Innovative Mag-Drive, LLC
6911 West 59th Street
Chicago, IL 60638
Tel: 773.586.6250 Fax:

TB-mag Series

General:

1. Thrust-balanced, non-metallic magnetic drive pump.
2. No axial thrust bearings. Axial forces on impeller balanced by patented system.
3. Radial bearings operate in a pressurized fluid environment. Pressurization virtually eliminates the possibility of flashing.
4. Wear rings limit particulate from entering containment shell and inner magnet assembly.
5. No restriction at the impeller eye, provides optimum NPSHr to match sealed ANSI pump performance.
6. Back pull-out design allows removal of impeller assembly without disturbing the piping connections.
7. Liquid end and drive end independently serviceable.
8. 100% replaceable wear parts including all rotating and stationary wear rings.
9. All external components protected with premium water-based epoxy primer and top coat.
10. Maximum discharge pressure: 300 psi (20.6 bar) .
11. Temperature range: -20°F (-29°C) to 250°F (121°C)
12. Close coupled motor mounting for a rigid, compact unit with no alignment requirements.

Casing:

1. One piece cast ductile iron.
2. Bonded TEFZEL® lining, minimum of 1/8" (3mm) thickness.
3. Self venting, top centerline discharge design.
4. Casing houses front stationary silicon carbide (SiC) wear ring and thrust bumper.
5. ASME/ANSI B73.1 dimensions for flange position and foot print.
6. Flanges: ASME/ANSI B16.5 class 150 hole pattern standard, class 300 optional.
7. Two bolt flanged drain with pure PTFE gasket and 316SS blind flange, standard.

Impeller Assembly:

1. Molded one-piece enclosed impeller made of carbon fiber-reinforced TEFZEL®.
2. High strength neodymium iron boron magnet assembly.
3. Magnet assembly hermetically sealed from environment.
4. High efficiency, low NPSHr impeller geometry.
5. Fully open impeller eye; no shaft socket or support struts.
6. Replaceable front and back rotating SiC wear rings.
7. Impeller houses radial bearings and thrust control valve.

Innovative Mag-Drive, LLC
6911 West 59th Street
Chicago, IL 60638
Tel: 773.586.6250 Fax:

Radial Bearings:
1. Tandem bearing system made of pure sintered silicon carbide (SiC)
2. Separately mounted for optimum alignment with shaft.
3. Bearings separated by pure PTFE spacer.

Pump Shaft:
1. Replaceable, straight SiC shaft.
2. Cantilevered design leaves impeller eye open for optimum NPSHr.
3. Shaft oversized to handle any combinations of radial loads.

Gasket:
1. FEP/Viton o-ring standard. Provides universal chemical resistance.
2. Other o-ring materials available on request.

Containment Shell:
1. One-piece molding of carbon fiber-reinforced TEFZEL®.
2. Outer pressure housing molded from a Kevlar®/Derakane ®(vinyl ester) composite.
3. Kevlar provides optimum combination of pressure and shock resistance.
4. Reinforced shaft socket to handle any combination of radial loads.
5. Zero eddy current losses for no heat operation and maximum possible efficiency.
6. Front face houses stationary SiC wear ring.
7. Internal ribs limit swirl to promote fast ejection of fine particles from containment shell.

Containment Ring:
1. One-piece ductile iron casting.
2. Aligns and supports the containment shell.
3. Jackscrew holes provided for easy disassembly.

Outer Magnet Assembly:
1. Ductile iron shell with high strength neodymium iron boron magnets.
2. One drive size per motor frame. Minimum possible inventory.
3. Keyless hub for fast assembly.
4. Jackscrew holes provided for easy removal from motor shaft.

Adapter:
1. One-piece ductile iron casting.
2. Mounts to a wide range of standard NEMA C-face motors.
3. Zero alignment required.
4. Back foot positioned for mounting directly to existing ANSI pump bases.