

SERFILCO®

SERIES 'RT' MAGNETIC-COUPLED PUMPS

BULLETIN
P-510A
JULY 1999

EXCEPTIONALLY HIGH FLOW RATE AND DISCHARGE HEAD CAPACITY FOR:



MODEL
RT3x2½

MODEL
RT2½x2

PLATING / CHEMICAL PROCESSES
RO / DI / STRONG ACIDS & ALKALIES
PULP - PAPER / MINING / PHOTOGRAPHIC
PHARMACEUTICAL / PETROCHEMICAL
FERTILIZER PRODUCTION
WATER TREATMENT

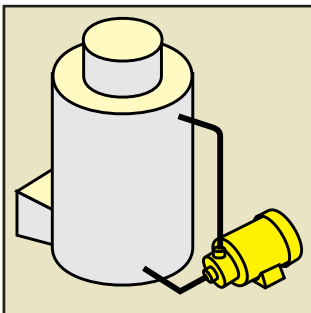
- **Non-metallic solution contact**
ETFE (fluoropolymer) lined liquid end to 212°F (100°C)
- **To 380 U.S. GPM or 165 Ft. TDH @ 60 Hz**
(1198 LPM or 35m TDH @ 50 Hz)
- **Flanged connections, top discharge**
2½" x 2" and 3" x 2½"
- **Specific gravities to 2.0**
Pumping efficiencies to 65%
- **Optional dry run protection**

Series 'RT' process pumps are designed to provide leak-free, emission-free performance with long operating life. All wetted surfaces are non-metallic to provide superior chemical resistance in the most difficult chemical process and industrial applications. Carbon filled ETFE casing, liner and impeller magnet assembly enable the pump to handle some of the most aggressive acids, alkalies and organic solvents.

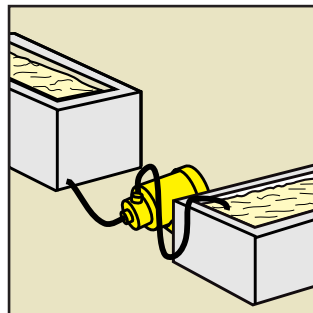
Durable ductile iron encasement ensures that mechanical strength equals or exceeds that of all-metal pumps. Bearing, spindle and liner ring are 99.8% alumina ceramic; also available in high density carbon or silicon carbide (SiC). Mouth ring is specially compounded Rulon®. Casing "O"-ring is available in EPDM, Viton® or Aflas.

Perforated external non-magnetic metal reinforcement of rear liner minimizes heat build-up due to eddy currents generated by the rotating magnets. This allows pumping of heat sensitive liquids as well as the ability to operate at near shut-off flow conditions. Minimum recommended flow rate is only 13 U.S. GPM (49 LPM).

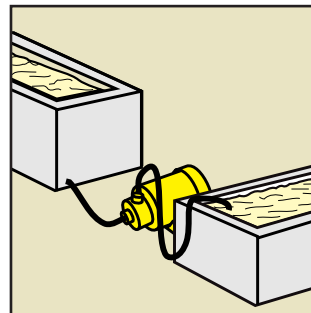
Simplicity of pump design allows many parts to be interchangeable between various models of common size. Inventory is thereby reduced, maintenance intervals extended and pump servicing becomes a simple task. Series 'RT' magnetic-coupled pumps combine strength with solution compatibility to meet the high level safety and environmental requirements of the chemical processing industries.



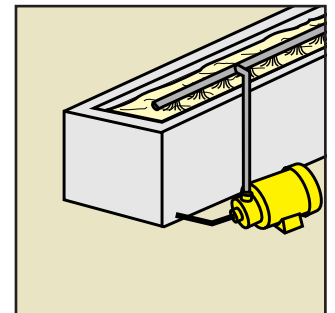
FUME SCRUBBER



TRANSFER PUMPING



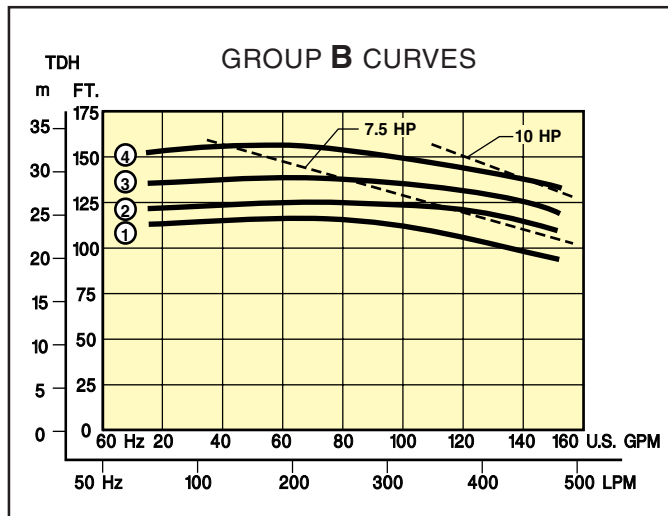
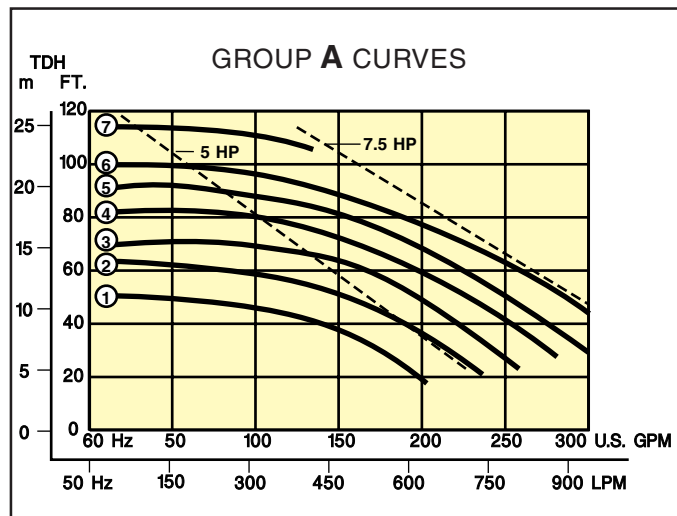
WASTE TREATMENT /
FILTRATION



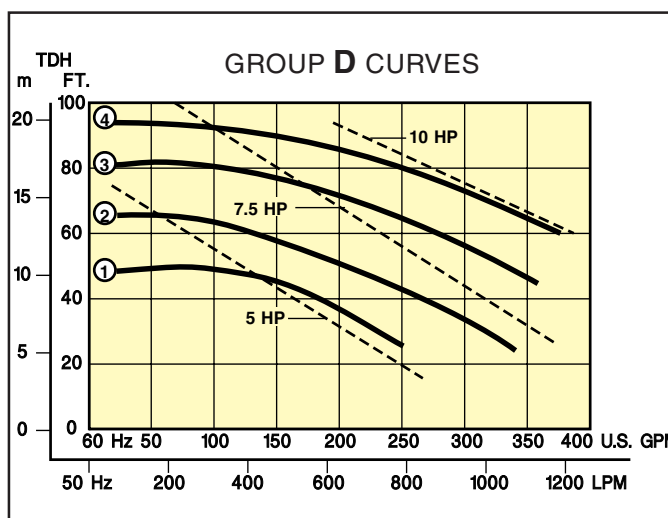
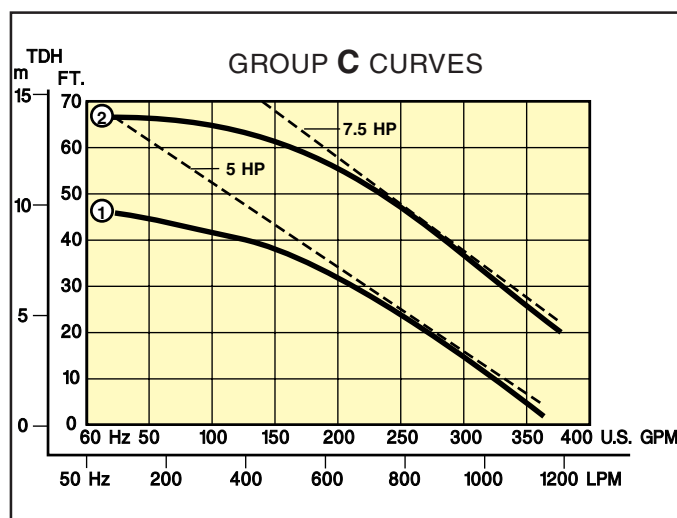
RECIRCULATION

SERIES 'RT' PUMP Flow Charts

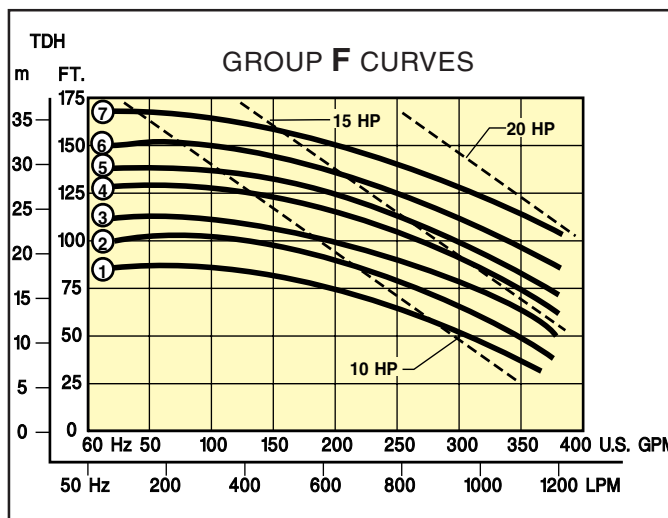
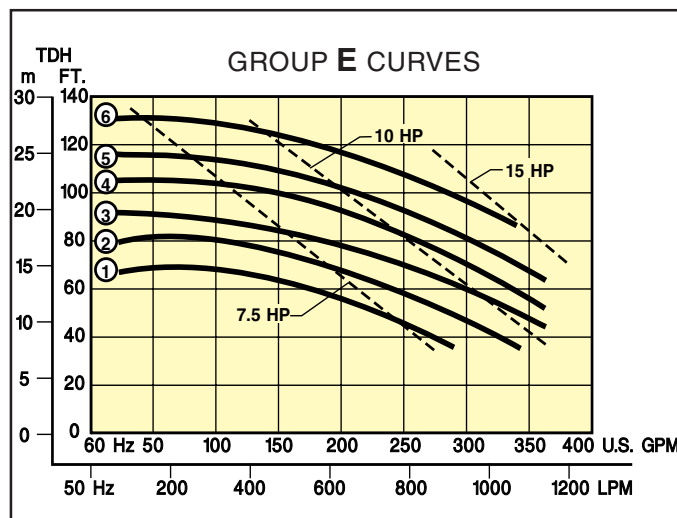
SERIES RT2½ x 2 FLOW CURVES *



SERIES RT3 x 2½ FLOW CURVES *



SERIES RT3 x 2½ FLOW CURVES *

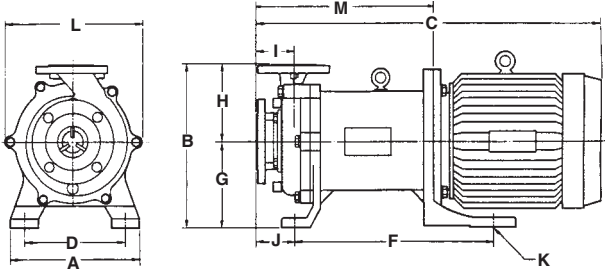


* GPM @ 3450 RPM, LPM @ 2850 RPM
Consult Application Engineering Dept for 50 Hz HP requirements.

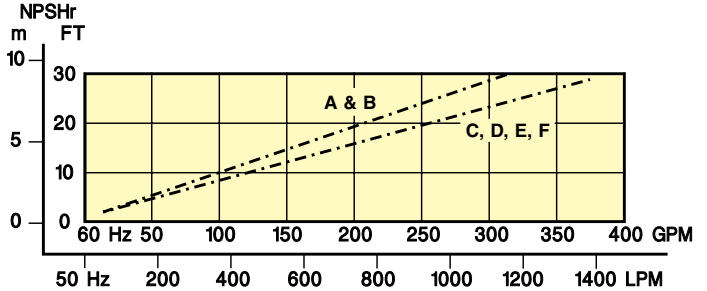
SERIES 'RT' PUMP Specifications

SPECIFICATIONS

DIMENSIONS*



NPSHr CURVES



PUMP CONNS.	HP	DIMENSIONS											PUMP ONLY SHIP. WT. (Lbs.)	
		Inches (mm)												
		A	B	C	D	F	G	H	I	J	K	L	M	
2½" x 2"	5.0	11 (280)	13-3/8 (340)	29-9/16 (751)	8-11/16 (220)	14-3/8 (365)	7-1/8 (180)	6-5/16 (160)	3-1/8 (80)	3-9/16 (90)	9/16 (14)	11-3/4 (298)	15-13/16 (402)	140
	7.5	11 (280)	14-3/16 (360)	30-3/16 (767)	8-11/16 (220)	14-3/8 (365)	7-1/8 (180)	7-1/8 (180)	3-15/16 (100)	4-1/4 (108)	9/16 (14)	11-3/4 (298)	16-7/8 (428)	140
3" x 2½"	10.0	11 (280)	14-3/16 (360)	30-3/16 (767)	8-11/16 (220)	14-3/8 (365)	7-1/8 (180)	7-1/8 (180)	3-15/16 (100)	4-1/4 (108)	9/16 (14)	11-3/4 (298)	16-7/8 (428)	170
	15.0	11 (280)	14-3/16 (360)	34-1/2 (876)	8-11/16 (220)	14-3/8 (365)	7-1/8 (180)	7-1/8 (180)	3-15/16 (100)	4-1/4 (108)	9/16 (14)	11-3/4 (298)	16-7/8 (428)	170

* Motor dimensions may vary. Use dimensions for reference only.

TO ORDER, use Price Code No.

For pump - motor combination, select components from table below.

To determine pump-motor for a specific flow, TDH and/or specific gravity, select flow/pressure point on performance curve (solid line). Required horsepower is determined by the section of the impeller curve falling below and/or to the left of the dotted HP curve and multiplying the indicated HP by the specific gravity of the fluid to be pumped. Select pump,

then flow curve group, impeller curve, bearing, "O"-ring and motor; then compile Model and Price Code Numbers. Calculate Net Positive Suction Head Available (NPSH_a) for the installation and refer to Net Positive Suction Head Required (NPSH_r) curves above. NPSH_a should be no less than NPSH_r to avoid cavitation or related suction problems.

EXAMPLE:

For RT2½x2 pump and flow curve group A, impeller curve 1, carbon bearing, EPDM "O"-ring and 5.0 HP motor

Typical Model No.: RT2½x2A + -1 + C + L + -D5.0 = RT2½x2A-1CL-D5.0
Price Code No.: 54-1 + 1 + 1 + 1 + B = 54-1111B

PUMP		
MODEL	FLOW CURVE GROUP ¹	PRICE CODE NO.
RT2½x2	A	54-1
	B	54-2
RT3x2½	C	54-3
	D	54-4
	E	54-5
	F	54-6

¹ Add to Model Number

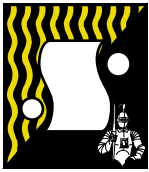
IMPELLER		
IMPELLER CURVE	ADD TO	
	MODEL	PRICE CODE NO.
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7

BEARING		
MATERIAL	ADD TO	
	MODEL	PRICE CODE NO.
Carbon	C	1
Alumina/ceramic	A	2
Silicon carbide	S	3

"O"-RING		
MATERIAL	ADD TO	
	MODEL	PRICE CODE NO.
EPDM	L	1
Viton	V	2
Aflas	A	3

OPTIONAL		
DESCRIPTION	MODEL	PRICE CODE NO.
DRY RUN PROTECTOR prevents the pump from being damaged during abnormal pumping conditions (severe cavitation, dry running, etc.). Connect to the power supply and motor. No modification of pump or piping is necessary.	DR-RT	54-1000

MOTOR ²				
TEFC		ADD TO		SHIPPING WEIGHT Lbs.
NEMA FRAME	HORSE-POWER	MODEL	PRICE CODE NO.	
184TC	5.0	D5.0	B	70
213TC	7.5	D7.5	C	88
215TC	10.0	D10.0	D	121
254TC	15.0	D15.0	E	203
256TC	20.0	D20.0	F	262



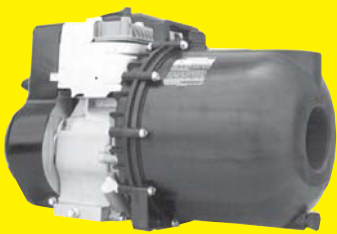
SERFILCO[®], LTD.

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SERFILCO also offers:

SELF-PRIMING PUMPS



SERIES 'S'

A lightweight, chemically resistant plastic pump. Used for general service on water and chemicals within a pH range of 4 to 9.

END SUCTION CENTRIFUGAL PUMPS



SERIES 'HE'

Enclosed impeller makes this chemically resistant plastic pump the most energy efficient. Available with single or double "water flush seals".

HAND OPERATED PUMPS

*Prevent product
contamination.
Improve product quality.*



SERIES 'HP'

The hand dispensing pump is a double acting piston type which will handle a wide range of solutions. The pump body, valves, valve seats and piston are all made of chemically resistant, performance engineered plastics.