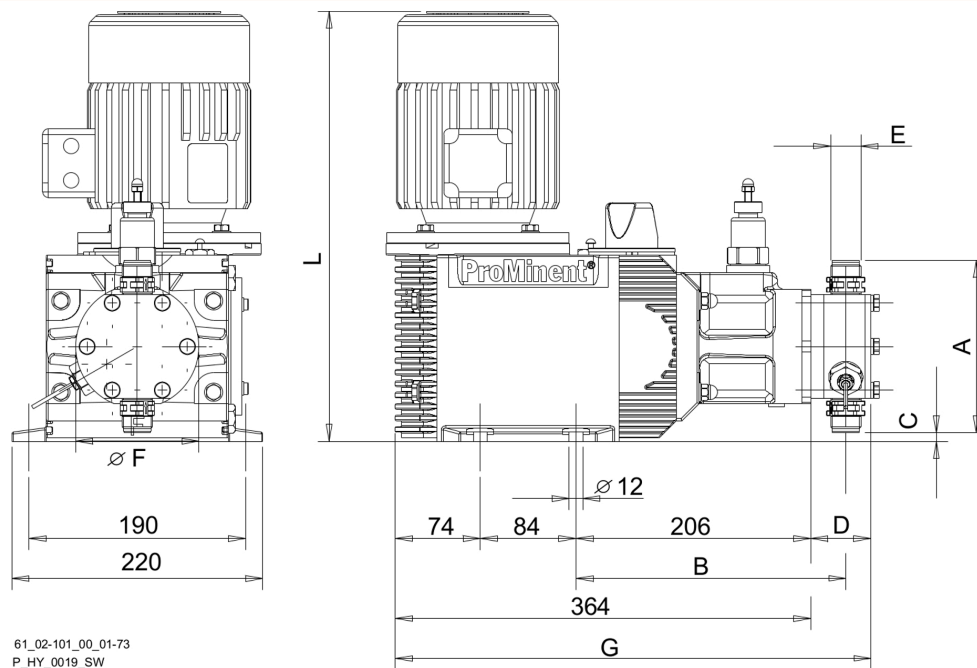


Hydraulic diaphragm metering pump HYDRO Classic

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



Exemplary representation. The dimensions depend on the configuration chosen.

As an extremely robust hydraulic diaphragm metering pump, the HYDRO range meets the most exacting safety requirements. Its modular construction, with either one or two dosing heads, 4 gear ratios, 2 dosing head sizes and 3 dosing head materials, offers a very high degree of flexibility in terms of areas of application.

Technical Details

- Stroke length: 15 mm (HP2a, HP3a), 20 mm (HP4a)
- Rod force: 2000 N (HP2a), 4200 N (HP3a), 5800 N (HP4a)
- Stroke volume adjustment range: 0 – 100%
- Stroke volume adjustment: manually using scaled rotary dial (optionally with electric actuator or control drive)
- Metering reproducibility is better than $\pm 1\%$ in the 20 to 100% stroke volume range under defined conditions and with correct installation
- PTFE multi-layer diaphragm with electrical diaphragm rupture warning/signalling system via a contact
- Integrated hydraulic relief and bleed valve
- Wetted materials: PVDF, PTFE+25% carbon, stainless steel 1.4571, Hastelloy C.
- A wide range of drive versions is available: Three-phase or 1-phase AC motor, motors for use in areas at risk from explosion, different flange designs for use of customer-specific motors
- Degree of protection: IP 55

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Hydraulic diaphragm metering pump HYDRO Classic

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

Hydraulic Diaphragm Metering Pump HYDRO HP2a

Technical data for HYDRO HP2a

Type	Capacity at max. back pressure with 1500 rpm motor at 50 Hz				Capacity at max. back pressure at 60 Hz			Suction lift m WC	Perm. pre-pressure suction side bar	Suction/discharge side connector G-DN	Shipping weight kg	Plunger Ø mm
	l/h	bar	ml/stroke	Max. stroke rate Strokes/min	psi	l/h / gph (US)	Max. stroke rate Strokes/min					
100003 *	3	100	3.0	60	1,450	3.6/1.0	72	3.0	5	Rp 1/4	31	16
100006 *	6	100	3.0	125	1,450	7.0/1.8	150	3.0	5	Rp 1/4	31	16
100007 *	7	100	3.0	150	1,450	8.0/2.1	180	3.0	5	Rp 1/4	31	16
100009 *	9	100	3.0	187	1,450	11.0/2.9	224	3.0	5	Rp 1/4	31	16
100010 *	10	100	3.0	212	-	-	-	3.0	5	Rp 1/4	31	16
064007	7	64	3.8	60	928	8.4/2.2	72	3.0	5	G 3/4-10	31	18
064015	15	64	3.8	125	928	18.0/4.8	150	3.0	5	G 3/4-10	31	18
064018	18	64	3.8	150	928	21.0/5.5	180	3.0	5	G 3/4-10	31	18
064022	22	64	3.8	187	928	26.0/6.9	224	3.0	5	G 3/4-10	31	18
064025	25	64	3.8	212	-	-	-	3.0	5	G 3/4-10	31	18
040014	14	40	5.7	60	580	16.8/4.4	72	3.0	5	G 3/4-10	31	22
040029	29	40	5.7	125	580	34.8/9.2	150	3.0	5	G 3/4-10	31	22
040035	35	40	5.7	150	580	42.0/11.1	180	3.0	5	G 3/4-10	31	22
040044	44	40	5.7	187	580	52.8/13.9	224	3.0	5	G 3/4-10	31	22
040050	50	40	5.7	212	580	-	-	3.0	5	G 3/4-10	31	22
025019 **	19	25	7.9	60	362	23.0/6.1	72	3.0	5	G 3/4-10	31	26
025040 **	40	25	7.9	125	362	48.0/12.7	150	3.0	5	G 3/4-10	31	26
025048 **	48	25	7.9	150	362	58.0/15.3	180	3.0	5	G 3/4-10	31	26
025060 **	60	25	7.9	187	362	72.0/19.0	224	3.0	5	G 3/4-10	31	26
025068 **	68	25	7.9	212	-	-	-	3.0	5	G 3/4-10	31	26

* SST version with double ball valve, valve connector on the suction-discharge side with female thread Rp 1/4 and male thread G 3/4 - DN 10

** HV design with G1 - DN 15 connector

PVDF version max. 25 bar, PTFE + 25 % carbon; PTFE max.16 bar

Wetted materials for HYDRO HP2a

Identity code of material	Dosing head	Connection on suction/discharge side	Seals/ball seat	Balls
PVT *	PVDF	PVDF	PTFE/PTFE + 25 % carbon	Ceramic
SST	Stainless steel 1.4571/1.4404	Stainless steel 1.4581	PTFE/stainless steel 1.4404	Ceramic
TTT	PTFE + 25% carbon	PVDF (polyvinylidene fluoride)	PTFE/PTFE + 25 % carbon	Ceramic

* Not for areas at risk from explosion

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Hydraulic diaphragm metering pump HYDRO Classic

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

Motor data for HYDRO HP2a

Identity code specification		Power supply		Remarks
S	3-phase, IP 55*	230 V/400 V	50 Hz	0.37 kW
T	3-phase, IP 55*	230 V/400 V 265 V/460 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 Hz	0.45 kW With PTC, speed control range 1:20, with external fan 1-phase 230 V; 50/60 Hz
V0	1-phase, IP 55*	230 V	50 Hz	0.37 kW Variable speed stroke control motor with integrated frequency converter
L2	3-phase, II 2G Ex de IIC T4 Gb	230 V/400 V	50 Hz	0.37 kW With PTC, speed control range 1:5
P2	3-phase, II 2G Ex de IIC T4	265 V/460 V	60 Hz	0.37 kW With PTC, speed control range 1:5

* Three-phase motor according to IEC 60034-1

Motor data sheets can be requested for more information. Versions 265/460V - 60Hz, special motors or special motor flanges are available on request.

Information for use in areas at risk from explosion

Only use pumps with the appropriate labelling in line with the ATEX Directive 2014/34/EC in premises at risk from explosion. Ensure that the explosion group, category and degree of protection specified on the label correspond to or are superior to the conditions prevalent in the intended application.

Hydraulic Diaphragm Metering Pump HYDRO HP3a

Technical data for HYDRO HP3a

Type	Capacity at max. back pressure with 1500 rpm motor at 50 Hz				Capacity at max. back pressure at 60 Hz				Suction lift	Perm. pre-pressure suction side	Suction/discharge side connector	Shipping weight	Plunger Ø
	I/h	bar	ml/stroke	Max. stroke rate Strokes/min	psi	I/h / gph (US)	Max. stroke rate Strokes/min	m WC					
100010	10	100	5.7	60	1,450	12/3.2	72	3.0	5	Rp 3/8-10	41	22	
100021 *	21	100	5.7	125	1,450	25/6.6	150	3.0	5	Rp 3/8-10	41	22	
100025 *	25	100	5.7	150	1,450	30/7.9	180	3.0	5	Rp 3/8-10	41	22	
100031 *	31	100	5.7	187	1,450	37/9.8	224	3.0	5	Rp 3/8-10	41	22	
100035 *	35	100	5.7	212	1,450	-	-	3.0	5	Rp 3/8-10	41	22	
064019 **	19	64	7.9	60	928	23/6.1	72	3.0	5	G 3/4-10	41	26	
064040 **	40	64	7.9	125	928	48/12.7	150	3.0	5	G 3/4-10	41	26	
064048 **	48	64	7.9	150	928	58/15.3	180	3.0	5	G 3/4-10	41	26	
064060 **	60	64	7.9	187	928	72/19.0	224	3.0	5	G 3/4-10	41	26	
064068 **	68	64	7.9	212	928	-	-	3.0	5	G 3/4-10	41	26	
040029 ***	29	40	12.0	60	580	35/9.2	72	3.0	5	G 1-15	41	32	
040062 ***	62	40	12.0	125	580	74/19.7	150	3.0	5	G 1-15	41	32	
040074 ***	74	40	12.0	150	580	89/23.5	180	3.0	5	G 1-15	41	32	
040092 ***	92	40	12.0	187	580	110/29.2	224	3.0	5	G 1-15	41	32	
040105 ***	105	40	12.0	212	580	-	-	3.0	5	G 1-15	41	32	
025048 ***	48	25	17.0	60	362	58/15.3	72	3.0	5	G 1-15	41	38	
025100 ***	100	25	17.0	125	362	120/31.7	150	3.0	5	G 1-15	41	38	
025120 ***	120	25	17.0	150	362	144/38.0	180	3.0	5	G 1-15	41	38	
025150 ***	150	25	17.0	187	362	180/47.6	224	3.0	5	G 1-15	41	38	
025170 ***	170	25	17.0	212	362	-	-	3.0	5	G 1-15	41	38	

* SST version with double ball valve, valve connector on the suction/discharge side with female thread Rp 3/8, male 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

Hydraulic diaphragm metering pump HYDRO Classic

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

PVDF version max. 25 bar, PTFE + 25 % carbon; PTFE max.16 bar

SST version with double ball valve, valve connector on the suction/discharge side with female thread Rp 3/8, male thread G 3/4-DN 10

Wetted materials for HYDRO HP3a

Identity code of material	Dosing head	Connection on suction/ discharge side	Seals/ball seat	Balls
PVT *	PVDF	PVDF	PTFE/PTFE + 25 % carbon	Ceramic
SST	Stainless steel 1.4571/1.4404	Stainless steel 1.4581	PTFE/ZrO ₂ (DN 15/DN20 stainless steel 1.4404)	Ceramic
TTT	PTFE + 25% carbon	PVDF (polyvinylidene fluoride)	PTFE/PTFE + 25 % carbon	Ceramic

* Not for areas at risk from explosion

Motor data for HYDRO HP3a

Identity code specification		Power supply			Remarks
S	3-phase, IP 55*	230 V/400 V	50 Hz	0.75 kW	
T	3-phase, IP 55*	230 V/400 V 265 V/460 V	50 Hz 60 Hz	0.75 kW	With PTC, speed control range 1:5
R	3-phase, IP 55*	230 V/400 V	50 Hz	0.75 kW	With PTC, speed control range 1:20, with external fan 1-phase 230 V; 50/60 Hz
V0	1-phase, IP 55*	230 V	50 Hz	0.75 kW	Variable speed stroke control motor with integrated frequency converter
L2	3-phase, II 2G Ex de IIC T4	230 V/400 V	50 Hz	0.75 kW	With PTC, speed control range 1:5
P2	3-phase, II 2G Ex de IIC T4	265 V/460 V	60 Hz	0.75 kW	With PTC, speed control range 1:5

* 3-phase AC motor in accordance with IEC 60034-1

Motor data sheets can be requested for more information. 265/460V - 60Hz versions, special motors or special motor flanges are available on request.

Information for use in areas at risk from explosion

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Hydraulic diaphragm metering pump HYDRO Classic

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

Hydraulic Diaphragm Metering Pump HYDRO HP4a

Technical data for HYDRO HP4a

Type	Capacity at max. back pressure with 1500 rpm motor at 50 Hz				Capacity at max. back pressure at 60 Hz			Suction lift	Perm. pre-pressure suction side	Suction/discharge side connector	Shipping weight	Plunger Ø
	I/h	bar	ml/stroke	Max. stroke rate Strokes/min	psi	I/h / gph (US)	Max. stroke rate Strokes/min					
400071	71	40	25.1	71	580	85/22	86	3	1	G 1 1/2-25	69	40
400105	105	40	25.1	103	580	126/33	124	3	1	G 1 1/2-25	69	40
400140	140	40	25.1	136	580	168/44	164	3	1	G 1 1/2-25	69	40
400190	190	40	25.1	188	580	188/49	225	3	1	G 1 1/2-25	69	40
400220	220	40	25.1	214	580	-	-	3	1	G 1 1/2-25	69	40
250130	130	25	42.4	71	363	155/41	86	3	1	G 1 1/2-25	69	52
250190	190	25	42.4	103	363	230/61	124	3	1	G 1 1/2-25	69	52
250250	250	25	42.4	136	363	300/79	164	3	1	G 1 1/2-25	69	52
250350	350	25	42.4	188	363	420/111	225	3	1	G 1 1/2-25	69	52
250400	400	25	42.4	214	-	-	-	3	1	G 1 1/2-25	69	52
160210	210	16	62.3	71	232	250/66	86	3	1	G 1 1/2-25	76	63
160300	300	16	62.3	103	232	360/95	124	3	1	G 1 1/2-25	76	63
160400	400	16	62.3	136	232	480/127	164	3	1	G 1 1/2-25	76	63
160550	550	16	62.3	188	232	660/174	225	3	1	G 1 1/2-25	76	63
160625	625	16	62.3	214	-	-	-	3	1	G 1 1/2-25	76	63
100330	330	10	100.4	71	145	400/106	86	3	1	G 2-32	87	80
100480	480	10	100.4	103	145	580/153	124	3	1	G 2-32	87	80
100635	635	10	100.4	136	145	760/201	164	3	1	G 2-32	87	80
100880	880	10	100.4	188	145	1,050/277	225	3	1	G 2-32	87	80
101000	1,000	10	100.4	214	-	-	-	3	1	G 2-32	87	80
070465	465	7	138.7	71	102	560/148	86	3	1	G 2 1/4-40	96	94
070670	670	7	138.7	103	102	805/213	124	3	1	G 2 1/4-40	96	94
070890	890	7	138.7	136	102	1,070/283	164	3	1	G 2 1/4-40	96	94
071230	1,230	7	138.7	188	102	1,450/383	225	3	1	G 2 1/4-40	96	94
071400	1,400	7	138.7	214	-	-	-	3	1	G 2 1/4-40	96	94

PVDF version max. 25 bar, PTFE + 25 % carbon; PTFE max.10 bar

Wetted materials for HYDRO HP4a

Identity code of material	Dosing head	Connection on suction/discharge side	Seals	Valve seats	Valve balls up to DN 25	Valve plates/valve springs
PVT *	PVDF	PVDF	PTFE	PTFE + 25% carbon	Glass	Ceramic/E-CTFE
SST	Stainless steel 1.4404	Stainless steel 1.4404	PTFE	PTFE	Stainless steel 1.4401	Stainless steel 1.4404/Hastelloy C
TTT	PTFE + 25% carbon	PVDF (polyvinylidene fluoride)	PTFE	PTFE + 25% carbon	Glass	Ceramic/E-CTFE

* Not for areas at risk from explosion

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Hydraulic diaphragm metering pump HYDRO Classic

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

Motor data for HYDRO HP4a

Identity code specification		Power supply			Remarks
S	3-phase, IP 55*	230 V/400 V	50 Hz	1.1 kW	
T	3-phase, IP 55*	230 V/400 V 265 V/460 V	50 Hz 60 Hz	1.1 kW	With PTC, speed control range 1:5
R	3-phase, IP 55*	230 V/400 V	50 Hz	1.5 kW	With PTC, speed control range 1:20, with external fan 1-phase 230 V; 50/60 Hz
V0	3-phase, IP 55*	400 V	50 Hz	1.5 kW	Variable speed stroke control motor with integrated frequency converter
L2	3-phase, II 2G Ex de IIC T4 Gb	230 V/400 V	50 Hz	1.1 kW	With PTC, speed control range 1:5
P2	3-phase, II 2G Ex de IIC T4	265 V/460 V	60 Hz	1.1 kW	With PTC, speed control range 1:5

* 3-phase AC motor in accordance with IEC 60034-1

Motor data sheets can be requested for more information. 265/460V - 60Hz versions, special motors or special motor flanges are available on request.

Information for use in areas at risk from explosion

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