



735

TECHNICAL DETAILS

METRIC

INCH

OPERATING CONDITIONS

MAXIMUM SPEED
TEMPERATURE RANGE
MAXIMUM PRESSURE

1.5 m/sec
-40°C +120°C
500 bar

4.5 ft/sec
-40°F + 250°F
7500 p.s.i.

MAXIMUM EXTRUSION GAP

PRESSURE bar
MAXIMUM GAP mm
PRESSURE p.s.i.
MAXIMUM GAP in

Figures show the maximum permissible gap all on one side using the minimum clearance \emptyset and maximum bore \emptyset

160	250	400	500
1.0	0.8	0.6	0.5
2400	3750	6000	7500
0.040	0.030	0.024	0.020

SURFACE ROUGHNESS

DYNAMIC SEALING FACE $\emptyset D_1$
STATIC SEALING FACE $\emptyset d_1$
STATIC HOUSING FACES L_1

μmRa	μmRt	$\mu inCLA$	$\mu inRMS$
0.1 ↔ 0.4	4 max	4 ↔ 16	5 ↔ 18
1.6 max	10 max	63 max	70 max
3.2 max	16 max	125 max	140 max

CHAMFERS & RADII

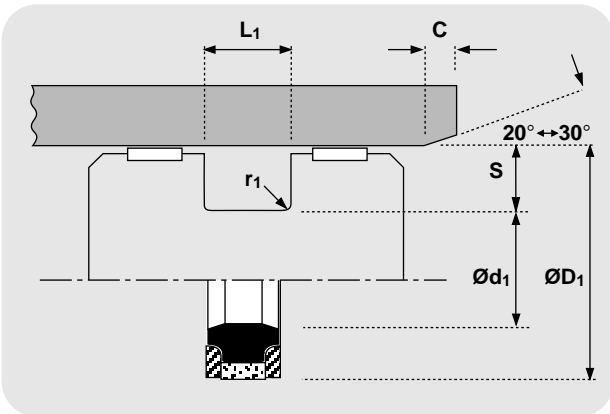
GROOVE SECTION $\leq S$ mm
MIN CHAMFER C mm
MAX FILLET RAD r_1 mm
GROOVE SECTION $\leq S$ in
MIN CHAMFER C in
MAX FILLET RAD r_1 in

7.0	7.5	11.5	14.0
4.0	5.0	7.0	8.0
0.8	0.8	0.8	0.8
0.187	0.240	0.365	0.470
0.160	0.200	0.250	0.280
0.016	0.016	0.035	0.035

TOLERANCES

mm
in
 $\emptyset D_1$ in
 $^* \emptyset d_1 Tol =$
***NB**

$\emptyset D_1$	$\emptyset d_1$	L_1
H9	+0 -0.2	+0.2 -0
H9	*see below	+0.01 -0
≤ 3.000	≤ 4.500	≥ 4.500
+0 - 0.002	+0 - 0.003	+0 - 0.004
Part numbers 710600_ and 710800_ Tol = ± 0.003		



MATERIALS

Please ensure the correct part number is used for the required cap ring.

PTFE, 40% bronze
Last digit of part no. _____ 0

or
PTFE, 15% glass 5% MoS₂
Last digit of part no. _____ 1

Products suffixed † are designed to suit popular Asian housings

For information about other material options available, please contact your local Hallite Seals office.

DESIGN

Hallite's 735 is a compact double acting piston seal assembly designed for one piece pistons and is suitable for low to high pressure, medium to heavy duty applications. The assembly comprises as standard a self lubricating wear resistant bronze filled or glass / MoS₂ filled PTFE cap ring, which is loaded by a NBR energiser. Thermoplastic split anti-extrusion rings support the seal on both sides and prevent contamination of the the energiser and cap ring.

Hallite's 735 piston seal is designed to be used in a variety of equipment and is particularly suited to use in earthmoving and other off-highway equipment.

The range consists of seals to suit popular North American and Asian housings.

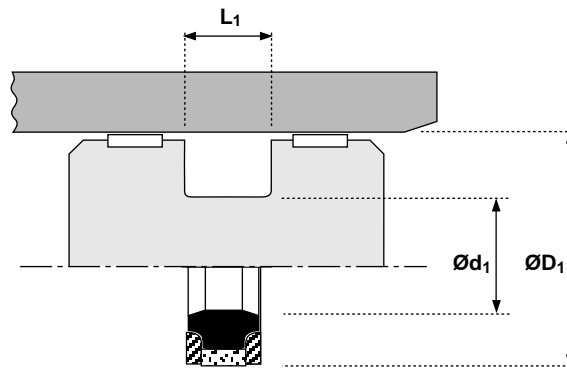
FEATURES

- HIGH PRESSURE
- HEAVY DUTY
- PTFE CAP RING
- COMPACT DESIGN
- LOW FRICTION
- LONG LIFE
- RANGE OF MATERIAL OPTIONS TO EXTEND SERVICE TEMPERATURE RANGE

Piston seals

735

metric



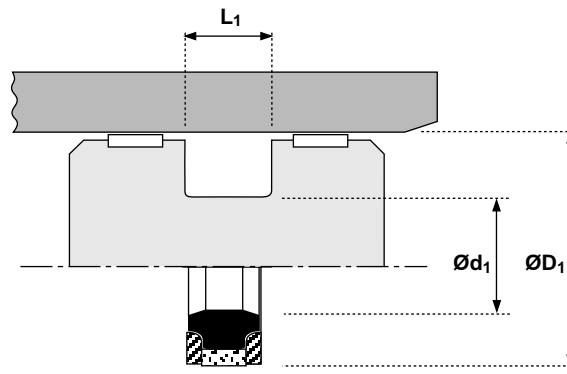
ØD ₁	TOL H9	Ød ₁	TOL	L ₁ +0.2-0.0	PART No.
50	+0.06 +0.00	36	+0.00 -0.20	9.0	715100_†
60	+0.07 +0.00	46	+0.00 -0.20	9.0	715150_†
63	+0.07 +0.00	48	+0.00 -0.20	11.0	715200_†
65	+0.07 +0.00	50	+0.00 -0.20	11.0	715250_†
70	+0.07 +0.00	55	+0.00 -0.20	11.0	715300_†
75	+0.07 +0.00	60	+0.00 -0.20	11.0	715350_†
80	+0.07 +0.00	65	+0.00 -0.20	11.0	715400_†
85	+0.09 +0.00	70	+0.00 -0.20	11.0	715450_†
90	+0.09 +0.00	75	+0.00 -0.20	11.0	715500_†
95	+0.09 +0.00	80	+0.00 -0.20	11.0	715550_†
100	+0.09 +0.00	85	+0.00 -0.20	12.5	715600_†
105	+0.09 +0.00	90	+0.00 -0.20	12.5	715650_†
110	+0.09 +0.00	95	+0.00 -0.20	12.5	715700_†
115	+0.09 +0.00	100	+0.00 -0.20	12.5	715750_†
120	+0.09 +0.00	105	+0.00 -0.20	12.5	715800_†
125	+0.10 +0.00	102	+0.00 -0.20	16.0	715850_
130	+0.10 +0.00	107	+0.00 -0.20	16.0	715900_†
135	+0.10 +0.00	112	+0.00 -0.20	16.0	715950_†
140	+0.10 +0.00	117	+0.00 -0.20	16.0	716000_†

ØD ₁	TOL H9	Ød ₁	TOL	L ₁ +0.2-0.0	PART No.
145	+0.10 +0.00	122	+0.00 -0.20	16.0	716050_†
150	+0.10 +0.00	127	+0.00 -0.20	16.0	716100_†
160	+0.10 +0.00	137	+0.00 -0.20	16.0	716150_†
165	+0.10 +0.00	142	+0.00 -0.20	16.0	716200_†
170	+0.10 +0.00	147	+0.00 -0.20	16.0	716250_†
175	+0.10 +0.00	152	+0.00 -0.20	16.0	716280_†
180	+0.10 +0.00	157	+0.00 -0.20	16.0	716300_†
185	+0.12 +0.00	162	+0.00 -0.20	16.0	716350_†
190	+0.12 +0.00	167	+0.00 -0.20	16.0	716400_†
200	+0.12 +0.00	177	+0.00 -0.20	16.0	716450_†
210	+0.12 +0.00	187	+0.00 -0.20	16.0	716500_†
215	+0.12 +0.00	192	+0.00 -0.20	16.0	716530_†
220	+0.12 +0.00	197	+0.00 -0.20	16.0	716550_†
225	+0.12 +0.00	202	+0.00 -0.20	16.0	716600_†
230	+0.12 +0.00	207	+0.00 -0.20	16.0	716650_†
240	+0.12 +0.00	217	+0.00 -0.20	16.0	716700_†
250	+0.12 +0.00	222	+0.00 -0.20	17.5	716750_†
260	+0.13 +0.00	232	+0.00 -0.20	17.5	716800_†
350	+0.14 +0.00	322	+0.00 -0.20	17.5	716950_†

Piston seals

735

inch



$\varnothing D_1$	TOL H9	$\varnothing d_1$	TOL	L_1 +0.010 -0.000	PART No.
1.750	+0.002 -0.000	1.377	+0.000 -0.002	0.424	710030_
2.000	+0.002 -0.000	1.627	+0.000 -0.002	0.424	710050_
2.500	+0.002 -0.000	2.127	+0.000 -0.002	0.424	710070_
3.000	+0.003 -0.000	2.522	+0.000 -0.003	0.579	710100_
3.250	+0.003 -0.000	2.772	+0.000 -0.003	0.579	710150_
3.500	+0.003 -0.000	3.022	+0.000 -0.003	0.579	710200_
3.750	+0.003 -0.000	3.272	+0.000 -0.003	0.579	710250_
4.000	+0.003 -0.000	3.522	+0.000 -0.003	0.579	710300_
4.250	+0.003 -0.000	3.772	+0.000 -0.003	0.579	710350_
4.500	+0.003 -0.000	3.909	+0.000 -0.003	0.492	710390_
4.500	+0.003 -0.000	4.022	+0.000 -0.003	0.579	710400_
4.750	+0.004 -0.000	4.159	+0.000 -0.003	0.492	710420_
5.000	+0.004 -0.000	4.094	+0.000 -0.003	0.630	710440_
5.000	+0.004 -0.000	4.274	+0.000 -0.004	0.750	710450_
5.250	+0.004 -0.000	4.524	+0.000 -0.004	0.750	710500_
5.500	+0.004 -0.000	4.594	+0.000 -0.004	0.630	710540_
5.500	+0.004 -0.000	4.774	+0.000 -0.004	0.750	710550_
5.500	+0.004 -0.000	5.022	+0.000 -0.003	0.579	710600_
6.000	+0.004 -0.000	5.094	+0.000 -0.004	0.630	710640_
6.000	+0.004 -0.000	5.274	+0.000 -0.004	0.750	710650_
6.250	+0.004 -0.000	5.344	+0.000 -0.004	0.630	710680_
6.250	+0.004 -0.000	5.772	+0.000 -0.004	0.579	710690_
6.250	+0.004 -0.000	5.524	+0.000 -0.004	0.750	710700_

$\varnothing D_1$	TOL H9	$\varnothing d_1$	TOL	L_1 +0.010 -0.000	PART No.
6.500	+0.004 -0.000	5.594	+0.000 -0.004	0.630	710740_
6.500	+0.004 -0.000	5.774	+0.000 -0.004	0.750	710750_
6.500	+0.004 -0.000	6.022	+0.000 -0.003	0.579	710800_
7.000	+0.004 -0.000	6.094	+0.000 -0.004	0.630	710840_
7.000	+0.004 -0.000	6.274	+0.000 -0.004	0.750	710850_
7.250	+0.005 -0.000	6.344	+0.000 -0.004	0.630	710860_
7.500	+0.005 -0.000	6.594	+0.000 -0.004	0.630	710890_
7.500	+0.005 -0.000	6.774	+0.000 -0.004	0.750	710900_
7.750	+0.005 -0.000	6.844	+0.000 -0.004	0.630	710920_
8.000	+0.005 -0.000	7.274	+0.000 -0.004	0.750	710950_
8.250	+0.005 -0.000	7.344	+0.000 -0.004	0.630	710970_
8.500	+0.005 -0.000	7.594	+0.000 -0.004	0.630	710990_
8.500	+0.005 -0.000	7.774	+0.000 -0.004	0.750	711000_
9.000	+0.005 -0.000	8.274	+0.000 -0.004	0.750	711050_
10.000	+0.005 -0.000	8.898	+0.000 -0.004	0.687	711090_
10.000	+0.005 -0.000	9.275	+0.000 -0.004	0.750	711100_
10.500	+0.005 -0.000	9.398	+0.000 -0.004	0.687	711120_
11.000	+0.005 -0.000	10.275	+0.000 -0.004	0.750	711150_
11.500	+0.005 -0.000	10.398	+0.000 -0.004	0.687	711170_
12.000	+0.005 -0.000	11.275	+0.000 -0.004	0.750	711200_
14.000	+0.005 -0.000	12.898	+0.000 -0.004	0.687	711270_
15.000	+0.005 -0.000	14.275	+0.000 -0.004	0.750	711300_