



MPR MODULAR WALL AND CASING SEAL

APPLICATIONS:

Wall and Floor Penetrations
Casing Pipes



MPR WALL AND CASING SEAL

The modular wall and casing seal is used for sealing the annular space between pipes/cables and casings or wall openings through which they pass.

The MPR modular Wall and Casing Seal is composed of identical solid rubber links which interlock to form a belt being fastened together with bolts.

The circumference of the carrier pipe/cable defines the number of links for the whole seal assembly.

Each link is connected to the next by a bolt and nut. Under the head of the bolt and nut are pressure plates. By tightening the bolt a few turns at a time and going on to the next continuing around the seal, pressure is applied by the pressure plates to the rubber links.

They expand and form a completely homogenous seal between O.D. of the carrier pipe and I.D. of the casing or wall opening.

In this way annular spaces between 9 mm and 145 mm can be sealed.

If the annular opening is larger than the expanded thickness of a single assembly, two layers are used and separated with an <intermediate sleeve>. Each layer i.e. outerseal and inner seal will expand independently and provide a positive hydrostatic seal.

MPR Wall and Casing Seals are available for pipe diameters from 17,2 mm to 3000 mm.

MPR Wall and Casing Seals are applicable for pressure-tight sealings up to 5 bar.

The temperature range for the MPR Wall and Casing Seals of type C is from -50°C to +130°C. For low and high temperatures the range of type TX is from -55°C to +220°C.

Various applications:

Pipelines, buildings, power generating plants, water plants, waste treatment plants, offshore production platforms, compressor stations

For use on:

Road crossings, wall penetrations – interior and exterior, fire protection piping, discharge lines, electrical conduit, instrument lines.

Headquarters

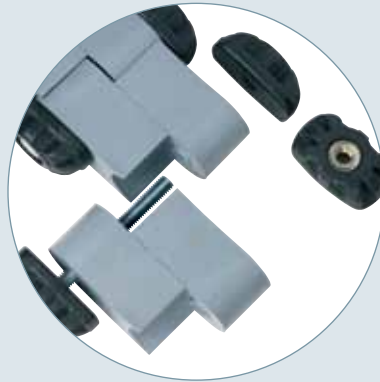
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>> DETAILS



>> seal element



>> seal element c/w screw, washer, nut and pressure plates



>> MPR
Wall and Casing Seal

Positive Hydrostatic Sealing

Properly installed, the MPR Wall and Casing Seal is designed to form a hydrostatic seal up to at 5 bar, which exceeds the performance requirements of most applications.

Cathodic and Corrosion Protection

All metal parts are embedded in rubber and plastic. Metal-to-metal contact is eliminated.

Compensates for Misalignment

The MPR Wall and Casing Seal allows for some angular and off-center pipe conditions and still seals effectively.

Absorbs Shocks, Sound and Vibration

This inherent benefit of the MPR Wall and Casing Seal helps support the pipe, reduce pipe failures due to fatigue at welds, flanges and threaded connections.

Long Seal Life

The MPR Wall and Casing Seal is designed for use as a permanent seal. Seal elements are compounded to resist aging, ozone, sunlight, water and a wide range of chemicals.

Seals any Pipe

If it's round, the MPR Wall and Casing Seal can seal it. Applications include concrete, cast iron, steel, copper, plastic, electrical and telecommunications cable.

Resistance to High and Low Temperatures

The MPR Wall and Casing Seal is available in special compounds that resist temperatures from as low -55°C to as high as 220°C.

Saves Time and Money

Easy to install with less labor.



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MPR WALL AND CASING SEALS

A wide variety of sizes, such as for instance



Model 7 x MD 565-C

for carrier pipe O.D. 110 mm x casing
pipe/wall opening I.D. 250 mm



Model 9 x MD 300-C

for carrier pipe O.D. 110 mm x casing
pipe/wall opening I.D. 150 mm



Model 10 x MD 575-O

for carrier pipe O.D. 200 mm x casing
pipe/wall opening I.D. 300

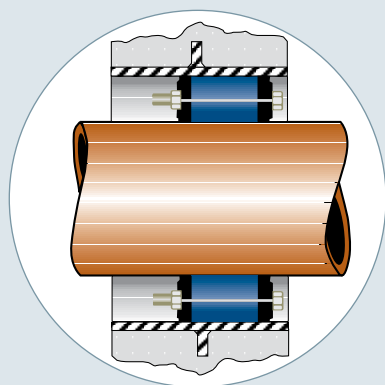
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Other sizes and types for gas and watertight sealings available

>> OUR PRODUCTION



>> MPR Wall and Casing Seal type Wall Penetration Seal



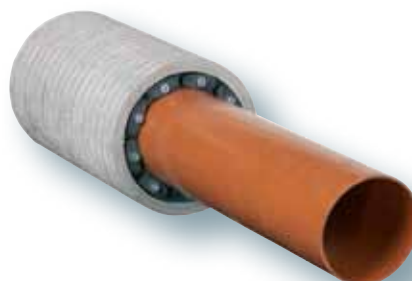
>> MPR modular Wall and Casing Seal



>> MPR Wall and Casing Seal



Wall sleeve manufactured from welded or seamless steel pipe with continuously-welded water stop collar and MPR Wall and Casing Seal assembly to assure positive water sealing



Wall sleeve made from fiber-concrete w/o asbestos and MPR Wall and Casing Seal assembly to assure positive water sealing

SERVICE DESIGNATION

Type	Model	Seal element	Pressure plates	Bolts, washers and nuts	Temperatur range (°C)	Applications
C	Standard	EPDM black	Glass reinforced nylon	steel quality 8.8 galvanized	-50° C to +130° C	Suitable for most standard applications incl. aboveground, direct underground burial, wet conditions and where cathodic protection – electrical insulation is desired.
X	Stainless	EPDM black	Glass reinforced nylon	Stainless steel V4A (AISI 316)	-50° C to +130° C	For chemical processing, waste water treatment. EPDM rubber is resistant to most inorganic acids and alkalis, some organic chemicals (acetone, alcohol, ketones).
O	Oil-resistant	Nitrile (NBR) grey	Glass reinforced nylon	steel quality 8.8 galvanized	-45° C to +115° C	Nitrile (NBR) rubber is resistant to oils, fuel and many solvents (gasoline, motor oil, kerosene, methane, jet fuel, hydraulic fluid, water, etc.).
OX	Oil-resistant stainless	Nitrile (NBR) grey	Glass reinforced nylon	Stainless steel V4A (AISI 316)	-45° C to +115° C	Combination of oil-resistant rubber and stainless steel hardware where ultimate corrosion protection is desired.
TX	High/low temperature	Silicone brown	Stainless steel V4A (AISI 316)	Stainless steel V4A (AISI 316)	-55° C to + 220° C	Silicone rubber is excellent where temperature extremes are a factor and resistant to strong and oxidizing chemicals, ozone, concentrated sodium and hydroxide.

Other types on request

>> CALCULATION METHOD

APPLICATIONS:

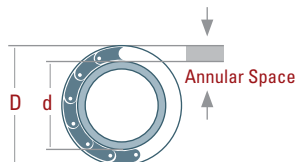
Wall and Floor Penetrations
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HOW TO FIGURE SIZE AND NUMBER OF LINKS NEEDED TO MAKE ONE COMPLETE SEAL

Formula 1

To figure which MPR Seal size N° is needed – The Annular Space is half the difference between your pipe size and the wall opening diameter. Use this formula:

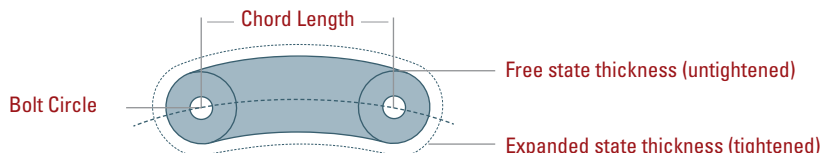


$$\text{Annular Space} = \frac{\text{I. D. Wall Opening (D)} - \text{O. D. Pipe Diameter (d)}}{2}$$

Now go to the MPR Seal Dimensional Chart on the opposite page. Select the size closest to the Annular Space just calculated. You have selected the correct MPR Seal size if the Free State Thickness (untightened) is less than the Annular Space and the Expanded State Thickness (tightened) is greater than the Annular Space.

Formula 2

To figure how many links of MPR Seal size are needed – calculate how many links are required to fit around the pipe and seal the Annular Space. First determine the Bolt Circle for your MPR Seal assembly. This is simply the mid-point of the Annular Space:



Second, determine the number of links needed for your assembly. To do this, find the Chord Length of your MPR Seal size in the MPR Seal Dimensional Chart on the opposite page. Then multiply the Bolt Circle by 3,14 and divide by the Chord Length.

$$\text{Links Per Seal} = \frac{\text{I. D. Wall Opening (D)} + \text{O. D. Pipe Diameter (d)}}{2} \times 3,14 = \text{Bolt Circle} : \text{Chord Length}$$

Visit our website: www.mprweb.com and find the results of calculation

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>>SELECTION AND DIMENSIONAL CHART



>> MPR Wall and Casing Seal Assemblies

Size Type	Sealing range			Rubber sealing element length	Chord length	Carrier pipe O.D.	Minimum links per seal
	Free state thickness	Annular space	Expanded state thickness				
MD-100	9,0		12,5	45	32,0	28,0 to 406,4	4
MD-200	12,5		16	45	31,0	25,0 to 406,4	4
MD-215	12,5		16	45	45,0	40,0 to 406,4	4
MD-250	15,5		20	45	29,0	17,2 to 406,4	4
MD-265	15,5		20	45	43,8	38,0 to 406,4	4
MD-300	17,0		23	65	42,7	33,7 to 630,0	4
MD-310	17,0		23	65	61,5	57,0 to 711,0	4
MD-315	20,5		27	65	38,3	25,0 to 508,0	4
MD-365	20,5		27	65	61,0	50,0 to 711,0	4
MD-325	24,5		33	65	78,0	90,0 to 1220,0	5
MD-340	24,5		33	65	43,4	25,0 to 610,0	4
MD-360	31,5		40	65	57,0	33,7 to 864,0	4
MD-465	31,5		40	75	94,2	110,0 to 1420,0	5
MD-425	28,5		38	75	96,3	144,0 to 1420,0	6
MD-400	36,5		46	75	94,6	133,0 to 1420,0	6
MD-410	36,5		46	75	70,7	48,3 to 1016,0	4
MD-450	40,5		51	75	94,5	101,6 to 1420,0	5
MD-475	40,5		51	75	72,2	42,4 to 1016,0	4
MD-525	48,5		60	90	102,0	139,7 to 2020,0	6
MD-575	48,5		60	90	80,0	75,0 to 1016,0	5
MD-565	58,5		72	90	81,0	60,3 to 1220,0	5
MD-500	58,5		72	90	102,0	92,0 to 2020,0	5
MD-650	70,5		84	100	107,0	90,0 to 2020,0	5
MD-600	81,5		100	100	107,0	110,0 to 2020,0	6
MD-615	81,5		100	100	162,0	219,1 to 3000,0	6
MD-800	128,0		145	100	170,0	180,0 to 3000,0	6

All dimensions in mm

>> INSTALLATION



>> Wall Penetration w/o seal

>> MPR Wall and Casing Seal belt before connecting the first and last links together

>> Tightening the bolts expands the sealing elements to create a gas and water tight seal



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