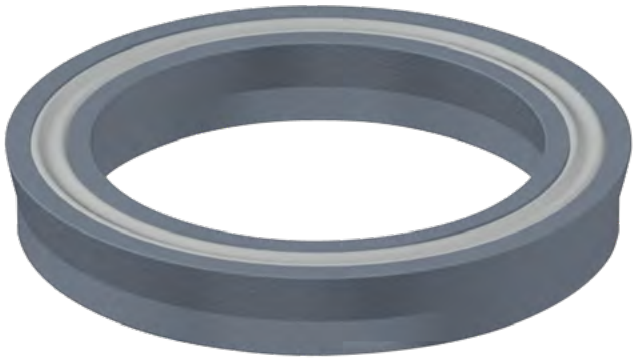
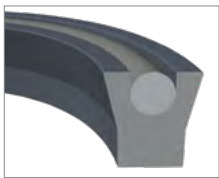


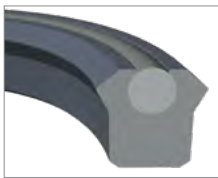
Seal Materials		Temp. Range	
Urethane (PU)		-54°C	to 105°C
Viton™/Fluorocarbon (FKM)		-26°C	to 204°C
Hytrel® /Fluorotrel™ (TPC-ET)		-54°C	to 149°C
Hydrogenated Nitrile (HNBR)		-40°C	to 160°C
Loader Materials			
Nitrile (NBR)		-40°C	to 120°C
Low Temp. Nitrile (LTN)		-54°C	to 116°C
Viton™/Fluorocarbon (FKM)		-26°C	to 204°C



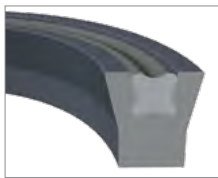
Loaded U-Cups



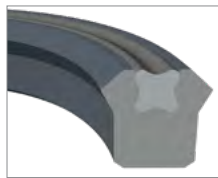
O-Ring Loaded
w/ Straight Lip



O-Ring Loaded
w/ Beveled Lip



Quad Loaded
w/ Straight Lip



Quad Loaded
w/ Beveled Lip

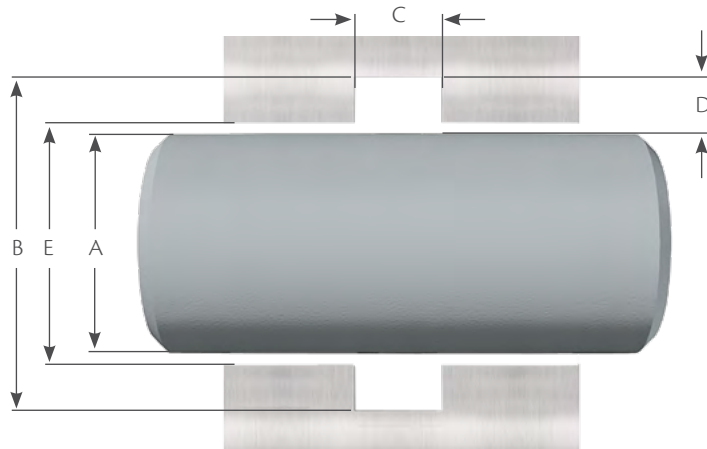
Product Description

U-cups are one of the most popular lip seals used today. Loaded U-cups are primarily intended for dynamic reciprocating applications. They are an excellent seal in low pressure rod or piston applications. As the system pressure increases, the loading lip force also increases, automatically compensating for the higher pressure while maintaining a positive seal. A variety of styles, materials, and sizes are available to suit specific requirements.

Part Numbers:

Prefix:	Metal C/S	Metal ID	Actual Seal Height*	Suffix:
LUC				Blank - O-Ring Loaded, Straight Lip
HSN				B - O-Ring Loaded, Beveled Lip
VUC				Q - Quad Loaded, Straight Lip
HTL				BQ - Quad Loaded, Beveled Lip
				Material - if other than described by the prefix

* Height is only listed if the axial height is greater than the cross-section.



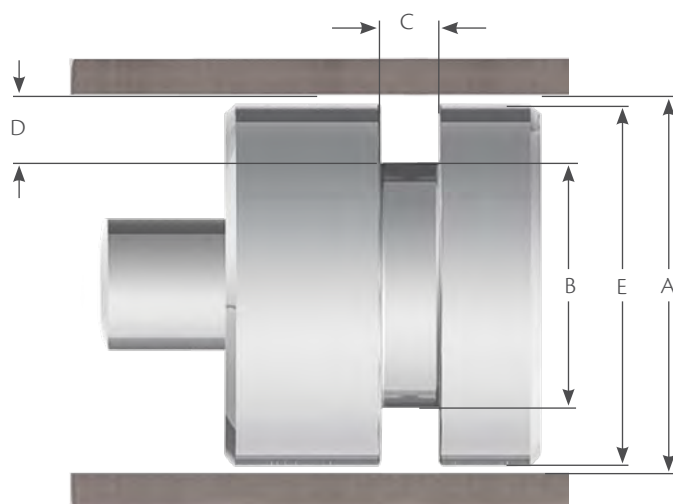
Rod Gland Application - Standard

A Rod Diameter		Metal C/S	Seal Width	B Groove Diameter		C Groove Width	E Throat Diameter	
Range	Tolerance			Calculation	Tolerance		Calculation	Tolerance
0.062 - 0.624	+0.000/-0.001	1/8 (0.125)	1/8 (0.125)	Dia. A + 0.250	+0.002/-0.000	0.138	Dia. A + 0.001	+0.002/-0.000
0.625 - 0.999	+0.000/-0.001	1/8 (0.125)	1/8 (0.125)	Dia. A + 0.250	+0.002/-0.000	0.138	Dia. A + 0.001	+0.002/-0.000
1.000 - 1.499	+0.000/-0.002	3/16 (0.187)	3/16 (0.187)	Dia. A + 0.375	+0.002/-0.000	0.206	Dia. A + 0.001	+0.002/-0.000
1.500 - 1.999	+0.000/-0.002	3/16 (0.187)	3/16 (0.187)	Dia. A + 0.375	+0.002/-0.000	0.206	Dia. A + 0.001	+0.002/-0.000
2.000 - 3.499	+0.000/-0.002	1/4 (0.250)	1/4 (0.250)	Dia. A + 0.500	+0.003/-0.000	0.275	Dia. A + 0.001	+0.003/-0.000
3.500 - 4.999	+0.000/-0.002	5/6 (0.312)	5/6 (0.312)	Dia. A + 0.625	+0.004/-0.000	0.343	Dia. A + 0.002	+0.003/-0.000
5.000 - 9.999	+0.000/-0.002	3/8 (0.375)	3/8 (0.375)	Dia. A + 0.750	+0.005/-0.000	0.413	Dia. A + 0.002	+0.004/-0.000
10.000 - 19.999	+0.000/-0.003	1/2 (0.500)	1/2 (0.500)	Dia. A + 1.000	+0.007/-0.000	0.550	Dia. A + 0.002	+0.005/-0.000
20.000 - 29.999	+0.000/-0.003	5/8 (0.625)	5/8 (0.625)	Dia. A + 1.250	+0.009/-0.000	0.688	Dia. A + 0.002	+0.006/-0.000
30.000 - 39.999	+0.000/-0.004	3/4 (0.750)	3/4 (0.750)	Dia. A + 1.500	+0.011/-0.000	0.825	Dia. A + 0.002	+0.007/-0.000
40.000 +	+0.000/-0.005	1 (1.000)	1 (1.000)	Dia. A + 2.000	+0.015/-0.000	1.100	Dia. A + 0.002	+0.009/-0.000

Rod Gland Application - Deep

A Rod Diameter		Metal C/S	Seal Width*	B Groove Diameter		C Groove Width	E Throat Diameter	
Range	Tolerance			Calculation	Tolerance		Calculation	Tolerance
0.062 - 0.624	+0.000/-0.001	1/8 (0.125)	3/16 (0.187)	Dia. A + 0.250	+0.002/-0.000	0.206	Dia. A + 0.001	+0.002/-0.000
0.625 - 0.999	+0.000/-0.001	1/8 (0.125)	1/4 (0.250)	Dia. A + 0.250	+0.002/-0.000	0.275	Dia. A + 0.001	+0.002/-0.000
1.000 - 1.499	+0.000/-0.002	3/16 (0.187)	5/16 (0.312)	Dia. A + 0.375	+0.002/-0.000	0.343	Dia. A + 0.001	+0.002/-0.000
1.500 - 1.999	+0.000/-0.002	3/16 (0.187)	3/8 (0.375)	Dia. A + 0.375	+0.002/-0.000	0.413	Dia. A + 0.001	+0.002/-0.000
2.000 - 3.499	+0.000/-0.002	1/4 (0.250)	3/8 (0.375)	Dia. A + 0.500	+0.003/-0.000	0.413	Dia. A + 0.001	+0.003/-0.000
3.500 - 4.999	+0.000/-0.002	5/6 (0.312)	1/2 (0.500)	Dia. A + 0.625	+0.004/-0.000	0.550	Dia. A + 0.002	+0.003/-0.000
5.000 - 9.999	+0.000/-0.002	3/8 (0.375)	5/8 (0.625)	Dia. A + 0.750	+0.005/-0.000	0.688	Dia. A + 0.002	+0.004/-0.000
10.000 - 19.999	+0.000/-0.003	1/2 (0.500)	3/4 (0.750)	Dia. A + 1.000	+0.007/-0.000	0.825	Dia. A + 0.002	+0.005/-0.000
20.000 - 29.999	+0.000/-0.003	5/8 (0.625)	1 (1.000)	Dia. A + 1.250	+0.009/-0.000	1.100	Dia. A + 0.002	+0.006/-0.000
30.000 - 39.999	+0.000/-0.004	3/4 (0.750)	1-1/4 (1.250)	Dia. A + 1.500	+0.011/-0.000	1.375	Dia. A + 0.002	+0.007/-0.000
40.000 +	+0.000/-0.005	1 (1.000)	1-1/2 (1.500)	Dia. A + 2.000	+0.015/-0.000	1.650	Dia. A + 0.002	+0.009/-0.000

* Any seal width may be used, as long as it's greater than the metal c/s.



Piston Gland Application - Standard

A Bore Diameter		Metal C/S	Seal Width	B Groove Diameter		C Groove Width +0.010/ -0.000	E Piston Diameter	
Range	Tolerance			Calculation	Tolerance		Calculation	Tolerance
0.312 - 1.499	+0.002/-0.000	1/8 (0.125)	1/8 (0.125)	Dia. A - 0.250	+0.000/-0.002	0.138	Dia. A - 0.001	+0.000/-0.001
1.500 - 2.999	+0.002/-0.000	3/16 (0.187)	3/16 (0.187)	Dia. A - 0.375	+0.000/-0.002	0.207	Dia. A - 0.001	+0.000/-0.002
3.000 - 5.999	+0.003/-0.000	1/4 (0.250)	1/4 (0.250)	Dia. A - 0.500	+0.000/-0.003	0.275	Dia. A - 0.001	+0.000/-0.002
6.000 - 9.999	+0.003/-0.000	5/16 (0.312)	5/16 (0.312)	Dia. A - 0.625	+0.000/-0.004	0.344	Dia. A - 0.002	+0.000/-0.002
10.000 - 19.999	+0.004/-0.000	3/8 (0.375)	3/8 (0.375)	Dia. A - 0.750	+0.000/-0.005	0.413	Dia. A - 0.002	+0.000/-0.002
20.000 - 29.999	+0.005/-0.000	1/2 (0.500)	1/2 (0.500)	Dia. A - 1.000	+0.000/-0.007	0.550	Dia. A - 0.002	+0.000/-0.003
30.000 - 39.999	+0.006/-0.000	5/8 (0.625)	5/8 (0.625)	Dia. A - 1.250	+0.000/-0.009	0.688	Dia. A - 0.002	+0.000/-0.003
40.000 - 49.999	+0.007/-0.000	3/4 (0.750)	3/4 (0.750)	Dia. A - 1.500	+0.000/-0.010	0.825	Dia. A - 0.002	+0.000/-0.004
50.000 +	+0.009/-0.000	1 (1.000)	1 (1.000)	Dia. A - 2.000	+0.000/-0.012	1.100	Dia. A - 0.002	+0.000/-0.005

Piston Gland Application - Deep

A Bore Diameter		Metal C/S	Seal Width*	B Groove Diameter		C Groove Width +0.010/ -0.000	E Piston Diameter	
Range	Tolerance			Calculation	Tolerance		Calculation	Tolerance
0.312 - 1.499	+0.002/-0.000	1/8 (0.125)	1/4 (0.250)	Dia. A - 0.250	+0.000/-0.002	0.275	Dia. A - 0.001	+0.000/-0.001
1.500 - 2.999	+0.002/-0.000	3/16 (0.187)	5/16 (0.312)	Dia. A - 0.375	+0.000/-0.002	0.344	Dia. A - 0.001	+0.000/-0.002
3.000 - 5.999	+0.003/-0.000	1/4 (0.250)	3/8 (0.375)	Dia. A - 0.500	+0.000/-0.003	0.413	Dia. A - 0.001	+0.000/-0.002
6.000 - 9.999	+0.003/-0.000	5/16 (0.312)	1/2 (0.500)	Dia. A - 0.625	+0.000/-0.004	0.550	Dia. A - 0.002	+0.000/-0.002
10.000 - 19.999	+0.004/-0.000	3/8 (0.375)	5/8 (0.625)	Dia. A - 0.750	+0.000/-0.005	0.688	Dia. A - 0.002	+0.000/-0.002
20.000 - 29.999	+0.005/-0.000	1/2 (0.500)	3/4 (0.750)	Dia. A - 1.000	+0.000/-0.007	0.825	Dia. A - 0.002	+0.000/-0.003
30.000 - 39.999	+0.006/-0.000	5/8 (0.625)	1 (1.000)	Dia. A - 1.250	+0.000/-0.009	1.100	Dia. A - 0.002	+0.000/-0.003
40.000 - 49.999	+0.007/-0.000	3/4 (0.750)	1-1/4 (1.250)	Dia. A - 1.500	+0.000/-0.010	1.375	Dia. A - 0.002	+0.000/-0.004
50.000 +	+0.009/-0.000	1 (1.000)	1-1/2 (1.500)	Dia. A - 2.000	+0.000/-0.012	1.650	Dia. A - 0.002	+0.000/-0.005

* Any seal width may be used, as long as it's greater than the metal c/s.