Parker Buffer Seal Gland

Innovative Solutions from
Parker Cylinder Division

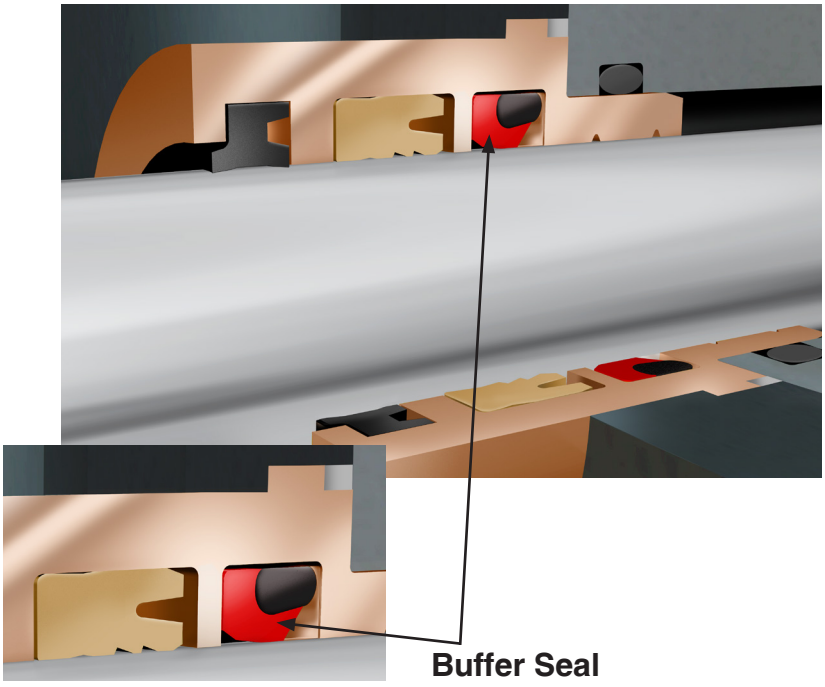
Customer Value Proposition:

The Parker Buffer Seal, installed ahead of the primary rod seal, protects the primary seal from the effects of pressure spikes. The result is increased primary rod seal and wiperseal performance life in severe applications.

The Parker Buffer Seal is a unique design that allows trapped pressure back into the cylinder. When the rod extends from the cylinder the Buffer Seal is riding on a high compression sealing point to limit leakage. On the retract stroke the seal rocks forward to allow trapped fluid to pass under the seal and return to the system.

Buffer Seals are available with Series 2HD/3HD and 2HB/3HB Bolt-on gland sealing systems in 1.50" - 8.00" bores. They are available with Seal Classes 1, 2, 3, 4, 5 & 6. Selection of the Buffer Seal is with a code in the cylinder model number.

To accommodate the Buffer Seal, rod gland length is extended 0.31" to 0.81", depending on rod diameter. See reverse side for piston rod extension details.



close-up view

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Product Features:

- Recommended for heavy duty applications where pressure spikes cause premature rod seal failure
- Protects the primary rod seal from damage caused by pressure spikes
- Unique design relieves trapped pressure back into the cylinder
- Reduces the need for frequent rod seal service
- Unplanned downtime for cylinder service is reduced
- Available in Seal Classes 1, 2, 3, 4, 5 & 6

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Parker Buffer Seal's Unique Design

The Parker Buffer Seal Gland is recommended for heavy duty applications where pressure spikes on the rod side of the piston produce premature rod seal failure. Whether the pressure spikes are caused by an external force or intensification due to differential piston areas, the resultant rod seal damage drives the need for more frequent unplanned service downtime.

Parker Buffer Seal is a secondary, upstream seal that protects the primary rod seal from damage caused by pressure spikes. The polyurethane Buffer Seal for Class 1 service and filled PTFE Buffer Seal for all other Seal Classes is o-ring energized, low friction and extrusion resistant.

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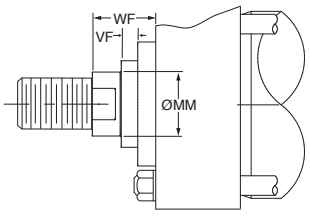
Buffer Seals are available with Series 2HD/3HD and 2HB/3HB in 1.50"-8.00" bores. They are available with Seal Classes 1, 2, 3, 4, 5 & 6. Selection of the Buffer Seal is made with a code in the cylinder model number.

Rod Extension Dimensions for Buffer Seal Glands

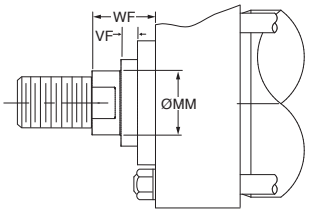
Buffer Seal glands are from 0.31" to 0.81" longer (see table at right) than glands without a Buffer Seal. The longer gland causes the piston rod to extend beyond its location for a standard gland. A differentiating rod end style 4B vs. 4, 9B vs. 9 etc. must also be specified when selecting the Buffer Seal gland option. Rod end extension dimensions – V, VF, W, WF and WG – for Buffer Seal rod end styles are in the table at right. All other rod end dimensions are unchanged and can be found on the Piston Rod Ends page for each series.

Series 2HD/2HB & 3HD/3HB 7.00" & 8.00" Bore Rod End Styles

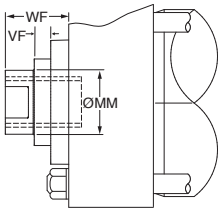
Style 4B – Small Male



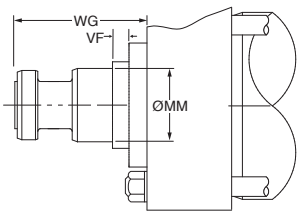
Style 8B – Intermediate Male



Style 9B – Short Female



Style 55B – Flanged Rod End



Bore Ø	Rod No.	MM Rod Ø	Gland Length Increase	V[1]	VF	W[1]	WF	WG[2]
1.50	1 (Std.)	0.625	Buffer Seal Not Available in 0.625" Rod					
	2	1.000	0.31	0.81	0.83	1.31	1.69	2.38
2.00	1 (Std.)	1.000	0.31	0.56	0.83	1.06	1.69	2.38
	2	1.375	0.38	0.75	1.02	1.38	2.00	2.75
2.50	1 (Std.)	1.000	0.31	0.56	0.83	1.06	1.69	2.38
	2	1.750	0.44	0.94	0.97	1.69	2.31	3.13
	3	1.375	0.38	0.75	1.02	1.38	2.00	2.75
3.25	1 (Std.)	1.375	0.38	0.63	1.02	1.25	2.00	2.75
	2	2.000	0.44	0.81	0.97	1.69	2.44	3.75
	3	1.750	0.44	0.81	0.97	1.56	2.31	3.13
4.00	1 (Std.)	1.750	0.44	0.69	0.97	1.44	2.31	3.13
	2	2.500	0.44	0.81	1.09	1.81	2.69	4.50
	3	2.000	0.44	0.69	0.97	1.56	2.44	3.75
5.00	1 (Std.)	2.000	0.44	0.69	0.97	1.56	2.44	3.75
	2	3.500	0.44	0.81	0.78	1.81	2.69	5.63
	3	2.500	0.44	0.81	1.09	1.81	2.69	4.50
	4	3.000	0.44	0.81	0.85	1.81	2.69	4.88
6.00	1 (Std.)	2.500	0.44	0.69	1.09	1.69	2.69	4.50
	2	4.000	0.44	0.69	0.78	1.69	2.69	5.75
	3	3.000	0.44	0.69	0.85	1.69	2.69	4.88
	4	3.500	0.44	0.69	0.78	1.69	2.69	5.63
7.00	1 (Std.)	3.000	0.44	1.06	0.84	1.69	2.69	4.88
	2	5.000	0.81	1.15	1.15	2.06	3.06	6.63
	3	3.500	0.44	1.07	0.78	1.69	2.69	5.63
	4	4.000	0.44	0.94	0.78	1.69	2.69	5.75
	5	4.500	0.44	0.94	0.78	1.69	2.69	6.50
8.00	1 (Std.)	3.500	0.44	1.06	0.78	1.69	2.69	5.63
	2	5.500	0.81	1.15	1.15	2.06	3.06	7.50
	3	4.000	0.44	0.94	0.78	1.69	2.69	5.75
	4	4.500	0.44	0.94	0.78	1.69	2.69	6.50
	5	5.000	0.81	1.15	1.15	2.06	3.06	6.63

[1] 'V' and "W' dimensions are for Mounting Styles J & JB and tie rod retained gland styles.

[2] The 'WG' dimension for Buffer Seal Glands matches the 'WG' for standard glands.

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