

Piston seals

Hallite



TECHNICAL DETAILS

METRIC

INCH

OPERATING CONDITIONS

MAXIMUM SPEED
TEMPERATURE RANGE
MAXIMUM PRESSURE

0.5 m/sec
-30°C + 100°C
200 bar

1.5 ft/sec
-22°F + 212°F
3000 p.s.i.

SURFACE ROUGHNESS

DYNAMIC SEALING FACE $\varnothing D_1$
STATIC SEALING FACE $\varnothing d_1$ $\varnothing d_2$
STATIC HOUSING FACES $\varnothing d_3$ L_1 L_2

μmRa	μmRt
0.1 ↔ 0.4	4 max
1.6 max	10 max
3.2 max	16 max

μinCLA	μinRMS
4 ↔ 16	5 ↔ 18
63 max	70 max
125 max	140 max

CHAMFERS & RADII

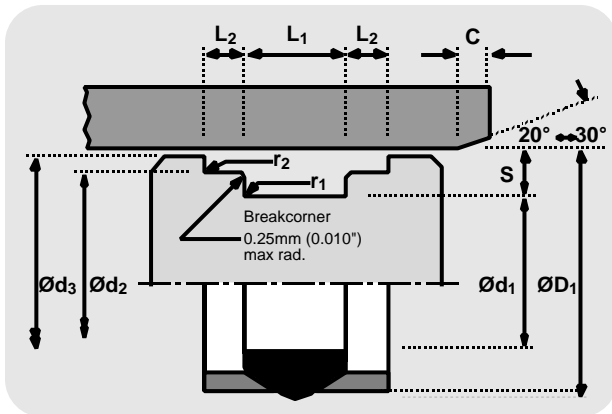
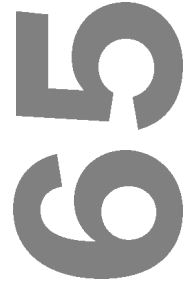
GROOVE SECTION S mm
MIN CHAMFER C mm
MAX FILLET RAD r_1 mm
MAX FILLET RAD r_2 mm
GROOVE SECTION S in
MIN CHAMFER C in
MAX FILLET RAD r_1 in
MAX FILLET RAD r_2 in

3.75	5.00	6.50	8.00	10.00
2.00	2.50	4.00	5.00	5.00
0.40	0.40	0.40	0.80	0.80
0.20	0.20	0.20	0.40	0.40
0.156	0.187	0.250	0.312	0.375
0.078	0.093	0.125	0.156	0.187
0.016	0.016	0.016	0.032	0.032
0.008	0.008	0.008	0.016	0.016

TOLERANCES

mm
in

$\varnothing D_1$	$\varnothing d_1$	$\varnothing d_2$	$\varnothing d_3$	L_1	L_2
H10	h9	h9	h11	+0.4 +0.13	0 -0.13
H10	h9	h9	h11	+0.015 +0.005	0 -0.005



DESIGN

Ideal for light to medium duty one piece piston applications, the Hallite 65 double acting seal is a simple, effective and economical design for pressures up to 200 bar/3000 p.s.i. 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 polyacetal bearings are proportioned to support the piston and its side load.

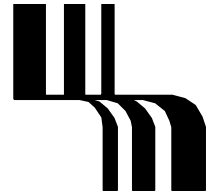
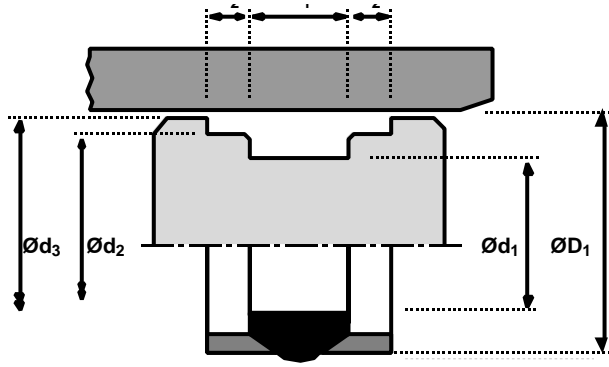
FEATURES

- COMPACT DESIGN
- EASY ASSEMBLY
- LOW WEAR
- LONG LIFE

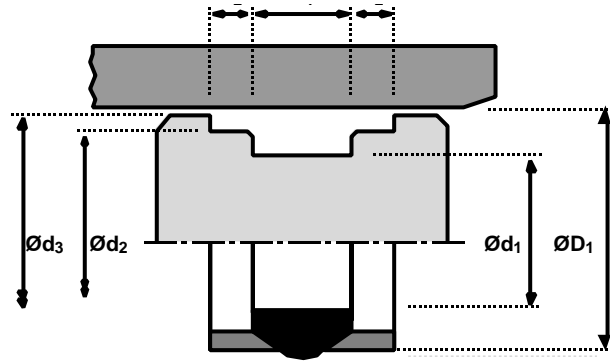
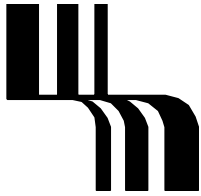
Piston seals

Hallite 65

metric



ØD ₁	TOL H10	Ød ₁	TOL h9	Ød ₂	TOL h9	Ød ₃	TOL h11	L ₁ +0.4 +0.13	L ₂ 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	2218210
32	+0.10 +0.00	22	+0.00 -0.05	27.5	+0.000 -0.052	31.0	+0.00 -0.16	11.00	4.00	2218110
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	2218010
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	2217910
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	2217810
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	2217610
92	+0.14 +0.00	82	+0.00 -0.09	87.5	+0.000 -0.087	90.5	+0.00 -0.22	11.00	4.00	2240410
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	0352510
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	0315810
140	+0.16 +0.00	124	+0.00 -0.10	132.0	+0.000 -0.100	138.5	+0.00 -0.25	17.50	8.75	0317710
160	+0.16 +0.00	140	+0.00 -0.10	151.4	+0.000 -0.100	158.5	+0.00 -0.25	25.00	12.50	0315910
180	+0.16 +0.00	160	+0.00 -0.10	171.4	+0.000 -0.100	178.5	+0.00 -0.25	25.00	12.50	0316010
200	+0.19 +0.00	180	+0.00 -0.10	191.4	+0.000 -0.115	198.5	+0.00 -0.29	25.00	12.50	0316910



Piston seals

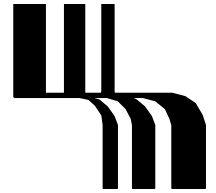
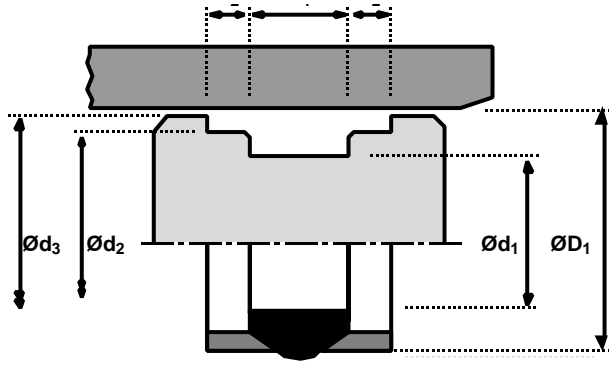
Hallite 65 inch

ØD ₁	TOL H10	Ød ₁	TOL h9	Ød ₂	TOL h9	Ød ₃	TOL h11	L ₁ + 0.015 + 0.005	L ₂ 0 - 0.005	PART No.
1.000	+0.003 +0.000	0.687	+0.000 -0.002	0.829	+0.000 -0.002	0.937	+0.000 -0.005	0.343	0.125	2221210
1.250	+0.004 +0.000	0.937	+0.000 -0.002	1.079	+0.000 -0.002	1.187	+0.000 -0.006	0.343	0.125	2221310
1.500	+0.004 +0.000	1.125	+0.000 -0.002	1.324	+0.000 -0.002	1.437	+0.000 -0.006	0.437	0.150	2219610
1.750	+0.004 +0.000	1.375	+0.000 -0.002	1.574	+0.000 -0.002	1.687	+0.000 -0.006	0.437	0.150	2220910
2.000	+0.005 +0.000	1.625	+0.000 -0.002	1.824	+0.000 -0.002	1.937	+0.000 -0.006	0.437	0.150	2224010
2.250	+0.005 +0.000	1.875	+0.000 -0.002	2.075	+0.000 -0.003	2.187	+0.000 -0.007	0.437	0.150	2221110
2.500	+0.005 +0.000	2.125	+0.000 -0.003	2.325	+0.000 -0.003	2.437	+0.000 -0.007	0.437	0.150	2224110
2.750	+0.005 +0.000	2.375	+0.000 -0.003	2.575	+0.000 -0.003	2.687	+0.000 -0.007	0.437	0.150	2219510
2.875	+0.005 +0.000	2.500	+0.000 -0.003	2.700	+0.000 -0.003	2.812	+0.000 -0.007	0.437	0.150	2225210
3.000	+0.005 +0.000	2.625	+0.000 -0.003	2.825	+0.000 -0.003	2.937	+0.000 -0.007	0.437	0.150	2224210
3.250	+0.006 +0.000	2.875	+0.000 -0.003	3.075	+0.000 -0.003	3.187	+0.000 -0.009	0.437	0.150	2219710
3.500	+0.006 +0.000	3.000	+0.000 -0.003	3.270	+0.000 -0.003	3.437	+0.000 -0.009	0.562	0.210	0177610
3.750	+0.006 +0.000	3.250	+0.000 -0.003	3.520	+0.000 -0.003	3.687	+0.000 -0.009	0.562	0.210	0178810
4.000	+0.006 +0.000	3.500	+0.000 -0.003	3.770	+0.000 -0.003	3.937	+0.000 -0.009	0.562	0.210	1172310
4.250	+0.006 +0.000	3.750	+0.000 -0.003	4.020	+0.000 -0.003	4.187	+0.000 -0.009	0.562	0.210	0309210
4.500	+0.006 +0.000	4.000	+0.000 -0.003	4.270	+0.000 -0.003	4.437	+0.000 -0.009	0.562	0.210	0418910
4.750	+0.006 +0.000	4.250	+0.000 -0.003	4.520	+0.000 -0.003	4.687	+0.000 -0.009	0.562	0.210	1155810
5.000	+0.006 +0.000	4.375	+0.000 -0.003	4.689	+0.000 -0.003	4.937	+0.000 -0.010	0.687	0.344	1175410
5.250	+0.006 +0.000	4.625	+0.000 -0.003	4.938	+0.000 -0.004	5.187	+0.000 -0.010	0.687	0.344	1173710
5.500	+0.006 +0.000	4.875	+0.000 -0.004	5.188	+0.000 -0.004	5.437	+0.000 -0.010	0.687	0.344	1173610
6.000	+0.006 +0.000	5.250	+0.000 -0.004	5.712	+0.000 -0.004	5.937	+0.000 -0.010	1.000	0.500	0300110
6.500	+0.006 +0.000	5.750	+0.000 -0.004	6.212	+0.000 -0.004	6.437	+0.000 -0.010	1.000	0.500	0047010
7.000	+0.006 +0.000	6.250	+0.000 -0.004	6.712	+0.000 -0.004	6.937	+0.000 -0.010	1.000	0.500	0314110

Piston seals

Hallite 65

inch



$\varnothing D_1$	TOL H10	$\varnothing d_1$	TOL h9	$\varnothing d_2$	TOL h9	$\varnothing d_3$	TOL h11	L_1 + 0.015 + 0.005	L_2 0 - 0.005	PART No.
7.500	+0.007 +0.000	6.750	+0.000 -0.004	7.212	+0.000 -0.005	7.437	+0.000 -0.011	1.000	0.500	0363410
8.000	+0.007 +0.000	7.250	+0.000 -0.005	7.712	+0.000 -0.005	7.937	+0.000 -0.011	1.000	0.500	0045110
9.000	+0.007 +0.000	8.250	+0.000 -0.005	8.712	+0.000 -0.005	8.937	+0.000 -0.011	1.000	0.500	0045510