



MAGNES Sliding Vane Magnetic Drive Pump

Positive Displacement Design

- A flow-creating pump that transports a fixed volume of fluid for each pump rotation
- Matches the system's backpressure, accommodating a wide range of operating conditions
- Has inherent functionality: self-prime, suction lift, line strip and solids & vapor handling

Aftermarket & Maintenance

- Low-cost and renewable wear parts provide an optimized total lifecycle cost
- Designed for continuous and extended operating time between maintenance intervals
- Simple maintenance renews performance while the pump remains installed in the piping system

Magnet Coupling

- Designed and manufactured by Blackmer to have unmatched torque density (torque/volume)
- 3" size: 415 ft-lb (560 Nm)
- 4" size: 990 ft-lb (1340 Nm)

Bearing Housing

- Sealed for life bearings are completely maintenance free and protected by lip seal
- Machined for use with optional Blackmer alignment-free gear reducers

Containment Shell

- Coupling strength of a thin-wall metallic shell and reliability from being eddy-current-free
- Long carbon fibers improve strength
- Polyether ether ketone (PEEK) thermoplastic polymer has excellent chemical compatibility

Inboard Head & Magnet Housing

- Provisions for jacking studs, which are used for coupling disassembly and reassembly
- 1/4" NPT threaded port provides access for optional thermowell or leak-detection

Magnets

- Neodymium rare earth magnets are the strongest magnets available
- Shape, length, positioning and quantity are optimized for maximum coupling strength

Flexible Porting Options

- Type: ANSI flanged, welded, and NPT threaded
- 90-degree: side inlet & top outlet (standard for all models)
- 180-degree: side inlet & side outlet (option for iron models MI3, MI4)

Outboard Head

- Provides easy access to the main pumping chamber for maintenance tasks that renew pumps to new condition

Anti-Galling Rotor Thrust Pad

- Self-lubricating carbon thrust pads prevent contact between rotor and head (stainless steel MS3 and MS4 models only)

Integral Relief Valve

- Relief valve is integral to the pump cylinder (casing). Pressure setting corresponds to motor rating, preventing overload and nuisance trips of motors

Self-Lubricating Bearings

- Low rotational speed and low surface velocity yield exceptional life
- Lubricating materials allow for expected and unexpected dry run, non-lubricating and abrasive liquids and vapor mixtures

Internal Porting

- Internal porting routes fluid back to the pump inlet (along with any solids) on both inboard and outboard ends

Sliding Vanes

- Vanes are non-metallic and lubricating, well suited for dry run, vapor and suspended solids
- Vanes self-compensate for wear, providing like-new performance throughout the life cycle

Pump Chamber

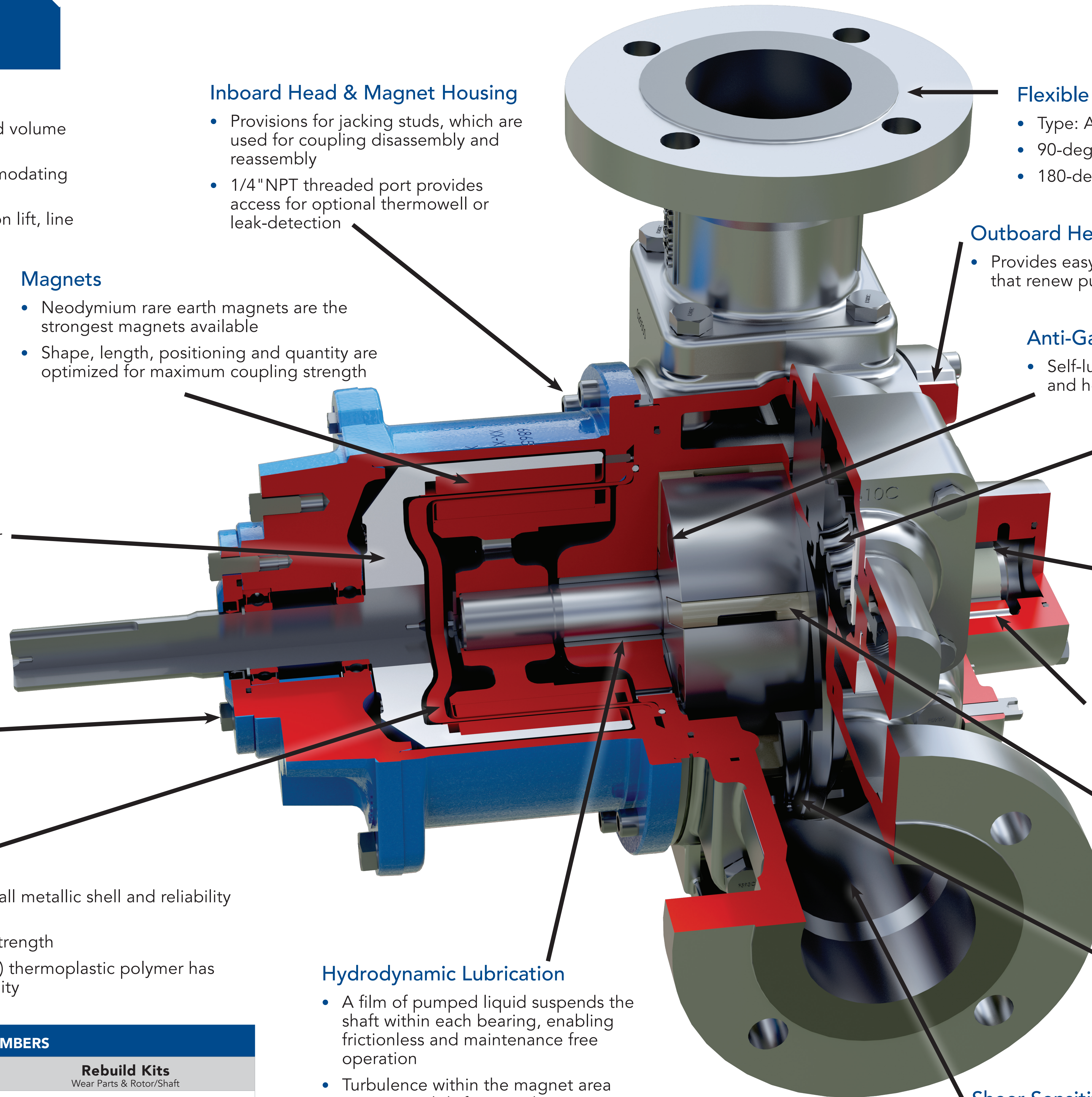
- Open flow paths are well suited for suspended solids
- Large internal volume yields high displacement, resulting in one or more port sizes smaller than competing positive displacement pumps

Shear Sensitive Profile

- Low internal flow velocity and unobstructed inlet and outlet create a gentle flow path for shear sensitive liquids and those with low available NPSH

Hydrodynamic Lubrication

- A film of pumped liquid suspends the shaft within each bearing, enabling frictionless and maintenance free operation
- Turbulence within the magnet area prevents solids from settling



MAGNES KIT PART NUMBERS

	Maintenance Kits Wear Parts	Rebuild Kits Wear Parts & Rotor/Shaft
MAGNES 3"	MI3: BLK899097 MS3: BLK899098	MI3: BLK899197 MS3: BLK899198
MAGNES 4"	MI4: BLK899083 MS4: BLK899084	MI4: BLK899183 MS4: BLK899184

Note: Kits include FKM elastomers

blackmer.com/MAGNES

