

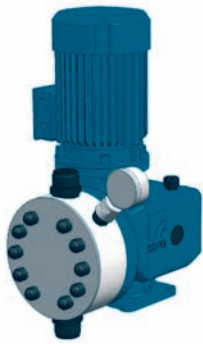
Multi-layer diaphragm pumps

Flow capacity 55 l/h ... 1200 l/h

Admiss. counterpressure up to 16 bar



R410.2-...ML



410.2-...ML 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

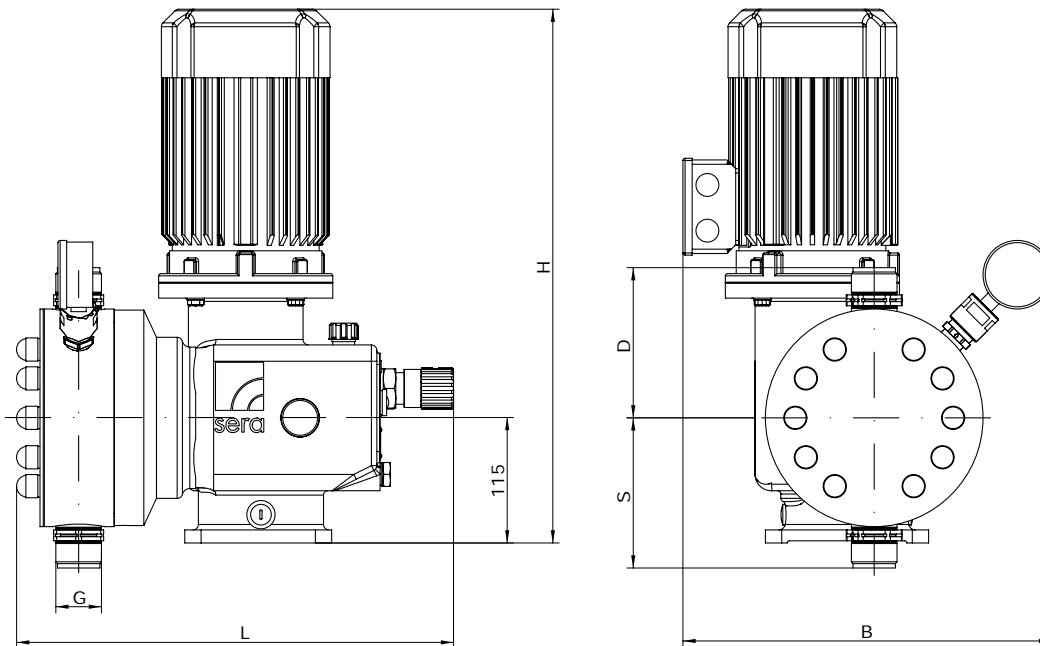
- Order information [Page 2.97](#)
- Options/accessories [Page 2.97](#)
- fittings-allocation [Page 2.100](#)
- connecting pieces [Chapter 4](#)
- resistance chart [Chapter 5](#)
- installation examples [Chapter 5](#)

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 mWC | Inlet/ Outlet nominal width DN | Max. stroke length mm | rated motor power kW |
|---------------|----------------------|----------|--------------------------------|-------|------------------------------|------------------------------------|-------------------------|--------------------------------|-----------------------|----------------------|
| | 50 Hz | 60 Hz | 50 Hz | 60 Hz | | | | | | |
| R410.2-55ML | 0 - 55 | 0 - 66 | 76 | 92 | 16 | -0,3 / 0 | 3 | 10 | 8 | 0,75 |
| R410.2-70ML | 0 - 70 | 0 - 84 | 97 | 116 | 16 | -0,3 / 0 | 3 | 15 | 8 | 0,75 |
| R410.2-105ML | 0 - 105 | 0 - 126 | 76 | 92 | 15 | -0,3 / 0 | 3 | 15 | 10 | 0,75 |
| R410.2-135ML | 0 - 135 | 0 - 162 | 97 | 116 | 15 | -0,3 / 0 | 3 | 15 | 10 | 0,75 |
| R410.2-400ML | 0 - 400 | 0 - 480 | 76 | 92 | 10 | -0,3 / 0 | 3 | 15 | 13 | 0,75 |
| R410.2-500ML | 0 - 500 | 0 - 600 | 97 | 116 | 10 | -0,3 / 0 | 3 | 15 | 13 | 0,75 |
| R410.2-940ML | 0 - 950 | 0 - 1128 | 76 | 92 | 5 | -0,3 / 0 | 3 | 20 | 20 | 1,5 |
| R410.2-1200ML | 0 - 1200 | - | 97 | - | 5 | -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) |
|---------------|---------|-----|-----|-----|-----|-----|-------------|
| R410.2-55ML | G 3/4 | 113 | 113 | 408 | 317 | 490 | 29 |
| R410.2-70ML | G 3/4 | 113 | 113 | 408 | 317 | 490 | 29 |
| R410.2-105ML | G 1 1/4 | 127 | 127 | 425 | 331 | 490 | 32 |
| R410.2-135ML | G 1 1/4 | 127 | 127 | 425 | 331 | 490 | 32 |
| R410.2-400ML | G 1 1/4 | 138 | 138 | 413 | 339 | 490 | 34 |
| R410.2-500ML | G 1 1/4 | 138 | 138 | 413 | 339 | 490 | 34 |
| R410.2-940ML | G 1 1/4 | 162 | 162 | 457 | 355 | 525 | 38,5 |
| R410.2-1200ML | G 1 1/4 | 162 | 162 | 457 | 355 | 525 | 38,5 |

■ Indication of weight for basic design acc. to order information

Order information

Basic design

R410.2-...ML

- Pump body PP
- Single valve PP-FRP
- Valve balls Glass
- Valve seals FPM
- Working diaphragm PTFE
- optical diaphragm-rupture indication with manometer



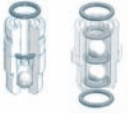

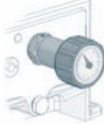
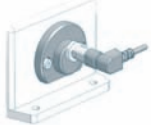
Motor:

- 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 |
|---------------|--------------|---|
| R410.2-55ML | 16013364 | |
| R410.2-70ML | 16013365 | |
| R410.2-105ML | 16013366 | |
| R410.2-135ML | 16013367 | |
| R410.2-400ML | 16013368 | |
| R410.2-500ML | 16013369 | |
| R410.2-940ML | 16013370 | |
| R410.2-1200ML | 16013371 | |

| Options/Accessories | | | R410.2-55ML R410.2-70ML | x | R410.2-105ML R410.2-135ML | x | R410.2-400ML R410.2-500ML | x | R410.2-940ML R410.2-1200ML | x |
|---|---|----------------------------|----------------------------|---|------------------------------|---|------------------------------|---|-------------------------------|---|
| Pump body and valves  | PP | Single valve PP-FRP | ● | | ● | | ● | | ● | |
| | PVC-U | Single valve PVC-U | ▲ | | ▲ | | ▲ | | ▲ | |
| | PVDF | Single valve PVDF-GFK | ▲ | | ▲ | | ▲ | | ▲ | |
| | 1.4571 | Single valve 1.4571/1.4581 | - | | ▲ | | ▲ | | ▲ | |
| | | Double valve 1.4571/1.4581 | ▲ | | ▲ | | ▲ | | ▲ | |
| Valve balls  | Glass | Single valve | ● | | ● | | ● | | ● | |
| | | Single valve PVC-U | ○ | | ▲ | | ▲ | | ▲ | |
| | 1.4401 | Single valve | ○ | | ▲ | | ▲ | | ▲ | |
| | | Double valve | ○ | | ▲ | | ▲ | | ▲ | |
| | PTFE | Single valve | ▲ | | ▲ | | ▲ | | ▲ | |
| | | Double valve | ▲ | | ▲ | | ▲ | | ▲ | |
| Valve seals  | FPM | Single valve | ● | | ● | | ● | | ● | |
| | EPDM | Single valve | ○ | | ○ | | ○ | | ○ | |
| | | Double valve | ○ | | ○ | | ○ | | ○ | |
| | FEP-umm. | Single valve | ▲ | | ▲ | | ▲ | | ▲ | |
| | | Double valve | ▲ | | ▲ | | ▲ | | ▲ | |
| Diaphragm rupture monitoring  | optical diaphragm rupture indicator with manometer | | ● | | ● | | ● | | ● | |
| | Pressure switch IP 65 | | ▲ | | ▲ | | ▲ | | ▲ | |
| | Pressure switch II2G EExd IIC T5 or T6 acc. to ATEX95 | | ▲ | | ▲ | | ▲ | | ▲ | |
| Stroke length adjustment  | with position indicator | | ▲ | | ▲ | | ▲ | | ▲ | |
| | Stroke frequency monitoring  | Inductive-contact | | | | | | | | |
| 10-60 V DC, three-wire, PNP | | ▲ | | ▲ | | ▲ | | ▲ | | |
| Namur execution, II2G EExia IICT6 acc. to ATEX95 | | ▲ | | ▲ | | ▲ | | ▲ | | |
| ● = basic design ▲ = with add. price ○ = without add. price ⊗ = on request -- = not available Art.-No. = available in basic design/accessories | | | | | | | | | | |

R410.2-...ML

Order information

Basic design

R410.2-...ML

- Pump body PP
- Single valve PP-FRP
- Valve balls Glass
- Valve seals FPM
- Working diaphragm PTFE
- optical diaphragm-rupture indication with manometer

Motor:

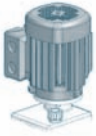


- 220-240/380-420 V +/- 5% threephase, 50/60 Hz, IP 55, insul. cl. F

Further options and accessories

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

| Type | Basic design | x |
|---------------|--------------|---|
| R410.2-55ML | 16013364 | |
| R410.2-70ML | 16013365 | |
| R410.2-105ML | 16013366 | |
| R410.2-135ML | 16013367 | |
| R410.2-400ML | 16013368 | |
| R410.2-500ML | 16013369 | |
| R410.2-940ML | 16013370 | |
| R410.2-1200ML | 16013371 | |

2

| Options/Accessories | | R410.2-55ML R410.2-70ML | x | R410.2-105ML R410.2-135ML | x | R410.2-400ML R410.2-500ML | x | R410.2-940ML R410.2-1200ML | x | |
|---|---|----------------------------|---|------------------------------|---|------------------------------|---|-------------------------------|---|---|
| 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. integrated posistor, 5-50/60Hz | ▲ | | ▲ | | ▲ | | ▲ | | |
| | Driver for converter operation II2G EExde IICT4, 5-50/60 Hz acc. ATEX 95, incl. integrated posistor | ▲ | | ▲ | | ▲ | | ▲ | | |
| Stroke length adjustment electrical  | Actuator N C1-BA 230 V, +/- 10%, 50/60 Hz, 128s/10 U, 1,5 Nm incl. mounting plate for actuator | ▲ | | ▲ | | ▲ | | ▲ | | |
| | Electronic positioning controller PMR3 input signal 0/4-20 mA incl. feedback signal 0/4-20 mA (only in N C1-BA 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 | | | | | | | | | |
| | Single-phase 230 V, 50/60 Hz | 0,37 kW | ▲ | | ▲ | | ▲ | | - | |
| | Three-phase 320-550 V, +/- 0%, 50/60 Hz | 0,37 kW | - | | - | | - | | ▲ | |
| | Switch-potentiometer for manuell stroke frequency adjustment and to switch on the pump motor (External control of the frequency converter with mounted switch potentiometer unit is not possible) | | | ▲ | | ▲ | | ▲ | | ▲ |
| | Service module hand terminal and keypad incl. 2,5m connection cable | | | ▲ | | ▲ | | ▲ | | ▲ |
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Order information

Basic design

R410.2-...ML

- Pump body PP
- Single valves PP-FRP
- Valve balls Glass
- Valve seals FPM
- Working diaphragm PTFE
- optical diaphragm-rupture indication with manometer


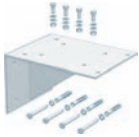
Motor:

- 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 |
|---------------|--------------|---|
| R410.2-55ML | 16013364 | |
| R410.2-70ML | 16013365 | |
| R410.2-105ML | 16013366 | |
| R410.2-135ML | 16013367 | |
| R410.2-400ML | 16013368 | |
| R410.2-500ML | 16013369 | |
| R410.2-940ML | 16013370 | |
| R410.2-1200ML | 16013371 | |

| Options/Accessories | | R410.2-55ML R410.2-70ML | x | R410.2-105ML R410.2-135ML | x | R410.2-400ML R410.2-500ML | x | R410.2-940ML R410.2-1200ML | x |
|--|---|---------------------------------------|----------|------------------------------|----------|------------------------------|----------|-------------------------------|---|
| Stroke frequency adjustment electrical  | Frequency converter series 8200 Motec mounted-on, input 4-20mA | | | | | | | | |
| | Single-phase 230 V, 50/60 Hz | 0,75 kW | 90017524 | 90017524 | 90017524 | | | | |
| | | 1,5 kW | — | — | — | 90018865 | | | |
| | Three-phase 320-550 V, +/- 0%, 50/60 Hz | 0,75 kW | 90017527 | 90017527 | 90017527 | | | | |
| | | 1,5 kW | — | — | — | 90017528 | | | |
| | Console  | for wall mounting incl. fixing screws | 1.4301 | 90023876 | 90023876 | 90023876 | 90023876 | 90023876 | |
| PP | | | 90023849 | 90023849 | 90023849 | 90023849 | 90023849 | | |
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R410.2-...ML

| | | R410.2-55ML | | R410.2-75ML | | R410.2-105ML | | R410.2-135ML | | R410.2-400ML R410.2-500ML | | R410.2-940ML R410.2-1200ML | |
|---|---------------------------|-------------|------|-------------|------|--------------|------|--------------|------|------------------------------|------|-------------------------------|------|
| | | Type | P. | Type | P. | Type | P. | Type | P. | Type | P. | Type | P. |
| Pulsation damper without separating diaphragm | PVC-U / PP | 702.1 | 3.14 | 702.1 | 3.14 | 702.1 | 3.14 | 702.1 | 3.14 | 702.1 | 3.14 | 702.1 | 3.14 |
| | 1.4571 | ⊗ | | ⊗ | | ⊗ | | ⊗ | | ⊗ | | ⊗ | |
| Suction lance | with level switch 1-stage | SL-02 | 3.36 | SL-02 | 3.36 | – | | – | | SLP-151.1 | 3.42 | – | |
| | | S-03 | 3.38 | S-03 | 3.38 | – | | – | | – | | – | |
| | without level switch | S-01 | 3.46 | S-01 | 3.46 | S-01 | 3.46 | S-01 | 3.46 | S-01 | 3.46 | S-01 | 3.46 |
| Priming aid / Siphon vessel | PVC-U transparent | 770.2 | 3.78 | 770.2 | 3.76 | 770.2 | 3.76 | 770.2 | 3.76 | 770.2 | 3.76 | 770.2 | 3.76 |
| Calibration pot | PVC-U | 792.1 | 3.78 | 792.1 | 3.78 | 792.1 | 3.78 | 794.1 | 3.78 | 795.1 | 3.78 | 795.1 | 3.78 |
| Foot valve | PVC-U | 731 | 3.82 | 731 | 3.82 | 732.2 | 3.80 | 732.2 | 3.80 | 732.2 | 3.80 | 732.2 | 3.80 |
| | PP / PVDF | – | | – | | 732 | 3.82 | 732 | 3.82 | 732 | 3.82 | 732 | 3.82 |
| | 1.4571 | 731 | 3.82 | 731 | 3.82 | 732 | 3.82 | 732 | 3.82 | 732 | 3.82 | 732 | 3.82 |
| | PP-FRP / PVDF-FRP | 781.1 | 3.86 | 781.1 | 3.86 | 783.1 | 3.86 | 783.1 | 3.86 | 783.1 | 3.86 | 783.1 | 3.86 |
| Line strainer | PVC-U / PP / PVDF | 752.1 | 3.88 | 752.1 | 3.88 | 752.1 | 3.88 | 752.1 | 3.88 | 752.1 | 3.88 | 752.1 | 3.88 |
| | 1.4408 | 752 | 3.90 | 752 | 3.90 | 752 | 3.90 | 752 | 3.90 | 752 | 3.90 | 752 | 3.90 |
| | PVC-U | 751.1 | 3.88 | 751.1 | 3.88 | – | | – | | – | | – | |
| Float valve | PVC-U | 871 | 3.92 | 871 | 3.92 | 872 | 3.92 | 872 | 3.92 | 872 | 3.92 | 872 | 3.92 |

| Fittings for the pressure side of dosing pumps | | R410.2-55ML | | R410.2-75ML | | R410.2-105ML | | R410.2-135ML | | R410.2-400ML R410.2-500ML | | R410.2-940ML R410.2-1200ML | |
|---|-------------------|----------------|------|----------------|------|----------------|------|----------------|------|------------------------------|------|-------------------------------|------|
| | | Type | P. | Type | P. | Type | P. | Type | P. | Type | P. | Type | P. |
| Diaphragm-type relief valve | | 620.10 | 3.4 | 620.10 | 3.4 | 622.10 | 3.4 | 622.10 | 3.4 | 622.10 | 3.4 | 623.10 | 3.4 |
| Diaphragm-type pressure keeping valve | | 620.D | 3.8 | 620.D | 3.8 | 622.D | 3.8 | 622.D | 3.8 | 622.D | 3.8 | 622.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 | 702.1 | 3.14 | 703.1 | 3.14 |
| | 1.4571 | ⊗ | | ⊗ | | ⊗ | | ⊗ | | ⊗ | | ⊗ | |
| Diaphragm-pulsation damper with PTFE/PTFE-faced diaphragm | PVC-U / PP / PVDF | 721.2 | 3.24 | 722.1 | 3.24 | 722.1 | 3.24 | 722.1 | 3.24 | – | | – | |
| | 1.4571 | 721.1 | 3.26 | 722.1 | 3.26 | 722.1 | 3.26 | 722.1 | 3.26 | – | | – | |
| Diaphragm-pulsation damper with Elastomer-diaphragm | PVC-U / PP / PVDF | – | | – | | – | | – | | 713.1 | 3.18 | 713.1 | 3.18 |
| | 1.4571 | 810.1-0,16/180 | 3.28 | 810.1-0,32/160 | 3.28 | 810.1-0,32/160 | 3.28 | 810.1-0,32/160 | 3.28 | 810.1-2,0/100 | 3.28 | 810.1-2,0/100 | 3.28 |
| Check valve | PP-FRP / PVDF-FRP | 661.2 | 3.50 | 661.2 | 3.50 | 663.2 | 3.50 | 663.2 | 3.50 | 663.2 | 3.50 | 663.2 | 3.50 |
| | 1.4571 | 661.2 | 3.50 | 661.2 | 3.50 | 662.2 | 3.50 | 662.2 | 3.50 | 662.2 | 3.50 | 663.2 | 3.50 |
| | PVC-U | 661.2 | 3.50 | 661.2 | 3.50 | – | | – | | – | | – | |
| Dosing valve | PP-FRP / PVDF-FRP | 691.1 | 3.54 | 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 | 691.1 | 3.54 | 692.1 | 3.54 | 692.1 | 3.54 | 692.1 | 3.54 | 693.1 | 3.54 |
| | PVC-U / PP / PVDF | 681.1 | 3.58 | 681.1 | 3.58 | 682.1 | 3.58 | 682.1 | 3.58 | 682.1 | 3.58 | 683.1 | 3.58 |
| | PVC-U | 691.1 | 3.54 | 691.1 | 3.54 | – | | – | | – | | – | |

⊗ = 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 troublefree 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**.