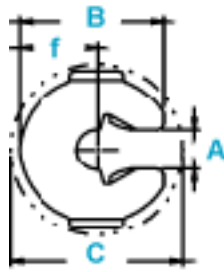




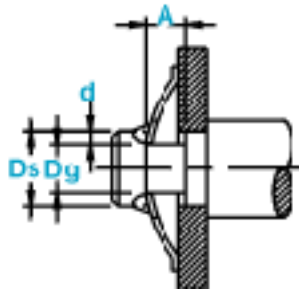
EL Retaining Rings

External, For End Play Take Up

Two prongs along the inner circumference retain the EL against the shaft.



Ring Measurements



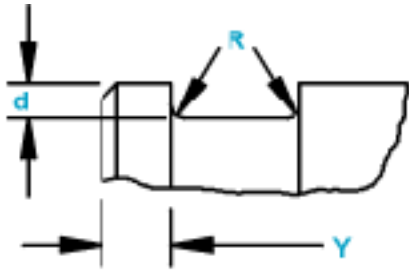
Shaft Diameter & Groove Dimensions

RING NO.	SHAFT			GROOVE SIZE				RING SIZE & WEIGHT								CLR. DIA.		THRUST LOAD (lbs.sq. corner abutment)			
	DIAMETER INCHES			DIAMETER		WIDTH		DEPTH		LENGTH		THICKNESS* T		BOW HEIGHT		GAP		GHT. PER 1000 Pcs.	Released In Groove	Ring Safety Factor Of 3	Groove Safety Factor Of 3
	DEC		FRACT	Dg	Tol.	W	TOL.	d	B	Tol.	T	Tol.	Bh	Tol.	A	Tol.	LBS.	C	Pr	Pg	
EL-9	.092		3/32	.061	±.001	.035		.016	.307		.010		.050		.063		.23	.370	80	35	
EL-12	.125	±.002	1/8	.082	±.0015	.035		.021	.307		.010	±.001	.050		.086	±.004	.19	.370	102	60	
EL-18	.188		3/16	.124	±.002	.045	+ .005	.032	.390	±.010	.015		.060	±.010	.130		.47	.480	203	140	
EL-25	.250	±.003	1/4	.165		.055	- .000	.042	.500		.015	±.002	.070		.172	±.005	.77	.620	305	250	
EL-31	.312		5/16	.228	±.003	.080		.042	.620		.015		.095		.234		1.3	.790	355	300	
EL-37	.375		3/8	.270		.095		.052	.740		.020		.130		.280		2.2	.940	555	450	

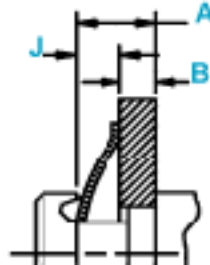
† BASED ON HOUSINGS/SHAFTS MADE OF COLD ROLLED STEEL. FOR AN EXPLANATION OF FORMULAS USED TO DERIVE THRUST LOAD AND OTHER PERFORMANCE DATA CONTACT THE ROTOR CLIP ENGINEERING DEPARTMENT. LARGER SIZES MAY BE AVAILABLE UPON REQUEST.

***For plated rings, add .002" to the listed maximum thickness.

For technical assistance call **1-800-55-ROTOR**



Exploded Groove Profile & Edge Margin (Y)
Maximum bottom radii (R) .005 for ring sizes -9 thru -25; .010 for ring sizes -31 thru -37



Outer Groove Wall Location
 $A_{max} = B_{min} + J_{max}$
 $A_{min} = B_{max} + J_{min}$

RING NO.	DISTANCE		RESILIENT TAKE-UP OF TOLERANCES OF A&B	FORCE NEEDED TO FLATTEN RINGS	APPROX. AV RESILIENT RES. (lbs) WITHIN J MAX. & J MIN			EDGE MARGIN
	OUTER GROOVE WALL TO FACE OF RETAINED PART				IN-STALLED	FLATTENED	f REF.	
	J MIN.	J MAX.	J MAX. - J MIN.	LBS.				Y
EL-9	.030	.038	.008	30	9	3.5	.166	.031
EL-12	.030	.040	.010	30	8	3.0	.166	.043
EL-18	.039	.049	.010	60	20	5.5	.213	.064
EL-25	.045	.060	.015	60	15	7.0	.280	.085
EL-31	.070	.085	.015	60	6	4.0	.360	.084
EL-37	.080	.105	.025	80	19	7.0	.427	.105

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

RING TYPE	SIZE RANGE	SCALE	ROCKWELL HARDNESS
EL	9&12	15N	82.5-86*
	18-31	15N	82.5-86
	37	30N	63-69.5

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

HARDNESS RANGES: BERYLLIUM COPPER RINGS

RING TYPE	SIZE RANGE	SCALE	ROCKWELL HARDNESS
EL	9&12	15N	77-82*
	18-37	15N	77-82

*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	SCALE	ROCKWELL HARDNESS
EL	9&12	15N	83.5-86*
	18&25	15N	83.5-86
	31&37	30N	65-69.5

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