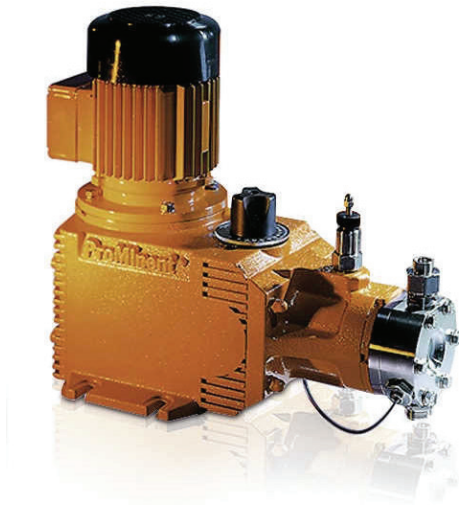


Hydraulic Diaphragm Metering Pump Hydro/ 3

For flexible metering with excellent process reliability in the medium pressure range

ProMinent®



Capacity range of single head pump: 10 – 180 l/h; 100 – 25 bar

The Hydro/ 3 hydraulic diaphragm metering pump (HP3a), together with the Hydro/ 2 and Hydro/ 4 pumps, represents an integrated product range with stroke lengths of 15 and/or 20 mm. This covers the capacity range from 3 to 1,450 l/h at 100 – 7 bar. A wide range of power end versions is available for use in areas at risk from explosion with ATEX certification. The Hydro product range is designed to comply with API 675 among others.

Your benefits

Excellent process safety and reliability:

- PTFE multi-layer diaphragm with integral diaphragm rupture warning system.
- Integral hydraulic relief valve.
- Metering reproducibility is better than $\pm 1\%$ within the 20-100% stroke volume range under defined conditions and with proper installation.

Excellent flexibility:

- The modular construction with single and double head versions permits a wide range of applications, with the double head designs being operated in push-pull mode.
- It is possible to combine up to 5 metering units, even with different pump capacities, in multiple pump systems.
- 5 different gear ratios are available.

Field of application

- Oil and gas industry
- Volume-proportional metering of chemicals/additives in the treatment of boiler feed water
- Metering of reactants and catalysts in the chemical industry
- Level-dependent metering of auxiliary agents in industrial production engineering, for instance hot wax metering in the production of adhesive strips



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Technical Data

| Type HP3a | With 1500 rpm motor at 50 Hz | | | | With 1800 rpm motor at 60 Hz | | | | Suction lift | Perm. pre- pressure suction side | Connection on suction/ pressure side | Shipping weight | Plunger Ø |
|--------------|---------------------------------------|-----|---------------------|-------------|--|--------------|---------------------|------|-----------------|---|---|--------------------|-----------|
| | Delivery rate at max.back pressure | | Max. stroke rate | | Delivery rate at max. back pressure | | Max. stroke rate | | | | | | |
| | bar | l/h | ml/ stroke | Strokes/min | psi | l/h/gph (US) | Strokes/ min | m WC | bar | G-DN | kg | mm | |
| 100010* | 100 | 10 | 2.8 | 60 | 1,450 | 12/3.2 | 72 | 3.0 | 5 | Rp 3/8-10* | 41 | 22 | |
| 100021* | 100 | 21 | 2.8 | 125 | 1,450 | 25/6.6 | 150 | 3.0 | 5 | Rp 3/8-10* | 41 | 22 | |
| 100025* | 100 | 25 | 2.8 | 150 | 1,450 | 30/7.9 | 180 | 3.0 | 5 | Rp 3/8-10* | 41 | 22 | |
| 100031* | 100 | 31 | 2.8 | 187 | 1,450 | 37/9.8 | 224 | 3.0 | 5 | Rp 3/8-10* | 41 | 22 | |
| 100035* | 100 | 35 | 2.8 | 212 | 1,450 | | - | 3.0 | 5 | Rp 3/8-10* | 41 | 22 | |
| 064019 | 64 | 19 | 5.3 | 60 | 928 | 23/6.1 | 72 | 3.0 | 5 | G 3/4-10** | 41 | 26 | |
| 064040 | 64 | 40 | 5.3 | 125 | 928 | 48/12.7 | 150 | 3.0 | 5 | G 3/4-10** | 41 | 26 | |
| 064048 | 64 | 48 | 5.3 | 150 | 928 | 58/15.3 | 180 | 3.0 | 5 | G 3/4-10** | 41 | 26 | |
| 064060 | 64 | 60 | 5.3 | 187 | 928 | 72/19.0 | 224 | 3.0 | 5 | G 3/4-10** | 41 | 26 | |
| 064068 | 64 | 68 | 5.3 | 212 | 928 | | - | 3.0 | 5 | G 3/4-10** | 41 | 26 | |
| 025048 | 25 | 48 | 13.4 | 60 | 362 | 58/15.3 | 72 | 3.0 | 5 | G 1-15*** | 41 | 38 | |
| 025100 | 25 | 100 | 13.4 | 125 | 362 | 120/31.7 | 150 | 3.0 | 5 | G 1-15*** | 41 | 38 | |
| 025120 | 25 | 120 | 13.4 | 150 | 362 | 144/38.0 | 180 | 3.0 | 5 | G 1-15*** | 41 | 38 | |
| 025150 | 25 | 150 | 13.4 | 187 | 362 | 180/47.6 | 224 | 3.0 | 5 | G 1-15*** | 41 | 38 | |
| 025170 | 25 | 170 | 13.4 | 212 | 362 | | - | 3.0 | 5 | G 1-15*** | 41 | 38 | |

Version PVDF max. 25 bar.

* Version SST/HCT with double ball valve, valve connector on the suction/discharge side with female thread Rp 3/8 and external thread G 3/4 - DN 10

** HV design (SST only) with G 1 - DN 15 connector

*** HV design (SST only) with 1 1/4" DN 20 connector

Materials in Contact With the Medium

| Material | Dosing head | Suction/pressure connector | Seals/ball seat | Balls |
|----------|--------------------------------|--------------------------------|------------------------------|---------|
| SST | Stainless steel 1.4571/1.4404 | Stainless steel 1.4581 | PTFE/stainless steel 1.4404) | Ceramic |
| PVT* | PVDF (polyvinylidene fluoride) | PVDF (polyvinylidene fluoride) | PTFE/PTFE | Ceramic |
| HCT | Hastelloy C | Hastelloy C | PTFE/Hastelloy C | Ceramic |
| TTT | PTFE + 25 % carbon | PVDF (polyvinylidene fluoride) | PTFE/PTFE | Ceramic |

* not for areas at risk from explosion



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Motor Data

| Identity code specification | | Power supply | | | Remarks |
|-----------------------------|---------------------------------|-------------------------|----------|---------|--|
| S | 3-phase, IP 55 | 220 – 240 V/380 – 420 V | 50 Hz | 0.75 kW | |
| | | 250 – 280 V/440 – 480 V | 60 Hz | | |
| T | 3-phase, IP 55 | 220 – 240 V/380 – 420 V | 50 Hz | 0.75 kW | with PTC, speed control range 1:5 |
| | | 265 – 280 V/440 – 480 V | 60 Hz | | |
| R | 3-phase, IP 55 | 230 V/400 V | 50/60 Hz | 0.75 kW | with PTC, speed adjustment range 1:20 with external fan 1-phase 230V; 50/60 Hz |
| V0 | 1-phase, IP 55 | 230 V ±10% | 50/60 Hz | 0.75 kW | Variable speed motor with integrated frequency converter |
| L1 | 3-phase, II 2G Ex h IIC T3 Gb X | 220 – 240 V/380 – 420 V | 50 Hz | 0.75 kW | |
| L2 | 3-phase, II 2G Ex h IIC T4 Gb X | 220 – 240 V/380 – 420 V | 50 Hz | 0.75 kW | with PTC, speed control range 1:5 |
| P1 | 3-phase, II 2G Ex h IIC T3 Gb X | 254 – 277 V/440 – 480 V | 60 Hz | 0.75 kW | |
| P2 | 3-phase, II 2G Ex h IIC T4 Gb X | 254 – 277 V/440 – 480 V | 60 Hz | 0.75 kW | with PTC, speed control range 1:5 |
| V2 | 3-phase, II 2G Ex h IIC T4 Gb X | 400 V ±10% | 50/60 Hz | 0.75 kW | Ex-variable speed motor with integrated frequency converter |

Motor data sheets can be requested for more information. Motors for Sigma basic pumps, special motors or special motor flanges are available on request.

The motors are designed in compliance with the Ecodesign Directive 2009/125/EC.

Information for use in areas at risk from explosion

Only use pumps with the appropriate labelling in line with the ATEX Directive 2014/34/EU in premises at risk from explosion.

Ensure that the explosion group, category and degree of protection specified on the label corresponds to or is better than the conditions prevalent in the intended field of application.

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