

Design

The newly designed 714 is a compact double acting piston seal for medium to heavy duty applications. The reinforced, heat stabilized, thermoplastic sealing face with a precision step-cut joint allows the seal to pass over ports, making it an ideal choice for double acting telescopic cylinders.

The rugged extrusion resistant design will also perform in high pressure off-highway applications with a considerable extrusion gap reducing the possibility of piston to bore contact.

The precision face has chamfers; this feature coupled with a profiled NBR expander allows for easier cylinder assembly.

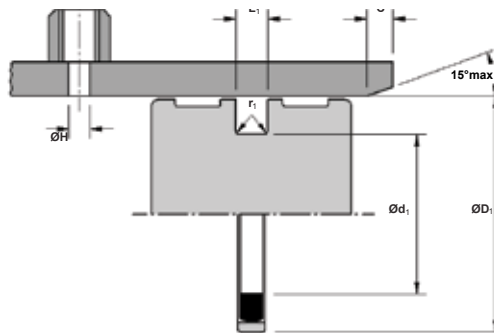
The energizer material can also be changed to meet different media and temperature demands. Contact Hallite for more information.

Custom sizes can be manufactured to order on request.

NB: Part numbers suffixed by “‡” indicate housing sizes to meet ISO 7425-1.

Features

- Passes over ports
- High pressure capability
- Excellent wear and abrasion resistance allowing it for use on SSID tube
- Chamfered cap with profiled expander for easier cylinder assembly
- Excellent dynamic and static sealing performance



Technical details

Operating conditions

Maximum Speed 1.0 m/sec
 Temperature Range -40°C + 110°C
 Maximum Pressure 500 bar

3.0 ft/sec
 -40°F + 230°F
 7250 p.s.i.

Maximum extrusion gap

	500	7.75	10.5	12.25
Pressure bar	500			
Groove Section S mm	5.5	7.75	10.5	12.25
Maximum Gap mm	.35	.50	.60	.80
Pressure p.s.i.	7250			
Groove Section S in	.269	.296	.380	.438
Maximum Gap in	.014	.020	.024	.032

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

Surface roughness

	µmRa	µmRt	µinRa	µinRt
Dynamic Sealing Face ØD ₁	0.1 <> 0.4	4 max	4 <> 16	160 max
Static Sealing Face Ød ₁	1.6 max	10 max	63 max	400 max
Static Housing Faces L ₁	3.2 max	16 max	125 max	600 max

It may be possible for seals to run on surfaces other than what is recommended above, please contact your Hallite Technical advisor for more information.

Chamfers & Radii

	5.5	7.75	10.5	12.25
Groove Section S mm	5.5	7.75	10.5	12.25
Min Chamfer C mm	4	6	8	10
Max Fillet Rad r ₁ mm	0.4	0.8	0.8	0.8
Groove section S in	.269	.296	.380	.438
Minimum chamfer C in	.250	.250	.375	.375
Max Fillet Rad r ₁ in	.016	.032	.032	.032

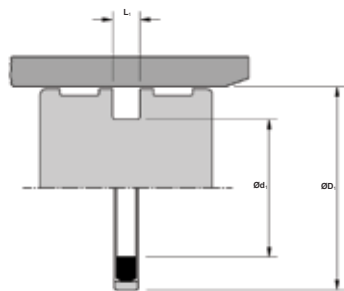
Port Diameter

If the seal is to pass over the port, step-cut joint position must be taken into account.
 Max ØH mm L₁ x 0.85
 Max ØH in L₁ x 0.85

Tolerances

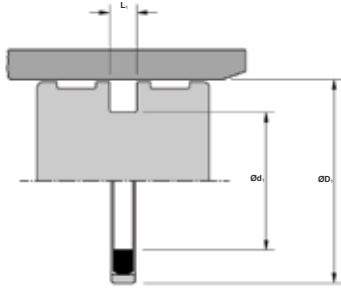
	ØD ₁	Ød ₁	L ₁
mm	H9	h9	+0.2-0
in	H9	h9	+0.008-0





ØD ₁	TOL H9	Ød ₁	TOL h9	L ₁ +0.2 -0	PART No.
40.0	+0.06 0.00	29.0	0.00 -0.05	4.2	7270510#
45.0	+0.06 0.00	34.0	0.00 -0.06	4.2	7270610
50.0	+0.06 0.00	34.5	0.00 -0.06	6.3	7272310#
50.0	+0.06 0.00	39.0	0.00 -0.06	4.2	7270810#
55.0	+0.07 0.00	39.5	0.00 -0.06	6.3	7274810
60.0	+0.07 0.00	49.0	0.00 -0.06	4.2	7270910
63.0	+0.07 0.00	44.7	0.00 -0.06	7.0	7274910
63.0	+0.07 0.00	47.5	0.00 -0.06	6.3	7272410#
63.0	+0.07 0.00	52.0	0.00 -0.06	4.2	7271010
70.0	+0.07 0.00	54.5	0.00 -0.07	6.3	7273710
70.0	+0.07 0.00	59.0	0.00 -0.07	4.2	7271310
75.0	+0.07 0.00	54.0	0.00 -0.07	8.1	7273010
75.0	+0.07 0.00	59.5	0.00 -0.07	6.3	7271410
80.0	+0.07 0.00	59.0	0.00 -0.07	8.1	7273310#
80.0	+0.07 0.00	64.5	0.00 -0.07	6.3	7270010#
85.0	+0.09 0.00	64.0	0.00 -0.07	8.1	7273110
90.0	+0.09 0.00	69.0	0.00 -0.07	8.1	7273210
90.0	+0.09 0.00	74.5	0.00 -0.07	6.3	7271610
95.0	+0.09 0.00	74.0	0.00 -0.07	8.1	7273510
100.0	+0.09 0.00	79.0	0.00 -0.07	8.1	7273810

ØD ₁	TOL H9	Ød ₁	TOL h9	L ₁ +0.2 -0	PART No.
100.0	+0.09 0.00	84.5	0.00 -0.09	6.3	7271810#
105.0	+0.09 0.00	84.0	0.00 -0.09	8.1	7272910
110.0	+0.09 0.00	89.0	0.00 -0.09	8.1	7273410
115.0	+0.09 0.00	94.0	0.00 -0.09	8.1	7273910
120.0	+0.09 0.00	99.0	0.00 -0.09	8.1	7272010
120.0	+0.09 0.00	104.5	0.00 -0.09	6.3	7275210
125.0	+0.10 0.00	104.0	0.00 -0.09	8.1	7272110#
125.0	+0.10 0.00	109.5	0.00 -0.09	6.3	7272810#
130.0	+0.10 0.00	109.0	0.00 -0.09	8.1	7274010
140.0	+0.10 0.00	119.0	0.00 -0.09	8.1	7272210
150.0	+0.10 0.00	129.0	0.00 -0.10	8.1	7274110
150.0	+0.10 0.00	130.6	0.00 -0.10	9.6	7275310
160.0	+0.10 0.00	139.0	0.00 -0.10	8.1	7272510#
180.0	+0.10 0.00	159.0	0.00 -0.10	8.1	7272610
190.0	+0.12 0.00	169.0	0.00 -0.10	8.1	7274210
200.0	+0.12 0.00	179.0	0.00 -0.10	8.1	7272710#
220.0	+0.12 0.00	199.0	0.00 -0.12	8.1	7274310
250.0	+0.12 0.00	229.0	0.00 -0.12	8.1	7273610#
280.0	+0.13 0.00	255.5	0.00 -0.13	8.1	7274410



ØD ₁	TOL H9	Ød ₁	TOL h9	L ₁ +.008-0	PART No.
1.750	+0.002 0.000	1.212	0.000 -0.002	0.282	7267610
2.000	+0.003 0.000	1.462	0.000 -0.002	0.282	7268210
2.250	+0.003 0.000	1.712	0.000 -0.002	0.282	7267710
2.500	+0.003 0.000	1.908	0.000 -0.002	0.312	7261710
2.500	+0.003 0.000	1.962	0.000 -0.002	0.282	7260810
2.750	+0.003 0.000	2.212	0.000 -0.003	0.282	7267810
3.000	+0.003 0.000	2.408	0.000 -0.003	0.312	7261810
3.000	+0.003 0.000	2.442	0.000 -0.003	0.282	7260910
3.250	+0.003 0.000	2.692	0.000 -0.003	0.282	7262910
3.500	+0.003 0.000	2.908	0.000 -0.003	0.312	7261910
3.500	+0.003 0.000	2.942	0.000 -0.003	0.282	7261110
3.750	+0.003 0.000	3.192	0.000 -0.003	0.282	7263110
4.000	+0.003 0.000	3.408	0.000 -0.003	0.312	7262110
4.000	+0.003 0.000	3.442	0.000 -0.003	0.282	7261210
4.250	+0.003 0.000	3.692	0.000 -0.003	0.282	7263210

ØD ₁	TOL H9	Ød ₁	TOL h9	L ₁ +.008-0	PART No.
4.500	+0.003 0.000	3.908	0.000 -0.003	0.312	7262210
4.500	+0.003 0.000	3.942	0.000 -0.003	0.282	7261310
4.750	+0.004 0.000	4.192	0.000 -0.003	0.282	7267910
5.000	+0.004 0.000	4.240	0.000 -0.003	0.375	7262310
5.000	+0.004 0.000	4.442	0.000 -0.003	0.282	7268310
5.250	+0.004 0.000	4.490	0.000 -0.003	0.375	7268410
5.500	+0.004 0.000	4.740	0.000 -0.004	0.375	7261410
6.000	+0.004 0.000	5.240	0.000 -0.004	0.375	7261610
6.500	+0.004 0.000	5.740	0.000 -0.004	0.375	7262410
7.000	+0.004 0.000	6.240	0.000 -0.004	0.375	7262610
7.500	+0.004 0.000	6.740	0.000 -0.004	0.375	7262710
8.000	+0.004 0.000	7.240	0.000 -0.004	0.375	7262810
9.000	+0.004 0.000	8.124	0.000 -0.004	0.375	7268010
10.000	+0.005 0.000	9.124	0.000 -0.004	0.375	7268110

Please note: these parts replace the legacy 714 series.
 For more information on the legacy part numbers please contact your local Hallite sales representative.



Seal & Design
 Corporate Headquarters
 Ph: (716)-759-3344
 Info@SealAndDesign.com
 www.SealAndDesign.com