

# 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**

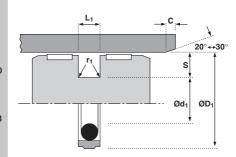
- Low breakout and operating friction levels
- · Rapid recovery of face after assembly
- More tolerant to contamination than common PTFE equivalents
- Excellent position holding characteristics under load
- · Compatible with most hydraulic fluids
- · Excellent wear resistance
- · Operates on a wide range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

# **Material Options**

Face material:

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

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





### **Technical details**

#### **Operating conditions**

Maximum Speed **Temperature Range** 

Maximum Pressure

1.0 m/sec -40°C +110°C 350 bar- standard 55D material

Metric

500 bar- 72D material

Inch

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 Ø and maximum bore Ø. Refer to **Housing Design section** 

## Polyester elastomer - standard (red 55D) material 9270061

250 350 Pressure bar 100 160 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 3750 5000 Pressure p.s.i 1500 2400

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

500 Pressure bar 160 250 400 0.8 0.4 Maximum Gap (S>7) mm 1.0 0.6 0.2 Maximum Gap (S<7) mm 8.0 0.6 0.4 2400 3750 6000 7500 Pressure p.s.i

#### Surface roughness umRa umRt μinCLA uinRMS Dynamic Sealing Face ØD<sub>1</sub> 0.1 < > 0.44 max 4 < > 16 5 < > 18 1.6 max 10 max 63 max 70 max Static Sealing Face Ød<sub>1</sub> 140 max 3.2 max Static Housing Faces L<sub>1</sub> 16 max 125 max

#### Chamfers & Radii

Groove Section < S mm 3.75 5.50 7.75 10.50 Min Chamfer C mm 2.00 2.50 5.00 5.00 0.80 Max Fillet Rad r₁ mm 0.40 1.20 1.60 Groove Section ≤ 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<sub>1</sub> in 0.016 0.032 0.047 0.063

Tolerances	$\emptyset D_1$	$Ød_1$	$L_1$ mm	$L_1$ in
	H9	h9	+0.2 -0	+0.008-0

