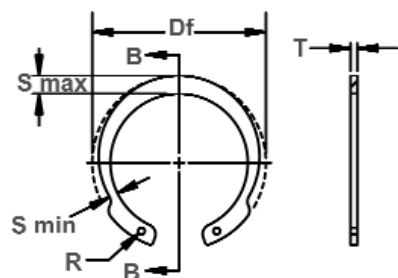




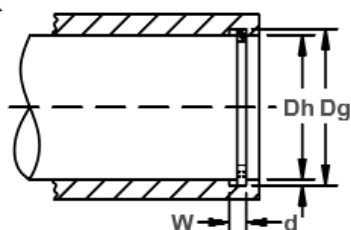
# HOI Housing Rings

## Axially Assembled, Internal Inverted

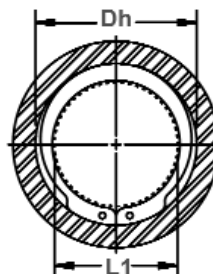
Functions like an HO ring in a housing/bore, only the lugs are "reversed." This version reduces the distance the lugs of the standard HO extend into the inner circumference of the housing/bore and allows for another assembly to pass through unimpeded.



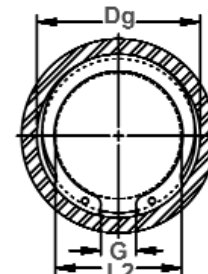
Free Diameter & Ring Measurements with Section B-B



Housing Diameter & Groove Dimensions



Clearance Diameter Compressed in Housing



Clearance Diameter & Gap Width Released in Groove

RING NO.	HOUSING DIAMETER			GROOVE SIZE					RING SIZE & WEIGHT				CLEARANCE DIA.			i THRUST LD. (lbs.)	
				DIAMETER		WIDTH		DEPTH	FREE DIAMETER		THICKNESS***		Wght. Per 1000 Pcs.	Compressed in housing	Released in groove	Sqr. Corner Abutment	Ring Safety Factor of 4
	Dh DEC	Dh FRACT	Dh mm	Dg	Tol.	W	Tol.	d	Df	Tol.	T	Tol.					
HOI-62	.625	5/8	15.9	.665	±.002	.029		.020	.675		.025		0.7	.47	.51	1015	450
HOI-75	.750	3/4	19.0	.796	.004*	.039		.023	.808		.035		1.3	.56	.605	1675	600
HOI-81	.812	13/16	20.6	.862		.046	+ .003	.025	.877	+ .010	.042		2.0	.62	.665	2639	700
HOI-87	.875	7/8	22.2	.931	±.003	.046	- .000	.028	.944	- .005	.042		2.2	.65	.705	2893	850
HOI-93	.938	15/16	23.8	1.000	.004*	.046		.031	1.015		.042		2.8	.70	.755	3147	1000
HOI-100	1.000	1	25.4	1.066		.046		.033	1.081		.042		2.9	.75	.81	3350	1150
HOI-106	1.062	1-1/16	27.0	1.130		.056		.034	1.150		.050		3.8	.80	.87	4212	1250
HOI-112	1.125	1-1/8	28.6	1.197		.056		.036	1.217		.050		4.4	.86	.93	4466	1400
HOI-118	1.188	1-3/16	30.2	1.262		.056		.037	1.283	+ .015	.050	±.002	4.9	.91	.98	4720	1600
HOI-125	1.250	1-1/4	31.7	1.330	±.004	.056		.040	1.351	- .010	.050		5.0	.97	1.05	4974	1750
HOI-131	1.312	1-5/16	33.3	1.396	.005*	.056		.042	1.418		.050		5.3	1.02	1.10	5227	1950
HOI-137	1.375	1-3/8	34.9	1.461		.056	+ .004	.043	1.486		.050		5.9	1.08	1.16	5481	2100
HOI-143	1.438	1-7/16	36.5	1.528		.056	- .000	.045	1.552		.050		6.3	1.13	1.22	5735	2300
HOI-150	1.500	1-1/2	38.1	1.594		.056		.047	1.622		.050		6.8	1.18	1.27	5938	2500
HOI-156	1.562	1-9/16	39.7	1.658		.068		.048	1.688		.062		8.9	1.21	1.30	7714	2650
HOI-162	1.625	1-5/8	41.3	1.725		.068		.050	1.756		.062		10.4	1.27	1.37	8019	2850
HOI-168	1.688	1-11/16	42.9	1.792	±.005	.068		.052	1.823	+ .020	.062		11.9	1.32	1.42	8374	3100
HOI-175	1.750	1-3/4	44.4	1.858	.005*	.068		.054	1.891	- .013	.062		11.8	1.38	1.49	8678	3300
HOI-187	1.875	1-7/8	47.6	1.989		.068		.057	2.025		.062		14.8	1.47	1.58	9287	3750
HOI-200	2.000	2	50.8	2.122		.068		.061	2.160		.062		17.4	1.55	1.67	9896	4300
HOI-206	2.062	2-1/16	52.4	2.186		.086		.062	2.224		.078		23.2	1.59	1.71	12840	4500
HOI-212	2.125	2-1/8	54.0	2.251	±.006	.086	+ .005	.063	2.295		.078		24.3	1.65	1.77	13246	4700
HOI-237	2.375	2-3/8	60.3	2.517	.006*	.086	- .000	.071	2.567	+ .025	.078	±.003	28.6	1.86	2.00	14718	5900
HOI-243	2.438	2-7/16	61.9	2.584		.086		.072	2.634	- .015	.078		30.6	1.91	2.05	15124	6200
HOI-250	2.500	2-1/2	63.5	2.648		.086		.074	2.700		.078		32.1	1.96	2.10	15530	6500
HOI-262	2.625	2-5/8	66.7	2.781		.103		.078	2.840		.093		45.6	2.06	2.21	19488	7200
HOI-275	2.750	2-3/4	69.8	2.914		.103		.082	2.975		.093		47.8	2.16	2.32	20300	7900
HOI-283	2.812	2-13/16	71.4	2.980		.103		.084	3.063		.093		49.5	2.21	2.37	20808	8300
HOI-283	2.835	-	72.0	3.006		.103		.086	3.063		.093		49.5	2.23	2.39	20808	8550
HOI-287	2.875	2-7/8	73.0	3.051		.103		.088	3.105	+ .030	.093		50.1	2.26	2.43	21315	8900
HOI-300	3.000	3	76.2	3.182		.103		.091	3.245	- .020	.093		52.6	2.36	2.53	22229	9600
HOI-315	3.156	3-5/32	80.2	3.348		.120		.096	3.408		.109		69.4	2.50	2.69	27405	10600
HOI-325	3.250	3-1/4	82.5	3.446		.120		.098	3.509		.109		72.6	2.58	2.77	28217	11200
HOI-334	3.346	3-11/32	85.0	3.546		.120		.100	3.611		.109		75.6	2.67	2.87	29029	11700
HOI-350	3.500	3-1/2	88.9	3.710		.120		.105	3.780		.109		80.2	2.82	3.03	30349	12900
HOI-356	3.562	3-9/16	90.5	3.776		.120		.107	3.850		.109		82.4	2.88	3.09	30958	13400
HOI-400	4.000	4	101.6	4.240		.120		.120	4.350		.109		97.4	3.29	3.53	34713	16900

\*F.I.M. (FULL INDICATOR MOVEMENT)-MAXIMUM ALLOWABLE DEVIATION OF CONCENTRICITY BETWEEN GROOVE AND HOUSING.

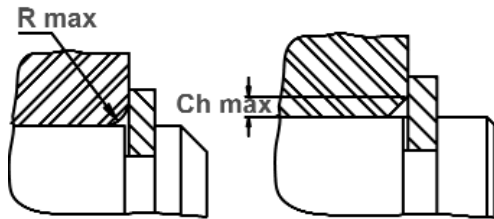
i BASED ON HOUSING/SHAFTS MADE OF COLD ROLLED STEEL. FOR AN EXPLANATION OF FORMULAS USED TO DERIVE THRUST LOAD AND OTHER PERFORMANCE DATA, CONTACT THE ROTOR CLIP ENGINEERING DEPT.

\*\*\* FOR PLATED RINGS, ADD .002" TO THE LISTED MAXIMUM THICKNESS. MAXIMUM RING THICKNESS WILL BE A MINIMUM OF .0002" LESS THAN THE LISTED GROOVE WIDTH (W) MINIMUM.

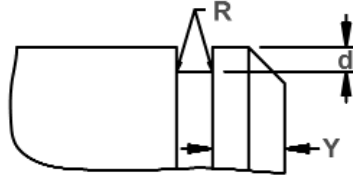
HARDNESS RANGES: STAINLESS STEEL RINGS (PH 15-7MO)

RING TYPE	SIZE RANGE	SCALE	ROCKWELL HARDNESS
HOI	62-100	30N	63-69.5
	106+	C	44-51

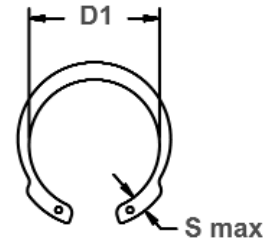




Allowable Corner Radius & Chamfer



Exploded Groove Profile & Edge Margin (Y) Maximum bottom radii (R), .005 for ring sizes -62 thru -100; .010 for ring sizes -106 thru -400



Measuring Free Diameter (Df) HOI Series  
Df = D1 + 2(S max)



Alternate Design Manufacturer's Option

RING NO.	MAXIMUM SECTION Including lug		MINIMUM SECTION		HOLE DIAMETER		GAP WIDTH Ring in groove	Allowable Corner Radii & Chamfers			MAX LOAD W/R Max or Ch Max	EDGE MARGIN
	S max	Tol.	S min.	Tol.	R	Tol.		G Min	R max	Ch max		
HOI-62	.072	± .004	.036	± .004	.030		.15	.042	.028	400	.060	
HOI-75	.085		.042		.042		.175	.050	.031	850	.069	
HOI-81	.092		.044		.042		.175	.054	.034	1250	.075	
HOI-87	.099		.047		.042		.20	.057	.036	1250	.084	
HOI-93	.106	± .005	.051	± .005	.042	+ .010	.21	.060	.038	1250	.093	
HOI-100	.113		.054		.042	- .002	.225	.064	.040	1250	.099	
HOI-106	.120		.057		.050		.24	.069	.043	1800	.102	
HOI-112	.123		.059		.050		.24	.070	.044	1800	.108	
HOI-118	.126		.060		.050		.27	.071	.045	1800	.111	
HOI-125	.129	± .006	.061	± .006	.050		.29	.071	.045	1800	.120	
HOI-131	.132		.063		.050		.29	.072	.045	1800	.126	
HOI-137	.135		.065		.050		.33	.074	.046	1800	.129	
HOI-143	.144		.069		.076		.35	.079	.050	1800	.135	
HOI-150	.148		.070		.076		.33	.081	.051	1800	.141	
HOI-156	.158		.074		.076		.36	.088	.055	2900	.144	
HOI-162	.162		.077		.076		.385	.090	.056	2900	.150	
HOI-168	.166	± .007	.079	± .007	.076	+ .015	.405	.091	.057	2900	.156	
HOI-175	.170		.082		.076	- .002	.42	.093	.058	2900	.162	
HOI-187	.188		.090		.076		.44	.105	.066	2900	.171	
HOI-200	.208		.100		.076		.48	.118	.074	2900	.183	
HOI-206	.218		.106		.094		.485	.125	.078	4600	.186	
HOI-212	.223		.108		.094		.49	.128	.080	4600	.189	
HOI-237	.243		.115		.094		.55	.138	.086	4600	.213	
HOI-243	.248		.117		.094		.57	.141	.088	4600	.216	
HOI-250	.254		.120		.094		.59	.144	.090	4600	.222	
HOI-262	.266		.128		.109		.60	.150	.094	6700	.234	
HOI-275	.278		.134		.109		.63	.157	.098	6700	.246	
HOI-283	.286		.139		.109		.61	.162	.102	6700	.252	
HOI-283	.286		.139		.109		.67	.162	.102	6700	.258	
HOI-287	.290		.139		.109		-	.162	.101	6700	.264	
HOI-300	.302		.143		.109		.705	.169	.106	6700	.273	
HOI-315	.314		.149		.125		.76	.174	.109	9000	.288	
HOI-325	.318		.151		.125		-	.176	.110	9000	.294	
HOI-334	.321	± .008	.155	± .008	.125		.81	.177	.111	9000	.300	
HOI-350	.324		.154		.125		.84	.175	.110	9000	.315	
HOI-356	.326		.155		.125		.86	.175	.110	9000	.321	
HOI-400	.338		.161		.125		.93	.174	.108	9000	.360	

LARGER SIZES MAY BE AVAILABLE UPON REQUEST.

HARDNESS RANGES: CARBON STEEL RINGS (SAE 1060-1090)

RING TYPE	SIZE RANGE	SCALE	ROCKWELL HARDNESS
HOI	62 & 75	30N	67.5-72
	81-100	30N	66-71
	106-343	C	47-52
	350+	C	45-50

HARDNESS RANGES: BERYLLIUM COPPER RINGS

RING TYPE	SIZE RANGE	SCALE	ROCKWELL HARDNESS
HOI	62-100	30N	56.5-62
	106+	C	37-43

