

WMCA Series Seal-less Mag-Drive Pumps



Seal-less Mag-Drive Pump Specialists



Specifications

- Flow Capacities: to 4,500 GPM
- Power Capabilities: to 200 HP
- Differential Heads: to 3850 Feet
- Working Pressures: to 7250 PSIG (MAWP)
- Operating Temperatures: -238 to 840 degrees F
(840 deg. F with external cooling)

WMCA

MAG-DRIVE
ANSI-B73.1
ISO-2858
or API-685

CENTRIFUGAL PUMPS

WARRENDER, LTD.

Seal-less Mag-drive Pump Specialists

WARRENDER Series WMCA

ANSI, API & ISO Heavy Duty Alloy Centrifugal Mag-Drive Pumps

The **WARRENDER WMCA** alloy centrifugal mag-drive pump program is a culmination of 30 years of research, engineering, product development and manufacturing technology. The **WMCA** designs are the benchmark for heavy-duty seal-less process pumps offering the utmost in versatility and reliability in the most arduous applications. **WMCA** alloy centrifugal mag-drive designs are available in ANSI-B73.1, API-685 and ISO-2858 configurations.

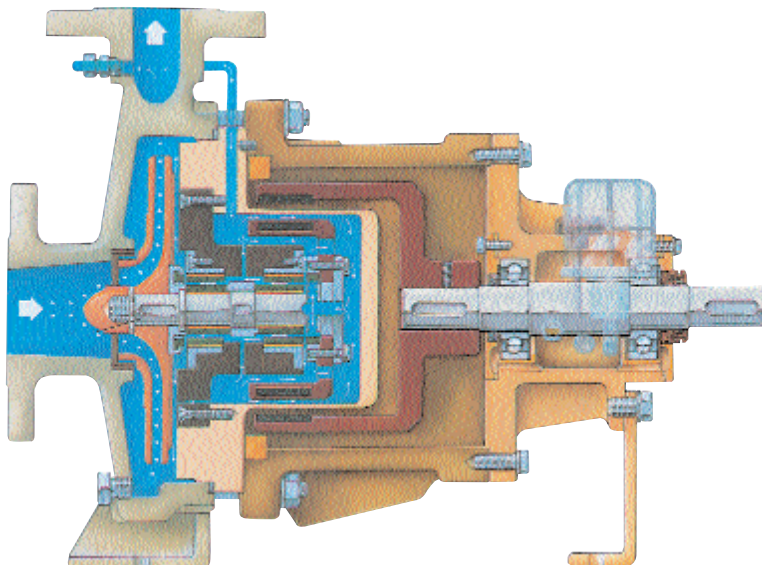
Maximum Component Interchangeability

A modular design concept results in fewer spares and reduced operating costs. All critical spare components including the silicon carbide sleeve, journal and thrust bearings, internal and external magnetic couplings, rear casings, and power frame components are interchangeable within each of the 3 respective pump groups.

The industry's most comprehensive range of mag-drive pumps.

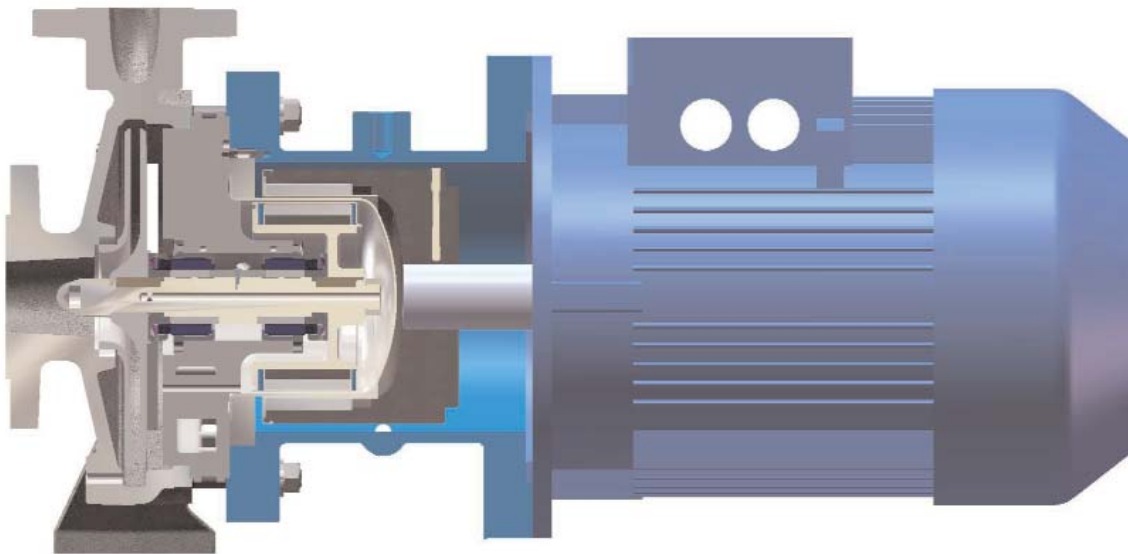
For over 25 years, we have been solving the most challenging process applications with leading edge pump technologies.

Warrender can meet your specifications!



Technical Design Features

- Available in ANSI-B73.1, API-685 or ISO-2858 design standards
- Long coupled-pedestal or close-coupled mounting
- Internal lubrication or external lubrication for accommodated API flush plans
- Heavy duty containment shell constructed in Hastelloy-C276 with a thickness of .060" that exceeds the ASME Pressure Vessel Codes
- Quick-change rear cartridge assembly allows for 10 minute retrofits
- Alpha grade silicon carbide sleeve and journal bearings that are positively located with star point tolerance rings to accommodate thermal expansion
- Alpha grade silicon carbide thrust bearings, spring loaded to eliminate shaft end-play
- Hydraulically and dynamically balanced impellers
- Replaceable casing wear ring
- Dual synchronous samarium cobalt magnetic couplings provide reliable performance up to 600 degrees F, without external cooling
- Modular impeller-magnet assembly with interchangeable components within each pump group reduces spare parts inventories
- Back-pull-out pedestal design allows for removal of internal parts without dismantling pipe-work or motor (requires 3" spacer coupling)
- Dual back-pull-out pedestal design allows for servicing the power frame without dismantling liquid end or motor (requires 7" spacer coupling)
- Ductile iron adapter housing
- Confined casing gaskets (requires no o-rings)
- All ports are raised face 150 lb. or 300 lb. ANSI flanges (600 lb. & 900 lb. ratings available)



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

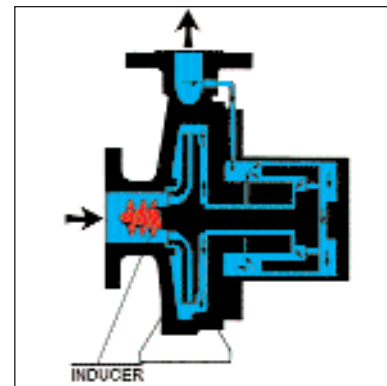
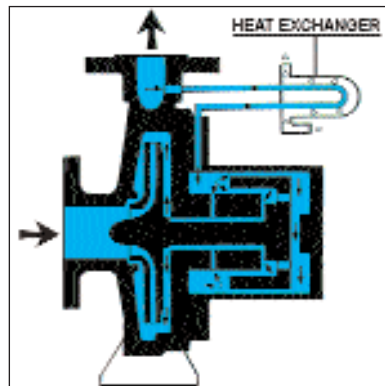
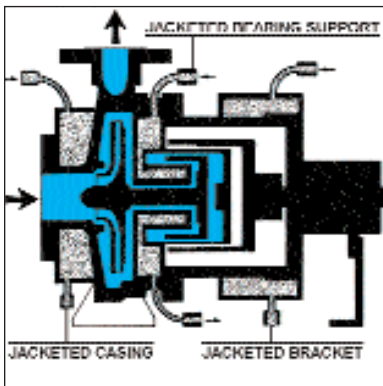
- PTFE, Garlock, Gylon or Graphoil

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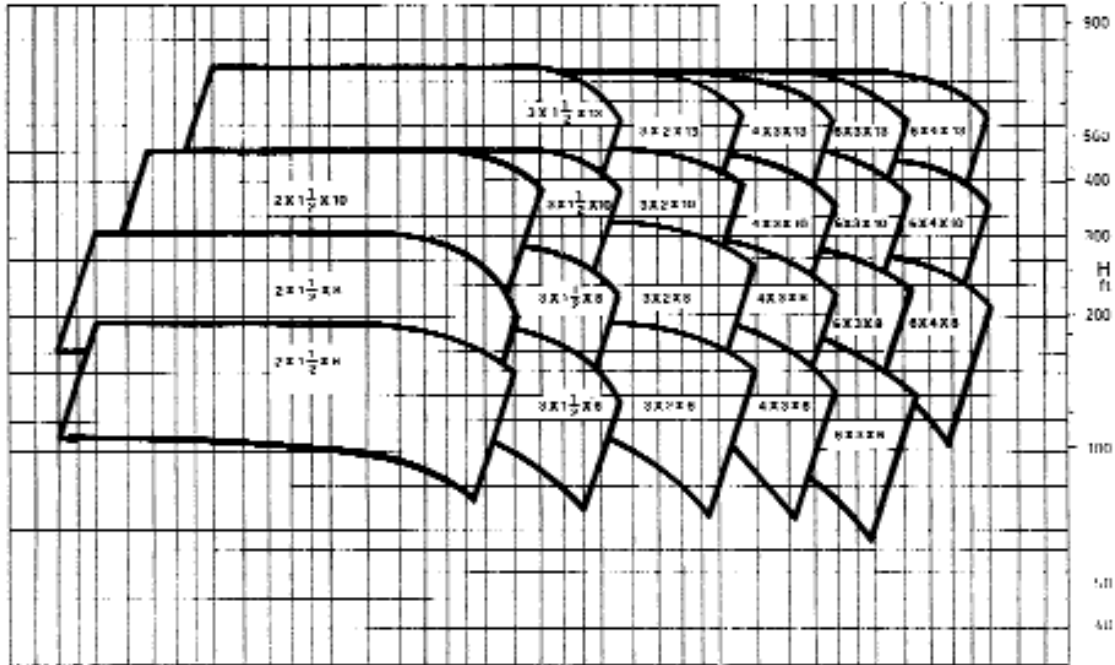
Options

- 300, 600 & 900 lb. flanges
- Welded steam jackets: pump casing, adapter housing or internal bearing carrier
- API flush plans for rear cavity
- Self-cleaning discharge strainer
- Internal seal w/ external mag-drive coupling for secondary containment
- Labyrinth oil seal for power frame
- Alternate internal bearing materials
- Inducers for marginal NPSHa conditions
- Fully open impeller for slurries
- Long coupled or NEMA close-coupled drive assemblies



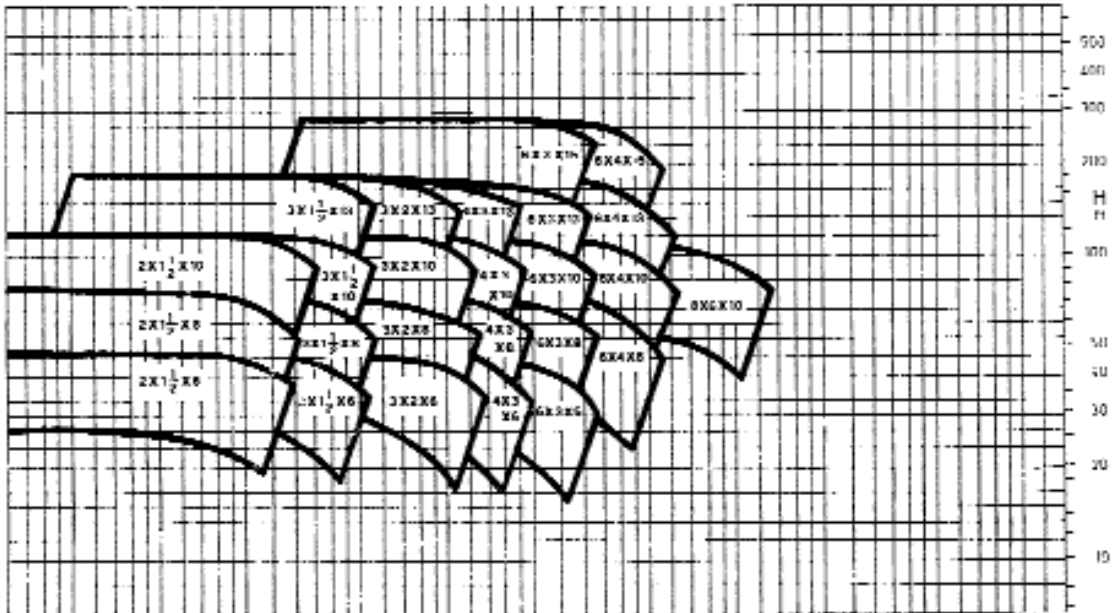
3500 RPM

5 10 U.S.gpm 20 30 40 50 100 200 300 400 500 1000 2000

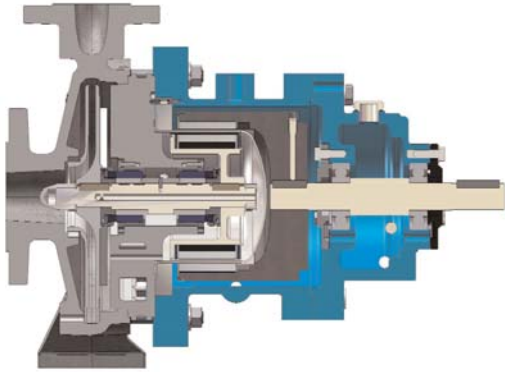


1750 RPM

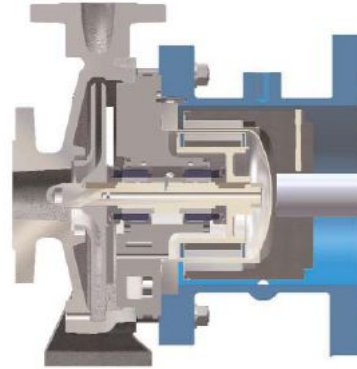
5 10 U.S.gpm 20 30 40 50 100 200 300 400 500 1000 2000 3000 4000 5000 10000 20000



Long Coupled Pedestal Pump



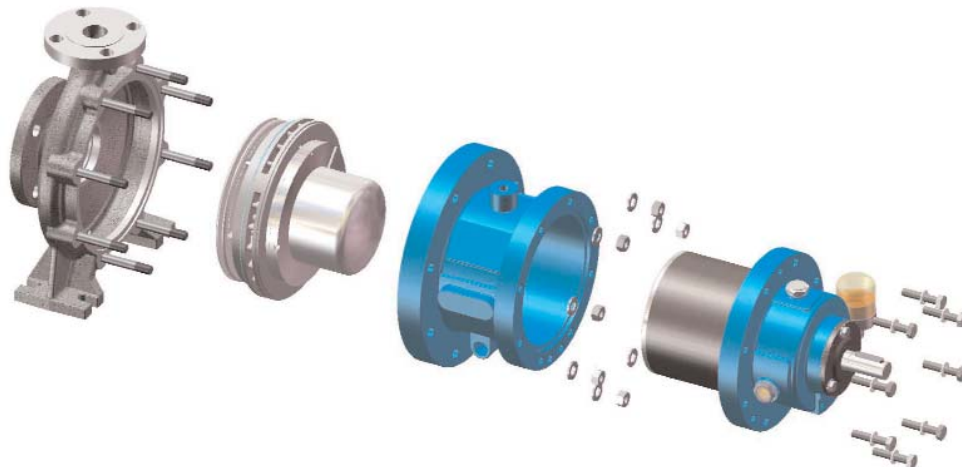
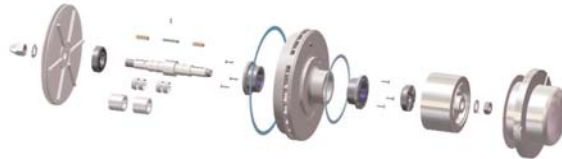
NEMA Closed Coupled Pump



Motor Mount

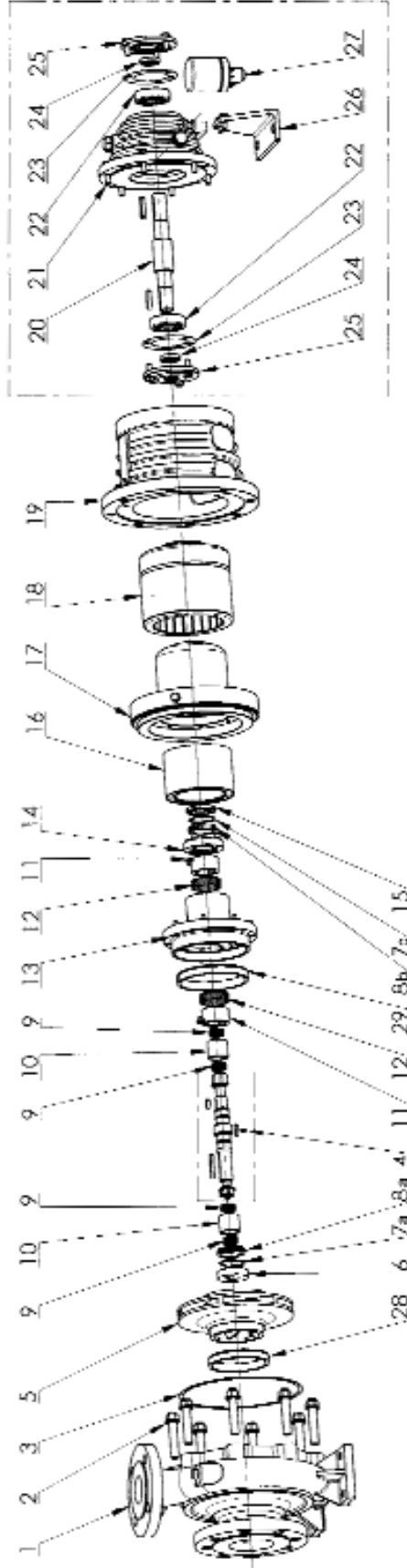


Wet End Assembly



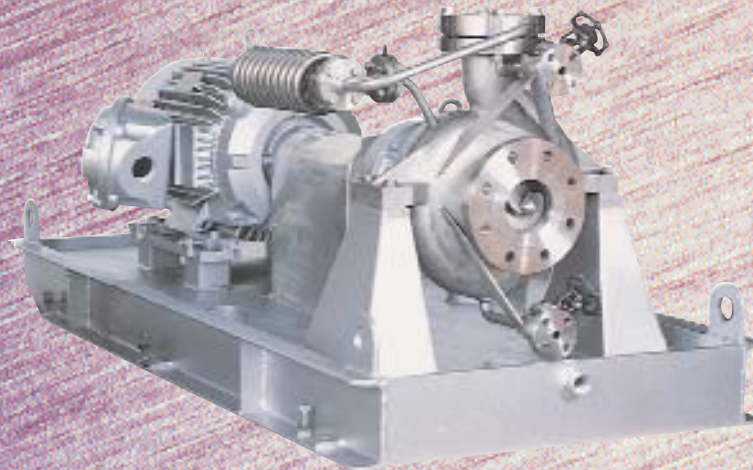
EXPLODED VIEW - PARTS LIST

POS	PART DESCRIPTION	POS	PART DESCRIPTION
1	Pump Casing	20	Oil Sump Shaft
2	Studs	21	Oil Sump Housing
3	Gasket	22	Ball Bearing (2 pcs)
4	Shaft	23	Gasket (2 pcs)
5	Impeller	24	Lip Seal (2 pcs)
6,7a,8a	Front Thrust Bushings	25	Cover (2 pcs)
9,10	Shaft Bushing set (2 pcs)	26	Foot
11,12	Bushings (2 pcs)	27	Constant Level Oiler
13	Bushing Support		
7b,8b,14,15	Rear Thrust Bushing		Only on request
16	Inner Magnet	28	Casing Wear Ring
17	Rear shell	29	Impeller Wear Ring
18	Outer Magnet		
19	Bracket		





WMCA API with Plan 31-S & Magnetic Strainer



**WMCA API with Plan 41-S with Self Cleaning Strainer
& Air Cooled Heat Exchanger**



WARRENDER, LTD.

821 Sivert Drive
Wood Dale, IL 60191

Phone: 847-247-8677 Toll Free: 888-24 PUMPS Fax: 847-247-8680
web site: www.warrender.com email: sales@warrender.com

Authorized Distributor: