

Metal C-Ring Axial Pressure Spring Energized

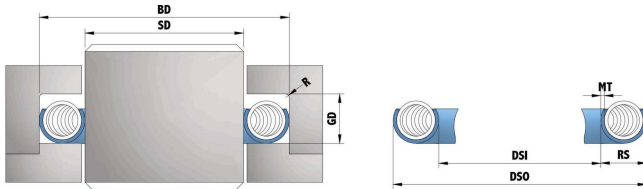
Common Metallic Material Options

• Alloy 718 • Alloy X-750 • 316 SS

Common Plating Options

• Silver • Nickel • Gold • Stannum • Copper • PTFE

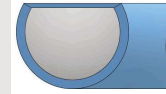
Groove and Seal Design



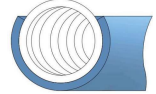
Groove Finish Recommendation

Groove finish is a critical factor for metal seal. Depend on different medium, Sonkit recommend the following groove surface roughness

Medium	For metal seal with plating	For meta seal without plating
Viscous media	Ra = 1.6 – 2.5	Ra = 0.8 – 1.6
Liquid media	Ra = 0.4 – 0.8	Unrecommended
Vacuum/ gases	Ra = 0.2 -0.6	Unrecommended



CA - CSA



Note: RS and GD values in the table below are for CA-Rings, The groove depth for CSA will be 15% more compared with the values below.

Seal Dimension										Groove Dimension					
D	MC	AS	RS	MT	DSO			DSI		BD		SD	GD	R	
Diameter Range	Material No	Axial Section	Tolerance On AS (cross section)	Radial Section	Thickness	Diameter Seal Outside	DSO Tolerance	Diameter Seal Inside	DSI Tolerance	Bore Diameter	Tolerance on BD	Shoulder Diameter	Tolerance on SD	Groove Depth (mm)	Radius (max)
12-38	157M	1.35	+0.05/-0.10	1.64	0.15	BD+0.08	+0.06/-0.03	DSO-3.28	+0.03/-0.06	SD+3.12	+0.03	BD-3.12	-0.03	1.50	0.25
38-45	157M	1.35	+0.05/-0.10	1.64	0.15	BD+0.10	+0.06/-0.03	DSO-3.28	+0.03/-0.06	SD+3.07	+0.03	BD-3.07	-0.03	1.50	0.25
30-38	239M	1.99	+0.05/-0.10	2.42	0.25	BD+0.08	+0.06/-0.03	DSO-4.85	+0.03/-0.06	SD+4.70	+0.03	BD-4.70	-0.03	2.14	0.28
38-65	239M	1.99	+0.05/-0.10	2.42	0.25	BD+0.10	+0.06/-0.03	DSO-4.85	+0.03/-0.06	SD+4.65	+0.03	BD-4.65	-0.03	2.14	0.28
50-85	318M	2.65	+0.05/-0.15	3.22	0.38	BD+0.10	+0.06/-0.03	DSO-6.45	+0.05/-0.08	SD+6.25	+0.03	BD-6.25	-0.03	2.80	0.38
85-150	318M	2.65	+0.05/-0.15	3.22	0.38	BD+0.15	+0.08/-0.05	DSO-6.45	+0.05/-0.08	SD+6.15	+0.05	BD-6.15	-0.05	2.80	0.38
150-200	318M	2.65	+0.05/-0.15	3.22	0.38	BD+0.20	+0.08/-0.05	DSO-6.45	+0.05/-0.08	SD+6.05	+0.05	BD-6.05	-0.05	2.80	0.38
85-150	396M	3.30	+0.05/-0.20	4.01	0.38	BD+0.15	+0.08/-0.05	DSO-8.03	+0.05/-0.08	SD+7.72	+0.05	BD-7.72	-0.05	3.45	0.51
150-250	396M	3.30	+0.05/-0.20	4.01	0.38	BD+0.20	+0.08/-0.05	DSO-8.03	+0.05/-0.08	SD+7.62	+0.05	BD-7.62	-0.05	3.45	0.51
100-150	478M	3.96	+0.05/-0.20	4.81	0.51	BD+0.15	+0.08/-0.05	DSO-9.63	+0.05/-0.08	SD+9.32	+0.05	BD-9.32	-0.05	4.11	0.51
150-300	478M	3.96	+0.05/-0.20	4.81	0.51	BD+0.20	+0.08/-0.05	DSO-9.63	+0.05/-0.08	SD+9.22	+0.05	BD-9.22	-0.05	4.11	0.51
150-300	635M	5.27	+0.05/-0.25	6.40	0.64	BD+0.20	+0.08/-0.05	DSO-12.80	+0.05/-0.08	SD+12.40	+0.05	BD-12.40	-0.05	5.42	0.76

Typical Applications

- Piston seal • Rod seal • Semi-dynamic
- Rotational and reciprocating applications



In house lab



In house HT



Test Report