

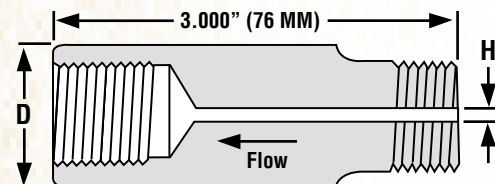
Orifice and Throttle Bushing

Orifices

Mechanical seal recirculation through an orifice helps deter solids buildup and provides cooling to minimize flashing of product in the seal chamber. Orifices are sized to provide adequate flush flow under specific operating conditions relative to the seal size and fluid properties.

Operating Parameters

- Temperatures: Up to 800° F (427° C)
- Capacity: 0.1 - 100 gpm (0.38 - 379 liter/min)
- Construction: 316 Stainless Steel, Alloy 600



Standard Sizes

Part Number	NPT Conn.		Inch		Millimeter	
	Male	Female	D	H	D	H
4R2829	.500	.500	1.188	none*	30	none*
4R2106	.500	.500	1.188	0.040	30	1.0
663660	.500	.500	1.188	0.056	30	1.4
664836	.500	.500	1.188	0.063	30	1.6
664887	.500	.500	1.188	0.073	30	1.9
614620	.250	.375	0.875	0.086	22	2.2
620822	.375	.375	1.000	0.086	25	2.2
621584	.500	.500	1.188	0.086	30	2.2
614619	.250	.375	0.875	0.098	22	2.5
620821	.375	.375	1.000	0.098	25	2.5
622330	.500	.500	1.188	0.098	30	2.5
662813	.375	.375	1.438	0.098	37	2.5
614618	.250	.375	0.875	0.113	22	2.9
620820	.375	.375	1.000	0.113	25	2.9
621577	.500	.500	1.188	0.113	30	2.9
669706	.750	.750	1.438	0.113	37	2.9

*drilled as needed

Part Number	NPT Conn.		Inch		Millimeter	
	Male	Female	D	H	D	H
667929	.250	.250	0.750	0.125	19	3.2
662312	.500	.500	1.188	0.125	30	3.2
4R0698	1.000	1.000	1.500	0.125	38	3.2
667222	.500	.500	1.188	0.129	30	3.3
665334	.500	.500	1.188	0.156	30	4.0
4R1467	.500	.500	1.188	0.172	30	4.4
667547	.500	.500	1.188	0.188	30	4.8
4R0688	1.000	1.000	1.500	0.188	38	4.8
4R1899	.500	.500	1.188	0.209	30	5.3
665333	.500	.500	1.188	0.250	30	6.4
671464	.375	.375	1.438	0.250	37	6.4
4R0689	1.000	1.000	1.500	0.250	38	6.4
4R0690	1.000	1.000	1.500	0.375	38	9.5
4R0691	1.000	1.000	1.500	0.438	38	11.1
4R0692	1.000	1.000	1.500	0.500	38	12.7
4R0693	1.000	1.000	1.500	0.625	38	15.9

Throttle Bushings

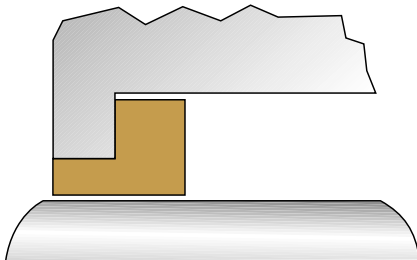
Installed in the bottom of seal chambers, throttle bushings are used to control flow past mechanical seal faces and to lower or raise the seal chamber pressure. Depending on the desired flow rates and equipment type, fixed or floating throttle bushings are available for any radial clearance over the shaft. Unitized and split designs simplify installation and removal.

Operating Parameters

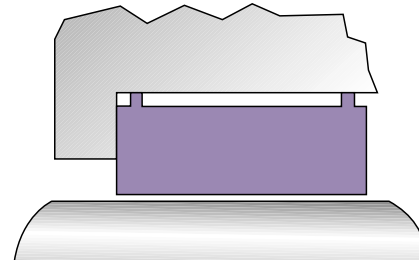
- Capacity: 0.1 - 100 gpm (.38 - 379 liter/min)
- Radial Clearance: 0.0025" - 0.010" (0.064 - 0.25 mm)
- Temperature: Up to 800° F (427° C)
- Sizes: .375" to 11.000" (10 - 280 mm)

Materials of Construction

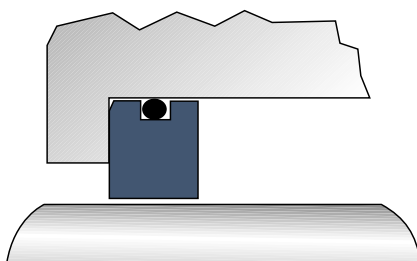
- Bushing: Carbon, Bronze, PTFE, PEEK
- Flange: 316 Stainless Steel, Alloy 600
- Springs: Alloy C-276
- Elastomers: EPR, Fluoroelastomer, Perfluoroelastomer, Nitrile



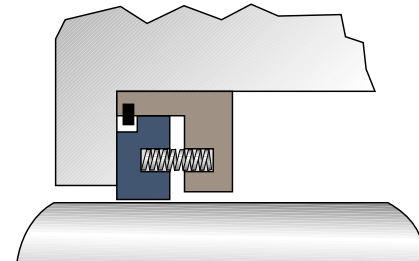
Press Fit



Split Flow Reducer



O-ring Fit



Unitized Floating

Note: For sizes and conditions not listed, contact your local Flowserve Representative.

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