

606

PISTON SEAL

Single-Acting
Polyurethane, Single Lip

DESIGN

The Hallite 606 single-acting, single lip asymmetric piston seal is designed with precision trimmed sealing lips to provide effective bore sealing in light and medium-duty applications. The seal can be considered for use in heavy-duty applications when used with a suitable full depth back-up ring. The sealing lips are trimmed at an angle to give optimal rod sealing performance.

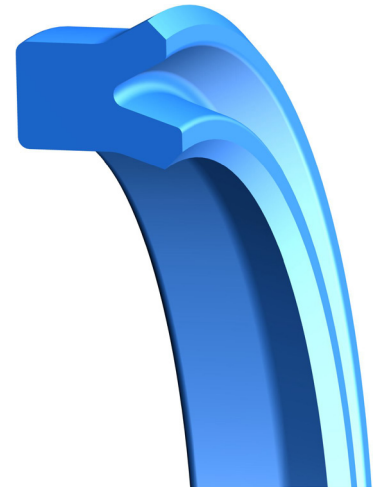
The range covers most standard housings used in Europe, North America and Asia.

The Hallite 606 is designed to have an interference in the seal housing groove.

The outer dynamic lip is shorter and more robust to improve sealing and compression set characteristics over conventional, symmetrical U-rings.

The seal is recommended for use in single-acting piston seal applications. It can also be fitted back-to-back in separate grooves for use in double-acting applications.

The Hallite 606 is molded in Hythane® 181, Hallite's high-performance polyurethane, for easy installation and excellent low temperature performance.



FEATURES

- General purpose seal
- Robust design
- Excellent wear resistance
- Performs well over wide temperature range and is extremely effective in low temperatures
- Easy to install

MATERIALS

As standard, this product comes in the following material. Contact your local Hallite technical team if you would like to find out if this profile can be made in a custom material to suit your application. For further material details, please refer to the Hallite Material Table.

MATERIAL OPTIONS	Name	Type	Color
Standard	Hythane® 181	TPU-EU	Blue

TECHNICAL DETAILS

OPERATING CONDITIONS	METRIC	INCH
Maximum Speed	1.0 m/sec	3.0 ft/sec
Temperature Range	-45°C +110°C	-50°F +230°F
Maximum Pressure	400 bar	6000 psi
Maximum Pressure with Backup Ring	700 bar	10000 psi

NOTE

Data given are maximum values and can apply depending on specific application. Maximum ratings of temperature, pressure, or operating speeds are dependent on fluid medium, surface, gap value, and other variables such as dynamic or static service. Maximum values are not intended for use together at the same time, e.g. max temperature and max pressure. Please contact your Hallite technical representative for application support.

NOTE

Pressure Rating: Can be extended with use of back-up ring. Seek technical advice from local Hallite office.

MAXIMUM EXTRUSION GAP			
Pressure bar	160	250	400
Maximum Gap mm	0.60	0.50	0.40
Pressure psi	2400	3750	6000
Maximum Gap in	0.024	0.020	0.016

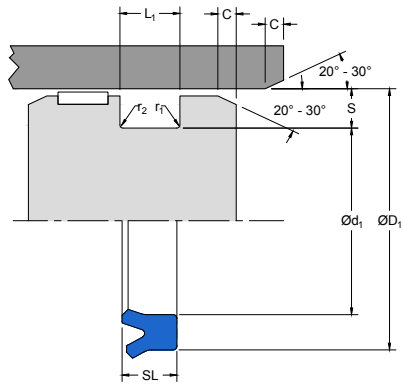
NOTE

Figures show the maximum permissible gap all on one side, for rod seals using minimum rod \varnothing and maximum clearance \varnothing and for piston seals using the minimum clearance \varnothing and maximum bore \varnothing . Refer to Housing Design section.

SURFACE ROUGHNESS	μmRa	μmRz	μmRt	μinRa	μinRz	μinRt
Dynamic Sealing Face $\varnothing D_1$	0.1 - 0.4	1.6 max	4 max	4 - 16	63 max	157 max
Static Sealing Face $\varnothing d_1$	1.6 max	6.3 max	10 max	63 max	250 max	394 max
Static Housing Faces L_1	3.2 max	10 max	16 max	125 max	394 max	630 max

CHAMFERS & RADII						
Groove Section $<S$ mm	4.00	5.00	7.50	10.00	12.50	15.00
Min Chamfer C mm	3.00	3.50	5.00	6.50	7.00	8.00
Max Fillet Rad r_1 mm	0.20	0.40	0.80	0.80	1.20	1.60
Max Fillet Rad r_2 mm	0.40	0.80	1.20	1.20	1.60	2.40
Groove Section $\leq S$ in	0.125	0.187	0.250	0.312	0.375	0.500
Min Chamfer C in	0.093	0.093	0.125	0.156	0.187	0.187
Max Fillet Rad r_1 in	0.008	0.008	0.016	0.032	0.032	0.032
Max Fillet Rad r_2 in	0.016	0.016	0.032	0.047	0.047	0.047

TOLERANCES	$\varnothing D_1$	$\varnothing d_1$	L_1
mm	H9	js11	+0.25 -0
in	H9	js11	+0.010 -0



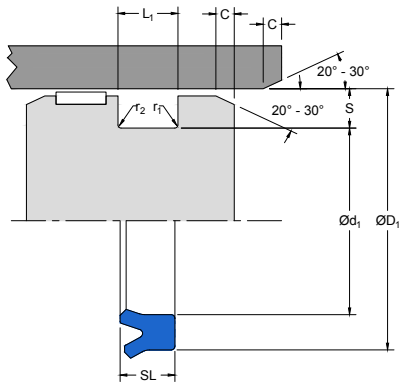
606

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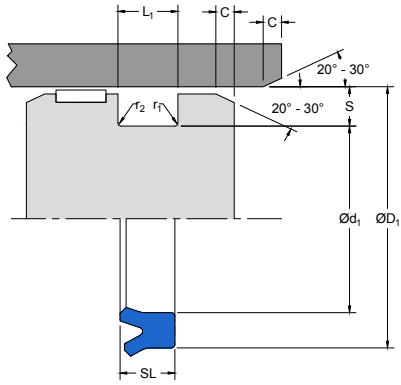
PART NUMBER RANGE

INCH						
ØD ₁	TOL H9	Ød ₁	TOL js11	SL	L ₁ +0.010-0	PART No.
0.750	+0.002 0.000	0.375	+0.002 -0.002	0.313	0.344	4707100
1.125	+0.002 0.000	0.750	+0.003 -0.003	0.313	0.344	4565600
1.250	+0.003 0.000	0.875	+0.003 -0.003	0.250	0.275	4800300
1.500	+0.003 0.000	1.125	+0.003 -0.003	0.250	0.275	4426700
1.500	+0.003 0.000	1.250	+0.003 -0.003	0.250	0.275	4426800
1.750	+0.003 0.000	1.500	+0.003 -0.003	0.250	0.275	4769800
2.000	+0.003 0.000	1.375	+0.003 -0.003	0.500	0.550	4364200
2.000	+0.003 0.000	1.500	+0.003 -0.003	0.375	0.413	4376000
2.000	+0.003 0.000	1.625	+0.003 -0.003	0.187	0.207	4426900
2.000	+0.003 0.000	1.625	+0.003 -0.003	0.312	0.344	4444300
2.000	+0.003 0.000	1.625	+0.003 -0.003	0.375	0.413	4364400
2.250	+0.003 0.000	1.750	+0.003 -0.003	0.375	0.413	4476500
2.250	+0.003 0.000	1.875	+0.003 -0.003	0.375	0.413	4479600
2.500	+0.003 0.000	1.625	+0.003 -0.003	0.500	0.550	4364500
2.500	+0.003 0.000	1.875	+0.003 -0.003	0.500	0.550	4376100
2.500	+0.003 0.000	2.000	+0.004 -0.004	0.250	0.275	4516500
2.500	+0.003 0.000	2.000	+0.004 -0.004	0.375	0.413	4391900



PART NUMBER RANGE

INCH						
ØD ₁	TOL H9	Ød ₁	TOL js11	SL	L ₁ +0.010-0	PART No.
2.500	+0.003 0.000	2.125	+0.004 -0.004	0.250	0.275	4427000
2.500	+0.003 0.000	2.125	+0.004 -0.004	0.312	0.344	4444400
2.500	+0.003 0.000	2.125	+0.004 -0.004	0.375	0.413	4451300
3.000	+0.003 0.000	2.250	+0.004 -0.004	0.455	0.500	4375000
3.000	+0.003 0.000	2.375	+0.004 -0.004	0.500	0.550	4364600
3.000	+0.003 0.000	2.500	+0.004 -0.004	0.250	0.275	4516600
3.000	+0.003 0.000	2.500	+0.004 -0.004	0.375	0.413	4364700
3.000	+0.003 0.000	2.625	+0.004 -0.004	0.187	0.207	4792800
3.000	+0.003 0.000	2.625	+0.004 -0.004	0.375	0.413	4458400
3.250	+0.004 0.000	2.625	+0.004 -0.004	0.500	0.550	4376200
3.250	+0.004 0.000	2.750	+0.004 -0.004	0.250	0.275	4516700
3.250	+0.004 0.000	2.750	+0.004 -0.004	0.375	0.413	4474400
3.250	+0.004 0.000	2.875	+0.004 -0.004	0.250	0.275	4427100
3.500	+0.004 0.000	2.750	+0.004 -0.004	0.500	0.550	4444600
3.500	+0.004 0.000	2.750	+0.004 -0.004	0.625	0.688	4376300
3.500	+0.004 0.000	2.875	+0.004 -0.004	0.312	0.344	4571100
3.500	+0.004 0.000	2.875	+0.004 -0.004	0.500	0.550	4364800



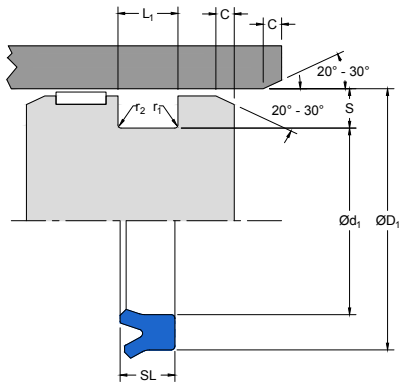
606

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Polyurethane, Single Lip

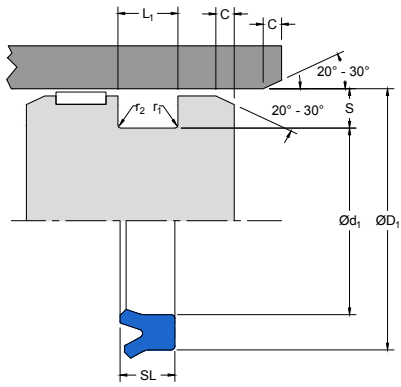
PART NUMBER RANGE

INCH						
ØD ₁	TOL H9 0.000	Ød ₁	TOL js11 -0.004	SL	L ₁ +0.010-0	PART No.
3.500	+0.004 0.000	3.000	+0.004 -0.004	0.250	0.275	4516800
3.500	+0.004 0.000	3.000	+0.004 -0.004	0.375	0.413	4364900
3.500	+0.004 0.000	3.125	+0.004 -0.004	0.275	0.302	4572200
3.500	+0.004 0.000	3.125	+0.004 -0.004	0.375	0.413	4444500
3.750	+0.004 0.000	3.250	+0.004 -0.004	0.375	0.413	4444700
4.000	+0.004 0.000	3.250	+0.004 -0.004	0.375	0.413	4517400
4.000	+0.004 0.000	3.250	+0.004 -0.004	0.500	0.550	4444900
4.000	+0.004 0.000	3.250	+0.004 -0.004	0.625	0.688	4376400
4.000	+0.004 0.000	3.375	+0.004 -0.004	0.500	0.550	4365000
4.000	+0.004 0.000	3.500	+0.004 -0.004	0.250	0.275	4516900
4.000	+0.004 0.000	3.500	+0.004 -0.004	0.312	0.344	4427200
4.000	+0.004 0.000	3.500	+0.004 -0.004	0.375	0.413	4365100
4.000	+0.004 0.000	3.625	+0.004 -0.004	0.375	0.413	4444800
4.250	+0.004 0.000	3.750	+0.004 -0.004	0.375	0.413	4445000
4.500	+0.004 0.000	3.750	+0.004 -0.004	0.625	0.688	4371000
4.500	+0.004 0.000	4.000	+0.004 -0.004	0.375	0.413	4448100
4.750	+0.004 0.000	4.379	+0.004 -0.004	0.275	0.302	4493600



PART NUMBER RANGE

INCH						
ØD ₁	TOL H9	Ød ₁	TOL js11	SL	L ₁ +0.010-0	PART No.
5.000	+0.004 0.000	4.250	+0.004 -0.004	0.375	0.413	4517500
5.000	+0.004 0.000	4.250	+0.004 -0.004	0.500	0.550	4445100
5.000	+0.004 0.000	4.250	+0.004 -0.004	0.625	0.688	4371100
5.000	+0.004 0.000	4.500	+0.004 -0.004	0.250	0.275	4517000
5.000	+0.004 0.000	4.500	+0.004 -0.004	0.375	0.413	4365200
5.000	+0.004 0.000	4.500	+0.004 -0.004	0.562	0.619	4495900
5.250	+0.004 0.000	4.500	+0.004 -0.004	0.500	0.550	4445200
5.500	+0.004 0.000	4.750	+0.005 -0.005	0.625	0.688	4371200
6.000	+0.004 0.000	5.250	+0.005 -0.005	0.375	0.413	4517600
6.000	+0.004 0.000	5.250	+0.005 -0.005	0.500	0.550	4445300
6.000	+0.004 0.000	5.250	+0.005 -0.005	0.625	0.688	4371300
6.000	+0.004 0.000	5.500	+0.005 -0.005	0.250	0.275	4517100
6.000	+0.004 0.000	5.500	+0.005 -0.005	0.375	0.413	4365300
6.000	+0.004 0.000	5.500	+0.005 -0.005	0.562	0.619	4393400
6.250	+0.004 0.000	5.750	+0.005 -0.005	0.563	0.619	4458300
6.500	+0.004 0.000	5.750	+0.005 -0.005	0.625	0.688	4743900
7.000	+0.004 0.000	6.250	+0.005 -0.005	0.375	0.413	4517700



606

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Polyurethane, Single Lip*

PART NUMBER RANGE

INCH						
ØD ₁	TOL H9 0.000	Ød ₁	TOL js11 -0.005	SL	L ₁ +0.010-0	PART No.
7.000	+0.004 0.000	6.250	+0.005 -0.005	0.500	0.550	4445500
7.000	+0.004 0.000	6.250	+0.005 -0.005	0.625	0.688	4371400
7.000	+0.004 0.000	6.500	+0.005 -0.005	0.250	0.275	4517200
7.000	+0.004 0.000	6.500	+0.005 -0.005	0.375	0.413	4445400
8.000	+0.004 0.000	7.250	+0.006 -0.006	0.625	0.688	4371500
8.000	+0.004 0.000	7.500	+0.006 -0.006	0.250	0.275	4517300
9.000	+0.004 0.000	8.000	+0.006 -0.006	0.750	0.825	4371600
10.000	+0.005 0.000	9.000	+0.006 -0.006	0.750	0.825	4536200
10.000	+0.005 0.000	9.250	+0.006 -0.006	0.375	0.413	4575100