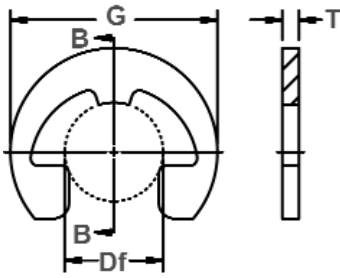


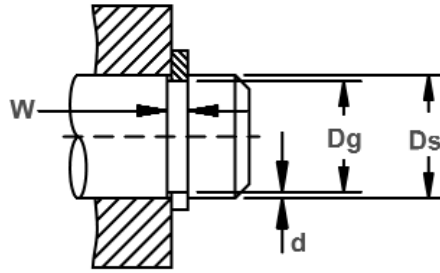
MRE Shaft Rings

Radially Assembled, External Reinforced 'E', ANSI Metric

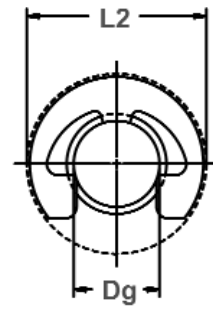
The MRE retaining ring is a reinforced version of the ME ring, which will accommodate higher thrust loadings and RPM. MRE rings function in the same size grooves as regular E rings, so that you can change from one to the other without re-engineering the application.



Free Diameter & Ring Measurements
With Section B-B



Shaft Diameter &
Groove Dimensions



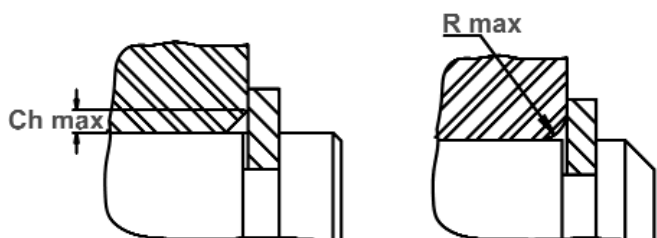
Clearance Diameter
Installed in Groove

RING NO.	SHAFT DIAMETER		GROOVE SIZE					RING SIZE & WEIGHT					CLEARANCE			I THRUST LD (kN)		
			DIAMETER		WIDTH		DEPTH	FREE DIAMETER		THICKNESS***			Wt. Per 1000 Pcs.	Free Out-Side Dia. Ref.	Re-leased In Groove	Sqr. Corner Abutment	Groove (Safety factor of 2)	
	Ds mm	Ds DEC	Dg	Tol.	F.I.M.*	W	Tol.	d	Df	Tol.	T	Tol.				kg		G
MRE-4	4	0.157	3.00	-0.05	0.05	0.7	+0.15	0.50	2.90	+0.05-0.08	0.6	±0.06	0.14	8.50	8.9	0.6	0.18	
MRE-5	5	0.197	3.85	-0.10	0.05	0.7		0.57	3.65	+0.08	0.6		0.6	0.18	9.50	9.9	0.8	0.27
MRE-6	6	0.236	4.85		0.05	0.7		0.57	4.65		-0.08			0.6	0.24	11.35	11.8	1.0
MRE-7	7	0.276	5.40	0.08	0.7	0.80		5.20	0.6	0.6	0.32		13.10	13.7	1.1	0.54		
MRE-8	8	0.315	6.40	0.08	0.7	0.80		6.15	0.6	±0.06	0.36		14.95	15.6	1.3	0.63		
MRE-9	9	0.354	7.10	0.10	1.0	0.95		6.75	0.9	0.60	15.70		16.4	2.2	0.80			
MRE-10	10	0.394	7.80	0.10	1.0	1.10		7.45	0.9	0.68	16.75		17.5	2.4	1.10			
MRE-11	11	0.433	8.80	0.10	1.0	1.10		8.45	0.9	0.86	18.95		19.7	2.7	1.20			
MRE-12	12	0.472	9.50	0.10	1.2	1.25		9.10	1.1	1.20	19.60		20.4	3.5	1.50			
MRE-13	13	0.512	10.2	0.10	1.2	1.40		9.80	1.1	1.45	20.55		21.3	3.9	1.70			
MRE-14	14	0.551	11.2	0.10	1.2	1.40		10.90	1.1	1.60	22.10		22.8	4.2	1.90			
MRE-15	15	0.591	11.8	0.10	1.2	1.60		11.50	1.1	1.75	23.20		23.9	4.5	2.30			

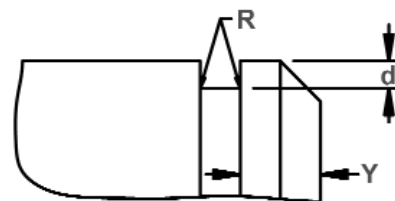
*F.I.M. (FULL INDICATOR MOVEMENT)-MAXIMUM ALLOWABLE DEVIATION OF CONCENTRICITY BETWEEN GROOVE AND SHAFT.

† BASED ON HOUSINGS/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 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.



Maximum Corner Radius & Chamfer



Exploded Groove Profile & Edge Margin (Y)
 Maximum bottom radii (R), 0.1 for ring sizes
 -4; 0.15 for ring sizes -5 thru -9;
 0.25 for ring sizes -10 thru -15

RING NO.	CORNER RADII & CHAMFERS		LOAD w/ R max or Ch max (kN)	MARGIN	LIMITS Standard Material
	R max	Ch max			
MRE-4	1.6	1.3	0.6	1.0	50000
MRE-5	1.6	1.3	0.8	1.1	43000
MRE-6	1.6	1.3	1.0	1.1	38000
MRE-7	1.6	1.3	1.1	1.6	33000
MRE-8	1.6	1.3	1.3	1.6	28000
MRE-9	1.8	1.4	2.2	1.9	27000
MRE-10	1.8	1.4	2.4	2.2	25000
MRE-11	1.8	1.4	2.7	2.2	21500
MRE-12	2.0	1.5	3.5	2.5	19500
MRE-13	2.0	1.5	3.9	2.8	17500
MRE-14	2.0	1.5	4.2	2.8	15500
MRE-15	2.0	1.5	4.5	3.2	14000

NOTE: CONTACT ROTOR CLIP FOR AVAILABILITY OF SIZES LISTED.
 LARGER SIZES MAY BE AVAILABLE UPON REQUEST.

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

RING TYPE	SIZE RANGE	SCALE	ROCKWELL HARDNESS
MRE	4-8	30N	63-69.5
	9-15	C	44-51

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

RING TYPE	SIZE RANGE	SCALE	ROCKWELL HARDNESS
MRE	4-8	30N	67.5-71
	9-15	C	48-52