

MZ / MZ-B SERIES

Non Metallic Magnetic Drive Pumps

PP-H | PVDF | ETFE



ANTICO

Corrosion Resistant Chemical Pumps

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Sealless, Non Metallic, Chemical Resistant Magnetic Drive Pumps

PRODUCT OVERVIEW

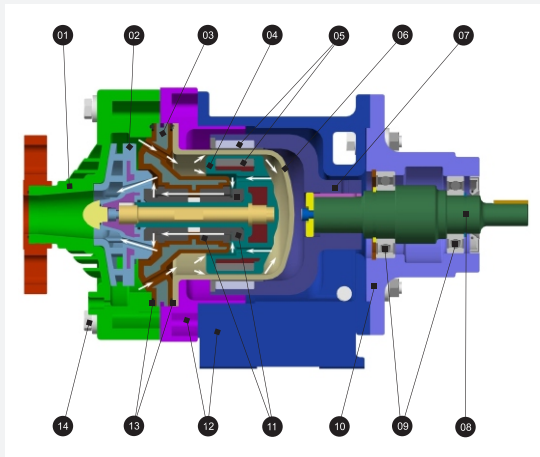
MagZeus pumps are injection moulded, non metallic, magnetic drive, long & close coupled, horizontal, single stage, end-suction, centrifugal pumps with rotary shaft design to surpass performance expectations in the most demanding chemical applications and environments.

TECHNICAL DATA

Operating Frequency		50 Hz	60 Hz
Capacity [Q]	up to	40 m³/hr (176 US gpm)	220 US gpm (50 m³/hr)
Head [H]	up to	38 m (125 ft)	176 ft (54 m)
Motor Power [P]	up to	15 kW (20 hp)	25 hp (18.5 kW)
Solids Handling	up to	10% w/w with 150 microns (6 mil) particle size	
Viscosity	up to	150 mPas (cP)	
Suction Lift	up to	4 m (13 ft) with priming chamber*	
Maximum Working Pressure		10 bar (145 psi)	
Maximum Specific Gravity [SG]		1.8 - 3	
Minimum Continuous Flow [MCF]		2.5 m³/hr (11 US gpm)	
Maximum Temperature		PP-H: 82°C (180°F), GFRPP: 90°C (194°F), PVDF: 104°C (220°F), ETFE: 121°C (250°F)	
Dry Running Capability		limited	
Suction & Delivery Connection		ANSI B16.5 - Class 150, DIN 2501, BS4504 - PN16, BSP or NPT*	
Motor Compatibility		IS 1231, IEC 72-1, NEMA*	

*available on request

MATERIALS



- Casing 01

Impeller 02

Bush Holder 03

Inner Magnetic Ring (IMR) 04

Magnets 05

Isolation Shell 06

Outer Magnetic Ring (OMR) 07

Shaft - long coupled 08

Rolling Element Bearing 09

Bearing Pedestal 10

Bearings & Bush 11

Housing & Adapter 12

O-rings 13

Fasteners 14
- PP-H¹ / GFRPP² / PVDF³ / ETFE⁴

PP-H / GFRPP / PVDF / ETFE

PP-H / GFRPP / PVDF / ETFE

GFRPP / PVDF / ETFE

Rare Earth Magnets (NdFeB⁵ / SmCo⁶)

GFRPP / PVDF / ETFE

Cast Iron*

Stainless Steel

Carbon Chromium Steel

Cast Iron*

Alpha Sintered Silicon Carbide (S-SiC)

Cast Iron*

FKM / FFKM / EPDM / TFE-P

Stainless Steel

1 - Polypropylene - Homopolymer, 2 - Glass filled Reinforced PP, 3 - Polyvinylidene Fluoride, 4 - Ethylene Tetrafluoroethylene

5 - High Performance Neodymium Iron Boron Magnets, 6 - High Performance Samarium Cobalt Magnets

* - with high grade 2C corrosion protection paint. Special coatings available on request



PP-H : Suitable for Corrosive Media up to 82°C (180°F)

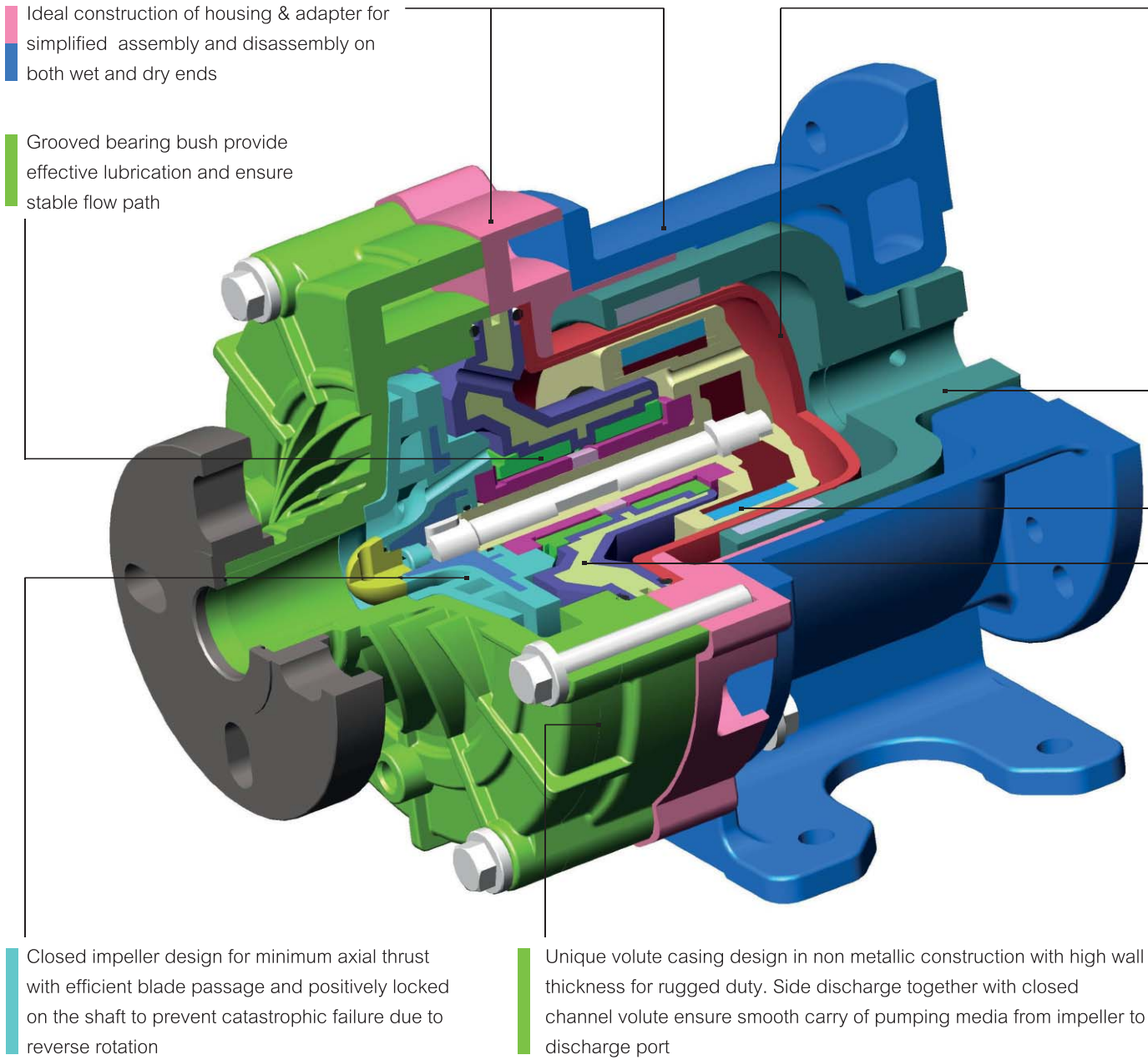


GFRPP : Suitable for Aggressive Media up to 90°C (194°F)



PVDF : Suitable for Corrosive, Hazardous Media up to 104°C (220°F)

DESIGN FEATURES



Impeller Locking Mechanism

Prevents catastrophic failure in case of reverse rotation



Drain Plug

PVDF drain plug with quick connect coupling allow swift drainage of hazardous liquids without dismantling the pump



Flexible Casing Orientation

Vertical or Horizontal orientation for optimized discharge piping layout

COMPONENT FEATURES

In a magnetically coupled pump, the **OUTER MAGNETIC RING (OMR)** is mounted on the motor shaft, which transfers the motor torque to the **IMPELLER** through an **INNER MAGNETIC RING (IMR)**. The impeller and IMR are contained in an **ISOLATION SHELL**, which effectively seals any leakage of process media. Alpha Sintered Silicon Carbide (**S-SiC**) **BEARINGS & BUSH** are used to give frictionless drive to the impeller and IMR assembly. The S-SiC bush are locked on the **BUSH HOLDER**.



Impeller

Option of closed and semi-open impeller with efficient blade passage for effective pumping of process media.



Bush Holder

Rigid bush holder with engineered hexagonal slots for accurate alignment of bearings and to withstand hydraulic forces.



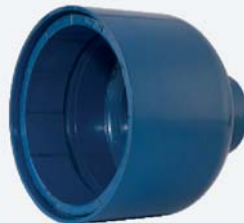
Isolation Shell

Numerically optimised elliptical shape, monolithic construction to withstand high pressures. Non metallic construction ensures zero eddy current losses as a result, no heat generation of process media thus achieving maximum power transmission.



Bearings & Bush

Hexagonal shaped alpha sintered silicon carbide bush for snug fit on the bush holder. Slots on bearings ensure positive locking on impeller and IMR thus preventing relative motion. Grooved bush and bearings for smooth transfer of contaminants of size up to 150 microns.



OMR

Dynamically balanced outer magnetic ring for maximum torque transmission with minimum vibration & noise.



IMR

Inner magnetic ring positively locked on the shaft for effective torque transmission and lined with suitable polymer provides excellent corrosion resistance.

Optimum size and shape of non metallic containment shell to obtain high pressure capability and zero eddy current losses

Dynamically balanced OMR and IMR with high performance rare earth magnets for effective torque transmission

- Volute Casing
- Impeller
- Bush Holder
- Bearing Bush
- Sleeve Bearing
- Shaft & Key
- IMR
- Isolation Shell
- OMR
- Casing Adapter
- Housing
- Suction Flange & O-rings

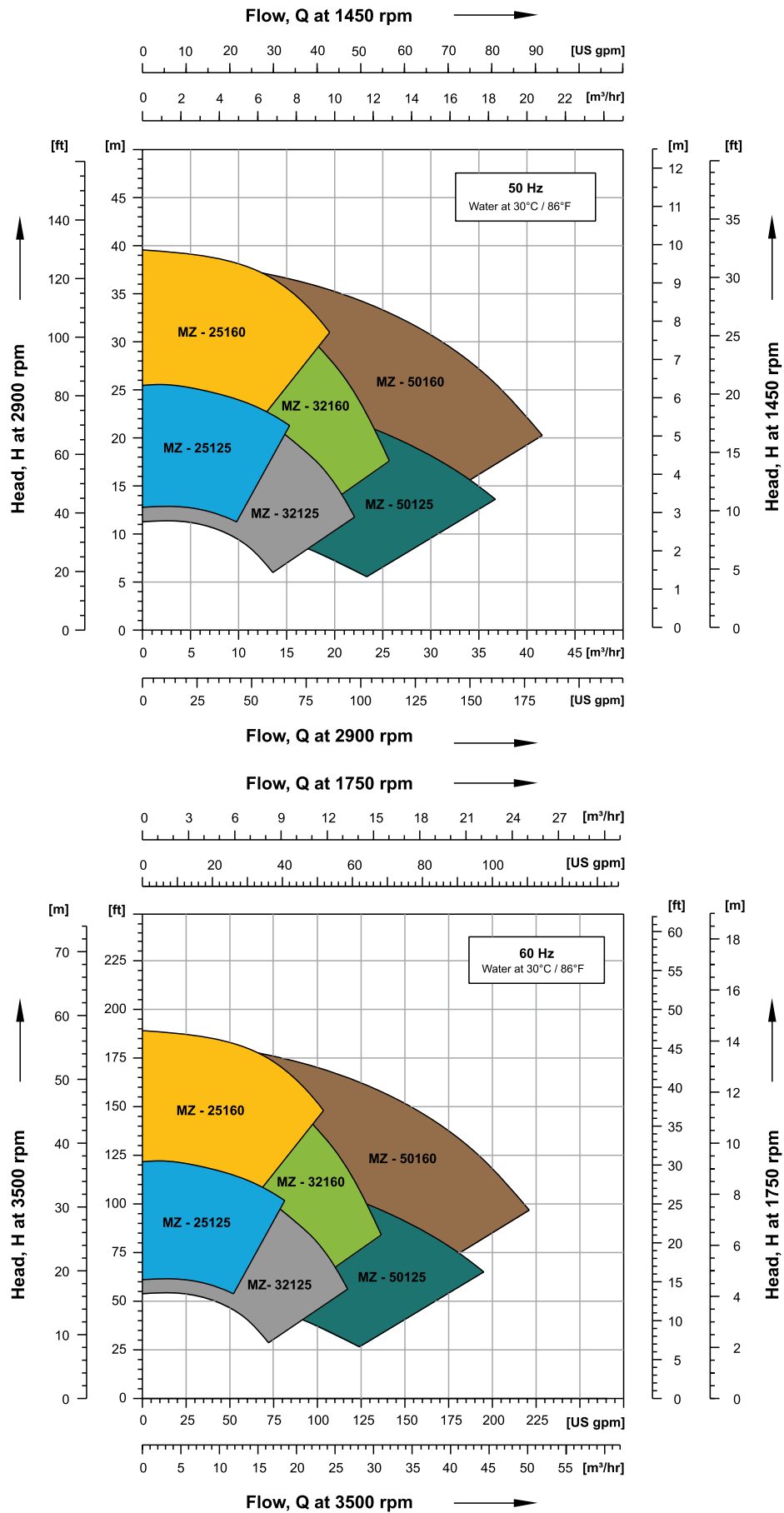
Single piece bush holder with metallic insert provides accurate alignment of bearings and absorbs hydraulic forces



Telescopic Arrangement

Quick and safe assembly of pump with telescopic arrangement ensures smooth gliding of inner and outer magnet assembly

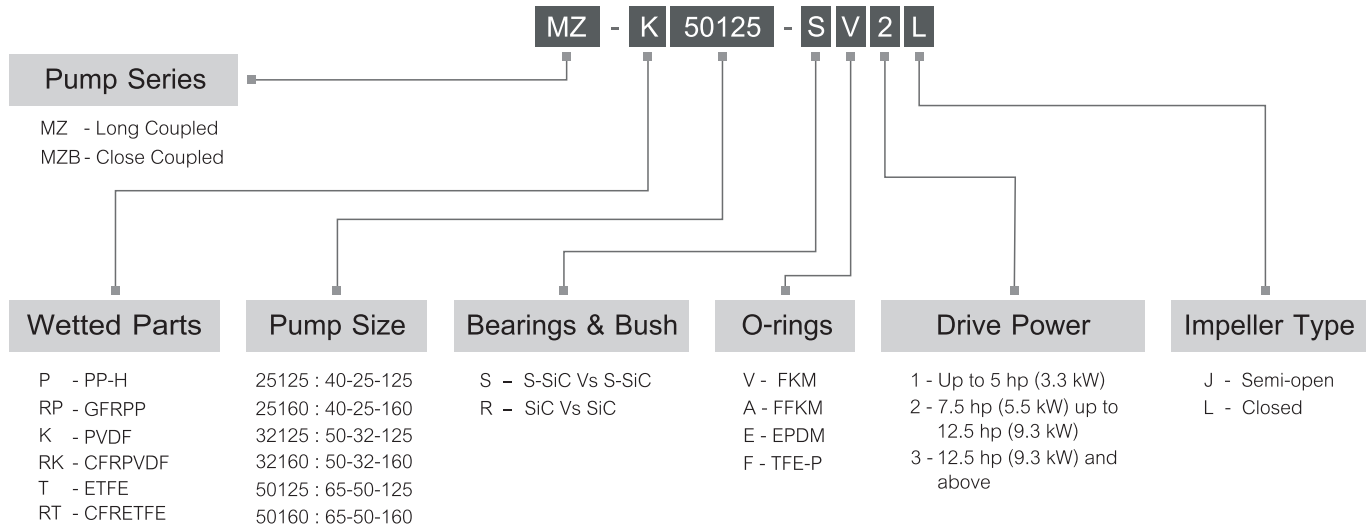
HYDRAULIC COVERAGE



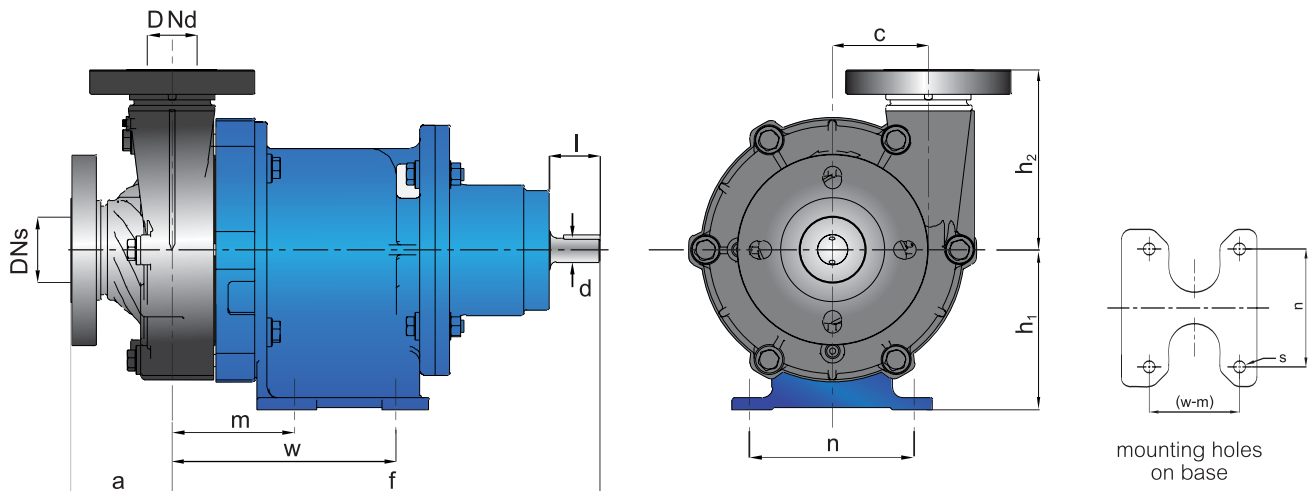
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PUMP IDENTIFICATION



DIMENSIONS



MODELS	PUMP DIMENSIONS													
	DN _s	DN _d	a	f	c	h ₁	h ₂	m	n	w	(w-m)	s	d	l
MZ - 25125	40	25	100	435	90	160	182	125	150	240	115	M12	24	50
MZ - 25160	40	25	110	435	104	160	208	125	150	240	115	M12	24	50
MZ - 32125	50	32	100	435	90	160	182	125	150	240	115	M12	24	50
MZ - 32160	50	32	110	435	104	160	208	125	150	240	115	M12	24	50
MZ - 50125	65	50	100	435	96	160	182	125	150	240	115	M12	24	50
MZ - 50160	65	50	110	435	108	160	208	125	150	240	115	M12	24	50

All Dimensions in mm

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Anticorrosive Equipment Pvt. Ltd.