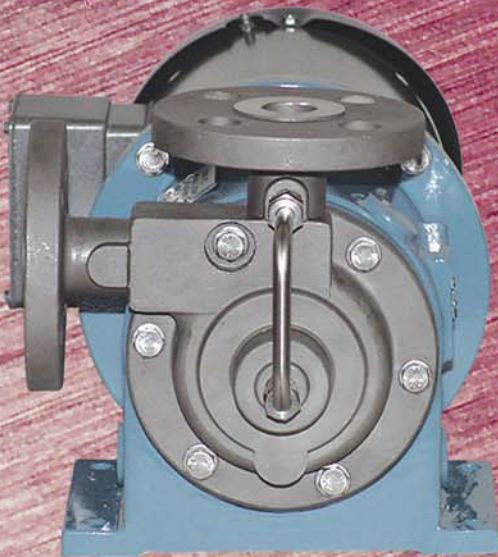


# TA Series Mag-Drive Sealless Pumps

# TECH-MAG



Complete Source for Mag-Drive Sealless Pumps



## TA Series

ALLOY  
MAG-DRIVE

REGENERATIVE  
TURBINE PUMPS

LOW FLOW / HIGH HEAD



# TECH-MAG

PRIME SOURCE FOR MAG-DRIVE SEALLESS PUMPS

## TECH-MAG Series TA

### Regenerative Turbine Mag-Drive Pumps

The **TECH-MAG** Series TA Alloy Regenerative Turbine Mag-Drive Seal-less Pumps are ideally suited for LOW FLOW / HIGH HEAD applications. All **TA** pumps are equipped with zero leakage magnetic couplings to meet the latest toxic emissions regulations. The absence of mechanical seals or packing glands eliminates costly pump maintenance, lost production time and process contamination.

The **TA** pumps are able to handle liquids containing with up to 20% entrained gas. The **TA** pumps are suitable for very thin non-lubricating liquids and/or high differential pressures.

### Technical Design Features

- High head / low flow capability minimizes or eliminates by-pass requirements and prevents over-heating and high head cavitation common with centrifugals
- Heavy duty casings and impellers
- Heavy duty alloy containment shell
- No metal to metal contact to eliminate galling and product contamination
- Impeller design handles up to 20% entrained gas - ideal for pumping liquified gases
- Self balancing impeller - Zero axial thrust loading
- Replaceable impeller, reduces maintenance costs
- High torque magnets, suitable for direct starting motors
- Pedestal mounted or close coupled design

### Commercial Benefits

- Eliminates leakage, seal pressure pots, and catastrophic seal failures
- Exempt from EPA seal monitoring
- Avoids by-pass lines associated with oversized centrifugals
- Avoids relief valves required for P.D. pumps
- Balanced thrust loads prevents thrust bearing maintenance in clean services

## Materials of Construction

### Alloy Components

- AISI SS-316 Stainless Steel
- Alloy-20
- Incoloy-825
- Hastelloy-C276

### Internal Sleeve Bearings

- Alpha Grade Silicon Carbide

### Casing Gasket

- PTFE, Garlock, Gylon or Graphoil

## Specifications

- Flow Capacities: to 40 GPM
- Power Capabilities: to 15 HP
- Differential Heads: to 400 Feet (122 mtr)
- Working Pressures: 350 PSI (25 BAR) to 3000 PSI (200 BAR)
- Operating Temperatures: -150°F (-100°C) to 600°F (315°C)

## Options

- 150 or 300 lb. flanges
- Welded steam jackets: Pump Casing
- Silicon carbide channeled bearings
- High temperature design
- Long coupled or NEMA close-coupled drive designs

Standard Design



High Temp Design

**MODEL CODIFICATION****SAMPLE MODEL:** TA214L1B23**SERIES:** TA**SIZE:**

1 - T10            4 - T40  
2 - T20            5 - T50  
3 - T30            6 - T60

**PORTS:**

1 - Threaded  
2 - ANSI 150# Flanges  
3 - ANSI 300# Flanges (Other port options available)

**BEARINGS:**

4 - Silicon Carbide / Carbon  
5 - Silicon Carbide / Silicon Carbide (Other material options available)

**MAGNETIC COUPLING:**

L - Standard (to 250°F)  
H - High Temp (to 660°F)

**FRAME SIZE:**

1 - 56C  
2 - 145TC  
3 - 184TC  
4 - 215TC (Metric frame sizes available)

**ADAPTER BRACKET:**

B - Bearing Frame (oil lubricated)  
C - Closed Round Body Bracket (standard - 390°F max)  
F - Closed w/ Feet (standard - 390°F max)  
O - Open Ventillated (660°F max)

**MOTOR:**

0 - Less Motor    1 - OPD                    2 - TEFC  
3 - ULXP          4 - Chem-Duty          X - Special

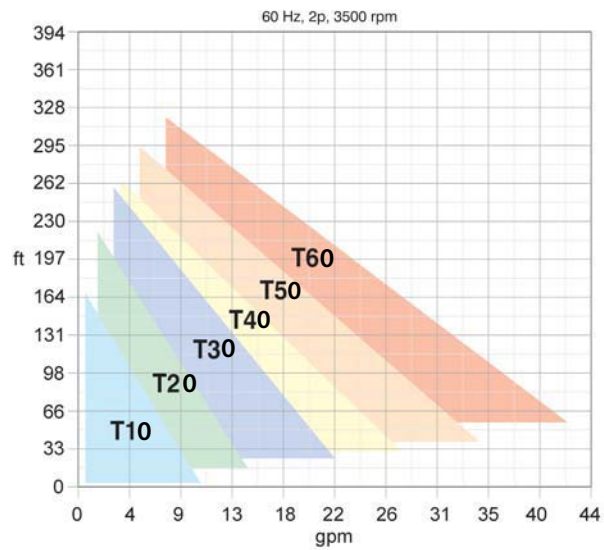
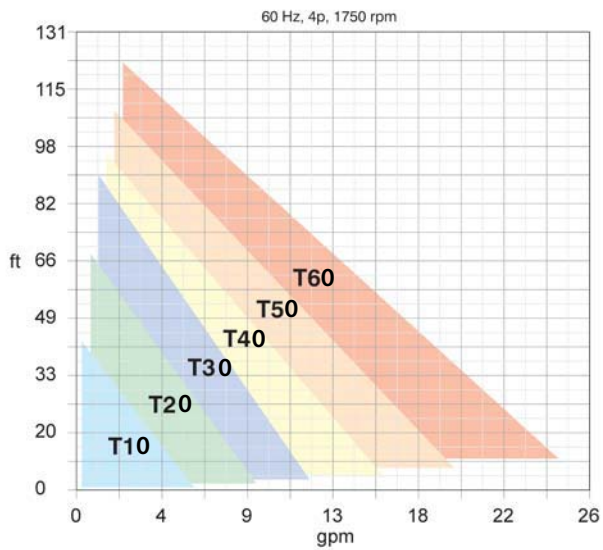
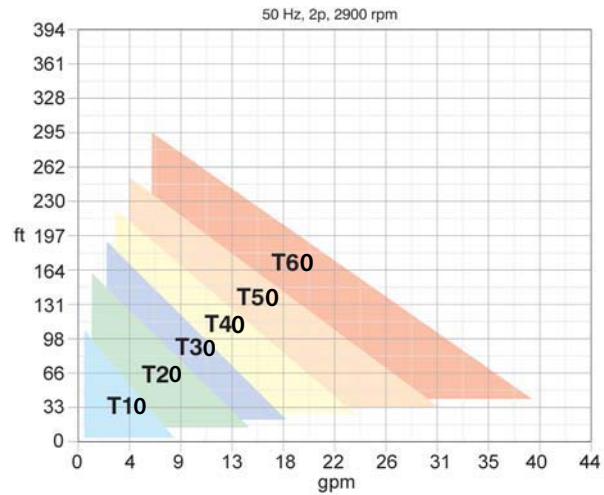
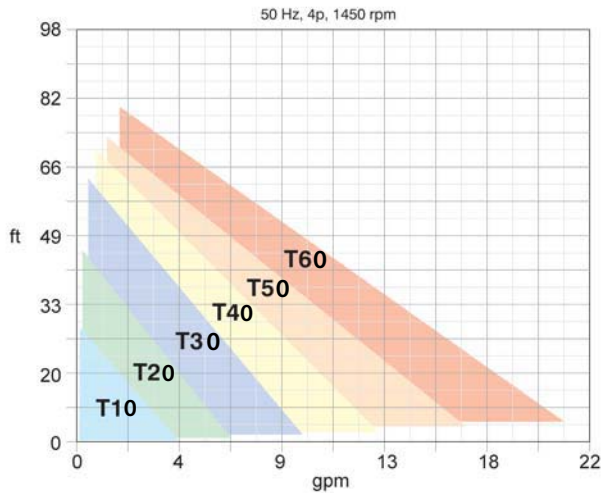
**PHASE:**

1 - Single 3450                    2 - Single 1750                    3 - Three 3450                    4 - Three 1750

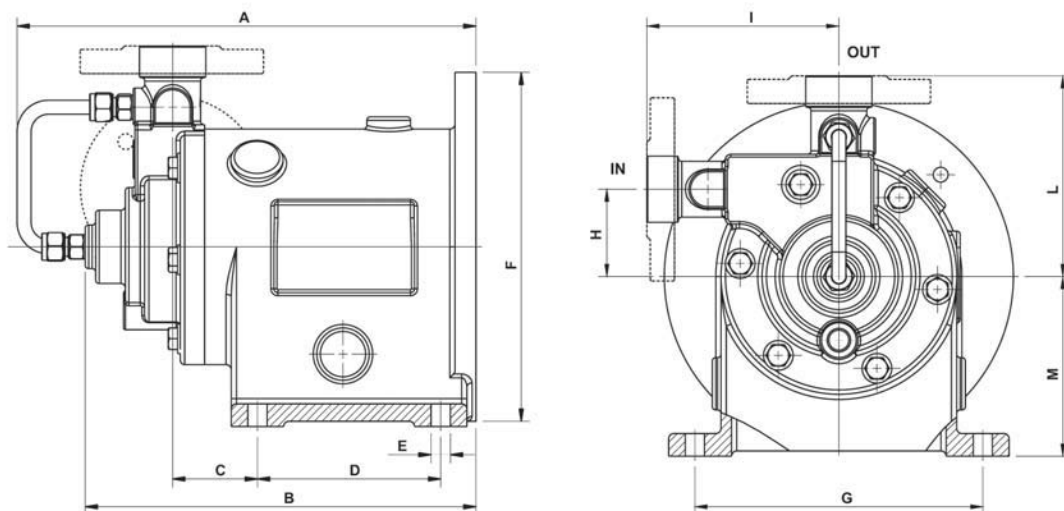




## Performance Curves

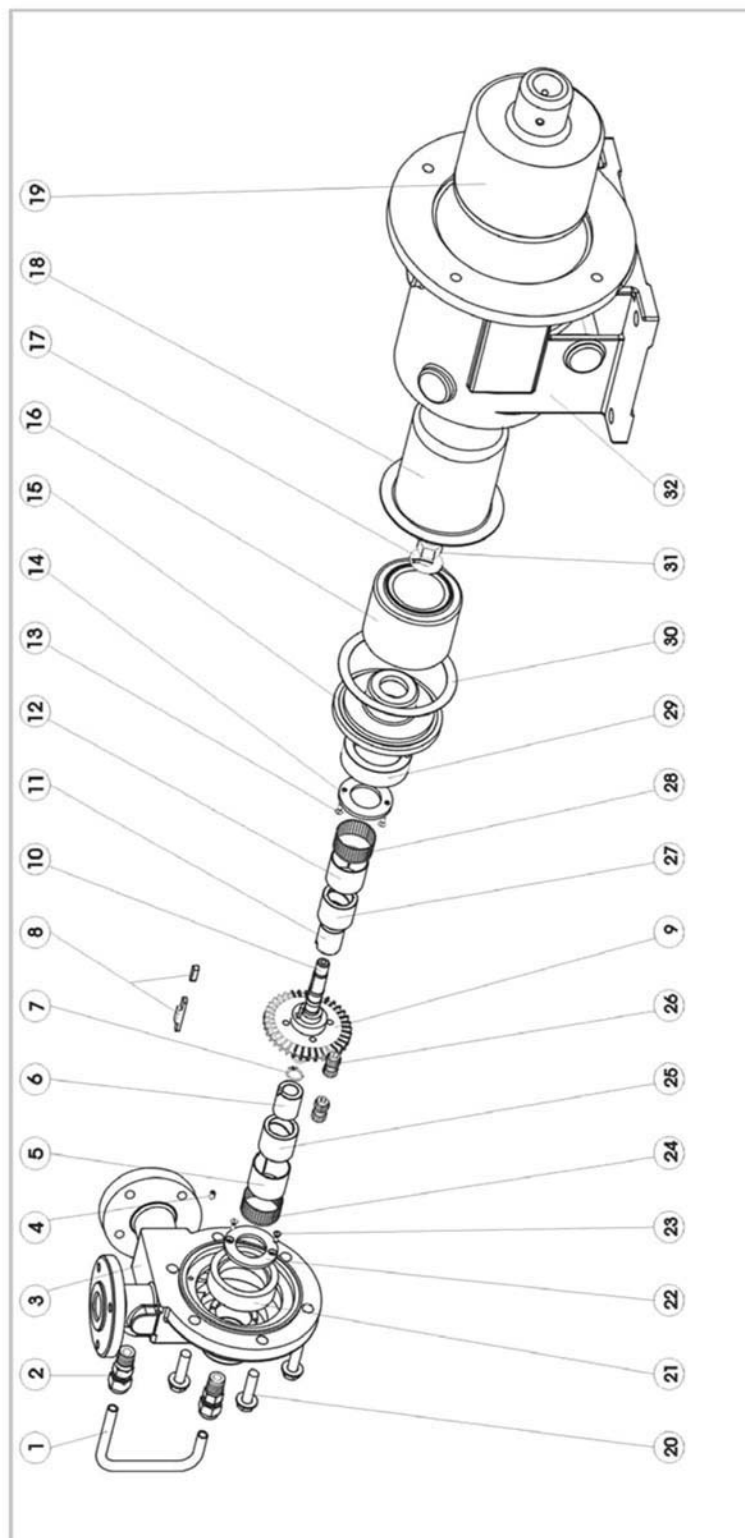


## Dimensional Drawing



Model	Motor Size	Suction	Discharge	A	B	C	D	E	F	G	H	I	L	M
T10	56C NEMA	1/2"	1/2"	9.61	7.84	1.73	3.15	0.45	6.61	5.51	1.77	3.47	3.94	3.54
T20	56C - 143/5TC NEMA	3/4"	3/4"	11.5	9.72	1.93	4.13	0.45	7.87	6.5	1.97	4.33	4.53	4.06
T30&T40	143/5TC - 182/4TC NEMA	1"	1"	11.81	10.04	2.24	4.21	0.45	7.87	7.09	1.87	4.72	4.72	4.06
T50	182/4TC - 215TC NEMA	1"	1"	13.66	11.89	0.87	4.72	0.45	9.84	7.48	2.36	5.71	5.71	5.12
T60	182/4TC - 215TC NEMA	1"	1"	13.82	12.05	0.95	4.72	0.45	9.84	7.48	2.36	5.71	5.71	5.12
All dimensions are in inches														

## EXPLODED VIEW - PARTS LIST



Pos.	Part Description	Material	Pos.	Part Description	Material
1, 2	Flushing kit	SS 316	18	Rear casing	SS 316
3	Pump casing	SS 316	19	External magnet	Carbon steel
4	Screw	SS 316	20	Set screws	SS 316
5, 12	Bushing tolerance rings	SS 316	21	Pump casing wear ring	Special carbon
6, 11	Sleeve bushings	SiC	24, 28	Bushings tolerance rings	SS 316
7, 17, 31, 8	Spacer, washer, nut, shaft key	SS 316	25, 27	Bushings	Special carbon
9	Impeller	SS 316	26	Sleeve bushings tolerance rings	SS 316
10	Shaft	SS 316	29	Volute ring wear ring	Special carbon
13, 14, 22, 23	Lock washer & screws	SS 316	30	Casing gasket	PTFE
15	Volute ring	SS 316	32	Bracket	Carbon steel
16	Internal magnet	SS 316			



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## COMPLETE SOURCE FOR MAG-DRIVE SEALLESS PUMPS

### APEI / TECH-MAG PUMPS

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