MFPSEALS®

A DIVISION OF MARTIN FLUID POWER

Oil & Gas

Sealing Products Guide

Volume Two

www.mfpseals.com

MFP SEALS®

MARTIN FLUID POWER

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This booklet contains images and information on a variety of Oil & Gas industry related products that we offer. Our product offering is not limited to what is shown in this booklet. Other products, sizes, configurations and materials are available where applicable. Please contact an MFP Seals' Sales Associate with any questions you have about the products shown in this booklet.

MFP Seals has the capability to custom engineer, manufacture, package and ship sealing products to meet or exceed the specifications of your application. Consult with your MFP Seals Sales Associate for more information.

The images shown in this booklet are 3D representations of our products, but may not necessarily represent the actual off-the-shelf product, which may vary in color and finish. The orientation of the products in the images does not necessarily reflect the orientation needed for installation, they are shown in an orientation that is best for product identification within the image.

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Index

	Page
About Us	**1**
Our Locations	2
BOP Blowout Preventer	**5**
Seals and Kits	5
Specialty O-Rings	**6**
Flowline Seals	**7**
Hammer Union Seals	8
Guiberson® Style Union Seals	9
Plug Valve Seals	9
Swivel Joint Seals	10
Swivel Joint Seal Kits	10
Valve Seals	**11**
Choke Valve Packing and Seals	12
Gate Valve Seals	14
Flange Gaskets	**17**
RTJ - Ring Type Joint Gaskets	17
Spiral Wound Gaskets	18
Wireline Seals	**18**
Lock Pin Packing (Slug Packing)	18
Wellhead Seals	**19**
FS Seals	20
S Seals	20
P Seals	21
C22 Packing Rubbers	22
Casing Seals	22
C29 Packing Rubbers	23
PE Seals	23
TC-1A	24
TC-1W	24
Dovetail Seals	25
B02 O-Rings & Anti-Extrusion Rings	25
Approved Compounds	**26**
API 6A Certified, NORSOK	26
NACE, MFP Seals Fluorochem®	27

QR codes are available for many of the products, to take you to our website's corresponding product page, or directly to the products' parts list.

Building MFP SEALS® MARTIN FLUID POWER For You.

MFP Seals, a division of Martin Fluid Power, is focused on providing you superior customer service, an effortless experience and our broad network access to all sealing devices that are available worldwide.

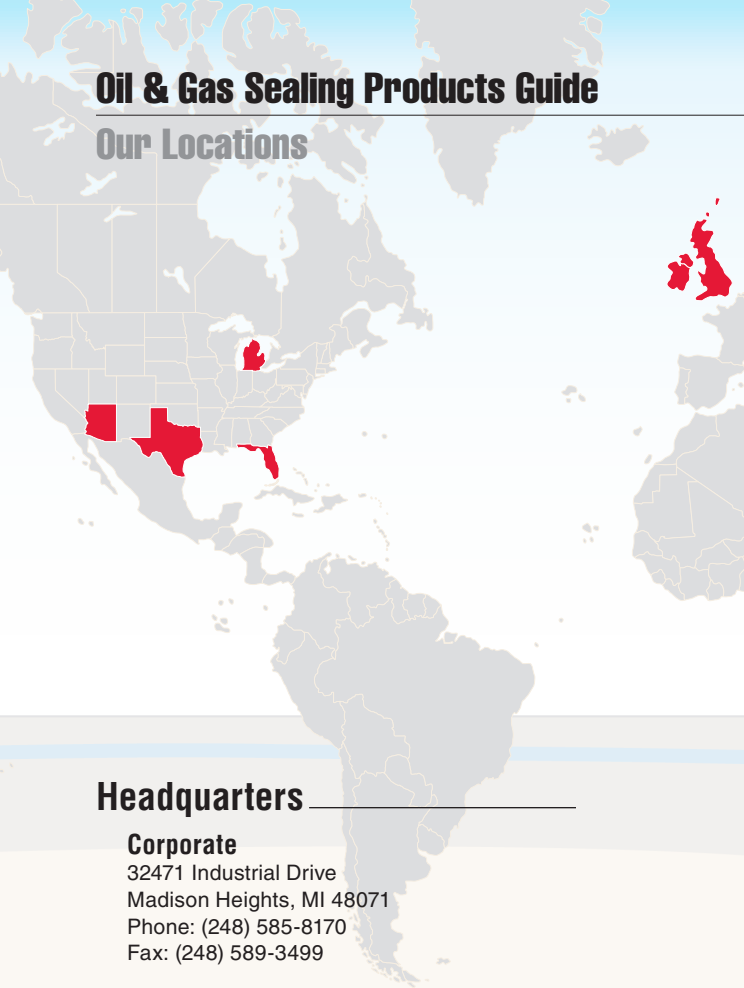
Founded in January 1977, Martin Fluid Power now includes five wholesale distribution locations in the United States, plus locations in England, Colombia and Taiwan. The MFP Seals division represents a culmination of our efforts to bring together, in-house, our Design, Engineering, CNC Machining, Injection Molding, Seal Kitting, and Die Cutting departments. Together as MFP Seals we are focused on designing, engineering and manufacturing the highest quality sealing devices, made in the USA, without the premium price.

Going beyond our shores, we work with our global alliance partners, which include the best manufacturers in Europe, Asia and beyond. Thanks to these global partners, we can offer sealing products in all styles, sizes and materials, in both inch and metric, that we are not currently manufacturing here in the United States.

When you're looking for the highest quality seals at the best prices, remember, we've built MFP Seals to be your best choice.

Our Focus:
MFP Seals will provide you, our customer, with the best solutions for your sealing device problems - while maintaining the highest quality, best prices, and all the conveniences that a global manufacturer can provide.

Our Locations



Headquarters

Corporate
32471 Industrial Drive
Madison Heights, MI 48071
Phone: (248) 585-8170
Fax: (248) 589-3499

Manufacturing

MFP Manufacturing
32471 Industrial Drive
Madison Heights, MI 48071
Phone: (248) 583-7767
Fax: (248) 589-3499

MFP Research & Development
32471 Industrial Drive
Madison Heights, MI 48071

International Distribution Centers

Lincoln, England
mfp.uk@mfpseals.com

Taipei, Taiwan
mfp.tw@mfpseals.com

Bogota, Colombia
mfp.co@mfpseals.com

MFPSEALS®
MARTIN FLUID POWER

Stocking Locations Around the Globe

Worldwide Service and Support

U.S. Distribution Centers

E-mail: sales@mfpseals.com

Troy, MI
600 Minnesota, Troy, MI 48083
Phone: (248) 585-8170
Fax: (248) 585-4398

International Sales
600 Minnesota, Troy, MI 48083
Phone: (248) 585-8171
Fax: (248) 585-4398

St. Joseph, MI
315 Palladium Drive
St. Joseph, MI 49085
Phone: (269) 429-0824
Fax: (269) 429-0829

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6130 Westview
Houston, TX 77055
Phone: (713) 939-9990
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Phoenix, AZ
3767 E. Broadway, Rd.
Suite 10, Phoenix, AZ 85040
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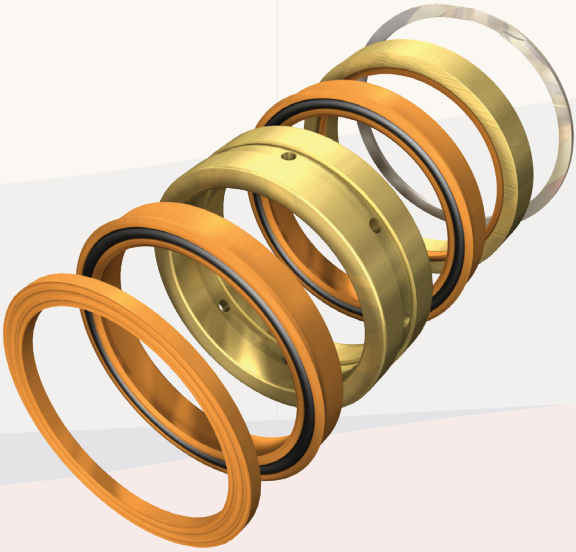
Tampa, FL
5159 Rio Vista Ave. W.
Tampa, FL 33634
Phone: (813) 884-6777
Fax: (813) 884-6999

LOCKING SHAFT SEAL ASSEMBLY



RAM SHAFT SEAL ASSEMBLY

For other material configurations, nonstandard sizes, or styles not shown, contact your MFP Seals Sales Associate.

SPHERICAL BOP SEAL ASSEMBLY

BOP Blowout Preventer Seals and Kits

MFP Seals produces a wide range of sealing products for Annular and Ram type BOP. Our Blowout Preventer seals are available individually or as a complete kit. Please consult MFP Seals for the size and pressure rating your application requires.

QR to our Spherical BOP Seal Kit Parts List

For other material configurations, nonstandard sizes, or styles not shown, contact your MFP Seals Sales Associate.

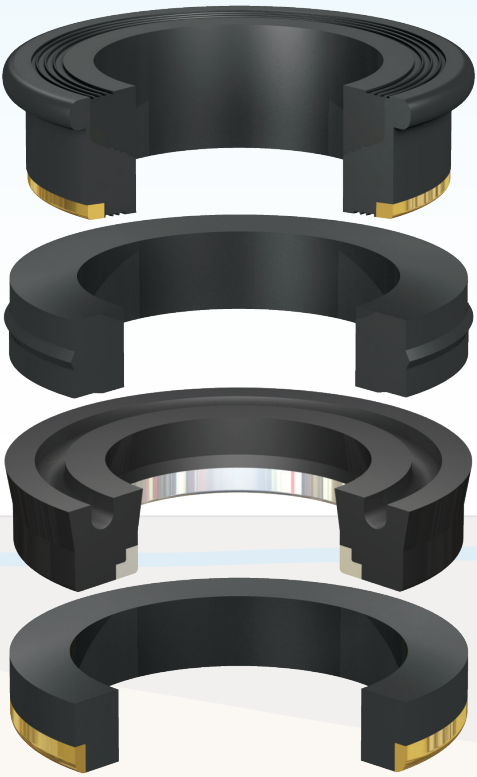
Specialty O-Rings

MFP Seals stocks an extensive line of O-Rings for the pumping and oilfield industry. Our O-Rings are available in standard AS568D, European, Japanese metric sizes, as well as custom sizes. We offer High Temperature, Amine, Chemical, Solvent, Organic and Inorganic Acid Resistant, Low Compression Set, FDA and NORSOK Compliant O-Rings, in a wide variety of compounds and durometers. Contact your MFP Seals' Sales Associate for more information.

QR to our Custom Molded BN70 O-Rings Parts List

QR to our O-Rings & Back-Up Rings Web Page

For other material configurations, nonstandard sizes, or styles not shown, contact your MFP Seals Sales Associate.



Flowline Seals

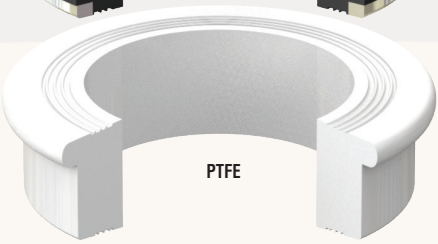
MFP Seals provides a comprehensive line of Flowline products for the pumping and oilfield industry. Our Flowline products include but are not limited to: 1502 Hammer Union Seals, Guiberson® Union Seals, Union Retaining Rings, Plug Valve Seals and Kits, Dart Valve Seals, and Swivel Joint Seals and Kits.

QR to our Oil & Gas Sealing Division Products Web Page

For other material configurations, nonstandard sizes, or styles not shown, contact your MFP Seals Sales Associate.

Flowline

Hammer Union Seals



Hammer Union Seals (HUS)

MFP Seals produces a full line of Hammer Union Seals for use on flow lines. These Hammer Union Seals are designed to seal on a Figure 1502 unions with typical pressure ratings for standard service of 15,000 PSI and are tested to 22,500 PSI.

Our standard Hammer Union Seals are made from a variety of elastomers, for Sour Gas Service we offer proprietary HNBR compounds. MFP Seals also manufactures our HUS with either brass or stainless steel backup rings molded in. Whatever your application requires, MFP Seals has the correct solution.

QR to our Flowline: Hammer Union Seals Web Page

For other material configurations, nonstandard sizes, or styles not shown, contact your MFP Seals Sales Associate.

Guiberson® Style Union Seals

Guiberson® Style Union Seals

Guiberson® Style Union Seals are available in 1", 1-1/2", 2", and 3" sizes for standard service as well as sour gas service. Our materials include Nitrile, FKM, and HNBR.

QR to our Flowline: Guiberson® Style Hammer Union Seals Web Page

Plug Valve Seals

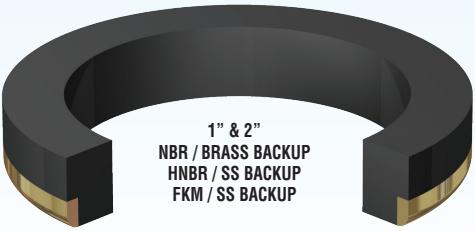
Plug Valve Seals

MFP Seals produces a wide range of plug valve seals for standard and sour gas applications. We can custom package these into kits to fit your needs. Our materials include Nitrile, FKM, and HNBR. Plug Valve Seals are manufactured with either a brass or stainless steel anti-extrusion ring.

QR to our Flowline: Plug Valve Seals Web Page

For other material configurations, nonstandard sizes, or styles not shown, contact your MFP Seals Sales Associate.

Swivel Joint Seals



Swivel Joint Seals

Swivel Joint Seals come in a variety of sizes and materials for standard and sour gas applications. Our Swivel Joint Seals are made from Nitrile or FKM and include either a Brass or Stainless Steel Anti-Extrusion Ring. Additional Swivel Joint products also include Ball Plugs, Ball Bearings, Snap Rings, and Dust Seals, which can be provided as individual items or as complete kits.

Swivel Joint Seal Kits

Swivel joint seal kits come in a variety of sizes and materials for standard and sour gas applications. MFP Seals can package kits to fit your application, on demand.

QR to our Flowline: Swivel Joint Seals & Kits Web Page

For other material configurations, nonstandard sizes, or styles not shown, contact your MFP Seals Sales Associate.

Valve Seals

MFP Seals is a global leader of sealing products for Choke Valve and Gate Valve equipment. Whether you are looking for Stem Packing, Seat Gaskets, O-rings, Retaining Rings, Bonnet Seal Rings, or Seals for Seat and Body Bushings, MFP Seals has the right seal for you.

QR to our Oil & Gas Sealing Division Products Web Page

For other material configurations, nonstandard sizes, or styles not shown, contact your MFP Seals Sales Associate.

Choke Valve Packing and Seals

Choke Valve Packing and Seals

A Choke Valve is a control valve used in production wells to control the flow of well fluids being produced. Choke Valves also kill the pressure from the reservoir and regulate the downstream pressures in flowlines. Choke Packing is available in multiple styles and material configurations for standard and sour gas applications.

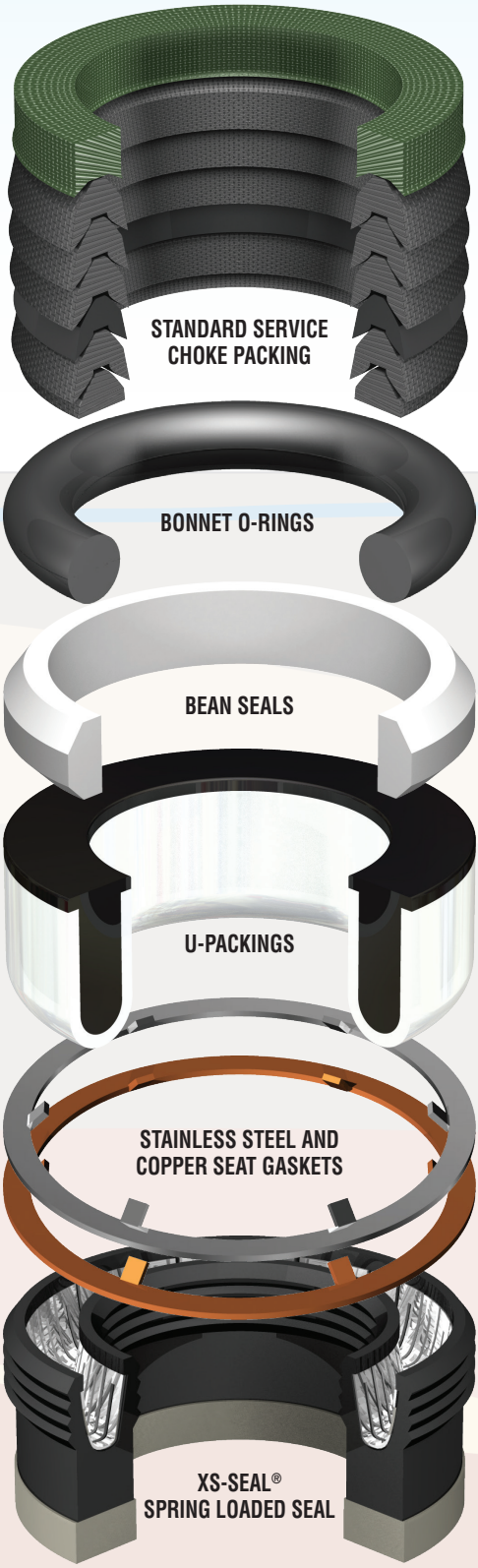
The XS-Seal® utilizes a chemically inert seal jacket and incorporates a resilient spring element to ensure positive sealing in high or low temperature applications. MFP Seals also provides additional Choke Valve sealing products like Seat Gaskets out of Copper, Carbon Steel, and Stainless Steel, as well as Bonnet O-Rings, Retaining Rings, Junk Rings, and Bean Seals.

U-Packings are most commonly used in oilfield valves where poor gland conditions and harsh media are encountered and are supplied with a PTFE jacket and either Nitrile or FKM filler. Whether you are looking for a chevron style, U-Packing style or our XS-Seal MFP Seals has the right materials and configurations for your application.

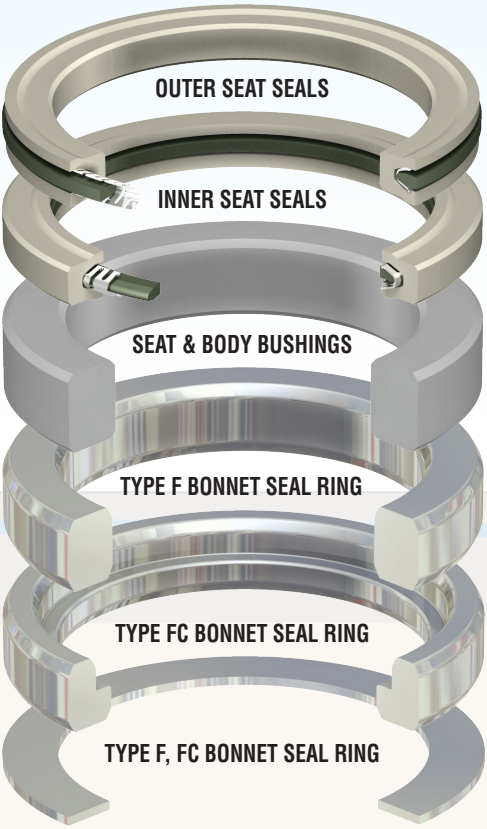
QR to our Valve Seals:
Choke Packing
Web Page

For other material configurations, nonstandard sizes, or styles not shown, contact your MFP Seals Sales Associate.

Choke Valve Packing and Seals



For other material configurations, nonstandard sizes, or styles not shown, contact your MFP Seals Sales Associate.

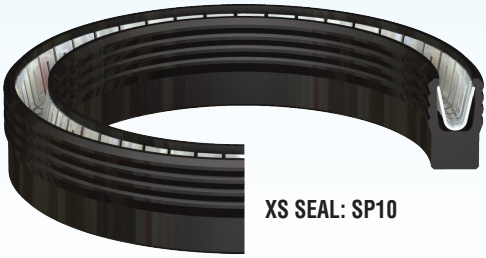


Valve Seals Gate Valves

MFP Seals has an extensive line of Valve Seals, available off the shelf, for all types of Gate Valves, which include our SP10, SP15, SP20, and SP25 Stem Packing seals and assemblies, Bonnet Seal Rings, Seat and Body Bushing, as well as our IFS (Inner) and OFS (Outer) seat seals for high pressure or high temperature, applications. At MFP Seals we have the experience and knowledge to conquer the most severe of applications.

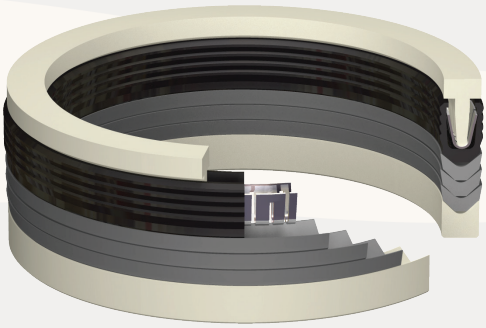
QR to our Valve Seals:
Gate Vale Seals
Web Page

For other material configurations, nonstandard sizes, or styles not shown, contact your MFP Seals Sales Associate.

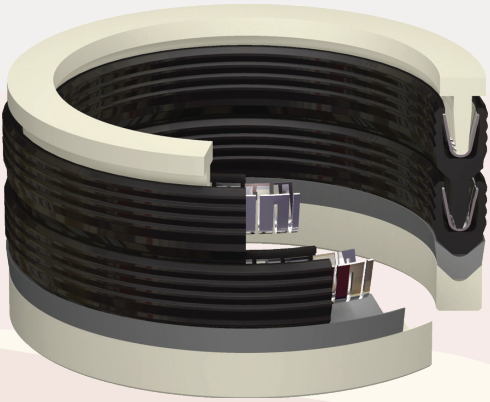


XS SEAL: SP10

XS SEAL: SP15



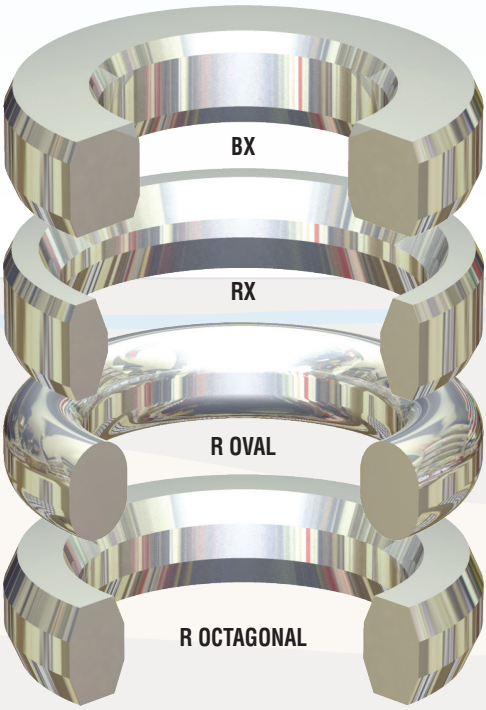
XS SEAL: SP20



XS SEAL: SP25

For other material configurations, nonstandard sizes,
or styles not shown, contact your MFP Seals Sales Associate.

Flange Gaskets



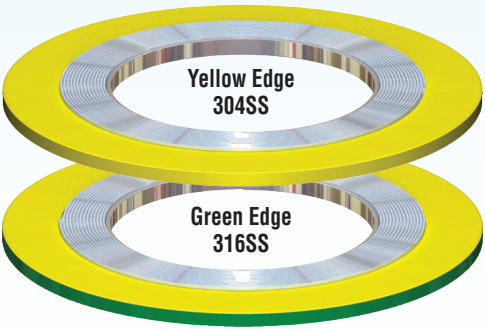
RTJ - Ring Type Joint Gaskets

Ring Gaskets are offered in BX, RX, R Oval, and Octagonal styles, out of Soft Iron, Low Carbon Steel, 316 Stainless Steel and 304 Stainless Steel. All MFP Ring Gaskets are manufactured in accordance with ASME B16.20. Each Ring Gasket is marked with ring number, material reference, and API license number for identification and traceability. The material of the gasket should be selected based on the service condition and it is recommended that the gasket material be softer than the mating flange.

QR to our Flange Gaskets: Ring Type Joint (RTJ) Ring Gaskets Web Page

For other material configurations, nonstandard sizes, or styles not shown, contact your MFP Seals Sales Associate.

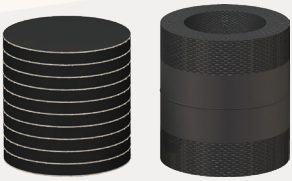
Spiral Wound Gaskets



Spiral Wound Gaskets

Spiral Wound Gaskets are offered in a variety of styles, suitable for both flat face or raised face flanges. They are constructed from alternate plies of preformed metal windings and non-metal fillers, and can be fitted with an internal ring for additional radial support. MFP Seals, Spiral Wound Gaskets are manufactured in accordance with ASME B16.20.

QR to our Flange Gaskets: Spiral Wound Gaskets Web Page

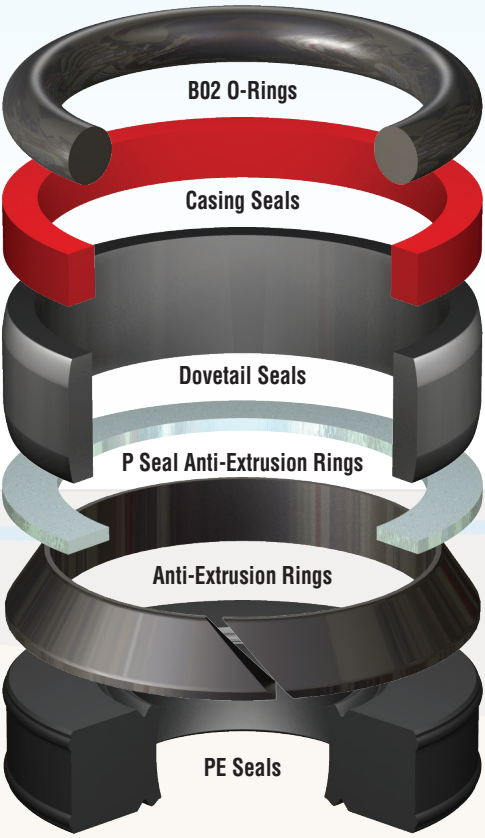


Lock Pin Packing (Slug Packing)

Wireline Seals

QR to our Wireline: Lock Pin Packing (Slug Packing) Parts List

For other material configurations, nonstandard sizes, or styles not shown, contact your MFP Seals Sales Associate.



Wellhead Seals

MFP Seals offers a wide range of sealing products for Wellhead applications which includes Lock Pin Packings, B02 O-Rings, Anti-Extrusion Rings, Casing Seals, C22 Packing Rubbers, Support Plates and Alignment Rings, C29 Packing Rubbers, S Seals, FS Seals, P Seals and P Seal Anti-Extrusion Rings, PE Seals and PE Anti-Extrusion Rings, and TC-1W Seals.

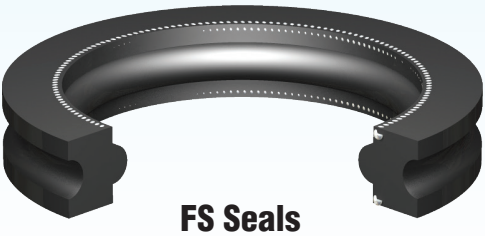
See more Wellhead Seals on the following pages.

QR to our Wellhead Products Web Page

For other material configurations, nonstandard sizes, or styles not shown, contact your MFP Seals Sales Associate.

Wellhead Seals

FS & S Seals



FS Seals

FS Casing and Tube Seals are available in multiple grades of both HNBR, or FKM for standard service, rapid gas decompression, NORSOK M710 compliance, as well as, grades for low temperature applications. FS Casing seals replace traditional plastic packing seal arrangements and are used in applications where there are large clearances between wellhead components.

QR to our Wellhead Seals: FS Seals Parts Lists

HNBR 75A

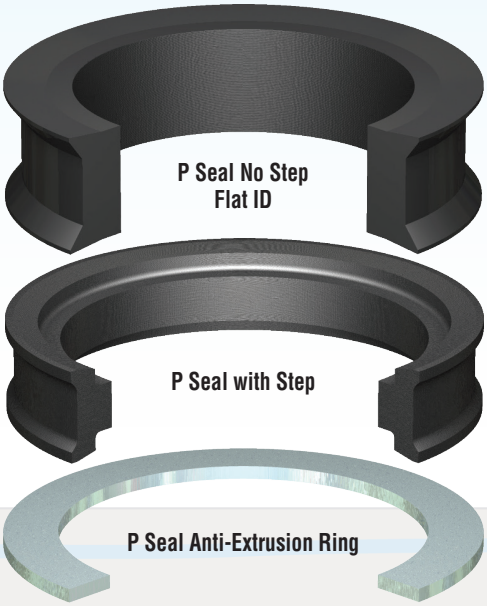
HNBR 85A

S Seals

S-Seals are available in multiple grades of both HNBR, or FKM for standard service, rapid gas decompression, NORSOK M710 compliance as well as grades for low temperature applications. S-Seals come with Stainless Steel anti-extrusion springs and are made to fit a wide range of standard SAE housings.

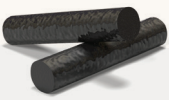
QR to our Wellhead Seals: S Seals Parts List

For other material configurations, nonstandard sizes, or styles not shown, contact your MFP Seals Sales Associate.



P Seals

MFP Seals offers a full range of P-Seals for Casing and Tubing heads. Our Materials can be fabric & rubber, or homogeneous rubber, and can be supplied with or without anti-extrusion rings.



P-Seals are energized by the injection of plastic packing sticks. These plastic packing sticks are available in a variety of materials designed for standard temperature, high temperature or cryogenic applications. Consult with MFP Seals for the appropriate P-Seal and plastic packing stick materials for your application.

QR to our Wellhead Seals: P Seals Parts Lists

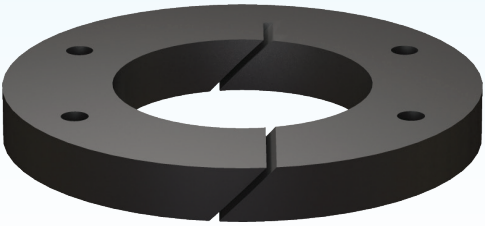
P Seals No Step

P Seals with Step

P Seal Anti-Extrusion Ring

For other material configurations, nonstandard sizes, or styles not shown, contact your MFP Seals Sales Associate.

C22 Packing Rubbers & Casing Seals



C22 Packing Rubbers

C22 Packing Rubbers are made from a standard grade of NBR 70 that is reinforced with an NBR/ Cotton Fabric. Additional C22 accessories like C22 Support Plates and C22 Alignment Rings are available upon request.

QR to our Wellhead Seals: C22 Packing Rubbers Parts List

Casing Seals

MFP Seals offers a range of Casing Seals for the Oil & Gas Industry. Whether you need Buttress Thread, Long Thread, External Upset End, or Non Upset End Casing Seals, we have them stocked and ready for you.

QR to our Wellhead Seals: Casing Seal Parts Lists

Buttress Thread

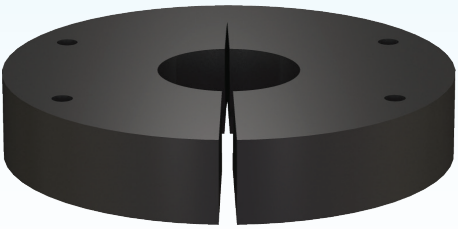
Long Thread

External Upset End

Non Upset End

For other material configurations, nonstandard sizes, or styles not shown, contact your MFP Seals Sales Associate.

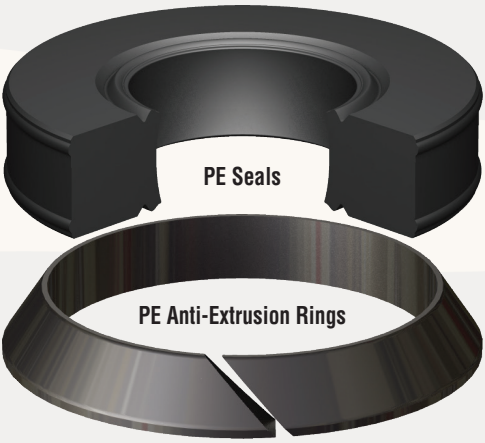
C29 Packing Rubbers & PE Seals



C29 Packing Rubbers

C29 Packing Rubbers are made from a durable NBR 70 material.

QR to our Wellhead Seals: C29 Packing Rubbers Parts List



PE Seals

PE Seals are secondary seals, retained with a snap wire, and located in a casing or tubing spool. The PE Seal is energized when the spool is installed over the casing stub and the flange connection is made up. Our standard PE Seal is manufactured in either NBR or HNBR rubber.

QR to our Wellhead Seals: PE Seal Parts Lists

PE Seals

PE Anti-Extrusion Rings

For other material configurations, nonstandard sizes, or styles not shown, contact your MFP Seals Sales Associate.

Wellhead Seals

TC1A & TC-1W

TC-1A

TC-1A seals fit in a mandrel type hanger that has female suspension and lift threads. The seal is activated by tubing weight and lock-down pins.

QR to our Wellhead Seals: TC-1A Packing Rubbers Parts List

TC-1W

TC-1W seals fit in a tubing hanger and are designed to seal the annulus. The seal is activated by engaging the lock-down pins. TC-1W seals are available in a flat style or with a step. Consult your MFP Seals sales associate with your requirements.

QR to our Wellhead Seals: TC-1W Seal Parts Lists

TC-1W, 11” OD, 1-1/2” Thick Flat Style

TC-1W, 6” OD with Step

For other material configurations, nonstandard sizes, or styles not shown, contact your MFP Seals Sales Associate.

Dovetail Seal

MFP Seals has Dovetail Seals for nominal plug sizes of 7” up to 20”. Our Dovetail Seals are made from a durable NBR 70 material.

QR to our Wellhead Seals: Dovetail Seal Parts List

B02 O-Rings & Anti-Extrusion Rings

Our industry standard B02 Tubing Head Adapter O-Ring is made from a durable NBR 70 (Nitrile) material. Its counterpart, B02 Tubing Head Adapter Anti-Extrusion Ring is available in an NBR 90 (Nitrile) material.

QR to our Wellhead Seals: B02 O-Ring and Anti-Extrusion Ring Parts List

For other material configurations, nonstandard sizes, or styles not shown, contact your MFP Seals Sales Associate.

Approved Compounds

NORSOK M710 RGD APPROVED

API 6A APPROVED

The Oil & Gas Industry has a high demand for seals made from specialty compounds. Designed to withstand high pressures and temperatures, and meet the specifications of NORSOK and API testing, MFP Seals has the compounds designed for your application.

API 6A Annex F - Approved
(Sour Gas Service Testing)
(Fluid Immersion Testing)

N6021 - HNBR - 80 Shore A
-50°F to +300°F
API 6A (DD/EE Material Class) - Approved

U4145 - Ultraflex® XS - 95 Shore A
-65°F to +212°F
API 6A (DD/EE Material Class) - Approved

U4150 - Ultraflex® XTS - 92 Shore A
-45°F to +275°F
API 6A (DD/EE Material Class) - Approved

NORSOK M710 Rev.2 - Approved
(Rapid Gas Decompression Testing)

FC7600 - Fluorochem® FFKM - 90 Shore A
+32°F to +500°F
NORSOK M710 Rev. 2 RGD Test - Approved

FC7625 - Fluorochem® FFKM - 90 Shore A
+25°F to +446°F
NORSOK M710 Rev. 2 RGD Test - Approved

N7020 - HNBR ED - 90 Shore A (FS Seals)
-13°F to +320°F
NORSOK M710 Rev. 2 RGD Test - Approved

N9020 - HNBR ED - 90 Shore A
-25°F to +300°F
NORSOK M710 Rev. 2 RGD Test - Approved

V9080 - FKM ED - 90 Shore A
-15°F to +400°F
NORSOK M710 Rev. 2 RGD Test - Approved

V9090 - FKM ED - 90 Shore A - **LOW TEMP FKM**
-40°F to +400°F
NORSOK M710 Rev. 2 RGD Test - Approved

V7200 - FKM ED - 90 Shore A
Dynamic -22°F to +428°F
Static -40°F to +482°F
NORSOK M710 Rev. 2 RGD Test - Approved

The list of compounds shown is only a small sampling of the compounds that are available. For more information about which compound is best suited for your application, please contact your MFP Seals Sales Associate.

Approved Compounds

NACE TM0297:2008 - Approved
(Rapid Gas Decompression Resistant)

V7350 - Aflas® - 90 Shore A - **RGD RESISTANT**
Dynamic +23°F to +428°F
Static -22°F to +482°F

MFP Seals Fluorochem®
FKM Extreme and FFKM Compounds

FC7500 - Fluorochem® FKME - 75 Shore A
-7°F to +482°F
Extreme chemical resistant fluoroelastomer.

FC7510 - Fluorochem® FKM - 75 Shore A
-4°F to +392°F
High purity, abrasion resistant fluoroelastomer.

FC7525 - Fluorochem® FFKM - 75 Shore A
+5°F to +608°F
Peroxide-cured FFKM designed for use in AMS 7257C aerospace applications, chemical processing and applications requiring excellent thermal resistance.

FC7550 - Fluorochem® FFKM - 75 Shore A
+5°F to +608°F
High purity, low compression set, excellent heat and chemical resistance.

FC7650 - Fluorochem® FFKM - 70 Shore A
-4°F to +446°F
General purpose Perfluoroelastomer.

FC7675 - Fluorochem® FFKM - 75 Shore A
+25°F to +446°F
Certified to USP Class VI and is FDA compliant for food processing applications. Wide chemical resistance.

FC7700 - Fluorochem® FFKM - 75 Shore A
+20°F to +446°F
Broad chemical resistance. Perfluorinated Elastomer.

FC7725 - Fluorochem® FFKM - 75 Shore A
+20°F to +446°F
Semiconductor: General Purpose. Certified to USP Class VI. Compatible with aggressive dry process chemistries & reactive plasmas. Excellent chemical and solvent resistance. Heat resistance up to +446°F

FC7750 - Fluorochem® FFKM - 75 Shore A
+21°F to +570°F
General purpose perfluoroelastomer. High heat resistance.

FC7775 - Fluorochem® FFKM - 75 Shore A
+20°F to +446°F
Outstanding chemical and solvent resistance. Compatibility with Nitric Acid and amine chemicals. Heat resistance to +446°F.

FC7800 - Fluorochem® FFKM - 75 Shore A
+23°F to +608°F
Outstanding chemical and solvent resistance. Compatibility with Nitric Acid and amine chemicals. High temperature resistance up to +608°F. Low compression set. AMS 7257.

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MFP SEALS®

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www.mfpseals.com

Oil & Gas

Sealing Products Guide

Volume Two

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