

TOOLING COMPONENTS



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distributed by :

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Super Clamp Kits Steel or Aluminum Step Blocks



Kit Contains:

- 6 Step Blocks
- 6 Serrated End Clamps
- 4 Coupling Nuts
- 4 Flange Nuts
- 4 T-Slot Nuts
- 1 T-Slot Cleaners
- 24 Studs – 4 each of:
 - English Kits:
 - 3", 4", 5", 6", 7" & 8" long
 - Metric Kits:
 - Kit No. 68101:
 - 80MM, 110MM, 125MM, 150MM, 175MM and 200MM
 - Kit No. 68102-06 & 68110-12:
 - 80MM, 110MM, 140MM, 150MM, 175MM and 200MM long
 - Kit No. 68107-08 & 68113-15:
 - 80MM, 110MM, 150MM, 175MM, 200MM and 250MM long
 - 1 Holder (wooden base and metal tray)
- Bridgeport type milling machines use Part Nos. 20206, 20212, 20306 & 20312.
- The English Kit is included in the Expanded Clamp Kit (Part Nos. 21502-21510). See page 5 for Expanded Clamp Kit
- For material information, see individual components

English Kits

Steel Step Block Part No.	Wt. (lbs/kit)	Aluminum Step Block Part No.	Wt. (lbs/kit)	Table T-Slot Size	Stud Size
WITH 1" THICK STEP BLOCKS					
20201	18	20301	14.8	3/8	5/16-18
20202	18	20302	14.8	7/16	3/8-16
20203	18	20303	14.8	1/2	3/8-16
20204	18	20304	14.8	9/16	3/8-16
20205	23	20305	19.8	9/16	1/2-13
20206	23	20306	19.8	5/8	1/2-13
20207	24	20307	20.8	11/16	1/2-13
20208	28.3	20308	25.1	11/16	5/8-11
20209	28.3	20309	25.1	3/4	5/8-11
20210	28.3	20310	25.1	13/16	5/8-11
WITH 1-1/2" THICK STEP BLOCKS					
20211	30	20311	28	9/16	1/2-13
20212	30	20312	28	5/8	1/2-13
20213	30	20313	28	11/16	1/2-13
20214	44.3	20314	32.5	11/16	5/8-11
20215	44.3	20315	32.5	3/4	5/8-11
20216	44.3	20316	32.5	13/16	5/8-11
20217	58	20317	47	13/16	3/4-10
20218	58	20318	47	7/8	3/4-10
20219	58	20319	47	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

Metric Kits (with Steel Step Blocks)

Part No.	Table T-Slot Size	Stud Size	Weight (lbs/kit)
WITH 25MM THICK STEP BLOCKS			
68101	10MM	M8 x 1.25	18
68102	12MM	M10 x 1.5	18
68103	14MM	M10 x 1.5	18
68104	14MM	M12 x 1.75	23
68105	16MM	M12 x 1.75	23
68106	17MM	M12 x 1.75	24
68107	18MM	M16 x 2.0	28.3
68108	20MM	M16 x 2.0	28.3
WITH 38MM THICK STEP BLOCKS			
68110	14MM	M12 x 1.75	30
68111	16MM	M12 x 1.75	30
68112	17MM	M12 x 1.75	30
68113	18MM	M16 x 2.0	44.3
68114	20MM	M16 x 2.0	44.3
68115	22MM	M20 x 2.5	58

T-Nut & Stud Kits

Kit Contains:

- 4 Coupling Nuts
- 4 Flange Nuts
- 4 T-Slot Nuts
- 1 T-Slot Cleaner
- 24 Studs – 4 each of”
 - English Kits:
 - 3”, 4”, 5”, 6”, 7” and 8” long
 - Metric Kits:
 - Kit No. 68201-06:
 - 80MM, 110MM, 140MM, 150MM, 175MM and 200MM long
 - Kit No. 58207-09:
 - 80MM, 110MM, 150MM, 175MM, 200MM and 250MM long
- 1 Holder (wooden base and metal tray)
- Bridgeport type milling machines use Part No. 20606
- Versatility expanded when used with Step Block & Clamp Kits
- The English Kit is included with the Milling Machine Clamp Kit (see page 4)
- For material information, see individual components



English Kits

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

Metric Kits

Part No.	Table T-Slot Size	Stud Size	Weight (lbs/kit)
68201	10MM	M8 x 1.25	8
68202	12MM	M10 x 1.5	8
68203	14MM	M10 x 1.5	8
68204	14MM	M12 x 1.75	12
68205	16MM	M12 x 1.75	12
68206	17MM	M12 x 1.75	13
68207	18MM	M16 x 2.0	16.3
68208	20MM	M16 x 2.0	16.3
68209	20MM	M20 x 2.5	24

Punch Press Kits

Kit Contains:

- 4 Coupling Nuts
- 8 Flange Nuts
- 4 Step Clamps
- 24 Studs - 4 each of 3”, 4”, 5”, 6”, 7” and 8” long
- 1 Holder
- For material information, see individual components



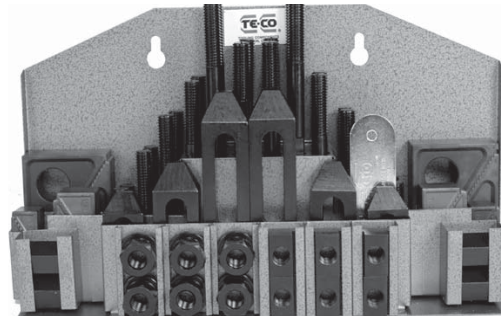
With Clamps

Part No.	Stud Size	Clamps 4 Each	Weight (lbs/kit)
20701	3/8-16	30801	12
20702	1/2-13	30802	16
20703	5/8-11	30803	21
20704	3/4-10	30804	28

Without Clamps

Part No.	Stud Size	Weight (lbs/kit)
20710	3/8-16	9.5
20711	1/2-13	13
20712	5/8-11	17
20713	3/4-10	22.75
20715	7/8-9	30
20716	1-8	39

Machinist Clamp Kits



Kit Contains (52 Pieces):

- 4 Coupling Nuts
- 6 Flange Nuts
- 6 T-Slot Nuts
- 1 T-Slot Cleaner
- 24 Studs - 4 Each of:
 - English Kits:
 - 3", 4", 5", 6", 7" and 8" long.
 - Metric Kits:
 - 80MM, 110MM, 125MM, 150MM, 175MM and 200MM long
- 6 Step Blocks
- 6 Serrated End Clamps
- 1 Holder
- Bridgeport type milling machines use Part No. 20402
- For material information, see individual components

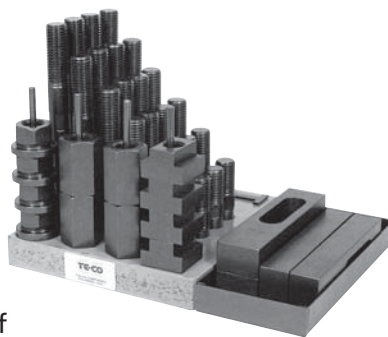
English Kits

Part No.	Wt. (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

Metric Kits

Part No.	Wt. (lbs/kit)	Table T-Slot Size	Stud Size
WITH 25MM THICK STEP BLOCKS			
68001	18.5	12MM	M10 x 1.5
68002	18.5	14MM	M10 x 1.5
68003	24	14MM	M12 x 1.75
68004	24	16MM	M12 x 1.75
68005	24	17MM	M12 x 1.75
68006	29	18MM	M16 x 2.0
68007	29	20MM	M16 x 2.0

Milling Machine Clamp Kits



Kit Contains:

- 4 Soft Clamps - 6" long
- 4 Coupling Nuts
- 4 Flange Nuts
- 4 T-Slot Nuts
- 1 T-Slot Cleaner
- 24 Studs with flats – 4 each of
 - 3", 4", 5", 6", 7" and 8" long
- 1 Holder (wooden base and metal tray)
- Bridgeport type milling machines use Part No. 20506
- Versatility expanded when used with Step Block Kits (see page 7)
- For material information, see individual components

Part No.	Table T-Slot Size	Stud Size	Clamps 6" Long 4 Each	Wt. (lbs/kit)
20501	3/8	5/16-18	30701	12
20502	7/16	3/8-16	30701	14
20503	1/2	3/8-16	30701	14
20504	9/16	3/8-16	30701	14
20505	9/16	1/2-13	30702	19
20506	5/8	1/2-13	30702	19
20507	11/16	1/2-13	30702	19
20508	11/16	5/8-11	30703	25
20509	3/4	5/8-11	30703	25
20510	13/16	5/8-11	30703	25
20511	13/16	3/4-10	30704	30
20512	7/8	3/4-10	30704	30
20513	1	3/4-10	30704	30

Basic Clamp Kits



Kit Contains:

- 14 Clamps
- 1 Holder (metal tray)
- The versatility is increased by using with the T-Nut & Stud Kit (see page 3)
- For material information, see individual components

Part No.	Serrated End Clamps 2 Each	Plain Clamps 2 Each	Step Clamps 2 Each	Stud Size	Wt. (lbs/kit)
20901	30501 30502 30503	30401 30402 30403	30801	3/8-16	11
20902	30504 30505 30506	30404 30405 30406	30802	1/2-13	13
20903	30507 30508 30509	30407 30408 30409	30803	5/8-11	15

Expanded Clamp Kits

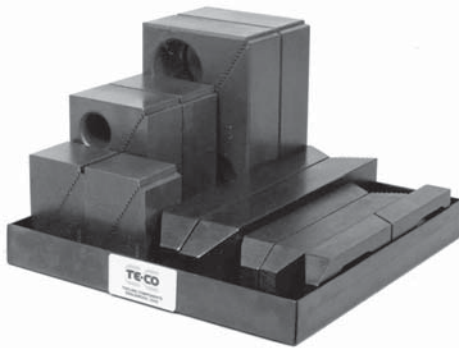


Kit Contains:

- 4 Soft Clamps
- 4 Step Clamps
- 6 Plain Clamps
- 4 Coupling Nuts
- 4 Flange Nuts
- 4 T-Slot Nuts
- 6 Serrated End Clamps
- 6 Step Blocks
- 1 T-Slot Cleaner
- 24 Studs with flats – 4 each of 3", 4", 5", 6", 7" and 8" long.
- 1 Holder (Wood base and two metal holders)
- For material information, see individual components

Part No.	Table T-Slot Size	Stud Size	Soft Clamps 4 Each	Step Clamps 4 Each	Plain Clamps 4 each	Wt. (lbs/kit)
21502	7/16	3/8-16	30701	30801	30401 30402 30403	32
21503	1/2	3/8-16	30701	30801	30401 30402 30403	32
21504	9/16	3/8-16	30701	30801	30401 30402 30403	32
21505	9/16	1/2-13	30702	30802	30404 30405 30406	38
21506	5/8	1/2-13	30702	30802	30404 30405 30406	38
21507	11/16	1/2-13	30702	30802	30404 30405 30406	38
21508	11/16	5/8-11	30703	30803	30407 30408 30409	48
21509	3/4	5/8-11	30703	30803	30407 30408 30409	48
21510	13/16	5/8-11	30703	30803	30407 30408 30409	48

Step Block & Clamp Kits Steel or Aluminum Step Blocks



Kit Contains:

- 6 Step Blocks
- 6 Serrated End Clamps
- 1 Holder
- Versatility is expanded when used with T-Nut & Stud Kit (Part No.'s 20601-18, 68202-09, see page 3).
- For material information, see individual components

English

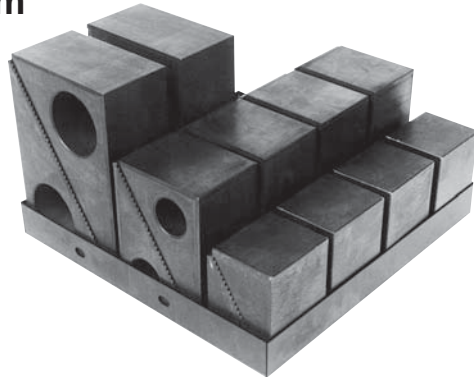
Steel Step Block Part No.	Wt. (lbs/kit)	Step Blocks 2 Each	Aluminum Step Block Part No.	Wt. (lbs/kit)	Step Blocks 2 Each	Stud Size	Serrated End Clamps 2 Each
WITH 1" THICK STEP BLOCKS							
21001	10	40102 40103 40104	21101	6.8	40201 40202 40203	5/16 or 3/8	30501 30502 30503
21002	11	40102 40103 40104	21102	7.8	40201 40202 40203	1/2	30504 30505 30506
21003	12	40102 40103 40104	21103	8.8	40201 40202 40203	5/8	30507 30508 30509
With 1-1/2" Thick Step Blocks							
21004	27	40105 40106 40107	21104	16	40204 40205 40206	1/2	30504 30505 30506
21005	28	40105 40106 40107	21105	16.2	40204 40205 40206	5/8	30507 30508 30509
21006	34	40105 40106 40107	21106	22.2	40204 40205 40206	3/4	30510 30511 30512
With 2" Thick Step Blocks							
*21007	60	40108 40109 40110	– – –	– – –	– – –	7/8 or 1	30513 30514 30515

* Kits furnished with flatboard holder

Metric (with Steel Step Blocks)

Part No.	Wt. (lbs/kit)	Step Blocks 2 Each	Stud Size	Serrated End Clamps 2 Each
WITH 25MM THICK STEP BLOCKS				
21001M	10	40102M 40103M 40104M	M10 x 1.5	30501M 30502M 30503M
21002M	11	40102M 40103M 40104M	M12 x 1.75	30504M 30505M 30506M
21003M	12	40102M 40103M 40104M	M16 x 2.0	30507M 30508M 30509M
WITH 38MM THICK STEP BLOCKS				
21004M	27	40105M 40106M 40107M	M12 x 1.75	30504M 30505M 30506M
21005M	28	40105M 40106M 40107M	M16 x 2.0	30507M 30508M 30509M
21006M	34	40105M 40106M 40107M	M20 x 2.5	30510M 30511M 30512M

Step Block Kits Steel or Aluminum



Kit Contains:

- 10 Step Blocks
- 1 Holder
- Versatility is expanded when a T-Nut and Stud Kit is used (see Page 3)
- Blocks work in conjunction with Serrated End Clamps (see page 38)
- **Two halves = One Block**

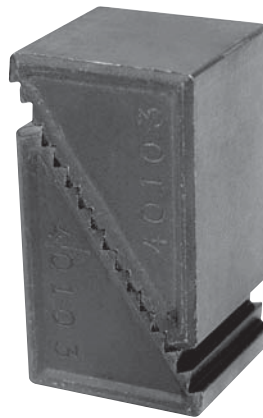
English

Part No.	4 Each	4 Each	2 Each	Weight (lbs/kit)
Steel Step Blocks				
20801	40102	40103	40104	8
20805	40105	40106	40107	33
20807	40108	40109	40110	40
Aluminum Step Blocks				
20802	40201	40202	40203	5
20806	40204	40205	40206	18

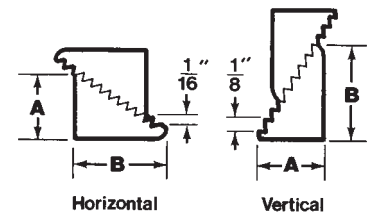
Metric

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

Step Blocks – Steel or Aluminum



- Larger sizes have chamfered holes for ease of use
- Blocks work in conjunction with Serrated End clamps (see page 38)
- **Two halves = One Block**



English

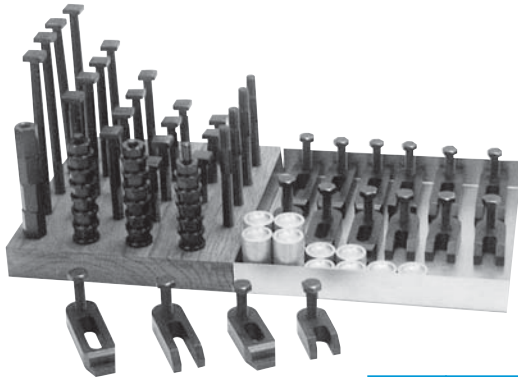
Steel Part No.	Wt. (lbs/kit)	Aluminum Part No.	Wt. (lbs/100 pcs.)	Height Adj. Range	A	B
WITH 1" THICK STEP BLOCKS						
40102	21	40201	8	3/4 to 1-5/8	1-1/16	11/16
40103	49	40202	20	1-1/8 to 2-1/2	1-39/64	1-1/16
40104*	203	40203	91	2-1/2 to 6	3-3/4	2-15/32
WITH 1-1/2" THICK STEP BLOCKS						
40105	174	40204	70	1-3/4 to 4	2-17/32	1-43/64
40106*	305	40205	138	2-1/2 to 6	3-3/4	2-15/32
40107*	506	40206	300	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	–	–	4-7/8 to 10-1/2	7-3/8	4-3/4

* Indicates chamfered holes

Metric (with Steel Step Blocks)

Part No.	Wt. (lbs/100 pcs.)	Height Adj. Range	A	B
WITH 25MM THICK STEP BLOCKS				
40102M	21	19MM to 41MM	1-1/16	11/16
40103M	49	29MM to 64MM	1-39/64	1-1/16
40104M	203	64MM to 152MM	3-3/4	2-15/32
WITH 38MM THICK STEP BLOCKS				
40105M	174	45MM to 102MM	2-17/32	1-43/64
40106M	305	64MM to 152MM	3-3/4	2-15/32
40107M	506	89MM to 229MM	5-21/64	3-7/16
WITH 51 MM THICK STEP BLOCKS				
40108M	230	45MM to 102MM	2-17/32	1-43/64
40109M	400	64MM to 152MM	3-3/4	2-15/32
40110M	670	89MM to 229MM	5-21/64	3-7/16

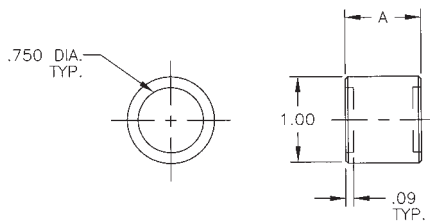
Jig Bore Kit



- For jig borers and jig grinders
- Will clamp anything within the range of the machine
- Aluminum heel rests prevent marring of the table top surface
- Hex bolts in clamps and coupling nuts allow adjustment of height within the range of the machine
- Clamps, T-Bolts, Studs, Coupling Nuts and Flange Nuts have a black oxide finish
- Kit includes holder to store elements (wooden base and metal tray)
- For material information, see individual components

Part No.	Stud Size	Stud 4 Each	Coupling Nut 4 Each	"U" Clamp 4 Each	Single Toe Clamp 4 Each	Hex Bolt 4 Each	T-Bolt 4 Each	Flange Nut 20 Each	Heel Rest 4 Each
21401	3/8-16	40520	41503	30001 30002	30820 30821	45101	46215 46216 46217 46218 46219	41603	40215 40216 40217

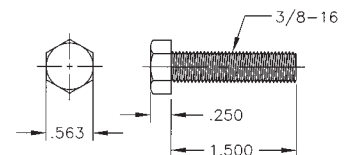
Aluminum Heel Rest



- Heel Rests prevent marring of the table top surface
- Material: Aluminum

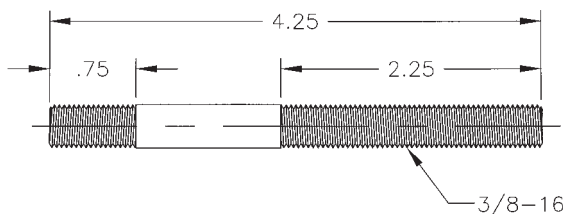
Part No.	Stud Size
40215	0.375
40216	0.875
40217	1.875

Hex Bolt: Part No. 45101



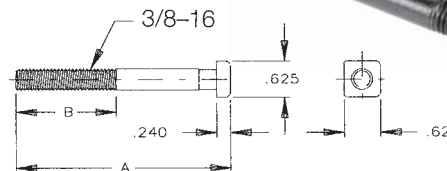
- Black Oxide Finish

Stud: Part No. 40520



- Material: Medium Carbon Alloy Steel
- Thread Class 2A UNC
- Black Oxide Finish, Heat Treated

T-Bolt

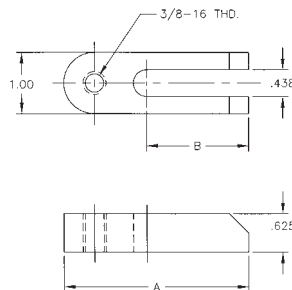


- Black Oxide Finish
- Material: 1045 Steel

Part No.	A	B
46215	1.88	1.00
46216	2.50	1.75
46217	3.50	1.75
46218	4.50	1.75
46219	6.00	1.75

"U" Clamp

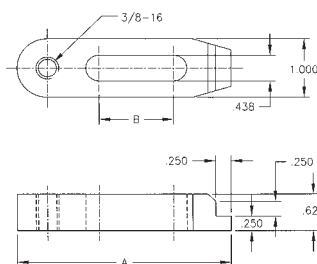
- Included in jig bore kit (page 8)
- Material 1018 Steel
- Black Oxide Finish
- Case Hardened



Part No.	A	B
30001	2.00	0.656
30002	3.00	1.656

Single Toe Clamp

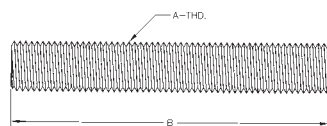
- Included in jig bore kit (page 8)
- Material 1018 Steel
- Black Oxide Finish
- Case Hardened



Part No.	A	B
30820	2.75	0.688
30821	3.50	1.438

Threaded Rod

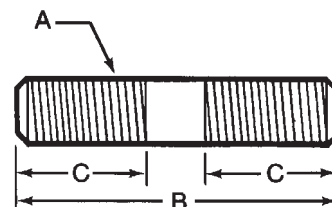
- Black Oxide Finish
- Medium Carbon Steel



Part No.	A	B
45170	1/4-20	12 in.
45171	5/16-18	12 in.
45172	3/8-16	12 in.
45173	1/2-13	12 in.
45174	5/8-11	12 in.
45175	3/4-10	12 in.
45176	7/8-9	12 in.
45177	1-8	12 in.
45160	1/4-20	36 in.
45161	5/16-18	36 in.
45162	3/8-16	36 in.
45163	1/2-13	36 in.
45164	5/8-11	36 in.
45165	3/4-10	36 in.
45166	7/8-9	36 in.
45167	1-8	36 in.
45150	1/4-20	6 ft.
45151	5/16-18	6 ft.
45152	3/8-16	6 ft.
45153	1/2-13	6 ft.
45154	5/8-11	6 ft.
45155	3/4-10	6 ft.
45156	7/8-9	6 ft.
45157	1-8	6 ft.

Stainless Steel Driver Studs

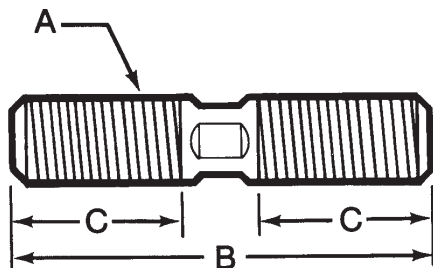
- Material: 303 Series Stainless Steel
- Rolled Threads



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

Driver Studs

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

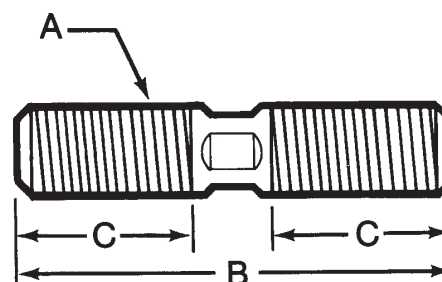


Part No.	Thread A	B	C	Flats	Weight (lbs/100pcs)
40301	1/4-20	1-1/2	1/2	NO	2
40302	1/4-20	2	3/4	NO	3
40303	1/4-20	2-1/2	1	NO	3
40304	1/4-20	3	1	NO	4
40305	1/4-20	3-1/2	1	NO	4
40306	1/4-20	4	1	NO	5
40307	1/4-20	4-1/2	1	NO	6
40308	1/4-20	5	1	NO	6
40309	1/4-20	5-1/2	1	NO	7
40310	1/4-20	6	1	NO	8
40311	1/4-20	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
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

Part No.	Thread A	B	C	Flats	Weight (lbs/100pcs)
40601	7/16-14	1-1/2	1/2	NO	5
40602	7/16-14	2	3/4	NO	8
40603	7/16-14	2-1/2	1	NO	10
40604	7/16-14	3	1	YES	13
40605	7/16-14	3-1/2	1-1/4	YES	15
40606	7/16-14	4	1-3/8	YES	18
40607	7/16-14	4-1/2	1-3/8	YES	20
40608	7/16-14	5	1-3/8	YES	23
40609	7/16-14	5-1/2	1-3/8	YES	25
40610	7/16-14	6	1-3/8	YES	28
40611	7/16-14	6-1/2	1-3/8	YES	30
40612	7/16-14	7	1-3/8	YES	33
40613	7/16-14	7-1/2	1-3/8	YES	35
40614	7/16-14	8	1-3/8	YES	38
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
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

(Driver Studs continued on next page)

Driver Studs (continued)



Part No.	Thread A	B	C	Flats	Weight (lbs/100pcs)
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
41001	7/8-9	3	1	YES	43
41002	7/8-9	3-1/2	1-1/4	YES	49
41003	7/8-9	4	1-1/2	YES	56
41004	7/8-9	4-1/2	1-3/4	YES	62
41005	7/8-9	5	2	YES	78
41006	7/8-9	5-1/2	2-1/4	YES	84
41007	7/8-9	6	2-1/4	YES	88
41008	7/8-9	6-1/2	2-1/4	YES	97
41009	7/8-9	7	2-1/4	YES	103
41010	7/8-9	7-1/2	2-1/4	YES	109
41011	7/8-9	8	2-1/4	YES	116
41012	7/8-9	9	2-1/4	YES	128
41013	7/8-9	10	2-1/4	YES	141
41014	7/8-9	12	2-1/4	YES	166
41015	7/8-9	14	2-1/4	YES	191
41016	7/8-9	16	2-1/4	YES	216
41017	7/8-9	18	2-1/4	YES	241
41018	7/8-9	20	2-1/4	YES	266
41019	7/8-9	22	2-1/4	YES	291
41020	7/8-9	24	2-1/4	YES	316

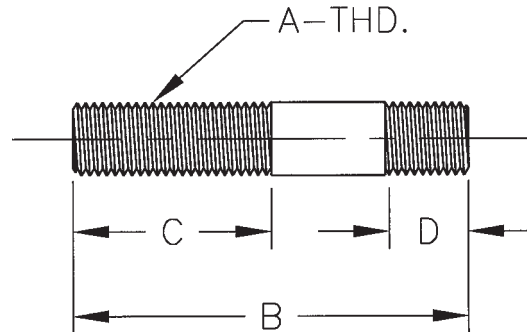
Part No.	Thread A	B	C	Flats	Weight (lbs/100pcs)
41101	1-8	3	1	YES	58
41102	1-8	3-1/2	1-1/4	YES	67
41103	1-8	4	1-1/2	YES	76
41104	1-8	4-1/2	1-3/4	YES	86
41105	1-8	5	2	YES	95
41106	1-8	5-1/2	2-1/4	YES	104
41107	1-8	6	2-1/2	YES	114
41108	1-8	6-1/2	2-1/2	YES	123
41109	1-8	7	2-1/2	YES	133
41110	1-8	7-1/2	2-1/2	YES	142
41111	1-8	8	2-1/2	YES	151
41112	1-8	9	2-1/2	YES	170
41113	1-8	10	2-1/2	YES	189
41114	1-8	12	2-1/2	YES	226
41115	1-8	14	2-1/2	YES	264
41116	1-8	16	2-1/2	YES	301
41117	1-8	18	2-1/2	YES	339
41118	1-8	20	2-1/2	YES	376
41119	1-8	22	2-1/2	YES	414
41120	1-8	24	2-1/2	YES	451

May Be Used With:

- T-Nuts, see pgs. 21-22
- Flange Nuts, see pgs. 22-24
- Flat Washers, see pgs. 26-27
- Spherical Washers, see pgs. 28-29

Driver Studs – Various Thread 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

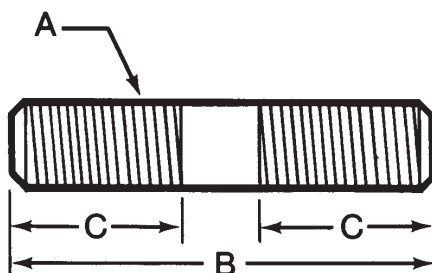
English

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 and sizes quoted upon request

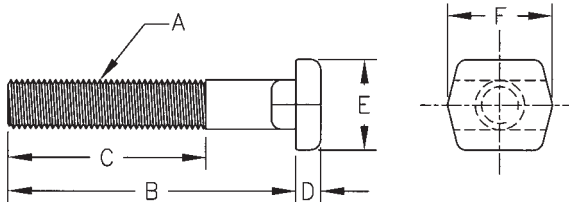


Part No.	Thread A	B	C	Weight (lbs/100pcs)
60201	M6 x 1.0	50	20	2
60202	M6 x 1.0	65	20	2.7
60203	M6 x 1.0	80	27	3
60204	M6 x 1.0	95	27	4
60206	M6 x 1.0	110	31	5
60208	M6 x 1.0	140	35	6
60210	M6 x 1.0	150	35	7
60211	M6 x 1.0	175	35	8
60213	M6 x 1.0	200	35	9
60301	M8 x 1.25	50	20	4
60302	M8 x 1.25	65	20	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
60310	M8 x 1.25	150	35	12
60311	M8 x 1.25	175	35	13
60313	M8 x 1.25	200	35	16
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
60408	M10 x 1.5	140	35	17
60410	M10 x 1.5	150	35	19
60411	M10 x 1.5	175	35	21
60413	M10 x 1.5	200	35	24
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

Part No.	Thread A	B	C	Weight (lbs/100pcs)
60506	M12 x 1.75	110	39	18
60507	M12 x 1.75	125	39	21
60508	M12 x 1.75	140	39	24
60510	M12 x 1.75	150	39	26
60511	M12 x 1.75	175	39	30
60513	M12 x 1.75	200	39	35
60603	M16 x 2.0	80	21	24
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
60611	M16 x 2.0	175	47	55
60613	M16 x 2.0	200	47	63
60615	M16 x 2.0	250	47	80
60616	M16 x 2.0	300	47	96
60703	M20 x 2.5	80	27	38
60704	M20 x 2.5	95	31	45
60706	M20 x 2.5	110	47	51
60707	M20 x 2.5	125	55	58
60709	M20 x 2.5	150	55	72
60711	M20 x 2.5	175	55	84
60713	M20 x 2.5	200	55	97
60715	M20 x 2.5	250	55	124
60716	M20 x 2.5	300	55	148
60805	M24 x 3.0	100	39	69
60807	M24 x 3.0	125	55	82
60809	M24 x 3.0	150	63	100
60811	M24x 3.0	175	63	120
60813	M24x 3.0	200	63	137
60815	M24 x 3.0	250	63	175
60816	M24 x 3.0	300	63	213

Heavy Duty T-Slot Bolts – 4140 Steel

- Black Oxide Finish
- 4140 Steel
- T-Slot Bolt head is undersized to fit machine table slot
- Thread Class 2A UNC
- Special lengths and sizes quoted upon request



Part No.	Thread A	B	C	D	E	F	Table Slot	Weight (lbs/100pcs)
45458	1/2-13	1-1/4	1	5/16	7/8	1-1/4	1/2	15
45459	1/2-13	1-1/2	1	5/16	7/8	1-1/4	1/2	15
45469	1/2-13	1-3/4	1	5/16	7/8	1-1/4	1/2	16
45460	1/2-13	2	1	5/16	7/8	1-1/4	1/2	17
45470	1/2-13	2-1/4	1	5/16	7/8	1-1/4	1/2	18
45461	1/2-13	2-1/2	1-1/4	5/16	7/8	1-1/4	1/2	19
45462	1/2-13	3	1-1/2	5/16	7/8	1-1/4	1/2	22
45463	1/2-13	3-1/2	1-1/2	5/16	7/8	1-1/4	1/2	23.5
45464	1/2-13	4	1-1/2	5/16	7/8	1-1/4	1/2	26.5
45471	1/2-13	4-1/2	1-1/2	5/16	7/8	1-1/4	1/2	30
45465	1/2-13	5	2	5/16	7/8	1-1/4	1/2	32
45466	1/2-13	6	2	5/16	7/8	1-1/4	1/2	39
45467	1/2-13	8	2	5/16	7/8	1-1/4	1/2	48
45468	1/2-13	9	2	5/16	7/8	1-1/4	1/2	54
45560	5/8-11	2	1-1/4	3/8	1-1/8	1-1/2	5/8	29
45569	5/8-11	2-1/4	1-1/7	3/8	1-1/8	1-1/2	5/8	31
45561	5/8-11	2-1/2	1-1/4	3/8	1-1/8	1-1/2	5/8	33
45570	5/8-11	2-3/4	1-1/4	3/8	1-1/8	1-1/2	5/8	35
45562	5/8-11	3	1-1/2	3/8	1-1/8	1-1/2	5/8	37
45563	5/8-11	3-1/2	1-1/2	3/8	1-1/8	1-1/2	5/8	42
45564	5/8-11	4	1-1/2	3/8	1-1/8	1-1/2	5/8	45
45571	5/8-11	4-1/2	1-1/2	3/8	1-1/8	1-1/2	5/8	50
45565	5/8-11	5	1-1/2	3/8	1-1/8	1-1/2	5/8	53
45566	5/8-11	6	1-1/2	3/8	1-1/8	1-1/2	5/8	61
45572	5/8-11	7	3	3/8	1-1/8	1-1/2	5/8	70
45567	5/8-11	8	3	3/8	1-1/8	1-1/2	5/8	75
45568	5/8-11	10	3	3/8	1-1/8	1-1/2	5/8	96
45573	5/8-11	12	3	3/8	1-1/8	1-1/2	5/8	114
45659	3/4-10	2-1/2	1-1/4	7/16	1-5/16	1-3/4	3/4	56
45660	3/4-10	3	1-1/2	7/16	1-5/16	1-3/4	3/4	58
45661	3/4-10	3-1/2	1-1/2	7/16	1-5/16	1-3/4	3/4	64
45662	3/4-10	4	1-1/2	7/16	1-5/16	1-3/4	3/4	69
45668	3/4-10	4-1/2	1-1/2	7/16	1-5/16	1-3/4	3/4	76
45663	3/4-10	5	1-1/2	7/16	1-5/16	1-3/4	3/4	81
45669	3/4-10	5-1/2	1-1/2	7/16	1-5/16	1-3/4	3/4	90
45665	3/4-10	8	1-1/2	7/16	1-5/16	1-3/4	3/4	93
45670	3/4-10	7	3	7/16	1-5/16	1-3/4	3/4	107
45664	3/4-10	6	3	7/16	1-5/16	1-3/4	3/4	117
45666	3/4-10	10	3	7/16	1-5/16	1-3/4	3/4	143
45667	3/4-10	12	3	7/16	1-5/16	1-3/4	3/4	166
45760	7/8-9	4	2	9/16	1-1/2	1-3/4	7/8	99
45761	7/8-9	5	2	9/16	1-1/2	1-3/4	7/8	115
45762	7/8-9	6	2	9/16	1-1/2	1-3/4	7/8	132
45763	7/8-9	7	2	9/16	1-1/2	1-3/4	7/8	149
45764	7/8-9	8	2	9/16	1-1/2	1-3/4	7/8	166
45858	1-8	3-1/2	1-1/2	1/2	1-11/16	2-1/4	1	135
45866	1-8	4-1/2	1-1/2	1/2	1-11/16	2-1/4	1	160
45859	1-8	4	2-1/2	1/2	1-11/16	2-1/4	1	150
45860	1-8	5	2-1/2	1/2	1-11/16	2-1/4	1	165
45861	1-8	6	2-1/2	1/2	1-11/16	2-1/4	1	188
45862	1-8	8	3	1/2	1-11/16	2-1/4	1	231
45863	1-8	7	3	1/2	1-11/16	2-1/4	1	210
45864	1-8	10	3	1/2	1-11/16	2-1/4	1	274
45865	1-8	12	3	1/2	1-11/16	2-1/4	1	319

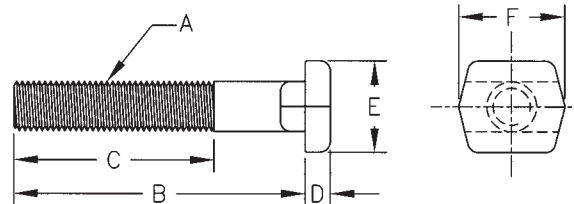
T-Slot Cleaner – Part No. 50101

- T-Slot Cleaner allows for easy removal of chips from the machine table
- T-Slot Cleaners are made of steel for durability
- Weight per 100 pcs. = 11.3 lbs.



Tugger® T-Slot Bolts

- Black Oxide Finish
- Medium Carbon Steel
- T-Slot Bolt head is undersized to fit machine table slot
- Thread Class 2A UNC
- Special lengths and sizes quoted upon request



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

Tugger® T-Slot Bolt Super Clamp Kit

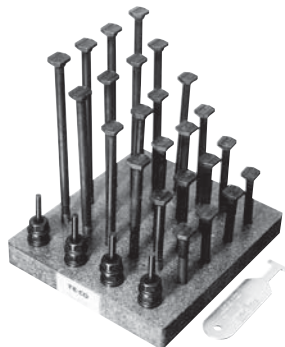
Kit Contains:

- 24 T-Slot Bolts
 - Short Series: 4 each of 1-1/2", 2", 2-1/2", 3", 3-1/2" and 4" long
 - Long Series: 4 each of 3", 4", 5", 6", 7" and 8" long
 - 8 Flange Nuts
 - 6 Step Blocks
 - 6 Serrated End Clamps
 - 1 T-Slot Cleaner
 - 1 Holder (wooden base and metal tray)
- For material information, see individual components



Part No.	T-Slot Size	Bolt Length	Thread Size
WITH 1" THICK STEP BLOCKS			
21350	3/8	Short	3/8-16
21351	3/8	Long	3/8-16
21352	1/2	Short	1/2-13
21353	1/2	Long	1/2-13
21354	5/8	Short	5/8-11
21355	5/8	Long	5/8-11
WITH 1-1/2" THICK STEP BLOCKS			
21356	1/2	Short	1/2-13
21357	1/2	Long	1/2-13
21358	5/8	Short	5/8-11
21359	5/8	Long	5/8-11
21360	3/4	Long	3/4-10

Tugger® T-Slot Bolt Kits

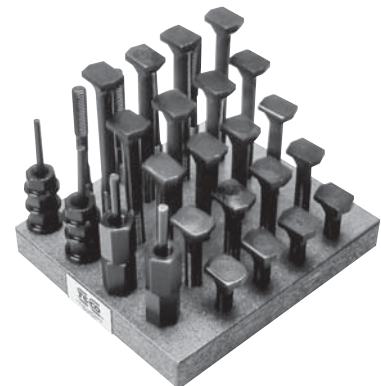


Kit Contains:

- 24 T-Slot Bolts:
 - Short Series: 4 each of 1-1/2", 2", 2-1/2", 3", 3-1/2" and 4" long
 - Long Series: 4 each of 3", 4", 5", 6", 7" and 8" long
 - 8 Flange Nuts
 - 1 T-Slot Cleaner
 - 1 Holder
- For material information, see individual components

Part No.	Thread Size	Table Slot	Bolt Series	4 Each O.A.L.
21330	3/8-16	3/8	Short	1-1/2 thru 4
21332	1/2-13	1/2	Short	1-1/2 thru 4
21334	5/8-11	5/8	Short	1-1/2 thru 4
21331	3/8-16	3/8	Long	3 thru 8
21333	1/2-13	1/2	Long	3 thru 8
21335	5/8-11	5/8	Long	3 thru 8
21336	3/4-10	3/4	Long	3 thru 8

Tugger® T-Slot Bolt /Stud Kits

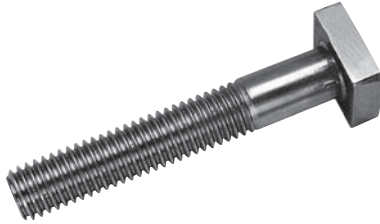


Kit Contains:

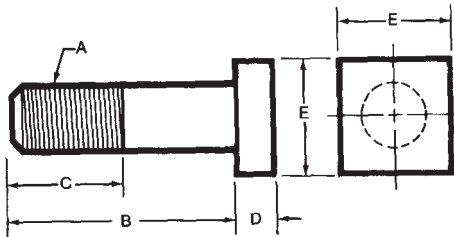
- 20 T-Slot Bolts
 - 4 Studs
 - 6 Flange Nuts
 - 4 Coupling Nuts
 - 1 T-Slot Cleaner
 - 1 Holder
- For material information, see individual components

Part No.	Thread Size	Table Slot	Set Incl. 4 Ea T-Slot Bolts	Stud Length
21340	3/8-16	3/8	1-1/2", 2", 2-1/2", 3", 4"	4
21341	1/2-13	1/2	2", 3", 4", 5", 6"	5
21342	5/8-11	5/8	3", 4", 5", 6", 8"	6
21343	3/4-10	3/4	3", 4", 5", 6", 8"	7
21344	1-8	1	4", 5", 6", 8", 10"	8

Stainless Steel T-Bolts



- Material: 304 Stainless Steel
- Special lengths and sizes quoted upon request

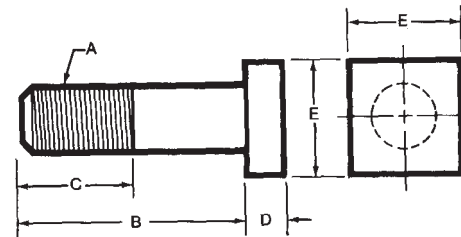


Part No.	Thread A	B	C	D	E	Table Slot	Weight (lbs/100pcs)
46480	1/2-13	1-1/2	1	5/16	7/8	1/2	15
46481	1/2-13	2	1-1/2	5/16	7/8	1/2	17
46482	1/2-13	2-1/2	2	5/16	7/8	1/2	19
46483	1/2-13	3	2	5/16	7/8	1/2	22
46484	1/2-13	4	2	5/16	7/8	1/2	28
46485	1/2-13	5	2	5/16	7/8	1/2	33
46486	1/2-13	6	2	5/16	7/8	1/2	39
46487	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

Heavy Duty 4140 Steel T-Bolts



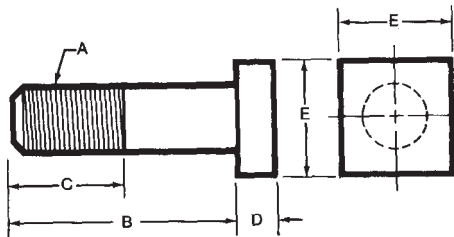
- Black Oxide Finish
- 4140 Steel
- Thread Class 2A UNC
- Special lengths and sizes quoted upon request



Part No.	Thread A	B	C	D	E	Table Slot	Weight (lbs/100pcs)
46260	3/8-16	1-1/2	1	1/4	11/16	3/8	7
46261	3/8-16	2	1-1/2	1/4	11/16	3/8	9
46262	3/8-16	2-1/2	2	1/4	11/16	3/8	11
46263	3/8-16	3	2	1/4	11/16	3/8	12
46264	3/8-16	3-1/2	2	1/4	11/16	3/8	13
46265	3/8-16	4	2	1/4	11/16	3/8	15
46266	3/8-16	5	2	1/4	11/16	3/8	18
46267	3/8-16	6	2	1/4	11/16	3/8	21
46460	1/2-13	1-1/2	1	5/16	7/8	1/2	14
46461	1/2-13	2	1-1/2	5/16	7/8	1/2	17
46462	1/2-13	2-1/2	2	5/16	7/8	1/2	18
46463	1/2-13	3	2	5/16	7/8	1/2	21
46464	1/2-13	3-1/2	2	5/16	7/8	1/2	24
46465	1/2-13	4	2	5/16	7/8	1/2	27
46466	1/2-13	5	2	5/16	7/8	1/2	32
46467	1/2-13	6	2	5/16	7/8	1/2	38
46468	1/2-13	7	2	5/16	7/8	1/2	43
46469	1/2-13	8	2	5/16	7/8	1/2	49
46560	5/8-11	2	1-1/2	13/32	1-1/8	5/8	29
46561	5/8-11	2-1/2	2	13/32	1-1/8	5/8	32
46562	5/8-11	3	2	13/32	1-1/8	5/8	37
46563	5/8-11	3-1/2	2	13/32	1-1/8	5/8	42
46564	5/8-11	4	2	13/32	1-1/8	5/8	45
46565	5/8-11	5	2	13/32	1-1/8	5/8	54
46566	5/8-11	6	2	13/32	1-1/8	5/8	62
46567	5/8-11	7	2	13/32	1-1/8	5/8	72
46568	5/8-11	8	2	13/32	1-1/8	5/8	81
46569	5/8-11	10	2	13/32	1-1/8	5/8	96
46660	3/4-10	3	2	17/32	1-5/16	3/4	58
46661	3/4-10	3-1/2	2	17/32	1-5/16	3/4	65
46662	3/4-10	4	2	17/32	1-5/16	3/4	67
46663	3/4-10	5	2	17/32	1-5/16	3/4	80
46664	3/4-10	6	2	17/32	1-5/16	3/4	94
46665	3/4-10	7	2	17/32	1-5/16	3/4	106
46666	3/4-10	8	2	17/32	1-5/16	3/4	118
46667	3/4-10	10	2	17/32	1-5/16	3/4	144

Tugger® T-Bolts

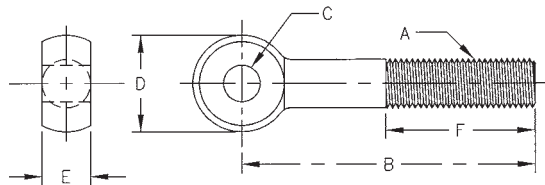
- Black Oxide Finish
- Medium Carbon Steel
- Heat Treated
- Thread Class 2A UNC
- Special lengths and sizes quoted upon request



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

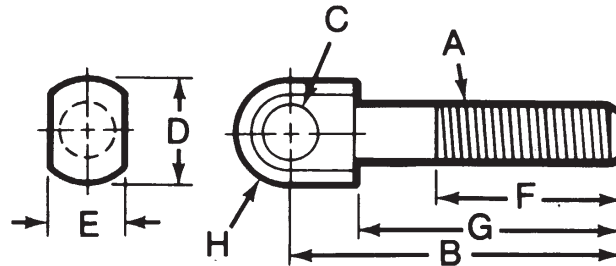


Metric sizes manufactured upon request

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

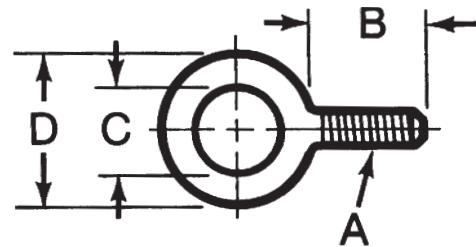
- Black Oxide Finish – steel only
- Case Hardened – steel only
- Material: 12L14 Steel or 303 Stainless Steel
- Thread Class 2A UNC
- Special sizes quoted upon request
- Metric sizes manufactured upon request
- Many sizes conform to TCMAl standards



Steel Part No.	Stainless Steel Part No.	Thread A	B	+0.001 -0.000 C	D	+0.000 -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

Plain Forged Eye Bolts

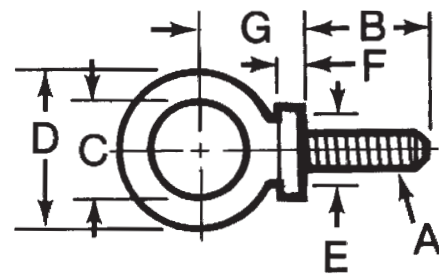
- C1030 Material
- Hot Forged
- For Safe Working Load Rating and Breaking Strength Information, see table below.



Part No.	Thread A	B	C	D	Weight (lbs/100pcs)
43102	3/8-16	1-1/4	1	1-21/32	15
43103	1/2-13	1-1/2	1-3/16	2-1/16	25
43104	5/8-11	1-3/4	1-3/8	2-1/2	56
43105	3/4-10	2	1-1/2	2-13/16	94

Shoulder Forged Eye Bolts

- C1030 Material
- Hot Forged
- For Safe Working Load Rating and Breaking Strength Information, see table below.



Part No.	Thread A	B	C	D	E	F	G	Weight (lbs/100pcs)
43202	3/8-16	1-1/4	1	1-21/32	11/16	3/16	1-3/16	18
43203	1/2-13	1-1/2	1-3/16	2-1/16	7/8	1/4	1-13/32	35
43204	5/8-11	1-3/4	1-3/8	2-1/2	1-1/8	1/4	1-11/16	75
43205	3/4-10	2	1-1/2	2-13/16	1-1/4	5/16	1-13/16	101

Standard Eyebolt Rated Capacity

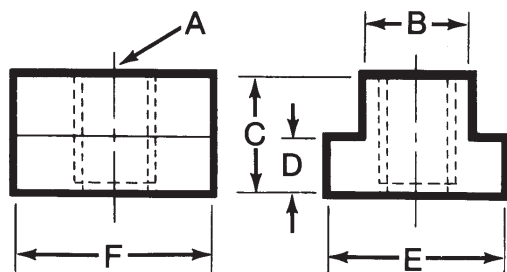
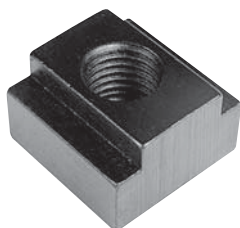
Eye Bolt Size	Plain Part No.	Shoulder Part No.	Safe Working Load	Breaking Strength
3/8"	43102	43202	1,300 lbs.	6,300 lbs.
1/2"	43103	43203	2,400 lbs.	12,000 lbs.
5/8"	43104	43204	4,000 lbs.	20,000 lbs.
3/4"	43105	43205	5,000 lbs.	25,000 lbs.

Rated capacity is for **STRAIGHT LIFTS** – **angle lifts should be avoided.**

If using angle lifts, **SHOULDER EYEBOLTS** are recommended and **MUST BE USED WITH A STEEL WASHER** so they seat on the shoulder at all times. **Load limits are reduced by 75% on angle lifts.**

Also See Selection of Hoist Rings, pgs. 133-156

T-Slot Nuts



- Black Oxide Finish
- Case Hardened
- 1018 Material
- The last thread is incomplete on T-Slot Nuts to prevent the 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- 61413: 25 pcs.
- Tapped through T-Slot Nuts are also available. To order, add a "T" after the above Part No.'s (ex: 41412T)

* 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	Weight (lbs/100pcs)
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	*English Table Slot B	**Metric Table Slot	C	D	E	F	Weight (lbs/100pcs)
61401	M6 x 1.0	8	5/16	10	6	14	19	3
61402	M6 x 1.0	10	7/16	11	6	16	22	5
61403	M8 x 1.25	10	7/16	11	6	16	22	5
61404	M10 x 1.5	12	1/2	13	7	19	22	6
61405	M10 x 1.5	14	9/16	16	9	22	29	12
61406	M12 x 1.75	14	9/16	16	9	22	29	12
61407	M12 x 1.75	16	5/8	16	9	25	29	14
61408	M12 x 1.75	17	11/16	19	11	29	32	21
61409	M16 x 2.0	18	3/4	19	11	29	32	19
61410	M16 x 2.0	21	13/16	25	14	32	38	36
61411	M20 x 2.5	22	7/8	25	14	35	38	36
61412	M24 x 3.0	27	1-1/16	29	18	41	51	69
61413	M24 x 3.0	33	1-5/16	32	24	51	51	106

Stainless Steel T-Nuts

- 304 Stainless Steel
- The last thread is incomplete to prevent the stud from turning through the bottom of the nut.

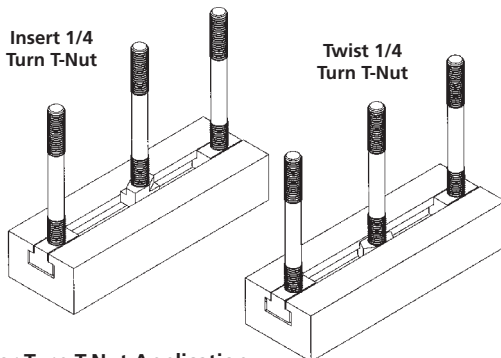
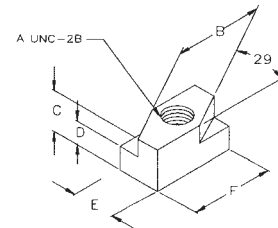
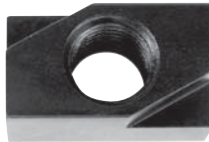


* T-Nuts are undersized to fit machine table slot.

Part No.	Thread A	*English Table Slot B	C	D	E	F	Weight (lbs/100pcs)
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

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

Flange Nuts

- Black Oxide Finish
- Case Hardened
- 12L14 Material
- Available in Coarse or Fine Threads
- **Standard package quantity:**
41601- 41607: 25 pcs.
41701- 41707: 25 pcs.
- Many sizes conform to TCMAI standards
- Special sizes quoted upon request
- Metric: Dimension in millimeters



UNC Flange Nuts

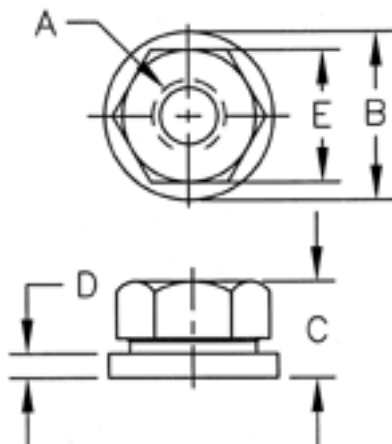
Part No.	Thread A	B	C	D	E	Weight (lbs/100pcs)
41601	1/4-20	5/8	5/16	3/32	1/2	3
41602	5/16-18	3/4	3/8	1/8	9/16	4
41603	3/8-16	7/8	1/2	1/8	11/16	5
41604	7/16-14	1	9/16	5/32	3/4	7
41605	1/2-13	1-1/8	11/16	3/16	7/8	11
41606	5/8-11	1-3/8	13/16	3/16	1-1/16	18
41607	3/4-10	1-5/8	1	1/4	1-1/4	31
41608	7/8-9	1-3/4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

UNF Flange Nuts

Part No.	Thread A	B	C	D	E	Weight (lbs/100pcs)
41701	1/4-28	5/8	5/16	3/32	1/2	3
41702	5/16-24	3/4	3/8	1/8	9/16	4
41703	3/8-24	7/8	1/2	1/8	11/16	5
41704	7/16-20	1	9/16	5/32	3/4	7
41705	1/2-20	1-1/8	11/16	3/16	7/8	11
41706	5/8-18	1-3/8	13/16	3/16	1-1/16	18
41707	3/4-16	1-5/8	1	1/4	1-1/4	31
41708	7/8-14	1-3/4	1-1/8	1/4	1-7/16	42
41709	1-14	2	1-1/4	1/4	1-5/8	59

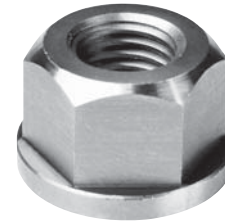
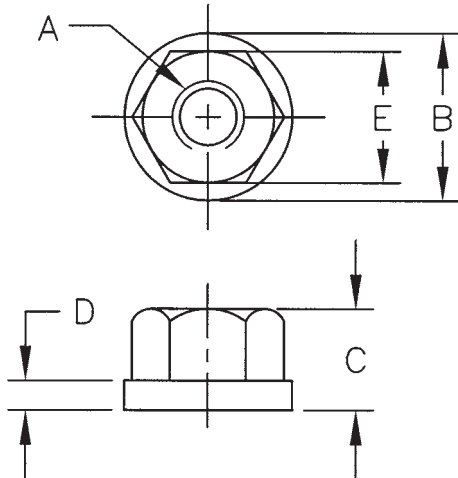
Metric

Part No.	Thread A	B	C	D	E	Weight (lbs/100pcs)
61601	M6 x 1.0	16	8	2	10	1.8
61602	M8 x 1.25	19	10	2.5	13	2.4
61603	M10 x 1.5	22	13	3	17	3.5
61604	M12 x 1.75	27	17	4	19	9.5
61605	M16 x 2.0	33	21	5	24	16.5
61606	M20 x 2.5	40	25	6	30	29
61607	M24 x 3.0	49	32	7	36	51



Stainless Steel Flange Nuts

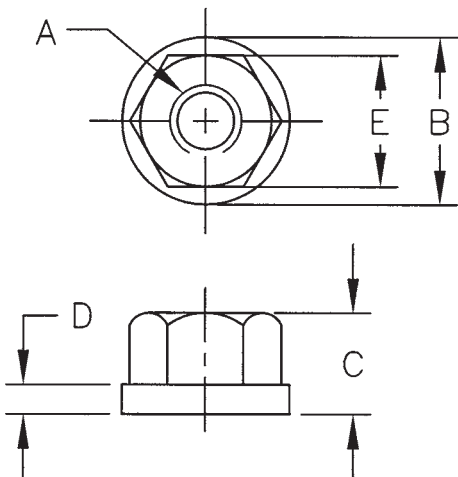
- 303 Stainless Steel
- Special sizes quoted upon request



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

Swivel Flange Nuts

- Black Oxide Finish
- Case Hardened
- 12L14 Material
- Head rotates but washer remains stationary upon contact and holds rigidly without marring the workpiece



Part No.	Thread A	B	C	D	E	Weight (lbs/100pcs)
42001	1/4-20	5/8	3/8	1/8	1/2	2
42002	5/16-18	3/4	7/16	9/64	9/16	3
42003	3/8-16	7/8	17/32	5/32	11/16	4
42004	1/2-13	1-1/8	23/32	7/32	7/8	11
42005	5/8-11	1-3/8	29/32	1/4	1-1/16	18
42006	3/4-10	1-5/8	1-1/64	9/32	1-1/4	28
42007	7/8-9	1-3/4	1-1/8	7/16	1-7/16	41
42008	1-8	2	1-15/64	15/32	1-5/8	57

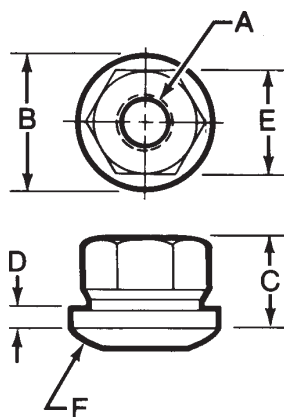
Spherical Flange Nuts

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	3/32	1/2	3/4	2
41822	5/16-18	3/4	3/8	3/32	9/16	1	4
41823	3/8-16	7/8	1/2	1/8	11/16	1-1/4	6
41824	1/2-13	1-1/8	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

For spherical washers, see pgs. 28-29

Spherical Flange Nut Assemblies

- Assemblies consist of Flange Nuts (Part Nos. 41801-41811) and Spherical Washers (Part Nos. 42741-42750)

For material information, see individual components



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

Stainless Steel Spherical Flange Nut Assemblies

- Assemblies consist of 1 Stainless Steel Flange Nut (Part Nos. 41821-41826) and 1 Female Spherical Washer (Part Nos. 47741-47745)

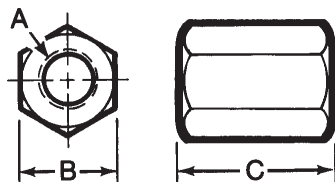
For material information, see individual components



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

Coupling (Extension) Nuts

- Black Oxide Finish
- Case Hardened
- 1117 Material
- Coupling Nuts can be used to join two or more studs for a desired length.
- Many sizes conform to TCMAI standards
- **Standard package quantity:**
41501-41507: 25 pcs.



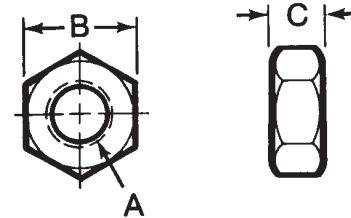
Part No.	Thread A	B	C	Weight (lbs/100pcs)
41501	1/4-20	1/2	5/8	4
41502	5/16-18	9/16	7/8	7
41503	3/8-16	11/16	1	9
41504	7/16-14	3/4	1-1/4	13
41505	1/2-13	7/8	1-1/4	18
41506	5/8-11	1-1/16	1-5/8	34
41507	3/4-10	1-1/4	1-7/8	50
41508	7/8-9	1-7/16	2-1/4	88
41509	1-8	1-5/8	2-1/2	106

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

Heavy Hex Nuts

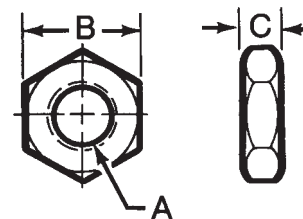
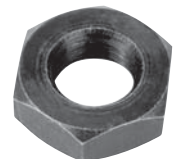
- Black Oxide Finish
- High Grade Alloy Steel
- Will outlast ordinary Hex Nuts when used in repetitive operations
- **Standard package quantity: 25 pcs.**



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

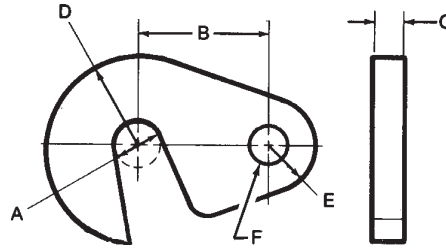
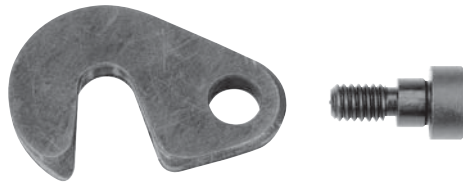
Heavy Hex Jam Nuts

- Black Oxide Finish
- Case Hardened
- High Grade Alloy Steel
- Will outlast ordinary Hex Jam Nuts when used in repetitive operations
- **Standard package quantity: 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

Swing "C" Washers

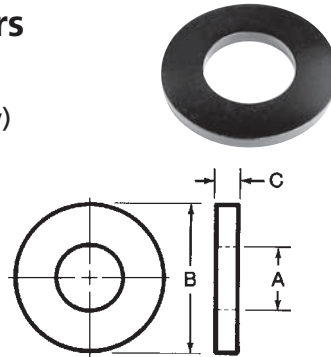


- Black Oxide Finish
- Case Hardened
- 1144 Material
- Shoulder screw furnished with each Swing "C" Washer
- Shoulder diameter of the screw allows pivotal motion

Part No.	A	B	C	D	E	F	Shoulder Screw Size	Weight (lbs/100pcs)
42850	13/32	1	1/4	3/4	3/8	3/8	5/16-18	15
42851	17/32	1-1/4	5/16	1	1/2	3/8	5/16-18	33
42852	21/32	1-1/2	3/8	1-1/8	9/16	1/2	3/8-16	49
42853	25/32	1-3/4	1/2	1-1/4	5/8	1/2	3/8-16	74

Hardened Flat Washers

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



English

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

Metric

Part No.	Stud Size	A	B	C	Weight (lbs/100pcs)
63601	M6	7	16	3	1
63602	M8	9	19	3	2
63603	M10	11	22	3	3
63605	M12	13	29	3	3
63606	M16	17	35	3	4
63608	M20	22	44	5	8
63609	M24	26	51	4	12

Heavy Duty Hardened Flat Washers

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

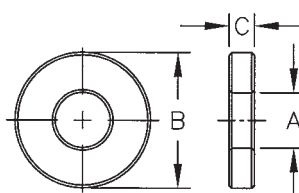


English

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

Metric

Part No.	Stud Size	A	B	C	Weight (lbs/100pcs)
63619	M6	7	16	5	2
63620	M8	9	19	5	2
63621	M10	11	22	5	3
63623	M12	13	29	5	4
63624	M16	17	35	5	6
63626	M20	22	44	6	12
63627	M24	26	51	7	18



Heavy Duty Hardened Flat Washer Assortment Part No. 42697

- Heavy Duty Flat Washer Assortment Contains:
42621: 10 pcs.
42623: 10 pcs.
42624: 10 pcs.
42625: 10 pcs.
1 Holder
4 Holder Pins
- For material information, see individual components.

Metric Heavy Duty Hardened Flat Washer Assortment Part No. 63697

- Metric Heavy Duty Flat Washer Assortment Contains:
63621: 10 pcs.
63623: 10 pcs.
63624: 10 pcs.
63626: 10 pcs.
1 Holder
4 Holder Pins
- For material information, see individual components.

Hardened Flat Washer Assortment Part No. 42699

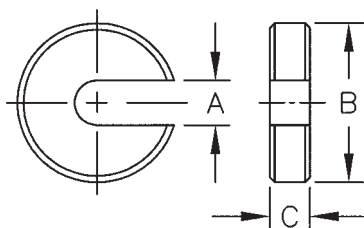
- Flat Washer Assortment Contains:
42601: 50 pcs.
42603: 50 pcs.
42605: 25 pcs.
42606: 25 pcs.
42607: 12 pcs.
42609: 12 pcs.
1 Holder
8 Holder Pins
- For material information, see individual components.



Metric Hardened Flat Washer Assortment Part No. 63699

- Metric Flat Washer Assortment Contains:
63601: 50 pcs.
63602: 50 pcs.
63605: 25 pcs.
63606: 25 pcs.
63608: 12 pcs.
63609: 12 pcs.
1 Holder
8 Holder Pins
- For material information, see individual components.

"C" Washers



- Black Oxide Finish
- Case Hardened
- 1018 Material: 42801, 08, 09
- 12L14 Material: 42802, 06, 07, 13, 14, 17, 20
- Many sizes conform to TCMAI standards

Part No.	Stud Size	A	B	C	Weight (lbs/100pcs)
42801	3/16-1/4	9/32	3/4	1/4	2
42802	3/16-1/4	9/32	1	1/4	5
42806	5/16	11/32	1-1/4	5/16	10
42807	5/16-3/8	13/32	1-1/4	3/8	10
42808	5/16-3/8	13/32	1-1/2	3/8	15
42809	5/16-3/8	13/32	1-3/4	3/8	20
42813	7/16-1/2	17/32	1-7/8	3/8	24
42814	7/16-1/2	17/32	2-1/4	3/8	35
42817	5/8	21/32	2-1/8	3/8	29
42820	3/4	25/32	2-1/2	7/16	44

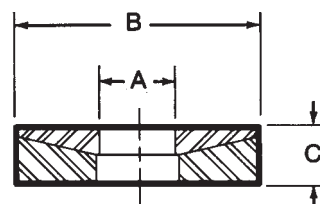
Spherical Washers – Steel

- Black Oxide Finish
- Case Hardened
- Material: 12L14 steel
- Tops and bottoms also sold separately
- Reduces stress on threads
- Bottom Washer can be used with Spherical Flange Nuts
- Compensates for slight misalignment between the workpiece and strap clamp
- Many sizes conform to TCMAI standards
- Special sizes quoted upon request



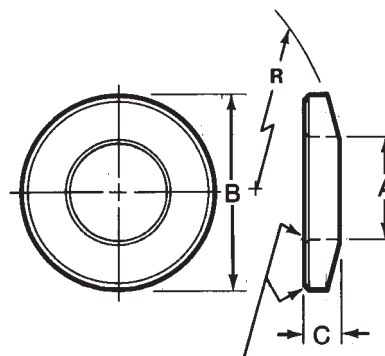
Assemblies

Steel Part No.	Male Part No. A	Female Part No. B	Stud Size	C	Total Degree of Rotation	Weight (lbs/100pcs)
42701	42721	42741	3/16 and 1/4	3/16	8 and 5	1
42702	42722	42742	5/16 and 3/8	1/4	5 and 3	4
42703	42723	42743	7/16 and 1/2	5/16	4 and 2	8
42704	42724	42744	5/8	5/16	2	10
42705	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



Male (Top) Spherical Washers

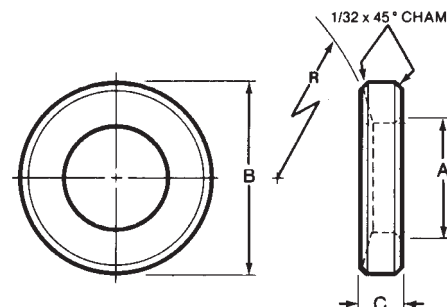
Steel Part No.	Stud Size	A	B	+0.000 -0.005 C	Rad. R	Total Weight (lbs/100pcs)
42721	3/16 and 1/4	9/32	5/8	.120	3/4	1
42722	5/16 and 3/8	13/32	7/8	.130	1-1/4	1
42723	7/16 and 1/2	17/32	1-1/8	.188	1-1/2	3
42724	5/8	21/32	1-3/8	.188	1-3/4	4
42725	3/4	25/32	1-5/8	.219	2-1/4	7
42726	7/8	15/16	1-3/4	.240	2-1/2	9
42727	1	1-1/16	2	.330	2-3/4	17
42728	1-1/8	1-3/16	2-1/4	.281	3	16
42729	1-1/4	1-5/16	2-1/2	.312	3	22
42730	1-1/2	1-9/16	2-7/8	.350	3	28



1/32 x 45° CHAM.

Female (Bottom) Spherical Washers

Steel Part No.	Stud Size	A	B	+0.000 -0.005 C	Rad. R	Total Weight (lbs/100pcs)
42741	3/16 and 1/4	5/16	5/8	.120	3/4	1
42742	5/16 and 3/8	7/16	7/8	.156	1-1/4	2
42743	7/16 and 1/2	9/16	1-1/8	.188	1-1/2	3
42744	5/8	11/16	1-3/8	.219	1-3/4	5
42745	3/4	13/16	1-5/8	.265	2-1/4	10
42746	7/8	1	1-3/4	.240	2-1/2	9
42747	1	1-1/8	2	.290	2-3/4	14
42748	1-1/8	1-1/4	2-1/4	.350	3	22
42749	1-1/4	1-3/8	2-1/2	.375	3	28
42750	1-1/2	1-5/8	2-7/8	.390	3	35



1/32 x 45° CHAM.

Spherical Washers – Stainless Steel

- Material: 303 stainless steel
- Tops and bottoms also sold separately
- Reduces stress on threads
- Bottom Washer can be used with Spherical Flange Nuts
- Compensates for slight misalignment between the workpiece and strap clamp
- Many sizes conform to TCMAI standards
- Special sizes quoted upon request

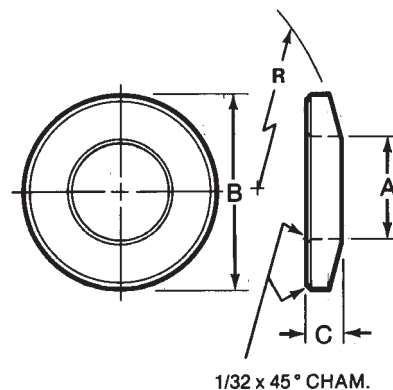
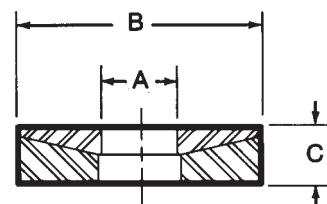


Assemblies

Stainless Steel Part No.	Male Part No. A	Female Part No. B	Stud Size	C	Total Degree of Rotation	Weight (lbs/100pcs)
47701	47721	47741	1/4	3/16	8	1
47702	47722	47742	3/8	1/4	5	4
47703	47723	47743	1/2	5/16	2	8
47704	47724	47744	5/8	5/16	2	10
47705	47725	47745	3/4	3/8	3	17

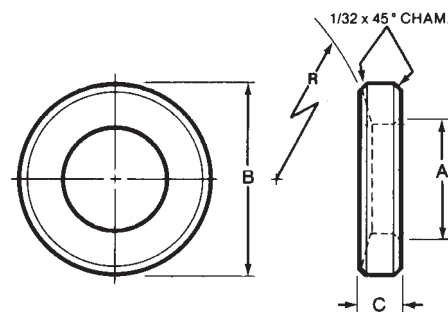
Male (Top) Spherical Washers

Stainless Steel Part No.	Stud Size	A	B	+0.000 -0.005 C	Rad. R	Total Weight (lbs/100pcs)
47721	1/4	9/32	5/8	1/8	3/4	1
47722	3/8	13/32	7/8	11/64	1-1/4	1
47723	1/2	17/32	1-1/8	13/64	1-1/2	3
47724	5/8	21/32	1-3/8	13/64	1-3/4	4
47725	3/4	25/32	1-5/8	1/4	2-1/4	7



Female (Bottom) Spherical Washers

Stainless Steel Part No.	Stud Size	A	B	+0.000 -0.005 C	Rad. R	Total Weight (lbs/100pcs)
47741	1/4	9/32	5/8	1/8	3/4	1
47742	3/8	13/32	7/8	11/64	1-1/4	2
47743	1/2	17/32	1-1/8	7/32	1-1/2	3
47744	5/8	21/32	1-3/8	7/32	1-3/4	5
47745	3/4	25/32	1-5/8	1/4	2-1/4	10

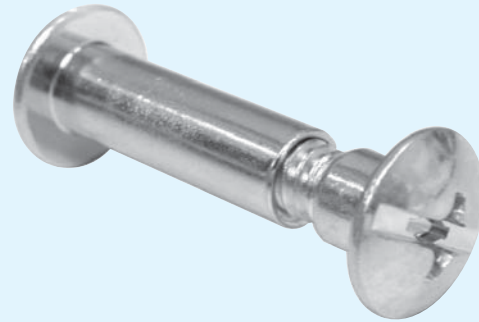


Sex Bolts

Now offering a premium line of sex bolts and mating parts.

Female barrels are used in combination with either shoulder screws or machine screws.

Female barrels and mating parts sold separately!



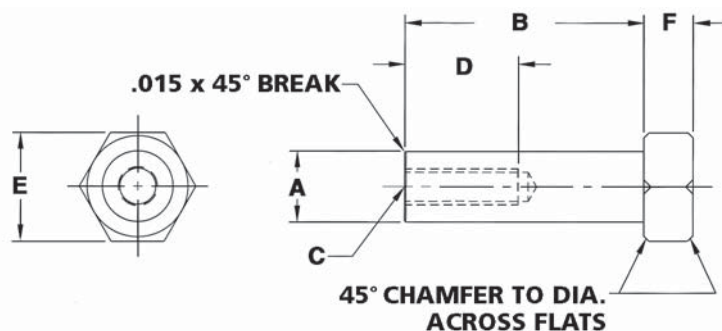
Sex Bolts: Hex Head Barrel (Female)

- Internally threaded
- Used in combination with standard industrial screws



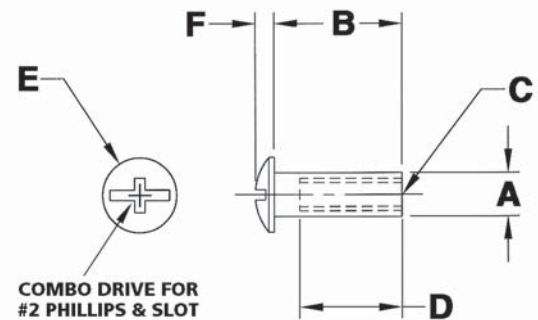
Stainless Steel

Part No.	A	B	Thread C	D	E	F
45001	5/16	1/2	10-24	5/16	1/2	3/16
45002	5/16	3/4	10-24	3/8	1/2	3/16
45003	5/16	1	10-24	3/8	1/2	3/16
45004	3/8	1/2	1/4-20	5/16	5/8	13/64
45005	3/8	3/4	1/4-20	3/8	5/8	13/64
45006	3/8	1	1/4-20	3/8	5/8	13/64
45007	1/2	1/2	3/8-16	5/16	3/4	1/4
45008	1/2	3/4	3/8-16	3/8	3/4	1/4
45009	1/2	1	3/8-16	3/8	3/4	1/4



Sex Bolts: Combo Head Barrel (Female)

- All components are matched
- Both male and female heads are identical
- Shoulder Screws and Female Barrels allow different grip lengths to be achieved
- Machine Screws present a finished set appearance
- Heads manufactured in accordance with IFI Standards
- Internally threaded

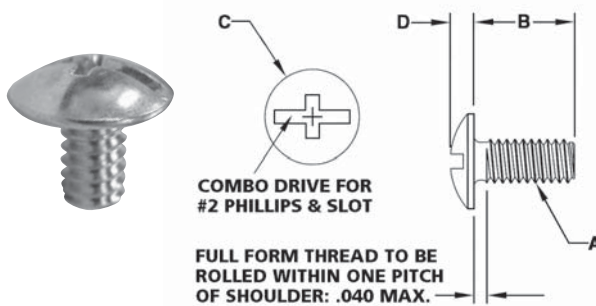


Steel

Part No.	A	B	Thread C	D	E	F	Drive
45010	1/4	1/4	10-24	thru	7/16	1/8	slot
45011	1/4	5/16	10-32	thru	3/8	1/8	slot
45012	1/4	3/8	10-24	5/16	7/16	1/8	combo
45013	1/4	1/2	10-24	3/8	7/16	1/8	combo
45014	1/4	5/8	10-24	3/8	7/16	1/8	combo
45015	1/4	3/4	10-24	3/8	7/16	1/8	combo
45016	1/4	1	10-24	3/8	7/16	1/8	combo
45017	1/4	1-1/4	10-24	3/8	7/16	1/8	combo
45018	1/4	1-1/2	10-24	3/8	7/16	1/8	combo
45019	1/4	2	10-24	3/8	7/16	1/8	combo

Sex Bolts: Combo Truss Head Machine Screw (Male)

- All components are matched
- Both male and female heads are identical
- Shoulder Screws and Female Barrels allow different grip lengths to be achieved
- Machine Screws present a finished set appearance
- Heads manufactured in accordance with IFI Standards

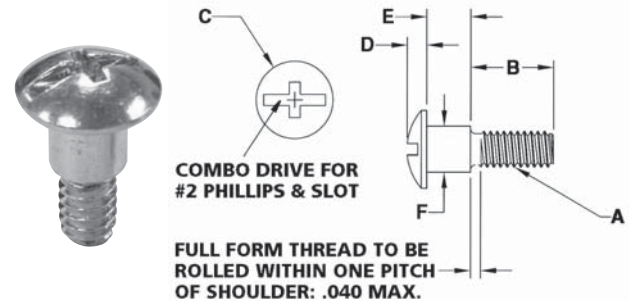


Steel Zinc

Part No.	Thread A	B	C	D
45020	10-24	5/16	7/16	1/8

Sex Bolts: Combo Head Shoulder Mating Screw (Male)

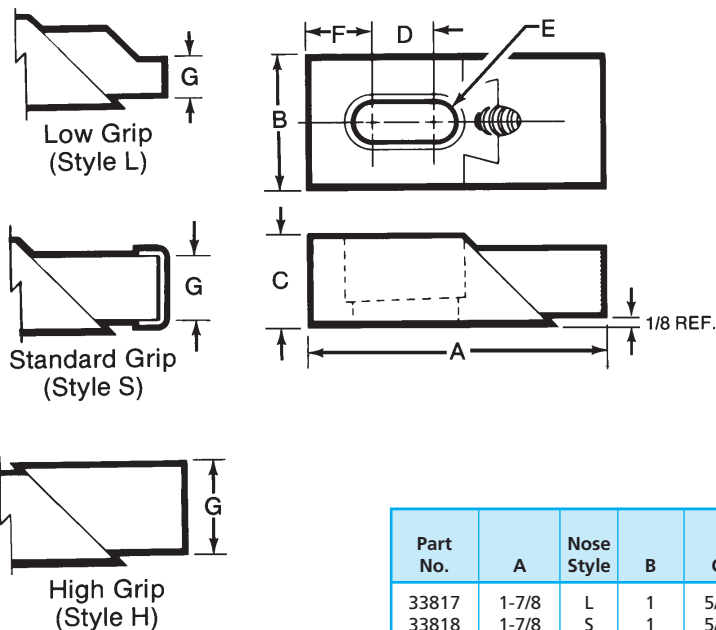
- All components are matched
- Both male and female heads are identical
- Shoulder Screws and Female Barrels allow different grip lengths to be achieved
- Machine Screws present a finished set appearance
- Heads manufactured in accordance with IFI Standards



Steel Zinc

Part No.	Thread A	B	C	D	E	F
45021	10-24	5/16	7/16	1/8	1/4	1/4

Nuzzler® Edge Clamps

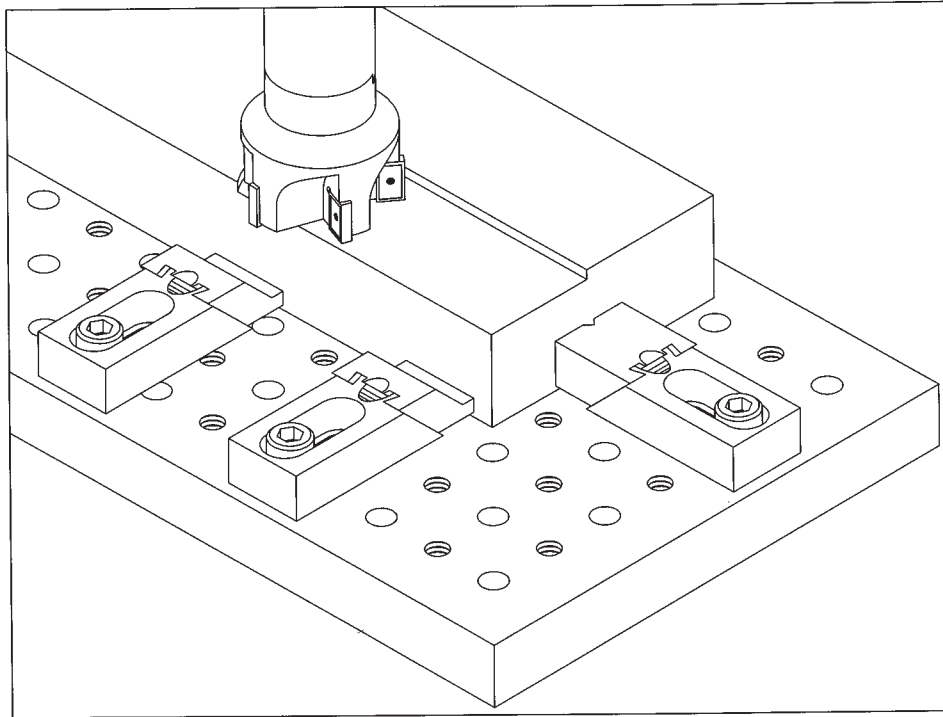


- See Page 33 for Application
- Clamp Material: 1018 Steel
- Black Oxide Finish
- Features a double action, adjustable nose which exerts clamping pressures bot downward and inward through a 45 degree angle.
- Noses have serrations for better gripping of non-finished or semi-finished workpieces
- Tapered 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

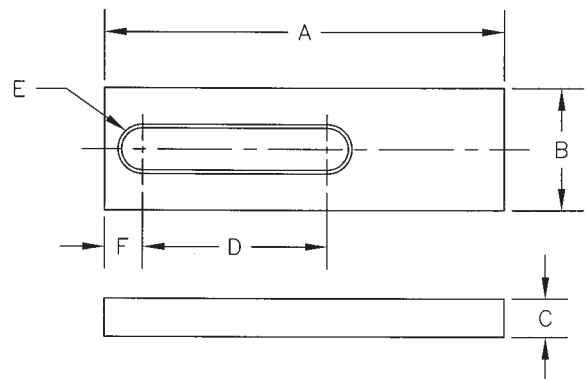
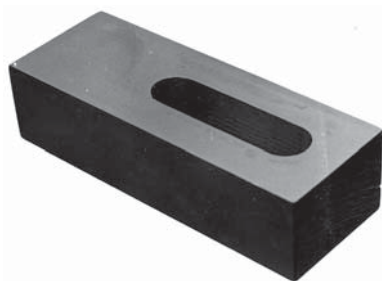
Part No.	A	Nose Style	B	C	D	Bolt Size E	F	G	Wrench Size	Wt. (lbs/100pcs)
33817	1-7/8	L	1	5/8	1/4	5/16	13/32	1/8	5/32	25
33818	1-7/8	S	1	5/8	1/4	5/16	13/32	5/8	5/32	30
33819	2-3/8	L	1	5/8	3/4	5/16	5/16	1/8	5/32	29
33820	2-3/8	S	1	5/8	3/4	5/16	5/16	5/8	5/32	35
33821	2-7/8	L	1	5/8	1-1/4	5/16	5/16	1/8	5/32	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

* Standard Grip includes removable aluminum nose cap, which prevents damage to your workpiece.

Nuzzler® Edge Clamps: Application



Edge Clamp Spacers



- Spacer is used to increase the height of the Edge Clamp and in turn lower the nose profile
- Spacer is adjustable to allow for breakthrough clearance.
- Spacers are low carbon steel, case hardened and ground for precise locating of the workpiece

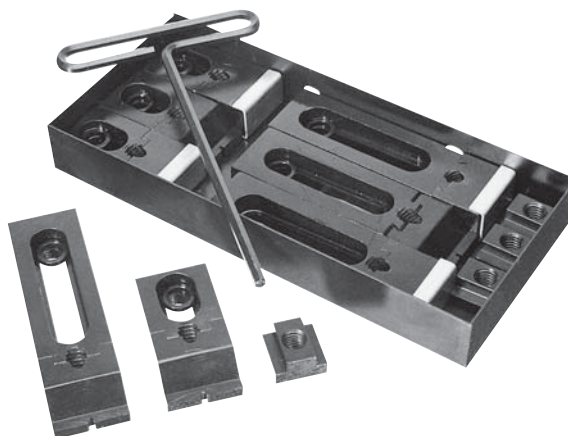
Part No.	A	B	C	D	E	F
33885	6	1.5	.5	2.5	0.531	0.688
81103	4.62	1.5	1	2.06	0.531	0.688
81104	5.62	1.5	1	2.43	0.531	0.688
81105	4	1.5	1	1.46	0.531	0.688
82905	5.75	2	1.5	2.41	0.812	0.84
84703	3.25	1	0.3125	1.5	0.34	0.31
84704	3.25	1	0.625	1.5	0.34	0.31

Nuzzler® Edge Clamp Kits: Small

Kit Contains:

- 4 Low Grip Clamps
 - 4 Standard Grip Clamps
 - 4 T-Slot Nuts
 - 8 Washers
 - 1 T-Handle Wrench
 - 1 Holder
- For material information, see individual components

Part No.	Edge Clamps 2 Each	T-Slot Nut No.	Table Slot Size	Socket Cap Screw Size	Weight Per Kit
23800	33817-33818 33821-33822	41403T	3/8	5/16	5
23801	33817-33818 33821-33822	41433T	7/16	5/16	5
23802	33817-33818 33821-33822	41434T	1/2	5/16	5
23803	33801-33802 33803-33804	41404T	7/16	3/8	5
23804	33801-33802 33803-33804	41405T	1/2	3/8	5
23805	33801-33802 33803-33804	41406T	9/16	3/8	5
23806	33805-33806 33807-33808	41409T	9/16	1/2	10
23807	33805-33806 33807-33808	41410T	5/8	1/2	10
23808	33805-33806 33807-33808	41412T	11/16	1/2	10

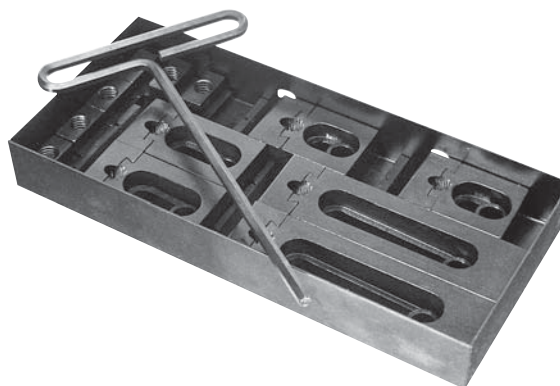


Nuzzler® Edge Clamp Kits: Large

Kit Contains:

- 6 Low Grip Clamps
 - 6 T-Slot Nuts
 - 6 Washers
 - 1 T-Handle Wrench
 - 1 Holder
- For material information, see individual components

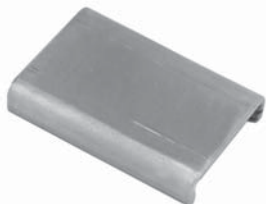
Part No.	Edge Clamps 2 Each	T-Slot Nut No.	Table Slot Size	Socket Cap Screw Size	Weight Per Kit
23809	33817-33819-33821	41403T	3/8	5/16	10
23810	33817-33819-33821	41433T	7/16	5/16	10
23811	33817-33819-33821	41434T	1/2	5/16	10
23812	33801-33890-33892	41404T	7/16	3/8	10
23813	33801-33890-33892	41405T	1/2	3/8	10
23814	33801-33890-33892	41406T	9/16	3/8	10
23815	33823-33825-33827	41409T	9/16	1/2	11
23816	33823-33825-33827	41410T	5/8	1/2	11
23817	33823-33825-33827	41412T	11/16	1/2	11



Nuzzler® Edge Clamp Accessories

Aluminum Nose Cap

- Prevents damage to workpiece
- For standard grip clamps only



Part No.	Height	Width	Fits Clamp Number	Weight (lbs/100pcs)
33852	5/8	1	33818-33820-33822	1
33850	5/8	1-1/4	33802-33804-33891	1
			33893	
33851	3/4	1-1/2	33806-33808-33810	1
			33813	
33853	7/8	1-1/2	33824-33826-33828	

Clamp Washers



Part No.	Socket Cap Screw Size	Fits Clamp Number	Weight (lbs/100pcs)
33874	5/16	33817-33818-33819	1
		33820-33821-33822	
33875	3/8	33801-33802-33803	1
		33804-33890-33891	
		33892-33893	
33876	1/2	33805-33806-33807	1
		33808-33809-33810	
		33811-33812-33813	
		33814-33823-33824	
		33825-33826-33827	
		33828	
33870	3/4	33815-33829	2
33871	7/8	33816	6

T-Handle Wrenches



Part No.	Wrench Hex Size	Adj. Screw Size	Fits Clamp Number	Weight (lbs/100pcs)
33884	5/32	5/16-18	33817-33818-33819	7
			33820-33821-33822	
33880	3/16	3/8-16	33801-33802-33803	12
			33804-33890-33891	
			33892-33893	
33881	1/4	1/2-13	33805-33806-33807	20
			33808-33809-33810	
			33811-33812-33813	
			33814-33823-33824	
			33825-33827	
			33828	
33882	5/16	5/8-11	33815-33829	42
33883	1/2	7/8-9	33816	145

Adjustment Screws

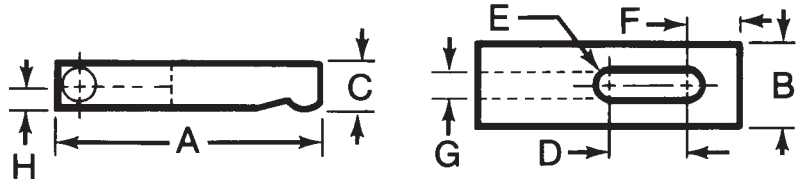
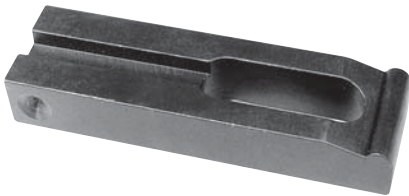
- Alloy Steel Material
- Black Oxide Finish



Part No.	Thread	Wrench Hex Size	Fits Clamp Number	Weight (lbs/100pcs)
33865	5/16-18	5/32	33817-33818-33819	2
			33820-33821-33822	
33864	3/8-16	3/16	33801-33802-33803	1
			33804-33890-33891	
			33892-33893	
33861	1/2-13	1/4	33811-33814-33823	2
			33824-33825-33826	
			33827-33828	
			33805-33806-33807	
			33808-33809-33810	
			33812-33813	
33862	5/8-11	5/16	33815-33829	2
33863	7/8-9	1/2	33816	10

Center Clamps

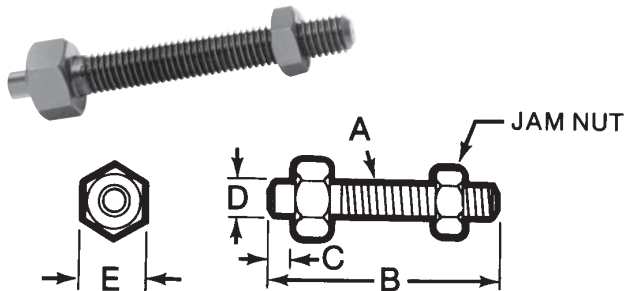
- Material: 1018 Steel
- Case Hardened, Black Oxide Finish
- See Clamp Rest below to place in center groove
- Finger grips on both sides



Part No.	A	B	C	D	Stud Size E	F	G	H	Wt. (lbs/100pcs)
30102	2-1/2	5/8	3/8	3/4	1/4	1/2	3/16	1/8	16
30103	4	1-1/4	5/8	1-1/4	1/2	3/4	3/8	9/32	65
30105	5	1-1/4	5/8	1-3/4	1/2	3/4	3/8	9/32	81
30106	5-1/2	1-1/4	5/8	2	1/2	3/4	3/8	9/32	93
30107	6	1-1/4	5/8	2-1/4	1/2	3/4	3/8	9/32	109
30108	4-1/2	1-1/2	3/4	1-3/8	5/8	7/8	1/2	9/32	116
30109	5	1-1/2	3/4	1-5/8	5/8	7/8	1/2	9/32	228

Clamp Rest

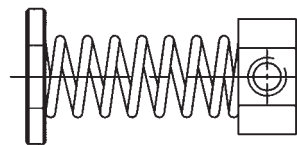
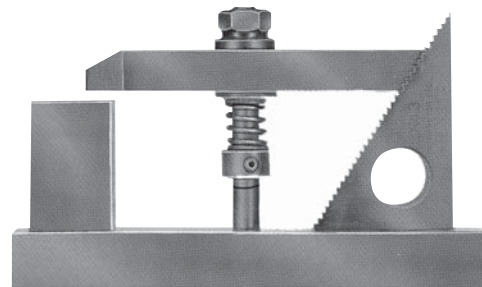
- Material: Low Carbon Steel
- Screw Case Hardened, Black Oxide Finish.
- Many sizes conform to TCMAI standards
- Clamp Rests can be used with Center Clamps



Part No.	A	B	C	D	E	Wt. (lbs/100pcs)
44001	1/4-20	1-1/4	1/8	5/32	7/16	4
44002	3/8-16	2-1/4	7/32	11/32	9/16	12
44003	1/2-13	2-3/8	1/4	11/32	11/16	41
44004	1/2-13	3-7/8	1/4	11/32	11/16	30
44006	5/8-11	3-7/8	1/4	15/32	7/8	39
44008	3/4-10	3-7/8	1/4	15/32	1-1/16	78
44009	5/16-18	1-7/8	3/16	7/32	1/2	5
44010	5/16-18	2-1/4	3/16	7/32	1/2	5.5

Clamp Supports

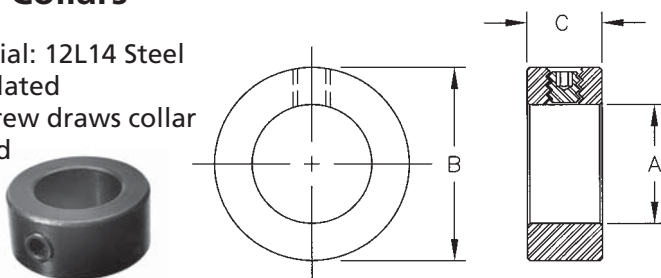
- Includes Washer, Spring and Shaft Collar
- Black Oxide Finish on washer only



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

Shaft Collars

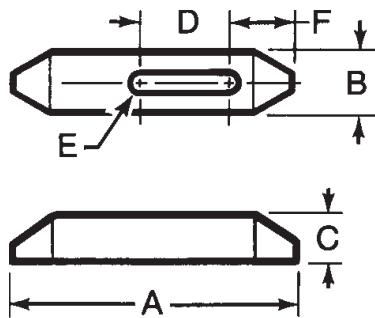
- Material: 12L14 Steel
- Zinc Plated
- Set screw draws collar to stud



Part No.	A	B	C	Set Screw Thread	Weight (lbs/100pcs)
50901	1/4	1/2	9/32	10-32	1
50902	5/16	5/8	11/32	10-32	1
50903	3/8	3/4	3/8	1/4-20	2
50904	1/2	1	7/16	1/4-20	2
50905	5/8	1-1/8	1/2	5/16-18	6
50906	3/4	1-1/4	9/16	5/16-18	7
50908	1	1-5/8	5/8	5/16-18	3

Plain Clamps

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



English

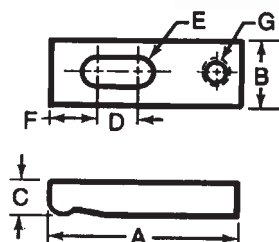
Part No.	A	B	C	D	Stud Size E	F	Wt. (lbs/100pcs)
30401	2-1/2	1	1/2	13/16	5/16 and 3/8	27/32	24
30402	4	1	5/8	1-7/16	5/16 and 3/8	1-1/32	48
30403	6	1-1/8	3/4	2-3/16	5/16 and 3/8	1-5/32	105
30404	2-1/2	1-1/8	1/2	1-1/16	1/2	29/32	24
30405	4	1-1/4	3/4	1-5/16	1/2	1-5/32	67
30406	6	1-1/4	7/8	2-1/16	1/2	1-9/32	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 and 1	1-27/32	274
30414	8	2	1-3/8	1-15/16	7/8 and 1	2-1/32	425
30415	10	2	1-1/2	2-15/16	7/8 and 1	2-1/32	618

Metric Dimensions in millimeters

Part No.	A	B	C	D	Stud Size E	F	Wt. (lbs/100pcs)
30401M	64	25	13	21	M6-M8-M10	21	24
30402M	102	25	16	37	M6-M8-M10	26	48
30403M	152	29	19	56	M6-M8-M10	29	105
30404M	64	29	13	18	M12	23	24
30405M	102	32	16	33	M12	29	67
30406M	152	32	19	52	M12	29	37
30407M	64	32	16	14	M16	25	31
30408M	102	38	19	30	M16	31	83
30409M	152	38	22	49	M16	34	150
30410M	102	38	19	27	M20	33	75
30411M	152	38	25	49	M20	37	164
30412M	203	45	29	56	M20	48	321
30413M	152	51	32	43	M24	44	274
30414M	203	51	35	49	M24	52	425
30415M	254	51	38	75	M24	52	618

Tapped End Clamps

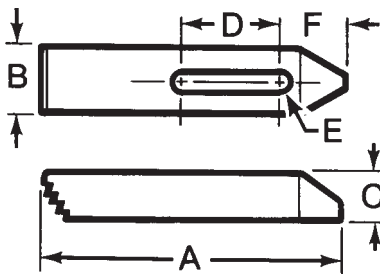
- Material: 1018 Steel
- Case Hardened
- Black Oxide Finish



Part No.	A	B	C	D	Stud Size E	F	G	Wt. (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	--

Serrated End Clamps

- Material: 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



English

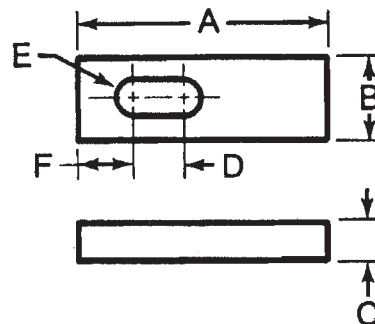
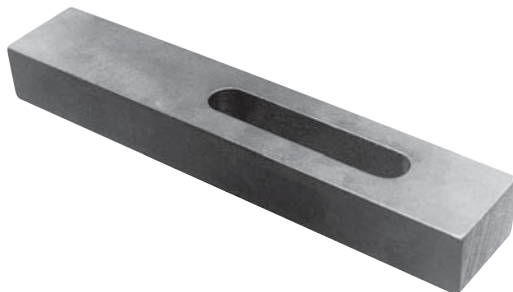
Part No.	A	B	C	D	Stud Size E	F	Wt. (lbs/100pcs)
30501	2-1/2	1	1/2	13/16	5/16 or 3/8	27/32	23
30502	4	1	5/8	1-7/16	5/16 or 3/8	1-1/32	49
30503	6	1-1/8	3/4	2-3/16	5/16 or 3/8	1-5/32	106
30504	2-1/2	1-1/8	1/2	11/16	1/2	29/32	27
30505	4	1-1/4	3/4	1-5/16	1/2	1-5/32	72
30506	6	1-1/4	7/8	2-1/16	1/2	1-9/32	134
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

Metric Dimensions in millimeters

Part No.	A	B	C	D	Stud Size E	F	Wt. (lbs/100pcs)
30501M	64	25	13	21	M6-M8-M10	21	23
30502M	102	25	16	37	M6-M8-M10	26	49
30503M	152	29	19	56	M6-M8-M10	29	106
30504M	64	29	13	18	M12	23	27
30505M	102	32	16	33	M12	29	72
30506M	152	32	19	52	M12	29	134
30507M	64	32	16	14	M16	25	33
30508M	102	38	19	30	M16	31	87
30509M	152	38	22	49	M16	34	160
30510M	102	38	19	27	M20	33	81
30511M	152	38	25	49	M20	37	170
30512M	203	45	29	56	M20	48	330
30513M	152	51	32	43	M24	44	275
30514M	203	51	35	49	M24	52	440
30515M	254	51	38	75	M24	52	601

Soft Clamps

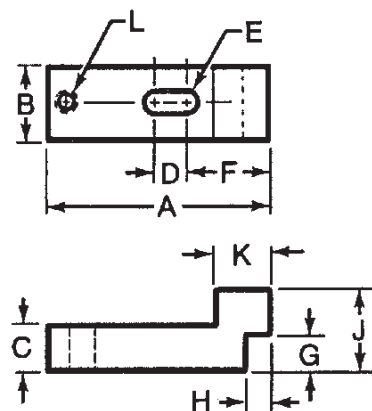
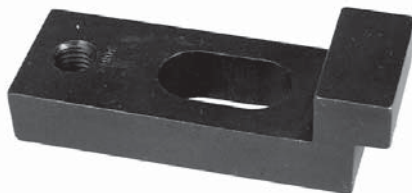
- Material: Mild Steel for easy modification
- Black Oxide Finish



Part No.	A	B	C	D	Stud Size E	F	Wt. (lbs/100pcs)
30701	6	1-1/8	3/4	2	5/16 or 3/8	1-5/32	120
30702	6	1-1/2	3/4	2	1/2	1-7/32	160
30703	6	1-1/2	7/8	2	5/8	1-9/32	179
30704	6	1-1/2	1	2	3/4	1-11/32	194

Step Clamps

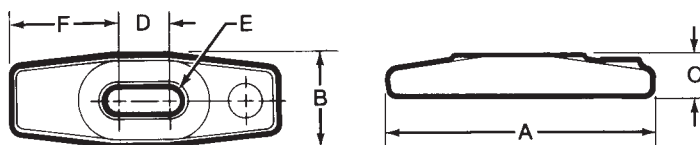
- Material: 1018 Steel
- Black Oxide Finish
- Case Hardened



Part No.	A	B	C	D	Stud Size E	F	G	H	J	K	Thread L	Weight (lbs./100 pcs.)
30800	3	5/8	9/16	7/8	5/16	1-1/4	3/8	3/8	7/8	3/4	5/16-18	
30801	3-1/4	1	5/8	7/8	3/8	1-3/16	1/2	1/2	1-1/8	3/4	3/8-16	50
30802	3-5/8	1-1/8	5/8	7/8	1/2	1-7/16	1/2	1/2	1-1/8	7/8	3/8-16	66
30803	3-3/4	1-1/4	3/4	7/8	5/8	1-7/16	3/4	3/8	1-3/8	3/4	3/8-16	84
30804	4-1/4	1-1/2	3/4	3/4	3/4	1-7/8	3/4	3/8	1-3/8	13/16	1/2-13	118

Forged Plain Clamps

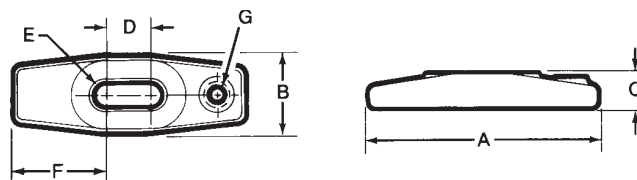
- Material: Forged high tensile carbon steel
- Black Oxide Finish



Part No.	A	B	C	D	Stud Size E	F	Wt. (lbs/100pcs)
33901	4	1-5/8	3/4	11/16	5/8 or 1/2	1-21/32	86
33902	6	1-3/4	7/8	1-3/8	5/8 or 1/2	2-5/16	173
33903	8	2-1/8	1-1/8	2	3/4	2-31/32	366
33904	10	2-1/2	1-3/8	2-3/4	7/8	3-5/8	657

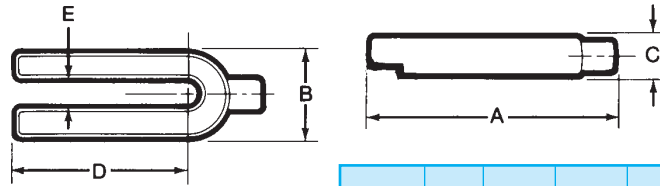
Forged Tapped Plain Clamps

- Material: Forged high tensile carbon steel
- Black Oxide Finish



Part No.	A	B	C	D	Stud Size E	F	Tap G	Wt. (lbs/100pcs)
33911	4	1-5/8	3/4	11/16	5/8 or 1/2	1-21/32	1/2-13	82
33912	6	1-3/4	7/8	1-3/8	5/8 or 1/2	2-5/16	5/8-11	168
33913	8	2-1/8	1-1/8	2	3/4	2-31/32	3/4-10	360
33914	10	2-1/2	1-3/8	2-3/4	7/8	3-5/8	7/8-9	630

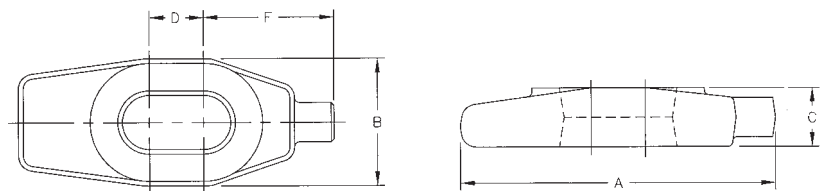
Forged "U" Clamps



- Material: Forged high tensile carbon steel
- Black Oxide Finish

Part No.	A	B	C	D	Stud Size E	Wt. (lbs/100pcs)
33920	4	1-3/4	3/4	2-9/16	5/8 or 1/2	86
33921	6	2	7/8	4-5/16	5/8 or 1/2	193
33922	8	2-3/8	1-1/8	6	3/4	400
33923	10	2-3/4	1-1/4	7-11/16	7/8	638
33924	12	3-1/4	1-3/8	9-5/16	1	798

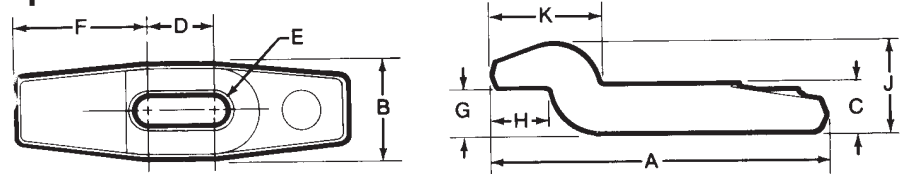
Forged Finger-Tip Clamps



- Material: Forged high tensile carbon steel
- Black Oxide Finish

Part No.	A	B	C	D	Stud Size E	F	Wt. (lbs/100pcs)
33930	4	1-5/8	3/4	11/16	5/8 or 1/2	1-21/32	71
33931	6	1-3/4	7/8	1-1/4	5/8 or 1/2	2-3/8	151
33932	8	2-1/8	1-1/8	1-3/4	3/4	3-1/8	304

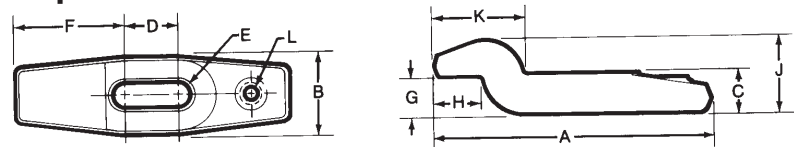
Forged Gooseneck Clamps



- Material:
Forged high tensile carbon steel
- Black Oxide Finish

Part No.	A	B	C	D	Stud Size E	F	G	H	J	K	Wt. (lbs/100pcs)
33940	4	1-5/8	3/4	1/4	5/8 or 1/2	1-7/8	13/16	3/4	1-7/16	1-3/8	100
33941	6	1-3/4	7/8	1	5/8 or 1/2	2-1/2	15/16	1	1-9/16	1-3/4	179
33942	8	2-1/8	1-1/8	1-5/8	3/4	3-3/16	1-1/8	1-1/4	2-1/16	2-1/2	387

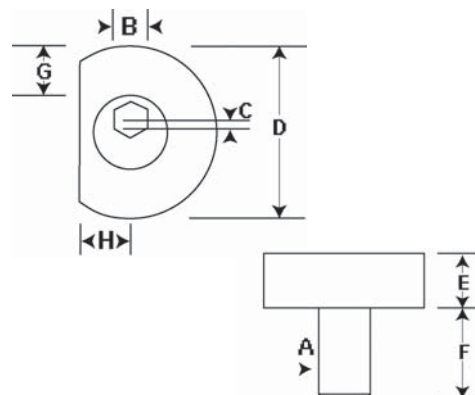
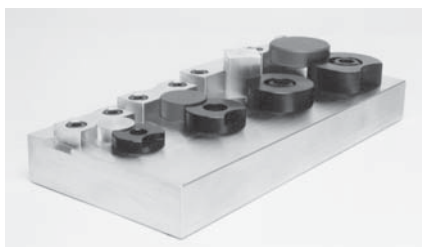
Forged Tapped Gooseneck Clamps



- Material: Forged high tensile carbon steel
- Black Oxide Finish

Part No.	A	B	C	D	Stud Size E	F	G	H	J	K	Tap L	Weight (lbs./100 pcs.)
33950	4	1-5/8	3/4	1/4	5/8 or 1/2	1-7/8	13/16	3/4	1-7/16	1-3/8	1/2-13	100
33951	6	1-3/4	7/8	1	5/8 or 1/2	2-1/2	15/16	1	1-9/16	1-3/4	5/8-11	179
33952	8	2-1/8	1-1/8	1-5/8	3/4	3-3/16	1-1/8	1-1/4	2-1/16	2-1/2	5/8-11	387

Machinable Fixture Clamps



- Machinable steel washers provide more flexibility for holding round or unusual shape parts.
- Parts can be held directly to the fixture plate surface or elevated for through drilling.
- Special screw provided to hold the washer in the proper place during machining.
- Low Profile
- Made of mild steel for machinability

Part No.	Max. Holding Force Lbs.	Clamps Per Pack	A	B	C	D	E	F	G*	H***
35320	800 lbs.	4**	1/4-20	1/8	0.40	.980	.250	.470	.250	.312
35321	2000 lbs.	4**	3/8-16	3/16	0.50	1.23	.350	.710	.275	.406
35322	4000 lbs.	4**	1/2-13	5/16	.100	1.48	.450	.900	.300	.500
35323	6000 lbs.	4**	5/8-11	3/8	.100	1.73	.550	1.125	.350	.593

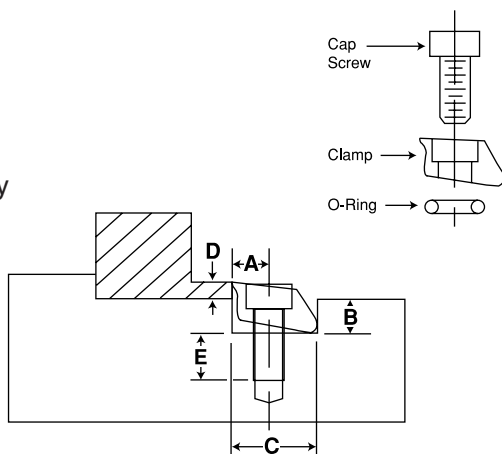
* "G" is the amount of machinable stock.

** Every package includes one machining screw.

*** "H" is the distance from edge of workpiece to drill & tap hole.

Pitbull™ Clamps

- Extremely low bite
- Positive down force
- High resistance to rip-out
- Simple, sturdy, high quality design and components
- Available in several sizes and three styles

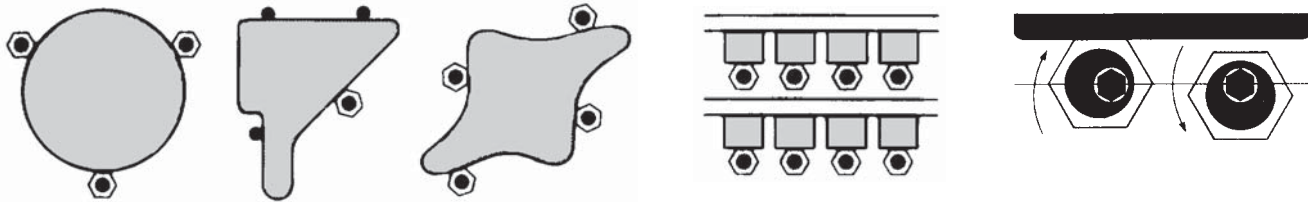


*Trademark of the Pitbull Company, Inc.

Part No.	Description	Clamp Width	Screw Size	Max. Holding Force Lbs.	Torque (in./lbs.)	Total Throw	Clamps Per Pkg.	A*	B	C	D	E
35200	Tool Steel, Knife Edge	.375	4-40	650 lbs.	16	.0075	8	.150	.140	.375	.075	.260
35201	Tool Steel, Blunt Edge	.375	4-40	650 lbs.	16	.0075	8	.150	.140	.375	.075	.260
35202	Brass, Blunt Edge	.375	4-40	200 lbs.	5	.0075	8	.150	.140	.375	.075	.220
35203	Tool Steel, Knife Edge	.500	8-32	1500 lbs.	50	.016	8	.200	.187	.500	.100	.390
35204	Tool Steel, Blunt Edge	.500	8-32	1500 lbs.	50	.016	8	.200	.187	.500	.100	.390
35205	Brass, Blunt Edge	.500	8-32	400 lbs.	25	.016	8	.200	.187	.500	.100	.340
35206	Tool Steel, Knife Edge	.750	1/4-20	3600 lbs.	200	.024	6	.300	.280	.750	.150	.570
35207	Tool Steel, Blunt Edge	.750	1/4-20	3600 lbs.	200	.024	6	.300	.280	.750	.150	.570
35208	Brass, Blunt Edge	.750	1/4-20	950 lbs.	50	.024	6	.300	.280	.750	.150	.440
35209	Tool Steel, Knife Edge	1.00	3/8-16	6000 lbs.	360	.050	4	.400	.450	1.00	.250	.710
35210	Tool Steel, Blunt Edge	1.00	3/8-16	6000 lbs.	360	.050	4	.400	.450	1.00	.250	.710
35211	Tool Steel, Knife Edge	1.50	1/2-13	12000 lbs.	1300	.075	2	.600	.640	1.50	.375	1.200
35212	Tool Steel, Blunt Edge	1.50	1/2-13	12000 lbs.	1300	.075	2	.600	.640	1.50	.375	1.200

*D: Clamp height

Fixture Clamps



Steel Part No.	Stainless Steel Part No.	Screw Size	Thread Length	Hex Size	Hex Height	Drill & Tap Dist.*	Max. Holding Force Lbs.	Total Throw	Clamps Per Pkg.
35300	-	#8-32	3/8	5/16	.110	.150	205 lbs.	.030	10
35301	-	#10-32	3/8	1/2	.160	.250	350 lbs.	.040	10
35302	-	1/4-20	1/2	5/8	.190	.308	800 lbs.	.040	10
35303	-	5/16-24	1/2	13/16	.190	.400	750 lbs.	.040	12
35304	-	5/16-18	1/2	13/16	.190	.400	750 lbs.	.040	12
35305	-	3/8-16	3/4	13/16	.250	.400	2000 lbs.	.050	10
35306	-	1/2-13	1	1	.375	.500	4000 lbs.	.100	8
35307	-	5/8-11	1 1/4	1 3/16	.500	.590	6000 lbs.	.100	4
-	35308	1/4-20	1/2	5/8	.190	.308	800 lbs.	.040	4
-	35309	5/8-18	1/2	13/16	.190	.400	750 lbs.	.040	4

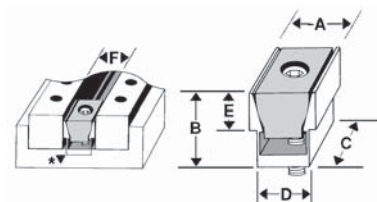
*NOTE: Distance from edge of workpiece to drill & tap hole.

- Hardened steel socket cap screw with an offset head and a hexagonal washer
- Low profile makes computer programming easier
- Small size allows more parts per load
- Simple design keeps cost low

Uniforce® Clamp

- A compact, economical workholding device enables you to fixture more parts on the machine table.
- This simple, efficient method of clamping workpieces will decrease your set up time, and increase your profits and production.

Part No.	Thread Size	Hex Key Size	Max. Spread	Holding Force Lbs.	Clamps Per Pkg.	A	B	C	D	E	F
35330	#2-56	5/64	.265	200 lbs.	6	.240	.27	.320	.210	.140	.250
35331	#4-40	3/32	.395	310 lbs.	6	.360	.38	.470	.310	.185	.375
35332	#8-32	9/64	.540	500 lbs.	8	.485	.57	.625	.410	.220	.500
35333	1/4-20	3/16	.800	1500 lbs.	6	.735	.77	.940	.635	.375	.750
35334	5/16-18	1/4	1.060	2000 lbs.	4	.980	1.02	1.250	.820	.500	1.00
35335	1/2-13	3/8	1.590	3500 lbs.	2	1.470	1.52	1.875	1.215	.750	1.50
35336	5/8-11	1/2	2.100	6000 lbs.	2	1.960	2.03	2.500	1.625	1.00	2.00

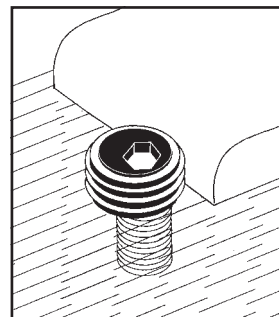


*"F" means the distance between workpieces for clamp clearance. Drill and tap mounting hole on the center of "F" dimension.

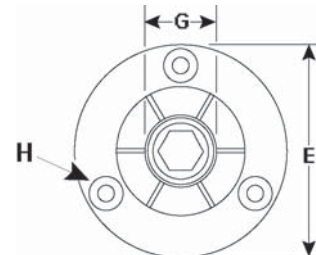
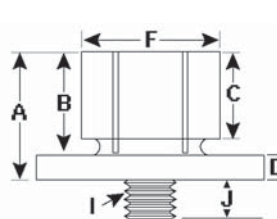
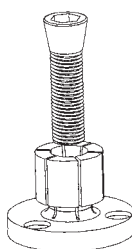
Knife Edge Clamps

- Bites into workpiece for secure clamping
- Follows contour of part for maximum contact
- Hardened steel
- For castings & rough cut stock

Part No.	Thread Size	Package Includes
35220	3/8-16	(8) Cam Screws + Knife Edge W
35221	1/2-13	(8) Cam Screws + Knife Edge W
35222	5/8-11	(4) Cam Screws + Knife Edge W



ID Expansion™ Clamp



- Low profile
- Ideal for secondary operations on lathe parts
- Easily machined to size on lathe or mill
- Excellent for palletized setups
- Allows more parts per workcube or fixture plates
- Clamp body made of mild steel for machinability
- Tighten with hex key or hydraulic pull cylinders

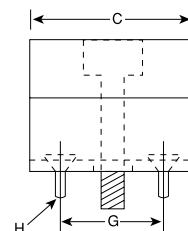
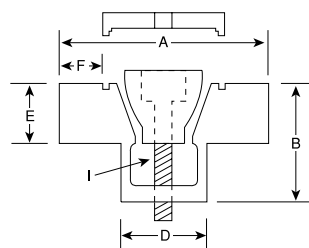
PATENT PENDING

Part No.	Model No.	A	B	C	D	+0.000 E -.002	F	G*	H**	I	J
35260	#0	.86	.63	.59	.23	1.170	.49	.28	6-32 on .825 BHC	8-32	.30
35261	#1	.98	.75	.59	.23	1.240	.56	.48	6-32 on .910 BHC	1/4-20	.50
35262	#2	.98	.75	.59	.23	1.476	.79	.53	6-32 on 1.140 BHC	5/16-18	.56
35263	#3	1.13	.88	.69	.25	1.968	1.06	.71	8-32 on 1.550 BHC	3/8-16	.71
35264	#4	1.25	1.0	.81	.25	2.205	1.39	.90	8-32 on 1.790 BHC	1/2-13	.71
35265	#5	1.56	1.25	1.06	.31	2.736	1.65	1.15	10-32 on 2.200 BHC	5/8-11	.79
35266	#6	1.56	1.25	1.06	.31	2.972	2.03	1.15	10-32 on 2.515 BHC	5/8-11	.79
35267	#7	1.79	1.48	1.27	.31	4.232	3.06	1.15	1/4-20 on 3.646 BHC	5/8-11	.79
35268	#00	.42	.30	.24	.12	.787	.29	.16	2-56 on .540 BHC	2-56	.16
35269	#8	1.79	1.48	1.27	.31	5.232	4.06	1.15	1/4-20 on 4.648 BHC	5/8-11	.79

**G*: Minimum diameter the "F" dimension can be machined or turned down to

**H: 3 mounting screws included

Machinable Uniforce Clamps



- Hold round and unusual shaped parts with ease
- Compact method allows more parts per load at a lower price than vise soft jaw
- Available with extra material on the clamping jaws so it can be machined to conform to the shape of your workpiece
- Specially designed steel wedge spreads the clamping force uniformly on both sides of the 7075-T6 aluminum channel
- Unique locking plate makes the clamp rigid while machining the jaws to your specifications, without vibration

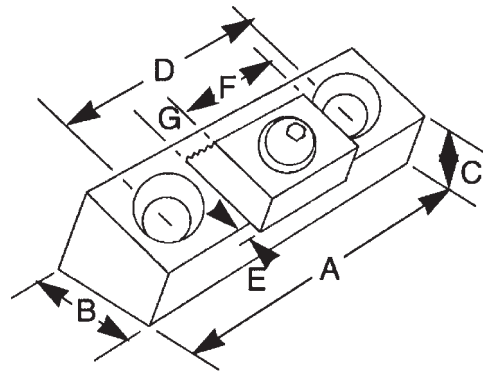
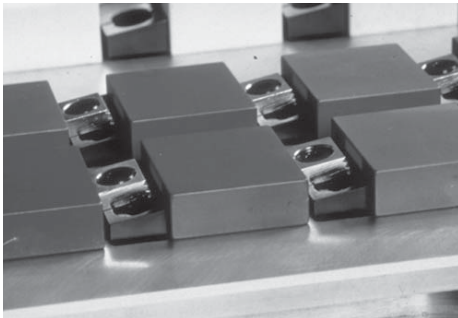
Part No.	Description	Model	A*	B	C	D	E	F**	G	H***	I
35350	1 Clamp Assembly w/Locking Plate	500	1.125	.50	.62	.420	.25	.18	.400	2-56	8-32
35351	1 Clamp Assembly, No Locking Plate	500	1.125	.50	.62	.420	.25	.18	.400	2-56	8-32
35352	1 Clamp Assembly w/Locking Plate	750	1.50	.75	.94	.632	.37	.26	.625	6-32	1/4-20
35353	1 Clamp Assembly, No Locking Plate	750	1.50	.75	.94	.632	.37	.26	.625	6-32	1/4-20
35354	1 Clamp Assembly w/Locking Plate	1000	2.00	1.0	1.25	.820	.50	.39	.812	6-32	5/16-18
35355	1 Clamp Assembly, No Locking Plate	1000	2.00	1.0	1.25	.820	.50	.39	.812	6-32	5/16-18
35356	1 Clamp Assembly w/Locking Plate	1500	3.00	1.5	1.87	1.215	.75	.62	1.20	10-32	1/2-13
35357	1 Clamp Assembly, No Locking Plate	1500	3.00	1.5	1.87	1.215	.75	.62	1.20	10-32	1/2-13
35358	1 Clamp Assembly w/Locking Plate	2000	4.00	2.0	2.5	1.625	1.0	.80	1.625	1/4-20	5/8-11
35359	1 Clamp Assembly, No Locking Plate	2000	4.00	2.0	2.5	1.625	1.0	.80	1.625	1/4-20	5/8-11

*A: The distance needed between workpieces for clamp clearance, drill and tap mounting holes on the center of "A" dimension.

**F: The amount of machinable stock on jaws.

***Mounting Screws included.

Compact Toe Clamp



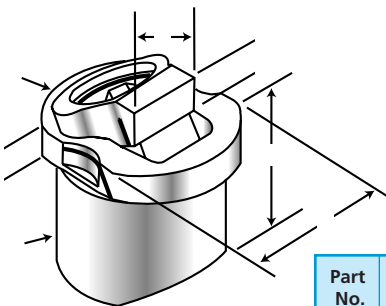
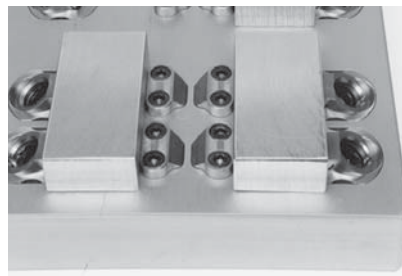
- Positive down force
- Cam action
- Clamp base should be installed in a slot to retain location
- Mounting screws included
- Available in three sizes
- Clamps can be used in series
- Clamp base provides for higher clamping – height is determined by depth of slot

Part No.	Cam Screw	Total Distance of Movement	Key Size	Mounting Screws	A	B	C	D	E*	F	G
35230	MB-6	.050	3/16	5/16-18 x 3/4 LH	1.70	.75	.50	1.00	.090	.75	.25
35231	MB-8	.100	5/16	3/8-16 x 3/4 LH	2.12	1.00	.45	1.32	.110	1.00	.38
35232	MB-10	.100	3/8	1/2-13 x 1 1/4 SHCS	2.95	1.50	.99	2.00	.130	1.50	.50

*"E" is the distance needed between the front of the clamp base & the workpiece.

Dyna-Force Clamp

- Incredible clamping and hold down power
- Low profile, compact design
- High quality stainless steel construction
- Easy to install
- Smooth or serrated
- Available in five sizes



Part No.	Clamp Travel	Drive Screw	Key Size	Clamp Jaw** & Hardness	A*	B	C	D	E	F	Min G	Opt G	Max G
35240	2.0	6mm	5mm	smooth 34RC	20.00	24.90	19.00	19.90	4.50	13.50	3.25	5.00	6.75
35241	2.0	6mm	5mm	serrated 44RC	20.00	24.90	19.00	19.90	4.50	13.50	3.25	5.00	6.75
35242	2.2	8mm	6mm	smooth 34RC	25.00	29.90	24.00	24.90	5.00	15.00	4.50	6.50	8.35
35243	2.2	8mm	6mm	serrated 44RC	25.00	29.90	24.00	24.90	5.00	15.00	4.50	6.50	8.35
35244	3.8	10mm	8mm	smooth 34RC	30.00	37.90	29.00	29.90	7.00	20.00	4.50	7.50	10.75
35245	3.8	10mm	8mm	serrated 44RC	30.00	37.90	29.00	29.90	7.00	20.00	4.50	7.50	10.75
35246	4.3	12mm	10mm	smooth 34RC	40.00	47.90	39.00	39.90	8.00	25.00	6.00	9.50	13.00
35247	4.3	12mm	10mm	serrated 44RC	40.00	47.90	39.00	39.90	8.00	25.00	6.00	9.50	13.00
35248	5.0	16mm	14mm	smooth 34RC	50.00	60.90	49.00	49.90	10.00	30.00	7.00	11.00	15.50
35249	5.0	16mm	14mm	serrated 44RC	50.00	60.90	49.00	49.90	10.00	30.00	7.00	11.00	15.50

*"A" is body diameter

**Smooth jaw only will have relief cut

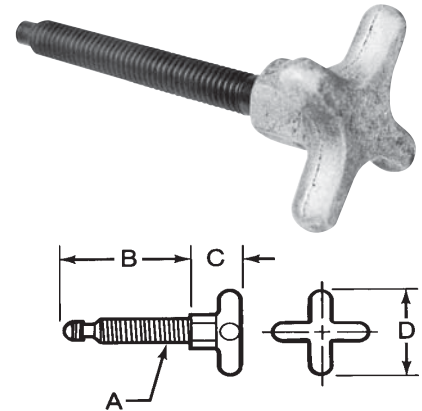
Bodies for Swivel Screw Clamp Systems

- Material: 12L14 Steel on all screw parts
- Black Oxide Finish
- Order pads separately – see page 46

Hand Knob Head Swivel Screw Clamps

- Use when hand tightening is necessary.

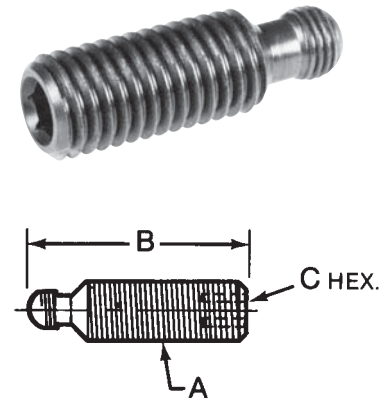
Part No.	Thread A	B	C	D	Use with Small Pad	Use with Large Pad	Wt. (lbs/100pcs)
31121	1/4-20	1-15/32	3/4	1-1/8	31501	31601	5
31122	1/4-20	1-31/32	3/4	1-1/8	31501	31601	5
31131	5/16-18	1-15/32	7/8	1-1/2	31502	31602	7
31133	5/16-18	2-15/32	7/8	1-1/2	31502	31602	8
31141	3/8-16	1-7/16	1	2	31503	31603	10
31142	3/8-16	1-15/16	1	2	31503	31603	12
31144	3/8-16	2-15/16	1	2	31503	31603	14
31154	1/2-13	2-15/16	1-1/2	2-1/2	31504	31604	31
31155	1/2-13	3-15/16	1-1/2	2-1/2	31504	31604	35



Hex Socket Head Swivel Screw Clamps

- Use when space is limited and greater clamping pressures are needed.

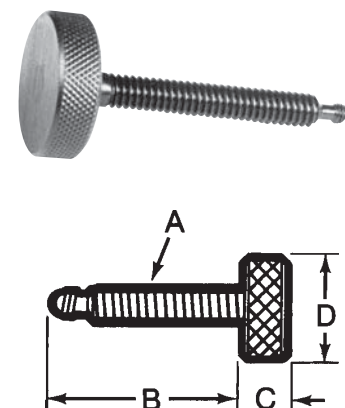
Part No.	Thread A	B	C	Use with Small Pad	Use with Large Pad	Wt. (lbs/100pcs)
31221	1/4-20	15/32	3/32	31501	31601	*
31222	1/4-20	23/32	3/32	31501	31601	*
31223	1/4-20	31/32	3/32	31501	31601	1
31224	1/4-20	1-15/32	3/32	31501	31601	1
31231	5/16-18	23/32	5/32	31502	31602	*
31232	5/16-18	31/32	5/32	31502	31602	*
31233	5/16-18	1-15/32	5/32	31502	31602	2
31234	5/16-18	1-31/32	5/32	31502	31602	3
31241	3/8-16	11/16	3/16	31503	31603	1
31242	3/8-16	15/16	3/16	31503	31603	2
31243	3/8-16	1-7/16	3/16	31503	31603	3
31244	3/8-16	1-15/16	3/16	31503	31603	4
31252	1/2-13	15/16	1/4	31504	31604	2
31253	1/2-13	1-7/16	1/4	31504	31604	5
31255	1/2-13	2-15/16	1/4	31504	31604	6



Knurled Head Swivel Screw Clamps

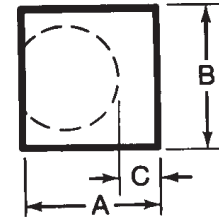
- Use when finger tightening provides adequate pressure.

Part No.	Thread A	B	C	D	Use with Small Pad	Use with Large Pad	Wt. (lbs/100pcs)
31321	1/4-20	1-15/32	5/16	1	31501	31601	8
31322	1/4-20	1-31/32	5/16	1	31501	31601	12
31331	5/16-18	1-15/32	3/8	1-1/8	31502	31602	9
31332	5/16-18	1-31/32	3/8	1-1/8	31502	31602	13
31333	5/16-18	2-15/32	3/8	1-1/8	31502	31602	14
31341	3/8-16	1-7/16	7/16	1-1/4	31503	31603	18
31342	3/8-16	1-15/16	7/16	1-1/4	31503	31603	19
31343	3/8-16	2-7/16	7/16	1-1/4	31503	31603	20
31344	3/8-16	2-15/16	7/16	1-1/4	31503	31603	21
31354	1/2-13	2-15/16	7/16	1-1/4	31504	31604	26



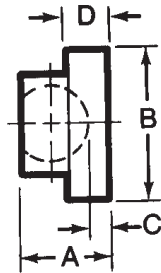
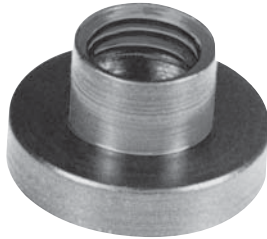
Pads for Swivel Screw Clamp Systems

- Used to secure clamping of soft metal or angular surface without damaging workpiece
- Assembly includes: 1 Swivel Clamp Body and 1 Pad
- For material information, see individual components
- Material: 12L14 Steel
- Black Oxide Finish
- Left Hand internal threads



Small Pad

Part No.	Fit Body Thread Size	A	B	C	Internal Thread (left hand)	Weight (lbs/100pcs)
31501	1/4-20	0.193	3/16	1/16	8-36	1
31502	5/16-18	19/64	1/4	3/64	12-28	1
31503	3/8-16	21/64	19/64	1/16	1/4-28	1
31504	1/2-13	25/64	13/32	1/16	5/16-24	2

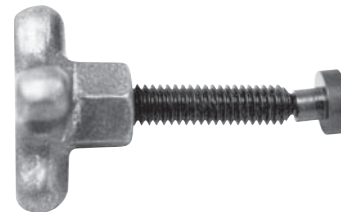


Large Pad

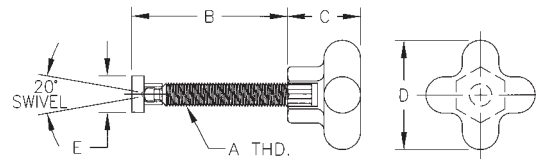
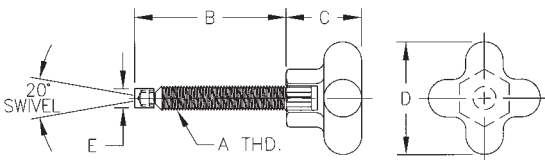
Part No.	Body Thread Size	A	B	C	D	Internal Thread (left hand)	Weight (lbs/100pcs)
31601	1/4-20	5/16	3/8	1/8	1/8	8-36	1
31602	5/16-18	23/64	1/2	9/64	5/32	12-28	1
31603	3/8-16	7/16	9/16	11/64	3/16	1/4-28	1
31604	1/2-13	27/64	3/4	1/8	3/16	5/16-24	2

Swivel Screw Clamp Assemblies

- Assembly includes: 1 Swivel Clamp Body and 1 Pad
- For material information, see individual components



Hand Knob Head Swivel Screw Clamp Assemblies



Small Pad

Part No.	A	B	C	D	E	Wt. (lbs/100pcs)
31121S	1/4-20	1.50	3/4	1-1/8	3/16	6
31122S	1/4-20	2.00	3/4	1-1/8	3/16	7
31131S	5/16-18	1.50	7/8	1-1/2	1/4	8
31133S	5/16-18	2.50	7/8	1-1/2	1/4	9
31141S	3/8-16	1.50	1	2	19/64	11
31142S	3/8-16	2.00	1	2	19/64	13
31144S	3/8-16	3.00	1	2	19/64	15
31154S	1/2-13	3.00	1-1/2	2-1/2	13/32	33
31155S	1/2-13	4.00	1-1/2	2-1/2	13/32	37

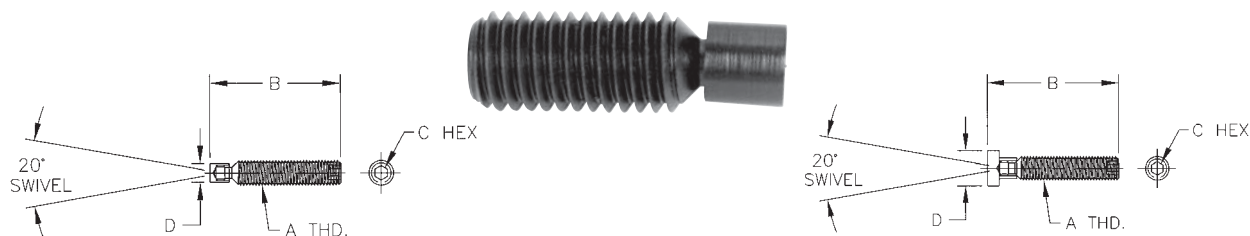
Large Pad

Part No.	A	B	C	D	E	Wt. (lbs/100pcs)
31121L	1/4-20	1.60	3/4	1-1/8	3/8	6
31122L	1/4-20	2.10	3/4	1-1/8	3/8	7
31131L	5/16-18	1.60	7/8	1-1/2	1/2	8
31133L	5/16-18	2.60	7/8	1-1/2	1/2	9
31141L	3/8-16	1.60	1	2	9/16	11
31142L	3/8-16	2.10	1	2	9/16	13
31144L	3/8-16	3.10	1	2	9/16	15
31154L	1/2-13	3.10	1-1/2	2-1/2	3/4	33
31155L	1/2-13	4.10	1-1/2	2-1/2	3/4	37

Swivel Screw Clamp Assemblies

- Assembly includes: 1 Swivel Clamp Body and 1 Pad
- For material information, see individual components

Hex Head Swivel Screw Clamp Assemblies



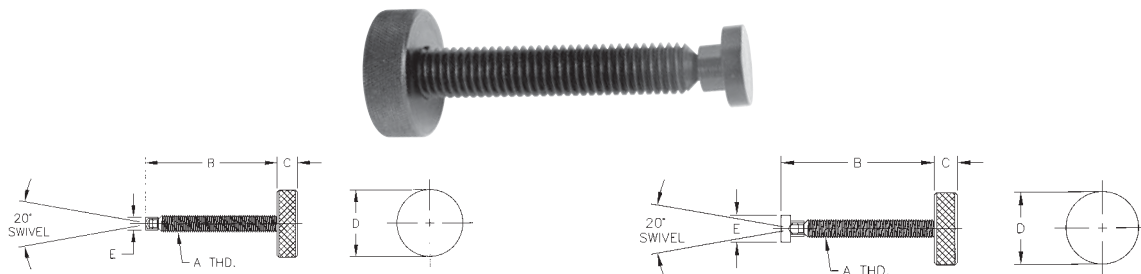
Small Pad

Part No.	A	B	C	D	Weight (lbs/100pcs)
31221S	1/4-20	0.53	3/32	3/16	1
31222S	1/4-20	0.78	3/32	3/16	1
31223S	1/4-20	1.03	3/32	3/16	2
31224S	1/4-20	1.50	3/32	3/16	2
31231S	5/16-18	0.77	5/32	1/4	1
31232S	5/16-18	1.02	5/32	1/4	1
31233S	5/16-18	1.52	5/32	1/4	3
31234S	5/16-18	2.02	5/32	1/4	4
31241S	3/8-16	0.75	3/16	19/64	2
31242S	3/8-16	1.00	3/16	19/64	3
31243S	3/8-16	1.50	3/16	19/64	4
31244S	3/8-16	2.00	3/16	19/64	5
31252S	1/2-13	1.00	1/4	13/32	4
31253S	1/2-13	1.50	1/4	13/32	7
31255S	1/2-13	3.00	1/4	13/32	10

Large Pad

Part No.	A	B	C	D	Weight (lbs/100pcs)
31221L	1/4-20	0.59	1/8	3/8	1
31222L	1/4-20	0.84	1/8	3/8	1
31223L	1/4-20	1.09	1/8	3/8	2
31224L	1/4-20	1.59	1/8	3/8	2
31231L	5/16-18	0.86	5/32	1/2	1
31232L	5/16-18	1.11	5/32	1/2	1
31233L	5/16-18	1.61	5/32	1/2	3
31234L	5/16-18	2.11	5/32	1/2	4
31241L	3/8-16	0.86	3/16	9/16	2
31242L	3/8-16	1.11	3/16	9/16	3
31243L	3/8-16	1.61	3/16	9/16	4
31244L	3/8-16	2.11	3/16	9/16	5
31252L	1/2-13	1.06	1/4	3/4	4
31253L	1/2-13	1.56	1/4	3/4	7
31255L	1/2-13	3.06	1/4	3/4	10

Knurled Head Swivel Screw Clamp Assemblies



Small Pad

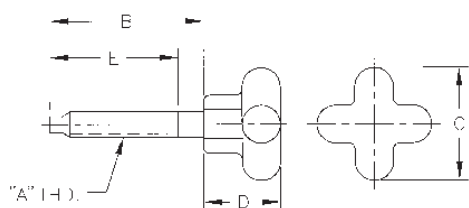
Part No.	A	B	C	D	E	Wt. (lbs/100pcs)
31321S	1/4-20	1.50	5/16	1	3/16	9
31322S	1/4-20	2.03	5/16	1	3/16	13
31331S	5/16-18	1.51	3/8	1-1/8	1/4	10
31332S	5/16-18	2.02	3/8	1-1/8	1/4	14
31333S	5/16-18	2.52	3/8	1-1/8	1/4	15
31341S	3/8-16	1.50	7/16	1-1/4	19/64	19
31342S	3/8-16	2.00	7/16	1-1/4	19/64	20
31343S	3/8-16	2.50	7/16	1-1/4	19/64	21
31344S	3/8-16	3.00	7/16	1-1/4	19/64	22
31354S	1/2-13	3.00	7/16	1-1/4	13/32	28

Large Pad

Part No.	A	B	C	D	E	Wt. (lbs/100pcs)
31321L	1/4-20	1.59	5/16	1	3/8	9
31322L	1/4-20	2.09	5/16	1	3/8	13
31331L	5/16-18	1.61	3/8	1-1/8	1/2	10
31332L	5/16-18	2.11	3/8	1-1/8	1/2	14
31333L	5/16-18	2.61	3/8	1-1/8	1/2	15
31341L	3/8-16	1.61	7/16	1-1/4	9/16	19
31342L	3/8-16	2.11	7/16	1-1/4	9/16	20
31343L	3/8-16	2.61	7/16	1-1/4	9/16	21
31344L	3/8-16	3.11	7/16	1-1/4	9/16	22
31354L	1/2-13	3.06	7/16	1-1/4	3/4	28

Dog Point Hand Knob Screws

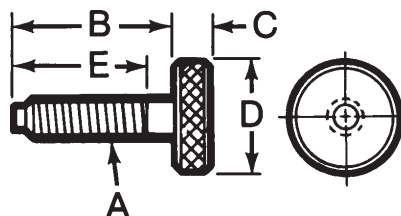
- Material:
Knob: Cast Aluminum
Stem: 12L14 Steel
- Stem only: Black Oxide Finish, Case Hardened
- Many sizes conform to TCMAI standards
- Use when hand tightening is necessary for holding or clamping
- Dog point prevents damage to end threads



Part No.	Thread A	B	C	D	E	Weight (lbs/100pcs)
31025	1/4-20	1-1/2	3/4	1-1/8	1-1/4	5
31026	1/4-20	2	3/4	1-1/8	1-3/4	5
31027	1/4-20	2-1/2	3/4	1-1/8	2-1/4	6
31031	5/16-18	2	7/8	1-1/2	1-3/4	9
31032	5/16-18	2-1/2	7/8	1-1/2	2-1/4	9
31040	3/8-16	2-1/6	1	2	1-3/4	12
31041	3/8-16	2-9/16	1	2	2-1/4	14
31042	3/8-16	3-1/16	1	2	2-3/4	15
31050	1/2-13	2-9/16	1-1/2	2-1/2	2-1/4	35
31051	1/2-13	3-1/16	1-1/2	2-1/2	2-3/4	31
31052	1/2-13	3-9/16	1-1/2	2-1/2	3-1/4	39

Dog Point Knurled Head Screws

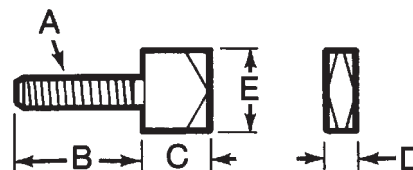
- Material: 12L14 Steel
- Black Oxide Finish
- Case Hardened
- Many sizes conform to TCMAI standards
- Use for light clamping or holding
- Knurled head allows better grip
- Dog point prevents damage to end threads
- Special sizes quoted upon request



Part No.	Thread A	B	C	D	E	Weight (lbs/100pcs)
43801	10-24	1	1/4	3/4	3/4	3
43802	10-24	1-1/2	1/4	3/4	1-1/4	3
43803	10-24	2	1/4	3/4	1-3/4	3
43804	10-32	1-1/2	1/4	3/4	1-3/8	3
43805	1/4-20	2	5/16	1	1-3/4	5
43806	1/4-20	2-1/2	5/16	1	2-1/4	9
43807	1/4-20	1-1/2	5/16	1	1-1/4	9
43808	5/16-18	1-1/2	3/8	1-1/8	1-1/4	6
43809	5/16-18	2	3/8	1-1/8	1-3/4	11
43810	5/16-18	2-1/2	3/8	1-1/8	2-1/4	13
43813	3/8-16	2	7/16	1-1/4	1-3/4	13
43811	3/8-16	2-1/2	7/16	1-1/4	2-1/4	24
43812	3/8-16	3	7/16	1-1/4	2-3/4	27
43814	1/2-13	3	7/16	1-1/4	2-3/4	28
43815	1/2-13	3-1/2	7/16	1-1/4	3-1/4	30

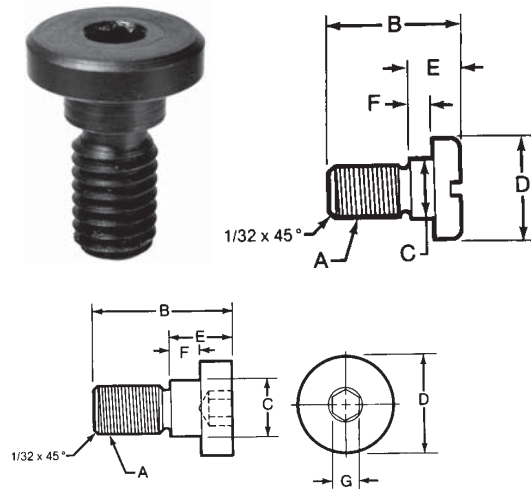
Quarter Turn Screws

- Material: 1018 Steel
- Black Oxide Finish
- Many sizes conform to TCMAI standards
- Chamfered corners for self alignment of screw



Part No.	Thread A	B	C	D	E	Weight (lbs/100pcs)
43901	10-24	1	1/2	3/16	1/2	3
43902	10-32	1	1/2	3/16	1/2	3
43903	1/4-20	1-1/4	5/8	1/4	3/4	5
43904	5/16-18	1-1/2	3/4	5/16	1	9
43905	3/8-16	1-1/2	1	3/8	1	11

Lock Screws



Slotted Lock Screws

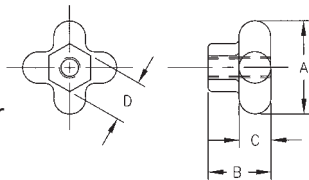
Part No.	Thread A	B	C	D	E	F	Wt. (lbs/100pcs)
79110	8-32	7/16	3/16	5/16	3/16	.094/1.00	1
79111	5/16-18	5/8	3/8	5/8	1/4	.132/.128	2
79112	5/16-18	7/8	3/8	5/8	3/8	.194/.200	3
79113	3/8-16	1	7/16	3/4	3/8	.194/.200	4
79114	3/8-16	1-1/16	7/16	3/4	7/16	.225/.231	5
79115	3/8-16	1-1/8	7/16	3/4	1/2	.257/.263	5

Socket Head Lock Screws

Part No.	Thread A	B	C	D	E	F	Hex G	Wt. (lbs/100pcs)
79130	8-32	7/16	3/16	5/16	3/16	.094/.100	3/32	1
79131	5/16-18	5/8	3/8	5/8	1/4	.132/.138	3/16	2
79132	5/16-18	7/8	3/8	5/8	3/8	.194/.200	3/16	3
79133	3/8-16	1	7/16	3/4	3/8	.194/.200	7/32	4
79134	3/8-16	1-1/16	7/16	3/4	7/16	.225/.231	7/32	5
79135	3/8-16	1-1/8	7/16	3/4	1/2	.257/.263	7/32	5

Cast Aluminum Hand Knobs

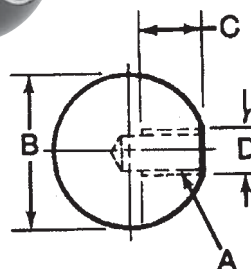
- Many sizes conform to TCMAL standards
- Available tapped through, blank or tapped part way through
- Blank knob includes a cast center which eliminates center drilling
- Use as a handle or clamping knob



Part No.	A	B	C	D	Thread No. 1	Thread No. 2	Thread Depth	Weight (lbs/100pcs)
43305	1-1/8	3/4	3/8	1/2	1/4-20	-	Thru	3
43307	1-1/8	3/4	3/8	1/2	-	-	Blank	4
43308	1-1/8	3/4	3/8	1/2	-	1/4-20	3/8	3
43309	1-1/2	7/8	3/8	19/32	5/16-18	-	Thru	4
43311	1-1/2	7/8	3/8	19/32	-	-	Blank	5
43312	1-1/2	7/8	3/8	19/32	-	5/16-18	7/16	4
43313	2	1	3/8	11/16	3/8-16	-	Thru	6
43315	2	1	3/8	11/16	-	-	Blank	8
43316	2	1	3/8	11/16	-	3/8-16	1/2	6
43317	2-1/2	1-1/2	1/2	1-1/16	1/2-13	-	Thru	16
43319	2-1/2	1-1/2	1/2	1-1/16	-	-	Blank	19
43320	2-1/2	1-1/2	1/2	1-1/16	-	1/2-13	3/4	16
43325	3	1-3/4	5/8	1-1/4	3/4-10	-	Thru	26
43327	3	1-3/4	5/8	1-1/4	-	-	Blank	33

Plastic Ball Knobs

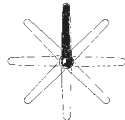
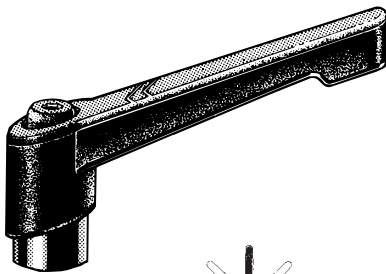
- Material: Black Plastic
- Lightweight, plastic construction keeps ball rust free
- Blank knob includes a cast center which eliminates center drilling



Part No.	Thread A	B	C	D	Brass Insert	Weight (lbs/100pcs)
43601	10-32	3/4	5/16	3/8	YES	2
43602	1/4-20	1	7/16	1/2	YES	4
43603	1/4-28	1	7/16	1/2	YES	4
43604	5/16-18	1	7/16	1/2	YES	4
43605	5/16-24	1	7/16	1/2	YES	4
43606	3/8-16	1-3/8	1/2	5/8	YES	8
43607	3/8-24	1-3/8	1/2	5/8	YES	8
43608	1/2-13	1-3/8	5/8	5/8	YES	8
43609	1/2-20	1-3/8	5/8	5/8	YES	8
43612	1/2-13	1-7/8	5/8	3/4	YES	20
43613	1/2-20	1-7/8	5/8	3/4	YES	20
43614*	5/8-18	1-7/8	3/4	7/8	NO	20

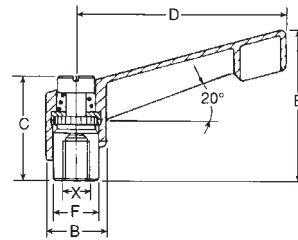
*Molded Threads

Adjustable Clamping Levers



LIFT AND
ROTATE
HANDLE 360°

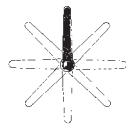
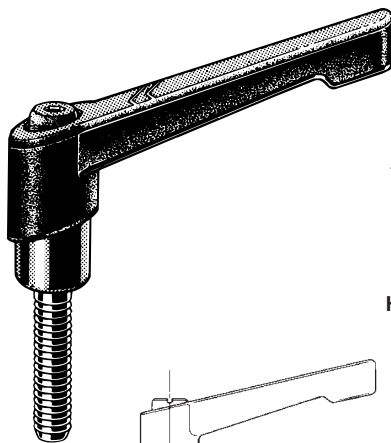
- Black thermoplastic handle with metal insert
- Zinc die-cast handle with black finish
- All steel parts ensure durability
- Internal thread with black oxide finish



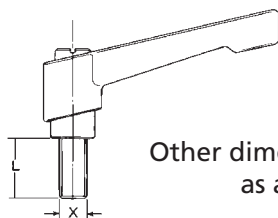
HANDLE TYPE							
Plastic Part No.	Die-Cast Part No.	X Thread	B	C	D	E	F
46700	46701	#10-24	.55	.95	1.65	1.30	.39
46702	46703	#10-32	.55	.95	1.65	1.30	.39
46704	46705	1/4-20	.55	.95	1.65	1.30	.39
46706	46707	1/4-20	.71	1.22	2.56	1.77	.53
46708	46709	5/16-18	.71	1.22	2.56	1.77	.53
46710	46711	5/16-18	.86	1.41	3.07	2.12	.63
46712	46713	3/8-16	.86	1.41	3.07	2.12	.63
46714	46715	3/8-16	.98	1.69	3.62	2.52	.75
46716	46717	1/2-13	.98	1.69	3.62	2.52	.75
-	46718	1/2-13	1.18	1.98	4.25	2.95	.91
-	46719	5/8-11	1.18	1.98	4.25	2.95	.91

Adjustable Clamping Levers with Stud

- Plastic Handle with Stud
- Die-cast Zinc Handle with Stud



LIFT AND
ROTATE
HANDLE 360°

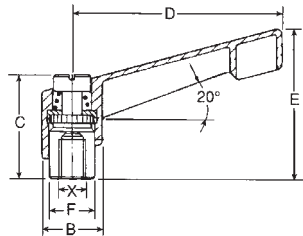


Other dimensions same
as above

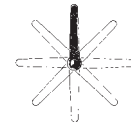
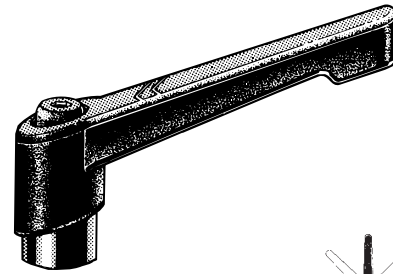
- Black thermoplastic handle with metal insert
- Steel parts give increased stability and rigidity
- External steel stud with black oxide finish
- Additional thread lengths available upon request

HANDLE TYPE								
Plastic Part No.	Die-Cast Part No.	X Thread	L	B	C	D	E	F
46720	46721	#10-24	.63	.55	.95	1.65	1.30	.39
46722	46723	#10-32	.63	.55	.95	1.65	1.30	.39
46724	46725	#10-32	1.25	.55	.95	1.65	1.30	.39
46726	46727	1/4-20	.78	.55	.95	1.65	1.30	.39
46728	46729	1/4-20	1.25	.55	.95	1.65	1.30	.39
46730	46731	1/4-20	1.57	.55	.95	1.65	1.30	.53
46732	46733	1/4-20	.98	.71	1.22	2.56	1.77	.53
46734	46735	5/16-18	.78	.71	1.22	2.56	1.77	.53
46736	46737	5/16-18	1.26	.71	1.22	2.56	1.77	.53
46738	46739	5/16-18	1.57	.71	1.22	2.56	1.77	.53
46740	46741	5/16-18	2.48	.71	1.22	2.56	1.77	.53
46742	46743	3/8-16	.78	.71	1.22	2.56	1.77	.53
46744	46745	3/8-16	1.25	.71	1.22	2.56	1.77	.53
46746	46747	3/8-16	1.57	.71	1.22	2.56	1.77	.53
46748	46749	5/16-18	1.97	.86	1.41	3.07	2.12	.63
46750	46751	3/8-16	.98	.86	1.41	3.07	2.12	.63
46752	46753	3/8-16	1.26	.86	1.41	3.07	2.12	.63
46754	46755	3/8-16	1.57	.86	1.41	3.07	2.12	.63
46756	46757	3/8-16	1.97	.86	1.41	3.07	2.12	.63
46758	46759	3/8-16	2.48	.86	1.41	3.07	2.12	.63
46760	46761	3/8-16	1.57	.98	1.69	3.62	2.52	.75
46762	46763	3/8-16	1.97	.98	1.69	3.62	2.52	.75
46764	46765	1/2-13	1.25	.98	1.69	3.62	2.52	.75
46766	46767	1/2-13	1.57	.98	1.69	3.62	2.52	.75
46768	46769	1/2-13	1.97	.98	1.69	3.62	2.52	.75
46770	46771	1/2-13	2.48	.98	1.69	3.62	2.52	.75
-	46772	1/2-13	1.57	1.18	1.98	4.25	2.95	.91
-	46773	1/2-13	2.48	1.18	1.98	4.25	2.95	.91
-	46774	5/8-11	1.57	1.18	1.98	4.25	2.95	.91
-	46775	5/8-11	2.48	1.18	1.98	4.25	2.95	.91

Metric Adjustable Clamping Levers



HANDLE TYPE								
Plastic Part No.	Die-Cast Part No.	X Thread	B	C	D	E	F	
46780	46781	M4	14mm	24mm	42mm	33mm	10mm	
46782	46783	M5	14mm	24mm	42mm	33mm	10mm	
46784	46785	M6	14mm	24mm	42mm	33mm	10mm	
46786	46787	M6	18mm	31mm	65mm	45mm	13.5mm	
46788	46789	M8	18mm	31mm	65mm	45mm	13.5mm	
46790	46791	M8	22mm	36mm	78mm	54mm	16mm	
46792	46793	M10	22mm	36mm	78mm	54mm	16mm	
46794	46795	M10	25mm	43mm	92mm	64mm	19mm	
46796	46797	M12	25mm	43mm	92mm	64mm	19mm	
-	46798	M12	30mm	50mm	108mm	75mm	23mm	
-	46799	M16	30mm	50mm	108mm	75mm	23mm	



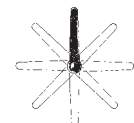
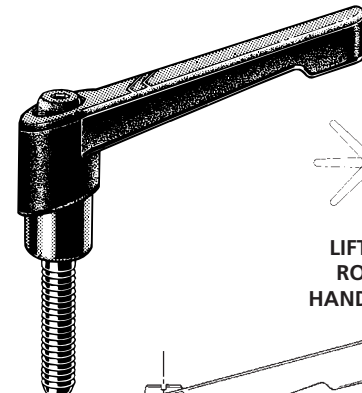
LIFT AND ROTATE HANDLE 360°

- Black thermoplastic handle with metal insert
- Zinc die-cast handle with black finish
- All steel parts ensure durability
- Internal metric thread with black oxide finish

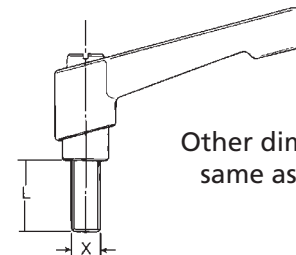
Metric Adjustable Clamping Levers with Stud

HANDLE TYPE									
Plastic Part No.	Die-Cast Part No.	X Thread	L	B	C	D	E	F	
46800	46801	M5	12mm	14mm	24mm	42mm	33mm	10mm	
46802	46803	M5	16mm	14mm	24mm	42mm	33mm	10mm	
46804	46805	M5	20mm	14mm	24mm	42mm	33mm	10mm	
46806	46807	M6	16mm	14mm	24mm	42mm	33mm	10mm	
46808	46809	M6	20mm	14mm	24mm	42mm	33mm	10mm	
46810	46811	M6	25mm	14mm	24mm	42mm	33mm	10mm	
46812	46813	M6	32mm	14mm	24mm	42mm	33mm	10mm	
46814	46815	M6	40mm	14mm	24mm	42mm	33mm	10mm	
46816	46817	M8	20mm	18mm	31mm	65mm	45mm	13.5mm	
46818	46819	M8	25mm	18mm	31mm	65mm	45mm	13.5mm	
46820	46821	M8	32mm	18mm	31mm	65mm	45mm	13.5mm	
46822	46823	M8	40mm	18mm	31mm	65mm	45mm	13.5mm	
46824	46825	M8	50mm	18mm	31mm	65mm	45mm	13.5mm	
46826	46827	M8	63mm	18mm	31mm	65mm	45mm	13.5mm	
46828	46829	M10	20mm	18mm	31mm	65mm	45mm	13.5mm	
46830	46831	M10	32mm	18mm	31mm	65mm	45mm	13.5mm	
46832	46833	M10	40mm	18mm	31mm	65mm	45mm	13.5mm	
46834	46835	M10	50mm	18mm	31mm	65mm	45mm	13.5mm	
46836	46837	M10	20mm	22mm	36mm	78mm	54mm	16mm	
46838	46839	M10	32mm	22mm	36mm	78mm	54mm	16mm	
46840	46841	M10	40mm	22mm	36mm	78mm	54mm	16mm	
46842	46843	M10	50mm	22mm	36mm	78mm	54mm	16mm	
46844	46845	M10	63mm	22mm	36mm	78mm	54mm	16mm	
46846	46847	M12	32mm	25mm	43mm	92mm	64mm	19mm	
46848	46849	M12	40mm	25mm	43mm	92mm	64mm	19mm	
46850	46851	M12	50mm	25mm	43mm	92mm	64mm	19mm	
46852	46853	M12	63mm	25mm	43mm	92mm	64mm	19mm	
-	46854	M12	40mm	30mm	50mm	108mm	75mm	23mm	
-	46855	M12	63mm	30mm	50mm	108mm	75mm	23mm	

- Plastic Handle with Stud
- Die-cast Zinc Handle with Stud



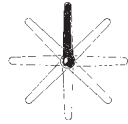
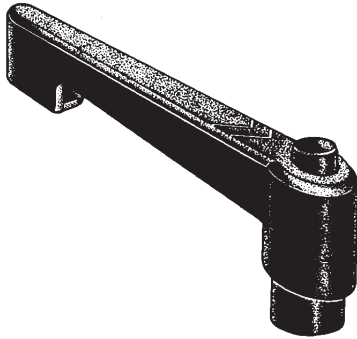
LIFT AND ROTATE HANDLE 360°



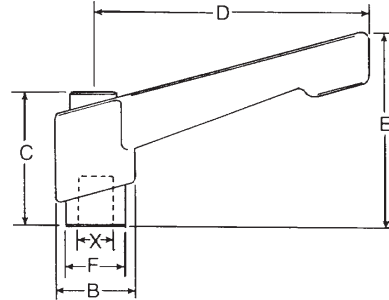
Other dimensions same as above

- Black thermoplastic handle with metal insert
- Steel parts give increased stability and rigidity
- External steel stud with black oxide finish

Economy Adjustable Clamping Levers



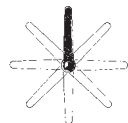
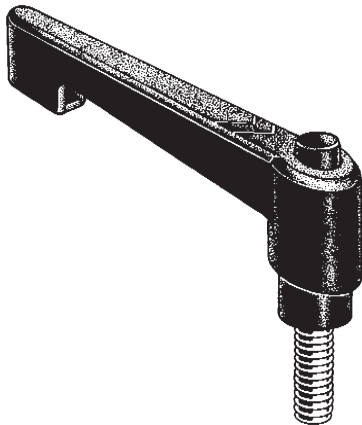
LIFT AND
ROTATE
HANDLE 360°



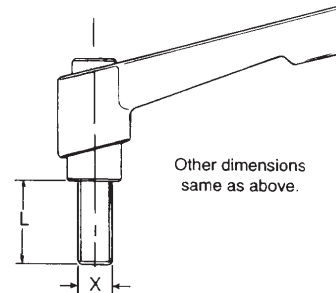
- Internal thread
- Excellent pricing ... quality low cost solution
- Handle made from glass-fiber reinforced polyimide
- Bushing made from zinc-plated steel
- Resistant to oils, solvents, and other chemicals
- Orange handle levers available upon request

Part No.	X Thread	B	C	D	E	F
46860	#10-24	.63	1.04	1.65	1.38	.47
46861	#10-32	.63	1.04	1.65	1.38	.47
46862	1/4-20	.63	1.04	1.65	1.38	.47
46863	1/4-20	.79	1.42	2.56	1.97	.59
46864	5/16-18	.79	1.42	2.56	1.97	.59
46865	5/16-18	.98	1.81	3.15	2.48	.79
46866	3/8-16	.98	1.81	3.15	2.48	.79
46867	1/2-13	.98	1.81	3.15	2.48	.79

Economy Adjustable Clamping Levers with Stud



LIFT AND
ROTATE
HANDLE 360°

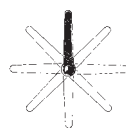
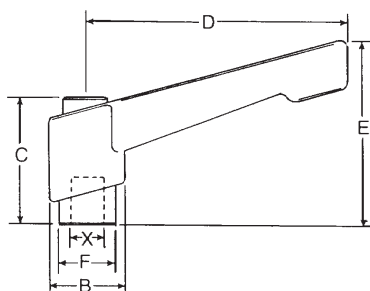


Other dimensions
same as above.

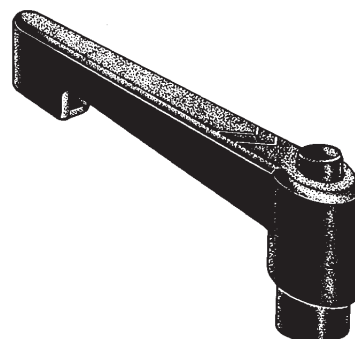
- External steel stud
- Excellent pricing ... quality low cost solution
- Handle made from glass-fiber reinforced polyimide
- Screw made from zinc-plated steel
- Resistant to oils, solvents, and other chemicals
- Orange handle levers available upon request

Part No.	X Thread	L	B	C	D	E	F
46870	#10-32	.39	.63	1.04	1.65	1.38	.47
46871	#10-32	.79	.63	1.04	1.65	1.38	.47
46872	1/4-20	.59	.63	1.04	1.65	1.38	.47
46873	1/4-20	.79	.63	1.04	1.65	1.38	.47
46874	1/4-20	1.18	.63	1.04	1.65	1.38	.47
46875	5/16-18	.59	.79	1.42	2.56	1.97	.59
46876	5/16-18	.79	.79	1.42	2.56	1.97	.59
46877	5/16-18	1.18	.79	1.42	2.56	1.97	.59
46878	5/16-18	1.57	.79	1.42	2.56	1.97	.59
46879	3/8-16	.79	.98	1.81	3.15	2.48	.79
46880	3/8-16	1.18	.98	1.81	3.15	2.48	.79
46881	3/8-16	1.57	.98	1.81	3.15	2.48	.79
46882	3/8-16	1.97	.98	1.81	3.15	2.48	.79
46883	1/2-13	1.18	.98	1.81	3.15	2.48	.79
46884	1/2-13	1.97	.98	1.81	3.15	2.48	.79

Metric Economy Adjustable Clamping Levers



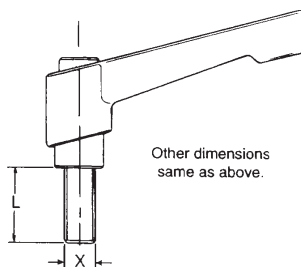
LIFT AND
ROTATE
HANDLE 360°



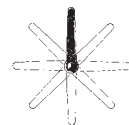
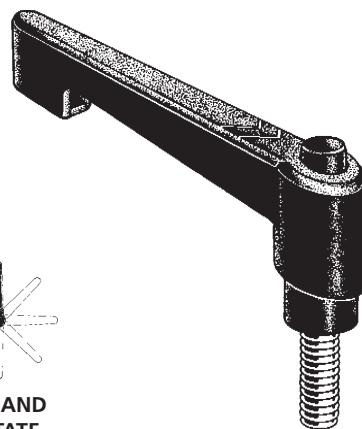
Part No.	X Thread	B	C	D	E	F
46900	M4	16mm	26.5mm	42mm	35mm	12mm
46901	M5	16mm	26.5mm	42mm	35mm	12mm
46902	M6	16mm	26.5mm	42mm	35mm	12mm
46903	M6	20mm	36mm	65mm	50mm	15mm
46904	M8	20mm	36mm	65mm	50mm	15mm
46905	M8	25mm	46mm	80mm	63mm	20mm
46906	M10	25mm	46mm	80mm	63mm	20mm
46907	M12	25mm	46mm	80mm	63mm	20mm

- Internal thread
- Excellent pricing ... quality low cost solution
- Handle made from glass-fiber reinforced polyimide
- Bushing made from zinc-plated steel
- Resistant to oils, solvents, and other chemicals
- Orange handle levers available upon request

Metric Economy Adjustable Clamping Levers with Stud



Other dimensions
same as above.



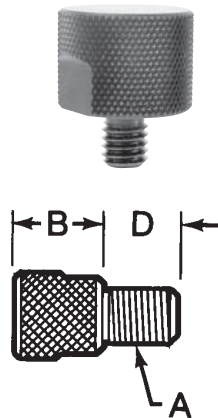
LIFT AND
ROTATE
HANDLE 360°

Part No.	X Thread	L	B	C	D	E	F
46910	M5	10mm	16mm	26.5mm	42mm	35mm	12mm
46911	M5	20mm	16mm	26.5mm	42mm	35mm	12mm
46912	M5	30mm	16mm	26.5mm	42mm	35mm	12mm
46913	M6	10mm	16mm	26.5mm	42mm	35mm	12mm
46914	M6	15mm	16mm	26.5mm	42mm	35mm	12mm
46915	M6	20mm	16mm	26.5mm	42mm	35mm	12mm
46916	M6	25mm	16mm	26.5mm	42mm	35mm	12mm
46917	M6	30mm	16mm	26.5mm	42mm	35mm	12mm
46918	M8	15mm	20mm	36mm	65mm	50mm	15mm
46919	M8	20mm	20mm	36mm	65mm	50mm	15mm
46920	M8	25mm	20mm	36mm	65mm	50mm	15mm
46921	M8	30mm	20mm	36mm	65mm	50mm	15mm
46922	M8	40mm	20mm	36mm	65mm	50mm	15mm
46923	M10	20mm	25mm	46mm	80mm	63mm	20mm
46924	M10	30mm	25mm	46mm	80mm	63mm	20mm
46925	M10	40mm	25mm	46mm	80mm	63mm	20mm
46926	M10	50mm	25mm	46mm	80mm	63mm	20mm
46927	M12	30mm	25mm	46mm	80mm	63mm	20mm
46928	M10	40mm	25mm	46mm	80mm	63mm	20mm
46929	M10	50mm	25mm	46mm	80mm	63mm	20mm

- External steel stud
- Excellent pricing ... quality low cost solution
- Handle made from glass-fiber reinforced polyimide
- Screw made from zinc-plated steel
- Resistant to oils, solvents, and other chemicals
- Orange handle levers available upon request

Threaded Flat Rest Pads

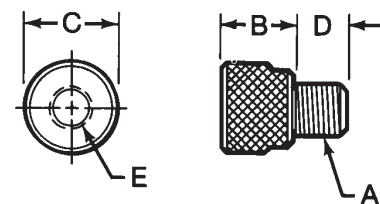
- Material: 1117 Steel
- Black oxide finish on all surfaces not qualified
- Case hardened
- Use to support and position workpiece
- Especially effective when supporting flat surfaces



Part No.	Thread A	+0.000 -0.0003 B	Dia. C	D	Wt. (lbs/100 pcs)
56003	3/8-16	0.50	1	7/16	12
56004	3/8-16	0.75	1	7/16	12
56005	3/8-16	1.00	1	7/16	12
56013	1/2-13	0.50	1	7/16	12
56014	1/2-13	0.75	1	7/16	12
56015	1/2-13	1.00	1	7/16	12

Threaded Stack Rest Pads

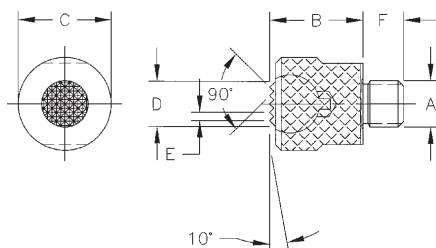
- Material: 1117 Steel
- Black oxide finish on all surfaces not qualified
- Case hardened
- Use to support and position workpiece
- Internal threads allow rest pads to be stacked to support workpiece at desired height



Part No.	Thread A	+0.000 -0.0003 B	Dia. C	D	E	Wt. (lbs/100 pcs)
56106	1/2-13	0.75	1	7/16	1/2-13 x .48 dp	12
56107	1/2-13	1.00	1	7/16	1/2-13 x .48 dp	12

Threaded Rest Pads with Self-Aligning Gripper

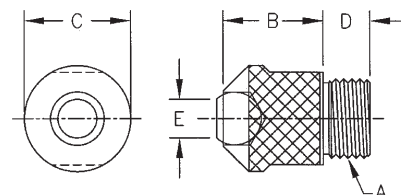
- Material:
 - Body: 4140 Steel
 - Ball: 52100 Steel
- Black oxide finish on all surfaces not qualified
- Case hardened
- Self-aligning gripper ball enables rest pad to effectively support and position rough or uneven workpiece surfaces
- Gripper ball swivels 10 degrees in any direction



Part No.	Thread A	+0.000 -0.005 B	Dia. C	D	E	F	Wt. (lbs/100 pcs)
56801	3/8-16	0.75	3/4	3/8	0.093	.44	12
56802	3/8-16	1.00	3/4	3/8	0.093	.44	12
56803	1/2-13	0.75	3/4	3/8	0.093	.44	12
56804	1/2-13	1.00	3/4	3/8	0.093	.44	12

Threaded Rest Pads with Self-Aligning Ball

- Material:
 - Body: 4140 Steel
 - Ball: 52100 Steel
- Black oxide finish on all surfaces not qualified
- Case hardened
- Use to support and position workpiece
- Self-aligning ball enables rest pad to effectively support and position smooth workpiece surfaces
- Ball swivels 10 degrees in any direction

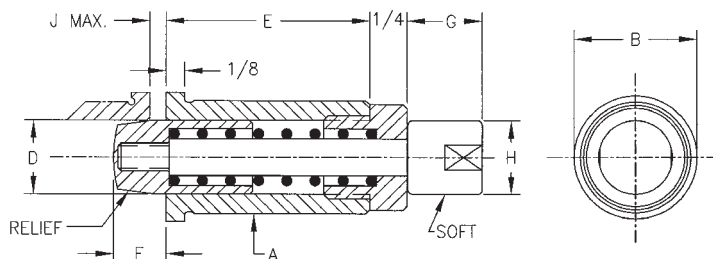


Part No.	Thread A	+0.000 -0.005 B	Dia. C	D	E	Wt. (lbs/100 pcs)
56400	3/8-16	0.50	3/4	7/16	3/8	12
56401	3/8-16	0.75	3/4	7/16	3/8	12
56402	3/8-16	1.00	3/4	7/16	3/8	12
56410	1/2-13	0.50	3/4	7/16	3/8	12
56411	1/2-13	0.75	3/4	7/16	3/8	12
56412	1/2-13	1.00	3/4	7/16	3/8	12

Taper Index Plungers Finished and Unfinished Ground



- For material information, contact TE-CO
- Many sizes conform to TCMAI standards
- Bushing not included – order separately (see below)



Finished Ground

Part No.	A*	B	D	E	F	G	H	J	Lbs.**	Use with Bushing No.	Wt. (lbs/100 pcs)
54900	.7518/.7515	7/8	1/2	1-3/8	5/16	1/2	1/2	3/32	22	54970	22
54902	1.1268/1.1265	1-1/4	3/4	2	3/8	3/4	3/4	1/8	48	54972	67
54904	1.5022/1.5018	1-5/8	1	2-1/4	3/8	1	1	1/8	68	54974	135

* For proper installation use nominal drill diameter

Unfinished Ground

Part No.	A*	B	D	E	F	G	H	J	Lbs.**	Use with Bushing No.	Wt. (lbs/100 pcs)
54901	.770/.765	7/8	1/2	1-3/8	5/16	1/2	1/2	3/32	22	54971	22
54903	1.145/1.140	1-1/4	3/4	2	3/8	3/4	3/4	1/8	48	54973	67
54905	1.520/1.515	1-5/8	1	2-1/4	3/8	1	1	1/8	68	54975	135

**Approximate poundage required to completely retract plunger.

Taper Index Bushings Finished and Unfinished Ground

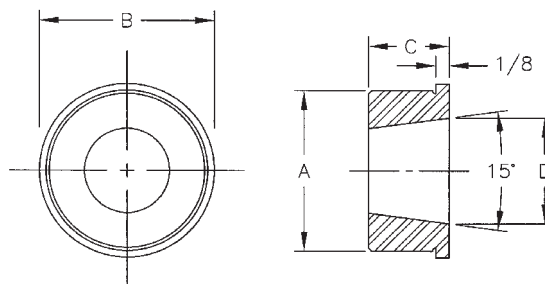


Finished Ground

Part No.	A*	B	C	+0.002 -0.000 D	Wt. (lbs/100 pcs)
54970	.7518/.7515	7/8	1/2	0.483	5
54972	1.1268/1.1265	1-1/4	5/8	0.738	12
54974	1.5022/1.5018	1-5/8	3/4	0.988	25

Unfinished Ground

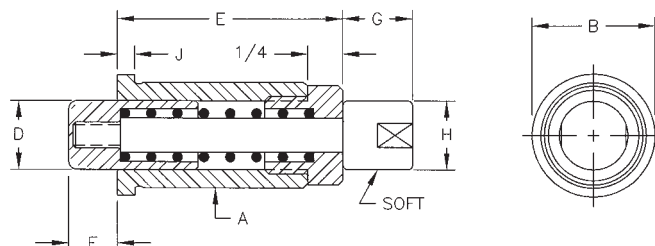
Part No.	A*	B	C	+0.002 -0.000 D	Wt. (lbs/100 pcs)
54971	.770/.765	7/8	1/2	0.483	5
54973	1.145/1.140	1-1/4	5/8	0.738	12
54975	1.520/1.515	1-5/8	3/4	0.988	25



*For proper installation use nominal drill diameter

Straight Index Plungers Finished and Unfinished Ground

- For material information, contact TE-CO
- Many sizes conform to TCMAI standards
- Bushing not included – order separately (see below)



Finished Ground

Part No.	A*	B	D	E	F	G	H	J	Lbs.**	Use with Bushing No.	Wt. (lbs/100 pcs)
54910	.7518/.7515	7/8	1/2	1-3/8	23/64	1/2	1/2	1/8	22	54980	22
54912	1.1268/1.1265	1-1/4	3/4	2	33/64	3/4	3/4	1/8	55	54982	69
54914	1.5022/1.5018	1-5/8	1	2-1/4	5/8	1	15/16	1/8	90	54984	139
54916	2.0023/2.0019	2-3/16	1-3/8	3	27/32	1	15/16	3/16	150	54986	300

* For proper installation use nominal drill diameter

Unfinished Ground

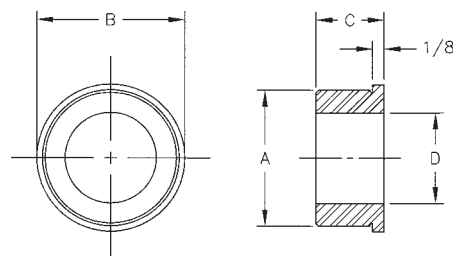
Part No.	A*	B	D	E	F	G	H	J	Lbs.**	Use with Bushing No.	Wt. (lbs/100 pcs)
54911	.770/.765	7/8	1/2	1-3/8	23/64	1/2	1/2	1/8	22	54981	22
54913	1.145/1.140	1-1/4	3/4	2	33/64	3/4	3/4	1/8	55	54983	69
54915	1.520/1.515	1-5/8	1	2-1/4	5/8	1	15/16	1/8	90	54985	139
54917	2.020/2.015	2-3/16	1-3/8	3	27/32	1	15/16	3/16	150	54987	300

** Approximate poundage required to completely retract plunger.

Straight Index Bushings Finished and Unfinished Ground

Finished Ground

Part No.	A*	B	C	D	J	Wt. (lbs/100 pcs)
54980	.7518/.7515	7/8	1/2	1/2	1/8	4
54982	1.1268/1.265	1-1/4	5/8	3/4	1/8	10
54984	1.5022/1.5018	1-5/8	3/4	1	1/8	22
54986	2.0023/2.0019	2-3/16	1	1-3/8	3/16	50



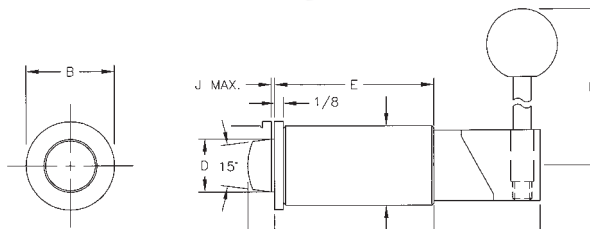
Unfinished Ground

Part No.	A*	B	C	D	J	Wt. (lbs/100 pcs)
54981	.770/.765	7/8	1/2	1/2	1/8	4
54983	1.145/1.140	1-1/4	5/8	3/4	1/8	10
54985	1.520/1.515	1-5/8	3/4	1	1/8	22
54987	2.020/2.015	2-3/16	1	1-3/8	3/16	50

*For proper installation use nominal drill diameter

Rotary Cam Operated Taper Index Plungers Finished and Unfinished Ground

- For material information, contact TE-CO
- Many sizes conform to TCMAI standards
- Bushing not included – see page 56
- Vertical cam allows for quick vertical motion



Finished Ground

Part No.	A*	B	D	E	F	G	H	J	Use with Bushing No.	Wt. (lbs/100 pcs)
54920	.7518/.7515	7/8	1/2	1-3/8	5/16	1-1/8	3	3/32	54970	35
54922	1.1268/1.1265	1-1/4	3/4	2	3/8	1-1/2	3-1/2	1/8	54972	91
54924	1.5022/1.5018	1-5/8	1	2-1/4	3/8	1-7/8	4-1/2	1/8	54974	184

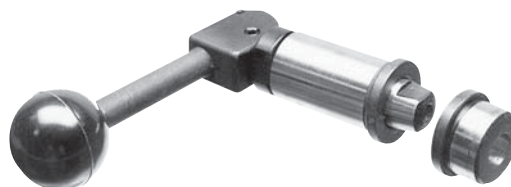
Unfinished Ground

Part No.	A*	B	D	E	F	G	H	J	Use with Bushing No.	Wt. (lbs/100 pcs)
54921	.770/.765	7/8	1/2	1-3/8	5/16	1-1/8	3	3/32	54971	35
54923	1.145/1.140	1-1/4	3/4	2	3/8	1-1/2	3-1/2	1/8	54973	91
54925	1.520/1.515	1-5/8	1	2-1/4	3/8	1-7/8	4-1/2	1/8	54975	184

*For proper installation use nominal drill diameter

Vertical Cam Operated Taper Index Plungers Finished and Unfinished Ground

- For material information, contact TE-CO
- Many sizes conform to TCMAI standards
- Bushing not included – see page 56
- Vertical cam allows for quick vertical motion



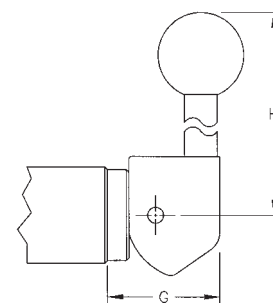
Finished Ground

Part No.	A*	B	D	E	F	G	H	J	Use with Bushing No.	Wt. (lbs/100 pcs)
54930	.7518/.7515	7/8	1/2	1-3/8	5/16	1	3	3/32	54970	32
54932	1.1268/1.1265	1-1/4	3/4	2	3/8	1-5/16	3-1/2	1/8	54972	90
54934	1.5022/1.5018	1-5/8	1	2-1/4	3/8	1-7/16	4-1/2	1/8	54974	163

Unfinished Ground

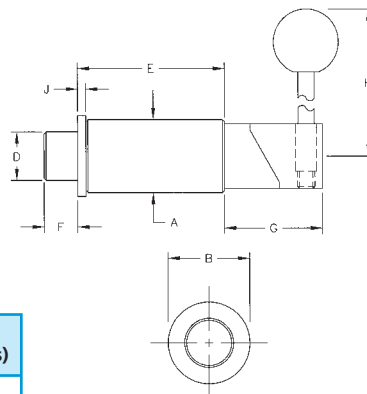
Part No.	A*	B	D	E	F	G	H	J	Use with Bushing No.	Wt. (lbs/100 pcs)
54931	.770/.765	7/8	1/2	1-3/8	5/16	1	3	3/32	54971	32
54933	1.145/1.140	1-1/4	3/4	2	3/8	1-5/16	3-1/2	1/8	54973	90
54935	1.520/1.515	1-5/8	1	2-1/4	3/8	1-7/16	4-1/2	1/8	54975	163

*For proper installation use nominal drill diameter



Rotary Cam Operated Straight Index Plungers Finished and Unfinished Ground

- For material information, contact TE-CO
- Many sizes conform to TCMAI standards
- Bushing not included – see page 56
- Rotary cam allows for quick horizontal motion



Finished Ground

Part No.	A*	B	D	E	F	G	H	J	Use with Bushing No.	Wt. (lbs/100 pcs)
54940	.7518/.7515	7/8	1/2	1-3/8	23/64	1-1/8	3	1/8	54980	35
54942	1.1268/1.1265	1-1/4	3/4	2	33/64	1-1/2	3-1/2	1/8	54982	92
54944	1.5022/1.5018	1-5/8	1	2-1/4	5/8	1-7/8	4-1/2	1/8	54984	185
54946	2.0023/2.0019	2-3/16	1-3/8	3	27/32	2-1/8	5-3/4	3/16	54986	418

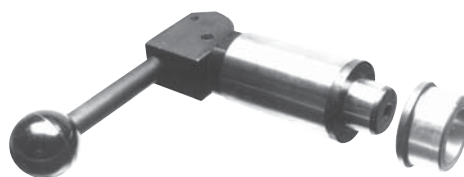
Unfinished Ground

Part No.	A*	B	D	E	F	G	H	J	Use with Bushing No.	Wt. (lbs/100 pcs)
54941	.770/.765	7/8	1/2	1-3/8	23/64	1-1/8	3	1/8	54981	35
54943	1.145/1.140	1-1/4	3/4	2	33/64	1-1/2	3-1/2	1/8	54983	92
54945	1.520/1.515	1-5/8	1	2-1/4	5/8	1-7/8	4-1/2	1/8	54985	185
54947	2.020/2.015	2-3/16	1-3/8	3	27/32	2-1/8	5-3/4	3/16	54987	418

*For proper installation use nominal drill diameter

Vertical Cam Operated Straight Index Plungers Finished and Unfinished Ground

- For material information, contact TE-CO
- Many sizes conform to TCMAI standards
- Bushing not included – see page 56
- Vertical cam allows for quick vertical motion



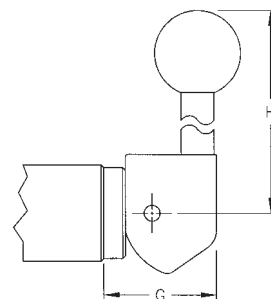
Finished Ground

Part No.	A*	B	D	E	F	G	H	J	Use with Bushing No.	Wt. (lbs/100 pcs)
54950	.7518/.7515	7/8	1/2	1-3/8	23/64	1	3	1/8	54980	33
54952	1.1268/1.1265	1-1/4	3/4	2	33/64	1-5/16	3-1/2	1/8	54982	90
54954	1.5022/1.5018	1-5/8	1	2-1/4	5/8	1-7/16	4-1/2	1/8	54984	167
54956	2.023/2.0019	2-3/16	1-3/8	3	27/32	1-5/8	5-3/4	3/16	54986	354

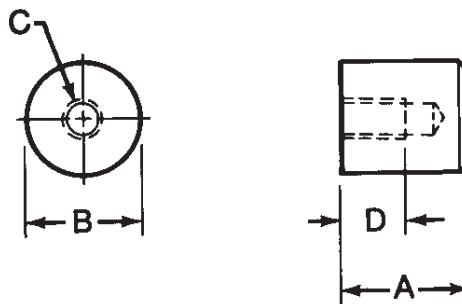
Unfinished Ground

Part No.	A*	B	D	E	F	G	H	J	Use with Bushing No.	Wt. (lbs/100 pcs)
54951	.770/.765	7/8	1/2	1-3/8	23/64	1	3	1/8	54981	33
54953	1.145/1.140	1-1/4	3/4	2	33/64	1-5/16	3-1/2	1/8	54983	90
54955	1.520/1.515	1-5/8	1	2-1/4	5/8	1-7/16	4-1/2	1/8	54985	167
54957	2.020/2.015	2-3/16	1-3/8	3	27/32	1-5/8	5-3/4	3/16	54987	354

*For proper installation use nominal drill diameter



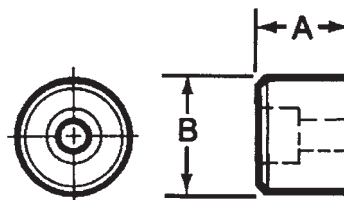
Tapped Jig Feet



- Material: 1018 Steel
- Black Oxide Finish
- Case Hardened
- Use to support or locate workpiece.
- Use to raise jigs and fixtures off machine table

Part No.	+0.001 -0.000 A	B	C	D	Wt. (lbs/100 pcs)
44150	3/8	5/8	10-32	1/4	3
44151	1/2	5/8	10-32	1/4	4
44152	3/4	5/8	10-32	5/16	6
44153	1	5/8	10-32	5/16	8
44154	1/2	7/8	5/16-18	5/16	8
44155	3/4	7/8	5/16-18	1/2	12
44156	1	7/8	5/16-18	1/2	16
44157	3/4	1-1/4	3/8-16	9/16	24
44158	1	1-1/4	3/8-16	9/16	32
44159	1-1/2	1-1/4	3/8-16	9/16	49

Button Jig Feet



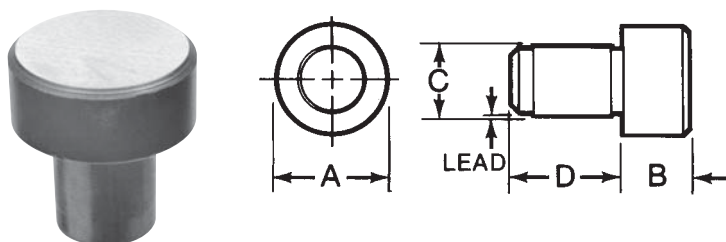
- Material: 12L14 Steel
- Black Oxide Finish
- Case Hardened
- Many sizes conform to TCMAI standards.
- Screw not furnished
- Length dimension is finished ground
- Use to locate or support workpiece
- Use to raise jigs and fixtures off machine table
- 10-32 Flat Head Machine Screw

Socket Head Cap Screw

*Flat Head Cap Screw

Part No.	+0.001 -0.000 A	B	Screw Type & Size	Wt. (lbs/100 pcs)
44103	3/8	1/2	10-32*	1
44104	1/2	1/2	10-32*	2
44105	1/4	5/8	10-32*	1
44107	3/8	5/8	1/4#	2
44109	1/2	5/8	1/4#	3
44110	5/8	5/8	1/4#	4
44111	3/4	5/8	1/4#	5
44113	1	5/8	1/4#	7
44115	1/2	7/8	5/16#	6
44117	3/4	7/8	5/16#	10
44118	1	7/8	5/16#	13
44119	3/4	1-1/4	3/8#	21
44120	1	1-1/4	3/8#	29
44121	1-1/2	1-1/4	3/8#	44
44122	2	1-1/4	3/8#	60

Press Fit Rest Buttons – Unfinished Ground

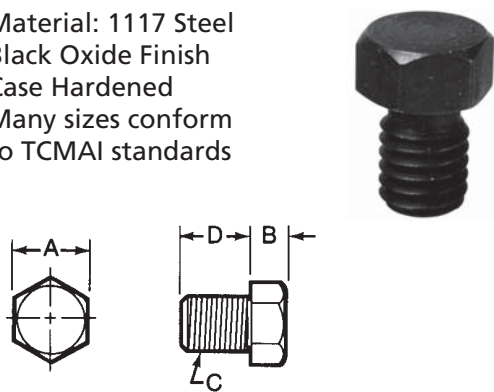


- Material: 1144 Stressproof Steel
- Through Hardened
- Black Oxide Finish on unqualified surfaces
- Many sizes conform to TCMAI standards
- Finished ground quoted upon request

Part No.	A	+0.015 +0.005 B	C	D	Wt. (lbs/100 pcs)
44201	3/8	1/4	.1880/.1885	3/8	1
44202	3/8	3/8	.1880/.1885	3/8	1
44203	3/8	1/2	.1880/.1885	3/8	2
44204	1/2	1/4	.2505/.2510	1/2	2
44205	1/2	3/8	.2505/.2510	1/2	3
44206	1/2	1/2	.2505/.2510	1/2	3
44207	5/8	1/4	.3755/.3760	5/8	4
44208	5/8	3/8	.3755/.3760	5/8	5
44209	5/8	1/2	.3755/.3760	5/8	6
44210	5/8	5/8	.3755/.3760	5/8	7
44211	7/8	3/8	.5005/.5010	5/8	10
44212	7/8	1/2	.5005/.5010	5/8	12
44213	7/8	5/8	.5005/.5010	5/8	14
44214	1	3/8	.6255/.6260	3/4	15
44215	1	1/2	.6255/.6260	3/4	18
44216	1	5/8	.6255/.6260	3/4	20
44217	1-1/4	1/2	.7505/.7510	7/8	28
44218	1-1/4	5/8	.7505/.7510	7/8	32
44220	1/2	1/4	.3130/.3135	1/2	2
44221	1/2	3/8	.3130/.3135	1/2	3
44222	1/2	1/2	.3130/.3135	1/2	4
44223	5/8	7/16	.3755/.3760	5/8	6
44224	5/8	3/4	.3755/.3760	5/8	8
44225	7/8	7/16	.5005/.5010	5/8	1
44226	7/8	3/4	.5005/.5010	5/8	16
44227	1	7/16	.6255/.6260	3/4	16
44228	1	3/4	.6255/.6260	3/4	23
44229	1-1/4	3/8	.7505/.7510	7/8	24
44230	1-1/4	7/16	.7505/.7510	7/8	26
44231	1-1/2	3/4	1.0005/1.0010	1	59

Threaded Rest Buttons Finished & Unfinished Ground

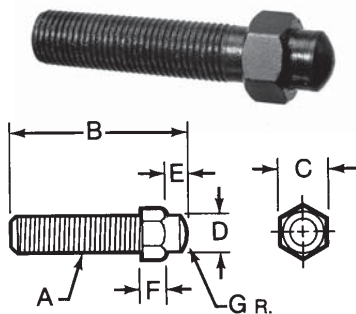
- Material: 1117 Steel
- Black Oxide Finish
- Case Hardened
- Many sizes conform to TCMAI standards



Part No. Unfinished Ground "B" Dim. +0.015 +0.005	Part No. Finished Ground "B" Dim. +0.001 -0.000	A	B	Thread C	D	Wt. (lbs/100pcs)
44801	44821	3/8	1/4	1/4-20	3/8	1
44802	44822	3/8	3/8	1/4-20	3/8	2
44803	44823	3/8	1/2	1/4-20	3/8	2
44804	44824	3/8	3/4	1/4-20	3/8	3
44805	44825	3/8	1	1/4-20	3/8	3
44806	44826	1/2	1/4	3/8-16	1/2	3
44807	44827	1/2	3/8	3/8-16	1/2	3
44808	44828	1/2	1/2	3/8-16	1/2	4
44809	44829	1/2	3/4	3/8-16	1/2	6
44810	44830	1/2	1	3/8-16	1/2	7
44811	44831	5/8	1/4	1/2-13	5/8	5
44812	44832	5/8	3/8	1/2-13	5/8	6
44813	44833	5/8	1/2	1/2-13	5/8	7
44814	44834	5/8	5/8	1/2-13	5/8	8
44815	44835	5/8	3/4	1/2-13	5/8	10
44816	44836	5/8	1	1/2-13	5/8	12

Pre-Set Buttons

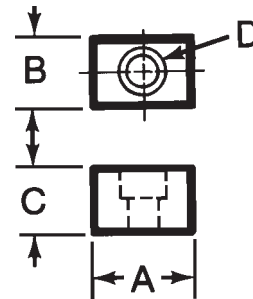
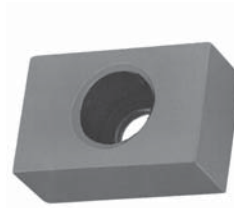
- Material: 12L14 Steel
- Black Oxide Finish
- Case Hardened
- Many sizes conform to TCMAI standards



Part No.	A	B	C	D	E	F	G	Wt. (lbs/100pcs)
44290	10-32	1	1/4	3/16	1/8	1/8	1/8	1
44291	14/-28	1-1/2	3/8	1/4	3/16	3/16	3/16	2
44292	3/8-24	2	1/2	3/8	1/4	1/4	1/4	6
44293	1/2-20	2-1/2	5/8	1/2	5/16	5/16	5/16	13
44294	5/8-18	3	3/4	5/8	3/8	3/8	3/8	25

Plain Fixture Keys

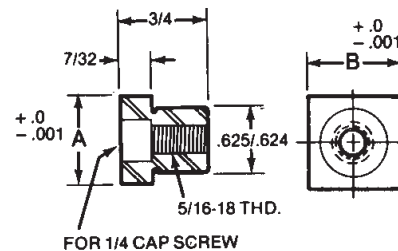
- Material: 1018 Steel
- Black Oxide Finish
- Case Hardened
- Many sizes conform to TCMAI standards
- Precision Ground
- Use to accurately align fixture on machine table
- Special sizes quoted upon request



Part No.	A	+.001 -.000 B	C	Socket Head Screw D	Wt. (lbs/100 pcs)
44501	3/4	.5000	1/2	1/4	4
44502	3/4	.5625	1/2	1/4	5
44503	3/4	.625	1/2	5/16	6
44504	1	.6875	1/2	5/16	8
44505	1-1/4	.750	1/2	5/16	11
44506	1-1/4	.8125	1/2	5/16	13

Round Fixture Keys: Locking & Standard

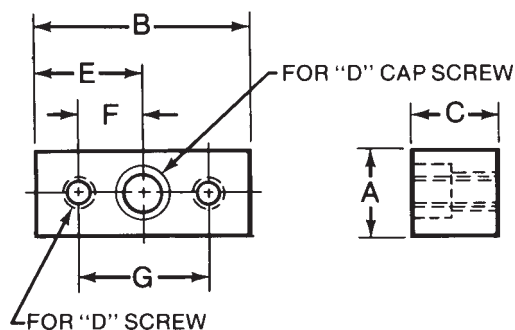
- Material: 1018 Steel
- Black Oxide Finish
- Case Hardened
- Use to accurately align fixture on machine table
- Use standard keys on through holes
- Use locking keys in blind holes
- Locking keys are easily locked into position and removed
- Locking key assembly includes:
 - Fixture Key
 - Socket Head Cap Screw
 - Split Ring
 - Taper Plunger
- Split ring expands in hole by turning screw



Locking Part No.	Wt. (lbs/100 pcs)	Standard Part No.	Wt. (lbs/100 pcs)	+.001 -.000 A	+.001 -.000 B
44520	8	44510	5	5/8	11/16
44521	8	44511	6	11/16	3/4
44522	9	44512	6	11/16	13/16
44523	9	44513	6	3/4	13/16

Precision Fixture Keys

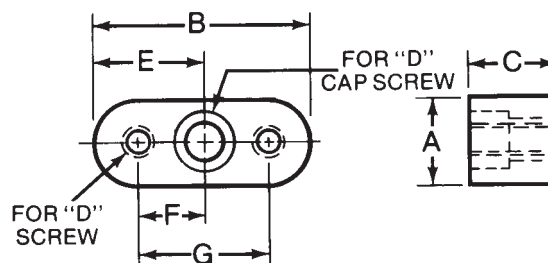
- Material: 1018 Steel
- Black Oxide Finish
- Case Hardened
- Precision Ground
- Use to accurately align fixture on machine table



Part No.	+0.0000 -0.0002 A	B	C	D	E	F	G	Wt. (lbs/100 pcs)
44530	0.3748	15/16	3/8	10-24	15/32	9/32	9/16	3
44531	0.4998	1-1/4	1/2	1/4-20	5/8	3/8	3/4	6
44532	0.6248	1-9/16	5/8	1/4-20	25/32	31/64	15/16	13
44533	0.7498	1-7/8	3/4	5/16-18	15/16	9/16	1-1/8	24
44534	0.9998	2-1/2	1	5/16-18	1-1/4	3/4	1-1/2	55

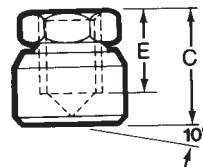
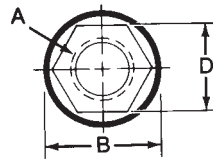
Radius End Precision Fixture Keys

- Material: 1018 Steel
- Black Oxide Finish
- Case Hardened
- Precision Ground
- Use to accurately align fixture on machine table



Part No.	+0.0000 -0.0002 A	B	C	D	E	F	G	Wt. (lbs/100 pcs)
44540	0.3748	15/16	3/8	10-24	15/32	9/32	9/16	2
44541	0.4998	1-1/4	1/2	1/4-20	5/8	3/8	3/4	5
44542	0.6248	1-9/16	5/8	1/4-20	25/32	31/64	15/16	12
44543	0.7498	1-7/8	3/4	5/16-18	15/16	9/16	1-1/8	21
44544	0.9998	2-1/2	1	5/16-18	1-1/4	3/4	1-1/2	50

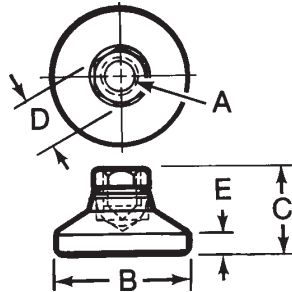
Toggle Pads



- Material: 12L14 Steel
- Black Oxide Finish or Zinc Plate Yellow Chromate Finish
- Case Hardened
- Many sizes conform to TCMAI standards.
- Pads swivel 10 degrees from vertical in any direction
- Assures positive gripping
- Use when high clamping pressures are required

Black Part No.	Yellow Part No.	Thread A	B	C	D	E	Weight (lbs/100pcs)
44302	44362	1/4-20	5/8	5/8	1/2	13/32	4
44303	44363	5/16-18	11/16	11/16	9/16	7/16	5
44304	44364	3/8-16	3/4	3/4	5/8	1/2	6
44305	44365	1/2-13	7/8	1	3/4	17/32	10
44306	44366	5/8-11	1	1-1/16	7/8	9/16	16
44307	44367	3/4-10	1-1/4	1-5/16	1-1/16	3/4	25
44308	44368	1-8	1-5/8	1-11/16	1-3/8	1	60

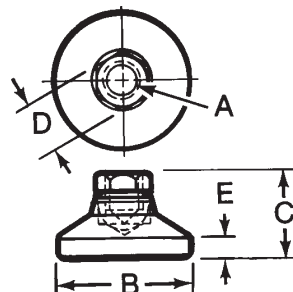
Leveling Pads



- Material: 12L14 Steel
- Black Oxide Finish
- Case Hardened
- Many sizes conform to TCMAI standards
- Pads swivel 10 degrees from vertical in any direction
- Large pad diameter provides solid support
- Use as a foot for machine tools, branches, electronic racks, etc.
- Special sizes quoted upon request

Part No.	Thread A	B	C	D	E	Load Limits	Weight (lbs/100pcs)
44401	3/8-16	1-1/4	7/8	5/8	3/16	3750 lbs.	14
44402	1/2-13	1-7/8	1-1/8	3/4	1/4	5000 lbs.	47
44403	5/8-11	2-1/2	1-1/4	7/8	5/16	6000 lbs.	67
44404	3/4-10	3	1-1/2	1-1/16	1/2	7200 lbs.	138

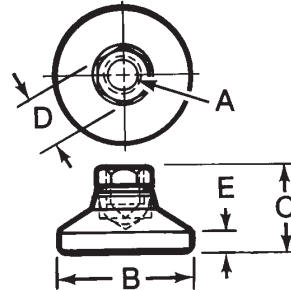
Zinc Plated Leveling Pads



- Material: 12L14 Steel with Zinc Plate Yellow Chromate Finish
- Many sizes conform to TCMAI standards
- Pads swivel 10 degrees from vertical in any direction
- Large pad diameter provides solid support
- Use as a foot for machine tools, benches, electronic racks, etc.
- Special sizes quoted upon request

Part No.	Thread A	B	C	D	E	Load Limits	Weight (lbs/100pcs)
44431	3/8-16	1-1/4	7/8	5/8	3/16	3750 lbs.	14
44432	1/2-13	1-7/8	1-1/8	3/4	1/4	5000 lbs.	47
44433	5/8-11	2-1/2	1-1/4	7/8	5/16	6000 lbs.	67
44434	3/4-10	3	1-1/2	1-1/16	1/2	7200 lbs.	138

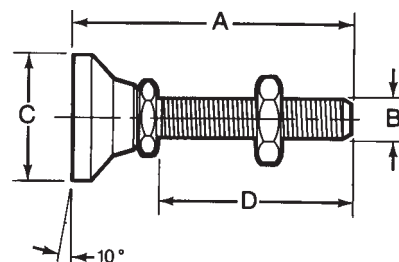
Leveling Pads: Delrin® Leveling Pads



Part No.	Thread A	B	C	D	E
44470	3/8-16	1-1/4	7/8	5/8	3/16
44471	1/2-13	1-7/8	1-1/8	3/4	1/4
44472	5/8-11	2-1/2	1-1/4	7/8	5/16
44473	3/4-10	3	1-1/2	1-1/16	1/2

- Material: Delrin® Pad & 12L14 Steel ball
- Large diameter provides solid support
- Use as a foot for machine tools, benches, electronic racks, etc.
- Pad swivels 10 degrees from vertical in any direction
- Delrin is a trademark of DuPont Corp.

Leveling Pad & Stud Assembly



Part No.	A	Thread B	C	D	Load Limits	Weight (lbs/100pcs)
44450	2-7/8	3/8-16	1-1/4	2-1/32	3750 lbs.	22
44451	3-1/8	1/2-13	1-7/8	1-31/32	5000 lbs.	54
44452	3-1/4	5/8-11	2-1/2	1-15/16	6000 lbs.	102
44453	3-1/2	3/4-10	3	1-31/32	7200 lbs.	184

- Material: 12L14 Steel with Zinc Plating
- Zinc coating deters rust
- Integral stud and hardened ball swivels 10 degrees from vertical in any direction.
- Swivel action facilitates leveling of machine tools, benches, electronic racks, etc. – even on rough surfaces

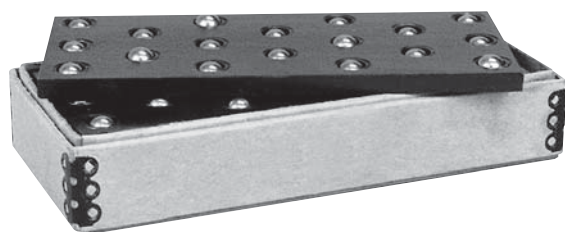
Ball Bearing Parallels



- Material:
 - Plate: 1018 Steel
 - Balls: Grade 200 Carbon Steel
- Black oxide finish on plate
- Designed to ease movement of heavy loads when machining
- Load capacity per ball: 3,000 lbs.
- All plates are 1/4" thick x 2-1/2" wide
- Balls are 3/8" diameter

Part No.	Length	Number of Balls per Plate	Wt. (lbs/100 pcs)
50201	6	18	105
50202	12	36	209
50203	18	54	313

Ball Bearing Parallel Kits



- Material:
 - Plate: 1018 Steel
 - Balls: Grade 200 Carbon Steel
- Black oxide finish on plate
- Designed to ease movement of heavy loads when machining
- Load capacity per ball: 3,000 lbs.
- All plates are 1/4" thick x 2-1/2" wide
- Balls are 3/8" diameter

Part No.	Plate No.	Number of Plates per Kit	Wt. (lbs/100 pcs)
50204	50201	4	4.25
50205	50202	2	6.39

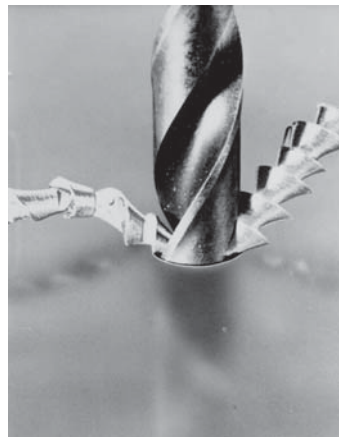
TE-CO Threaded Insert Kits



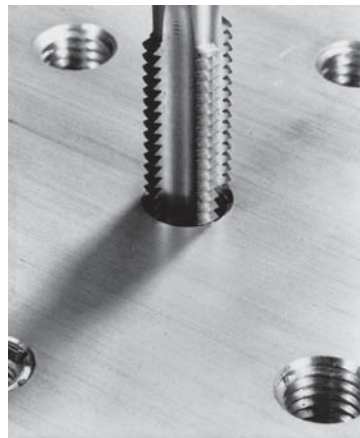
Part No.	Quantity of Inserts	Insert Part No.	Internal Thread	External Thread
Coarse Thread/Fine Thread – Steel				
42370	10	42313	10-24	3/8-16
	10	42314	1/4-20	7/16-14
	10	42315	5/16-18	1/2-13
	10	42316	3/8-16	9/16-12
	6	42318	1/2-13	3/4-10
42371	6	42318	1/2-13	3/4-10
	7	42320	5/8-11	7/8-9
	7	42322	3/4-10	1/8
	2	42323	1-8	1 3/8-12
42372	10	42324	10-32	3/8-16
	10	42325	1/4-28	7/16-14
	10	42326	5/16-24	1/2-13
	10	42327	3/8-24	9/16-12
	6	42329	1/2-20	3/4-10
Metric Internal/U.S. External – Steel				
42373	10	42332	M6 x 1.0	3/8-16
	10	42333	M8 x 1.25	1/2-13
	10	42334	M10 x 1.5	9/16-12
	6	42335	M12 x 1.75	3/4-10

Part No.	Quantity of Inserts	Insert Part No.	Internal Thread	External Thread
Metric Internal/Metric External – Steel				
42374	10	42338	M3 x 0.5	M6 x 1.0
	10	42339	M4 x 0.7	M8 x 1.25
	10	42340	M5 x 0.8	M8 x 1.25
	10	42341	M6 x 1.0	M10 x 1.5
	10	42342	M8 x 1.25	M12 x 1.75
42375	10	42342	M8 x 1.25	M12 x 1.75
	10	42343	M10 x 1.5	M16 x 2.0
	8	42344	M12 x 1.75	M16 x 2.0
	5	42345	M16 x 2.0	M24 x 3.0
303 Stainless Steel, Passivated				
42376	10	42346	10-24	3/8-16
	10	42347	1/4-20	7/16-14
	10	42348	5/16-18	1/2-13
	10	42349	3/8-16	9/16-12
	6	42351	1/2-13	3/4-10
42377	10	42352	10-32	3/8-16
	10	42353	1/4-28	7/16-14
	10	42354	5/16-24	1/2-13
	10	42355	3/8-24	9/16-12
	6	42357	1/2-20	3/4-10

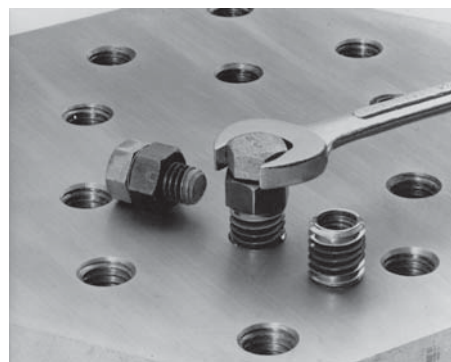
Installation Instructions:



1. Drill hole according to table.
TE-CO insert can be used in extra deep or through hole.



2. Use standard size tap according to table.



3. Use bolt as illustrated to install TE-CO Insert. Nut prevents hang-up of TE-CO Insert on grip of bolt. Use two nuts locked against each other to shorten bolt to proper thread length.

TE-CO Threaded Inserts



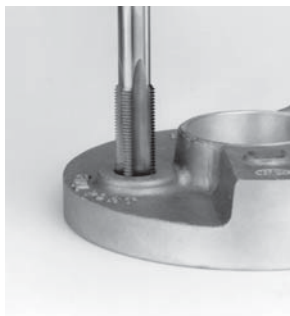
- Automatic self-locking external thread with use-activated adhesive
- Will not back out or vibrate loose
- Immediately on installation, micro-encapsulated epoxy molecules begin to set, and the newly installed insert can be fastened to within minutes. Adhesive continues to cure overnight until completely set
- Adhesive seals against liquids and gases to pressures of 6,000 psi and bonds to virtually all metals

Part No.	Internal Thread	Tap Drill Size	Tap Size External Thread	Length
Coarse Thread/Fine Thread - Steel				
42310	4-40	5/32	10/32	.250
42311	6-32	#7	1/4-20	.280
42312	8-32	F	5/16-18	.290
42313	10-24	5/16	3/8-16	.406
42314	1/4-20	23/64	7/16-14	.437
42315	5/16-18	27/64	1/2-13	.484
42316	3/8-16	31/64	9/16-12	.515
42317	7/16-14	17/32	5/8-11	.656
42318	1/2-13	21/32	3/4-10	.656
42319	9/16-12	21/32	3/4-10	.656
42320	5/8-11	49/64	7/8-9	.687
42321	5/8-11	49/64	7/8-9	1.125
42322	3/4-10	7/8	1-8	.781
42323	1-8	1-9/32	1-3/8-12	1.250
42324	10/32	5/16	3/8-16	.406
42325	1/4-28	23/64	7/16-14	.437
42326	5/16-24	27/64	1/2-13	.484
42327	3/8-24	31/64	9/16-12	.515
42328	7/16-20	17/32	5/8-11	.656
42329	1/2-20	21/32	3/4-10	.656
42330	5/8-18	49/64	7/8-9	.687
42331	3/4-16	7/8	1-8	.781
Extra Heavy Wall - Steel				
42358	1/4-20	27/64	1/2-13	.484
42359	5/16-18	31/64	9/16-12	.515
42360	3/8-16	17/32	5/8-11	.656
42361	1/2-13	49/64	7/8-9	.687
42362	5/8-11	7/8	1-8	.781
Metric Internal/U.S. External - Steel				
42332	M6 x 1.0	5/16	3/8-16	.406
42333	M8 x 1.25	27/64	1/2-13	.484
42334	M10 x 1.50	31/64	9/16-12	.515
42335	M12 x 1.75	21/32	3/4-10	.656
42336	M14 x 2.0	49/64	7/8-9	.656
42337	M16 x 2.0	7/8	1-8	.781
Metric Internal/Metric External - Steel				
42338	M3 x 0.5	5.1mm	M6 x 1.0	6.5mm
42339	M4 x 0.7	6.9mm	M8 x 1.25	7.5mm
42340	M5 x 0.8	6.9mm	M8 x 1.25	7.5mm
42341	M6 x 1.0	8.6mm	M10 x 1.5	10.5mm
42342	M8 x 1.25	10.4mm	M12 x 1.75	12.5mm
42343	M10 x 1.5	14.0mm	M16 x 2.0	17.0mm
42344	M12 x 1.75	14.0mm	M16 x 2.0	17.0mm
42345	M16 x 2.0	21.0mm	M24 x 3.0	20.0mm
303 Stainless Steel, Passivated				
42346	10-24	5/16	3/8-16	.406
42347	1/4-20	23/64	7/16-14	.437
42348	5/16-18	27/64	1/2-13	.484
42349	3/8-16	31/64	9/16-12	.515
42350	7/16-14	17/32	5/8-11	.656
42351	1/2-13	21/32	3/4-10	.656
42352	10-32	5/16	3/8-16	.406
42353	1/4-28	23/64	7/16-14	.437
42354	5/16-24	27/64	1/2-13	.484
42355	3/8-24	31/64	9/16-12	.515
42356	7/16-20	17/32	5/8-11	.656
42357	1/2-20	21/32	3/4-10	.656

Keylocking Inserts: Installation & Removal Information



1. Drill out old threads with a standard drill. Countersink with a standard (82-100 degree) countersink. Note: Drill is oversized, see charts for proper dimensions.



2. Tap new threads with a standard tap. See charts for proper size and depth.



If necessary, Thread Repair Inserts can be removed without damage to the parent material.

1. Drill out material between keys and internal thread with standard drill to specified depth from chart.
2. Bend the keys inward and break off.
3. Remove the old insert using an E-Z out or similar tool.
4. Install replacement insert into the original tapped hole.



3. Screw in the insert until slightly below surface

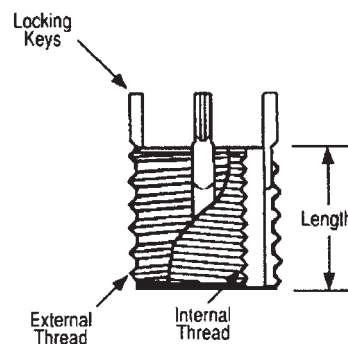


4. Drive keys down with several hammer taps on the proper installation tool.

Technical Notes

- Material:** Carbon Steel Inserts: C1215 or equivalent
Stainless Steel Inserts: 303
Keys: 302
- Finish:** Carbon Steel Inserts: Parkerized
Stainless Steel Inserts: Passivated
- Tolerances:** ± 0.010 inch or ± 0.25 mm unless specified otherwise
- Keys:** Inserts with an internal thread size of 5/16 or M7 and larger are furnished with (4) locking keys

Dimensions are expressed in inches, except metric inserts are in millimeters



Keylocking Inserts

Thinwall

Part Number		Insert		Length	Installation		C'Sink Dia*	Thread Tap		Removal	
Carbon Steel	Stainless Steel	Internal Thread Class 2B	External Thread (Mod) Class 2A		Installation Tool Part No.	Tap Drill Size		Size Class 2B	Min. Depth	Drill Size	Drill Depth
42431	42453	10-24	5/16-18	0.31	42482	I	0.32	5/16-18	0.37	7/32	1/8
42432	42454	10-32	5/16-18	0.31	42482	I	0.32	5/16-18	0.37	7/32	1/8
42433	42455	1/4-20	3/8-16	0.37	42483	Q	0.38	3/8-16	0.43	9/32	3/16
42434	---	1/4-28	3/8-16	0.37	42483	Q	0.38	3/8-16	0.43	9/32	3/16
42435	42456	5/16-18	7/16-14	0.43	42484	X	0.44	7/16-14	0.50	11/32	3/16
42436	---	5/16-24	7/16-14	0.43	42484	X	0.44	7/16-14	0.50	11/32	3/16
42437	42457	3/8-16	1/2-13	0.50	42485	29/64	0.51	1/2-13	0.56	13/32	3/16
42438	42458	3/8-24	1/2-13	0.50	42485	29/64	0.51	1/2-13	0.56	13/32	3/16
42439	---	7/16-14	9/16-12	0.56	42486	33/64	0.57	9/16-12	0.62	15/32	3/16
42440	42459	1/2-13	5/8-11	0.62	42487	37/64	0.63	5/8-11	0.68	17/32	3/16
42441	---	1/2-20	5/8-11	0.62	42487	37/64	0.63	5/8-11	0.68	17/32	3/16

*Tolerance: +.010, -.000

Heavy Duty

Part Number		Insert		Length	Installation		C'Sink Dia*	Thread Tap		Removal	
Carbon Steel	Stainless Steel	Internal Thread Class 2B	External Thread (Mod) Class 2A		Installation Tool Part No.	Tap Drill Size		Size Class 2B	Min. Depth	Drill Size	Drill Depth
42410	42445	8-32	5/16-18	0.31	42470	I	0.32	5/16-18	0.37	7/32	1/8
42411	42446	10-24	3/8-16	0.31	42471	Q	0.38	3/8-16	0.37	9/32	1/8
42412	42447	10-32	3/8-16	0.31	42471	Q	0.38	3/8-16	0.37	9/32	1/8
42413	42448	1/4-20	7/16-14	0.37	42472	X	0.44	7/16-14	0.43	11/32	3/16
42414	---	1/4-28	7/16-14	0.37	42472	X	0.44	7/16-14	0.43	11/32	3/16
42415	42449	5/16-18	1/2-13	0.43	42473	29/64	0.51	1/2-13	0.50	13/32	3/16
42416	---	5/16-24	1/2-13	0.43	42473	29/64	0.51	1/2-13	0.50	13/32	3/16
42417	42450	3/8-16	9/16-12	0.50	42474	33/64	0.57	9/16-12	0.56	15/32	3/16
42418	42451	3/8-24	9/16-12	0.50	42474	33/64	0.57	9/16-12	0.56	15/32	3/16
42419	---	7/16-14	5/8-11	0.62	42475	37/64	0.63	5/8-11	0.68	17/32	3/16
42420	---	7/16-20	5/8-11	0.62	42475	37/64	0.63	5/8-11	0.68	17/32	3/16
42421	42452	1/2-13	3/4-16	0.62	42476	45/64	0.76	3/4-16	0.68	21/32	3/16
42422	---	1/2-20	3/4-16	0.62	42476	45/64	0.76	3/4-16	0.68	21/32	3/16
42423	---	5/8-11	7/8-14	0.87	42478	53/64	0.88	7/8-14	1.00	25/32	5/16
42424	---	5/8-18	7/8-14	0.87	42478	53/64	0.88	7/8-14	1.00	25/32	5/16
42425	---	3/4-10	1-1/8-12	1.12	42479	1-1/16	1.14	1-1/8-12	1.31	31/32	5/16
42426	---	3/4-16	1-1/8-12	1.12	42479	1-1/16	1.14	1-1/8-12	1.31	31/32	5/16
42427	---	7/8-9	1-1/4-12	1.25	42480	1-3/16	1.27	1-1/4-12	1.44	1-3/32	5/16
42428	---	1-8	1-3/8-12	1.37	42481	1-5/16	1.39	1-3/8-12	1.56	1-7/32	5/16

*Tolerance: +.010, -.000

Thinwall: Metric

Part No.		Insert		Length	Installation		C'Sink Dia*	Thread Tap		Removal	
Carbon Steel		Internal Thread Class 2B	External Thread (Mod) Class 6G		Installation Tool Part No.	Tap Drill Size		Size Class 2B	Min. Depth	Drill Size	Drill Depth
62411	M5 x 0.8	M8 x 1.25		8.00	42488	6.9	8.25	M8 x 1.25	9.5	5.50	4.00
62412	M6 x 1.0	M10 x 1.25		10.00	42489	8.8	10.25	M10 x 1.25	11.5	7.50	4.75
62413	M8 x 1.25	M12 x 1.25		12.00	42490	10.8	12.25	M12 x 1.25	13.5	9.50	4.75
62414	M8 x 1.0	M12 x 1.25		12.00	42490	10.8	12.25	M12 x 1.25	13.5	9.50	4.75
62415	M10 x 1.5	M14 x 1.5		14.00	42491	12.8	14.25	M14 x 1.5	15.5	11.50	4.75
62416	M10 x 1.25	M14 x 1.5		14.00	42491	12.8	14.25	M14 x 1.5	15.5	11.50	4.75
62417	M12 x 1.75	M16 x 1.5		16.00	42492	14.75	16.25	M16 x 1.5	17.5	13.50	4.75
62418	M12 x 1.25	M16 x 1.5		16.00	42492	14.75	16.25	M16 x 1.5	17.5	13.50	4.75

*Tolerance: +.010, -.000

Inserts: Knife Thread Inserts for Wood

External knife threads provide superior holding power in hard and soft woods, particle board and all wood products. Use wherever field assembly or disassembly could lead to thread erosion or stripping. The long pilot ensures straight driving into a drilled hole. Install with screw driver, bolt and nut, tapping head or driving tool.



Insert Part No.	Drive Tool Part No.	Internal Thread	Length Overall	Major Diameter External Thread	Hole Size
42378	N/A	4-40	.375	.350	1/4
42379	42309	6-32	.375	.350	1/4
42380	42386	8-32	.375	.350	1/4
42381	42387	10-24	.500	.453	3/8
42382	42387	10-32	.500	.453	3/8
42383	42388	1/4-20	.500	.453	3/8
42302	42388	1/4-28	.500	.453	3/8
42384	42389	5/16-18	.625	.600	1/2
42303	42389	5/16-24	.625	.600	1/2
42385	42399	3/8-16	.625	.600	1/2
42304	42399	3/8-24	.625	.600	1/2

Inserts: Hexdrive Knife Thread Inserts for Wood

An inexpensive insert for use in ready-to-assemble furniture, drawer pulls and wherever ease of assembly or avoidance of thread stripping is desired. Install with hex drive wrench or drive tool.

- Material: Die cast zinc alloy



Insert Part No.	Drive Tool Part No.	Description	Length	Hole Size	Hex Dimension
42363	42368	8-32 Flanged	11mm	6mm	4mm
42306	42368	10-24 Flanged	11mm	4mm	4mm
42364	42369	1/4-20 Flanged	13mm	9mm	6mm
42365	42369	1/4-20 Flanged	20mm	9mm	6mm
42307	42300	5/16-18 Flanged	13mm	8mm	8mm
42308	42301	3/8-16 Flanged	25mm	10mm	10mm
42366	42369	1/4-20 Flush	13mm	9mm	6mm
42367	42369	1/4-20 Flush	20mm	9mm	6mm
42305	42300	5/16-18 Flush	20mm	8mm	8mm

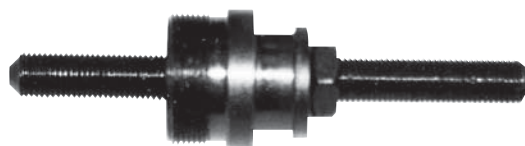
Note: 11mm approximately 7/16"; 13mm approximately 1/2"; 20mm approximately 3/4"

Collet Stop Assembly Part Number 35001



- Assembly includes:
 - Adjustable Collet Stop: Part Number 35002
 - Extension Tube: Part Number 35004
 - Stop Wrench: Part Number 35009

Adjustable Collet Stop Part Number 35002



- Fully threaded adjustment screw
- Fits collet with internal threads
- Overall length = 4.12
- Black Oxide Finish

Collet Stop Extension Tube Part Number 35004



- Adds 3" length to the collet stop
- Conveniently locates long parts
- Two or more tubes can be coupled for desired length
- Internal Thread & External Thread = 1.041-24

Collet Stop Wrench Part Number 35009



- Makes it easy to tighten or remove collet stops
- Saves time and prevents damage to precision collets
- Wrench mates perfectly with collet