



HYDRAULIC SEALS *for* LONGWALL MINING

MFP[®]SEALS
MARTIN FLUID POWER

ROD WIPERS

INCH
HMW

METRIC
MHMW

Heavy Duty Urethane Rod Wiper
with Enhanced Particulate Shielding

MAX. VELOCITY 1.0 m/s (3 ft./s)

COMPONENT	COMPOUND	TEMP. RANGE
Seal	U2150	-50°C to +110°C



RW

INCH
D

METRIC
MD

D Style Rod Wiper,
with Slotted Heel

MAX. VELOCITY 1.0 m/s (3 ft./s)

COMPONENT	COMPOUND	TEMP. RANGE
Seal	H2155	-20°C to +120°C



ROD SEALS

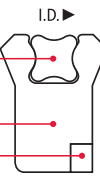
INCH
XPAR

METRIC
MXPAR

X-PAC® Loaded B-Lip U-Cup,
with Anti-Extrusion Ring

MAX. PRESSURE 690 bar (10,000 psi) MAX. VELOCITY .5 m/s (1.5 ft./s)

COMPONENT	COMPOUND	TEMP. RANGE
X-Ring Expander	N6014	-20°C to +120°C
Seal	U2150	-50°C to +110°C
Anti-Ext. Ring	M1001	+100°C
Anti-Ext. Ring	M1016	+110°C



RS

INCH
XPRA

METRIC
MXPRA

X-PAC® Loaded B-Lip, Twin-Lip
U-Cup, with & Anti-Extrusion Ring

MAX. PRESSURE 690 bar (10,000 psi) MAX. VELOCITY .5 m/s (1.5 ft./s)

COMPONENT	COMPOUND	TEMP. RANGE
X-Ring Expander	N6014	-20°C to +120°C
Seal	U2150	-50°C to +110°C
Anti-Ext. Ring	M1001	+100°C
Anti-Ext. Ring	M1016	+110°C



GUIDE RINGS

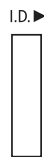
INCH
WR

METRIC
MWR

Tight Tolerance,
Composite Guide Ring

MAX. VELOCITY 2.0 m/s (6.0 ft./s)

COMPONENT	COMPOUND	TEMP. RANGE
Guide Ring	C4000	-40°C to +120°C



GR

INCH
PWS

METRIC
MPWS

Tight Tolerance,
Composite Wear Strip

MAX. VELOCITY 2.0 m/s (6.0 ft./s)

COMPONENT	COMPOUND	TEMP. RANGE
Guide Ring	C4000	-40°C to +120°C



STATIC SEALS

INCH
GSU

METRIC
MGSU

Assymetrical U-Cup, Static Seal

MAX. PRESSURE 500 bar (7,250 psi)

COMPONENT	COMPOUND	TEMP. RANGE
Seal	H2112	-54°C to +135°C
Seal	H2140	-20°C to +120°C
Seal	H2155	-20°C to +120°C



SS

INCH
GS

METRIC
MGS

Assymetrical, Static, Gland Seal

MAX. PRESSURE 500 bar (7,200 psi)

COMPONENT	COMPOUND	TEMP. RANGE
Seal	U2150	-50°C to +110°C



PISTON SEALS

INCH
CGTI

METRIC
MCGTI



**Inner Stage Piston Seal,
Double Acting, Capped GT, 6 Piece**

MAX. PRESSURE 1200 bar (17,400 psi) MAX. VELOCITY 0.1 m/s (0.328 ft./s)

COMPONENT	COMPOUND	TEMP. RANGE
Back-Up Rings	M1001	+100°C
Back-Up Rings	M1016	+110°C
Cap	U2161	-30°C to +110°C
Energizer	N6023	-24°C to +150°C
Energizer	N6015	-40°C to +125°C



SEAL LOCATION



INCH
CGT

METRIC
MCGT



**Piston Seal, Double Acting,
Capped GT, 4 Piece**

MAX. PRESSURE 690 bar (10,000 psi) MAX. VELOCITY 0.3 m/s (0.98 ft./s)

COMPONENT	COMPOUND	TEMP. RANGE
Back-Up Rings	M1001	+100°C
Back-Up Rings	M1016	+110°C
Cap	U2161	-30°C to +110°C
Energizer	N6023	-24°C to +150°C
Energizer	N6015	-40°C to +125°C



ISPS

RW

RS

SS

GR

PS

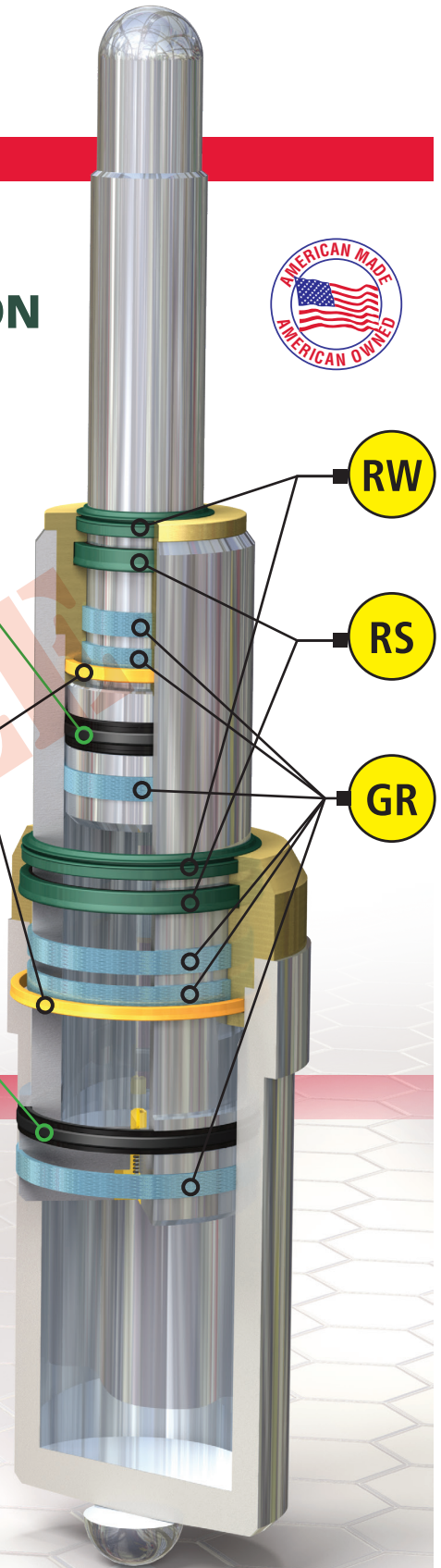
YOUR CYLINDER, MFP SEALS



MFP Seals designs and manufactures a full line of Hydraulic and Pneumatic Sealing devices. Many of our designs have been modified and updated from industry standard profiles, from our own internal testing, and through feedback from our customers in the field. We've made both minor, and major modifications, increasing seal performance in a variety of applications. We've also modified and adapted our compounds to exceed the demands of harsh environments, high temperatures and excessive duty cycles. So, the next time you're designing a new hydraulic cylinder, pneumatic actuator, or valve, or you just want to improve the performance of your current equipment, talk with us, we have the seals and experience you need.

MFP Seals, Sealing In Success™

Note: The temperature ranges shown above are governed by the high water-based fluid (HFA) that is used in longwall roof supports. The values shown are compiled from random tests taken from ongoing production. All data was established based on standard test-products according to ISO, DIN and ASTM standards, and can basically not be carried over to the completed seal. All technical advice, services and recommendations rendered by Martin Fluid Power, or its affiliated companies are gratis. They are based on technical data which the seller believes to be reliable, and are intended to be used by persons having skill and know-how and ability to analyze the application where the product will be used and apply the information to it at their own discretion and risk. We cannot assume or accept any responsibility for results obtained or damages occurred from any installer's decisions or work, in whole or in part. Martin Fluid Power's exclusive warranty is against defects in materials and workmanship at the time of shipment. It is in lieu of all other warranties. There is no implied warranty of merchantability or fitness for a particular purpose. The exclusive remedy is replacement of defective products or, at our option, refund of their purchase price. All damages exceeding the purchase price are excluded, whether consequential or otherwise, regardless of cause. The sale of our products under any other warranty or guarantee, expressed or implied, is not authorized by the company.



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