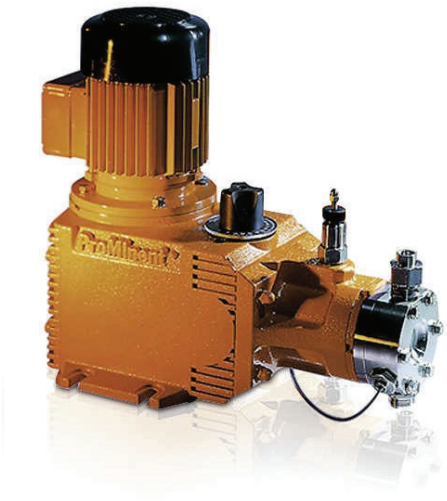
Hydraulic Diaphragm Metering Pump Hydro/ 2

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



Capacity range of single head pump: 3 – 72 l/h; 100 – 25 bar

The Hydro/ 2 hydraulic diaphragm metering pump (HP2a), together with the Hydro/ 3 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 ± 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 HP2a	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
100003*	100	3	0.8	60	1,450	3.6/1.0	72	3.0	5	Rp 1/4*	31	16
100006*	100	6	0.8	125	1,450	7.0/1.8	150	3.0	5	Rp 1/4*	31	16
100007*	100	7	0.8	150	1,450	8.0/2.1	180	3.0	5	Rp 1/4*	31	16
100009*	100	9	0.8	187	1,450	11.0/2.9	224	3.0	5	Rp 1/4*	31	16
100010*	100	10	0.8	212	–		–	3.0	5	Rp 1/4*	31	16
064007	64	7	2.0	60	928	8.4/2.2	72	3.0	5	G 3/4-10	31	18
064015	64	15	2.0	125	928	18.0/4.8	150	3.0	5	G 3/4-10	31	18
064018	64	18	2.0	150	928	21.0/5.5	180	3.0	5	G 3/4-10	31	18
064022	64	22	2.0	187	928	26.0/6.9	224	3.0	5	G 3/4-10	31	18
064025	64	25	2.0	212	–		–	3.0	5	G 3/4-10	31	18
025019	25	19	5.3	60	362	23.0/6.1	72	3.0	5	G 3/4-10**	31	26
025040	25	40	5.3	125	362	48.0/12.7	150	3.0	5	G 3/4-10**	31	26
025048	25	48	5.3	150	362	58.0/15.3	180	3.0	5	G 3/4-10**	31	26
025060	25	60	5.3	187	362	72.0/19.0	224	3.0	5	G 3/4-10**	31	26
025068	25	68	5.3	212	–		–	3.0	5	G 3/4-10**	31	26

Version PVDF max. 25 bar.

* Version SST/HCT with double ball valve, valve connector on the suction-pressure with female thread Rp 1/4 and external thread G 3/4 - DN 10

** HV design with G1 - DN 15 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/ZrO2 (DN 15 – 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 250 – 280 V/440 – 480 V	50 Hz 60 Hz	0.37 kW	
T	3-phase, IP 55	220 – 240 V/380 – 420 V 265 – 280 V/440 – 480 V	50 Hz 60 Hz	0.37 kW	with PTC, speed control range 1:5
R	3-phase, IP 55	230 V/400 V	50/60 Hz	0.37 kW	with PTC, speed adjustment range 1:20 with external fan 1-phase 230 V; 50/60 Hz
V0	1-phase, IP 55	230 V ±10%	50/60 Hz	0.37 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	0.37 kW	
L2	3-phase, II 2G Ex h IIC T4 Gb X	220 – 240 V/380 – 420 V	50 Hz	0.37 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	0.37 kW	
P2	3-phase, II 2G Ex h IIC T4 Gb X	254 – 277 V/440 – 480 V	60 Hz	0.37 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	0.55 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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