

Design

The Hallite 775 is a compact seal for light to medium duty hydraulic cylinders. It is a double acting piston seal with single acting capabilities. This makes it an excellent choice for double acting applications where minimal dynamic leakage is required.

The Hallite 775 is manufactured for two housing standards; to fit standard O-ring grooves and for O-ring and two back-up grooves. It comprises a tough elastomeric face that is pre-loaded by a rectangular cross section expander.

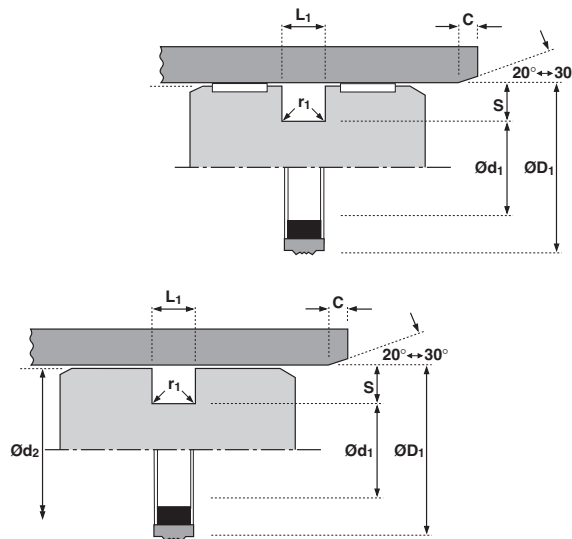
The Hallite 775 seal can be used on SG iron pistons or on pistons with adequate remote bearing (see Hallite 506 or 533 bearings).

The standard material is suitable for hydraulic mineral oil applications.

For full details and availability please contact your local Hallite Sales office.

Features

- Double acting seal with single acting capabilities
- Excellent wear resistance
- High extrusion resistance ideal for use with Hallite 506 or 533
- More tolerant to contamination
- Rapid recovery after assembly
- Advanced face geometry provides enhanced dynamic and static sealing



Technical details

Operating conditions

Maximum Speed
Temperature Range
Maximum Pressure

Metric

1.0 m/sec
-30°C +110°C
350 bar

Inch

3.0 ft/sec
-22°F +230°F
5000 p.s.i.

Maximum extrusion gap

Pressure bar
Pressure p.s.i.
Maximum Gap in

Figures show the maximum permissible gap all on one side using minimum rod \varnothing and maximum clearance \varnothing . Refer to Housing Design section.

	100	160	250	350
Pressure bar	100	160	250	350
Pressure p.s.i.	1500	2400	3750	5000
Maximum Gap in	0.025	0.020	0.016	0.008

Surface roughness

Dynamic Sealing Face $\varnothing D_1$
Static Sealing Face $\varnothing d_1$
Static Housing Faces L_1

	μmRa	μmRt	$\mu inCLA$	$\mu inRMS$
Dynamic Sealing Face $\varnothing D_1$	0.1 < > 0.4	4 max	4 < > 16	5 < > 18
Static Sealing Face $\varnothing d_1$	1.6 max	10 max	63 max	70 max
Static Housing Faces L_1	3.2 max	16 max	125 max	140 max

Chamfers & Radii

Groove Section $\leq S$ in
Min Chamfer C in
Max Fillet Rad r_1 in

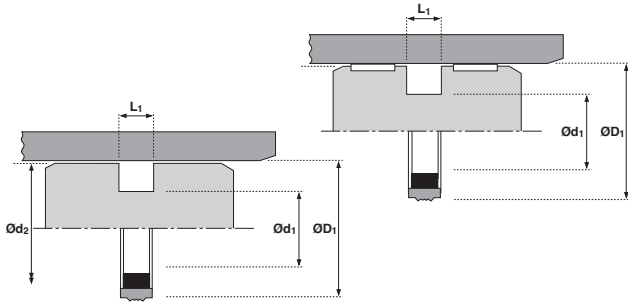
Groove Section $\leq S$ in	0.125	0.187	0.250
Min Chamfer C in	0.100	0.150	0.200
Max Fillet Rad r_1 in	0.016	0.016	0.016

Tolerances

in $\varnothing D_1 \leq 2.500$
 $\varnothing D_1 > 2.500$

	$\varnothing D_1$	$\varnothing d_1$	$\varnothing d_2$	L_1
in $\varnothing D_1 \leq 2.500$	+0.002 -0	+0 -0.002	+0 -0.001	+0.005 -0
$\varnothing D_1 > 2.500$	+0.004 -0	+0 -0.004	+0 -0.001	+0.005 -0





Housings suit standard O-ring

ØD ₁	TOL	Ød ₁	TOL	Ød ₂	TOL	L ₁	TOL	O RING	PART NO.
1.375	+0.003 -0.000	1.133	+0.000 -0.003	1.372	+0.000 -0.001	0.187	+0.005 -0.000	216	4763516
1.500	+0.003 -0.000	1.258	+0.000 -0.003	1.497	+0.000 -0.001	0.187	+0.005 -0.000	218	4731816
1.750	+0.003 -0.000	1.508	+0.000 -0.003	1.747	+0.000 -0.001	0.187	+0.005 -0.000	222	4750716
2.000	+0.003 -0.000	1.630	+0.000 -0.003	1.997	+0.000 -0.001	0.281	+0.005 -0.000	326	4731016
2.500	+0.003 -0.000	2.130	+0.000 -0.003	2.497	+0.000 -0.001	0.281	+0.005 -0.000	330	4731116
3.000	+0.004 -0.000	2.630	+0.000 -0.004	2.997	+0.000 -0.001	0.281	+0.005 -0.000	334	4731216
3.500	+0.004 -0.000	3.130	+0.000 -0.004	3.497	+0.000 -0.001	0.281	+0.005 -0.000	338	4731316
4.000	+0.004 -0.000	3.630	+0.000 -0.004	3.997	+0.000 -0.001	0.281	+0.005 -0.000	342	4731416

Housings suit standard O-ring with two back-up rings

ØD ₁	TOL	Ød ₁	TOL	Ød ₂	TOL	L ₁	TOL	O RING	PART NO.
1.500	+0.003 -0.000	1.258	+0.000 -0.003	1.497	+0.000 -0.001	0.275	+0.005 -0.000	218	4730516
2.000	+0.003 -0.000	1.630	+0.000 -0.003	1.997	+0.000 -0.001	0.410	+0.005 -0.000	326	4733716
2.500	+0.003 -0.000	2.130	+0.000 -0.003	2.497	+0.000 -0.001	0.410	+0.005 -0.000	330	4726916
3.000	+0.004 -0.000	2.630	+0.000 -0.004	2.997	+0.000 -0.001	0.410	+0.005 -0.000	334	4733816
3.500	+0.004 -0.000	3.130	+0.000 -0.004	3.497	+0.000 -0.001	0.410	+0.005 -0.000	338	4733916
4.000	+0.004 -0.000	3.630	+0.000 -0.004	3.997	+0.000 -0.001	0.410	+0.005 -0.000	342	4734016
5.000	+0.004 -0.000	4.528	+0.000 -0.004	4.997	+0.000 -0.001	0.538	+0.005 -0.000	425	4730616
6.000	+0.004 -0.000	5.528	+0.000 -0.004	5.997	+0.000 -0.001	0.538	+0.005 -0.000	433	4734116