



MAGNATEX® MPT Series Specifications

Maximum Flow	40 GPM
Maximum Head	440 FT
Liquid Temperature	-20° F to +446° F
Maximum Power	5 HP
Maximum Working Pressure	232 psig
Connections	NPT with Optional Flanges
Bearings	SiC/SiC-X
Impeller	Turbine Vane
Speeds	Up to 3550 rpm
Magnets	Samarium Cobalt + Neodymium
Motor	NEMA or IEC Frame Mounted

Magnetic Drive Regenerative Turbine Pumps

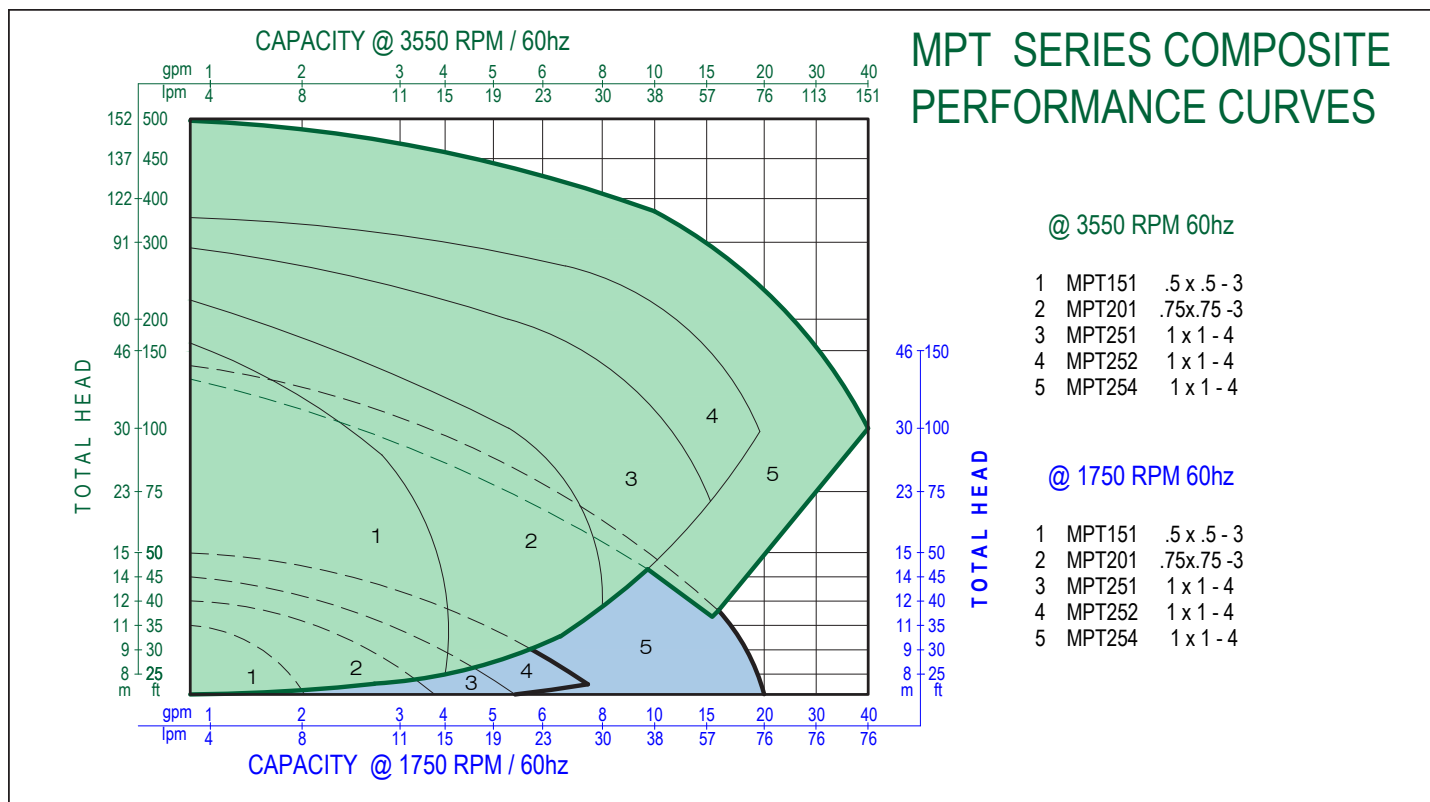
MAGNATEX® MPT Series

MPT Series magnetically driven, sealless, regenerative turbine vane pumps are designed specifically for small flows at high heads. The MPT Series features close-coupled construction similar to the MP Series, but uses a regenerative turbine vane impeller. This design provides better pump hydraulics at low flow rates and low NPSHa conditions.

- Standard SiC-X bearing system for enhanced dry running capability
- Straddle-mounted, inner magnet system, with bearings on both sides of the magnet, which reduces shaft and bearing loads when compared to our competitors' overhung, cantilevered inner magnet designs
- Slip-fit construction that allows easy on-site maintenance, with no special tools or fixtures required
- Close-coupled configuration eliminates coupling and motor alignment issues
- No expensive mechanical seals; eliminates costly shutdowns and pump repair, which helps eliminate "Reportable Release" issues
- Handles toxic, noxious and corrosive liquids for leak-free pumping with increased safety to plant personnel and the environment.
- Excellent for pumping entrained gases
- Excellent for low NPSHa applications

Materials of Construction:

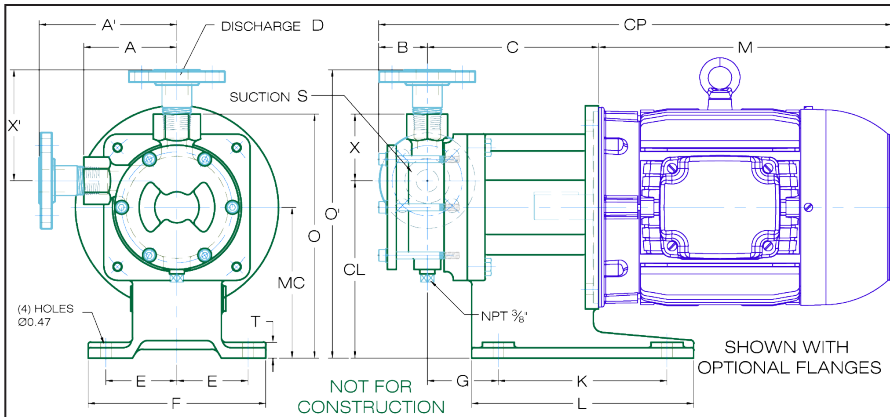
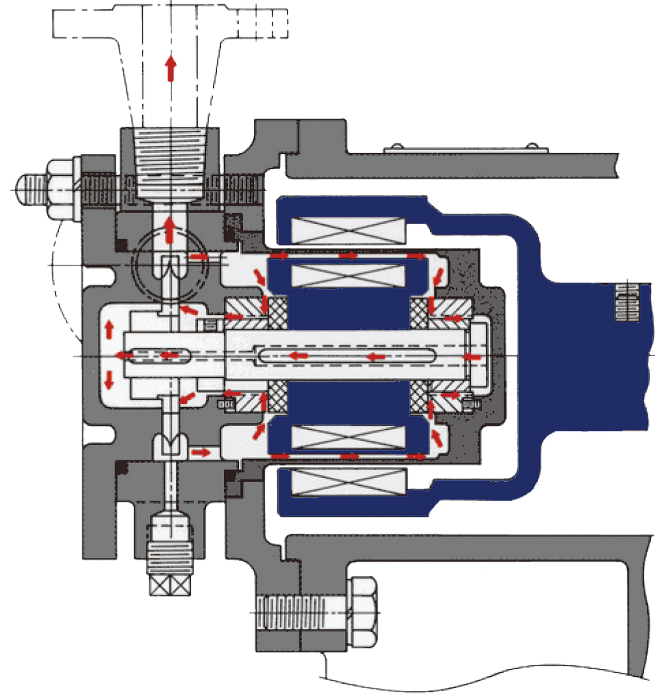
- 316SS
- Alloy B & C
- Alloy 20
- Titanium



MAGNATEX®

HOW A REGENERATIVE TURBINE PUMP WORKS

- The unusual regenerative turbine impeller design involves a large number of blades machined into the periphery of the impeller.
- Blades are on both sides of the centerline to limit axial thrust, which hydraulically centers the impeller during operation.
- Instead of the liquid entering the impeller at the shaft centerline and exiting at the impeller periphery, liquid enters a regenerative turbine pump in the vicinity of the impeller OD. After acceleration around the pump casing it discharges through a port in the same plane as the suction.
- There is considerable debate about the fluid dynamics involved in regenerative turbine pumps, but the consensus of expert opinion is that liquid entering the impeller blade is accelerated radially and tangentially in the direction of rotation. Liquid moving outward toward the casing is reflected back onto the next impeller blade where it is further accelerated. This process is repeated many times until the liquid exits the discharge port.
- The clearances between the impeller and casing and between the inlet and outlet are smaller to minimize backflow in the discharge segment of the casing.
- Regenerative turbine pumps develop much more head for the impeller diameter and speed of rotation when compared to a typical centrifugal pump.
- Because of the special impeller design, regenerative turbine pumps are excellent for low NPSH applications.



CONDUIT BOX SHOWN FOR ILLUSTRATION ONLY
REQUIRED LOCATION MUST BE SPECIFIED



DIMENSIONAL DRAWING
MPT SERIES CLOSE-COUPLED PUMP

DRAWN BY: B VALENTIN DATE: 10/20/10 SCALE: NTS PAGE: 1 OF 1

DD-MPT-SERIES R1

ALL DIMENSIONS ± 0.12" [3mm]

MODEL	MOTOR FRAME		DIMENSIONS in INCHES [MILLIMETERS]													STANDARD NPT			*OPTIONAL 150# ANSI RF			APPROX. WEIGHT												
	NEMA	IEC	M	CP	MC	CL	B	C	E	F	G	K	L	T	S & D	A	X	O	S & D	A'	X'	O'	lbs.(kgs.)	lbs.(kgs.)										
MPT 151	56C	63,71,80	10.29 [261]	18.30 [465]	4.33 [110]	5.31 [135]	1.36 [34.5]	6.65 [169]	2.56 [65]	6.30 [160]	2.99 [76]	4.72 [120]	7.09 [180]	0.47 [12]	1/2" [13]	3.15 [80]	2.17 [55]	7.48 [190]	1/2" [13]	5.12 [130]	4.13 [105]	9.45 [240]	35 (16)	31 (14)										
MPT 201	56C	63,71,80	10.29 [261]	18.56 [471]	4.33 [110]	5.31 [135]	1.42 [42]	6.85 [174]	2.56 [65]	6.30 [160]	3.15 [80]	4.72 [120]	7.09 [180]	0.47 [12]	3/4" [20]	3.15 [80]	2.17 [55]	7.48 [190]	3/4" [20]	5.12 [130]	4.13 [105]	9.45 [240]	44 (20)	31 (14)										
	143TC	90S	10.23 [260]	18.50 [470]																				54 (25)										
MPT 251	145TC	90L	11.50 [292]	19.77 [502]	4.33 [110]	5.51 [140]	1.61 [41]	6.85 [174]	2.56 [65]	6.30 [160]	3.15 [80]	4.72 [120]	7.09 [180]	0.47 [12]	1" [25]	4.13 [105]	2.95 [75]	8.46 [215]	1" [25]	6.10 [155]	4.92 [125]	10.43 [265]	44 (20)	54 (25)										
	182TC	112S	12.02 [305]	21.23 [539]																				6.69 [170]	7.87 [200]	7.60 [193]	3.15 [80]	7.87 [200]	7.48 [190]	9.87 [251]	0.71 [18]	10.83 [275]	12.80 [325]	99 (45)
	184TC	112L	13.01 [330]	22.22 [564]																				6.69 [170]	7.87 [200]	7.60 [193]	3.15 [80]	7.87 [200]	7.48 [190]	9.87 [251]	0.71 [18]	10.83 [275]	12.80 [325]	108 (49)
	143TC	90S	10.23 [260]	18.85 [479]																				4.33 [110]	5.51 [140]	1.77 [45]	6.85 [174]	2.56 [65]	6.30 [160]	3.15 [80]	4.72 [120]	7.09 [180]	0.47 [12]	1" [25]
145TC	90L	11.50 [292]	20.12 [511]	58 (26)																														
182TC	112S	12.02 [305]	21.39 [543]	6.69 [170]	7.87 [200]	7.60 [193]	3.15 [80]	7.87 [200]	7.48 [190]	9.87 [251]	0.71 [18]	10.83 [275]	12.80 [325]	99 (45)																				
184TC	112L	13.01 [330]	22.38 [568]	6.69 [170]	7.87 [200]	7.60 [193]	3.15 [80]	7.87 [200]	7.48 [190]	9.87 [251]	0.71 [18]	10.83 [275]	12.80 [325]	108 (49)																				

*DOES NOT CHANGE THE PRESSURE RATING OF THE PUMP

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3575 West 12th Street, Houston, TX 77008
 tel: 713.972.8666 toll free: 866.MAGPUMP fax: 713.972.8665
www.magnatexpumps.com