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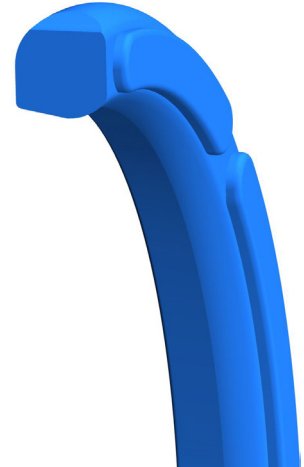
PNEUMATIC SEAL
Polyurethane Cushion Seal

DESIGN

The Hallite 661 polyurethane cushion seal for pneumatic applications is 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 enters the seal and pushes it against the radial housing wall to trap air between it and the piston decelerating the piston in the process. 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 Hallite 661 is manufactured in Hythane® 181, Hallite's high-performance polyurethane, for easy installation, excellent low temperature performance, and long service life.



FEATURES

- Non-return valve action
- Excellent temperature range
- Hard wearing
- Easy to install

MATERIALS

As standard, this product comes in the following material. Contact your local Hallite technical team if you would like to find out if this profile can be made in a custom material to suit your application. For further material details, please refer to the Hallite Material Table.

MATERIAL OPTIONS	Name	Type	Color
Standard	Hythane® 181	TPU-EU	Blue

TECHNICAL DETAILS

OPERATING CONDITIONS	METRIC	INCH
Maximum Speed	1.0 m/sec	3.0 ft/sec
Temperature Range	-45°C +80°C	-50°F +180°F
Maximum Pressure	16 bar	230 psi

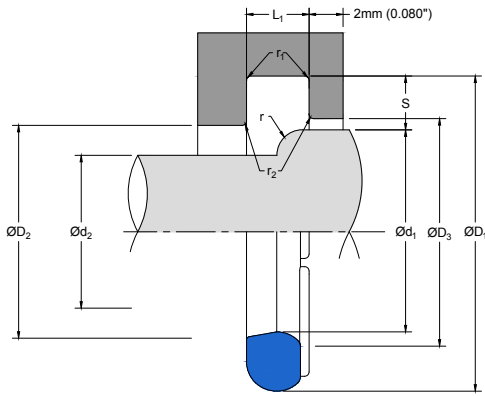
NOTE

Data given are maximum values and can apply depending on specific application. Maximum ratings of temperature, pressure, or operating speeds are dependent on fluid medium, surface, gap value, and other variables such as dynamic or static service. Maximum values are not intended for use together at the same time, e.g. max temperature and max pressure. Please contact your Hallite technical representative for application support.

SURFACE ROUGHNESS	μmRa	μmRz	μmRt	μinRa	μinRz	μinRt
Dynamic Sealing Face $\varnothing d_1$	0.1 - 0.4	1.6 max	4 max	4 - 16	63 max	157 max
Static Sealing Face $\varnothing D_1$	1.6 max	6.3 max	10 max	63 max	250 max	394 max
Static Housing Faces L_1	3.2 max	10 max	16 max	125 max	394 max	630 max

CHAMFERS & RADII				
Groove Section $\leq S$ mm	3.00	4.00	5.00	7.00
Max Rad r mm	3.00	4.00	4.00	5.00
Max Fillet Rad r_1 mm	0.40	0.40	0.40	0.40
Max Fillet Rad r_2 mm	0.20	0.20	0.20	0.20
Groove Section $\leq S$ in	0.157	0.197		
Max Rad r in	0.118	0.157		
Max Fillet Rad r_1 in	0.016	0.016		
Max Fillet Rad r_2 in	0.008	0.008		

TOLERANCES	$\varnothing d_1$	$\varnothing D_1$	$\varnothing D_2$	$\varnothing D_3$	L_1
mm	h10	H11	H11	H11	+0.20 -0.20
in	h10	H11	H11	H11	+0.016 -0



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PART NUMBER RANGE

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 +0.20-0.20	PART No.
0.719	0.880	0.000 -0.004	1.195	+0.006 0.000	0.900	+0.005 0.000	0.959	+0.005 0.000	0.189	8907300
1.094	1.253	0.000 -0.004	1.568	+0.006 0.000	1.273	+0.006 0.000	1.332	+0.006 0.000	0.189	8907400
1.469	1.624	0.000 -0.004	1.939	+0.006 0.000	1.644	+0.006 0.000	1.703	+0.006 0.000	0.189	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 +0.016 -0	PART No.
7.00	10.00	0.00 -0.06	18.00	+0.11 0.00	10.50	+0.11 0.00	12.00	+0.11 0.00	4.80	4574800
13.00	16.00	0.00 -0.07	24.00	+0.13 0.00	16.50	+0.11 0.00	18.00	+0.11 0.00	4.80	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	4.80	4574900
24.00	28.00	0.00 -0.08	38.00	+0.16 0.00	28.60	+0.13 0.00	30.00	+0.13 0.00	6.00	4574400
28.00	32.00	0.00 -0.10	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	0.00 -0.10	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	0.00 -0.10	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	0.00 -0.12	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	0.00 -0.12	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	0.00 -0.12	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	0.00 -0.14	114.00	+0.22 0.00	100.60	+0.22 0.00	103.00	+0.22 0.00	8.40	4582700