

Pneumatic Cushion Seal

Technical details

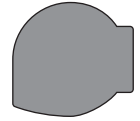
Metric

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 $\varnothing d_1$	0.1 < > 0.4	4 max
Static Sealing Face $\varnothing D_1$	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

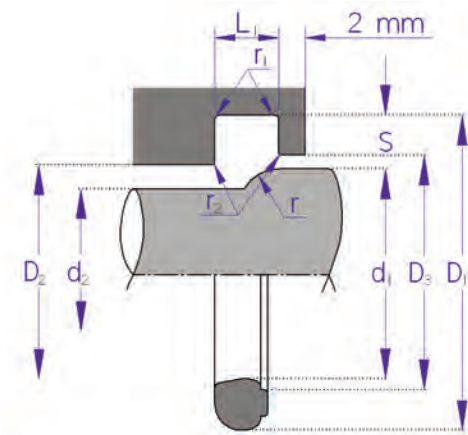
Groove Section $\leq S$ mm	3.0	4.0	5.0	7.0
Max Fillet Rad r mm	3.0	4.0	4.0	5.0
Max Fillet Rad r_1 mm	0.4	0.4	0.4	0.4
Max Fillet Rad r_2 mm	0.2	0.2	0.2	0.2

	.157	.197
.118	.157	
.016	.016	
.008	.008	

Tolerances

	$\varnothing d_1$	$\varnothing D_1$	$\varnothing D_2$	$\varnothing D_3$	L_1 mm	L_1 in
mm	h10	H11	H11	H11	+0.2-0.2	+0.008-0.008

661



DESIGN

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

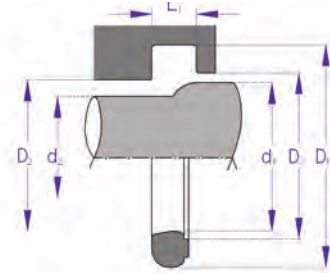
Near the end of the cylinder stroke the cushion spear contacts the seal and pushes it against the radial housing wall thereby trapping air and decelerating the piston. When pressure is applied to the system to return the piston, specially designed venting grooves allow pressure to pass over the Hallite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

661



inch

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 +0.008 -0.008	PART No.
0.719	0.875	+0.02 -0.02	1.195	+0.06 +0.000	0.959	+0.05 +0.000	0.900	+0.05 +0.000	0.181	8907300
1.094	1.250	+0.02 -0.02	1.568	+0.06 +0.000	1.332	+0.06 +0.000	1.273	+0.05 +0.000	0.181	8907400
1.469	1.625	+0.02 -0.02	2.016	+0.07 +0.000	1.701	+0.06 +0.000	1.646	+0.06 +0.000	0.228	8907500

metric

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 +0.2 - 0.2	PART No.
7.00	10.00	+0.00 -0.06	18.00	+0.13 +0.00	10.50	+0.11 +0.00	12.00	+0.11 +0.00	4.8	4574800
13.00	16.00	+0.00 -0.07	24.00	+0.13 +0.00	16.50	+0.11 +0.00	18.00	+0.13 +0.00	4.8	4558500
18.00	22.00	+0.00 -0.08	30.00	+0.13 +0.00	22.50	+0.13 +0.00	24.00	+0.13 +0.00	4.8	4574900
24.00	28.00	+0.00 -0.09	38.00	+0.13 +0.00	28.60	+0.13 +0.00	30.00	+0.16 +0.00	6.0	4574400
28.00	32.00	+0.00 -0.10	42.00	+0.16 +0.00	32.60	+0.16 +0.00	34.0	+0.16 +0.00	6.0	4591400
34.00	38.00	+0.00 -0.10	48.00	+0.16 +0.00	38.60	+0.16 +0.00	40.00	+0.16 +0.00	6.0	4574500
46.00	50.00	+0.00 -0.12	60.00	+0.19 +0.00	50.60	+0.19 +0.00	52.00	+0.19 +0.00	6.0	4558600
56.00	60.00	+0.00 -0.12	74.00	+0.19 +0.00	60.60	+0.19 +0.00	63.00	+0.19 +0.00	8.4	4574600
66.00	70.00	+0.00 -0.12	84.00	+0.22 +0.00	70.60	+0.19 +0.00	73.00	+0.19 +0.00	8.4	4576000
76.00	80.00	+0.00 -0.14	94.00	+0.22 +0.00	80.60	+0.22 +0.00	83.00	+0.22 +0.00	8.4	4574700
96.00	100.00	+0.00 -0.14	114.00	+0.22 +0.00	100.60	+0.22 +0.00	103.00	+0.22 +0.00	8.4	4582700