Bluearc

STUD WELDING

Stud Welding Construction Product Guide

BLUEARC STUD WELDING EQUIPMENT

As Well as Providing Quality Fasteners, We Carry a Full Line of Stud Welding Supplies....

We offer a complete line of stud welding equipment and accessories. Our equipment is designed to make the stud welding process easier for the user. Our equipment may be customized to your needs and is upgradable for future growth. For further information please contact us.

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CONSTRUCTION PRODUCTS

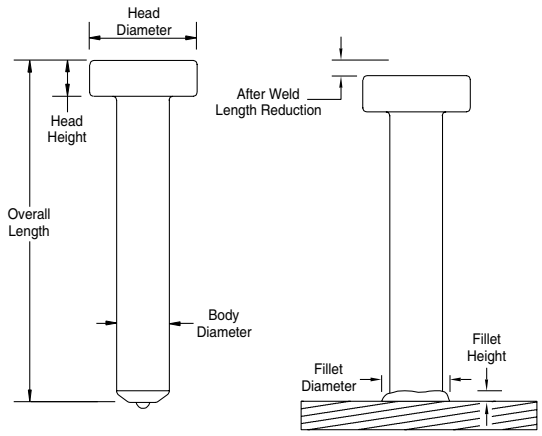
Stud Welding Attachment Systems for the Construction Industry:

This document and other information from **Bluearc**, its subsidiaries and authorize distributors provides product and/or system options for further investigation by users having technical expertise. It is important that the user analyze all aspects of the application and review the information concerning the product or system in the catalog. Due to the variety of operating conditions and applications for these products, or systems, the user, through his or her own analysis and testing, is solely responsible for making the final selection of the products and systems and assuring that all performance, safety and warning requirements of the application are met.

The products described in this catalog, including without limitations, product features, specifications, designs, availability and pricing, are subject to change by **Bluearc**, and its subsidiaries at any time without notice.

Consult your Sales Representative with your questions.

HEADED CONCRETE ANCHOR



A longer grip is usually needed when welding into angles.

Consult your Sales Representative for assistance with accessories for this type of application.

MECHANICAL PROPERTIES	TYPE B
Tensile Strength	65,000 psi minimum
Yield Strength	51,000 psi minimum
Elongation (% in 2")	20% minimum
Elongation (% in 5x dia)	15% minimum
Reduction of Area	50% minimum

TYPE B STUDS are headed, bent, or of other configurations that are used as an essential component in composite beam design in construction.

Concrete Anchors can be made any length above the standard minimum.

WELD STUD SPECIFICATION			WELD STUD PACKAGING			WELD STUD WEIGHTS		
Bluearc P/N	Weld Base Diameter	Overall Length	Piece per Box	Box per Pallet	Pieces per Pallet	Box Weight	Pallet Weight	1,000 Piece Weight
HA25-112	1/4	1 1/8	2,000	27	54,000	48 lbs	1,296 lbs	22 lbs
HA25-268	1/4	2 11/16	1,000	27	27,000	45 lbs	1,215 lbs	43 lbs
HA25-312	1/4	3 1/8	1,000	27	27,000	51 lbs	1,377 lbs	50 lbs
HA25-412	1/4	4 1/8	600	27	16,200	38 lbs	1,026 lbs	63 lbs

Head Diameter @ 1/2" and Head Height @ 3/ 1 6" for all 1/4" Headed Concrete Anchors

Concrete Anchors:

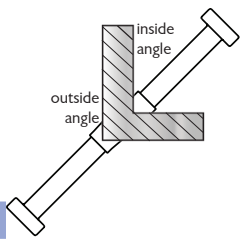
Fasteners that are unthreaded with an upset head. The typical use is for anchoring steel plates and shapes in concrete structures. Meets with AWS and all other applicable specifications. *(see below)*

Length:

Length listed is before weld. Stud diameters 1/2" or less, will be approximately 1/8" shorter after weld - Stud diameters 5/8" and above, will be approximately 3/16" shorter - Stud diameters 1" will be approximately 1/4" shorter after weld.

Material:

Low carbon steel, ASTM A29/A108, 1010-1020. Also available in stainless steel.
Typically provided in SS302 though other grades available on request.



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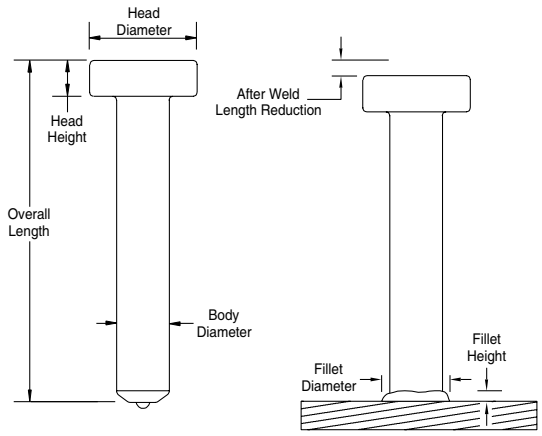
STANDARD ACCESSORIES	Bare Beam	Inside Angle	Outside Angle
Chuck	C50	C50	C50
Grip	GS25	GLS25	GS25
Foot	FTSS20	FTSS20	FTSS20
Ferrule	25F	25I	25O
When Using Heavy Duty Ferrules Use Grip GS37			

HEADED CONCRETE ANCHOR



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Bluearc P/N	Weld Base Diameter	Overall Length	Piece per Box	Box per Pallet	Pieces per Pallet	Box Weight	Pallet Weight	1,000 Piece Weight
HA37-137	3/8	1 3/8	1,000	27	27,000	70 lbs	1,890 lbs	68 lbs
HA37-162	3/8	1 5/8	1,000	27	27,000	79 lbs	2,133 lbs	77 lbs
HA37-212	3/8	2 1/8	700	27	18,900	67 lbs	1,809 lbs	92 lbs
HA37-262	3/8	2 5/8	600	27	16,200	66 lbs	1,782 lbs	111 lbs
HA37-312	3/8	3 1/8	500	27	13,500	62 lbs	1,674 lbs	124 lbs
HA37-412	3/8	4 1/8	350	36	12,600	55 lbs	1,980 lbs	154 lbs
HA37-612	3/8	6 1/8	150	36	5,400	33 lbs	1,188 lbs	220 lbs

Head Diameter @ 3/4" and Head Height @ 9/32" for all 3/8" Headed Concrete Anchors

Concrete Anchors:

Fasteners that are unthreaded with an upset head. The typical use is for anchoring steel plates and shapes in concrete structures. Meets with AWS and all other applicable specifications. *(see below)*

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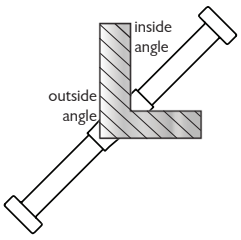

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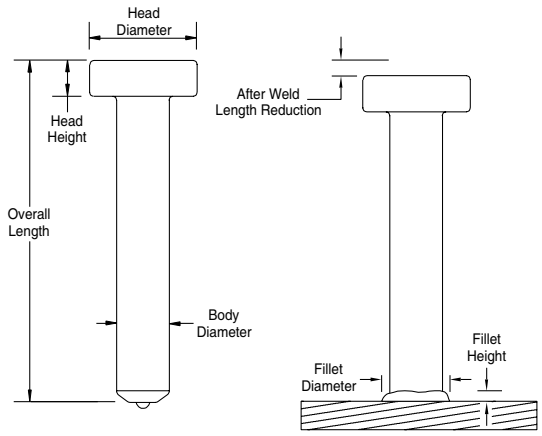
STANDARD ACCESSORIES	Bare Beam	Inside Angle	Outside Angle
Chuck	CH37	CH37	CH37
Grip	GS37	GLS37	GS37
Foot	FTSS20	FTSS20	FTSS20
Ferrule	37F	37I	37O
When Using Heavy Duty Ferrules Use Grip GS50			

HEADED CONCRETE ANCHOR



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TYPE B STUDS are headed, bent, or of other configurations that are used as an essential component in composite beam design in construction.

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WELD STUD SPECIFICATION			WELD STUD PACKAGING			WELD STUD WEIGHTS		
Bluearc P/N	Weld Base Diameter	Overall Length	Piece per Box	Box per Pallet	Pieces per Pallet	Box Weight	Pallet Weight	1,000 Piece Weight
HA50-112	1/2	1 1/8	600	27	16,200	68 lbs	1,836 lbs	112 lbs
HA50-162	1/2	1 5/8	450	27	12,150	64 lbs	1,728 lbs	138 lbs
HA50-212	1/2	2 1/8	400	27	10,800	67 lbs	1,809 lbs	166 lbs
HA50-262	1/2	2 5/8	250	27	6,750	47 lbs	1,269 lbs	198 lbs
HA50-312	1/2	3 1/8	300	36	10,800	68 lbs	2,448 lbs	223 lbs
HA50-362	1/2	3 5/8	250	36	9,000	65 lbs	2,340 lbs	259 lbs
HA50-412	1/2	4 1/8	200	36	7,200	56 lbs	2,016 lbs	277 lbs
HA50-531	1/2	5 5/16	150	36	5,400	52 lbs	1,872 lbs	339 lbs
HA50-612	1/2	6 1/8	125	36	4,500	49 lbs	1,728 lbs	388 lbs
HA50-812	1/2	8 1/8	100	36	3,600	50 lbs	1,800 lbs	495 lbs
HA50-1012	1/2	10 1/8	90	36	3,240	54 lbs	1,944 lbs	600 lbs
HA50-1212	1/2	12 1/8	50	36	1,800	38 lbs	1,368 lbs	760 lbs

Head Diameter @ 1" and Head Height @ 5/16" for all 1/2" Headed Concrete Anchors

Concrete Anchors:

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Material:

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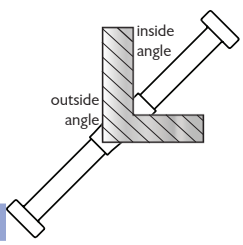

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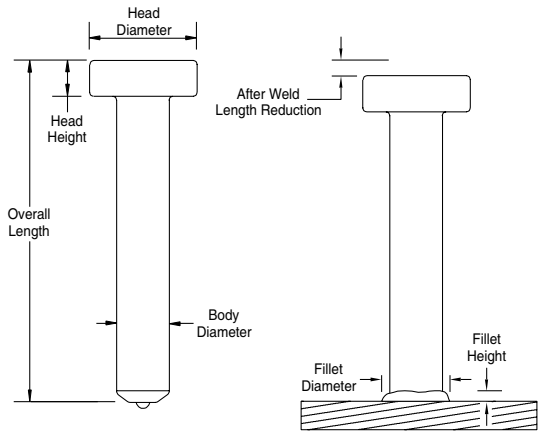
STANDARD ACCESSORIES	Bare Beam	Inside Angle	Outside Angle
Chuck	CH50	CH50	CH50
Grip	GS50	GLS50	GS50
Foot	FTSS20	FTSS20	FTSS20
Ferrule	50F	50I-25 50I-37	50O

When Using Heavy Duty Ferrules Use Grip GS62 and a medium, foot FTMS20

HEADED CONCRETE ANCHOR



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HA62-143	5/8	1 7/16	400	27	10,800	85 lbs	2,295 lbs	208 lbs
HA62-268	5/8	2 11/16	200	27	5,400	62 lbs	1,674 lbs	319 lbs
HA62-318	5/8	3 3/16	150	27	4,050	57 lbs	1,539 lbs	380 lbs
HA62-418	5/8	4 3/16	125	36	4,500	52 lbs	2,016 lbs	416 lbs
HA62-518	5/8	5 3/16	100	36	3,600	53.5 lbs	1,926 lbs	535 lbs
HA62-618	5/8	6 3/16	80	36	2,880	50 lbs	1,795 lbs	623 lbs
HA62-656	5/8	6 9/16	80	36	2,880	55 lbs	1,980 lbs	687 lbs
HA62-818	5/8	8 3/16	50	36	1,800	40 lbs	2,000 lbs	800 lbs
HA62-1018	5/8	10 3/16	100	9	900	98 lbs	882 lbs	946 lbs

Head Diameter @ 1 1/4" and Head Height @ 5/16" for all 5/8" Headed Concrete Anchors

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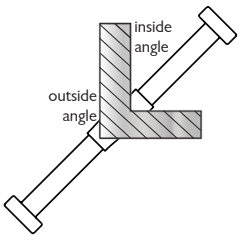

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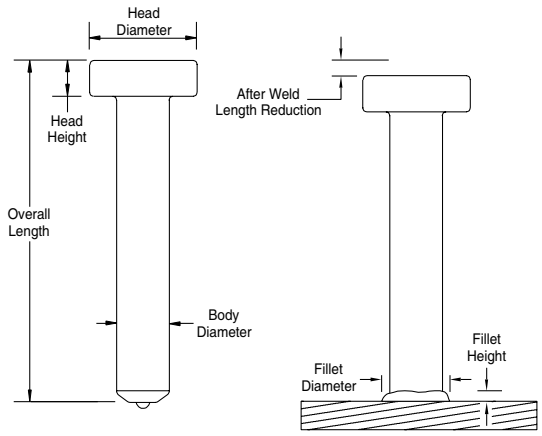
STANDARD ACCESSORIES			
	Bare Beam	Inside Angle	Outside Angle
Chuck	CH75	CH75	CH75
Grip	GS62	GLS62	GS62
Foot	FTMS20	FTMS20	FTMS20
Ferrule	62FL	62I	62O
When Using Heavy Duty Ferrules Use Grip GS75			

SHEAR CONNECTOR



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SC75-318	3/4	3 3/16	125	48	6,000	60 lbs	2,880 lbs	478 lbs
SC75-418	3/4	4 3/16	100	48	4,800	62 lbs	2,976 lbs	600 lbs
SC75-518	3/4	5 3/16	60	48	2,880	44 lbs	2,112 lbs	735 lbs
SC75-618	3/4	6 3/16	60	48	2,880	50 lbs	2,400 lbs	852 lbs
SC75-718	3/4	7 3/16	60	48	2,880	59 lbs	2,832 lbs	980 lbs
SC75-818	3/4	8 3/16	50	48	2,400	56 lbs	2,688 lbs	1,105 lbs
SC75-918	3/4	9 3/16	50	48	2,400	61.5 lbs	2,952 lbs	1,230 lbs
SC75-1018	3/4	10 3/16	40	48	1,920	55 lbs	2,640 lbs	1,356 lbs
SC75-1218	3/4	12 3/16	30	48	1,440	48 lbs	2,304 lbs	1,607 lbs
SC75-1618	3/4	16 3/16	30	48	1,440	63 lbs	3,036 lbs	2,108 lbs

Head Diameter @ 1 1/4" and Head Height @ 3/8" for all 3/4" Shear Connectors

***THROUGH DECK LENGTH: When welding with 3/4" Shear Connectors, burn off is 3/8" shorter after weld.**

Shear Connectors:

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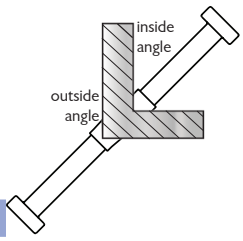

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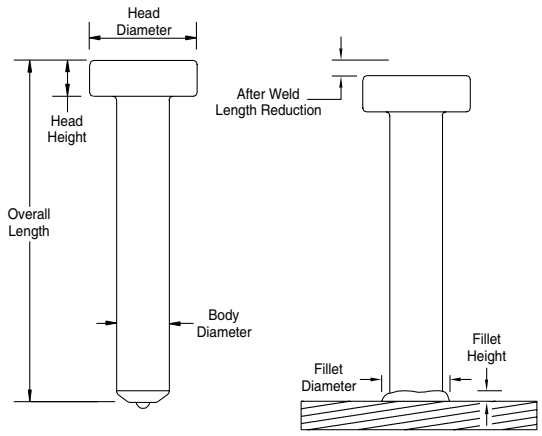
STANDARD ACCESSORIES	Bare Beam	Thru-Deck
Chuck	CH75	CH75
Grip	GS75	11062
Foot	FTMS20	FTTD
Ferrule	75F	75TD

SHEAR CONNECTOR



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SC75-337	3/4	3 3/8	125	48	6,000	62 lbs	2,976 lbs	500 lbs
SC75-387	3/4	3 7/8	100	48	4,800	58 lbs	2,784 lbs	567 lbs
SC75-437	3/4	4 3/8	75	48	3,600	47 lbs	2,282 lbs	634 lbs
SC75-487	3/4	4 7/8	75	48	3,600	53 lbs	2,525 lbs	701 lbs
SC75-537	3/4	5 3/8	60	48	2,880	45 lbs	2,160 lbs	754 lbs
SC75-587	3/4	5 7/8	60	48	2,880	49 lbs	2,352 lbs	810 lbs

Head Diameter @ 1 1/4" and Head Height @ 3/8" for all 3/4" Shear Connectors

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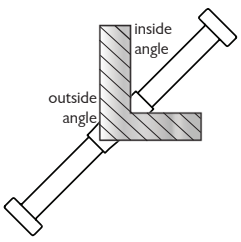

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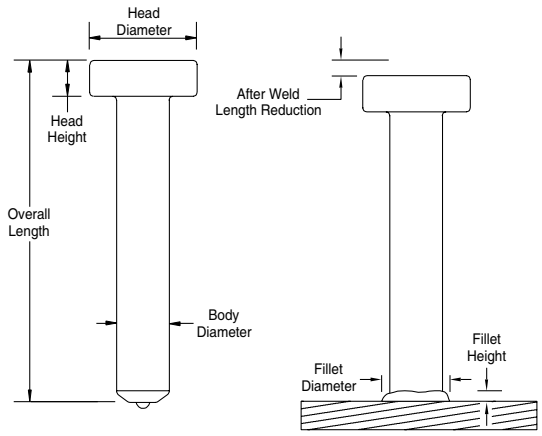
STANDARD ACCESSORIES	Bare Beam	Thru-Deck
Chuck	CH75	CH75
Grip	GS75	11062
Foot	FTMS20	FTTD
Ferrule	75F	75TD

SHEAR CONNECTOR



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SC87-368	7/8	3 11/16	100	27	2,700	74 lbs	1,998 lbs	709 lbs
SC87-418	7/8	4 3/16	60	27	1,620	48 lbs	1,296 lbs	796 lbs
SC87-518	7/8	5 3/16	50	27	2,025	48 lbs	1,971 lbs	961 lbs
SC87-618	7/8	6 3/16	50	27	1,350	57 lbs	1,539 lbs	1,137 lbs
SC87-718	7/8	7 3/16	40	27	1,215	53 lbs	1,593 lbs	1,306 lbs
SC87-818	7/8	8 3/16	30	27	810	45 lbs	1,215 lbs	1,496 lbs
SC87-918	7/8	9 3/16	30	27	810	50 lbs	1,350 lbs	1,666 lbs
SC87-1018	7/8	10 3/16	30	27	810	55 lbs	1,490 lbs	1,839 lbs
SC87-1218	7/8	12 3/16	30	27	810	65.5 lbs	1,768 lbs	2,182 lbs

Head Diameter @ 1 3/8" and Head Height @ 3/8" for all 7/8" Shear Connectors

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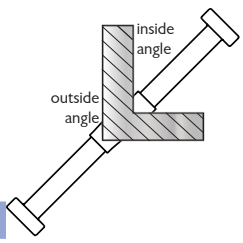

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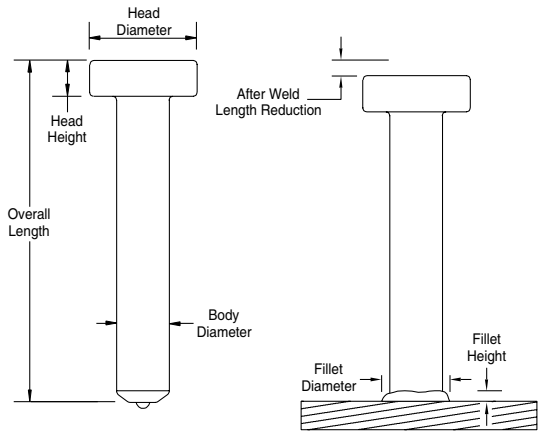
STANDARD ACCESSORIES	Bare Beam	Thru-Deck
Chuck	CH87	CH87
Grip	GS87	11062
Foot	FTLS20	FTTD
Ferrule	87F	87TD

SHEAR CONNECTOR



A longer grip is usually needed when welding into angles.

Consult your Sales Representative for assistance with accessories for this type of application.

MECHANICAL PROPERTIES	TYPE B
Tensile Strength	65,000 psi minimum
Yield Strength	51,000 psi minimum
Elongation (% in 2")	20% minimum
Elongation (% in 5x dia)	15% minimum
Reduction of Area	50% minimum

TYPE B STUDS are headed, bent, or of other configurations that are used as an essential component in composite beam design in construction.

Concrete Anchors can be made any length above the standard minimum.

WELD STUD SPECIFICATION			WELD STUD PACKAGING			WELD STUD WEIGHTS		
Bluearc P/N	Weld Base Diameter	Overall Length	Piece per Box	Box per Pallet	Pieces per Pallet	Box Weight	Pallet Weight	1,000 Piece Weight
SC1-425	1	4 1/4	50	27	1,350	56 lbs	1,512 lbs	1,115 lbs
SC1-525	1	5 1/4	50	27	1,350	66.5 lbs	1,795 lbs	1,330 lbs
SC1-625	1	6 1/4	35	27	945	55 lbs	1,485 lbs	1,554 lbs
SC1-825	1	8 1/4	35	27	945	69 lbs	1,863 lbs	1,978 lbs
SC1-925	1	9 1/4	30	27	810	66.5 lbs	1,795 lbs	2,214 lbs

Head Diameter @ 1 5/8" and Head Height @ 1/2" for all 1" Shear Connectors

Shear Connectors:

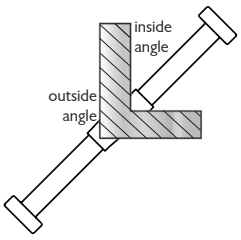
Fasteners that are unthreaded with an upset head. Designed to interconnect the concrete slab to the load bearing steel beams. This inter connection or composite construction resists shear loading between the concrete and steel beams. Meets with AWS and all other applicable specifications. *(see below)*

Length:

Length listed is before weld. Stud diameters 1/2" or less, will be approximately 1/8" shorter after weld - Stud diameters 5/8" and above, will be approximately 3/16" shorter - Stud diameters 1" will be approximately 1/4" shorter after weld. (*see above for Through Deck)

Material:

Low carbon steel, ASTM A29/A108, 1010-1020. Also available in stainless steel.
Typically provided in SS302 though other grades available on request.

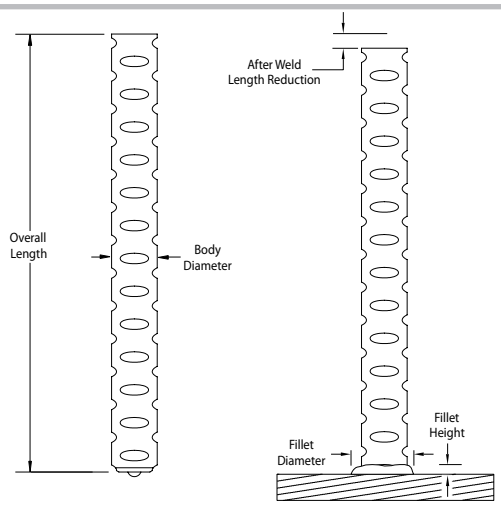


Bluearc STUD WELDING

www.bluearcstudwelding.com

STANDARD ACCESSORIES	Bare Beam	Thru-Deck
Chuck	CH1	N/A
Grip	GS1	N/A
Foot	FTLS20	N/A
Ferrule	1F	N/A

DEFORMED BAR ANCHORS



A longer grip is usually needed when welding into angles.

Consult your Sales Representative for assistance with accessories for this type of application.

MECHANICAL PROPERTIES	
	TYPE C
Tensile Strength	80,000 psi minimum (552 MPa)
Yield Strength (0.5% offset)	70,000 psi minimum (485 MPa)

TYPE C STUDS are cold-worked deformed steel bars manufactured in accordance with specifications ASTM A496 having a nominal diameter equivalent to the diameter of a plain wire having the same weight per foot as the deformed wire. ASTM A496 specifies a maximum diameter of 0.628 inches (16 mm). Any bar supplied above that diameter must have the same physical characteristics regarding deformations as required by ASTM A496.

These Studs can be made any length above the standard minimum.

WELD STUD SPECIFICATION			WELD STUD PACKAGING			WELD STUD WEIGHTS		
Bluearc P/N	Weld Base Diameter	Overall Length	Piece per Box	Box per Pallet	Pieces per Pallet	Box Weight	Pallet Weight	1,000 Piece Weight
DBA37-1012	3/8	10 1/8	150	18	2,700	46 lbs	828 lbs	288 lbs
DBA37-1212	3/8	12 1/8	150	18	2,700	55 lbs	990 lbs	344 lbs
DBA37-1812	3/8	18 1/8	150	12	1,800	80 lbs	960 lbs	515 lbs
DBA37-2412	3/8	24 1/8	150	8	1,200	108 lbs	864 lbs	685 lbs
DBA37-3012	3/8	30 1/8	150	7	1,050	130 lbs	910 lbs	897 lbs
DBA37-3612	3/8	36 1/8	150	6	900	156 lbs	936 lbs	1,029 lbs
DBA37-4812	3/8	48 1/8	150	6	900	208 lbs	1,248 lbs	1,394 lbs

Deformed Bar Anchors:

Our studs are low carbon-steel devices designed to increase holding power in concrete and maximize material strength in applications where substantial load supporting (shear tension) forces are present on embedments.

Length:

Length listed is before weld. Stud diameters 1/2" or less, will be approximately 1/8" shorter after weld - Stud diameters 5/8" and above, will be approximately 3/16" shorter - Stud diameters 1" will be approximately 1/4" shorter after weld.

Material:

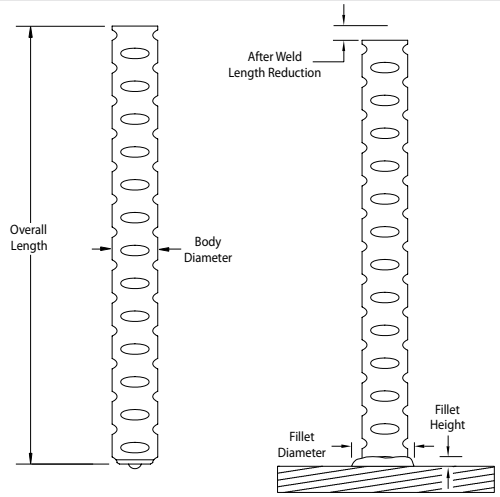
Low carbon steel, ASTM A496.

Bluearc STUD WELDING

www.bluearcstudwelding.com

STANDARD ACCESSORIES	
	Bare Beam
Chuck	C37
Grip	GS37
Foot	FTSS20
Ferrule	37F

DEFORMED BAR ANCHORS



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Yield Strength (0.5% offset)	70,000 psi minimum (485 MPa)

TYPE C STUDS are cold-worked deformed steel bars manufactured in accordance with specifications ASTM A496 having a nominal diameter equivalent to the diameter of a plain wire having the same weight per foot as the deformed wire. ASTM A496 specifies a maximum diameter of 0.628 inches (16 mm). Any bar supplied above that diameter must have the same physical characteristics regarding deformations as required by ASTM A496.

These Studs can be made any length above the standard minimum.

WELD STUD SPECIFICATION			WELD STUD PACKAGING			WELD STUD WEIGHTS		
Bluearc P/N	Weld Base Diameter	Overall Length	Piece per Box	Box per Pallet	Pieces per Pallet	Box Weight	Pallet Weight	1,000 Piece Weight
DBA50-1012	1/2	10 1/8	100	18	1,800	54 lbs	972 lbs	529 lbs
DBA50-1212	1/2	12 1/8	100	18	1,800	67 lbs	1,206 lbs	680 lbs
DBA50-1812	1/2	18 1/8	100	12	1,200	98 lbs	1,176 lbs	972 lbs
DBA50-2412	1/2	24 1/8	100	8	800	128 lbs	1,024 lbs	1,292 lbs
DBA50-3012	1/2	30 1/8	100	7	700	160 lbs	1,120 lbs	1,560 lbs
DBA50-3612	1/2	36 1/8	100	6	600	192 lbs	1,152 lbs	1,879 lbs
DBA50-4212	1/2	42 1/8	100	6	600	222 lbs	1,332 lbs	2,174 lbs
DBA50-4812	1/2	48 1/8	100	6	600	256 lbs	1,536 lbs	2,502 lbs
DBA50-6012	1/2	60 1/8	100	1	100	314 lbs	314 lbs	3,140 lbs

Deformed Bar Anchors:

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Length:

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Material:

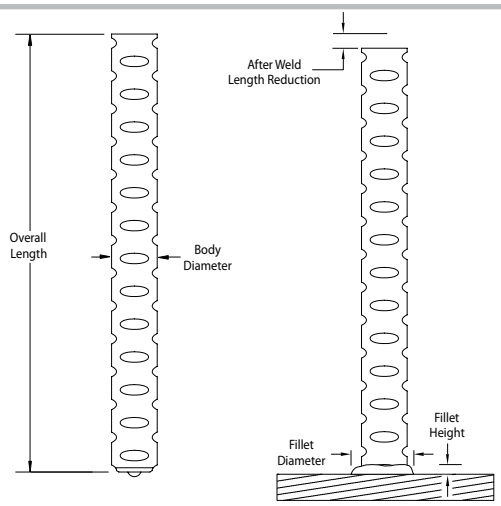
Low carbon steel, ASTM A496.

Bluearc STUD WELDING

www.bluearcstudwelding.com

STANDARD ACCESSORIES	
	Bare Beam
Chuck	C50
Grip	GS50
Foot	FTSS20
Ferrule	50F

DEFORMED BAR ANCHORS



A longer grip is usually needed when welding into angles.

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MECHANICAL PROPERTIES	
	TYPE C
Tensile Strength	80,000 psi minimum (552 MPa)
Yield Strength (0.5% offset)	70,000 psi minimum (485 MPa)

TYPE C STUDS are cold-worked deformed steel bars manufactured in accordance with specifications ASTM A496 having a nominal diameter equivalent to the diameter of a plain wire having the same weight per foot as the deformed wire. ASTM A496 specifies a maximum diameter of 0.628 inches (16 mm). Any bar supplied above that diameter must have the same physical characteristics regarding deformations as required by ASTM A496.

These Studs can be made any length above the standard minimum.

WELD STUD SPECIFICATION			WELD STUD PACKAGING			WELD STUD WEIGHTS		
Bluearc P/N	Weld Base Diameter	Overall Length	Piece per Box	Box per Pallet	Pieces per Pallet	Box Weight	Pallet Weight	1,000 Piece Weight
DBA62-1218	5/8	12 3/16	50	18	900	51 lbs	918 lbs	997 lbs
DBA62-1818	5/8	18 3/16	50	12	600	76 lbs	912 lbs	1,633 lbs
DBA62-2418	5/8	24 3/16	50	8	400	102 lbs	816 lbs	2,136 lbs
DBA62-3018	5/8	30 3/16	50	7	350	126 lbs	882 lbs	2,666 lbs
DBA62-3618	5/8	36 3/16	50	6	300	151 lbs	906 lbs	3,196 lbs
DBA62-4218	5/8	42 3/16	50	8	400	176 lbs	1,408 lbs	3,482 lbs
DBA62-4818	5/8	48 3/16	50	6	300	197 lbs	1,182 lbs	3,962 lbs

Deformed Bar Anchors:

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Length:

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Material:

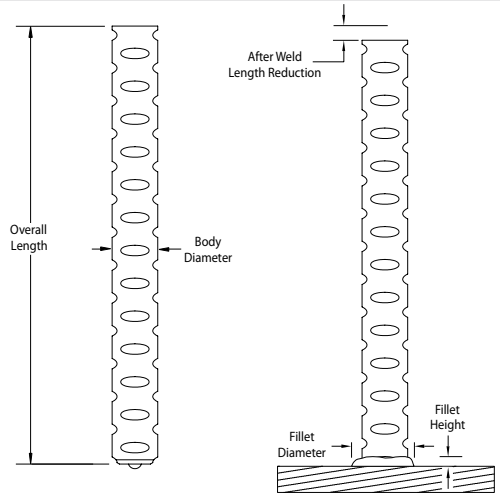
Low carbon steel, ASTM A496.

Bluearc STUD WELDING

www.bluearcstudwelding.com

STANDARD ACCESSORIES	
	Bare Beam
Chuck	C62
Grip	GS62
Foot	FTMS20
Ferrule	62FL

DEFORMED BAR ANCHORS



A longer grip is usually needed when welding into angles.

Consult your Sales Representative for assistance with accessories for this type of application.

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	TYPE C
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TYPE C STUDS are cold-worked deformed steel bars manufactured in accordance with specifications ASTM A496 having a nominal diameter equivalent to the diameter of a plain wire having the same weight per foot as the deformed wire. ASTM A496 specifies a maximum diameter of 0.628 inches (16 mm). Any bar supplied above that diameter must have the same physical characteristics regarding deformations as required by ASTM A496.

These Studs can be made any length above the standard minimum.

WELD STUD SPECIFICATION			WELD STUD PACKAGING			WELD STUD WEIGHTS		
Bluearc P/N	Weld Base Diameter	Overall Length	Piece per Box	Box per Pallet	Pieces per Pallet	Box Weight	Pallet Weight	1,000 Piece Weight
DBA75-1218	3/4	12 3/16	40	18	720	60 lbs	1,080 lbs	1,525 lbs
DBA75-1818	3/4	18 3/16	40	12	480	87 lbs	1,044 lbs	2,276 lbs
DBA75-2418	3/4	24 3/16	40	8	320	115 lbs	920 lbs	3,027 lbs
DBA75-3018	3/4	30 3/16	40	6	240	142 lbs	852 lbs	3,778 lbs
DBA75-3618	3/4	36 3/16	40	6	240	175 lbs	1,050 lbs	4,529 lbs
DBA75-4218	3/4	42 3/16	40	6	240	205 lbs	1,230 lbs	5,125 lbs
DBA75-4818	3/4	48 3/16	40	6	240	226 lbs	1,356 lbs	5,650 lbs

Deformed Bar Anchors:

Our studs are low carbon-steel devices designed to increase holding power in concrete and maximize material strength in applications where substantial load supporting (shear tension) forces are present on embedments.

Length:

Length listed is before weld. Stud diameters 1/2" or less, will be approximately 1/8" shorter after weld - Stud diameters 5/8" and above, will be approximately 3/16" shorter - Stud diameters 1" will be approximately 1/4" shorter after weld.

Material:

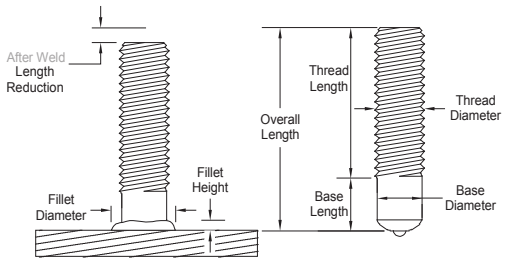
Low carbon steel, ASTM A496.

Bluearc STUD WELDING

www.bluearcstudwelding.com

STANDARD ACCESSORIES	
	Bare Beam
Chuck	C75
Grip	GS75
Foot	FTLS20
Ferrule	75F

ARC WELD STUDS



Pitch Diameter and Full Thread Studs are the two most common types of Standard Drawn Arc Weld Studs. The primary advantage of a Pitch Diameter Stud versus a Full Thread Stud is in shear value. Due to the slightly larger base diameter, the Pitch Diameter Stud will have a higher shear value than the same size Full Thread Stud. However, since a Pitch Diameter Stud is not fully threaded, it is best suited when there is a mating part that covers the unthreaded portion of the weld stud so make it is appropriate for your specific application.

PITCH DIAMETER MILD STEEL

	Overall Length	1/4 - 20	5/16 - 18	3/8 - 16	1/2 - 13	5/8 - 11	3/4 - 10
	5/8	PDC25-62	PDC31-62	PDC37-62			
	3/4	PDC25-75	PDC31-75	PDC37-75			
	7/8	PDC25-87	PDC31-87	PDC37-87			
	1	PDC25-1	PDC31-1	PDC37-1	PDC50-1		
	1 1/8	PDC25-112	PDC31-112	PDC37-112	PDC50-112		
	1 1/4	PDC25-125	PDC31-125	PD37-125	PDC50-125		
	1 3/8	PDC25-137	PDC31-137	PDC37-137	PDC50-137		
	1 1/2	PDC25-150	PDC31-150	PDC37-150	PDC50-150		
	1 5/8	PDC25-162	PDC31-162	PDC37-162	PDC50-162	PDC62-162	PDC75-162
	1 3/4	PDC25-175	PDC31-175	PDC37-175	PDC50-175	PDC62-175	PDC75-175
	1 7/8	PDC25-187	PDC31-187	PDC37-187	PDC50-187	PDC62-187	PDC75-187
	2	PDC25-2	PDC31-2	PDC37-2	PDC50-2	PDC62-2	PDC75-2
	2 1/4	PDC25-225	PDC31-225	PDC37-225	PDC50-225	PDC62-225	PDC75-225
	2 1/2	PDC25-250	PDC31-250	PDC37-250	PDC50-250	PDC62-250	PDC75-250
	2 3/4	PDC25-275	PDC31-275	PDC37-275	PDC50-275	PDC62-275	PDC75-275
	3	PDC25-3	PDC31-3	PDC37-3	PDC50-3	PDC62-3	PDC75-3
	Minimum Length	5/8	5/8	5/8	1	1 5/8	1 5/8
	Maximum Length	Up to 3" is considered a stocking size. Beyond 3" is a custom order.					
Base	**Diameter**	.215"	.275"	.330"	.446"	.562"	.680"
	Length	.375" +.063 -.000	.375" +.063 -.000	.375" +.063 -.000	.500" +.063 -.000	.625" +.063 -.000	.790" +.063 -.000
Fillets	**Height**	.11 ± .02"	.13 ± .02"	.13 ± .02"	.17 ± .02"	.17 ± .02"	.25 ± .02"
	Diameter	.32 ± .02"	.39 ± .02"	.43 ± .02"	.58 ± .02"	.71 ± .02"	.84 ± .02"
After Weld Length Reduction (approx)		.12"	.12"	.12"	.12"	.19"	.19"

STANDARD ACCESSORIES

Chuck	C25	C31	C37	C50	C62	C75
Grip	GS25	GS31	GS37	GS50	GS62	GS75
Foot	FTSS20	FTSS20	FTSS20	FTSS20	FTSS20	FTSS20
Ferrule	25P	31P	37P	50P	62P	75P

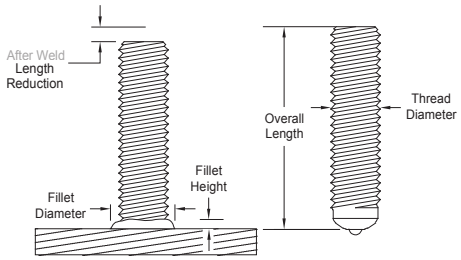
MECHANICAL PROPERTIES

Minimum Working Tensile	1,074 lbs	1,770 lbs	2,616 lbs	4,789 lbs	7,628 lbs	11,288 lbs
Minimum Yield Shear	1,072 lbs	1,731 lbs	2,534 lbs	4,589 lbs	7,258 lbs	10,634 lbs
Minimum Working Torque	4.5 ft-lbs	9.3 ft-lbs	16.3 ft-lbs	39.9 ft-lbs	79.4 ft-lbs	141.1 ft-lbs
Minimum Yield Torque	5.4 ft-lbs	11.1 ft-lbs	19.6 ft-lbs	47.9 ft-lbs	95.3 ft-lbs	169.3 ft-lbs

Bluearc STUD WELDING

www.bluearcstudwelding.com

ARC WELD STUDS



Full Thread Studs are one of the two most common studs. The threads on a Full Thread Stud run the full length of the fastener (hence full thread). This simplifies many mating part concerns and is a favorite of engineering. Also, a Pitch Diameter Stud requires that the mating part(s) cover the unthreaded portion of the fastener. Also, a Pitch Diameter Stud is marginally stronger in shear than a Full Thread Stud due to the slightly larger diameter in the shear area.

FULL THREAD MILD STEEL

	Overall Length	1/4 - 20	5/16 - 18	3/8 - 16	1/2 - 13	5/8 - 11	3/4 - 10
	5/8	FTC25-62	FTC31-62	FTC37-62			
	3/4	FTC25-75	FTC31-75	FTC37-75			
	7/8	FTC25-87	FTC31-87	FTC37-87			
	1	FTC25-1	FTC31-1	FTC37-1	FTC50-1		
	1 1/8	FTC25-112	FTC31-112	FTC37-112	FTC50-112		
	1 1/4	FTC25-125	FTC31-125	FTC37-125	FTC50-125		
	1 3/8	FTC25-137	FTC31-137	FTC37-137	FTC50-137		
	1 1/2	FTC25-150	FTC31-150	FTC37-150	FTC50-150		
	1 5/8	FTC25-162	FTC31-162	FTC37-162	FTC50-162	FTC62-162	FTC75-162
	1 3/4	FTC25-175	FTC31-175	FTC37-175	FTC50-175	FTC62-175	FTC75-175
	1 7/8	FTC25-187	FTC31-187	FTC37-187	FTC50-187	FTC62-187	FTC75-187
	2	FTC25-2	FTC31-2	FTC37-2	FTC50-2	FTC62-2	FTC75-2
	2 1/4	FTC25-225	FTC31-225	FTC37-225	FTC50-225	FTC62-225	FTC75-225
	2 1/2	FTC25-250	FTC31-250	FTC37-250	FTC50-250	FTC62-250	FTC75-250
	2 3/4	FTC25-275	FTC31-275	FTC37-275	FTC50-275	FTC62-275	FTC75-275
	3	FTC25-3	FTC31-3	FTC37-3	FTC50-3	FTC62-3	FTC75-3
	Minimum Length	5/8	5/8	5/8	1	1 5/8	1 5/8
	Maximum Length	Up to 3" is considered a stocking size. Beyond 3" is a custom order.					
Fillets	**Height**	.12 ± .02"	.12 ± .02"	.14 ± .02"	.17 ± .02"	.25 ± .02"	.32 ± .02"
	Diameter	.36 ± .02"	.43 ± .02"	.49 ± .02"	.63 ± .02"	.77 ± .02"	.97 ± .02"
After Weld Length Reduction (approx)		.12"	.12"	.12"	.12"	.19"	.19"

STANDARD ACCESSORIES

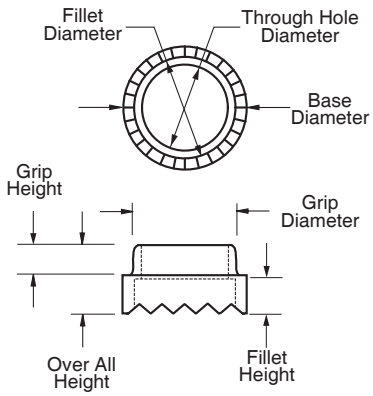
Chuck	C25	C31	C37	C50	C62	C75
Grip	GS25	GS31	GS37	GS50	GS62	GS75
Foot	FTSS20	FTSS20	FTSS20	FTSS20	FTSS20	FTSS20
Ferrule	25F	31F	37F	50F	62FL	75F

MECHANICAL PROPERTIES

Minimum Working Tensile	1,074 lbs	1,770 lbs	2,616 lbs	4,789 lbs	7,628 lbs	11,288 lbs
Minimum Yield Shear	1,072 lbs	1,731 lbs	2,534 lbs	4,589 lbs	7,258 lbs	10,634 lbs
Minimum Working Torque	4.5 ft-lbs	9.3 ft-lbs	16.3 ft-lbs	39.9 ft-lbs	79.4 ft-lbs	141.1 ft-lbs
Minimum Yield Torque	5.4 ft-lbs	11.1 ft-lbs	19.6 ft-lbs	47.9 ft-lbs	95.3 ft-lbs	169.3 ft-lbs

Bluearc
STUD WELDING
www.bluearcstudwelding.com

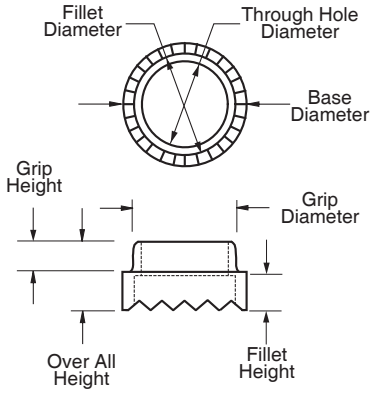
FERRULE SPECIFICATIONS



FULL DIAMETER FERRULES

Ferrule P/N	Through Hole Diameter	Grip Diameter	Base Diameter	Overall Height	Grip Height	Fillet Diameter	Fillet Height
	+.015/-.000	± .010	± .015	± .015	± .015	+.015/-.000	+.015/-.000
25F	.255	.380	.455	.390	.125	.330	.125
31F	.317	.445	.578	.390	.156	.406	.125
37F	.385	.505	.640	.390	.156	.468	.141
43F	.442	.585	.703	.422	.188	.546	.156
50F	.505	.650	.795	.438	.188	.603	.172
62FL	.635	.785	1.040	.516	.188	.745	.250
75F	.785	1.030	1.232	.656	.188	.937 +.020/-.000	.315
87F	.906	1.210	1.430	.732	.188	1.052	.390
1F	1.030	1.406	1.620	.770	.188	1.220	.390

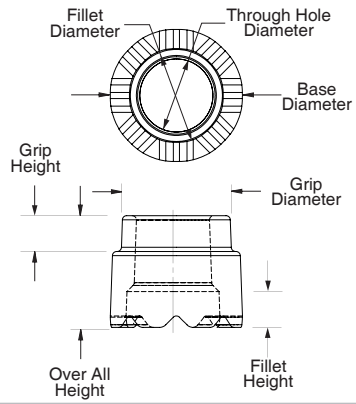
F Ferrules, sometimes referred to as flat ferrules, are used any time the weld base is a nominal diameter. Used on FT, NT, FB, SB, TP, HA, and SC style studs.



PITCH DIAMETER FERRULES

Ferrule P/N	Through Hole Diameter	Grip Diameter	Base Diameter	Overall Height	Grip Height	Fillet Diameter	Fillet Height
	+.015/-.000	± .010	± .015	± .015	± .015	+.015/-.000	+.015/-.000
25P	.222	.380	.455	.250	.125	.290	.110
31P	.280	.445	.535	.250	.125	.360	.125
37P	.340	.505	.595	.264	.125	.406	.125
43P	.395	.585	.675	.329	.156	.468	.142
50P	.462	.650	.740	.362	.156	.550	.172
62P	.585	.785	.905	.433	.156	.685	.172
75P	.695	1.030	1.150	.526	.187	.813	.250
87P	.815	1.210	1.330	.593	.187	.960	.250
1P	.955	1.410	1.525	.660	.190	1.105	.355

P Ferrules are used when the weld base is equal to the pitch diameter of the fastener. Typically only used on PD style studs.



HEAVY DUTY FERRULES

Ferrule P/N	Through Hole Diameter	Grip Diameter	Base Diameter	Overall Height	Grip Height	Fillet Diameter	Fillet Height
	+.015/-.000	± .010	± .010	± .015	± .010	± .000	± .000
25H	.260	.510	.650	.390	.160	.335	.145
37H	.385	.650	.795	.450	.190	.465	.180
50H	.505	.785	.880	.430	.160	.620	.190
62H	.665	1.020	1.250	.510	.200	.775	.390

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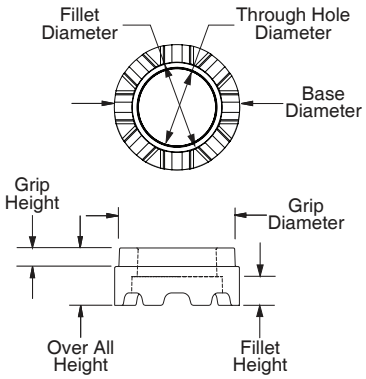
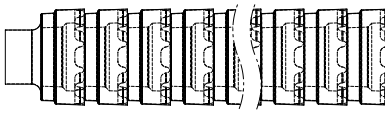
FERRULE SPECIFICATIONS

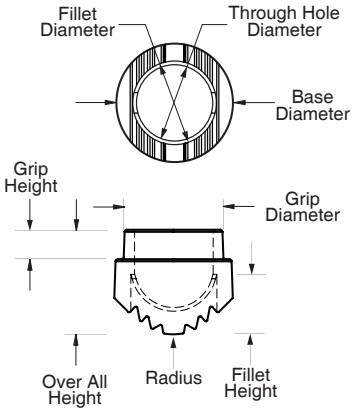


THRU DECK FERRULES

Ferrule P/N	Through Hole Diameter	Grip Diameter	Base Diameter	Overall Height	Grip Height	Fillet Diameter	Fillet Height
	+.015/-.000	± .010	± .010	± .015	± .010	± .000	± .000
50TD	.515	.645	.800	.450	.185	.615	.220
62TD	.660	.785	1.030	.540	.188	.775	.270
75TD	.805	1.210	1.335	.590	.188	.955	.340
75TDZ	Zip Ferrules: 50 Pieces of 75TD collated into a quick release package						
87TD	.935	1.210	1.440	.680	.188	1.080	.390

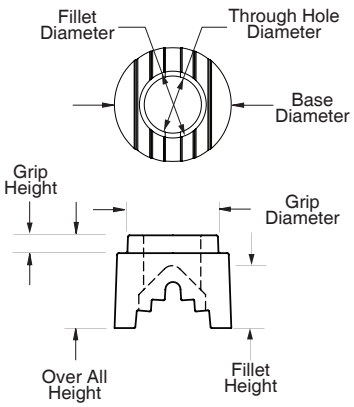
Bluearc Innovative Zip Ferrules
75TDZ 50 piece sleeve of ferrules





INSIDE ANGLE FERRULES

Ferrule P/N	Through Hole Diameter	Grip Diameter	Base Diameter	Overall Height	Grip Height	Fillet Diameter	Fillet Height	Radius
	+.015/-.000	± .010	± .015	± .015	± .015	+.015/-.000	+.015/-.000	
25I	.275	.390	.580	.510	.155	.340	.140	1/8
37I	.395	.515	.640	.520	.155	.465	.170	1/4
50I25	.530	.670	.810	.680	.190	.580	.230	1/4
50I37	.530	.670	.810	.710	.200	.580	.270	3/8
62I	.660	.885	1.015	.880	.190	.765	.280	3/8
75I	.785	1.030	1.230	.990	.180	.920	.280	3/8



OUTSIDE ANGLE FERRULES

Ferrule P/N	Through Hole Diameter	Grip Diameter	Base Diameter	Overall Height	Grip Height	Fillet Diameter	Fillet Height
	+.015/-.000	± .010	± .010	± .015	± .010	± .000	± .000
25O	.280	.431	.580	.420	.125	.345	.250
37O	.418	.509	.715	.696	.160	.520	.350
50O	.525	.825	1.050	. 840	.160	.630	.300
62O	.645	.785	1.040	. 915	.215	.780	.350
75O	.800	1.038	1.250	1.035	.195	.940	.570

Ferrules:

Used for multiple purposes in stud welding. First, the ferrule helps to shield the arc from the operator. Second, it minimizes the atmosphere that the flux must purge. Third, the ferrule forms the molten metal into the fillet. Finally, the fillet vents allow weld gases to escape.

Ferrules are disposable items. As disposable items they are mass manufactured quickly and inexpensively. Ferrules are cast in a mold out of a low grade moldable ceramic. They are taken out of the mold and are dried. Because of this manufacturing method, ferrule tolerances can be greater than machining or other manufacturing processes. Therefore, it is not recommended to fixture off of a ferrule when exact location is required.

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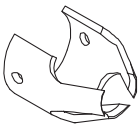
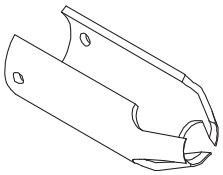
ARC ACCESSORIES

STANDARD FERRULE GRIP
1" Long



SPLIT FERRULE GRIP
1" Long

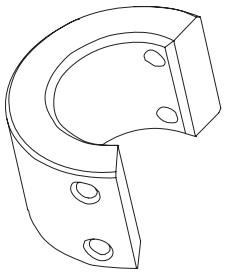


LONG SPLIT FERRULE GRIP
2" Long

BRASS ALLOY FERRULE GRIP

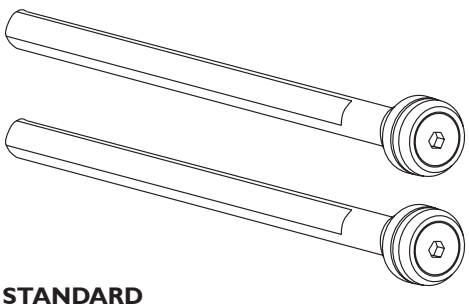
WELD STUD SIZE	REQUIRED FOOT	GRIP DIAMETER	STANDARD FERRULE GRIP 1" Long	SPLIT FERRULE GRIP 1" Long	LONG SPLIT FERRULE GRIP 2" Long
1/4	Small	0.380	G25	GS25	GLS25
5/16	Small	0.445	G31	GS31	GLS31
3/8	Small	0.505	G37	GS37	GLS37
7/16	Small	0.585	G43	GS43	GLS43
1/2	Small	0.650	G50	GS50	GLS50
5/8	Medium	0.785	G62	GS62	GLS62
3/4	Medium	1.030	G75	GS75	GLS75
7/8	Large	1.203	G87	GS87	GLS87
1	Large	1.406	G1	GS1	GLS1

Brass alloy ferrule grips are harder and last longer than copper ferrule grips. Split grips are typically used with Headed Anchors and Shear Connectors. Long grips can improve access to tight spots where a foot and short grip might not reach.



SHEAR CONNECTOR FERRULE GRIP

WELD STUD SIZE	PART NUMBER
1/2	GSC50
5/8	GSC62
3/4	GSC75
7/8	GSC87



STANDARD ADJUSTABLE LEGS
Sold individually. If you need a pair be sure to order two.

ADJUSTABLE LEGS

LEG DIAMETER	LEG LENGTH	PART NUMBER
3/8	7	L37-7
3/8	9	L37-9
3/8	14	L37-14
3/8	18	L37-18
3/8	24	L37-24
3/8	27	L37-27
3/8	32	L37-32
3/8	36	L37-36

The end of Bluearc legs are brass to prevent weld spatter from building up on them. A new leg comes complete with the special washer and screw. The special washer and screws are available as a separate item.

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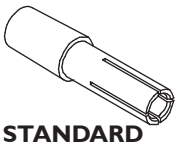
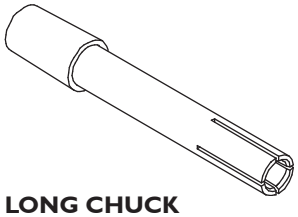
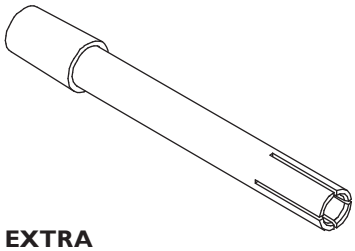
ARC ACCESSORIES



STANDARD CHUCK
Less than 5/8" diameter the length is 2.50". Greater than 5/8" the length is 3" OAL 3".



LONG CHUCK
3.87" Long



EXTRA LONG CHUCK
4.75" Long

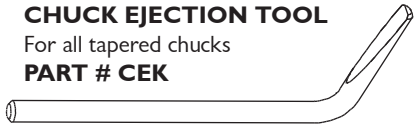
STANDARD, LONG & EXTRA LONG ADJUSTABLE CHUCKS

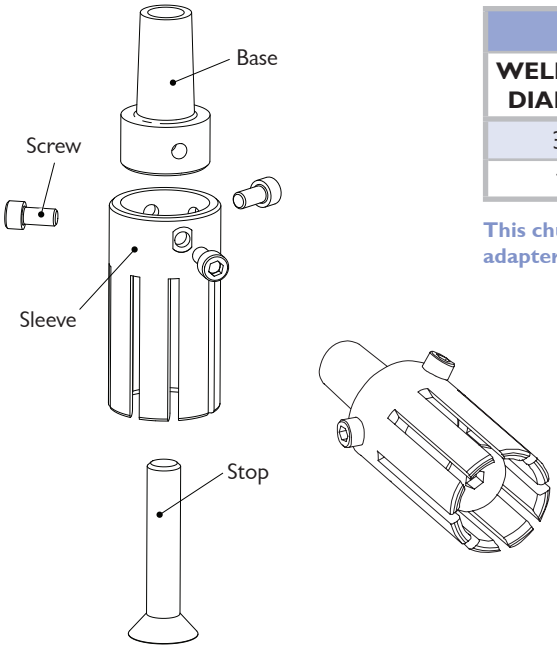
WELD STUD DIAMETER	STANDARD CHUCK 1" Long	LONG CHUCK 1" Long	EXTRA LONG CHUCK 2" Long
3/8	C37	CL37	CEL37
7/16	C43	CL43	CEL43
1/2	C50	CL50	CEL50
9/16	C56	N/A	N/A
5/8	C62	CL62	CEL62
0.680	C68	N/A	N/A
3/4	C75	CL75	CEL75
7/8	C87	N/A	N/A
1	C1	N/A	N/A

Each chuck comes with an internal, adjustable depth stop. All chucks have chamfered ends for easy stud insertion. The standard chuck is the most widely used chuck suitable for use in drawn arc, CD and stored arc applications. These chucks have a #2 Morse taper which will fit a variety of stud weld tools.

NOTE: Long and extra long chucks don't have longer throat depths. They should be used as an extension to help reach difficult spots.

CHUCK EJECTION TOOL
For all tapered chucks
PART # CEK





HEADED ANCHOR CHUCK

WELD STUD DIAMETER	COMPLETE ASSEMBLY	SLEEVE	BASE	STOP	SCREW
3/8	CH37	CH37-1	CH37-2	FHC25F-2	SHC19F-37
1/2	CH50	CH50-1	CH50-2	FHC37F-2	SHC19F-37

This chuck has a standard Morse taper and fits standard, or heavy duty chuck adapters.

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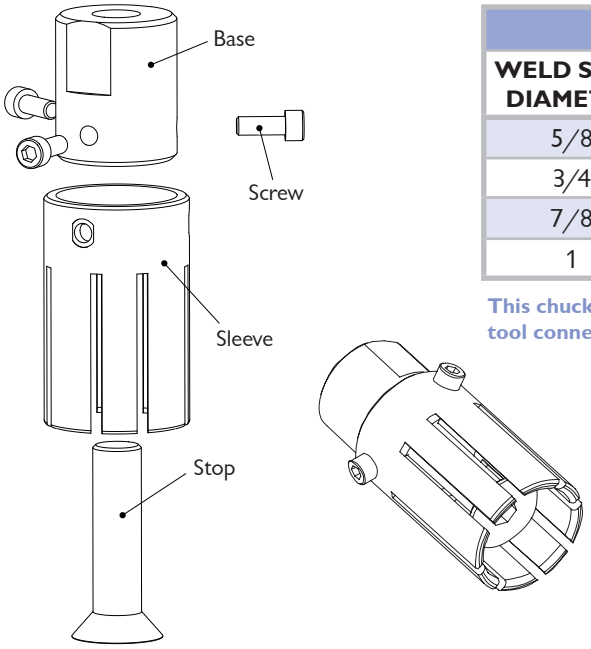
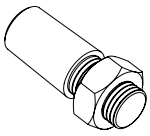
ARC ACCESSORIES

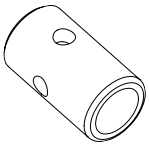


SHEAR CONNECTOR CHUCK					
WELD STUD DIAMETER	COMPLETE ASSEMBLY	SLEEVE	BASE	STOP	SCREW
5/8	CH75	CH75-1	CH75-2	FHC50F-2	SHC19F-37
3/4	CH75	CH75-1	CH75-2	FHC50F-2	SHC19F-37
7/8	CH87	CH87-1	CH87-2	FHC50F-2	SHC19F-37
1	CH1	CH1-1	CH1-2	FHC50F-2	SHC19F-37

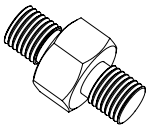
This chuck is internally threaded on the base end, and connects directly to the weld tool connector stud.



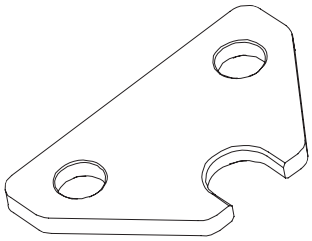
MORSE TAPER ADAPTER P/N MTA



CHUCK ADAPTER P/N GBM12



WELD TOOL CONNECTOR STUD P/N GBM36



TWIN LEG

FERRULE FOOT PLATE	
WELD STUD SIZE	TWIN LEG
1/4	FFP25
5/16	FFP31
3/8	FFP37
1/2	FFP50
5/8	FFP62
3/4	FFP75
7/8	FFP87
1	FFP1

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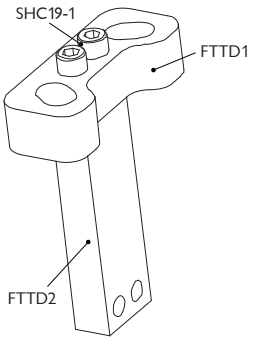
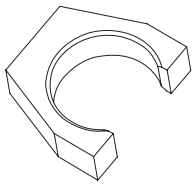
ARC ACCESSORIES

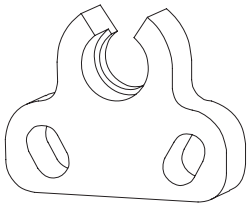


WELD THRU DECK
3" Foot Extension **P/N FTTD**

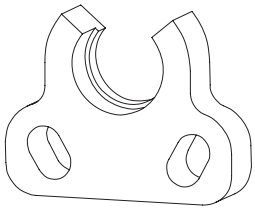


WELD THRU DECK FERRULE HOLDER

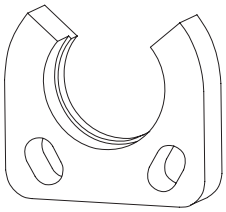
WELD THRU DECK FOOT EXTENSION & FERRULE HOLDER		
Stud Diameter	**Flat Ferrule**	**Thru Deck**
1/2	11059	11061
1/2 HD	11060	N/A
5/8	11060	11060
3/4	11061	11062
7/8	11062	11062
1	11063	N/A



TYPE A



TYPE B



TYPE C

FEET		
SPLIT, SMALL 1/8 - 1/2	**SPLIT, MEDIUM 9/16 - 3/4**	**SPLIT, LARGE 7/8 - 1**
FTSS20	FTMS20	FTLS20
TYPE A	TYPE B	TYPE C

FOOT DESCRIPTION: Foot Style, Foot Size, and Stud Sizes.

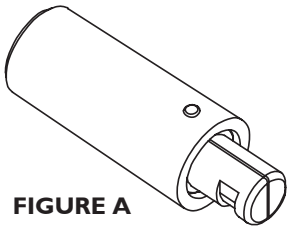


FIGURE A

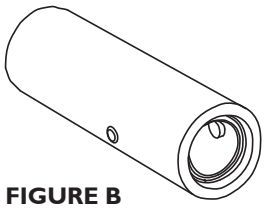


FIGURE B

WELD CABLE CONNECTORS			
WELD CABLE CONNECTOR	**FIGURE**	**COLOR**	**PART**
4/0 Male Heavy Duty Hi Temp	A	CLEAR	CCL4/0AMHT
4/0 Female Heavy Duty Hi Temp	B	CLEAR	CCL4/0AFHT

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DRAWN ARC POWER SUPPLY CONTROL CONNECTORS						
STYLE	4 PIN SCREW STYLE (Bluearc)		4 PIN (R&S)		3 PIN HOLLOW POST (Hubble)	
	Figure	Part	Figure	Part	Figure	Part
Female	A	CSS4AF	D	CRS4AF	G	CHB2GAF
Male	B	CSS4AM	E	CRS4AM	H	CHB2GAM
Female Panel Mount	C	CSS4RF	F	CRS4RF	J	CHB2GRF

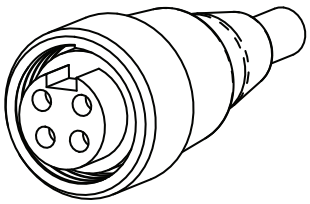

Figure A

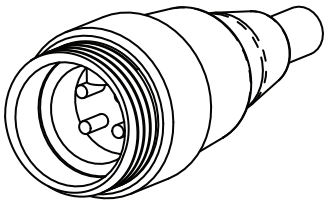

Figure B

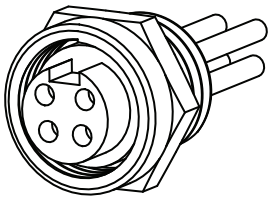

Figure C

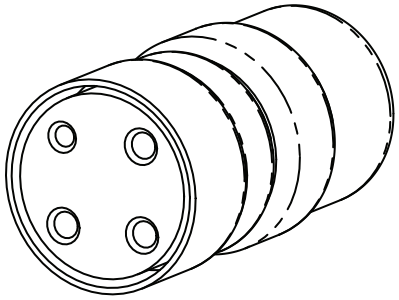

Figure D

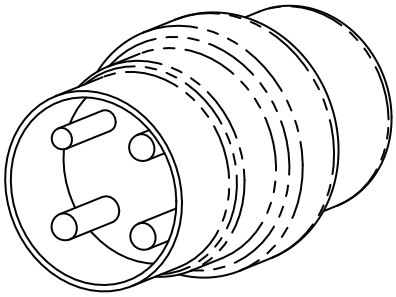

Figure E

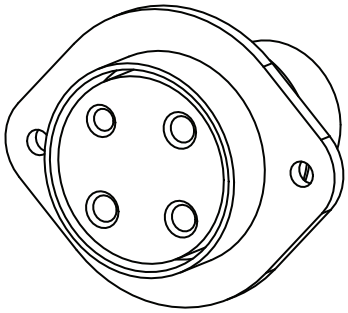

Figure F

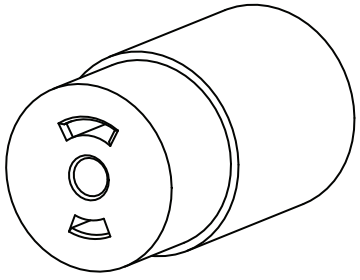

Figure G

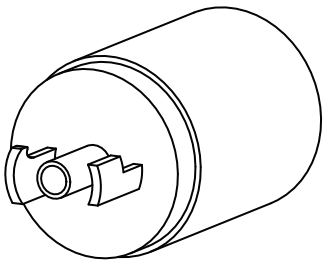

Figure H

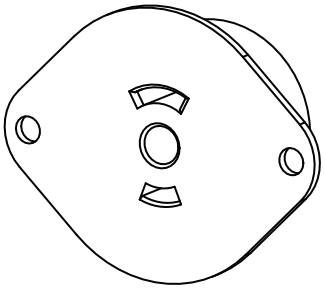

Figure J

STUD WELDING PROCEDURES

> Set time for appropriate weld base diameter.

> Set amperage for appropriate weld base diameter.

> Make sure to use a positive (+) ground.

> Align accessories so they are centered and adjust legs.

At least 3/16" to 1/4" of stud needs to protrudes beyond ferrule.

> Have a good clean ground.

> Work surface relatively clean so impurities do not affect weld.

This would include cleaning off painted surfaces before welding.

> Keep studs and ferrules clean and dry.

> Test welds at beginning of each shift or change in stud.

Bend two studs 30° after cooled.

> Check burn off (1/8"- 3/16"), color (silver blue & shiny), fillet (360°).

> Visually inspect all welds.

WELD STUDS	
SIZE	**PLUNGE or STICK OUT**
3/16" through 1/2"	1/8"
5/8" through 7/8"	3/16"
1" and over	3/16" to 1/4"

TIME AND CURRENT GUIDE		
STUD DIAMETER	**TIME/ SECONDS**	**CURRENT**
1/4	.20 - .25	350 - 450
5/16	.25 - .30	450 - 600
3/8	.33 - .40	525 - 700
7/16	.40 - .45	675 - 750
1/2	.50 - .55	750 - 925
5/8	.65 - .70	1100 - 1400
3/4	.85 - .90	1450 - 1750
7/8	1.00 - 1.20	1700 - 1950
Thru Deck		
3/4	1.00 - 1.40	1550 - 1800

Bluearc STUD WELDING

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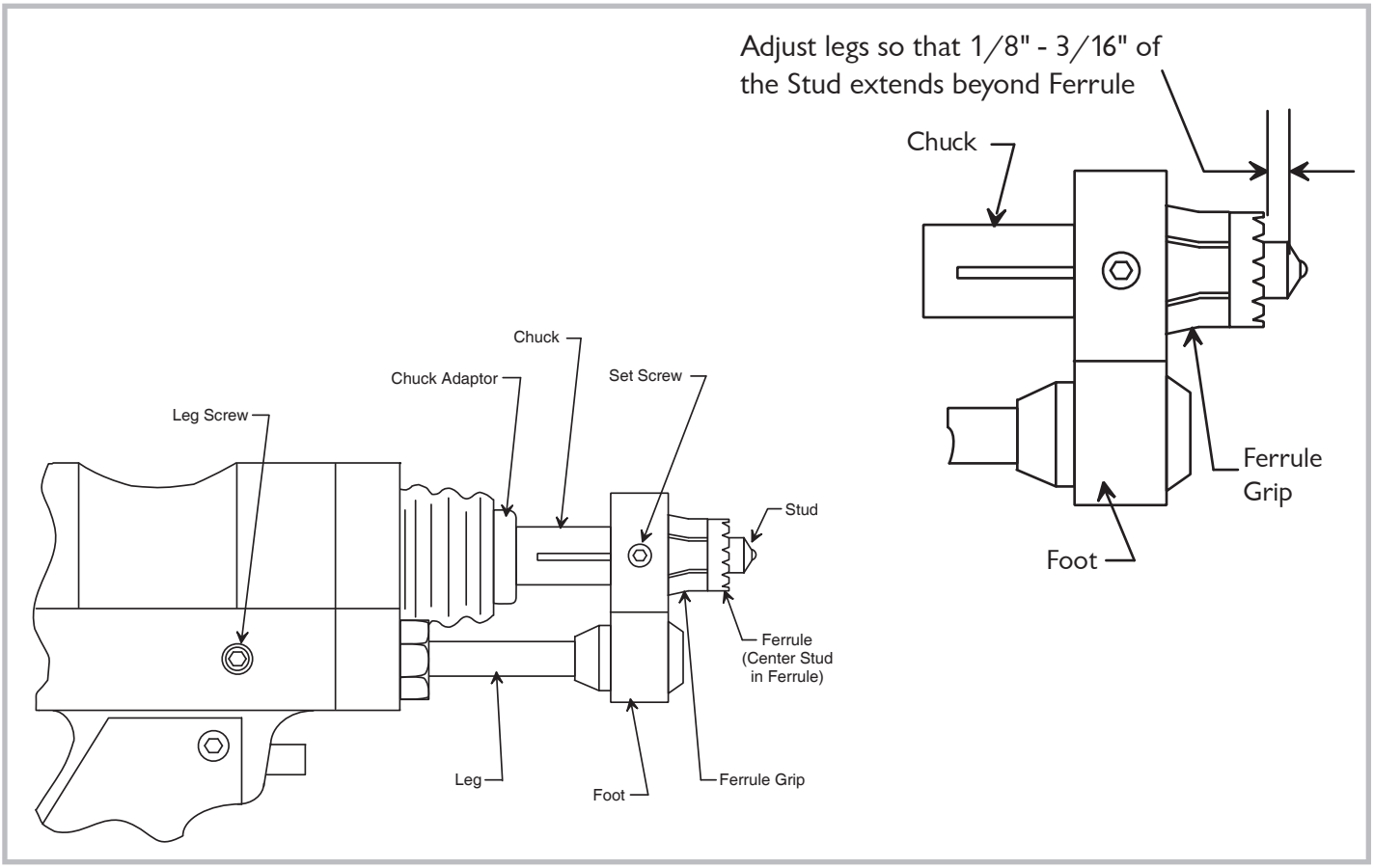
STUD WELDING PROCEDURES



Adjusting Stud Weld Tool Plunge

1.) Place a chuck into the chuck adapter. Tap on the end lightly to make sure that the chuck is properly seated in the adapter. NOTE: A different chuck is required for each different stud diameter.

2.) Insert a ferrule grip into the foot and tighten the set screws on the foot.
NOTE: A different ferrule grip is required for different size ferrules.

3.) Insert a stud into the chuck and a ferrule into the ferrule grip.

4.) Loosen the screws holding the FOOT and adjust the foot so the stud is centered in the ferrule.
THIS IS IMPORTANT so there is no binding between the ferrule and the stud. This binding could cause improper welds (hang-up). A good rule of thumb is that you should be able to work the weld tool mechanism with the ferrule in place without knocking the ferrule out of the ferrule grip.

5.) Loosen the leg set screws (one on each side of the weld tool).

6.) Adjust the legs so that the stud extends 1/8” to 3/16” beyond the end of the ferrule.

7.) After you have properly positioned the legs, tighten the leg set screws on both sides of the weld tool body.
NOTE: You must readjust the plunge setting whenever changing stud lengths.

STUD WELDING STOCKING & DISTRIBUTION LOCATIONS

ATLANTA **IMAGE INDUSTRIES** ☎ **877-824-7883**

Serves AK, AL, FL, GA, LA, NC, OK, SC, TN, TX

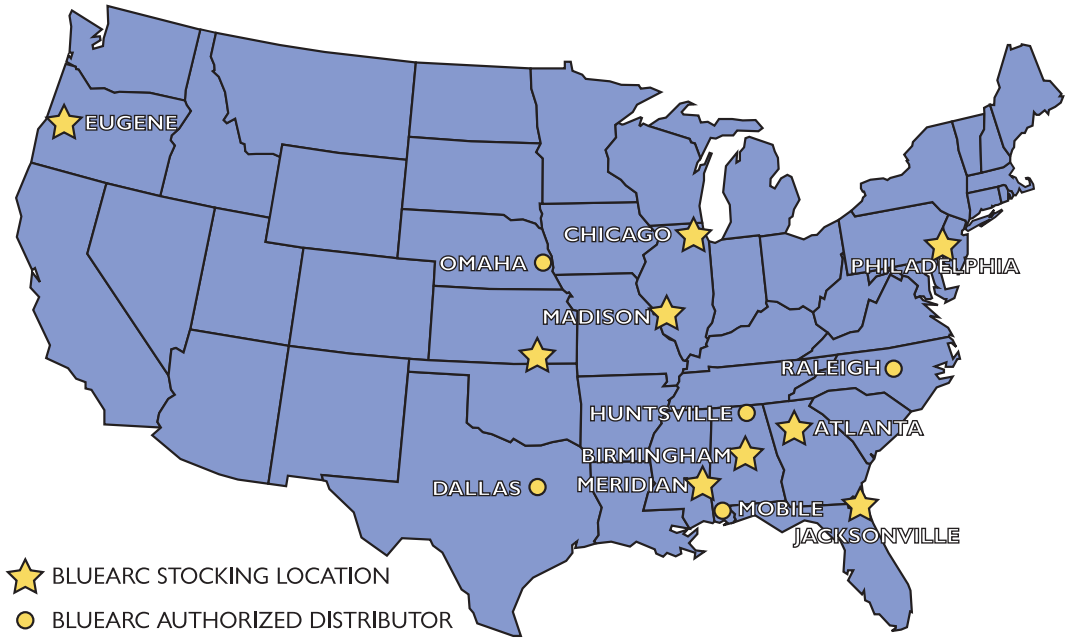
CHICAGO **IMAGE INDUSTRIES** ☎ **800-722-7883**

Serves IA, IL, IN, KY, MI, MN, MO, OH

Other Distributor Locations:

AL:	Birmingham	IL:	Madison	OR:	Eugene
	Huntsville	MS:	Meridian	PA:	Philadelphia
	Mobile	NC:	Raleigh	TX:	Dallas
FL:	Jacksonville	NE:	Omaha		

Please contact the Atlanta office for distributor contact information



If you are in an area other than the ones coded, please call the ATLANTA office.

All quote requests or shipments will be handled by them.

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