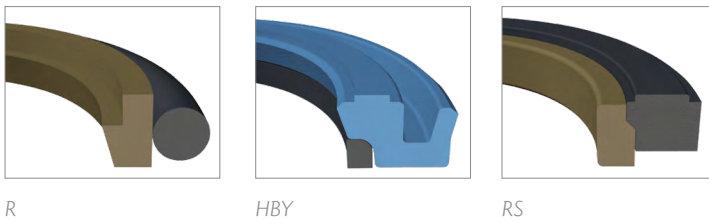
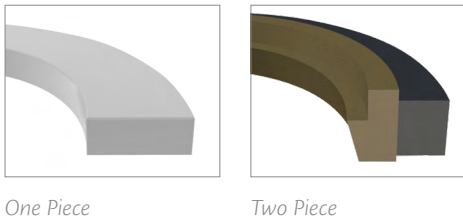


Seal Materials	Temp. Range		
40% Bronze Reinforced PTFE	-260°C	to	260°C
15% Glass, 5% Moly Reinforced PTFE	-260°C	to	260°C
Nylon/Polyamide (PA)	-30°C	to	93°C
Nitrile (NBR)	-40°C	to	120°C
Viton™/Fluorocarbon (FKM)	-26°C	to	204°C
Urethane (PU)	-54°C	to	105°C



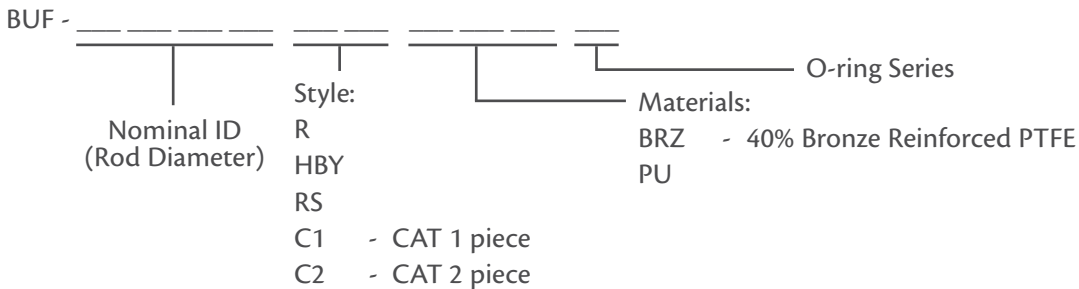
Caterpillar Equivalent Styles



Product Description

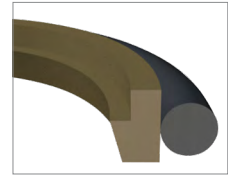
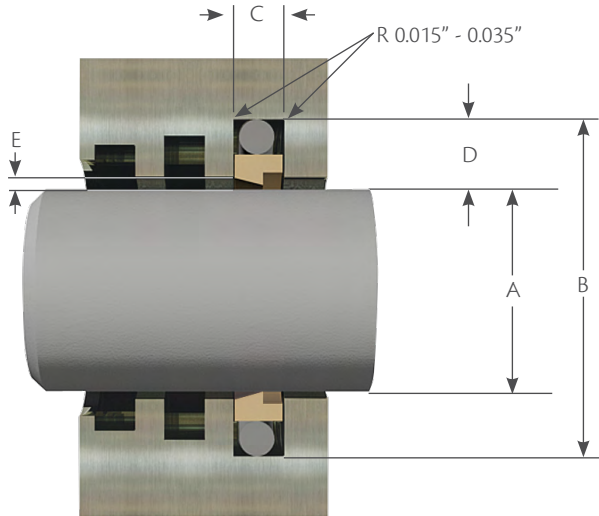
Buffer seals are commonly used in combination with another rod or piston seal, typically a U-cup style seal. Buffer seals in rod applications are designed to absorb pressure fluctuations when working under high-load conditions, this increases the lifespan of a rod seal.

Part Numbers:



Example: BUF 1250RBRZ1 - R Style Buffer, 40% Bronze Reinforced PTFE, NBR loader, 1.250" Rod, N70 126 O-Ring

Design Information



Buffer Seals

E is the maximum extrusion gap, which is the largest gap permitted by tolerances and eccentricity. Refer to *emax* on the following page.

Rendering represents an R-Style Buffer Seal.

Style:	Description	Common Material(s)
R	Standard design. Suitable up to 5800 psi.	40% Bronze Reinforced PTFE, NBR Loader
HBV	Suitable up to 10 000 psi.	High Temperature PU, PA Back-Up
RS	Suitable up to 5800 psi.	40% Bronze Reinforced PTFE, NBR Loader
One Piece	One piece CAT Buffer Seal	PU
Two Piece	Two piece CAT Buffer Seal	40% Bronze Reinforced PTFE, NBR Loader

Information is intended as a guide only; contact a Hi-Tech Seals representative when designing a new application or altering a current application.

R-Style



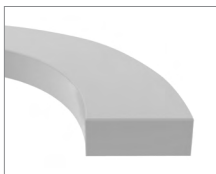
Maximum extrusion gap (e)

Groove Depth D	O-Ring Series	e _{max} at 80°C (175°F)		
		2300 psi	3600 psi	5080 psi
0.149"	100	0.014	0.010	0.006
0.212"	200	0.016	0.012	0.008
0.308"	300	0.020	0.014	0.010
0.415"	400	0.024	0.018	0.014

Part Number	A		O-Ring C/S	B		C Groove Width +0.010/-0.000	D Groove Depth
	Shaft Diameter	Tol.		Groove Diameter	Tol.		
BUF 1000RBRZ1	1.000	+0.000/-0.002	3/32	1.298	+0.003/-0.000	0.126	0.149
BUF 1000RBRZ2	1.000	+0.000/-0.003	1/8	1.424	+0.004/-0.000	0.166	0.212
BUF 1250RBRZ1	1.250	+0.000/-0.002	3/32	1.548	+0.003/-0.000	0.126	0.149
BUF 1250RBRZ2	1.250	+0.000/-0.003	1/8	1.674	+0.004/-0.000	0.166	0.212
BUF 1500RBRZ1	1.500	+0.000/-0.002	3/32	1.798	+0.003/-0.000	0.126	0.149
BUF 1500RBRZ2	1.500	+0.000/-0.003	1/8	1.924	+0.004/-0.000	0.166	0.212
BUF 1500RBRZ3	1.500	+0.000/-0.004	3/16	2.116	+0.005/-0.000	0.247	0.308
BUF 1750RBRZ2	1.750	+0.000/-0.003	1/8	2.174	+0.004/-0.000	0.166	0.212
BUF 1750RBRZ3	1.750	+0.000/-0.004	3/16	2.366	+0.005/-0.000	0.247	0.308
BUF 2000RBRZ2	2.000	+0.000/-0.003	1/8	2.424	+0.004/-0.000	0.166	0.212
BUF 2000RBRZ3	2.000	+0.000/-0.004	3/16	2.616	+0.005/-0.000	0.247	0.308
BUF 2250RBRZ2	2.250	+0.000/-0.003	1/8	2.674	+0.004/-0.000	0.166	0.212
BUF 2250RBRZ3	2.250	+0.000/-0.004	3/16	2.866	+0.005/-0.000	0.247	0.308
BUF 2500RBRZ2	2.500	+0.000/-0.003	1/8	2.924	+0.004/-0.000	0.166	0.212
BUF 2500RBRZ3	2.500	+0.000/-0.004	3/16	3.116	+0.005/-0.000	0.247	0.308
BUF 2750RBRZ2	2.750	+0.000/-0.003	1/8	3.174	+0.004/-0.000	0.166	0.212
BUF 2750RBRZ3	2.750	+0.000/-0.004	3/16	3.366	+0.005/-0.000	0.247	0.308
BUF 3000RBRZ2	3.000	+0.000/-0.003	1/8	3.424	+0.004/-0.000	0.166	0.212
BUF 3000RBRZ3	3.000	+0.000/-0.004	3/16	3.616	+0.005/-0.000	0.247	0.308
BUF 3250RBRZ3	3.250	+0.000/-0.004	3/16	3.866	+0.005/-0.000	0.247	0.308
BUF 3500RBRZ3	3.500	+0.000/-0.004	3/16	4.116	+0.005/-0.000	0.247	0.308
BUF 3750RBRZ3	3.750	+0.000/-0.004	3/16	4.366	+0.005/-0.000	0.247	0.308
BUF 4000RBRZ3	4.000	+0.000/-0.004	3/16	4.616	+0.005/-0.000	0.247	0.308
BUF 4000RBRZ4	4.000	+0.000/-0.005	1/4	4.830	+0.006/-0.000	0.320	0.415
BUF 4250RBRZ3	4.250	+0.000/-0.004	3/16	4.866	+0.005/-0.000	0.247	0.308
BUF 4250RBRZ4	4.250	+0.000/-0.005	1/4	5.080	+0.006/-0.000	0.320	0.415
BUF 4500RBRZ3	4.500	+0.000/-0.004	3/16	5.116	+0.005/-0.000	0.247	0.308
BUF 4500RBRZ4	4.500	+0.000/-0.005	1/4	5.330	+0.006/-0.000	0.320	0.415

Part Number	A		O-Ring C/S	B		C Groove Width +0.010/-0.000	D Groove Depth
	Shaft Diameter	Tol.		Groove Diameter	Tol.		
BUF 4750RBRZ3	4.750	+0.000/-0.004	3/16	5.366	+0.005/-0.000	0.247	0.308
BUF 4750RBRZ4	4.750	+0.000/-0.005	1/4	5.580	+0.006/-0.000	0.320	0.415
BUF 5000RBRZ3	5.000	+0.000/-0.004	3/16	5.616	+0.005/-0.000	0.247	0.308
BUF 5000RBRZ4	5.000	+0.000/-0.005	1/4	5.830	+0.006/-0.000	0.320	0.415
BUF 5250RBRZ3	5.250	+0.000/-0.004	3/16	5.866	+0.005/-0.000	0.247	0.308
BUF 5250RBRZ4	5.250	+0.000/-0.005	1/4	6.080	+0.006/-0.000	0.320	0.415
BUF 5500RBRZ3	5.500	+0.000/-0.004	3/16	6.116	+0.005/-0.000	0.247	0.308
BUF 5500RBRZ4	5.500	+0.000/-0.005	1/4	6.330	+0.006/-0.000	0.320	0.415
BUF 5750RBRZ3	5.750	+0.000/-0.004	3/16	6.366	+0.005/-0.000	0.247	0.308
BUF 5750RBRZ4	5.750	+0.000/-0.005	1/4	6.580	+0.006/-0.000	0.320	0.415
BUF 6000RBRZ3	6.000	+0.000/-0.004	3/16	6.616	+0.005/-0.000	0.247	0.308
BUF 6000RBRZ4	6.000	+0.000/-0.005	1/4	6.830	+0.006/-0.000	0.320	0.415
BUF 6250RBRZ3	6.250	+0.000/-0.004	3/16	6.866	+0.005/-0.000	0.247	0.308
BUF 6250RBRZ4	6.250	+0.000/-0.005	1/4	7.080	+0.006/-0.000	0.320	0.415
BUF 6500RBRZ3	6.500	+0.000/-0.004	3/16	7.116	+0.005/-0.000	0.247	0.308
BUF 6500RBRZ4	6.500	+0.000/-0.005	1/4	7.330	+0.006/-0.000	0.320	0.415
BUF 6750RBRZ3	6.750	+0.000/-0.004	3/16	7.366	+0.005/-0.000	0.247	0.308
BUF 6750RBRZ4	6.750	+0.000/-0.005	1/4	7.580	+0.006/-0.000	0.320	0.415
BUF 7000RBRZ3	7.000	+0.000/-0.004	3/16	7.616	+0.005/-0.000	0.247	0.308
BUF 7000RBRZ4	7.000	+0.000/-0.005	1/4	7.830	+0.006/-0.000	0.320	0.415
BUF 7250RBRZ3	7.250	+0.000/-0.004	3/16	7.866	+0.005/-0.000	0.247	0.308
BUF 7250RBRZ4	7.250	+0.000/-0.005	1/4	8.080	+0.006/-0.000	0.320	0.415
BUF 7500RBRZ3	7.500	+0.000/-0.004	3/16	8.116	+0.005/-0.000	0.247	0.308
BUF 7500RBRZ4	7.500	+0.000/-0.005	1/4	8.330	+0.006/-0.000	0.320	0.415
BUF 7750RBRZ3	7.750	+0.000/-0.004	3/16	8.366	+0.005/-0.000	0.247	0.308
BUF 7750RBRZ4	7.750	+0.000/-0.005	1/4	8.580	+0.006/-0.000	0.320	0.415
BUF 8000RBRZ3	8.000	+0.000/-0.004	3/16	8.616	+0.005/-0.000	0.247	0.308
BUF 8000RBRZ4	8.000	+0.000/-0.005	1/4	8.830	+0.006/-0.000	0.320	0.415
BUF 8500RBRZ4	8.500	+0.000/-0.005	1/4	9.330	+0.006/-0.000	0.320	0.415
BUF 9000RBRZ4	9.000	+0.000/-0.005	1/4	9.830	+0.006/-0.000	0.320	0.415
BUF 9500RBRZ4	9.500	+0.000/-0.005	1/4	10.330	+0.006/-0.000	0.320	0.415
BUF 10000RBRZ4	10.000	+0.000/-0.005	1/4	10.830	+0.006/-0.000	0.320	0.415
BUF 10500RBRZ4	10.500	+0.000/-0.005	1/4	11.330	+0.006/-0.000	0.320	0.415
BUF 11000RBRZ4	11.000	+0.000/-0.005	1/4	11.830	+0.006/-0.000	0.320	0.415
BUF 11500RBRZ4	11.500	+0.000/-0.005	1/4	12.330	+0.006/-0.000	0.320	0.415
BUF 12000RBRZ4	12.000	+0.000/-0.005	1/4	12.830	+0.006/-0.000	0.320	0.415

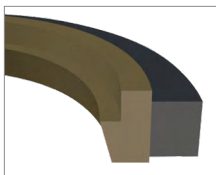
Caterpillar* One Piece Style



Part Number	Shaft Diameter	CAT Part Number
BUF 0875-C1	0.875	5P4673
BUF 1250-C1	1.250	9J3497
BUF 1500-C1	1.500	6J9733
BUF 1750-C1	1.750	6J9178
BUF 2000-C1	2.000	6J6917
BUF 2250-C1	2.250	5J3616
BUF 2375-C1	2.375	6J6916
BUF 2500-C1	2.500	5J3620
BUF 2750-C1	2.750	6J6553
BUF 3000-C1	3.000	6J6915
BUF 3250-C1	3.250	6J7167

Part Number	Shaft Diameter	CAT Part Number
BUF 3500-C1	3.500	6J6736
BUF 3750-C1	3.750	8J6070
BUF 4000-C1	4.000	8J4627
BUF 4250-C1	4.250	7J8943
BUF 4375-C1	4.375	3G5055
BUF 4750-C1	4.750	7J9257
BUF 5000-C1	5.000	8J4509
BUF 5500-C1	5.500	8J9449
BUF 5750-C1	5.750	9J5468
BUF 6500-C1	6.500	6J8631
BUF 7000-C1	7.000	9J2495

Caterpillar* Two Piece Style



Part Number	Shaft Diameter	CAT Part Number
BUF 1500-C2	1.500	8C9122
BUF 1750-C2	1.750	8C9123
BUF 2000-C2	2.000	8C9124
BUF 2250-C2	2.250	8C9125
BUF 2375-C2	2.375	8C9138
BUF 2500-C2	2.500	8C3839
BUF 2750-C2	2.750	8C3841
BUF 3000-C2	3.000	8C9126
BUF 3250-C2	3.250	8C9121
BUF 3500-C2	3.500	8C9127
BUF 3750-C2	3.750	8C9128
BUF 4000-C2	4.000	8C9129

* Our Caterpillar parts are not original equipment parts. Caterpillar part numbers are only provided as a reference.