

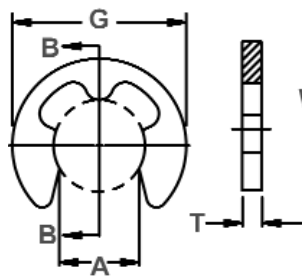


# DE Shaft Rings (DIN 6799)

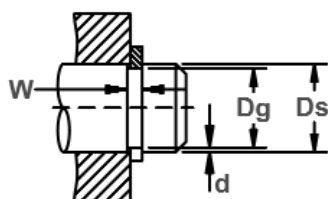
## Radially Assembled, External E, Metric

Perhaps the most popular and widely used radial retaining ring is the "E" (so named because it is shaped like the letter "E").

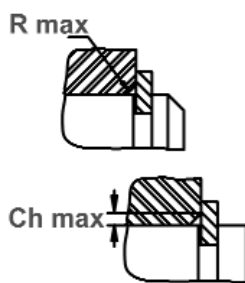
Three prongs make contact with the bottom of the groove and provide a shoulder for effective retention of assemblies.



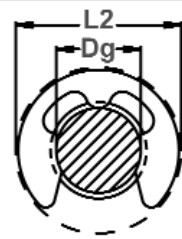
Ring Measurements



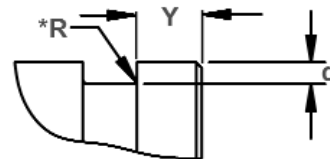
Shaft Diameter &  
Groove Dimensions



Maximum Corner  
Radius & Chamfer



Clearance Diameter  
Installed In Groove



Edge Margin (Y)  
The radius "R" on the load  
side must not exceed 0.1T.

RING NO.	NOM SIZE	SHAFT DIA. (mm)			GROOVE SIZE				RING SIZE & WEIGHT				CLEARANCE		SUPPLEMENTARY DATA							
		Dg	From	To	Dg	Tol.	W	Tol.	T	Tol.	A	Tol.	kg/1000	G Ref.	L2 Max.	Y Min.	Pr kN	Pg kN	Ds'	R/Ch Max.	P'r kN	RPM Limits
DE-0.8	0.8	1	1.4	0.8	-0.04	0.24	+0.04	0.2			0.58		0.003	1.95	2.25	0.4	0.08	0.03	1.2	0.3	0.04	50000
DE-1.2	1.2	1.4	2.0	1.2		0.34	-0.00	0.3			1.01		0.009	2.9	3.25	0.6	0.12	0.04	1.5	0.4	0.06	47000
DE-1.5	1.5	2.0	2.5	1.5	-0.06	0.44		0.4			1.28	±0.04	0.021	3.9	4.25	0.8	0.22	0.07	2.0	0.6	0.11	42000
DE-1.9	1.9	2.5	3.0	1.9		0.54		0.5			1.61		0.040	4.40	4.8	1.0	0.35	0.10	2.5	0.7	0.17	40000
DE-2.3	2.3	3.0	4.0	2.3		0.64		0.6			1.94		0.069	5.90	6.3	1.0	0.50	0.15	3.0	0.9	0.24	38000
DE-3.2	3.2	4.0	5.0	3.2		0.64		0.6	±0.02		2.70		0.088	6.90	7.3	1.0	0.65	0.22	4.0	0.9	0.32	35000
DE-4	4.0	5.0	7.0	4.0	-0.075	0.74	+0.05	0.7			3.34		0.158	8.85	9.3	1.2	0.95	0.25	5.0	1.0	0.47	32000
DE-5	5.0	6.0	8.0	5.0		0.74	-0.00	0.7			4.11	±0.048	0.236	10.85	11.3	1.2	1.15	0.90	7.0	1.0	0.60	28000
DE-6	6.0	7.0	9.0	6.0		0.74		0.7			5.26		0.255	11.8	12.3	1.2	1.35	1.10	8.0	1.1	0.70	25000
DE-7	7.0	8.0	11.0	7.0		0.94		0.9			5.84		0.474	13.8	14.3	1.5	1.80	1.25	9.0	1.3	1.00	22000
DE-8	8.0	9.0	12.0	8.0	-0.09	1.05		1.0			6.52		0.660	15.75	16.3	1.8	2.50	1.42	10.0	1.5	1.25	20000
DE-9	9.0	10.0	14.0	9.0		1.15		1.1			7.63	±0.058	1.090	18.20	18.8	2.0	3.00	1.60	11.0	1.6	1.50	17000
DE-10	10.0	11.0	15.0	10.0		1.25		1.2			8.32		1.250	19.70	20.4	2.0	3.50	1.70	12.0	1.8	1.75	15000
DE-12	12.0	13.0	18.0	12.0	-0.11	1.35	+0.08	1.3	±0.03		10.45		1.630	22.7	23.4	2.5	4.70	3.10	15.0	1.9	2.30	13000
DE-15	15.0	16.0	24.0	15.0		1.55	-0.00	1.5			12.61	±0.07	3.370	28.70	29.4	3.0	7.80	7.00	20.0	2.2	3.30	11000
DE-19	19.0	20.0	31.0	19.0		1.80		1.75			15.92		6.420	36.50	37.6	3.5	11	10.00	25.0	2.5	3.60	7600
DE-24	24.0	25.0	38.0	24.0	-0.13	2.05		2.00			21.88	±0.084	8.550	43.50	44.6	4.0	15	13.00	30.0	3.0	4.00	5500
DE-30	30.0	32.0	42.0	30.0		2.55		2.50			25.80		13.50	51.3	52.6	4.5	23.00	16.50	36.0	3.5	5.30	4200

\*SHARP CORNER ABUTMENT.

ALL DIMENSIONS IN MILLIMETERS.

The radius "R" on the load side must not exceed 0.1T.

\*\*\* FOR PLATED RINGS, ADD 0.05 TO THE LISTED MAXIMUM THICKNESS. MAXIMUM RING THICKNESS WILL BE A MINIMUM OF 0.005 LESS THAN THE LISTED GROOVE WIDTH (W) MINIMUM.

NOTE: GROOVE WIDTH MUST BE INCREASED FOR PLATED PARTS. PLEASE CONTACT TECHNICAL SALES FOR ADDITIONAL INFORMATION: [tech@rotorclip.com](mailto:tech@rotorclip.com).

HARDNESS RANGES: BERYLLIUM COPPER RINGS

RING TYPE	SIZE RANGE	HARDNESS		
		VICKERS	ROCKWELL	
			HRC	LOWER SCALE*
DE	0.8-1.5	360-415	37-43	79-82 HR15N**
	1.9	360-415	37-43	79-82 HR15N
	2.3-9	360-415	37-43	56.5-62 HR30N
	10-30	360-415	37-43	-

\*WHERE APPLICABLE

\*\*HARDNESS CAN NOT BE CHECKED WITH ANY DEGREE OF ACCURACY DIRECTLY ON THESE RINGS.

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

RING TYPE	SIZE RANGE	HARDNESS		
		VICKERS	ROCKWELL	
			HRC	LOWER SCALE*
DE	0.8-1.5	460-580	46-54	83.5-87.5 HR15N**
	1.9	460-580	46-54	83.5-87.5 HR15N
	2.3-9	460-580	46-54	65-72 HR30N
	10-30	460-580	46-54	-

\*WHERE APPLICABLE

\*\*HARDNESS CAN NOT BE CHECKED WITH ANY DEGREE OF ACCURACY DIRECTLY ON THESE RINGS.

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

RING TYPE	SIZE RANGE	HARDNESS			
		VICKERS	ROCKWELL		
			HRC	LOWER SCALE*	
DE	0.8-1.5	435-530	44-51	82.5-86 HR15N**	
	1.9	435-530	44-51	82.5-86 HR15N	
	2.3-9	435-530	44-51	63-69.5 HR30N	
	10-30	435-530	44-51	-	

\*WHERE APPLICABLE

\*\*HARDNESS CAN NOT BE CHECKED WITH ANY DEGREE OF ACCURACY DIRECTLY ON THESE RINGS.

HARDNESS RANGES: STAINLESS STEEL RINGS (DIN 1.4122 X39CrMo17)

RING TYPE	SIZE RANGE	HARDNESS			
		HV	HRC	15N	30N
DE	ALL	471-577	47-54	83.9-87.4	65.8-72

Installation tools can be found at [rotorclip.com/pliers\\_tools\\_applicators\\_kits](http://rotorclip.com/pliers_tools_applicators_kits)