Technical details

	Metric				Inch
Operating conditions					
Maximum Speed	1.0 m/sec				3.0 ft/sec
Temperature Range	-45°C + 110°C				-50°F + 230°F
Maximum Pressure	700 bar				10,000 p.s.i.

Maximum extrusion gap

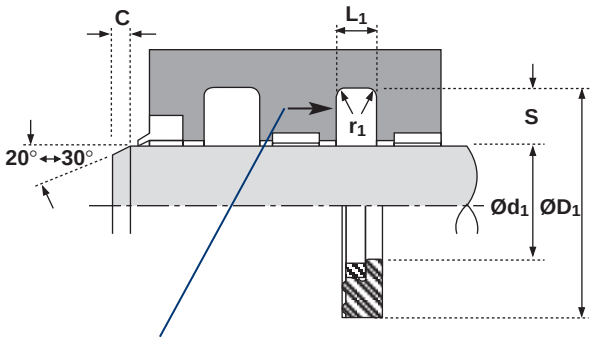
Figures show the maximum permissible gap all on one side using minimum rod Ø and maximum clearance Ø.

Pressure bar	160	250	400	500	700
Maximum Gap (S < =6) mm	0.6	0.5	0.4	0.3	0.2
Maximum Gap (S > 6) mm	1.0	0.8	0.6	0.4	0.25
Pressure p.s.i.	2400	3750	6000	7500	10,000
Maximum Gap (S < =0.250) in	0.024	0.020	0.016	0.012	0.008
Maximum Gap (S > 0.250) in	0.040	0.032	0.024	0.016	0.010

Surface roughness	µmRa	µmRt	µinCLA	µinRMS
Dynamic Sealing Face $Ød_1$	0.1 <> 0.4	4 max	4 <> 16	5 <> 18
Static Sealing Face L_1	1.6 max	10 max	63 max	70 max
Static Housing Faces $ØD_1, L_1$	3.2 max	16 max	125 max	140 max

Chamfers & Radii			
Groove Section ≤ S mm	3.75	5.50	7.75
Min Chamfer C mm	3.00	3.50	5.00
Max Fillet Rad r_1 mm	0.50	0.70	1.20
Groove Section ≤ S in	0.150	0.215	0.306
Min Chamfer C in	0.093	0.125	0.156
Max Fillet Rad r_1 in	0.020	0.028	0.047

Tolerances	$Ød_1$	$ØD_1$	L_1
mm	f9	H10	+0.25 -0
in	f9	Js11	+0.010 -0



N.B. This is a sealing surface

Design

The Hallite 653 is a buffer seal developed to work in conjunction with high performance rod seals, such as the Hallite 605 and 621. It is also interchangeable with common PTFE buffer seal housings.

The seal, which is manufactured in Hythane® 181, is designed to provide a valve action to prevent excessive pressure build up in the cavity between the buffer seal and the rod seal. A polyacetal anti-extrusion ring is fitted to provide maximum extrusion resistance against shock pressure loads.

The Hallite 653 is a patented product :
European patent no. 0427554BI.
U.S.A. patent no. 5088747.

Features

- **Prevents inter-seal pressure build up**
- **Interchangeable with common PTFE buffer seal housings**
- **Easy installation**
- **Long life**
- **Excellent temperature range**

NB : Part numbers suffixed by "‡" indicate housing sizes to meet ISO 7425-2

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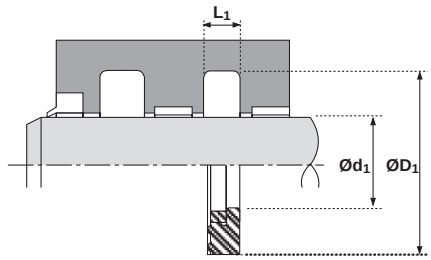

metric

Ød1	TOL f9	ØD1	TOL H10	L1 +0.25-0	PART No.
40.0	-0.025 -0.087	55.5	+0.120 -0.00	6.3	4772710
45.0	-0.025 -0.087	56.0	+0.120 -0.00	4.2	4575510‡
45.0	-0.025 -0.087	60.5	+0.120 -0.00	6.3	4772810
50.0	-0.025 -0.087	65.5	+0.120 -0.000	6.3	4403210
55.0	-0.030 -0.104	70.5	+0.120 -0.000	6.3	4403310
60.0	-0.030 -0.104	75.5	+0.120 -0.000	6.3	4403410
63.0	-0.030 -0.104	78.5	+0.120 -0.000	6.3	4751110‡
65.0	-0.030 -0.104	80.5	+0.140 -0.000	6.3	4742110
70.0	-0.030 -0.104	85.5	+0.140 +0.000	6.3	4742310‡
75.0	-0.030 -0.104	90.5	+0.140 +0.000	6.3	4742410
80.0	-0.030 -0.104	95.5	+0.140 +0	6.3	4742510‡
85.0	-0.036 -0.123	100.5	+0.140 +0	6.3	4742610
90.0	-0.036 -0.123	105.5	+0.140 -0	6.3	4523710‡
95.0	-0.036 -0.123	110.5	+0.140 -0	6.3	4742810
100.0	-0.036 -0.123	115.5	+0.140 -0.	6.3	4742910‡
110.0	-0.036 -0.123	125.5	+0.160 -0	6.3	4743010‡
140.0	-0.036 -0.123	155.5	+0.160 -0	6.3	4770810‡
215.0	-0.050 -0.165	236.0	+0.185 -0	8.1	4705710

inch

$Ød_1$	TOL f9	$ØD_1$	TOL Js11	L_1 +0.010 -0	PART No.
2.000	-0.0012 -0.0041	2.424	+0.004 -0.004	0.166	4521310
2.500	-0.0012 -0.0041	2.924	+0.004 -0.004	0.166	4514610
2.750	-0.0012 -0.0041	3.174	+0.004 -0.004	0.166	4533510
3.000	-0.0012 -0.0041	3.616	+0.004 -0.004	0.247	4515910
3.500	-0.0014 -0.0048	4.116	+0.004 -0.004	0.247	4514810
4.000	-0.0014 -0.0048	4.616	+0.004 -0.004	0.247	4524610
7.000	-0.0016 -0.0056	7.616	+0.006 -0.006	0.247	4588310
8.000	-0.0020 -0.0065	8.610	+0.006 0.006	0.247	4753410
8.500	-0.0020 -0.0065	9.116	+0.006 -0.006	0.247	4744810
12.000	-0.0020 -0.0065	12.950	+0.006 -0.006	0.319	4764910