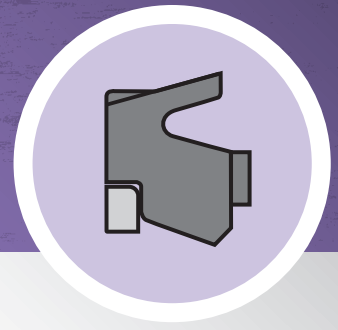


**BUFFER SEAL**  
**RBR**

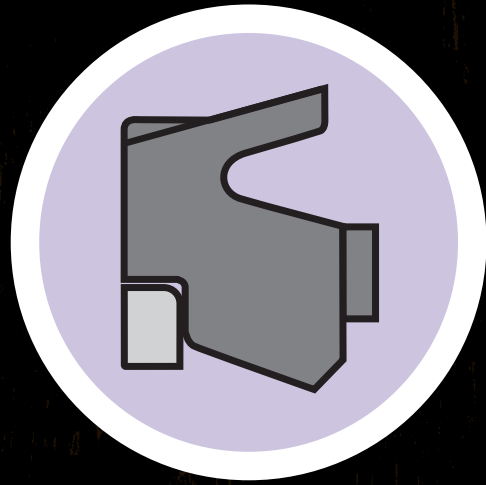


Product Performance. Affordability. Availability.



BUFFER SEAL

# RBR



## BUFFER SEAL PROFILES

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The RBR Buffer Seal is a uni-directional rod seal designed to function as a buffer seal, protecting the primary rod seal from high pressure intensification and impulses. The RBR Buffer Seal provides the majority of the sealing function, while allowing a small amount of fluid bypass to assist in the pressure actuation of the primary rod seal. The use of the RBR Buffer Seal will greatly extend the life of the primary rod seal by protecting it from excessive pressure conditions. Pressurized fluid between the RBR Buffer Seal and the primary rod seal is allowed back into the cylinder via the slotted outside diameter rib, flexible outer sealing lip and side wall slots. This relieving function prevents excessive pressure build-up between the RBR Buffer Seal and the primary rod seal, which results in the premature failure of the primary rod seal due to excessive frictional heat build-up and seal extrusion. A high-performance Backup Ring is nested into the Buffer Seal inside diameter to prevent seal extrusion at high pressure and elevated temperatures. Both ID and OD sealing lips are knife trimmed to provide reliable sealing performance.

The RBR Buffer Seal is a dual element seal design made from a high grade of water resistant polyurethane material that can withstand the inherent strain of heavy duty mining and mobile cylinder applications. The Backup Ring provides superior extrusion resistance during high pressure operation and allows for increased extrusion gaps. When used in conjunction with a high performance primary rod seal, the RBR Buffer Seal provides extended service life and effective zero leakage sealing performance for medium and heavy-duty cylinder applications.

The RBR Buffer Seal can be utilized in a variety of demanding hydraulic cylinders requiring superior reliability and lasting performance, which is particularly suited for earth moving and other mobile equipment applications. The product range consists of industry standard sizes to accommodate imperial (inch) dimensioned housings.

## STANDARD MATERIALS

- P95T                    95D Polyurethane (Purple)
- NY46                    Nylon (Black)

Other material options may be available upon request.

## TECHNICAL SPECIFICATIONS

### OPERATING CONDITION

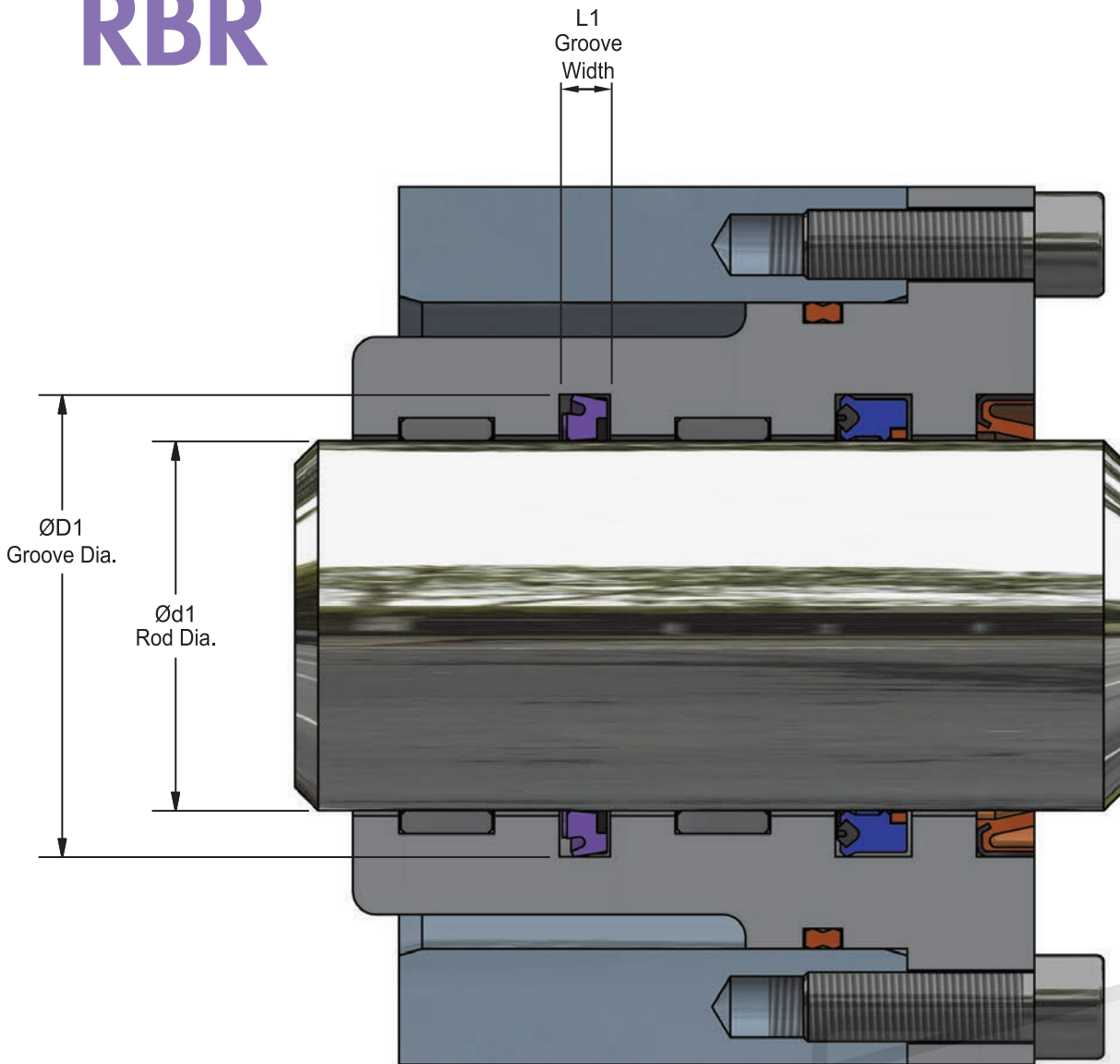
Parameter	Unit	Low Extreme	Normal Operation			High Extreme
Pressure	psi		0	—	5,000	10,000
Temperature	°F	-50	-40	—	250	265
Speed	fps		0	—	1.5	3.0
Note	Continuous operation at any one of the extreme conditions may result in substantially reduced seal life. The RBR Buffer Seal is designed to be used in a sealing system arrangement in conjunction with a high performance primary rod seal.					

### FEATURES

- Dual Element Design
- Pressure Relieving
- Excellent Extrusion Resistance
- Excellent Wear Resistance
- Zero Leakage Sealing System Performance
- Low Compression Set
- Low Friction
- Easy Installation
- Cost Effective
- Robust Design

**BUFFER SEAL**

**RBR**



**EXTRUSION GAPS**

Cross Section	3,000 psi	3,000 psi	5,000 psi	7,500 psi
0.125"	0.034"	0.028"	0.020"	0.012"
0.187"	0.038"	0.030"	0.022"	0.014"
0.250"	0.040"	0.032"	0.024"	0.016"
0.312"	0.042"	0.034"	0.026"	0.018"
0.375"	0.044"	0.036"	0.028"	0.020"
0.500"	0.046"	0.038"	0.030"	0.022"

Maximum recommended diametrical extrusion gap when using precision wear rings.

BUFFER SEAL  
RBR

Part Number	Rod Dia. "d1"	Groove Dia. "D1"	Groove Width "L1"
RBR-12500250-125-P95T	0.250	0.500	0.138
RBR-12500312-125-P95T	0.312	0.562	0.138
RBR-12500375-125-P95T	0.375	0.625	0.138
RBR-12500437-125-P95T	0.437	0.687	0.138
RBR-12500500-125-P95T	0.500	0.750	0.138
RBR-12500625-125-P95T	0.625	0.875	0.138
RBR-12500750-125-P95T	0.750	1.000	0.138
RBR-12500875-125-P95T	0.875	1.125	0.138
RBR-18700750-187-P95T	0.750	1.125	0.205
RBR-18701000-187-P95T	1.000	1.375	0.205
RBR-18701125-187-P95T	1.125	1.500	0.205
RBR-18701250-187-P95T	1.250	1.625	0.205
RBR-18701375-187-P95T	1.375	1.750	0.205
RBR-18701500-187-P95T	1.500	1.875	0.205
RBR-18701625-187-P95T	1.625	2.000	0.205
RBR-18701750-187-P95T	1.750	2.125	0.205
RBR-18701875-187-P95T	1.875	2.250	0.205
RBR-25001500-250-P95T	1.500	2.000	0.275
RBR-25001750-250-P95T	1.750	2.250	0.275
RBR-25001875-250-P95T	1.875	2.375	0.275
RBR-25002000-250-P95T	2.000	2.500	0.275
RBR-25002125-250-P95T	2.125	2.625	0.275
RBR-25002250-250-P95T	2.250	2.750	0.275
RBR-25002375-250-P95T	2.375	2.875	0.275
RBR-25002500-250-P95T	2.500	3.000	0.275
RBR-25002625-250-P95T	2.625	3.125	0.275
RBR-25002750-250-P95T	2.750	3.250	0.275
RBR-25003000-250-P95T	3.000	3.500	0.275
RBR-25003250-250-P95T	3.250	3.750	0.275
RBR-25003500-250-P95T	3.500	4.000	0.275
RBR-25003750-250-P95T	3.750	4.250	0.275
RBR-25004250-250-P95T	4.250	4.750	0.275
RBR-25005750-250-P95T	5.750	6.250	0.275
RBR-31203500-312-P95T	3.500	4.125	0.343
RBR-31203750-312-P95T	3.750	4.375	0.343
RBR-31204000-312-P95T	4.000	4.625	0.343
RBR-31204250-312-P95T	4.250	4.875	0.343
RBR-31204500-312-P95T	4.500	5.125	0.343
RBR-31204750-312-P95T	4.750	5.375	0.343
RBR-37504750-375-P95T	4.750	5.500	0.413
RBR-37505000-375-P95T	5.000	5.750	0.413
RBR-37505500-375-P95T	5.500	6.250	0.413
RBR-37505750-375-P95T	5.750	6.500	0.413
RBR-37506000-375-P95T	6.000	6.750	0.413
RBR-37506500-375-P95T	6.500	7.250	0.413
RBR-37507000-375-P95T	7.000	7.750	0.413
RBR-50007500-500-P95T	7.500	8.500	0.550
RBR-50008000-500-P95T	8.000	9.000	0.550
RBR-50008500-500-P95T	8.500	9.500	0.550
RBR-50009000-500-P95T	9.000	10.000	0.550
RBR-50009500-500-P95T	9.500	10.500	0.550
RBR-50010000-500-P95T	10.000	11.000	0.550

Tolerance h9

Tolerance H9

Tolerance +0/-0.010"

H9 and h9 tolerance per ISO 286. Additional sizes may be available.



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