Technical details

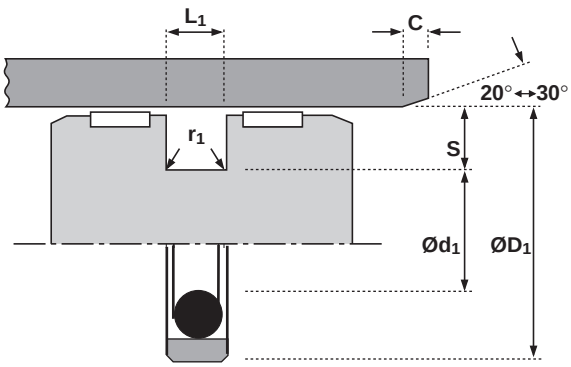
	Metric				Inch
Operating conditions					
Maximum Speed	4.0 m/sec				12.0 ft/sec
Temperature Range	-30°C +100°C				-22°F +212°F
Maximum Pressure	350 bar				5,000 p.s.i.

Maximum extrusion gap	**Figures show the maximum permissible gap all on one side using minimum clearance Ø and maximum bore Ø.**			
Pressure p.s.i.	1500	2400	3750	5250
Maximum Gap in	0.024	0.020	0.018	0.014

Surface roughness	µmRa	µmRt	µinCLA	µinRMS
Dynamic Sealing Face $ØD_1$	0.1 <> 0.4	4 max	4 <> 16	5 <> 18
Static Sealing Face $Ød_1$	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 ≤ S in	0.147	0.216	0.305	0.413	0.483
Min Chamfer C in	0.093	0.125	0.156	0.187	0.305
Max Fillet Rad r_1 in	0.016	0.016	0.032	0.032	0.032

Tolerances	$ØD_1$	$Ød_1$	L_1
in	H9	f8	+0.008 -0



Features

- **Low friction - No stick lip**
- **Low cost**
- **High strength precision Machined PTFE cap ring**
- **Wide range of materials available for special applications**

Materials

Face material - O-Ring	last two digits of part number
Standard material	
Bronze/PTFE - NBR	_ _ _ _ _ **00**
Material options:	
15% Glass/PTFE - NBR	_ _ _ _ _ **01**
15% Glass/PTFE - FKM	_ _ _ _ _ **11**
Bronze/PTFE - FKM	_ _ _ _ _ **10**

Design

The Hallite 454 double acting piston seal provides the designer with a compact, low friction seal for light to medium duty hydraulic cylinders.

It comprises a bronze filled PTFE ring, which is pre-loaded by an O ring to be effective for the operating pressure range recommended. As the pressure rises the O ring deforms and compresses the PTFE ring against the tube wall increasing the sealing force and the effectiveness of the seal. As only the PTFE ring is in contact with the sliding surface, friction is very low and stick slip movement is eliminated.

The housing width allows the designer to use a narrow width piston, but it is recommended an adequate bearing is mounted either side of the seal as shown.

A number of material options can be provided to extend operating conditions. Please ensure that the correct part number is specified for the material option as indicated.

The Hallite 454 seal is not recommended for applications where it is necessary for the pressurised cylinder to maintain the load in a set position.

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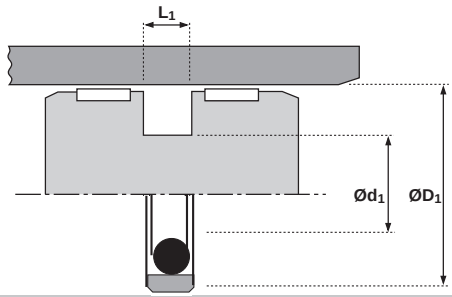

$ØD_1$	TOL H9	$Ød_1$	TOL f8	L_1 + 0.008 -0	PART No.
2.000	+0.0030 +0.0000	1.576	-0.0012 -0.0030	0.165	72305_ _
2.500	+0.0030 +0.0000	2.076	-0.0012 -0.0030	0.165	72310_ _
2.750	+0.0030 +0.0000	2.326	-0.0012 -0.0030	0.165	72315_ _
3.000	+0.0030 +0.0000	2.576	-0.0012 -0.0030	0.165	72320_ _
3.250	+0.0035 +0.0000	2.634	-0.0014 -0.0036	0.246	72325_ _
3.500	+0.0035 +0.0000	2.884	-0.0014 -0.0036	0.246	72330_ _
4.000	+0.0035 +0.0000	3.384	-0.0014 -0.0036	0.246	72335_ _
4.250	+0.0035 +0.0000	3.634	-0.0014 -0.0036	0.246	72340_ _
4.500	+0.0035 +0.0000	3.884	-0.0014 -0.0036	0.246	72345_ _
5.000	+0.0040 +0.0000	4.384	-0.0016 -0.0041	0.246	72350_ _
5.500	+0.0040 +0.0000	4.670	-0.0016 -0.0041	0.319	72355_ _
6.000	+0.0040 +0.0000	5.170	-0.0016 -0.0041	0.319	72360_ _
6.500	+0.0040 +0.0000	5.670	-0.0016 -0.0041	0.319	72365_ _
7.000	+0.0040 +0.0000	6.170	-0.0016 -0.0041	0.319	72370_ _
7.500	+0.0045 +0.0000	6.670	-0.0016 -0.0041	0.319	72375_ _
8.000	+0.0045 +0.0000	7.170	-0.0020 -0.0048	0.319	72380_ _
9.500	+0.0045 +0.0000	8.670	-0.0020 -0.0048	0.319	72385_ _
10.000	+0.0050 +0.0000	9.170	-0.0020 -0.0048	0.319	72390_ _