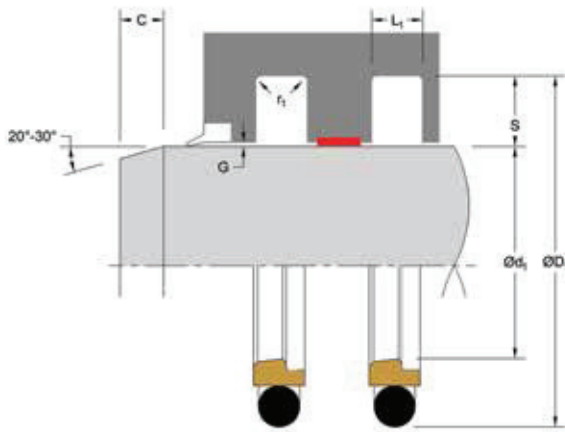




R16

ROD SEAL

Single-Acting

TECHNICAL DETAILS

The Hallite R16 is a single-acting, o-ring energized, low-friction rod seal proven to be ideal in a variety of applications. The seal is made with our high-quality Armorlene® products combined with an elastomer energizer for superior performance. High performance Armorlene® materials, like HLX, provide outstanding wear and extrusion-resistance properties as well as large range of temperature and media compatibility.

Unlike other designs, the R16 can be used in tandem installations to provide optimum sealing in high-speed applications. The R16 is also commonly used as a pressure buffer seal protecting the primary rod seal from high-frequency pressure spikes that might be found in a system. This design also fits standard ISO 7425-2 grooves and is offered in a wide range of metric and inch options.



FEATURES

- Low break-away force
- Design eliminates occurrence of stick-slip
- Design offers excellent dynamic and static sealing properties
- Long wear and high extrusion resistance
- Able to absorb shock loads created from pressure spikes

Part Number Structure

R16MR00500NHLX _

R16	M	R	00500	N	HLX	—
PROFILE DESIGNATION	UNIT OF MEASUREMENT M = Metric E = Inch	APPLICATION Refer to <i>Installation Recommendations</i> and use designator for desired application	ROD DIAMETER Metric = mm X 10 Inch = inches X 1000	ENERGIZER MATERIAL Refer to <i>Energizer Table</i> for desired energizer material	PTFE MATERIAL Refer to <i>Material Table</i> for desired PTFE (face) material	SPECIAL FEATURE Blank = Std profile



OPERATING CONDITIONS

	metric	inch
Maximum Speed	Up to 15.0m/sec	Up to 50.0ft/sec
Temperature Range*	-45 to 200°C	-49 to 392°F
Maximum Dynamic Pressure**	600 bar	8700 psi
Used as Buffer Seal / Pressure Spikes	800 bar	11000 psi

*Dependent upon energizer used (NBR, FKM, etc.). **For pressures above 400 bar (5800 psi), contact Hallite Engineering.

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	
Dynamic Sealing Face Ød₁	0.05 - 0.2	1.3 max	2 max	2 - 8	52 max	78 max	60% - 90%
Static Sealing Face ØD₁	1.6 max	7 max	10 max	63 max	276 max	394 max	
Static Housing Faces L₁	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
NBR - 70A	O-Ring	N	-30 to 100°C	-22 to 212°F
NBR - 70A Low temp.	O-Ring	L	-45 to 80°C	-49 to 176°F
FKM - 75A	O-Ring	F	-10 to 200°C	14 to 392°F
EPDM - 70A	O-Ring	E	-45 to 145°C	-49 to 293°F
HNBR - 70A	O-Ring	H	-25 to 150°C	-13 to 302°F
NBR - 90A	O-Ring	Q	-30 to 100°C	-22 to 212°F
HNBR - 90A	O-Ring	U	-25 to 150°C	-13 to 302°F
No Energizer*	None	X	-	-

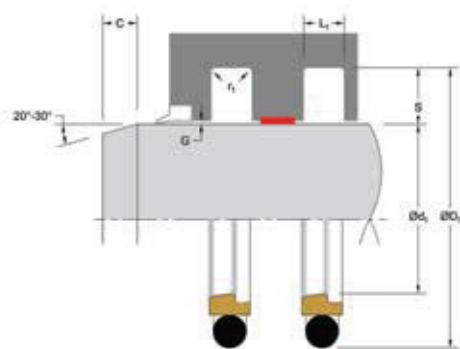
*Seal ratings are based upon capabilities of its matched material components. Hallite cannot rate seal performance when the seal is mixed with other manufacturers' energizers/components.

MATERIALS

MATERIAL FEATURES AND APPLICATIONS	FILLER	MATERIAL DESIGNATOR	COLOR	TEMPERATURE RANGE °C	TEMPERATURE RANGE °F	MAXIMUM DYNAMIC PRESSURE - BAR	MAXIMUM DYNAMIC PRESSURE - PSI
ARMORLENE® HLX - Standard material for hydraulic applications - High compressive strength - Excellent extrusion resistance - Extended wear resistance	Special Bronze Compound	HLX	Gold	-73 to 288°C	-100 to 550°F	500 bar	7250 psi
ARMORLENE® 713 - High compressive strength - Excellent extrusion resistance - Excellent wear properties	60% Bronze Content	713	Bronze	-73 to 288°C	-100 to 550°F	600 bar	8700 psi
ARMORLENE® HCF - Excellent in lubricating and non-lubricating hydraulic fluids (includes water) w/o zinc content - Not recommended for gas sealing applications - Not recommended for electrical conductive fluids	Carbon Fiber Filled	HCF	Gray/Black	-73 to 260°C	-100 to 500°F	250 bar	3600 psi
ARMORLENE® HCV - Recommended for lubricating and non-lubricating fluids - Excellent for high-frequency and short-stroke applications - Not recommended for gas sealing applications - Not recommended for electrical conductive fluids	High Carbon Fiber Filled	HCV	Gray/Black	-73 to 260°C	-100 to 500°F	300 bar	4350 psi
ARMORLENE® 700 - Excellent in all hydraulic fluids - Recommended for hard mating surfaces only - Low friction and no stick-slip	Unfilled	700	White	-184 to 204°C	-300 to 400°F	200 bar	2900 psi
ARMORLENE® 706 - Excellent in lubricating and non-lubricating hydraulic fluids - Excellent extrusion resistance - Good chemical resistance - Good dielectrical properties	15% Glass	706	Off-White	-73 to 260°C	-100 to 500°F	400 bar	5800 psi
ARMORLENE® 702 - Excellent in lubricating and non-lubricating hydraulic fluids - Good low-friction properties - Excellent extrusion resistance - Good chemical resistance	Glass Molybdenum Disulfide	702	Gray	-73 to 260°C	-100 to 500°F	400 bar	5800 psi
ARMORLENE® 711 - Excellent in all lubricating fluids and pneumatic applications - High chemical resistance - Excellent extrusion resistance - Excellent wear properties	25% Carbon/Graphite	711	Black	-73 to 288°C	-100 to 550°F	400 bar	5800 psi
ARMORLENE® HLA - Excellent in all hydraulic fluids - Excellent wear resistance - Excellent low-friction properties - Good extrusion resistance	Special Mineral Compound	HLA	Gray	-73 to 260°C	-100 to 500°F	500 bar	7250 psi
ARMORLENE® 782 - Good abrasion resistance - Recommended for lubricating and non-lubricating fluids - Recommended for high frequency and short-stroke applications - Not recommended for electrical and conductive fluids	Modified Carbon Fiber Filled	782	Black	-73 to 260°C	-100 to 500°F	300 bar	4350 psi
748 - UHMWPE - Excellent impact resistance - Good dielectrical properties - Excellent abrasion resistance - Low coefficient of friction	Standard	748	Translucent	-184 to 82°C	-300 to 180°F	350 bar	5000 psi

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.





Applications with maximum radial clearance that are using nylon, phenolic, or PTFE bearings must ensure proper clearance in accordance with the bearing recommendations to avoid metal-to-metal contact. Please refer to Hallite Type 87, Type 506, and Type 533 Specification Sheets for this information.

INSTALLATION RECOMMENDATIONS

metric

ROD DIAMETER Ød ₁ f8/h9			GROOVE DIAMETER	GROOVE WIDTH	RADIUS	CHAMFER	GROOVE SECTION	RADIAL CLEARANCE G MAX*			O-RING CROSS SECTION
DIAMETER RANGE			ØD ₁ H9	L ₁ + 0.2	R ₁	C	S	Up to 100 bar	Up to 200 bar	Up to 400 bar	O-Ring
Standard Duty Application - R	Light Duty Application - L	Heavy Duty Application - H									
3.0 - 7.9	8.0 - 18.9	-	d ₁ + 4.9	2.2	0.4	2.0	2.45	0.30	0.20	0.15	1.78
8.0 - 18.9	19.0 - 37.9	-	d ₁ + 7.5	3.2	0.6	3.0	3.75	0.40	0.25	0.15	2.62
19.0 - 37.9	38.0 - 199.9	8.0 - 18.9	d ₁ + 11.0	4.2	1.0	4.0	5.50	0.50	0.30	0.20	3.53
38.0 - 199.9	200.0 - 255.9	19.0 - 37.9	d ₁ + 15.5	6.3	1.3	6.0	7.75	0.70	0.40	0.25	5.33
200.0 - 255.9	256.0 - 649.9	38.0 - 199.9	d ₁ + 21.0	8.1	1.8	8.0	10.50	0.80	0.60	0.35	7.00
256.0 - 649.9	650.0 - 1000.0	200.0 - 255.9	d ₁ + 24.5	8.1	2.5	9.0	12.25	0.90	0.70	0.40	6.99
650.0 - 1000.0	-	256.0 - 649.9	d ₁ + 28.0	9.5	3.0	10.0	14.00	1.00	0.80	0.50	6.99
> 1000.0	-	650.0 - 1000.0	d ₁ + 38.0	13.8	3.0	10.0	19.00	1.20	0.90	0.60	12.00

At pressure >400 bar use diameter tolerance f8/H8.

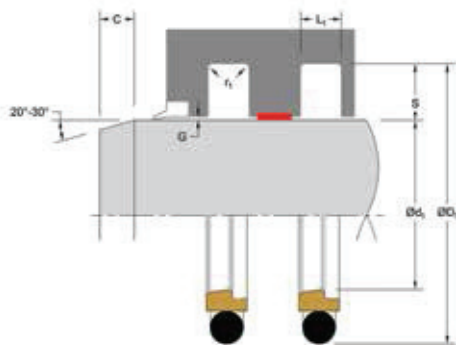
*Radial Clearance G max. = maximum permissible gap all on one side using min. rod diameter and max. clearance diameter.

inch

ROD DIAMETER Ød ₁ f8/h9			GROOVE DIAMETER	GROOVE WIDTH	RADIUS	CHAMFER	GROOVE SECTION	RADIAL CLEARANCE G MAX*			O-RING CROSS SECTION
DIAMETER RANGE			ØD ₁ H9	L ₁ + .008	R ₁	C	S	Up to 1500 PSI	Up to 2900 PSI	Up to 5800 PSI	O-Ring
Standard Duty Application - R	Light Duty Application - L	Heavy Duty Application - H									
0.125 - 0.311	0.312 - 0.749	-	d ₁ + 0.193	0.087	0.016	0.079	0.097	0.012	0.008	0.006	0.070
0.312 - 0.749	0.750 - 1.500	-	d ₁ + 0.287	0.126	0.024	0.118	0.144	0.016	0.010	0.006	0.103
0.750 - 1.500	1.501 - 7.874	0.312 - 0.749	d ₁ + 0.421	0.165	0.039	0.157	0.211	0.020	0.012	0.008	0.139
1.501 - 7.874	7.875 - 9.999	0.750 - 1.500	d ₁ + 0.594	0.248	0.051	0.236	0.297	0.028	0.016	0.010	0.210
7.875 - 9.999	10.000 - 25.499	1.500 - 7.874	d ₁ + 0.807	0.319	0.071	0.315	0.404	0.031	0.024	0.014	0.275
10.000 - 25.499	25.500 - 39.999	7.875 - 9.999	d ₁ + 0.945	0.319	0.071	0.315	0.473	0.035	0.028	0.016	0.275
25.500 - 39.999	> 40.000	10.000 - 25.499	d ₁ + 1.075	0.374	0.098	0.354	0.538	0.039	0.031	0.020	0.331

At pressure >5800 psi use diameter tolerance f8/H8.

*Radial Clearance G max. = maximum permissible gap all on one side using min. rod diameter and max. clearance diameter.



R16

ROD SEAL

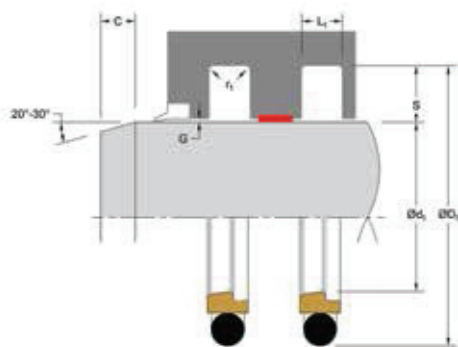
Single-Acting

PART NUMBER RANGE (METRIC)*

metric			PART NUMBER			Ød ₁	ØD ₁	L ₁
Ød ₁	ØD ₁	L ₁						
Tol. f8/h9	Tol. H9	Tol. +0.2				Tol. f8/h9	Tol. H9	Tol. +0.2
8.0	15.5	3.2	R16MR00080****	Also Fits	8.0	15.3	3.2	
8.0	12.9	2.2	R16ML00080****	Also Fits	-	-	-	
10.0	17.5	3.2	R16MR00100****	Also Fits	10.0	17.3	3.2	
10.0	14.9	2.2	R16ML00100****	Also Fits	-	-	-	
12.0	19.5	3.2	R16MR00120****	Also Fits	12.0	19.3	3.2	
12.0	16.9	2.2	R16ML00120****	Also Fits	-	-	-	
14.0	21.5	3.2	R16MR00140****	Also Fits	14.0	21.3	3.2	
14.0	18.9	2.2	R16ML00140****	Also Fits	-	-	-	
15.0	22.5	3.2	R16MR00150****	Also Fits	15.0	22.3	3.2	
15.0	19.9	2.2	R16ML00150****	Also Fits	-	-	-	
16.0	23.5	3.2	R16MR00160****	Also Fits	16.0	23.3	3.2	
16.0	20.9	2.2	R16ML00160****	Also Fits	-	-	-	
18.0	25.5	3.2	R16MR00180****	Also Fits	18.0	25.3	3.2	
18.0	22.9	2.2	R16ML00180****	Also Fits	-	-	-	
20.0	31.0	4.2	R16MR00200****	Also Fits	20.0	30.7	4.2	
20.0	27.5	3.2	R16ML00200****	Also Fits	20.0	27.3	3.2	
22.0	33.0	4.2	R16MR00220****	Also Fits	22.0	32.7	4.2	
22.0	29.5	3.2	R16ML00220****	Also Fits	22.0	29.3	3.2	
25.0	36.0	4.2	R16MR00250****	Also Fits	25.0	35.7	4.2	
25.0	32.5	3.2	R16ML00250****	Also Fits	25.0	32.3	3.2	
28.0	39.0	4.2	R16MR00280****	Also Fits	28.0	38.7	4.2	
28.0	35.5	3.2	R16ML00280****	Also Fits	28.0	35.3	3.2	
30.0	41.0	4.2	R16MR00300****	Also Fits	30.0	40.7	4.2	
30.0	37.5	3.2	R16ML00300****	Also Fits	30.0	37.3	3.2	
32.0	43.0	4.2	R16MR00320****	Also Fits	32.0	42.7	4.2	
32.0	39.5	3.2	R16ML00320****	Also Fits	32.0	39.3	3.2	
35.0	46.0	4.2	R16MR00350****	Also Fits	35.0	45.7	4.2	
35.0	42.5	3.2	R16ML00350****	Also Fits	35.0	42.3	3.2	

metric			PART NUMBER			Ød ₁	ØD ₁	L ₁
Ød ₁	ØD ₁	L ₁						
Tol. f8/h9	Tol. H9	Tol. +0.2				Tol. f8/h9	Tol. H9	Tol. +0.2
36.0	47.0	4.2	R16MR00360****	Also Fits	36.0	46.7	4.2	
36.0	43.5	3.2	R16ML00360****	Also Fits	36.0	43.3	3.2	
40.0	55.5	6.3	R16MR00400****	Also Fits	40.0	55.1	6.3	
40.0	51.0	4.2	R16ML00400****	Also Fits	40.0	50.7	4.2	
43.0	58.5	6.3	R16MR00430****	Also Fits	43.0	58.1	6.3	
42.0	53.0	4.2	R16ML00420****	Also Fits	42.0	52.7	4.2	
45.0	60.5	6.3	R16MR00450****	Also Fits	45.0	60.1	6.3	
45.0	56.0	4.2	R16ML00450****	Also Fits	45.0	55.7	4.2	
50.0	65.5	6.3	R16MR00500****	Also Fits	50.0	65.1	6.3	
50.0	61.0	4.2	R16ML00500****	Also Fits	50.0	60.7	4.2	
55.0	70.5	6.3	R16MR00550****	Also Fits	55.0	70.1	6.3	
55.0	66.0	4.2	R16ML00550****	Also Fits	55.0	65.7	4.2	
56.0	71.5	6.3	R16MR00560****	Also Fits	56.0	71.1	6.3	
56.0	67.0	4.2	R16ML00560****	Also Fits	56.0	66.7	4.2	
56.0	77.0	8.1	R16MH00560****	Also Fits	56.0	76.5	8.1	
60.0	75.5	6.3	R16MR00600****	Also Fits	60.0	75.1	6.3	
60.0	71.0	4.2	R16ML00600****	Also Fits	60.0	70.7	4.2	
60.0	81.0	8.1	R16MH00600****	Also Fits	60.0	80.5	8.1	
63.0	78.5	6.3	R16MR00630****	Also Fits	63.0	78.1	6.3	
63.0	74.0	4.2	R16ML00630****	Also Fits	63.0	73.7	4.2	
63.0	84.0	8.1	R16MH00630****	Also Fits	63.0	83.5	8.1	
65.0	80.5	6.3	R16MR00650****	Also Fits	65.0	80.1	6.3	
65.0	76.0	4.2	R16ML00650****	Also Fits	65.0	75.7	4.2	
65.0	86.0	8.1	R16MH00650****	Also Fits	65.0	85.5	8.1	
70.0	85.5	6.3	R16MR00700****	Also Fits	70.0	85.1	6.3	
70.0	81.0	4.2	R16ML00700****	Also Fits	70.0	80.7	4.2	
70.0	91.0	8.1	R16MH00700****	Also Fits	70.0	90.5	8.1	
75.0	90.5	6.3	R16MR00750****	Also Fits	75.0	90.1	6.3	

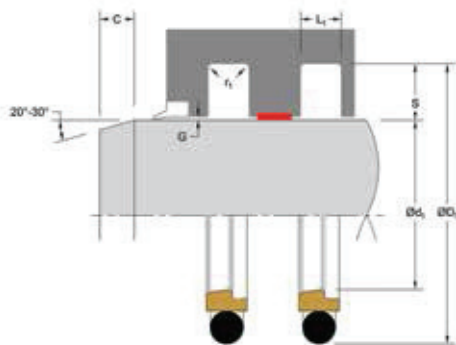




PART NUMBER RANGE (METRIC)*

metric			PART NUMBER			PART NUMBER		
Ød ₁	ØD ₁	L ₁						
Tol. f8/h9	Tol. H9	Tol. +0.2						
75.0	96.0	8.1	R16MH00750****	Also Fits	75.0	95.5	8.1	
78.0	93.5	6.3	R16MR00780****	Also Fits	78.0	93.1	6.3	
78.0	99.0	8.1	R16MH00780****	Also Fits	78.0	98.5	8.1	
80.0	95.5	6.3	R16MR00800****	Also Fits	80.0	95.1	6.3	
80.0	101.0	8.1	R16MH00800****	Also Fits	80.0	100.5	8.1	
85.0	100.5	6.3	R16MR00850****	Also Fits	85.0	100.1	6.3	
85.0	106.0	8.1	R16MH00850****	Also Fits	85.0	105.5	8.1	
90.0	105.5	6.3	R16MR00900****	Also Fits	90.0	105.1	6.3	
90.0	111.0	8.1	R16MH00900****	Also Fits	90.0	110.5	8.1	
95.0	110.5	6.3	R16MR00950****	Also Fits	95.0	110.1	6.3	
95.0	116.0	8.1	R16MH00950****	Also Fits	95.0	115.5	8.1	
97.0	112.5	6.3	R16MR00970****	Also Fits	97.0	112.1	6.3	
97.0	118.0	8.1	R16MH00970****	Also Fits	97.0	117.5	8.1	
100.0	115.5	6.3	R16MR01000****	Also Fits	100.0	115.1	6.3	
100.0	121.0	8.1	R16MH01000****	Also Fits	100.0	120.5	8.1	
105.0	120.5	6.3	R16MR01050****	Also Fits	105.0	120.1	6.3	
105.0	126.0	8.1	R16MH01050****	Also Fits	105.0	125.5	8.1	
110.0	125.5	6.3	R16MR01100****	Also Fits	110.0	125.1	6.3	
110.0	131.0	8.1	R16MH01100****	Also Fits	110.0	130.5	8.1	
115.0	130.5	6.3	R16MR01150****	Also Fits	115.0	130.1	6.3	
115.0	136.0	8.1	R16MH01150****	Also Fits	115.0	135.5	8.1	
120.0	135.5	6.3	R16MR01200****	Also Fits	120.0	135.1	6.3	
120.0	141.0	8.1	R16MH01200****	Also Fits	120.0	140.5	8.1	
125.0	140.5	6.3	R16MR01250****	Also Fits	125.0	140.1	6.3	
125.0	146.0	8.1	R16MH01250****	Also Fits	125.0	145.5	8.1	
130.0	145.5	6.3	R16MR01300****	Also Fits	130.0	145.1	6.3	
130.0	151.0	8.1	R16MH01300****	Also Fits	130.0	150.5	8.1	
135.0	150.5	6.3	R16MR01350****	Also Fits	135.0	150.1	6.3	

metric			PART NUMBER			PART NUMBER		
Ød ₁	ØD ₁	L ₁						
Tol. f8/h9	Tol. H9	Tol. +0.2						
135.0	156.0	8.1	R16MH01350****	Also Fits	135.0	155.5	8.1	
140.0	155.5	6.3	R16MR01400****	Also Fits	140.0	155.1	6.3	
140.0	161.0	8.1	R16MH01400****	Also Fits	140.0	160.5	8.1	
145.0	160.5	6.3	R16MR01450****	Also Fits	145.0	160.1	6.3	
145.0	166.0	8.1	R16MH01450****	Also Fits	145.0	165.5	8.1	
150.0	165.5	6.3	R16MR01500****	Also Fits	150.0	165.1	6.3	
150.0	171.0	8.1	R16MH01500****	Also Fits	150.0	170.5	8.1	
155.0	170.5	6.3	R16MR01550****	Also Fits	155.0	170.1	6.3	
155.0	176.0	8.1	R16MH01550****	Also Fits	155.0	175.5	8.1	
160.0	175.5	6.3	R16MR01600****	Also Fits	160.0	175.1	6.3	
160.0	181.0	8.1	R16MH01600****	Also Fits	160.0	180.5	8.1	
170.0	185.5	6.3	R16MR01700****	Also Fits	170.0	185.1	6.3	
170.0	191.0	8.1	R16MH01700****	Also Fits	170.0	190.5	8.1	
180.0	195.5	6.3	R16MR01800****	Also Fits	180.0	195.1	6.3	
180.0	201.0	8.1	R16MH01800****	Also Fits	180.0	200.5	8.1	
190.0	205.5	6.3	R16MR01900****	Also Fits	190.0	205.1	6.3	
190.0	211.0	8.1	R16MH01900****	Also Fits	190.0	210.5	8.1	
200.0	215.5	6.3	R16ML02000****	Also Fits	200.0	215.1	6.3	
200.0	221.0	8.1	R16MR02000****	Also Fits	200.0	220.5	8.1	
200.0	224.5	8.1	R16MH02000****	Also Fits	200.0	224.0	8.1	
210.0	231.0	8.1	R16MR02100****	Also Fits	210.0	230.5	8.1	
210.0	234.5	8.1	R16MH02100****	Also Fits	210.0	234.0	8.1	
220.0	241.0	8.1	R16MR02200****	Also Fits	220.0	240.5	8.1	
220.0	244.5	8.1	R16MH02200****	Also Fits	220.0	244.0	8.1	
225.0	246.0	8.1	R16MR02250****	Also Fits	225.0	245.5	8.1	
225.0	249.5	8.1	R16MH02250****	Also Fits	225.0	249.0	8.1	
240.0	261.0	8.1	R16MR02400****	Also Fits	240.0	260.5	8.1	
240.0	264.5	8.1	R16MH02400****	Also Fits	240.0	264.0	8.1	



R16

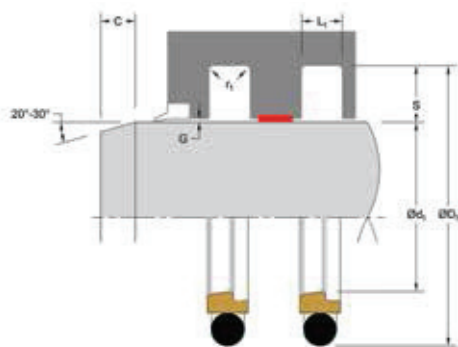
ROD SEAL
Single-Acting

PART NUMBER RANGE (METRIC)*

metric			PART NUMBER		metric		
Ød ₁	ØD ₁	L ₁			Ød ₁	ØD ₁	L ₁
Tol. f8/h9	Tol. H9	Tol. +0.2			Tol. f8/h9	Tol. H9	Tol. +0.2
250.0	271.0	8.1	R16MR02500****	Also Fits	250.0	270.5	8.1
250.0	274.5	8.1	R16MH02500****	Also Fits	250.0	274.0	8.1
260.0	284.5	8.1	R16MR02600****	Also Fits	260.0	284.0	8.1
260.0	288.0	9.5	R16MH02600****	Also Fits	260.0	287.3	9.5
270.0	294.5	8.1	R16MR02700****	Also Fits	270.0	294.0	8.1
270.0	298.0	9.5	R16MH02700****	Also Fits	270.0	297.3	9.5
280.0	304.5	8.1	R16MR02800****	Also Fits	280.0	304.0	8.1
280.0	308.0	9.5	R16MH02800****	Also Fits	280.0	307.3	9.5
290.0	314.5	8.1	R16MR02900****	Also Fits	290.0	314.0	8.1
290.0	318.0	9.5	R16MH02900****	Also Fits	290.0	317.3	9.5
300.0	324.5	8.1	R16MR03000****	Also Fits	300.0	324.0	8.1
300.0	328.0	9.5	R16MH03000****	Also Fits	300.0	327.3	9.5
320.0	344.5	8.1	R16MR03200****	Also Fits	320.0	344.0	8.1
320.0	348.0	9.5	R16MH03200****	Also Fits	320.0	347.3	9.5
330.0	354.5	8.1	R16MR03300****	Also Fits	330.0	354.0	8.1
330.0	358.0	9.5	R16MH03300****	Also Fits	330.0	357.3	9.5
340.0	364.5	8.1	R16MR03400****	Also Fits	340.0	364.0	8.1
340.0	368.0	9.5	R16MH03400****	Also Fits	340.0	367.3	9.5
350.0	374.5	8.1	R16MR03500****	Also Fits	350.0	374.0	8.1
350.0	378.0	9.5	R16MH03500****	Also Fits	350.0	377.3	9.5
360.0	384.5	8.1	R16MR03600****	Also Fits	360.0	384.0	8.1
360.0	388.0	9.5	R16MH03600****	Also Fits	360.0	387.3	9.5
370.0	394.5	8.1	R16MR03700****	Also Fits	370.0	394.0	8.1
370.0	398.0	9.5	R16MH03700****	Also Fits	370.0	397.3	9.5
380.0	404.5	8.1	R16MR03800****	Also Fits	380.0	404.0	8.1
380.0	408.0	9.5	R16MH03800****	Also Fits	380.0	407.3	9.5
390.0	414.5	8.1	R16MR03900****	Also Fits	390.0	414.0	8.1
390.0	418.0	9.5	R16MH03900****	Also Fits	390.0	417.3	9.5

metric			PART NUMBER		metric		
Ød ₁	ØD ₁	L ₁			Ød ₁	ØD ₁	L ₁
Tol. f8/h9	Tol. H9	Tol. +0.2			Tol. f8/h9	Tol. H9	Tol. +0.2
400.0	424.5	8.1	R16MR04000****	Also Fits	400.0	424.0	8.1
400.0	428.0	9.5	R16MH04000****	Also Fits	400.0	427.3	9.5
410.0	434.5	8.1	R16MR04100****	Also Fits	410.0	437.3	9.5
410.0	438.0	9.5	R16MH04100****	Also Fits	410.0	437.3	9.5
420.0	444.5	8.1	R16MR04200****	Also Fits	420.0	444.0	8.1
420.0	448.0	9.5	R16MH04200****	Also Fits	420.0	447.3	9.5
450.0	474.5	8.1	R16MR04500****	Also Fits	450.0	474.0	8.1
450.0	478.0	9.5	R16MH04500****	Also Fits	450.0	477.3	9.5
460.0	484.5	8.1	R16MR04600****	Also Fits	460.0	484.0	8.1
460.0	488.0	9.5	R16MH04600****	Also Fits	460.0	487.3	9.5
480.0	504.5	8.1	R16MR04800****	Also Fits	480.0	504.0	8.1
480.0	508.0	9.5	R16MH04800****	Also Fits	480.0	507.3	9.5
500.0	524.5	8.1	R16MR05000****	Also Fits	500.0	524.0	8.1
500.0	528.0	9.5	R16MH05000****	Also Fits	500.0	527.3	9.5
520.0	544.5	8.1	R16MR05200****	Also Fits	520.0	544.0	8.1
520.0	548.0	9.5	R16MH05200****	Also Fits	520.0	547.3	9.5
550.0	574.5	8.1	R16MR05500****	Also Fits	550.0	574.0	8.1
550.0	578.0	9.5	R16MH05500****	Also Fits	550.0	577.3	9.5
560.0	584.5	8.1	R16MR05600****	Also Fits	560.0	584.0	8.1
560.0	588.0	9.5	R16MH05600****	Also Fits	560.0	587.3	9.5
590.0	614.5	8.1	R16MR05900****	Also Fits	590.0	614.0	8.1
590.0	618.0	9.5	R16MH05900****	Also Fits	590.0	617.3	9.5
600.0	624.5	8.1	R16MR06000****	Also Fits	600.0	624.0	8.1
600.0	628.0	9.5	R16MH06000****	Also Fits	600.0	627.3	9.5
625.0	649.5	8.1	R16MR06250****	Also Fits	625.0	649.0	8.1
625.0	653.0	9.5	R16MH06250****	Also Fits	625.0	652.3	9.5
650.0	678.0	9.5	R16MR06500****	Also Fits	650.0	677.3	9.5
700.0	728.0	9.5	R16MR07000****	Also Fits	700.0	727.3	9.5





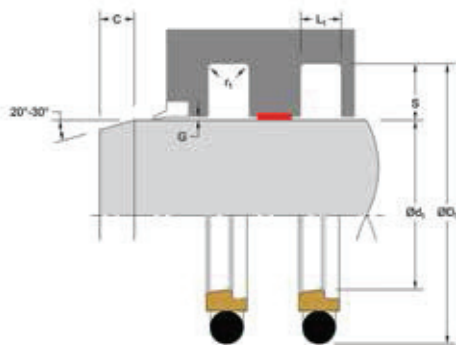
PART NUMBER RANGE (METRIC)*

metric							
$\varnothing d_1$	$\varnothing D_1$	L_1	PART NUMBER		$\varnothing d_1$	$\varnothing D_1$	L_1
Tol. f8/h9	Tol. H9	Tol. +0.2			Tol. f8/h9	Tol. H9	Tol. +0.2
750.0	778.0	9.5	R16MR07500****	Also Fits	750.0	777.3	9.5
800.0	828.0	9.5	R16MR08000****	Also Fits	800.0	827.3	9.5
850.0	878.0	9.5	R16MR08500****	Also Fits	850.0	877.3	9.5
900.0	928.0	9.5	R16MR09000****	Also Fits	900.0	927.3	9.5
950.0	978.0	9.5	R16MR09500****	Also Fits	950.0	977.3	9.5
1000.0	1038.0	13.8	R16MR10000****	Also Fits	-	-	-
1050.0	1088.0	13.8	R16MR10500****	Also Fits	-	-	-
1100.0	1138.0	13.8	R16MR11000****	Also Fits	-	-	-
1150.0	1188.0	13.8	R16MR11500****	Also Fits	-	-	-
1200.0	1238.0	13.8	R16MR12000****	Also Fits	-	-	-
1250.0	1288.0	13.8	R16MR12500****	Also Fits	-	-	-
1300.0	1338.0	13.8	R16MR13000****	Also Fits	-	-	-
1350.0	1388.0	13.8	R16MR13500****	Also Fits	-	-	-

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

PART NUMBER RANGE (INCH)*

inch							
$\varnothing d_1$	$\varnothing D_1$	L_1	PART NUMBER		$\varnothing d_1$	$\varnothing D_1$	L_1
Tol. f8/h9	Tol. H9	Tol. +0.008			Tol. f8/h9	Tol. H9	Tol. +0.008
0.312	0.599	0.126	R16ER00312****		0.312	0.599	0.126
0.312	0.733	0.165	R16EH00312****		0.312	0.733	0.165
0.312	0.505	0.087	R16EL00312****		0.312	0.505	0.087
0.375	0.662	0.126	R16ER00375****		0.375	0.662	0.126
0.375	0.796	0.165	R16EH00375****		0.375	0.796	0.165
0.375	0.568	0.087	R16EL00375****		0.375	0.568	0.087
0.437	0.724	0.126	R16ER00437****		0.437	0.724	0.126
0.437	0.858	0.165	R16EH00437****		0.437	0.858	0.165
0.437	0.630	0.087	R16EL00437****		0.437	0.630	0.087
0.500	0.787	0.126	R16ER00500****		0.500	0.787	0.126
0.500	0.921	0.165	R16EH00500****		0.500	0.921	0.165
0.500	0.693	0.087	R16EL00500****		0.500	0.693	0.087
0.562	0.850	0.126	R16ER00562****		0.562	0.850	0.126
0.562	0.983	0.165	R16EH00562****		0.562	0.983	0.165
0.562	0.755	0.087	R16EL00562****		0.562	0.755	0.087
0.625	0.912	0.126	R16ER00625****		0.625	0.912	0.126
0.625	1.046	0.165	R16EH00625****		0.625	1.046	0.165
0.625	0.818	0.087	R16EL00625****		0.625	0.818	0.087
0.687	0.975	0.126	R16ER00687****		0.687	0.975	0.126
0.687	1.108	0.165	R16EH00687****		0.687	1.108	0.165
0.687	0.800	0.087	R16EL00687****		0.687	0.800	0.087
0.750	1.171	0.165	R16ER00750****		0.750	1.171	0.165
0.750	1.344	0.248	R16EH00750****		0.750	1.344	0.248
0.750	1.037	0.126	R16EL00750****		0.750	1.037	0.126
0.812	1.234	0.165	R16ER00812****		0.812	1.234	0.165
0.812	1.406	0.248	R16EH00812****		0.812	1.406	0.248
0.812	1.099	0.126	R16EL00812****		0.812	1.099	0.126
0.875	1.296	0.165	R16ER00875****		0.875	1.296	0.165



R16

ROD SEAL

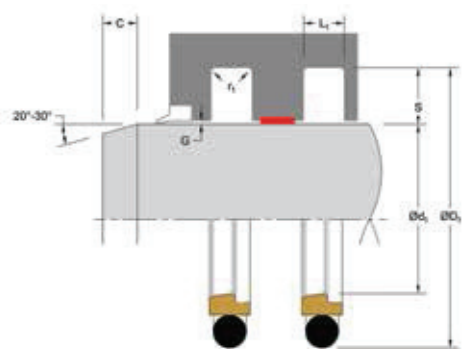
Single-Acting

PART NUMBER RANGE (INCH)*

inch			PART NUMBER
Ød ₁	ØD ₁	L ₁	
Tol. f8/h9	Tol. H9	Tol. +0.008	
0.875	1.469	0.248	R16EH00875****
0.875	1.162	0.126	R16EL00875****
0.937	1.359	0.165	R16ER00937****
0.937	1.531	0.248	R16EH00937****
0.937	1.224	0.126	R16EL00937****
1.000	1.421	0.165	R16ER01000****
1.000	1.594	0.248	R16EH01000****
1.000	1.287	0.126	R16EL01000****
1.062	1.484	0.165	R16ER01062****
1.062	1.656	0.248	R16EH01062****
1.062	1.349	0.126	R16EL01062****
1.125	1.546	0.165	R16ER01125****
1.125	1.719	0.248	R16EH01125****
1.125	1.412	0.126	R16EL01125****
1.187	1.608	0.165	R16ER01187****
1.187	1.781	0.248	R16EH01187****
1.187	1.474	0.126	R16EL01187****
1.250	1.671	0.165	R16ER01250****
1.250	1.844	0.248	R16EH01250****
1.250	1.537	0.126	R16EL01250****
1.312	1.733	0.165	R16ER01312****
1.312	1.906	0.248	R16EH01312****
1.312	1.599	0.126	R16EL01312****
1.375	1.796	0.165	R16ER01375****
1.375	1.969	0.248	R16EH01375****
1.375	1.662	0.126	R16EL01375****
1.437	1.858	0.165	R16ER01437****
1.437	2.031	0.248	R16EH01437****

inch			PART NUMBER
Ød ₁	ØD ₁	L ₁	
Tol. f8/h9	Tol. H9	Tol. +0.008	
1.437	1.724	0.126	R16EL01437****
1.500	2.094	0.248	R16EH01500****
1.500	1.787	0.126	R16EL01500****
1.500	1.921	0.165	R16ER01500****
1.562	2.156	0.248	R16ER01562****
1.562	2.369	0.319	R16EH01562****
1.562	1.983	0.165	R16EL01562****
1.625	2.219	0.248	R16ER01625****
1.625	2.432	0.319	R16EH01625****
1.625	2.046	0.165	R16EL01625****
1.687	2.281	0.248	R16ER01687****
1.687	2.494	0.319	R16EH01687****
1.687	2.108	0.165	R16EL01687****
1.750	2.344	0.248	R16ER01750****
1.750	2.557	0.319	R16EH01750****
1.750	2.171	0.165	R16EL01750****
1.812	2.406	0.248	R16ER01812****
1.812	2.619	0.319	R16EH01812****
1.812	2.233	0.165	R16EL01812****
1.875	2.469	0.248	R16ER01875****
1.875	2.682	0.319	R16EH01875****
1.875	2.296	0.165	R16EL01875****
1.937	2.531	0.248	R16ER01937****
1.937	2.744	0.319	R16EH01937****
1.937	2.358	0.165	R16EL01937****
2.000	2.594	0.248	R16ER02000****
2.000	2.807	0.319	R16EH02000****
2.000	2.421	0.165	R16EL02000****

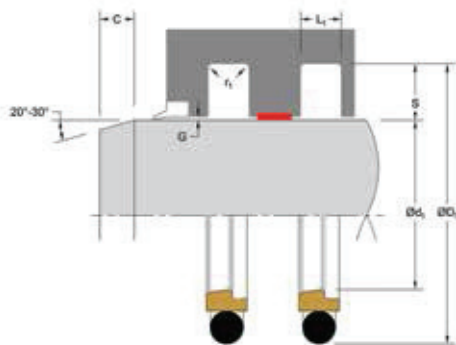




PART NUMBER RANGE (INCH)*

inch			PART NUMBER
Ød ₁	ØD ₁	L ₁	
Tol. f8/h9	Tol. H9	Tol. +0.008	
2.125	2.719	0.248	R16ER02125****
2.125	2.932	0.319	R16EH02125****
2.125	2.546	0.165	R16EL02125****
2.250	2.844	0.248	R16ER02250****
2.250	3.057	0.319	R16EH02250****
2.250	2.671	0.165	R16EL02250****
2.375	2.969	0.248	R16ER02375****
2.375	3.182	0.319	R16EH02375****
2.375	2.796	0.165	R16EL02375****
2.500	3.094	0.248	R16ER02500****
2.500	3.307	0.319	R16EH02500****
2.500	2.921	0.165	R16EL02500****
2.625	3.219	0.248	R16ER02625****
2.625	3.432	0.319	R16EH02625****
2.625	3.046	0.165	R16EL02625****
2.750	3.344	0.248	R16ER02750****
2.750	3.557	0.319	R16EH02750****
2.750	3.171	0.165	R16EL02750****
2.875	3.469	0.248	R16ER02875****
2.875	3.682	0.319	R16EH02875****
2.875	3.296	0.165	R16EL02875****
3.000	3.594	0.248	R16ER03000****
3.000	3.807	0.319	R16EH03000****
3.000	3.421	0.165	R16EL03000****
3.125	3.719	0.248	R16ER03125****
3.125	3.932	0.319	R16EH03125****
3.125	3.546	0.165	R16EL03125****
3.250	3.844	0.248	R16ER03250****

inch			PART NUMBER
Ød ₁	ØD ₁	L ₁	
Tol. f8/h9	Tol. H9	Tol. +0.008	
3.25	4.057	0.319	R16EH03250****
3.25	3.671	0.165	R16EL03250****
3.375	3.969	0.248	R16ER03375****
3.375	4.182	0.319	R16EH03375****
3.375	3.796	0.165	R16EL03375****
3.500	4.094	0.248	R16ER03500****
3.500	4.307	0.319	R16EH03500****
3.500	3.921	0.165	R16EL03500****
3.625	4.219	0.248	R16ER03625****
3.625	4.432	0.319	R16EH03625****
3.625	4.046	0.165	R16EL03625****
3.750	4.344	0.248	R16ER03750****
3.750	4.557	0.319	R16EH03750****
3.750	4.171	0.165	R16EL03750****
3.875	4.469	0.248	R16ER03875****
3.875	4.682	0.319	R16EH03875****
3.875	4.296	0.165	R16EL03875****
4.000	4.594	0.248	R16ER04000****
4.000	4.807	0.319	R16EH04000****
4.000	4.421	0.165	R16EL04000****
4.125	4.719	0.248	R16ER04125****
4.125	4.932	0.319	R16EH04125****
4.125	4.546	0.165	R16EL04125****
4.250	4.844	0.248	R16ER04250****
4.250	5.057	0.319	R16EH04250****
4.250	4.671	0.165	R16EL04250****
4.375	4.969	0.248	R16ER04375****
4.375	5.182	0.319	R16EH04375****



R16

ROD SEAL

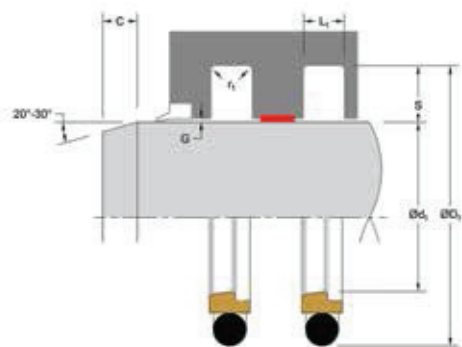
Single-Acting

PART NUMBER RANGE (INCH)*

inch			PART NUMBER
Ød ₁	ØD ₁	L ₁	
Tol. f8/h9	Tol. H9	Tol. +0.008	
4.375	4.796	0.165	R16EL04375****
4.500	5.094	0.248	R16ER04500****
4.500	5.307	0.319	R16EH04500****
4.500	4.921	0.165	R16EL04500****
4.625	5.219	0.248	R16ER04625****
4.625	5.432	0.319	R16EH04625****
4.625	5.046	0.165	R16EL04625****
4.750	5.344	0.248	R16ER04750****
4.750	5.557	0.319	R16EH04750****
4.750	5.171	0.165	R16EL04750****
4.875	5.469	0.248	R16ER04875****
4.875	5.682	0.319	R16EH04875****
4.875	5.296	0.165	R16EL04875****
5.000	5.594	0.248	R16ER05000****
5.000	5.807	0.319	R16EH05000****
5.000	5.421	0.165	R16EL05000****
5.125	5.719	0.248	R16ER05125****
5.125	5.932	0.319	R16EH05125****
5.125	5.546	0.165	R16EL05125****
5.250	5.844	0.248	R16ER05250****
5.250	6.057	0.319	R16EH05250****
5.250	5.671	0.165	R16EL05250****
5.375	5.969	0.248	R16ER05375****
5.375	6.182	0.319	R16EH05375****
5.375	5.796	0.165	R16EL05375****
5.500	6.094	0.248	R16ER05500****
5.500	6.307	0.319	R16EH05500****
5.500	5.921	0.165	R16EL05500****

inch			PART NUMBER
Ød ₁	ØD ₁	L ₁	
Tol. f8/h9	Tol. H9	Tol. +0.008	
5.625	6.219	0.248	R16ER05625****
5.625	6.432	0.319	R16EH05625****
5.625	6.046	0.165	R16EL05625****
5.750	6.344	0.248	R16ER05750****
5.750	6.557	0.319	R16EH05750****
5.750	6.171	0.165	R16EL05750****
6.000	6.594	0.248	R16ER06000****
6.000	6.807	0.319	R16EH06000****
6.000	6.421	0.165	R16EL06000****
6.250	6.844	0.248	R16ER06250****
6.250	7.057	0.319	R16EH06250****
6.250	6.671	0.165	R16EL06250****
6.500	7.094	0.248	R16ER06500****
6.500	7.307	0.319	R16EH06500****
6.500	6.921	0.165	R16EL06500****
6.750	7.344	0.248	R16ER06750****
6.750	7.557	0.319	R16EH06750****
6.750	7.171	0.165	R16EL06750****
7.000	7.594	0.248	R16ER07000****
7.000	7.807	0.319	R16EH07000****
7.000	7.421	0.165	R16EL07000****
7.250	7.844	0.248	R16ER07250****
7.250	8.057	0.319	R16EH07250****
7.250	7.671	0.165	R16EL07250****
7.500	8.094	0.248	R16ER07500****
7.500	8.307	0.319	R16EH07500****
7.500	7.921	0.165	R16EL07500****
7.750	8.344	0.248	R16ER07750****





PART NUMBER RANGE (INCH)*

inch			PART NUMBER
Ød ₁	ØD ₁	L ₁	
Tol. f8/h9	Tol. H9	Tol. +0.008	
7.75	8.557	0.319	R16EH07750****
7.75	8.171	0.165	R16EL07750****
8.00	8.807	0.319	R16ER08000****
8.00	8.945	0.319	R16EH08000****
8.00	8.594	0.248	R16EL08000****
8.25	9.057	0.319	R16ER08250****
8.25	9.195	0.319	R16EH08250****
8.25	8.844	0.248	R16EL08250****
8.5	9.307	0.319	R16ER08500****
8.5	9.445	0.319	R16EH08500****
8.5	9.094	0.248	R16EL08500****
8.75	9.557	0.319	R16ER08750****
8.75	9.695	0.319	R16EH08750****
8.75	9.344	0.248	R16EL08750****
9.00	9.807	0.319	R16ER09000****
9.00	9.945	0.319	R16EH09000****
9.00	9.594	0.248	R16EL09000****
9.25	10.057	0.319	R16ER09250****
9.250	10.195	0.319	R16EH09250****
9.250	9.844	0.248	R16EL09250****
9.500	10.307	0.319	R16ER09500****
9.500	10.445	0.319	R16EH09500****
9.500	10.094	0.248	R16EL09500****
9.750	10.557	0.319	R16ER09750****
9.750	10.695	0.319	R16EH09750****
9.750	10.344	0.248	R16EL09750****
10.000	10.945	0.319	R16ER10000****
10.000	11.075	0.374	R16EH10000****

inch			PART NUMBER
Ød ₁	ØD ₁	L ₁	
Tol. f8/h9	Tol. H9	Tol. +0.008	
10.00	10.807	0.319	R16EL10000****
10.5	11.307	0.319	R16EL10500****
10.5	11.445	0.319	R16ER10500****
10.5	11.575	0.374	R16EH10500****
11.000	11.807	0.319	R16EL11000****
11.000	11.945	0.319	R16ER11000****
11.000	12.075	0.374	R16EH11000****
11.500	12.307	0.319	R16EL11500****
11.500	12.445	0.319	R16ER11500****
11.500	12.575	0.374	R16EH11500****
12.000	12.945	0.319	R16ER12000****
12.500	13.445	0.319	R16ER12500****
12.500	13.575	0.374	R16EH12500****
13.000	13.945	0.319	R16ER13000****
13.500	14.445	0.319	R16ER13500****
14.000	14.945	0.319	R16ER14000****
14.500	15.445	0.319	R16ER14500****
15.000	15.945	0.319	R16ER15000****
15.500	16.445	0.319	R16ER15500****
16.000	16.945	0.319	R16ER16000****
16.500	17.445	0.319	R16ER16500****
17.000	17.945	0.319	R16ER17000****
17.500	18.445	0.319	R16ER17500****
18.000	18.945	0.319	R16ER18000****
18.500	19.445	0.319	R16ER18500****
19.000	19.945	0.319	R16ER19000****
19.500	20.445	0.319	R16ER19500****
20.000	20.945	0.319	R16ER20000****