

Tinnerman® Stud Receivers One-Piece, Self Locking

The dimensions of the above parts are envelope dimensions only. For complete design information, please request a blueprint from your Tinnerman representative or the Tinnerman Engineering department.

Metric parts listed in italic



Grooveless Retainer Rings

Superior stainless steel fasteners. Provide 360° of bearing surface for maximum holding power...without a groove!

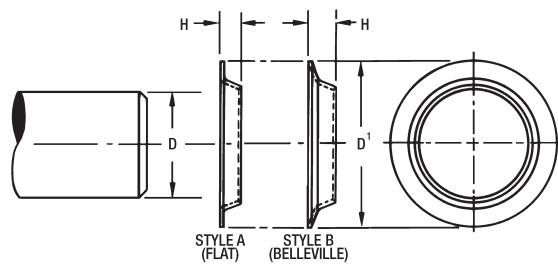
Tinnerman **Grooveless Retainer Rings** press over studs, shafts, or any round shape from .046" to 2.00" diameter. **G-R-R's** become an integral part of the axial application, replacing snap or bearing rings, cotter pins, staking, swaging, spinning, heat forming, ultrasonics, coining, cementing, or upsetting... eliminating high-cost operations.

Designed without slots, or shears, **G-R-R's** will not "walk-off" or spring free. Low profile flat designs require a minimum of space. Wall dimensions as thin as .024" make them ideal for limited access locations. They need as little as .032" of shaft or stud extension for full anchor.

Quality stainless steel assures long life, corrosion resistance, minimal distortion, dry finish, eliminates heat treat, finish and handling operations...and the extra costs they entail.

A full range of sizes has been developed on modular tooling. Virtually any unlisted size can be made that falls within the limits of the tools, for a one-time set up charge. Sizes beyond this range can be made but require special tooling.

*Patented



Material: 300 Series Stainless Steel Preferred
 Finish -576 Degreased, clean, and free of oil
 -27 Soluble oil, dipped
 -928 Mildly Alkaline Acrylic Water Based Rust Preventative
 -4 Phosphate and Oil
 † Parts identified available in Spring Steel material only-standard finish-27.

Metric Equiv. (mm.)	D Stud Size	D1 Dia.	H Height	T Mat'l. Thick.	Style	Part Number
1.170	.046	.088	.017	.006	A	T99220SS-125-576
1.570	.062	.150	.020	.010†	A	T99220-210-27
2.360	.093	.245	.030	.008	A	T99220SS-75-576
	.093	.325	.025	.006	A	T99220SS-87-576
2.970	.117	.245	.030	.008	A	T99220SS-67-576
3.960	.156	.260	.025	.008	A	T99220SS-66-576
4.000	.157	.243	.025	.008	A	T99220SS-203-576
4.110	.162	.437	.040	.015	A	T99220SS-86-576
4.750	.187	.312	.025	.006	A	T99220SS-68-576
	.187	.375	.030	.012	A	T99220SS-126-576
5.080	.200	.405	.050	.022†	A	T99220-99-27
5.590	.220	.325	.025	.008	A	T99220SS-97-576
6.020	.237	.437	.030	.010	A	T99220SS-90-576
	.237	.531	.045	.017	A	T99220SS-196-576
6.290	.248	.750	.060	.025†	A	T99220-171-4
6.300	.248	.750	.030	.010	A	T99220SS-144-576
6.350	.250	.437	.050	.010	B	T99220SS-104-576
	.250	.625	.030	.010	A	T99220SS-137-576
7.620	.300	.500	.055	.022†	A	T99220-154-928
7.920	.312	.437	.030	.010	A	T99220SS-64-576
	.312	.564	.035	.015	A	T99220SS-141-576
	.312	.625	.050	.022†	A	T99220-112-27
8.000	.315	.500	.035	.010	A	T99220SS-161-576
8.710	.343	.562	.030	.010	A	T99220SS-132-576
9.270	.365	.560	.050	.020†	A	T99220-163-4
9.460	.372	.500	.043	.020	A	T99220SS-173-576
9.520	.375	.625	.030	.010	A	T99220SS-91-576
9.530	.375	.590	.030	.010	A	T99220SS-152-576
11.100	.437	.655	.040	.020	A	T99220SS-150-576
11.460	.451	.610	.030	.010	A	T99220SS-139-576
11.730	.462	.750	.025	.008	A	T99220SS-88-576
12.000	.472	.783	.070	.031	A	T99220SS-181-576
12.700	.500	.750	.025	.010	A	T99220SS-120-576
14.000	.551	21.900	2.000	1.060†	A	T99220-200-4
15.880	.625	.940	.089	.037†	A	T99220-207-4
18.260	.719	25.400	—	.430	A	T99220SS-205-576
25.400	1.000	1.750	.040	.014†	A	T99220-199-4
40.950	1.612	2.250	.240	.050†	A	T99220-157-4

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