

## 2.6

# ProMinent® Hydro Hydraulic Diaphragm Metering Pumps

### 2.6.7

## Technical Data Hydro/ 4

	Type HP4aH With motor 1500 rpm at 50 Hz						With motor 1800 rpm at 60 Hz			
	Delivery rate at max. back pressure		Max. stroke rate	Delivery rate at max. back pressure		Max. stroke rate	Suction height	Perm. admss. pressure suction side	Connection on suction/ pressure side	Shipping weight
	bar	l/h	strokes/ min	psi	l/h	strokes/ min	mWC	bar	G-DN	kg
400071	40	71	71	580	85	86	3	1	1-1/2" 25	69
400105	40	105	103	580	126	124	3	1	1-1/2" 25	69
400140	40	140	136	580	168	164	3	1	1-1/2" 25	69
400190	40	190	188	580	188	225	3	1	1-1/2" 25	69
400220	40	220	214	580	-	-	3	1	1-1/2" 25	69
250130	25	130	71	363	155	86	3	1	1-1/2" 25	69
250190	25	190	103	363	230	124	3	1	1-1/2" 25	69
250250	25	250	136	363	300	164	3	1	1-1/2" 25	69
250350	25	350	188	363	420	225	3	1	1-1/2" 25	69
250400	25	400	214	-	-	-	3	1	1-1/2" 25	69
160210	16	210	71	232	250	86	3	1	1-1/2" 25	76
160300	16	300	103	232	360	124	3	1	1-1/2" 25	76
160400	16	400	136	232	480	164	3	1	1-1/2" 25	76
160550	16	550	188	232	660	225	3	1	1-1/2" 25	76
160625	16	625	214	-	-	-	3	1	1-1/2" 25	76
100330	10	330	71	145	400	86	3	1	2" 32	87
100480	10	480	103	145	580	124	3	1	2" 32	87
100635	10	635	136	145	760	164	3	1	2" 32	87
100880	10	880	188	145	1050	225	3	1	2" 32	87
101000	10	1000	214	-	-	-	3	1	2" 32	87
070465	7	465	71	102	560	86	3	1	2-1/4" 40	96
070670	7	670	103	102	805	124	3	1	2-1/4" 40	96
070890	7	890	136	102	1070	164	3	1	2-1/4" 40	96
071230	7	1230	188	102	1450	225	3	1	2-1/4" 40	96
071400	7	1400	214	-	-	-	3	1	2-1/4" 40	96



## 2.6 ProMinent® Hydro Hydraulic Diaphragm Metering Pumps

### 2.6.7 Technical Data Hydro/ 4

#### Material in contact with media

Material	Liquid End	Suction/Discharge connector	Seals/ball seat	Valve Balls
SST	stainless steel 1.4404	stainless steel no. 1.4401	PTFE/PTFE	stainless steel 1.4404
PVT	PVDF (Polyvinylidenfluoride)	PVDF (Polyvinylidenfluoride)	PTFE/PTFE	glass
HCT	Hast. C	Hast. C	PTFE/PTFE	Hast. C
TTT	PTFE + 20% Carbon	PVDF (Polyvinylidenfluoride)	PTFE/PTFE	glass

DN32 and DN40 plate valves						
Material	Liquid End	Suction/Discharge connector	Seals/seats	Valve plates	Springs	
SST	stainless steel 1.4404	stainless steel no. 1.4401	PTFE/PTFE	stainless steel 1.4404	Hast. C	
PVT	PVDF (Polyvinylidenfluoride)	PVDF (Polyvinylidenfluoride)	PTFE/PTFE	ceramic	C-CTFE	
HCT	Hast. C	Hast. C	PTFE/PTFE	Hast. C	C-CTFE	

#### Motor Data

Identity code specification		Power supply			Remarks
S	3 ph, IP 55	220-240 V/380-420 V	50 Hz	1.1 kW	
		250-280 V/440-480 V	60 Hz		
T	3 ph, IP 55	220-240 V/380-420 V	50 Hz	1.1 kW	With PTC, speed control range 1:5
		265-280 V/440-480 V	60 Hz		
R	3 ph, IP 55	230 V/400 V	50/60 Hz	1.5 kW	With PTC, speed control range 1:20, with external fan 1 ph 230V; 50/60 Hz
V0	3 ph, IP 55	400 V	50/60 Hz	1.5 kW	Variable speed motor w/integrated frequency converter
L1	3 ph, II2GEEExIIIT3	220-240 V/380-420 V	50 Hz	1.1 kW	
L2	3 ph, II2GEEExIIICT4	220-240 V/380-420 V	50 Hz	1.1 kW	With PTC, speed control range 1:5
P1	3 ph, II2GEEExIIIT3	254-277 V/440-480 V	60 Hz	1.1 kW	
P2	3 ph, II2GEEExIIICT4	254-277 V/440-480 V	60 Hz	1.1 kW	With PTC, speed control range 1:5
V2	3 ph, II2GEEExIIICT4	400 V ±10 %	50/60 Hz	1.5 kW	Ex-variable speed motor with integrated frequency converter

#### Motor data sheets can be requested for more information.

Special motors or special motor flanges are available on request.

The motors are designed in compliance with the Ecodesign Directive 2005/32/EC (IE2 standard).

#### Information for use in areas at risk from explosion

Only use pumps with the appropriate labelling in line with the ATEX Directive 94/9/EC in premises at risk from explosion. Ensure that the



# 2.6 ProMinent® Hydro Hydraulic Diaphragm Metering Pumps

## 2.6.8 Identity Code Ordering System For Hydro/ 4 - SINGLE HEAD

HP4a Hydro/ 4

### H Main power end

Pump:	Pump:	Pump:
40071 40 bar, 71 l/h	250130 25 bar, 130 l/h PVT	160210 16 bar, 210 l/h PVT
400105 40 bar, 105 l/h SS	250190 25 bar, 190 l/h SS	160300 16 bar, 300 l/h SS
400140 40 bar, 140 l/h	250250 25 bar, 250 l/h	160400 16 bar, 400 l/h
400190 40 bar, 190 l/h	250350 25 bar, 350 l/h	160550 16 bar, 550 l/h
400220 40 bar, 220 l/h	250400 25 bar, 400 l/h	160625 16 bar, 625 l/h
100330 10 bar, 330 l/h PVT	070465 7 bar, 465 l/h PVT	
100480 10 bar, 480 l/h SS	070670 7 bar, 670 l/h SS	
100635 10 bar, 635 l/h	070890 7 bar, 890 l/h	
100880 10 bar, 880 l/h	071230 7 bar, 1230 l/h	
101000 10 bar, 1000 l/h	071400 7 bar, 1400 l/h	

#### Liquid end material:

- PV PVDF
- SS Stainless steel
- HC Hastalloy C *Price on Application*

#### Seal material:

- T PTFE seal

#### Positive displacement element:

- 0 Standard multi-layer diaphragm with rupture protection signal

#### Liquid end version:

- 0 No valve springs
- 1 With valve springs DN32 and DN40

#### Hydraulic connector:

- 0 Standard threaded connector
- E With DIN ISO flange
- F With ANSI flange

#### Version:

- 0 With ProMinent® logo, with overpressure signal
- 1 Without ProMinent® logo, with overpressure signal
- M Modified

#### Power supply:

- S 3 ph. 230V/400V 50/60 Hz, 1.1kw
- L 3 ph. 230V/400V 50 Hz (Exe, Exd) } See Enclosure Rating
- P 3 ph. 230V/400V 60 Hz (Exe, Exd) } See Enclosure Rating
- R 3ph, variable speed motor 4 pol. 230/400V 1.5 kw
- V (0) var. speed motor with integral speed control
- V (2) var. speed motor with integral speed control Exd

#### Enclosure rating:

- 0 IP 55
- 1 Exe motor version (ATEX-T3)
- 2 Exde motor version (ATEX-T4)

#### Stroke sensor:

- 0 No stroke sensor (standard)
- 1 Stroke sensor for explosion-proof applications

#### Stroke length adjustment:

- 0 Manual (standard)
- 1 With stroke positioning motor, 230V/50/60Hz
- 2 With stroke positioning motor, 115V/60Hz
- B With stroke control motor, 4...20 mA 230 V/50/60Hz
- D With stroke control motor, 4...20 mA 115 V/50/60Hz

#### Hydraulic oil:

- 0 Standard
- 1 Food products grade
- 2 Low Temp. to -25 °C

#### Connection Sizes for PVDF

P0 - 250130 - 250190 - 250250 - 250350 - 250400  
 160210 - 160300 - 160400 - 160550 - 160625  
 1" Male BSPT PVDF adaptor  
 100330 - 100480 - 100635 - 100880 - 101000  
 1-1/2" Male BSPT PVDF Adaptor

#### for SS

250130 - 250190 - 250250 - 250350 - 250400  
 160210 - 160300 - 160400 - 160550 - 160625  
 1" Female BSPF SS Insert and Union Nut  
 100330 - 100480 - 100635 - 100880 - 101000  
 1-1/4" Female BSPF SS Insert and Union Nut

HP4a H 025130 SS T 0 0 0 0 S 0 0 0 0



# 2.6 ProMinent® Hydro Hydraulic Diaphragm Metering Pumps

## 2.6.9 Identity Code Ordering System For Hydro/ 4 - DOUBLE HEAD

**HP4a Hydro/ 4 NOTE: Capacities shown are per Head**

### D Main power end Double Head V\version

Pump type:			Pump type:		
250130	25 bar, 130 l/h	PVT	160210	16 bar, 210 l/h	PVT
250190	25 bar, 190 l/h	SS	160300	16 bar, 300 l/h	SS
250250	25 bar, 250 l/h		160400	16 bar, 400 l/h	
250350	25 bar, 350 l/h		160550	16 bar, 550 l/h	
250400	25 bar, 400 l/h		160625	16 bar, 625 l/h	
100330	10 bar, 330 l/h	PVT	070465	7 bar, 465 l/h	PVT
100480	10 bar, 480 l/h	SS	070670	7 bar, 670 l/h	SS
100635	10 bar, 625 l/h		070890	7 bar, 890 l/h	
100880	10 bar, 880 l/h		071230	7 bar, 1230 l/h	
101000	10 bar, 1000 l/h		071400	7 bar, 1400 l/h	

#### Liquid end material:

- PV PVDF
- SS Stainless steel
- HC Hastalloy C *Price on Application*

#### Seal material:

- T PTFE seal

#### Positive displacement element:

- 0 Standard multi-layer diaphragm with rupture protection signal

#### Liquid end version:

- 0 No valve springs
- 1 With valve springs DN32 and DN40

#### Hydraulic connector:

- 0 Standard threaded connector
- E With DIN ISO flange
- F With ANSI flange

#### Version:

- 0 With ProMinent® logo, with overpressure signal
- 1 Without ProMinent® logo, with overpressure signal
- M Modified

#### Power supply:

- S 3 ph. 230V/400V 50/60 Hz, 1.1kw
- L 3 ph. 230V/400V 50 Hz (Exe, Exd) } See Enclosure Rating
- P 3 ph. 230V/400V 60 Hz (Exe, Exd) } See Enclosure Rating
- R 3ph, variable speed motor 4 pol. 230/400V 1.5 kw
- V (0) var. speed motor with integral speed control
- V (2) var. speed motor with integral speed control Exd

#### Enclosure rating:

- 0 IP 55
- 1 Exe motor version (ATEX-T3)
- 2 Exde motor version (ATEX-T4)

#### Stroke sensor:

- 0 No stroke sensor (standard)
- 1 Stroke sensor for explosion-proof applications

#### Stroke length adjustment:

- 0 Manual (standard)
- 1 With stroke positioning motor, 230V/50/60Hz
- 2 With stroke positioning motor, 115V/60Hz
- B With stroke control motor, 4...20 mA 230V/50/60Hz
- D With stroke control motor, 4...20 mA 115V/50/60Hz

#### Hydraulic oil:

- 0 Standard
- 1 Food products grade
- 2 Low Temp. to -25 °C

#### Connection Sizes

##### for PVDF

PO - 250130 - 250190 - 250250 - 250350 - 250400  
 160210 - 160300 - 160400 - 160550 - 160625  
 1" Male BSPT PVDF adaptor  
 100330 - 100480 - 100635 - 100880 - 101000  
 1-1/2" Male BSPT PVDF Adaptor

##### for SS

250130 - 250190 - 250250 - 250350 - 250400  
 160210 - 160300 - 160400 - 160550 - 160625  
 1" Female BSPF SS Insert and Union Nut  
 100330 - 100480 - 100635 - 100880 - 101000  
 1-1/4" Female BSPF SS Insert and Union Nut

HP4a H 025130 SS T 0 0 0 0 S 0 0 0 0



## 2.6 ProMinent® Hydro Hydraulic Diaphragm Metering Pumps

### 2.6.10 Spare Parts Kits

#### Spare parts kits Hydro/ 4

Applies to identity code: Part No.

Type 250130, 250190, 250250, 250350, 250400

FMH 400 - DN 25	PVT	1023057
	SST	1040812
	SST (with 2 valve set)	1040813

Applies to identity code:

Part No.

Type 160210, 160300, 160400, 160550, 160625

FMH 625 - DN 32	PVT	1040863
	SST	1040824
	SST (with 2 valve set)	1040825

Applies to identity code:

Part No.

Type 100330, 100480, 100635, 100880, 101000

FMH 1000 - DN 32	PVT	1040866
	SST	1040826
	SST (with 2 valve set)	1040827

Applies to identity code:

Part No.

Type 070465, 070670, 070890, 071230, 071400

FMH 1400 - DN 40	PVT	1040869
	SST	1040828
	SST (with 2 valve set)	1040829

#### Hydro /4 Diaphragm PTFE/1.4404

	Part No.
Type 250130, 250190, 250250, 250350, 250400	1040808
Type 160210, 160300, 160400, 160550, 160625	1040809
Type 100330, 100480, 100635, 100880, 101000	1040810
Type 070465, 070670, 070890, 071230, 071400	1040811

#### Hydro /4 Diaphragm PTFE/Hast.C coated

	Part No.
Type 250130, 250190, 250250, 250350, 250400	1040874
Type 160210, 160300, 160400, 160550, 160625	1040875
Type 100330, 100480, 100635, 100880, 101000	1040876
Type 070465, 070670, 070890, 071230, 071400	1040877

