



4000 SERIES DIAPHRAGM METERING PUMPS



520

l/h

MD

BLACK PLUS

Acromet (Aust) Pty Ltd

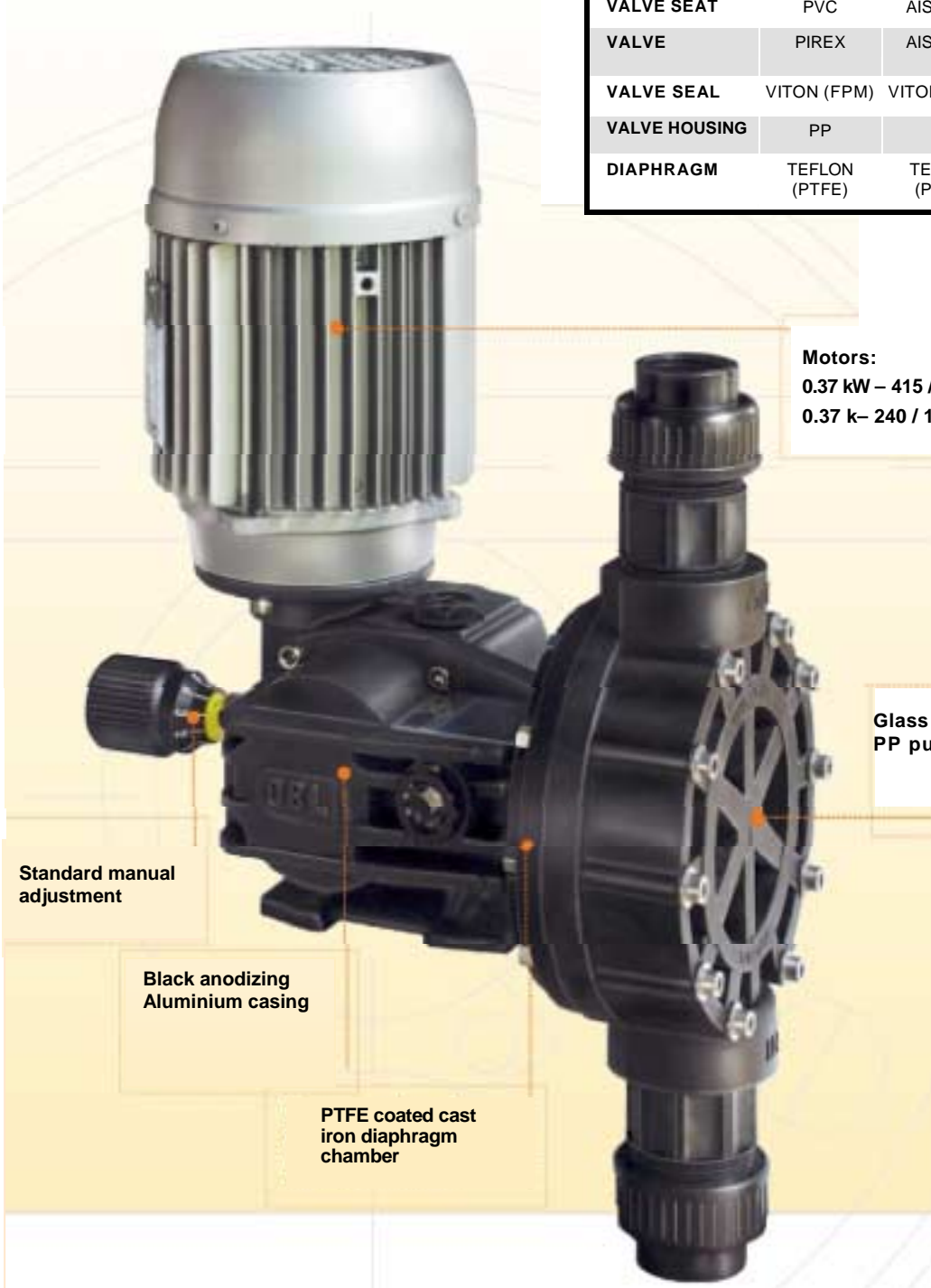
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The model **MD** Diaphragm Metering Pump offers the advantage of a Compact, Cost Effective, Lightweight design to suit a wide range of applications and working conditions, without sacrificing quality.

A combination of a fully supported PTFE diaphragm and self cleaning screw-in valve assemblies, ensures precise volumetric displacement of your expensive chemicals each and every time.

MATERIALS OF CONSTRUCTION				
PARTS	PP	PP11	PP32	A
LIQUID END	PP	PP	PP	AISI 316L
VALVE GUIDE	PP	PP	PP	AISI 316L
VALVE SEAT	PVC	AISI 316L	INCOLOY 825	AISI 316L
VALVE	PIREX	AISI 316L	HASTELLOY C-276	AISI 316L
VALVE SEAL	VITON (FPM)	VITON (FPM)	VITON (FPM)	VITON (FPM)
VALVE HOUSING	PP	PP	PP	AISI 316L
DIAPHRAGM	TEFLON (PTFE)	TEFLON (PTFE)	TEFLON (PTFE)	TEFLON (PTFE)



Motors:
 0.37 kW – 415 /3/ 50 or
 0.37 k– 240 / 1/ 50

**Glass filled
 PP pump head**

**Standard manual
 adjustment**

**Black anodizing
 Aluminium casing**

**PTFE coated cast
 iron diaphragm
 chamber**

- ◆ **Manual:** With 0 – 10 scale micrometer knob.
- ◆ **Electric:** Via 4-20 mA electrical actuator.
- ◆ **Pneumatic:** Via 20-100 KPA pneumatic actuator.

STANDARD MANUAL CAPACITY ADJUSTMENT

- ◆ Adjustment via 0-10 scale micrometer knob



GENERAL FEATURES

- ◆ Precise and positive volumetric displacement.
- ◆ Multiplex design with choice of liquid and sizes and material of construction
- ◆ Robust no maintenance oil lubricated gearbox.
- ◆ Self-cleaning valve operation.
- ◆ Available as a bare shaft pump.
- ◆ Easy to maintain screw in valve assembly.
- ◆ Variable or fixed motor speeds.

OPTIONAL CAPACITY ADJUSTMENT

- ◆ 0-100% scale dial handwheel



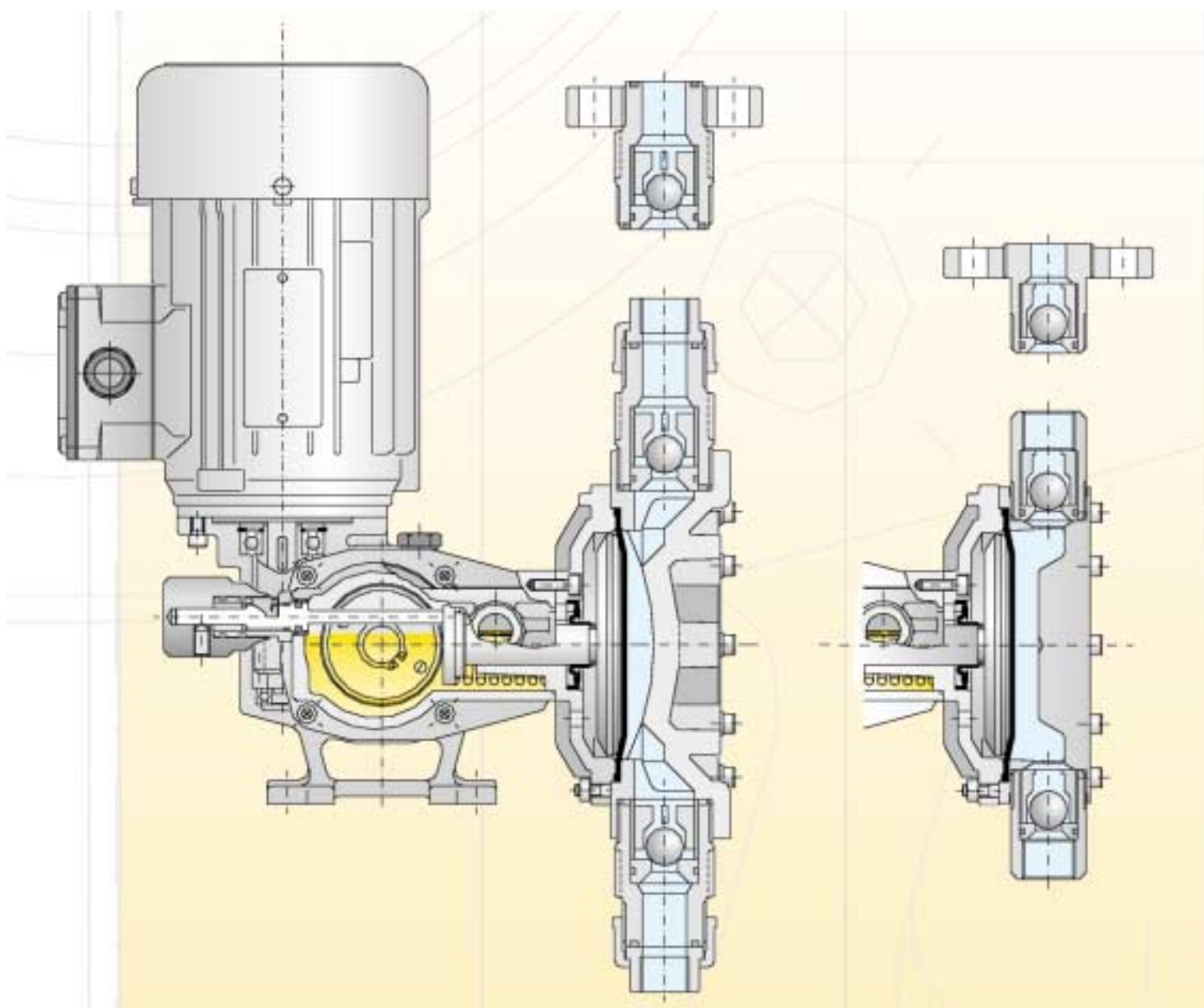
ELECTRIC ACTUATORS



- ◆ Automatic adjustment of the flow rate according to: 4-20 mA signal / from PLC (pulses) / from remote control.
- ◆ Electric actuator with integral balancing relay.
- ◆ Can be installed to any pump type and size.

PUMP HEADS

- ◆ Double and single valve ball.
- ◆ Suction and discharge connections both threaded and flanged (optional)
- ◆ Max: suction lift 1.5 m.w.c. (see operating manual).



- ◆ Max: temperature of dosed chemical: 45°C.

PP head. "PP" construction.

AISI 316L head. "A" construction.

DIAPHRAGM STRUCTURE

The unique (patented) mechanical diaphragm design ensures controlled volumetric displacement.



DIAPHRAGM SECTIONAL VIEW

Sectional view without PVC support ring

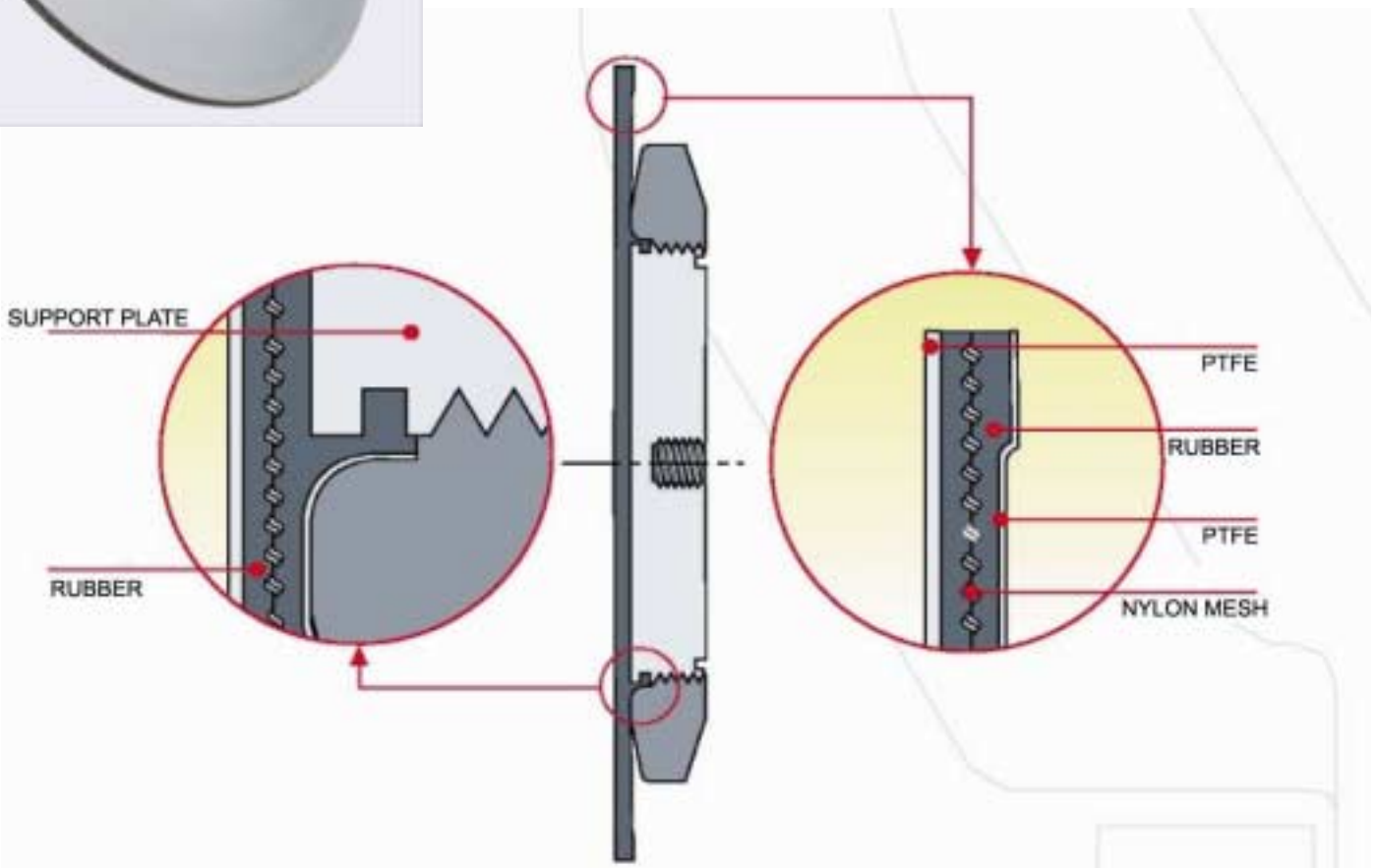


Complete sectional view with PVC support ring



DETAIL OF THE BONDING BETWEEN DIAPHRAGM AND METALLIC SUPPORT

Cross section of the diaphragm



TYPE	STROKES / MIN	MAX FLOW LITRE / HOUR	MAX PRESSURE BAR	CONNECTIONS			
				THREADED		FLANGED	
				PP	A	PP	A
50 Hz							
MD1	36	1	12	1/4".- BSPF		1/2"ANSI 150#RF	
MD1.6	50	1.5	12	1/4".- BSPF		1/2"ANSI 150#RF	
MD2.4	70	2.4	12	1/4".- BSPF		1/2"ANSI 150#RF	
MD3.5	95	3.5	12	1/4".- BSPF		1/2"ANSI 150#RF	
MD4	115	4	12	1/4".- BSPF		1/2"ANSI 150#RF	
MD5.5	155	5.5	12	1/4".- BSPF		1/2"ANSI 150#RF	
MD 3.1	36	3	12	1/4".- BSPF		1/2"ANSI 150#RF	
MD4.5	50	4.5	12	1/4".- BSPF		1/2"ANSI 150#RF	
MD7.1	70	7	12	1/4".- BSPF		1/2"ANSI 150#RF	
MD8.5	95	8.5	12	1/4".- BSPF		1/2"ANSI 150#RF	
MD10.5	115	10	12	1/4".- BSPF		1/2"ANSI 150#RF	
MD13	155	13	12	1/4".- BSPF		1/2"ANSI 150#RF	
MD11	36	11	12	1/4".- BSPF		1/2"ANSI 150#RF	
MD16	50	16	12	1/4".- BSPF		1/2"ANSI 150#RF	
MD23	70	23	10	3/8".- BSPF		1/2"ANSI 150#RF	
MD31	95	31	10	3/8".- BSPF		1/2"ANSI 150#RF	
MD37	115	37	10	3/8".- BSPF		1/2"ANSI 150#RF	
MD50	155	50	10	3/8".- BSPF		1/2"ANSI 150#RF	
MD35	36	35	10	3/8".- BSPF		1/2"ANSI 150#RF	
MD49	50	49	10	3/8".- BSPF		1/2"ANSI 150#RF	
MD75	70	75	10	3/8".- BSPF		1/2"ANSI 150#RF	
MD101	95	101	10	3/8".- BSPF		1/2"ANSI 150#RF	
MD120	115	120	10	3/8".- BSPF 1/2".-BSPF		1/2"ANSI 150#RF	
MD155	155	155	10	3/8".- BSPF 1/2".-BSPF		1/2"ANSI 150#RF	
MD102	36	100	8	3/4".- BSPF		3/4"ANSI 150#RF	
MD131	50	132	8	3/4".- BSPF		3/4"ANSI 150#RF	
MD201	70	197	7	3/4".- BSPF		3/4"ANSI 150#RF	
MD261	95	260	7	3/4".- BSPF		3/4"ANSI 150#RF	
MD321	115	320	6	1".- BSPF		1" ANSI 150#RF	
MD421	155	420	6	1".- BSPF		1" ANSI 150#RF	
MD150	36	150	5	1".- BSPF		1" ANSI 150#RF	
MD190	50	200	5	1".- BSPF		1" ANSI 150#RF	
MD301	70	300	5	1".- BSPF		1" ANSI 150#RF	
MD431	95	435	5#	1".- BSPF		1" ANSI 150#RF	
MD521	115	520	5#	1".- BSPF		1" ANSI 150#RF	



- Material:**
- ◆ Black Anodised (Deep Surface) Aluminium casing
 - ◆ PTFE coated cast iron diaphragm chamber

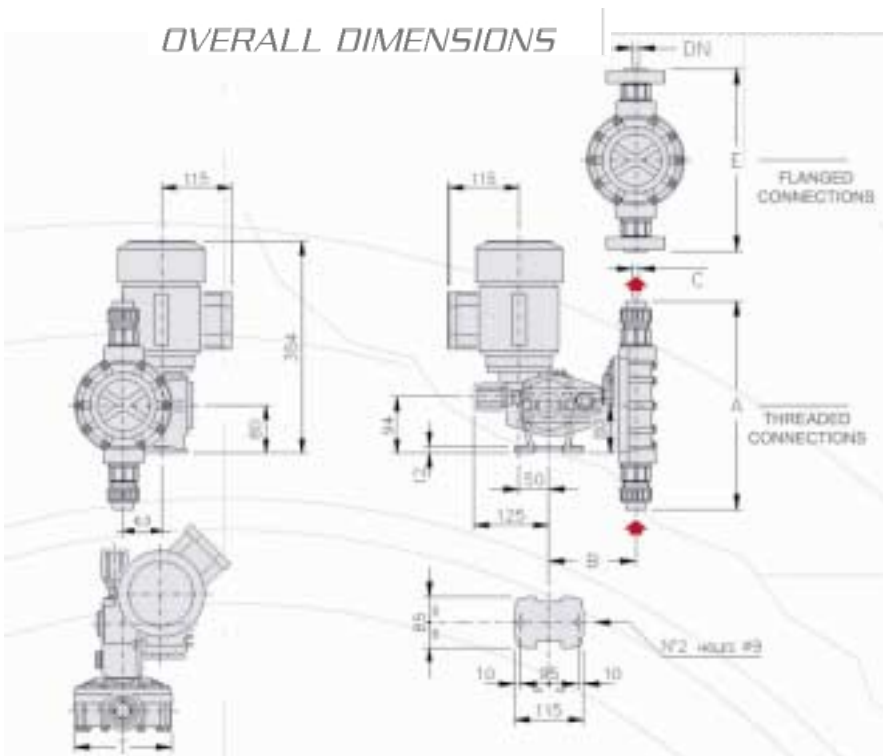
- Motors:**
- ◆ 0.37 kW, 415v / 3pH / 50Hz – 4 pole TEFC IP55 Standard Motor
 - ◆ 0.37 kW, 240v / 1pH / 50Hz 4 pole TEFC IP44 Standard Motor

- Weight:**
- ◆ Approx 17 Kgs

NOTE:

= Max. 4 Bar when driven by 240 volt motor

OVERALL DIMENSIONS



CONSTRUCTION CHARACTERISTICS

- ◆ PTFE coated cast iron diaphragm chamber ensures chemical compatibility with any dosed liquid.
- ◆ Leak-free diaphragm pump head.
- ◆ Smooth and linear adjustment, either stationary or running, via micrometer knob.
- ◆ $\pm 2\%$ accuracy within 10 to 100% of the nominal flow rate.

TYPE		AISI 316 L							PP							DN
50Hz	60Hz	A	ADV	B	C	E	EDV	TO	A	ADV	B	C	E	EDV	TO	ANSI
1-13	0.8-12	-	179	135	1/4". BSPF	-	155	90	-	222	141	1/4". BSPF	-	170	98	1/2"
11	9	-	204	132,5	1/4". BSPF	-	180	114	237	275	133	1/4". BSPF	201	215	117	1/2"
16	14	-	204	132,5	1/4". BSPF	-	180	114	237	275	133	1/4". BSPF	201	215	117	1/2"
23	28	166	204	132,5	3/8". BSPF	180	180	114	237	275	133	3/8". BSPF	201	215	117	1/2"
31	36	166	204	132,5	3/8". BSPF	180	180	114	237	275	133	3/8". BSPF	201	215	117	1/2"
37	45	166	204	132,5	3/8". BSPF	180	180	114	237	275	133	3/8". BSPF	201	215	117	1/2"
50	-	166	204	132,5	3/8". BSPF	180	180	114	237	275	133	3/8". BSPF	201	215	117	1/2"
35	-	181	219	132	3/8". BSPF	195	195	129	251	289	133	3/8". BSPF	215	229	133	1/2"
49	42	181	219	132	3/8". BSPF	195	195	129	251	289	133	3/8". BSPF	215	229	133	1/2"
75	58	181	219	132	3/8". BSPF	195	195	129	251	289	133	3/8". BSPF	215	229	133	1/2"
101	90	181	219	132	3/8". BSPF	195	195	129	251	289	133	3/8". BSPF	215	229	133	1/2"
120	121	200	252	133,5	1/2". BSPF	200	220	129	251	289	133	3/8". BSPF	215	229	133	1/2"
155	145	200	252	133,5	1/2". BSPF	200	220	129	251	289	133	3/8". BSPF	215	229	133	1/2"
102	-	235	-	142	3/4". BSPF	235	-	159	347	-	145	3/4". BSPF	303	-	162	3/4"
131	119	235	-	142	3/4". BSPF	235	-	159	347	-	145	3/4". BSPF	303	-	162	3/4"
201	158	235	-	142	3/4". BSPF	235	-	159	347	-	145	3/4". BSPF	303	-	162	3/4"
261	236	235	-	142	3/4". BSPF	235	-	159	347	-	145	3/4". BSPF	303	-	162	3/4"
321	312	276	-	140	1" BSPF	261	-	159	355	-	145	1" BSPF	303	-	162	1"
421	384	276	-	140	1" BSPF	261	-	159	355	-	145	1" BSPF	303	-	162	1"
150	-	307	-	149	1" BSPF	293	-	189	386	-	148	1" BSPF	336	-	194	1"
190	180	307	-	149	1" BSPF	293	-	189	386	-	148	1" BSPF	336	-	194	1"
301	228	307	-	149	1" BSPF	293	-	189	386	-	148	1" BSPF	336	-	194	1"
431	360	307	-	149	1" BSPF	293	-	189	386	-	148	1" BSPF	336	-	194	1"
521	519	307	-	149	1" BSPF	293	-	189	386	-	148	1" BSPF	336	-	194	1"



PP head MD metering pump , with electric actuator .



Duplex MD metering pump with PP heads. Threaded connections.



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