

NELSON[®] STUD WELDING

A Nelson Fastener Systems Company

In Stock Studs & Standards



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General Information

The Basic Engineering Specifications that cover all of the studs listed in this publication, regardless of size and shape, are detailed below.

Stud Dimensions (Before Weld Length)

The length dimensions (L), shown throughout this catalog, are the overall length of the stud before weld. The after weld length will depend on the diameter of the stud and the welding process. The approximate length reduction due to welding is shown in Table 1 below.

Stud Diameter	Weld Process	Length Reduction
6-32 Thru 1/4-20 (ATC,ATS, ANC, ANS, AXC, WTOP, TFTC, TFTS, TFTA, TUTC, TUTA, TPC 10GA)	Short Cycle	1/32"
3/16" Thru 1/2"	Electric Arc	1/8"
5/8" Thru 7/8"	Electric Arc	3/16"
1" (and over)	Electric Arc	1/4"
All Diameters	Weld Through Deck (WTD)	1/2 x Diameter

Table 1. Approximate Length Reduction After Weld

Mild Steel Studs

Mild Steel Studs typically conform to ASTM-A29/A108 and ISO 13918, with C1015 and C1018 being the preferred steels. The composition of Mild Steel Studs typically conforms to the following limits (weight %):

C	0.23 Max	P	0.040 Max
Mn	0.90 Max	S	0.050 Max

Stainless Steel Studs

Stainless Steel Studs typically conform to ASTM-A276, ASTM-A493, and ISO 13918, with the SS18-8 family being the preferred steels. The composition of Stainless Steel Studs typically conforms to the following limits (weight %):

C	0.12 Max
Mn	2.00 Max
Cr	16.00/20.00
Ni	8.00/13.00
Cu	3.00/4.00

Aluminum

Nelson reserves the right to substitute aluminum alloys based on availability of material. Approved alloys in aluminum are

5356, 5086, 5083, & 5456 for Drawn Arc studs and 6061 for CD studs.

Threads

Unless stated otherwise, standard threads are UNC-2A for external threads and 2B for internal threads, prior to plating. Standard maximum thread length is 3". Other thread types and thread lengths are available on request.

Flux

Nelson Standard Studs 5/16" diameter and larger include a solid aluminum flux. Smaller diameter studs can be supplied with or without a solid aluminum flux per customer request or Nelson standard design.

Mechanical Properties

The minimum expected mechanical properties of the raw material (cold drawn) are shown in Table 2. The values in the table conform to one or more of the following specifications: AWS D1.5 or ISO 13918, AWS D1.1, AWS D1.6

Annealing

Previously when stainless studs were welded to a carbon steel plate, it was necessary to have the stud in the annealed condition. Now studs are made in high volume using the cold forming process and are produced from annealed-in-process (AIP) wire that is 90 Rockwell B or less, and no further processing is required. Studs made from bar stock using the screw machine process are still required to have a post-anneal process.

Ordering Nelson Studs

Each stud ordered should be listed separately with the appropriate ferrule included. The "Stud Style" should be specified along with diameter/thread, length, material, Nelson Part#, and quantity required. For reference, each stud type has an ordering example that shows the proper format to ensure proper identification of your requirements. Where applicable, gun accessories are also included. Nelson strongly recommends using genuine Nelson accessories with all stud orders.

Delivery

The majority of items listed in this catalog are shipped within 24 hours following receipt of an order.

Some items may require a lead-time based on material availability and machine backlog.

In such cases, please consult your Nelson Representative.

Mechanical Properties

Mechanical Properties – English (Nelson Standard Studs)

Stud Type	Tensile (UTS) (Minimum) (PSI)	Yield (Minimum) (PSI)	Elongation (2") (Minimum)	Reduction of Area (Minimum)
Mild Steel				
CPL, CFL, PFL, MP, MD, CKL, NBL, H4L (1/4 DIA), L2L, R7P, etc	61,000	49,000	17%	50%
S3L, H4L (3/8, 1/2, & 5/8 DIA)	65,000	51,000	20%	50%
D2L (ASTM-A-1064)	80,000	70,000	-	-
ATC, ANC, AXC, TFTC, TUTC, TUNC	50,000	35,000	17%	50%
Stainless Steel				
Standard Studs, As Manufactured	70,000	35,000	40%	40%
ATS, ANS, UNS, TFTS, TFNC, TUNS	70,000	35,000	40%	40%

Mechanical Properties – Metric (Nelson Standard Studs)

Stud Type	Tensile (UTS) (Minimum) (MPa)	Yield (Minimum) (MPa)	Elongation (2") (Minimum)	Reduction of Area (Minimum)
Mild Steel				
CPL, CFL, PFL, MP, MD, CKL, NBL, H4L (1/4 DIA), L2L, R7P, etc	420	337	17%	50%
S3L, H4L (3/8, 1/2, & 5/8 DIA)	448	351	20%	50%
D2L (ASTM-A1064)	551	482	-	-
ATC, ANC, TFTC, TUTC, AXC, UNC	345	241	17%	50%
Stainless Steel				
Standard Studs, As Manufactured	482	241	40%	40%
ATS, ANS, TFTS, UNS	482	241	40%	40%

Table 2. Mechanical Properties of Standard Nelson Weld Studs

Nelson High Strength Studs (Non-Heat Treated, Weldable)

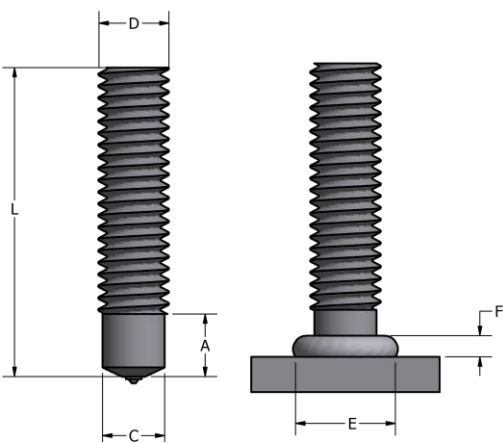
Property (Minimum Values)	Nelson High Strength Studs (HS)	SAE Grade 5 Bolts	ISO 898-1, Class 8.8 Bolts
Tensile Strength (UTS)	110,000*	120,000	116,000
Yield Strength	92,000	92,000	92,000
Hardness (HRC)	22-34	25-34	22-32
Elongation (2")	6.5%	14%	-
Reduction in Area	42%	35%	-

*Depending on diameter

Table 3. Comparison of Nelson High Strength Studs to Common Industry Specifications



Partially Threaded Stud



Ordering Example
Nelson Type CPL, 1/2-13 x 2 MS, Part No. 101-017-315

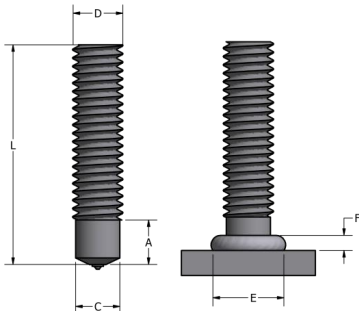
Material
Low Carbon Steel (MS) per ASTM-A29/A108, Grades 1010 through 1020
Stainless Steel (SS18-8) (UNS S30430) per ASTM-A493

D Thread	1/4-20	5/16-18	3/8-16	1/2-13	5/8-11	3/4-10	7/8-9
A	.375	.375	.385	.500	.625	.791	.858
C	.215	.275	.330	.448	.562	.680	.798
E	.312	.406	.468	.593	.750	.921	1.046
F	.093	.109	.109	.156	.187	.250	.312
Flash Clearance	.375	.469	.531	.656	.812	.984	1.125

Thread	L Length	Modifier	Part Number		Qty/ Ctn	Part Number							
			SS	MS		Ferrule	Chuck	Grip	Foot*				
1/4-20	7/8			101017005	5000								
1/4-20	1			101017009	4000								
1/4-20	1 1/4			101017018	3700								
1/4-20	1 1/4	Annealed	101017679		3000	100101034	500001007	501001005	502001137				
1/4-20	1 1/2			101017024	2500								
1/4-20	1 1/2	Annealed	101017680		2500								
1/4-20	1 3/4			101017028	2250								
1/4-20	2			101017032	2000								
5/16-18	1 1/4	Annealed	101017691		2000								
5/16-18	1 1/2			101017109	1800								
5/16-18	1 1/2	Annealed	101017694		1800	100101035	500001009	501001006	502001137				
5/16-18	1 3/4	Annealed	101017696		1500								
5/16-18	2 1/2			101017122	1000								
3/8-16	1			101017178	1800								
3/8-16	1	High Strength		101021700	1800								
3/8-16	1	Annealed	101017710		1800								
3/8-16	1 1/8			101017181	1600								
3/8-16	1 1/8	High Strength		101021699	1600								
3/8-16	1 1/8	Annealed	101017711		1600								
3/8-16	1 1/4			101017182	1500								
3/8-16	1 1/4	High Strength		101021698	1500								
3/8-16	1 1/4	Annealed	101017712		1350								
3/8-16	1 3/8			101017185	1250								
3/8-16	1 3/8	High Strength		101021697	1250								
3/8-16	1 3/8	Annealed	101017713		1250	100101036	500001011	501001007	502001137				
3/8-16	1 1/2			101017186	1200								
3/8-16	1 1/2	Annealed	101017714		1250								
3/8-16	1 1/2	316L, Annealed	101018525		1150								
3/8-16	1 5/8			101017188	1000								
3/8-16	1 5/8	Annealed	101017716		1000								
3/8-16	1 3/4			101017189	1100								
3/8-16	1 3/4	High Strength		101021696	1000								
3/8-16	1 3/4	Annealed	101017717		1000								
3/8-16	2			101017191	1000								
3/8-16	2	Annealed	101017719		900								
3/8-16	2 1/8			101018314	850								
3/8-16	2 1/4			101017193	800								

Partially Threaded Stud

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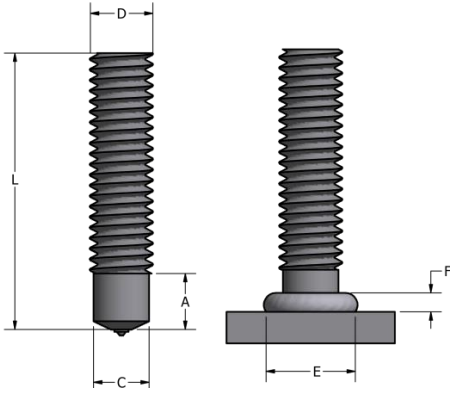


D Thread	1/4-20	5/16-18	3/8-16	1/2-13	5/8-11	3/4-10	7/8-9
A	.375	.375	.385	.500	.625	.791	.858
C	.215	.275	.330	.448	.562	.680	.798
E	.312	.406	.468	.593	.750	.921	1.046
F	.093	.109	.109	.156	.187	.250	.312
Flash Clearance	.375	.469	.531	.656	.812	.984	1.125

Thread	L Length	Modifier	Part Number		Qty/ Ctn	Part Number			
			SS	MS		Ferrule	Chuck	Grip	Foot*
3/8-16	2 1/4	Annealed	101017722		800				
3/8-16	2 1/2			101017195	700				
3/8-16	2 1/2	Annealed	101017725		700	100101036	500001011	501001007	502001137
3/8-16	2 3/4			101017197	600				
3/8-16	3			101017199	600				
3/8-16	3 1/2			101017204	500				
1/2-13	1 1/8	Annealed	101-021-528		900				
1/2-13	1 1/4			101017303	850				
1/2-13	1 1/4	High Strength		101021689	850				
1/2-13	1 1/4	Annealed	101017745		850				
1/2-13	1 3/8			101017306	750				
1/2-13	1 1/2			101017308	700				
1/2-13	1 1/2	Annealed	101017747		700				
1/2-13	1 5/8			101018150	700				
1/2-13	1 3/4			101017312	600				
1/2-13	1 3/4	High Strength		101021688	600				
1/2-13	1 3/4	Annealed	101017750		550				
1/2-13	2			101017315	500				
1/2-13	2	Annealed	101017752		500	100101038	500001014	501001009	502001137
1/2-13	2 1/8			101017317	450				
1/2-13	2 1/8	High Strength		101021687	500				
1/2-13	2 1/4			101017318	450				
1/2-13	2 1/2			101017321	400				
1/2-13	2 1/2	Annealed	101017755		400				
1/2-13	2 3/4			101017324	350				
1/2-13	3			101017326	350				
1/2-13	3	Annealed	101017758		350				
1/2-13	3 1/2			101017330	250				
1/2-13	4			101017334	250				
1/2-13	4 1/2			101017338	225				
1/2-13	5			101017342	200				
1/2-13	6			101017350	170				
5/8-11	1 1/2			101017370	425				
5/8-11	1 3/4			101017372	375				
5/8-11	2			101017375	300				
5/8-11	2	Annealed	101017668		300	100101039	500001016	501001011	502001138
5/8-11	2 1/4			101017377	275				
5/8-11	2 1/2			101017379	250				
5/8-11	2 1/2	Annealed	101017666		250				
5/8-11	2 3/4			101017381	225				
5/8-11	2 3/4	Annealed	101019237		225				

Partially Threaded Stud

(Continued)



D Thread	1/4-20	5/16-18	3/8-16	1/2-13	5/8-11	3/4-10	7/8-9
A	.375	.375	.385	.500	.625	.791	.858
C	.215	.275	.330	.448	.562	.680	.798
E	.312	.406	.468	.593	.750	.921	1.046
F	.093	.109	.109	.156	.187	.250	.312
Flash Clearance	.375	.469	.531	.656	.812	.984	1.125

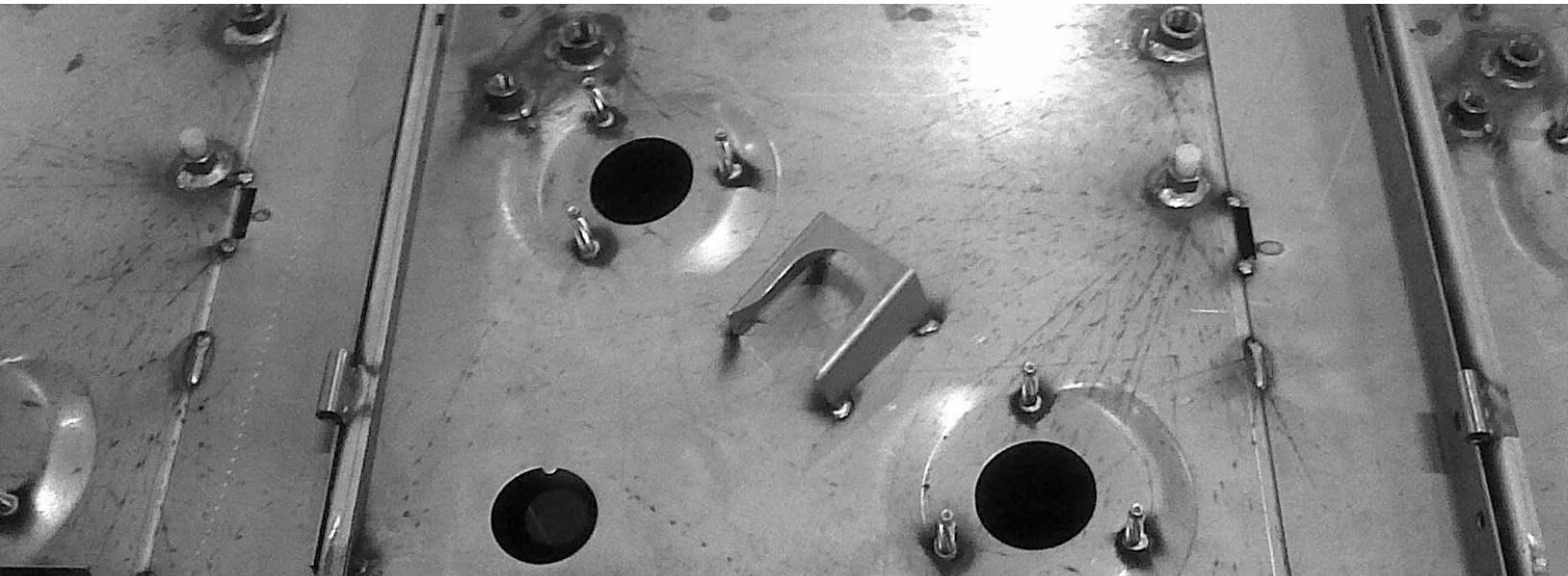
Thread	L Length	Modifier	Part Number		Qty/ Ctn	Part Number			Foot*
			SS	MS		Ferrule	Chuck	Grip	
5/8-11	3			101017383	200				
5/8-11	3 1/2			101017387	180				
5/8-11	4			101017391	150				
5/8-11	4 1/2			101017395	140	100101039 ¹	500001016	501001011	502001138
5/8-11	5			101017399	125				
5/8-11	5 1/2			101017403	110				
5/8-11	6			101017407	100				
3/4-10	1 1/2			101017424	300				
3/4-10	1 3/4			101017425	250				
3/4-10	2			101017426	200				
3/4-10	2 1/2			101017428	170				
3/4-10	2 3/4			101017429	150				
3/4-10	3			101017430	150	100101040 ²	500001018	501001014	502001002
3/4-10	3 1/2			101017432	125				
3/4-10	4			101017434	100				
3/4-10	4 1/2			101017436	100				
3/4-10	5			101017438	85				
3/4-10	5 1/2			101017440	75				
7/8-9	2 1/2			101018390	125	100101041	500001019	501001015	502001003
7/8-9	3 1/2			101018352	85				

* 502-001-001 Foot used with Heavy Duty Gun. Use 502-001-137 Foot with Standard Duty Gun.

502-001-002 Foot used with Heavy Duty Gun. Use 502-001-138 Foot with Standard Duty Gun.

¹ For vertical welding surface use Ferrule 100-101-234.

² For vertical welding surface use Ferrule 100-101-214.



Fully Threaded Stud

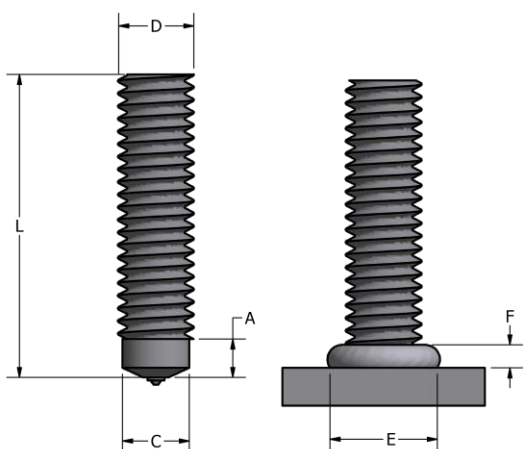
Ordering Example

Nelson Type CFL, 1/4-20 x 1 MS, Part No. 101-010-011

Material

Low Carbon Steel (MS) per ASTM-A29/A108, Grades 1010 through 1020

Stainless Steel (SS18-8) (UNS S30430) per ASTM -A493

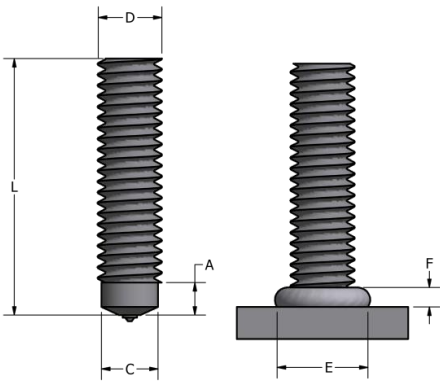


D Thread	1/4-20	5/16-18	3/8-16	1/2-13	5/8-11	3/4-10
A	.142	.142	.190	.221	.284	.346
C	.215	.275	.330	.448	.562	.680
E	.359	.437	.500	.687	.781	1.062
F	.109	.109	.125	.156	.187	.250
Flash Clearance	.437	.500	.593	.750	.843	1.125

Thread	L Length	Modifier	Part Number		Qty/ Ctn	Part Number			
			SS	MS		Ferrule	Chuck	Grip	Foot*
1/4-20	5/8	18-8	101010315		6000				
1/4-20	3/4			101010003	5500	100101077	500001007	501001005	502001137
1/4-20	3/4	18-8, Annealed	101010316		6000				
1/4-20	7/8			101010008	5000				
1/4-20	7/8	18-8, Annealed	101010317		5000				
1/4-20	1			101010011	4000				
1/4-20	1	18-8, ID Mark	101010318		4000				
1/4-20	1	K/O 1/2		101010014	5000				
1/4-20	1	K/O 5/8		101010017	5000				
1/4-20	1 1/8			101010019	4000				
1/4-20	1 1/8	18-8, Annealed	101010322		4000	100101067	500001007	501001007	502001137
1/4-20	1 1/4			101010023	3250				
1/4-20	1 1/4	18-8, Annealed	101010323		3500				
1/4-20	1 1/2			101010028	2750				
1/4-20	1 1/2	18-8, ID Mark	101010324		2750				
1/4-20	2 1/4			101010037	1800				
1/4-20	2 1/2			101010040	1600				
5/16-18	3/4			101010062	3500				
5/16-18	3/4	18-8	101010331		3500	100101030	500001009	501001007	502001137
5/16-18	7/8			101010065	3000				
5/16-18	1			101010067	2500				
5/16-18	1	18-8, Annealed	101010333		2700				
5/16-18	1 1/8			101010071	2500				
5/16-18	1 1/4			101010073	2000				
5/16-18	1 1/4	18-8, Annealed	101011924		2000	100101024	500001009	501001006	502001137
5/16-18	1 1/4	18-8, ID Mark	101010335		2000				
5/16-18	1 1/2			101010077	1800				
5/16-18	1 1/2	18-8, Annealed	101010336		1700				
5/16-18	1 3/4			101010080	1500				
3/8-16	3/4			101010110	2500				
3/8-16	3/4	18-8, Annealed	101010340		2500	100101031	50001011	501001008	502001137
3/8-16	7/8			101010112	2250				
3/8-16	7/8	18-8, Annealed	101010341		2000				
3/8-16	1			101010113	1800				
3/8-16	1	18-8, ID Mark	101010342		1800	100101025	500001011	501001007	502001137
3/8-16	1 1/8			101010117	1600				
3/8-16	1 1/8	18-8, Annealed	101010343		1600				

Fully Threaded Stud

(Continued)



D Thread	1/4-20	5/16-18	3/8-16	1/2-13	5/8-11	3/4-10
A	.142	.142	.190	.221	.284	.346
C	.215	.275	.330	.448	.562	.680
E	.359	.437	.500	.687	.781	1.062
F	.109	.109	.125	.156	.187	.250
Flash Clearance	.437	.500	.593	.750	.843	1.125

Thread	L Length	Modifier	Part Number		Qty/ Ctn MS	Part Number			
			SS	MS		Ferrule	Chuck	Grip	Foot*
3/8-16	1 1/4			101010118	1500				
3/8-16	1 1/4	18-8, ID Mark	101010344		1500				
3/8-16	1 1/2			101010122	1250				
3/8-16	1 1/2	18-8, ID Mark	101010346		1200				
3/8-16	1 5/8			101010124	1100				
3/8-16	1 5/8	18-8, ID Mark	101010347		1100				
3/8-16	1 3/4	18-8, ID Mark	101012743		1000	100101025	500001011	501001007	502001137
3/8-16	2			101010127	900				
3/8-16	2	18-8, ID Mark	101010350		900				
3/8-16	2 1/8	18-8, Annealed	101011329		900				
3/8-16	2 1/4	18-8, Annealed	101010130		800				
3/8-16	2 1/2	18-8, Annealed	101010132		700				
3/8-16	2 3/4	18-8, ID Mark	101010354		700				
1/2-13	1			101010177	1000				
1/2-13	1 1/8			101010179	900				
1/2-13	1 1/4			101010180	850				
1/2-13	1 1/4	18-8, Annealed	101010363		800				
1/2-13	1 1/2			101010183	700	100101027	500001014	501001009	502001137
1/2-13	1 1/2	18-8, Annealed	101010364		650				
1/2-13	1 3/4	18-8, Annealed	101012820		575				
1/2-13	2			101010188	500				
1/2-13	2	18-8, Annealed	101012819		500				
5/8-11	7/8	316L, Annealed	102010150		700				
5/8-11	1 1/2			101010213	450	100101028 ¹	500001016	501001011	502001138
5/8-11	2			101010218	300				
3/4-10	1 9/16	18-8, Annealed	102010140		250				
3/4-10	1 3/4			101010238	2500				
3/4-10	1 15/16	304L, Annealed	102010054		200	100101029 ²	500001018	501001014	502001002
3/4-10	2			101010239	225				
3/4-10	3 1/2			101010245	125				

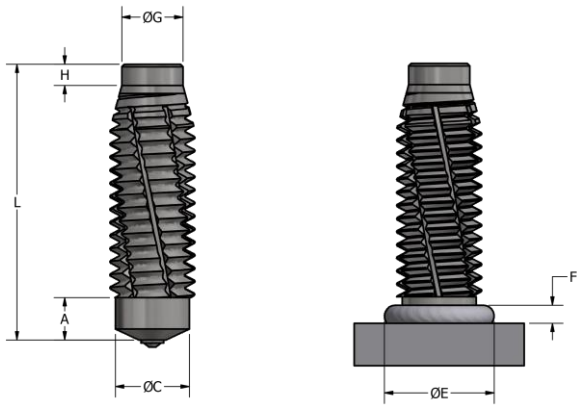
¹ For vertical welding surface use Ferrule 100-101-224.

² For vertical welding surface use Ferrule 100-101-226.

*502-001-001 Foot used with Heavy Duty Gun. Use 502-001-137 Foot with Standard Duty Gun.

502-001-002 Foot used with Heavy Duty Gun. Use 502-001-138 Foot with Standard Duty Gun.

Paint Groove Stud



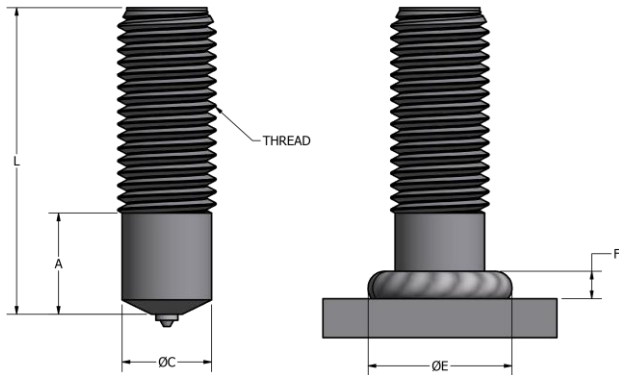
Ordering Example
Nelson Type PFL, 3/8-16 x 1 5/8 SS, Part No 102-013-005

Material
Low Carbon Steel (MS) per ASTM-A29/A108, Grades 1010 through 1020
Stainless Steel (SS) (UNS S30430) per ASTM-A493

Thread	A	C	E	F	G	H
3/8-16	.190	.312	.500	.125	.265	.125
M10-1.5	.190	.343	.500	.125	.285	.125

Thread	L Length	Modifier	Part Number		Qty/ Ctn	Part Number			
			SS	MS		Ferrule	Chuck	Grip	Foot
3/8-16	1 1/8	6 Grooves, Annealed	102013004		1850	100101025	500001471	501001007	502001137
3/8-16	1 5/8	6 Grooves		102013003	1300				
3/8-16	1 5/8	6 Grooves, Annealed	102013005		1300				
3/8-16	1 3/4	6 Grooves, Annealed	102013001		1250				
3/8-16	1 7/8	6 Grooves, Annealed	102013006		1100				
3/8-16	2 1/8	6 Grooves, Annealed	102013012		1000				
3/8-16	2 3/8	6 Grooves, Annealed	102013010		900				
3/8-16	2 7/8	6 Grooves, Annealed	102013011		700				
M10-1.5	43.0MM	6 Grooves, Annealed	102013013		1000	100101240	500001490	501001008	502001137
M10-1.5	45.0MM	6 Grooves, Annealed	102013015		1000				

Metric Partially Threaded Stud



Ordering Example
Nelson Type MP, M10 x 38.0MM HS, Part No. 101-021-692

Material
Low Carbon Steel (MS) per ASTM-A29/A108, Grades 1010 through 1020
Stainless Steel (SS) (UNS S30430) per ASTM-A493

Thread	A	C	E	F
M6-1.0	9.50	5.30	9.00	2.80
M10-1.5	11.50	8.90	12.50	3.40

Thread	L Length	Modifier	Part Number	Qty/ Ctn	Part Number			
					Ferrule	Chuck	Grip	Foot*
M6-1.0	33.0MM	SS316 Annealed	102017156	3500	100101034	500001267	501001005	502001137
M10-1.5	30.0MM	High Strength, Gold Zinc	101021693	1500	100101156	500001269	501001008	
M10-1.5	38.0MM	High Strength	101021692	1100				
M10-1.5	48.0MM	High Strength	101021691	1000				

* 502-001-001 Foot used with Heavy Duty Gun. Use 502-001-137 Foot with Standard Duty Gun.

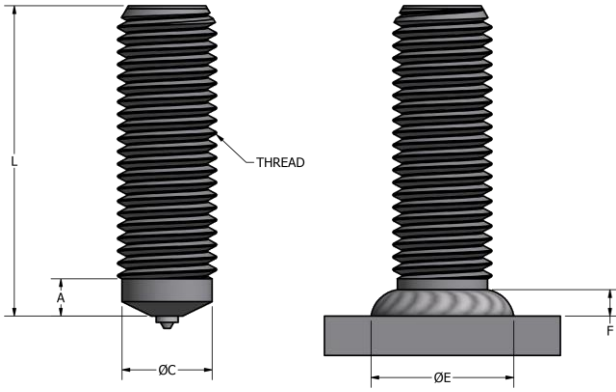
Metric Fully Threaded Stud

Ordering Example

Nelson Type MD, M10 x 23.0MM MS, Part No. 101-011-410

Material

Low Carbon Steel (MS) per ASTM-A29/A108, Grades 1010 through 1020
Stainless Steel (SS) (UNS S30430) per ASTM-A493



Thread	A	C	E	F
M6-1.0	4.00	5.25	9.10	3.00
M8-1.25	4.00	7.10	11.00	3.50
M10-1.5	5.00	8.92	12.30	4.00
M12-1.75	6.00	10.75	16.00	4.50

Thread	L Length	Modifier	Part Number		Qty/ Ctn	Part Number			
			SS	MS		Ferrule	Chuck	Grip	Foot*
M6-1.0	16.0MM	316L, Annealed	102010164		7250				
M6-1.0	17.0MM	Nickel Plating		101017972	6500				
M6-1.0	22.0MM	18-8, Annealed	102010077		5000	100101067	500001267	501001007	502001137
M6-1.0	25.0MM			101012932	4500				
M8-1.25	23.0MM	18-8, Annealed	102010076		2750	100101024	500001009	501001006	502001137
M10-1.5	23.0MM			101011410	1875				
M10-1.5	23.0MM	High Strength		101021694	1850				
M10-1.5	23.0MM	High Strength, Gold Zinc		102010099	1800				
M10-1.5	28.0MM			101011568	1500				
M10-1.5	28.0MM	High Strength		102010074	1500				
M10-1.5	33.0MM			101011558	1250	100101240	500001269	501001008	502001137
M10-1.5	35.0MM	316L	101012777		1200				
M10-1.5	38.0MM	18-8, Annealed	101011656		1000				
M10-1.5	38.0MM	316L, Annealed	102010168		1100				
M10-1.5	40.0MM	18-8, Annealed	101012758		1000				
M10-1.5	40.0MM	316L, Annealed	102010119		1000				
M12-1.75	33.0MM			101011465	850				
M12-1.75	43.0MM			101011584	700	100101027	500001206	501001009	502001137

* 502-001-001 Foot used with Heavy Duty Gun. Use 502-001-137 Foot with Standard Duty Gun.

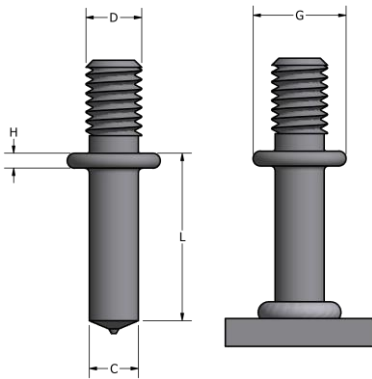
Collar Stud w/ Threaded Extension

Ordering Example

Nelson Type CKL, .330 X 2 1/8 MS, 3/4 Extension, Part No. 101-015-084

Material

Low Carbon Steel (MS) per ASTM-A29/A108, Grades 1010 through 1020
Stainless Steel (SS) (UNS S30430) per ASTM-A276, -A493

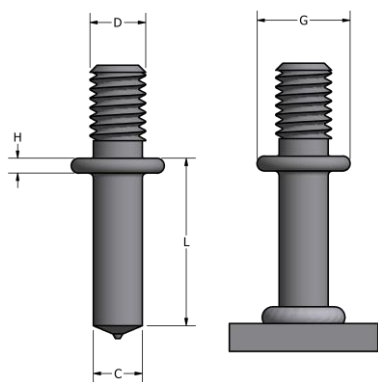


C	D Thread	G	H
.275	5/16-18	.562	.100
.330	3/8-16	.625	.100
.448	1/2-13	.750	.100

C	L	EXT	Modifier	Part Number		Qty/ Ctn	Part Number			
				SS	MS		Ferrule	Chuck	Grip	Foot*
.275	7/8	1	Nickel Plating		101016909	1000	100101073	500001009	501001011	501001138
.330	1/2	3/4	45 Deg. Weld Base		101015231	1200				
.330	1/2	5/8	45 Deg. Weld Base		101015114	1000	100101083	500001011	501001011	502001138
.330	1/2	5/8	Nickel Plated		101016819	1200				

Collar Stud w/ Threaded Extension

(Continued)



C	D Thread	G	H
.275	5/16-18	.562	.100
.330	3/8-16	.625	.100
.448	1/2-13	.750	.100

C	L	EXT	Modifier	Part Number		Qty/ Ctn	Part Number			
				SS	MS		Ferrule	Chuck	Grip	Foot*
.330	1/2	3/4			101015231	1200				
.330	1/2	1	Annealed	101016353		900				
.330	5/8	5/8	45 Deg. Weld Base		101015072	1000				
.330	21/32	5/8	45 Deg. Weld Base		101015863	1000				
.330	1	5/8	45 Deg. Weld Base		101015860	900				
.330	1	3/4	Spl. Collar, NKPL		101016999	900				
.330	1	3/4	Spl. Collar OD, Copper Plating							
.330	1	5/8	45 Deg. Weld Base	101015862		900	100101083	500001011	501001011	502001138
.330	1	5/8	M8 EXT,45 Deg WB	101016930		900				
.330	1 1/8	5/8	45 Deg. Weld Base		101015078	750				
.330	1 1/8	3/4	45 Deg. Weld Base		101015077	750				
.330	1 1/8	3/4	ANLD, 45 Deg. WB	101016552		750				
.330	1 1/8	1	Annealed	101016354		700				
.330	2 1/8	3/4			101015084	500				
.330	2 1/8	3/4	Annealed	101016498						
.330	3 1/8	3/4			101015089	400				
.448	5/8	3/4	Nickel Plated		101015502	700				
.448	5/8	1.54	Nickel Plated		101015454	450				
.448	1	3/4			101015979	300	100101118	500001014	501001012	502001138
.448	1.44	3/4			101015985	425				
.448	1.79	3/4			101015990	400				
5.45MM	15.0mm		M6 x 16MM ext 16MM FL dia A/O		102015020	2100	100101066	500001267	501001011	502001138
10.8MM	16.0MM		M10x25.0MM ext		101016487	20000	100101210	500001269	501001009	502001137
10.8MM	16MM		M10x19MM ext 19MM CLR NKPL		101016499	900				
10.8MM	16.0MM		M12 x 19.0MM ext chamfer, NKPL		101016539	650	100101211	500001206	501001011	502001138

*502-001-001 Foot used with Heavy Duty Gun. Use 502-001-137 Foot with Standard Duty Gun.

502-001-002 Foot used with Heavy Duty Gun. Use 502-001-138 Foot with Standard Duty Gun.



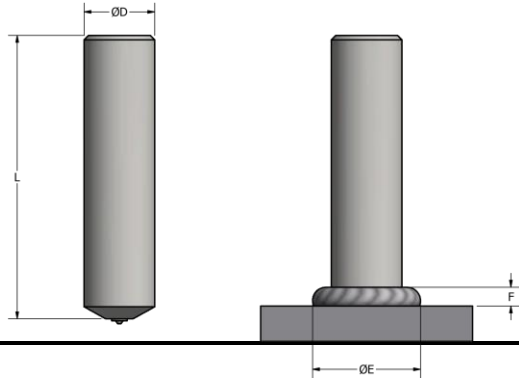
No Thread Stud

Ordering Example

Nelson Type NBL, 3/8 x 1 MS, Part No. 101-065-022

Material

Low Carbon Steel (MS) per ASTM-A29/A108, Grades 1010 through 1020



D	.250	.375	.500	.625	.680	.750	1.000
E	.359	.500	.687	.875	.921	1.063	1.312
F	.109	.125	.156	.187	.250	.250	.453
Flash Clearance	.437	.593	.750	.937	.984	1.125	1.390

Dia.	L Length	Modifier	Part Number		Qty/ Ctn	Part Number			
			SS	MS		Ferrule	Chuck	Grip	Foot*
1/4	7/8			101063035	4500	100101067	500001007	501001007	502001137
3/8	1			101065022	2000				
3/8	1 1/2	Auto Feed		101066439	1200				
3/8	1 1/2	SS430	101066799		1200	100101099	500001011	501001009	502001137
3/8	2			101066440	900				
3/8	2 1/8			101064350	800				
1/2	1	Auto Feed		101065551	1000				
1/2	1	K/O 13/32, SS304	101066871		800				
1/2	1 1/2			101066444	700	100101114	500001014	501001011	502001138
1/2	2			101066445	450				
1/2	3 1/8			101064218	250				
5/8	2 1/8			101064361	350	100101187	500001016	501001014	502001002
.680	2 1/2			101064074	200	100101040†	500001245	501001014	502001002
3/4	2 1/8			101065573	215				
3/4	2 1/2			101065390	145				
1	3			101065773	90	100101045	500001085	501001016	502001003
1	4			101064296	75				

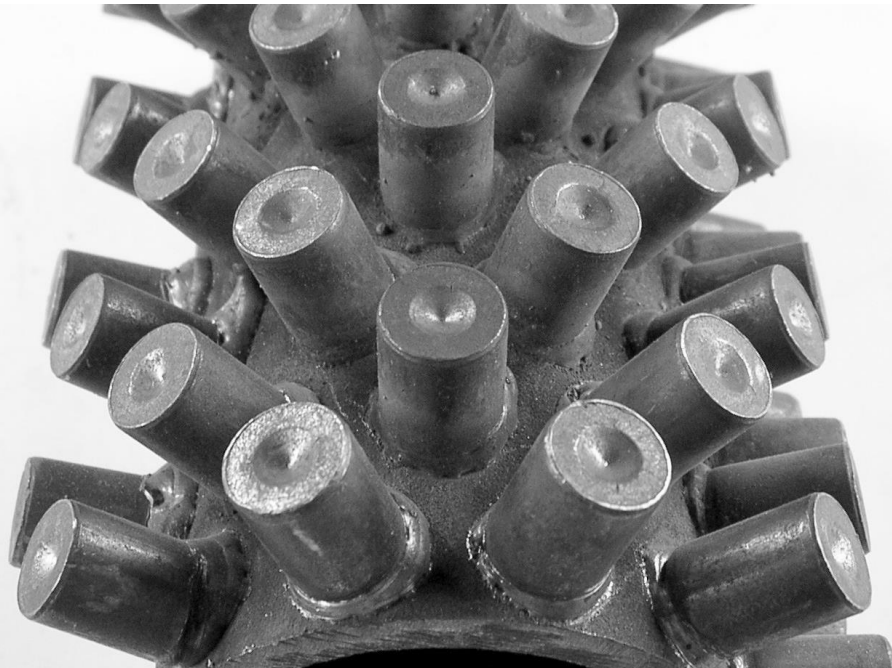
† For Vertical Welding Surface use 100-101-214 Ferrule

‡ For Vertical Welding Surface use 100-101-226 Ferrule

* 502-001-001 Foot used with Heavy Duty Gun. Use 502-001-137 Foot with Standard Duty Gun.

502-001-002 Foot used with Heavy Duty Gun. Use 502-001-138 Foot with Standard Duty Gun.

502-001-003 Foot used with Heavy Duty Gun. Use 502-001-144 Foot with NS-30 Gun.



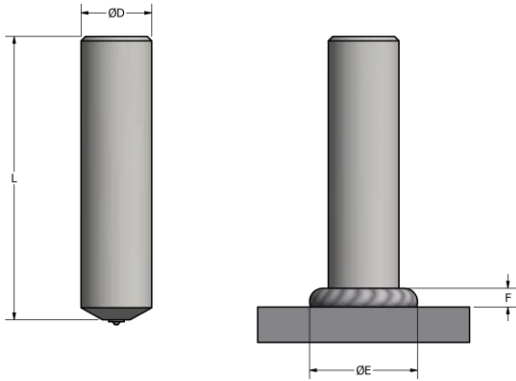
Boiler Studs (Auto Feed, No Thread)

Ordering Example

Nelson Type NBL, 3/8 x 3/4 MS, Part No. 101-064-840

Material

Low Carbon Steel (MS) per ASTM-A29/A108, Grades 1010 - 1020



D	.375
E	.500
F	.125
Fillet Clearance	.500

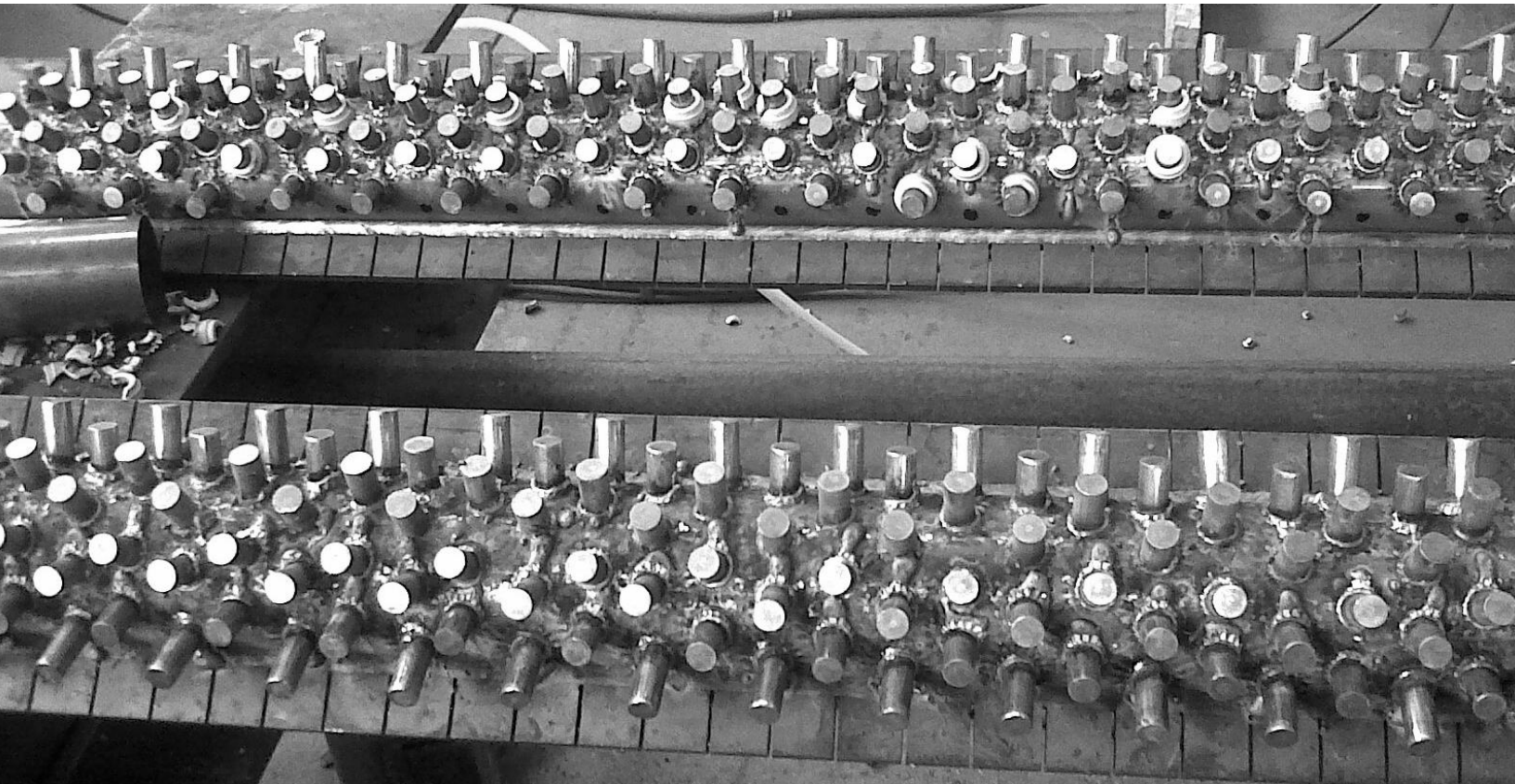
Dia.	L Length	Modifier	Part Number		Qty/ Ctn	Ferrule**	Part Number		
			SS	MS			Chuck	Grip	Foot*
3/8	3/4	430, Auto Feed	101064418		2500	100102012			See Chart Below
3/8	3/4	Auto Feed		101064840	3000	100102012			See Chart Below

Accessories	Chuck	Bushing	Ferrule Tube	Foot*
Hand Feed With Ferrules**	500001030	506000005	501005005	502001137
Auto Feed With Ferrules**	500018082	751040022	501005035	502001138

*502-001-001 Foot used with Heavy Duty Gun. Use 502-001-137 Foot with Standard Duty Gun.

502-001-002 Foot used with Heavy Duty Gun. Use 502-001-138 Foot with Standard Duty Gun.

** For Auto Feed Welding Without Ferrules Consult Your Nelson Representative.



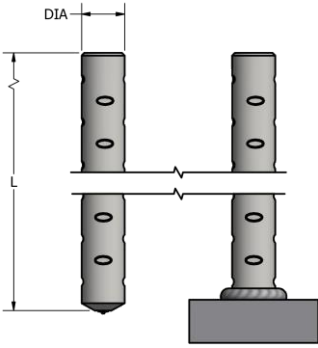
Deformed Bar Anchors

Ordering Example

Nelson Type D2L, 3/8 x 10 1/8 MS, Part No. 101-064-536

Material

Low Carbon Steel (MS) per ASTM-A1064



Dia	L Length	Modifier	Part Number		Qty/ Ctn	Part Number			
			SS	MS		Ferrule	Chuck	Grip	Foot*
3/8	9 1/8			101065668	125				
3/8	10 1/8			101064536	125				
3/8	12 1/8			101064537	125	100101099	500001011	501003009	502001001
3/8	18 1/8			101064539	2000				
3/8	24 1/8			101064541	1500				
1/2	5 1/8			101066166	200				
1/2	12 1/8			101064762	75	100101114	500001014	501003010	502002002
1/2	18 1/8			101064765	1200				
1/2	24 1/8			101064796	1000				
1/2	30 1/8			101065038	1000				
1/2	36 1/8			101064815	750				
5/8	18 3/16			101064909	500	100101187†	500001016	501003014	502002002
5/8	24 3/16			101064923	500				
5/8	30 3/16			101064957	500				
5/8	36 3/16			101064958	500				
3/4	18 3/16			101066222	500	100101152‡	500001018	501003019	502002003
3/4	24 3/16			101066170	400				
3/4	30 3/16			101066171	500				
3/4	36 3/16			101066172	450				

†For Vertical Welding Surface use Ferrule 100-101-224

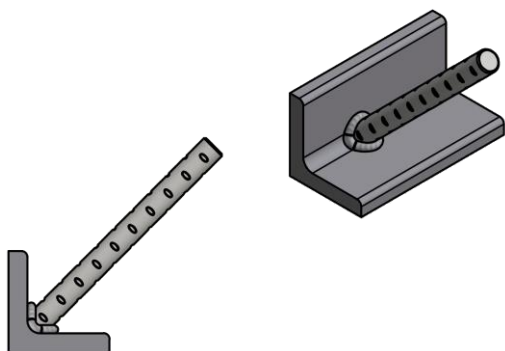
‡For Vertical Welding Surface use Ferrule 100-101-226



Deformed Bar Anchors

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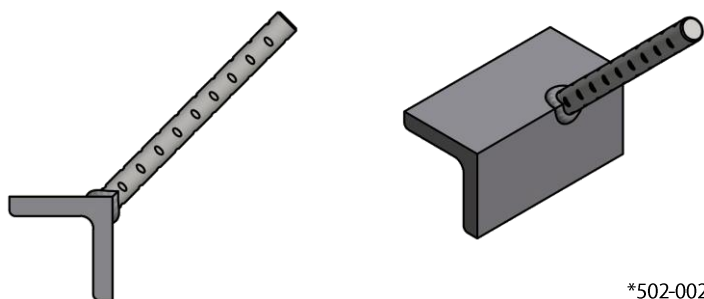
Ferrule and Accessories for welding studs in fillet of angles/structural shapes



Stud Dia.	Ferrule	Fillet Radius	Chuck	Grip	Foot*
3/8	100106002	.250	500001011	501004006	502002001
1/2	100103009	.250	500001014	501004009	502002001
1/2	100103011	.375		501004008	
5/8	100106005	.375	500001016	501004009	502002002
5/8				501008010	
3/4	100106004	.375	500001018	501004014	502002002
3/4	100103012	.750			



Ferrule and Accessories for welding studs to heel of angles/structural shapes

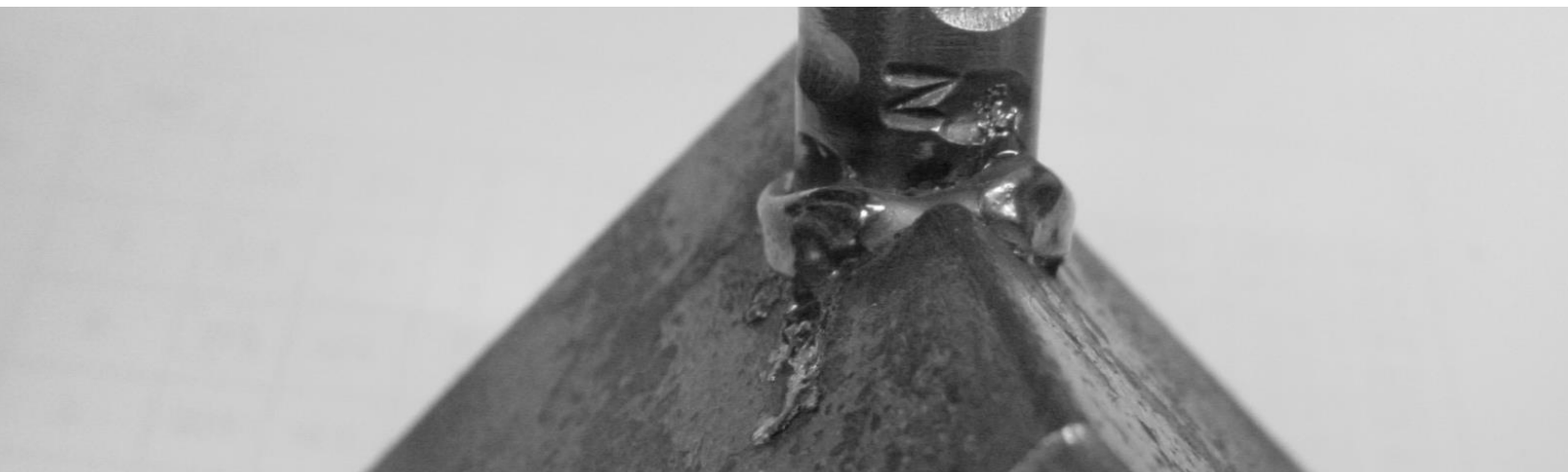


Outside Angle

Stud Dia.	Ferrule	Chuck	Grip	Foot*
3/8	100105001	500001011	501003008	502002001
1/2	100105002	500001014	501003010	502002002
5/8	100105003	500001016	501003010	502002002
3/4	100105005	500001018	501003014	502002002

*502-002-045 or 502-002-046 Feet used with Standard Duty guns

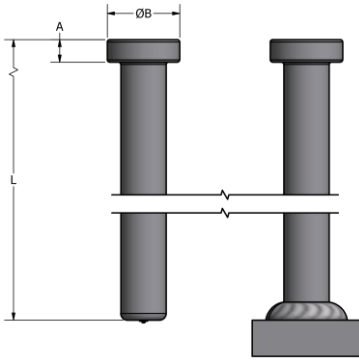
502-002-001, 502-002-002 or 502-002-009 Feet used with Heavy Duty guns



Headed Concrete Anchors

Ordering Example
Nelson Type H4L, 1/2 x 3 1/8 MS, Part No. 101-053-002

Material
Low Carbon Steel (MS) per ASTM-A29/A108, Grades 1010 through 1020
Stainless Steel (SS) (UNS S31603) per ASTM-A276, -A493



DIA	1/4	3/8	1/2	5/8
A	.187	.281	.312	.312
B	.500	.750	1.000	1.250

Dia.	L Length	Part Number		QTY/ CTN	QTY/ Pallet	Ferrule	Welding Accessories - Part Number		
		SS	MS				Chuck	Grip	Foot*
1/4	3/4		102053031	2750	74250				
1/4	1 1/8		101053168	2000	54000				
1/4	2 11/16		101053031	1000	27000	100101067	500001014	501003007	502002001
1/4	4 1/8		101053033	550	14850				
3/8	1 3/8		101053116	1000	27000				
3/8	1 5/8		101053107	845	22815				
3/8	2 1/8		101053037	610	16470				
3/8	2 5/8		101053039	530	14310	100101099	500001018	501003009	502002001
3/8	3 1/8		101053041	430	11610				
3/8	4 1/8		101053043	350	9450				
3/8	5 1/8		102053005	250	6750				
3/8	6 1/8		101053045	150	4050				
3/8	6 1/8 316L	101053417		150	4050				
1/2	2 1/8		101053047	400	10800				
1/2	2 5/8		101053081	315	8505				
1/2	3 1/8		101053002	275	7425				
1/2	3 5/8		101053265	240	6480				
1/2	4 1/8		101053003	180	4860				
1/2	4 1/8 316L	101053332		180	4860				
1/2	5 1/8		102053030	150	4050	100101114	500001085	501003010	502002002
1/2	5 5/16		101053005	120	3240				
1/2	6 1/8		101053008	105	2835				
1/2	6 1/8 SS316L	101053407	101053407	105	2835				
1/2	8 1/8		101053010	65	1755				
5/8	1 7/16		101053331	275	7425				
5/8	2 11/16		101053012	195	5625				
5/8	3 3/16		101053014	175	4725				
5/8	4 3/16		101053015	125	3375				
5/8	5 3/16		101053064	95	2565	100101187†	500001088	501003014	502002002
5/8	6 3/16		101053063	75	2025				
5/8	6 9/16		101053019	70	1890				
5/8	8 3/16		101053023	50	1350				
5/8	10 3/16		102053001	1800	Triwall				

*502-002-045 or 502-002-046 Feet used with Standard Duty guns
502-002-001, 502-002-002 or 502-002-009 Feet used with Heavy Duty guns
†For Vertical Welding Surfaces use Ferrule 100101224

Headed Concrete Anchors

(Continued)

Ferrule and Accessories for welding studs in fillet of angles/structural shapes

Stud Dia.	Ferrule	Fillet Radius	Chuck	Grip**	Foot*
1/4	100106001	.125	500001014	501004003	502002001
3/8	100106002	.250	500001018	501004006	502002001
1/2	100103009	.250	500001085	501004008	502002001
1/2	100103011	.375		501004008	
5/8	100106005	.375	500001088	501004009	502002002
3/4	100106004	.375	500001088	501004014	502002002
3/4	100103012	.750			

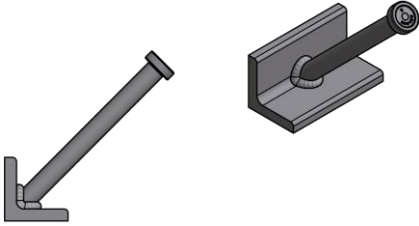
*502022045 or 502002046 Split Feet used with Standard Duty Guns

502002001 or 502002002 Split Feet used with Heavy Duty Guns

**Long length Split Grips are needed to reach into angles

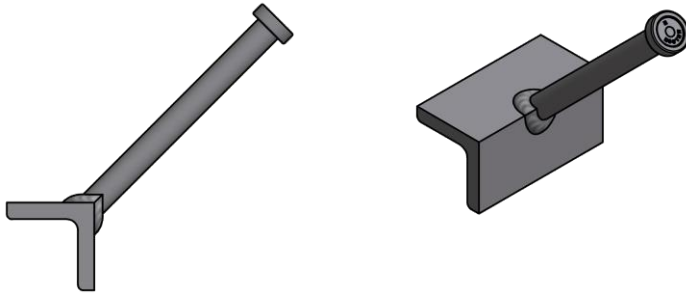
Ferrule and Accessories for welding studs to heel of angles/structural shapes

Stud Dia.	Ferrule	Chuck	Grip	Foot*
1/4	—	—	—	—
3/8	100105001	500001018	501003008	502002001
1/2	100105002	500001085	501003010	502002002
5/8	100105003	500001088	501004009	502002002
3/4	100105005	500001088	501003014	502002002
7/8	100105006	500001091	501003015	502002003

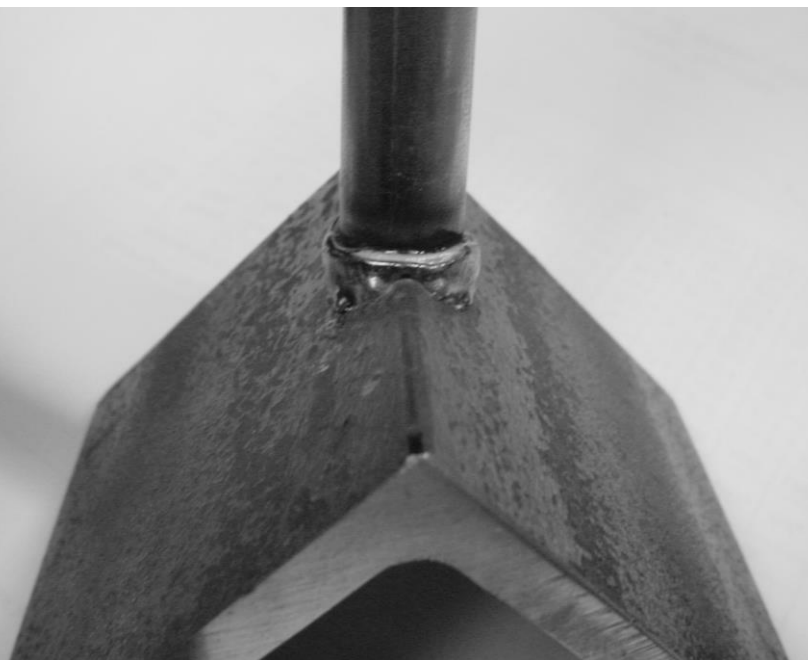


Inside Angle

Short studs in angles do not provide enough anchorage – concrete fails



Outside Angle



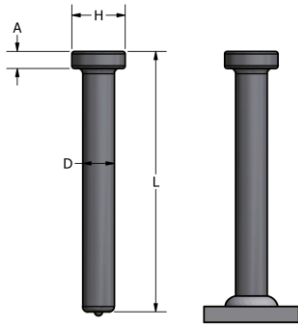
Shear Connectors

Ordering Example

Nelson Type S3L, 3/4 x 4-3/16 MS, Part No. 101-098-007

Material

Low Carbon Steel (MS) per ASTM-A29/A108, Grades 1010 through 1020
Stainless Steel (SS) (UNS S31603) per ASTM-A276, -A493



DIA	3/4	7/8	1
A	.375	.375	.500
H	1.250	1.375	1.625

Dia.	L Length	Part Number		QTY/ CTN	QTY/ Pallet	Welding Accessories - Part Number			
		SS	MS			Ferrule	Chuck	Grip	Foot
3/4	2 3/16		101098078	175	4725				
3/4	3 3/16		101098003	130	3510				
3/4	3 3/8		101098132	120	3240	Bare Beam Accessories – 2 Grip Foot Options			
3/4	3 7/8		101098127	110	2970	100101152	500001088	501006027	502002042
3/4	4 3/16		101098007	95	2565	100101152	500001088	501003014	502002002
3/4	4 3/8		101098126	90	2430				
3/4	4 7/8		101098131	80	2160	Weld-Thru-Deck Accessories (Usable for Bare Beam)			
3/4	5 3/16		101098011	80	2160	100101175	500001088	501006028	502002042
3/4	5 3/8		101098143	75	2025				
3/4	5 7/8		101098138	70	1890	Vertical Welding Accessories – 2 Grip Foot Options			
3/4	6 3/16		101098015	60	1620	100101226	500001088	501006027	502002042
3/4	7 3/16		101098019	55	1485	100101226	500001088	501003014	502002002
3/4	8 3/16		101098023	40	1080				
3/4	9 3/16		101098085	30	810				
3/4	10 3/16		101098073	1200	Triwall				
3/4	12 3/16		101098025	1100	Triwall				
7/8	3 11/16		101098029	85	2295				
7/8	4 3/16		101098031	75	2025				
7/8	5 3/16		101098035	60	1620				
7/8	5 11/16		101098037	55	1485				
7/8	6 3/16		101098039	50	1350				
7/8	6 11/16		101098087	50	1350	100101140	500001091	501006028	502002042
7/8	7 3/16		101098043	40	1080				
7/8	8 3/16		101098047	35	945				
7/8	9 3/16		101098119	30	810				
7/8	10 1/32		102098007	950	Triwall				
7/8	12 3/16		101098066	825	Triwall				
7/8	14 3/16		101098032	700	Triwall				
1	4 1/4		101098204	55	1485				
1	6 1/4		101098168	30	810	100101045	500001424	501006046	502002042
1	8 1/4		101098177	25	675				



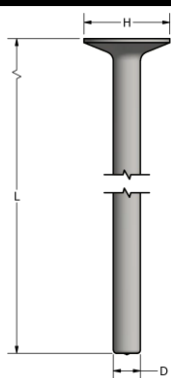
Punching Shear Resistor Stud

Ordering Example

Nelson Type PSRS, 1/2 x 6-3/8 MS, Part No. 102-114-022

Material

Low Carbon Steel (MS) per ASTM-A29/A108, Grades 1010 through 1020

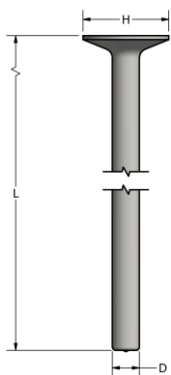


DIA	3/8	1/2	5/8	3/4
H	1.19	1.58	1.98	2.37

Dia.	L Length	Modifier	Part Number MS	Qty / Ctn	Qty / Pallet	Ferrule Part#
3/8	5 7/16		102114007	140	3780	100101099
3/8	5 15/16		102114008	130	3510	
3/8	6 7/16		102114009	135	3645	
1/2	3 3/8		102114016	120	3240	100101114
1/2	3 5/8		102114084	115	3105	
1/2	3 7/8		102114017	110	2970	
1/2	4 1/8		102114072	100	2700	
1/2	4 3/8		102114018	100	2700	
1/2	4 5/8		102114065	100	2700	
1/2	4 7/8		102114019	100	2700	
1/2	5 1/8		102114068	100	2700	
1/2	5 3/8		102114020	90	2430	
1/2	5 5/8		102114061	85	2295	
1/2	5 7/8		102114021	80	2160	
1/2	6 1/8		102114062	3000	3000	
1/2	6 3/8		102114022	3000	3000	
1/2	6 5/8		102114079	70	1890	
1/2	6 7/8		102114023	70	1890	
1/2	7 1/8		102114076	65	1755	
1/2	7 3/8		102114024	1700	1700	
1/2	7 5/8		102114086	60	1620	
1/2	7 7/8		102114025	55	1485	
1/2	8 1/8		102114077	1500	Triwall	
1/2	8 3/8		102114026	1500	Triwall	
1/2	8 7/8		102114067	1500	Triwall	
1/2	9 3/8		102114063	1500	Triwall	
1/2	9 7/8		102114059	1500	Triwall	
1/2	10 1/8		102114074	1800	Triwall	
1/2	10 3/8		102114083	1600	Triwall	
1/2	12 1/8		102114107	1100	Triwall	
1/2	13 7/8		102114073	825	Triwall	
1/2	14 3/8		102114085	900	Triwall	
1/2	14 7/8		102114053	800	Triwall	
1/2	16 3/8		102114069	850	Triwall	
5/8	4 3/8		102114031	2300	Triwall	100101187
5/8	5 3/8		102114033	2000	Triwall	
5/8	5 5/8		102114089	2000	Triwall	
5/8	5 7/8		102114034	1900	Triwall	
5/8	6 3/8		102114035	1800	Triwall	
5/8	7 3/8		102114037	1500	Triwall	
5/8	9 7/8		102114088	1250	Triwall	
5/8	11 7/8		102114143	1000	Triwall	
5/8	13 1/8		102114142	900	Triwall	
5/8	13 7/8		102114117	750	Triwall	

Punching Shear Resistor Stud

(Continued)



DIA	3/8	1/2	5/8	3/4
H	1.19	1.58	1.98	2.37

Dia.	L Length	Modifier	Part Number MS	Qty / Ctn	Qty / Pallet	Ferrule Part#
3/4	6 3/8		102114125	1200	Triwall	100101152
3/4	10 3/8		102114127	900	Triwall	
3/4	12 3/8		102114128	750	Triwall	
3/4	14 3/8		102114129	550	Triwall	

PSRS Chairs

PSRS Chairs

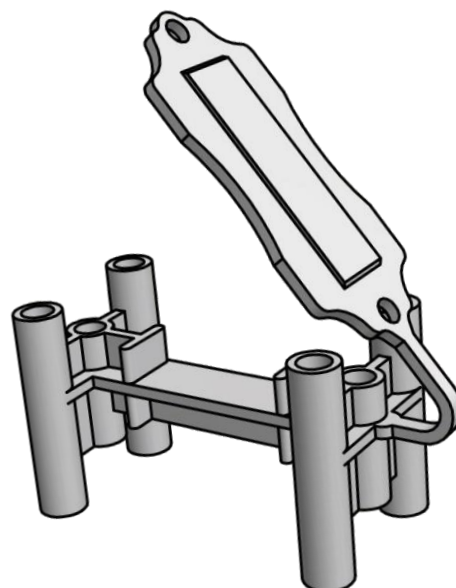
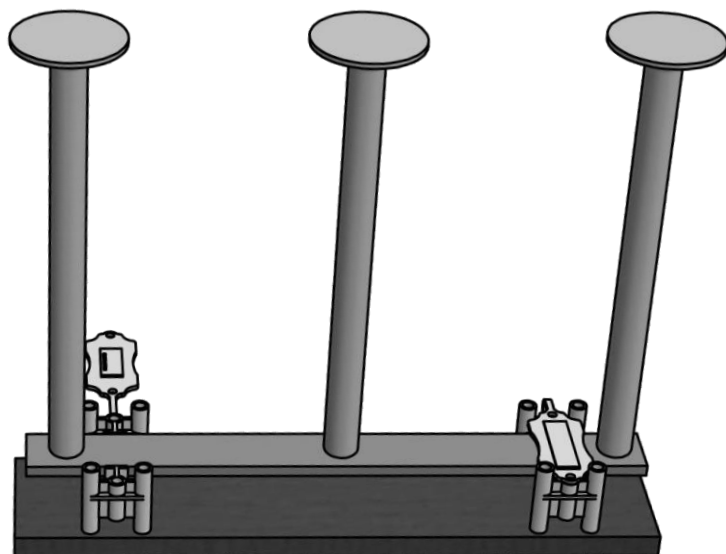
Universal Chair

Nelson Type PSRS Chair, 3/4" or 1" w. cover, Part No. 102-309-003

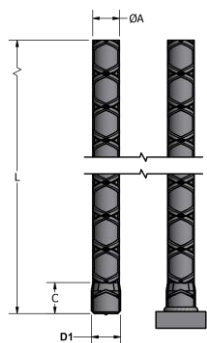
Material

Plastic

Clear Cover	Part Number
3/4	102309003
1	102309008



D6L



Rebar Anchor Studs

Ordering Example

Nelson Type D6L, 1/2 x 12 3/16 MS, Part No. 101-064-536

Material

Low Carbon Steel (MS) per ASTM A706

D	#	D'	C
1/2	A4	.575	5/8
5/8	5	.707	3/4
3/4	6	.880	7/8

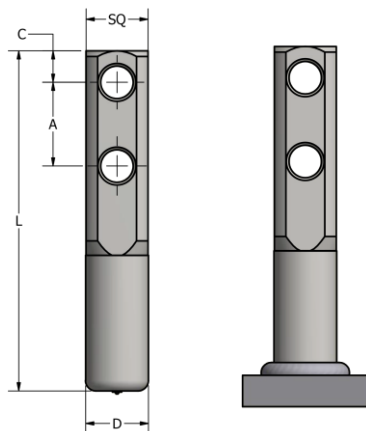
Stock Code	Dia.	L Length	Modifier	Part Number		Qty / Ctn	Ferrule	Part Number			Foot**
				SS	MS			Chuck	Grip		
	1/2	6 3/16									
	1/2	12 3/16			102065004						
	1/2	18 3/16			102065003						
	1/2	24 3/16			102065002		100101187 ^a	500001544	5010006027		502002042
	1/2	30 3/16									
	1/2	36 3/16			102065001						
	5/8	18 3/16			102065007						
	5/8	24 3/16			102065006						
	5/8	30 3/16			102065005		100101152 ²	500001545	501006207		502002042
	5/8	36 3/16									
	3/4	18 1/4			102065011						
	3/4	24 1/4									
	3/4	30 1/4			102065009		100101140 ³	500001546	501006028		502002042
	3/4	36 1/4			102065008						

^a For vertical welding surface use Ferrule 100-101-224

² For vertical welding surface use Ferrule 100-101-226 or 100-109-026

³ For vertical welding surface use Ferrule 100-101-235 or 100-109-035

XBL



Round Corner Square Studs

Ordering Example

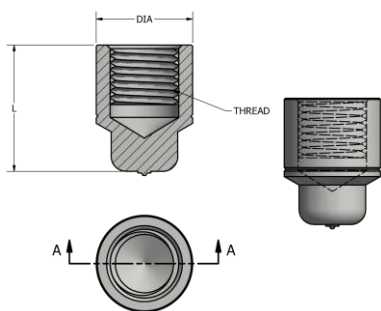
Nelson Type XBL, 3/4 SQ x 4 1/16, 2 holes Part No. 101-111-066

Material

Low Carbon Steel per ASTM A29/A108 Grades 1010 through 1020

Dia.	L Length	Modifier	Part Number		Qty/Carton	Part Number			
			Condition	MS		Ferrule	Chuck	Grip	Foot
3/4	4 1/16	2 holes	3/8" + Bare Steel	101111066	85				
3/4	4 1/16	No hole		102111005	85	100101152	500007035	501001014	502001002
3/4	4 1/16	2 holes	3/8" + Zinc Plated	101111100	80				

Hydraulic Port Stud



With O-Ring Grooves

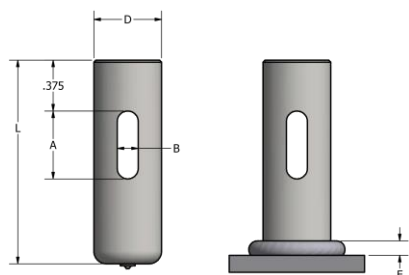
Ordering Example
Nelson Type XXL, 13/16 x 1 1/16 Tap 9/16 x .609 Part No. 101-113-065

Material
Low Carbon Steel per ASTM A29/A108 Grades 1010 - 1020

Dia	L Length	Modifier	Part Number		Part Number				
			Mild Steel	Qty/ Ctn	Ferrule	Chuck	Grip	Foot*	
13/16	1 1/16	Tap 9/16-18 x .609 deep	101113065	500	100102066	500001201	501010051	502001002	
13/16	1 1/16	Tap M16 x .609 deep	102113035	500					

L2L

Lagging W/Hole



Ordering Example
Nelson Type L2L, 3/8 x 1 1/2, Part No. 101-060-013

Material
Low Carbon Steel per ASTM A29/A108 Grades 1010 - 1020

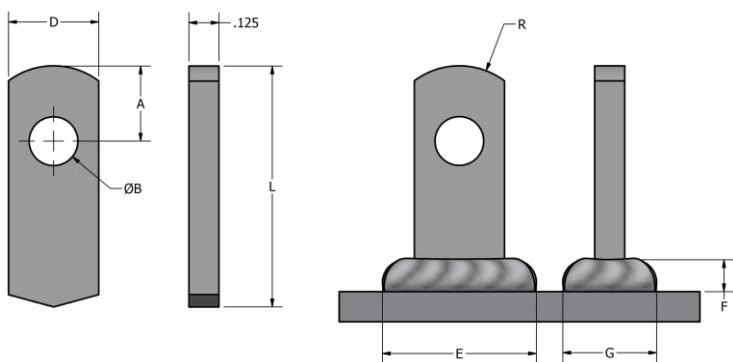
Dia.	L Length	A	B	Part Number		Part Number				
				MS	Qty/ Ctn	Ferrule	Chuck	Grip	Foot*	
3/8	1 1/2	.500	.156	101060013	900	100101099	500001011	501001009	502001137	

*502-001-137 or 502-001-138 Feet used with Standard Duty Guns

502-001-001 or 502-001-002 Feet used with Heavy Duty Guns

R7P

Rectangular W/Hole



Ordering Example
Nelson Type R7P, 1/8 x 3/8 x 1, Part No. 101-091-099

Material
Low Carbon Steel per ASTM A29/A108 Grades 1010 - 1020
Stainless Steel per ASTM UNS S30430 or S31603

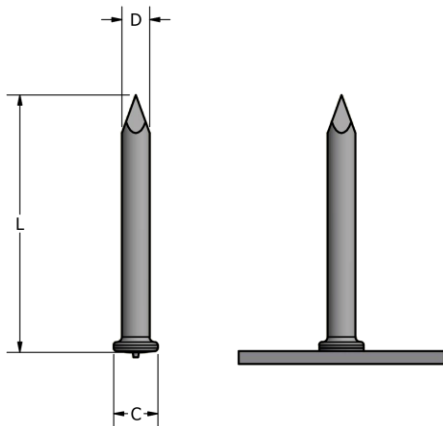
Thickness X Width	D	A	B	R	E	F	G
1/8 x 3/8	.375	.312	.203	.312	.437	.093	.218
1/8 x 5/8	.625	.312	.203	.312	.687	.093	.218

Dia X Thickness	L Length	Modifier	Part Number		Qty/ Ctn	Part Number				
			SS	MS		Ferrule	Chuck	Grip	Foot*	
1/8 x 3/8	1	SS18-8	101091099		4000	100301002	500005003	501001007	502001137	

*502-001-137 or 502-001-138 Feet used with Standard Duty Guns

502-001-001, 502-001-002 or 502-001-003 Feet used with Heavy Duty guns

Single Pointed Insulation Pin



Ordering Example

Nelson Type TPC, 10 GA x 1 1/4, Part No. 101-262-125

Material

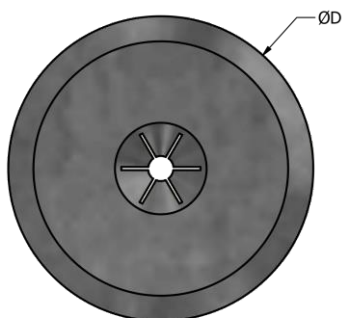
Low Carbon Steel per ASTM A29/A108 Grades 1010 - 1020

D	C
.134	.215

Dia.	L Length	Modifier	Part Number		Qty/ Ctn	Chuck	Part Number	
			SS	MS			Spark Shield	Foot*
10 GA	1 1/4			101262125	5000			
10 GA	1 1/2			101262150	5000	500001002	511001002	502001138
10 GA	2 1/4			101262225	5000			

*502-001-138 Foot used with Standard Duty guns

SPEED CLIP



Ordering Example

Nelson Type Speed Clip, 10 GA x 1 1/2, Part No. 101-301-104

Material

Low Carbon Steel

D	C Pin Size	A Thickness
1 1/2	10 Ga	.021
2	10 Ga	.021

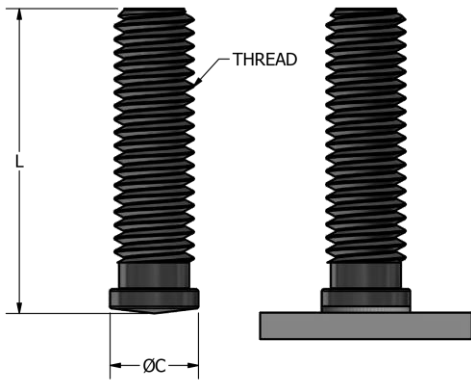


Pin Dia.	Dia.	Modifier	Part Number MS	Qty/ Ctn
10 Ga	1 1/2	Round	101301104	5000
10 Ga	2	Round	101301100	1000



ATC, ATS

Stored-Arc Threaded



Ordering Example

Nelson Type ATC, 6-32 x 1/4, Part No. 101-222-025

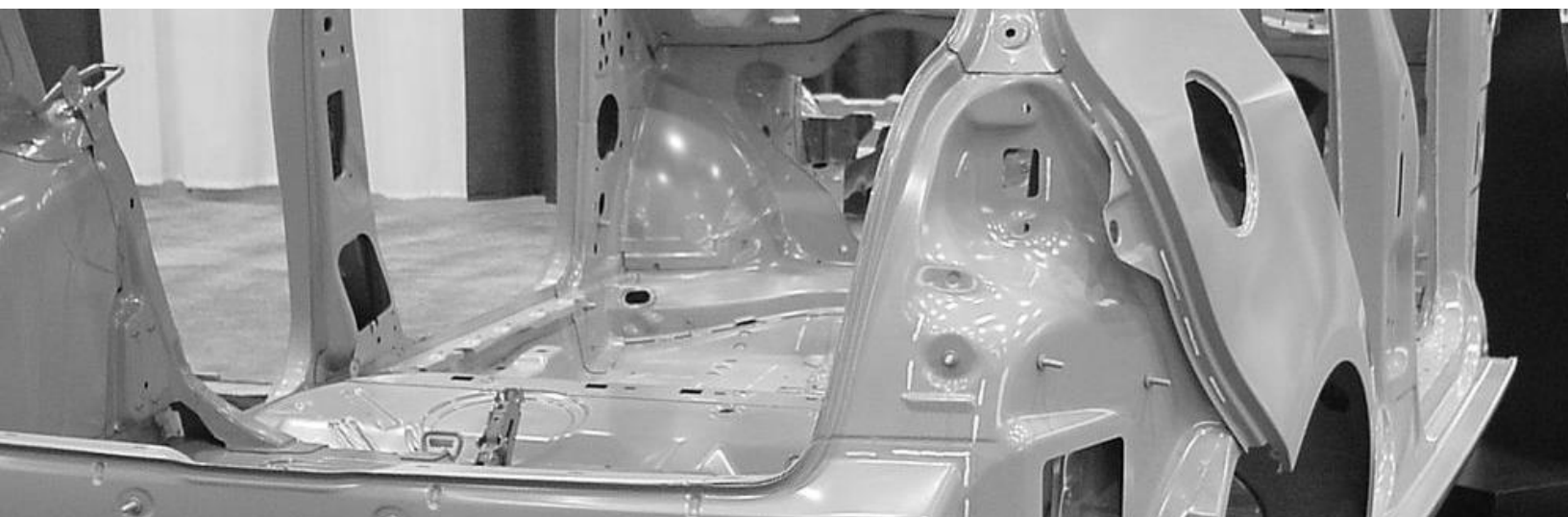
Material

Low Carbon Steel per ASTM A29/A108 Grades 1010 through 1020

Stainless Steel per ASTM UNS S30430

D	6-32	8-32	10-24	10-32	1/4-20	5/16-18	3/8	M5-0.80	M6-1.0	M8-1.25	M10-1.5
C	.168	.194	.220	.220	.280	.375	.418	6.00	7.00	9.00	10.00

Thread	L Length	Modifier	Part Number		Qty/ Ctn	Chuck	Part Number	
			SS	MS			Spark Shield	Foot
6-32	1/4	Copper Plating		101222025	25000	500001002		
8-32	3/8	SS18-8, Passivate	101233037		6750	500001006		
10-24	1/2	Copper Plating		101224050	14000	500001005		
10-32	13/16	Dog Point, Copper Plating		101228078	8000	500001005		
10-32	3/8	Copper Plating		101225037	18000			
10-32	3/4	Special Pitch Dia., Copper		101228163	8000			
10-32	3/4	SS18-8, Passivate	102228013		9000			
1/4-20	1/2	Copper Plating		101226050	8000	500001007		
1/4-20	1/2	SS18-8, Passivate	101236050		7250			
1/4-20	3/4	Copper Plating		101226075	5500			
1/4-20	1	Copper Plating		101226100	4000			
1/4-20	1 1/4	Copper Plating		101226125	3000			
5/16-18	1 1/4	Copper Plating		101228136	1800	500001009		
3/8-16	1 7/16	SS18-8, Auto Feed	102228016		1200	500001011		
3/8-16	2 3/16	SS18-8, Auto Feed	102228015		800			
M5-0.80	9.0MM	Copper Plating		101274009	15000	500001427		
M6-1.0	14.0MM	CL 6.8, Paint Groove		102228014	8000	500001267		
M6-1.0	20.0MM	Auto Feed, Copper Plating		101228125	4650			
M8-1.25	16.0MM	SS18-8, Passivate	101228199		4000	500001009		
M8-1.25	20.0MM	Copper Plating		101228200	3250			
M8-1.25	20.0MM	SS18-8, Passivate	102228005		3000			
M10-1.5	29.75	Auto Feed, Copper Plating		102228017	1400	500001269		



ANC, ANS

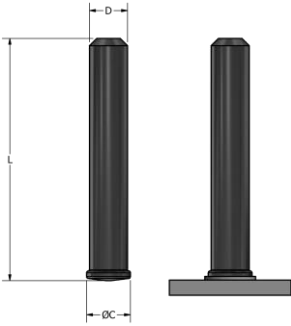
Stored-Arc Unthreaded

Ordering Example

Nelson Type ANC 1/4 x 11/16, Part No. 101-211-165

Material

Low Carbon Steel per ASTM A29/A108 Grades 1010 through 1020
Stainless Steel; per ASTM-A493, UNS S30430



D	3/16	.215	1/4	5/16	4MM	5MM	6.3MM
C	.220	.220	.280	.343	5.00	6.00	7.00

Dia.	L Length	Modifier	Part Number		Qty/ Ctn	Chuck	Part Number	
			SS	MS			Spark Shield	Foot
3/16	.791	1/4 HD, Copper Plating		102211012	7000	500001005	511001108	502001137
.215	1/2	1/4 Flange, Auto Feed		101211164	6500	500001004		
.215	3/4	1/4 Flange, Auto Feed		101211148	6000			
1/4	.342	Copper Plating		101211073	7500	500001007		
1/4	11/16	Copper Plating		101211165	4500			
5/16	2	Passivate, Auto Feed	102211006		1000	500001009		
4MM	12.7	Copper Plating		102211001	15000	500001003		
5MM	8.0MM	Copper Plating		101211166	3000	500001005		
6.3	20.0MM	Auto Feed, Copper Plating		101211050	3000	500001007		

TFTC, TFTS

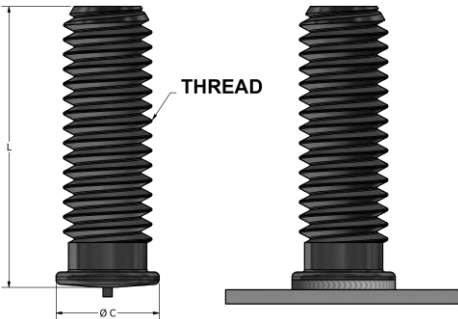
Threaded Capacitor Discharge

Ordering Example

Nelson Type TFTC, 6-32 x 1/2, Part No. 101-208-218

Material

Low Carbon Steel per ASTM A29/A108 Grades 1010 through 1020
Stainless Steel per ASTM-A493, UNS S30430

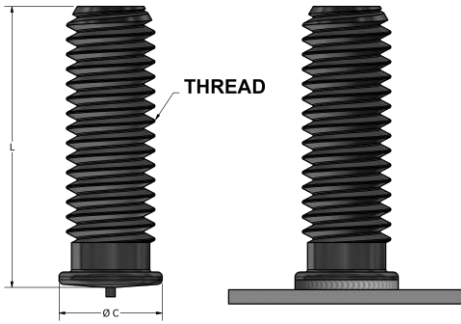


D	.138	.164	.187	.187	.250	.312
C	.218	.250	.250	.250	.312	.375

Thread	L Length	Modifier	Part Number		Qty/ Ctn	Part Number	
			SS	MS		Chuck* Series 650 Style Gun	Chuck Assy CD-Lite Gun
6-32	3/8	Copper Plating		101208217	28000	500001356	500-001-516
6-32	3/8	Passivate	101208317		40000		
6-32	1/2	Copper Plating		101208218	15000		
6-32	1/2	Passivate	101208318		25000		
8-32	5/16	Passivate	101208330		10000	500001357	500-001-517
8-32	3/8	Copper Plating		101208231	20000		
8-32	3/8	Passivate	101208331		20000		
8-32	1/2	Copper Plating		101208232	15000		
8-32	1/2	Passivate	101208332		14500		
8-32	5/8	Copper Plating		101208233	14000		
8-32	5/8	Passivate	101208333		14000		
8-32	3/4	Copper Plating		101208234	10000		
8-32	3/4	Passivate	101208334		12000		
8-32	1	Passivate	101208336		7250		
10-24	3/8	Copper Plating		101208245	15000	50001366	500-001-518
10-24	3/8	Passivate	101208345		10000		

Threaded Capacitor Discharge

(Continued)

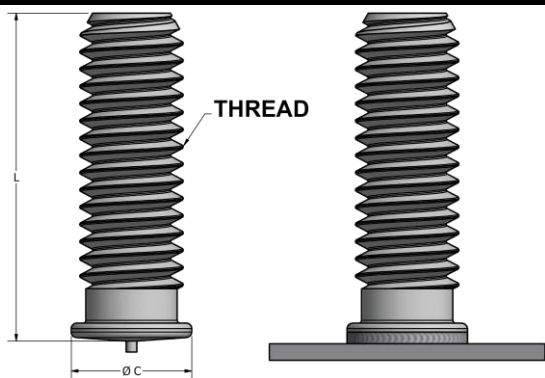


D	.138	.164	.187	.187	.250	.312
C	.218	.250	.250	.250	.312	.375

Thread	L Length	Modifier	Part Number		Qty/ Ctn	Part Number	
			SS	MS		Chuck* Series 650 Style Gun	Chuck Assy CD-Lite Gun
10-24	1/2	Copper Plating		101208246	11000		
10-24	1/2	Passivate	101208346		14000		
10-24	3/4	Copper Plating		101208248	8000	500001366	500-001-518
10-24	3/4	Passivate	101208348		10000		
10-24	1	Copper Plating		101208250	7000		
10-32	3/8	Copper Plating		101208259	18000		
10-32	3/8	Passivate	101208359		18000		
10-32	1/2	Copper Plating		101208260	12000	500001366	500-001-518
10-32	1/2	Passivate	101208360		13000		
10-32	5/8	Passivate	101208361		10500		
10-32	3/4	Copper Plating		101208262	9000		
10-32	3/4	Passivate	101208362		9000		
1/4-20	3/8	Copper Plating		101208273	5000		
1/4-20	3/8	Passivate	101208373		11000		
1/4-20	1/2	Copper Plating		101208274	5750	500001359	500-001-519
1/4-20	1/2	Passivate	101208374		7250		
1/4-20	5/8	Copper Plating		101208275	4500		
1/4-20	5/8	Passivate	101208375		5750		
1/4-20	3/4	Copper Plating		101208276	5000		
1/4-20	3/4	Passivate	101208376		5000		
1/4-20	1	Copper Plating		101208278	4250		
1/4-20	1	Passivate	101208378		4250		
1/4-20	1 1/4	Passivate	101208379		1000		
1/4-20	1 1/2	Copper Plating		101208280	5000		
1/4-20	1 1/2	Passivate	101208380		2800		
5/16-18	3/4	Copper Plating		101208290	2500	500001360	500-001-520
5/16-18	3/4	Passivate	101208390		3250		
5/16-18	1	Passivate	101208392		2500		
5/16-18	1 1/2	Copper Plating		101208294	1000		

TFTA

Threaded Capacitor Discharge



Ordering Example
Nelson Type TFTA, 8-32 x 1/2, Part No. 101-208-532

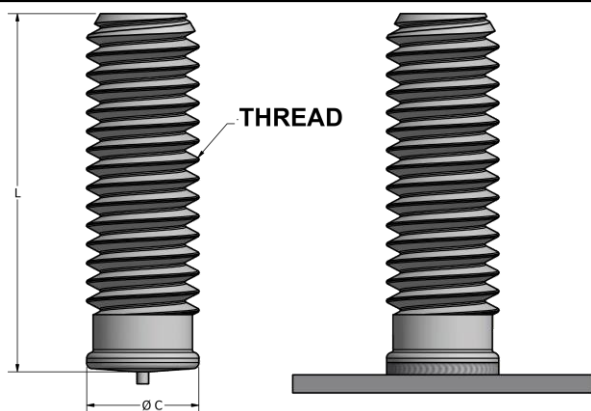
Material
Aluminum Grade 6000 Series

D	.164	.187	.187	.250
C	.250	.250	.250	.312

Thread	L Length	Modifier	Part Number		Qty/ Ctn	Part Number	
			Aluminum	MS		Chuck* Series 650 Style Gun	Chuck Assy CD-Lite Gun
8-32	1/2	5356	101208532		16000	500001357	520324
10-24	1/2	5356	101208546		13000	500001366	500-001-517
10-24	3/4	5356	101208548	10000			
10-24	1	5356	101208550	5000			
10-32	3/4	5356	101208562	9000			
1/4-20	1/2	5356	101208574		7000	500001359	500-001-519
1/4-20	5/8	5356	101208575	2000			
1/4-20	3/4	5356	101208576	5000			
1/4-20	1	5356	101208578	4250			

TUTC, TUTA

Unflanged Capacitor Discharge



Ordering Example
Nelson Type TUTC, 6-32 x 1/4, Part No. 101-208-615

Material
Low Carbon Steel per ASTM A29/A108 Grades 1010 through 1020
Aluminum 6000 Series

D	.138	.187	.250	4.0	10.0
L	.250	.250	.375	8.000	20.000

Thread	L Length	Modifier	Part Number		Qty/ Ctn	Part Number	
			Aluminum	MS		Chuck* Series 650 Style Gun	Chuck Assy CD-Lite Gun
6-32	1/4	Copper Plating		101208615	10000	500001356	500-001-516
10-24	1 1/2	Copper Plating		101208652	2500	500001366	500-001-518
1/4-20	2	5356	102218225		1000	500001359	500-001-519
M4-0.70	8.0MM	Cooper Plating		102218003	10000	500001361	500-001-520
M10-1.5	20.0MM	Cooper Plating		101218167	1500	200900	N/A

Internally Threaded Stud

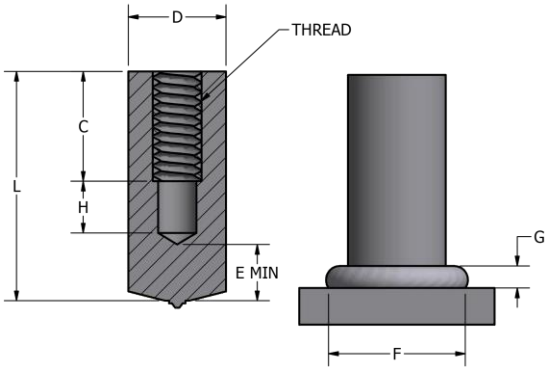
Ordering Example

Nelson Type TBL, 1/2 x 1 1/8 tap 1/4-20 x 1/2, Part No. 101-102-237

Material

Low Carbon Steel per ASTM A29/A108 Grades 1010 - 1020

Stainless Steel per ASTM-A493, UNS S30400

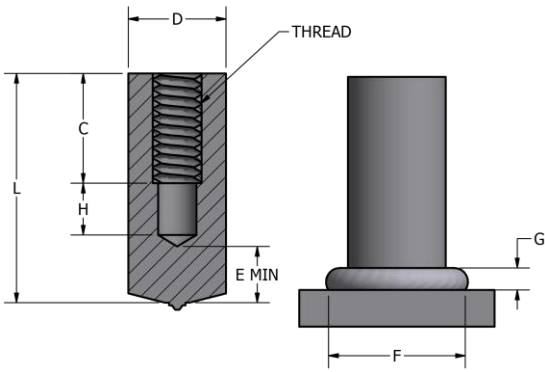


D	.375	.500	.625	16.00	.680	.721	.750	19.00
C	.375	.562	0.75	15.00	.690	.690	.937	18.00
H	.203	.265	0.319	6.00	.266	.300	.406	7.00
E	.140	.156	0.218	6.00	.220	.197	.250	6.00
F	.500	.687	0.921	21.00	.921	1.062	1.062	27.00
G	.125	.156	0.187	6.00	.250	.250	.250	7.00

Diameter	L Length	Thread	Part Number		Qty/ Ctn	Part Number			
			SS	MS		Ferrule	Chuck	Grip	Foot
3/8	1 1/8	304L, 1/4 x 3/8 tap	101102736		1300	100101099	500001011	501001009	502001137
1/2	5/8	1/4 x .30 tap		101102025	1500	100101114	500001014	501001011	502001137
1/2	1 1/8	1/4 x 1/2 tap		101102237	750				
5/8	1	M10 x .630 tap Yellow Zinc Pltg		101102317	700	100101187	500001016	501001014	502001137
5/8	1 3/16	M10 x .69 tap		101103790	15000				
5/8	1.77	M10 x .69 tap		101103732	9500				
5/8	2 9/16	M10 x .69 tap		101103793	6000				
5/8	3 7/32	M10 x .69 tap		101103728	170				
16MM	35.0MM	M10 x 17.5mm		101103558	500	100101187	500001016	501001014	502001138
16MM	40.0MM	M10 x 17.5mm		101103697	325				
16MM	50.0MM	M10 x 17.5mm		101103530	300				
16MM	55.0MM	M10 x 17.5mm		101103789	250				
16MM	60.0MM	M10 x 17.5mm		101103751	250				
.680	.940	3/8 x 9/16 tap		101102975	500	100101040	500001245	501001014	502001138
.680	1.173	3/8 x .69 tap		101103979	425				
.680	1.763	3/8 x .69 tap		101103978	275				
.721	1 3/16	M10 x .69 tap		101103729	11000	100101152	500001271	501001014	502001002
.721	1.772	M10 x .69 tap		101103706	250				
.721	1.968	M12 x .708 tap		101103722	225				
.721	2.953	M10 x .690 tap		101103707	125				
.721	1 3/16	M10 x .69 tap		101103729	11000				
3/4	.94	3/8 x .640 tap		101102777	425	100101152	500001018	501001014	502001002
3/4	.940	3/8 x .640 tap, Nickel Plating		101104362	425				
3/4	1 1/16	3/8 x .64 tap		101102690	11000				
3/4	1 5/16	3/8 x .69 tap		101102897	300				
3/4	1 11/16	1/2 x 1 tap		101102905	275				
3/4	1 11/16	3/8 x 3/4 taperlock tap		101104347	200				
3/4	1 51/64	3/8 x .69 tap		101102768	6000				
3/4	1.190	3/8 x .69 tap		101102765	9000				
3/4	1.44	3/8 x .69 tap		101102766	275				
3/4	1 5/8	SS18-8, 3/8 x 15/16	102103126		250				
3/4	1.69	3/8 x .69 tap		101102767	6500				
3/4	1.97	3/8 x .69 tap		101102769	180				
3/4	2 13/16	3/8 x .69 tap		101102772	130				
3/4	2.19	3/8 x .69 tap		101102770	5000				
3/4	2.44	3/8 x .69 tap		101102771	4500				
3/4	3 1/16	3/8 x 3/8 tap		101102775	110				

Internally Threaded Stud

(Continued)



D	.375	.500	.625	16.00	.680	.721	.750	19.00
C	.375	.562	0.75	15.00	.690	.690	.937	18.00
H	.203	.265	0.319	6.00	.266	.300	.406	7.00
E	.140	.156	0.218	6.00	.220	.197	.250	6.00
F	.500	.687	0.921	21.00	.921	1.062	1.062	27.00
G	.125	.156	0.187	6.00	.250	.250	.250	7.00

Diameter	L Length	Thread	Part Number		Qty/ Ctn	Ferrule	Chuck	Part Number Grip	Foot
			SS	MS					
3/4	3.69	3/8 x .69 tap		101102773	100				
3/4	4 3/16	3/8 x .69 tap		101102774	85	100101152	500001018	501001014	502001002
3/4	4 9/16	3/8 x .69 tap		101102896	75				
3/4	5.51	3/8 x .69 tap		101103492	65				
19.0MM	135.0MM	3/8 x 17.5mm tap		101103516	2000	100101152	500001018	501001014	502001002

W-TOP

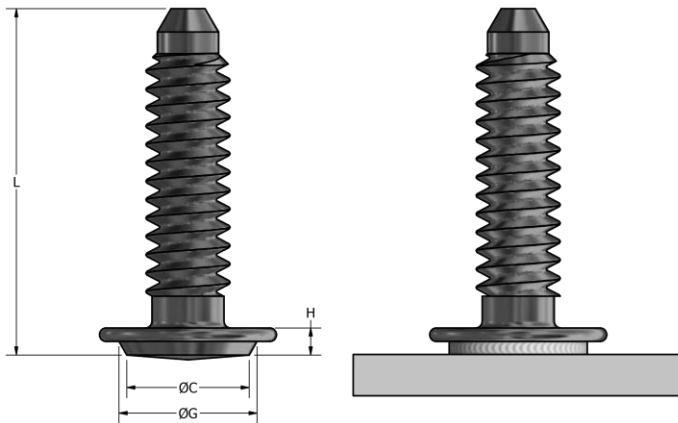
Wide Flanged Stud

Ordering Example

Nelson Type W-TOP, 1/4 x 1 1/16, Part No. 101-056-077

Material

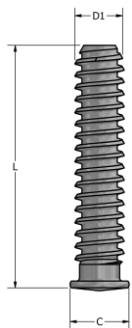
Low carbon Steel per ASTM A29/A108 Grades 1010 through 1020



D	1/4-20	M6
C	0.354	9
G	0.512	13
H	0.078	2

Thread	L Length	Modifier	Part Number MS	Qty/ Ctn
1/4-20	1 1/16	Copper Plating	101056077	2500
M6	18.0MM	Copper Plating	102056016	3000
M6	18.0MM	Flange 9.5, Copper Plating	102056019	4500
M6	20.0MM	1524, Copper Plating, Stress Relieve	102056010	3000
M6	23.0MM	M Point, 1524, Copper Plating, Stress Relieve	102056020	3000
M6	25.0MM	1524, Copper Plating, Stress Relieve	102056005	3000
M6	25.0MM	Flat Head Bolt, Copper Plating	101056091	3700
M6	25.0MM	Copper Plating	102056004	950

AXC



Fir Tree Studs

Ordering Example

Nelson Type AXC, 5mm x 9mm, Part No. 101-211-120

Material

Low Carbon Steel per ASTM A29/A108 Grades 1010 through 1020

D1	C
5MM	6MM

Thread	L Length	Modifier	Part Number MS	Qty/ Ctn
M5	9.0MM	Copper Plating	101211120	7500
M5	14.2MM AW	Copper Plating	101211093	10000
M5	25.0MM	Clear Zinc Plating	101211143	7500

H8L

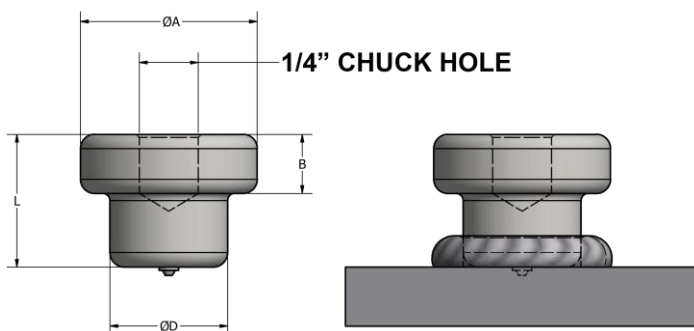
Dowell Stud

Ordering Example

Nelson Type H8L, 3/4 x .523 w/7/16 x .335 WB Part No. 101-056-094

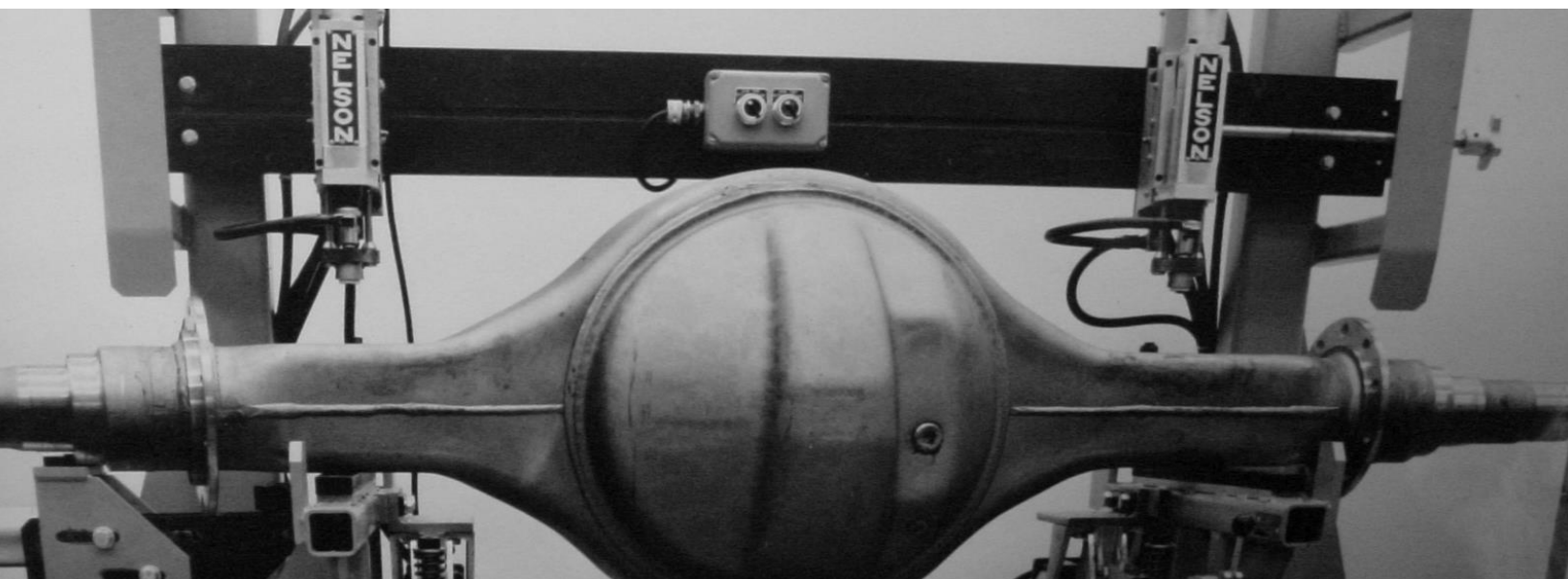
Material

Low Carbon Steel per ASTM A29/A108 Grades 1010 through 1020

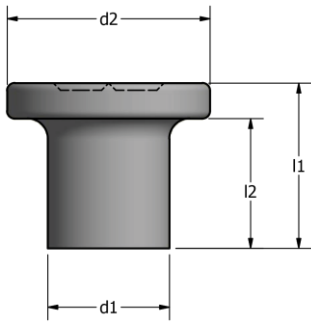


A	5/8	3/4
B	0.188	0.297
D	0.469	0.532

Dia.	L Length	Modifier	Part Number MS	Qty/ Ctn	Ferrule	Chuck
3/4	9/16	1/2 x 5/16 weld base w/ 1/4 chuck hole	101056098	1000	100-108-021	500-003-012
5/8	15/32	7/16 x 9/32 weld base w/ 1/4 chuck hole	101056048	1800	100-108-008	500-003-012



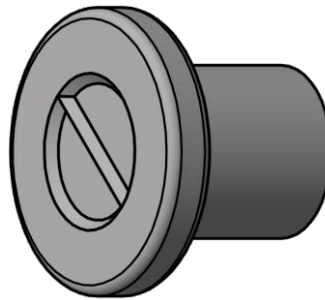
T-STUD



Ordering Example
 Nelson Type T Stud, 3.00mm x 4.00mm, Part No. 140247
Carbon Steel Material
 Stainless Steel per ASTM UNS S30500

d1	l1	d2	l2
.197 (5)	.393 (10)	.354	.323
3.00MM	4.00MM	5.05MM	3.00MM

Dia.	Length	Part Number	Qty/Ctn
.197	.393	MS 101056109	11500
3MM	4MM	SS 140247	50000



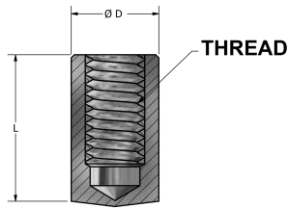
MISC

Dia.	Description	Part Number Mild Steel	Qty/ Ctn
½ - 13	Watertight Nut w/Lock	101302244	375
3/16 Rd.	Alum Cap Anodized	101304021	2200
½ - 13	Large Flange Nut w/ Lock	101302286	550



UNC, UNS

Internally Tapped Stud



Dia.	L Length	Modifier	Part Number		Qty/ Ctn
			SS	MS	
.280	.487	UNC .280 x .487, Tap 10-32 x .350, Copper Plating		102218201	5500
.280	.487	UNS .280 x .487, Tap, 10-32 x .350, SS18-8	102218202		5500

SC-KRB

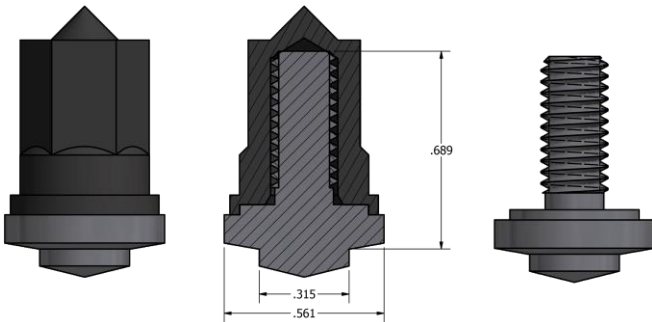
Ground Stud W/Cap

Ordering Example

Nelson Type Grounding Stud, M6 x 18mm, Part No. 140347

Material

Low Carbon Steel per ASTM A29/A108 Grade 1010 through 1020



Thread	D	L	C
M6	8	18	14

Thread	L Length	Modifier	Part Number		Qty/ Ctn	Part Number Chuck
			Mild Steel			
M6	17.5	CL 8.8, Copper Plating	140346		3500	500001436
M6	18	w/transcap, Copper Plating	140347		2000	
M6	19	BW, Zinc Plating	140599		2000	
M6	19.8	W/cap, Hex Free Chrome	140764		1500	

SC-B

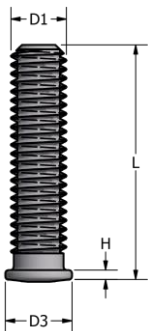
Ordering Example

Nelson Type SC-B M5 x 12, Part No. 140575

Material

Low Carbon Steel per ASTM A29/A108 Grades 1010 – 1020

Stainless Steel per ASTM UNS 30500

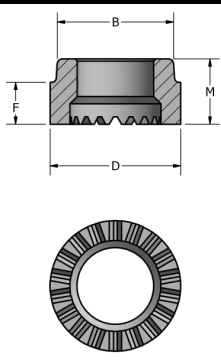
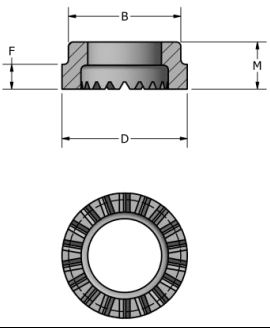
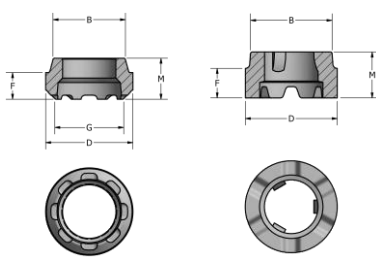


D ₁	D ₃	H
M5	6.0	0.7
M6	7.0	0.8

Thread	L Length	Modifier	Part Number		Qty/ Ctn	Part Number Chuck
			Mild Steel			
M5	12	ST37-3K DB, Copper Plating W/Paint Groove Thread	140575		4000	500001427
M5	21		140368		8000	
M6	14	SVZN W/Paint Groove Thread	140798		NA	500001267
M6	15	ST37-3K (MS) ZNPL	140784		NA	



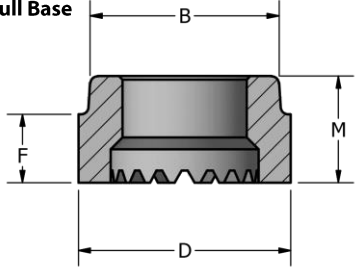
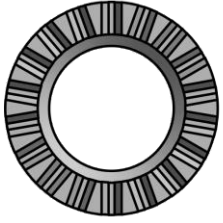
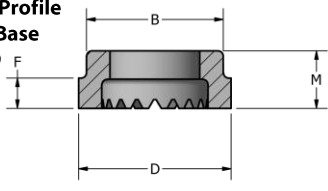
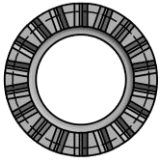
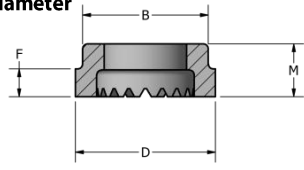
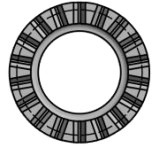
Standard Ferrules

STUD TYPE Ferrule Series	A Reference Stud Diameter	Ferrule Part No.	Description	B Neck Dia.	D Major Dia.	F Height to Neck	M Height Overall
Full Thread CFL F107 	5/16	100101024	5/16 F107	.445	.578	.281	.437
	3/8	100101025	3/8 F107	.505	.640	.281	.437
	7/16	100101026	7/16 F107	.585	.703	.281	.469
	1/2	100101027	1/2 F107	.650	.795	.281	.469
	5/8	100101028	5/8 F107	.785	1.030	.390	.579
	3/4	100101029	3/4 F107	1.030	1.180	.390	.595
Collar Studs CKL 	1/4 - .215	100101066	1/4 F172	.785	.875	.095	.235
	5/16 - .275	100101073	5/16 F172	.785	.875	.095	.235
	3/8 - .330	100101083	3/8 F172	.785	.875	.095	.250
	1/2 - .448	100101118	1/2 F172	.921	1.030	.125	.250
Weld-Thru Deck Ribs in Neck Standard Chamfered-Narrow Valley Rib in Neck 	3/8	100101242	WTD HD	.785	.875	.281	.437
	1/2	100101237	1/2 WTD HD	1.030	D 1.150 G .860 / .920	.300	.625
	5/8	100101203	5/8 WTD HD	1.030	1.203	.437	.625
	3/4	100101181	3/4 WD HD Vented & Ctr Ribs	1.210	1.410	.497	.674
	3/4	100101175	3/4 WTD	1.210	1.330	.406	.593
	3/4	100101177	3/4 WTD HD	1.210	D 1.304 G 1.000 / 1.060	.406	.593
	5/8 Thd. - .562	100101234	5/8 PD w/13 vents	.785	.905	.277	.433
	5/8	100101224	5/8 HD Vertical	1.030	1.150	.339	.526
	3/4 Thd. - .680	100101214	.680 Vertical	1.030	1.150	.339	.526
	3/4	100101226	3/4 HD Vertical	1.015	1.215	.486	.676
7/8	100101235	7/8 HD Vertical	1.210	1.410	0.545	0.836	

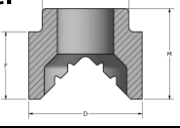
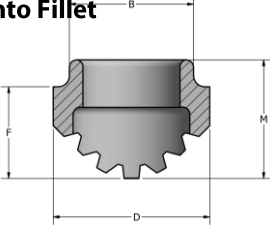
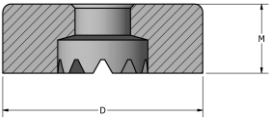
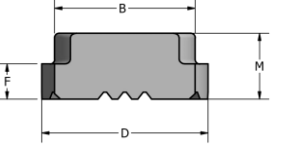
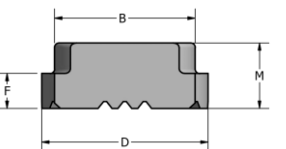
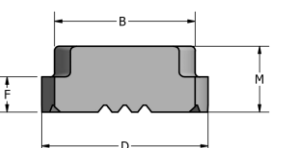
Standard Ferrules

Note: Ferrule dimensions shown are nominal.

A dimensional tolerance established by Nelson assures that the ferrules are suitable for the intended purpose.

STUD TYPE Ferrule Series	A Reference Stud Diameter	Ferrule Part No.	Description	B Neck Dia.	D Major Dia.	F Height to Neck	M Height Overall	
Full Base  	.164	100101002	#8 F105	.291	.375	.234	.390	
	3/16	100101003	#10 F105	.305	.390	.234	.390	
	1/4	100101067	1/4 F225	.505	.640	.286	.437	
	5/16	100101007	5/16 F105	.445	.578	.234	.390	
	3/8	100101099	3/8 F181 HD	.650	.795	.228	.390	
	7/16	100101009	7/16 F105	.585	.703	.234	.422	
	1/2	100101114	1/2 F260 HD	.785	.875	.228	.390	
	5/8	100101187	5/8 Heavy Duty	1.030	1.150	.339	.526	
	3/4	100101152	3/4 F152	1.030	1.215	.469	.656	
	7/8	100101140	7/8 F276	1.210	1.413	.545	.732	
	1"	100101045	1 F305	1.406	1.610	.633	.820	
	Full Base Thin wall Specials	1/4	100101006	1/4 F105	.380	.455	.265	.390
		3/8	100101008	3/8 F105	.505	.640	.234	.390
		1/2	100101010	1/2 F105	.650	.795	.250	.438
		5/8	100101012	5/8 F105	.785	1.030	.328	.515
	Low Profile Full Base F139  	3/16 & #10	100101063	#10 F140	.305	.390	.125	.250
		1/4	100101077	1/4 F166	.370	.455	.125	.250
5/16		100101030	5/16 F139	.505	.596	.125	.250	
3/8		100101031	3/8 F139	.585	.675	.125	.250	
7/16		100101032	7/16 F139	.650	.740	.125	.281	
1/2		100101033	1 1/2 F139	.785	.875	.174	.330	
1/2		100101119	F133	.921	1.030	.125	.312	
5/8		100101126	F252	.921	1.030	.187	.375	
3/4		100101133	F294	1.210	1.413	.203	.390	
Threaded Pitch Diameter CPL F-239  	1/4 - .215	100101034	1/4 F239	.380	.455	.125	.250	
	5/16 - .275	100101035	5/16 F239	.445	.535	.125	.250	
	3/8 - .330	100101036	3/8 F239	.505	.595	.139	.264	
	7/16 - .388	100101037	7/16 F239	.585	.675	.173	.329	
	1/2 - .448	100101038	1/2 F239	.650	.740	.206	.362	
	5/8 - .562	100101039	5/8 F239	.785	.905	.277	.433	
	3/4 - .680	100101040	3/4 F239	1.030	1.150	.339	.526	
	7/8 - .797	100101041	7/8 F239	1.210	1.330	.406	.593	
	1" - .915	100101042	1 F239	1.406	1.526	.474	.661	

Standard Ferrules

	Stud Diameter	Part No.	Description	B Neck dia. ±.010	D Major dia. ±.015	F Height to Neck ±.010	M Height Overall ±.015
Onto Heel 	3/8"	100105001	3/8 F141	.585	.703	.550	.706
	1/2"	100105002	1/2 F141	.785	1.030	.625	.812
	5/8"	100105003	5/8 F141	.785	1.030	.703	.891
	3/4"	100105005	3/4 Outside	1.030	1.215	.844	1.031
Into Fillet 	1/4"	100106001	1/4 F184	.380	.578	.350	.500
	3/8"	100106002	3/8 F184	.505	.640	.375	.480
	1/2"	100103011	1/2 F184	.650	.795	.500	.688
	5/8"	100106005	5/8 F184	.785	1.030	.687	.875
	1/2"	100103009	F266	.650	.687	.795	.500
	3/4"	100108004	F277	1.030	1.218	.562	.937
	3/4"	100103012	F237	1.030	1.218	.687	.875
Aluminum 	3/16"	100101046	#10 F250	.750	.750		.250
	1/4"	100101047	1/4 F250	.750	.750		.250
	5/16"	100101048	5/16 F250	.750	.750		.250
	3/8"	100101049	3/8 F250	1.000	1.000		.375
	7/16"	100101050	7/16 F250	1.000	1.000		.375
	1/2"	100101051	1/2 F250	1.000	1.000		.375
Rectangular 	1/8" x 3/8"	100301002	F103	.505	.640	.234	.390
Rectangular 	1/8" x 5/8"	100301003	F126	.921	1.093 x.500 Rectangle	.234	.438
Rectangular 	1/4" x 1 1/4"	100301012	F188	.750	1.812 x.750 Rectangle		.672

Nelson Stud Welding can supply ferrules for many special applications. Contact us for ferrules involving welding for curved surfaces at angles to edges or for straight striping.

Weight Chart

Estimated Weight of Threaded Studs per 1000

(Always use length before welding to determine weight)

Length	Diameter							
	1/4	5/16	3/8	7/16	1/2	5/8	3/4	7/8
3/4	8.3	12.8	18.8	25.5	34.5			
1	11.0	17.0	25.0	34.0	46.0	70.0		
1-1/4	13.8	21.3	31.3	42.5	57.5	87.5	133.8	
1-1/2	16.5	25.5	37.5	51.0	69.0	105.0	160.5	243.8
1-3/4	19.3	29.8	43.8	59.5	80.5	122.5	187.3	284.4
2	22.0	34.0	50.0	68.0	92.0	140.0	214.0	325.0
2-1/4	24.8	38.3	56.3	76.5	103.5	157.5	240.8	365.6
2-1/2	27.5	42.5	62.5	85.0	115.0	175.0	267.5	406.3
2-3/4	30.3	46.8	68.8	93.5	126.5	192.5	294.3	446.9
3	33.0	51.0	75.0	102.0	138.0	210.0	321.0	487.5
3-1/4	35.8	55.3	81.3	110.5	149.5	227.5	347.8	528.1
3-1/2	38.5	59.5	87.5	119.0	161.0	245.0	374.5	568.8
3-3/4	41.3	63.8	93.8	127.5	172.5	262.5	401.3	609.4
4	44.0	68.0	100.0	136.0	184.0	280.0	428.0	650.0
4-1/4	46.8	72.3	106.3	144.5	195.5	297.5	454.8	690.6
4-1/2	49.5	76.5	112.5	153.0	207.0	315.0	481.5	731.3
4-3/4	52.3	80.8	118.8	161.5	218.5	332.5	508.3	771.9
5	55.0	85.0	125.0	170.0	230.0	350.0	535.0	812.5
Each Additional Inch	11.0	17.0	25.0	34.0	46.0	70.0	107.0	162.5
Add for Collar Studs	5.8	7.2	9.0	12.8	13.0			
Ferrule	2.0	2.5	3.0	3.5	4.0	5.0	10.0	12.0

Estimated Weight of No-Thread Studs per 1000

Length	Diameter								
	3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4	7/8
3/4	6.0	10.5	16.4	23.5	31.9	41.7			
1	8.0	14.0	21.8	31.3	42.5	55.6	86.6		
1-1/4	10.0	17.5	27.3	39.1	53.1	69.5	108.3	156.0	
1-1/2	12.0	21.0	32.7	47.0	63.8	83.4	129.9	187.2	255.0
1-3/4	14.0	24.5	38.2	54.8	74.4	97.3	151.6	218.4	297.5
2	16.0	28.0	43.6	62.6	85.0	111.2	173.2	249.6	340.0
2-1/4	18.0	31.5	49.1	70.4	95.6	125.1	194.9	280.8	382.5
2-1/2	20.0	35.0	54.5	78.3	106.3	139.0	216.5	312.0	425.0
2-3/4	22.0	38.5	60.0	86.1	116.9	152.9	238.2	343.2	467.5
3	24.0	42.0	65.4	93.9	127.5	166.8	259.8	374.4	510.0
3-1/4	26.0	45.5	70.9	101.7	138.1	180.7	281.5	405.6	552.5
3-1/2	28.0	49.0	76.3	117.4	148.8	194.6	303.1	436.8	595.0
3-3/4	30.0	52.5	81.8	125.2	159.4	208.5	324.8	468.0	637.5
4	32.0	56.0	87.2	125.2	170.0	222.4	346.4	499.2	680.0
4-1/4	34.0	59.5	92.7	133.0	180.6	236.3	368.1	530.4	722.5
4-1/2	36.0	63.0	98.1	140.9	191.3	250.2	389.7	561.6	765.0
4-3/4	38.0	66.5	103.6	148.7	201.9	264.1	411.4	592.8	807.5
5	40.0	70.0	109.0	156.5	212.5	278.0	433.0	624.0	850.0
Each Additional Inch	8.0	14.0	21.8	31.3	42.5	55.6	86.6	124.8	170.0
Ferrule	3.0	3.5	4.0	5.0	6.0	7.5	9.0	27.0	37.0

Above Figures in Pounds (lbs. Av.)
Pounds x 0.4536 = Kilograms (kg)

Weight-Shears & Headed Anchors

Shear Connectors

Catalog No.	Description	Weight / Box, lbs.	Qty/Box	Qty/Pallet	Weight / 1000 Pcs., lbs.	Net Wgt. of Pallet, lbs.
101098003	3/4 x 3 3/16 S3L	60.9 lbs.	130	3510	476	1671
101098132	3/4 x 3 3/8 S3L	60.0	120	3240	500	1620
101098127	3/4 x 3 7/8 S3L	62.2	110	2970	565	1678
101098007	3/4 x 4 3/16 S3L	57.5	95	2565	605	1552
101098131	3/4 x 4 7/8 S3L	55.5	80	2160	694	1499
101098011	3/4 x 5 3/16 S3L	58.9	80	2160	736	1590
101098143	3/4 x 5 3/8 S3L	57.0	75	2025	760	1539
101098138	3/4 x 5 7/8 S3L	57.8	70	1890	825	1559
101098015	3/4 x 6 3/16 S3L	51.0	60	1620	850	1377
101098019	3/4 x 7 3/16 S3L	54.7	55	1485	995	1478
101098023	3/4 x 8 3/16 S3L	42.7	40	1080	1067	1152
101098029	7/8 x 3 11/16 S3L	64.0	85	2295	753	1728
101098031	7/8 x 4 3/16 S3L	63.0	75	2025	840	1701
101098035	7/8 x 5 3/16 S3L	57.9	60	1620	965	1563
101098039	7/8 x 6 3/16 S3L	56.6	50	1350	1132	1528
101098043	7/8 x 7 3/16 S3L	52.6	40	1080	1315	1420
101098047	7/8 x 8 3/16 S3L	52.0	35	945	1487	1405

Anchors

Catalog No.	Description	Weight / Box, lbs.	Qty/Box	Qty/Pallet	Weight / 1000 Pcs., lbs.	Net Wgt. of Pallet, lbs.
101053031	1/4 x 2 11/16 H4L	44.0 lbs.	1000	27000	44	1188
101053033	1/4 x 4 1/8 H4L	35.2	550	14850	64	950
101053043	3/8 x 4 1/8 H4L	53.9	350	9450	154	1455
101053045	3/8 x 6 1/8 H4L	32.9	150	4050	219	887
101053047	1/2 x 2 1/8 H4L	68.4	400	10800	171	1847
101053002	1/2 x 3 1/8 H4L	64.4	275	7425	234	1737
101053003	1/2 x 4 1/8 H4L	50.6	180	4860	281	1366
101053005	1/2 x 5 5/16 H4L	41.8	120	3240	348	1128
101053008	1/2 x 6 1/8 H4L	41.1	105	2835	391	1108
101053010	1/2 x 8 1/8 H4L	33.7	65	1755	519	911
101053012	5/8 x 2 11/16 H4L	62.4	195	5265	320	1685
101053015	5/8 x 4 3/16 H4L	56.0	125	3375	448	1512
101053019	5/8 x 6 9/16 H4L	45.8	70	1890	654	1236
101053023	5/8 x 8 3/16 H4L	39.6	50	1350	792	1069



Punching Shear Resistor Studs

Catalog No.	Description	Weight / Box, lbs.	Qty/Box	Qty/Pallet	Weight / 1000 Pcs., lbs.	Net Wgt. of Pallet, lbs.
102114007	3/8 x 5 7/16	30.5	140	3780	218	824
102114008	3/8 x 5 15/16	30.4	130	3510	236	821.3
102114009	3/8 x 6 7/16	31.6	135	3645	247	852.9
102114016	1/2 x 3 3/8	35.6	120	3240	297	962.3
102114084	1/2 x 3 5/8	37.3	115	3105	311	1007.6
102114017	1/2 x 3 7/8	35.9	110	2970	326	968.2
102114072	1/2 x 4 1/8	34	100	2700	340	918
102114018	1/2 x 4 3/8	35.4	100	2700	354	955.8
102114065	1/2 x 4 5/8	36.7	100	2700	367	990.9
102114019	1/2 x 4 7/8	38.1	100	2700	381	1028.7
102114068	1/2 x 5 1/8	39.5	100	2700	395	1066.5
102114020	1/2 x 5 3/8	36.9	90	2430	410	996.3
102114061	1/2 x 5 5/8	36	85	2295	424	973.1
102114021	1/2 x 5 7/8	35	80	2160	438	946.1
102114062	1/2 x 6 1/8	1356	3000	3000	452	1356
102114022	1/2 x 6 3/8	1398	3000	3000	466	1398
102114079	1/2 x 6 5/8	33.7	70	1890	481	909.1
102114023	1/2 x 6 7/8	34.7	70	1890	495	935.6
102114076	1/2 x 7 1/8	33.2	65	1755	510	895.1
102114024	1/2 x 7 3/8	890.8	1700	1700	524	890.8
102114086	1/2 x 7 5/8	32.3	60	1620	538	871.6
102114025	1/2 x 7 7/8	30.4	55	1485	554	821.2
102114077	1/2 x 8 1/8	823.5	1500	Triwall	570	823.5
102114026	1/2 x 8 3/8	844.5	1500	Triwall	588	844.5
102114067	1/2 x 8 7/8	885	1500	Triwall	605	885
102114063	1/2 x 9 3/8	925.5	1500	Triwall	638	925.5
102114059	1/2 x 9 7/8	967.5	1500	Triwall	645	967.5
102114074	1/2 x 10 1/8	1184.4	1800	Triwall	658	1184.4
102114083	1/2 x 10 3/8	1075.2	1600	Triwall	672	1075.2
102114107	1/2 x 12 1/8	844.8	1100	Triwall	768	844.8
102114073	1/2 x 13 7/8	712	825	Triwall	863	712
102114085	1/2 x 14 3/8	801.9	900	Triwall	891	801.9
102114053	1/2 x 14 7/8	734.4	800	Triwall	918	734.4
102114069	1/2 x 16 3/8	850	850	Triwall	1000	850
102114016	1/2 x 3 3/8	35.6	120	3240	297	962.3
102114084	1/2 x 3 5/8	37.3	115	3105	311	1007.6
102114017	1/2 x 3 7/8	35.9	110	2970	326	968.2
102114072	1/2 x 4 1/8	34	100	2700	340	918
102114018	1/2 x 4 3/8	35.4	100	2700	354	955.8
102114065	1/2 x 4 5/8	36.7	100	2700	367	990.9
102114019	1/2 x 4 7/8	38.1	100	2700	381	1028.7
102114068	1/2 x 5 1/8	39.5	100	2700	395	1066.5
102114020	1/2 x 5 3/8	36.9	90	2430	410	996.3
102114061	1/2 x 5 5/8	36	85	2295	424	973.1
102114021	1/2 x 5 7/8	35	80	2160	438	946.1
102114062	1/2 x 6 1/8	1356	3000	3000	452	1356
102114022	1/2 x 6 3/8	1398	3000	3000	466	1398
102114079	1/2 x 6 5/8	33.7	70	1890	481	909.1
102114023	1/2 x 6 7/8	34.7	70	1890	495	935.6
102114076	1/2 x 7 1/8	33.2	65	1755	510	895.1
102114024	1/2 x 7 3/8	890.8	1700	1700	524	890.8
102114086	1/2 x 7 5/8	32.3	60	1620	538	871.6
102114025	1/2 x 7 7/8	30.4	55	1485	554	821.2
102114077	1/2 x 8 1/8	823.5	1500	Triwall	570	823.5
102114026	1/2 x 8 3/8	844.5	1500	Triwall	588	844.5
102114067	1/2 x 8 7/8	885	1500	Triwall	605	885
102114063	1/2 x 9 3/8	925.5	1500	Triwall	638	925.5
102114059	1/2 x 9 7/8	967.5	1500	Triwall	645	967.5
102114074	1/2 x 10 1/8	1184.4	1800	Triwall	658	1184.4
102114083	1/2 x 10 3/8	1075.2	1600	Triwall	672	1075.2
102114107	1/2 x 12 1/8	844.8	1100	Triwall	768	844.8

Punching Shear Resistor Studs

(cont'd)

Catalog No.	Description	Weight / Box, lbs.	Qty/Box	Qty/Pallet	Weight / 1000 Pcs., lbs.	Net Wgt. of Pallet, lbs.
102114073	½ x 13 7/8	712	825	Triwall	863	712
102114085	½ x 14 3/8	801.9	900	Triwall	891	801.9
102114053	½ x 14 7/8	734.4	800	Triwall	918	734.4
102114069	½ x 16 3/8	850	850	Triwall	1000	850
102114031	5/8 x 4 3/8	1322.5	2300	Triwall	575	1322.5
102114033	5/8 x 5 3/8	1324	2000	Triwall	662	1324
102114089	5/8 x 5 5/8	1366	2000	Triwall	683	1366
102114034	5/8 x 5 7/8	1339.5	1900	Triwall	705	1339.5
102114035	5/8 x 6 3/8	1348.2	1800	Triwall	749	1348.2
102114037	5/8 x 7 3/8	1254	1500	Triwall	836	1254
102114088	5/8 x 9 7/8	1317.5	1250	Triwall	1054	1317.5
102114143	5/8 x 11 7/8	1228	1000	Triwall	1228	1228
102114142	5/8 x 13 1/8	1203.3	900	Triwall	1337	1203.3
102114117	5/8 x 13 7/8	1051.5	750	Triwall	1402	1051.5
102114125	¾ x 6 3/8	1323.6	1200	Triwall	1103	1323.3
102114127	¾ x 10 3/8	1434.6	900	Triwall	1594	1434.6
102114128	¾ x 12 3/8	1379.3	750	Triwall	1839	1379.3
102114129	¾ x 14 3/8	1146.2	550	Triwall	2084	1146.2

Above weights include weight of box

Empty shear cartons 1.00 lbs each
 Shear cartons 27 per pallet
 Pallet size 36" x 36"

Approximate cube per pallet: 18 cu. Ft. (0.51 cu. Meters)

For approximate gross shipping weight of full pallet quantity add **30** lbs. to net weight/pallet figure listed above.

Note: All of the weights have been calculated at the mean dimensions of the tolerance allowance and will vary if the product is at minimum or maximum tolerance.

General Stud Specifications

Standard Arc Welding Studs (AWS Type A) —Tensile and Torque Strengths

Mild Steel – 61,000psi Minimum Ultimate, 49,000 psi Minimum Yield

Thread Diameter	META ¹ (sq. in.)	Yield Load ² (lbs.) at 49,000 psi	Ultimate Tensile Load (lbs) at 61,000 psi	Yield Torque ² (ft-lbs) at 49,000 psi	Ultimate Torque (ft-lbs) at 61,000 psi	Shear Strength (75% of Tensile Strength)
10-24 UNC	0.0174	853	1,061	2.7	3.4	796
10-32 UNF	0.0199	975	1,214	3.1	3.8	910
1/4-20 UNC	0.0317	1,553	1,934	6.5	8.1	1,450
1/4-28 UNF	0.0362	1,774	2,208	7.4	9.2	1,656
5/16-18 UNC	0.0522	2,558	3,184	13.3	16.6	2,388
5/16-24 UNF	0.0579	2,837	3,532	14.8	18.4	2,649
3/8-16 UNC	0.0773	3,788	4,715	23.7	29.5	3,536
3/8-24 UNF	0.0876	4,292	5,344	26.8	33.4	4,008
7/16-14 UNC	0.1060	5,194	6,466	37.9	47.1	4,850
7/16-20 UNF	0.1185	5,807	7,229	42.3	52.7	5,421
1/2-13 UNC	0.1416	6,938	8,638	57.8	72.0	6,478
1/2-20 UNF	0.1597	7,825	9,742	65.2	81.2	7,306
5/8-11 UNC	0.2256	11,054	13,762	115.2	143.4	10,321
5/8-18 UNF	0.2555	12,520	15,586	130.4	162.3	11,689
3/4-10 UNC	0.3340	16,366	20,374	204.6	254.7	15,281
3/4-16 UNF	0.3724	18,248	22,716	228.1	284.0	17,037
7/8-9 UNC	0.4612	22,599	28,133	329.6	410.3	21,100
7/8-14 UNF	0.5088	24,931	31,037	363.6	452.6	23,278
1-8 UNC	0.6051	29,650	36,911	494.2	615.2	27,683
1-14 UNF	0.6791	33,276	41,425	554.6	690.4	31,069

*Torque figures based on assumption that excessive deformation of thread has not taken relationship between torque/tension out of its proportional range.

In actual practice, stud should not be used at its yield load. A factor of safety must be applied. It is generally recommended that studs not be used at more than 60% of yield strength, however, the factor of safety may vary up or down according to the particular application in which the studs are being used.

The user of these studs will make this determination.

	Ultimate Tensile	$L = SA$	Ultimate Torque	$T = 0.2 \times D \times L \div 12$
	Yield	$Z = YA$	Yield Torque	$T = 0.2 \times D \times Z \div 12$
Where	D =	Nominal Thread Diameter (in)	A =	Mean Effective Thread Area (META) (in ²)
	S =	Tensile Stress (psi)	Y =	Yield Stress (psi)
	L =	Tensile Load (lbs)	Z =	Yield Load (lbs)
	T =	Torque (ft-lbs)		

1 META is used instead of root area in calculating screw lengths because of closer correlation with actual tensile strength. META is based on mean diameter, which is the diameter of an imaginary co-axial cylinder whose surface would pass through the thread profile approximately midway between the minor and pitch diameters.

2 In actual practice, stud should not be used at its yield load. A factor of safety must be applied. It is generally recommended that studs not be used at more than 60% of yield strength, however, the factor of safety may vary up or down according to the particular application in which the studs are being used. **The user will make this safety factor determination.**

General Stud Specifications

Stainless Steel (As Formed) – 70,000 psi Minimum Ultimate, 35,000 psi Minimum Yield

Thread Diameter	META ¹ (sq. in.)	Yield Load ² (lbs.) at 35,000 psi	Ultimate Tensile Load (lbs) at 70,000 psi	Yield Torque ² (ft-lbs) at 35,000 psi	Ultimate Torque (ft-lbs) at 70,000 psi	Shear Strength (75% of Tensile Strength)
10-24 UNC	0.0174	609	1,218	1.9	3.9	914
10-32 UNF	0.0199	697	1,393	2.2	4.4	1,045
1/4-20 UNC	0.0317	1,110	2,219	4.6	9.2	1,664
1/4-28 UNF	0.0362	1,267	2,534	5.3	10.6	1,901
5/16-18 UNC	0.0522	1,827	3,654	9.5	19.0	2,741
5/16-24 UNF	0.0579	2,027	4,053	10.6	21.1	3,040
3/8-16 UNC	0.0773	2,706	5,411	16.9	33.8	4,058
3/8-24 UNF	0.0876	3,066	6,132	19.2	38.3	4,599
7/16-14 UNC	0.1060	3,710	7,420	27.1	54.1	5,565
7/16-20 UNF	0.1185	4,148	8,295	30.2	60.5	6,221
1/2-13 UNC	0.1416	4,956	9,912	41.3	82.6	7,434
1/2-20 UNF	0.1597	5,590	11,179	46.6	93.2	8,384
5/8-11 UNC	0.2256	7,896	15,792	82.3	164.5	11,844
5/8-18 UNF	0.2555	8,943	17,885	93.2	186.3	13,414
3/4-10 UNC	0.3340	11,690	23,380	146.1	292.3	17,535
3/4-16 UNF	0.3724	13,034	26,068	162.9	325.9	19,551
7/8-9 UNC	0.4612	16,142	32,284	235.4	470.8	24,213
7/8-14 UNF	0.5088	17,808	35,616	259.7	519.4	26,712
1-8 UNC	0.6051	21,179	42,357	353.0	706.0	31,768
1-14 UNF	0.6791	23,769	47,537	396.1	792.3	35,653

*Torque figures based on assumption that excessive deformation of thread has not taken relationship between torque/tension out of its proportional range.

In actual practice, stud should not be used at its yield load. A factor of safety must be applied. It is generally recommended that studs not be used at more than 60% of yield strength, however, the factor of safety may vary up or down according to the particular application in which the studs are being used.

The user of these studs will make this determination.

	Ultimate Tensile	$L = SA$	Ultimate Torque	$T = 0.2 \times D \times L \div 12$
	Yield	$Z = YA$	Yield Torque	$T = 0.2 \times D \times Z \div 12$
Where	D =	Nominal Thread Diameter (in)	A =	Mean Effective Thread Area (META) (in ²)
	S =	Tensile Stress (psi)	Y =	Yield Stress (psi)
	L =	Tensile Load (lbs)	Z =	Yield Load (lbs)
	T =	Torque (ft-lbs)		

1 META is used instead of root area in calculating screw lengths because of closer correlation with actual tensile strength. META is based on mean diameter, which is the diameter of an imaginary co-axial cylinder whose surface would pass through the thread profile approximately midway between the minor and pitch diameters.

2 In actual practice, stud should not be used at its yield load. A factor of safety must be applied. It is generally recommended that studs not be used at more than 60% of yield strength, however, the factor of safety may vary up or down according to the particular application in which the studs are being used. **The user will make this safety factor determination.**

General Stud Specifications

High Strength Steel – 110,000† psi Minimum Ultimate, 92,000 psi Minimum Yield

Thread Diameter	META ¹ (sq. in.)	Yield Load ² (lbs.) at 92,000 psi	Ultimate Tensile Load (lbs) at 110,000 psi	Yield Torque ² (ft-lbs) at 92,000 psi	Shear Strength (75% of Tensile Strength)
M10 (0.394" dia.)	0.0899	8271	9889	54.3	7417
3/8-16	0.0773	7112	8503	44.3	6377
1/2-13	0.1417	13036	15587	108.6	11690

*Torque figures based on assumption that excessive deformation of thread has not taken relationship between torque/tension out of its proportional range.

†Dependent on diameter. Consult Nelson Stud Welding for additional information.

In actual practice, stud should not be used at its yield load. A factor of safety must be applied. It is generally recommended that studs not be used at more than 60% of yield strength, however, the factor of safety may vary up or down according to the particular application in which the studs are being used. **High Strength (HS) studs should not be welded to A36 structural steel.**

The user of these studs will make this determination.

	Ultimate Tensile	$L = SA$	Ultimate Torque	$T = 0.2 \times D \times L \div 12$
	Yield	$Z = YA$	Yield Torque	$T = 0.2 \times D \times Z \div 12$
Where	D =	Nominal Thread Diameter (in)	A =	Mean Effective Thread Area (META) (in ²)
	S =	Tensile Stress (psi)	Y =	Yield Stress (psi)
	L =	Tensile Load (lbs)	Z =	Yield Load (lbs)
	T =	Torque (ft-lbs)		

¹ META is used instead of root area in calculating screw lengths because of closer correlation with actual tensile strength. META is based on mean diameter, which is the diameter of an imaginary co-axial cylinder whose surface would pass through the thread profile approximately midway between the minor and pitch diameters.

² In actual practice, stud should not be used at its yield load. A factor of safety must be applied. It is generally recommended that studs not be used at more than 60% of yield strength, however, the factor of safety may vary up or down according to the particular application in which the studs are being used. **The user will make this safety factor determination.**

Stored Arc Welding Studs—Tensile/Yield Strengths

Mild Steel – 50,000 psi Ultimate, 35,000 psi Yield

Stainless Steel – 70,000 psi Ultimate, 35,000 psi Yield

Aluminum – 21,000 psi Ultimate, 20,000 psi Yield

Thread Diameter	META ¹ (sq. in.)	Ultimate Tensile Load (lbs)			Yield Load (lbs)		
		Mild Steel	Stainless Steel	Aluminum	Mild Steel	Stainless Steel	Aluminum
6-32 UNC	0.0090	450	630	189	315	315	180
8-32 UNC	0.0139	695	973	292	487	487	278
10-24 UNC	0.0174	870	1218	365	609	609	348
10-32 UNF	0.0199	995	1393	418	697	697	398
1/4-20 UNC	0.0317	1585	2219	666	1110	1110	634
5/16-18 UNC	0.0522	2610	3654	1096	1827	1827	1044

The studs listed in this catalog with a Stock Code are considered standard items and are in stock. Because these are High Volume parts, they represent the lowest cost option for our customers, when designing for stud welded connections. Studs with a Stock Code are standards which are already tooled and also represent the lowest cost option. They may or may not be stock.

If your design-criteria requires something other than the studs listed, a Nelson representative is available to consult with you and make recommendation for design, and provide a price quotation for your specific requirements. To order studs, or schedule a visit, call **1-800-635-9353**.



1144 Fifteenth is the 1st Class-A office tower to rise above Denver in more than 30 years. Nelson is proud to be part of this project!



Nelson® Stud Welding

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