

## Piston Seals

### Technical details

#### Operating conditions

Maximum Speed	0.5 m/sec
Temperature Range	-30°C +100°C
Maximum Pressure	400 bar

#### Inch

1.5 ft/sec
-22°F +212°F
6000 p.s.i.

#### Surface roughness

	µmRa	µmRt
Dynamic Sealing Face $\varnothing D_1$	0.1 <-> 0.4	4 max
Static Sealing Face $\varnothing d_1$ $\varnothing d_2$	1.6 max	10 max
Static Housing Faces $\varnothing d_3$ L <sub>1</sub> L <sub>2</sub>	3.2 max	16 max

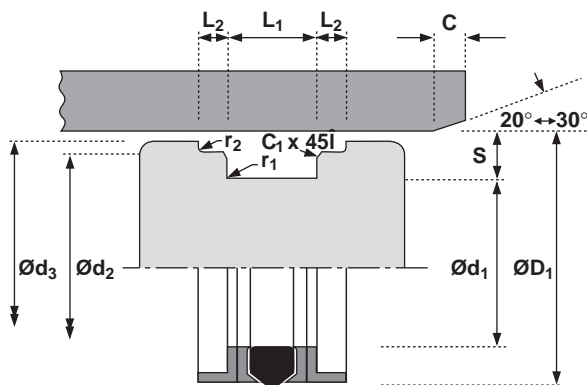
µinCLA	µinRMS
4 <-> 16	5 <-> 18
63 max	70 max
125 max	140 max

#### Chamfers & Radii

Groove Section $\leq S$ mm	5.0	7.0	8.0	9.0	11.0	12.5
Min Chamfer C mm	2.5	4.0	5.0	5.0	6.5	6.5
Max Chamfer C <sub>1</sub> mm	0.4	0.4	0.4	0.8	0.8	0.8
Max Fillet Rad r <sub>1</sub> mm	0.4	0.4	0.4	0.4	0.4	0.4
Max Fillet Rad r <sub>2</sub> mm	0.2	0.2	0.2	0.2	0.4	0.4

#### Tolerances

	$\varnothing D_1$	$\varnothing d_1$	$\varnothing d_2$	$\varnothing d_3$	L <sub>1</sub>	L <sub>2</sub>
mm	H10	h9	h9	h11	+0.2 -0	+0.1 -0



### Design

A robust seal assembly designed specifically for one piece pistons, the Hallite 64 double acting seal uses a rubber sealing element which has proved itself in service to be extremely wear resistant and capable of working most effectively in a wide variety of medium to heavy duty applications.

The assembly comprises a rubber seal, two split support rings and two split bearings, one of each located either side of the seal. The nitrile rubber seal is designed to have its section compressed by the housing, to ensure a low pressure seal, and when pressurised be protected from extrusion damage by the extending lips of the support ring. The support ring is manufactured from a tough but flexible polymer and scarf cut for assembly.

L section bearings provide the support and guidance for the piston and the other parts of the seal.

For seals up to 90mm diameter  $\varnothing d_3$  is not required. Above 90mm diameter the seals benefit from the additional support of the L-section bearings.

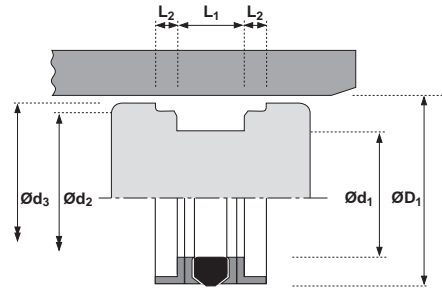
All seals are also suitable for two piece housings.

**Note:** Other sizes of this design of seal are shown under Hallite 50, 53 and 68. Also see Hallite 753 for interchangeable sizes.

### Features

- Compact seal design
- Easy assembly
- Positive no drift seal

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$\text{ØD}_1$	TOL H10	$\text{Ød}_1$	TOL h9	$\text{Ød}_2$	TOL h9	$\text{Ød}_3$	TOL h11	$L_1$ + 0.2 - 0	$L_2$ + 0.1 - 0	PART No.
32	+0.10 +0.00	22	+0.00 -0.05	28.0	+0.000 -0.052	31.0	+0.00 -0.16	15.5	2.60	6600100
40	+0.10 +0.00	26	+0.00 -0.05	36.0	+0.000 -0.062	39.0	+0.00 -0.16	15.5	2.60	6600200
50	+0.10 +0.00	34	+0.00 -0.06	46.0	+0.000 -0.062	49.0	+0.00 -0.16	20.5	3.10	6600300
55	+0.12 +0.00	39	+0.00 -0.06	51.0	+0.000 -0.074	54.0	+0.00 -0.19	20.5	3.10	6600400
60	+0.12 +0.00	44	+0.00 -0.06	56.0	+0.000 -0.074	59.0	+0.00 -0.19	20.5	3.10	6600500
63	+0.12 +0.00	47	+0.00 -0.06	59.0	+0.000 -0.074	62.0	+0.00 -0.19	20.5	3.10	6600600
65	+0.12 +0.00	49	+0.00 -0.06	61.0	+0.000 -0.074	64.0	+0.00 -0.19	20.5	3.10	1705210
70	+0.12 +0.00	54	+0.00 -0.07	66.0	+0.000 -0.074	69.0	+0.00 -0.19	20.5	3.10	6600700
80	+0.12 +0.00	62	+0.00 -0.07	76.0	+0.000 -0.074	79.0	+0.00 -0.19	22.5	3.60	1705110
90	+0.14 +0.00	72	+0.00 -0.07	86.0	+0.000 -0.087	89.0	+0.00 -0.22	22.5	3.60	6600800
100	+0.14 +0.00	82	+0.00 -0.09	96.0	+0.000 -0.087	99.0	+0.00 -0.22	22.5	3.60	6600900
110	+0.14 +0.00	92	+0.00 -0.09	106.0	+0.000 -0.087	109.0	+0.00 -0.22	22.5	3.60	6601000
125	+0.16 +0.00	103	+0.00 -0.09	121.0	+0.000 -0.100	124.0	+0.00 -0.25	26.5	5.10	6601100
140	+0.16 +0.00	118	+0.00 -0.09	136.0	+0.000 -0.100	139.0	+0.00 -0.25	26.5	5.10	6601200
160	+0.16 +0.00	138	+0.00 -0.10	156.0	+0.000 -0.100	159.0	+0.00 -0.25	26.5	5.10	6601300
250	+0.19 +0.00	225	+0.00 -0.12	246.0	+0.000 -0.115	249.0	+0.00 -0.29	31.5	6.60	6601400