

Design

Manufactured in polyacetal resin, the Hallite 63 bearing ring is extremely versatile, offering very low friction and excellent resistance to abrasion and wear.

The materials natural resistance to water makes it an ideal choice for pneumatic applications.

They can be used in conjunction with almost any Hallite piston seal.

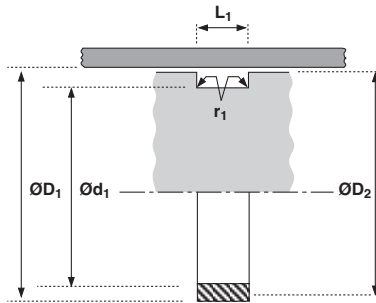
Piston Diameter D₂

Where a seal is used, this dimension is critical and must be within specified extrusion gap relative to the seal. Where a seal is not used:

$$\text{ØD}_2 (\text{min}) = \text{ØD}_1 - 1.00\text{mm} (0.040\text{'})$$

Features

- Low friction
- Good compressive strength
- Compatible with water based fluids
- Functions well in non-lubricated applications
- 1/16" cross sections offered for use in pneumatic applications



Technical details

Operating Conditions

| | | |
|---------------------|--------------|--------------|
| Maximum Speed | 5.0 m/sec | 15.0 ft/sec |
| Maximum Temperature | -45°C +110°C | -50°F +230°F |

Typical Physical Properties

| | | |
|---|-------------------------------|-------------------------------|
| Specific Gravity | 1.41 | 1.41 |
| Coefficient of Thermal Expansion | 1.1 x 10 ⁻⁴ per °C | 1.9 x 10 ⁻⁴ per °K |
| Compressive Stress to Give 1% Deflection (ASTM D695) | 23°C 31MN/m ² | 73°F 4,500p.s.i. |
| Compressive Stress to Give 10% Deflection (ASTM D695) | 23°C 110MN/m ² | 73°F 16,000p.s.i. |

Surface roughness

| | | | | |
|--|------------------|------------|-----------------|-----------------|
| Dynamic Sealing Face ØD ₁ | µmRa 0.1 < > 0.4 | µmRt 4 max | µinCLA 4 < > 16 | µinRMS 5 < > 18 |
| Static Sealing Face Ød ₁ L ₁ | 3.2 max | 16 max | 125 max | 140 max |

Chamfers & Radii

| | | | |
|----------------------------------|-------|-------|-------|
| Groove Section ≤ S mm | 2.5 | 3.2 | 3.8 |
| Max Fillet Rad r ₁ mm | 0.4 | 0.4 | 0.8 |
| Groove Section ≤ S in | 0.100 | 0.125 | 0.150 |
| Max Fillet Rad r ₁ in | 0.016 | 0.016 | 0.032 |

Tolerances

| | | | | |
|----|-----------------|-----------------|-----------------|----------------|
| | ØD ₁ | Ød ₁ | ØD ₂ | L ₁ |
| mm | H11 | f9 | see note above | +0.2 +0 |
| in | H11 | f9 | see note above | +0.008 +0 |

