

## 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.

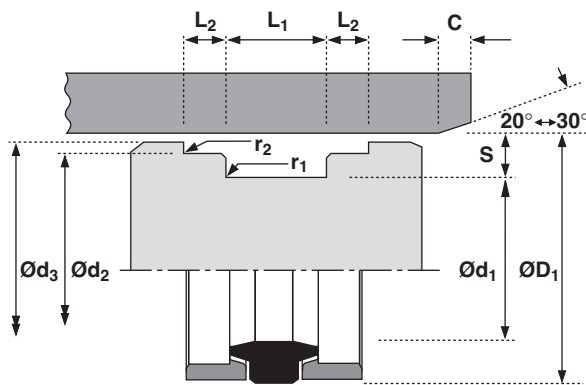
It is an assembly of a continuous rubber seal and two scarf cut bearings.

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

	$\mu\text{mRa}$	$\mu\text{mRt}$
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

#### $\mu\text{inCLA}$

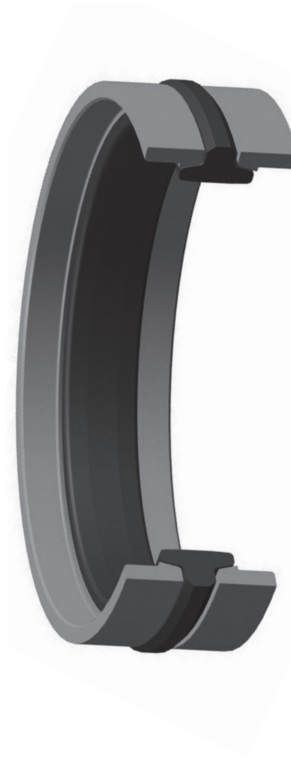
	$\mu\text{inCLA}$	$\mu\text{inRMS}$
4 < > 16	4 < > 16	5 < > 18
63 max	63 max	70 max
125 max	125 max	140 max

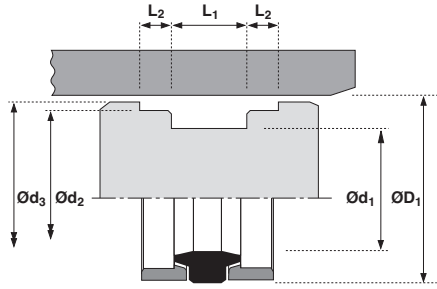
#### Chamfers & Radii

	Metric	Metric	Inch
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

	$\text{ØD}_1$	$\text{Ød}_1$	$\text{Ød}_2$	$\text{Ød}_3$	$L_1$	$L_2$
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 <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> +0.4 +0.13	L <sub>2</sub> 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 <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> +0.015 +0.005	L <sub>2</sub> 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 Able Division

5533 Steeles Avenue West Unit 11  
Toronto, Ontario M9L 1S7  
Ph: (416) 741-0750  
Gasket@AbleSealAndDesign.com

#### Seal & Design Corporate Headquarters

4015 Casilio Parkway  
Clarence, NY 14031  
Ph: (716) 759-2222  
Info@SealAndDesign.com

#### Seal & Design Higbee Division

6741 Thompson Rd N  
Syracuse, NY 13221  
Ph: (315) 432-8021  
Sales@Higbee-Inc.com