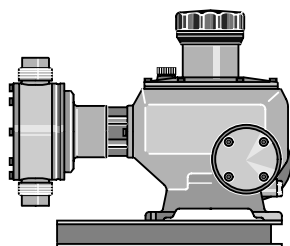


ProMinent® Makro TZ Diaphragm Metering Pumps

Overview: Makro TZ

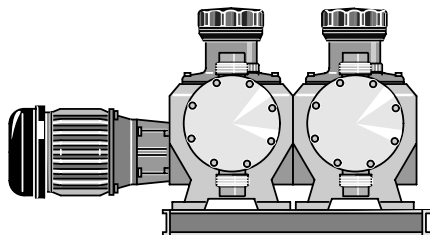


Ideal for high volume and high pressure applications

(see [page 135](#) for spare parts)

The ProMinent® Makro TZMb is a mechanically or hydraulically actuated motor driven diaphragm metering pump.

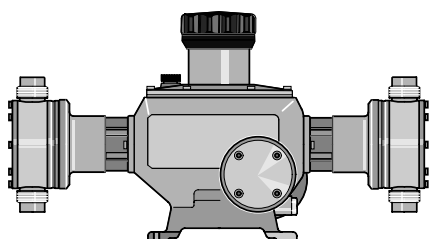
The stroke length can be adjusted by means of the shift ring mechanism from 0-10 mm (TZMb), with 0.5 % accuracy. The 5-speed gearbox is encased in a cast, seawater resistant, acrylic resin lacquered housing. Liquid ends are available in different material combinations to suit differing applications. The suction lift varies according to the density and viscosity of the medium, the dimension of the pipework and the pump stroke rate. Reproducibility of metering is better than ± 2 % in the stroke length range from 30 % - 100 % subject to defined conditions and correct installation. (You must follow the instructions in the operating instruction manual).



pk_2_013

ProMinent® Makro TZ TZMbA Add-On Pumps

The ProMinent® Makro TZ main diaphragm metering pump can be converted to a duplex or triplex pump with the ProMinent® Makro TZ add-on diaphragm pump (several add-on pumps can be operated at reduced back pressure). Multiplex pumps can also be retrofitted by the operator; all the necessary components and fittings are included with the TZMbA. Different stroke rates can be achieved with the add-on pump independently of the main pump as each TZMbA has its own reducing gear. The main power end can be fitted for this purpose with a more powerful drive motor. A base frame is required when using add-on power ends.



pk_2_014

ProMinent® Makro TZ Double Head Version TZMbD/TZMbB

The double head version of the ProMinent® Makro TZ is similar to the simplex pump. It is, however, fitted with a second liquid end.

The liquid ends work in push-pull mode by means of a coupling element in the gearbox.

ProMinent® Makro TZ Diaphragm Metering Pumps

Identcode Ordering System (TZMb)

TZMb

Motor-Driven Metering Pump TZMb Makro TZ 10
(mechanically driven add-on diaphragm pump)

Drive type
H Main drive
A Add-on power end
D Double main drive
B Double add-on power end

Pump type:
120260 070430 040840
120340 070570 041100
120430 070720 041400
120510 070860 041670
120650 071070

Liquid end material:
PC PVC
PP Polypropylene
SS Stainless steel
TT PTFE + 25% carbon

Seal material:
T PTFE

Positive displacement element:
1 Standard composite diaphragm with rupture indicator

Liquid end version:
0 No valve springs
1 With valve springs

Hydraulic connection:
0 Standard connection
1 PVC union nut and insert
2 PP union nut and insert
3 PVDF union nut and insert
4 SS union nut and insert

Version:
0 with ProMinent® logo
2 No ProMinent® logo
A 0 with ProMinent® logo, with frame, simplex
B 0 with ProMinent® logo, with frame, duplex
C 0 with ProMinent® logo, with frame, triplex
M Modified

Electrical power supply:
S 3 ph. 230/400 V 50/60 Hz (dual wound)
P 3 ph. 230/400 V 60 Hz (Exe, Exde)
R Variable speed motor 4 pole 230/400 V
V Variable speed motor with integr. speed changer
Z Speed control kit
4 No motor, with 56 C flange
7 No motor, with 120/80 flange
8 No motor, with 160/90 flange
9 No motor, with 200/90 flange

Enclosure rating:
0 IP 55 (Standard) ISO class F
A ATEX power end

Stroke sensor:
0 No stroke sensor
1 With stroke sensor (Namur)

Stroke length adjustment:
0 Stroke length adjustment, man.
1 230 V stroke actuator
2 115 V stroke actuator
3 230 V 0-20 mA stroke controller
4 230 V 4-20 mA stroke controller
5 115 V 0-20 mA stroke controller
6 115 V 4-20 mA stroke controller

Applications:
0 Standard

TZMb

H

120260

PC

T

1

0

0

0

S

0

0

0

0

ProMinent® Makro TZ Diaphragm Metering Pumps

Capacity Data (TZMbH)

with 1800 rpm motor at 60 Hz Pump Capacity at Max. backpressure						Max. Stroke Frequency	Suc- tion Lift	Connection Suction Discharge Side	Shipping Weight PP, PC, TT/SS
Pump type TZMbH	gph	l/h	psi	bar	ml/ stroke	strokes/ min.	ft (m)	in (DN)	lb (kg)
120260	82	312	174	12	60	86	13.1 (4)	1 (25)	101.4/119 (46/54)
120340	108	408	174	12	60	115	13.1 (4)	1 (25)	101.4/119 (46/54)
120430	136	516	174	12	60	144	13.1 (4)	1 (25)	101.4/119 (46/54)
120510	162	612	174	12	60	173	13.1 (4)	1 (25)	101.4/119 (46/54)
120650	-	-	174	12	60	-	13.1 (4)	1 (25)	101.4/119 (46/54)
070430	136	516	100	7	99	86	11.5 (3.5)	1 1/2 (32)	110.2/141 (50/64)
070570	180	684	100	7	99	115	11.5 (3.5)	1 1/2 (32)	110.2/141 (50/64)
070720	228	864	100	7	99	144	11.5 (3.5)	1 1/2 (32)	110.2/141 (50/64)
070860	272	1032	100	7	99	173	11.5 (3.5)	1 1/2 (32)	110.2/141 (50/64)
071070	-	-	100	7	99	-	11.5 (3.5)	1 1/2 (32)	110.2/141 (50/64)
040840	266	1008	58	4	194	86	9.8 (3)	2 (40)	123.5/176.4 (56/80)
041100	348	1320	58	4	194	115	9.8 (3)	2 (40)	123.5/176.4 (56/80)
041400	443	1680	58	4	194	144	9.8 (3)	2 (40)	123.5/176.4 (56/80)
041670	529	2004	58	4	194	173	9.8 (3)	2 (40)	123.5/176.4 (56/80)
042100	-	-	58	4	194	-	9.8 (3)	2 (40)	123.5/176.4 (56/80)

Stroke length 10 mm

The admissible priming pressure on the suction side is 50 % of the maximum back pressure.

Materials In Contact With Chemical In Version

Pump Head		Suction/ Dis- charge Connector	DN 25 Ball Valves		DN 32/DN 40 Plate Valves**			
			Seals	Valve Balls	Valve Seat	Seals	Valve Plate/ Valve Spring	Valve Seat
PPT	Polypropylene	PVDF	PTFE	Ceramic	PTFE	PTFE	Ceramic/ Hast. C + CTFE**	PTFE
PCT	PVC	PVDF	PTFE	Ceramic	PTFE	PTFE	Ceramic/ Hast. C + CTFE**	PTFE
TTT	PTFE with carbon	PTFE with carbon	PTFE	Ceramic	PTFE	PTFE	Ceramic/ Hast. C + CTFE**	PTFE
SST	Stainless steel	Stainless steel	PTFE	Stainless steel	PTFE	PTFE	Stainless steel Hast. C + CTFE*	PTFE

Multi-layer safety diaphragm with PTFE coating.

** The valve spring is coated with CTFE (similar to PTFE)

Custom designs available to order.