

## Panel Clips / Trim Clips

### Self-Sufficient One-Piece Fasteners

The product displayed in this catalog is a preferred sampling of the larger product offering. For additional product refer to our web-site or contact a sales professional.

#### U-CLIPS

ARaymond Tinnerman's U-Shaped Panel Clips slide easily over metal, plastic or wooden panels providing a strong clamping action for firm, vibration-free assembly. They are self-sufficient requiring no holes, screws, welds, rivets or other secondary fastening devices. Turned-up lead lips on one or both legs allow fast assembly over the panel edges. Some are equipped with barbs for positive retention of the panel.



U-Clip



S-Clip

#### S-CLIPS

ARaymond Tinnerman's S-Shaped Panel Clips are used for attaching parallel panels in opposing directions. The spring steel "cushions" the joint, preventing chipping and other damages during shipping and handling. They eliminate the need for holes in panels or flanges.

#### METAL DART TYPE FASTENERS

ARaymond Tinnerman's metal dart type fasteners require no screws or other secondary fastening devices. They require only a cavity or mounting hole. Dart type fasteners can be applied from the front or top of a panel eliminating many blind or limited access fastening problems. The spring tension secures the components between the base and knuckles of the clip. The amount of clamping action depends on the material thickness and design of the clip.



Dart Clip



U-Clip Special

#### U-CLIP SPECIALS

ARaymond Tinnerman has developed several special U-Clips to solve specific applications, and demonstrate our comprehensive engineering capabilities. All designs feature a "U-shaped" clip that secures to one panel, and another feature that secures or interferes with an additional component. There are several design variations to consider. ARaymond Tinnerman can create new designs if needed for specific applications.

#### Industries and Applications

- Universal - Can be used across most industries
- Ceiling light fixtures

#### FAN BALANCE CLIPS

U-Shaped or V-Shaped self-retaining fasteners are designed to assemble to fan blades. The key objective of fan blades is to meet a specific weight. Motor and fan manufacturers use these to balance out fans so the unit can run properly. Weight is usually measured in grains or ounces. Basic dimensions have also been provided on two of the more popular series.



Fan Balance Clip - 69 Series



Fan Balance Clip - 17/18 Series

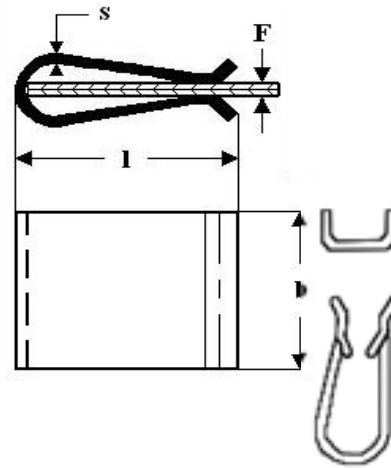
# Panel Clips / Trim Clips

## Self-Sufficient One-Piece Fasteners

Most of the products featured on this page are manufactured with spring steel. ARaymond Tinnerman offers these parts in corrosion protection and/or aesthetically pleasing finishes. Parts may also be available in stainless steel.

### U-Clips

Part Number	Panel Thickness (F)	Width (b)	Length (l)	Material Thick. (s)	Design Variation
C25341-014	0.035-0.045	0.380	0.200	0.014	ACE
C23928-014	0.046-0.056	0.380	0.200	0.014	ACE
D20285-017	0.050-0.100	0.500	0.340	0.017	BE
D27091-014	0.115-0.185	0.500	0.420	0.014	E
D43806-014	0.170-0.205	0.500	0.430	0.014	E
C45931-014	0.245-0.255	0.500	0.360	0.014	CE
C57065-014	0.270-0.320	0.500	0.265	0.014	CD
C56147-014	0.320-0.340	0.500	0.270	0.014	CE

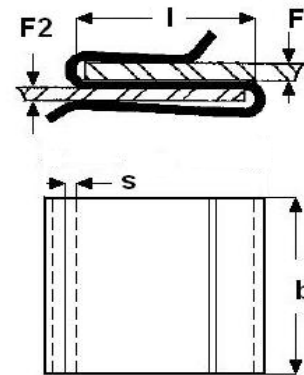


#### DESIGN VARIATIONS

- (A) STRAIGHT LEGS
- (B) ONE LEG STRAIGHT
- (C) SQUARE BACK
- (D) BARBS ON ONE LEG
- (E) BARBS ON BOTH LEGS
- (F) BARBS STAGGERED

### S-Clips

Part Number	Panel Thickness (F)	Panel Thickness (F2)	Width (b)	Length (l)	Material Thick. (s)	Design Variation
C53241-020	0.026-0.032	0.112-0.118	0.375	0.475	0.020	CE
<b><i>D99269-051M</i></b>	<b><i>0.900</i></b>	<b><i>2.500</i></b>	<b><i>15.050</i></b>	<b><i>14.000</i></b>	<b><i>0.510</i></b>	<b><i>CD</i></b>
C28173-025	0.040-0.080	0.120-0.136	0.500	0.545	0.025	B
C22306-025	0.043-0.053	0.025-0.060	0.562	0.540	0.025	CD
D44684-020	0.048-0.080	0.070-0.110	0.375	0.530	0.020	CF
<b><i>D98707-051M</i></b>	<b><i>1.250-2.000</i></b>	<b><i>1.800-2.800</i></b>	<b><i>9.550</i></b>	<b><i>13.450</i></b>	<b><i>0.510</i></b>	<b><i>BF</i></b>
C52161-020	0.050-0.070	0.050-0.070	0.380	0.565	0.020	CE
C58137-025	0.055-0.060	0.025-0.060	0.562	0.540	0.025	C
D40991-020	0.055-0.065	0.080-0.110	0.375	0.530	0.020	BF
<b><i>C58675-064M</i></b>	<b><i>1.500-2.000</i></b>	<b><i>1.500-2.000</i></b>	<b><i>12.750</i></b>	<b><i>19.000</i></b>	<b><i>0.640</i></b>	<b><i>E</i></b>
C48766-020	0.070-0.080	0.070-0.110	0.375	0.530	0.020	CF
C55113-020	0.090-0.130	0.090-0.130	0.375	0.530	0.020	CE
<b><i>D99044-043M</i></b>	<b><i>2.300-3.300</i></b>	<b><i>2.300-3.300</i></b>	<b><i>9.550</i></b>	<b><i>13.500</i></b>	<b><i>0.430</i></b>	<b><i>BF</i></b>
<b><i>C57908-043M</i></b>	<b><i>2.500-2.800</i></b>	<b><i>2.500-2.800</i></b>	<b><i>9.530</i></b>	<b><i>22.360</i></b>	<b><i>0.430</i></b>	<b><i>CF</i></b>
C55638-020	0.161-0.170	0.090-0.130	0.375	0.520	0.020	CE



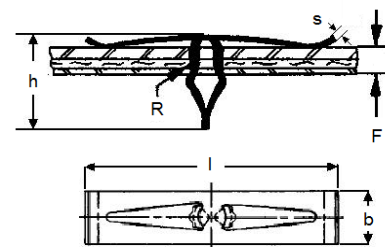
#### DESIGN VARIATIONS

- (B) LEAD UP ON ONE LEG
- (C) LEAD UP ON TWO LEGS
- (D) RETAINING BARBS ON ONE LEG
- (E) RETAINING BARBS ON TWO LEGS
- (F) RETAINING BARBS ON THREE LEGS

***Bold Italics: Metric***

### Dart Clips - Metal

Part Number	Panel Range Thickness (F)	Hole Diameter (R)	Height (h)	Length (l)	Width (b)	Material Thick. (s)
C40617-017	0.190-0.230	0.190-0.190	0.610	1.700	0.330	0.020



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## Self-Sufficient One-Piece Fasteners

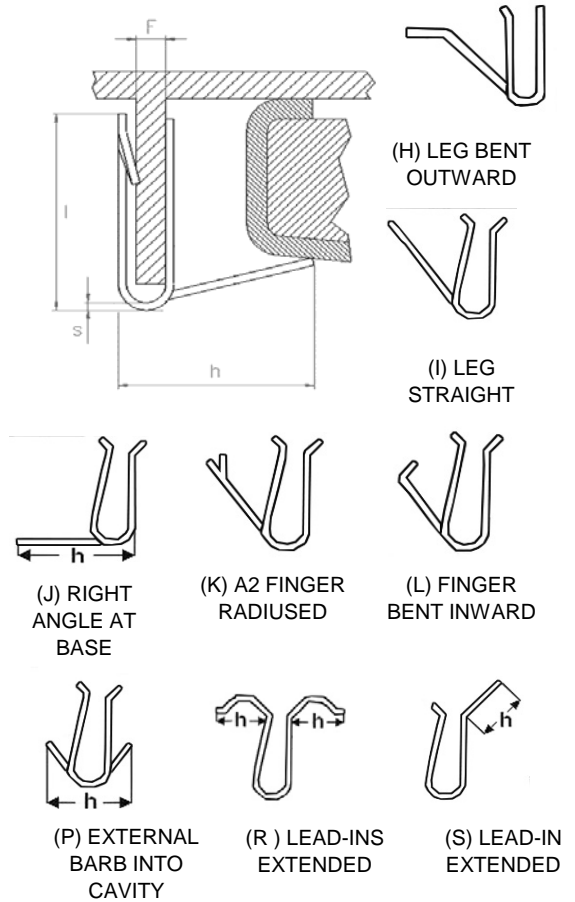
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### U-Clips - Special

Part Number	Panel Thickness (F)	Leg Height (h)	Width (b)	Length (l)	Material Thick. (s)	Design Variation
C44140-014	0.025-0.035	0.350	0.500	0.460	0.014	BFI
C20597-017	0.042-0.048	0.610	0.500	0.300	0.017	BFJ
C23259-017	0.042-0.062	0.525	0.500	0.290	0.017	BFJ
C29019-014	0.055-0.065	0.360	0.500	0.310	0.014	BFH
C41412-017	0.070-0.090	0.525	0.500	0.290	0.017	BEJ
C21527-014	0.075-0.105	0.315	0.500	0.410	0.014	FH
C28015-025	0.030-0.110	0.190	0.875	0.635	0.025	FI
C54150-017	0.120-0.125	0.545	0.500	0.260	0.017	FIJ
C25672-017	0.125-0.140	0.545	0.500	0.260	0.017	BCFJ
D99073-043M	0.780-1.040	9.440	12.700	8.280	0.430	BFI
D98920-043M	1.820-1.950	3.000	25.400	10.500	0.430	FJ
C28036-017	0.090-0.110	0.180	0.500	0.350	0.017	BFS
C58664-064M	2.650-2.750	3.000	21.000	18.500	0.640	CEGR
D98672-064M	1.100-3.100	1.000	18.000	17.500	0.640	CR
C58172-064M	3.450-3.550	0.075	12.700	17.800	0.640	CERZ
D28601-014	0.067-0.077	0.196	0.500	0.350	0.014	EP
C58521-028	0.080-0.080	0.080	0.437	1.125	0.028	P
D47463-017	0.105-0.115	0.240	0.500	0.380	0.017	AP

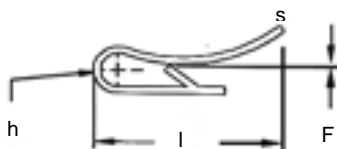
**Bold Italics: Metric**

Refer to U-Clip design variations for A through E



### Balance Clips - 69 Series Thin Blade

Part Number	Weight (Grains)	Width (b)	Length (l)	Height (h)	Material Thick. (s)	Gap Max (F)
97-09017	6.25	0.216	0.630	0.030	0.013	0.000
69-125	12.50	0.343	0.795	0.078	0.012	0.000
97-09016	12.50	0.435	0.630	0.030	0.013	0.000
69-25	25.00	0.343	0.782	0.078	0.025	0.020
69-37 1/2	37.50	0.515	0.833	0.078	0.025	0.015
69-50	50.00	0.688	0.816	0.078	0.025	0.020
97-09009	62.00	0.860	0.810	0.078	0.026	0.020
69-75	75.00	1.032	0.814	0.078	0.025	0.020
97-09011	87.00	1.203	0.810	0.078	0.026	0.020
69-100	100.00	1.375	0.826	0.078	0.025	0.020
69-150	150.00	1.500	0.897	0.156	0.032	0.030
69-200	200.00	2.000	0.890	0.156	0.032	0.030



### Balance Clips - 17-18 Series Thick Blade

Part Number	Weight (Ounce)	Width (b)	Length (l)	Height (h)	Material Thick. (s)
17-1	0.13	0.625	1.076	0.738	0.020
17-2	0.25	1.125	1.173	0.774	0.020
17-3	0.50	1.500	1.062	0.778	0.031
17-4	1.00	2.500	1.057	0.743	0.035
17-5	1.50	2.500	1.057	0.782	0.047
17-6	2.00	2.500	1.043	0.655	0.062
18-1/4	0.25	0.500	1.750	1.187	0.028
18-1/2	0.50	1.000	1.750	1.187	0.028

