

Design

The Hallite 754 double acting piston seal is a compact low friction seal for light to medium duty hydraulic cylinders. As standard, it comprises a tough, wear resistant thermoplastic elastomer face, (see below for face material options) which is pre-loaded by an O ring. The housing width allows a narrow width piston to be used, but it is recommended that an adequate bearing is mounted on one or both sides of the seal.

Housing dimensions for use with Hallite 87 and 506 bearing strip are given in the installation details. For further details of bearing strip grooves, please refer to the appropriate data sheets.

NB: Part numbers suffixed by “#” indicate housing sizes to meet ISO 7425-1.

Features

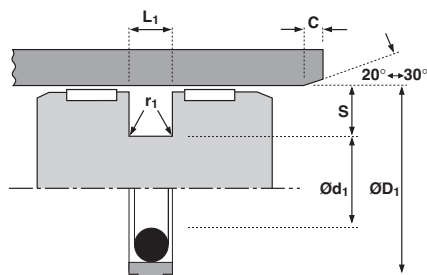
- Low breakout and operating friction levels
- Rapid recovery of face after assembly
- More tolerant to contamination than common PTFE equivalents
- Excellent position holding characteristics under load
- Compatible with most hydraulic fluids
- Excellent wear resistance
- Operates on a wide range of surface finishes
- Ideal for use with Hallite 506 or 87 bearing
- ISO 7425 housing

Material Options

Face material:

Polyester elastomer - standard Red 55D
Last digit of part no. ----- 0

Hydrolysis stabilised polyester elastomer Dark Red 72D
Last digit of part no. ----- 3



Technical details

Metric

Inch

Operating conditions

Maximum Speed	1.0 m/sec
Temperature Range	-40°C +110°C
Maximum Pressure	350 bar- standard 55D material 500 bar- 72D material

3ft/sec
40°C+230°F
5000 p.s.i
7500 p.s.i

Maximum extrusion gap

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

Polyester elastomer - standard (red 55D) material 9270061

Pressure bar	100	160	250	350
Maximum Gap (S>7) mm	1.0	0.8	0.6	0.4
Maximum Gap (S<7) mm	0.8	0.6	0.5	0.3
Pressure p.s.i	1500	2400	3750	5000

Hydrolysis stabilised polyester elastomer (dark red 72D) material 9270051

Pressure bar	160	250	400	500
Maximum Gap (S>7) mm	1.0	0.8	0.6	0.4
Maximum Gap (S<7) mm	0.8	0.6	0.4	0.2
Pressure p.s.i	2400	3750	6000	7500

Surface roughness

	μmRa	μmRt	μinCLA	μinRMS
Dynamic Sealing Face $\varnothing D_1$	0.1 < > 0.4	4 max	4 < > 16	5 < > 18
Static Sealing Face $\varnothing d_1$	1.6 max	10 max	63 max	70 max
Static Housing Faces L_1	3.2 max	16 max	125 max	140 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	L_1 in
H9	h9	+0.2 -0	+0.008-0

