

754

PISTON SEAL

*Double-Acting
Polyester Face with Pre-Loaded O-Ring*

DESIGN

The Hallite 754 double-acting piston seal is a compact, low friction seal for light to medium duty applications.

The Hallite 754 is comprised of a tough, wear-resistant thermoplastic elastomer face seal which is pre-loaded by a NBR O-ring. The face material comes in a number of material options to extend operating conditions. The housing width allows a narrow width piston to be used.

We recommend that an adequate bearing, such as the Hallite 506 or 87 bearing strip, is mounted on one or both sides of the seal. For further details of bearing grooves, please refer to the appropriate product data sheet.



FEATURES

- Excellent position holding characteristics under load
- Low breakout and low operating friction levels
- Excellent wear resistance
- More tolerant to contamination
- Rapid recovery of face after assembly
- Compatible with most hydraulic fluids
- Operates on wide range of surface finishes
- Ideal for use with Hallite 506 or 87 bearing

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	Face Type	Face Color	Part Designator
Standard	TPE 061 - NBR	TPE	Red	0
Optional	TPE 051 - NBR	TPE	Dark Red	3

TECHNICAL DETAILS

OPERATING CONDITIONS	METRIC	INCH
Maximum Speed	1.0 m/sec	3.0 ft/sec
Temperature Range	-40°C +110°C	-40°F +230°F
Maximum Pressure for TPE 061 Face	350 bar	5000 psi
Maximum Pressure for TPE 051 Face	500 bar	7500 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				
TPE 061 FACE				
Pressure bar	100	160	250	350
Maximum Gap (S>7 mm)	1.00	0.80	0.60	0.40
Maximum Gap (S<7 mm)	0.80	0.60	0.50	0.30
Pressure psi	1500	2400	3750	5000
Maximum Gap (S>0.25 in)	0.040	0.032	0.024	0.016
Maximum Gap (S<0.25 in)	0.032	0.024	0.020	0.012
TPE 051 FACE				
Pressure bar	160	250	400	500
Maximum Gap (S>7 mm)	1.00	0.80	0.60	0.40
Maximum Gap (S<7 mm)	0.80	0.60	0.40	0.20
Pressure psi	2400	3750	6000	7500
Maximum Gap (S>0.25 in)	0.040	0.032	0.024	0.016
Maximum Gap (S<0.25 in)	0.032	0.024	0.016	0.008

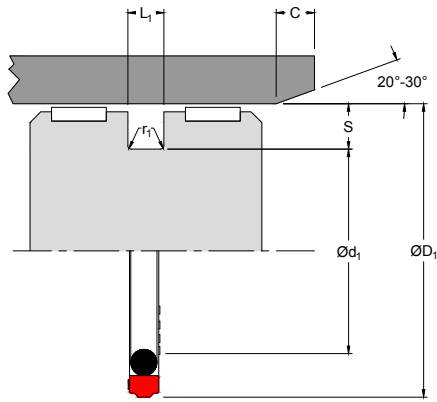
NOTE

Figures show the maximum permissible gap all on one side using minimum rod \varnothing and maximum clearance \varnothing . Refer to Housing Design section.

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	3.75	5.50	7.75	10.50
Min Chamfer C mm	2.00	2.50	5.00	5.00
Max Fillet Rad r_1 mm	0.40	0.80	1.20	1.60
Groove Section $\leq S$ in	0.150	0.220	0.310	0.410
Min Chamfer C in	0.080	0.100	0.200	0.200
Max Fillet Rad r_1 in	0.016	0.032	0.047	0.063

TOLERANCES	$\varnothing D_1$	$\varnothing d_1$	L_1
mm	H9	h9	+0.20 -0
in	H9	h9	+0.008-0



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PART NUMBER RANGE

INCH					
ØD ₁	TOL H9	Ød ₁	TOL h9	L ₁ +0.008-0	PART No.
1.250	+0.003 0.000	0.974	0.000 -0.002	0.126	4339810
1.375	+0.003 0.000	1.079	0.000 -0.002	0.126	4352410
1.500	+0.003 0.000	1.067	0.000 -0.002	0.165	4432310
1.500	+0.003 0.000	1.204	0.000 -0.003	0.125	4428710
2.000	+0.003 0.000	1.567	0.000 -0.003	0.165	4327110
2.500	+0.003 0.000	2.067	0.000 -0.003	0.165	4326910
2.750	+0.003 0.000	2.140	0.000 -0.003	0.248	4763410
2.750	+0.003 0.000	2.318	0.000 -0.003	0.165	4326810
3.250	+0.004 0.000	2.640	0.000 -0.003	0.248	4428810
4.000	+0.004 0.000	3.390	0.000 -0.004	0.248	4428910
5.000	+0.004 0.000	4.390	0.000 -0.004	0.248	4429010