

## Bearing

### Technical details

Metric

Inch



#### Operating Conditions

Maximum Speed	5.0 m/sec
Maximum Temperature	-45°C +110°C

15.0 ft/sec
-50°F +230°F

#### Typical Physical Properties

Specific Gravity	1.41
Coefficient of Thermal Expansion	$1.1 \times 10^{-4}$ per °C
Compressive Stress to Give 1% Deflection (ASTM D695)	23°C 31MN/m <sup>2</sup>
Compressive Stress to Give 10% Deflection (ASTM D695)	23°C 110MN/m <sup>2</sup>

1.41
$1.9 \times 10^{-4}$ per °K
73°F 4,500p.s.i.
73°F 16,000p.s.i.

#### Surface Roughness

	µmRa	µmRt
Dynamic Sealing Face ØD <sub>1</sub>	0.1 <> 0.4	4 max
Static Sealing Face Ød <sub>1</sub> L <sub>1</sub>	3.2 max	16 max

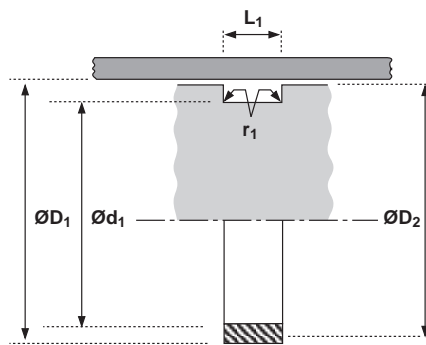
	µinCLA	µinRMS
Dynamic Sealing Face ØD <sub>1</sub>	4 <> 16	5 <> 18
Static Sealing Face Ød <sub>1</sub> L <sub>1</sub>	125 max	140 max

#### Chamfers & Radii

Groove Section ≤ S mm	2.5	3.2	3.8
Max Fillet Rad r <sub>1</sub> mm	0.4	0.4	0.8
Groove Section ≤ S in	0.100	0.125	0.150
Max Fillet Rad r <sub>1</sub> in	0.016	0.016	0.032

#### Tolerances

	ØD <sub>1</sub>	Ød <sub>1</sub>	ØD <sub>2</sub>	L <sub>1</sub>
mm	H11	f9	see note below	+0.2 +0
in	H11	f9	see note below	+0.008 +0



### 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.

### 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

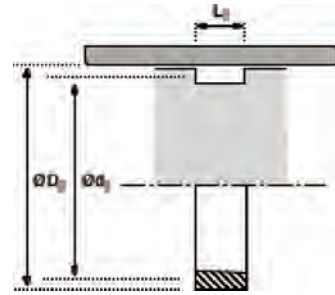
### Piston Diameter D<sub>2</sub>

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:

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

63

# 63



ØD <sub>1</sub>	TOL H11	Ød <sub>1</sub>	TOL f9	L <sub>1</sub> + 0.008 + 0.	PART No.
1.500	+0.006 +0.000	1.321	-0.001 -0.003	0.258	4533400
1.500	+0.006 +0.000	1.375	-0.001 -0.003	0.385	F70003
2.000	+0.007 +0.000	1.750	-0.001 -0.003	0.258	4710800
2.000	+0.007 +0.000	1.750	-0.001 -0.003	0.385	4710900
2.000	+0.007 +0.000	1.821	-0.001 -0.003	0.258	4259900
2.000	+0.007 +0.000	1.875	-0.001 -0.003	0.385	F70004
2.250	+0.009 +0.000	2.071	-0.001 -0.004	0.258	4286800
2.500	+0.009 +0.000	2.321	-0.001 -0.004	0.258	4272500
2.500	+0.009 +0.000	2.375	-0.001 -0.004	0.385	F70005
2.750	+0.009 +0.000	2.524	-0.001 -0.004	0.258	4287000
3.000	+0.009 +0.000	2.774	-0.001 -0.004	0.258	4193200
3.250	+0.009 +0.000	3.024	-0.001 -0.004	0.258	4287200
3.250	+0.009 +0.000	3.125	-0.001 -0.004	0.385	F70006

ØD <sub>1</sub>	TOL H11	Ød <sub>1</sub>	TOL f9	L <sub>1</sub> + 0.008 + 0.	PART No.
3.500	+0.009 +0.000	3.274	-0.001 -0.005	0.258	4193400
3.750	+0.009 +0.000	3.524	-0.001 -0.005	0.258	4700000
4.000	+0.009 +0.000	3.773	-0.001 -0.005	0.258	4177600
4.000	+0.009 +0.000	3.875	-0.001 -0.005	0.385	F70007
4.250	+0.009 +0.000	4.024	-0.001 -0.005	0.258	4318600
4.500	+0.009 +0.000	4.232	-0.001 -0.005	0.258	4264200
4.750	+0.009 +0.000	4.463	-0.001 -0.005	0.388	4700300
5.000	+0.010 +0.000	4.712	-0.001 -0.005	0.385	4267200
5.000	+0.010 +0.000	4.875	-0.001 -0.005	0.385	F70008
5.500	+0.010 +0.000	5.213	-0.001 -0.006	0.385	4260200
6.000	+0.010 +0.000	5.713	-0.001 -0.006	0.385	4267400
6.000	+0.010 +0.000	5.875	-0.001 -0.006	0.385	F70009

This list is best suited to piston applications. Please consult your local Hallite sales office for sizes specific for rod applications.