



The Ultimate Bearing Protection Device



ISOMAG[®]

Magnetic Shaft Seals

MAGNUM-S Cartridge Bearing Seal

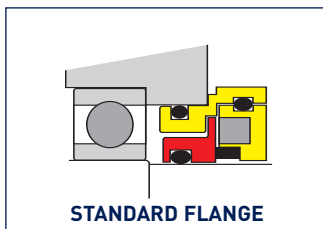
ISOMAG® MAGNUM-S resolves the long-standing issues of leakage and installation that have plagued flooded bearing seals.

The MAGNUM-S cartridge seal, with Easy Flex feature, will fit into narrow cross-section and short axial length applications that previously prevented the use of precision flat face seals.

Unitized cartridge design correctly sets the seal forever. Axial rotor movement is contained within the cobalt magnetic field for the life of the seal... even if you move the shaft.

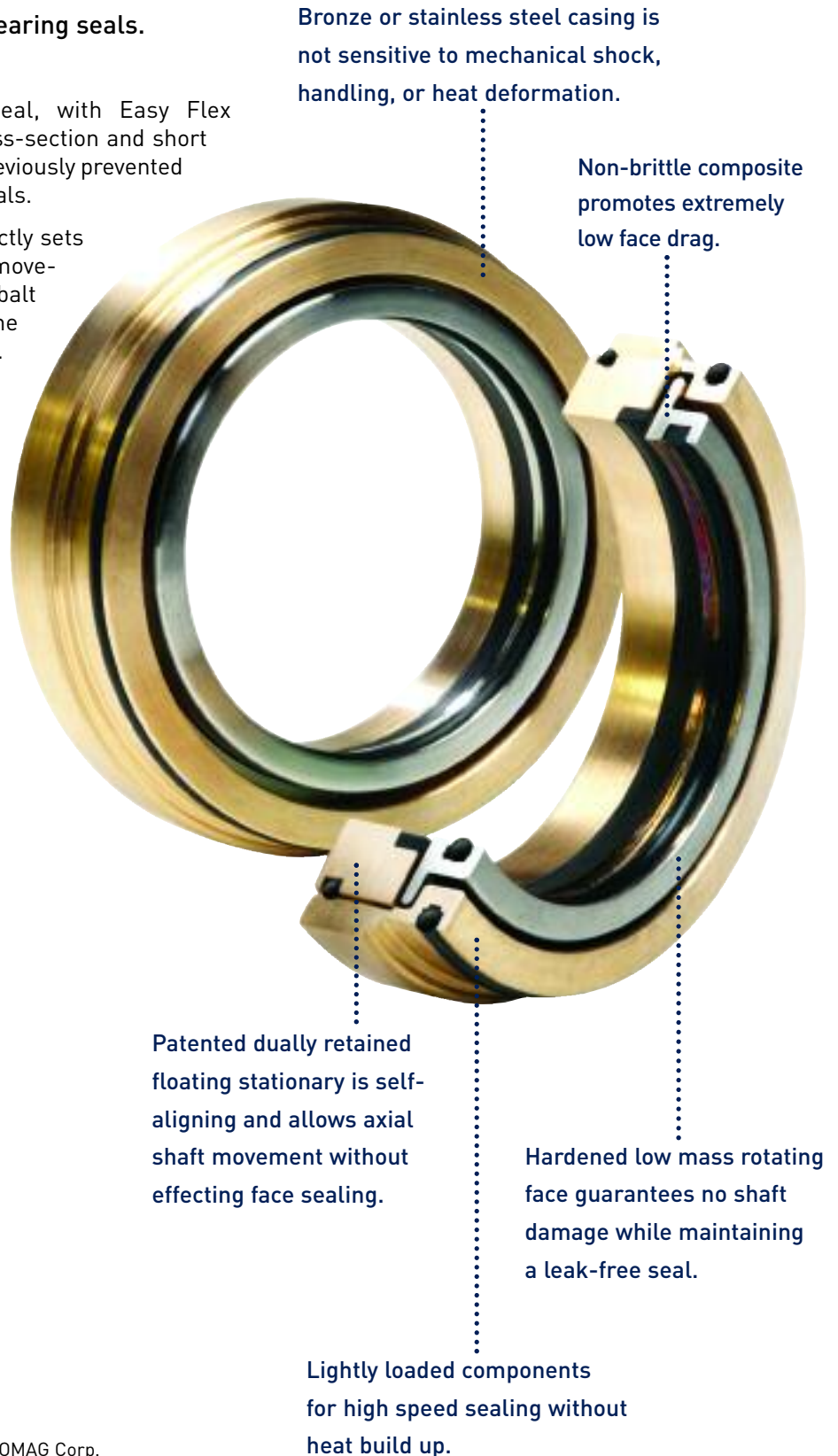
MAGNUM-S is a precision contact mechanical seal designed to completely seal your power frame, gearbox, motor, turbine, blower and more. The MAGNUM-S features precision lapped faces and OD hydraulic loading to assure sealing in flooded applications. All these features are in a compact unitized assembly that installs as easily as a lip seal.

U.S. Patent #6,805,358

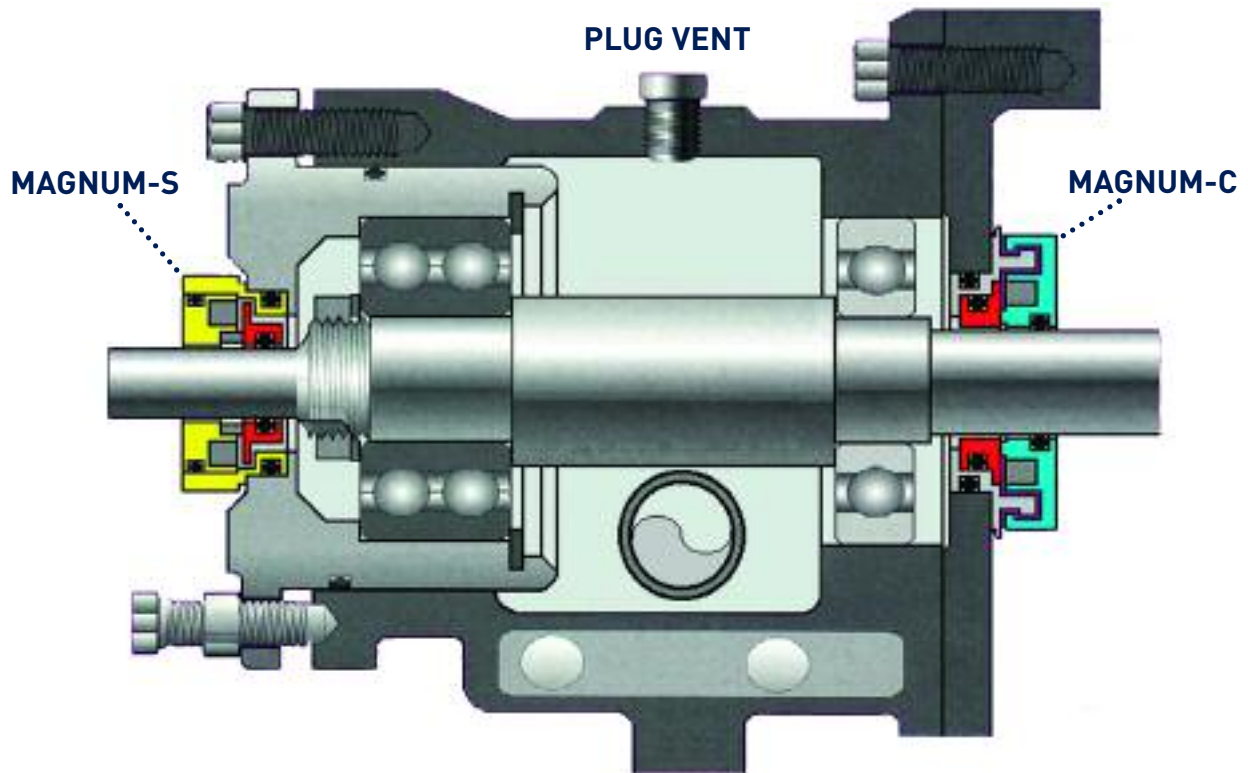


STANDARD FLANGE
MAGNUM-S*

ISOMAG is a registered trademark of ISOMAG Corp.



Typical Applications



MAGNUM-S WORKS WELL WITH:

Oil Flooded
Oil Mist
Oil Splash
Grease

IN ANY POSITION:

Horizontal
Vertical Up
Vertical Down

MAGNUM-C WORKS WELL WITH:

Oil Splash
Grease
Oil Mist

IN ANY POSITION:

Horizontal
Vertical Up
Vertical Down

- Pumps
- Gear Boxes
- Steam Turbines
- Blowers
- Fans
- Motors
- Rotary Airlocks
- All Low Pressure Centrifugal Shaft Seal Applications

AVAILABLE IN ALL ANSI AND MOST POPULAR SIZES
0.75" through 15" shaft diameters. Custom sizes available.

***See Back Page for Alternative Seal Configurations.**

MAGNUM-C Cartridge Bearing Seal

MAGNUM-C sets new standards for bearing protection and ease of assembly.

The MAGNUM-C seal combines ISOMAG precision lapped flat sealing faces with a rotating labyrinth. This unique combination yields a superior seal for containing lubrication and excluding contamination.

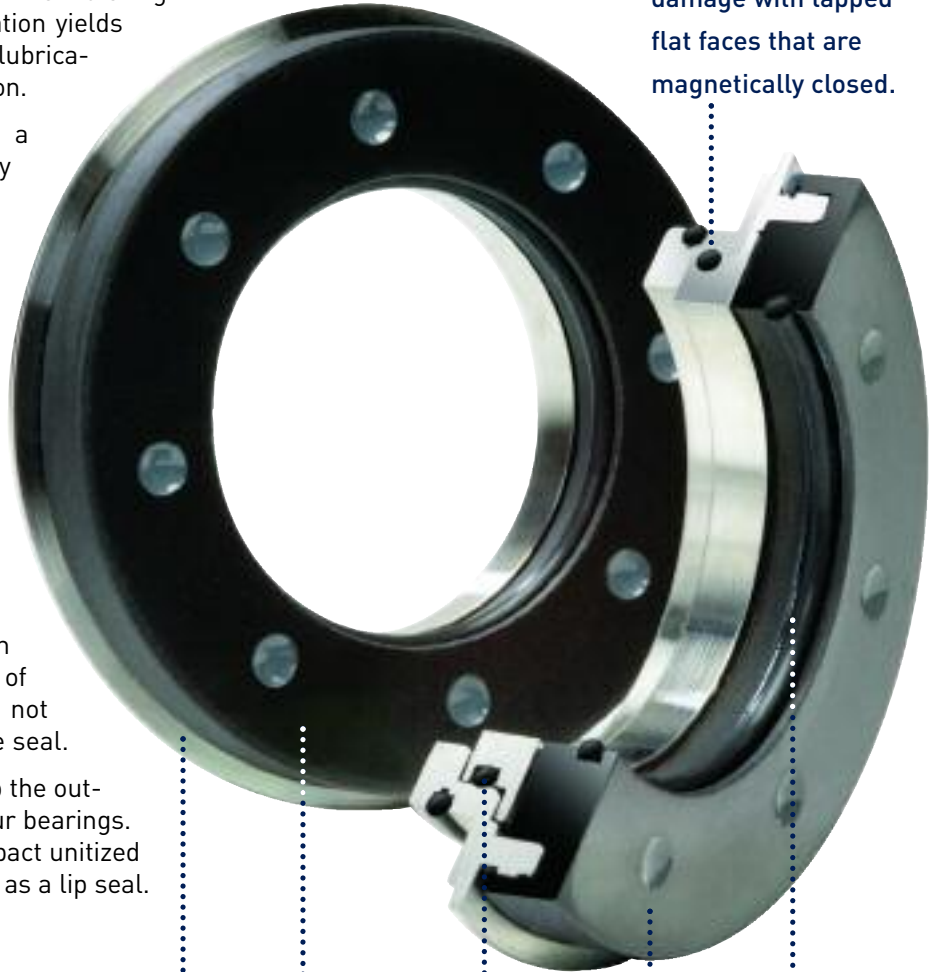
MAGNUM-C features include a labyrinth cartridge assembly with no possibility of shaft damage. The lapped sealing faces positively seal, eliminating the breathing that comes with other labyrinths.

MAGNUM-C is designed to protect your pump power frame, gearbox, motor, blower and more.

Unlike existing labyrinths, ISOMAG seals incorporate precision lapped sealing faces that do not breathe. Axial rotor movement is contained within the magnetic field for the life of the seal. Shaft adjustments do not impede the performance of the seal.

The design is optimized to keep the outside world from getting into your bearings. All these features are in a compact unitized assembly that installs as easily as a lip seal.

Eliminate shaft damage with lapped flat faces that are magnetically closed.



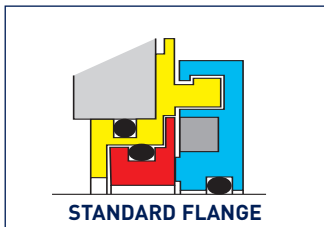
Bronze or stainless steel casing is not sensitive to mechanical shock, handling, or heat deformation.

Standard seal components require only an adaptor change to accommodate a multitude of applications.

Controlled range faces allow unlimited axial shaft movement.

ISOMAG combines labyrinths and flat face technology into one easily installed cartridge assembly.

Non-brittle composite promotes extremely low face drag.



MAGNUM-C*

Feature

Benefit

- **Total exclusion of contaminants and moisture from bearing housings** → Ensures longer bearing life.
- **Zero lubricant leakage** → Operates in flooded applications. Greatly reduces required maintenance and environmental pollution.
- **Unitized cartridge design with positive locking mechanism** → Unique locking mechanism ensures components cannot separate during installation or operation.
- **High initial axial movement capability** → Eliminates installation errors.
- **Can be custom designed to suit applications** → No modifications required to rotating equipment even when retrofitted.
- **Easy to install** → Simply press into housing.

Performance Capabilities

Maximum operating limits

Pressure	1.4 barg/20 psig (for MAGNUM-S) 0.3 barg/5 psig (for MAGNUM-C)
Speed	60 mps/12,000 fpm Lubricated 20 mps/4000 fpm Dry
Temperature	Up to 150°C/300°F (for MAGNUM-S) Up to 100°C/225°F (for MAGNUM-C)
Axial Shaft Movement	±0.8mm/±0.032"
Allowable TIR	±0.5mm/±0.020"
Shaft Diameter	19mm to 380mm/0.750" to 15.00"

Contact John Crane for applications outside these limits.

Materials of Construction

MAGNUM-S

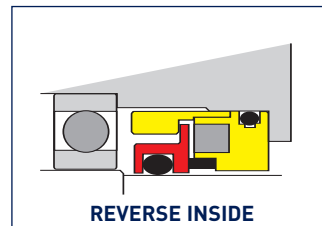
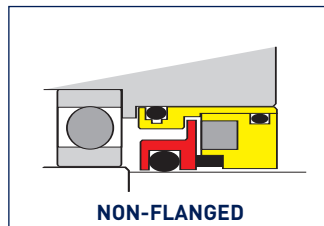
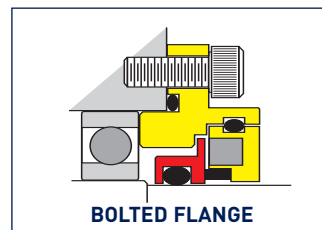
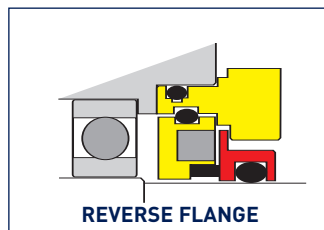
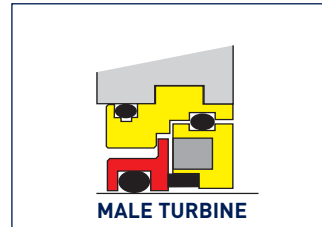
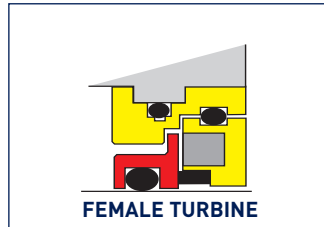
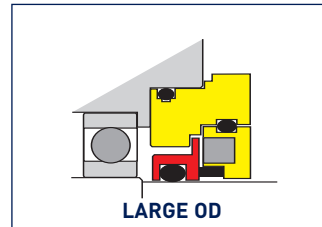
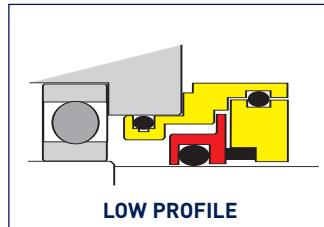
Component	Standard
Stationary Face	PTFE Composite
Stator	Bronze
Rotor	HT 17-4 PH
O-rings	Fluoroelastomer

MAGNUM-C

Component	Standard
Stationary Face	HT 17-4 PH
Stator	Bronze
Rotor	PTFE Composite
O-rings	Fluoroelastomer

Optional material available.

ISOMAG Alternative Seal Configurations (MAGNUM-S Shown)



Many Other Custom Configurations Available.



Europe
Slough, UK

Tel: 44-1753-224000
Fax: 44-1753-224224

Latin America
São Paulo, Brazil

Tel: 55-11-3371-2500
Fax: 55-11-3371-2599

Middle East, Africa, Asia
Dubai, United Arab Emirates

Tel: 971-4-3438940
Fax: 971-4-3438970

North America
Morton Grove, Illinois USA

1-800-SEALING
Tel: 1-847-967-2400
Fax: 1-847-967-3915

smiths

For your nearest John Crane facility, please contact one of the locations above.

If the products featured will be used in a potentially dangerous and/or hazardous process, your John Crane representative should be consulted prior to their selection and use. In the interest of continuous development, John Crane Companies reserve the right to alter designs and specifications without prior notice. It is dangerous to smoke while handling products made from PTFE. Old and new PTFE products must not be incinerated.