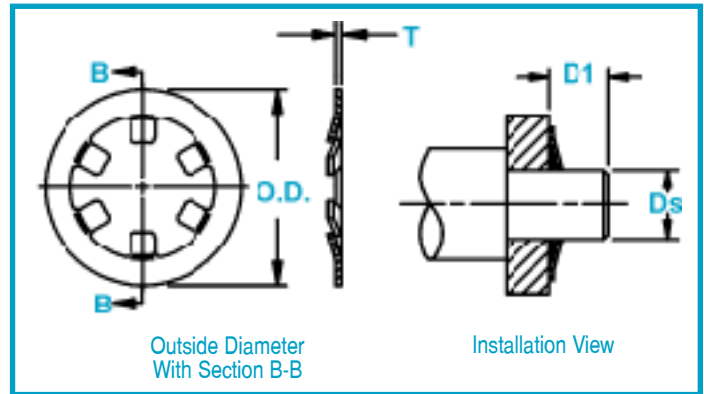
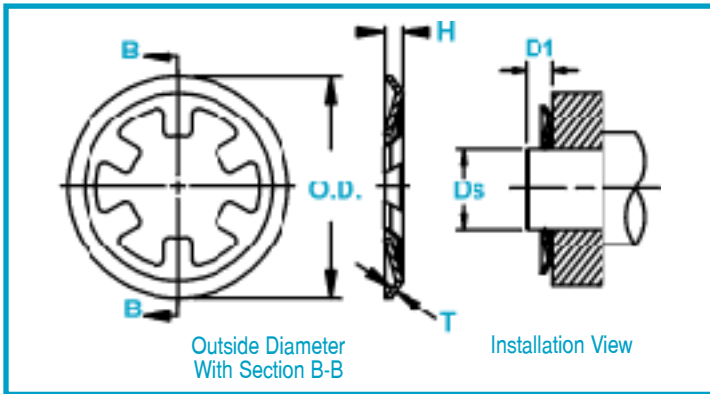


External, Self-Locking

Prongs dig into shaft when load is introduced into other side.

TX, TY Rings



RING NO.	SHAFT DIAMETER				OUTSIDE DIAMETER		No. of prongs	*** RING HEIGHT			* THICKNESS **Standard	i Thrust Ld. @ Std. T	Wght. Per 1000 Pcs. @ Std. T	* Thick-ness Optional	i Thrust Ld. @ Opt. T	WEIGHT Per 1000 Pcs. @ Opt. T	Min. Distance Face of part to end of shaft				
	Ds DEC		Ds FRACT	Ds mm	O.D.	Tol.		T	H	Tol.											
	FROM	TO																Tol.	Tol.	Tol.	Tol.
TX-9	.091	.097	3/32	2.39	.326	±.005	3	.029	±.005	.010 ±.001	27	.16	.015 ±.002	45	.25	.058					
TX-12	.121	.129	1/8	3.17	.366		4	.029									46	.22	57	.30	.058
TX-15	.152	.160	5/32	3.96	.397		4	.029													
TX-18	.184	.192	3/16	4.77	.444		6	.031									±.007	112	.55	58	.39
TX-25	.246	.254	1/4	6.35	.522		6	.042	±.008	112	.64	60	.44	.074							
TX-31	.308	.316	5/16	7.92	.584		8	.042							±.009	122	.74	65	.48	.074	
TX-37	.371	.379	3/8	9.53	.645		8	.042	.015 ±.002	122	.96			.090							
TX-43	.432	.442	7/16	11.1	.737		10	.045							±.010	122	1.27			.108	
TX-50	.495	.505	1/2	12.7	.828		10	.054	±.010	127	1.38			.108							
TX-56	.557	.567	9/16	14.27	.889		12	.054							±.010	137	1.47			.108	
TX-62	.620	.630	5/8	15.88	.951	12	.054	±.010	142	1.65			.108								
TX-75	.745	.755	3/4	19.05	1.076	14	.054							±.010	142	1.96			.108		
TX-87	.870	.880	7/8	22.23	1.203	16	.054	±.010	142	2.29			.108								
TX-100	.995	1.005	1	25.4	1.327	18	.054													.108	

* FOR PLATED RINGS ADD .002" TO MAXIMUM THICKNESS AND HEIGHT.

** STANDARD THICKNESS FOR STAINLESS STEEL IS AS FOLLOWS:TX-9-TX-37, .010"; TX-43-TX-100, .015".

*** FOR TX-9-TX-18 OPTIONAL THICKNESS (.015"), ADD .005" TO RING HEIGHT VALUES (H) SHOWN.

FOR TX-25-TX-37 OPTIONAL THICKNESS (.010), DEDUCT.005" FROM RING HEIGHT VALUES (H) SHOWN.

FOR HARDNESS SPECIFICATIONS SEE PAGE 80.

THRUST LOAD CAPACITY IF APPLICABLE TO PARTS MADE FROM CARBON SPRING STEEL AND STAINLESS STEEL MATERIALS ONLY.

RING NO.	SHAFT DIAMETER				OUTSIDE DIAMETER		No. Of Prongs	THICKNESS*		i Thrust Load	WEIGHT Per 1000 Pcs.	Min. Distance Face of part to end of shaft		
	Ds DEC-DEZ		Ds FRACT	Ds mm	O.D.	Tol.		T	Tol.					
	FROM	TO											Tol.	Tol.
TY-9	.093	.095	3/32	2.39	.250	±.005	3	.010 ±.001	1 3	.09	.040			
TY-12	.124	.126	1/8	3.17	.325		4					2 0	.14	.040
TY-15	.155	.157	5/32	3.96	.356		4							
TY-18	.187	.189	3/16	4.77	.387		6					3 5	.21	.040
TY-21	.218	.220	7/32	5.56	.418		6	.015 ±.002	40	.35	.060			
TY-24	.239	.241	-	6.10	.460		6					.010 ±.001	4 0	.23
TY-25	.249	.251	1/4	6.35	.450		6	4 5	.26	.040				
TY-31	.311	.313	5/16	7.92	.512		6				4 5	.27	.040	
TY-37	.374	.376	3/8	9.53	.575		6	5 0	.47	.060				
TY-43	.437	.439	7/16	11.1	.638		6				5 0	.72	.060	
TY-50	.498	.502	1/2	12.7	.750	6	±.002	50	.75	.060				
TY-56	.560	.564	9/16	14.27	.812	6					50	.82	.060	
TY-62	.623	.627	5/8	15.88	.875	7	5 5	.97	.060					
TY-75	.748	.752	3/4	19.05	1.000	8				60	1.1	.060		
TY-87	.873	.877	7/8	22.23	1.125	10	65	1.2	.060					
TY-100	.998	1.002	1	25.4	1.250	10								.060

* FOR PLATED RINGS ADD .002" TO MAXIMUM THICKNESS.

LARGER SIZES MAY BE AVAILABLE UPON REQUEST.

i 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.

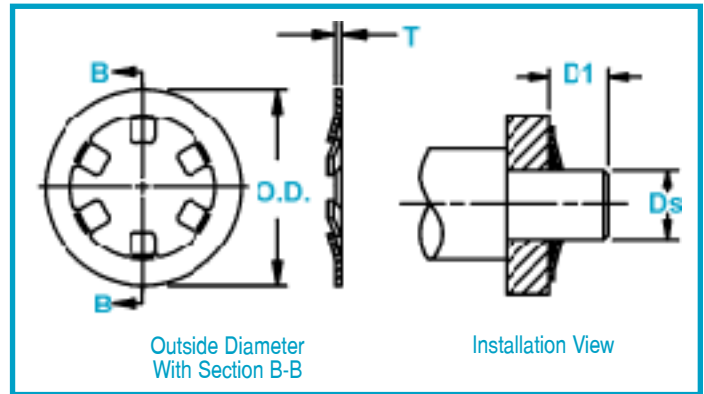
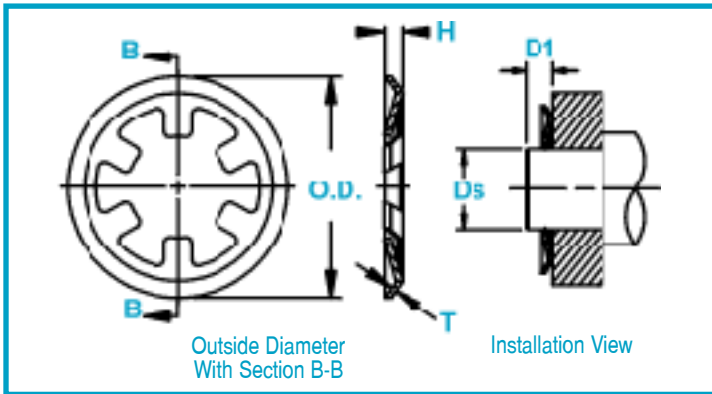
THRUST LOAD CAPACITY IF APPLICABLE TO PARTS MADE FROM CARBON SPRING STEEL AND STAINLESS STEEL MATERIALS ONLY.

FOR HARDNESS SPECIFICATIONS SEE PAGE 80.

External, Self-Locking

Prongs dig into shaft when load is introduced into other side.

TX, TY Rings



Hardness Ranges For TX Retaining Rings

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

RING TYPE	SIZE RANGE	SCALE	ROCKWELL HARDNESS
TX	9-37(.010thick)	15N	82.5-86*
	+ .010	15N	82.5-86

*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
TX	9-37(.010thick)	15N	77-82*
	+ .010	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
TX	9-37(.010thick)	15N	84-86*
	+ .010	15N	84-86

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

Hardness Ranges For TY Retaining Rings

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

RING TYPE	SIZE RANGE	SCALE	ROCKWELL HARDNESS
TY	9-21,25-37	15N	82.5-86*
	24,43+	15N	82.5-86

*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
TY	9-21,25-37	15N	77-82*
	24,43+	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
TY	9-21,25-37	15N	84-86*
	24,43+	15N	84-86

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