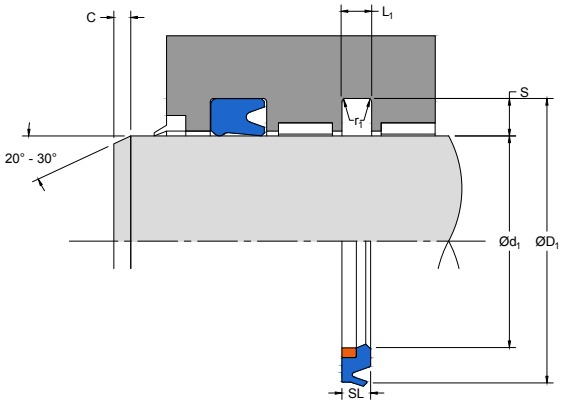


660

ROD BUFFER SEAL

Polyurethane with AE Ring

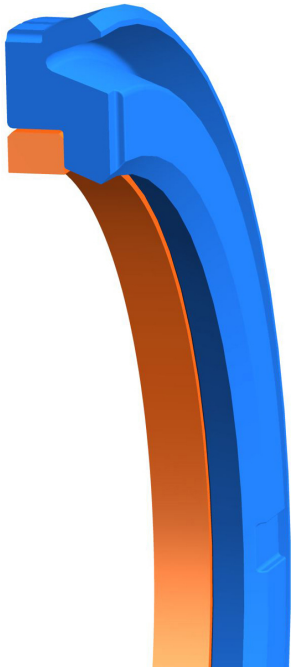
DESIGN

The Hallite 660 single-acting rod buffer seal is designed to be used in conjunction with high-performance rod seal, such as the Hallite 605, 663, or 673, to protect the primary seal from shock pressure loading and high frequency pressure spikes in the hydraulic system. The design allows oil to pass through to the rod seal while holding back pressure spikes. The Hallite 660 design also allows pressure to pass back into the system preventing a pressure trap between the rod seal and the buffer seal. The Hallite 660 is an excellent pressure buffer option in heavy-duty applications and offers extended sealing system life and performance.

The Hallite 660 is also interchangeable with common PTFE buffer seal housings.

The Hallite 660 is moulded in Hythane® 181, Hallite's high-performance polyurethane, for easy installation and excellent low temperature performance.

The design also incorporates a polyacetal anti-extrusion ring to provide maximum extrusion resistance against shock pressure loads.



FEATURES

- Self-energised by pressure spikes to protect primary seal
- Prevents inter-seal pressure build up
- Interchangeable with common PTFE buffer seal housings
- Excellent temperature range
- Long seal life
- Easy to install

MATERIALS

This product comes in a number of material options to extend operating conditions. Contact your local Hallite technical team to decide which is best for your application. Use the part designator in the table below as the last digit of the part number to specify material choice when ordering. For further material details, please refer to the Hallite Material Table.

MATERIAL OPTIONS	Name	Seal Type	Seal Colour	Part Designator
Standard	Hythane® 181-POM	TPU-EU	Blue	0
Optional	Hythane® 591-POM	TPU-AU	Orange	8

TECHNICAL DETAILS

OPERATING CONDITIONS	METRIC	INCH
Maximum Speed	1.0 m/sec	3.0 ft/sec
Temperature Range	-45°C +110°C	-50°F +230°F
Maximum Pressure	700 bar	10000 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.

MAXIMUM EXTRUSION GAP					
Pressure bar	160	250	400	500	700
Maximum Gap (S≤6 mm)	0.60	0.50	0.40	0.30	0.20
Maximum Gap (S>6 mm)	1.00	0.80	0.60	0.40	0.25

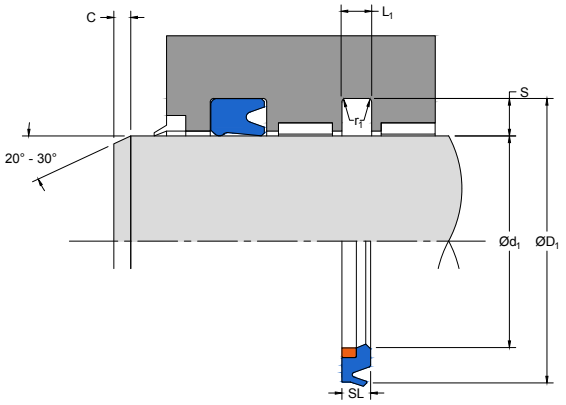
NOTE

Figures show the maximum permissible gap all on one side, for rod seals using minimum rod Ø and maximum clearance Ø and for piston seals using the minimum clearance Ø and maximum bore Ø. Refer to Housing Design section.

SURFACE ROUGHNESS	µmRa	µmRz	µmRt	µinRa	µinRz	µinRt
Dynamic Sealing Face $Ød_1$	0.1 - 0.4	1.6 max	4 max	4 - 16	63 max	157 max
Static Sealing Face $ØD_1$	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

RADII				
Groove Section <S mm	3.75	5.50	7.75	10.50
Min Chamfer C mm	3.00	3.50	5.00	7.50
Max Fillet Rad r_1 mm	0.50	0.70	1.20	1.60

TOLERANCES	$Ød_1$	$ØD_1$	L_1
mm	f9	H10	+0.25 -0



660

ROD BUFFER SEAL

Polyurethane with AE Ring

PART NUMBER RANGE

METRIC					
$Ød_1$	TOL f9	$ØD_1$	TOL H10	L_1 +0.25-0	PART No.
40.00	-0.03 -0.09	55.50	+0.12 0.00	6.30	4634310
50.00	-0.03 -0.09	65.50	+0.12 0.00	6.30	4649610
55.00	-0.03 -0.10	70.50	+0.12 0.00	6.30	4634410
60.00	-0.03 -0.10	75.50	+0.12 0.00	6.30	4634510
65.00	-0.03 -0.10	80.50	+0.14 0.00	6.30	4634610
70.00	-0.03 -0.10	85.50	+0.14 0.00	6.30	4634710‡
75.00	-0.03 -0.10	90.50	+0.14 0.00	6.30	4634810
80.00	-0.03 -0.10	95.50	+0.14 0.00	6.30	4634910‡
85.00	-0.04 -0.12	100.50	+0.14 0.00	6.30	4635010
90.00	-0.04 -0.12	105.50	+0.14 0.00	6.30	4635110‡
95.00	-0.04 -0.12	110.50	+0.14 0.00	6.30	4635210
100.00	-0.04 -0.12	115.50	+0.14 0.00	6.30	4635310‡
105.00	-0.04 -0.12	120.50	+0.16 0.00	6.30	4635410
110.00	-0.04 -0.12	125.50	+0.16 0.00	6.30	4635510‡
115.00	-0.04 -0.12	130.50	+0.16 0.00	6.30	4635610
120.00	-0.04 -0.12	135.50	+0.16 0.00	6.30	4635710
125.00	-0.04 -0.14	140.50	+0.16 0.00	6.30	4635810‡
130.00	-0.04 -0.14	145.50	+0.16 0.00	6.30	4635910

NOTE Part numbers suffixed by ‡ indicate housing sizes to meet ISO 7425-2.

PART NUMBERS ON THIS PAGE ARE LISTED IN THE STANDARD MATERIAL OPTION. FOR MATERIAL VARIATIONS OR FOR CUSTOM SIZES, MATERIALS, OR SEAL DESIGNS, PLEASE CONTACT YOUR LOCAL HALLITE REPRESENTATIVE.