

# E5W

## WIPER/EXCLUDER

Double-Acting

### TECHNICAL DETAILS

The Hallite E5W is a double-acting, o-ring energized, rod wiper/excluder designed to include two different unique wiping lip geometries. The two lips combine to scrape debris from the rod and contain residual oil on rod extension, as well as allowing oil to pump back into the cylinder. The o-ring energizer provides the force necessary to maintain the engagement of the wiping lips against the sliding surface and allow the wiper to adjust for deflection.

Typically made from exclusive Hallite Armorlene® materials, this seal is capable of high speed applications and eliminates any potential for stick-slip. High-performance Armorlene® materials, like HLX, provide outstanding wear and scraping capability as well as large range of temperature and media compatibility.

The Hallite E5W works well paired with rod seals that support the requisite dynamic pressure pump-back, like the Hallite R16 rod seal. When paired, they produce a sealing system capable of handling higher speeds, large range of fluid compatibilities, and temperature range of service. For other rod seal arrangements with E5W, it is necessary to make sure the rod seal will provide proper pressure pump-back, or alternatively vent the system. The E5W is often preferred for heavier duty and large-diameter applications. Please consult the series part listing for more information.



### FEATURES

- Low friction and elimination of stick-slip action
- Self-adjustment for side movement of rod
- High-performance PTFE material as standard offering
- Balanced design keeps contamination out of cylinder while also minimizing oil film on rod

### Part Number Structure

E5WMR00500NHLX \_

<b>E5W</b>	<b>M</b>	<b>R</b>	<b>00500</b>	<b>N</b>	<b>HLX</b>	<b>_</b>
<b>PROFILE DESIGNATION</b>	<b>UNIT OF MEASUREMENT</b> M = Metric E = Inch	<b>APPLICATION</b> Refer to <i>Installation Recommendations</i> and use designator for desired application	<b>ROD DIAMETER</b> Metric = mm X 10 Inch = inches X 1000	<b>ENERGIZER MATERIAL</b> Refer to <i>Energizer Table</i> for desired energizer material	<b>PTFE MATERIAL</b> Refer to <i>Material Table</i> for desired PTFE (face) material	<b>SPECIAL FEATURE</b> Blank = Std profile

## OPERATING CONDITIONS

	metric	inch
<b>Maximum Speed</b>	Up to 15.0m/sec	Up to 50.0ft/sec
<b>Temperature Range*</b>	-45 to 200°C	-49 to 392°F

\*Dependent upon energizer used (NBR, FKM, etc.).

### 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.

## SURFACE FINISH RECOMMENDATIONS

SURFACE ROUGHNESS	metric			inch			RMR*
	μMRA	μMRZ	μMRT	μINRA	μINRZ	μINRT	
<b>Dynamic Sealing Face Ød<sub>1</sub></b>	0.05 - 0.2	1.3 max	2 max	2 - 8	52 max	78 max	60% - 90%
<b>Static Sealing Face ØD<sub>1</sub> and ØD<sub>2</sub></b>	1.6 max	7 max	10 max	63 max	276 max	394 max	
<b>Static Housing Faces L<sub>1</sub></b>	3.2 max	10 max	16 max	125 max	394 max	630 max	

\*RMR is measured at a depth of 25% of the Rz value based upon a reference level (zero line) at 5% material/bearing area.

## ENERGIZER TABLE

ENERGIZER MATERIAL (SHORE A)	ENERGIZER TYPE	ENERGIZER DESIGNATION	ENERGIZER OPERATING TEMPERATURE°C	ENERGIZER OPERATING TEMPERATURE°F
<b>NBR - 70A</b>	O-Ring	N	-30 to 100°C	-22 to 212°F
<b>NBR - 70A Low temp.</b>	O-Ring	L	-45 to 80°C	-49 to 176°F
<b>FKM - 75A</b>	O-Ring	F	-10 to 200°C	14 to 392°F
<b>EPDM - 70A</b>	O-Ring	E	-45 to 145°C	-49 to 293°F
<b>HNBR - 70A</b>	O-Ring	H	-25 to 150°C	-13 to 302°F
<b>NBR - 90A</b>	O-Ring	Q	-30 to 100°C	-22 to 212°F
<b>HNBR - 90A</b>	O-Ring	U	-25 to 150°C	-13 to 302°F
<b>No Energizer*</b>	None	X	-	-

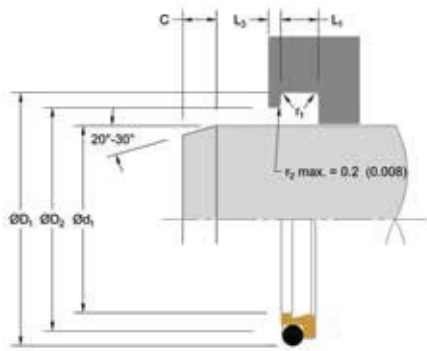
\*Seal ratings are based upon capabilities of its matched material components. Hallite cannot rate seal performance when the seal is mixed with other manufacturers' energizers/components.

## MATERIALS

MATERIAL FEATURES AND APPLICATIONS	FILLER	MATERIAL DESIGNATOR	COLOR	TEMPERATURE RANGE °C	TEMPERATURE RANGE °F
<b>ARMORLENE® HLX</b> <ul style="list-style-type: none"> <li>Standard material for hydraulic applications</li> <li>High compressive strength</li> <li>Excellent extrusion resistance</li> <li>Extended wear resistance</li> </ul>	Special Bronze Compound	HLX	Gold	-73 to 288°C	-100 to 550°F
<b>ARMORLENE® HCF</b> <ul style="list-style-type: none"> <li>Excellent in lubricating and non-lubricating hydraulic fluids (includes water) w/o zinc content</li> <li>Not recommended for gas sealing applications</li> <li>Not recommended for electrical conductive fluids</li> </ul>	Carbon Fiber Filled	HCF	Gray/Black	-73 to 260°C	-100 to 500°F
<b>ARMORLENE® 702</b> <ul style="list-style-type: none"> <li>Excellent in lubricating and non-lubricating hydraulic fluids</li> <li>Good low-friction properties</li> <li>Excellent extrusion resistance</li> <li>Good chemical resistance</li> </ul>	Glass Molybdenum Disulfide	702	Gray	-73 to 260°C	-100 to 500°F
<b>ARMORLENE® 711</b> <ul style="list-style-type: none"> <li>Excellent in all lubricating fluids and pneumatic applications</li> <li>High chemical resistance</li> <li>Excellent extrusion resistance</li> <li>Excellent wear properties</li> </ul>	25% Carbon/Graphite	711	Black	-73 to 288°C	-100 to 550°F
<b>ARMORLENE® 700</b> <ul style="list-style-type: none"> <li>Excellent in all hydraulic fluids</li> <li>Recommended for use with soft mating surfaces</li> <li>Low friction and no stick-slip</li> </ul>	Unfilled	700	White	-184 to 204°C	-300 to 400°F
<b>748 - UHMWPE</b> <ul style="list-style-type: none"> <li>Excellent impact resistance</li> <li>Good dielectrical properties</li> <li>Excellent abrasion resistance</li> <li>Low coefficient of friction</li> </ul>	Standard	748	Translucent	-184 to 82°C	-300 to 180°F
<b>HU5 - POLYURETHANE, 55D</b> <ul style="list-style-type: none"> <li>Positive position load holding</li> <li>Excellent extrusion resistance</li> <li>Excellent wear resistance</li> <li>Available up to 2540mm (100 inches) diameter</li> </ul>	Standard	HU5	Yellow	-20 to 115°C	-4 to 240°F
<b>HU9 - POLYURETHANE, 95A</b> <ul style="list-style-type: none"> <li>Positive position load holding</li> <li>Excellent extrusion resistance</li> <li>Excellent wear resistance</li> <li>Available up to 2540mm (100 inches) diameter</li> </ul>	Standard	HU9	Red	-20 to 115°C	-4 to 240°F

For other material options consult the Master Materials Index at the front of the catalog. If you do not find the material that you require, please contact your local Hallite sales office.

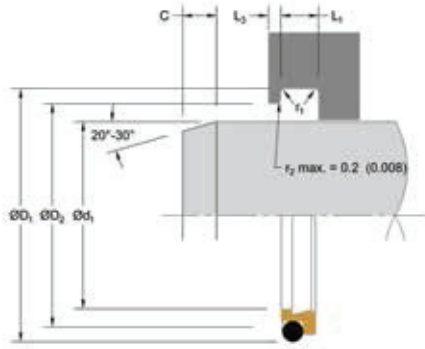




## INSTALLATION RECOMMENDATIONS

metric			GROOVE DIAMETER	GROOVE WIDTH	BORE DIAMETER	STEP WIDTH	RADIUS	CHAMFER	O-RING CROSS SECTION
ROD DIAMETER $\varnothing d_1$ f8/h9									
DIAMETER RANGE			$D_1$ H9	$L_1 + 0.2$	$D_2$ H11	$L_3$ Min	$r_1$	C	O-Ring
Standard Duty Application - R	Light Duty Application - L								
19.0 - 39.9	40.0 - 69.9		$d_1 + 7.6$	4.2	$d_1 + 1.5$	3.0	0.5	3.0	2.62
40.0 - 69.9	70.0 - 139.9		$d_1 + 8.8$	6.3	$d_1 + 1.5$	3.0	0.8	4.0	2.62
70.0 - 139.9	140.0 - 399.9		$d_1 + 12.2$	8.1	$d_1 + 2.0$	4.0	1.0	6.0	3.53
140.0 - 399.9	400.0 - 649.9		$d_1 + 16.0$	9.5	$d_1 + 2.5$	5.0	1.5	6.0	5.33
400.0 - 649.9	650.0 - 999.9		$d_1 + 24.0$	14.0	$d_1 + 2.5$	8.0	1.5	8.0	6.99
650.0 - 999.9	$\geq 1000.0$		$d_1 + 27.3$	16.0	$d_1 + 2.5$	10.0	2.0	9.0	8.40

inch				GROOVE DIAMETER	GROOVE WIDTH	BORE DIAMETER	STEP WIDTH	RADIUS	CHAMFER	O-RING CROSS SECTION
ROD DIAMETER $\varnothing d_1$ f8/h9										
DIAMETER RANGE				$D_1$ H9	$L_1 + .008$	$D_2$ H11	$L_3$ Min	$r_1$	C	O-Ring
Standard Duty Application - R	Light Duty Application - L	Heavy Duty Application - H								
1.500 - 2.749	2.750 - 5.499	1.188 - 1.499		$d_1 + 0.346$	0.248	$d_1 + 0.060$	0.079	0.015	0.157	0.103
2.750 - 5.499	5.500 - 15.749	1.500 - 2.749		$d_1 + 0.480$	0.319	$d_1 + 0.080$	0.118	0.015	0.236	0.139
5.500 - 7.999	-	2.750 - 5.499		$d_1 + 0.630$	0.374	$d_1 + 0.100$	0.118	0.035	0.236	0.210
8.000 - 15.749	15.750 - 25.500	-		$d_1 + 0.630$	0.374	$d_1 + 0.100$	0.150	0.035	0.236	0.210
15.750 - 25.500	-	5.500 - 15.749		$d_1 + 0.945$	0.551	$d_1 + 0.100$	0.150	0.035	0.315	0.275



# E5W

WIPER/EXCLUDER  
Double-Acting

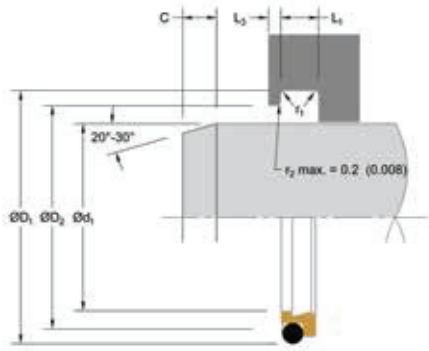
## PART NUMBER RANGE (METRIC)\*

metric					
Ød <sub>1</sub>	ØD <sub>1</sub>	L <sub>1</sub>	ØD <sub>2</sub>	STEP WIDTH	PART NUMBER
Tol. f8/h9	Tol. H9	Tol. +0.2	Tol. H11	L <sub>3</sub> Min	
20.0	27.6	4.2	21.5	3.0	E5WMR00200****
25.0	32.6	4.2	26.5	3.0	E5WMR00250****
28.0	35.6	4.2	29.5	3.0	E5WMR00280****
30.0	37.6	4.2	31.5	3.0	E5WMR00300****
32.0	39.6	4.2	33.5	3.0	E5WMR00320****
36.0	43.6	4.2	37.5	3.0	E5WMR00360****
40.0	48.8	6.3	41.5	3.0	E5WMR00400****+
42.0	50.8	6.3	43.5	3.0	E5WMR00420****
45.0	53.8	6.3	46.5	3.0	E5WMR00450****+
50.0	58.8	6.3	51.5	3.0	E5WMR00500****+
55.0	63.8	6.3	56.5	3.0	E5WMR00550****
56.0	64.8	6.3	57.5	3.0	E5WMR00560****+
60.0	68.8	6.3	61.5	3.0	E5WMR00600****
63.0	71.8	6.3	64.5	3.0	E5WMR00630****+
65.0	73.8	6.3	66.5	3.0	E5WMR00650****
70.0	78.8	6.3	71.5	3.0	E5WML00700****+
70.0	82.2	8.1	72.0	4.0	E5WMR00700****+
75.0	87.2	8.1	77.0	4.0	E5WMR00750****
80.0	88.8	6.3	81.5	3.0	E5WML00800****+
80.0	92.2	8.1	82.0	4.0	E5WMR00800****+
85.0	97.2	8.1	87.0	4.0	E5WMR00850****
90.0	98.8	6.3	91.5	3.0	E5WML00900****+
90.0	102.2	8.1	92.0	4.0	E5WMR00900****+
97.0	109.2	8.1	99.0	4.0	E5WMR00970****
99.0	111.2	8.1	101.0	4.0	E5WMR00990****
100.0	108.8	6.3	101.5	3.0	E5WML01000****+
100.0	112.2	8.1	102.0	4.0	E5WMR01000****+
110.0	118.8	6.3	111.5	3	E5WML01100****+

metric					
Ød <sub>1</sub>	ØD <sub>1</sub>	L <sub>1</sub>	ØD <sub>2</sub>	STEP WIDTH	PART NUMBER
Tol. f8/h9	Tol. H9	Tol. +0.2	Tol. H11	L <sub>3</sub> Min	
110.0	122.2	8.1	112.0	4.0	E5WMR01100****+
115.0	127.2	8.1	117.0	4.0	E5WMR01150****
120.0	132.2	8.1	122.0	4.0	E5WMR01200****
125.0	133.8	6.3	126.5	3.0	E5WML01250****+
125.0	137.2	8.1	127.0	4.0	E5WMR01250****+
125.4	137.6	8.1	127.4	4.0	E5WMR01254****
130.0	142.2	8.1	132.0	4.0	E5WMR01300****
135.0	147.2	8.1	137.0	4.0	E5WMR01350****
140.0	152.2	8.1	142.0	4.0	E5WML01400****+
140.0	156.0	9.5	142.5	5.0	E5WMR01400****+
140.5	156.5	9.5	143.0	5.0	E5WMR01405****
150.0	166.0	9.5	152.5	5.0	E5WMR01500****
153.0	169.0	9.5	155.5	5.0	E5WMR01530****
155.0	171.0	9.5	157.5	5.0	E5WMR01550****
160.0	172.2	8.1	162.0	4.0	E5WML01600****+
160.0	176.0	9.5	162.5	5.0	E5WMR01600****+
165.0	181.0	9.5	167.5	5.0	E5WMR01650****
170.0	186.0	9.5	172.5	5.0	E5WMR01700****
175.0	191.0	9.5	177.5	5.0	E5WMR01750****
180.0	192.2	8.1	182.0	4.0	E5WML01800****+
180.0	196.0	9.5	182.5	5.0	E5WMR01800****+
188.2	204.2	9.5	190.7	5.0	E5WMR01882****
190.0	206.0	9.5	192.5	5.0	E5WMR01900****
192.0	208.0	9.5	194.5	5.0	E5WMR01920****
200.0	212.2	8.1	202.0	4.0	E5WML02000****+
200.0	216.0	9.5	202.5	5.0	E5WMR02000****+
211.0	227.0	9.5	213.5	5	E5WMR02110****
220.0	232.2	8.1	222.0	4	E5WML02200****+

\* Fits ISO 6195 Type D grooves.





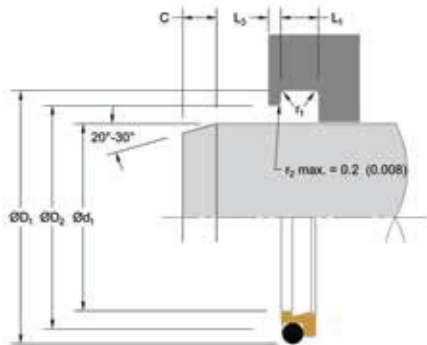
**PART NUMBER RANGE (METRIC)\***

metric					PART NUMBER
$\varnothing d_1$	$\varnothing D_1$	$L_1$	$\varnothing D_2$	STEP WIDTH	
Tol. f8/h9	Tol. H9	Tol. +0.2	Tol. H11	$L_3$ Min	
220.0	236.0	9.5	222.5	5.0	E5WMR02200****+
240.0	256.0	9.5	242.5	5.0	E5WMR02400****
250.0	262.2	8.1	252.0	4.0	E5WML02500****+
250.0	266.0	9.5	252.5	5.0	E5WMR02500****+
260.0	276.0	9.5	262.5	5.0	E5WMR02600****
270.0	286.0	9.5	272.5	5.0	E5WMR02700****
280.0	292.2	8.1	282.0	4.0	E5WML02800****+
280.0	296.0	9.5	282.5	5.0	E5WMR02800****+
300.0	316.0	9.5	302.5	5.0	E5WMR03000****
320.0	332.2	8.1	322.0	4.0	E5WML03200****+
320.0	336.0	9.5	322.5	5.0	E5WMR03200****+
330.0	346.0	9.5	332.5	5.0	E5WMR03300****
350.0	366.0	9.5	352.5	5.0	E5WMR03500****
360.0	372.2	8.1	362.0	4.0	E5WML03600****+
360.0	376.0	9.5	362.5	5.0	E5WMR03600****+
380.0	396.0	9.5	382.5	5.0	E5WMR03800****
400.0	424.0	14.0	402.5	8.0	E5WMR04000****
440.0	464.0	14.0	442.5	8.0	E5WMR04400****
450.0	474.0	14.0	452.5	8.0	E5WMR04500****
480.0	504.0	14.0	482.5	8.0	E5WMR04800****
500.0	524.0	14.0	502.5	8.0	E5WMR05000****
560.0	584.0	14.0	562.5	8.0	E5WMR05600****
600.0	624.0	14.0	602.5	8.0	E5WMR06000****
650.0	677.3	16.0	652.5	10.0	E5WMR06500****
680.0	707.3	16.0	682.5	10.0	E5WMR06800****
700.0	727.3	16.0	702.5	10.0	E5WMR07000****
770.0	797.3	16.0	772.5	10.0	E5WMR07700****
785.0	812.3	16.0	787.5	10.0	E5WMR07850****

metric					PART NUMBER
$\varnothing d_1$	$\varnothing D_1$	$L_1$	$\varnothing D_2$	STEP WIDTH	
Tol. f8/h9	Tol. H9	Tol. +0.2	Tol. H11	$L_3$ Min	
800.0	827.3	16.0	802.5	10.0	E5WMR08000****
810.0	837.3	16.0	812.5	10.0	E5WMR08100****
900.0	927.3	16.0	902.5	10.0	E5WMR09000****
950.0	977.3	16.0	952.5	10.0	E5WMR09500****
1000.0	1027.3	16.0	1002.5	10.0	E5WML10000****
1040.0	1067.3	16.0	1042.5	10.0	E5WML10400****
1130.0	1157.3	16.0	1132.5	10.0	E5WML11300****
1200.0	1227.3	16.0	1202.5	10.0	E5WML12000****

+ Fits ISO 6195 Type D grooves. \*Please contact Hallite for sizes, material selection, or seal design.





# E5W

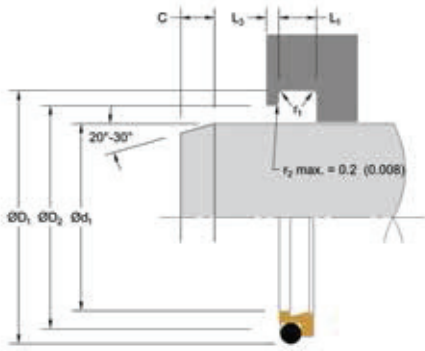
WIPER/EXCLUDER  
Double-Acting

## PART NUMBER RANGE (INCH)\*

inch					
Ød <sub>1</sub>	ØD <sub>1</sub>	L <sub>1</sub>	ØD <sub>2</sub>	STEP WIDTH	PART NUMBER
Tol. f8/h9	Tol. H9	Tol. +.008	Tol. H11	L <sub>3</sub> Min	
1.500	1.846	0.248	1.560	0.079	E5WER01500****
1.562	1.908	0.248	1.623	0.079	E5WER01562****
1.625	1.971	0.248	1.685	0.079	E5WER01625****
1.687	2.033	0.248	1.748	0.079	E5WER01687****
1.750	2.096	0.248	1.810	0.079	E5WER01750****
1.812	2.158	0.248	1.873	0.079	E5WER01812****
1.875	2.221	0.248	1.935	0.079	E5WER01875****
1.937	2.283	0.248	1.998	0.079	E5WER01937****
2.000	2.346	0.248	2.060	0.079	E5WER02000****
2.125	2.471	0.248	2.185	0.079	E5WER02125****
2.250	2.596	0.248	2.310	0.079	E5WER02250****
2.375	2.721	0.248	2.435	0.079	E5WER02375****
2.500	2.846	0.248	2.560	0.079	E5WER02500****
2.625	2.971	0.248	2.685	0.079	E5WER02625****
2.750	3.230	0.319	2.830	0.118	E5WER02750****
2.875	3.355	0.319	2.955	0.118	E5WER02875****
3.000	3.480	0.319	3.080	0.118	E5WER03000****
3.125	3.605	0.319	3.205	0.118	E5WER03125****
3.250	3.730	0.319	3.330	0.118	E5WER03250****
3.375	3.855	0.319	3.455	0.118	E5WER03375****
3.500	3.980	0.319	3.580	0.118	E5WER03500****
3.625	4.105	0.319	3.705	0.118	E5WER03625****
3.750	4.230	0.319	3.830	0.118	E5WER03750****
3.875	4.355	0.319	3.955	0.118	E5WER03875****
4.000	4.480	0.319	4.080	0.118	E5WER04000****
4.125	4.605	0.319	4.205	0.118	E5WER04125****
4.250	4.730	0.319	4.330	0.118	E5WER04250****
4.375	4.855	0.319	4.455	0.118	E5WER04375****

inch					
Ød <sub>1</sub>	ØD <sub>1</sub>	L <sub>1</sub>	ØD <sub>2</sub>	STEP WIDTH	PART NUMBER
Tol. f8/h9	Tol. H9	Tol. +.008	Tol. H11	L <sub>3</sub> Min	
4.500	4.980	0.319	4.580	0.118	E5WER04500****
4.625	5.105	0.319	4.705	0.118	E5WER04625****
4.750	5.230	0.319	4.830	0.118	E5WER04750****
4.875	5.355	0.319	4.955	0.118	E5WER04875****
5.000	5.480	0.319	5.080	0.118	E5WER05000****
5.125	5.605	0.319	5.205	0.118	E5WER05125****
5.250	5.730	0.319	5.330	0.118	E5WER05250****
5.375	5.855	0.319	5.455	0.118	E5WER05375****
5.500	6.130	0.374	5.600	0.118	E5WER05500****
5.625	6.255	0.374	5.725	0.118	E5WER05625****
5.750	6.380	0.374	5.850	0.118	E5WER05750****
6.000	6.630	0.374	6.100	0.118	E5WER06000****
6.250	6.880	0.374	6.350	0.118	E5WER06250****
6.500	7.130	0.374	6.600	0.118	E5WER06500****
6.750	7.380	0.374	6.850	0.118	E5WER06750****
7.000	7.630	0.374	7.100	0.118	E5WER07000****
7.250	7.880	0.374	7.350	0.118	E5WER07250****
7.500	8.130	0.374	7.600	0.118	E5WER07500****
7.750	8.380	0.374	7.850	0.118	E5WER07750****
8.000	8.630	0.374	8.100	0.150	E5WER08000****
8.250	8.880	0.374	8.350	0.150	E5WER08250****
8.500	9.130	0.374	8.600	0.150	E5WER08500****
8.750	9.380	0.374	8.850	0.150	E5WER08750****
9.000	9.630	0.374	9.100	0.150	E5WER09000****
9.250	9.880	0.374	9.350	0.150	E5WER09250****
9.500	10.130	0.374	9.600	0.150	E5WER09500****
9.750	10.380	0.374	9.850	0.150	E5WER09750****
10.000	10.630	0.374	10.100	0.150	E5WER10000****





**PART NUMBER RANGE (INCH)\***

inch					PART NUMBER
Ød <sub>1</sub>	ØD <sub>1</sub>	L <sub>1</sub>	ØD <sub>2</sub>	STEP WIDTH	
Tol. f8/h9	Tol. H9	Tol. +.008	Tol. H11	L <sub>3</sub> Min	
10.500	11.130	0.374	10.600	0.150	E5WER10500****
11.000	11.630	0.374	11.100	0.150	E5WER11000****
11.500	12.130	0.374	11.600	0.150	E5WER11500****
12.000	12.630	0.374	12.100	0.150	E5WER12000****
12.500	13.130	0.374	12.600	0.150	E5WER12500****
13.000	13.630	0.374	13.100	0.150	E5WER13000****
13.500	14.130	0.374	13.600	0.150	E5WER13500****
14.000	14.630	0.374	14.100	0.150	E5WER14000****
14.500	15.130	0.374	14.600	0.150	E5WER14500****
15.000	15.630	0.374	15.100	0.150	E5WER15000****

inch					PART NUMBER
Ød <sub>1</sub>	ØD <sub>1</sub>	L <sub>1</sub>	ØD <sub>2</sub>	STEP WIDTH	
Tol. f8/h9	Tol. H9	Tol. +.008	Tol. H11	L <sub>3</sub> Min	
15.500	16.130	0.374	15.600	0.150	E5WER15500****
16.000	16.945	0.551	16.100	0.150	E5WER16000****
16.500	17.445	0.551	16.600	0.150	E5WER16500****
17.000	17.945	0.551	17.100	0.150	E5WER17000****
17.500	18.445	0.551	17.600	0.150	E5WER17500****
18.000	18.945	0.551	18.100	0.150	E5WER18000****
18.500	19.445	0.551	18.600	0.150	E5WER18500****
19.000	19.945	0.551	19.100	0.150	E5WER19000****
19.500	20.445	0.551	19.600	0.150	E5WER19500****
20.000	20.945	0.551	20.100	0.150	E5WER20000****

\*Please contact Hallite for custom sizes, material selection, or seal design.