INTERNAL – NOTCHED

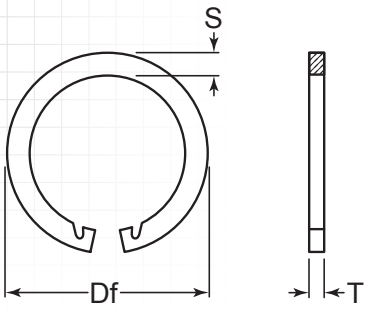
HOW TO IDENTIFY

1. Verify notched cut circular design and appearance.
2. Measure the housing diameter (Dh).
3. Measure the ring free outside diameter (Df).
4. Measure the thickness (T).
5. Measure the radial wall (S).
6. Find the part in the chart.

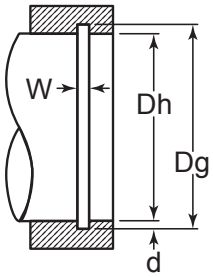
DESCRIPTION

Once installed in the groove of a housing/bore, the portion of the ring protruding from the groove holds an assembly in place.

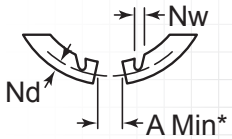




Ring Dimensions



View with Groove



*Ring Installed in Groove

Item #	Housing Diameter	Groove Size				Ring Size & Weight							Allowable Static Thrust Load
		Diameter		Width	Depth	Free Diameter		Thickness	Section	Gap	Notch Dimension Depth	Notch Dimension Width	
	Dh	Dg	Tol.	W	d	Df	Tol.	T +/-.002	S +/-.005	A Min.*	Nd +0/-.030	Nw Ref.	lbs.
UHO-175	1.750" (1-3/4)	1.858"	+/-.005"	.068" +.004/-.000"	.054"	1.878"	+.070/-.000"	.062"	.156"	.370"	.078"	.093"	4,100
UHO-181	1.812" (1-13/16)	1.922"	+/-.005"		.055"	1.942"	+.070/-.000"	.062"	.156"	.370"	.078"	.093"	4,280
UHO-185	1.850"	1.962"	+/-.005"		.056"	1.982"	+.070/-.000"	.062"	.156"	.370"	.078"	.093"	4,380
UHO-187	1.875" (1-7/8)	1.989"	+/-.005"		.057"	2.014"	+.070/-.000"	.062"	.156"	.400"	.078"	.093"	4,650
UHO-193	1.938" (1-15/16)	2.056"	+/-.005"		.059"	2.081"	+.070/-.000"	.062"	.156"	.400"	.078"	.093"	5,000
UHO-200	2.000" (2)	2.122"	+/-.005"		.061"	2.147"	+.070/-.000"	.062"	.156"	.420"	.078"	.093"	5,350
UHO-206	2.047"	2.171"	+/-.006"	.086" +.005/-.000"	.062"	2.201"	+.070/-.000"	.078"	.171"	.420"	.085"	.093"	6,490
	2.062" (2-1/16)	2.186"	+/-.006"		.062"	2.201"	+.070/-.000"	.078"	.171"	.450"	.085"	.093"	6,490
UHO-212	2.125" (2-1/8)	2.251"	+/-.006"		.063"	2.271"	+.070/-.000"	.078"	.171"	.450"	.085"	.093"	6,810
UHO-218	2.165"	2.295"	+/-.006"		.065"	2.338"	+.070/-.000"	.078"	.171"	.430"	.085"	.093"	7,240
	2.188" (2-3/16)	2.318"	+/-.006"		.065"	2.338"	+.070/-.000"	.078"	.171"	.470"	.085"	.093"	7,240
UHO-225	2.250" (2-1/4)	2.382"	+/-.006"		.066"	2.402"	+.070/-.000"	.078"	.171"	.450"	.085"	.093"	7,560
UHO-231	2.312" (2-5/16)	2.450"	+/-.006"		.069"	2.470"	+.070/-.000"	.078"	.171"	.450"	.085"	.093"	8,120
UHO-237	2.375" (2-3/8)	2.517"	+/-.006"		.071"	2.537"	+.070/-.000"	.078"	.188"	.470"	.093"	.093"	8,580
UHO-244	2.440" (2-7/16)	2.584"	+/-.006"		.072"	2.604"	+.070/-.000"	.078"	.188"	.470"	.093"	.093"	8,940
UHO-250	2.500" (2-1/2)	2.648"	+/-.006"		.074"	2.673"	+.080/-.000"	.078"	.188"	.470"	.093"	.093"	9,410
UHO-253	2.531" (2-17/32)	2.681"	+/-.006"		.075"	2.706"	+.080/-.000"	.078"	.188"	.470"	.093"	.093"	9,660
UHO-256	2.562" (2-9/16)	2.714"	+/-.006"	.103" +.005/-.000"	.076"	2.739"	+.080/-.000"	.093"	.188"	.530"	.093"	.093"	9,910
UHO-262	2.625" (2-5/8)	2.781"	+/-.006"		.078"	2.806"	+.080/-.000"	.093"	.188"	.530"	.093"	.093"	10,420
UHO-268	2.677"	2.837"	+/-.006"		.080"	2.868"	+.080/-.000"	.093"	.188"	.530"	.093"	.093"	10,900
	2.688" (2-11/16)	2.848"	+/-.006"		.080"	2.868"	+.080/-.000"	.093"	.188"	.560"	.093"	.093"	10,900

* Installed in groove
Material: SAE 1060-1075

HARDNESS RANGES: UHO RINGS

Material		Size Range	Rockwell Hardness
(blank)	Carbon Spring Steel, (SAE 1060/1075)	170 – 700 725 – 1000	45 – 52 40 – 47

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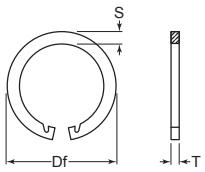
INTERNAL – NOTCHED





HOW TO IDENTIFY

1. Verify notched cut circular design and appearance.
2. Measure the housing diameter (Dh).
3. Measure the ring free outside diameter (Df).
4. Measure the thickness (T).
5. Measure the radial wall (S).
6. Find the part in the chart.

Item #	Housing Diameter	Groove Size				Ring Size & Weight							Allowable Static Thrust Load
		Diameter		Width	Depth	Free Diameter		Thickness	Section	Gap	Notch Dimension Depth	Notch Dimension Width	
	Dh	Dg	Tol.	W	d	Df	Tol.	T +/-.002	S +/-.005	A Min.*	Nd +0/-.030	Nw Ref.	lbs.
UHO-275	2.750" (2-3/4)	2.914"	+/-.006"	.103" +.005/-.000"	.082"	2.944"	+.080/-.000"	.093"	.188"	.590"	.093"	.093"	11,470
UHO-281	2.812" (2-13/16)	2.980"	+/-.006"		.084"	3.025"	+.080/-.000"	.093"	.188"	.590"	.093"	.093"	12,200
	2.835"	3.005"	+/-.006"		.085"	3.025"	+.080/-.000"	.093"	.188"	.660"	.093"	.093"	12,200
UHO-287	2.875" (2-7/8)	3.051"	+/-.006"		.088"	3.086"	+.080/-.000"	.093"	.203"	.620"	.100"	.093"	12,870
UHO-295	2.953"	3.135"	+/-.006"		.091"	3.175"	+.080/-.000"	.093"	.203"	.620"	.100"	.093"	13,480
UHO-300	3.000" (3)	3.182"	+/-.006"		.091"	3.222"	+.080/-.000"	.093"	.203"	.620"	.100"	.093"	13,890
UHO-306	3.062" (3-1/16)	3.248"	+/-.006"	.120" +.005/-.000"	.093"	3.288"	+.100/-.000"	.109"	.218"	.650"	.109"	.125"	14,490
UHO-312	3.125" (3-1/8)	3.315"	+/-.006"		.095"	3.353"	+.100/-.000"	.109"	.218"	.650"	.109"	.125"	15,110
UHO-315	3.149"	3.341"	+/-.006"		.096"	3.388"	+.100/-.000"	.109"	.218"	.650"	.109"	.125"	15,420
	3.156" (3-5/32)	3.348"	+/-.006"		.096"	3.388"	+.100/-.000"	.109"	.218"	.680"	.109"	.125"	15,420
UHO-325	3.250" (3-1/4)	3.446"	+/-.006"		.098"	3.488"	+.100/-.000"	.109"	.218"	.680"	.109"	.125"	16,210
UHO-334	3.346" (3-11/32)	3.546"	+/-.006"		.100"	3.590"	+.100/-.000"	.109"	.218"	.680"	.109"	.125"	17,030
UHO-347	3.469" (3-15/32)	3.675"	+/-.006"		.103"	3.721"	+.100/-.000"	.109"	.234"	.710"	.120"	.125"	18,190
UHO-350	3.500" (3-1/2)	3.710"	+/-.006"		.105"	3.760"	+.100/-.000"	.109"	.234"	.710"	.120"	.125"	18,700
UHO-354	3.543"	3.755"	+/-.006"		.106"	3.805"	+.100/-.000"	.109"	.234"	.740"	.120"	.125"	19,400
	3.562" (3-9/16)	3.776"	+/-.006"		.107"	3.805"	+.100/-.000"	.109"	.234"	.810"	.120"	.125"	19,400
UHO-362	3.625" (3-5/8)	3.841"	+/-.006"		.108"	3.895"	+.100/-.000"	.109"	.234"	.740"	.120"	.125"	19,930
UHO-375	3.740"	3.964"	+/-.006"		.112"	4.030"	+.100/-.000"	.109"	.250"	.740"	.125"	.125"	21,380
	3.750" (3-3/4)	3.974"	+/-.006"		.112"	4.030"	+.100/-.000"	.109"	.250"	.780"	.125"	.125"	21,380
UHO-387	3.875" (3-7/8)	4.107"	+/-.006"		.116"	4.165"	+.100/-.000"	.109"	.250"	.780"	.125"	.125"	22,880
UHO-393	3.938" (3-15/16)	4.174"	+/-.006"		.118"	4.234"	+.100/-.000"	.109"	.250"	.810"	.125"	.125"	23,650
UHO-400	4.000" (4)	4.240"	+/-.006"		.120"	4.300"	+.100/-.000"	.109"	.250"	.810"	.125"	.125"	24,430
UHO-412	4.125" (4-1/8)	4.365"	+/-.006"		.120"	4.430"	+.100/-.000"	.109"	.250"	.810"	.125"	.125"	25,190
UHO-425	4.250" (4-1/4)	4.490"	+/-.006"		.120"	4.555"	+.100/-.000"	.109"	.250"	.810"	.125"	.125"	25,960
UHO-433	4.331"	4.571"	+/-.006"		.120"	4.641"	+.100/-.000"	.109"	.250"	.810"	.125"	.125"	26,450
UHO-450	4.500" (4-1/2)	4.740"	+/-.006"		.120"	4.815"	+.100/-.000"	.109"	.281"	.840"	.140"	.156"	27,490
UHO-462	4.625" (4-5/8)	4.865"	+/-.006"		.120"	4.940"	+.100/-.000"	.109"	.281"	.840"	.140"	.156"	28,250
UHO-475	4.724"	4.969"	+/-.006"		.122"	5.070"	+.100/-.000"	.109"	.281"	.840"	.140"	.156"	29,000
	4.750" (4-3/4)	4.995"	+/-.006"		.122"	5.070"	+.100/-.000"	.109"	.281"	.910"	.140"	.156"	29,000
UHO-500	5.000" (5)	5.260"	+/-.006"		.130"	5.340"	+.100/-.000"	.109"	.281"	.930"	.140"	.156"	33,100
UHO-525	5.250" (5-1/4)	5.520"	+/-.007"	.139" +.006/-.000"	.135"	5.600"	+.120/-.000"	.125"	.312"	1.000"	.156"	.156"	36,070
UHO-537	5.375" (5-3/8)	5.650"	+/-.007"		.135"	5.735"	+.120/-.000"	.125"	.312"	1.000"	.156"	.156"	36,930
UHO-550	5.500" (5-1/2)	5.770"	+/-.007"		.135"	5.860"	+.120/-.000"	.125"	.312"	1.000"	.156"	.156"	37,790
UHO-575	5.750" (5-3/4)	6.020"	+/-.007"		.135"	6.120"	+.120/-.000"	.125"	.312"	1.000"	.156"	.156"	39,500
UHO-600	6.000" (6)	6.270"	+/-.007"		.135"	6.380"	+.120/-.000"	.125"	.312"	1.000"	.156"	.156"	41,220

* Installed in groove

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INTERNAL – NOTCHED

MATERIAL & HARDNESS

MATERIAL: SAE 1060-1075

HARDNESS RANGES: UHO RINGS

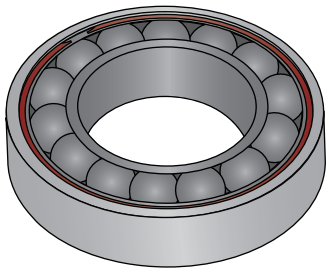
Material		Size Range	Rockwell Hardness
(blank)	Carbon Spring Steel, (SAE 1060/1075)	170 – 700 725 – 1000	45 – 52 40 – 47



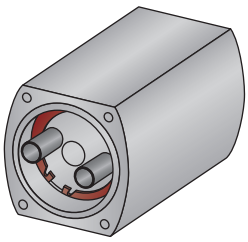
Item #	Housing Diameter	Groove Size				Ring Size & Weight							Allowable Static Thrust Load
		Diameter		Width	Depth	Free Diameter		Thickness	Section	Gap	Notch Dimension Depth	Notch Dimension Width	
	Dh	Dg	Tol.	W	d	Df	Tol.	T +/-.002	S +/-.005	A Min.*	Nd +0/-.030	Nw Ref.	lbs.
UHO-625	6.250" (6-1/4)	6.530"	+/-.008"	.174 +.008/-.000"	.140"	6.640"	+.150/-.000"	.156"	.343"	1.030"	.171"	.156"	44,530
UHO-650	6.500" (6-1/2)	6.790"	+/-.008"		.145"	6.905"	+.150/-.000"	.156"	.343"	1.090"	.171"	.156"	47,970
UHO-662	6.625" (6-5/8)	6.925"	+/-.008"		.150"	7.045"	+.150/-.000"	.156"	.343"	1.120"	.171"	.156"	50,580
UHO-675	6.750" (6-3/4)	7.055"	+/-.008"		.152"	7.180"	+.150/-.000"	.156"	.343"	1.130"	.171"	.156"	52,220
UHO-700	7.000" (7)	7.315"	+/-.008"		.157"	7.445"	+.150/-.000"	.156"	.343"	1.140"	.171"	.156"	55,930
UHO-725	7.250" (7-1/4)	7.575"	+/-.008"	.209" +.008/-.000"	.162"	7.705"	+.180/-.000"	.187"	.375"	1.140"	.187"	.187"	59,700
UHO-750	7.500" (7-1/2)	7.840"	+/-.008"		.170"	7.975"	+.180/-.000"	.187"	.375"	1.150"	.187"	.187"	64,900
UHO-775	7.750" (7-3/4)	8.100"	+/-.008"		.175"	8.240"	+.180/-.000"	.187"	.375"	1.160"	.187"	.187"	68,700
UHO-800	8.000" (8)	8.360"	+/-.008"		.180"	8.505"	+.220/-.000"	.187"	.437"	1.200"	.218"	.187"	72,900
UHO-825	8.250" (8-1/4)	8.620"	+/-.008"		.185"	8.770"	+.220/-.000"	.187"	.437"	1.230"	.218"	.187"	77,600
UHO-850	8.500" (8-1/2)	8.880"	+/-.008"		.190"	9.035"	+.220/-.000"	.187"	.437"	1.270"	.218"	.187"	81,800
UHO-875	8.750" (8-3/4)	9.144"	+/-.008"		.197"	9.305"	+.220/-.000"	.187"	.437"	1.320"	.218"	.187"	87,300
UHO-900	9.000" (9)	9.404"	+/-.008"		.202"	9.564"	+.220/-.000"	.187"	.437"	1.370"	.218"	.187"	92,400
UHO-925	9.250" (9-1/4)	9.668"	+/-.008"		.209"	9.833"	+.220/-.000"	.187"	.500"	1.400"	.250"	.187"	98,000
UHO-950	9.500" (9-1/2)	9.930"	+/-.008"		.215"	10.100"	+.220/-.000"	.187"	.500"	1.500"	.250"	.187"	103,900
UHO-975	9.750" (9-3/4)	10.190"	+/-.008"		.220"	10.365"	+.220/-.000"	.187"	.500"	1.620"	.250"	.187"	10,900
UHO-1000	10.000" (10)	10.450"	+/-.008"		.225"	10.630"	+.220/-.000"	.187"	.500"	1.750"	.250"	.187"	114,600

* Installed in groove

APPLICATIONS



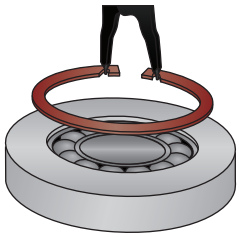
The internal constant section ring is installed on an open type bearing. This could be used on a shielded style as well.

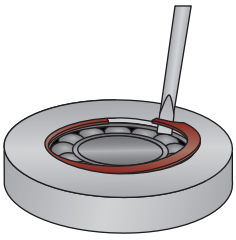


The notched ends of the constant section ring allows for ease of installation in the housing. The ring is used to help absorb the shock load of the pistons.

INSTALLATION AND REMOVAL

The notched design provides a means to grip the ring to be able to expand or contract the rings to install/remove the ring in the groove.





When the groove is located near the end of the shaft, a constant section ring can be installed into the groove by applying pressure while working the ring around the groove. Prying up the edge and reversing this procedure will remove the ring.

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