

## Piston Seals

### 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

	$\mu\text{mRa}$	$\mu\text{mRt}$
Dynamic Sealing Face $\text{ØD}_1$	0.1 < > 0.4	4 max
Static Sealing Face $\text{Ød}_1$ $\text{Ød}_2$	1.6 max	10 max
Static Housing Faces $\text{Ød}_3$ $L_1$ $L_2$	3.2 max	16 max

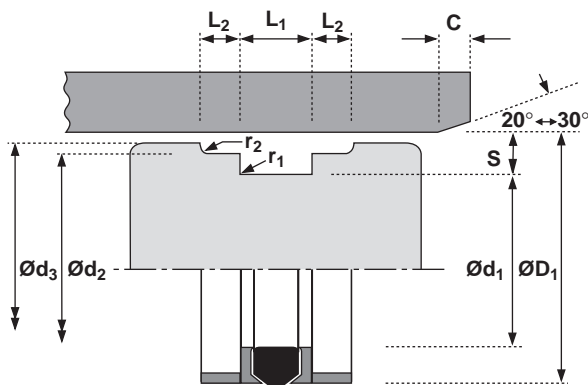
$\mu\text{inCLA}$	$\mu\text{inRMS}$
4 < > 16	5 < > 18
63 max	70 max
125 max	140 max

#### Chamfers & Radii

	Metric	Metric	Inch	Inch
Groove Section $\leq S$ mm	4.0	5.0	7.5	10.0
Min Chamfer C mm	2.0	2.5	4.0	5.0
Max Fillet Rad $r_1$ mm	0.4	0.4	0.4	0.4
Max Fillet Rad $r_2$ mm	0.4	0.4	0.4	0.4

#### Tolerances

mm	$\text{ØD}_1$	$\text{Ød}_1$	$\text{Ød}_2$	$\text{Ød}_3$	$L_1$	$L_2$
	H10	h9	h9	h11	+0.35 +0.1	+0.1 -0



### Design

The Hallite 50 is a double acting seal designed for light duty applications using either one piece or split pistons to ISO 6547 housings.

It comprises a rubber seal, two split support rings and two split bearings, located either side of the seal. The nitrile rubber seal has proved itself to be extremely wear resistant in service.

It is designed to be 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. A tough flexible polymer is used for the support ring which is scarf cut for assembly and to protect the seal from damage.

A rectangular reinforced nylon bearing completes the assembly and provides the seal and piston with support and guidance.

The proportions of this range of piston seals have been determined to give a satisfactory performance when used with the recommended operating conditions.

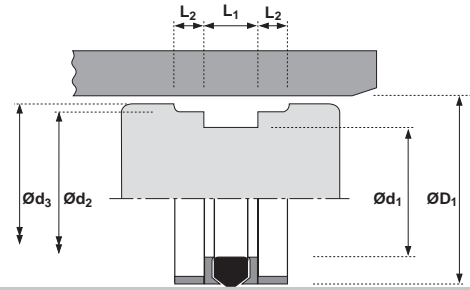
**Note:** Other sizes of this design of seal are shown under Hallite 53, 64 and 68.

### Features

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

**NB:** Part numbers suffixed by “±” indicate housing sizes to meet ISO 6547.

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ØD <sub>1</sub>	TOL H10	Ød <sub>1</sub>	TOL h9	Ød <sub>2</sub>	TOL h9	Ød <sub>3</sub>	TOL h11	L <sub>1</sub> + 0.35 + 0.1	L <sub>2</sub> + 0.1 - 0	PART No.
25	+0.08 +0.00	17	+0.00 -0.04	22.0	+0.000 -0.052	24.0	+0.00 -0.13	10.0	4.0	6607810‡
32	+0.10 +0.00	24	+0.00 -0.05	29.0	+0.000 -0.052	31.0	+0.00 -0.16	10.0	4.0	6607910‡
40	+0.10 +0.00	32	+0.00 -0.06	37.0	+0.000 -0.062	39.0	+0.00 -0.16	10.0	4.0	6608010‡
50	+0.10 +0.00	40	+0.00 -0.06	47.0	+0.000 -0.062	49.0	+0.00 -0.16	12.5	4.0	6608110‡
63	+0.12 +0.00	53	+0.00 -0.07	60.0	+0.000 -0.074	62.0	+0.00 -0.19	12.5	4.0	2199513‡
80	+0.12 +0.00	65	+0.00 -0.07	76.0	+0.000 -0.074	78.5	+0.00 -0.19	20.0	5.0	6608210‡
100	+0.14 +0.00	85	+0.00 -0.09	96.0	+0.000 -0.087	98.5	+0.00 -0.22	20.0	5.0	6608310‡
125	+0.16 +0.00	105	+0.00 -0.09	120.0	+0.000 -0.087	123.0	+0.00 -0.25	25.0	6.3	6608410‡
140	+0.16 +0.00	120	+0.00 -0.09	135.0	+0.000 -0.087	138.0	+0.00 -0.25	25.0	6.3	2317030
160	+0.16 +0.00	140	+0.00 -0.10	155.0	+0.000 -0.100	158.0	+0.00 -0.25	25.0	6.3	6608510‡