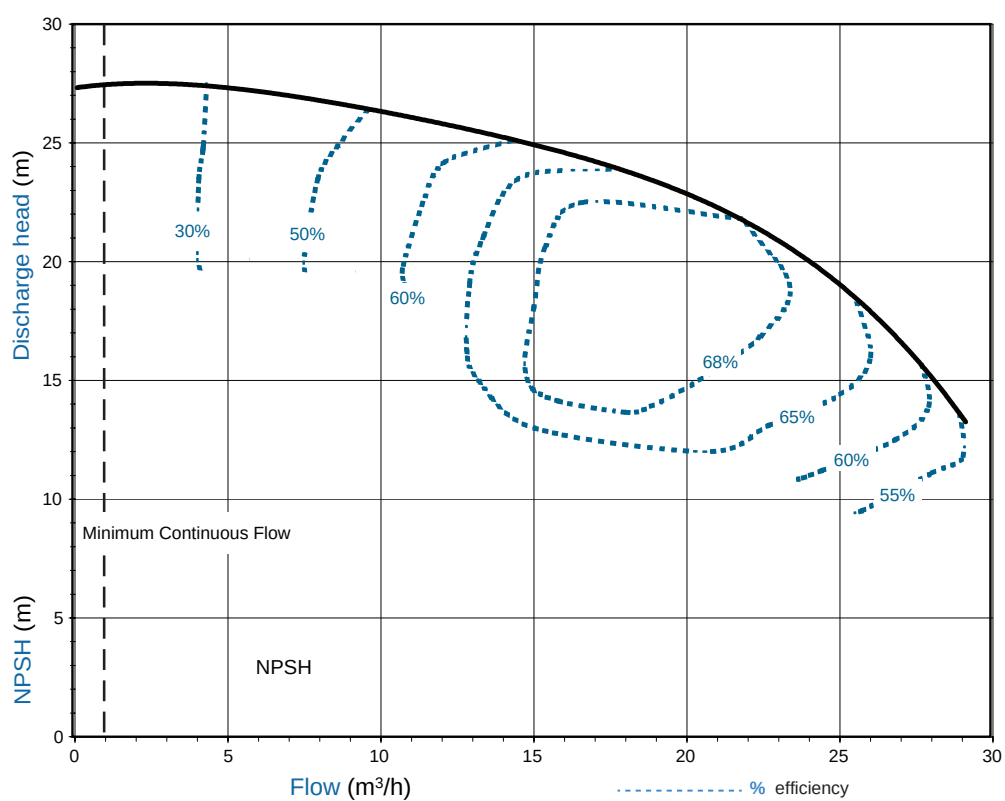
max. flow capacity 29 m³/h
Discharge head up to 27 m

DB15

DIMENSIONS



CHARACTERISTIC CURVES



MAGNETIC-DRIVE CENTRIFUGAL PUMPS

BASIC DESIGNS

PP			PVDF		
Pump housing	PP-FRP		Pump housing	PVDF-FRP	
Impeller	PP-FRP		Impeller	PVDF-FRP	
Slide bearing	Carbon		Slide bearing	Oxide ceramic	
O-Rings	EPDM		O-Rings	FKM	
Drive motor	1,5 kW (Standard)		Drive motor	1,5 kW (Standard)	
Type	Article-No.	Price (EUR)	Type	Article-No.	Price (EUR)
DB11V	15006584	🕒	DB11V	15006585	🕒

DRIVE MOTOR



Surcharge [EUR]

3-Phase-DC motor, 230/400V DC, 50Hz, 3x PTC

BG 90	2,2 kW	(included in the basic design)	●
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1-Phase-AC motor, 230V/50Hz

BG 90	2,2 kW		▲
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II2G EExe II T4 (according to ATEX95)

BG 90	2,2 kW		🕒
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Further drive motors possible on request.

ACCESSORIES



Diaphragm valve, manually

- reliable diaphragm valve
- good control characteristics
- optical position indicator
- Valve accessories on request (e.g. stroke limitation, pneumatic drive, limit switch, solenoid pilot valve, manual override)

						Article-No.	Price (EUR)
Diaphragm valve	1 1/2"	DN40	Socket	d50	PP	EPDM	37607489
Diaphragm valve	1 1/2"	DN40	Socket	d50	PVDF	FPM	37607494

max. flow capacity 29 m³/h
Discharge head up to 27 m

DB15

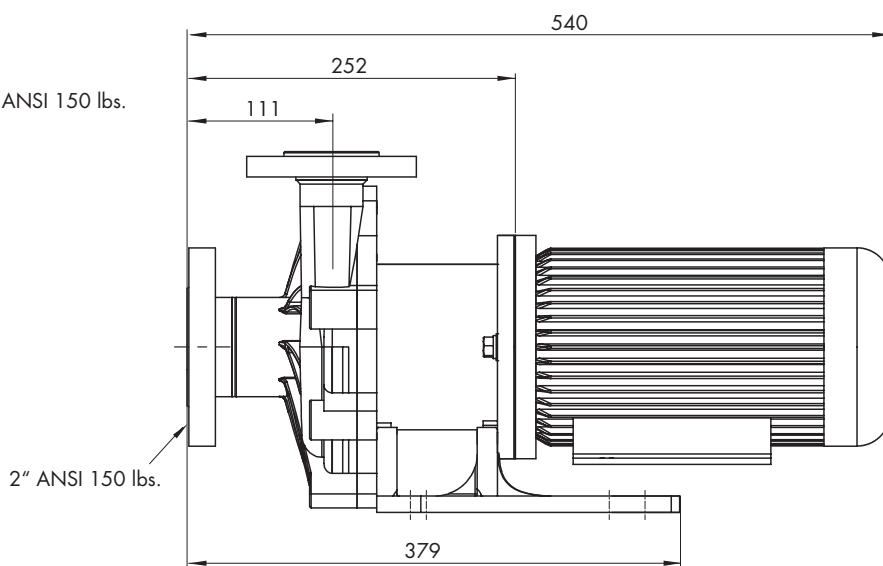
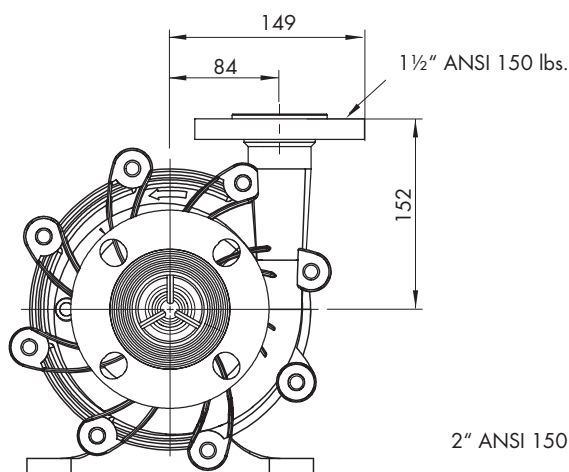
OPTIONS



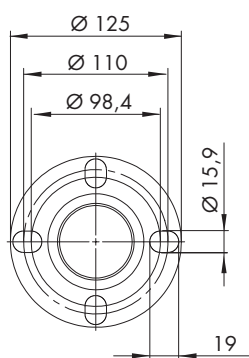
Flange connection

			Surcharge [EUR]
FRP flange	ANSI 150/PN20/40	PP	▲
		PVDF	▲
Steel reinforced flange	ANSI 150/PN20/40	PP	▲
		PVDF	▲

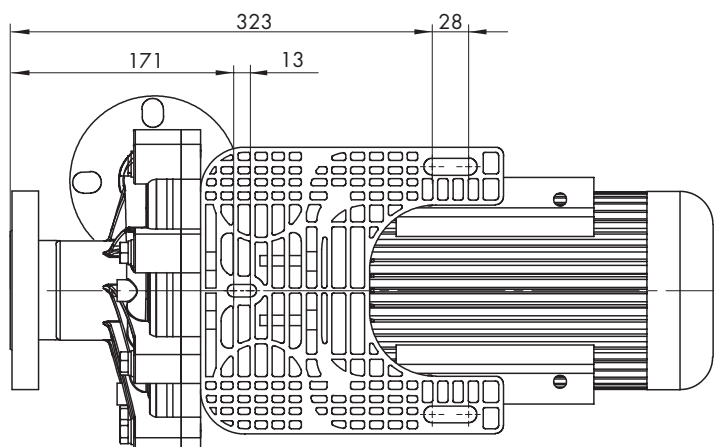
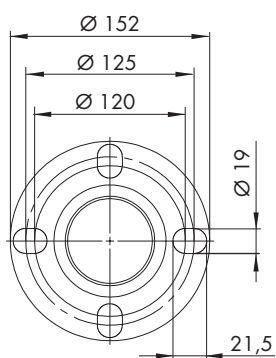
DIMENSIONS



1 1/2" ANSI 150 lbs.



2" ANSI 150 lbs.



MAGNETIC-DRIVE CENTRIFUGAL PUMPS



OVERVIEW

- 5 years warranty
- Extreme dry run capability
- Neodymium magnets on every model
- Easy Set measurement-free outer drive
- Close-coupled design
- Design according to ATEX 2014/34/EU
- Horizontal or vertical installation
- ISO 1940 G2.5 balancing
- High quality materials
- Material PP or PVDF

TECHNICAL DATA

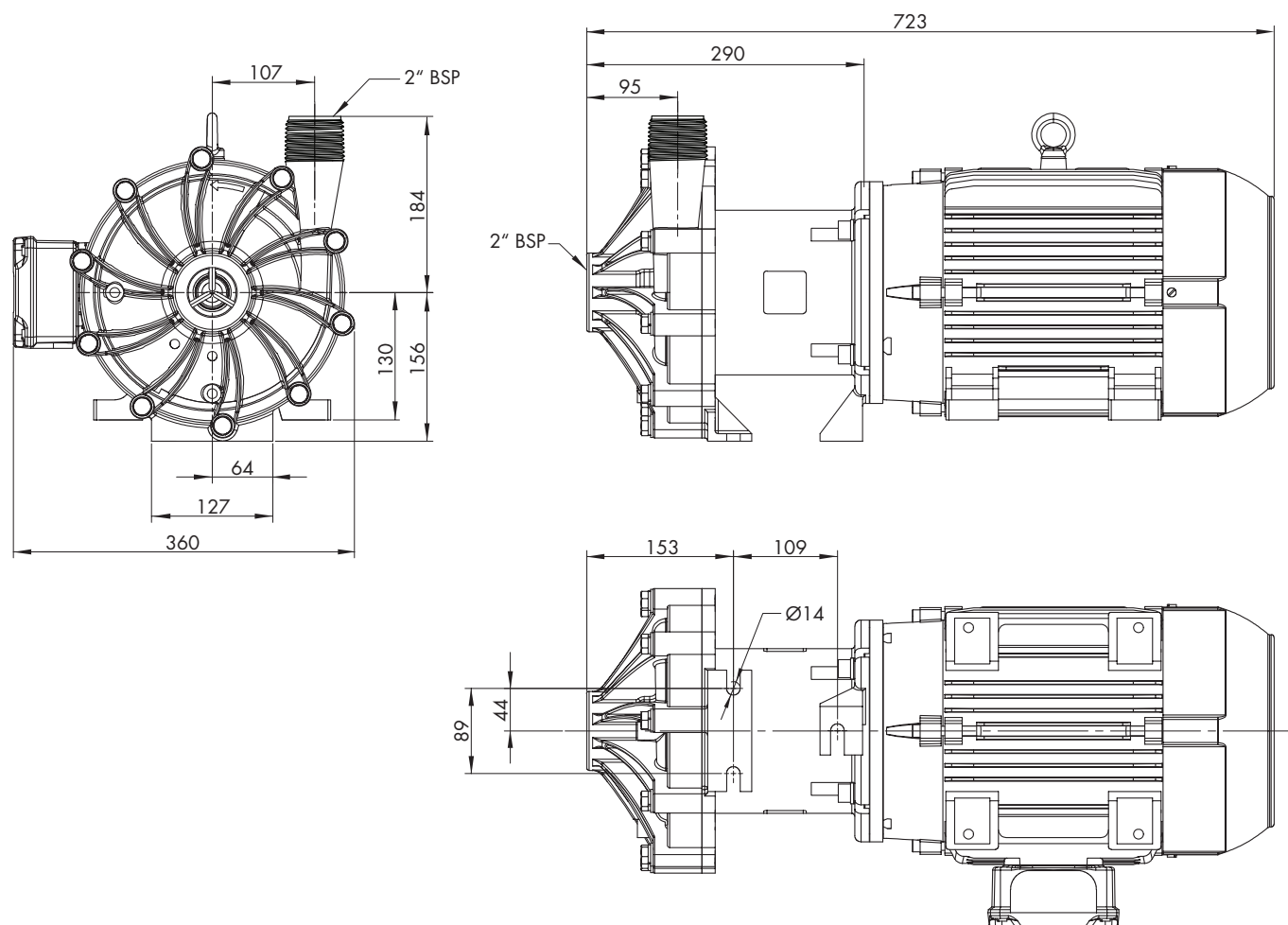
PUMP DATA			DB22 L	DB22 H
Impeller	Diameter	[mm]	152,4	184,2
Flow quantity Q_N	min.	[Litre/min]	38	38
	max.	[Litre/min]	650	717
		[m ³ /h]	39	43
Discharge head	max. H	[mWC]	29	45
System pressure	max.	[bar]	6,2	6,2
Density	max.	[kg/dm ³]	1,8	1,8
Viscosity	max.	[cP]	150	150
Temperature	max. [°C]	PP	82	82
		PVDF	104	104
Weight	approx. [kg]	PP	18	19
		PVDF	19	19,5

MOTOR DATA		DB22 L	DB22 H
Nominal speed	[rpm]	2.900	2.900
Power consumption	[kW]	3,0	5,5
Nominal voltage	[V]	400/690	400/690
Frequency	[Hz]	50	50
Enclosure	[IP]	55	55
Isolation class		F	F
Motor-Size	[BG]	100	132
Weight (without pump)	approx. [kg]	21,2	52,9

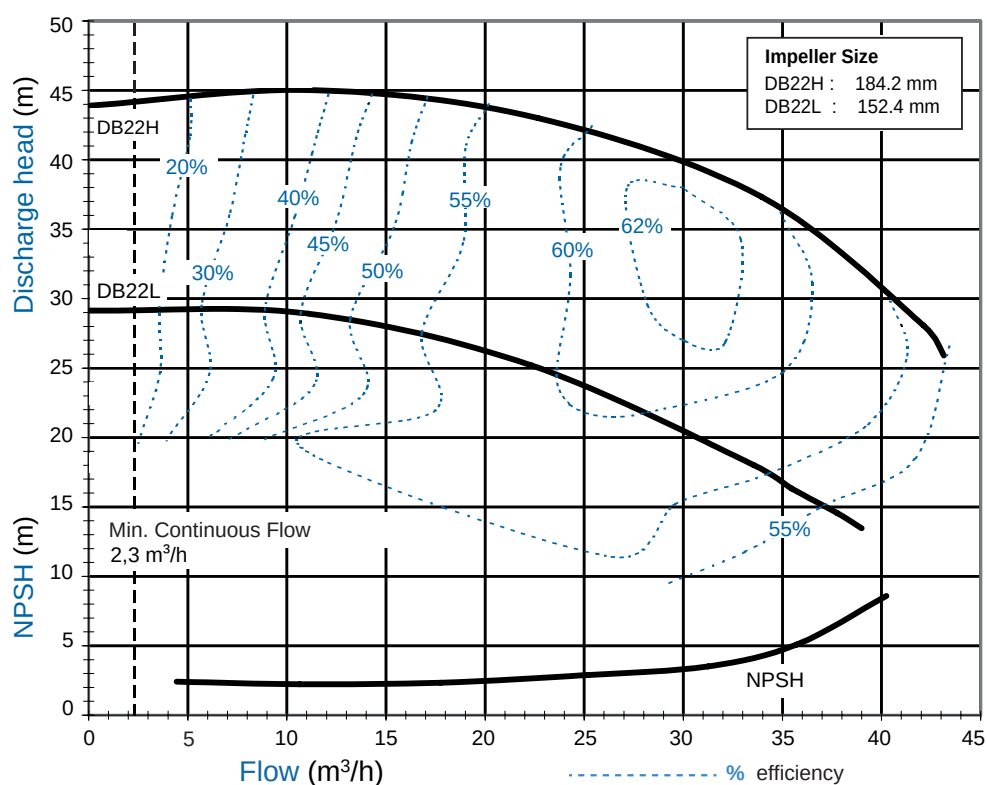
max. flow capacity 50,7 m³/h
Discharge head up to 41,7 m

DB22

DIMENSIONS



CHARACTERISTIC CURVES



MAGNETIC-DRIVE CENTRIFUGAL PUMPS

BASIC DESIGNS

PP			PVDF		
Pump housing	PP-FRP		Pump housing	PVDF-FRP	
Impeller	PP-FRP		Impeller	PVDF-FRP	
Slide bearing	Carbon		Slide bearing	PTFE	
O-Rings	EPDM		O-Rings	FKM	
Drive motor	3,0 kW (*5,5 kW) (Standard)		Drive motor	3,0 kW (*5,5 kW) (Standard)	
Type	Article-No.	Price (EUR)	Type	Article-No.	Price (EUR)
DB22 L	15006586	⌚	DB22 L	15006587	⌚
DB22 H*	15006588	⌚	DB22 H*	15006589	⌚

DRIVE MOTOR



3-Phase-DC motor, 230/400V DC, 50Hz, 3x PTC

			Surcharge [EUR]
BG 100	3,0 kW	(included in the basic design)	●
BG 132	5,5 kW	(included in the basic design)	●

II2G EExe II T4 (according to ATEX95)

BG 100	3,0 kW	⌚
BG 132	5,5 kW	⌚

Further drive motors possible on request.

ACCESSORIES



Diaphragm valve, manually

- reliable diaphragm valve
- good control characteristics
- optical position indicator
- Valve accessories on request (e.g. stroke limitation, pneumatic drive, limit switch, solenoid pilot valve, manual override)

						Article-No.	Price (EUR)
Diaphragm valve	2"	DN50	Socket d63	PP	EPDM	37607490	▲
Diaphragm valve	2"	DN50	Socket d63	PVDF	FPM	37607495	▲

max. flow capacity 50,7 m³/h
Discharge head up to 41,7 m

DB22

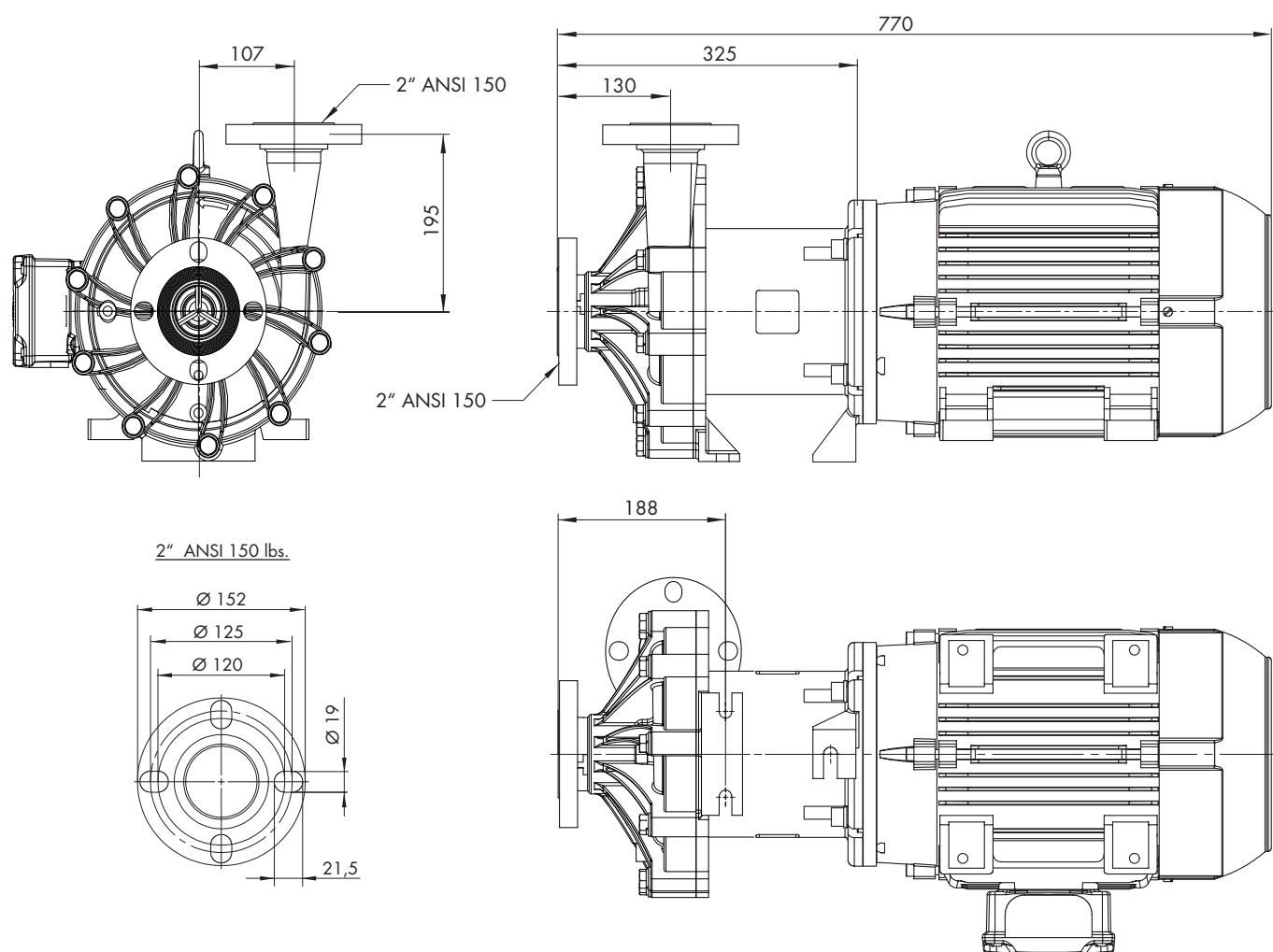
OPTIONS



Flange connection

				Surcharge [EUR]
FRP flange 2" x 2"	ANSI 150/PN20/40	PP		▲
		PVDF		▲
FRP flange 3" x 2"	ANSI 150/PN20/40	PP		▲
		PVDF		▲
Steel reinforced flange	ANSI 150/PN20/40	PP		▲
		PVDF		▲

DIMENSIONS



MAGNETIC-DRIVE CENTRIFUGAL PUMPS

SELF-PRIMING



OVERVIEW

- 5 years warranty
- Suction height up to 7.6 m (at density 1.0)
- Extreme dry run capability
- Neodymium magnets on every model
- Easy Set measurement-free outer drive
- Close-coupled design
- Horizontal or vertical installation
- ISO 1940 G2.5 balancing
- High quality materials
- Material PP or PVDF

TECHNICAL DATA

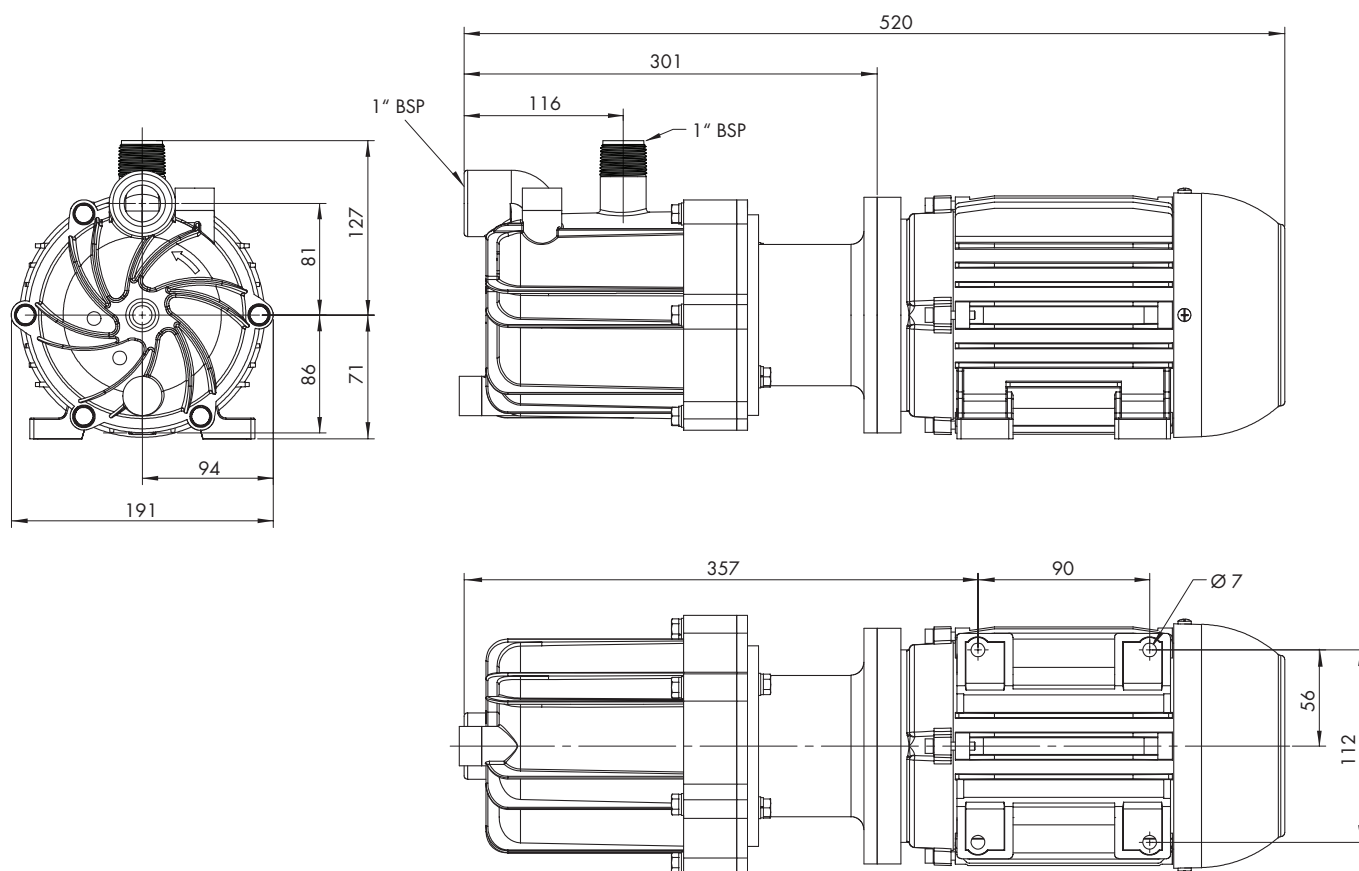
PUMP DATA			SP10
Impeller	Diameter	[mm]	106,2
Flow quantity Q_N	min.	[Litre/min]	1,9
	max.	[Litre/min]	203
		[m ³ /h]	12,2
Discharge head	max. H	[mWC]	13,7
System pressure	max.	[bar]	5,5
Density	max.	[kg/dm ³]	1,8
Viscosity	max.	[cP]	150
Temperature	max. [°C]	PP	82
		PVDF	104
Weight	approx. [kg]	PP	5,1
		PVDF	5,4

MOTOR DATA		SP10
Nominal speed	[rpm]	2.900
Power consumption	[kW]	0,55
Nominal voltage	[V]	230/400
Frequency	[Hz]	50
Enclosure	[IP]	55
Isolation class		F
Motor-Size	[BG]	71
Weight (without pump)	approx. [kg]	7,0

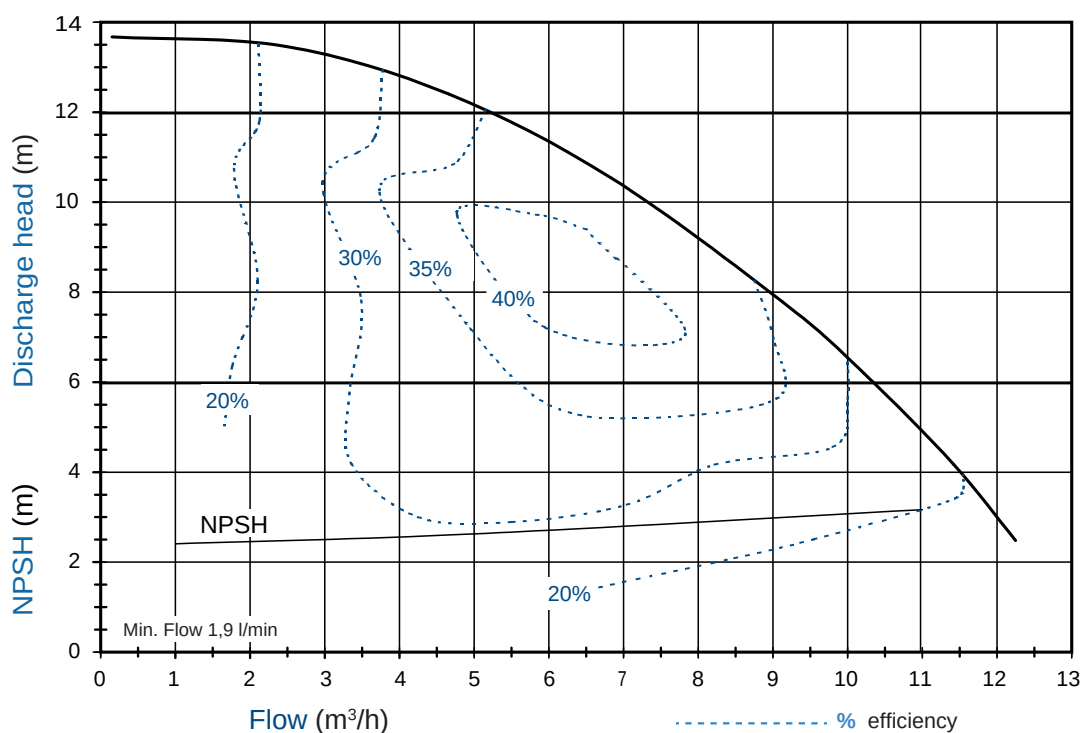
max. flow capacity 12,2 m³/h
Discharge head to 13,7 m

SP10

DIMENSIONS



CHARACTERISTIC CURVES



MAGNETIC-DRIVE CENTRIFUGAL PUMPS

SELF-PRIMING

BASIC DESIGNS

PP			PVDF		
Pump housing	PP-FRP		Pump housing	PVDF-FRP	
Impeller	PP-FRP		Impeller	PVDF-FRP	
Slide bearings	Carbon		Slide bearings	Oxide ceramic	
O-Rings	EPDM		O-Rings	FKM	
Drive motor	0,55 kW (Standard)		Drive motor	0,55 kW (Standard)	
Type	Article-No.	Price (EUR)	Type	Article-No.	Price (EUR)
SP10P	15006591	🕒	SP10V	15006592	🕒

DRIVE MOTOR



Surcharge [EUR]

3-Phase-DC motor, 230/400V DC, 50Hz, 3x PTC

BG 71	0,55 kW	(included in the basic design)	●
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1-Phase-AC motor, 230V/50Hz

BG 71	0,55 kW		▲
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II2G EExe II T4 (according to ATEX95)

BG 71	0,55 kW		🕒
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Further drive motors possible on request.

ACCESSORIES



Diaphragm valve, manually

- reliable diaphragm valve
- good control characteristics
- optical position indicator
- Valve accessories on request (e.g. stroke limitation, pneumatic drive, limit switch, solenoid pilot valve, manual override)

● optical position indicator							Article-No.	Price (EUR)
Diaphragm valve	1"	DN25	Socket	d32	PP	EPDM	37607488	▲
Diaphragm valve	1"	DN25	Socket	d32	PVDF	FPM	37607493	▲

max. flow capacity 12,2 m³/h
Discharge head to 13,7 m

SP10

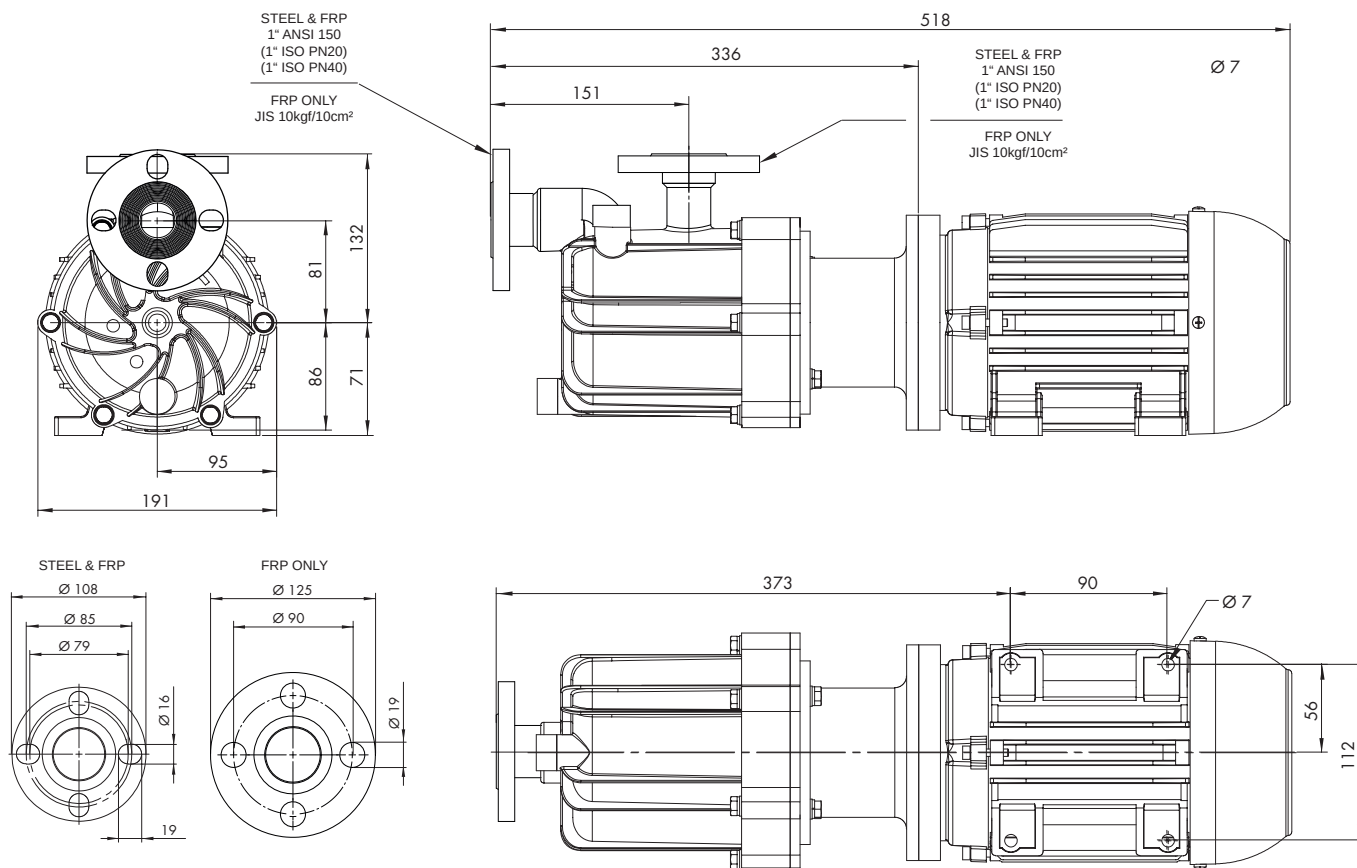
OPTIONS



Flange connection

			Surcharge [EUR]
FRP flange	ANSI 150/PN20/40	PP	▲
		PVDF	▲
Steel reinforced flange	ANSI 150/PN20/40	PP	▲
		PVDF	▲

DIMENSIONS



MAGNETIC-DRIVE CENTRIFUGAL PUMPS

SELF-PRIMING



OVERVIEW

- 5 years warranty
- Suction height up to 7.6 m (at density 1.0)
- Extreme dry run capability
- Neodymium magnets on every model
- Easy Set measurement-free outer drive
- Close-coupled design
- Horizontal or vertical installation
- ISO 1940 G2.5 balancing
- High quality materials
- Material PP or PVDF

TECHNICAL DATA

PUMP DATA			SP11
Impeller	Diameter	[mm]	133
Flow quantity Q_N	min.	[Litre/min]	15
	max.	[Litre/min]	400
		[m ³ /h]	24
Discharge head	max. H	[mWC]	21,3
System pressure	max.	[bar]	6,2
Density	max.	[kg/dm ³]	1,8
Viscosity	max.	[cP]	150
Temperature	max. [°C]	PP	82
		PVDF	104
Weight	approx. [kg]	PP	12,8
		PVDF	13,9

MOTOR DATA			SP11
Nominal speed	[rpm]		2.900
Power consumption	[kW]		1,5
Nominal voltage	[V]		230/400
Frequency	[Hz]		50
Enclosure	[IP]		55
Isolation class			F
Motor-Size	[BG]		90
Weight (without pump)	approx. [kg]		17,7

SP11

Technical drawing of a 1500W, 230V/50Hz single-phase asynchronous motor, showing three views with dimensions in mm.

Front View (Top Left):

- Overall width: 247
- Mounting flange diameter: 220
- Mounting flange width: 110
- Overall height: 156
- Mounting flange height: 81
- Motor body height: 127

Side View (Top Right):

- Overall width: 606
- Mounting flange width: 116
- Motor body length: 446
- Mounting flange height: 116
- Motor body height: 156

Rear View (Bottom Right):

- Overall width: 391
- Mounting flange width: 239
- Motor body length: 28
- Mounting flange height: 13
- Motor body height: 95
- Overall height: 190

Additional labels and dimensions:

- 1 1/2" BSP (Thread specification)
- Ø 9,5 (Bore diameter)
- Ø 13 (Mounting flange diameter)

MAGNETIC-DRIVE CENTRIFUGAL PUMPS

SELF-PRIMING

BASIC DESIGNS

PP			PVDF		
Pump housing	PP-FRP		Pump housing	PVDF-FRP	
Impeller	PP-FRP		Impeller	PVDF-FRP	
Slide bearings	Carbon		Slide bearings	Oxide ceramics	
O-Rings	EPDM		O-Rings	FKM	
Drive motor	1,5 kW (Standard)		Drive motor	1,5 kW (Standard)	
Type	Article-No.	Price (EUR)	Type	Article-No.	Price (EUR)
SP11P	15006593	🕒	SP11V	15006594	🕒

DRIVE MOTOR



Surcharge [EUR]

3-Phase-DC motor, 230/400V DC, 50Hz, 3x PTC

BG 90	1,5 kW	(included in the basic design)	●
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1-Phase-AC motor, 230V/50Hz

BG 90	1,5 kW		▲
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II2G EExe II T4 (according to ATEX95)

BG 90	1,5 kW		🕒
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Further drive motors possible on request.

ACCESSORIES



Diaphragm valve, manually

- reliable diaphragm valve
- good control characteristics
- optical position indicator
- Valve accessories on request (e.g. stroke limitation, pneumatic drive, limit switch, solenoid pilot valve, manual override)

						Article-No.	Price (EUR)
Diaphragm valve	1 1/2"	DN40	Socket	d50	PP	EPDM	37607489
Diaphragm valve	1 1/2"	DN40	Socket	d50	PVDF	FPM	37607494

max. flow capacity 24 m³/h
Discharge head up to 21,3 m

SP11

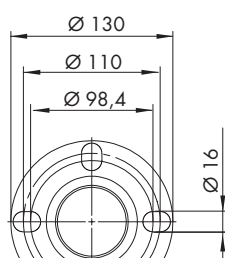
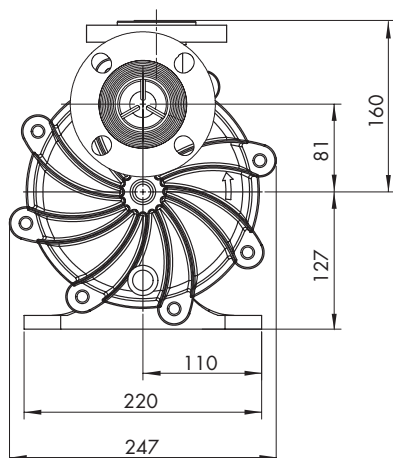
OPTIONS



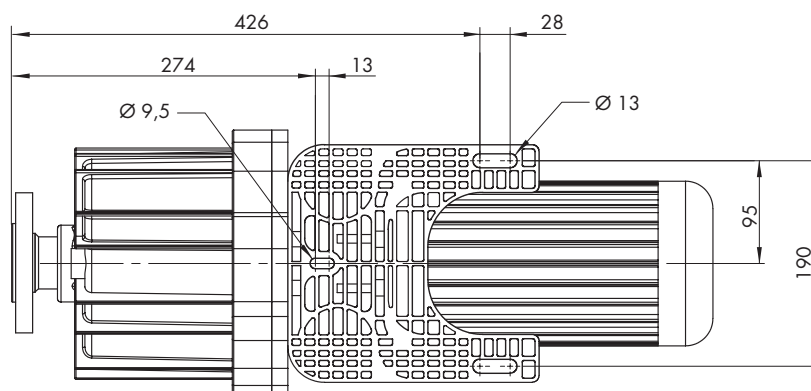
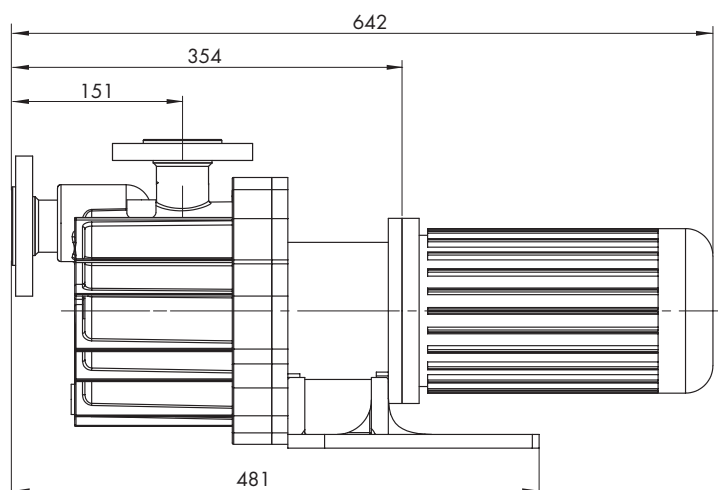
Flange connection

		Surcharge [EUR]	
FRP flange	ANSI 150/PN20/40	PP	▲
		PVDF	▲
Steel reinforced flange	ANSI 150/PN20/40	PP	▲
		PVDF	▲

DIMENSIONS



1 1/2" ANSI 150 lbs.



MAGNETIC-DRIVE CENTRIFUGAL PUMPS

SELF-PRIMING



OVERVIEW

- 5 years warranty
- Suction height up to 7.6 m (at density 1.0)
- Extreme dry run capability
- Neodymium magnets on every model
- Easy Set measurement-free outer drive
- Close-coupled design
- Horizontal or vertical installation
- ISO 1940 G2.5 balancing
- High quality materials
- Material PP or PVDF

TECHNICAL DATA

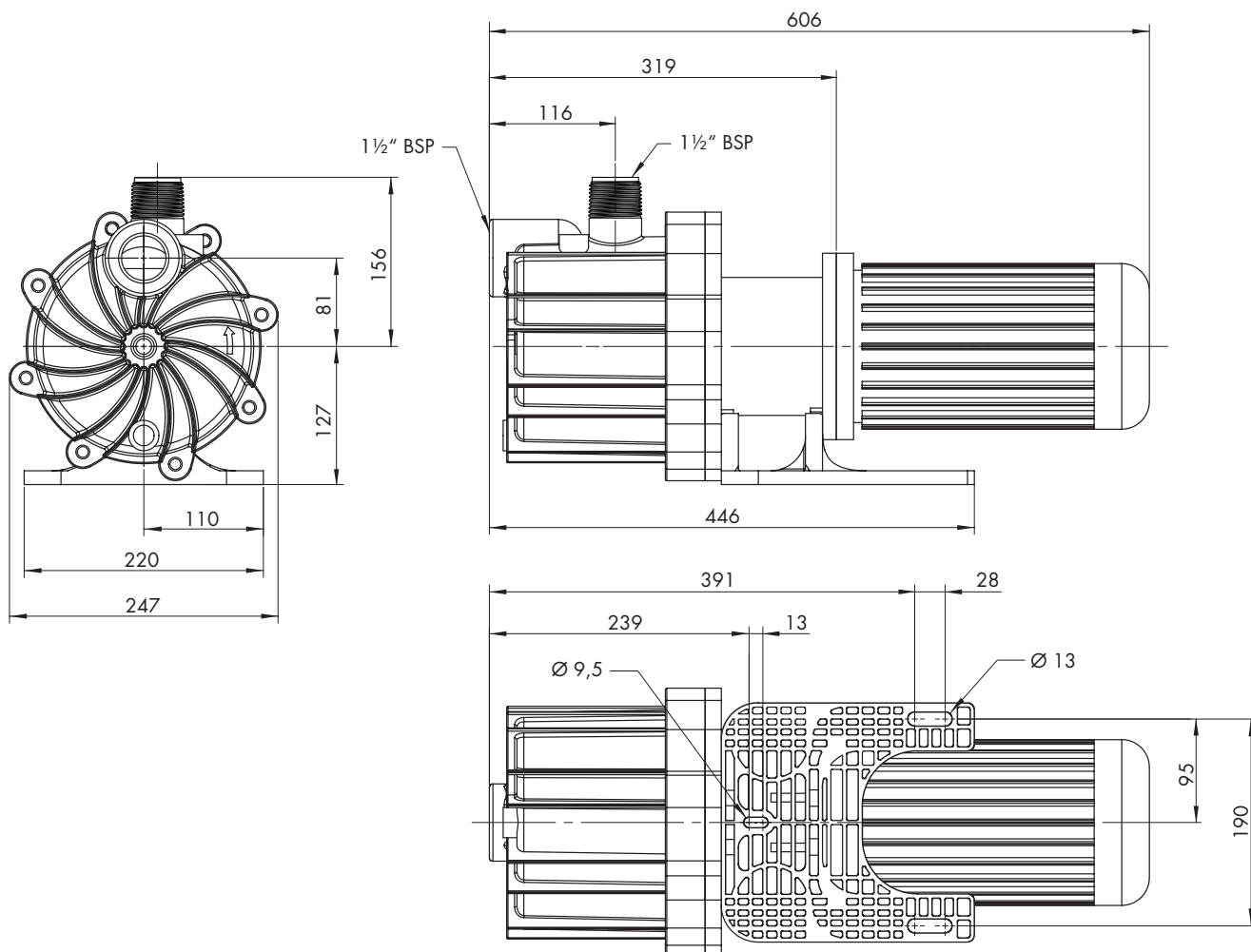
PUMP DATA			SP15
Impeller	Diameter	[mm]	140
Flow quantity Q_N	min.	[Litre/min]	20
	max.	[Litre/min]	430
		[m ³ /h]	25,8
Discharge head	max. H	[mWC]	23,3
System pressure	max.	[bar]	6,2
Density	max.	[kg/dm ³]	1,8
Viscosity	max.	[cP]	150
Temperature	max. [°C]	PP	82
		PVDF	104
Weight	approx. [kg]	PP	12,8
		PVDF	13,9

MOTOR DATA			SP15
Nominal speed	[rpm]		2.900
Power consumption	[kW]		2,2
Nominal voltage	[V]		230/400
Frequency	[Hz]		50
Enclosure	[IP]		55
Isolation class			F
Motor-Size	[BG]		90
Weight (without pump)	approx. [kg]		21,1

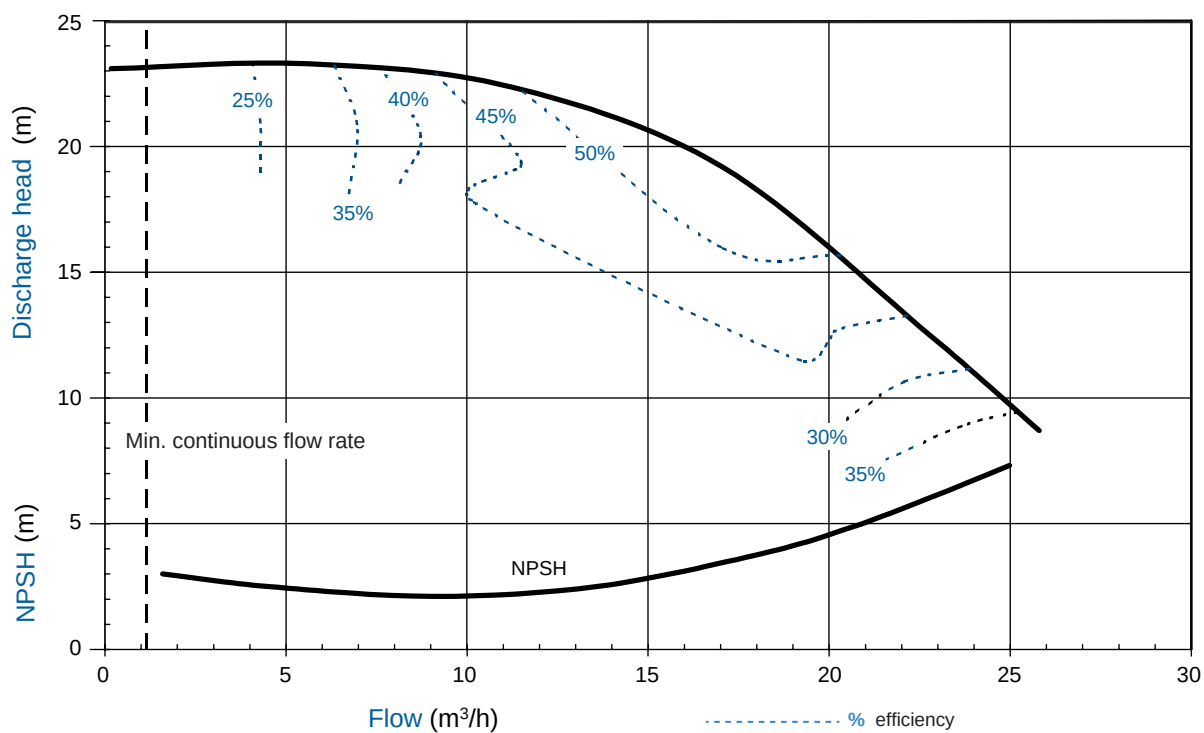
max. flow capacity 25,8 m³/h
Discharge head up to 23,3 m

SP15

DIMENSIONS



CHARACTERISTIC CURVES



MAGNETIC-DRIVE CENTRIFUGAL PUMPS

SELF-PRIMING

BASIC DESIGNS

PP			PVDF		
Pump housing	PP-FRP		Pump housing	PVDF-FRP	
Impeller	PP-FRP		Impeller	PVDF-FRP	
Slide bearings	Carbon		Slide bearings	Oxide ceramic	
O-Rings	EPDM		O-Rings	FKM	
Drive motor	2,2 kW (Standard)		Drive motor	2,2 kW (Standard)	
Type	Article-No.	Price (EUR)	Type	Article-No.	Price (EUR)
SP15P	15006595	🕒	SP15V	15006596	🕒

DRIVE MOTOR



Surcharge [EUR]

3-Phase-DC motor, 230/400V DC, 50Hz, 3x PTC

BG 90	2,2 kW	(included in the basic design)	●
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1-Phase-AC motor, 230V/50Hz

BG 90	2,2 kW		▲
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II2G EExe II T4 (according to ATEX95)

BG 90	2,2 kW		🕒
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Further drive motors possible on request.

ACCESSORIES



Diaphragm valve, manually

- reliable diaphragm valve
- good control characteristics
- optical position indicator
- Valve accessories on request (e.g. stroke limitation, pneumatic drive, limit switch, solenoid pilot valve, manual override)

						Article-No.	Price (EUR)
Diaphragm valve	1 1/2"	DN40	Socket	d50	PP	EPDM	37607489
Diaphragm valve	1 1/2"	DN40	Socket	d50	PVDF	FPM	37607494

max. flow capacity 25,8 m³/h
Discharge head up to 23,3 m

SP15

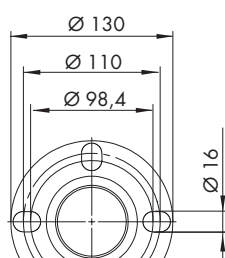
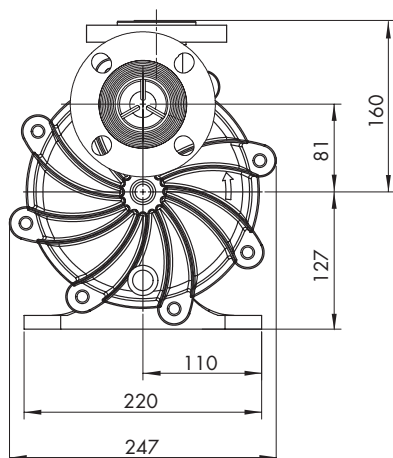
OPTIONS



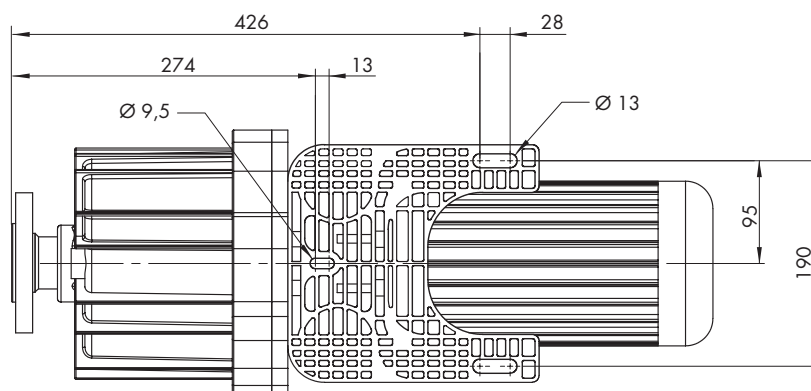
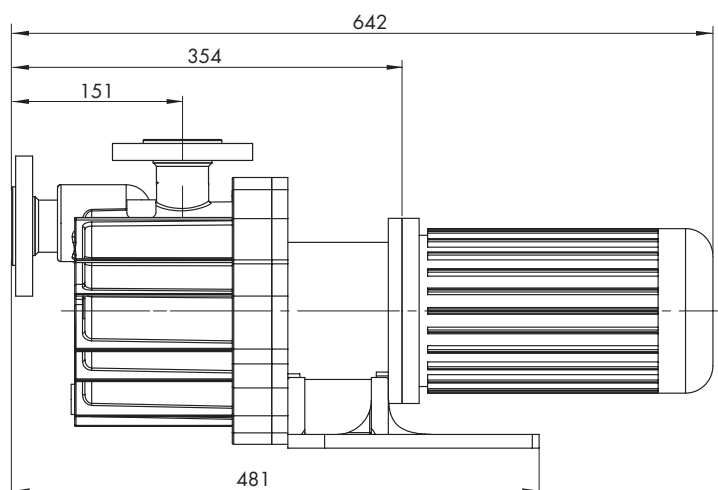
Flange connection

		Surcharge [EUR]	
FRP flange	ANSI 150/PN20/40	PP	▲
		PVDF	▲
Steel reinforced flange	ANSI 150/PN20/40	PP	▲
		PVDF	▲

DIMENSIONS



1 1/2" ANSI 150 lbs.



MAGNETIC-DRIVE CENTRIFUGAL PUMPS

SELF-PRIMING



OVERVIEW

- 5 years warranty
- Suction height up to 7.6 m (at density 1.0)
- Extreme dry run capability
- Neodymium magnets on every model
- Easy Set measurement-free outer drive
- Close-coupled design
- Horizontal or vertical installation
- ISO 1940 G2.5 balancing
- High quality materials
- Material PP or PVDF

TECHNICAL DATA

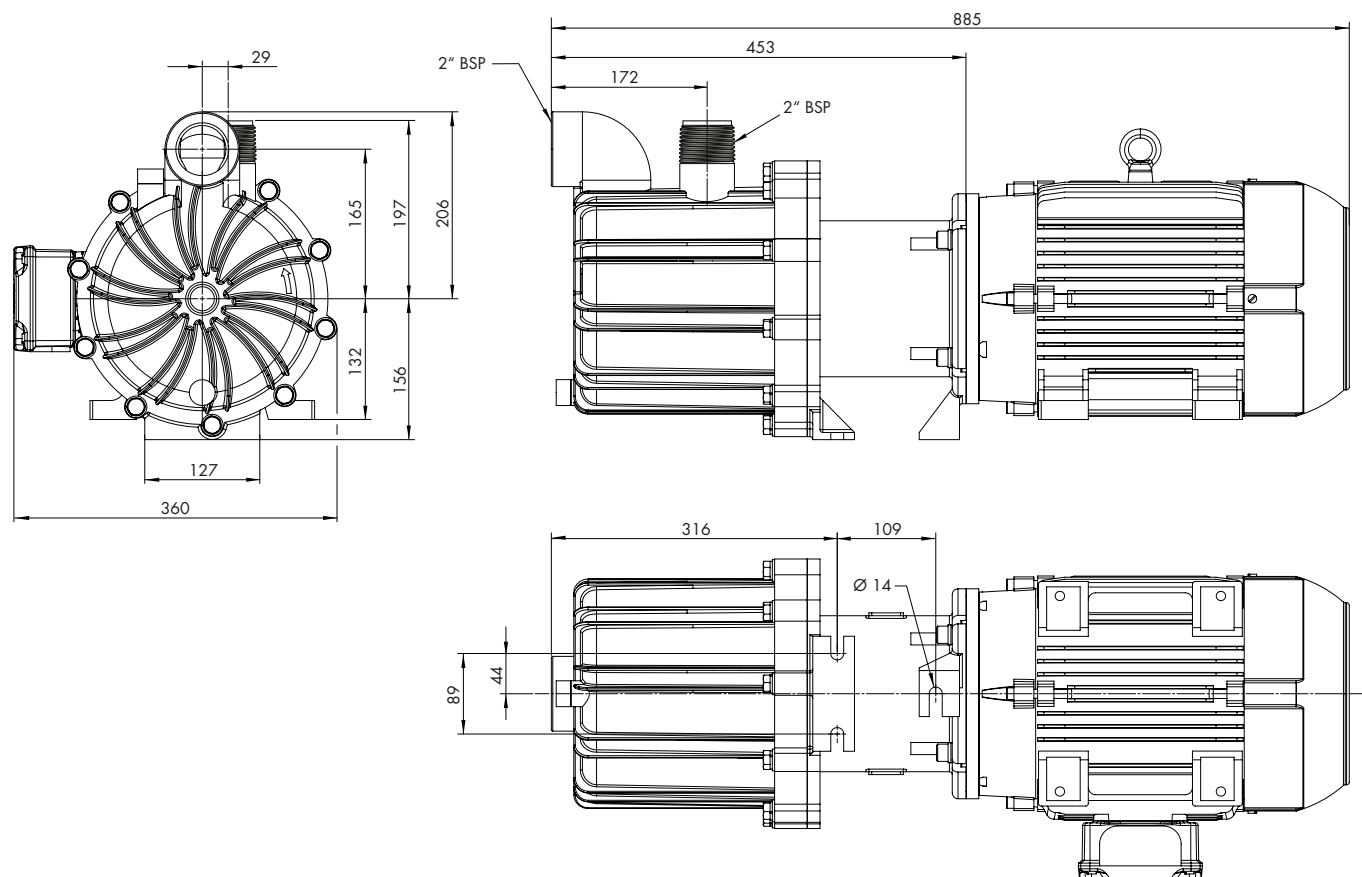
PUMP DATA			SP22
Impeller	Diameter	[mm]	177,8
Flow quantity Q_N	min.	[Litre/min]	39
	max.	[Litre/min]	798
		[m ³ /h]	47,9
Discharge head	max. H	[mWC]	37,9
System pressure	max.	[bar]	6,2
Density	max.	[kg/dm ³]	1,8
Viscosity	max.	[cP]	50
Temperature	max. [°C]	PP	82
		PVDF	104
Weight	approx. [kg]	PP	21
		PVDF	23

MOTOR DATA			SP22
Nominal speed	[rpm]		2.900
Power consumption	[kW]		5,5
Nominal voltage	[V]		400/690
Frequency	[Hz]		50
Enclosure	[IP]		55
Isolation class			F
Motor-Size	[BG]		132
Weight (without pump)	approx. [kg]		53

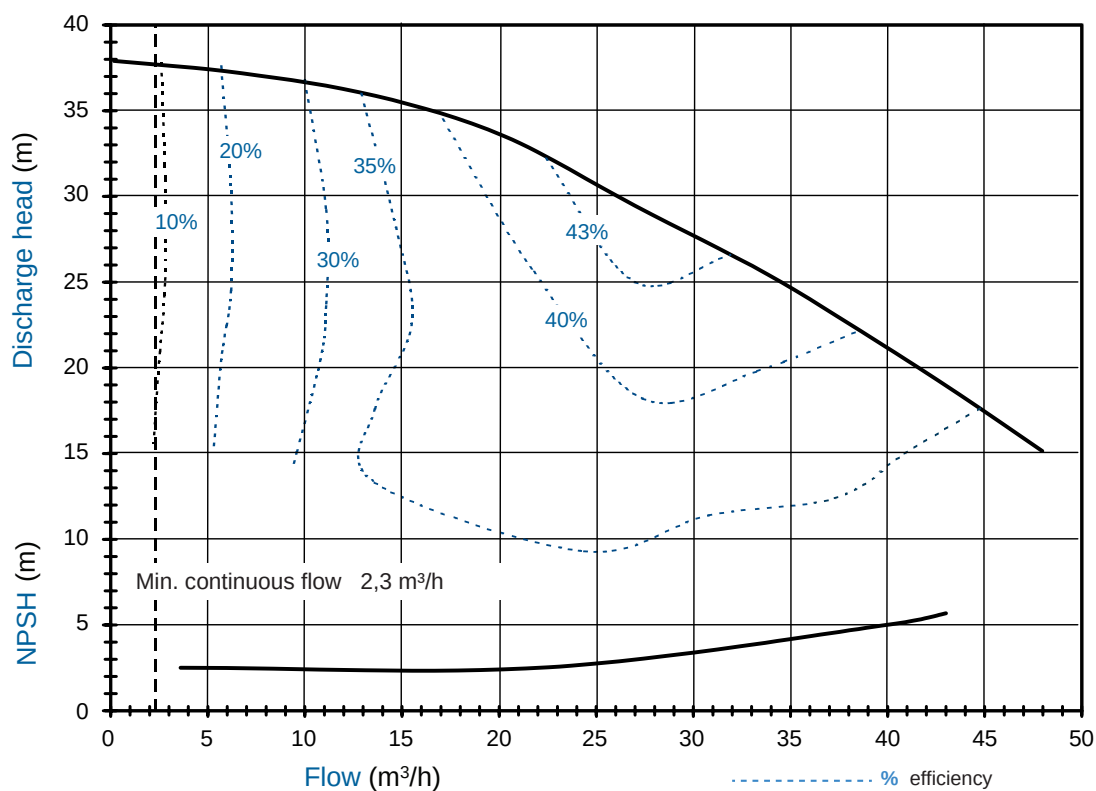
max. flow capacity 47,9 m³/h
Discharge head up to 37,9 m

SP22

DIMENSIONS



CHARACTERISTIC CURVES



MAGNETIC-DRIVE CENTRIFUGAL PUMPS

SELF-PRIMING

BASIC DESIGNS

PP			PVDF		
Pump housing	PP-FRP		Pump housing	PVDF-FRP	
Impeller	PP-FRP		Impeller	PVDF-FRP	
Slide bearings	Carbon		Slide bearings	PTFE	
O-Rings	EPDM		O-Rings	FKM	
Drive motor	5,5 kW (Standard)		Drive motor	5,5 kW (Standard)	
Type	Article-No.	Price (EUR)	Type	Article-No.	Price (EUR)
SP22P	15006597	⌚	SP22V	15006598	⌚

DRIVE MOTOR



Surcharge [EUR]

3-Phase-DC motor, 230/400V DC, 50Hz, 3x PTC

BG 132	5,5 kW	(included in the basic design)	●
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II2G EExe II T4 (according to ATEX95)

BG 132	5,5 kW		⌚
--------	--------	--	---

Further drive motors possible on request.

ACCESSORIES



Diaphragm valve, manually

- reliable diaphragm valve
- good control characteristics
- optical position indicator
- Valve accessories on request (e.g. stroke limitation, pneumatic drive, limit switch, solenoid pilot valve, manual override)

						Article-No.	Price (EUR)
Diaphragm valve	2"	DN50	Socket d63	PP	EPDM	37607490	▲
Diaphragm valve	2"	DN50	Socket d63	PVDF	FPM	37607495	▲

max. flow capacity 47,9 m³/h
Discharge head up to 37,9 m

SP22

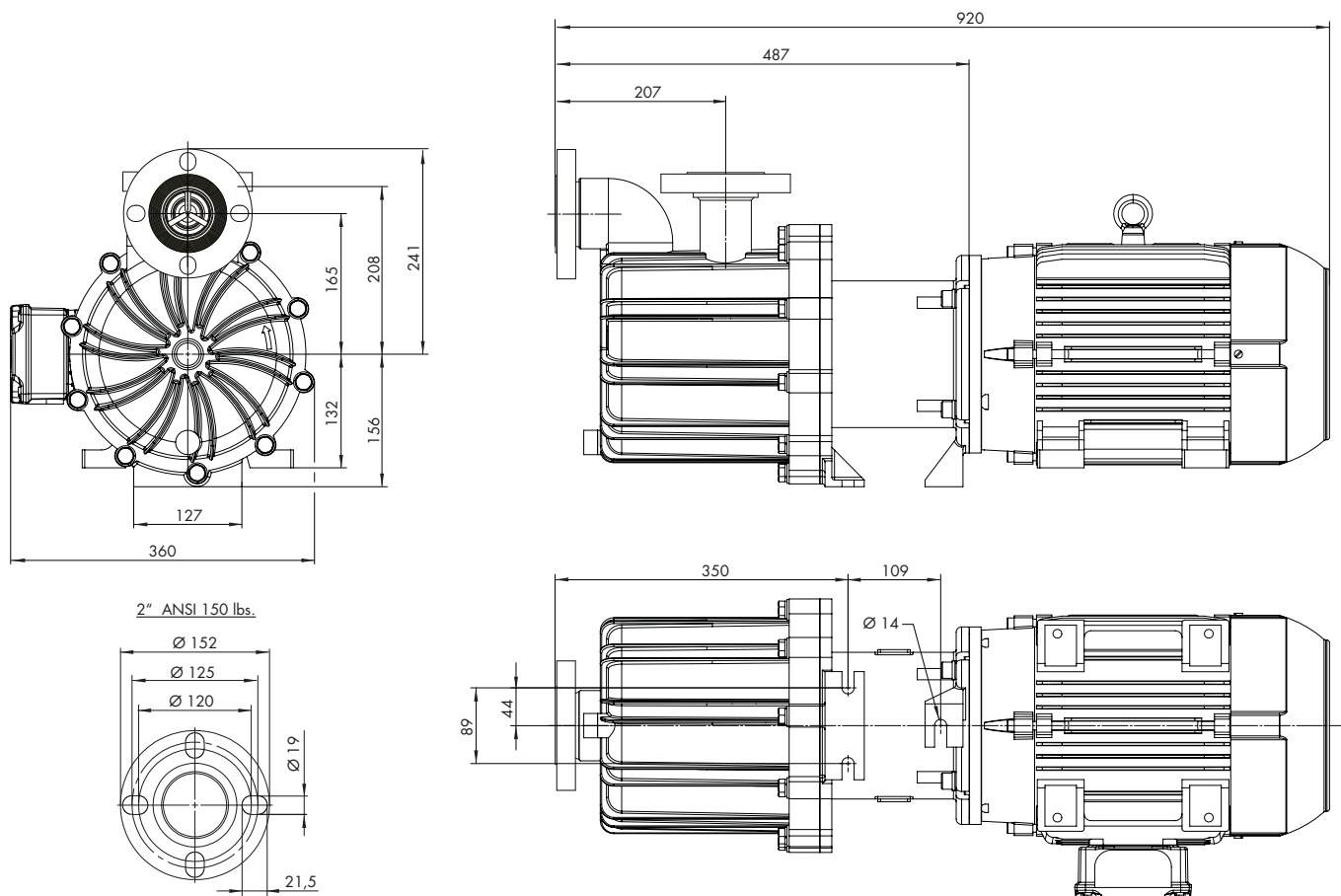
OPTIONS



Flange connection

			Surcharge [EUR]
FRP flange 2" x 2"	ANSI 150/PN20/40	PP	▲
		PVDF	▲
Steel reinforced flange	ANSI 150/PN20/40	PP	▲
		PVDF	▲

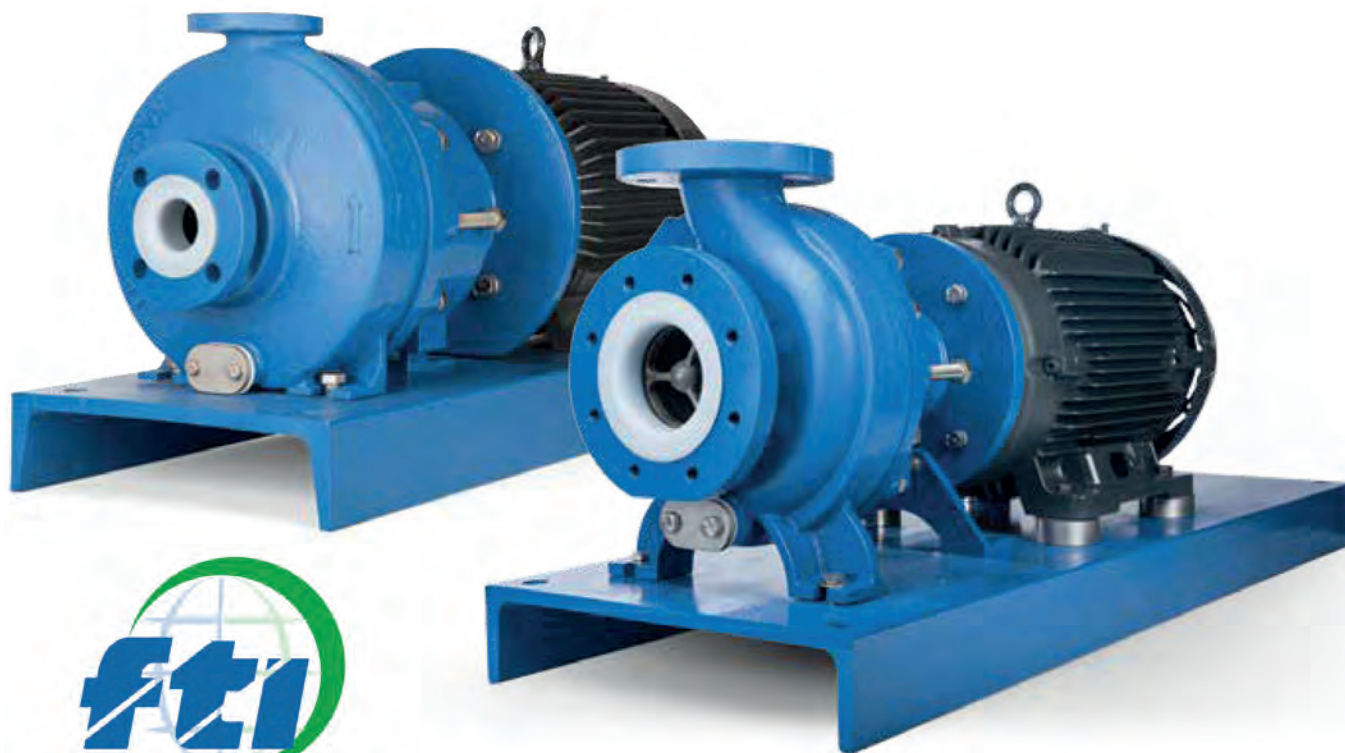
DIMENSIONS



MAGNETIC-DRIVE CENTRIFUGAL PUMPS

UC-SERIES

ETFE-LINED ANSI PROCESS CENTRIFUGAL PUMPS WITH MAGNETIC DRIVE



FINISH THOMPSON INC.

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PARTNER PRODUCT

INSPIRED. SOLUTIONS. FOR CUSTOMERS.

MAGNETIC-DRIVE CENTRIFUGAL PUMPS

PROPERTIES AT A GLANCE

- Close-coupled design
- Material PP or PVDF
- Neodymium magnets on every model
- Replaceable shaft and bushing
- ISO 1940 G2.5 balancing
- Mounts to NEMA and IEC motor frames
- Easy Set measurement-free outer drive
- Mounts to motor without disassembly
- Back pullout design
- CE certified
- ATEX 2014/34/EU available

TECHNICAL DATA

- **System pressure:** up to 20 bar
- **Max. Temp.:** 121°C
- **Max. Viscosity:** over 200 cP
- **Specific Gravity:** over 1,8 kg/dm³
- **Flanges:** ANSI , ISO/DIN
- **Casing:** ANSI/ASME B73, 1m
- **Certifications:** CE, ATEX
- **Motor frames:** NEMA 143 up to 365
IEC: 90 up to 225

APPLICATIONS

- Chemical Processes
- Steel Processing
- Water & Wastewater
- Electronics Manufacturing
- Surface Finishing
- Paper Mills
- Biofuels
- Fume Scrubbing
- Metal Plating
- Pharmaceutical

TYPICAL CHEMICALS

- Sodium hydroxide
- Sulfuric acid
- Hydrochloric acid
- Sodium hypochlorite
- Plating solutions
- Corrosive blends
- Wastewater
- Solvents

UC-Series
only on request!

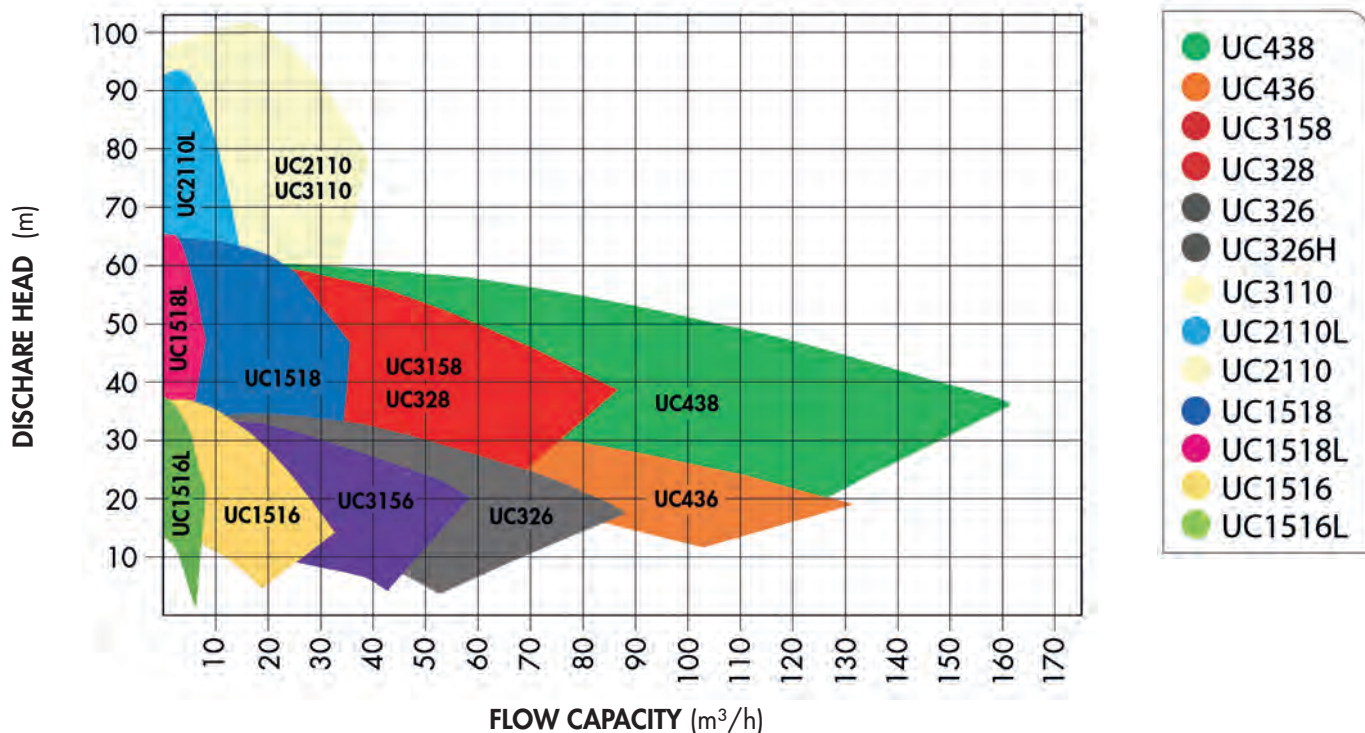
sales.prodos@sera-web.com



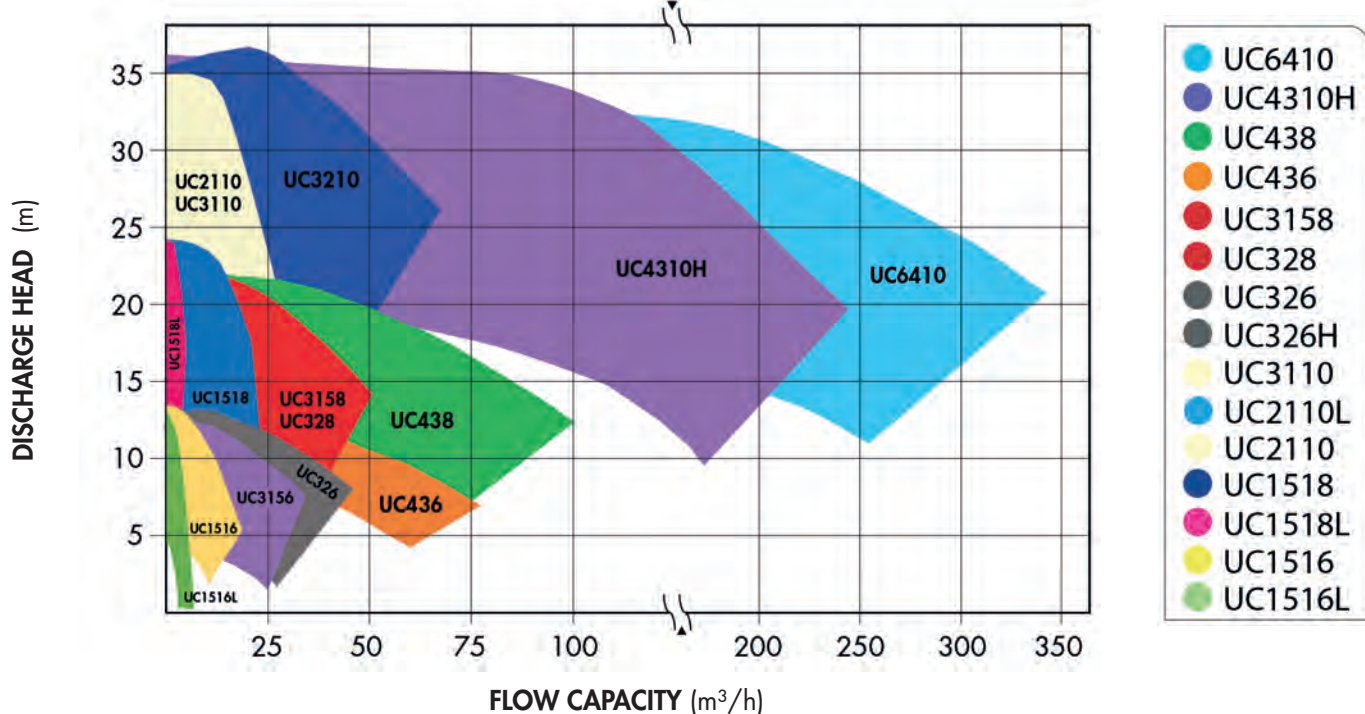
Flow capacity up to max. 329 m³/h
Discharge head up to 102 m

UC

2.900 U/min. (50 Hz)



1.450 U/min. (50 Hz)



DRUM PUMPS

EF-/PF-SERIES



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DRUM PUMPS

SEALLESS HIGH PERFORMANCE PUMPS



PFM/PFP

PFV

PFS



OVERVIEW

Unique double suction impeller provides high flow and high head. Sealless design improves reliability. Model PFS offers FDA-compliant material and ATEX 2014/34/EU certified options.

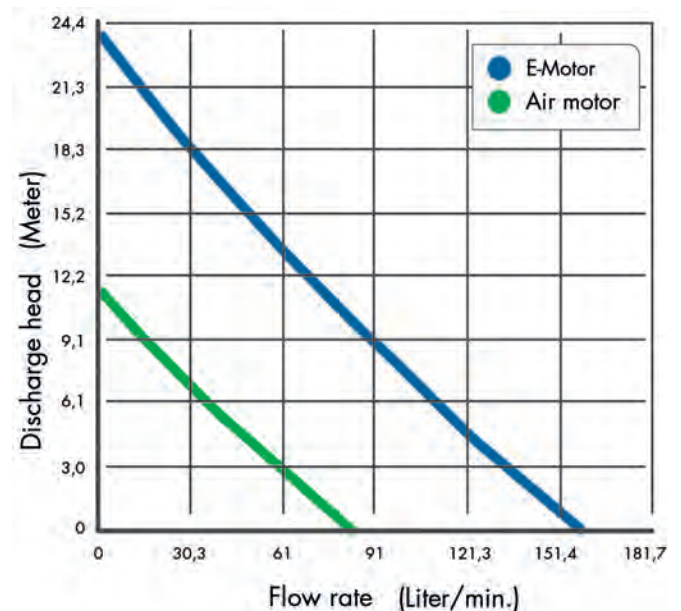
APPLICATIONS

Acids, bases, solvents¹⁾, flammables¹⁾, water treatment chemicals, cleaners, plating solutions, kidney dialysis solutions, sanitary, diesel exhaust fluid (DEF)/AdBlue

TECHNICAL DATA

PUMP DATA			
Flow capacity ²⁾	[max. Liter/min]	up to	151
Discharge head ²⁾	[max. mWC]	up to	24
Temperature	[max. °C]	PP	71
		PVDF ³⁾	49
		316SS	105
Specific gravity	[max. kg/dm ³]		1,8
Viscosity	[max. cP]	Electric motor	2.000
		Air motor	330
Tube diameter	[mm]		51
Discharge connection	[mm]		25

CHARACTERISTIC CURVES



¹⁾ Wenn entflammable od. brennbare Stoffe gepumpt werden, verwenden Sie nur explosionsgeschützte Elektro- oder Druckluftmotoren sowie Edelstahlpumpen mit Antistatiksatz.

²⁾ Alle Tests wurden mit Wasser bei 20°C und in einem vollen Behälter mit maximaler Öffnung der Druckseite durchgeführt. Die tatsächliche Leistung kann um +/- 10 % variieren.

³⁾ PFV-72 = 46° C Höchsttemperatur

Die Förderleistung nimmt bei erhöhter Viskosität und spezifischer Dichte des Fördermediums ab.

BASIC DESIGN

PP			
Pump housing	PP		
O-Rings	FKM		
Shaft	316SS		
Shaft sealing	without (sealless)		
Connection suction side	Ø 2"		
Connection pressure side	1" hose nozzle		
FDA conformity	no		
Type	Length	Article-No.	Price (EUR)
PFM-27	690 mm	☎	▲
PFM-40	1.020 mm	☎	▲
PFM-48	1.220 mm	☎	▲

PP			
Pump housing	PP		
O-Rings	FKM		
Shaft	Alloy625		
Shaft sealing	without (sealless)		
Connection suction side	Ø 2"		
Connection pressure side	1" hose nozzle		
FDA conformity	no		
Type	Length	Article-No.	Price (EUR)
PFP-27	690 mm	☎	▲
PFP-40	1.020 mm	☎	▲
PFP-48	1.220 mm	☎	▲

PVDF			
Pump housing	PVDF		
O-Rings	FKM		
Shaft	Alloy625		
Shaft sealing	without (sealless)		
Connection suction side	Ø 2"		
Connection pressure side	1" hose nozzle		
FDA conformity	no		
Type	Length	Article-No.	Price (EUR)
PFV-27	690 mm	☎	▲
PFV-40	1.020 mm	☎	▲
PFV-48	1.220 mm	☎	▲

STAINLESS STEEL			
Pump housing	316SS		
O-Rings	FKM		
Shaft	316SS		
Shaft sealing	without (sealless)		
Connection suction side	Ø 2"		
Connection pressure side	1" hose nozzle		
FDA conformity	no		
Type	Length	Article-No.	Price (EUR)
PFS-27	690 mm	☎	▲
PFS-40	1.020 mm	☎	▲
PFS-48	1.220 mm	☎	▲

STAINLESS STEEL			
Pump housing	316SS		
O-Rings	FDA Buna		
Shaft	316SS		
Shaft sealing	without (sealless)		
Connection suction side	Ø 2"		
Connection pressure side	1" hose nozzle		
FDA conformity	yes		
			
Type	Length	Article-No.	Price (EUR)
PFS-27-B	690 mm	☎	▲
PFS-40-B	1.020 mm	☎	▲
PFS-48-B	1.220 mm	☎	▲

STAINLESS STEEL			
Pump housing	316SS		
O-Rings	FDA Buna		
Shaft	316SS		
Shaft sealing	without (sealless)		
Connection suction side	Ø 2"		
Connection pressure side	1" Tri-Clamp		
FDA conformity	yes		
			
Type	Length	Article-No.	Price (EUR)
PFS-27-BTC	690 mm	☎	▲
PFS-40-BTC	1.020 mm	☎	▲
PFS-48-BTC	1.220 mm	☎	▲

DRUM PUMPS

SEALLESS UNIVERSAL PUMPS

Flow capacity up to max. 64 Liter/min
Discharge head up to 6 m

DRIVE MOTORS

Article-No. Price (EUR)



M5V (standard alternating current motor, splash-proof, IP24)

Voltage	230V, 50/60HZ	Power (Input): 650 W	Ⓢ	▲
Speed	3.500 - 10.000 rpm	Power (Output): 400 W		
Viscosity	max. 500 cP			



M5T (standard alternating current motor, encapsulated, IP54)

Voltage	230V, 50/60HZ	Power (Input): 1.000 W	Ⓢ	▲
Speed	12.000 rpm	Power (Output): 680 W		
Viscosity	max. 1.000 cP			



M5TV (standard alternating current motor, encapsulated, IP54, with speed control)

Voltage	230V, 50/60HZ	Power (Input): 1.000 W	Ⓢ	▲
Speed	0 - 12.000 rpm	Power (Output): 680 W		
Viscosity	max. 2.000 cP			



M5XV (explosion-proof motor)

Voltage	230V, 50/60HZ	Power (Input): 1.000 W	Ⓢ	▲
Speed	0 - 12.000 rpm	Power (Output): 680 W		
Viscosity	max. 2.000 cP			



M6 (compressed air motor)

Compressed air	80-100 psi @ 15-32 cfm	Power (Input): —	Ⓢ	▲
Speed	300 - 9.000 rpm	Power (Output): 400 W		
Viscosity	max. 330 cP			



M6X (compressed air motor)

Compressed air	80-100 psi @ 15-32 cfm	Power (Input): —	Ⓢ	▲
Speed	300 - 6.000 rpm	Power (Output): 600 W		
Viscosity	max. 330 cP			

ACCESSORIES

FOR DRUM PUMPS

PF/EF

ACCESSORIES (on request)

FLOW METERS

- Dispense precise amount of fluids from containers.
- Handles chemicals and corrosive liquids.
- Large LCD display in GPM or LPM, 20 cP maximum +/-1% accuracy and repeatability.
- All models are factory calibrated.
- Some models may be field calibrated.
- Batch control versions available.
- Corrosion resistant polypropylene or PVDF.
- Engineered connections for fast assembly to PFM, PFP and PFV drum pumps.



DISCHARGE TUBING

Flexible tubing connects to the pump discharge. Available in PVC, reinforced PVC and special EPDM for Diesel Exhaust Fluid applications.

STRAINERS

Strainers attach to pump tubes preventing foreign objects from entering the pump.



WALL MOUNT BRACKET

Allows pump to be stored in an upright position.

DRUM ADAPTERS

Secures the pump tube in the barrel's bung opening. Fits standard 2" NPT bung opening. Available in polypropylene, galvanized or stainless steel.

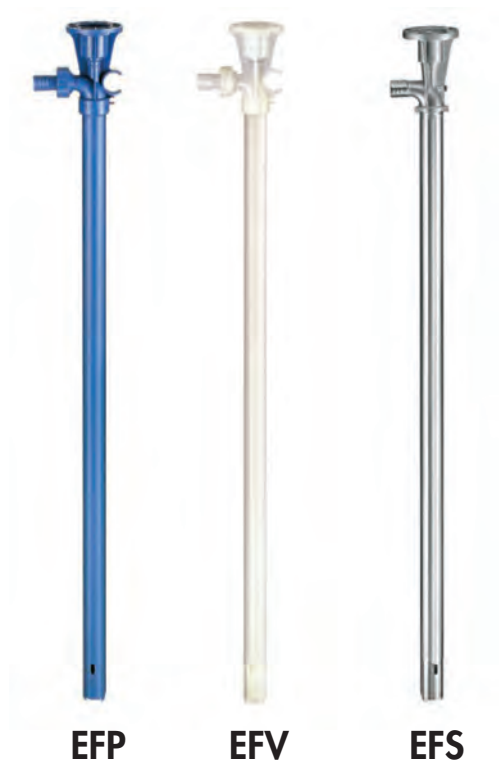


STATIC PROTECTION KIT

Increases safety when transferring flammable or combustible liquids. Kit includes cross-linked polyethylene grounded hose, ground wire and clamps.

DRUM PUMPS

SEALLESS UNIVERSAL PUMPS



OVERVIEW

This pump provides an economical choice for light duty transfer. Ideal replacement for hand pumps. ATEX 2014/34/EU certified options available.

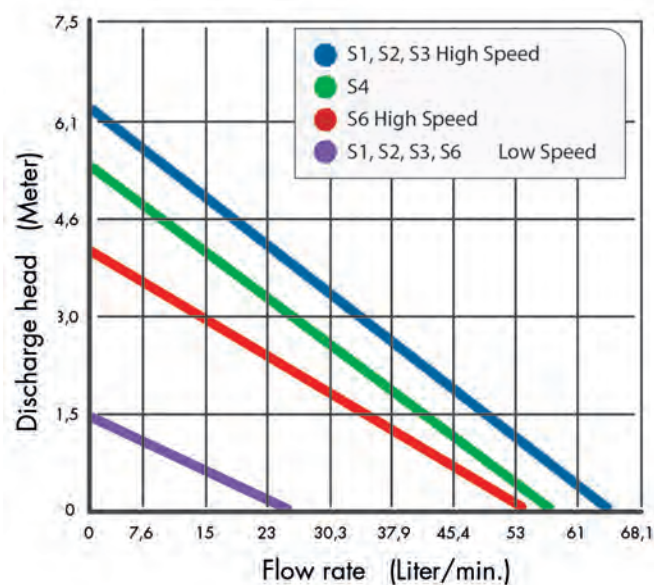
APPLICATIONS

Light acids and bases, solvents¹⁾, flammables¹⁾, plating solutions, sodium hypochlorite, cleaners, coolants, diesel exhaust fluid (DEF)/AdBlue

TECHNICAL DATA

PUMP DATA			
Flow capacity ²⁾	[max. Liter/min]	up to	64,4
Discharge head ²⁾	[max. mWC]	up to	6,1
Temperature	[max. °C]	PP	66
		PVDF	71
		316SS	100
Specific density	[max. kg/dm ³]		1,6
Viscosity	[max. cP]	Electric motor	300
		Air motor	300
		12V-Motor	100
Tube diameter	[mm]	EFP, EFS	32
		EFV	32
Connection diameter	[mm]		19

CHARACTERISTIC CURVES



¹⁾ Wenn entflammbare od. brennbare Stoffe gepumpt werden, verwenden Sie nur explosionsgeschützte Elektro- oder Druckluftmotoren sowie Edelstahlpumpen mit Antistatiksatz.

²⁾ Alle Tests wurden mit Wasser bei 20°C durchgeführt. Die tatsächliche Leistung kann um +/- 10 % variieren.

Die Förderleistung nimmt bei erhöhter Viskosität und spezifischer Dichte des Fördermediums ab.

Flow capacity up to max. 64 Liter/min
Discharge head up to 6 m

EF

BASIC DESIGN

PP

Pump housing	PP
O-Rings	FKM
Shaft	316SS
Shaft sealing	FKM
Connection suction side	Ø 1 1/4"
Connection pressure side	3/4" hose nozzle
FDA conformity	no

Type	Length	Article-No.	Price (EUR)
EFP-27	690 mm	☎	▲
EFP-40	1.020 mm	☎	▲
EFP-48	1.220 mm	☎	▲

PVDF

Pump housing	PVDF
O-Rings	FKM
Shaft	Alloy625
Shaft sealing	FKM
Connection suction side	Ø 1 5/16"
Connection pressure side	3/4" hose nozzle
FDA conformity	no

Type	Length	Article-No.	Price (EUR)
EFV-27	690 mm	☎	▲
EFV-40	1.020 mm	☎	▲
EFV-48	1.220 mm	☎	▲

STAINLESS STEEL

Pump housing	316SS
O-Rings	FKM
Shaft	316SS
Shaft sealing	FKM
Connection suction side	Ø 1 1/4"
Connection pressure side	Schlauchtülle 3/4"
FDA conformity	nein

Type	Length	Article-No.	Price (EUR)
EFS-27	690 mm	☎	▲
EFS-40	1.020 mm	☎	▲
EFS-48	1.220 mm	☎	▲

DRIVE MOTORS



S2 (standard alternating current motor, splash-proof, IP24)

Voltage	230V, 50/60HZ	Power (Input): 230 W	☎	▲
Speed	8.000 - 14.000 rpm	Power (Output): 100 W		
Viscosity	max. 300 cP			



S6 Kit (battery-powered motor, splash-proof, IP24)

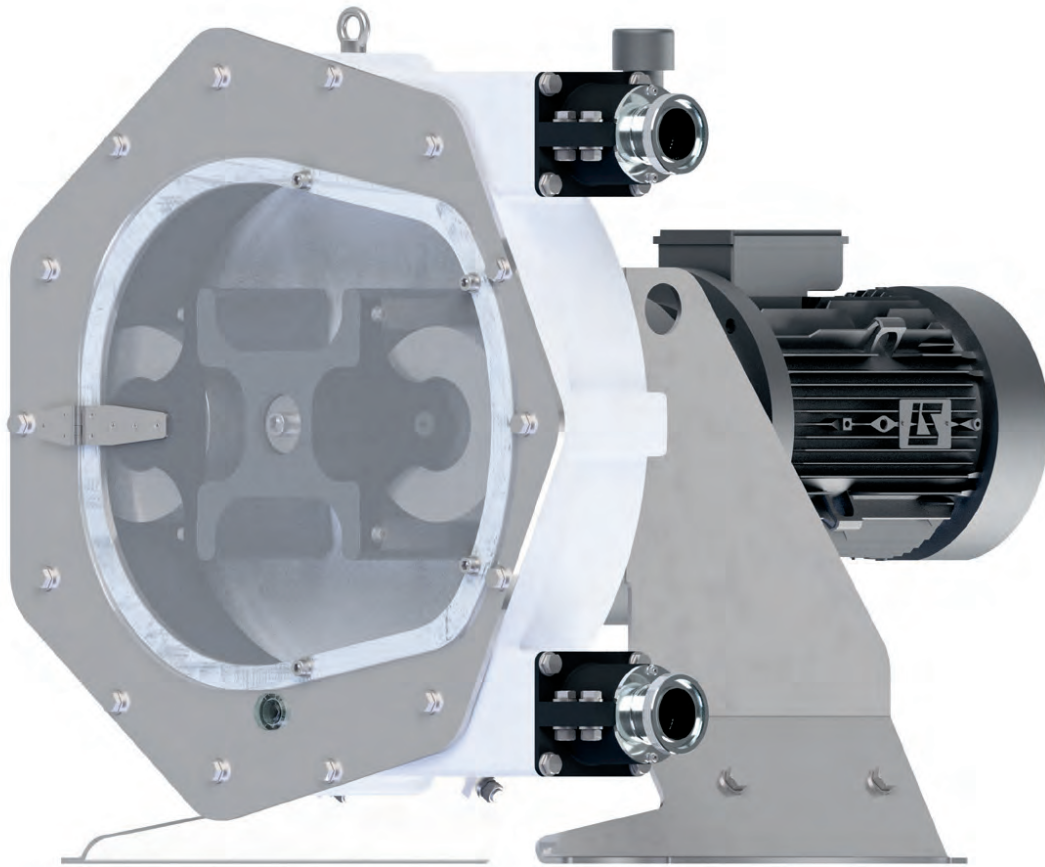
Voltage	12V	Power (Input): 1150 W	☎	▲
Speed	8.000 - 12.000 rpm	Power (Output): 110 W		
Viscosity	max. 100 cP			



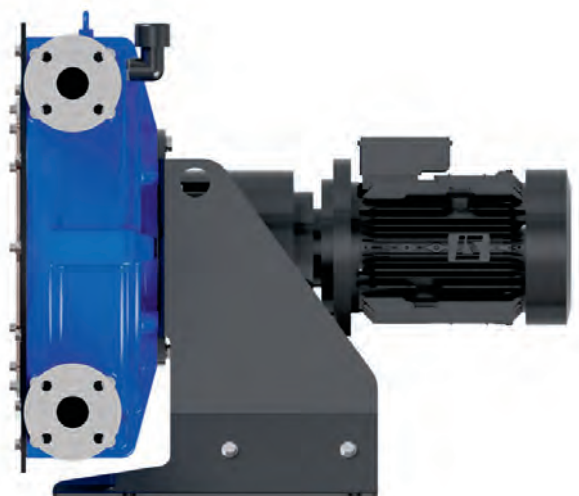
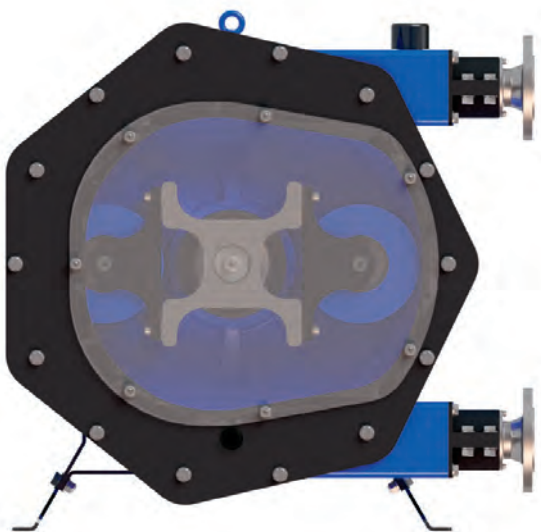
S4 (compressed air motor)

Compressed air	40 psi @ 27 cfm	Power (Input): —	☎	▲
Speed	300 - 11.000 rpm	Power (Output): 400 W		
Viscosity	max. 300 cP			

HIGH PERFORMANCE HOSE PUMPS I-SERIES



PERIBEST
pumps



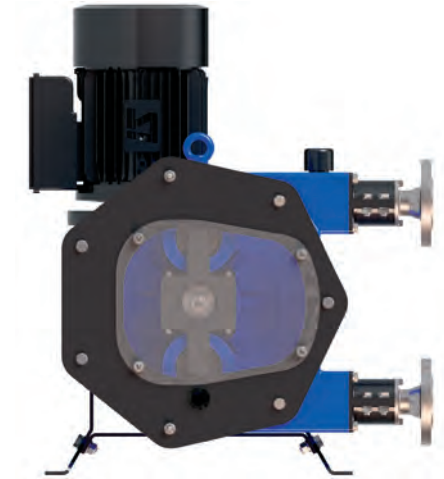
INSPIRED. SOLUTIONS. FOR CUSTOMERS.

HOSE PUMPS

HIGH PERFORMANCE HOSE PUMPS

PERIBEST PUMPS PERISTALTIC TECHNOLOGY

- maximum resistance to abrasion.
- unmatched suction capability.
- indefinite dry running.
- no valves or mechanical seals.
- sanftes Fördern.
- gentle and reversible pumping.
- full dosing control.
- industrial, corrosion resistant and food versions.
- Dosiergenauigkeit von $\pm 1\%$



ADVANTAGES OF PERIBEST HOSE PUMPS COMPARED WITH:

Hose pumps with shoe technology

Energy savings of up to 30%, ease of hose replacement, wide range of operation, low starting torque.

Progressive cavity pumps

Allow dry running and have no mechanical seals. Simple adaptation to pumping of corrosive products.

Air operated diaphragm pumps

Incomparable efficiency and absence of valves that make the passage of solids difficult.

DIFFICULT PRODUCTS ARE NOT A PROBLEM

abrasive products

Lime milk, activated carbon, sludges and slurries...

corrosive products

sodium hypochlorite, ferric chloride, hydrochloric acid...

viscous products

water-based glues, greases, creams, resins...

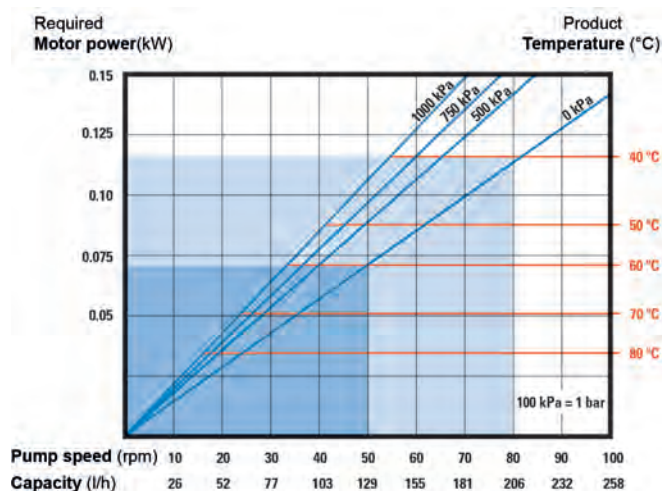
shear sensitive products

Latex, polymers and flocculants, food products...

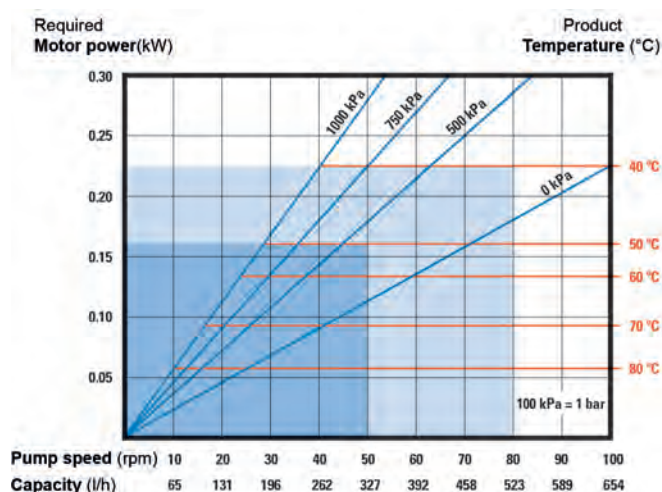
Flow capacity up to max. 1.100 Litres/h
max. operating pressure 10 bar

PERIBEST I12, I17, I21

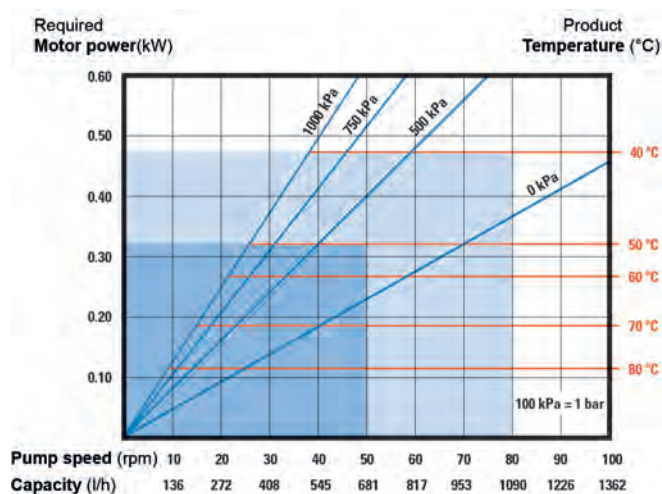
Technical specification	Model I12
Max. flow (continuous)	max. 205 l/h
Capacity	0,043 l/U
Max. discharge pressure	10 bar
Max. temperature	80°C
Inner diameter	13 mm
Hose material	NR, EPDM, NBR (food grade), Hypalon®
Connections	stainless steel 1.4401, PP, PVDF (PTFE)



Technical specification	Model I17
Max. flow (continuous)	max. 500 l/h
Capacity	0,109 l/U
Max. discharge pressure	10 bar
Max. temperature	80°C
Inner diameter	16 mm
Hose material	NR, EPDM, NBR (food grade), Hypalon®
Connections	stainless steel 1.4401, PP, PVDF (PTFE)



Technical specification	Model I21
Max. flow (continuous)	max. 1.100 l/h
Capacity	0,227 l/U
Max. discharge pressure	10 bar
Max. temperature	80°C
Inner diameter	22 mm
Hose material	NR, EPDM, NBR (food grade), Hypalon®
Connections	stainless steel 1.4401, PP, PVDF (PTFE)



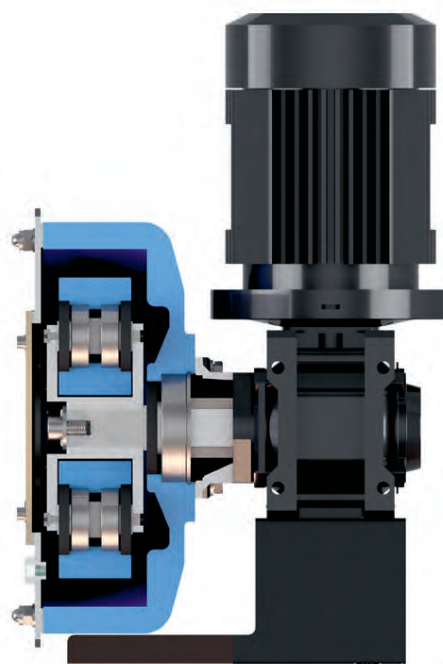
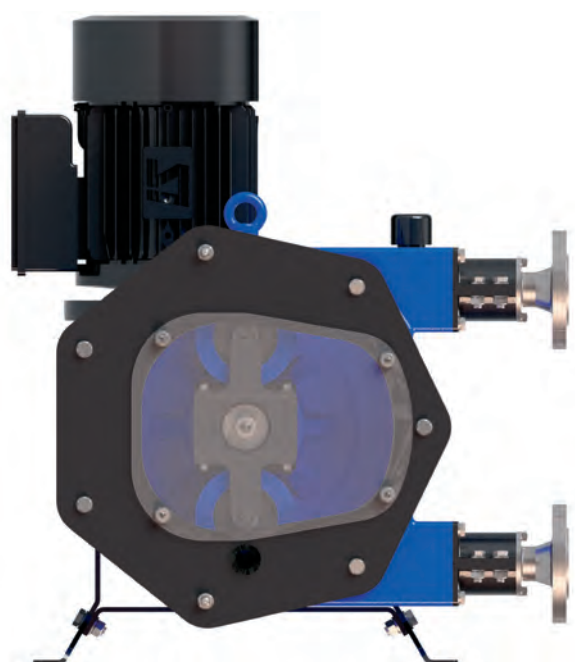
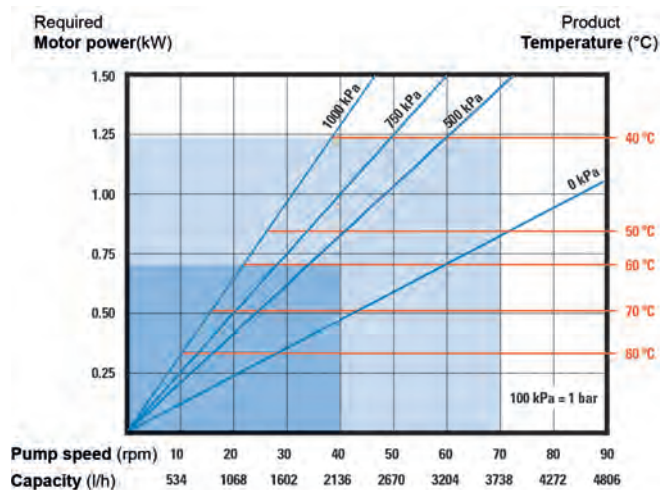
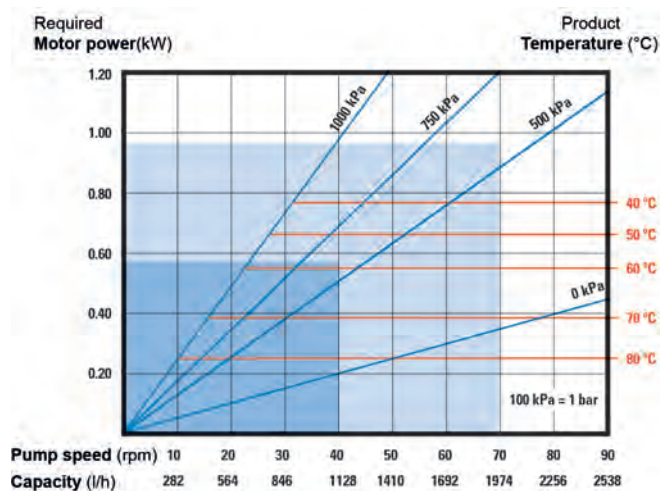
HOSE PUMPS

HIGH PERFORMANCE HOSE PUMPS

Technical specification	Model I28
Max. flow (continuous)	max. 1.900 l/h
Capacity	0,47 l/U
Max. discharge pressure	10 bar
Max. temperature	80°C
Inner diameter	28 mm
Hose material	NR, EPDM, NBR (food grade)
Connections	stainless steel 1.4401, PP, PVDF (PTFE)

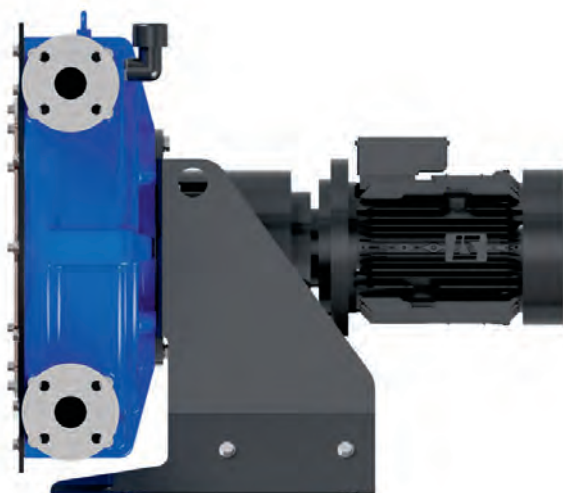
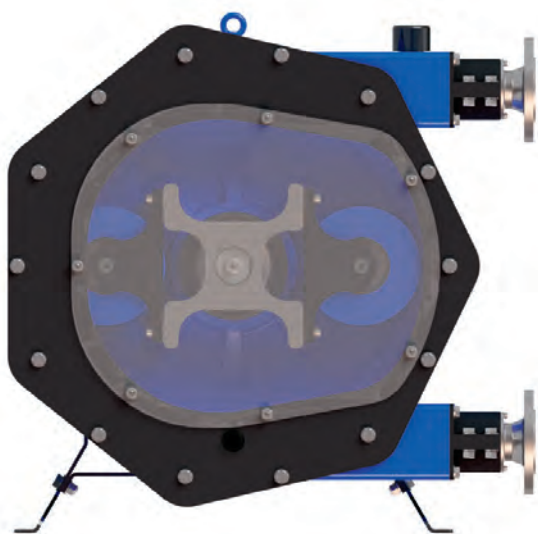
Technical specification	Model I35
Max. flow (continuous)	max. 3.600 l/h
Capacity	0,89 l/U
Max. discharge pressure	10 bar
Max. temperature	80°C
Inner diameter	35 mm
Hose material	NR, EPDM, NBR (food grade)
Connections	stainless steel 1.4401, PP, PVDF (PTFE)

PERIBEST I28, I35

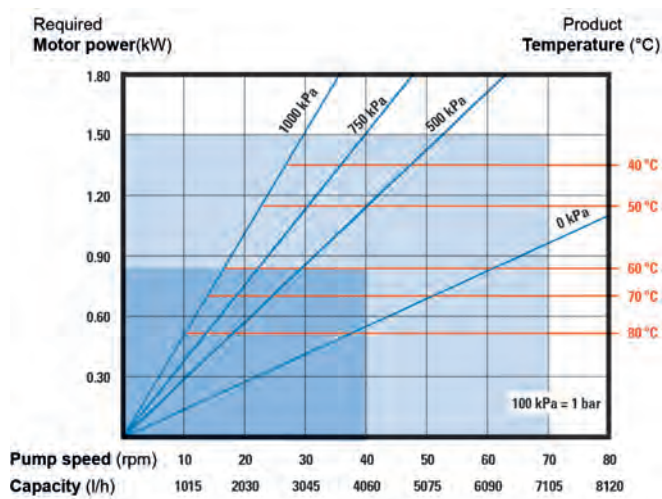


Flow capacity up to max. 13.000 Litres/h
max. operating pressure 10 bar

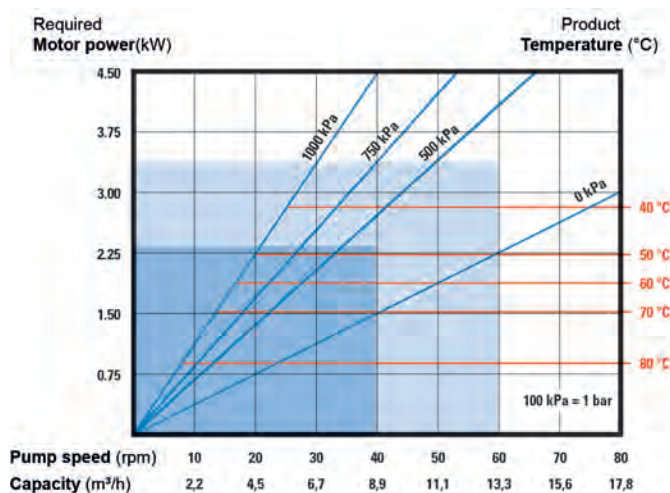
PERIBEST I43, I55



Technical specification	Model I43
Max. flow (continuous)	max. 7.000 l/h
Capacity	1,69 l/U
Max. discharge pressure	10 bar
Max. temperature	80°C
Inner diameter	43 mm
Hose material	Naturkautschuk, EPDM, NBR (lebensmittelecht)
Connections	Edelstahl 1.4401, PP, PVDF (PTFE)



Technical specification	Model I55
Max. flow (continuous)	max. 13.000 l/h
Capacity	3,71 l/U
Max. discharge pressure	10 bar
Max. temperature	80°C
Inner diameter	55 mm
Hose material	NR, EPDM, NBR (food grade)
Connections	stainless steel 1.4401, PP, PVDF (PTFE)





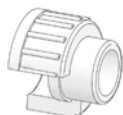
CONNECTION PARTS

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CONNECTION PARTS

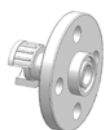
for dosing pumps and fittings

from page



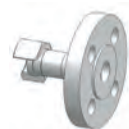
INSERTS and PIPE SOCKETS with union nut

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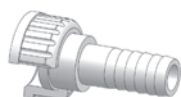
LOOSE FLANGES with transition piece and union nut

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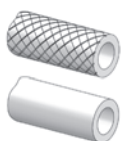
FIXED FLANGES with union nut

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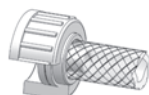
HOSE NOZZLES with union nut

450



DOSING HOSES and hose clamps

452



HOSE SCREW CONNECTIONS and dosing hoses

454



FLEXIBLE DOSING HOSES made of stainless steel

457

CONNECTING PARTS

Inserts/Pipe sockets

PP

Insert **PP**

Union nut **PP-FRP** (*PVC-U)

Connection type **Welding joint**

Type (Thread connection)	DN	Article-No.	Price (EUR)
G3/4	8	×	×
G3/4	10	90003805	▲
G3/4	15	90003544	▲
G1	15	90003808	▲
G1 1/4	15	90004620	▲
G1 1/4	20	90003811	▲
G1 1/4	25	90004624	▲
G1 1/2 *	25	90003814	▲
G2 *	32	90003817	▲
G2 1/4 *	40	⌚	⌚
G2 3/4 *	50	90003823	▲

PVC-U

Insert **PVC-U**

Union nut **PP-FRP** (*PVC-U)

Connection type **Gluing joint**

Type (Thread connection)	DN	Article-No.	Price (EUR)
G3/4	8	90003796	▲
G3/4	10	90003797	▲
G3/4	15	90003543	▲
G1	15	90003798	▲
G1 1/4	15	90004622	▲
G1 1/4	20	90003799	▲
G1 1/4	25	90004626	▲
G1 1/2 *	25	90003800	▲
G2 *	32	90003801	▲
G2 1/4 *	40	90003802	▲
G2 3/4 *	50	90003803	▲

PVC-U (NA) (North america design)

Insert **PVC-U**

Union nut **PP-FRP**

Connection type **Gluing joint**

Type (Thread connection)	DN	Article-No.	Price (EUR)
G3/4	10	90031755	⌚
G3/4	10	90031756	⌚
G3/4	10	90031757	⌚
G1	15	90031766	⌚
G1	15	90031768	⌚
G1 1/4	20	90031769	⌚
G1 1/4	20	90031770	⌚

PVDF

Insert **PVDF**

Union nut **PVDF-FRP** (*PVDF)

Connection type **Welding joint**

Type (Thread connection)	DN	Article-No.	Price (EUR)
G3/4	8	×	×
G3/4	10	90003804	▲
G3/4	15	90003546	▲
G1	15	90003807	▲
G1 1/4	15	90004621	▲
G1 1/4	20	90003810	▲
G1 1/4	25	90004625	▲
G1 1/2 *	25	90003813	▲
G2 *	32	⌚	⌚
G2 1/4 *	40	⌚	⌚
G2 3/4 *	50	⌚	⌚

STAINLESS STEEL

Pipe socket **1.4571**

Union nut **1.4571**

Connection type **Welding joint**

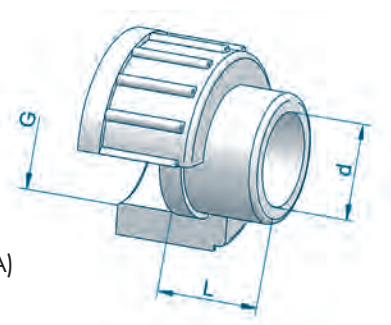
Type (Thread connection)	DN	Article-No.	Price (EUR)
G3/4	5	90003831	▲
G3/4	8	90003832	▲
G3/4	10	90008740	▲
G3/4	15	90008741	▲
G1	15	90008743	▲
G1	20	90015935	▲
G1 1/4	15	90008744	▲
G1 1/4	20	90008745	▲
G1 1/4	25	90008746	▲
G1 1/2	25	90008747	▲
G2	32	⌚	⌚
G2 1/4	40	⌚	⌚

CONNECTING PARTS

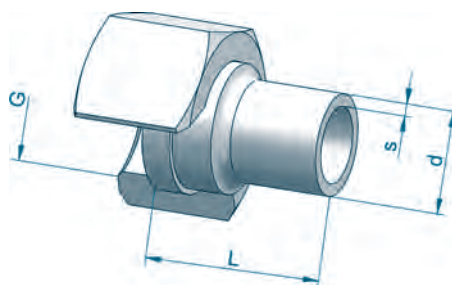
Inserts/Pipe sockets

DIMENSIONS

PVC-U
PVC-U (NA)
PP
PVDF



1.4571



DN	▶	d	L	▶	d	L	▶	d x s	L
G3/4	5	PVC-U	×	×	PP, PVDF	×	×	10 x 2,0	46
G3/4	8		12	17		12	18	12 x 2,0	46
G3/4	10		16	17		16	18	17,2 x 2,0	30
G3/4	15		20	60		20	60	21,3 x 2,0	30
G1	15	PVC-U	20	19	PP, PVDF	20	19	21,3 x 2,0	32
G1	20		×	×		×	×	26,9 x 2,5	35
G1 1/4	15		20	22		20	21	21,3 x 2,0	35
G1 1/4	20		25	22		25	21	26,9 x 2,5	35
G1 1/4	25		32	74		32	70	33,7 x 3,0	35
G1 1/2	25		32	25		32	23	33,7 x 3,0	37
G2	32		40	29		40	25	38 x 3,0	69
G2 1/4	40		50	34		50	28	44,5 x 2,0	70
G2 3/4	50		63	41		63	32	×	×

DN	▶	d	L
G3/4	10	3/8"	22
G3/4	10	1/2"	66
G3/4	10	3/4"	72
G1	15	3/4"	75
G1	15	1"	80
G1 1/4	20	1"	74
G1 1/4	20	1 1/4"	81,5

CONNECTING PARTS

Transition piece with loose flange

PP

Loose flange **PP** with steel inlay (* **PP-FRP**) DIN2501 (PN10)
Union nut **PP-FRP**

Type (Thread connection)		Seals EPDM Article-No.	Price (EUR)	Seals FPM Article-No.	Price (EUR)
G3/4 *	DN10	☉	▲	90003788	▲
G3/4	DN15	☉	▲	90003791	▲
G1	DN15	☉	▲	90005809	▲
G1 1/4	DN15	☉	▲	90005705	▲
G1 1/4	DN20	☉	▲	90005702	▲
G1 1/4	DN25	☉	▲	90005699	▲

PVDF

Loose flange **PP** with steel inlay (* **PVDF-FRP**) DIN2501 (PN10)
Union nut **PVDF-FRP**

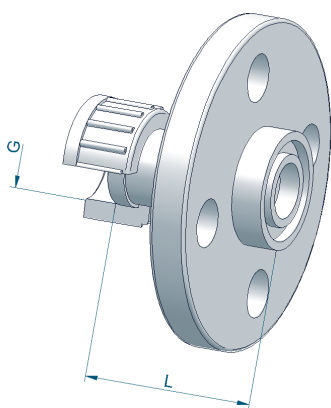
Type (Thread connection)		Seals EPDM Article-No.	Price (EUR)	Seals FPM Article-No.	Price (EUR)
G3/4 *	DN10	☉	▲	90003789	▲
G3/4	DN15	☉	▲	90003792	▲
G1	DN15	☉	☉	☉	☉
G1 1/4	DN15	☉	▲	90005706	▲
G1 1/4	DN20	☉	▲	90005703	▲
G1 1/4	DN25	☉	▲	90005700	▲

PVC-U

Loose flange **PVC-U** DIN2501 (PN10)
Union nut **PP-FRP**

Type (Thread connection)		Seals EPDM Article-No.	Price (EUR)	Seals FPM Article-No.	Price (EUR)
G3/4	DN10	☉	▲	90003790	▲
G3/4	DN15	☉	▲	90003793	▲
G1	DN15	☉	▲	90005808	▲
G1 1/4	DN15	☉	▲	90005707	▲
G1 1/4	DN20	☉	▲	90005704	▲
G1 1/4	DN25	☉	▲	90005701	▲

DIMENSIONES



G	DN		L		L
G3/4	10	PVC-U	45	PP, PVDF	46
G3/4	15		45		46
G1	15		52		50
G1 1/4	15		51		53
G1 1/4	20		51		53
G1 1/4	25		51		53

CONNECTING PARTS

Transition piece with fixed flange

STAINLESS STEEL

Flange **1.4571** DIN2633 (PN16)
Union nut **1.4571**

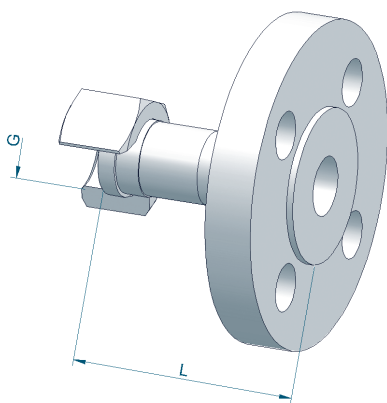
Type (Thread connection)		Article-No.	Price (EUR)
G3/4	DN10	90023375	▲
G3/4	DN15	90011412	▲
G1	DN15	90011414	▲
G1 1/4	DN15	90011418	▲
G1 1/4	DN20	90011420	▲
G1 1/4	DN25	90011422	▲

STAINLESS STEEL

Flange **1.4571** ANSI B16,5 (150 lbs/sqin)
Union nut **1.4571**

Type (Thread connection)		Article-No.	Price (EUR)
G3/4	DN10	90011472	▲
G3/4	DN15	90018303	▲
G1	DN15	90023332	▲
G1 1/4	DN15	90021801	▲
G1 1/4	DN20	90022289	▲
G1 1/4	DN25	90021802	▲

DIMENSIONES



G	▶	DN	L	▶	DN	L
G3/4	DIN 2633	10	65	ANSI B16,5	1/2"	77,8
G3/4		15	65		3/4"	120
G1		15	67		3/4"	87,3
G1 1/4		15	70		3/4"	87,5
G1 1/4		20	73		1"	90,6
G1 1/4		25	73		1 1/4"	142,2

● basic version

○ available without extra charge

▲ available with extra charge

✗ not available

Ⓢ on request

CONNECTING PARTS

Transition piece with hose nozzle

PP

Hose nozzle **PP**
Union nut **PP-FRP** (*PP)

Type (Thread connection)	DN	Article-No.	Price (EUR)
G3/4	3	🕒	🕒
G3/4	5	90003873	▲
G3/4	8	90003877	▲
G3/4	10	90003881	▲
G3/4	15	90003885	▲
G1	15	90003889	▲
G1 1/4	15	90004631	▲
G1 1/4	20	90003893	▲
G1 1/4	25	90004635	▲
G1 1/2 *	25	🕒	🕒
G2 *	32	🕒	🕒
G2 1/4 *	40	🕒	🕒

PVDF

Hose nozzle **PVDF**
Union nut **PVDF-FRP** (*PVDF)

Type (Thread connection)	DN	Article-No.	Price (EUR)
G3/4	3	🕒	🕒
G3/4	5	🕒	🕒
G3/4	8	🕒	🕒
G3/4	10	🕒	🕒
G3/4	15	90003886	▲
G1	15	🕒	🕒
G1 1/4	15	🕒	🕒
G1 1/4	20	🕒	🕒
G1 1/4	25	90004636	▲
G1 1/2 *	25	90003898	▲
G2 *	32	🕒	🕒
G2 1/4 *	40	🕒	🕒

PVC-U

Hose nozzle **PVC-U**
Union nut **PP-FRP** (*PVC-U)

Type (Thread connection)	DN	Article-No.	Price (EUR)
G3/4	3	90003871	▲
G3/4	5	90003875	▲
G3/4	8	90003879	▲
G3/4	10	90003883	▲
G3/4	15	90003887	▲
G1	15	90003891	▲
G1 1/4	15	90004633	▲
G1 1/4	20	🕒	🕒
G1 1/4	25	🕒	🕒
G1 1/2 *	25	90003899	▲
G2 *	32	90003903	▲
G2 1/4 *	40	90003907	▲

STAINLESS STEEL

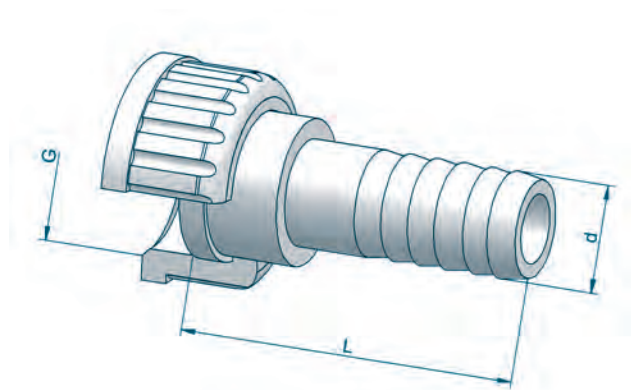
Hose nozzle **1.4571**
Union nut **1.4571**

Type (Thread connection)	DN	Article-No.	Price (EUR)
G3/4	3	90003872	▲
G3/4	5	90003876	▲
G3/4	8	90003880	▲
G3/4	10	90003884	▲
G3/4	15	90003888	▲
G1	15	90003892	▲
G1 1/4	15	90004634	▲
G1 1/4	20	🕒	🕒
G1 1/4	25	90004638	▲
G1 1/2 *	25	90003900	▲
G2 *	32	🕒	🕒
G2 1/4 *	40	🕒	🕒

CONNECTING PARTS

Transition piece with hose nozzle

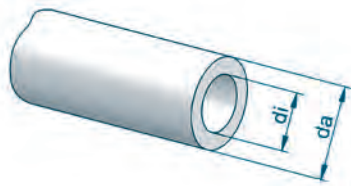
DIMENSIONES



DN		▶ PVC-U, PP, PVDF, 1.4571	d L	
G3/4	3		6,5	30
G3/4	5		10	35
G3/4	8		12	54
G3/4	10		16	60
G3/4	15		20	65
G1	8		13	57
G1	15		20	65
G1 1/4	15		20	65
G1 1/4	20		25	82
G1 1/4	25		30	92
G1 1/2	25		30	92
G2	32		40	103
G2 1/4	40		50	120

CONNECTING PARTS

Dosing hoses/hose clamps



DOSING HOSE made of EPDM

Only for connection with hose nozzle + hose clamp

Inner liners and outer cover made of EPDM, black

Available in any length (note max. length)

Price per metre

Ø (di/da)	Ø Hose nozzle [mm]	permitted min. pressure [bar]	max. pressure [bar]	max. length [m]	Article-No.	Price (EUR)
13/20	13	-0,3	10	40	90009835	▲
19/27	20	-0,3	10	40	90010443	▲
25/34	25	-0,3	10	40	90014695	▲



HOSE CLAMP for EPDM-hose

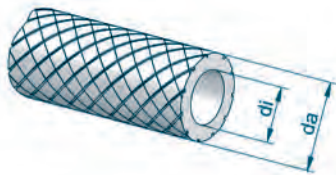
Heavy duty clamp, DIN3017

Stainless steel W4 (1.4301)

for hose up to Ø (da)	Strapping width	Wide gap		Article-No.	Price (EUR)
		d (min)	d (max)		
21	18	19	21	90041220	▲
29	18	27	29	90041221	▲
37	20	34	37	90041222	▲
43	20	40	43	90041223	▲

CONNECTING PARTS

Dosing hoses/hose clamps

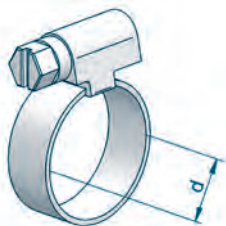


DOSING HOSE made of PVC-U with cross fabric inlay

Available in any length (note max. length)

Price per metre

Ø (di/da)	Hose nozzle [Ø mm]	max. pressure [bar]	max. length [m]	Article-No.	Price (EUR)
6/12	6,5	10	50	90005974	▲
10/16	10	10	50	90005975	▲
12/21	12	10	50	90005976	▲
16/24	16	10	50	90005977	▲
19/27	20	10	50	90005978	▲
25/34	25	9	25	90005979	▲
30/38	30	6	25	90010204	▲
38/48	40	6	25	90005981	▲



HOSE CLAMP for PVC-hose

Worm drive clamp, DIN3017

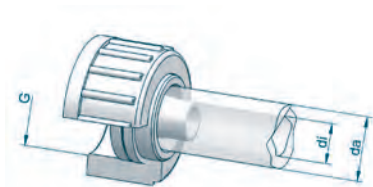
Stainless steel W4 (1.4301)

for hose up to Ø (da)	Strapping width	Wide gap		Article-No.	Price (EUR)
		d (min)	d (max)		
16	9	10	16	90002343	▲
24	9	16	27	90002345	▲
27	9	20	32	90002346	▲
48	9	32	50	90002348	▲

CONNECTING PARTS

Hose screw connections and dosing hoses

HOSE SCREW CONNECTION for PE- and PTFE-hose



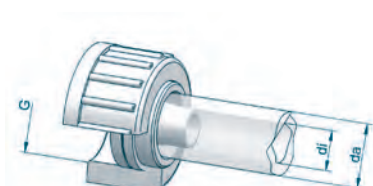
PVC-U

Nozzle **PVC-U**

Support sleeve **PVC-U**

Union nut **PVC-U** or **PP-FRP**

Type (Thread connection)	di	da	Article-No.	Price (EUR)
G3/4	4	6	90043324	▲
G3/4	6	8	90040925	▲
G3/4	8	12	90025703	▲
G3/4	10	12	90017815	▲



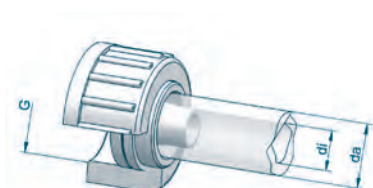
PP-FRP

Nozzle **PP-GFK**

Support sleeve **PP-FRP**

Union nut **PP-FRP**

Type (Thread connection)	di	da	Article-No.	Price (EUR)
G3/4	4	6	90043323	▲
G3/4	6	8	×	×
G3/4	8	12	×	×
G3/4	10	12	×	×



PP

Nozzle **PP**

Support sleeve **PP**

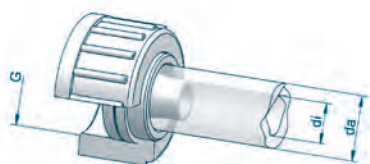
Union nut **PP-FRP**

Type (Thread connection)	di	da	Article-No.	Price (EUR)
G3/4	4	6	×	×
G3/4	6	8	90015988	▲
G3/4	8	12	90015981	▲
G3/4	10	12	90016415	▲

CONNECTING PARTS

Hose screw connections and dosing hoses

HOSE SCREW CONNECTION for PE- and PTFE-hose (North america design)



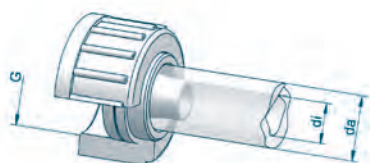
PVC-U

Nozzle **PVC-U**

Support sleeve **PVC-U**

Union nut **PVC-U** or **PP-FRP**

Type (Thread connection)	di	da	Article-No.	Price (EUR)
G3/4	9,65	12,7	⌚	⌚
G1	9,65	12,7	⌚	⌚



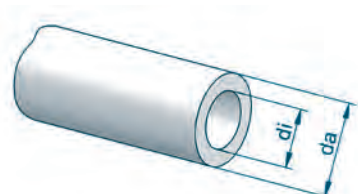
PP

Nozzle **PP**

Support sleeve **PP**

Union nut **PP-FRP**

Type (Thread connection)	di	da	Article-No.	Price (EUR)
G3/4	9,65	12,7	⌚	⌚
G1	9,65	12,7	⌚	⌚



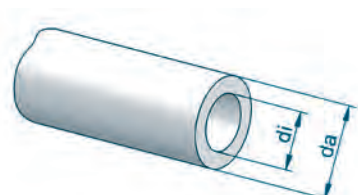
DOSING HOSE made of PE

Only for hose screw connection

Available in any length (note max. length)

Price per metre

Ø (di/da)	max. pressure [bar]	max. length [m]	Article-No.	Price (EUR)
4/6	10	50	90005503	▲
6/8	10	50	90041198	▲
8/12	10	50	90007742	▲



DOSING HOSE made of PTFE

Only for hose screw connection

Available in any length (note max. length)

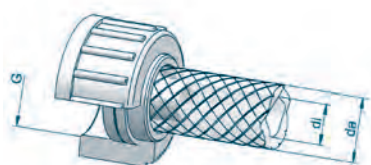
Price per metre

Ø (di/da)	max. pressure [bar]	max. length [m]	Article-No.	Price (EUR)
4/6	15	30	90007737	▲
6/8	10	50	90018852	▲
10/12	11	50	90007738	▲

CONNECTING PARTS

Dosing hoses

HOSE SCREW CONNECTION for PVC-hose with cross fabric inlay



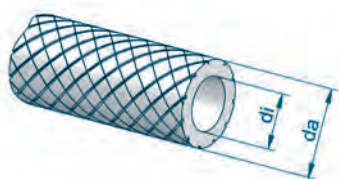
PVC-U

Nozzle **PVC-U**

Support sleeve **PVC-U**

Union nut **PVC-U** or **PP-FRP**

Type (Thread connection)	di	da	Article-No.	Price (EUR)
G3/4	6	12	90011092	▲
G3/4	10	16	90011093	▲
G1	16	24	90011094	▲
G1	10	16	Ⓢ	Ⓢ
G1 1/4	16	24	Ⓢ	Ⓢ
G1 1/4	19	27	90011096	▲



DOSING HOSE made of PVC-U with cross fabric inlay

Available in any length (note max. length)

Price per metre

Ø (di/da)	Hose nozzle [Ø mm]	max. pressure [bar]	max. length [m]	Article-No.	Price (EUR)
6/12	6,5	10	50	90005974	▲
10/16	10	10	50	90005975	▲
12/21	12	10	50	90005976	▲
16/24	16	10	50	90005977	▲
19/27	20	10	50	90005978	▲
25/34	25	9	25	90005979	▲
30/38	30	6	25	90010204	▲
38/48	40	6	25	90005981	▲

CONNECTING PARTS

Flexible dosing hoses



DOSING HOSE, FLEXIBLE made of stainless steel

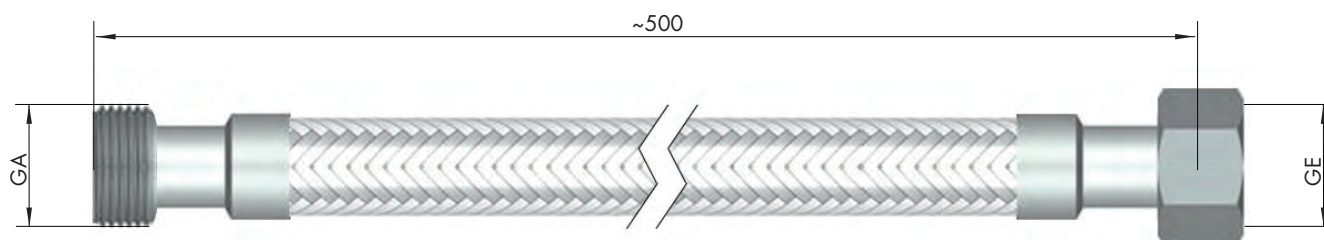
Hose set incl. connection O-ring

Inlet: union nut (female thread - GE)

Outlet: thread joint (male thread - GA)

Materials: hose 1.4401, O-ring: FEP

GE	GA	L	Article-No.	Price (EUR)
G3/4	G3/4	500	90049993	▲
G 1	G 1	500	90049994	▲





FITTINGS

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FITTINGS

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Diaphragm pressure keeping valves	Counterpressure up to max. 10 bar	62x.D	466
Multi function valves	Counterpressure up to max. 10 bar	MFV	470
Diaphragm pulsation damper	Flow rate up to 4.000 l/h Counterpressure up to max. 10 bar	713.1	472
Diaphragm pulsation damper	Flow rate up to 600 l/h Counterpressure up to max. 10 bar	72x.1	474
Diaphragm pulsation damper	Flow rate up to 900 l/h Counterpressure up to max. 10 bar	810.1	478
Diaphragm pulsation damper	Flow rate up to 900 l/h Counterpressure up to max. 180 bar	810.1	480
Suction lances with level switch	Flow rate up to bis 35 l/h	SL-12.1	482
Suction lances with level switch	Flow rate up to bis 200 l/h	SL-02	484
Suction lances with level switch	Flow rate up to bis 700 l/h	SLP-15x.1	488
Suction lances without level switch	Flow rate up to bis 200 l/h	S-01	490
Dosing valves	Flow rate up to 1.500 l/h Counterpressure up to max. 10 bar	69x.1	492
Injection fittings	Flow rate up to 1.500 l/h Counterpressure up to max. 10 bar	806x.1	496
Vent valve	Flow rate up to 190 l/h Counterpressure up to max. 10 bar	8152	498
Foot valves	Flow rate up to 1.100 l/h Counterpressure up to max. 10 bar	73x	500
Foot valves	Flow rate up to 1.450 l/h Counterpressure up to max. 10 bar	78x.1	500
Multi function device	Flow rate up to 1.500 l/h Counterpressure up to max. 10 bar	MFD	502

DIAPHRAGM RELIEF VALVES



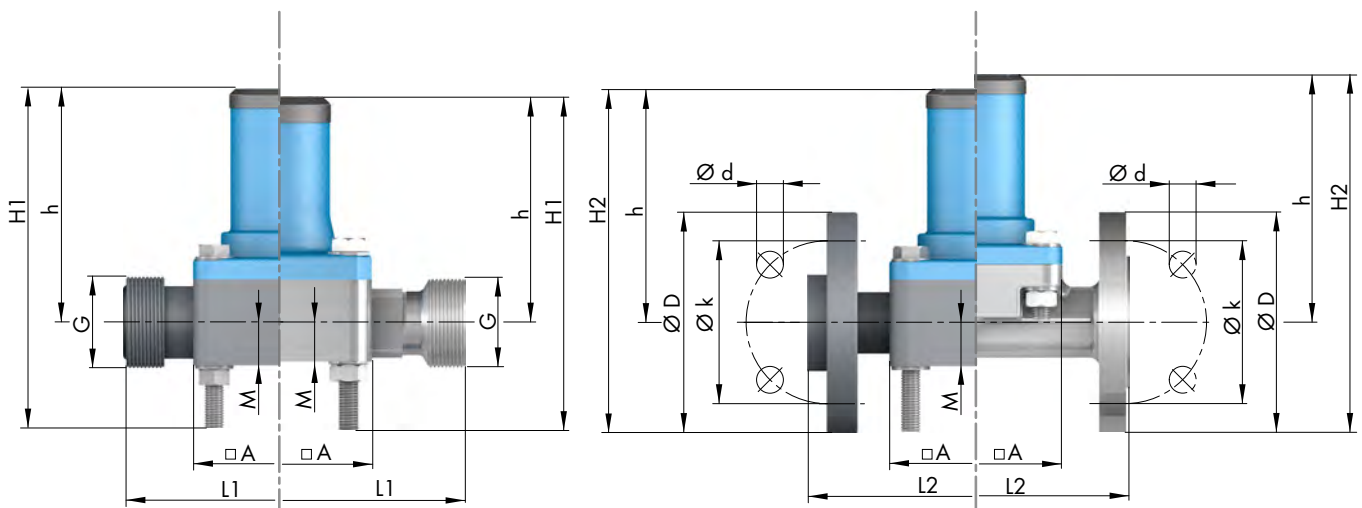
OVERVIEW

- Compact design
- Easy to mount
- Maintenance free
- Reliable
- Overpressure protection of dosing pumps
- High quality materials
- Low weight

TECHNICAL DATA

		620.10	622.10	623.10	624.10	625.10	626.10	627.10
Inlet/outlet nominal width	DN	8	15	20	25	32	40	50
Permissible operating pressure	bar	10	10	10	10	10	10	10
Set pressure p_e	bar	2,5...10	2,5...10	1,5...10	1,5...10	1,5...10	1,5...10	1,5...10
Max. flow rate	l/h	200	500	1000	2000	4000	7000	10000

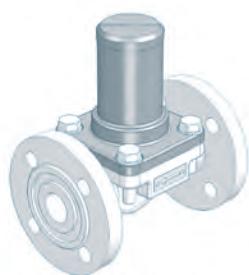
DIMENSIONS



		620.10	622.10	623.10	624.10	625.10	626.10	627.10
G	PVC-U, PP (-FRP), PVDF (-FRP)	G¾	G1	G1¼	G1½	G2	G2¼	G2½
	1.4581	G¾	G1	—	—	—	—	—
A	PVC-U, PP (-FRP), PVDF (-FRP), 1.4581	50	72	80	90	100	115	140
M	PVC-U, PP (-FRP), PVDF (-FRP)	13	15	28	22,5	24	30	38
	1.4581	13	16	—	—	—	—	—
L1	PVC-U, PP (-FRP), PVDF (-FRP)	80	115	130	160	180	235	260
	1.4581	110	145	—	—	—	—	—
L2	PVC-U, PP (-FRP), PVDF (-FRP)	110	145	160	175	200	235	260
	1.4581	—	—	150	160	180	200	230
h	PVC-U, PP (-FRP), PVDF (-FRP)	80	90	116	123	157	180	185
	1.4581	80	88	125	130	165	180	185
H1	PVC-U, PP (-FRP), PVDF (-FRP)	113	130	169	166,5	206	249	254
	1.4581	108	129	—	—	—	—	—
H2	PVC-U, PP (-FRP), PVDF (-FRP)	125	137,5	168,5	180,5	227	255	267,5
	1.4581	—	—	177,5	187,5	235	255	267,5
k	PVC-U, PP (-FRP), PVDF (-FRP), 1.4581	60	65	75	85	100	110	125
d	PVC-U, PP (-FRP), PVDF (-FRP), 1.4581	14	14	14	14	18	18	18
D	PVC-U, PP (-FRP), PVDF (-FRP), 1.4581	90	95	105	115	140	150	165

(Dimensions in mm)

BASIC DESIGNS



Diaphragm relief valve (with fixed flanges)

for overpressure protection

Properties

- Compact design
- Easy installation
- Maintenance-free
- High-quality materials

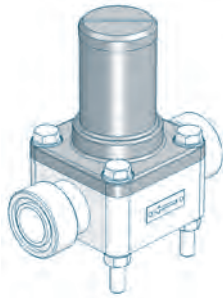
Basic design

- Flanges acc. to **DIN 2501**
- Valve body: **1.4581** or **GG**
- Diaphragm: **PTFE-faced**

Type	Nominal size	Connection	Valve body	Article-No.	Price (EUR)
623.10	DN20	DIN 2501	GG	37600038	▲
624.10	DN25	DIN 2501	GG	37600039	▲
625.10	DN32	DIN 2501	GG	Ⓢ	Ⓢ
626.10	DN40	DIN 2501	GG	Ⓢ	Ⓢ
627.10	DN50	DIN 2501	GG	Ⓢ	Ⓢ
623.10	DN20	DIN 2501	1.4581	36230104	▲
624.10	DN25	DIN 2501	1.4581	36240104	▲
625.10	DN32	DIN 2501	1.4581	Ⓢ	Ⓢ
626.10	DN40	DIN 2501	1.4581	Ⓢ	Ⓢ
627.10	DN50	DIN 2501	1.4581	Ⓢ	Ⓢ

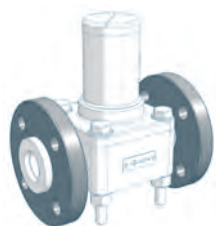
DIAPHRAGM RELIEF VALVES

BASIC DESIGNS



Type	Nominal size	Connection	Valve body	Seals	Article-No.	Price (EUR)
620.10	DN8	G 3/4	PVC-U	FPM	37603632	▲
620.10	DN8	G 3/4	PVC-U	EPDM	36200101	▲
620.10	DN8	G 3/4	PP	FPM	37603630	▲
620.10	DN8	G 3/4	PP	EPDM	37603629	▲
620.10	DN8	G 3/4	PVDF	FEP	37601792	▲
620.10	DN8	G 3/4	1.4581	FEP	37600670	▲
622.10	DN15	G 1	PVC-U	FPM	37604006	▲
622.10	DN15	G 1	PVC-U	EPDM	37603635	▲
622.10	DN15	G 1	PP	FPM	Ⓞ	Ⓞ
622.10	DN15	G 1	PP	EPDM	Ⓞ	Ⓞ
622.10	DN15	G 1	PP-GFK	FPM	37603634	▲
622.10	DN15	G 1	PP-GFK	EPDM	37600450	▲
622.10	DN15	G 1	PVDF	FEP	37600717	▲
622.10	DN15	G 1	PVDF-GFK	FEP	37601819	▲
622.10	DN15	G 1	1.4581	FEP	37600695	▲
623.10	DN20	G 1 1/4	PVC-U	FPM	37600009	▲
623.10	DN20	G 1 1/4	PVC-U	EPDM	36230101	▲
623.10	DN20	G 1 1/4	PP	FPM	37600016	▲
623.10	DN20	G 1 1/4	PP	EPDM	36230105	▲
623.10	DN20	G 1 1/4	PVDF	FEP	37606304	▲
624.10	DN25	G 1 1/2	PVC-U	FPM	37603639	▲
624.10	DN25	G 1 1/2	PVC-U	EPDM	37603638	▲
624.10	DN25	G 1 1/2	PP	FPM	37603637	▲
624.10	DN25	G 1 1/2	PP	EPDM	37603636	▲
624.10	DN25	G 1 1/2	PVDF	FEP	37603866	▲
625.10	DN32	G 2	PVC-U	Ⓞ	Ⓞ	Ⓞ
625.10	DN32	G 2	PP	Ⓞ	Ⓞ	Ⓞ
625.10	DN32	G 2	PVDF	Ⓞ	Ⓞ	Ⓞ
626.10	DN40	G 2 1/4	PVC-U	Ⓞ	Ⓞ	Ⓞ
626.10	DN40	G 2 1/4	PP	Ⓞ	Ⓞ	Ⓞ
626.10	DN40	G 2 1/4	PVDF	Ⓞ	Ⓞ	Ⓞ
627.10	DN50	G 2 3/4	PVC-U	Ⓞ	Ⓞ	Ⓞ
627.10	DN50	G 2 3/4	PP	Ⓞ	Ⓞ	Ⓞ
627.10	DN50	G 2 3/4	PVDF	Ⓞ	Ⓞ	Ⓞ

OPTIONS



Type	Design	Loose flange	Surcharge [EUR]
620.10	PVC	Loose flange made of PVC-U	①
620.10	PP-FRP/PVDF-FRP	Loose flange made of PP with steel inlay	×
620.10	PP	Loose flange made of PP with steel inlay	▲
620.10	PVDF	Loose flange made of PP with steel inlay	▲
Type	Design	Loose flange	Surcharge [EUR]
622.10	PVC	Loose flange made of PVC-U	▲
622.10	PP-FRP/PVDF-FRP	Loose flange made of PP with steel inlay	①
622.10	PP	Loose flange made of PP with steel inlay	▲
622.10	PVDF	Loose flange made of PP with steel inlay	▲
Type	Design	Loose flange	Surcharge [EUR]
623.10	PVC	Loose flange made of PVC-U	▲
623.10	PP-FRP/PVDF-FRP	Loose flange made of PP with steel inlay	×
623.10	PP	Loose flange made of PP with steel inlay	▲
623.10	PVDF	Loose flange made of PP with steel inlay	▲
Type	Design	Loose flange	Surcharge [EUR]
624.10	PVC	Loose flange made of PVC-U	▲
624.10	PP-FRP/PVDF-FRP	Loose flange made of PP with steel inlay	×
624.10	PP	Loose flange made of PP with steel inlay	▲
624.10	PVDF	Loose flange made of PP with steel inlay	▲
Type	Design	Loose flange	Surcharge [EUR]
625.10	PVC	Loose flange made of PVC-U	①
625.10	PP-FRP/PVDF-FRP	Loose flange made of PP with steel inlay	×
625.10	PP	Loose flange made of PP with steel inlay	①
625.10	PVDF	Loose flange made of PP with steel inlay	①
Type	Design	Loose flange	Surcharge [EUR]
626.10	PVC	Loose flange made of PVC-U	①
626.10	PP-FRP/PVDF-FRP	Loose flange made of PP with steel inlay	×
626.10	PP	Loose flange made of PP with steel inlay	①
626.10	PVDF	Loose flange made of PP with steel inlay	①
Type	Design	Loose flange	Surcharge [EUR]
627.10	PVC	Loose flange made of PVC-U	①
627.10	PP-FRP/PVDF-FRP	Loose flange made of PP with steel inlay	×
627.10	PP	Loose flange made of PP with steel inlay	①
627.10	PVDF	Loose flange made of PP with steel inlay	①

DIAPHRAGM PRESSURE KEEPING VALVES



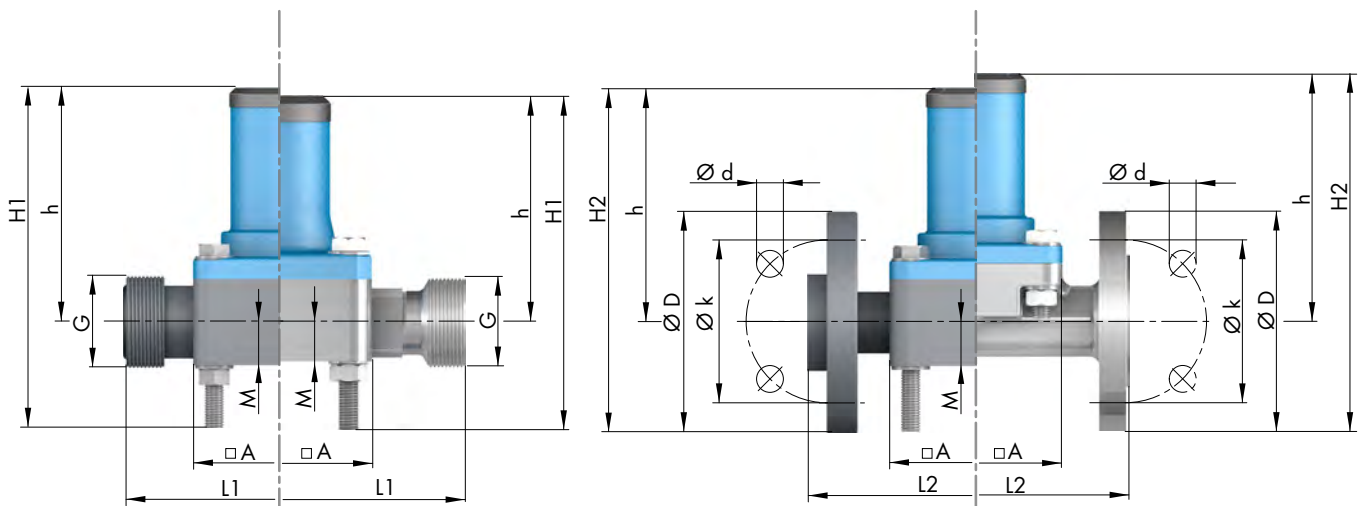
OVERVIEW

- Compact design
- Easy installation
- Maintenance free
- Reliable
- High quality materials
- Low weight
- Overpressure protection of dosing pumps

TECHNICAL DATA

		620.D	622.D	623.D	624.D	625.D	626.D	627.D
Inlet/outlet nominal width	DN	8	15	20	25	32	40	50
Permissible operating pressure	bar	10	10	10	10	10	10	10
Set pressure p_e	bar	1,5...2,0	1,0...2,0	1,0...3,5	1,0...3,0	1,0...7,0	1,0...7,0	1,0...7,0
Max. flow rate	l/h	200	500	1000	2000	4000	7000	10000

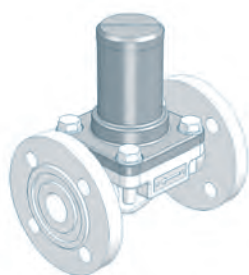
DIMENSIONS



		620.D	622.D	623.D	624.D	625.D	626.D	627.D
G	PVC-U, PP (-FRP), PVDF (-FRP)	G $\frac{3}{4}$	G1	G1 $\frac{1}{4}$	G1 $\frac{1}{2}$	G2	G2 $\frac{1}{4}$	G2 $\frac{1}{2}$
	1.4581	G $\frac{3}{4}$	G1	—	—	—	—	—
A	PVC-U, PP (-FRP), PVDF (-FRP), 1.4581	50	72	80	90	100	115	140
M	PVC-U, PP (-FRP), PVDF (-FRP)	13	15	28	22,5	24	30	38
	1.4581	13	16	—	—	—	—	—
L1	PVC-U, PP (-FRP), PVDF (-FRP)	80	115	130	160	180	235	260
	1.4581	110	145	—	—	—	—	—
L2	PVC-U, PP (-FRP), PVDF (-FRP)	110	145	160	175	200	235	260
	1.4581	—	—	150	160	180	200	230
h	PVC-U, PP (-FRP), PVDF (-FRP)	80	90	116	123	157	180	185
	1.4581	80	88	125	130	165	180	185
H1	PVC-U, PP (-FRP), PVDF (-FRP)	113	130	169	166,5	206	249	254
	1.4581	108	129	—	—	—	—	—
H2	PVC-U, PP (-FRP), PVDF (-FRP)	125	137,5	168,5	180,5	227	255	267,5
	1.4581	—	—	177,5	187,5	235	255	267,5
k	PVC-U, PP (-FRP), PVDF (-FRP), 1.4581	60	65	75	85	100	110	125
d	PVC-U, PP (-FRP), PVDF (-FRP), 1.4581	14	14	14	14	18	18	18
D	PVC-U, PP (-FRP), PVDF (-FRP), 1.4581	90	95	105	115	140	150	165

(Dimensions in mm)

BASIC DESIGNS



Diaphragm pressure keeping valve (with fixed flanges)

to prevent over-conveyance

Properties

- Compact design
- Easy installation
- Maintenance-free
- High-quality materials

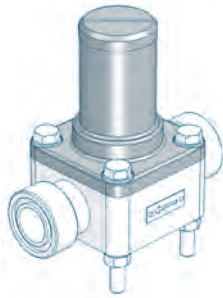
Basic design

- Flanges acc. to **DIN 2501**
- Valve body: **1.4581** or **GG**
- Diaphragm: **PTFE-faced**

Type	Nominal size	Connection	Valve body	Article-No.	Price (EUR)
623.D	DN20	DIN 2501	GG	37600080	▲
624.D	DN25	DIN 2501	GG	37600081	▲
625.D	DN32	DIN 2501	GG	Ⓢ	Ⓢ
626.D	DN40	DIN 2501	GG	Ⓢ	Ⓢ
627.D	DN50	DIN 2501	GG	Ⓢ	Ⓢ
623.D	DN20	DIN 2501	1.4581	36231104	▲
624.D	DN25	DIN 2501	1.4581	36241104	▲
625.D	DN32	DIN 2501	1.4581	Ⓢ	Ⓢ
626.D	DN40	DIN 2501	1.4581	Ⓢ	Ⓢ
627.D	DN50	DIN 2501	1.4581	Ⓢ	Ⓢ

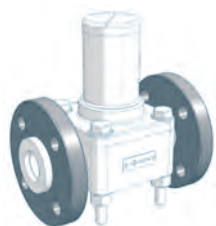
DIAPHRAGM PRESSURE KEEPING VALVES

BASIC DESIGNS



Type	Nominal size	Connection	Valve body	Seals	Article-No.	Price (EUR)
620.D	DN8	G 3/4	PVC-U	FPM	37600048	▲
620.D	DN8	G 3/4	PVC-U	EPDM	36201101	▲
620.D	DN8	G 3/4	PP	FPM	37600055	▲
620.D	DN8	G 3/4	PP	EPDM	36201105	▲
620.D	DN8	G 3/4	PVDF	FEP	37601827	▲
620.D	DN8	G 3/4	1.4581	FEP	37600525	▲
622.D	DN15	G 1	PVC-U	FPM	37600049	▲
622.D	DN15	G 1	PVC-U	EPDM	36221101	▲
622.D	DN15	G 1	PP	FPM	⌚	⌚
622.D	DN15	G 1	PP	EPDM	⌚	⌚
622.D	DN15	G 1	PP-GFK	FPM	37600056	▲
622.D	DN15	G 1	PP-GFK	EPDM	36221105	▲
622.D	DN15	G 1	PVDF	FEP	37602881	▲
622.D	DN15	G 1	PVDF-GFK	FEP	37601449	▲
622.D	DN15	G 1	1.4581	FEP	37600538	▲
623.D	DN20	G 1 1/4	PVC-U	FPM	37600050	▲
623.D	DN20	G 1 1/4	PVC-U	EPDM	36231101	▲
623.D	DN20	G 1 1/4	PP	FPM	37600057	▲
623.D	DN20	G 1 1/4	PP	EPDM	36231105	▲
623.D	DN20	G 1 1/4	PVDF	FEP	37606309	▲
624.D	DN25	G 1 1/2	PVC-U	FPM	37600051	▲
624.D	DN25	G 1 1/2	PVC-U	EPDM	36241101	▲
624.D	DN25	G 1 1/2	PP	FPM	37600058	▲
624.D	DN25	G 1 1/2	PP	EPDM	36241105	▲
624.D	DN25	G 1 1/2	PVDF	FEP	37606310	▲
625.D	DN32	G 2	PVC-U	⌚	⌚	⌚
625.D	DN32	G 2	PP	⌚	⌚	⌚
625.D	DN32	G 2	PVDF	⌚	⌚	⌚
626.D	DN40	G 2 1/4	PVC-U	⌚	⌚	⌚
626.D	DN40	G 2 1/4	PP	⌚	⌚	⌚
626.D	DN40	G 2 1/4	PVDF	⌚	⌚	⌚
627.D	DN50	G 2 3/4	PVC-U	⌚	⌚	⌚
627.D	DN50	G 2 3/4	PP	⌚	⌚	⌚
627.D	DN50	G 2 3/4	PVDF	⌚	⌚	⌚

OPTIONS



Type	Design	Loose flange	Surcharge [EUR]
620.D	PVC	Loose flange made of PVC-U	①
620.D	PP-FRP/PVDF-FRP	Loose flange made of PP with steel inlay	×
620.D	PP	Loose flange made of PP with steel inlay	▲
620.D	PVDF	Loose flange made of PP with steel inlay	▲
Type	Design	Loose flange	Surcharge [EUR]
622.D	PVC	Loose flange made of PVC-U	▲
622.D	PP-FRP/PVDF-FRP	Loose flange made of PP with steel inlay	①
622.D	PP	Loose flange made of PP with steel inlay	▲
622.D	PVDF	Loose flange made of PP with steel inlay	▲
Type	Design	Loose flange	Surcharge [EUR]
623.D	PVC	Loose flange made of PVC-U	▲
623.D	PP-FRP/PVDF-FRP	Loose flange made of PP with steel inlay	×
623.D	PP	Loose flange made of PP with steel inlay	▲
623.D	PVDF	Loose flange made of PP with steel inlay	▲
Type	Design	Loose flange	Surcharge [EUR]
624.D	PVC	Loose flange made of PVC-U	▲
624.D	PP-FRP/PVDF-FRP	Loose flange made of PP with steel inlay	×
624.D	PP	Loose flange made of PP with steel inlay	▲
624.D	PVDF	Loose flange made of PP with steel inlay	▲
Type	Design	Loose flange	Surcharge [EUR]
625.D	PVC	Loose flange made of PVC-U	①
625.D	PP-FRP/PVDF-FRP	Loose flange made of PP with steel inlay	×
625.D	PP	Loose flange made of PP with steel inlay	①
625.D	PVDF	Loose flange made of PP with steel inlay	①
Type	Design	Loose flange	Surcharge [EUR]
626.D	PVC	Loose flange made of PVC-U	①
626.D	PP-FRP/PVDF-FRP	Loose flange made of PP with steel inlay	×
626.D	PP	Loose flange made of PP with steel inlay	①
626.D	PVDF	Loose flange made of PP with steel inlay	①
Type	Design	Loose flange	Surcharge [EUR]
627.D	PVC	Loose flange made of PVC-U	①
627.D	PP-FRP/PVDF-FRP	Loose flange made of PP with steel inlay	×
627.D	PP	Loose flange made of PP with steel inlay	①
627.D	PVDF	Loose flange made of PP with steel inlay	①

MULTI-FUNCTION VALVES



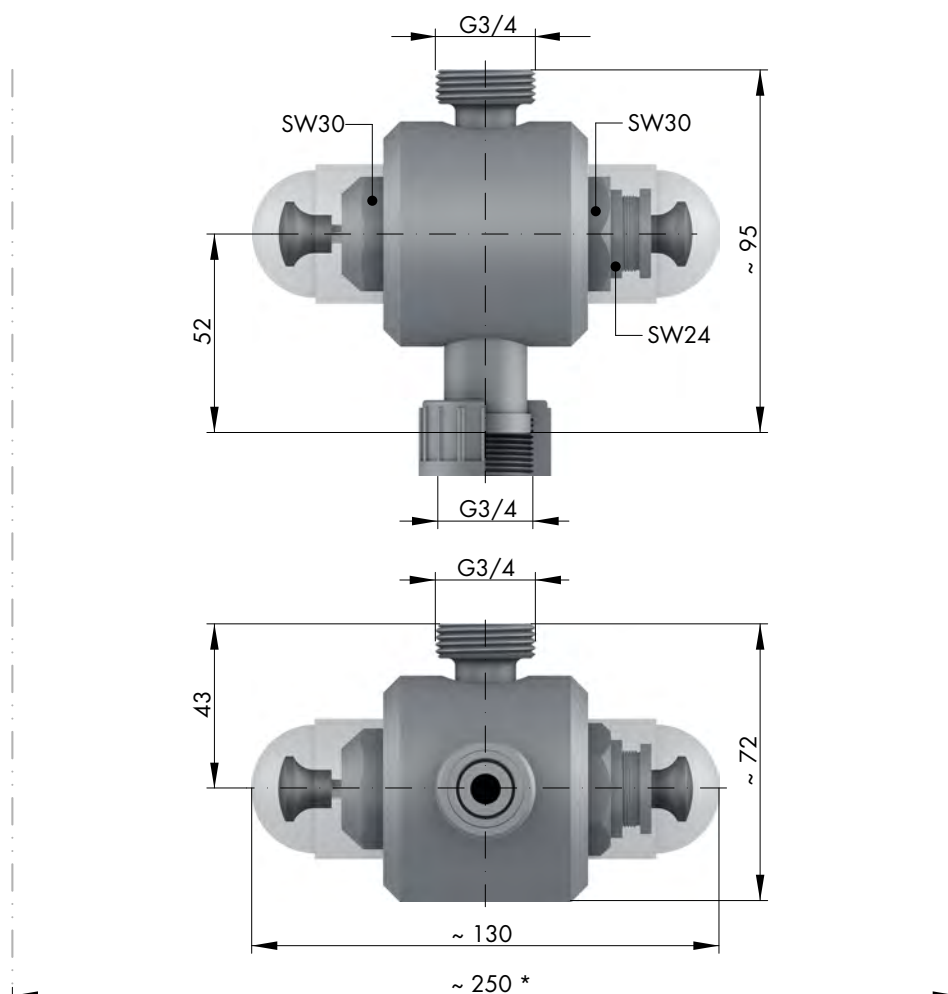
OVERVIEW

- Compact design
- Easy installation
- Maintenance free
- Overpressure protection for dosing pumps
- Prevention of overdose
- Venting
- High quality materials

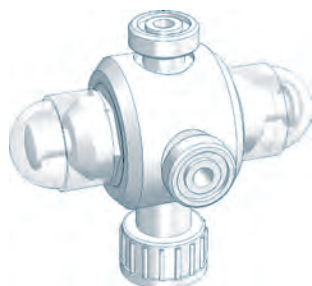
TECHNICAL DATA

MFV050		
Opening pressure	bar	4 - 10
Holding pressure	bar	1 - 1,5
Max. flow rate	l/h	50

DIMENSIONS



BASIC DESIGNS



Multi function valve

Properties

- Maximum operating pressure 10 bar
- Compact design
- Easy installation
- Maintenance-free
- Venting
- Overpressure protection for dosing pumps
- Prevention of over conveyance

Basic version

- Diaphragms: **PTFE-faced**
- Connection: **G^{3/4}**
- **Relief valve side**
Opening pressure: **2 up to 10 bar** (adjustable)
- **Pressure keeping valve side**
Holding pressure: **1,0 - 1,5 bar**

Type	Valve body	Seals	Article-No.	Price (EUR)
MFV 050	PVC-U	EPDM	37600973	▲
MFV 050	PVC-U	FPM	37600974	▲
MFV 050	PVC-U	FEP	37600975	▲
MFV 050	PP	EPDM	37600982	▲
MFV 050	PP	FPM	37600983	▲
MFV 050	PP	FEP	37600984	▲

DIAPHRAGM PULSATION DAMPER



OVERVIEW

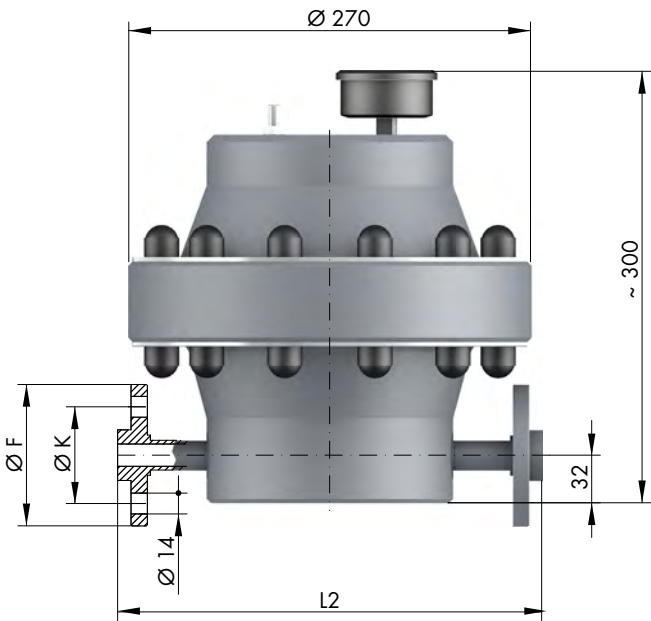
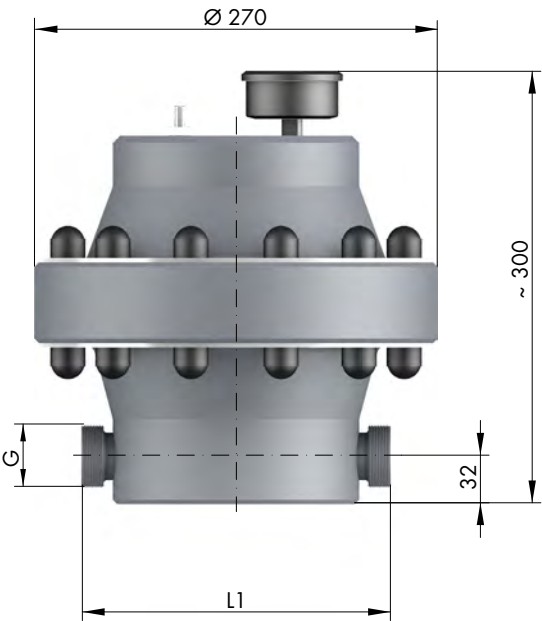
- User-friendly
- Low-maintanance
- Long service life
- Easy installation
- Design acc. to 2014/68/EU
- High quality materials

TECHNICAL DATA

				713.1		
Nominal width	DN		15	20	25	
Max. permissible operating pressure	bar		10	10	10	
Content	Litre		3	3	3	
Weight ²⁾						
Empty weight	PP	kg	6,5	6,5	6,5	
Empty weight	PVC-U	kg	9,0	9,0	9,0	
Empty weight	PVDF ¹⁾	kg	9,0	9,0	9,0	

¹⁾ Upper part made of PVC-U
²⁾ Standard design (threaded connector)

DIMENSIONS



Threaded connector		713.1		
DN	Nominal width	15	20	25
G	Connection thread	G1	G1¼	G1½
L1	PVC-U	213	207	235
L1	PP	263	215	243
L1	PVDF ²⁾	255	215	243
Loose-type flange connector acc. to DIN2501		713.1		
DN	Nominal width	15	20	25
F		95	105	115
K		65	75	85
L2	PVC-U	285	285	285
L2	PP	285	285	285

(Dimensions in mm) ²⁾ Upper part made of PVC-U

BASIC DESIGNS



Diaphragm pulsation damper (Plastic, with elastomere diaphragm, max. 10 bar)

Properties

- Any mounting position
- Easy installation
- Long service life
- Easy handling
- High-quality materials
- Low maintenance

Type	Connection	max. Pressure	Housing	Diaphragm Seals	Article-No.	Price (EUR)
713.1	G 1¼	10 bar	PVC-U	EPDM	30071038	▲
713.1	G 1¼	10 bar	PVC-U	FPM	30071039	▲
713.1	G 1¼	10 bar	PP	EPDM	30071040	▲
713.1	G 1¼	10 bar	PP	FPM	30071041	▲
713.1	G 1¼	10 bar	PVDF	EPDM	30071060	▲
713.1	G 1¼	10 bar	PVDF	FPM	30071061	▲

OPTIONS

Loose-type flanges

PVC-design	Loose flange, PVC-U	DN20	▲
PP-/PVDF-design	Loose flange, PP with steel insert	DN20	▲

ACCESSORIES

Bracket	PP	90010913	▲
for wall mounting	1.4301	90010914	▲
	Steel (color treated)	90010915	▲
Filling pump FLP 2	for filling device		
with manometer, max. 7 bar incl. 2m hose and coupling for air valve		90009396	▲



DIAPHRAGM PULSATION DAMPER



OVERVIEW

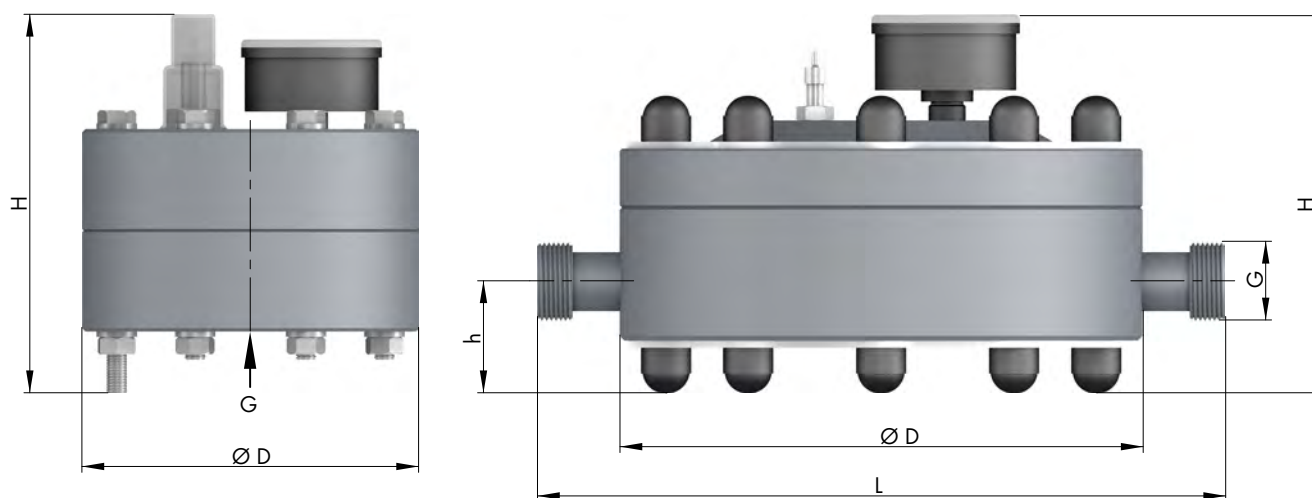
- User-friendly
- Low-maintenance
- Long service life
- Any mounting position
- Easy installation
- Design acc. to 2014/68/EU
- High quality materials

TECHNICAL DATA

			720.1	721.2	722.1	723.1
Nominal width	DN		5	10	15	20
Max. permissible operation pressure	bar		10	10	10	10
Content	Litre		0,025	0,14	0,32	0,86
Weight						
Empty weight	PP	kg	0,9	3,5	5,0	8,0
Empty weight	PVC-U	kg	0,9	4,5	6,5	11,5
Empty weight	PVDF ¹⁾	kg	1,0	5,0	7,0	13,0

¹⁾ Upper part made of PVC-U

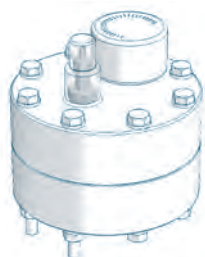
DIMENSIONS



	720.1	721.2	722.1	723.1
DN Nominal width	5	10	15	20
G Connection thread	G½	G¾	G1	G1¼
D	100	180	222	280
H	115	165	180	211
h	—	45	48	46
L	—	250	292	330

(Dimensions in mm)

BASIC DESIGNS



Diaphragm pulsation damper (Plastic, PTFE-diaphragm, max. 10 bar)

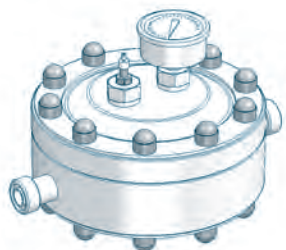
Properties

- Any mounting position
- Easy installation
- Long service life
- Easy handling
- High-quality materials
- Low maintenance

Type	Connection	max. Pressure	Material	Diaphragm	Article-No.	Price (EUR)
720.1	G ½	10 bar	PVC-U	PTFE	37601848	▲
720.1	G ½	10 bar	PP	PTFE	37601856	▲
720.1	G ½	10 bar	PVDF	PTFE	37601857	▲

DIAPHRAGM PULSATION DAMPER

BASIC DESIGNS



Diaphragm pulsation damper (Plastic, PTFE(-faced) diaphragm, max. 10 bar)

Properties

- Any mounting position
- Easy installation
- Long service life
- Easy handling
- High-quality materials
- Low maintenance
- Diaphragm: PTFE-faced

Type	Connection	max. Pressure	Material	Seals	Article-No.	Price (EUR)
721.2	G ¾	10 bar	PVC-U	EPDM	37602014	▲
721.2	G ¾	10 bar	PVC-U	FPM	37602013	▲
721.2	G ¾	10 bar	PP	EPDM	37603419	▲
721.2	G ¾	10 bar	PP	FPM	37602017	▲
721.2	G ¾	10 bar	PVDF	FEP	37604046	▲
722.1	G 1	10 bar	PVC-U	EPDM	37600647	▲
722.1	G 1	10 bar	PVC-U	FPM	30100008	▲
722.1	G 1	10 bar	PP	EPDM	37600676	▲
722.1	G 1	10 bar	PP	FPM	30100009	▲
722.1	G 1	10 bar	PVDF	FEP	37601852	▲
723.1	G 1¼	10 bar	PVC-U	EPDM	37601002	▲
723.1	G 1¼	10 bar	PVC-U	FPM	30100011	▲
723.1	G 1¼	10 bar	PP	EPDM	37603271	▲
723.1	G 1¼	10 bar	PP	FPM	30100012	▲
723.1	G 1¼	10 bar	PVDF	FEP	37600918	▲
724.1	G 1¼	10 bar	PVC-U	EPDM	Ⓢ	Ⓢ
724.1	G 1¼	10 bar	PVC-U	FPM	30100014	▲
724.1	G 1¼	10 bar	PP	EPDM	Ⓢ	Ⓢ
724.1	G 1¼	10 bar	PP	FPM	30100015	▲
724.1	G 1¼	10 bar	PVDF	FEP	30100016	▲

ACCESSORIES



720.1, 721.2, 722.1, 723.1

Filling pump FLP 2 for filling device

with manometer, max. 7 bar incl. 2m hose and coupling for air valve 90009396 ▲



720.1

Connection adapter

Thread connection G3/4 male

PVC-U EPDM 90021733 ▲

Connction to pulsation damper G1/2 male

PVC-U FPM 90025079 ▲

PP EPDM 90038083 ▲

PP FPM 90038082 ▲

PVDF FEP ⓘ ⓘ



720.1

Retaining clamp

(2 Piece each pulsation damper) PP d 16 90010649 ▲



721.2, 722.1

Retaining clamp

(2 Piece each pulsation damper) PP d 25 90010651 ▲

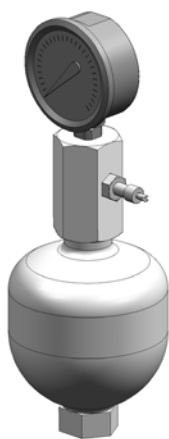


723.1

Bracket

● basic version ○ avail for wall mounting PP 90011722 ▲

DIAPHRAGM PULSATION DAMPER



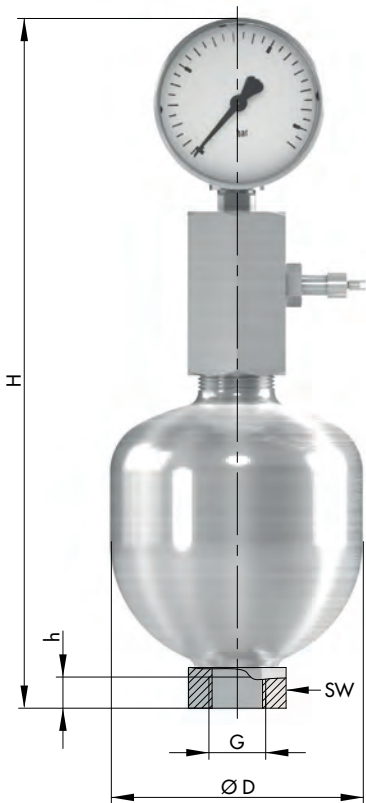
OVERVIEW

- Compact design
- User-friendly
- Low-maintanance
- Long service life
- Easy installation
- Design acc. to 2014/68/EU
- High quality materials

TECHNICAL DATA

Type	max. permissible operating pressure bar	Content litre
810.1-0,16/10	10	0,16
810.1-0,32/10	10	0,32
810.1-0,75/10	10	0,75
810.1-2,0/10	10	2,00

DIMENSIONS



	G	SW	D	h	H	kg
810.1-0,16/10	G1/2	30	74	14	244	0,8
810.1-0,32/10	G1/2	30	93	14	257	1,3
810.1-0,75/10	G1/2	41	212	14	288	2,8
810.1-2,0/10	G3/4	46	160	18	338	4,0

BASIC DESIGNS



Diaphragm pulsation damper (Stainless steel, max. 10 bar)

Properties

- Any mounting position
- Easy installation
- Long service life
- Easy handling
- High-quality materials
- Low maintenance

Type	Connection	max.Pressure	Material	Diaphragm	Article-No.	Price (EUR)
810.1-0,16/10	G ½	10 bar	1.4571	Butyl	37603720	▲
810.1-0,16/10	G ½	10 bar	1.4571	FPM	37603724	▲
810.1-0,16/10	G ½	10 bar	1.4571	PTFE	×	×
810.1-0,32/10	G ½	10 bar	1.4571	Butyl	37603721	▲
810.1-0,32/10	G ½	10 bar	1.4571	FPM	37603725	▲
810.1-0,32/10	G ½	10 bar	1.4571	PTFE	×	×
810.1-0,75/10	G ½	10 bar	1.4571	Butyl	37603722	▲
810.1-0,75/10	G ½	10 bar	1.4571	FPM	37603726	▲
810.1-0,75/10	G ½	10 bar	1.4571	PTFE	37606307	▲
810.1-2,0/10	G ¾	10 bar	1.4571	Butyl	37603723	▲
810.1-2,0/10	G ¾	10 bar	1.4571	FPM	37603727	▲
810.1-2,0/10	G ¾	10 bar	1.4571	PTFE	37606308	▲

ACCESSORIES

Filling- and pressure measuring device

(mounted on pulsation damper)



Design: Plastic	Manometer: 0-16 bar Measuring system: copper alloyed	●
Design: Stainless steel	Manometer: 0-16 bar, glycerine-damped Measuring system: copper alloyed Housing: 1.4301	▲
Filling pump FLP 2 for filling device		
with manometer, max. 7 bar incl. 2m hose and coupling for air valve		90009396 ▲



DIAPHRAGM PULSATION DAMPER



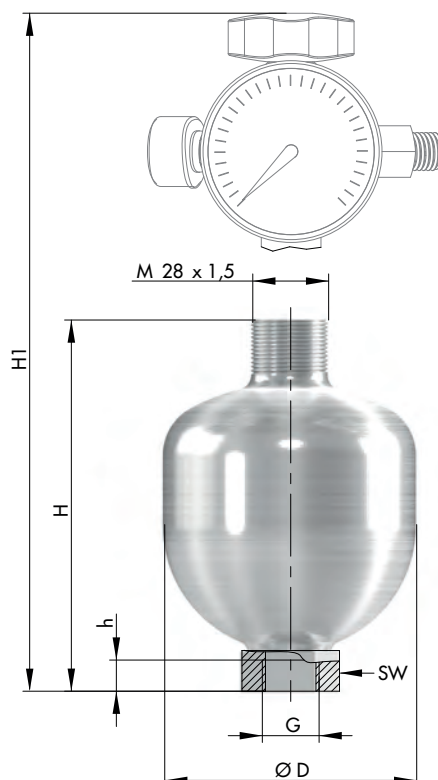
OVERVIEW

- Compact design
- User-friendly
- Low-maintenance
- Long service life
- Easy installation
- Design acc. to 2014/68/EU
- High quality materials

TECHNICAL DATA

Type	max. permissible operating pressure bar	Content litre
810.1-0,16/180	180	0,16
810.1-0,32/160	160	0,32
810.1-0,75/140	140	0,75
810.1-2,0/100	100	2,00

DIMENSIONS



	G	SW	D	h	H	H1	kg
810.1-0,16/180	G1/2	30	74	14	124	225	0,8
810.1-0,32/160	G1/2	30	93	14	137	238	1,3
810.1-0,75/140	G1/2	41	212	14	168	268	2,8
810.1-2,0/100	G3/4	46	160	18	218	319	4,0

BASIC DESIGNS



Diaphragm pulsation damper (Stainless steel, max. 100-180 bar)

Properties

- Any mounting position
- Easy installation
- Long service life
- Easy handling
- High-quality materials
- Low maintenance

Type	Connection	max.Pressure	Material	Diaphragm	Article-No.	Price (EUR)
810.1-0,16/180	G ½	180 bar	1.4571	Butyl	90008811	▲
810.1-0,16/180	G ½	180 bar	1.4571	FPM	90009498	▲
810.1-0,16/180	G ½	180 bar	1.4571	PTFE	×	×
810.1-0,32/160	G ½	160 bar	1.4571	Butyl	90010409	▲
810.1-0,32/160	G ½	160 bar	1.4571	FPM	90010983	▲
810.1-0,32/160	G ½	160 bar	1.4571	PTFE	×	×
810.1-0,75/140	G ½	140 bar	1.4571	Butyl	37600313	▲
810.1-0,75/140	G ½	140 bar	1.4571	FPM	37600148	▲
810.1-0,75/140	G ½	140 bar	1.4571	PTFE	37606302	▲
810.1-2,0/100	G ¾	100 bar	1.4571	Butyl	37600314	▲
810.1-2,0/100	G ¾	100 bar	1.4571	FPM	37600149	▲
810.1-2,0/100	G ¾	100 bar	1.4571	PTFE	37606303	▲

ACCESSORIES



Filling- and pressure measuring device

Design: removeable
 Manometer d63, plastic housing, measuring system: copper alloyed
 incl. 2,5m filling hose, connection M14x1,5

0 - 25 bar	37601674	▲
0 - 100 bar	37601673	▲
0 - 250 bar	30066005	▲

SUCTION LANCES



OVERVIEW

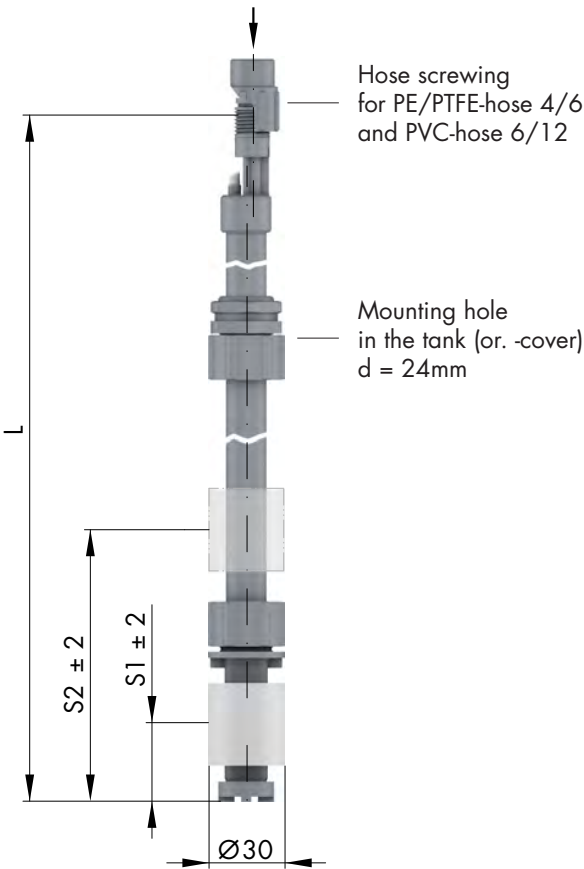
- Compact design
- Safe
- Height adjustable
- 2-stage level monitoring
- 3- or 8-pole connection
- Flexible connection possibilities
- Maintenance free
- Easy handling
- High quality materials

TECHNICAL DATA

Type	Switching voltage	Switching current	Switching capacity		max. flow rate	max. viscosity of the conveyed medium	min density of the conveyed medium
	V	A	W	VA	l/h	mPas	kg/dm³
SL-12.1	50	0,5	10	10	35*	50	1

*) max. flow rates:
 up to 14 l/h with hose screwing 4/6
 up to 35 l/h with hose screwing 6/12

DIMENSIONS



	L	S1	S2
SL-12.1	600	33	104
SL-12.1	1.000	33	104
SL-12.1	1.200	33	104

BASIC DESIGNS



Suction lance SL-12.1 (with level switch, 2-stage with plug, 3-pole)

Properties

- Compact design
- Height-adjustable
- 2-stage level monitoring
- Flexible connection
- Easy handling
- High-quality materials
- Maintenance-free
- incl. hose connections
4/6, 6/8, 6/12

Basic version

- Suction lance: **PVC-U**
- Foot valve: **PVC-U**
- Valve ball: **PTFE**
- Hose (inboard): **PE**
- Level switch: **PP**
2-stage, normally closed (NC)
5m cable (from foot valve) with plug, M12, 3-pole
- max. flow rate: **14 l/h** (4/6) ... **35 l/h** (6/12)

Type	Length	Seals	Article-No.	Price (EUR)
C409.2-...e				
SL-12.1	600 mm	PTFE	37606120	▲
SL-12.1	1.000 mm	PTFE	37606117	▲
SL-12.1	1.200 mm	PTFE	37606118	▲



Suction lance SL-12.1 (with level switch, 2-stage with plug, 8-pole)

Properties

- Compact design
- Height-adjustable
- 2-stage level monitoring
- Flexible connection
- Easy handling
- High-quality materials
- Maintenance-free
- incl. hose connection
4/6, 6/8, 6/12

Basic version

- Suction lance: **PVC-U**
- Foot valve: **PVC-U**
- Valve ball: **PTFE**
- Hose (inboard): **PE**
- Level switch: **PP**
2-stage, normally closed (NC)
5m cable (from foot valve) with plug, M12, 8-pole
- max. flow rate: **14 l/h** (4/6) ... **35 l/h** (6/12)

Type	Length	Seals	Article-No.	Price (EUR)
iSTEP, C409.2-... Pro+				
SL-12.1	600 mm	PTFE	37606194	▲
SL-12.1	1.000 mm	PTFE	37606495	▲
SL-12.1	1.200 mm	PTFE	37606195	▲

SUCTION LANCES



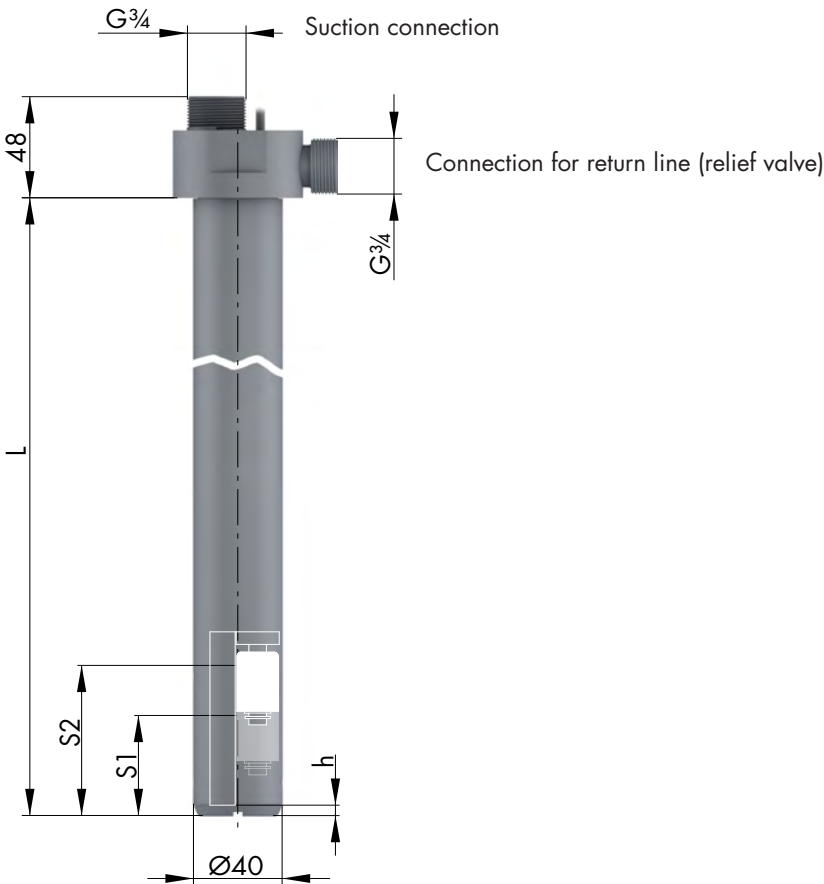
OVERVIEW

- Compact, robust design
- Protective tube
- Safe
- 1-stage level monitoring
- 3- or 8-pole connection
- Flexible connection possibilities
- Maintenance free
- Easy handling
- High quality materials

TECHNICAL DATA

Typ	Switching voltage	Switching current	Switching capacity		max. flow rate	max. pump stroke volume	max. iscosity of the conveyed medium	min. density of the conveyed medium
	V	A	W	VA	l/h	cm³	mPas	kg/dm³
SL-02	max. 48	0,5	10	12	200	20	100	1

DIMENSIONS



	G	L	1-stage			2-stage		
			S1	S2	h	S1	S2	h
SL-02	G 3/4	630	50	–	8	72	48	5
SL-02	G 3/4	1.000	50	–	8	72	48	5
SL-02	G 3/4	1.200	50	–	8	72	48	5

BASIC DESIGNS



Suction lance SL-02 (with level switch, 1- or 2-stage with plug, 3-pole)

Properties

- Compact, robust design
- Safe
- Easy handling
- 1-stage level switch
- Flexible connection
- High-quality materials
- Maintenance-free

Basic version

- Suction lance: **PVC-U**
- Foot valve: **PVDF-GFK**
- Valve ball: **PTFE**
- Suction basket: **PP**
- Level switch: **PP**
1- or 2-stage, normally closed (NC)
5m cable (from foot valve) with plug, M12, 3-pole
- max. flow rate: **200 l/h**

Type	Level switch	Length	Connection	Seals	Article-No.	Price (EUR)
SL-02	1-stage	630 mm	G ¾	EPDM	37606372	▲
SL-02	1-stage	1.000 mm	G ¾	EPDM	37606567	▲
SL-02	1-stage	1.200 mm	G ¾	EPDM	37606568	▲
SL-02	1-stage	630 mm	G ¾	FPM	37606566	▲
SL-02	1-stage	1.000 mm	G ¾	FPM	37606078	▲
SL-02	1-stage	1.200 mm	G ¾	FPM	37606569	▲
SL-02	2-stage	630 mm	G ¾	EPDM	37606570	▲
SL-02	2-stage	1.000 mm	G ¾	EPDM	37606572	▲
SL-02	2-stage	1.200 mm	G ¾	EPDM	37606573	▲
SL-02	2-stage	630 mm	G ¾	FPM	37606571	▲
SL-02	2-stage	1.000 mm	G ¾	FPM	37606577	▲
SL-02	2-stage	1.200 mm	G ¾	FPM	37606574	▲

ACCESSORIES



Drum connection adapter

Connection	Material	Seal	Article-No.	Price (EUR)
for external thread G=S65x5 DIN2781	PP	EPDM	90011763	▲
	PP	FPM	90011762	▲
for internal thread (set) G=2 fine thread steel drum DIN-ISO 228-1	PP	EPDM	90046044	▲
G=v. Leer/tri-sure BCS 56x4 EN12708	PP	FPM	90046043	▲
for external thread G= DIN51	PP	EPDM	90011767	▲
	PP	FPM	90011766	▲
for wall duct G=2 Wall thickness S=max. 6mm	PP/PVC	EPDM	90011773	▲
	PP/PVC	FPM	90011772	▲
other adapters			🔗	🔗

SUCTION LANCES

BASIC DESIGNS



Suction lance SL-02 (with level switch, 1- or 2-stage with plug, 8-pole)

Properties

- Compact, robust design
- Safe
- Easy handling
- 1-stage level switch
- Flexible connection
- High-quality materials
- Maintenance-free

Basic version

- Suction lance: **PVC-U**
- Foot valve: **PVDF-GFK**
- Valve ball: **PTFE**
- Suction basket: **PP**
- Level switch: **PP**
1- or 2-stage
5m cable (from foot valve) with plug, M12, 8-pole
- max. flow rate: **200 l/h**

Type	Level switch	Length	Connection	Seals	Article-No.	Price (EUR)
SL-02	1-stage	630 mm	G ¾	EPDM	37606579	▲
SL-02	1-stage	1.000 mm	G ¾	EPDM	37606581	▲
SL-02	1-stage	1.200 mm	G ¾	EPDM	37606583	▲
SL-02	1-stage	630 mm	G ¾	FPM	37606580	▲
SL-02	1-stage	1.000 mm	G ¾	FPM	37606582	▲
SL-02	1-stage	1.200 mm	G ¾	FPM	37606584	▲
SL-02	2-stage	630 mm	G ¾	EPDM	37606585	▲
SL-02	2-stage	1.000 mm	G ¾	EPDM	37606587	▲
SL-02	2-stage	1.200 mm	G ¾	EPDM	37606589	▲
SL-02	2-stage	630 mm	G ¾	FPM	37606586	▲
SL-02	2-stage	1.000 mm	G ¾	FPM	37606588	▲
SL-02	2-stage	1.200 mm	G ¾	FPM	37605974	▲

ACCESSORIES



Drum connection adapter

Connection	Material	Seal	Article-No.	Price (EUR)
for external thread G=S65x5 DIN2781	PP	EPDM	90011763	▲
	PP	FPM	90011762	▲
for internal thread (set) G=2 fine thread steel drum DIN-ISO 228-1	PP	EPDM	90046044	▲
G=v. Leer/tri-sure BCS 56x4 EN12708	PP	FPM	90046043	▲
for external thread G= DIN51	PP	EPDM	90011767	▲
	PP	FPM	90011766	▲
for wall duct G=2 Wall thickness S=max. 6mm	PP/PVC	EPDM	90011773	▲
	PP/PVC	FPM	90011772	▲
other adapters			📞	📞

with level monitoring
Flow rates up to 200 l/h

SL-02

SUCTION LANCES



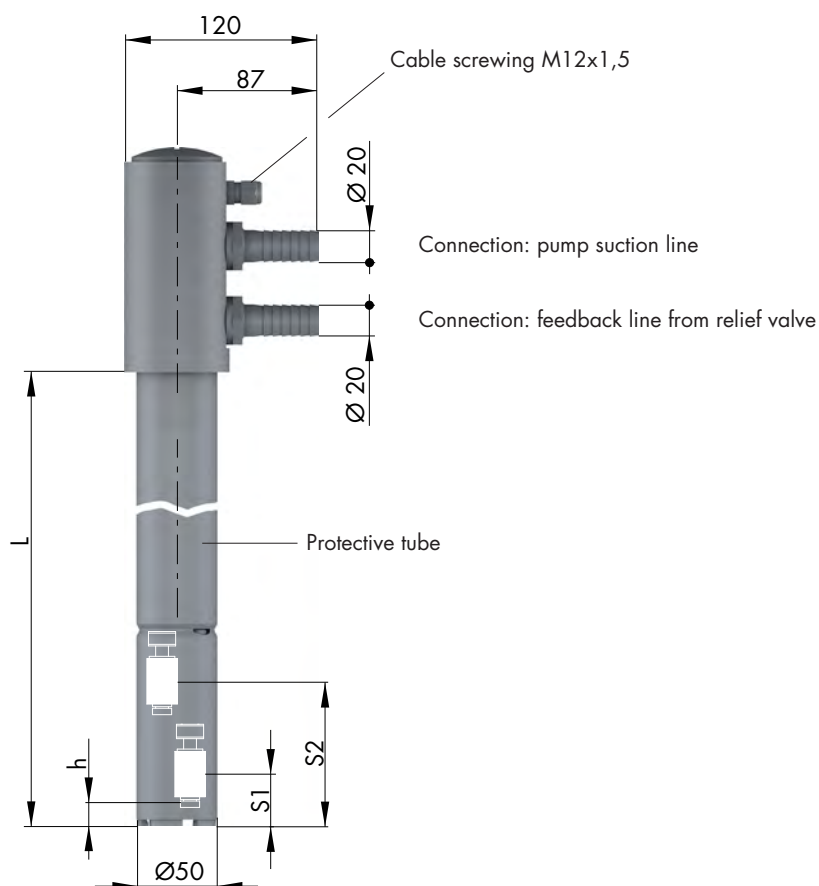
OVERVIEW

Compact, robust design
Easy handling
Maintenance free
Protective tube
Safe
High quality materials
SLP-151.1 1-stage level monitoring
SLP-152.1 2-stage level monitoring
Protection class IP65

TECHNICAL DATA

Type	Nominal size DN	Switching voltage V	Switching capacity		max. flow rate l/h	max. pump stroke volume cm ³	max. viscosity of the conveyed medium mPas	min. density of the conveyed medium kg/dm ³
SLP-151.1/152.1	15	48	10	12	700	100	100	1

DIMENSIONS



	DN	L	S1	S2	h
SLP-151.1	15	750 / 1.000 / 1.250	55	—	15
SLP-152.1	15	750 / 1.000 / 1.250	55	113	15

BASIC DESIGNS



Suction lance SLP-15x.1 (with level switch, 1- or 2-stage)

Properties

- Compact, robust design
- Easy handling
- 1- or 2-stage level monitoring
- Protective tube
- Maintenance free
- High quality materials
- Protection class IP65

Basic version

- Suction lance: **PVC-U**
- Foot valve: **PVC-U**
- Valve ball: **PTFE**
- Seals: **EPDM** or **FPM**
- Level switch: **PP**
1- or 2-stage, normally closed (NC)
cable gland: **M12x1,5**
- max. flow rate: **700 l/h**

Type	Level switch	Length	Material	Seals	Article-No.	Price (EUR)
SLP-151.1	1-stage	750 mm	PVC-U	EPDM	37604108	▲
SLP-151.1	1-stage	750 mm	PVC-U	FPM	37604114	▲
SLP-151.1	1-stage	1.000 mm	PVC-U	EPDM	37604109	▲
SLP-151.1	1-stage	1.000 mm	PVC-U	FPM	37604115	▲
SLP-151.1	1-stage	1.250 mm	PVC-U	EPDM	37604110	▲
SLP-151.1	1-stage	1.250 mm	PVC-U	FPM	37604116	▲
SLP-152.1	2-stage	750 mm	PVC-U	EPDM	37604111	▲
SLP-152.1	2-stage	750 mm	PVC-U	FPM	37604117	▲
SLP-152.1	2-stage	1.000 mm	PVC-U	EPDM	37604112	▲
SLP-152.1	2-stage	1.000 mm	PVC-U	FPM	37604118	▲
SLP-152.1	2-stage	1.250 mm	PVC-U	EPDM	37604113	▲
SLP-152.1	2-stage	1.250 mm	PVC-U	FPM	37604119	▲

Type	Designation	Article-No.	Price (EUR)
BCS 70x6 Di=50	Container screw connection for internal thread. Ventilation via tolerance of the inner diameter of the adapter or via separate ventilation of the container.	90028923	▲
G2 IBC	For IBC cover with G2 internal thread. Ventilation via adapter. Gas-tight design with „hose set“ possible.	90044282	▲
G2 universal	Bulkhead fitting with flat gasket (made of PVC-U). Ventilation via adapter. Gas-tight design with „hose set“ possible.	90044277	▲
Hose set	G3/4, d12, L=3m for gas tight container screwing for connection to On-site evacuation system	90044369	▲
Quiver	Quiver for storing/holding the suction lance (e.g. when changing containers)	90028919	▲
Control cable	Control cable for level input Cable socket M12x1, 3-pole, 5m length, loosely delivered	90031245	▲
Control cable	Control cable for level input Cable plug M12x1, 8-pole, 5m length, loosely delivered	90042494	▲



SUCTION LANCES



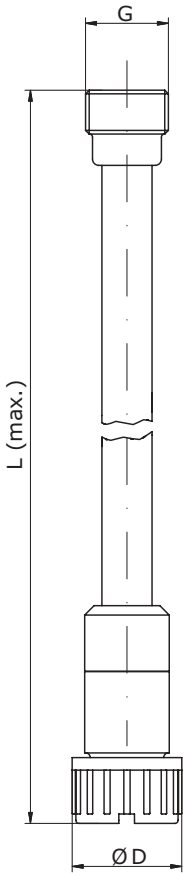
OVERVIEW

- Compact, robust design
- Easy handling
- Maintanance free
- High quality materials

TECHNICAL DATA

Type	max. flow rate l/h	max. pump stroke volume cm³	max. iscosity of the conveyed medium mPas	min. density of the conveyed medium kg/dm³
S-01	200	20	100	1

DIMENSIONS



	DN	G	D	max. L
S-01	15	G 3/4	38	1.500

BASIC DESIGNS



Suction lance S-01 (without level switch)

Properties

- Compact, robust design
- Maintenance-free
- Easy handling
- High-quality materials
- individual special lengths
up to max. 1.500mm possible

Basic version

- Suction lance: **PVC-U**
- Foot valve: **PVC-U**
- Seals: **EPDM** or **FPM**
- Valve ball: **PTFE**
- max. flow rate: **200 l/h**
- Standard length: **650mm, 1.000mm und 1.250mm**

Type	Length	Connection	Seals	Article-No.	Price (EUR)
S-01	650 mm	G 3/4	EPDM	37606591	▲
S-01	1.000 mm	G 3/4	EPDM	37606592	▲
S-01	1.250 mm	G 3/4	EPDM	37606593	▲
S-01	max. 1.500 mm	G 3/4	EPDM	37600705	▲
S-01	650 mm	G 3/4	FPM	37606594	▲
S-01	1.000 mm	G 3/4	FPM	37606595	▲
S-01	1.250 mm	G 3/4	FPM	37606596	▲
S-01	max. 1.500 mm	G 3/4	FPM	37600817	▲

DOSING VALVES



OVERVIEW

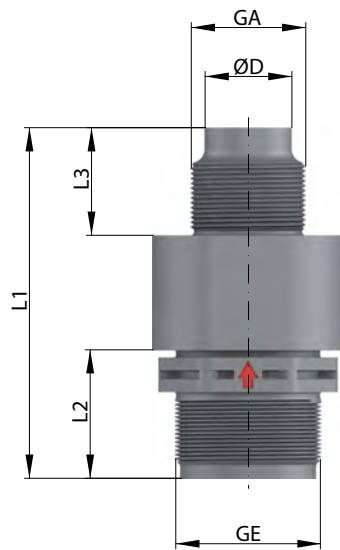
- Compact design
- Easy handling
- Maintenance free
- Mounting in any position
- High quality materials

TECHNICAL DATA

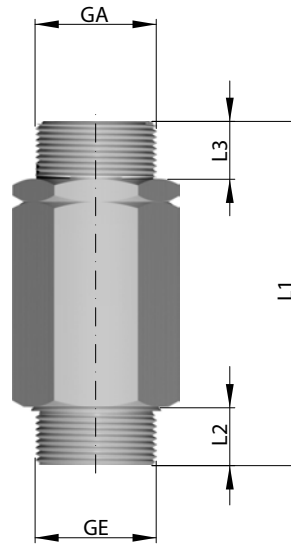
			691.1	691.2	692.1	693.1
Nominal width	DN		8	8	15	20
Max. permissible operating pressure*	bar	PVC-U, PP-, PVDF-FRP	10	10	–	10
		1.4571	63	–	40	25
Opening pressure	bar	PVC-U, PP-, PVDF-FRP	0,5	0,5	–	0,5
		1.4571	1,0	–	1,0	1,0
Max. flow rate	l/h		200	200	600	1100
Max. pump stroke volume	cm ³		20	20	100	190

*at 20°C (water)

DIMENSIONS



PVC/PP/PVDF



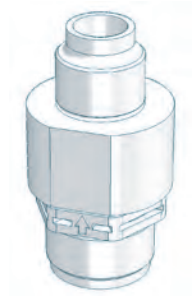
1.4571

		691.1	691.2	692.1	693.1
GE	PVC-U, PP-FRP, PVDF-FRP	G $\frac{3}{4}$	G $\frac{3}{4}$	—	G1 $\frac{1}{4}$
	1.4571	G $\frac{3}{4}$	—	G1	G1 $\frac{1}{4}$
GA	PVC-U, PP-FRP, PVDF-FRP	R $\frac{1}{2}$	R $\frac{1}{2}$	—	R1 $\frac{1}{4}$
	1.4571	R $\frac{1}{2}$	—	R1	R1 $\frac{1}{4}$
D	PVC-U, PP-FRP, PVDF-FRP	16	12	—	25
L1	PVC-U, PP-FRP, PVDF-FRP	71	116,1	—	101
	1.4571	60	—	104	119
L2	PVC-U, PP-FRP, PVDF-FRP	18	17	—	25
	1.4571	13	—	17	20
L3	PVC-U, PP-FRP, PVDF-FRP	24	69	—	31
	1.4571	13	—	17	20

(Dimensions in mm)

DOSING VALVES

BASIC DESIGNS



Dosing valve (Plastic)

Properties

- Compact design
- Any mounting position
- Maintenance-free
- High-quality materials

Basic version

- Valve ball: **PTFE**
- Spring: **Hastelloy C4**

Type	DN	Inlet	Outlet	Material	Seal	Article-No.	Price (EUR)
691.1	8	G 3/4	R 1/2	PVDF/-GFK	FEP	30072015	▲
693.1	20	G 1 1/4	R 1 1/4	PP-GFK	EPDM	37604661	▲
693.1	20	G 1 1/4	R 1 1/4	PP-GFK	FPM	37603317	▲
693.1	20	G 1 1/4	R 1 1/4	PVDF-GFK	FEP	30072027	▲



Dosing valve (Stainless steel)

Properties

- Compact design
- Any mounting position
- Maintenance-free
- High-quality materials

Basic version

- Valve ball: **1.4401**
- Seals: **FEP-covered**
- Spring: **Hastelloy C4**

Type	DN	Inlet	Outlet	Material	Seal	Article-No.	Price (EUR)
691.1	8	G 3/4	R 1/2	1.4571	FEP	37600493	▲
692.1	15	G 1	R 1	1.4571	FEP	37600669	▲
693.1	20	G 1 1/4	R 1 1/4	1.4571	FEP	37600789	▲



Dosing valve (Plastic)

Properties

- Compact design
- Any mounting position
- Maintenance-free
- High-quality materials

Basic version

- integrated injection lance
- Valve ball: **PTFE**
- Seals: **EPDM** or **FPM**
- Spring: **Hastelloy C4**

Type	DN	Inlet	Outlet	Material	Seal	Article-No.	Price (EUR)
691.2	8	G 3/4	R 1/2	PVC-U	EPDM	37606318	▲
691.2	8	G 3/4	R 1/2	PVC-U	FPM	37605769	▲
691.2	8	G 3/4	R 1/2	PP-GFK	EPDM	37605768	▲
691.2	8	G 3/4	R 1/2	PP-GFK	FPM	37606317	▲

Check valves/Injection fittings
Flow rates up to 1.500 l/h

691.1- 693.1, 691.2

INJECTION FITTING



OVERVIEW

Injection lance for better mixing

Easy installation

Maintanance free

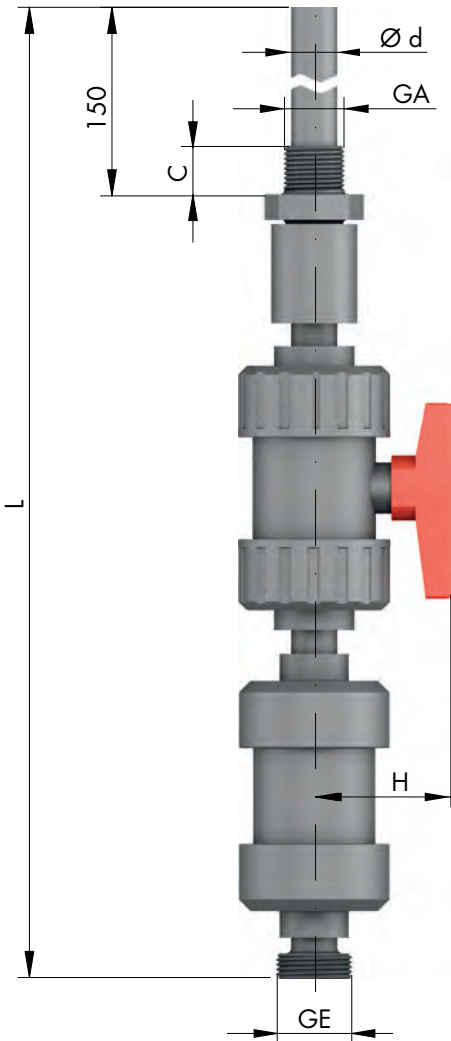
Mounting in any position

High quality materials

TECHNICAL DATA

		8061.1	8062.1	8063.1
Nominal width	DN	10	15	20
Opening pressure	bar	0,05	0,05	0,05
Max. permissible operating pressure	bar	10	10	10

DIMENSIONS



DIMENSIONS

		8061.1	8062.1	8063.1
GE	PVC-U, PP, PVDF	G $\frac{3}{4}$	G1	G1 $\frac{1}{4}$
GA	PVC-U, PP, PVDF	R $\frac{1}{2}$	R $\frac{3}{4}$	R1
d	PVC-U, PP, PVDF	16	20	25
C	PVC-U, PP, PVDF	17	19	22
H	PVC-U, PP, PVDF	72	72	77
L	PVC-U	390	409	447
	PP	427	439	481
	PVDF	438	446	483

(Dimensions in mm)

BASIC DESIGNS



Injection fitting

Properties

- incl. injection lance for better mixing
- Easy installation
- Any mounting position
- Maintenance-free
- High-quality materials

Basic version

- Cone-type check valve (spring loaded)
- Shut-off ball valve
- Injection lance (L=150mm)
- max. operating pressure: 10 bar

Type	DN	Inlet	Outlet	Material	Seals	Article-No.	Price (EUR)
8061.1	10	G $\frac{3}{4}$	R $\frac{1}{2}$	PVC-U	EPDM	37602105	▲
8061.1	10	G $\frac{3}{4}$	R $\frac{1}{2}$	PVC-U	FPM	37602106	▲
8061.1	10	G $\frac{3}{4}$	R $\frac{1}{2}$	PP	EPDM	37602107	▲
8061.1	10	G $\frac{3}{4}$	R $\frac{1}{2}$	PP	FPM	37602108	▲
8061.1	10	G $\frac{3}{4}$	R $\frac{1}{2}$	PVDF	FPM	37602109	▲
8062.1	15	G 1	R $\frac{3}{4}$	PVC-U	EPDM	37602110	▲
8062.1	15	G 1	R $\frac{3}{4}$	PVC-U	FPM	37602111	▲
8062.1	15	G 1	R $\frac{3}{4}$	PP	EPDM	37602112	▲
8062.1	15	G 1	R $\frac{3}{4}$	PP	FPM	37602113	▲
8062.1	15	G 1	R $\frac{3}{4}$	PVDF	FPM	37602114	▲
8063.1	20	G 1 $\frac{1}{4}$	R 1	PVC-U	EPDM	37602115	▲
8063.1	20	G 1 $\frac{1}{4}$	R 1	PVC-U	FPM	37602116	▲
8063.1	20	G 1 $\frac{1}{4}$	R 1	PP	EPDM	37602117	▲
8063.1	20	G 1 $\frac{1}{4}$	R 1	PP	FPM	37602118	▲
8063.1	20	G 1 $\frac{1}{4}$	R 1	PVDF	FPM	37602119	▲

VENT VALVE



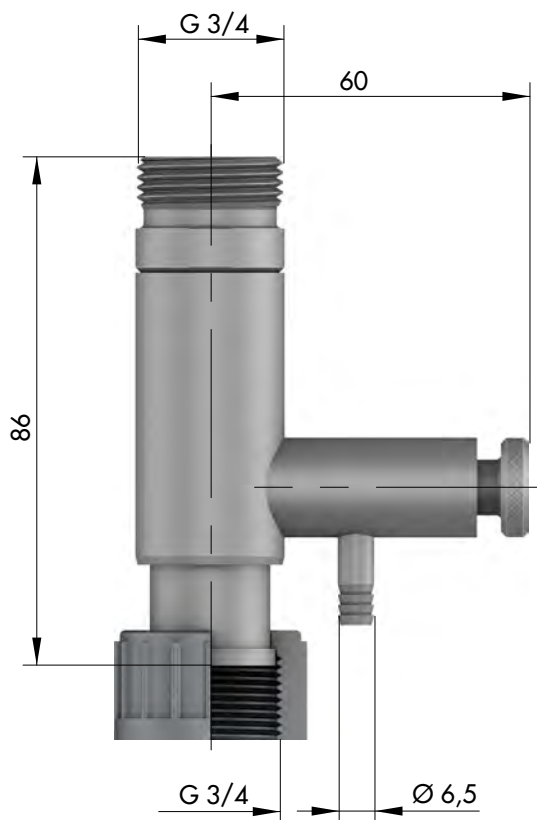
OVERVIEW

Compact design
Easy installation
Maintenance free
High quality materials

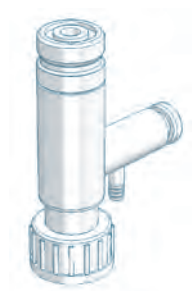
TECHNICAL DATA

		8152
Nominal width	DN	8
Max. permissible operating pressure	bar	10
Max. volume of pump's stroke	cm ³	20

DIMENSIONS



BASIC DESIGNS



Vent valve

Properties

- Compact design
- Easy installation
- Maintenance-free
- High-quality materials

Basic version

- Valve body: **PVC-U** or **PP**
- Valve ball: **PTFE**
- Seals: **FPM** or **EPDM**
- Connection: **G^{3/4}**
- Vent joint: **Hose nozzle d=6,5mm**

Type	Valve body	Seals	Article-No.	Price (EUR)
8152	PVC-U	EPDM	37605884	▲
8152	PVC-U	FPM	37600531	▲
8152	PP	EPDM	37605885	▲
8152	PP	FPM	37605853	▲

FOOT VALVES



OVERVIEW

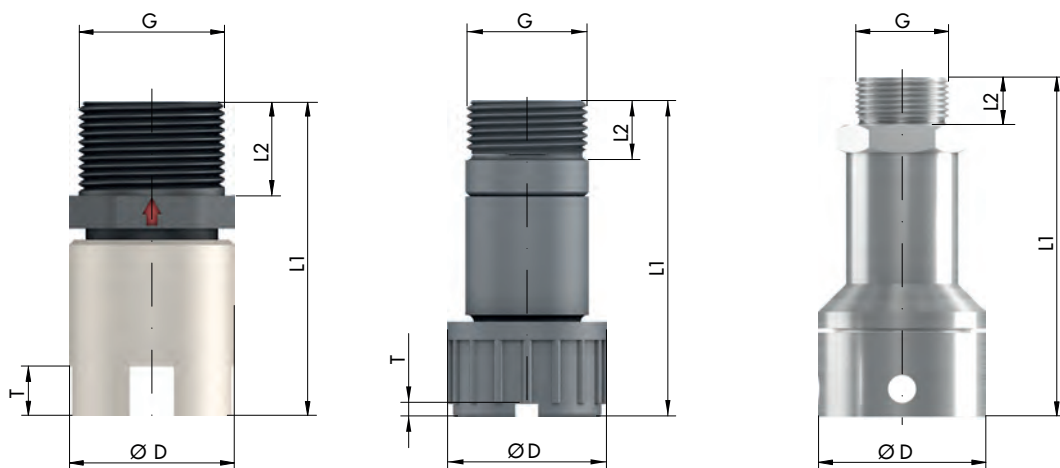
Compact design
Easy installation
Maintenance free
High quality materials

TECHNICAL DATA

		781.1	783.1	731	732	733
Nominal width	DN	8	20	8	15	20
Max. permissible operating pressure	bar	10	10	10	10	3
Max. flow rate*	l/h	200	1450	200	600	1100
Max. volume of pump's stroke	cm ³	20	190	20	100	190

*at a viscosity of max. 50mPas

DIMENSIONS



		781.1	783.1	731	732	733
G		G ³ / ₄	G1 ¹ / ₄	G ³ / ₄	G1	G1 ¹ / ₄
D	PVC-U	—	—	31	—	—
	PP-FRP, PVDF-FRP	30	50	—	—	—
	1.4571	—	—	30	60	80
L1		50	82	70	121	129
L2	PVC-U	—	—	13	—	—
	PP-FRP	18	25	—	—	—
	PVDF-FRP	18	24	—	—	—
	1.4571	—	—	13	17	20

(Dimensions in mm)

BASIC DESIGNS



Foot valve (Plastic)

Properties

- Compact design
- Easy installation
- High-quality materials
- Maintenance-free

Basic version

- Ball: **PTFE**
- Sieve: **ETFE**
- Mesh size: **1mm**

Type	DN	Connection	Material	Seals	Article-No.	Price (EUR)
781.1	8	G 3/4	PVDF/PVDF-GFK	FEP	30073008	▲
783.1	20	G 1 1/4	PP/PP-GFK	EPDM	37600552	▲
783.1	20	G 1 1/4	PP/PP-GFK	FPM	37600553	▲
783.1	20	G 1 1/4	PVDF/PVDF-GFK	FEP	30073018	▲



Foot valve (plastic)

Properties

- Compact design
- Easy installation
- High-quality materials
- Maintenance-free

Basic version

- Ball: **PTFE**
- Sieve: **ETFE**
- Mesh size: **1mm**

Type	DN	Connection	Material	Seals	Article-No.	Price (EUR)
731	8	G 3/4	PVC-U	EPDM	37601636	▲



Foot valve (Stainless steel)

Properties

- Compact design
- Easy installation
- High-quality materials
- Maintenance-free

Basic version

- Ball: **1.4401**
- Sieve: **ETFE**
- Mesh size: **1mm**

Type	DN	Connection	Material	Seals	Article-No.	Price (EUR)
731	8	G 3/4	1.4571	FEP	37601149	▲
732	15	G 1	1.4571	FEP	37603325	▲
733	20	G 1 1/4	1.4571	FEP	37603962	▲

MULTIFUNCTION DEVICE



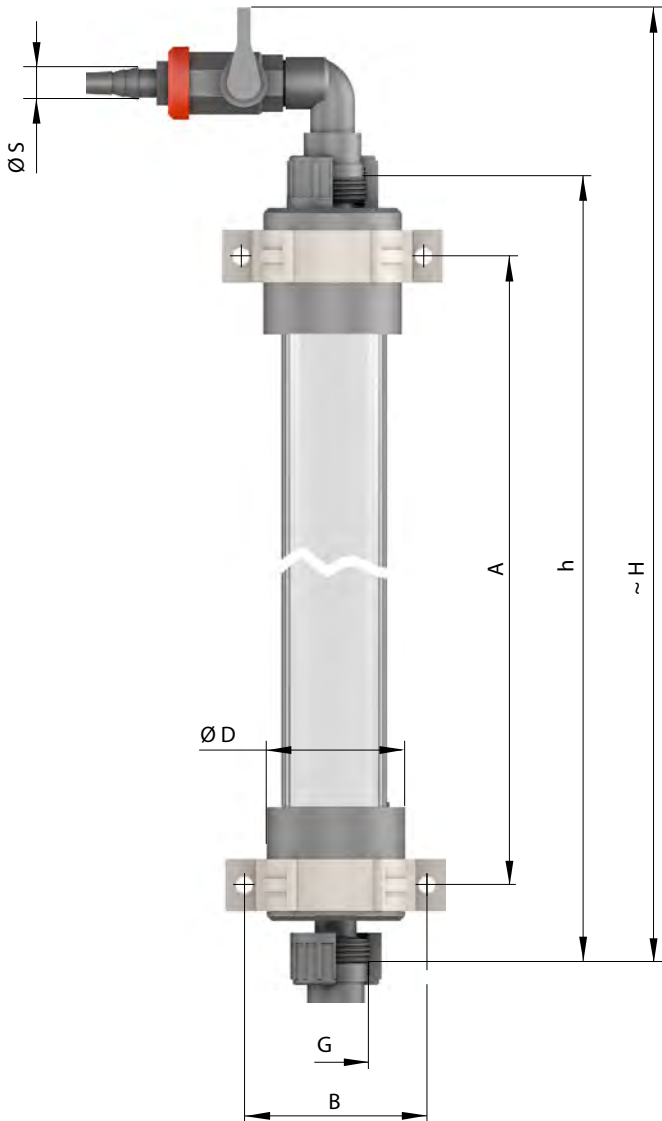
OVERVIEW

- Can be used as an priming aid and/or an calibration pot
 - Compact Design
 - Easy installation
 - Flexible connection
 - Maintanance free
 - High quality materials
- incl. glue joint (PVC-U)
and welding joint (PP)

TECHNICAL DATA

		MFD-60	MFD-570	MFD-1500
Nominal width	DN	8	15	20
Content	Litre	0,5	2,0	5,0
Max. permissible operating pressure	bar	-0,5...+2	-0,5...+2	-0,5...+2

DIMENSIONS



DIMENSIONS

	MFD-60	MFD-570	MFD-1500
G	G $\frac{3}{4}$	G1	G1 $\frac{1}{4}$
D	53	120	180
h	637	557	562
H	707	635	637
A	574	442	458
B	70	167	228
S	8-13	8-13	8-13

(Dimensions in mm)

BASIC DESIGNS



Multi-function device

Properties

- Can be used as an priming aid and/or an calibration pot
- Compact design
- Flexible Connection
- Maintenance-free
- incl. glue joint (PVC-U) and welding joint (PP)

Basic version

- Housing: **PVC-U / PVC-transparent**
- Seals: **FPM or EPDM**
- max. operating pressure: **-0,5 ... +2 bar**

Type	DN	Connetion	Volume	Seals	Article-No.	Price (EUR)
MFD 60	8	G $\frac{3}{4}$	0,5 Ltr.	EPDM	37606311	▲
MFD 60	8	G $\frac{3}{4}$	0,5 Ltr.	FPM	37605864	▲
MFD 570	15	G1	2 Ltr.	EPDM	37606278	▲
MFD 570	15	G1	2 Ltr.	FPM	37605992	▲
MFD 1500	20	G1 $\frac{1}{4}$	5 Ltr.	EPDM	37606316	▲
MFD 1500	20	G1 $\frac{1}{4}$	5 Ltr.	FPM	37606315	▲

ACCESSORIES

Hand vacuum pump	PVC/FPM	37605682	▲
	(incl. 1,5m PVC-Hose d=12/21)		



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