V6 Profile, Cushion Seal

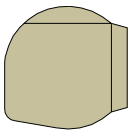
The V6 profile provides a check valve type action for use in cushioning pneumatic cylinders. The V6 profile seals against the cushioning piston or spud, allowing pneumatic pressure to build and cushion the cylinder's end stroke. Through a series of slots and pedestals the intake flow is then able to easily blow past the cushion seal to fill the cylinder. The installation of the cushion seal is very simple as it manually snaps into the groove recess. The V6 profile is available in proprietary Parker compounds formulated for low friction, extrusion resistance, and high temperature. The V6 profile can be used in a wide variety of NFPA cylinders and will provide excellent performance and long life.

Technical Data

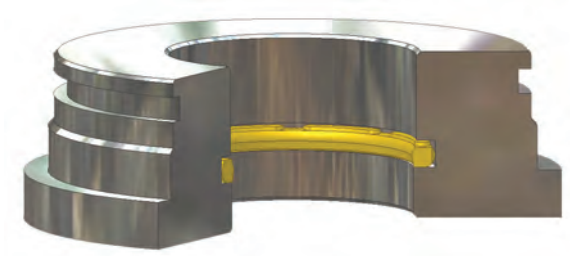
Standard Materials*	Temperature Range	Pressure Range†	Surface Speed
P4622A90	-65°F to 225°F (-54°C to 107°C)	250 psi (17 bar)	< 3 ft/s (1 m/s)
N4180A80	-40°F to 250°F (-40°C to 121°C)	250 psi (17 bar)	< 3 ft/s (1 m/s)
N4181A80	-40°F to 250°F (-40°C to 121°C)	250 psi (17 bar)	< 3 ft/s (1 m/s)
V4208A90	-5°F to 400°F (-21°C to 204°C)	250 psi (17 bar)	< 3 ft/s (1 m/s)

***Alternate Materials:** For applications that may require an alternate material, please contact your local Parker Seal representative.

†**Pressure Range** without wear rings (see Table 2-4, page 2-5).



V6 Cross-Section



V6 Installed in Rod Gland

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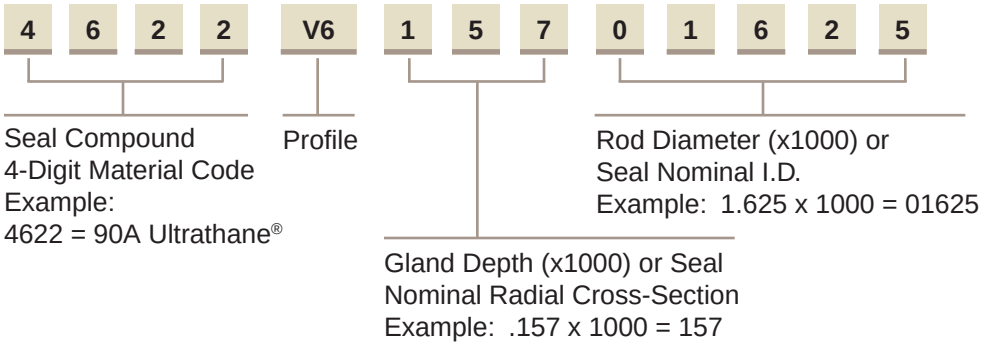
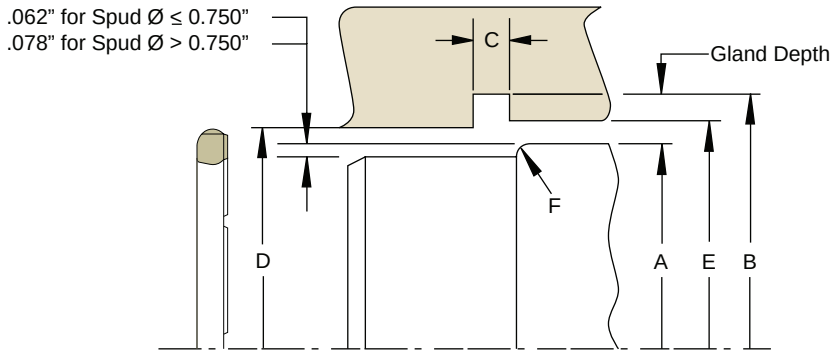
Part Number Nomenclature — V6 Profile

Table 5-35. V6 Profile — Inch



Gland Dimensions — V6 Profile



Please refer to Engineering Section 2, page 2-8 for surface finish and additional hardware considerations.

Table 5-36. V6 Gland Dimensions — Inch

Nominal Spud Diameter	A Spud Diameter	B Groove Diameter	C Groove Width	D Throat Diameter	E Throat Diameter	F Spud End Radius	Compound Codes (X = Standard Offering)			Part Number	
							4622	4180	4208	Compound Code	
3/8	0.368/0.370	0.685/0.689	0.181/0.197	0.390/0.393	0.449/0.453	0.118	X	X	X	**XXXX**	**V615700375**
5/8	0.617/0.620	0.935/0.940	0.181/0.197	0.640/0.644	0.699/0.703	0.118	X	X	X	**XXXX**	**V615700625**
3/4	0.742/0.745	1.060/1.065	0.181/0.197	0.765/0.769	0.824/0.828	0.118	X	X	X	**XXXX**	**V615700750**
7/8	0.877/0.880	1.195/1.201	0.181/0.197	0.900/0.905	0.959/0.964	0.118	X	X	X	**XXXX**	**V615700875**
1-3/16	1.179/1.184	1.578/1.585	0.228/0.244	1.208/1.215	1.263/1.270	0.157	X			**XXXX**	**V619701187**
1-1/4	1.249/1.253	1.568/1.574	0.181/0.197	1.273/1.279	1.332/1.338	0.118	X	X	X	**XXXX**	**V615701250**
1-5/8	1.620/1.624	1.939/1.945	0.181/0.197	1.644/1.650	1.703/1.709	0.118	X	X	X	**XXXX**	**V615701625**
1-5/8	1.616/1.622	2.016/2.023	0.228/0.244	1.646/1.653	1.701/1.709	0.157	X		X	**XXXX**	**V619701625**
2	1.992/1.997	2.391/2.398	0.228/0.244	2.021/2.028	2.076/2.083	0.157	X	X	X	**XXXX**	**V619702000**
2-1/4	2.242/2.247	2.562/2.569	0.181/0.197	2.267/2.274	2.326/2.333	0.118	X		X	**XXXX**	**V615702250**
2-3/4	2.735/2.740	3.291/3.300	0.323/0.339	2.764/2.771	2.858/2.865	0.197	X		X	**XXXX**	**V627602750**
4-1/4	4.219/4.225	4.776/4.786	0.323/0.339	4.249/4.258	4.343/4.352	0.197	X			**XXXX**	**V627604250**

NOTE: For sizes larger than those shown in the table, please contact your local Parker Seal representative.

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Engineered Polymer Systems Division
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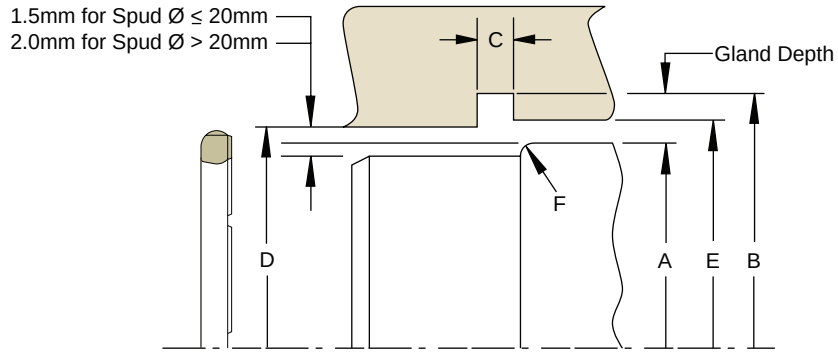
Part Number Nomenclature — V6 Profile

Table 5-37. V6 Profile — Metric

M	1	8	1	V6	0	4	.	0	0	2	0
Seal Compound 4-Digit Material Code (First digit "4" replaced with "M" for Metric) Example: M181 = 90A NBR				Profile	Gland Depth (mm) Example: 04.0 = 4.0 mm				Rod Diameter (mm) Example: 020 = 20 mm		

Gland Dimensions — V6 Profile



Please refer to Engineering Section 2, page 2-8 for surface finish and additional hardware considerations.

Table 5-38. V6 Gland Dimensions — Metric

Nominal Spud Diameter	A Spud Diameter	B Groove Diameter	C Groove Width	D Throat Diameter	E Throat Diameter	F Spud End Radius	Compound Codes (X = Standard Offering)		Part Number	
							M181	M208	Compound Code	
	h10	H11	+.20/-.00	H11	H11					
For ISO tolerances refer to Appendix F.										
10.0	10.0	18.0	4,8	10.5	12.0	3.0	X	X	XXXX	V604.0010
14.0	14.0	22.0	4,8	14.5	16.0	3.0	X	X	XXXX	V604.0014
16.0	16.0	24.0	4,8	16.5	18.0	3.0	X		XXXX	V604.0016
20.0	20.0	28.0	4,8	20.5	22.0	3.0	X	X	XXXX	V604.0020
22.0	22.0	30.0	4,8	22.5	24.0	3.0	X		XXXX	V604.0022
30.0	30.0	40.0	6.0	30.6	32.0	4.0	X	X	XXXX	V605.0030
32.0	32.0	42.0	6.0	32.6	34.0	4.0	X	X	XXXX	V605.0032
38.0	38.0	48.0	6.0	38.6	40.0	4.0	X	X	XXXX	V605.0038
50.0	50.0	60.0	6.0	50.6	52.0	4.0	X	X	XXXX	V605.0050

NOTE: For sizes larger than those shown in the table, please contact your local Parker Seal representative.

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