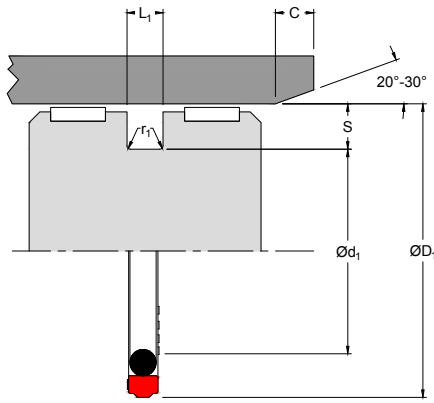




754

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 Colour	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	75000 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

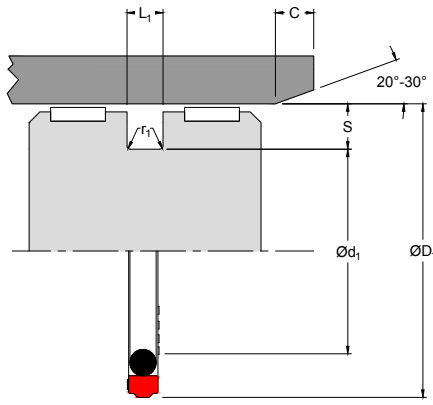
Figures show the maximum permissible gap all on one side using minimum rod $\varnothing$ and maximum clearance $\varnothing$. Refer to Housing Design section.

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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PISTON SEAL

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

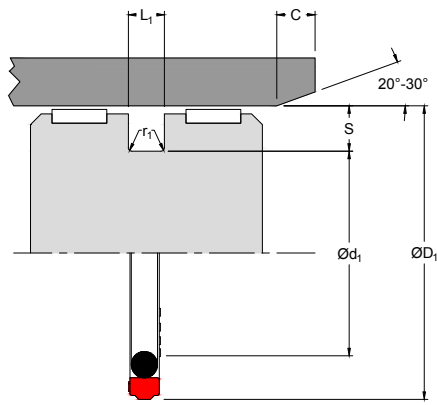
PART NUMBER RANGE

METRIC					
ØD ₁	TOL H9	Ød ₁	TOL h9	L ₁ +0.20-0	PART No.
15.00	+0.04 0.00	7.50	0.00 -0.04	3.20	4446410
16.00	+0.04 0.00	8.50	0.00 -0.04	3.20	4400610‡
20.00	+0.05 0.00	12.50	0.00 -0.04	3.20	4362310‡
25.00	+0.05 0.00	17.50	0.00 -0.04	3.20	4339610‡
28.00	+0.05 0.00	20.50	0.00 -0.05	3.20	4765910
30.00	+0.05 0.00	22.50	0.00 -0.05	3.20	4339710
32.00	+0.06 0.00	24.50	0.00 -0.05	3.20	4339810‡
35.00	+0.06 0.00	27.50	0.00 -0.05	3.20	4352410
36.00	+0.06 0.00	28.50	0.00 -0.05	3.20	4787510
40.00	+0.06 0.00	29.00	0.00 -0.05	4.20	4339210‡
40.00	+0.06 0.00	32.50	0.00 -0.06	3.20	4740010‡
42.00	+0.06 0.00	31.00	0.00 -0.06	4.20	4787610
45.00	+0.06 0.00	34.00	0.00 -0.06	4.20	4342310
50.00	+0.06 0.00	34.50	0.00 -0.06	6.30	4427410‡
50.00	+0.06 0.00	39.00	0.00 -0.06	4.20	4327110‡
55.00	+0.07 0.00	39.50	0.00 -0.06	6.30	4355610
55.00	+0.07 0.00	44.00	0.00 -0.06	4.20	4465510

NOTE

Part numbers suffixed by "‡" indicate housing sizes to meet ISO 7425-1.





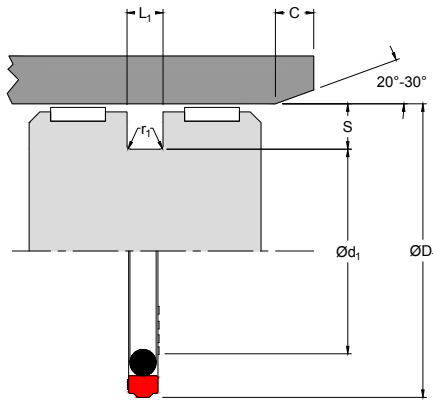
PART NUMBER RANGE

METRIC					
ØD ₁	TOL H9	Ød ₁	TOL h9	L ₁ +0.20-0	PART No.
60.00	+0.07 0.00	44.50	0.00 -0.06	6.30	4390710‡
60.00	+0.07 0.00	49.00	0.00 -0.06	4.20	4327010‡
63.00	+0.07 0.00	47.50	0.00 -0.06	6.30	4431110‡
63.00	+0.07 0.00	50.00	0.00 -0.06	6.30	4472310
63.00	+0.07 0.00	52.00	0.00 -0.07	4.20	4326910‡
65.00	+0.07 0.00	49.50	0.00 -0.06	6.30	4362010
65.00	+0.07 0.00	52.00	0.00 -0.07	6.30	4384910
65.00	+0.07 0.00	54.00	0.00 -0.07	4.20	4353010
70.00	+0.07 0.00	54.50	0.00 -0.07	6.30	4763410
70.00	+0.07 0.00	57.00	0.00 -0.07	6.30	4390810
70.00	+0.07 0.00	59.00	0.00 -0.07	4.20	4326810
75.00	+0.07 0.00	59.50	0.00 -0.07	6.30	4704910
75.00	+0.07 0.00	64.00	0.00 -0.07	4.20	4339910
80.00	+0.07 0.00	64.50	0.00 -0.07	6.30	4270910‡
80.00	+0.07 0.00	69.00	0.00 -0.07	4.20	4768510‡
85.00	+0.09 0.00	69.50	0.00 -0.07	6.30	4564010
90.00	+0.09 0.00	74.50	0.00 -0.07	6.30	4372710

NOTE

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PISTON SEAL

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

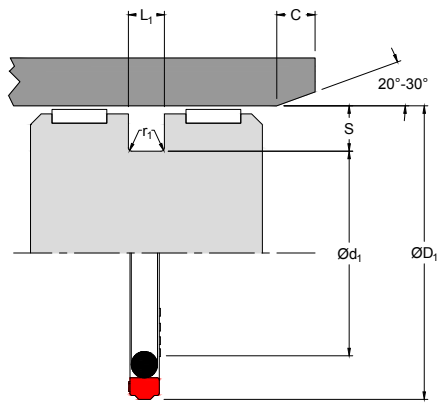
PART NUMBER RANGE

METRIC					
ØD ₁	TOL H9	Ød ₁	TOL h9	L ₁ +0.20-0	PART No.
95.00	+0.09 0.00	79.50	0.00 -0.07	6.30	4569510
95.00	+0.09 0.00	84.00	0.00 -0.09	4.20	4831610
100.00	+0.09 0.00	84.50	0.00 -0.09	6.30	4339310‡
105.00	+0.09 0.00	89.50	0.00 -0.09	6.30	4372510
110.00	+0.09 0.00	94.50	0.00 -0.09	6.30	4419310
115.00	+0.09 0.00	94.00	0.00 -0.09	8.10	4788510
115.00	+0.09 0.00	99.50	0.00 -0.09	6.30	4355810
120.00	+0.09 0.00	99.00	0.00 -0.09	8.10	4535010
120.00	+0.09 0.00	104.50	0.00 -0.09	6.30	4465410
125.00	+0.10 0.00	104.00	0.00 -0.09	8.10	4376510‡
125.00	+0.10 0.00	109.50	0.00 -0.09	6.30	4340010‡
130.00	+0.10 0.00	109.00	0.00 -0.09	8.10	4402410
130.00	+0.10 0.00	114.50	0.00 -0.09	6.30	4342210
135.00	+0.10 0.00	114.00	0.00 -0.09	8.10	4535110
140.00	+0.10 0.00	119.00	0.00 -0.09	8.10	4340110
140.00	+0.10 0.00	124.50	0.00 -0.10	6.30	4499410
150.00	+0.10 0.00	129.00	0.00 -0.10	8.10	4396910

NOTE

Part numbers suffixed by "‡" indicate housing sizes to meet ISO 7425-1.





PART NUMBER RANGE

METRIC					
$\varnothing D_1$	TOL H9	$\varnothing d_1$	TOL h9	L_1 +0.20-0	PART No.
160.00	+0.10 0.00	139.00	0.00 -0.10	8.10	4340210‡
165.00	+0.10 0.00	144.00	0.00 -0.10	8.10	4452210
170.00	+0.10 0.00	149.00	0.00 -0.10	8.10	4340310
180.00	+0.10 0.00	159.00	0.00 -0.10	8.10	4340410
190.00	+0.12 0.00	169.00	0.00 -0.10	8.10	4342410
200.00	+0.12 0.00	179.00	0.00 -0.10	8.10	4340510‡
210.00	+0.12 0.00	189.00	0.00 -0.12	8.10	4351510
220.00	+0.12 0.00	199.00	0.00 -0.12	8.10	4735710
225.00	+0.12 0.00	204.00	0.00 -0.12	8.10	4512810
230.00	+0.12 0.00	209.00	0.00 -0.12	8.10	4764010
240.00	+0.12 0.00	219.00	0.00 -0.12	8.10	4553610
250.00	+0.12 0.00	229.00	0.00 -0.12	8.10	4393710‡
300.00	+0.13 0.00	279.00	0.00 -0.13	8.10	4572810

NOTE

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