

Design

Ideal for light to medium duty one piece piston applications, the Hallite 77 seal is a simple, effective and economical design. Its compact dimensions enable the designer to keep the length of the piston to a minimum.

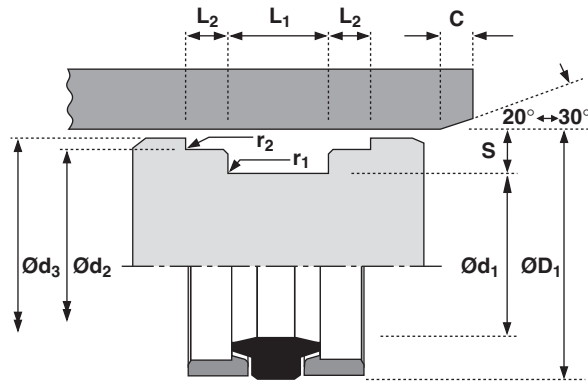
It is an assembly of a continuous rubber seal and two scarf cut bearings.

The nitrile rubber seal is designed to be pre-loaded by the housing to ensure an effective seal at low pressure. The outward thrust of the rubber seal on the bearings as it reacts to increasing pressure prevents any extrusion damage in the sealing area.

The pair of polyacetal bearings are proportioned to support the piston and its side load.

Features

- Compact design
- Easy assembly
- Low wear
- Long life



Technical details

Operating conditions

| | |
|-------------------|---------------|
| Maximum Speed | 0.5 m/sec |
| Temperature Range | -30°C + 100°C |
| Maximum Pressure | 350 bar |

Inch

| |
|---------------|
| 1.5 ft/sec |
| -22°F + 212°F |
| 5000 p.s.i. |

Surface roughness

| | μmRa | μmRt |
|---|-----------------|-----------------|
| Dynamic Sealing Face ØD_1 | 0.1 < > 0.4 | 4 max |
| Static Sealing Face Ød_1 Ød_2 | 1.6 max | 10 max |
| Static Housing Faces Ød_3 L_1 L_2 | 3.2 max | 16 max |

μinCLA

μinRMS

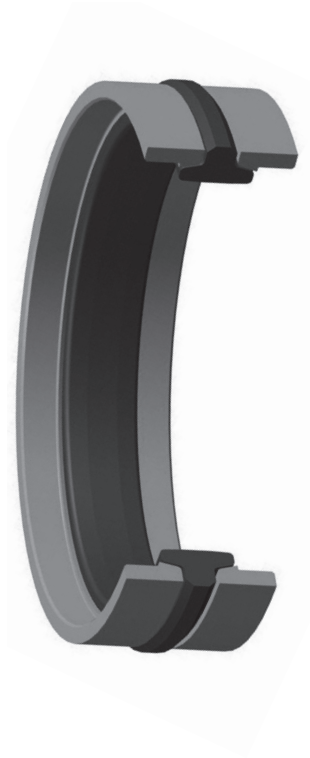
| | |
|----------|----------|
| 4 < > 16 | 5 < > 18 |
| 63 max | 70 max |
| 125 max | 140 max |

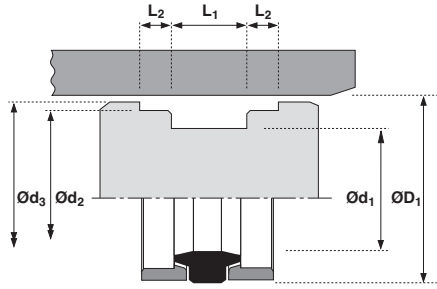
Chamfers & Radii

| | | | |
|----------------------------|-------|-------|-------|
| Groove Section $\leq S$ mm | 3.75 | 5.00 | 6.50 |
| Min Chamfer C mm | 2.00 | 2.50 | 4.00 |
| Max Fillet Rad r_1 mm | 0.40 | 0.40 | 0.40 |
| Max Fillet Rad r_2 mm | 0.20 | 0.20 | 0.20 |
| Groove Section $\leq S$ in | 0.156 | 0.187 | 0.250 |
| Min Chamfer C in | 0.078 | 0.093 | 0.125 |
| Max Fillet Rad r_1 in | 0.016 | 0.016 | 0.016 |
| Max Fillet Rad r_2 in | 0.008 | 0.008 | 0.008 |

Tolerances

| | ØD_1 | Ød_1 | Ød_2 | Ød_3 | L_1 | L_2 |
|----|---------------|---------------|---------------|---------------|---------------|----------|
| mm | H10 | h9 | h9 | h11 | +0.4 +0.13 | 0 -0.13 |
| in | H10 | h9 | h9 | h11 | +0.015 +0.005 | 0 -0.005 |





metric

| ØD ₁ | TOL H10 | Ød ₁ | TOL h9 | Ød ₂ | TOL h9 | Ød ₃ | TOL h11 | L ₁ +0.4 +0.13 | L ₂ 0 -0.13 | PART No. |
|-----------------|----------------|-----------------|----------------|-----------------|------------------|-----------------|----------------|------------------------------|---------------------------|-------------|
| 25 | +0.08 +0.00 | 17.5 | +0.00 -0.04 | 21.3 | +0.000 -0.052 | 24.0 | +0.00 -0.13 | 8.50 | 3.25 | 6111410 |
| 40 | +0.10 +0.00 | 30 | +0.00 -0.05 | 35.5 | +0.000 -0.062 | 39.0 | +0.00 -0.16 | 11.00 | 4.00 | 6111210 |
| 50 | +0.10 +0.00 | 40 | +0.00 -0.06 | 45.5 | +0.000 -0.062 | 49.0 | +0.00 -0.16 | 11.00 | 4.00 | 2326110 |
| 60 | +0.10 +0.00 | 48 | +0.00 -0.06 | 55.9 | +0.000 -0.062 | 59.2 | +0.00 -0.16 | 20.50 | 4.20 | 2326210 |
| 63 | +0.12 +0.00 | 53 | +0.00 -0.07 | 58.5 | +0.000 -0.074 | 61.5 | +0.00 -0.19 | 11.00 | 4.00 | 2325810 |
| 80 | +0.12 +0.00 | 70 | +0.00 -0.07 | 75.5 | +0.000 -0.074 | 78.5 | +0.00 -0.19 | 11.00 | 4.00 | 2325710 |
| 100 | +0.14 +0.00 | 87 | +0.00 -0.09 | 93.8 | +0.000 -0.087 | 98.5 | +0.00 -0.22 | 14.00 | 6.00 | 2326010 |
| 125 | +0.16 +0.00 | 112 | +0.00 -0.09 | 118.8 | +0.000 -0.087 | 123.5 | +0.00 -0.25 | 14.00 | 6.00 | 2325910 |

inch

| ØD ₁ | TOL H10 | Ød ₁ | TOL h9 | Ød ₂ | TOL h9 | Ød ₃ | TOL h11 | L ₁ +0.015 +0.005 | L ₂ 0 -0.005 | PART No. |
|-----------------|------------------|-----------------|------------------|-----------------|------------------|-----------------|------------------|---------------------------------|----------------------------|-------------|
| 1.250 | +0.004 +0.000 | 0.937 | +0.000 -0.002 | 1.079 | +0.000 -0.002 | 1.187 | +0.000 -0.005 | 0.343 | 0.125 | 6567790 |
| 2.375 | +0.005 +0.000 | 2.000 | +0.000 -0.003 | 2.200 | +0.000 -0.003 | 2.312 | +0.00 -0.005 | 0.437 | 0.150 | 6918060 |
| 2.500 | +0.005 +0.000 | 2.125 | +0.000 -0.003 | 2.325 | +0.000 -0.003 | 2.437 | +0.000 -0.005 | 0.437 | 0.150 | 2360210 |
| 3.250 | +0.005 +0.000 | 2.875 | +0.000 -0.003 | 3.270 | +0.000 -0.004 | 3.437 | +0.000 -0.005 | 0.437 | 0.150 | 2360310 |

piston seals metric/inch



Seal & Design
Corporate Headquarters
 Ph: (716)-759-3344
 Info@SealAndDesign.com
 www.SealAndDesign.com