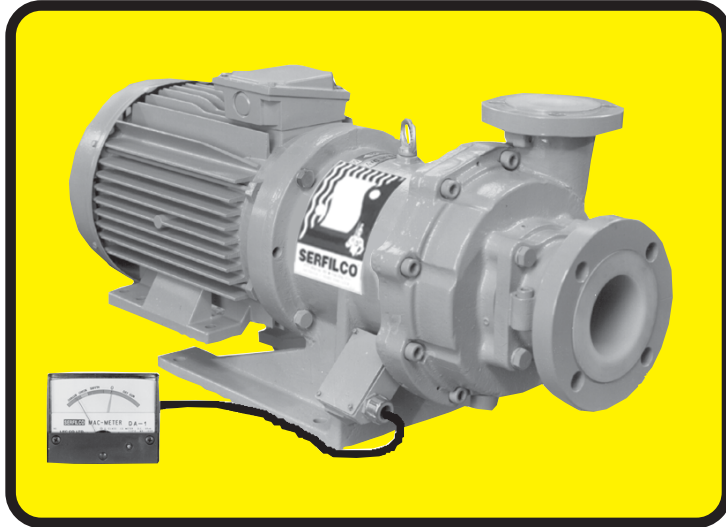




SERFILCO®

SERIES 'KK' MAGNETIC COUPLED PUMPS

BULLETIN
P-501G
JULY 1991



SERFILCO Series 'KK' process pumps are designed to provide durability and long leak-free service. The heavy cast iron housing protects the pump from mechanical shocks and the weight of the piping. Powerful rare earth magnets ensure positive coupling up to 1.85 specific gravity.

The fluoropolymer linings provide the highest degree of chemical protection available. The molded linings are thicker than similar coated pumps and thus offer a higher degree of protection. The modular design provides for easy and inexpensive maintenance, should it be required.

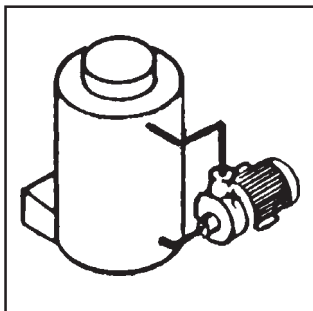
A unique and quite beneficial option is the Mac-Meter pump protector. Every pump has a built-in sensor on the outside of the body liner. When used with the Mac-Meter and any magnetic motor starter you get constant protection from cavitation or dry running. Another feature of the Mac-Meter is its ability to monitor the pump bearings for wear rate. A clearly marked multicolored meter face gives pump conditions at a glance. The heart of the meter is its solid state circuitry

Scores of applications:

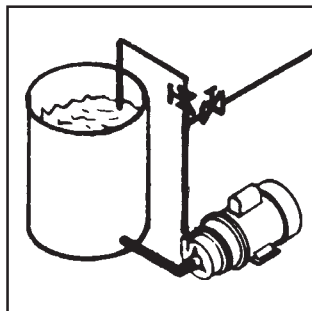
- Acids, alkalies and organic solvents*
- Petrochem / Electroplating*
- Fume scrubbing*
- Paper manufacturing*
- Pharmaceutical / Photographic*
- Fertilizer production / Water treatment*

- **Process pump designed for continuous duty in the harshest conditions**
 - Fluoroplastic molded Liner in ETFE or PVDF
 - Durable cast iron exterior
 - High efficiency enclosed impeller
- **Magnetic coupling for completely safe, leak-free pumping**
- **High flows to 270 U.S. GPM or 105 FT. TDH @ 60 Hz (1022 LPM or 32 M @ 50 Hz)**
- **High temperature service to 212°F (100°C)**
- **Optional Mac-Meter pump protector**
State-of-the-art electronics constantly monitor pump for wear, cavitation or dry running (Optional)
- **Accepts standard motors**
NEMA or IEC Metric

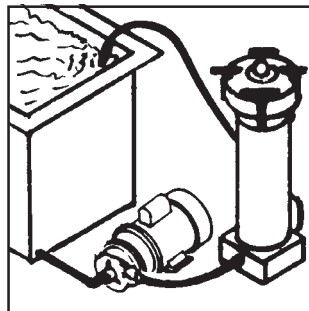
which is field set to the installation within one minute. No other pump on the market can offer the full durability and protection that these Series 'KK' Pumps and Mac-Meter can.



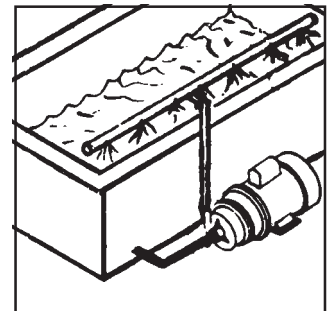
FUME SCRUBBER



TRANSFER PUMPING



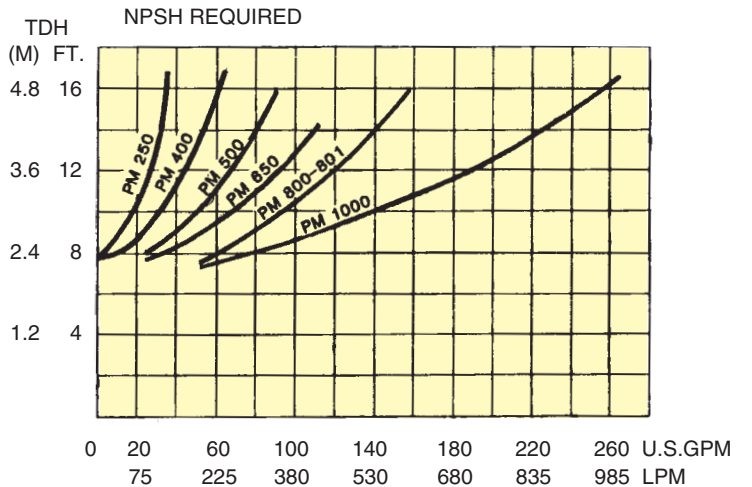
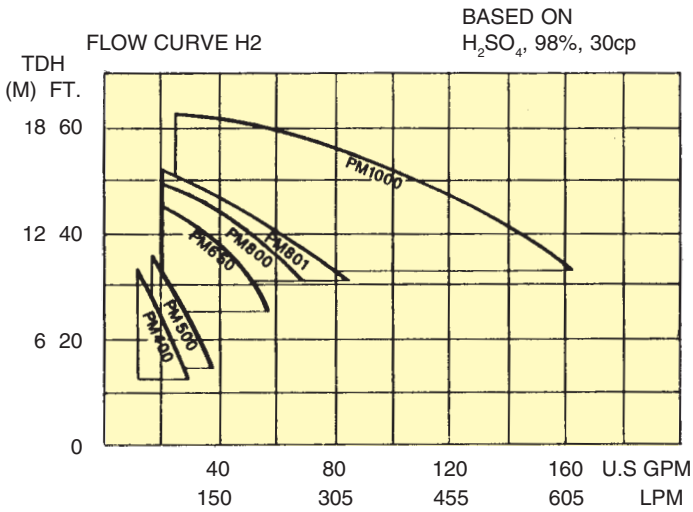
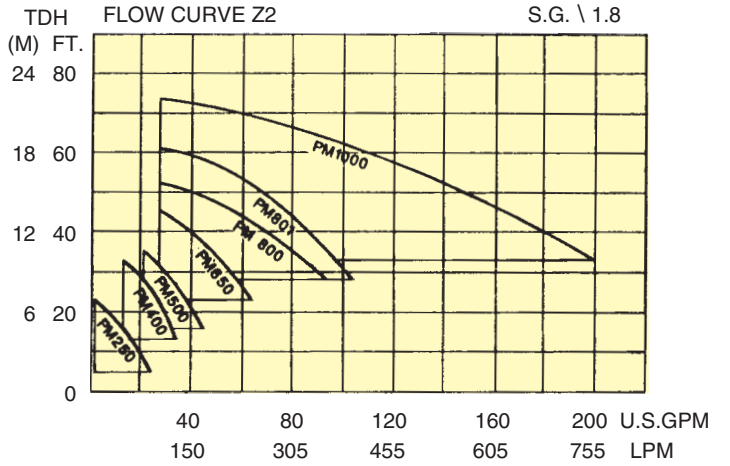
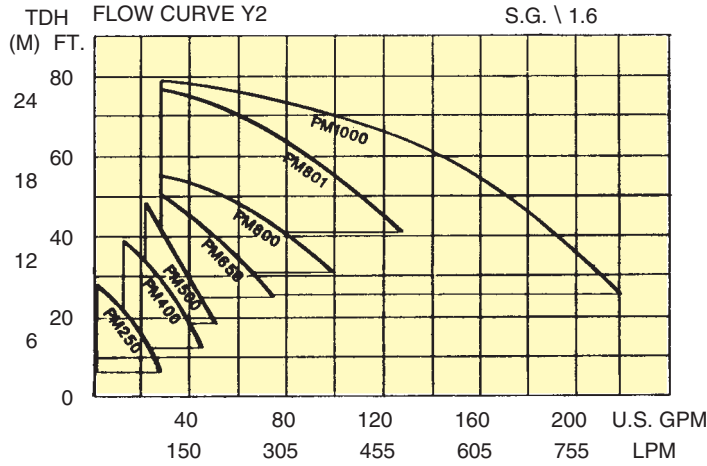
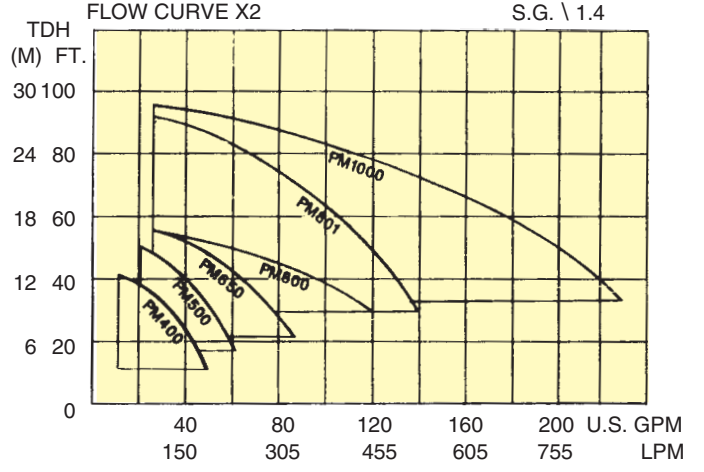
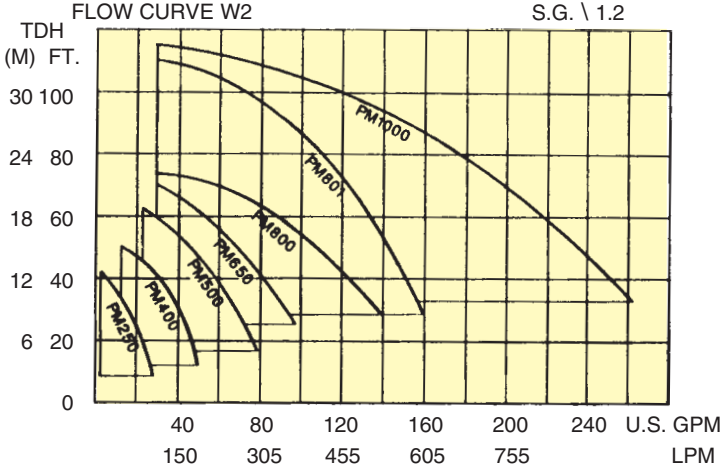
WASTE TREATMENT/



FILTRATION
RECIRCULATION

SERIES 'KK' PUMP Specifications

ENCLOSED IMPELLER PROVIDES HIGH EFFICIENCY PUMPING

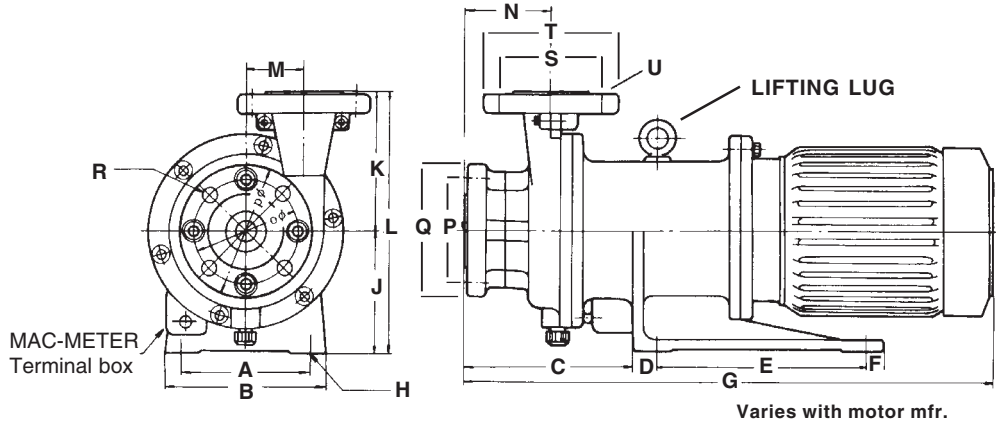


For complete performance curves including BHP requirements and pump efficiency for a particular pump consult factory.

SPECIFICATIONS

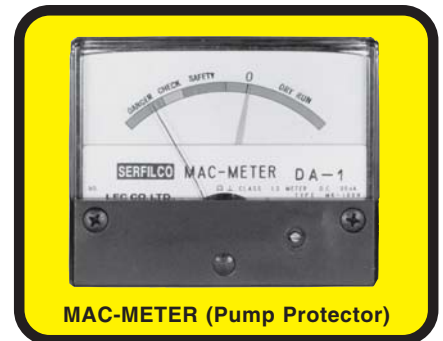
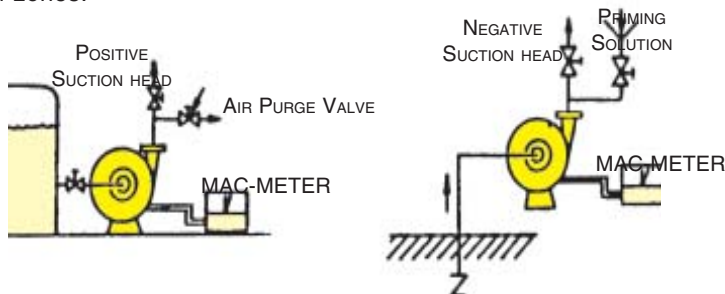
Series "KK" magnetic drive seal-less pumps are constructed of PVDF or ETFE with external cast iron support. Impeller magnet assembly is PVDF or ETFE. Liner is glass-filled ETFE, or carbon-filled ETFE, shaft and thrust washers are silica-free ceramic, bearing is carbon or Rulon, "O"-rings are Viton or EPDM. External fasteners are stainless steel. Pump assembly provides high chemical resis-

tance with non-metallic solution contact. Impeller is fully enclosed for high efficiency and available in smaller diameters for high specific gravity solutions. Pump connections have 150 lb. flanges and PVDF or ETFE faces. Each pump assembly includes a built-in sensor and terminal connections for the optional Mac-Meter pump protector. Standard NEMA frame motors are TEFC, 3450 RPM.



MODEL	FLANGE PORTS		A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	U	APPROX. SHIP. WT.	
																						LBS.	KG.
PM250	1x1	in. mm.	4.7 119	5.5 140	4.9 124	1.6 41	6.3 160	.6 15	18 457	.5 13	5.1 130	4.9 125	10.1 257	2.1 53	3.1 79	3.1 79	4.3 109	.6 15	3.1 79	4.3 109	.6 15	68	31
PM400	1½ x 1½	in. mm.	5.5 140	6.7 170	7.0 178	1.6 41	7.1 180	.8 20	20.1 511	.5 13	5.5 140	5.7 145	11.2 284	2.3 58	3.5 89	3.9 99	5.0 127	.6 15	3.9 99	5.0 127	.6 15	93	42
PM500	2 x 1½	in. mm.	5.9 150	7.1 180	7.3 185	1.6 41	7.7 196	.8 20	21.8 554	.5 13	6.3 160	6.1 155	12.4 315	2.5 64	3.8 97	4.8 122	6.0 152	.8 20	3.9 99	5.0 127	.6 15	116	52
PM650	2½ x 2	in. mm.	6.7 170	7.9 201	7.6 193	1.6 41	9.4 240	.8 20	24.5 622	.6 15	7.1 180	6.5 165	13.6 345	2.8 71	4.1 104	5.5 140	7.0 178	.8 20	4.8 122	6.0 152	.8 20	170	77
PM800	3 x 2	in. mm.	7.1 180	8.7 221	10.9 276	1.9 48	10.3 261	1.0 25	27 686	.6 15	7.9 201	7.1 180	14.9 378	3.1 79	6.1 155	6.0 152	7.5 191	.8 20	4.8 122	6.0 152	.8 20	191	86
PM801	3 x 2	in. mm.	7.1 180	8.7 221	10.9 276	1.9 48	10.3 261	1.0 25	29.1 739	.6 15	7.9 201	7.1 180	14.9 378	3.1 79	6.1 155	6.0 152	7.5 191	.8 20	4.8 122	6.0 152	.8 20	232	104
PM1000	4 x 3	in. mm.	9.0 230	10.6 270	12.3 313	2.1 53	11.8 300	1.0 25	35.4 900	.6 15	9.0 230	8.7 220	17.7 450	3.2 83	6.9 175	6.9 175	8.3 210	.8 20	5.9 150	7.3 185	.8 20	340	153

Should the possibility of dry operation exist, the separate Mac-Meter control measures the magnetic field variation due to axial thrust of the impeller and shuts off the motor or indicates pump maintenance requirement. The Mac-Meter's immediate sensing of the lack of liquid prevents unnecessary wear and damage to the spindle and bearings. Normal operation is indicated by "safe" area on meter. Cavitation or air entrapment causes the indicator to fall to the right, warning against possible damage, suggesting the need for corrective action. Wear of the bearings is monitored as the needle moves to the left and passes through the different marked zones.



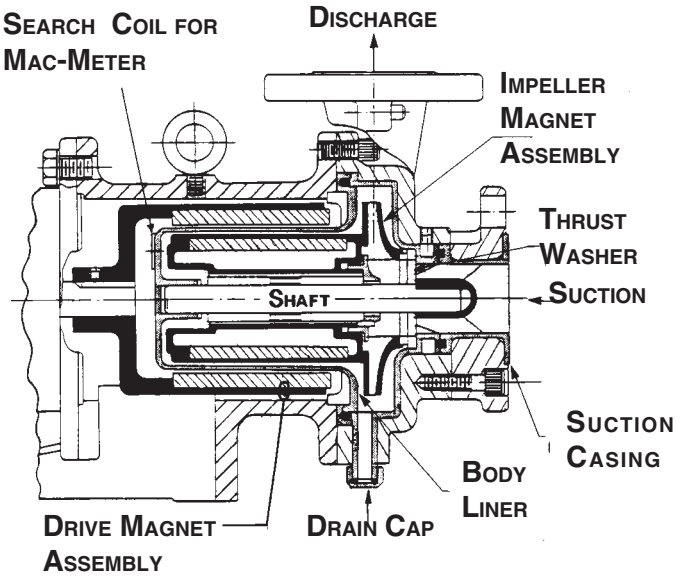
PROTECT YOUR PUMP FROM DRY OPERATION - USE MAC-METER.

MAC-METER DIMENSIONS
 METER FACE 4" w x 3¼" h
 METER BODY 2-7/8" DIA. x 5" LONG

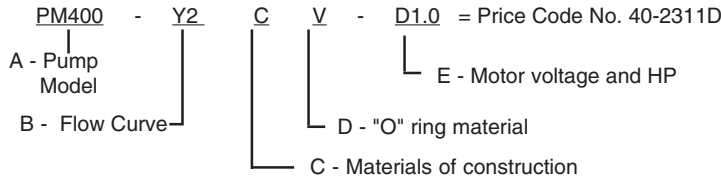
TO ORDER:

- A. Choose pump and model from flow curves for applicable specific gravity
- B. Show flow curve W2, X2, Y2, Z2, or H2 in Model Number.
- C. Select materials of construction and include designation in Model Number.
- D. Select "O"-ring material and include designation in Model Number.
- E. Select motor voltage, HP and include designation in Model Number. Motor HP shown in Table E is for non-overloading of all curves for particular pump.
- F. Add corresponding Price Code Number to 40-

REVOLUTIONARY SEARCH COIL FOR MAC-METER



EXAMPLE: TYPICAL MODEL NO.



A - PUMP MODEL

MODEL NO.	FLANGE PORTS ¹	PRICE CODE NO.
PM-250	1" x 1"	40-1
PM-400	1½" x 1½"	40-2
PM-500	2" x 1½"	40-3
PM-650	2½" x 2"	40-4
PM-800	3" x 2"	40-5
PM-801	3" x 2"	40-6
PM-1000	4" x 3"	40-7

¹ ANSI 150 lbs.

B - FLOW CURVE

FLOW CURVE 60 Hz	
ADD TO ...	
MODEL NO.	PRICE CODE NO.
- W2	1
- X2	2
- Y2	3
- Z2	4
- H2	5

C - PUMP MATERIALS OF CONSTRUCTION ²

SUCTION CASING & IMPELLER	BEARING	ETFE BODY LINER	ADD TO ...	
			MODEL NO.	PRICE CODE NO.
PVDF	CARBON	GLASS FILLED	C	1
PVDF	RULON	GLASS FILLED	R	2
PVDF	CARBON	CARBON FILLED	F	3
ETFE	CARBON	GLASS FILLED	A	4
ETFE	RULON	GLASS FILLED	B	5

² Impeller mouth ring is Rulon® on all models.

D - "O"-RING

MATERIAL	ADD TO ...	
	MODEL NO.	PRICE CODE NO.
Viton	V	1
EPDM	E	2

MAXIMUM - INLET PRESSURE

PM-250	50 PSI
PM-400	50 PSI
PM-500	55 PSI
PM-650	55 PSI
PM-800	70 PSI
PM-801	70 PSI
PM-1000	75 PSI

E - MOTOR ³ (TEFC, 3450/2850 RPM)

MODEL	HP / NEMA FRAME	VOLTAGE	ADD TO ...	
			MODEL NO.	PRICE CODE NO.
PM-250	.5 / 56C	115-230/1/50-60 230-460/3/50-60	- C.5	A
			- D.5	B
PM-400	1.0 / 56C	115-230/1/50-60 230-460/3/50-60	- C1.0	C
			- D1.0	D
PM-500	2.0 / 145TC	230-460/3/50-60	- D2.0	E
PM-650	3.0 / 182TC	230-460/3/50-60	- D3.0	F
PM-800	5.0 / 184TC	230-460/3/50-60	- D5.0	G
PM-801	7.5 / 213TC	230-460/3/50-60	- D7.5	H
PM-1000	10.0 / 213TC	230-460/3/50-60	- D10.0	J

PUMP AND MOTOR

SHIPPING WT.	
Lbs.	Kg.
80	36
100	45
135	61
165	75
231	105
330	150
396	180



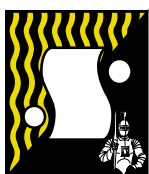
OPTIONAL MAC-METER (Panel mount)
 5 AMP SPST NO. OR NC CONTACT
 115/230/1/50-60

MAC-METER	PRICE CODE NUMBER
	40-0120

User-set for exact operating conditions and will then constantly monitor pump bearing condition, cavitation and dry running. Mac-Meter acting as a control device will turn off motor via motor starter.

³ **50 Hz FLOW** A larger diameter impeller is required for 50 Hz operation to make performance same as 60 Hz operation. Consult Factory. Add -5 to end of Price Code Number for 50 Hz operation.

Consult factory for the availability of silicon carbide.



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