



DON'T FORGET THE WORKHOLDING!



Nuts, Washers, & Driver Studs

Pgs. 2-7



THE SOLUTION FOR ALL OF YOUR WORKHOLDING NEEDS

Bolts

Pgs. 13-15



Clamps

Pgs. 8-9



Clamping Kits

Pgs. 15-16



Spring & Ball Plungers

Pgs. 10-12

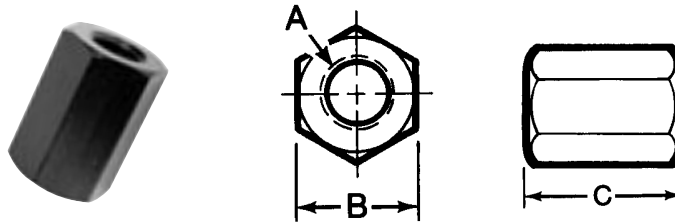


Call for a complete
Master Catalog
800-543-4071
or visit
www.te-co.com



Coupling (Extension) Nuts

- Black Oxide Finish
- Case Hardened
- 1117 Material
- Can be used to join two or more studs together for a desired length
- Many sizes conform to TCMAl standards
- Standard pkg. quantity: 41501-41507: 25 pcs.



English

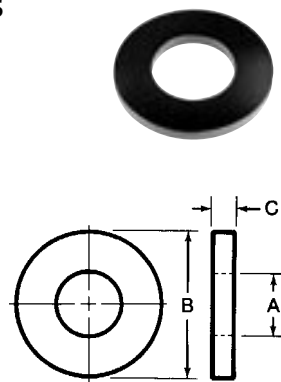
Part No.	Thread A	B	C	Weight (lbs/100pcs)
41501	1/4-20	1/2	5/8	4
41502	5/16-18	9/16	7/8	7
41503	3/8-16	11/16	1	9
41504	7/16-14	3/4	1-1/4	13
41505	1/2-13	7/8	1-1/4	18
41506	5/8-11	1-1/16	1-5/8	34
41507	3/4-10	1-1/4	1-7/8	50
41508	7/8-9	1-7/16	2-1/4	88
41509	1-8	1-5/8	2-1/2	106

Metric *Dimensions in millimeters*

Part No.	Thread A	B	C	Weight (lbs/100pcs)
61501	M6 x 1.00	13	16	3
61502	M8 x 1.25	14	19	4.6
61503	M10 x 1.5	16	24	9
61504	M12 x 1.75	22	32	18
61505	M16 x 2.0	27	40	30
61506	M20 x 2.5	32	51	52
61507	M24 x 3.0	38	64	94

Hardened Flat Washers

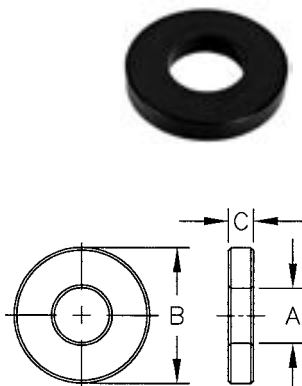
- Black Oxide Finish and Case Hardened (steel washers only)
- Material: C1010 Steel or 303 Stainless Steel
- Many sizes conform to TCMAl standards
- Large quantities quoted upon request



Steel Part No.	Stainless Steel Part No.	Stud Size	A	B	C	Weight (lbs/100pcs)
42600	42660	3/16	13/64	1/2	3/32	0.5
42601	42661	1/4	9/32	5/8	1/8	1
42602	42662	5/16	11/32	3/4	1/8	2
42603	42663	3/8	13/32	7/8	1/8	2
42604	42664	7/16	15/32	1	1/8	3
42605	42665	1/2	17/32	1-1/8	1/8	3
42606	42666	5/8	21/32	1-3/8	1/8	4
42607	42667	3/4	25/32	1-5/8	5/32	8
42608	42668	7/8	29/32	1-3/4	5/32	8
42609	42669	1	1-1/32	2	3/16	12
42610	42670	1-1/8	1-5/32	2-1/4	7/32	19
42611	42671	1-1/4	1-9/32	2-1/2	9/32	28
42612	42672	#4	1/8	5/16	5/64	0.5
42613	42673	#6	5/32	3/8	5/64	0.5
42614	42674	#8	3/16	7/16	5/64	0.5

Heavy Duty Hardened Flat Washers

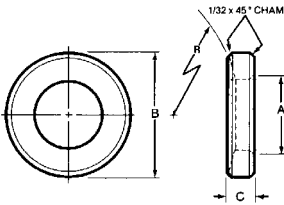
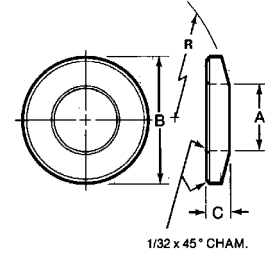
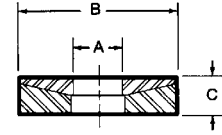
- Black Oxide Finish
- Case Hardened
- C1010 Material
- Large quantities quoted upon request



Part No.	Stud Size	A	B	C	Weight (lbs/100pcs)
42619	1/4	9/32	5/8	3/16	2
42620	5/16	11/32	3/4	3/16	2
42621	3/8	13/32	7/8	3/16	3
42622	7/16	15/32	1	3/16	4
42623	1/2	17/32	1-1/8	3/16	4
42624	5/8	21/32	1-3/8	3/16	6
42625	3/4	25/32	1-5/8	1/4	11
42626	7/8	29/32	1-3/4	1/4	11
42627	1	1-1/32	2	9/32	18

Spherical Washers

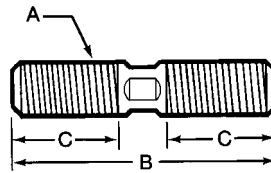
- Black Oxide Finish: steel washers only
- Case Hardened: steel washers only
- Material: 12L14 steel or 303 stainless steel
- Reduces stress on threads
- Bottom washer usable with Spherical Flange Nuts
- Many sizes conform to TCMAI standards
- Compensates for slight misalignment between workpiece and strap clamp
- Special sizes quoted upon request



Steel Part No.	Stainless Steel Part No.	Male Part No. A	Female Part No. B	Stud Size	C	Total Degree of Rotation	Wt. (lbs/100 pcs)
42701	47701	42721	42741	3/16 and 1/4	3/16	8 and 5	1
42702	47702	42722	42742	5/16 and 3/8	1/4	5 and 3	4
42703	47703	42723	42743	7/16 and 1/2	5/16	4 and 2	8
42704	47704	42724	42744	5/8	5/16	2	10
42705	47705	42725	42745	3/4	3/8	3	17
42706	-	42726	42746	7/8	3/8	3	18
42707	-	42727	42747	1	1/2	3	34
42708	-	42728	42748	1-1/8	1/2	3	38
42709	-	42729	42749	1-1/4	1/2	3	50
42710	-	42730	42750	1-1/2	1/2	3	80

Driver Studs

- Black Oxide Finish
- Tensile Strength: 125,000 p.s.i. min.
- Medium Carbon Steel
- Most studs have wrench flats
- Special lengths & sizes quoted upon request



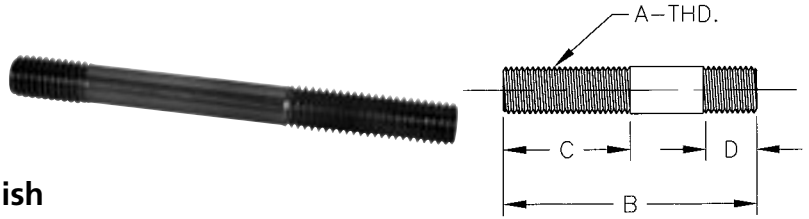
Part No.	Thread A	B	C	Flats	Weight (lbs/100pcs)
40301	1/4-20	1-1/2	1/2	NO	2
40302	1/4-20	2	3/4	NO	3
40303	1/4-20	2-1/2	1	NO	3
40304	1/4-20	3	1	NO	4
40305	1/4-20	3-1/2	1	NO	4
40306	1/4-20	4	1	NO	5
40307	1/4-20	4-1/2	1	NO	6
40308	1/4-20	5	1	NO	6
40309	1/4-20	5-1/2	1	NO	7
40310	1/4-20	6	1	NO	8
40311	1/4-20	6-1/2	1	NO	8
40312	1/4-20	7	1	NO	9
40313	1/4-20	7-1/2	1	NO	9
40314	1/4-20	8	1	NO	10
40401	5/16-18	1-1/2	1/2	NO	3
40402	5/16-18	2	3/4	NO	4
40403	5/16-18	2-1/2	1	NO	5
40404	5/16-18	3	1-1/8	NO	6
40405	5/16-18	3-1/2	1-1/8	NO	7
40406	5/16-18	4	1-1/8	NO	8
40407	5/16-18	4-1/2	1-1/8	NO	9
40408	5/16-18	5	1-1/8	NO	10
40409	5/16-18	5-1/2	1-1/8	NO	11
40410	5/16-18	6	1-1/8	NO	12
40411	5/16-18	6-1/2	1-1/8	NO	13
40412	5/16-18	7	1-1/8	NO	14
40413	5/16-18	7-1/2	1-1/8	NO	16
40414	5/16-18	8	1-1/8	NO	16
40501	3/8-16	1-1/2	1/2	NO	4
40502	3/8-16	2	3/4	NO	6

Part No.	Thread A	B	C	Flats	Weight (lbs/100pcs)
40503	3/8-16	2-1/2	1	NO	8
40504	3/8-16	3	1	YES	10
40505	3/8-16	3-1/2	1-1/4	YES	12
40506	3/8-16	4	1-1/4	YES	13
40507	3/8-16	4-1/2	1-1/4	YES	16
40508	3/8-16	5	1-1/4	YES	18
40509	3/8-16	5-1/2	1-1/4	YES	21
40510	3/8-16	6	1-1/4	YES	23
40511	3/8-16	6-1/2	1-1/4	YES	25
40512	3/8-16	7	1-1/4	YES	27
40513	3/8-16	7-1/2	1-1/4	YES	29
40514	3/8-16	8	1-1/4	YES	31
40701	1/2-13	1-1/2	1/2	NO	7
40702	1/2-13	2	3/4	NO	9
40703	1/2-13	2-1/2	1	NO	12
40704	1/2-13	3	1	YES	14
40705	1/2-13	3-1/2	1-1/4	YES	17
40706	1/2-13	4	1-1/2	YES	19
40707	1/2-13	4-1/2	1-1/2	YES	22
40708	1/2-13	5	1-1/2	YES	24
40709	1/2-13	5-1/2	1-1/2	YES	27
40710	1/2-13	6	1-1/2	YES	29
40711	1/2-13	6-1/2	1-1/2	YES	32
40712	1/2-13	7	1-1/2	YES	34
40713	1/2-13	7-1/2	1-1/2	YES	37
40714	1/2-13	8	1-1/2	YES	39
40715	1/2-13	9	1-1/2	YES	44
40716	1/2-13	10	1-1/2	YES	49
40717	1/2-13	12	1-1/2	YES	59
40718	1/2-13	14	1-1/2	YES	69
40719	1/2-13	16	1-1/2	YES	79

Part No.	Thread A	B	C	Flats	Weight (lbs/100pcs)
40801	5/8-11	1-1/2	1/2	NO	12
40802	5/8-11	2	3/4	NO	16
40803	5/8-11	2-1/2	1	NO	19
40804	5/8-11	3	1	YES	23
40805	5/8-11	3-1/2	1-1/4	YES	27
40806	5/8-11	4	1-1/2	YES	31
40807	5/8-11	4-1/2	1-3/4	YES	34
40808	5/8-11	5	1-3/4	YES	38
40809	5/8-11	5-1/2	1-3/4	YES	42
40810	5/8-11	6	1-3/4	YES	46
40811	5/8-11	6-1/2	1-3/4	YES	49
40812	5/8-11	7	1-3/4	YES	53
40813	5/8-11	7-1/2	1-3/4	YES	57
40814	5/8-11	8	1-3/4	YES	61
40815	5/8-11	9	1-3/4	YES	68
40816	5/8-11	10	1-3/4	YES	76
40817	5/8-11	12	1-3/4	YES	91
40818	5/8-11	14	1-3/4	YES	106
40819	5/8-11	16	1-3/4	YES	121
40820	5/8-11	18	1-3/4	YES	136
40821	5/8-11	20	1-3/4	YES	161
40822	5/8-11	22	1-3/4	YES	176
40823	5/8-11	24	1-3/4	YES	201
40901	3/4-10	3	1	YES	32
40902	3/4-10	3-1/2	1-1/4	YES	38
40903	3/4-10	4	1-1/2	YES	43
40904	3/4-10	4-1/2	1-3/4	YES	49
40905	3/4-10	5	2	YES	54
40906	3/4-10	5-1/2	2	YES	60
40907	3/4-10	6	2	YES	66
40908	3/4-10	6-1/2	2	YES	71
40909	3/4-10	7	2	YES	77
40910	3/4-10	7-1/2	2	YES	83
40911	3/4-10	8	2	YES	88
40912	3/4-10	9	2	YES	99
40913	3/4-10	10	2	YES	111
40914	3/4-10	12	2	YES	133
40915	3/4-10	14	2	YES	156
40916	3/4-10	16	2	YES	178
40917	3/4-10	18	2	YES	201
40918	3/4-10	20	2	YES	223
40919	3/4-10	22	2	YES	246
40920	3/4-10	24	2	YES	268

Driver Studs – Various Lengths

- Black Oxide Finish
- Medium Carbon Steel
- Special lengths & sizes quoted upon request
- Metric studs dimensioned in millimeters



Metric

Part No.	Thread A	B	C	D
60251	M6 x 1.0	50	20	12
60252	M6 x 1.0	65	20	12
60253	M6 x 1.0	80	27	12
60254	M6 x 1.0	95	27	12
60255	M6 x 1.0	110	31	12
60351	M8 x 1.25	50	20	12
60352	M8 x 1.25	65	20	12
60353	M8 x 1.25	80	27	12
60354	M8 x 1.25	95	31	12
60355	M8 x 1.25	110	31	12
60356	M8 x 1.25	140	35	12
60451	M10 x 1.5	50	20	16
60452	M10 x 1.5	65	20	16
60453	M10 x 1.5	80	27	16
60454	M10 x 1.5	95	31	16
60455	M10 x 1.5	110	35	16
60456	M10 x 1.5	140	35	16
60551	M12 x 1.75	50	20	16
60552	M12 x 1.75	65	20	16
60553	M12 x 1.75	80	27	16
60554	M12 x 1.75	95	31	16
60555	M12 x 1.75	110	39	16
60556	M12 x 1.75	140	39	16
60557	M12 x 1.75	175	39	16
60558	M12 x 1.75	200	39	16
60651	M16 x 2.0	80	21	18
60652	M16 x 2.0	110	47	18
60653	M16 x 2.0	150	47	18
60654	M16 x 2.0	175	47	18
60655	M16 x 2.0	200	47	18
60656	M16 x 2.0	250	47	18
60751	M20 x 2.5	80	27	20
60752	M20 x 2.5	110	47	20
60753	M20 x 2.5	150	55	20
60754	M20 x 2.5	175	55	20
60755	M20 x 2.5	200	55	20
60851	M24 x 3.0	160	35	100
60852	M24 x 3.0	300	35	100

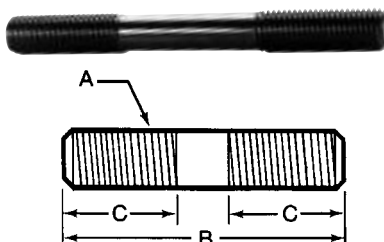
English

Part No.	Thread A	B	C	D
40350	1/4-20	1.50	0.88	0.38
40351	1/4-20	2.00	1.00	0.38
40352	1/4-20	2.50	1.00	0.38
40353	1/4-20	3.00	1.50	0.38
40354	1/4-20	4.00	1.75	0.38
40355	1/4-20	5.00	1.75	0.38
40356	1/4-20	6.00	2.00	0.38
40357	1/4-20	7.00	2.00	0.38
40358	1/4-20	8.00	2.50	0.38
40450	5/16-18	1.50	0.75	0.50
40451	5/16-18	2.00	1.00	0.50
40452	5/16-18	2.50	1.00	0.50
40453	5/16-18	3.00	1.50	0.50
40454	5/16-18	4.00	1.50	0.50
40455	5/16-18	5.00	1.75	0.50
40456	5/16-18	6.00	2.00	0.50
40457	5/16-18	7.00	2.00	0.50
40458	5/16-18	8.00	2.50	0.50
40550	3/8-16	1.50	0.63	0.63
40551	3/8-16	2.00	1.00	0.63
40552	3/8-16	3.00	1.50	0.63
40553	3/8-16	4.00	1.50	0.63
40554	3/8-16	5.00	1.75	0.63
40555	3/8-16	6.00	2.00	0.63
40556	3/8-16	8.00	2.50	0.63
40770	1/2-13	1.50	0.63	0.63
40771	1/2-13	2.00	1.00	0.63
40772	1/2-13	3.00	1.50	0.75
40773	1/2-13	4.00	1.50	0.75
40774	1/2-13	5.00	1.75	0.75
40775	1/2-13	5.50	1.75	0.75
40776	1/2-13	6.00	2.00	0.75
40777	1/2-13	6.50	2.00	0.75
40778	1/2-13	7.00	2.00	0.75
40779	1/2-13	8.00	2.50	0.75
40780	1/2-13	9.00	2.50	0.75
40781	1/2-13	10.00	3.00	0.75
40782	1/2-13	12.00	3.00	0.75

Part No.	Thread A	B	C	D
40850	5/8-11	2.00	1.00	0.63
40851	5/8-11	2.50	1.00	0.88
40852	5/8-11	3.00	1.50	0.88
40853	5/8-11	4.00	1.75	0.88
40854	5/8-11	5.00	1.75	0.88
40855	5/8-11	5.50	2.00	0.88
40856	5/8-11	6.00	2.00	0.88
40857	5/8-11	6.50	2.00	0.88
40858	5/8-11	7.00	2.00	0.88
40859	5/8-11	8.00	2.50	0.88
40860	5/8-11	9.00	2.50	0.88
40861	5/8-11	10.00	2.50	0.88
40862	5/8-11	12.00	3.00	0.88
40863	5/8-11	14.00	3.00	0.88
40950	3/4-10	3.00	1.50	1.00
40951	3/4-10	4.00	1.75	1.00
40952	3/4-10	5.00	1.75	1.00
40953	3/4-10	6.00	2.00	1.00
40954	3/4-10	7.00	2.00	1.00
40955	3/4-10	8.00	2.50	1.00
40956	3/4-10	9.00	2.50	1.00
40957	3/4-10	10.00	2.50	1.00
40958	3/4-10	12.00	3.00	1.00
40959	3/4-10	14.00	3.00	1.00
41050	7/8-9	3.00	1.00	1.25
41051	7/8-9	4.00	1.75	1.25
41052	7/8-9	5.00	1.75	1.25
41053	7/8-9	6.00	2.00	1.25
41054	7/8-9	7.00	2.50	1.25
41055	7/8-9	8.00	2.50	1.25
41056	7/8-9	9.00	3.00	1.25
41057	7/8-9	10.00	3.00	1.25
41058	7/8-9	12.00	3.00	1.25
41150	1-8	4.00	1.75	1.50
41151	1-8	5.00	1.75	1.50
41152	1-8	6.00	2.00	1.50
41153	1-8	8.00	2.50	1.50
41154	1-8	12.00	3.00	1.50

Metric Studs

- Black Oxide Finish
- Tensile Strength: 125,000 p.s.i. min.
- Medium Carbon Steel
- Dimension in millimeters
- Special lengths & sizes quoted upon request

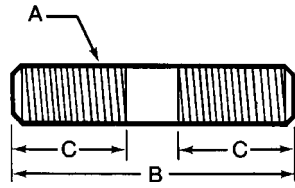


Part No.	Thread A	B	C	Weight (lbs/100pcs)
60201	M6 x 1.0	50	20	2
60202	M6 x 1.0	65	20	2.7
60204	M6 x 1.0	95	27	4
60206	M6 x 1.0	110	31	5
60208	M6 x 1.0	140	35	6
60301	M8 x 1.25	50	20	4
60302	M8 x 1.25	65	20	5
60303	M8 x 1.25	80	27	6
60304	M8 x 1.25	95	31	8
60306	M8 x 1.25	110	31	9
60308	M8 x 1.25	140	35	11
60401	M10 x 1.5	50	20	6
60402	M10 x 1.5	65	20	8
60403	M10 x 1.5	80	27	9
60404	M10 x 1.5	95	31	11
60406	M10 x 1.5	110	35	13
60407	M10 x 1.5	125	35	15

Part No.	Thread A	B	C	Weight (lbs/100pcs)
60501	M12 x 1.75	50	20	8
60502	M12 x 1.75	65	20	11
60503	M12 x 1.75	80	27	13
60504	M12 x 1.75	95	31	15
60506	M12 x 1.75	110	39	18
60604	M16 x 2.0	95	31	29
60606	M16 x 2.0	110	47	33
60607	M16 x 2.0	125	47	38
60609	M16 x 2.0	150	47	48
60703	M20 x 2.5	80	27	38
60706	M20 x 2.5	110	47	51
60707	M20 x 2.5	125	55	58
60709	M20 x 2.5	150	55	72
60805	M24 x 3.0	100	39	69
60807	M24 x 3.0	125	55	82
60809	M24 x 3.0	150	63	100

Stainless Steel Driver Studs

- Material: 303 Series Stainless Steel
- Rolled Threads

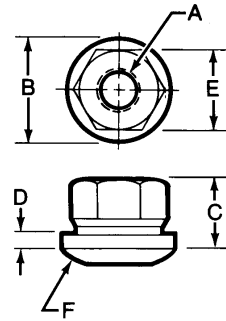


Part No.	Thread A	B	C
40374	1/4-20	3.00	1.00
40376	1/4-20	4.00	1.00
40378	1/4-20	5.00	1.00
40474	5/16-18	3.00	1.00
40476	5/16-18	4.00	1.13
40574	3/8-16	3.00	1.13
40576	3/8-16	4.00	1.25
40578	3/8-16	5.00	1.25
40580	3/8-16	6.00	1.25
40584	3/8-16	8.00	1.25
40785	1/2-13	4.00	1.50
40787	1/2-13	5.00	1.50
40789	1/2-13	6.00	1.50
40793	1/2-13	8.00	1.50
40876	5/8-11	4.00	1.75
40878	5/8-11	5.00	1.75
40880	5/8-11	6.00	1.75
40884	5/8-11	8.00	1.75
40971	3/4-10	3.00	1.25
40973	3/4-10	4.00	1.75
40977	3/4-10	6.00	2.00
40981	3/4-10	8.00	2.00
40983	3/4-10	10.00	2.00

Spherical Flange Nuts

Stainless Steel

- Nut: 303 Stainless Steel
- Equalizes thread loads when used with Spherical Washers



Part No.	Thread A	B	C	D	E	F	Weight (lbs/100pcs)
41821	1/4-20	5/8	5/16	3/16	1/2	3/4	2
41822	5/16-18	3/4	3/8	3/16	9/16	1	4
41823	3/8-16	7/8	1/2	1/8	11/16	1-1/4	6
41824	1/2-13	1-3/16	11/16	5/32	7/8	1-1/2	8
41825	5/8-11	1-3/8	13/16	3/16	1-1/16	1-3/4	13
41826	3/4-10	1-5/8	1	1/4	1-1/4	2-1/4	20

Steel

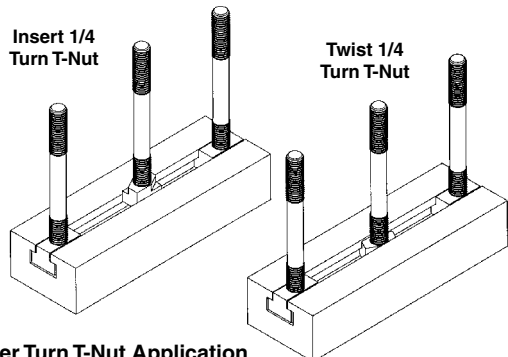
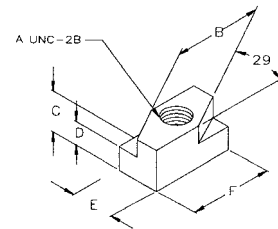
- Black Oxide Finish and Case Hardened
- 12L14 Material
- Many sizes conform to TCMAI standards
- When used with Spherical Washers Flange Nuts will equalize thread loads
- Standard package quantity: 41801- 41807: 25 pcs.



Part No.	Thread A	B	C	D	E	F	Weight (lbs/100pcs)
41801	1/4-20	5/8	5/16	3/32	1/2	3/4	2
41802	5/16-18	3/4	3/8	1/8	9/16	1-1/4	4
41803	3/8-16	7/8	1/2	1/8	11/16	1-1/4	6
41804	7/16-14	1	9/16	5/32	3/4	1-1/2	8
41805	1/2-13	1-1/8	11/16	3/16	7/8	1-1/2	13
41806	5/8-11	1-3/8	13/16	3/16	1-1/16	1-3/4	20
41807	3/4-10	1-5/8	1	1/4	1-1/4	2-1/4	34
41808	7/8-9	1-3/4	1-1/8	1/4	1-7/16	2-1/2	45
41809	1-8	2	1-1/4	1/4	1-5/8	2-3/4	65
41811	1-1/4-7	2-1/2	1-1/4	1/4	1-13/16	3	76

Quarter Turn T-Slot Nuts

- Sintered Metal
- The last thread is incomplete to prevent the stud from turning through the bottom of the nut
- Special sizes quoted upon request

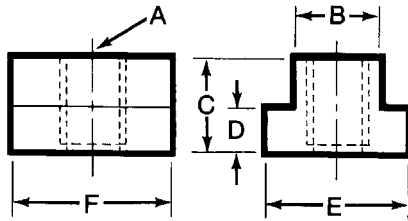


Quarter Turn T-Nut Application

Part No.	Thread A	English Table Slot B	Metric Table Slot	C	D	E	F
41450	3/8-16	7/16	12MM	1/2	0.208	0.438	0.75
41451	3/8-16	1/2	12MM	1/2	0.271	0.500	1
41452	1/2-13	9/16	15MM	5/8	0.333	0.563	0.94
41453	1/2-13	5/8	16MM	5/8	0.333	0.625	1.25
41454	5/8-11	11/16	18MM	3/4	0.427	0.688	1.38
41455	5/8-11	3/4	20MM	3/4	0.458	0.75	1.50
41456	1/2-13	11/16	18MM	3/4	0.427	0.688	1.3
41457	3/4-10	1	26MM	1	0.615	1	1.75

* Quarter Turn T-Slot Nuts are undersized to fit machine table slot

T-Slot Nuts



- Steel T-Slot Nuts:
 - Black Oxide Finish and Case Hardened
 - 1018 Material
- Stainless Steel T-Slot Nuts: 304 Stainless Steel
- The last thread is incomplete to prevent stud from turning through the bottom of the nut
- Many sizes conform to TCMAI standards
- Special sizes quoted upon request
- **Standard package quantity:**
 - 41401- 41419: 25 pcs.
 - 61401- 61412: 25 pcs.
- Tapped through T-Slot Nuts are also available. To order, add a "T" after the part no. (ex: 41412T)

English

* T-Slot Nuts are undersized to fit machine table slot
 ** English T-Slot Nut will fit this size metric machine T-slot

Part No.	Thread A	*English Table Slot B	**Metric Table Slot	C	D	E	F	Wt. (lbs/100 pcs)
41401	1/4-20	5/16	8MM	1/4	3/16	9/16	9/16	2
41402	1/4-20	3/8	10MM	3/8	15/64	9/16	9/16	3
41403	5/16-18	3/8	10MM	3/8	1/4	5/8	7/8	5
41433	5/16-18	7/16	12MM	1/2	7/32	11/16	7/8	6
41434	5/16-18	1/2	13MM	1/2	9/32	7/8	7/8	8
41404	3/8-16	7/16	12MM	1/2	7/32	11/16	7/8	5.5
41405	3/8-16	1/2	12MM	1/2	9/32	7/8	7/8	8
41406	3/8-16	9/16	15MM	5/8	11/32	7/8	1-1/8	12.6
41407	7/16-14	1/2	13MM	1/2	9/32	7/8	7/8	9
41408	7/16-14	1/2	13MM	3/8	7/32	3/4	7/8	8
41409	1/2-13	9/16	15MM	5/8	11/32	7/8	1-1/8	11
41410	1/2-13	5/8	16MM	5/8	11/32	1	1-1/8	14
41411	1/2-13	5/8	16MM	3/4	3/8	1-1/8	1-1/8	17
41412	1/2-13	11/16	18MM	3/4	7/16	1-1/8	1-1/4	21
41413	1/2-13	3/4	20MM	3/4	15/32	1-1/4	1-1/4	24
41415	5/8-11	11/16	18MM	3/4	7/16	1-1/8	1-1/4	19
41416	5/8-11	3/4	20MM	3/4	15/32	1-1/4	1-1/4	22
41417	5/8-11	13/16	21MM	1	9/16	1-1/4	1-1/2	37
41418	3/4-10	13/16	21MM	1	9/16	1-1/4	1-1/2	34
41419	3/4-10	7/8	23MM	1	9/16	1-1/2	1-1/2	41
41420	3/4-10	1	26MM	1	5/8	1-5/8	1-3/4	55
41421	3/4-10	1	26MM	1-1/2	3/4	1-3/4	1-3/4	86
41422	3/4-10	1-1/16	27MM	1-1/8	11/16	1-5/8	2	76
41423	7/8-9	1	26MM	1	5/8	1-5/8	1-3/4	84
41424	7/8-9	1-1/16	27MM	1-1/8	11/16	1-5/8	2	72
41425	7/8-9	1-1/8	28MM	1-1/2	3/4	1-3/4	2	98
41429	7/8-9	1-5/16	34MM	1-1/4	15/16	2	2	131
41426	1-8	1-1/16	27MM	1-1/8	11/16	1-5/8	2	67
41427	1-8	1-1/8	32MM	1-1/2	3/4	1-3/4	2	91
41428	1-8	1-1/4	32MM	1-1/4	7/8	2	2	231
41430	1-8	1-5/16	34MM	1-1/4	15/16	2	2	150
41432	1-1/4-7	1-3/8	36MM	1-3/4	1-1/8	2-1/2	2-1/2	204

Metric

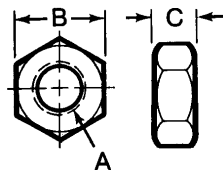
Part No.	Thread A	Metric Table Slot B	English Table Slot**	C	D	E	F	Wt. (lbs/100 pcs)
61401	M6 x 1.0	8	5/16	10	3/16	6	19	3
61402	M6 x 1.0	10	7/16	11	15/64	6	22	5
61403	M8 x 1.25	10	7/16	11	1/4	6	22	5
61404	M10 x 1.5	12	1/2	13	7/32	7	22	6
61405	M10 x 1.5	14	9/16	16	9/32	9	29	12
61406	M12 x 1.75	16	9/16	16	11/32	9	29	12
61407	M12 x 1.75	17	5/8	16	9/32	9	29	14
61408	M12 x 1.75	18	11/16	19	7/32	11	32	21
61409	M16 x 2.0	21	3/4	19	11/32	11	32	19
61410	M16 x 2.0	22	13/16	25	11/32	14	38	36
61411	M20 x 2.5	27	7/8	25	3/8	14	38	36
61412	M24 x 3.0	33	1-1/16	29	7/16	18	51	69

Stainless Steel

Part No.	Thread A	*English Table Slot B	C	D	E	F	Wt. (lbs/100 pcs)
47401	1/4-20	5/16	1/4	3/16	1/2	9/16	3
47403	5/16-18	3/8	3/8	1/4	5/8	7/8	6
47404	3/8-16	7/16	3/8	13/64	5/8	7/8	6.5
47405	3/8-16	1/2	1/2	9/32	7/8	7/8	9
47409	1/2-13	9/16	1/2	11/32	7/8	1-1/8	12
47410	1/2-13	5/8	5/8	11/32	1	1-1/8	15
47412	1/2-13	11/16	3/4	7/16	1	1-1/4	22
47415	5/8-11	11/16	3/4	7/16	1	1-1/4	20
47416	5/8-11	3/4	3/4	15/32	1-1/4	1-1/4	23

Heavy Hex Nuts

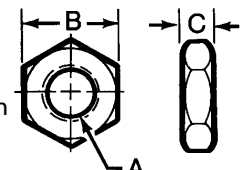
- Black Oxide Finish
- Case Hardened
- High Grade Alloy Steel
- Outlasts ordinary Hex Nuts when used in repetitive operations
- **Standard pkg. qty: 25 pcs.**



Part No.	Thread A	B	C	Weight (lbs/100pcs)
42101	1/4-20	1/2	15/64	1
42102	5/16-18	9/16	19/64	2
42103	3/8-16	11/16	23/64	4
42104	7/16-14	3/4	27/64	5
42105	1/2-13	7/8	31/64	6
42106	5/8-11	1-1/16	39/64	11
42107	3/4-10	1-1/4	47/64	19
42108	7/8-9	1-7/16	55/64	26
42109	1-8	1-5/8	63/64	40

Heavy Hex Jam Nuts

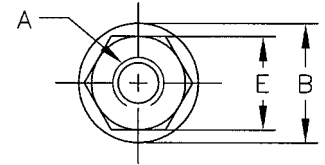
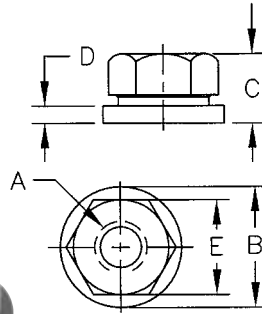
- Black Oxide Finish
- High Grade Alloy Steel
- Outlasts ordinary Hex Nuts when used in repetitive operations
- **Standard pkg. qty: 25 pcs.**



Part No.	Thread A	B	C	Weight (lbs/100pcs)
42201	1/4-20	1/2	11/64	1
42202	5/16-18	9/16	13/64	1
42203	3/8-16	11/16	15/64	2
42204	7/16-14	3/4	17/64	3
42205	1/2-13	7/8	19/64	3
42206	5/8-11	1-1/16	23/64	7
42207	3/4-10	1-1/4	27/64	11
42208	7/8-9	1-7/16	31/64	16
42209	1-8	1-5/8	35/64	20

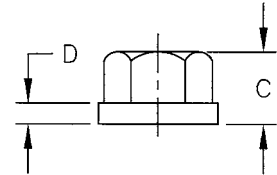
Flange Nuts – UNC & Metric

- Black Oxide Finish
- Case Hardened
- 12L14 Material
- Available in Coarse or Fine Threads
- Many sizes conform to TCMAI standards
- Special sizes quoted upon request
- **Standard package quantity:**
41601- 41607: 25 pcs.
41701- 41607: 25 pcs.



UNC Flange Nuts

Part No.	Thread A	B	C	D	E	Weight (lbs/100pcs)
41601	1/4-20	5/8	5/16	3/32	1/2	3
41602	5/16-18	3/4	3/8	1/8	9/16	4
41603	3/8-16	7/8	1/2	1/8	11/16	5
41604	7/16-14	1	9/16	5/32	3/4	7
41605	1/2-13	1-1/8	11/16	3/16	7/8	11
41606	5/8-11	1-3/8	13/16	3/16	1-1/16	18
41607	3/4-10	1-5/8	1	1/4	1-1/4	31
41608	7/8-9	1-3/4	1-1/8	1/4	1-7/16	42
41609	1-8	2	1-1/4	1/4	1-5/8	59
41611	1-1/4-7	2-1/2	1-1/4	1/4	1-13/16	66



Stainless Steel Flange Nuts

- Nut: 303 Stainless Steel
- Special sizes quoted upon request

Metric Flange Nuts

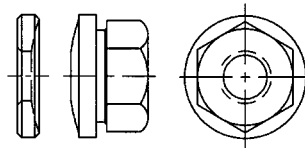
Part No.	Thread A	B	C	D	E	Weight (lbs/100pcs)
60601	M6 x 1.0	16	8	2	10	1.8
60602	M8 x 1.25	19	10	2.5	13	2.4
60603	M10 x 1.5	22	13	3	17	3.5
60604	M12 x 1.75	27	17	4	19	9.5
60605	M16 x 2.0	33	21	5	24	16.5
60606	M20 x 2.5	40	25	6	30	29
60607	M24 x 3.0	49	32	7	36	51

Part No.	Thread A	B	C	D	E	Weight (lbs/100pcs)
47601	1/4-20	5/8	5/16	3/32	1/2	4
47602	5/16-18	3/4	3/8	1/8	9/16	5
47603	3/8-16	7/8	1/2	1/8	11/16	6
47604	7/16-14	1	9/16	5/32	3/4	8
47605	1/2-13	1-1/8	11/16	3/16	7/8	12
47606	5/8-11	1-3/8	13/16	3/16	1-1/16	19
47607	3/4-10	1-5/8	1	1/4	1-1/4	32
47608	7/8-9	1-3/4	1-1/8	1/4	1-7/16	43
47609	1-8	2	1-1/4	1/4	1-5/8	60
47611	1-1/4-7	2-1/2	1-1/4	1/4	1-13/16	67

Spherical Flange Nut Assemblies

Stainless Steel:

- Nut: 416 Stainless Steel
- Washer: 303 Stainless Steel
- Includes one Stainless Steel Flange Nut and one Stainless Steel Washer



Steel:

- Consists of Flange Nuts (Part Nos. 41801-41811) and Spherical Washers (Part No.'s 42741-42750)

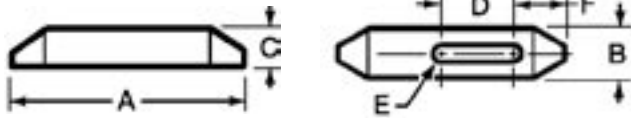
Part No.	Thread Size	Total Degree of Rotation	Weight (lbs/100pcs)
41921	1/4-20	5	3
41922	5/16-18	5	6
41923	3/8-16	3	8
41924	1/2-13	4	11
41925	5/8-11	2	16
41926	3/4-10	2	25



Part No.	Thread Size	Total Degree of Rotation	Weight (lbs/100pcs)
41901	1/4-20	5	3
41902	5/16-18	5	6
41903	3/8-16	3	8
41904	7/16-14	4	11
41905	1/2-13	2	16
41906	5/8-11	2	25
41907	3/4-10	3	43
41908	7/8-9	3	56
41909	1-8	3	77
41911	1-1/4-7	3	104

Plain Clamps

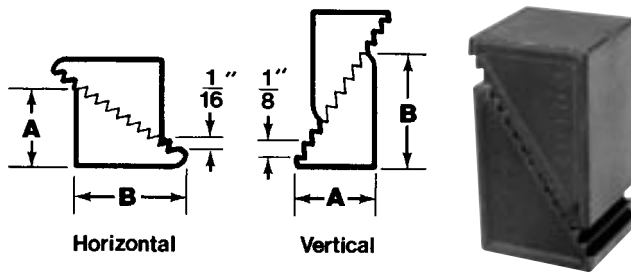
- Material: 1018 Steel
- Case Hardened
- Black Oxide Finish
- Tapered nose allows clamping in small areas



Part No.	A	B	C	D	Stud Size E	F	Weight (lbs/100pcs)
30401	2-1/2	1	1/2	13/16	5/16 & 3/8	27/32	24
30402	4	1	5/8	1-7/16	5/16 & 3/8	1-1/32	48
30403	6	1-1/8	3/4	2-3/16	5/16 & 3/8	1-5/32	105
30404	2-1/2	1-1/8	1/2	11/16	1/2	29/32	24
30405	4	1-1/4	3/4	1-5/16	1/2	1-5/32	67
30406	6	1-1/4	7/8	2-1/16	1/2	1-9/32	37
30407	2-1/2	1-1/4	5/8	9/16	5/8	31/32	31
30408	4	1-1/2	3/4	1-3/16	5/8	1-9/32	83
30409	6	1-1/2	7/8	1-15/16	5/8	1-13/32	150
30410	4	1-1/2	3/4	1-1/16	3/4	1-11/32	75
30411	6	1-1/2	1	1-15/16	3/4	1-15/32	164
30412	8	1-3/4	1-1/8	2-3/16	3/4	1-29/32	321
30413	6	2	1-1/4	1-11/16	7/8 & 1	1-27/32	274
30414	8	2	1-3/8	1-15/16	7/8 & 1	2-1/32	425
30415	10	2	1-1/2	2-15/16	7/8 & 1	2-1/32	618

Step Blocks – Steel

- Larger sizes have chamfered holes for ease of use
- Blocks work in conjunction with Serrated End clamps
- Two halves = One Block

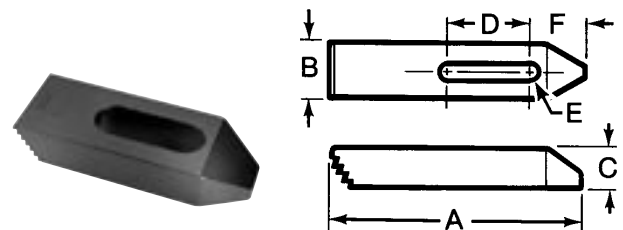


Part No.	Weight (lbs/kit)	Height Adj. Range	A	B
WITH 1" THICK STEP BLOCKS				
40102	21	3/4 to 1-5/8	1-1/16	11/16
40103	49	1-1/8 to 2-1/2	1-39/64	1-1/16
40104*	203	2-1/2 to 6	3-3/4	2-15/32
WITH 1-1/2" THICK STEP BLOCKS				
40105	174	1-3/4 to 4	2-17/32	1-43/64
40106*	305	2-1/2 to 6	3-3/4	2-15/32
40107*	506	3-1/2 to 9	5-21/64	3-7/16
WITH 2" THICK STEP BLOCKS				
40108	230	1-3/4 to 4	2-17/32	1-43/64
40109*	400	2-1/2 to 6	3-3/4	2-15/32
40110*	670	3-1/2 to 9	5-21/64	3-7/16
40111	2115	4-1/8 to 10-1/2	7-3/8	4-3/4

* Indicates chamfered holes

Serrated End Clamps

- 1018 Steel
- Case Hardened
- Black Oxide Finish
- Used when a workpiece fixture incorporates Step Blocks into the design
- Serrated teeth match all TE-CO Step Blocks



Part No.	A	B	C	D	Stud Size E	F	Weight (lbs/100pcs)
30501	2-1/2	1	1/2	13/16	5/16 or 3/8	27/32	23
30502	4	1	5/8	1-7/16	5/16 or 3/8	1-1/32	49
30503	6	1-1/8	3/4	2-3/16	5/16 or 3/8	1-5/32	106
30504	2-1/2	1-1/8	1/2	11/16	1/2	29/32	27
30505	4	1-1/4	3/4	1-5/16	1/2	1-5/32	72
30506	6	1-1/4	7/8	2-1/16	1/2	1-9/32	134
30507	2-1/2	1-1/4	5/8	9/16	5/8	31/32	33
30508	4	1-1/2	3/4	1-3/16	5/8	1-9/32	87
30509	6	1-1/2	7/8	1-15/16	5/8	1-13/32	160
30510	4	1-1/2	3/4	1-1/16	3/4	1-11/32	81
30511	6	1-1/2	1	1-15/16	3/4	1-15/32	170
30512	8	1-3/4	1-1/8	2-3/16	3/4	1-29/32	330
30513	6	2	1-1/4	1-11/16	7/8 or 1	1-27/32	275
30514	8	2	1-3/8	1-15/16	7/8 or 1	2-1/32	440
30515	10	2	1-1/2	2-15/16	7/8 or 1	2-1/32	601

Clamp Supports

- Includes Washer, Spring & Shaft Collar
- Black Oxide Finish (washer only)



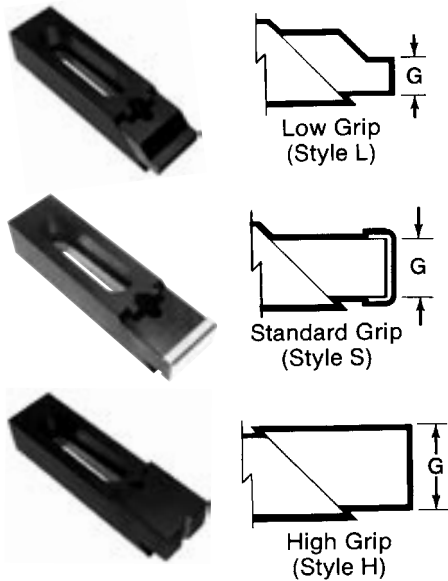
Part No.	Stud Size	Weight (lbs/kit)
50801	1/4	4
50802	5/16	4
50803	3/8	8
50804	1/2	12
50805	5/8	19
50806	3/4	26
50808	1	31

Edge Clamps

- Clamp Material: 1018 Steel
- Black Oxide Finish
- Features a double action, adjustable nose which exerts clamping pressures both downward and inward through a 45 degree angle.
- Noses have serrations for better gripping of non-finished or semi-finished workpieces
- Tapered slots prevent clamp from sliding off the workpiece during tightening
- Length "A" is calculated with nose raised 1/8"
- Low Profile Nose provides a greater machining clearance
- Clamp Washer is included with each Edge Clamp

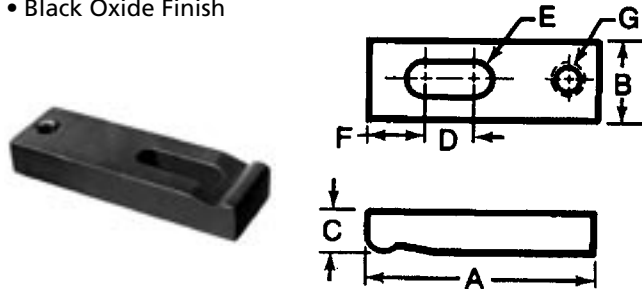


Part No.	A	Nose Style	B	C	D	E	F	G	Wrench Size	Wt. (lbs/100pcs)
33817	1-7/8	L	1	5/8	1/4	5/16	13/32	1/8	5/32	25
33818	1-7/8	S	1	5/8	1/4	5/16	13/32	5/8	5/32	30
33819	2-3/8	L	1	5/8	3/4	5/16	5/16	1/8	5/32	29
33820	2-3/8	S	1	5/8	3/4	5/16	5/16	5/8	5/32	35
33821	2-7/8	L	1	5/8	1-1/4	5/16	5/16	1/8	5/32	35
33822	2-7/8	S	1	5/8	1-1/4	5/16	5/16	5/8	5/32	40
33801	2-5/16	L	1-1/4	5/8	3/8	3/8	7/16	1/4	3/16	38
33802	2-5/16	S	1-1/4	5/8	3/8	3/8	7/16	5/8	3/16	43
33890	2-3/4	L	1-1/4	5/8	13/16	3/8	1/2	1/4	3/16	44
33891	2-3/4	S	1-1/4	5/8	13/16	3/8	1/2	5/8	3/16	49
33805	3-5/16	L	1-1/2	3/4	3/4	1/2	11/16	3/8	1/4	81
33806	3-5/16	S	1-1/2	3/4	3/4	1/2	11/16	3/4	1/4	88
33710	3-5/16	L	1-1/2	3/4	5/8	5/8	11/16	3/8	1/4	81
33711	3-5/16	S	1-1/2	3/4	5/8	5/8	11/16	3/4	1/4	88
33823	3-7/8	L	1-1/2	7/8	1-1/4	1/2	1/2	1/4	1/4	100
33824	3-7/8	S	1-1/2	7/8	1-1/4	1/2	1/2	7/8	1/4	112
33714	3-7/8	L	1-1/2	7/8	1-1/4	5/8	1/2	1/4	1/4	100
33715	3-7/8	S	1-1/2	7/8	1-1/4	5/8	1/2	7/8	1/4	112
33803	4-1/8	L	1-1/4	5/8	2	3/8	11/16	1/4	3/16	63
33804	4-1/8	S	1-1/4	5/8	2	3/8	11/16	5/8	3/16	73
33892	4-11/16	L	1-1/4	5/8	2-3/16	3/8	15/16	1/4	3/16	73
33893	4-11/16	S	1-1/4	5/8	2-3/16	3/8	15/16	5/8	3/16	76
33807	5-3/16	L	1-1/2	3/4	2-1/2	1/2	5/8	3/8	1/4	117
33808	5-3/16	S	1-1/2	3/4	2-1/2	1/2	5/8	3/4	1/4	123
33712	5-3/16	L	1-1/2	3/4	2-1/2	5/8	5/8	3/8	1/4	117
33713	5-3/16	S	1-1/2	3/4	2-1/2	5/8	5/8	3/4	1/4	123
33829	5-1/4	L	2	1-1/4	1-3/8	3/4	27/32	3/8	5/16	235
33815	5-1/4	H	2	1-1/4	1-3/8	3/4	27/32	1-1/4	5/16	296
33825	5-5/16	L	1-1/2	7/8	2	1/2	7/8	1/4	1/4	141
33826	5-5/16	S	1-1/2	7/8	2	1/2	7/8	7/8	1/4	155
33716	5-5/16	L	1-1/2	7/8	2	5/8	7/8	1/4	1/4	141
33717	5-5/16	S	1-1/2	7/8	2	5/8	7/8	7/8	1/4	155
33809	5-13/16	L	1-1/2	1-1/4	2-1/4	1/2	1-1/16	3/8	1/4	207
33810	5-13/16	S	1-1/2	1-1/4	2-1/4	1/2	1-1/16	3/4	1/4	216
33811	6-1/8	H	1-1/2	1-1/4	2-1/4	1/2	1-1/16	1	1/4	240
33816	6-7/16	H	2-1/2	1-1/2	2	7/8	15/16	1-1/2	1/2	541
33812	7-1/8	L	1-1/2	1-1/4	3-5/16	1/2	1-3/16	3/8	1/4	252
33813	7-1/8	S	1-1/2	1-1/4	3-5/16	1/2	1-3/16	3/4	1/4	255
33827	7-1/4	L	1-1/2	7/8	3	1/2	1-3/8	1/4	1/4	189
33828	7-1/4	S	1-1/2	7/8	3	1/2	1-3/8	7/8	1/4	205
33814	7-3/8	H	1-1/2	1-1/4	3-5/16	1/2	1-3/16	1	1/4	286



Tapped End Clamps

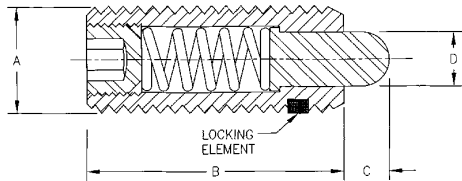
- Material: 1018 Steel
- Case Hardened
- Black Oxide Finish



Part No.	A	B	C	D	Stud Size E	F	G	Weight (lbs/100pcs)
30902	2	5/8	3/8	1/2	1/4	7/16	1/4-20	10
30903	2-1/2	5/8	3/8	1/2	1/4	9/16	1/4-20	14
30905	2-3/4	1	1/2	7/16	5/16	13/16	5/16-18	33
30906	3-1/4	1	1/2	13/16	5/16	7/8	5/16-18	39
30907	4	1	1/2	7/8	5/16	15/16	5/16-18	48
30908	3	1-1/4	5/8	3/4	3/8	9/16	3/8-16	55
30909	4	1-1/4	5/8	1	3/8	3/4	3/8-16	76
30910	5	1-1/4	5/8	1-1/2	3/8	3/4	3/8-16	94
30912	4	1-1/4	5/8	1	1/2	3/4	1/2-13	70
30913	4-1/2	1-1/4	5/8	1-1/2	1/2	13/16	1/2-13	76
30914	5	1-1/4	5/8	1-1/2	1/2	1-1/4	1/2-13	85
30916	6	1-1/4	5/8	1-1/2	1/2	2-1/4	1/2-13	114
30917	4-1/2	1-1/2	3/4	1	5/8	7/8	5/8-11	111
30918	5	1-1/2	3/4	1-1/2	5/8	15/16	5/8-11	120
30919	5-1/2	1-1/2	3/4	1-1/2	5/8	1-7/16	5/8-11	142
30920	6	1-1/2	3/4	1-1/2	5/8	2	5/8-11	152
30921	6	1-3/4	1	1-3/4	3/4	1-1/4	3/4-10	-
30922	7	1-3/4	1	2-1/4	3/4	1-1/4	3/4-10	-
30923	8	1-3/4	1	2-1/4	3/4	1-3/4	3/4-10	-

Standard Spring Plungers

- Steel Body Plungers:
 - 12L14 Steel Body
 - Black Oxide Finish
 - Case Hardened 12L14 Steel Nose, Black Oxide Finish
- Stainless Steel Body Plungers:
 - 303 Stainless Steel Body and Nose
- Excellent wear resistance
- Delrin noses and Metric sizes available
- **Standard pkg. quantity: 20 pcs.**



Heavy End Forces – Carbon & Stainless Steel Nose

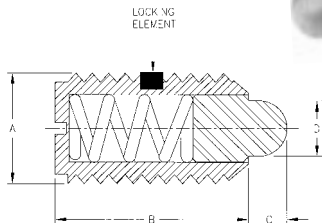
Steel Part No.	Stainless Steel Part No.	End Force (lbs)		Thread A	B	C	+.000 -.001 D	Weight (lbs/100pcs)
		Initial	Final					
52001	53201	1.50	4.50	6-32	17/32	.062	.046	.10
52002	53202	1.00	1.60	6-32	3/8	.062	.046	.10
52003	53203	2.70	7.30	8-32	5/8	.093	.070	.22
52004	53204	2.90	11.10	10-32	3/4	.125	.093	.38
52005	53205	3.00	13.00	1/4-20	1	.187	.119	.75
52006	53206	3.00	13.00	1/4-28	1	.187	.119	.75
52007	53207	2.00	9.00	1/4-20	3/4	.125	.119	.65
52008	53208	3.00	15.00	5/16-18	1	.187	.135	1.40
52009	53209	5.50	14.50	3/8-16	1-1/8	.187	.186	2.00
52010	53210	6.60	17.40	1/2-13	1-1/4	.250	.248	4.50
52011	53211	10.50	25.50	5/8-11	1-1/2	.312	.310	8.00
52012	53212	6.70	37.30	3/4-10	1-3/4	.312	.374	14.00
52013	53213	16.00	68.00	1-8	2-13/32	.500	.499	32.00

Light End Forces – Carbon & Stainless Steel Nose

Steel Part No.	Stainless Steel Part No.	End Force (lbs)		Thread A	B	C	+.000 -.001 D	Weight (lbs/100pcs)
		Initial	Final					
52201	53301	.50	1.50	6-32	17/32	.062	.046	.10
52202	53302	.70	2.30	8-32	5/8	.093	.070	.22
52203	53303	1.30	2.70	10-32	3/4	.125	.093	.37
52217	53308	.25	2.00	1/4-20	3/4	.125	.119	.65
52204	53305	1.00	4.00	1/4-20	1	.187	.119	.75
52205	53306	1.00	4.00	1/4-28	1	.187	.119	.75
52206	53304	1.50	4.50	5/16-18	1	.187	.135	1.40
52207	53307	2.80	7.20	3/8-16	1-1/8	.187	.186	2.00
52208	53309	2.70	9.30	1/2-13	1-1/4	.250	.248	4.50
52209	53310	3.50	10.50	5/8-11	1-1/2	.312	.310	8.00
52210	53311	4.00	16.00	3/4-10	1-3/4	.312	.374	14.00
52211	53312	4.00	31.00	1-8	2-13/32	.500	.499	32.00

Short Spring Plungers

- Steel Body Plungers:
 - 12L14 Steel Body
 - Black Oxide Finish
 - Case Hardened 12L14 Steel Nose, Black Oxide Finish
- Stainless Steel Body Plungers:
 - 303 Stainless Steel Body and Nose
- Excellent wear resistance
- Delrin noses and Metric sizes available
- **Standard pkg. quantity: 20 pcs.**
(except 52407 & 52607: 16 pcs.)



Heavy End Forces – Carbon & Stainless Steel Nose

Steel Part No.	Stainless Steel Part No.	End Force (lbs)		Thread A	B	C	+.000 -.001 D	Weight (lbs/100pcs)
		Initial	Final					
52408	53408	.50	3.50	6-32	3/8	.036	.046	.12
52409	53409	1.50	4.75	8-32	7/16	.052	.070	.12
52401	53401	1.50	4.75	8-36	7/16	.052	.069	.15
52402	53402	1.75	6.25	10-32	15/32	.065	.093	.16
52403	53403	3.00	10.50	1/4-20	17/32	.078	.119	.40
52404	53404	3.75	15.50	5/16-18	9/16	.084	.135	.60
52405	53405	4.50	18.50	3/8-16	5/8	.110	.186	.90
52406	53406	5.00	28.00	1/2-13	3/4	.151	.248	2.50
52407	53407	7.00	50.00	5/8-11	1-1/16	.215	.310	6.00

Light End Forces – Carbon & Stainless Steel Nose

Steel Part No.	Stainless Steel Part No.	End Force (lbs)		Thread A	B	C	+.000 -.001 D	Weight (lbs/100pcs)
		Initial	Final					
52608	53508	.50	1.50	6-32	3/8	.036	.046	.12
52609	53509	.50	1.50	8-32	7/16	.052	.070	.12
52601	53501	.50	1.50	8-36	7/16	.052	.069	.15
52602	53502	.75	2.50	10-32	15/32	.065	.093	.16
52603	53503	1.00	3.50	1/4-20	17/32	.078	.119	.40
52604	53504	1.50	4.00	5/16-18	9/16	.084	.135	.60
52605	53505	1.50	5.00	3/8-16	5/8	.110	.186	.90
52606	53506	1.75	5.50	1/2-13	3/4	.151	.248	2.50
52607	53507	2.00	8.50	5/8-11	1-1/16	.215	.310	6.00

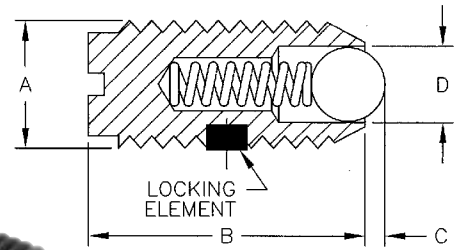
NYLON THREAD LOCKING ELEMENT IS STANDARD ON ALL SIZES

To order ball plungers without a locking element, add an "X" to the end of the part number (ex. 52821X).

Pricing is the same with or without locking element.

Ball Plungers

- Material:
 - Steel Body: 12L14 Steel
 - Stainless Steel Body: 303 Stainless Steel
 - Ball: 440 Stainless Steel or Nylon
- Smallest and lightest spring loaded device
- Side-load tolerant
- Controlled end forces
- Screwdriver installation
- Many sizes conform to TCMAI standards
- Bodies are color coded to indicate end forces:
 - Plain or Zinc = Light Force
 - Black = Standard Force
 - Gold = Heavy Force



STEEL BODY			STAINLESS STEEL BODY			End Force (lbs)		Thread A	B	C	Ball Dia. D	Weight (lbs/100pcs)
Stainless Steel Ball Part No.	Nylon Ball Part No.	Body Color Type	Stainless Steel Ball Part No.	Nylon Ball Part No.	Body Color Type	Initial	Final					
52821	53821	Black	52901	53830	Plain	.12	.50	4-48	3/16	.020	.062	.005
52822	53822	Black	52902	53831	Plain	.25	.75	5-40	1/4	.020	.062	.02
52823	53823	Black	52903	53832	Plain	.50	1.00	6-40	5/16	.023	.078	.02
52824	53824	Black	52904	53833	Plain	.50	1.25	8-36	11/32	.025	.093	.04
52825	53825	Black	52923	53852	Plain	.50	1.25	8-32	11/32	.025	.093	.04
52801	53801	Zinc	52905	53834	Plain	.50	1.50	10-32	33/64	.025	.093	.30
52802	53802	Black	52906	53835	Black	1.50	3.00	10-32	33/64	.025	.093	.30
52803	53803	Gold	52907	53836	Gold	2.00	5.00	10-32	33/64	.025	.093	.30
52804	53804	Zinc	52908	53837	Plain	2.00	4.00	1/4-20	17/32	.035	.125	.40
52805	53805	Black	52909	53838	Black	3.00	7.00	1/4-20	17/32	.035	.125	.40
52806	53806	Gold	52910	53839	Gold	4.00	12.00	1/4-20	17/32	.035	.125	.40
52807	53807	Zinc	52911	53840	Plain	2.00	4.50	5/16-18	37/64	.040	.156	.70
52808	53808	Black	52912	53841	Black	4.00	9.00	5/16-18	37/64	.040	.156	.70
52809	53809	Gold	52913	53842	Gold	6.00	17.00	5/16-18	37/64	.040	.156	.70
52810	53810	Zinc	52914	53843	Plain	2.50	5.00	3/8-16	5/8	.048	.187	1.20
52811	53811	Black	52915	53844	Black	5.00	10.00	3/8-16	5/8	.048	.187	1.20
52812	53812	Gold	52916	53845	Gold	6.00	21.00	3/8-16	5/8	.048	.187	1.20
52813	53813	Zinc	52917	53846	Plain	3.00	6.00	1/2-13	3/4	.072	.281	2.60
52814	53814	Black	52918	53847	Black	6.00	12.00	1/2-13	3/4	.072	.281	2.60
52815	53815	Gold	52919	53848	Gold	6.00	30.00	1/2-13	3/4	.072	.281	2.60
52816	53816	Zinc	52920	53849	Plain	4.50	9.00	5/8-11	63/64	.096	.375	5.00
52817	53817	Black	52921	53850	Black	9.00	18.00	5/8-11	63/64	.096	.375	5.00
52818	53818	Gold	52922	53851	Gold	7.00	50.00	5/8-11	63/64	.096	.375	5.00

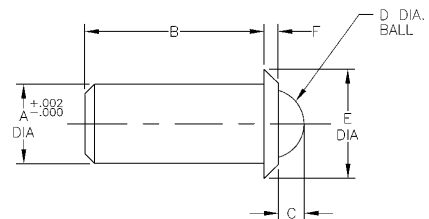
Metric sizes available

NYLON THREAD LOCKING ELEMENT IS STANDARD ON ALL SIZES

To order ball plungers without a locking element, add an "X" to the end of the part number (ex. 52821X). Pricing is the same with or without locking element.

Press Fit Ball Plungers

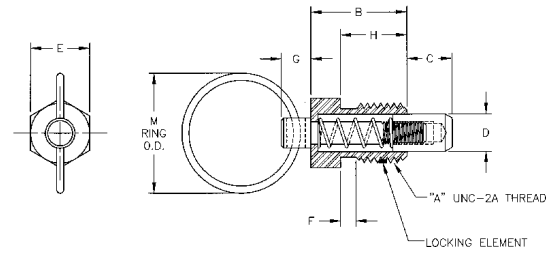
- Material:
 - Steel Body: 12L14 Steel
 - Stainless Steel Body: 303 Stainless Steel
 - Ball: 440 Stainless Steel
- Black Oxide Finish – Steel Only
- Ideal for installation in softer materials, such as aluminum, wood or plastic
- Sturdy shoulder provides a fixed seating position and positively resists detent force (installation hole can be counter bored to recess the shoulder)
- Use when a threaded hole would be impractical



STEEL BODY		STAINLESS BODY		A	End Force (lbs)		B	C	Dia. D	Dia. E	F
Stainless Steel Ball Part No.	Nylon Ball Part No.	Stainless Steel Ball Part No.	Nylon Ball Part No.		Initial	Final					
53754	53762	53755	53780	.125	.4	1.3	.252	.035	.094	.187	.032
53756	53763	53757	53781	.125	.75	2.5	.252	.035	.094	.187	.032
53701	53764	53709	53782	.188	1.0	2.5	.410	.058	.156	.250	.035
53702	53766	53710	53784	.250	1.5	3.5	.480	.070	.188	.312	.044
53758	53768	53759	53786	.312	2.0	5.0	.643	.090	.250	.375	.045
53760	53769	53761	53787	.312	4.0	10.0	.643	.090	.250	.375	.045
53703	53770	53711	53788	.375	2.5	7.0	.790	.110	.312	.500	.078
53704	53772	53712	53790	.500	4.0	9.0	1.13	.161	.438	.688	.088
53705	53765	53713	53783	.188	2.0	5.0	.410	.058	.156	.250	.035
53706	53767	53714	53785	.250	3.0	7.0	.480	.070	.188	.312	.044
53707	53771	53715	53789	.375	5.0	14.0	.790	.110	.312	.500	.078
53708	53773	53716	53791	.500	8.0	18.0	1.13	.161	.438	.688	.088

Stubby Hand Retractable Spring Plunger Quick Release "Pull Ring" Steel & Stainless Steel: Non-Locking

- Designed for applications where space is limited
- Chamfered plunger for easy alignment
- Withstands side loading

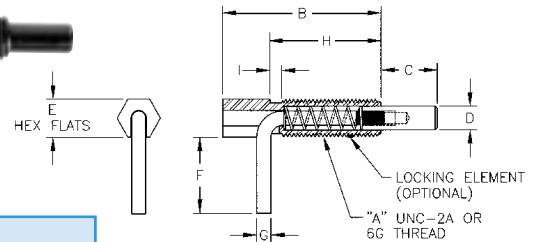


Steel** Part No.	Stainless Steel Part No.	End Force (lbs)		Thread A	B	C	D	Hex					M
		Initial	Final					E	F	G	H		
54450	54455	.50	2.0	1/4-20	.44	.19	.16	.25	*	.18	.31	.62	
54451	54456	.50	2.0	1/4-20	.44	.19	.16	.25	*	.18	.31	.75	
54452	54457	.75	3.0	3/8-16	.63	.28	.25	.38	.13	.19	.44	.75	
54453	54458	1.0	4.0	1/2-13	.81	.38	.31	.50	.13	.25	.56	1.0	
54454	54459	1.25	5.0	5/8-11	1.0	.44	.38	.62	.13	.31	.69	1.0	

*No thread relief **Zinc Plated Clear Chromate Finish

Lever Type Plunger: Locking

- Plunger can be completely withdrawn into the body and locked into a retracted position
- Chamfered plunger for easy alignment
- Built in drive wrench for rapid installation and alignment

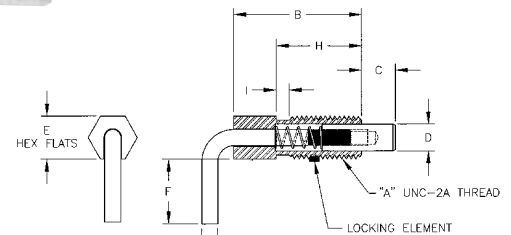


Steel* Part No.	Stainless Steel Part No.	End Force (lbs)		Thread A	B	C	D	Hex			Dia G	H	I	Weight (lbs/100pcs)
		Initial	Final					E	F	F				
54305	54201	0.50	2.50	1/4-20	1.25	0.38	.16	.25	0.50	.09	0.80	*	2	
54306	54202	0.75	3.75	3/8-16	2.00	0.56	.25	.38	0.75	.14	1.31	.13	5	
54307	54203	1.00	5.00	1/2-13	2.11	0.75	.31	.50	0.93	.19	1.25	.15	10	
54308	54204	1.00	5.00	5/8-11	3.05	1.00	.38	.62	1.00	.19	2.00	.18	15	

*No thread relief in 1/4-20 thread size **Zinc Plated Clear Chromate Finish

Lever Type Steel Plunger: Non-Locking

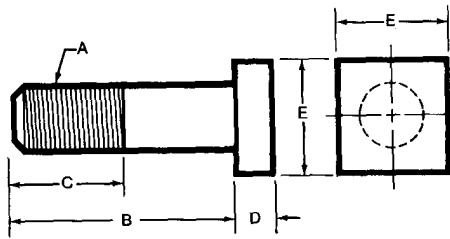
- Fully retractable plunger
- Chamfered plunger for easy alignment
- Easy withdrawing and re-engagement
- Zinc Plated Clear Chromate finish



Part No.	End Force (lbs)		Thread A	B	C	D	Hex				
	Initial	Final					E	F	G	H	I
54310	.50	2.50	1/4-20	1.25	.38	.16	.25	.50	.09	.80	*
54311	.75	3.75	3/8-16	2.00	.56	.25	.38	.75	.14	1.31	.13
54312	1.0	5.0	1/2-13	2.00	.75	.31	.50	1.0	.19	1.25	.15
54313	1.0	5.0	5/8-11	3.05	1.0	.38	.62	1.0	.19	2.0	.18

*No thread relief in 1/4-20 thread size

T-Bolts



Stainless Steel

- 304 Stainless Steel



Part No.	Thread A	B	C	D	E	Table Slot	Weight (lbs/100pcs)
46480	1/2-13	1-1/2	1	5/16	7/8	1/2	15
46481	1/2-13	2	1-1/2	5/16	7/8	1/2	17
46482	1/2-13	2-1/2	2	5/16	7/8	1/2	19
46483	1/2-13	3	2	5/16	7/8	1/2	22
46484	1/2-13	4	2	5/16	7/8	1/2	28
46485	1/2-13	5	2	5/16	7/8	1/2	33
46486	1/2-13	6	2	5/16	7/8	1/2	39
46487	1/2-13	8	2	5/16	7/8	1/2	50
46580	5/8-11	2	1-1/2	13/32	1-1/8	5/8	30
46581	5/8-11	2-1/2	2	13/32	1-1/8	5/8	33
46582	5/8-11	3	2	13/32	1-1/8	5/8	38
46583	5/8-11	4	2	13/32	1-1/8	5/8	46
46584	5/8-11	5	2	13/32	1-1/8	5/8	55
46585	5/8-11	6	2	13/32	1-1/8	5/8	63
46586	5/8-11	8	2	13/32	1-1/8	5/8	82
46680	3/4-10	2-1/2	1-3/4	17/32	1-5/16	3/4	56
46681	3/4-10	3	2	17/32	1-5/16	3/4	59
46682	3/4-10	3-1/2	2	17/32	1-5/16	3/4	66
46683	3/4-10	4	2	17/32	1-5/16	3/4	68
46684	3/4-10	5	2	17/32	1-5/16	3/4	81
46685	3/4-10	6	2-1/2	17/32	1-5/16	3/4	96
46686	3/4-10	8	2-1/2	17/32	1-5/16	3/4	120

Special lengths and sizes quoted upon request

Tugger T-Bolts also available in 4140 Steel

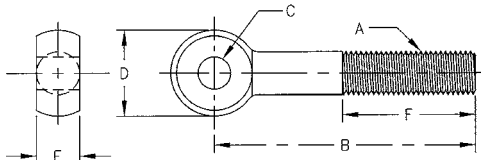
Tugger® T-Bolts

- Black Oxide Finish
- Heat Treated
- Medium Carbon Steel
- Thread Class 2A UNC

Part No.	Thread A	B	C	D	E	Table Slot	Weight (lbs/100pcs)
46201	3/8-16	1-1/2	1	1/4	11/16	3/8	7
46202	3/8-16	2	1-1/2	1/4	11/16	3/8	9
46203	3/8-16	2-1/2	2	1/4	11/16	3/8	11
46204	3/8-16	3	2	1/4	11/16	3/8	12
46205	3/8-16	3-1/2	2	1/4	11/16	3/8	13
46206	3/8-16	4	2	1/4	11/16	3/8	15
46207	3/8-16	5	2	1/4	11/16	3/8	18
46208	3/8-16	6	2	1/4	11/16	3/8	21
46209	3/8-16	7	2	1/4	11/16	3/8	25
46210	3/8-16	8	2	1/4	11/16	3/8	27
46401	1/2-13	1-1/2	1	5/16	7/8	1/2	14
46402	1/2-13	2	1-1/2	5/16	7/8	1/2	17
46403	1/2-13	2-1/2	2	5/16	7/8	1/2	18
46404	1/2-13	3	2	5/16	7/8	1/2	21
46405	1/2-13	3-1/2	2	5/16	7/8	1/2	24
46406	1/2-13	4	2	5/16	7/8	1/2	27
46413	1/2-13	4-1/2	2	5/16	7/8	1/2	30
46407	1/2-13	5	2	5/16	7/8	1/2	32
46408	1/2-13	6	2	5/16	7/8	1/2	38
46409	1/2-13	7	2	5/16	7/8	1/2	43
46410	1/2-13	8	2	5/16	7/8	1/2	49
46411	1/2-13	10	2	5/16	7/8	1/2	59
46412	1/2-13	12	2	5/16	7/8	1/2	70
46501	5/8-11	1-1/2	1	13/32	1-1/8	5/8	25
46502	5/8-11	2	1-1/2	13/32	1-1/8	5/8	29
46503	5/8-11	2-1/2	2	13/32	1-1/8	5/8	32
46504	5/8-11	3	2	13/32	1-1/8	5/8	37
46505	5/8-11	3-1/2	2	13/32	1-1/8	5/8	42
46506	5/8-11	4	2	13/32	1-1/8	5/8	45
46513	5/8-11	4-1/2	2	13/32	1-1/8	5/8	50
46507	5/8-11	5	2	13/32	1-1/8	5/8	54
46514	5/8-11	5-1/2	2	13/32	1-1/8	5/8	59
46508	5/8-11	6	2	13/32	1-1/8	5/8	62
46509	5/8-11	7	2	13/32	1-1/8	5/8	72
46510	5/8-11	8	2	13/32	1-1/8	5/8	81
46511	5/8-11	10	2	13/32	1-1/8	5/8	96
46512	5/8-11	12	2	13/32	1-1/8	5/8	115
46600	3/4-10	2-1/2	2	17/32	1-5/16	3/4	56
46601	3/4-10	3	2	17/32	1-5/16	3/4	58
46602	3/4-10	3-1/2	2	17/32	1-5/16	3/4	65
46603	3/4-10	4	2	17/32	1-5/16	3/4	67
46610	3/4-10	4-1/2	2	17/32	1-5/16	3/4	73
46604	3/4-10	5	2	17/32	1-5/16	3/4	80
46611	3/4-10	5-1/2	2	17/32	1-5/16	3/4	90
46605	3/4-10	6	2	17/32	1-5/16	3/4	94
46606	3/4-10	7	2	17/32	1-5/16	3/4	106
46607	3/4-10	8	2	17/32	1-5/16	3/4	118
46608	3/4-10	10	2	17/32	1-5/16	3/4	144
46609	3/4-10	12	2	17/32	1-5/16	3/4	168

Eye Bolts

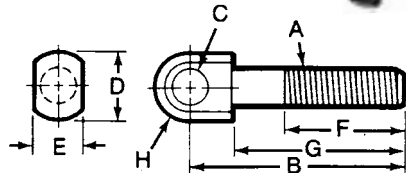
- Black Oxide Finish
- ASTM A311 Material
- Thread Class 2A UNC
- Special sizes quoted upon request
- Many sizes conform to TCMAl standards



Part No.	Thread A	B	+0.001 -0.000 C	D	+0.000 -0.005 E	F	Weight (lbs/100pcs)
42930	1/4-20	2	3/16	1/2	1/4	3/4	3.2
42931	1/4-20	3	3/16	1/2	1/4	1-1/4	4.3
42935	5/16-18	3	1/4	5/8	5/16	1-1/2	6.9
42936	5/16-18	3	5/16	5/8	5/16	1-1/2	6.8
42937	5/16-18	4	1/4	5/8	5/16	2	8.9
42938	5/16-18	4	5/16	5/8	5/16	2	8.6
42940	3/8-16	3	5/16	3/4	3/8	1-1/2	10.6
42941	3/8-16	3	3/8	3/4	3/8	1-1/2	10.3
42942	3/8-16	3-3/4	3/8	3/4	3/8	2	12
42943	3/8-16	5	3/8	3/4	3/8	2-1/2	16
42945	1/2-13	3-3/4	3/8	1	1/2	1-1/2	25
42946	1/2-13	5	3/8	1	1/2	2	31
42950	5/8-11	4-1/2	5/8	1-1/4	5/8	2	44
42951	5/8-11	6	5/8	1-1/4	5/8	2-1/2	56
42955	3/4-10	4-1/2	3/4	1-1/2	3/4	2	65
42956	3/4-10	6	3/4	1-1/2	3/4	2-1/2	83

Latch Swing Bolts

- Black Oxide Finish – steel only
- Case Hardened – steel only
- Material: 12L14 Steel or 303 Stainless Steel
- Thread Class 2A UNC
- Metric sizes manufactured upon request
- Many sizes conform to TCMAI standards



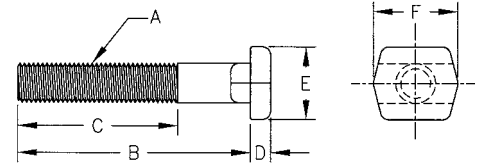
Steel Part No.	Stainless Steel Part No.	Thread A	B	+0.01 -0.000 C	D	+0.00 -0.005 E	F	G	H	Weight (lbs/100pcs)
43001	43021	1/4-20	1-1/2	1/4	1/2	5/16	3/4	1-3/16	1/4	3
43002	43022	1/4-20	2-1/2	1/4	1/2	5/16	1-1/4	2-3/16	1/4	4.1
43013	43033	1/4-20	2-5/8	1/4	1/2	1/4	2-5/16	2-5/16	1/4	5
43003	43023	5/16-18	2	5/16	5/8	3/8	1	1-5/8	5/16	6
43004	43024	5/16-18	3	5/16	5/8	3/8	1-3/8	2-5/8	5/16	9
43014	43034	5/16-18	3-3/16	5/16	5/8	5/16	2-13/16	2-13/16	21/64	9.5
43005	43025	3/8-16	2-1/2	3/8	3/4	1/2	1-3/8	2	3/8	10
43006	43026	3/8-16	3-1/2	3/8	3/4	1/2	2	3	3/8	14
43015	43035	3/8-16	3-3/4	3/8	3/4	3/8	3-5/16	3-5/16	25/64	20
43007	43027	1/2-13	3-1/8	1/2	1	5/8	1-3/4	2-1/2	1/2	28
43008	43028	1/2-13	4-1/8	1/2	1	5/8	2-1/4	3-1/2	1/2	30
43016	43036	1/2-13	4-7/8	1/2	1	1/2	4-5/16	4-5/16	33/64	37
43009	43029	5/8-11	3-1/2	5/8	1-1/4	3/4	1-5/8	2-3/4	5/8	45
43010	43030	5/8-11	4-3/4	5/8	1-1/4	3/4	2-1/2	4	5/8	55
43011	43031	3/4-10	4-1/2	3/4	1-1/2	7/8	2	3-5/8	3/4	65
43012	43032	3/4-10	6	3/4	1-1/2	7/8	3	3-5/16	3/4	83

Special sizes quoted upon request

Tugger® T-Slot Bolts

Also available in 4140 Steel

- Black Oxide Finish
- Medium Carbon Steel
- T-Slot Bolt head is undersized to fit machine table slot
- Thread Class 2A UNC



Part No.	Thread A	B	C	D	E	F	Table Slot	Weight (lbs/100pcs)
45203	3/8-16	1-1/2	1	3/16	11/16	13/16	3/8	7
45205	3/8-16	2	1-1/2	3/16	11/16	13/16	3/8	8
45207	3/8-16	2-1/2	2	3/16	11/16	13/16	3/8	10
45209	3/8-16	3	2	3/16	11/16	13/16	3/8	11
45210	3/8-16	3-1/2	2	3/16	11/16	13/16	3/8	12.5
45211	3/8-16	4	2	3/16	11/16	13/16	3/8	14
45212	3/8-16	4-1/2	2	3/16	11/16	13/16	3/8	15
45213	3/8-16	5	2	3/16	11/16	13/16	3/8	17.5
45214	3/8-16	5-1/2	2	3/16	11/16	13/16	3/8	19
45215	3/8-16	6	2	3/16	11/16	13/16	3/8	20
45216	3/8-16	7	2	3/16	11/16	13/16	3/8	23
45217	3/8-16	8	2	3/16	11/16	13/16	3/8	26
45402	1/2-13	1-1/2	1	1/4	7/8	1-3/16	1/2	14
45404	1/2-13	2	1-1/2	1/4	7/8	1-3/16	1/2	17
45406	1/2-13	2-1/2	2	1/4	7/8	1-3/16	1/2	19
45408	1/2-13	3	2	1/4	7/8	1-3/16	1/2	22
45409	1/2-13	3-1/2	2	1/4	7/8	1-3/16	1/2	23.5
45410	1/2-13	4	2	1/4	7/8	1-3/16	1/2	26.5
45411	1/2-13	4-1/2	2	1/4	7/8	1-3/16	1/2	29
45412	1/2-13	5	2	1/4	7/8	1-3/16	1/2	32
45413	1/2-13	5-1/2	2	1/4	7/8	1-3/16	1/2	35
45414	1/2-13	6	2	1/4	7/8	1-3/16	1/2	39
45415	1/2-13	7	2	1/4	7/8	1-3/16	1/2	70
45416	1/2-13	8	2	1/4	7/8	1-3/16	1/2	48
45417	1/2-13	9	2	1/4	7/8	1-3/16	1/2	54
45418	1/2-13	10	2	1/4	7/8	1-3/16	1/2	59
45419	1/2-13	12	2	1/4	7/8	1-3/16	1/2	71
45501	5/8-11	1-1/2	1	11/32	1-1/8	1-5/16	5/8	25
45502	5/8-11	2	1-1/2	11/32	1-1/8	1-5/16	5/8	29
45504	5/8-11	2-1/2	2	11/32	1-1/8	1-5/16	5/8	33
45506	5/8-11	3	2	11/32	1-1/8	1-5/16	5/8	37
45507	5/8-11	3-1/2	2	11/32	1-1/8	1-5/16	5/8	42
45508	5/8-11	4	2	11/32	1-1/8	1-5/16	5/8	45
45509	5/8-11	4-1/2	2	11/32	1-1/8	1-5/16	5/8	49
45510	5/8-11	5	2	11/32	1-1/8	1-5/16	5/8	53
45511	5/8-11	5-1/2	2	11/32	1-1/8	1-5/16	5/8	57
45512	5/8-11	6	2	11/32	1-1/8	1-5/16	5/8	61
45513	5/8-11	7	2	11/32	1-1/8	1-5/16	5/8	69
45514	5/8-11	8	2	11/32	1-1/8	1-5/16	5/8	75
45515	5/8-11	9	2	11/32	1-1/8	1-5/16	5/8	88
45516	5/8-11	10	2	11/32	1-1/8	1-5/16	5/8	96
45517	5/8-11	12	2	11/32	1-1/8	1-5/16	5/8	114

Part No.	Thread A	B	C	D	E	F	Table Slot	Weight (lbs/100pcs)
45601	3/4-10	2	1-1/2	15/32	1-1/4	1-9/16	3/4	46
45602	3/4-10	2-1/2	2	15/32	1-1/4	1-9/16	3/4	52
45603	3/4-10	3	2	15/32	1-1/4	1-9/16	3/4	58
45604	3/4-10	3-1/2	2	15/32	1-1/4	1-9/16	3/4	64
45605	3/4-10	4	2	15/32	1-1/4	1-9/16	3/4	69
45606	3/4-10	4-1/2	2	15/32	1-1/4	1-9/16	3/4	74
45607	3/4-10	5	2	15/32	1-1/4	1-9/16	3/4	81
45608	3/4-10	5-1/2	2	15/32	1-1/4	1-9/16	3/4	86
45609	3/4-10	6	2	15/32	1-1/4	1-9/16	3/4	93
45610	3/4-10	7	2	15/32	1-1/4	1-9/16	3/4	105
45611	3/4-10	8	2	15/32	1-1/4	1-9/16	3/4	117
45612	3/4-10	9	2	15/32	1-1/4	1-9/16	3/4	129
45613	3/4-10	10	2	15/32	1-1/4	1-9/16	3/4	143
45614	3/4-10	12	2	15/32	1-1/4	1-9/16	3/4	166
45701	7/8-9	3	2	9/16	1-1/2	1-3/4	7/8	84
45702	7/8-9	4	2	9/16	1-1/2	1-3/4	7/8	99
45703	7/8-9	5	2	9/16	1-1/2	1-3/4	7/8	115
45704	7/8-9	6	2	9/16	1-1/2	1-3/4	7/8	132
45705	7/8-9	7	2	9/16	1-1/2	1-3/4	7/8	149
45706	7/8-9	8	2	9/16	1-1/2	1-3/4	7/8	166
45707	7/8-9	9	2	9/16	1-1/2	1-3/4	7/8	184
45708	7/8-9	10	2	9/16	1-1/2	1-3/4	7/8	199
45709	7/8-9	12	2	9/16	1-1/2	1-3/4	7/8	232
45710	7/8-9	14	2	9/16	1-1/2	1-3/4	7/8	265
45711	7/8-9	16	2	9/16	1-1/2	1-3/4	7/8	300
45712	7/8-9	18	2	9/16	1-1/2	1-3/4	7/8	332
45801	1-8	3	2	11/16	1-3/4	2-1/16	1	123
45802	1-8	4	2	11/16	1-3/4	2-1/16	1	144
45803	1-8	5	2	11/16	1-3/4	2-1/16	1	165
45804	1-8	6	2	11/16	1-3/4	2-1/16	1	188
45805	1-8	7	2	11/16	1-3/4	2-1/16	1	210
45806	1-8	8	2	11/16	1-3/4	2-1/16	1	231
45807	1-8	9	2	11/16	1-3/4	2-1/16	1	252
45808	1-8	10	2	11/16	1-3/4	2-1/16	1	274
45809	1-8	12	2	11/16	1-3/4	2-1/16	1	319
45810	1-8	14	2	11/16	1-3/4	2-1/16	1	360
45811	1-8	16	2	11/16	1-3/4	2-1/16	1	404
45812	1-8	18	2	11/16	1-3/4	2-1/16	1	453

Special lengths and sizes quoted upon request

Super Clamp Kit



- **Kit Contains:**
 - 6 Step Blocks
 - 6 Serrated End Clamps
 - 4 Coupling Nuts
 - 4 Flange Nuts
 - 4 T-Slot Nuts
 - 1 T-Slot Cleaner
 - 24 Studs – 4 each of: 3", 4", 5", 6", 7" & 8" long
 - 1 Holder (wooden base and metal tray)
- Bridgeport type milling machines use Part Nos. 20206, 20212, 20306 & 20312
- Metric sizes also available

Part No.	Weight (lbs/kit)	Table T-Slot Size	Stud Size
WITH 1" THICK STEP BLOCKS			
20201	18	3/8	5/16-18
20202	18	7/16	3/8-16
20203	18	1/2	3/8-16
20204	18	9/16	3/8-16
20205	23	9/16	1/2-13
20206	23	5/8	1/2-13
20207	24	11/16	1/2-13
20208	28.3	11/16	5/8-11
20209	28.3	3/4	5/8-11
20210	28.3	13/16	5/8-11
WITH 1-1/2" THICK STEP BLOCKS			
20211	30	9/16	1/2-13
20212	30	5/8	1/2-13
20213	30	11/16	1/2-13
20214	44.3	11/16	5/8-11
20215	44.3	3/4	5/8-11
20216	44.3	13/16	5/8-11
20217	58	13/16	3/4-10
20218	58	7/8	3/4-10
20219	58	1	3/4-10
20222	59	1-1/16	3/4-10
WITH 2" THICK STEP BLOCKS			
20220*	90	1	7/8-9
20221*	99	1-1/16	1-8

* Kits shipped in all wooden holders

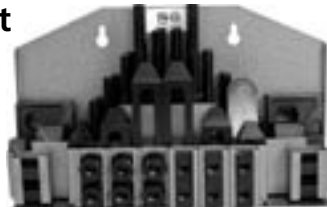
Step Block & Clamp Kits



- **Kit Contains:**
 - 6 Step Blocks
 - 6 Serrated End Clamps
 - 1 Holder
- Expanded versatility when used with T-Nut & Stud Kit (Part No.'s 20601-18)

Part No.	Weight (lbs/kit)	Step Blocks (2 each)	Stud Size	Serrated End Clamps (2 each)
WITH 1" THICK STEP BLOCKS				
21001	10	40102	5/16	30501
		40103	3/8	30502
		40104	3/8	30503
21002	11	40102	1/2	30504
		40103	1/2	30505
		40104	1/2	30506
21003	12	40102	5/8	30507
		40103	5/8	30508
		40104	5/8	30509
WITH 1-1/2" THICK STEP BLOCKS				
21004	27	40105	1/2	30504
		40106	1/2	30505
		40107	1/2	30506
21005	28	40105	5/8	30507
		40106	5/8	30508
		40107	5/8	30509
21006	34	40105	3/4	30510
		40106	3/4	30511
		40107	3/4	30512
WITH 2" THICK STEP BLOCKS				
21007	60	40108	7/8	30513
		40109	1	30514
		40110	1	30515

Machinist Clamp Kit



- **52-piece Kit Contains:**
 - 4 Coupling Nuts
 - 6 Flange Nuts
 - 6 T-Slot Nuts
 - 1 T-Slot Cleaner
 - 24 Studs - 4 Each of: 3", 4", 5", 6", 7" and 8" long
 - 6 Step Blocks
 - 6 Serrated End Clamps
 - 1 Holder
- Bridgeport type milling machines use Part No. 20402

Part No.	Weight (lbs/kit)	Table T-Slot Size	Stud Size
WITH 1" THICK STEP BLOCKS			
20412	18.5	7/16	3/8-16
20413	18.5	1/2	3/8-16
20414	18.5	9/16	3/8-16
20401	24	9/16	1/2-13
20402	24	5/8	1/2-13
20403	24	11/16	1/2-13
20404	24	5/8	1/2-13
20415	29	11/16	5/8-11
20416	29	3/4	5/8-11
20417	29	13/16	5/8-11

T-Nut & Stud Kit

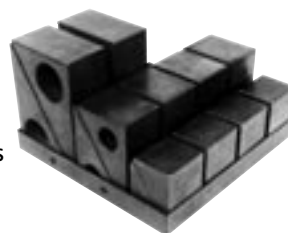
- **Kit Contains:**
 - 4 Coupling Nuts
 - 4 Flange Nuts
 - 4 T-Slot Nuts
 - 1 T-Slot Cleaner
 - 24 Studs – 4 each of: 3", 4", 5", 6", 7" & 8"
 - 1 Holder (wood base, metal tray)



Part No.	Weight (lbs/kit)	Table T-Slot Size	Stud Size
20601	8	3/8	5/16-18
20602	8	7/16	3/8-16
20603	8	1/2	3/8-16
20604	8	9/16	3/8-16
20605	12	9/16	1/2-13
20606	12	5/8	1/2-13
20607	13	11/16	1/2-13
20608	16.3	11/16	5/8-11
20609	16.3	3/4	5/8-11
20610	16.3	13/16	5/8-11
20611	24	13/16	3/4-10
20612	24	7/8	3/4-10
20613	24	1	3/4-10
20618	25	1-1/16	3/4-10
20614	30	1	7/8-9
20615	30	1-1/16	7/8-9
20616	30	1-1/8	7/8-9
20617	39	1-1/16	1-8

Step Block Kit

- **Kit Contains:**
 - 10 Step Blocks
 - 1 Holder
- Use with T-Nut & Stud Kit to expand versatility
- Works in conjunction with Serrated End Clamps
- Metric sizes also available
- Two halves = One Block



Part No.	4 Each	4 Each	2 Each	Weight (lbs/kit)
20801	40102	40103	40104	8
20805	40105	40106	40107	33
20807	40108	40109	40110	40

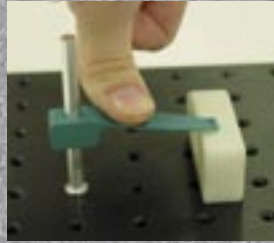
NEW! CMM FIXTURING

1/4-20 Modular CMM Fixturing

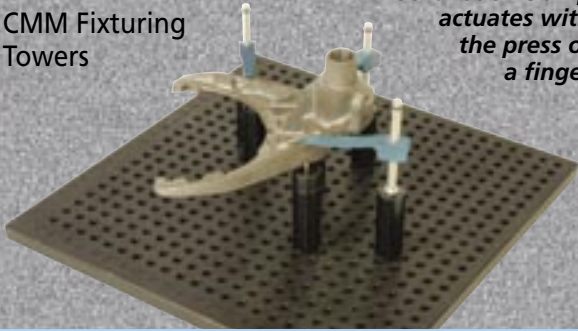
Build repeatable setups in minutes!

Available Components:

- Aluminum CMM Fixture Plates
- Soft Touch Clamps
- Standoffs and Rest Pads
- Magnetic Rest Pads and Vees
- CMM Fixturing Towers



Soft Touch Clamp actuates with the press of a finger



SPRING & BALL PLUNGERS

Expansive Line of Spring and Ball Plungers

Ideal for Locating, Positioning, and Fastening

- Spring Plungers
- Short Spring Plungers
- Ball Plungers
- Press Fit Plungers
- Hand Retractable

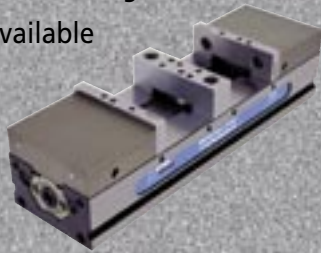
Contact us for a quote



TOOLEX VISES

Increase Spindle Time, Accuracy and Flexibility

- Manual and Hydraulic available in 4" and 6" systems
- 8" system available for large workpieces
- Vise bodies are manufactured from high tensile ductile cast iron
- Unique SnapLock™ Jaw design allows quick jaw changeover in seconds
- Precision ground for accuracy and repeatability



TOOLEX[®]
VISE WORKHOLDING SYSTEMS

TOOLEX PARALLEL SYSTEMS

AccuSnap[®] and QuickChange[™] Jaw and Parallel Systems

Adaptable to Most Vises

AccuSnap parallels and jaws "snap" into position, with repeatability of +.0002.

Available in
4", 6" & 8"
sizes

QuickChange parallels and jaws "slide" into position via dovetail design.



Visit www.te-co.com for more information

109 Quinter Farm Rd. • Union, OH 45322-9796 • 800-543-4071 • Fax: 937-832-1274 • Email: sales@te-co.com