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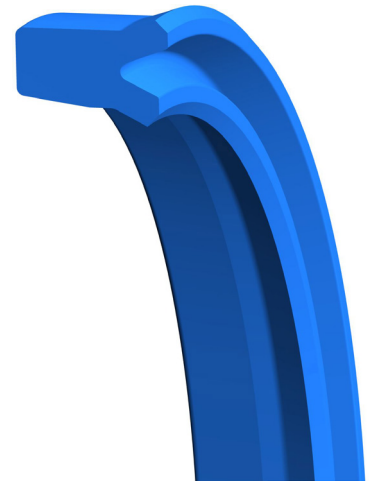
ROD SEAL

Single Lip
Polyurethane

DESIGN

The Hallite 663 is an asymmetric, single lip U-ring rod seal designed to provide a dry sealing solution in light and medium-duty applications and manufactured in Hythane® 181, Hallite's high-performance polyurethane, for easy installation and excellent low temperature performance. The seal can be considered for use in heavy-duty applications when used with a suitable full depth back-up ring.

The seal is a single lip modification of the well-established Hallite 605 profile and is ideal for applications that require a double-lipped wiper, such as the Hallite 839, Hallite 844, Hallite 846, or Hallite 864. The Hallite 663 is also offered in other high quality Hythane® materials to best fit the needs of the application.



FEATURES

- Prevents pressure build up between seal and double-lipped wiper
- Robust design
- Excellent wear resistance
- Performs well over wide temperature range and is extremely effective in low temperatures
- Easy to install

MATERIALS

This product comes in a number of material options to extend operating conditions. Contact your local Hallite technical team to decide which is best for your application. Use the part designator in the table below as the last digit of the part number to specify material choice when ordering. For further material details, please refer to the Hallite Material Table.

MATERIAL OPTIONS	Name	Type	Colour	Part Designator
Standard	Hythane® 181	TPU-EU	Blue	0
Optional	Hythane® 361	TPU-AU	Orange	6



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 backup 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

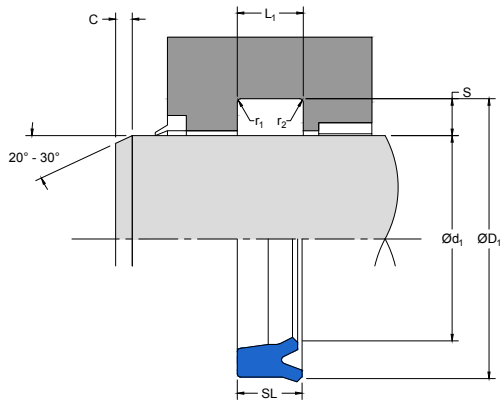
Figures show the maximum permissible gap all on one side using minimum rod \varnothing and maximum clearance \varnothing . Refer to Housing Design section.

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
Min Chamfer C mm	3.00	3.50	5.00	6.50
Max Fillet Rad r_1 mm	0.20	0.40	0.80	0.80
Max Fillet Rad r_2 mm	0.40	0.80	1.20	1.20

TOLERANCES	$\varnothing d_1$	$\varnothing D_1$	L_1
mm	f9	Js11	+0.25 -0





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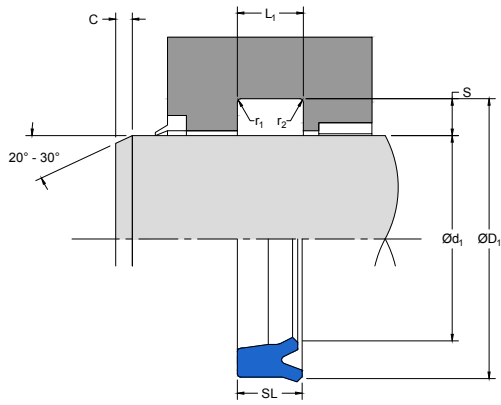
PART NUMBER RANGE

METRIC						
Ød ₁	TOL f ₉	ØD ₁	TOL Js11	SL	L ₁ +0.25-0	PART No.
12.00	-0.02 -0.06	22.00	+0.07 -0.07	7.30	8.00	4865100‡
14.00	-0.02 -0.06	24.00	+0.07 -0.07	8.20	9.00	4865200
16.00	-0.02 -0.06	24.00	+0.07 -0.07	5.70	6.30	4789300‡
16.00	-0.02 -0.06	26.00	+0.07 -0.07	7.30	8.00	4865300‡
18.00	-0.02 -0.06	26.00	+0.07 -0.07	5.70	6.30	4789400‡
20.00	-0.02 -0.07	28.00	+0.07 -0.07	5.70	6.30	4827400‡
20.00	-0.02 -0.07	30.00	+0.07 -0.07	7.30	8.00	4865400‡
22.00	-0.02 -0.07	32.00	+0.08 -0.08	7.30	8.00	4865500‡
24.00	-0.02 -0.07	34.00	+0.08 -0.08	7.80	8.50	4764500
25.00	-0.02 -0.07	31.00	+0.08 -0.08	4.90	5.35	4799600
25.00	-0.02 -0.07	33.00	+0.08 -0.08	5.70	6.30	4789500‡
25.00	-0.02 -0.07	35.00	+0.08 -0.08	7.30	8.00	4865600‡
25.00	-0.02 -0.07	40.00	+0.08 -0.08	10.00	11.00	4865700
26.00	-0.02 -0.07	36.00	+0.08 -0.08	10.00	11.00	4726000
28.00	-0.02 -0.07	36.00	+0.08 -0.08	5.70	6.30	4789600
30.00	-0.02 -0.07	38.00	+0.08 -0.08	5.70	6.30	4830400
30.00	-0.02 -0.07	38.00	+0.08 -0.08	8.20	9.00	4789700

NOTE

Part numbers suffixed by "‡" indicate housing sizes to meet ISO 5597.





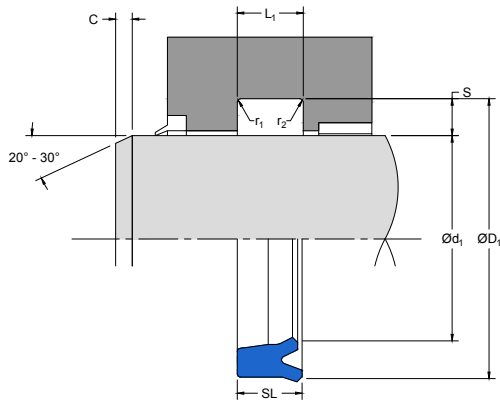
PART NUMBER RANGE

METRIC						
Ød ₁	TOL f ₉	ØD ₁	TOL Js11	SL	L ₁ +0.25-0	PART No.
30.00	-0.02 -0.07	40.00	+0.08 -0.08	7.30	8.00	4816700
30.00	-0.02 -0.07	40.00	+0.08 -0.08	10.00	11.00	4811800
30.00	-0.02 -0.07	45.00	+0.08 -0.08	10.00	11.00	4865800
32.00	-0.03 -0.09	40.00	+0.08 -0.08	5.70	6.30	4827500
32.00	-0.03 -0.09	42.00	+0.08 -0.08	7.30	8.00	4865900‡
35.00	-0.03 -0.09	43.00	+0.08 -0.08	5.70	6.30	4789800
35.00	-0.03 -0.09	45.00	+0.08 -0.08	7.30	8.00	4816800
35.00	-0.03 -0.09	45.00	+0.08 -0.08	10.00	11.00	4816100
36.00	-0.03 -0.09	44.00	+0.08 -0.08	5.80	6.30	4859600
36.00	-0.03 -0.09	44.00	+0.08 -0.08	8.20	9.00	4726200
36.00	-0.03 -0.09	46.00	+0.08 -0.08	7.30	8.00	4866000‡
40.00	-0.03 -0.09	48.00	+0.08 -0.08	5.70	6.30	4789900
40.00	-0.03 -0.09	48.00	+0.08 -0.08	8.20	9.00	4790000
40.00	-0.03 -0.09	50.00	+0.08 -0.08	7.30	8.00	4806300‡
40.00	-0.03 -0.09	50.00	+0.08 -0.08	8.20	9.00	4790100
40.00	-0.03 -0.09	50.00	+0.08 -0.08	10.00	11.00	4553400
45.00	-0.03 -0.09	53.00	+0.10 -0.10	8.20	9.00	4838900

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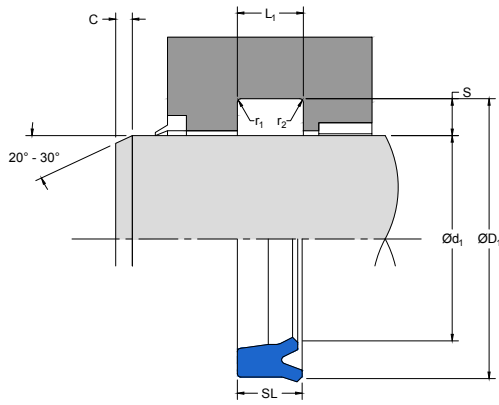
PART NUMBER RANGE

METRIC						
Ød ₁	TOL f ₉	ØD ₁	TOL Js11	SL	L ₁ +0.25-0	PART No.
45.00	-0.03 -0.09	55.00	+0.10 -0.10	7.30	8.00	4790200‡
45.00	-0.03 -0.09	55.00	+0.10 -0.10	10.00	11.00	4726300
50.00	-0.03 -0.09	57.00	+0.10 -0.10	9.00	10.00	4787400
50.00	-0.03 -0.09	58.00	+0.10 -0.10	8.20	9.00	4790300
50.00	-0.03 -0.09	60.00	+0.10 -0.10	7.30	8.00	4726400‡
50.00	-0.03 -0.09	60.00	+0.10 -0.10	10.00	11.00	4814400
50.00	-0.03 -0.09	65.00	+0.10 -0.10	11.40	12.50	4806400‡
54.00	-0.03 -0.10	64.00	+0.10 -0.10	10.00	11.00	4868700
55.00	-0.03 -0.10	65.00	+0.10 -0.10	10.00	11.00	4798900
55.00	-0.03 -0.10	67.00	+0.10 -0.10	10.00	11.00	4793800
56.00	-0.03 -0.10	66.00	+0.10 -0.10	10.00	11.00	4726500
60.00	-0.03 -0.10	68.00	+0.10 -0.10	8.20	9.00	4816900
60.00	-0.03 -0.10	70.00	+0.10 -0.10	7.30	8.00	4822600
60.00	-0.03 -0.10	70.00	+0.10 -0.10	10.00	11.00	4726600
60.00	-0.03 -0.10	70.00	+0.10 -0.10	11.80	13.00	4885700
60.00	-0.03 -0.10	75.00	+0.10 -0.10	11.40	12.50	4806500
63.00	-0.03 -0.10	73.00	+0.10 -0.10	7.30	8.00	4877600

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METRIC						
Ød ₁	TOL f ₉	ØD ₁	TOL Js11	SL	L ₁ +0.25-0	PART No.
65.00	-0.03 -0.10	75.00	+0.10 -0.10	11.80	13.00	4790400
65.00	-0.03 -0.10	80.00	+0.10 -0.10	11.40	13.00	4726700
70.00	-0.03 -0.10	85.00	+0.11 -0.11	11.40	13.00	4790500
75.00	-0.03 -0.10	85.00	+0.11 -0.11	11.80	13.00	4726800
75.00	-0.03 -0.10	95.00	+0.11 -0.11	14.50	16.00	4809000
80.00	-0.03 -0.10	90.00	+0.11 -0.11	11.80	13.00	4761400
80.00	-0.03 -0.10	100.00	+0.11 -0.11	14.50	16.00	4806600‡
85.00	-0.04 -0.12	97.00	+0.11 -0.11	8.70	9.60	4870100
85.00	-0.04 -0.12	100.00	+0.11 -0.11	11.80	13.00	4806700
100.00	-0.04 -0.12	115.00	+0.11 -0.11	11.80	13.00	4837400

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