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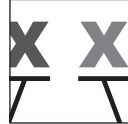
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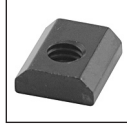
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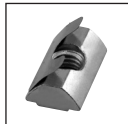
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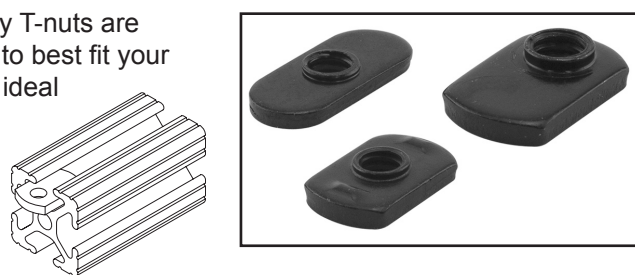


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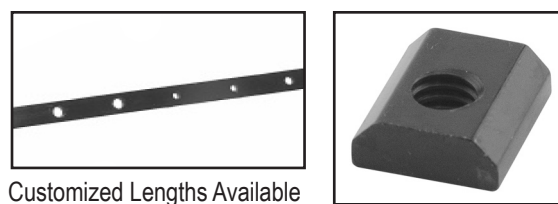
Introduction to Fasteners

80/20® has the largest assortment of fasteners available in the industry! We stock over 20 types, featuring over 400 variations and combinations for your applications. 80/20 fasteners are made of high-quality materials and hold tight tolerances. Variations include fasteners that load from the profile end or the profile side, fractional or metric, and black zinc, bright zinc or stainless steel material.

Slide-In Economy T-Nuts: Single economy T-nuts are available with the thread centered or offset to best fit your application requirements. Offset T-nuts are ideal for making clean end connections without compromising strength. Centered T-nuts work well for connections made in the center of a profile or with a joining plate. Economy T-nuts are also available in double and triple configurations.

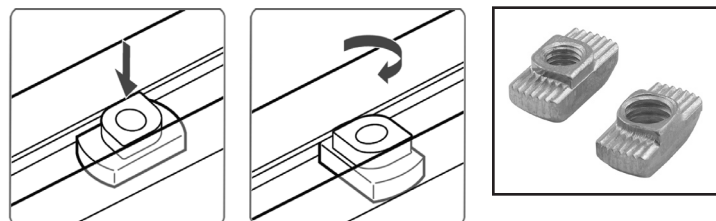


Standard **Slide-In T-Nuts**, made of 1215 carbon steel, are high-strength, low-cost fasteners that load from the profile end. They can be customized up to 36 inches in length for any application.

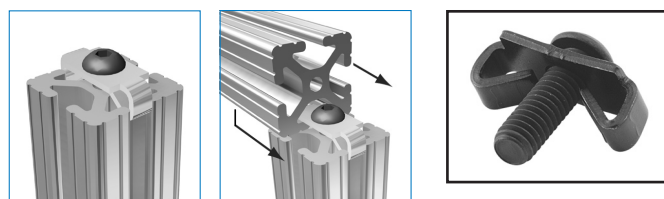


Customized Lengths Available

Drop-in T-Nut fasteners are a cost-effective, modular choice for most mounting needs. If the profile ends are captivated, Drop-in fasteners can be placed directly in the T-slot, then rotated for secure placement.



End Fasteners provide a strong, square, hidden joint in a fixed location that simplifies assembly. When ordering applications with end fasteners, be sure to specify tapping and access hole machining services for your profiles.



Self-Aligning T-Nuts have a raised section that extends up into the T-slot opening. This feature will center the threaded hole of the T-nut in the T-slot, prevent rotation and allow for longer thread dimensions. **Note:** Make certain the "neck" does not extend past the face of the T-slot profile, interfering with the connection.



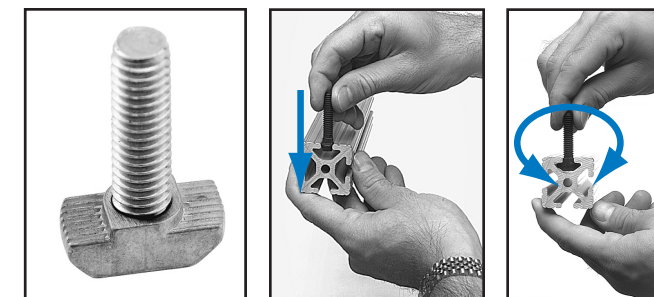
Roll-In T-Nuts with Flex Handle, Set Screw, Ball Spring or Spring Leaf load from the profile side, allowing add-ons to your application without dismantling the frame. Roll-in T-nuts with a flex handle, ball spring, set screw or spring leaf hold the T-nut in place for easy positioning. The flex handle makes removal of the drop-in simple.



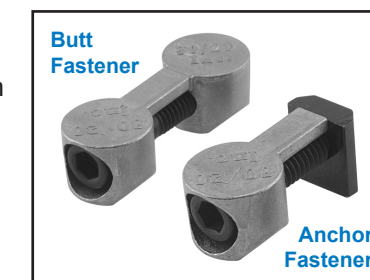
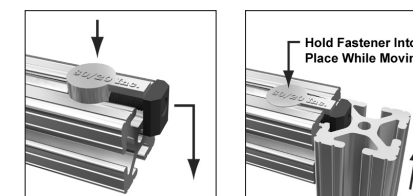
Slide-In Economy T-Slot Studs, loaded from the end of a profile, are the strongest fastener available from 80/20® for use with joining plates. By engaging the Drop-Lock feature, they provide a vibration-proof connection when properly tightened. The square key on the shoulder of the bolt prevents the stud from turning when an application is subjected to vibration.



Drop-in T-Slot Studs load from the profile end or into the profile side. If the profile ends are captivated, drop-in fasteners can be placed directly in the T-slot, then rotated for secure placement.



Anchor Fasteners, available in single and double configurations, are perfect for making 90° connections in the center of a bar. These fasteners make a strong, flush connection that can be easily adjusted when used with any of 80/20®'s T-slotted profiles.



Butt Fasteners allow you to fasten two profiles end-to-end with maximum strength and near-perfect alignment. When space restrictions prevent the use of joining plates, butt fasteners are the perfect solution.

How to Order 80/20® Fasteners

As you will notice in the order below, ordering fasteners from 80/20 is a simple process. Simply write the part number and quantity required (note: when ordering bolt kits, double check the quantity required per the connector). To finish, just write a brief description of the fastener you are ordering. This will help us ensure that you receive the exact parts that you need.

How To Order						
Shipping Method: <input type="text"/>		Ship To:				
Ordered By: <input type="text"/>		Customer: <input type="text"/>				
		Address: <input type="text"/>				
		City / State: <input type="text"/>				
		Attention: <input type="text"/>				
		Tag: <input type="text"/>				
Complete Address & Shipping Method Required... NO P.O. Box						
Part Number	Quantity	Length	Description / Machining	Price/UOM	Ext. Price	
25-2525	2	469.9mm	25-7042 in A both ends	\$0.01	\$7.89	
40-4040-Lite-4m	5	4 m	Full length profile	\$80.00	\$400.00	
40-8016	4	1016.0mm	40-7029 one end	\$0.14	\$554.74	
40-8080	4	914.4mm	40-7050 style MG in W, X both ends	\$0.06	\$230.43	
CM01-051006	2		Custom bracket per drawing #1	\$23.00	\$46.00	
65-2611	1	.63 sm	6mm bronze polycarb 1 @ 457.2mm x 1016mm w/ 25-7311 per drawing	\$111.95	\$70.53	
65-7150	1		Cut plastic panels all sides < -1220mm	\$10.50	\$10.50	
25-7042	4		25 Series anchor fastener counterbore	\$2.25	\$9.00	
25-7005	2		Cut-to-length for 25-2525	\$1.95	\$3.90	
40-7023	4		Cut-to-length for 40-8016	\$2.90	\$11.60	
40-7030	4		Cut-to-length for 40-8080	\$2.60	\$10.40	
40-7050	64		40 Series drill access hole	\$1.95	\$124.80	
40-7029	4		5/16-18 tap service for 40-8016	\$15.20	\$60.80	
25-7311	2		Anchor fastener notch for 25 Series	\$0.53	\$1.06	
40-3891	32		40 Series M8 bright zinc end fastener w/ screw	\$1.65	\$52.80	
25-2114	16		Gray T-Slot covers for 25 Series	\$3.45	\$55.20	
40-2050	8		End caps for 40-8080	\$1.85	\$14.80	
25-3896	4		25 Series anchor fasteners	\$3.10	\$12.40	
40-1982	5		40 Series M8 bright zinc double economy T-nut	\$0.84	\$4.20	
25-4132	12		2 hole inside corner gusset bracket	\$3.95	\$47.40	
75-3404	24		25 Series M6 BHSCS & economy T-nut	\$0.45	\$10.80	
TOTAL					\$1739.25	
NOTE: Prices shown for illustration use only. Contact your distributor for a personalized quote.						
Special Instructions: Must be delivered for assembly by Friday!!!						

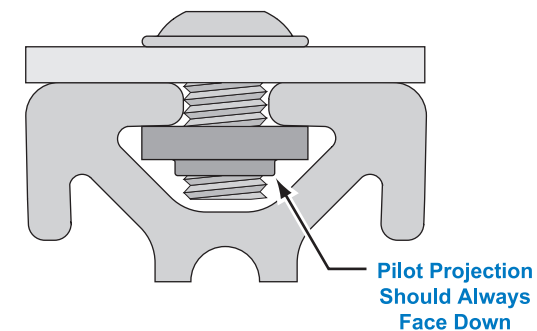
1 - Profiles = Pages 640-694 • 2 - Custom Parts = Pages 695-710 • 3 - Panels = Pages 831-914
 4 - Machining Services = Pages 1025-1078 • 5 - Accessories & Tools = Pages 915-938 & 1015-1024

Fastener Standards

Assembling T-slotted profiles with 80/20's selection of fasteners is a simple and quick process. To ensure a secure connection, there are a few key points to keep in mind when placing fasteners into the T-slot:

Threaded Pilot Projection

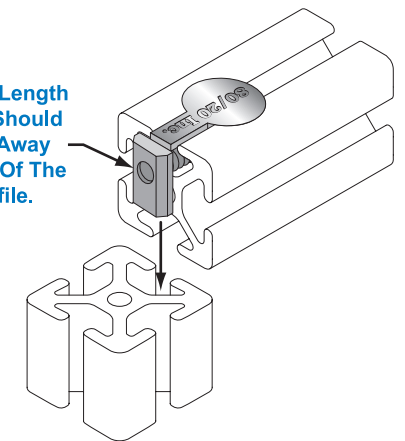
The threaded pilot projection on T-nuts provides more thread, adding strength to the fastener. Always position the projection down in the T-slot to avoid crashing and an uneven connection.



Offset Tap Hole Location

The offset threaded hole on 80/20 T-nuts allows for a flush surface when mating two profiles at a 90° connection. This is most common when using anchor fasteners, shown in the example below.

The Extended Length Of The T-Nut Should Always Aim Away From The Top Of The Mating Profile.



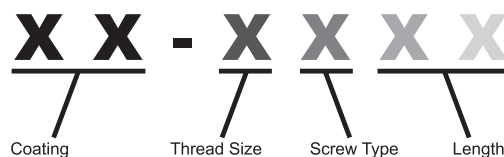
Fastener/Hex Tool Size Reference

This chart is a quick reference when looking for the correct size of hex wrench for use with 80/20 fasteners. See pages 1015-1024 for power bits, T or L-handle wrenches, and Bondhus® tools.

Thread Size	Fastener Head			
	SHCS	BHSCS	FBHSCS	FHSCS
8-32	N/A	3/32"	N/A	N/A
10-32	5/32"	1/8"	N/A	N/A
1/4-20	3/16"	5/32"	5/32"	5/32"
5/16-18	1/4"	3/16"	3/16"	3/16"
3/8-16	5/16"	N/A	N/A	7/32"
M5	4mm	3mm	N/A	3mm
M6	5mm	4mm	N/A	4mm
M8	6mm	5mm	N/A	5mm
M10	8mm	6mm	N/A	6mm

Metric Fastener Part Number Definition

All metric fasteners have a 2-digit prefix followed by a dash, followed by a 4-digit number.



Example: 13-8316
Blue M8 BHSCS x 16mm

Example: 11-6510
Black M6 SHCS x 10mm

Coating	Thread Size	Screw Type	Length (mm)
11 - Black	1 - M10	3 - BHSCS	10 - 10 mm
13 - Blue	2 - M12	5 - SHCS	12 - 12 mm
17 - Stainless	3 - M3	7 - FHSCS	16 - 16 mm
19 - Bright	4 - M4	9 - Econ T-Slot Stud	20 - 20 mm
	5 - M5		25 - 25 mm
	6 - M6		30 - 30 mm
	8 - M8		35 - 35 mm
			40 - 40 mm
			45 - 45 mm

Legend for Icons

Design files for this part can be found on the 80/20® DVD (Design Software)

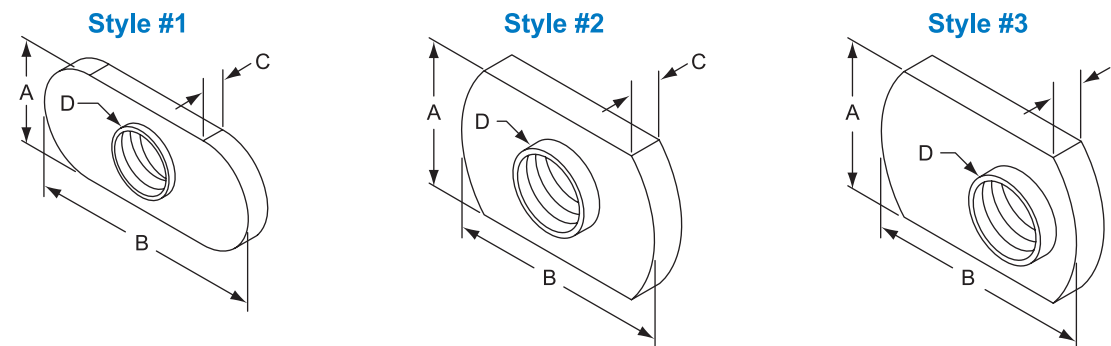


This part can use double economy T-nuts. See page 757

Slide-In Economy T-Nuts



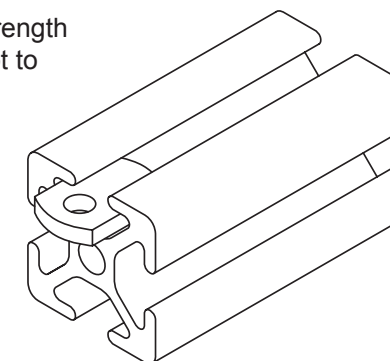
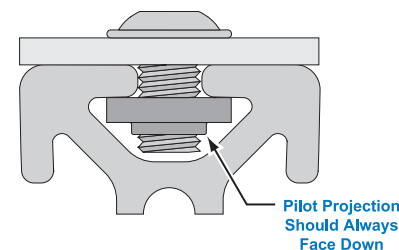
- Loads from the profile end only
- Available in carbon steel, black and bright zinc-plated
- Refer to pages 743-751 for our full screw and bolt offering
- Refer to page 719 for T-nut holding springs



Part No.	Style	A	B	C	D (Thread)	Finish	kg.
25-3382	Style 1	11.25	25.40	2.38	1/4-20 Centered	Black Zinc	.0042
25-1961	Style 1	11.25	25.40	2.38	M6 x 1.0 Centered	Bright Zinc	.0041
25-1941	Style 3	11.25	15.87	2.79	M4 x 0.7 Offset	Bright Zinc	.0037
25-1951	Style 3	11.25	15.87	2.79	M5 x 0.8 Offset	Bright Zinc	.0035
30-3789	Style 2	13.50	25.40	3.60	5/16-18 Centered	Bright Zinc	.0090
30-3796	Style 2	13.50	25.40	3.60	M8 x 1.25 Centered	Bright Zinc	.0090
30-1961	Style 3	13.00	20.60	3.20	M6 x 1.0 Offset	Bright Zinc	.0055
40-3286	Style 2	12.82	20.60	3.17	1/4-20 Centered	Black Zinc	.0054
40-1961	Style 2	12.82	28.57	3.17	M6 x 1.0 Centered	Bright Zinc	.0080
40-1981	Style 3	16.00	24.99	3.60	M8 x 1.25 Offset	Bright Zinc	.0093
40-3278	Style 3	16.00	24.99	3.60	5/16-18 Offset	Black Zinc	.0093

Threaded Pilot Projection

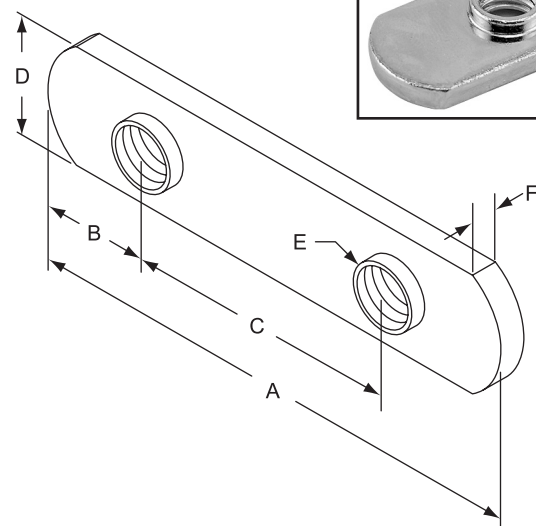
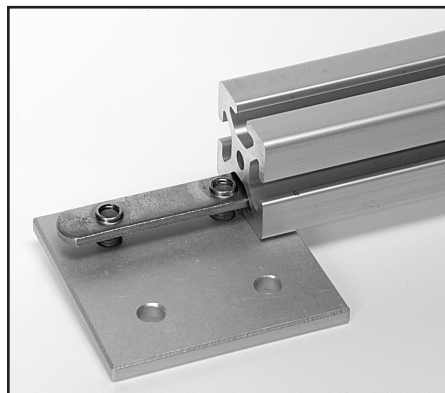
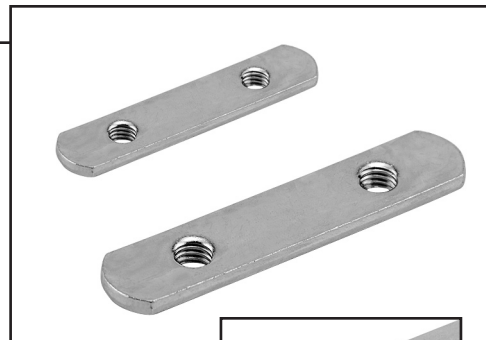
The threaded pilot projection provides more threads, adding strength to the fastener. Always position the projection down in the T-slot to avoid crashing and an uneven connection.



Double Slide-In Economy T-Nuts



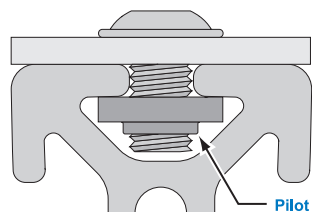
- Reduces assembly time
- Loads from the profile end only
- Made from steel with bright zinc finish
- Perfect for multiple hole joining plates
- Refer to pages 743-751 for our full screw and bolt offering



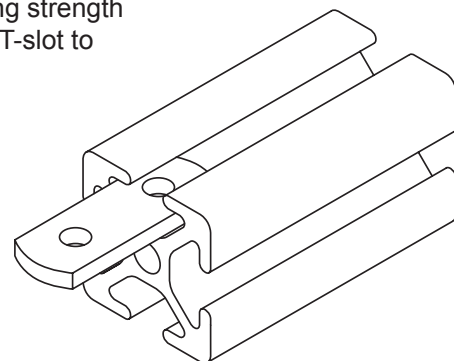
Part No.	A	B	C	D	E (Thread)	F	Finish	kg.
25-1962	47.60	11.30	25.00	11.20	M6 x 1.00	2.41	Bright Zinc	.009
40-1982	75.00	17.50	40.00	16.20	M8 x 1.25	3.60	Bright Zinc	.028

Threaded Pilot Projection

The threaded pilot projection provides more threads, adding strength to the fastener. Always position the projection down in the T-slot to avoid crashing and an uneven connection.

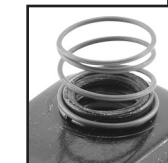
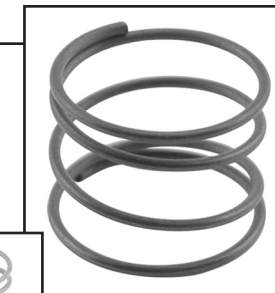


Pilot Projection Should Always Face Down



Economy T-Nut Holding Springs

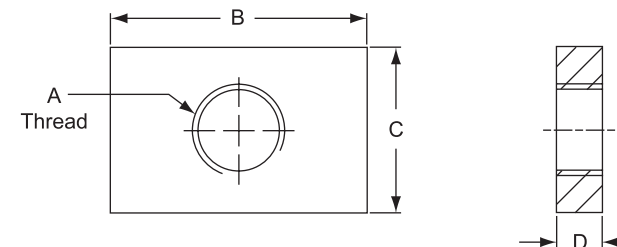
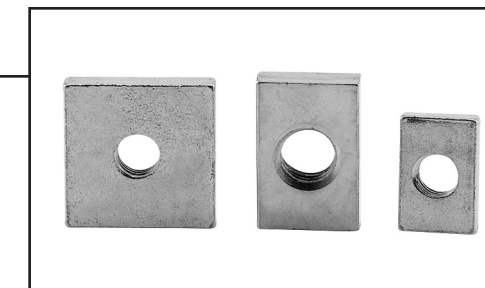
- Holds 40 Series M8 x 1.25 or 5/16-18 slide-in economy T-nuts in place
- Snaps around the pilot projection of the T-nut
- Sold in bags of 100 springs
- Compatible with 40-1981, 40-1982 and 40-3278



Part No.	Compatible Series	kg. (bag)
3010	40 Series & 15 Series	.0453

Slide-In Economy T-Nuts
Steel, Zinc-Plated

- Loads only from the profile's end
- Very economical



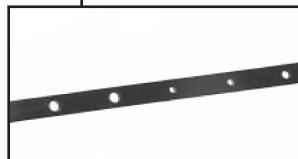
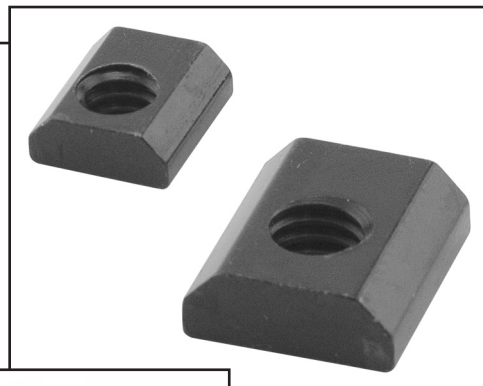
Part No.	A	B	C	D	Compatibility Code*
14159	M4	9.00	9.00	3.00	5-20
14122	M5	9.00	9.00	3.00	5-20
14124	M6	15.00	10.00	4.00	6-10, 6-25
14126	M6	19.00	16.00	4.00	8-15, 8-40, 10-45
14127	M8	19.00	16.00	4.00	8-15, 8-40, 10-45
14128	M6	19.00	19.00	4.00	10-45
14129	M8	19.00	19.00	4.00	10-45
14130	M6	20.00	13.00	5.00	8-15, 8-40, 10-45
14131	M8	20.00	13.00	5.00	8-15, 8-40, 10-45

* See Compatibility Code information on page 642.

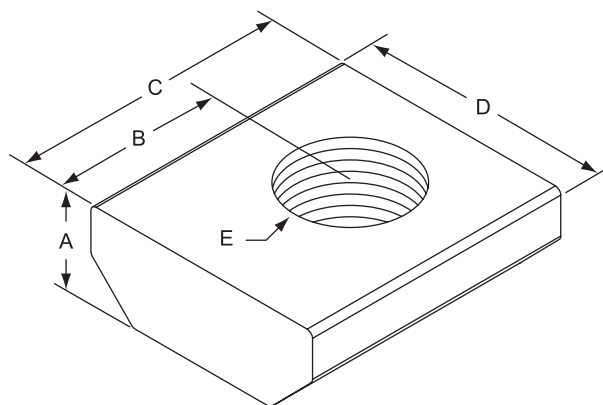
Slide-In T-Nuts



- Loads from the profile end only
- Made from 1215 carbon steel with bright and black zinc finishes
- 1M Standard T-Nut profiles are available for customized T-Nuts*
- Refer to pages 743-751 for our full screw and bolt offering
- See page 1029 for cut-to-length service



Customized Lengths Available



Part No.	A	B (Tap Location)	C	D	E (Thread)	Finish	kg.
25-1954	4.34	5.08	12.45	10.95	M5 x 0.8	Bright Zinc	.0045
25-1964	4.34	5.08	12.45	10.95	M6 x 1.0	Bright Zinc	.0045
25-3204	4.34	5.08	12.45	10.95	1/4-20	Black Zinc	.0045
25-8901*	4.34	Per Your Drawing	914.00	10.95	Per Your Drawing	Black or Bright Zinc	.3420
40-1964	6.35	7.14	17.45	15.90	M6 x 1.0	Bright Zinc	.0090
40-1984	6.35	7.14	17.45	15.90	M8 x 1.25	Bright Zinc	.0090
40-3202	6.35	7.14	17.45	15.90	1/4-20	Black Zinc	.0090
40-3203	6.35	7.14	17.45	15.90	5/16-18	Black Zinc	.0090
40-8900*	6.35	Per Your Drawing	914.00	15.90	Per Your Drawing	Black or Bright Zinc	.6840

*Note: 80/20® can customize T-nut profiles to match your specific requirements; simply submit a sketch to 80/20® or your distributor.

Slide-In Economy T-Slot Studs



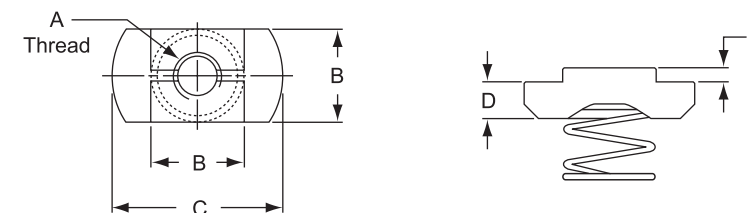
- 40 Series compatible
- Loads from the profile end only
- Strongest fastener available for joining plates
- Square neck prevents rotation
- Refer to pages 743-751 for our full nut and washer offering



Part No.	Finish	Thread x Length	kg.
19-8920	Bright Zinc	M8 x 20mm	.0142
19-8925	Bright Zinc	M8 x 25mm	.0153
19-8930	Bright Zinc	M8 x 30mm	.0169
19-8935	Bright Zinc	M8 x 35mm	.0194
19-8945	Bright Zinc	M8 x 45mm	.0213
40-3116	Black Zinc	5/16-18 x 3/4"	.0117
40-3120	Black Zinc	5/16-18 x 1"	.0139
40-3126	Black Zinc	5/16-18 x 1-1/4"	.0156
40-3134	Black Zinc	5/16-18 x 1-1/2"	.0177
40-3290	Black Zinc	5/16-18 x 2"	.0225

Spring T-Nuts
Steel, Zinc-Plated

- Loads only from the end of our 10-45 compatible profiles
- Coil spring positions T-nut in the slot for easier assembly

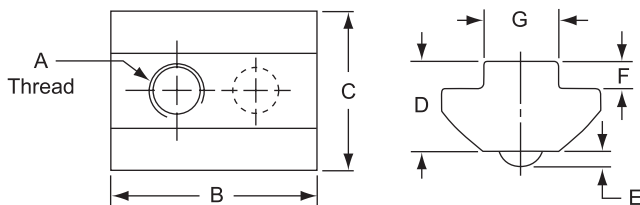


Part No.	A	B	C	D	E	kg.	Compatibility Code*
13106	M4	9.80	18.00	3.80	1.50	.0050	10-45
13107	M5					.0042	
13108	M6					.0041	
13109	M8					.0039	

* See Compatibility Code information on page 642.

Slide-In T-Nuts with Ball Spring
Steel, Zinc-Plated, Self-Aligning

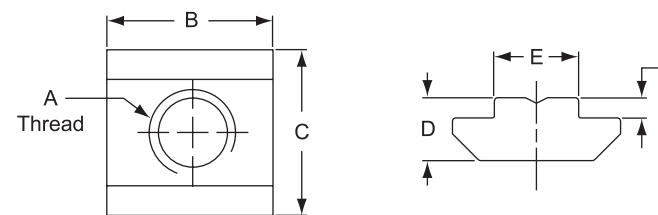
- Loads from the profile's end only
- Compatible with 15 and 40 Series profiles
- Ball spring positions the T-nut in the slot for easier assembly



Part No.	A	B	C	D	E	F	G	kg.	Compatibility Code*
13050	M4	22.00	17.00	9.60	1.70	2.90	8.00	.0108	8-15 8-40
13051	M5							.0105	
13052	M6							.0099	
13053	M8							.0090	
13054	1/4-20							.0099	
13055	5/16-18							.0090	

Slide-In T-Nuts
Steel, Zinc-Plated, Self-Aligning

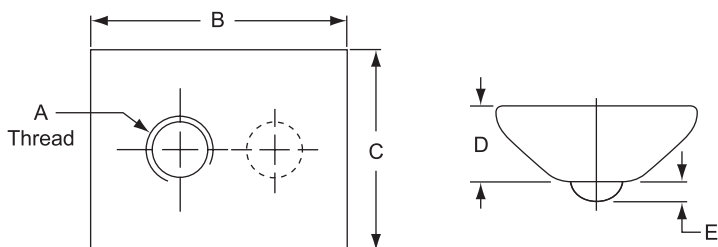
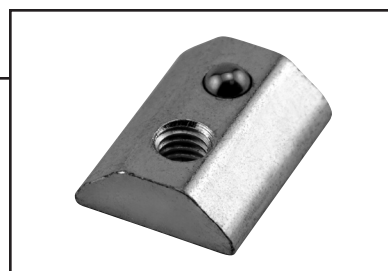
- Loads only from the profile's end
- Works best in our 30 Series profile
- Compatible with all our 8mm slot width profiles



Part No.	A	B	C	D	E	F	kg.	Compatibility Code*
13022	M4	16.00	16.00	6.00	8.00	1.90	.0840	8-15 8-30 8-40
13023	M5						.0810	
13024	M6						.0770	
13025	M8						.0690	

Slide-In T-Nuts with Ball Spring
Steel, Zinc-Plated

- Loads from the profile's end only
- Compatible with 15 and 40 Series profiles

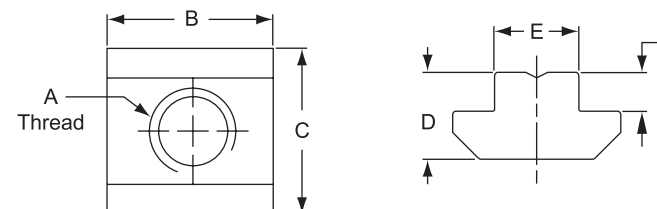


Part No.	A	B	C	D	E	kg.	Compatibility Code*
13064	M5	23.00	18.00	6.80	1.70	.0164	8-15 8-40
13065	M6					.0160	
13066	M8					.0150	

* See Compatibility Code information on page 642.

Slide-In T-Nuts
Steel, Zinc-Plated, Self-Aligning

- Loads only from the profile's end
- Compatible with 10-45 profiles



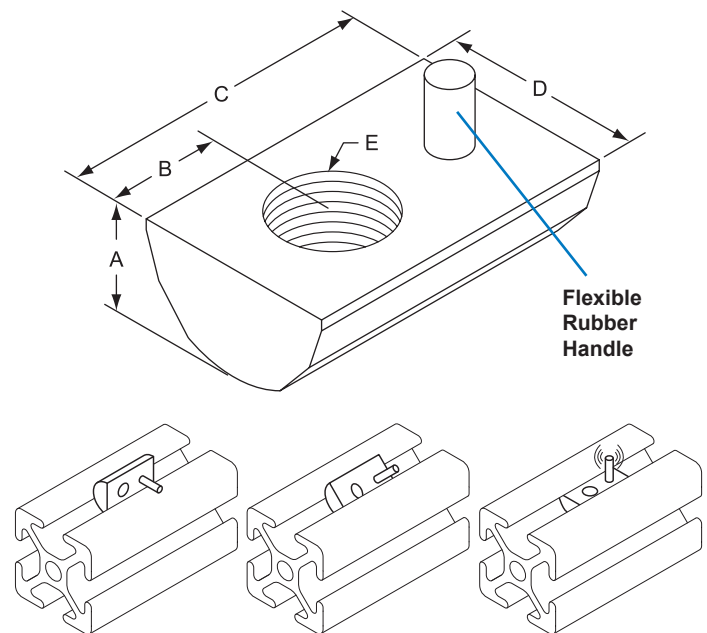
Part No.	A	B	C	D	E	F	kg.	Compatibility Code*
13046	M4	20.00	19.50	10.60	9.80	5.10	.0215	10-45
13047	M5						.0209	
13048	M6						.0203	
13049	M8						.0186	

* See Compatibility Code information on page 642.

Roll-In T-Nuts with Flex Handle



- Easy to add and reposition on an existing frame where T-slot ends are captivated
- Can be loaded from the profile end or the profile side
- Rubber friction nub holds nut in vertical position in the T-slot
- This high-strength T-nut reduces assembly time and can be easily removed from the T-slot
- Refer to pages 743-751 for our full screw and bolt offering

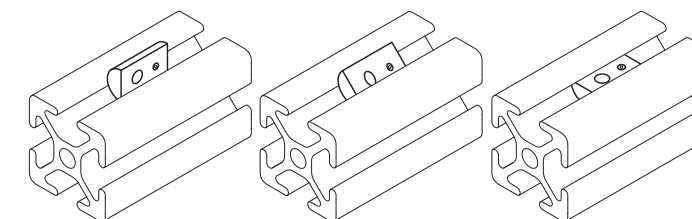
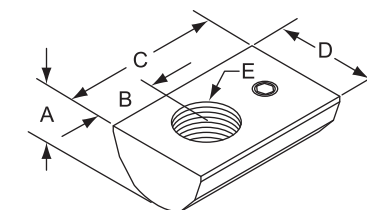


Part No.	A	B (Tap Location)	C	D	E (Thread)	Finish	kg.
25-1956	5.08	5.10	15.74	10.03	M5 x 0.80	Bright Zinc	.0045
25-1966	5.08	5.10	15.74	10.03	M6 x 1.00	Bright Zinc	.0038
25-3376	5.08	5.10	15.74	10.03	1/4-20	Black Zinc	.0037
40-1966	7.23	7.87	22.22	12.95	M6 x 1.00	Bright Zinc	.0106
40-1986	7.23	7.87	22.22	12.95	M8 x 1.25	Bright Zinc	.0103
40-3282	7.23	7.87	22.22	12.95	5/16-18	Black Zinc	.0103
40-3283	7.23	7.87	22.22	12.95	1/4-20	Black Zinc	.0109

Roll-In T-Nuts with Set Screw



- Easy to add and reposition on an existing frame where T-slot ends are captivated
- Can be loaded from the profile end or the profile side
- Set screw permanently positions the T-nut in the T-slot*
- Available in black and bright zinc
- Refer to pages 743-751 for our full screw and bolt offering



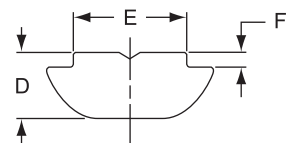
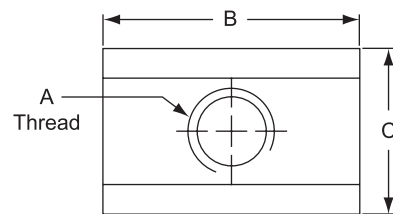
Part No.	A	B (Tap Location)	C	D	E (Thread)	Finish	kg.
40-3310	7.23	7.87	22.22	12.95	1/4-20	Black Zinc	.0122
40-3311	7.23	7.87	22.22	12.95	5/16-18	Black Zinc	.0118
25-3312	5.08	5.10	15.74	10.03	10-32	Black Zinc	.0036
25-3313	5.08	5.10	15.74	10.03	1/4-20	Black Zinc	.0036
40-1968	7.23	7.87	22.22	12.95	M6 x 1.00	Bright Zinc	.0118
40-1988	7.23	7.87	22.22	12.95	M8 x 1.25	Bright Zinc	.0113

*Note: An "L" wrench or a Bondhus® Combo Tool, shown on pages 1018-1019, is required for adjusting the set screw.

Roll-In T-Nuts

Steel, Zinc-Plated, Self-Aligning

- Loads from the profile end or side
- Easy to add to an existing frame where T-slot ends are captivated



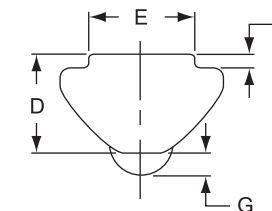
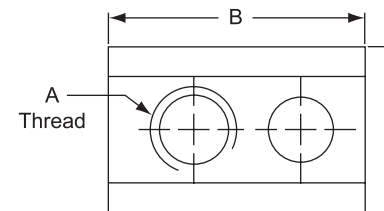
Part No.	A	B	C	D	E	F	kg.	Compatibility Code*
13088	M4	16.00	11.60	4.60	7.90	1.00	.0042	8-15
13090	M5						.0038	
13092	M6						.0032	
13094	M8						.0026	
13058	M5	20.00	15.00	6.00	9.80	2.00	.0130	10-45
13060	M6						.0120	
13062	M8						.0110	

* See Compatibility Code information on page 642.

Roll-In T-Nuts with Ball Spring

Steel & Stainless Steel, Self-Aligning

- T-nut can be loaded from the profile end or side
- Ball spring positions the T-nut in the slot for easier assembly
- Use in our 20 and 40 Series profiles

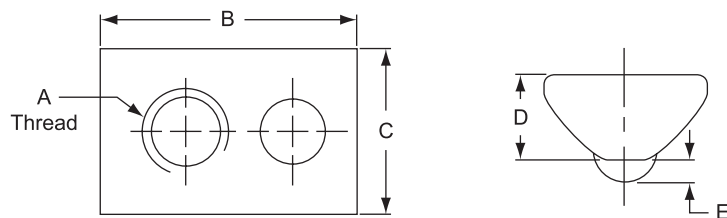


Part No.	Material	A	B	C	D	E	F	G	kg.	Compatibility Code*
13082	Steel, Zinc-Plated	M3	12.00	7.70	4.00	4.90	.60	1.00	.0022	5-20
13083		M4							.0020	
13084		M5							.0018	
13027		M4	22.00	13.50	7.20	7.80	.80	1.70	.0108	8-40
13028		M5							.0105	
13031		M6							.0099	
13034		M8							.0090	
13039		10-32							.0109	
13037		1/4-20	.0099							
13040		5/16-18	.0094							
13029	Stainless Steel	M5	22.00	13.50	7.20	7.80	.80	1.70	.0105	8-40
13032		M6							.0099	
13035		M8							.0090	

* See Compatibility Code information on page 642.

Roll-In T-Nuts with Ball Spring
Stainless Steel

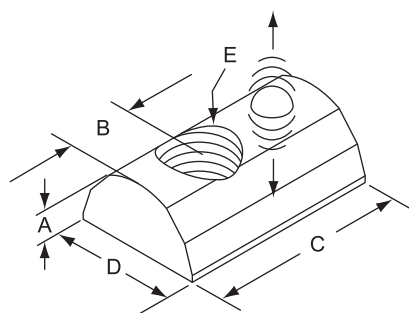
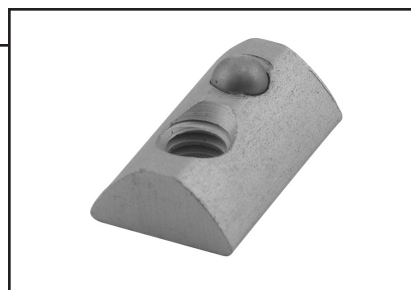
- Loads from the profile end or side
- Ball spring positions the T-nut in the slot for easier assembly
- Use in 40 Series profiles



Part No.	A	B	C	D	E	kg.	Compatibility Code*
13018	1/4-20	22.00	13.70	7.00	1.70	.0100	8-15, 8-40
13021	5/16-18					.0091	

Roll-In T-Nuts with Ball Spring

- 40 Series compatible
- Easy to add and reposition to existing frame where T-slot ends are captivated
- Can be loaded from the profile end or the profile side
- The ball spring holds the T-nut in vertical position in the T-slot
- Refer to pages 743-751 for our full screw and bolt offering

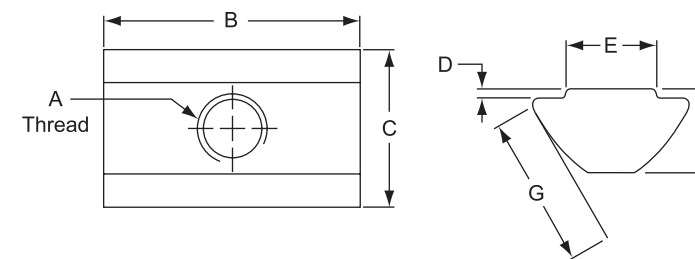
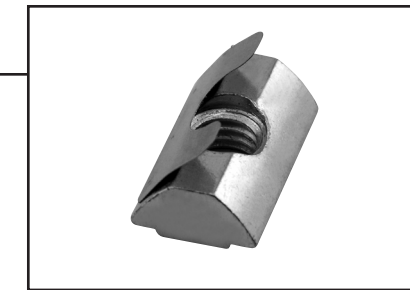


Part No.	A	B (Tap Location)	C	D	E (Thread)	Finish	kg.
40-3913	.285	.310	.875	.510	M5	Bright Zinc	.0127
40-3914	.285	.310	.875	.510	M6	Bright Zinc	.0118
40-3915	.285	.310	.875	.510	M8	Bright Zinc	.0118

* See Compatibility Code information on page 642.

Roll-In T-Nuts with Spring Leaf
Steel, Zinc-Plated, Self-Aligning

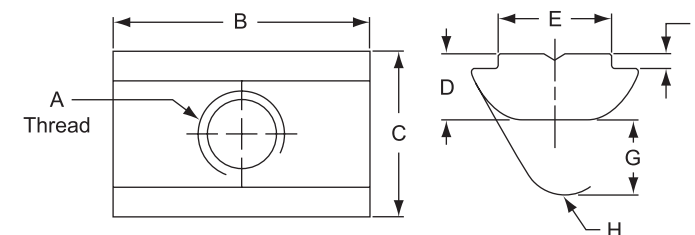
- Loads from the profile end or side
- Spring leaf positions the T-nut in the slot for easier assembly
- Compatible with 40 Series profiles



Part No.	A	B	C	D	E	F	G	kg.	Compatibility Code*
13030	M5	22.00	13.50	0.80	7.80	7.20	13.00	.0114	8-15 8-40
13033	M6							.0108	
13036	M8							.0099	
13038	1/4-20							.0109	
13041	5/16-18							.0100	

Roll-In T-Nuts with Spring Leaf
Steel, Zinc-Plated, Self-Aligning

- Loads from the profile's end or side
- Spring leaf positions the T-nut in the slot for easier assembly
- Compatible with all our 30 Series profiles

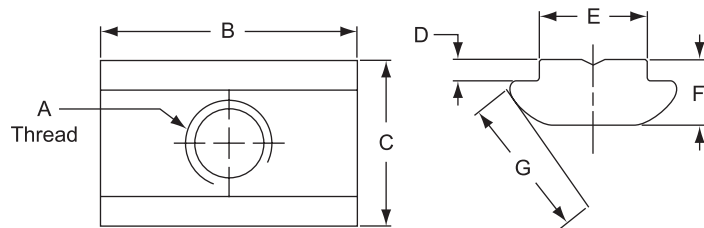


Part No.	A	B	C	D	E	F	G	H	kg.	Compatibility Code*
13089	M4	16.00	11.60	4.60	7.90	1.00	5.20	R 3.00	.0038	8-15 8-30 8-40
13091	M5								.0036	
13093	M6								.0034	
13095	M8								.0030	

* See Compatibility Code information on page 642.

Roll-In T-Nuts with Spring Leaf
Steel, Zinc-Plated, Self-Aligning

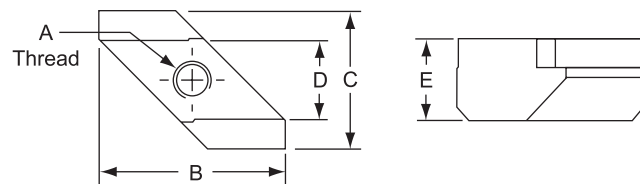
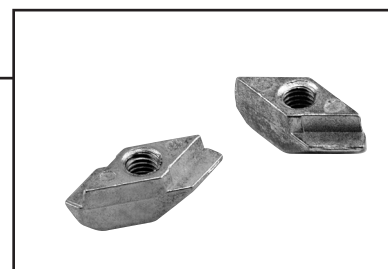
- Loads from the profile's end or side
- Spring leaf positions the T-nut in the slot for easier assembly
- Compatible with 45 Series profiles



Part No.	A	B	C	D	E	F	G	kg.	Compatibility Code*
13059	M5	20.00	15.00	2.00	9.80	6.00	13.00	.013	10-45
13061	M6							.012	
13063	M8							.011	

Drop-In T-Nuts
Die-Cast Zinc

- Loads from the profiles' end or side
- Compatible with 40 Series profiles

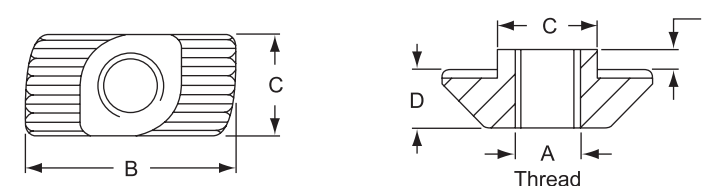


Part No.	A	B	C	D	E	kg.	Compatibility Code*
13179	M3	19.00	14.00	8.00	8.30	.0050	8-15 8-40
13180	M4						
13181	M5						
13182	M6						
14161	1/4-20						

* See Compatibility Code information on page 642.

Drop-In T-Nuts
Steel/Stainless Steel

- Loads by dropping into the T-slot, rotating and engaging in the slot
- Ridges bite into the profile surface maximizing the connection
- See Compatibility Code below for profile compatibility



Part No.	Material	A	B	C	D	E	kg.	Compatibility Code*
14162	Steel	10-32	11.50	5.70	3.20	1.00	.0012	6-10 6-25
14164		M4					.0012	
14166	Stainless Steel	M4					.0012	
13118	Stainless Steel	M6					.0032	
13111		1/4-20					.0030	
13113	Zinc-Plated	M4	16.00	7.70	4.50	1.50	.0038	8-30
13115		M5					.0031	
13117		M6					.0030	
13112		10-32					.0030	
13110		1/4-20					.0031	
13114	Zinc-Plated	M4	16.00	7.70	4.50	3.00	.0045	8-15 8-40
13116	M5	.0035						
13119	M6	.0033						
14165	Steel	1/4-20					.0033	
13123	Zinc-Plated	M4	19.00	9.70	5.80	3.00	.0079	10-45
13127		M5					.0077	
13129		M6					.0072	
13132		M8					.0057	
13122		10-32					.0076	
13120	Steel	1/4-20					.0068	
13124		5/16-18					.0058	
13130	Stainless Steel	M6					.0073	
13133		M8					.0061	
13121		1/4-20					.0073	
13125		5/16-18					.0062	

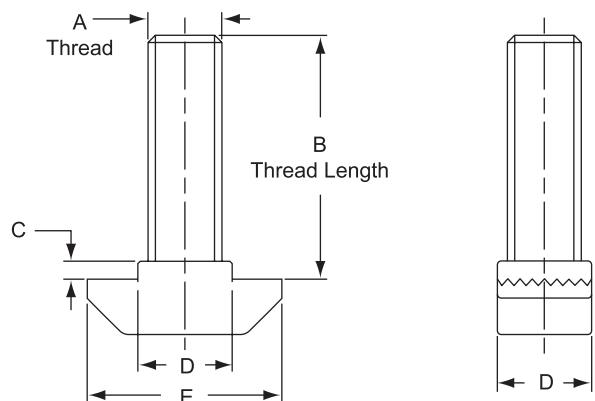
* See Compatibility Code information on page 642.

Drop-In T-Studs
Steel/Stainless Steel

- Loads from the profile side or end
- See Compatibility Code below for profile compatibility



See page 733 for bolt kits with flanged hex nuts



* See Compatibility Code information on page 642.

Part No.	Material	A	B	C	D	E	kg.	Compatibility Code*
13135	Stainless Steel	M6	20.00	1.50	7.70	16.00	.0076	8-30
13137			25.00				.0084	
13139			30.00				.0094	
13141			40.00				.0112	
13143			60.00				.0144	
13134	Zinc-Plated Steel	M6	20.00	1.50	7.70	16.00	.0062	8-30
13136			25.00				.0070	
13138			30.00				.0086	
13140			40.00				.0104	
13142			60.00				.0134	
13144	Zinc-Plated Steel	M6	20.00	3.00	7.70	16.00	.0056	8-15 8-40
13145			25.00				.0064	
13146			30.00				.0080	
13147			40.00				.0098	
13148			60.00				.0128	
13159	Zinc-Plated Steel	M6	20.00**	3.00	9.70	19.00	.0112	10-45
13161			25.00**				.0120	
13163			30.00**				.0128	
13165			40.00**				.0144	
13167			60.00**				.0176	
13169	Zinc-Plated Steel	M8	20.00	3.00	9.70	19.00	.0133	10-45
13171			25.00				.0148	
13173			30.00**				.0163	
13175			40.00**				.0194	
13177			60.00**				.0255	
13160	Stainless Steel	M6	20.00**	3.00	9.70	19.00	.0113	10-45
13162			25.00**				.0121	
13164			30.00**				.0131	
13166			40.00**				.0149	
13168			60.00**				.0181	
13170	SS304	M8	20.00**	3.00	9.70	19.00	.0135	10-45
13172			25.00**				.0152	
13174			30.00**				.0167	
13176			40.00**				.0199	
13178			60.00**				.0263	

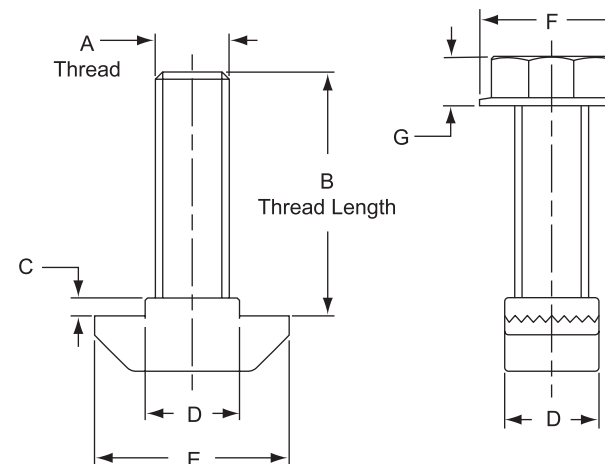
** Drop-In T-Nut with threaded rod

Drop-In T-Studs with Flanged Hex Nut

- Loads directly into profile's slot
- Use to connect 30 or 45 Series components
- Good for connecting joining plates or inside corner brackets



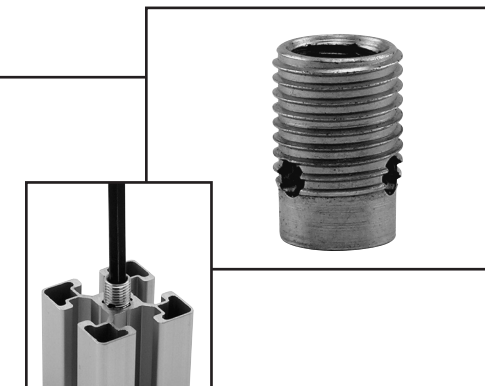
See drop-in T-studs on page 732



Bolt Kit Part No.	T-Stud Part No.	Hex Nut Part No.	A	B	C	D	E	F	G	kg.	Compatibility Code*
75-3633	13134	14156	M6	20.00	1.50	7.70	16.00	13.20	5.90	.0086	8-30
75-3636	13136			25.00						.0095	
75-3637	13138			30.00						.0109	
75-3632	13169	13-3759	M8	20.00	3.00	9.70	19.00	17.10	7.80	.0154	10-45
75-3635	13171			25.00						.0172	
75-3638	13173			30.00						.0186	

Threaded Insert
Zinc-Plated steel

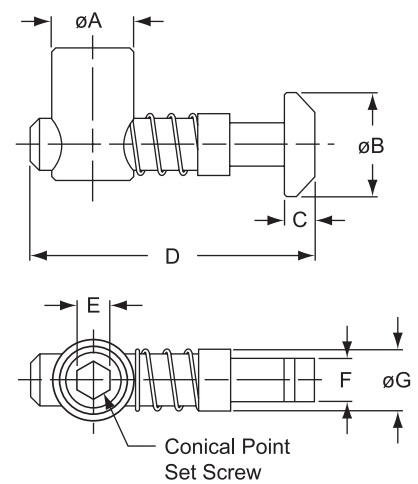
- Allows 45 Series pivot joints, such as Part No. 14019, to be mounted to a 45 Series profile end with M8 SHCS
- Use a 1/4" hex tool to install the insert — no tap required
- Reduces profile end holes to M8 thread



Part No.	Internal Thread	kg.	Compatibility Code*
14196	M8	.0038	10-45

* See Compatibility Code information on page 642.

Central Connectors
Steel, Zinc-Plated



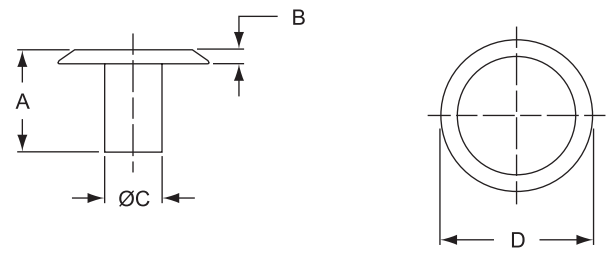
See page 931 for machining services.

Part No.	Connector Nut Orientation	A	B	C	D	E	F	G	kg.	Machining Service	Compatibility Code*
13187	Vertical	15.00	19.00	5.50	52.00	6.00	8.00	11.20	.0500	7058, 40-7058	8-15, 8-40
13188	Horizontal							11.00			
14012*	Vertical	17.00	19.50	5.50	46.00	6.00	10.00	-	.0558	45-7058	10-45
14013*	Horizontal							-			

* These part numbers are not spring-loaded

Cover Cap For Central Connector
Nylon, Black

- Covers the bore of the central connector shown above
- Press fit — use a soft faced mallet

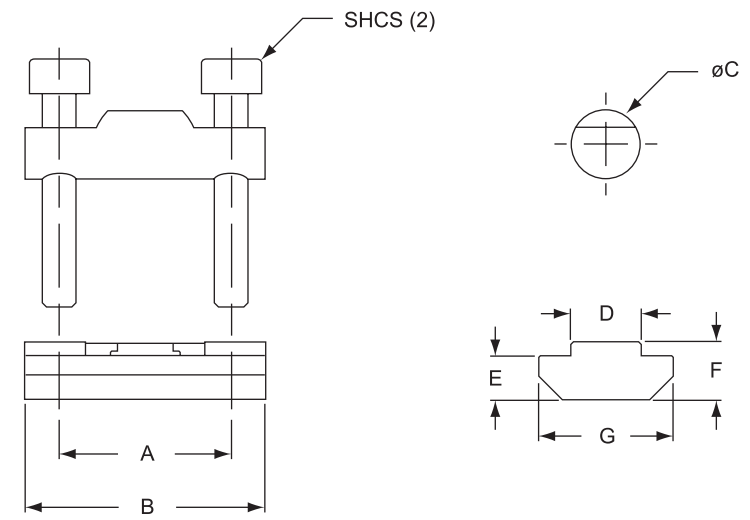
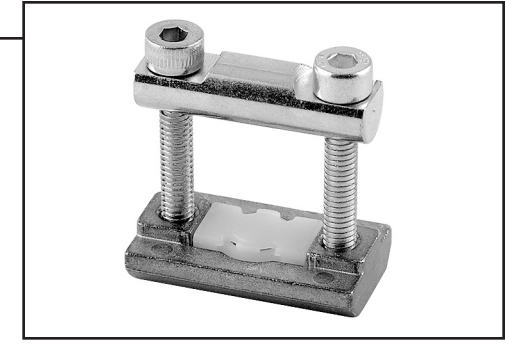


Part No.	A	B	C	D	kg.	Compatibility Code*
13001	12.00	1.50	6.40	17.00	.0010	10-45

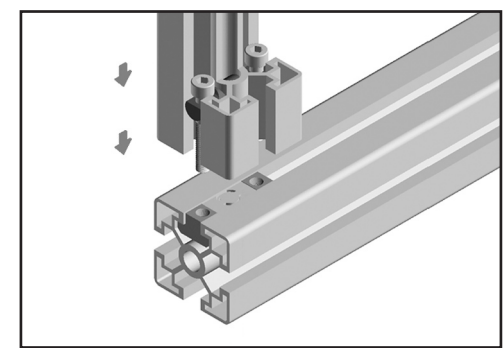
* See Compatibility Code information on page 642.

Bolt Connectors

- **Materials:**
Bolt and screws: zinc-plated steel
Housing: die-cast zinc
Anti-slip: nylon, white
- **Very strong 90° connections of 30 and 45 Series profiles**
- **Refer to page 1048 for required machining services**



Part No.	A	B	C	D	E	F	G	SHCS	kg.	Machining Service	Compatibility Code*
13189	20.00	28.00	8.00	7.80	5.00	6.70	15.70	M4 x 25	.025	30-7034	8-30
13190	32.00	43.00	10.00	9.60	6.00	11.60	19.20	M6 x 40	.056	45-7034	10-45
13192	77.00	88.00	10.00	9.60	6.00	11.60	19.20	M6 x 40	.140	45-7037	10-45



* See Compatibility Code information on page 642.

80/20® Inc.
The Industrial Erector Set®
THE STANDARD

Butt Fasteners 

- Fastens two profiles end to end for maximum strength and near perfect alignment
- Connecting bolt included
- Provides a clean and flush connection where space restrictions apply
- Refer to page 1033 for counterbore machining specifications

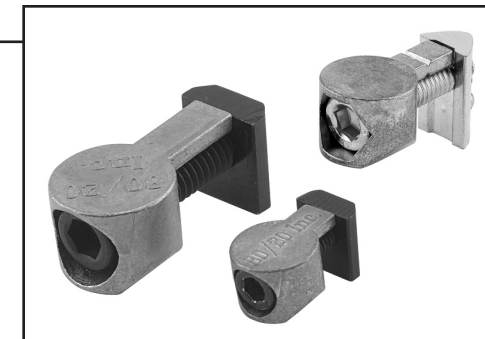


Part No.	Finish	Series	kg.
25-3369	Zinc Casting w/ Lacquer Finish	25 Series	.0186
40-3370	Zinc Casting w/ Lacquer Finish	40 Series	.0612

Metric

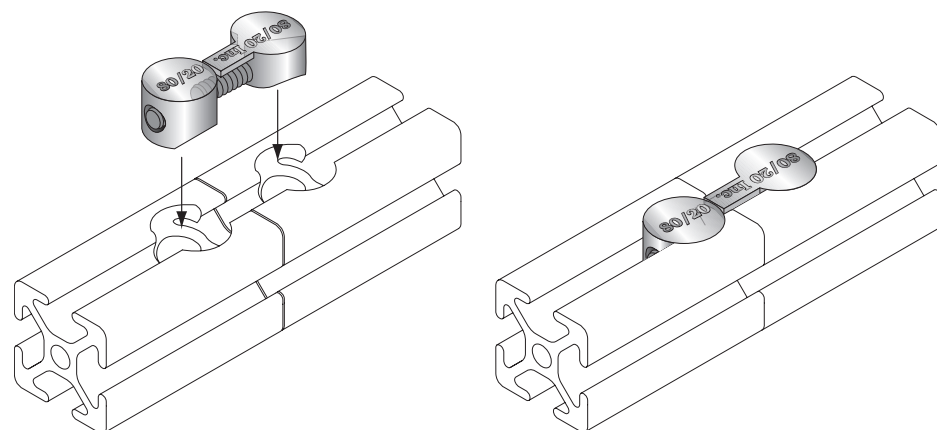
Anchor Fasteners 

- Strong 90° connector allows infinite adjustability along the T-slot
- Provides a vibration-proof, clean, and flush connection where space restrictions apply
- Creates 90° connections where T-slots are in alignment
- Refer to page 1033 for counterbore machining specifications
- Ships pre-assembled, saving you time



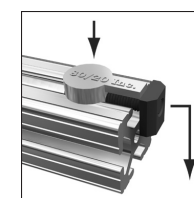
Part No.	Material	Bolt Type	T-Nut Type	kg.	Compatibility Code*
13183	Zinc Casting w/ Lacquer Finish	No Bolt	No T-Nut	.0034	5-20
13184	Zinc Casting w/ Lacquer Finish	M5	Roll-In	.0073	5-20
25-3396	Zinc Casting w/ Lacquer Finish	No Bolt	No T-Nut	.0072	6-25
25-3896	Zinc Casting w/ Lacquer Finish	M5	Slide-In	.0091	6-25
25-3392	Zinc Casting w/ Black Finish	M5	Slide-In	.0091	6-25
25-3363	Zinc Casting w/ Lacquer Finish	M5	Roll-In	.0091	6-25
13185	Zinc Casting w/ Lacquer Finish	No Bolt	No T-Nut	.0095	8-30
13186	Zinc Casting w/ Lacquer Finish	M6	Slide-In	.0186	8-30
40-3361	Zinc Casting w/ Lacquer Finish	No Bolt	No T-Nut	.0204	8-40
40-3897	Zinc Casting w/ Lacquer Finish	M8	Slide-In	.0454	8-40
40-3362	Zinc Casting w/ Lacquer Finish	M8	Roll-In	.0454	8-40

3

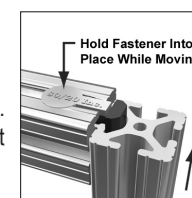


3

Anchor Fastener Assembly Steps



Step #1
Load the Anchor Fastener into the counterbore hole. Position the T-nut end flush with outside of profile.



Step #2
Hold the Anchor Fastener in place while sliding the mating profile into position.



Step #3
Square and align the mating profile. Using a 6mm T-handle hex wrench, tighten the SHCS until the profiles are securely affixed.

* See Compatibility Code information on page 642.

80/20® Inc.

The Industrial Erector Set®
THE STANDARD

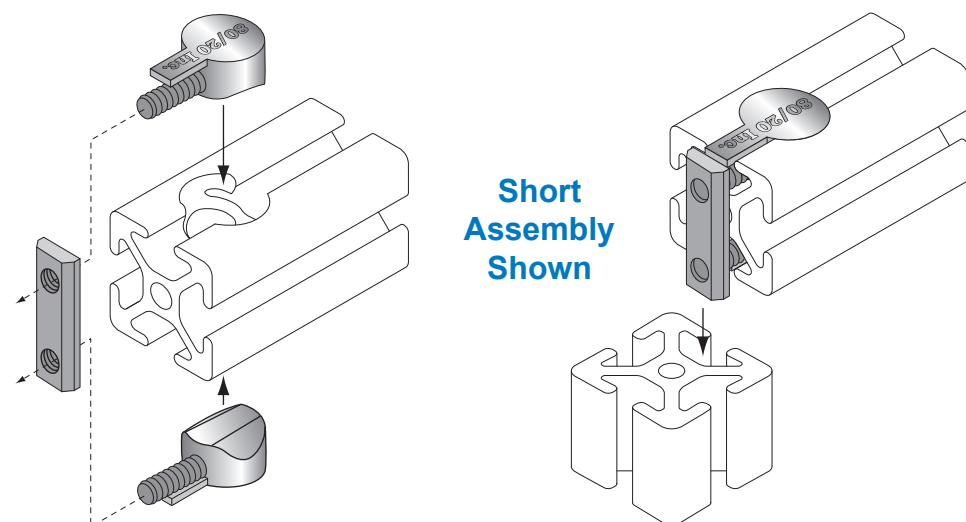
Double Anchor Fasteners

- One of 80/20®'s strongest fastening options
- Allows infinite positioning along the T-slot
- Provides a vibration-proof, clean, flush connection where space restrictions apply
- Creates 90° connections where T-slots are in alignment
- Profile must have T-slots opposite each other
- Short assemblies mount across the 25mm dimension for 25 Series and 40mm dimension for 40 Series
- Long assemblies mount across the 50mm dimension for 25 Series and 80mm dimension for 40 Series
- Refer to page 1033 for counterbore machining specifications



25-3094 Short 25-3096 Long 40-3100 Long 40-3102 Short

Part No.	Finish	Bolt Assembly (Included)	kg.	Profile Compatibility
25-3094	Zinc Casting w/ Lacquer Finish	M5 Short Assembly	.028	25-2525, 25-2503, 25-2504, 25-2550, 25-2576
25-3096	Zinc Casting w/ Lacquer Finish	M5 Long Assembly	.036	25-2550, 25-5050, 25-5010
40-3100	Zinc Casting w/ Lacquer Finish	M8 Short Assembly	.100	40-4040, 40-4040-Lite, 40-4003, 40-4004, 40-4080, 40-4080-Lite, 40-4012
40-3102	Zinc Casting w/ Lacquer Finish	M8 Long Assembly	.130	40-4080, 40-4080-Lite, 40-8080, 40-8016



Metric

Standard End Fasteners

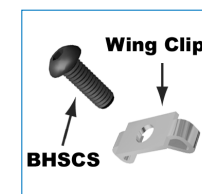


- Provides a clean and hidden method of connecting profiles at 90° without the use of joining plates
- Winged tabs of the clip prevents mating profile from rotating
- Mounting profile requires an end tap while the mating profile requires an access hole to reach the screw head
- Clip finish: bright zinc
- See page 1029 for tapping services
See page 1031 for access hole services



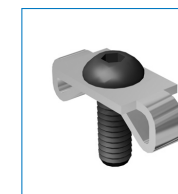
Part No.	Screw Included	Thread	kg.	Compatibility Code*
20-3681	No - Clip Only	—	.0018	5-20
20-3895	Yes (Black)	M5 x 12mm	.0039	5-20
25-3682	Yes (Stainless Steel)	M6 x 1.00	.0091	6-25
25-3895	Yes	M6 x 1.00	.0091	6-25
25-3681	No - Clip Only	—	.0045	6-25
40-3680	Yes (Stainless Steel)	M8 x 1.25	.0218	8-40
40-3891	Yes	M8 x 1.25	.0218	8-40
40-3679	No - Clip Only	—	.0113	8-40

End Fastener Assembly Steps



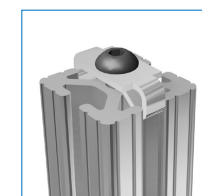
Step #1

End Fasteners are composed of two parts: The Button Head Socket Cap Screw (BHSCS) and a Wing Clip.



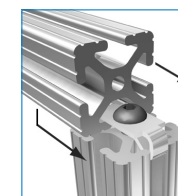
Step #2

Pre-assembly of End Fasteners is a quick process. Simply place the BHSCS through the hole in the Wing Clip as shown in the photo at left.



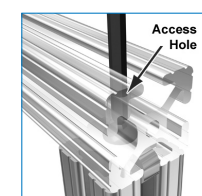
Step #3

Orient the Wing Clip in the direction of the mating profile's T-slot. Begin to screw the BHSCS into the tapped hole of the mounting profile. (Do NOT fully tighten)



Step #4

With the End Fastener slightly tightened, slide the mating profile into place. When aligned, the access hole on the mating profile should align with the BHSCS.



Step #5

To tighten the connection, place a T-handle hex wrench into the access hole until the wrench head inserts into the BHSCS. Tighten clockwise until secure.

* See Compatibility Code information on page 642.

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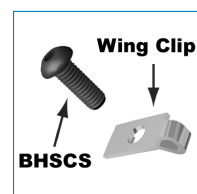
THE STANDARD**Single Tab End Fasteners**

- Provides a clean and hidden method of connecting closed sided and quarter round profiles at 90° without the use of joining plates
- Winged tab of the clip prevents mating profile from rotating
- Mounting profile requires an end tap while the mating profile requires an access hole to reach the screw head
- See page 1029 for tapping services
See page 1031 for access hole services

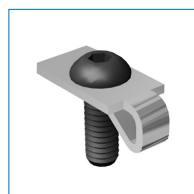


Part No.	Finish	Screw Included	Thread	kg.
25-3383	Bright Zinc	Yes	M6 x 1.00	.0071
25-3183	Bright Zinc	No	N/A	.0022
40-3389	Bright Zinc	Yes	M8 x 1.25	.0168
40-3189	Bright Zinc	No	N/A	.0065

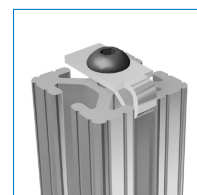
3

End Fastener Assembly Steps**Step #1**

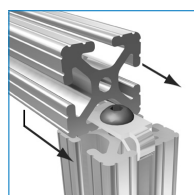
End Fasteners are composed of two parts: The Button Head Socket Cap Screw (BHSCS) and a Wing Clip.

**Step #2**

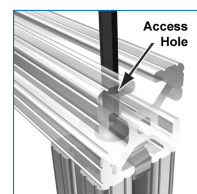
Pre-assembly of End Fasteners is a quick process. Simply place the BHSCS through the hole in the Wing Clip as shown in the photo at left.

**Step #3**

Orient the Wing Clip in the direction of the mating profile's T-slot. Begin to screw the BHSCS into the tapped hole of the mounting profile. (Do NOT fully tighten)

**Step #4**

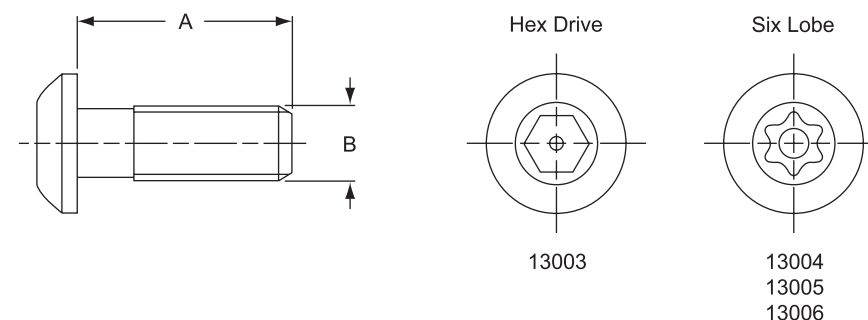
With the End Fastener slightly tightened, slide the mating profile into place. When aligned, the access hole on the mating profile should align with the BHSCS.

**Step #5**

To tighten the connection, place a T-handle hex wrench into the access hole until the wrench head inserts into the BHSCS. Tighten clockwise until secure.

Metric**Connecting Screws**
Regular and Self-Tapping

- Regular connecting screws M12 x 30 mm, hex or six lobe drive, require tap and access hole machining services when used
- Self-tapping screw S12 x 30 mm does not require machining. The self-tapping operation must be done with a T40 or T50 six lobe power bit and drill
- Power Bit T40 - Part No. 65-6073
Power Bit T50 - Part No. 65-6068



Part No.	Type	Drive	A	B	kg.	Compatibility Code*
13003	Regular	Hex	30.00	M12	.036	10-45
13004	Regular	Six Lobe	30.00	M12	.036	10-45
13006	Self-Tapping	Six Lobe	30.00	S12	.032	10-45

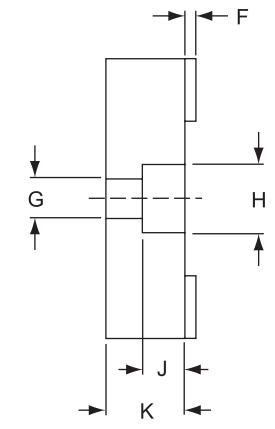
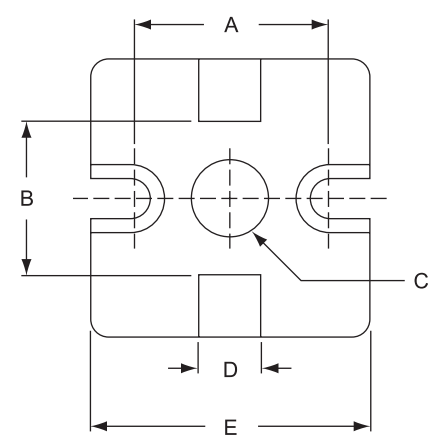
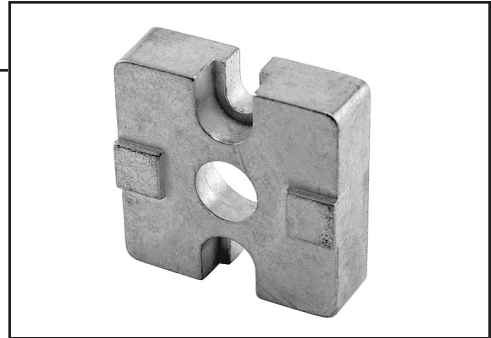


* See Compatibility Code information on page 642.

3

Plate Connectors
Die-Cast Zinc

- M12 end tap is required
- Refer to page 1029 for end tap machining services
- Available with a natural, plain finish or aluminum color powder coat
- Allow for plate thickness (13mm) when dimensioning frames



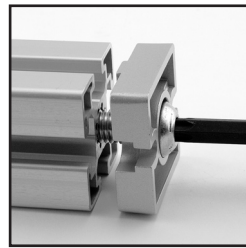
Part No.	Finish	A	B	C	D	E	F	G	H	J	K	kg.	Machining Service	Compatibility Code*
14137	Natural	32.00	25.00	12.50	10.00	45.00	1.70	6.50	11.00	7.00	13.00	.089	45-7053	10-45
14136	Aluminum Color	32.00	25.00	12.50	10.00	45.00	1.70	6.50	11.00	7.00	13.00	.089	45-7053	10-45

Recommended Bolt Assembly:

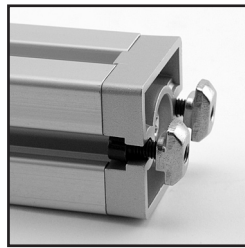
Part No.	Qty	Description
13004	1	M12 x 30mm Six Lobe Screw
11-6516	2	M6 x 16mm SHCS
13129	2	M6 Drop-In T-Nut

* See Compatibility Code information on page 642.

Refer to page 914 for required machining services.



Attach plate with M12 x 30 mm BHSCS, Hex drive (13004).



Load M6 SHCS on both sides with T-nuts attached.



Position the other profile, align fasteners and tighten.

Metric Screws, Washers, & Nuts (Blue-Coated)



Button Head Socket Cap Screws

Thread	Length	kg.	Lbs.	Part No.
M5 x 0.8	10mm	.0018	.0039	13-5310
	12mm	.0021	.0046	13-5312
	16mm	.0024	.0053	13-5316
	20mm	.0027	.0060	13-5320
M6 x 1.0	10mm	.0030	.0066	13-6310
	12mm	.0036	.0079	13-6312
	16mm	.0043	.0095	13-6316
	20mm	.0049	.0108	13-6320
M8 x 1.25	25mm	.0056	.0124	13-6325
	12mm	.0066	.0146	13-8312
	16mm	.0078	.0171	13-8316
	20mm	.0087	.0191	13-8320
	25mm	.0105	.0231	13-8325

Socket Head Cap Screws

Thread	Length	kg.	Lbs.	Part No.
M5 x 0.8	10mm	.0025	.0056	13-5510
	12mm	.0028	.0061	13-5512
	16mm	.0032	.0071	13-5516
	20mm	.0034	.0076	13-5520
	30mm	.0037	.0081	13-5530
M6 x 1.0	10mm	.0044	.0097	13-6510
	12mm	.0049	.0109	13-6512
	16mm	.0056	.0124	13-6516
	20mm	.0061	.0135	13-6520
	25mm	.0072	.0158	13-6525
	30mm	.0082	.0182	13-6530
	35mm	.0093	.0206	13-6535
M8 x 1.25	40mm	.0104	.0230	13-6540
	12mm	.0102	.0225	13-8512
	16mm	.0112	.0246	13-8516
	18mm	.0118	.0260	13-8518
	20mm	.0124	.0279	13-8520
	22mm	.0130	.0294	13-8522
	25mm	.0140	.0310	13-8525
	30mm	.0159	.0351	13-8530
	35mm	.0180	.0397	13-8535
	40mm	.0204	.0450	13-8540
M10 x 1.5	50mm	.0234	.0517	13-8550
	20mm	.0172	.0380	13-1520
	25mm	.0195	.0430	13-1525

Flat Head Socket Cap Screws

Thread	Length	kg.	Lbs.	Part No.
M4 x 0.7	10mm			11-4710
	12mm			11-4712
M5 x 0.8	8mm			11-5708
	10mm			11-5710
	12mm			11-5712
	14mm			11-5714
	16mm			11-5716
	12mm	.0027	.0060	13-5712
M6 x 1.0	14mm			11-6714
	16mm			11-6716
	18mm			11-6718
	20mm			11-6720
	10mm	.0030	.0066	13-6710
	12mm	.0034	.0074	13-6712
M8 x 1.25	16mm	.0041	.0090	13-6716
	16mm			11-8716
	20mm			11-8720
	12mm	.0060	.0133	13-8712
	16mm	.0070	.0154	13-8716
	20mm	.0079	.0175	13-8720
M10 x 1.5	16mm	.0122	.0270	13-1716

Hex Nuts

Thread	kg.	Lbs.	Part No.
M5 x 0.8	.0016	.0035	13-5065
M6 x 1.0	.0021	.0046	13-6065
M8 x 1.25	.0047	.0105	13-8065
M12 x 1.75	.0086	.0190	13-2065

Flat Washers

Size	kg.	Lbs.	Part No.
M5	.0008	.0018	13-6040
M6	.0010	.0020	13-6041
M8	.0018	.0040	13-6042
M10	.0028	.0061	13-6043
M12	.0038	.0083	13-6044

Metric Screws, Washers, & Nuts (Black-Coated)

Socket Head Cap Screws

Thread	Length	kg.	Lbs.	Part No.	
M4 x 0.7	16mm	.0021	.0048	11-4516	
	10mm	.0025	.0056	11-5510	
	12mm	.0028	.0061	11-5512	
	16mm	.0032	.0071	11-5516	
	20mm	.0034	.0076	11-5520	
M5 x 0.8	10mm	.0044	.0097	11-6510	
	12mm	.0049	.0109	11-6512	
	14mm	.0049	.0110	11-6514	
	16mm	.0056	.0124	11-6516	
	18mm	.0058	.0128	11-6518	
M6 x 1.0	20mm	.0061	.0135	11-6520	
	25mm	.0072	.0158	11-6525	
	30mm	.0082	.0182	11-6530	
	35mm	.0093	.0206	11-6535	
	40mm	.0104	.0230	11-6540	
	M8 x 1.25	12mm	.0102	.0225	11-8512
		16mm	.0112	.0246	11-8516
		18mm	.0120	.0266	11-8518
		20mm	.0124	.0274	11-8520
		25mm	.0140	.0310	11-8525
M8 x 1.25	30mm	.0159	.0351	11-8530	
	35mm	.0180	.0379	11-8535	
	40mm	.0204	.0450	11-8540	

Button Head Socket Cap Screws

Thread	Length	kg.	Lbs.	Part No.
M5 x 0.8	8mm			11-5308
	10mm	.0018	.0039	11-5310
	12mm	.0021	.0046	11-5312
	14mm			11-5314
	16mm	.0024	.0053	11-5316
M6 x 1.0	10mm	.0030	.0066	11-6310
	12mm	.0036	.0079	11-6312
	14mm			11-6314
	16mm	.0043	.0095	11-6316
	18mm			11-6318
	20mm	.0049	.0108	11-6320
M8 x 1.25	12mm	.0066	.0146	11-8312
	16mm	.0078	.0171	11-8316
	18mm			11-8318
	20mm	.0087	.0191	11-8320
	25mm	.0105	.0231	11-8325

Flat Washers

Size	kg.	Lbs.	Part No.
M4	.0004	.0009	11-6039
M5	.0007	.0015	11-6040
M6	.0010	.0022	11-6041
M8	.0018	.0040	11-6042

Hex Nuts

Thread	kg.	Lbs.	Part No.
M4 x 0.7	.0010	.0022	11-4065
M5 x 0.8	.0015	.0033	11-5065
M6 x 1.0	.0021	.0046	11-6065
M8 x 1.25	.0047	.0105	11-8065
M10 x 1.5	.0067	.0147	11-1065

Metric Screws, Washers, & Nuts (Stainless Steel)

Socket Head Cap Screws

Thread	Length	kg.	Lbs.	Part No.
M5 x 0.8	10mm	.0024	.0054	17-5510
	12mm	.0028	.0063	17-5512
	16mm	.0033	.0072	17-5516
	20mm	.0037	.0081	17-5520
	M6 x 1.0	10mm	.0045	.0099
12mm		.0048	.0104	17-6512
16mm		.0056	.0123	17-6516
20mm		.0065	.0143	17-6520
M8 x 1.25	12mm	.0090	.0199	17-8512
	16mm	.0101	.0222	17-8516
	20mm	.0111	.0245	17-8520
	25mm	.0125	.0276	17-8525
	30mm	.0157	.0348	17-8530
	40mm	.0204	.0450	17-8540

Flat Head Socket Cap Screws

Thread	Length	kg.	Lbs.	Part No.
M5 x 0.8	12mm	.0027	.0060	13-5712
	10mm	.0030	.0066	13-6710
M6 x 1.0	12mm	.0032	.0070	17-6712
	16mm	.0041	.0090	13-6716
	12mm	.0060	.0133	13-8712
M8 x 1.25	16mm	.0070	.0154	13-8716
	20mm	.0079	.0175	13-8720
M10 x 1.5	16mm	.0122	.0270	13-1716

Button Head Socket Cap Screws

Thread	Length	kg.	Lbs.	Part No.
M5 x 0.8	10mm	.0019	.0043	17-5310
	12mm	.0023	.0050	17-5312
	16mm	.0026	.0057	17-5316
	10mm	.0033	.0074	17-6310
M6 x 1.0	12mm	.0037	.0081	17-6312
	16mm	.0044	.0098	17-6316
	20mm	.0050	.0110	17-6320
M8 x 1.25	12mm	.0068	.0150	17-8312
	16mm	.0077	.0171	17-8316
	20mm	.0087	.0192	17-8320
	25mm	.0105	.0233	17-8325

Flat Washers

Size	kg.	Lbs.	Part No.
M6	.0013	.0028	17-6041
M8	.0021	.0047	17-6042

Hex Nuts

Thread	kg.	Lbs.	Part No.
M6 x 1.0	.0019	.0042	17-6065
M8 x 1.25	.0046	.0101	17-8065
M10 x 1.5	.0065	.0143	17-1065


**Button Head
Socket Cap
Screw (BHSCS)**

**Socket Head
Cap Screw
(SHCS)**

**Flat Head
Socket Cap
Screw (FHSCS)**

**Flanged Button
Head Socket
Cap Screw
(FBHSCS)**

Metric Screws, Washers, & Nuts (Bright Zinc)



Button Head Socket Cap Screws

Thread	Length	kg.	Lbs.	Part No.
M6 x 1.0	12mm	.0034	.0074	19-6312
	16mm	.0040	.0088	19-6316
	20mm	.0047	.0105	19-6320
	25mm	.0056	.0124	19-6325
M8 x 1.25	12mm	.0070	.0150	19-8312
	16mm	.0081	.0179	19-8316
	20mm	.0091	.0201	19-8320
	25mm	.0110	.0242	19-8325

Socket Head Cap Screws

Thread	Length	kg.	Lbs.	Part No.
M6 x 1.0	12mm	.0050	.0106	19-6512
	16mm	.0054	.0120	19-6516
	20mm	.0060	.0128	19-6520
	25mm	.0070	.0152	19-6525
M8 x 1.25	12mm	.0102	.0225	19-8512
	16mm	.0112	.0246	19-8516
	20mm	.0124	.0274	19-8520
	25mm	.0140	.0310	19-8525
	30mm	.0160	.0351	19-8530

Slide-In Economy T-Slot Studs

Thread	Length	kg.	Lbs.	Part No.
M8 x 1.25	20mm	.0142	.0313	19-8920
	25mm	.0153	.0338	19-8925
	30mm	.0169	.0373	19-8930
	35mm	.0194	.0427	19-8935
	45mm	.0213	.0470	19-8945

Flat Washers

Size	kg.	Lbs.	Part No.
M6	.0010	.0022	19-6041
M8	.0018	.0040	19-6042

Roll-In T-Nuts with Ball Spring

Thread	Lbs.	Part No.
M5	.028	40-3913
M6	.026	40-3914
M8	.026	40-3915

Slide-In Economy T-Nuts

Thread	kg.	Lbs.	Part No.
M4 x 0.7	.0035	.0078	25-1941
M5 x 0.8	.0037	.0080	25-1951
M6 x 1.0	.0042	.0093	25-1961
M6 x 1.0	.0080	.0177	40-1961
M8 x 1.25	.0093	.0206	40-1981

Double Slide-In Economy T-Nuts

Thread	kg.	Lbs.	Part No.
M6 x 1.0	.0090	.0198	25-1962
M8 x 1.25	.0280	.0625	40-1982

Slide-In T-Nuts

Thread	kg.	Lbs.	Part No.
M5 x 0.8	.0045	.010	25-3206
M5 x 0.8	.0045	.010	25-1954
M6 x 1.0	.0045	.010	25-1964
M6 x 1.0	.0091	.020	40-1964
M8 x 1.25	.0091	.020	40-1984

Roll-In T-Nuts - Flex Handle

Thread	kg.	Lbs.	Part No.
M5 x 0.8	.0045	.0100	25-1956
M6 x 1.0	.0038	.0083	25-1966
M6 x 1.0	.0106	.0233	40-1966
M8 x 1.25	.0103	.0228	40-1986

Roll-In T-Nuts - Set Screw

Thread	kg.	Lbs.	Part No.
M6 x 1.0	.0118	.026	40-1968
M8 x 1.25	.0113	.025	40-1988

Hex Nuts

Thread	kg.	Lbs.	Part No.
M6 x 1.0	.0021	.0046	19-6065
M8 x 1.25	.0047	.0105	19-8065
M10 x 1.5	.0065	.0143	19-1065
M12 x 1.75	.0086	.0190	19-2065

Fractional Screws, Washers, & Nuts (Black Zinc)



Button Head Socket Cap Screws

Thread	Length	kg.	Lbs.	Part No.
1/4-20	3/8"	.0029	.0065	65-3059
	1/2"	.0036	.0080	65-3061
	5/8"	.0043	.0095	65-3063
	3/4"	.0049	.0109	65-3065
5/16-18	1/2"	.0067	.0147	65-3104
	5/8"	.0077	.0170	65-3111
	3/4"	.0087	.0191	65-3114
	1"	.0106	.0233	65-3118

Socket Head Cap Screws

Thread	Length	kg.	Lbs.	Part No.
1/4-20	3/8"	.0044	.0096	65-3058
	1/2"	.0050	.0110	65-3062
	5/8"	.0056	.0124	65-3067
	3/4"	.0062	.0136	65-3064
5/16-18	1"	.0072	.0159	65-3071
	1/2"	.0088	.0194	65-3106
	5/8"	.0098	.0217	65-3110
	3/4"	.0108	.0237	65-3112
	1"	.0125	.0276	65-3122
	1 1/4"	.0146	.0323	65-3123

Slide-In Economy T-Slot Studs

Thread	Length	kg.	Lbs.	Part No.
5/16-18	3/4"	.0117	.0257	40-3116
	1"	.0139	.0308	40-3120
	1 1/4"	.0156	.0345	40-3126
	1 1/2"	.0177	.0391	40-3134
	2"	.0225	.0496	40-3290

Slide-In Economy T-Nuts

Thread	kg.	Lbs.	Part No.
1/4-20	.0041	.0091	25-3382
	.0054	.0120	40-3286
5/16-18	.0093	.0206	40-3278

Slide-In T-Nuts

Thread	kg.	Lbs.	Part No.
1/4-20	.0045	.010	25-3204
	.0090	.020	40-3202
5/16-18	.0090	.020	40-3203

Roll-In T-Nuts - Flex Handle

Thread	kg.	Lbs.	Part No.
1/4-20	.0037	.0081	25-3376
	.0109	.0241	40-3283
5/16-18	.0103	.0227	40-3282

Roll-In T-Nuts - Set Screw

Thread	kg.	Lbs.	Part No.
10-32	.0036	.0079	25-3312
1/4-20	.0036	.0079	25-3313
	.0122	.0269	40-3310
5/16-18	.0118	.0260	40-3311

Hex Nuts

Thread	kg.	Lbs.	Part No.
1/4-20	.0032	.0070	65-3208
5/16-18	.0047	.0103	65-3214

Flat Washers

Size	kg.	Lbs.	Part No.
1/4	.0017	.0037	65-3258
5/16	.0020	.0045	65-3260



Metric (Blue Screws & Bright Zinc T-Nuts)

Thread	Screw Type	Length	Economy T-Nut	kg.	Lbs.	Drop-In T-Nut	kg.	Lbs.	Hex Nut	Washer	
M5 x 0.8	SHCS	10mm	75-3401	.0063	.0138	-	-	-	-	-	
	SHCS	12mm	75-3402	.0074	.0141	-	-	-	-	-	
	SHCS	16mm	75-3403	.0068	.0157	-	-	-	-	-	
	SHCS, Washer	16mm	-	.0072	.0159	-	-	-	75-3400	-	
	BHSCS	10mm	75-3404	.0073	.0160	75-3435	.0068	.0150	-	-	
M6 x 1.0	BHSCS	12mm	75-3405	.0076	.0167	75-3436	.0071	.0157	-	-	
	BHSCS	16mm	75-3406	.0083	.0183	75-3437	.0078	.0173	-	75-3477	
	BHSCS	20mm	75-3407	.0091	.0200	75-3438	.0086	.0190	-	-	
	BHSCS, Washer	12mm	75-3408	.0086	.0189	75-3439	.0081	.0179	75-3466	-	
	BHSCS, Washer	16mm	75-3409	.0093	.0205	75-3440	.0088	.0195	75-3467	-	
	BHSCS, Washer	20mm	75-3410	.0101	.0222	75-3441	.0096	.0212	75-3468	-	
	SHCS	10mm	75-3411	.0087	.0191	75-3442	.0082	.0181	-	-	
	SHCS	12mm	75-3412	.0089	.0197	75-3443	.0084	.0187	-	-	
	SHCS	16mm	75-3413	.0098	.0216	75-3444	.0093	.0106	-	-	
	SHCS	20mm	75-3414	.0103	.0227	75-3445	.0098	.0217	-	-	
	SHCS	25mm	75-3415	.0114	.0252	75-3446	.0110	.0242	-	-	
	SHCS	30mm	75-3416	.0126	.0279	75-3447	.0122	.0269	-	-	
	SHCS	35mm	75-3417	.0144	.0318	75-3448	.0140	.0308	-	-	
	SHCS	40mm	75-3418	.0148	.0326	75-3449	.0143	.0316	-	-	
	SHCS, Washer	12mm	75-3419	.0099	.0219	75-3450	.0095	.0209	75-3469	-	
	SHCS, Washer	16mm	75-3420	.0108	.0238	75-3451	.0103	.0228	75-3470	-	
	M8 x 1.25	BHSCS	12mm	75-3421	.0162	.0358	75-3452	.0177	.0380	-	-
		BHSCS	16mm	75-3422	.0176	.0388	75-3453	.0136	.0410	-	-
BHSCS		20mm	75-3423	.0180	.0397	75-3454	.0190	.0419	-	75-3478	
BHSCS		25mm	75-3424	.0198	.0437	75-3455	.0208	.0459	-	-	
BHSCS, Washer		16mm	75-3425	.0194	.0428	75-3456	.0204	.0450	75-3471	-	
BHSCS, Washer		20mm	75-3426	.0198	.0437	75-3457	.0208	.0459	75-3472	-	
BHSCS, Washer		25mm	75-3427	.0216	.0477	75-3458	.0226	.0499	75-3473	-	
SHCS		12mm	75-3428	.0196	.0431	75-3459	.0205	.0453	-	-	
SHCS		16mm	75-3429	.0205	.0452	75-3460	.0215	.0474	-	-	
SHCS		20mm	75-3430	.0218	.0480	75-3461	.0227	.0502	-	-	
SHCS		25mm	75-3431	.0234	.0516	75-3462	.0244	.0538	-	-	
SHCS, Washer		16mm	75-3432	.0223	.0492	75-3463	.0233	.0514	75-3474	-	
SHCS, Washer		20mm	75-3433	.0235	.0520	75-3464	.0296	.0592	75-3475	-	
SHCS, Washer		25mm	75-3434	.0252	.0556	75-3465	.0262	.0578	75-3476	-	



Slide-In Economy T-Slot Studs (Bright Zinc)

Thread	Screw Type	Length	kg.	Lbs.	Hex Nut
M8 x 1.25	T-Slot Stud, Washer	20mm	.0208	.0458	75-3500
		25mm	.0220	.0486	75-3501
		30mm	.0235	.0518	75-3502
		35mm	.0262	.0578	75-3503
		45mm	.0279	.0615	75-3504

Roll-In T-Nut Assemblies (Blue Screw & Bright Zinc T-Nut)

Thread	Screw Type	Length	kg.	Lbs.	Part No.
M6 x 1.0	FHSCS	12mm	.0071	.0157	75-3505
M8 x 1.25	FHSCS	16mm	.0173	.0382	75-3506

Slide-In Economy T-Nut Assemblies (Blue Screw & Bright Zinc T-Nut)

Thread	Screw Type	Length	kg.	Lbs.	Part No.
M6 x 1.0	FHSCS	12mm	.0076	.0167	75-3507
M8 x 1.25	FHSCS	16mm	.0163	.0360	75-3508

Double Slide-In Economy T-Nut Assemblies (Blue Screw & Bright Zinc T-Nut)

Thread	Screw Type	Length	kg.	Lbs.	Part No.
M6 x 1.0	BHSCS (2)	10mm	.0145	.0320	75-3509
	BHSCS (2)	12mm	.0161	.0356	75-3510
	BHSCS, Washers (2)	12mm	.0177	.0390	75-3511
M8 x 1.25	BHSCS (2)	12mm	.0416	.0917	75-3512
	BHSCS (2)	16mm	.0439	.0967	75-3513
	BHSCS, Washers (2)	16mm	.0475	.1047	75-3514

Cap Screws (Black Screw & Bright Zinc T-Nut)

Thread	Screw Type	Length	kg.	Lbs.	Part No.
M6 x 1.0	SHCS	10mm	.0087	.0191	75-3520
	SHCS	12mm	.0089	.0197	75-3521
	SHCS	16mm	.0098	.0216	75-3522
	SHCS	20mm	.0103	.0227	75-3523
	SHCS	25mm	.0114	.0252	75-3524
	BHSCS	10mm	.0073	.0160	75-3515
	BHSCS	12mm	.0076	.0167	75-3516
	BHSCS	16mm	.0083	.0183	75-3517
	BHSCS, Washer	12mm	.0086	.0189	75-3518
	BHSCS, Washer	16mm	.0093	.0205	75-3519
	BHSCS	12mm	.0162	.0358	75-3525
	BHSCS	16mm	.0176	.0388	75-3526
	BHSCS	20mm	.0180	.0397	75-3527
	BHSCS, Washer	16mm	.0194	.0428	75-3528
M8 x 1.25	BHSCS, Washer	20mm	.0198	.0437	75-3529
	SHCS	12mm	.0196	.0431	75-3530
	SHCS	16mm	.0205	.0452	75-3531
	SHCS	18mm	.0211	.0466	75-3534
	SHCS	20mm	.0218	.0480	75-3532
	SHCS	25mm	.0234	.0516	75-3533
	SHCS, Washer	16mm	.0306	.0674	75-3534
	SHCS, Washer	20mm	.0329	.0726	75-3535
	SHCS, Washer	25mm	.0346	.0762	75-3536



Fractional (Black)

Thread	Screw Type	Length	Economy T-Nuts	kg.	Lbs.	Drop-In T-Nuts	kg.	Lbs.
1/4-20	BHSCS	1/2"	75-3800	.0077	.0171	75-3801	.0073	.0161
	BHSCS	5/8"	75-3802	.0090	.0198	75-3803	.0085	.0188
	BHSCS	3/4"	75-3804	.0101	.0223	75-3805	.0097	.0213
	BHSCS, Washer	1/2"	75-3806	.0094	.0208	75-3807	.0090	.0198
	BHSCS, Washer	5/8"	75-3808	.0101	.0223	75-3809	.0097	.0213
	BHSCS, Washer	3/4"	75-3810	.0118	.0260	75-3811	.0113	.0250
	SHCS	1/2"	75-3812	.0091	.0201	75-3813	.0087	.0191
	SHCS	5/8"	75-3814	.0096	.0212	75-3815	.0092	.0202
	SHCS	3/4"	75-3816	.0101	.0223	75-3817	.0097	.0213
	SHCS	1"	75-3818	.0114	.0251	75-3819	.0109	.0241
	SHCS, Washer	1/2"	75-3820	.0108	.0238	75-3821	.0103	.0228
	SHCS, Washer	5/8"	75-3822	.0114	.0252	75-3823	.0111	.0242
	SHCS, Washer	3/4"	75-3824	.0121	.0266	75-3825	.0116	.0256
	5/16-18	BHSCS	5/8"	75-3826	.0171	.0376	75-3827	.0181
BHSCS	3/4"	75-3828	.0180	.0397	75-3829	.0190	.0419	
BHSCS	1"	75-3830	.0200	.0439	75-3831	.0209	.0461	
BHSCS, Washer	5/8"	75-3832	.0183	.0403	75-3833	.0193	.0425	
BHSCS, Washer	3/4"	75-3834	.0198	.0437	75-3835	.0208	.0459	
BHSCS, Washer	1"	75-3836	.0232	.0512	75-3837	.0242	.0534	
SHCS	1/2"	75-3838	.0181	.0398	75-3839	.0191	.0420	
SHCS	5/8"	75-3840	.0191	.0421	75-3841	.0201	.0443	
SHCS	3/4"	75-3842	.0204	.0450	75-3843	.0214	.0472	
SHCS	1"	75-3844	.0230	.0508	75-3845	.0240	.0530	
SHCS, Washer	5/8"	75-3846	.0212	.0468	75-3847	.0222	.0490	
SHCS, Washer	3/4"	75-3848	.0220	.0485	75-3849	.0230	.0507	
SHCS, Washer	1"	75-3850	.0239	.0528	75-3851	.0250	.0550	

Metric (Black)

Bolt Kit Part No.	Screw Type	Screw Part No.	Nut Part No.	Washer
75-3401	M5 x 10mm SHCS	13-5510	25-1951	no
75-3481	M5 x 20mm SHCS	11-5520	13127	11-6040
75-3482	M6 x 18mm BHSCS	11-6318	13129	no
75-3483	M5 x 16mm SHCS	11-5516	13116	11-6040
75-3520	M6 x 10mm SHCS	11-6510	3859	no
75-3523	M6 x 20mm SHCS	11-6520	3859	no
75-3553	M4 x 20mm SHCS	11-4520	14164	no
75-3552 (20)	M4 x 10mm FHSCS	11-4710	14159	no
75-3556	M4 x 10mm SHCS	11-4510	14164	no
75-3558	M4 x 16mm SHCS	11-4516	11-4065	11-6039
75-3560	M4 x 12mm SHCS	11-4512	13114	no
75-3562	M4 x 12mm FHSCS	11-4712	11-4065	11-6039
75-3563 (45)	M4 x 12mm SHCS	11-4512	13123	no



Bolt Kit Part No.	Screw Type	Screw Part No.	Nut Part No.	Washer
75-3571 (20)	M5 x 8mm FHSCS	11-5708	14122	no
75-3572 (20)	M5 x 10mm FHSCS	11-5710	14122	no
75-3573	M5 x 14mm FHSCS	11-5714	11-5065	11-6040
75-3574 (30)	M5 x 14mm FHSCS	11-5714	13115	no
75-3575 (30)	M5 x 16mm FHSCS	11-5716	13115	no
75-3576	M5 x 14mm BHSCS	11-5314	11-5065	11-6040
75-3578 (20)	M5 x 12mm SHCS	11-5512	14122	no
75-3581 (20)	M5 x 8mm BHSCS	11-5308	14122	no
75-3583 (30)	M5 x 12mm BHSCS	11-5312	13115	no
75-3584	M6 x 14mm FHSCS	11-6714	25-1964	no
75-3585 (30)	M6 x 14mm FHSCS	11-6714	13117	no
75-3586	M6 x 18mm FHSCS	11-6718	13119	no
75-3587 (45)	M6 x 18mm FHSCS	11-6718	13129	no
75-3588 (45)	M6 x 20mm FHSCS	11-6720	13129	no
75-3589	M6 x 20mm FHSCS	11-6720	11-6065	11-6041
75-3590 (30)	M6 x 10mm SHCS	11-6510	13117	no
75-3591	M6 x 16mm FHSCS	11-6716	13119	no
75-3592	M6 x 14mm SHCS	11-6514	25-1964	no
75-3593 (30)	M6 x 14mm SHCS	11-6514	13117	no
75-3594 (45)	M6 x 14mm SHCS	11-6514	13129	no
75-3595 (30)	M6 x 16mm SHCS	11-6516	13117	no
75-3596 (30)	M6 x 18mm SHCS	11-6518	13117	no
75-3597 (45)	M6 x 20mm SHCS	11-6520	13129	no
75-3599 (30)	M6 x 10mm BHSCS	11-6310	13117	no
75-3600 (30)	M6 x 12mm BHSCS	11-6312	13117	no
75-3601	M6 x 14mm BHSCS	11-6314	13119	no
75-3602 (45)	M6 x 14mm BHSCS	11-6314	13129	no
75-3603	M6 x 14mm BHSCS	11-6314	11-6065	no
75-3605	M6 x 18mm BHSCS	11-6318	11-6065	11-6041
75-3616	M6 x 14mm FHSCS	11-6714	25-1964	no
75-3617	M8 x 20mm FHSCS	11-8720	11-8065	no
75-3618 (40)	M8 x 16mm FHSCS	11-8716	40-1981	no
75-3619 (45)	M8 x 18mm BHSCS	11-8318	13132	no
75-3621	M8 x 16mm SHCS	11-8516	40-1981	no
75-3622	M6 x 14mm BHSCS	11-6314	13119	no
75-3623 (45)	M8 x 16mm SHCS	11-8516	13132	no
75-3624	M8 x 12mm SHCS	11-8512	13025	no
75-3625	M8 x 16mm SHCS	11-8516	13025	no
75-3626 (45)	M8 x 18mm SHCS	11-8518	13132	no
75-3627	M8 x 18mm SHCS	11-8518	13025	no
75-3628	M6 x 18mm FHSCS	11-6718	13119	no
75-3629	M8 x 16mm FHSCS	11-8716	13025	no
75-3630 (45)	M8 x 20mm SHCS	11-8520	13132	no
75-3632	M8 x 20mm Drop-In T-Stud	13169	13-3759	no
75-3633	M6 x 20mm Drop-In T-Stud	13134	14156	no
75-3635	M8 x 25mm Drop-In T-Stud	13171	13-3759	no
75-3636	M6 x 25mm Drop-In T-Stud	13136	14156	no
75-3638	M8 x 30mm Drop-In T-Stud	13173	13-3759	no
75-3639	M6 x 30mm Drop-In T-Stud	13138	14156	no

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