

**Seal-Less Mag-Drive Pumps**  
*From Stock or Built-to-Spec™*

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**SEAL-LESS™**  
PUMP COMPANY

**High Head,  
Low NPSH  
Process Pumps**

Providing environmentally safe seal-less magnetic pumps of the highest quality.

Our company goals are to provide the solutions that protect our surroundings, raise the environmental awareness, and promote the growth of the community.



### Services

#### Refrigeration Systems

- Ammonia, CO2
- Fluorocarbon Refrigerants

#### API & CPI Processes

- Liquified Gases
- Petroleum By-Products
- Hydrocarbons
- Petrochemicals
- Chemical Processing

#### Thermal Transfer Systems

- High-temp Synthetic Oils
- Low-temp Synthetic Oils
- Super Heated Water

SPC-AMM&CO2-1122

# SEAL-LESS PUMP CO. MAG-DRIVE PUMPS

## Seal-less Pumps - Standard Motors™

Seal-Less Pump Co. mag-drive seal-less pumps meet EPA zero emissions regulations with versatile magnetic coupling technology. Minimal heat loads, field serviceability and lower installation costs are significant process advantages. Solve your most challenging pumping problems with reliable and cost effective solutions.

## Zero Emissions and Maximum Safety

Benefit from a process free of leakage, contamination or toxic releases while avoiding constant monitoring and potential environmental fines. Eliminate all toxic and dangerous chemical releases including volatile and toxic liquids that can react with atmospheric contact.

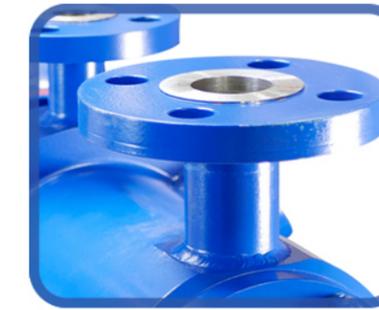
## Advanced Technology and the Highest Quality for Long Pump Life

Seal-Less Pump Co. designs are built to the highest quality standards to protect your process, preventing costly maintenance and lost production time.

- Robust, high thickness pump casings
- High efficiency impellers with low NPSH requirements
- High strength, rare earth magnetic couplings suitable for extreme temperatures
- Heavy duty rear casings
- Rugged internal bearing system withstands process upsets

## Performances to the Extreme

- Flows from 0.1 to 1500 gpm
- Pressures up to 1500 psig
- Heads to 1000 feet
- Temperatures from -139°F to +600°F
- Pump liquefied gases or liquids with low NPSH
- Compatible with VFD control systems



## Three Designs Provide Complete Hydraulic Coverage

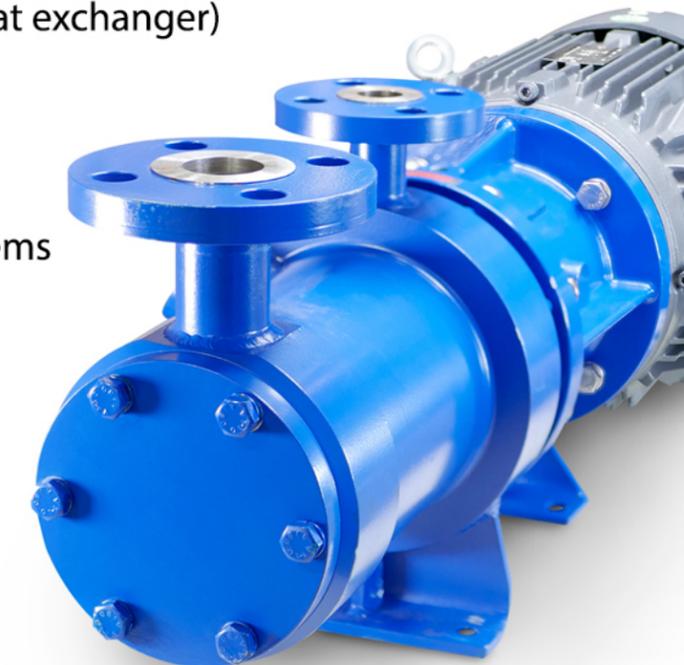
- High head turbine - Transfer
- High flow centrifugal - Recirculation
- Low flow rotary vane - Transfer



## Typical Applications

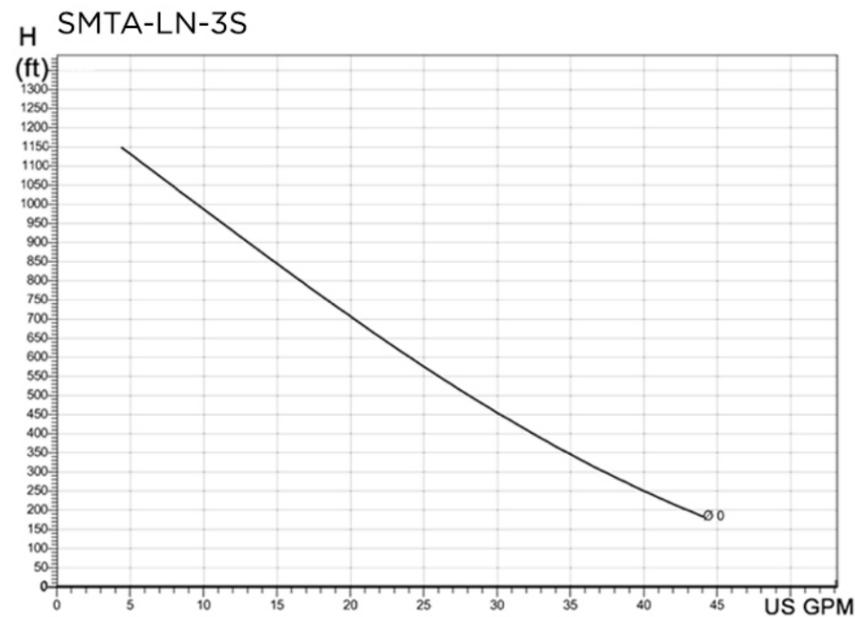
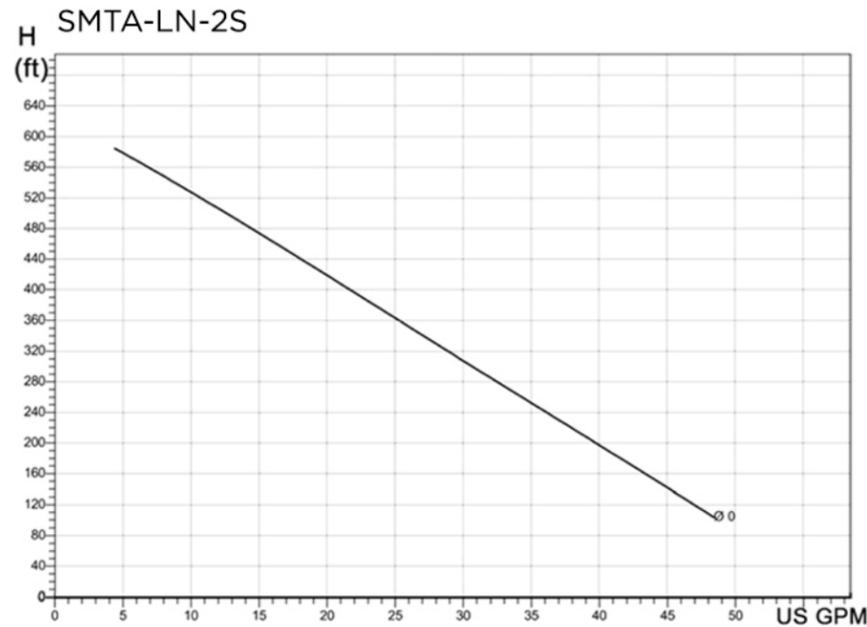
- Liquid Ammonia, CO2 and Fluorocarbon Refrigerants
- All EPA monitored chemicals
- Dangerous, toxic, noxious and carcinogenic liquids
- Solvents, hydrocarbons, pyrophorics and other volatile liquids
- Heat transfer fluids (up to + 600°F, 840°F w/ heat exchanger)
- Hot / super heated water
- Liquefied gases
- High pressure circulation systems
- Pressurizing mechanical seal pots
- Sampling, metering or chemical injection systems

- **Zero Emissions**
- **Low Heat Load**
- **No Flashing**



SMTA6 -LN-35

# Performance Curves 3600 RPM (60Hz)



## Series SMTA-LN Regenerative Turbine

(high heads, low to medium flows)

### Transfer Pumps: Low NPSH - High Head, Seal-Less Turbine

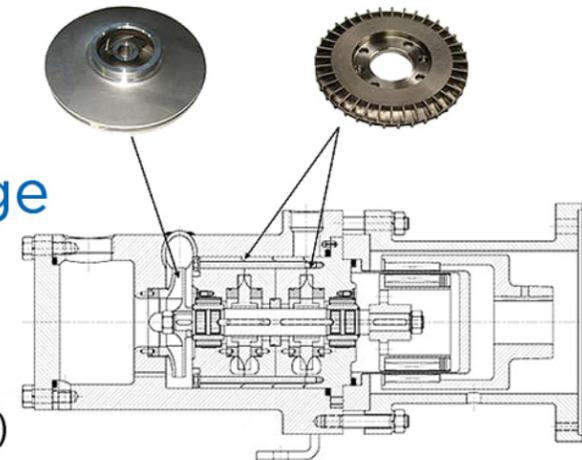
Series SMTA-LN mag-drive regenerative turbine pumps safely meet high head, low NPSH system requirements. Dynamic turbine impeller pumping action handles entrained gases to resist vapor locking.

### SMTA-LN Features

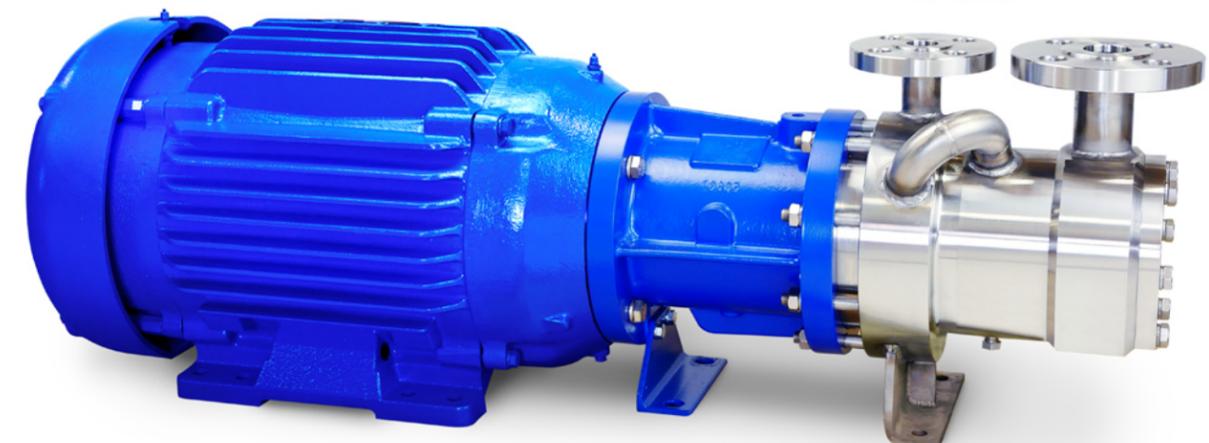
- High head pumping with pulsation free performance
- Handles up to 20% entrained gas, resists vapor locking
- Dynamic design (avoid over pressurization w/ P.D. pumps)
- Low heat induction to avoid flashing

### SMTA-LN Performance Range

- Flows from 5 to 40 gpm (1.1 - 9.1 m3/h)
- Heads to 1000 feet (305 m)
- System Pressures to 1450 psig (100 bar)
- Temperatures from -139 to +600°F (-95 to +315°C)
- NPSHr to 1'

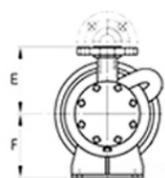
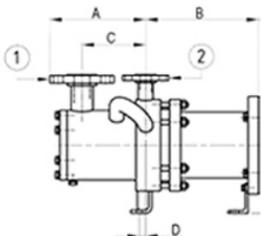


Regenerative Turbine Pump - 3 Stage Cross-Section



SMTA6-LN-2S

## Table of Sizes and Specifications



PUMP MODEL	OVERALL DIMENSIONS (Inches)						PORTS		WEIGHT Lbs.
	A	B	C	D	E	F	FLG 1 SUCTION ANSI 300 #	FLG 2 DISCHARGE ANSI 300 #	
SMTA6F-LN 2S	8.40	10.47	5.91	0.59	6.70	6.30	1 1/2" DN	1" DN	156
SMTA6F-LN 3S	11.54	10.47	8.46	0.59	6.70	6.30	1 1/2" DN	1" DN	180

# SMTA Features

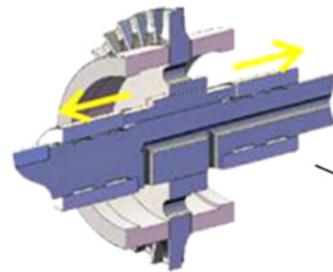
"Barrel" construction, with back inserted volute rings, to have the best hydraulic alignment and the longest wear ring life. Available in 2 or 3 stages

The hydraulic barrier between stages is made of a special high pressure static seal

Epoxy primer and polyacrylic enamel water-based painting for optimal chemical resistance, yet environmentally friendly

Hastelloy®-C276 or Titanium-G5 isolation shell material - providing a safe and efficient solution – system pressure max 100 BAR

Particular design of the hydraulic, with self balancing impeller to improve the wear ring life



The range design is available in 2 or 3 stages, with or without centrifugal inducer to minimize the required NPSH to 1' - 2'

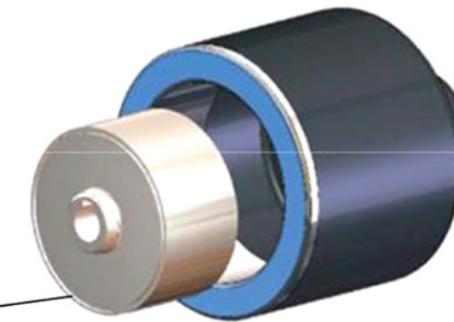
CF8M or WCB pump casing, cover & impellers  
High quality casting components

Other materials : Hastelloy C276, Incoloy825, Duplex, or others available on request

Drain plug (1/2"NPT)

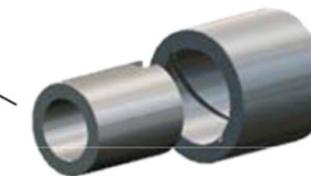


REAR CARTRIDGE KIT to ensure easy and fast maintenance retrofits



High torque synchronous rare earth magnetic coupling

The high performance magnets can be operated at liquid temperatures of up to 600°F (315°C) without external cooling



Confined casing O-rings prevents product leakage to atmosphere – different materials available:

- PTFE
- Buna
- Viton
- Kalrez

Field servicing of the lubricated bearings does not require special tools

The bearing materials are available in three different materials to match each application: Silicon Carbide (SiC), Tungsten Carbide (TC), Carbon to allow intermittent dry running