

Design

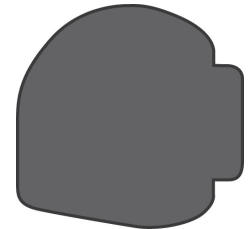
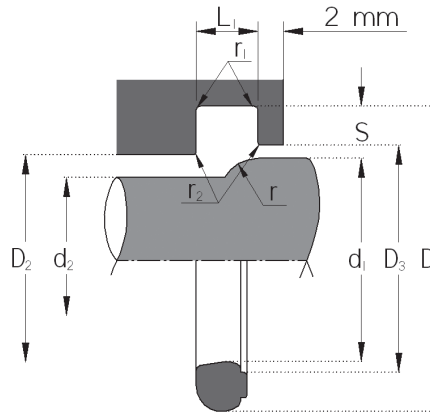
The Hallite 661 has been designed to cushion the stroke of the piston in pneumatic cylinders by acting as a non-return valve.

Near the end of the cylinder stroke the cushion spear contacts the seal and pushes it against the radial housing wall thereby trapping air and decelerating the piston. When pressure is applied to the system to return the piston, specially designed venting grooves allow pressure to pass over the Hallite 661 to the piston.

The type 661 seal is manufactured in Hallite's Hythane[®] 181 high specification polyurethane compound to provide a hard wearing material which is easily installed in the groove.

Features

- Non-return valve action
- Easy installation
- Hard wearing
- Excellent temperature range



Technical details

Metric

Inch

Operating conditions

Maximum Speed	1.0 m/sec
Temperature Range	-45°C + 80°C
Maximum Pressure	16 bar

3.0 ft/sec
-50°F + 180°F
230 p.s.i.

Surface roughness

	µmRa	µmRt
Dynamic Sealing Face Ød ₁	0.1 < > 0.4	4 max
Static Sealing Face ØD ₁	1.6 max	10 max
Static Housing Faces L ₁	1.6 max	10 max

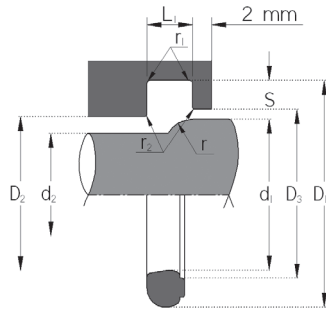
µinCLA	µinRMS
4 < > 16	5 < > 18
63 max	70 max
63 max	70 max

Chamfers & Radii

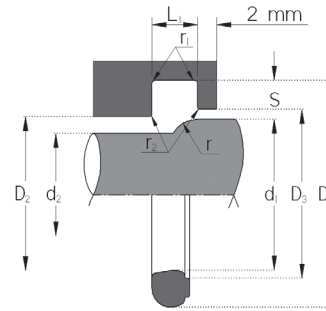
	3.0	4.0	5.0	7.0	0.157	0.197
Groove Section ≤ S mm						
Max Fillet Rad r mm	3.0	4.0	4.0	5.0	0.118	0.157
Max Fillet Rad r ₁ mm	0.4	0.4	0.4	0.4	0.016	0.016
Max Fillet Rad r ₂ mm	0.2	0.2	0.2	0.2	0.008	0.008

Tolerances

	Ød ₁	ØD ₁	ØD ₂	ØD ₃	L ₁ mm	L ₁ in
mm	h10	H11	H11	H11	+0.2-0.2	+0.016-0



MAX ROD DIA $\varnothing d_2$	SPEAR DIA $\varnothing d_1$	TOL h10	$\varnothing D_1$	TOL H11	$\varnothing D_2$	TOL H11	$\varnothing D_3$	TOL H11	L_1 + 0.016 - 0	PART No.
7.00	10.00	+0.000 -0.006	18.00	+0.13 -0.00	10.50	+0.11 -0.00	12.00	+0.11 -0.00	4.80	4574800
13.00	16.00	+0.000 -0.007	24.00	+0.13 -0.00	16.50	+0.11 -0.00	18.00	+0.13 -0.00	4.80	4558500
18.00	22.00	+0.000 -0.008	30.00	+0.13 -0.00	22.50	+0.13 -0.00	24.00	+0.13 -0.00	4.80	4574900
24.00	28.00	+0.000 -0.009	38.00	+0.13 -0.00	28.60	+0.13 -0.00	30.00	+0.16 -0.00	6.00	4574400
28.00	32.00	+0.000 -0.010	42.00	+0.16 -0.00	32.60	+0.16 -0.00	34.00	+0.16 -0.00	6.00	4591400
34.00	38.00	+0.000 -0.010	48.00	+0.16 -0.00	38.60	+0.16 -0.00	40.00	+0.16 -0.00	6.00	4574500
46.00	50.00	+0.000 -0.012	60.00	+0.19 -0.00	50.60	+0.19 -0.00	52.00	+0.19 -0.00	6.00	4558600
56.00	60.00	+0.000 -0.012	74.00	+0.19 -0.00	60.60	+0.19 -0.00	63.00	+0.19 -0.00	8.40	4574600
66.00	70.00	+0.000 -0.012	84.00	+0.22 -0.00	70.60	+0.19 -0.00	73.00	+0.19 -0.00	8.40	4576000
76.00	80.00	+0.000 -0.014	94.00	+0.22 -0.00	80.60	+0.22 -0.00	83.00	+0.22 -0.00	8.40	4574700
96.00	100.00	+0.000 -0.014	114.00	+0.22 -0.00	100.60	+0.22 -0.00	103.00	+0.22 -0.00	8.40	4582700



MAX ROD DIA $\emptyset d_2$	SPEAR DIA $\emptyset d_1$	TOL h10	$\emptyset D_1$	TOL H11	$\emptyset D_2$	TOL H11	$\emptyset D_3$	TOL H11	L_1 + 0.016 - 0	PART No.
0.719	0.875	+0.002 -0.002	1.195	+0.006 -0.000	0.900	+0.005 -0.000	0.959	+0.005 -0.000	0.189	8907300
1.094	1.250	+0.002 -0.002	1.568	+0.006 -0.000	1.273	+0.006 -0.000	1.332	+0.005 -0.000	0.189	8907400
1.469	1.625	+0.002 -0.002	1.939	+0.007 -0.000	1.644	+0.006 -0.000	1.703	+0.006 -0.000	0.189	8907500