

Piston diaphragm pumps

Flow capacity 30 l/h ... 850 l/h

Admiss. counterpressure up to 80 bar



R410.2-...KM



R410.2-...KM in survey

- Multi-layer diaphragm technology
- High dosing accuracy
- Safe to run dry
- High quality materials
- Leakage-free
- Low maintenance
- User-friendly
- Integrable into automatic processes
- Manual stroke length adjustment
- Robust metallic stroke mechanism housing

Infobox

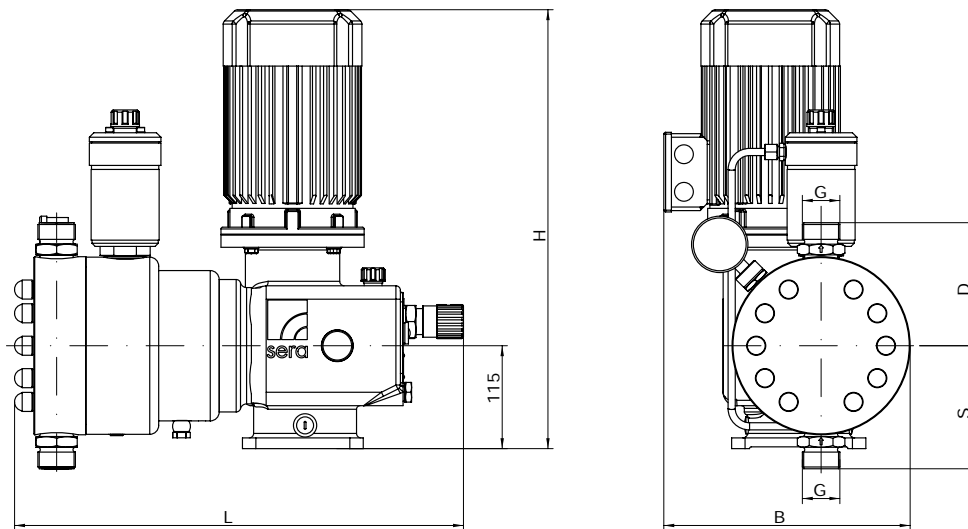
| | |
|-----------------------|----------------------------|
| Order information | Page 2.121 |
| Options/accessories | Page 2.121 |
| fittings-allocation | Page 2.125 |
| connecting pieces | Chapter 4 |
| resistance chart | Chapter 5 |
| installation examples | Chapter 5 |

Technical data

| Type | Nominal capacity l/h | | Nominal stroke frequency 1/min | | Admiss. counter-pressure bar | Admiss. pressure at pump inlet bar | Max. suction height mWS | Inlet/ Outlet nominal width DN | Max. stroke length mm | rated motor power kW |
|--------------|----------------------|----------|--------------------------------|-------|------------------------------|------------------------------------|-------------------------|--------------------------------|-----------------------|----------------------|
| | 50 Hz | 60 Hz | 50 Hz | 60 Hz | | | | | | |
| R410.2-30KM | 0 - 30 | 0 - 36 | 76 | 92 | 80 | -0,3 / 0 | 3 | 8 | 13 | 0,75 |
| R410.2-38KM | 0 - 38 | 0 - 45 | 97 | 116 | 80 | -0,3 / 0 | 3 | 8 | 13 | 0,75 |
| R410.2-60KM | 0 - 60 | 0 - 72 | 76 | 92 | 70 | -0,3 / 0 | 3 | 8 | 13 | 0,75 |
| R410.2-76KM | 0 - 76 | 0 - 90 | 97 | 116 | 70 | -0,3 / 0 | 3 | 8 | 13 | 1,5 |
| R410.2-120KM | 0 - 120 | 0 - 144 | 76 | 92 | 40 | -0,3 / 0 | 3 | 15 | 13 | 1,5 |
| R410.2-150KM | 0 - 150 | 0 - 180 | 97 | 116 | 40 | -0,3 / 0 | 3 | 15 | 13 | 1,5 |
| R410.2-250KM | 0 - 250 | 0 - 300 | 76 | 92 | 20 | -0,3 / 0 | 3 | 15 | 13 | 1,5 |
| R410.2-310KM | 0 - 310 | 0 - 372 | 97 | 116 | 20 | -0,3 / 0 | 3 | 15 | 13 | 1,5 |
| R410.2-400KM | 0 - 400 | 0 - 480 | 76 | 92 | 14 | -0,3 / 0 | 3 | 15 | 13 | 1,5 |
| R410.2-510KM | 0 - 510 | – | 97 | – | 14 | -0,3 / 0 | 3 | 15 | 13 | 1,5 |
| R410.2-700KM | 0 - 700 | – | 97 | – | 11 | -0,3 / 0 | 3 | 20 | 13 | 1,5 |
| R410.2-850KM | 0 - 850 | 0 - 1020 | 76 | 92 | 8 | -0,3 / 0 | 3 | 20 | 20 | 1,5 |

Note: The admissible counterpressure is 10 bar or lower when plastic pump bodies are used.

Dimensional drawing



Dimensional chart

All indications in mm

| Type | G | S | D | L | B | H | Weight (kg) |
|--------------|---------|-----|-----|-----|-----|-----|-------------|
| R410.2-30KM | G 3/4 | 95 | 95 | 495 | 280 | 490 | 35 |
| R410.2-38KM | G 3/4 | 95 | 95 | 495 | 280 | 490 | 35 |
| R410.2-60KM | G 3/4 | 95 | 95 | 495 | 280 | 490 | 35 |
| R410.2-76KM | G 3/4 | 95 | 95 | 495 | 280 | 490 | 35 |
| R410.2-120KM | G 1 1/4 | 138 | 138 | 535 | 305 | 530 | 46 |
| R410.2-150KM | G 1 1/4 | 138 | 138 | 535 | 305 | 530 | 46 |
| R410.2-250KM | G 1 1/4 | 138 | 138 | 535 | 305 | 530 | 46 |
| R410.2-310KM | G 1 1/4 | 138 | 138 | 535 | 305 | 530 | 46 |
| R410.2-400KM | G 1 1/4 | 138 | 138 | 535 | 305 | 530 | 46 |
| R410.2-510KM | G 1 1/4 | 138 | 138 | 535 | 305 | 530 | 46 |
| R410.2-700KM | G 1 1/4 | 162 | 162 | 535 | 330 | 530 | 62 |
| R410.2-850KM | G 1 1/4 | 162 | 162 | 580 | 330 | 530 | 62 |

Order information

Basic design

R410.2 -30KM up to R410.2-38KM

- Pump body PP
- Double valves PP-FRP
- Valve balls Glass
- Valve seals FPM
- Multi-layer diaphragm PTFE
- Optical diaphragm-rupture indication with manometer

R410.2-60KM up to R410.2-76KM

- Pump body PP
- Single valves PP-FRP
- Valve balls Glass
- Valve seals FPM
- Multi-layer diaphragm PTFE
- Optical diaphragm-rupture indication with manometer

R410.2-120KM up to R410.2-850KM

- Pump body PP
- Single valves PP
- Valve balls Glass
- Valve seals FPM
- Multi-layer diaphragm PTFE
- Optical diaphragm-rupture indication with manometer



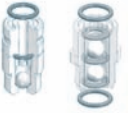
Motor:

- 220-240/380-420 V +/- 5% threephase, 50/60 Hz, IP 55, insul. cl. F

Further options and accessories

- Connection pieces see chapter 4
- Product documentation see chapter 5

| Type | Basic design | x |
|--------------|--------------|---|
| R410.2-30KM | 16013549 | |
| R410.2-38KM | 16013550 | |
| R410.2-60KM | 16013551 | |
| R410.2-76KM | 16013552 | |
| R410.2-120KM | 16013553 | |
| R410.2-150KM | 16013554 | |
| R410.2-250KM | 16013555 | |
| R410.2-310KM | 16013556 | |
| R410.2-400KM | 16013557 | |
| R410.2-510KM | 16013558 | |
| R410.2-700KM | 16013559 | |
| R410.2-850KM | 16013589 | |

| Options/Accessories | | | R410.2-30KM up to R410.2-38KM x | R410.2-60KM up to R410.2-76KM x | R410.2-120KM up to R410.2-510KM x | R410.2-700KM x | R410.2-850KM x |
|--|---|----------------------------|---------------------------------|---------------------------------|-----------------------------------|----------------|----------------|
| Pump body and valves  | PP | Double valve PP-FRP | ● | - | - | - | - |
| | | Single valve PP-FRP | - | ● | ● | ● | ● |
| | PVC-U | Single valve PVC-U | ▲ | ▲ | ▲ | ▲ | ▲ |
| | | Double valve PVDF-FRP | ▲ | ▲ | - | - | - |
| | PVDF | Single valve PVDF-FRP | - | ▲ | ▲ | ▲ | ▲ |
| | | Single valve 1.4571/1.4581 | - | - | ▲ | ▲ | ▲ |
| 1.4571 | Double valve 1.4571/1.4581 | ▲ | ▲ | - | - | - | |
| | Valve balls  | Glass | Single valve | ● | ● | ● | ● |
| Double valve | | | ● | ⊗ | - | - | - |
| 1.4401 | | Single valve PVC-U | ○ | ▲ | ▲ | ▲ | ▲ |
| | | Single valve | ○ | ▲ | ▲ | ▲ | ▲ |
| PTFE | | Double valve | ○ | ○ | - | - | - |
| | | Single valve | ▲ | ▲ | ▲ | ▲ | ▲ |
| Valve seals  | FPM | Double valve | ▲ | ⊗ | - | - | - |
| | | Single valve | ○ | ● | ● | ● | ● |
| EPDM | Single valve | ○ | ○ | ○ | ○ | ○ | |
| | Double valve | ○ | ⊗ | - | - | - | |
| FEP-covered | Single valve | ▲ | ▲ | ▲ | ▲ | ▲ | |
| | Double valve | ▲ | ○ | - | - | - | |
| ● = basic design ▲ = with add. price ○ = without add. price ⊗ = on request - = not available Art.-No. = available in basic design/accessories | | | | | | | |

R410.2-...KM

Order information

Basic design

R410.2-30KM up to R410.2-38KM

- Pump body PP
- Double valves PP-FRP
- Valve balls Glass
- Valve seals FPM
- Multi-layer diaphragm PTFE
- Optical diaphragm-rupture indication with manometer

R410.2-60KM up to R410.2-76KM

- Pump body PP
- Single valves PP-FRP
- Valve balls Glass
- Valve seals FPM
- Multi-layer diaphragm PTFE
- Optical diaphragm-rupture indication with manometer

R410.2-120KM up to R410.2-850KM

- Pump body PP
- Single valves PP
- Valve balls Glass
- Valve seals FPM
- Multi-layer diaphragm PTFE
- Optical diaphragm-rupture indication with manometer

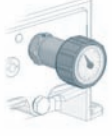
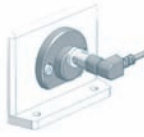
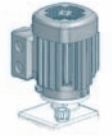
Motor:

- 220-240/380-420 V +/- 5% threephase, 50/60 Hz, IP 55, insul. cl. F

Further options and accessories

- Connection pieces see chapter 4
- Product documentation see chapter 5

| Type | Basic design | x |
|--------------|--------------|---|
| R410.2-30KM | 16013549 | |
| R410.2-38KM | 16013550 | |
| R410.2-60KM | 16013551 | |
| R410.2-76KM | 16013552 | |
| R410.2-120KM | 16013553 | |
| R410.2-150KM | 16013554 | |
| R410.2-250KM | 16013555 | |
| R410.2-310KM | 16013556 | |
| R410.2-400KM | 16013557 | |
| R410.2-510KM | 16013558 | |
| R410.2-700KM | 16013559 | |
| R410.2-850KM | 16013589 | |

| Options/Accessories | | R410.2-30KM up to R410.2-60KM | x | R410.2-76KM up to R410.2-510KM | x | R410.2-700KM | x | R410.2-850KM | x |
|--|--|-------------------------------------|---|--------------------------------------|---|--------------|---|--------------|---|
| Stroke length adjustment  | with position indicator | ▲ | | ▲ | | ▲ | | ▲ | |
| | Inductive contact | | | | | | | | |
| Stroke frequency monitoring  | 10-60 V DC, three-wire, PNP | ▲ | | ▲ | | ▲ | | ▲ | |
| | Namur execution, II2G EExia IICT6 acc. to ATEX95 | ▲ | | ▲ | | ▲ | | ▲ | |
| Drive motor  | Special voltage | ▲ | | ▲ | | ▲ | | ▲ | |
| | Enclosure IP 65 | ▲ | | ▲ | | ▲ | | ▲ | |
| | Protective roof for the fan of the drive | ▲ | | ▲ | | ▲ | | ▲ | |
| | integrated posistor (3 pcs.) insul. cl. F | ▲ | | ▲ | | ▲ | | ▲ | |
| | VIK-design | ▲ | | ▲ | | ▲ | | ▲ | |
| | II2G EExe IIT4 (acc. to ATEX95) | ▲ | | ▲ | | ▲ | | ▲ | |
| | II2G EExde IICT4 (acc. to ATEX95) | ▲ | | ▲ | | ▲ | | ▲ | |
| | Single phase AC 230V with capacitor | ▲ | | ▲ | | ▲ | | ▲ | |
| | Driver for converter operation incl. posistor, 5-50/60Hz | ▲ | | ▲ | | ▲ | | ▲ | |
| Driver for converter operation II2G EExde IICT4, 5-50/60 Hz gem. ATEX 95, incl. integrated posistor | ▲ | | ▲ | | ▲ | | ▲ | | |
| ● = basic design ▲ = with add. price ○ = without add. price ⊙ = on request – = not available Art.-No. = available in basic design/accessories | | | | | | | | | |

Order information

Basic design

R410.2 -30KM up to R410.2-38KM

- Pump body PP
- Double valves PP-FRP
- Valve balls Glass
- Valve seals FPM
- Multi-layer diaphragm PTFE
- Optical diaphragm-rupture indication with manometer

R410.2-60KM up to R410.2-76KM

- Pump body PP
- Single valves PP-FRP
- Valve balls Glass
- Valve seals FPM
- Multi-layer diaphragm PTFE
- Optical diaphragm-rupture indication with manometer

R410.2-120KM up to R410.2-850KM

- Pump body PP
- Single valves PP
- Valve balls Glass
- Valve seals FPM
- Multi-layer diaphragm PTFE
- Optical diaphragm-rupture indication with manometer

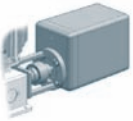
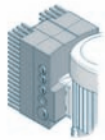

Motor:

- 220-240/380-420 V +/- 5% threephase, 50/60 Hz, IP 55, insul. cl. F

Further options and accessories

- Connection pieces see chapter 4
- Product documentation see chapter 5

| Type | Basic design | x |
|--------------|--------------|---|
| R410.2-30KM | 16013549 | |
| R410.2-38KM | 16013550 | |
| R410.2-60KM | 16013551 | |
| R410.2-76KM | 16013552 | |
| R410.2-120KM | 16013553 | |
| R410.2-150KM | 16013554 | |
| R410.2-250KM | 16013555 | |
| R410.2-310KM | 16013556 | |
| R410.2-400KM | 16013557 | |
| R410.2-510KM | 16013558 | |
| R410.2-700KM | 16013559 | |
| R410.2-850KM | 16013589 | |

| Options/Accessories | | R410.2-30KM up to R410.2-60KM | R410.2-76KM up to R410.2-510KM | R410.2- 700KM | R410.2- 850KM |
|--|--|-------------------------------------|--------------------------------------|------------------|------------------|
| Stroke length adjustment electrical  | Actuator N1S 230 V, 50/60 Hz, 128s/10 U, 15 Nm Potentiometer 1 kOhm incl. mounting plate for actuator | ▲ | ▲ | ▲ | ▲ |
| | Electronic positioning controller PMR3 input signal 0/4-20 mA incl. feedback signal 0/4-20 mA (only in N1S integrated) | ▲ | ▲ | ▲ | ▲ |
| | Actuator D30D-10-Ex (II2G EExde IICT4) acc. to ATEX 95, 400 V, 50 Hz, 10 U/min, incl. mounting-kit for actuator and base plate | ▲ | ▲ | ▲ | ▲ |
| Stroke frequency adjustment electrical  | Frequency converter series 8200 Motec mounted-on, input 4-20mA | | | | |
| | Three-phase 0,75 kW 320-550 V, +/- 0%, 50/60 Hz | ▲ | – | – | – |
| | 1,5 kW | – | ▲ | ▲ | ▲ |
| | Switch-potentiometer for manuell stroke frequency adjustment and to switch on the pump motor (External control of the frequency conver- ter with mounted switch potentiometer unit is not possible) | ▲ | ▲ | ▲ | ▲ |
| Service module hand terminal and keypad incl. 2,5m connection cable | ▲ | ▲ | ▲ | ▲ | |
| Stroke frequency adjustment electrical  | Frequency converter series 8200 Vector input 4-20mA, incl. Keypad (for integration into control cabinet) | | | | |
| | Single-phase 0,75 kW 230 V, 50/60 Hz | 90017524 | – | – | – |
| | 1,5 kW | – | 90016865 | 90016865 | 90016865 |
| | Three-phase 0,75 kW 320-550 V, +/- 0%, 50/60 Hz | 90017527 | – | – | – |
| 1,5 kW | – | 90017528 | 90017528 | 90017528 | |
| ● = basic design ▲ = with add. price ○ = without add. price ⊗ = on request – = not available Art.-No. = available in basic design/accessories | | | | | |

R410.2-...KM

Order information

Basic design

R410.2 -30KM up to R410.2-38KM

- Pump body PP
- Double valves PP-FRP
- Valve balls Glass
- Valve seals FPM
- Multi-layer diaphragm PTFE
- Optical diaphragm-rupture indication with manometer

R410.2-60KM up to R410.2-76KM

- Pump body PP
- Single valves PP-FRP
- Valve balls Glass
- Valve seals FPM
- Multi-layer diaphragm PTFE
- Optical diaphragm-rupture indication with manometer

R410.2-120KM up to R410.2-850KM

- Pump body PP
- Single valves PP
- Valve balls Glass
- Valve seals FPM
- Multi-layer diaphragm PTFE
- Optical diaphragm-rupture indication with manometer

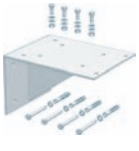
Motor:

- 220-240/380-420 V +/- 5% threephase, 50/60 Hz, IP 55, insul. cl. F

Further options and accesories

- Connection pieces see chapter 4
- Product documentation see chapter 5

| Type | Basic design | x |
|--------------|--------------|---|
| R410.2-30KM | 16013549 | |
| R410.2-38KM | 16013550 | |
| R410.2-60KM | 16013551 | |
| R410.2-76KM | 16013552 | |
| R410.2-120KM | 16013553 | |
| R410.2-150KM | 16013554 | |
| R410.2-250KM | 16013555 | |
| R410.2-310KM | 16013556 | |
| R410.2-400KM | 16013557 | |
| R410.2-510KM | 16013558 | |
| R410.2-700KM | 16013559 | |
| R410.2-850KM | 16013589 | |

| Options/Accessories | | R410.2-30KM up to R410.2-60KM | x | R410.2-76KM up to R410.2-510KM | x | R410.2- 700KM | x | R410.2- 850KM | x |
|---|--------|-------------------------------------|---|--------------------------------------|---|------------------|---|------------------|---|
|  <p>Console</p> <p>for wall mounting incl. fixing screws</p> | 1.4301 | ▲ | | ▲ | | ▲ | | ▲ | |
| | PP | ▲ | | ▲ | | ▲ | | ▲ | |

● = basic design ▲ = with add. price ○ = without add. price ⊗ = on request - = not available Art.-No. = available in basic design/accessories

| Fittings for suction side of dosing pumps | | R410.2-30KM up to R410.2-60KM | | R410.2-76KM up to R410.2-150KM | | R410.2-250KM up to R410.2-510KM | | R410.2-700KM | | R410.2-850KM | |
|---|----------------------|-------------------------------|------|--------------------------------|------|---------------------------------|------|----------------|------|---------------|------|
| | | Type | P. | Type | P. | Type | P. | Type | P. | Type | P. |
| Suction lance | with level switch | SL-02 | 3.36 | ∅ | | S-04 | 3.40 | ∅ | | ∅ | |
| | 1-stage | S-03 | 3.38 | ∅ | | ∅ | | SLP-151.1 | | ∅ | |
| | without level switch | S-01 | 3.46 | S-01 | 3.46 | S-01 | 3.46 | S-01 | 3.46 | S-01 | 3.46 |
| Suction aid / Siphon Vessel | PVC-U-transparent | 770.2 | 3.76 | 770.2 | 3.76 | 770.2 | 3.76 | 771.2 | 3.76 | 771.2 | 3.76 |
| Calibration Pot | PVC-U | 792.1 | 3.78 | 794.1 | 3.78 | 795.1 | 3.78 | 795.1 | 3.78 | 796.1 | 3.78 |
| Foot valve | PVC-U | 731 | 3.82 | 732.2 | 3.82 | 732.2 | 3.82 | 733.2 | 3.82 | 734.2 | 3.82 |
| | PP / PVDF | ∅ | | 732 | 3.82 | 732 | 3.82 | 733 | 3.82 | 733 | 3.82 |
| | PP-FRP / PVDF-FRP | 781.1 | 3.86 | 783.1 | 3.86 | 783.1 | 3.86 | 783.1 | 3.86 | ∅ | |
| | 1.4571 | 731 | 3.82 | 732 | 3.82 | 732 | 3.82 | 733 | 3.82 | 733 | 3.82 |
| Line strainer | PVC-U | 751.1 | 3.88 | ∅ | | ∅ | | ∅ | | ∅ | |
| | PVC-U / PP / PVDF | 752.1 | 3.88 | 752.1 | 3.88 | 752.1 | 3.88 | 753.1 | 3.88 | 753.1 | 3.88 |
| | 1.4408 | 752 | 3.90 | 752 | 3.90 | 752 | 3.90 | 753 | 3.90 | 753 | 3.90 |
| Float valve | PVC-U | 871 | 3.92 | 872 | 3.92 | 872 | 3.92 | 872 | 3.92 | 873 | 3.92 |
| Pulsation damper without separating diaphragm | PVC-U / PP | 702.1 | 3.14 | 702.1 | 3.14 | 702.1 | 3.14 | 702.1 | 3.14 | 703.1 | 3.14 |
| | 1.4571 | ∅ | | ∅ | | ∅ | | ∅ | | ∅ | |
| Fittings for pressure side of dosing pumps | | R410.2-30KM up to R410.2-60KM | | R410.2-76KM up to R410.2-150KM | | R410.2-250KM up to R410.2-510KM | | R410.2-700KM | | R410.2-850KM | |
| | | Type | P. | Type | P. | Type | P. | Type | P. | Type | P. |
| Diaphragm-type relief valve | | 620.10 | 3.4 | 622.10 | 3.4 | 622.10 | 3.4 | 623.10 | 3.4 | 623.10 | 3.4 |
| | for suspension | ∅ | | 622.S | 3.6 | 622.S | 3.6 | 623.S | 3.6 | 623.S | 3.6 |
| Diaphragm-type pressure keeping valve | | 620.D | 3.8 | 622.D | 3.8 | 622.D | 3.8 | 623.D | 3.8 | 623.D | 3.8 |
| Pulsation damper without separating diaphragm | PVC-U / PP | 702.1 | 3.14 | 702.1 | 3.14 | 702.1 | 3.14 | 702.1 | 3.14 | 703.1 | 3.14 |
| | 1.4571 | ∅ | | ∅ | | ∅ | | ∅ | | ∅ | |
| Diaphragm-pulsation damper with Elastomer-diaphragm | PVC-U / PP / PVDF | 713.1 | 3.18 | 713.1 | 3.18 | 713.1 | 3.18 | 713.1 | 3.18 | 713.1 | 3.18 |
| | 1.4571 | 713.1 | 3.20 | 713.1 | 3.20 | 713.1 | 3.20 | 713.1 | 3.20 | 713.1 | 3.20 |
| | | 810.1-0,32/160 | 3.28 | 810.1-0,75/140 | 3.28 | 810.1-0,75/140 | 3.28 | 810.1-0,75/140 | 3.28 | 810.1-2,0/100 | 3.28 |
| Diaphragm-pulsation damper with PTFE/PTFE-faced diaphragm | PVC-U / PP / PVDF | 721.2 | 3.22 | 723.1 | 3.22 | 723.1 | 3.22 | 723.1 | 3.22 | ∅ | |
| | 1.4571 | 721.1 | 3.26 | 723.1 | 3.26 | 723.1 | 3.26 | 723.1 | 3.26 | 724.1 | 3.26 |
| Check valve | PVC-U | 661.2 | 3.50 | ∅ | | ∅ | | ∅ | | ∅ | |
| | PP-FRP / PVDF-FRP | 661.2 | 3.50 | ∅ | | ∅ | | ∅ | | ∅ | |
| | 1.4571 | 661.2 | 3.50 | 662.2 | 3.50 | 662.2 | 3.50 | 663.2 | 3.50 | 663.2 | 3.50 |
| Dosing valve | PP-FRP / PVDF-FRP | 691.1 | 3.54 | 693.1 | 3.54 | 693.1 | 3.54 | 693.1 | 3.54 | 693.1 | 3.54 |
| | 1.4571 | 691.1 | 3.54 | 692.1 | 3.54 | 692.1 | 3.54 | 693.1 | 3.54 | 693.1 | 3.54 |
| Injection fitting | PVC-U / PP / PVDF | 8061.1 | 3.60 | 8062.1 | 3.60 | 8062.1 | 3.60 | 8063.1 | 3.60 | 8063.1 | 3.60 |

∅ = on request -- = not available

The above allocation considers the fittings which have to be used at least regarding their nominal width in order to ensure the safe and trouble-free operation of the respective pumps when feeding liquids which are similar to water.

Absolutely note the max. admissible operating pressure of the fittings.

The use of fittings of a bigger nominal width is unproblematically possible in most cases.

When choosing the fittings note the installation instructions for dosing pumps or confer with **sera**.