

connecting needs with capabilities

Nut & Stud Welding Gun Packages

Ver. 1.0

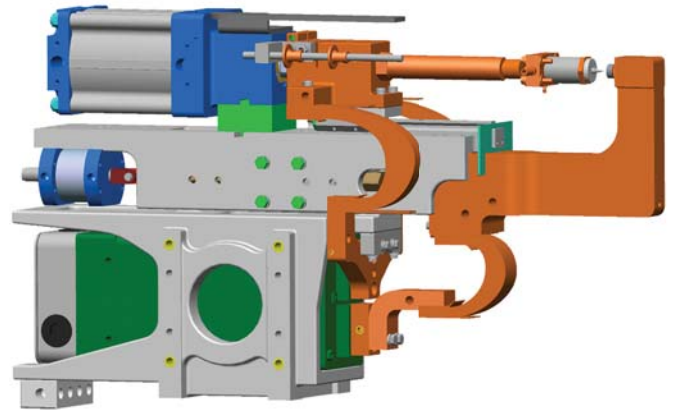
Nut & Stud Welding Gun Packages

CenterLine's family of Nut and Stud Welding gun packages are suitable for nearly any fastener welding need. Our extensive design library is divided into three basic style categories: Bench Type, C Type Inline and C Type 90°.

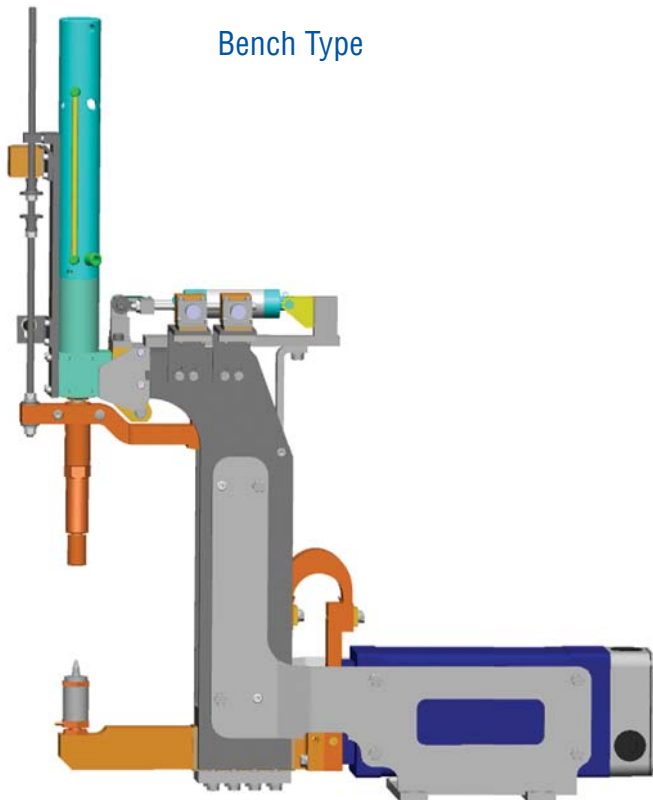
The Bench style guns are expressly designed for fastener welding and can be customized for a variety of integration needs. The Inline and 90° designs can be configured as either fastener welding or straight resistance welding guns enabling users to reduce the number of gun styles for programs that require both straight welding and fastener welding needs.

All packages can be fitted with either MFDC or AC transformers. Due to the unique application needs of projection welding, CenterLine has designed this group of welding guns to function using low impact closure so as to eliminate potential damage to projections from conventional air cylinders. The CenterLine FX air cylinders and the air/oil OHMA® intensifier cylinders are used with these packages.

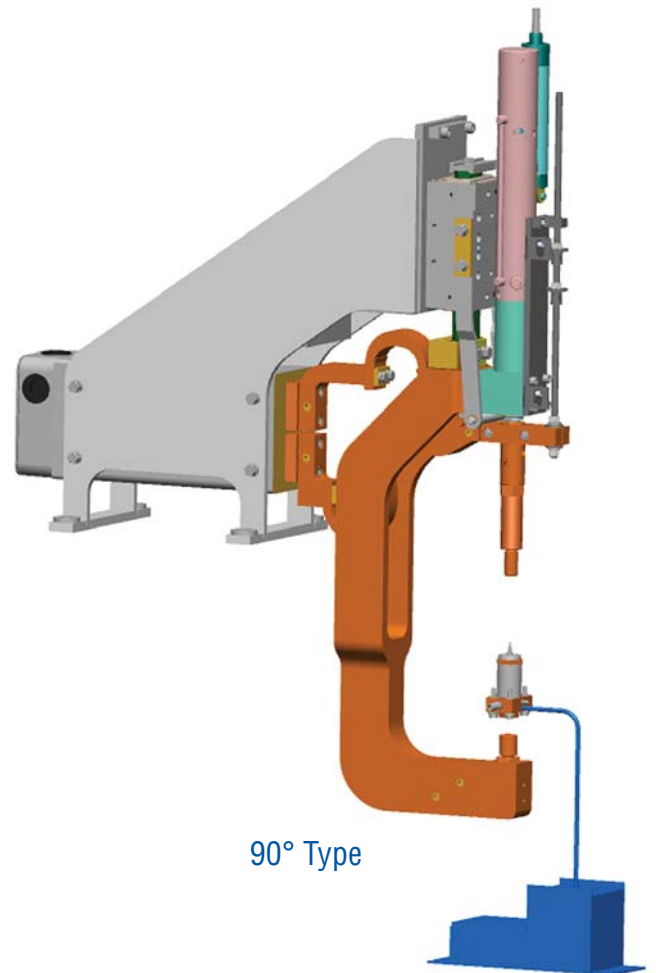
The overall Nut & Stud Welding gun design library consists of several hundred designs. This flyer presents a cross section of designs to provide readers with a basic overview of this particular product family.



“C” Type



Bench Type

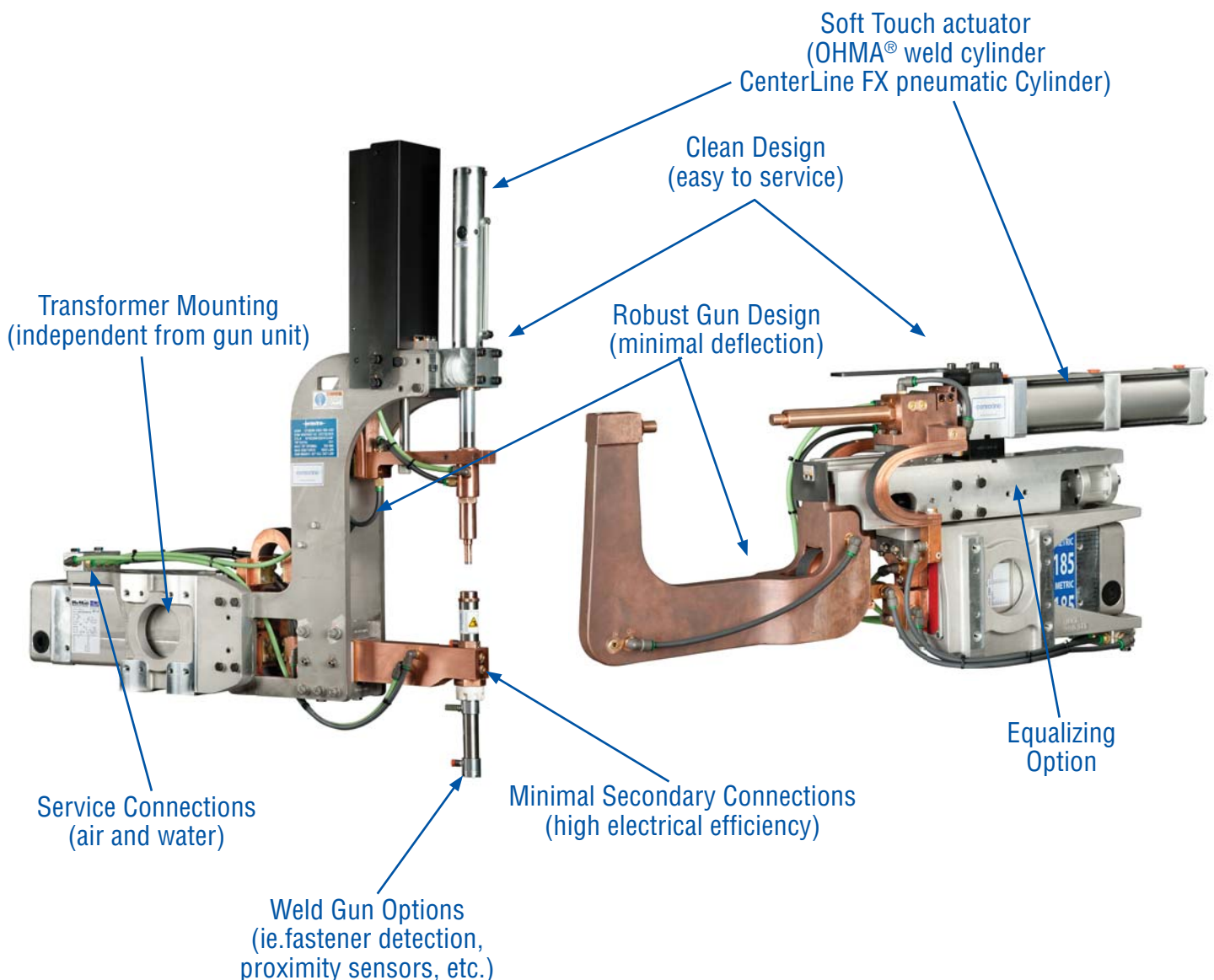


90° Type

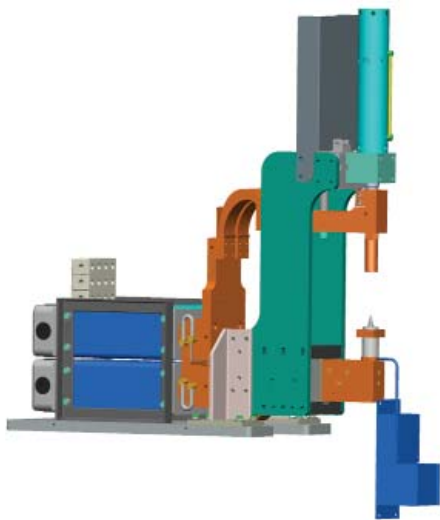
Standard Features

Common features to all Nut & Stud Welding Guns include:

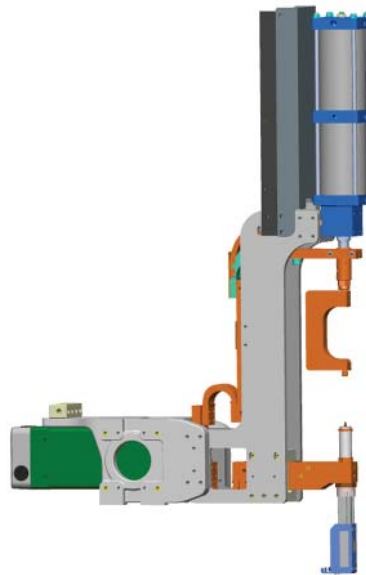
- Weld force ranges between 500 – 4000 lbs
- High electrical efficiency – minimal secondary connections
- Soft touch operation extends gun and electrode life and improves weld quality.
- Weld force maintenance throughout weld cycle to improve weld and part quality.
- Minimal deflection to prevent offset weld forces
- Small bore actuators reduce air consumption
- Clean design enables addition of optional features such as fastener detection, safety pivots, proximity sensors, etc.
- Gun bodies not directly mounted to transformer pads to eliminate potential transformer mechanical damage.
- Easy access to all gun components for service and maintenance needs.



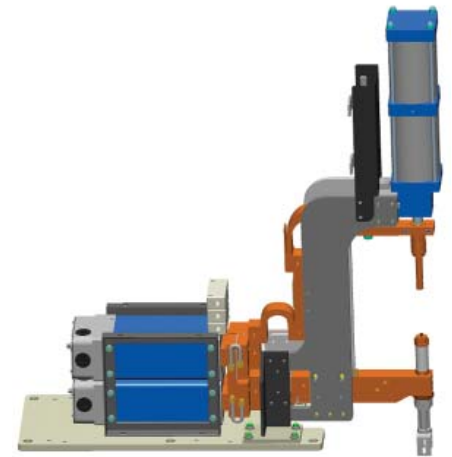
Gun Number #	Max Weld Force		Max Air Press		Tip Ratio	Weight		Throat Depth		Total Tip Opening		Actuator
	lbs	N	psi	Bar		lbs	kg	in	mm	in	mm	
CFOB9N-050-165-002	4000	17793	63	4.3	64:1	505	229.1	5	127	5.3	134.62	OHMA
CFAB9N-060-240-002	1600	7117	47	3.2	34.2:4	381	172.8	6	152.4	5.5	139.7	AIR
CFAB9N-075-185-001	2500	11121	77	5.3	32.4:1	505	229.1	7.5	190.5	5.6	142.74	AIR
CFOB9N-090-185-022	1700	7562	55	3.8	31:1	287	130.2	9	228.6	5.3	134.62	OHMA
CFOB9N-120-185-001	2500	11121	80	5.5	31.1:1	327	148.3	12	304.8	5.6	142.24	OHMA
CFAB9N-120-185-026	1800	8007	53	3.7	34.2:2	363	164.7	12	304.8	1.8	45.72	AIR
CFOB9N-140-185-001	2000	8896	95	6.5	21:1	326	147.9	14	355.6	5.2	132.08	OHMA
CFOB9N-240-215-001	1500	6672	71	4.9	21:1	458	207.7	24	609.6	7.9	200.66	OHMA



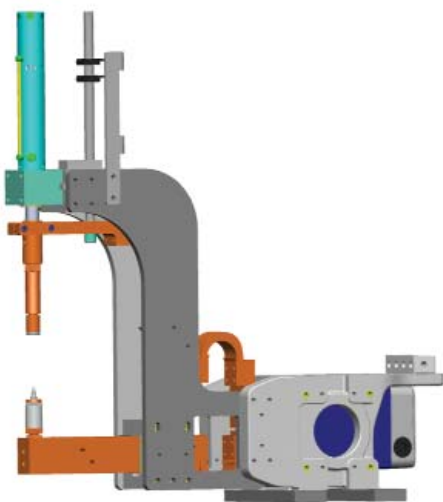
CF0B9N-050-165-002



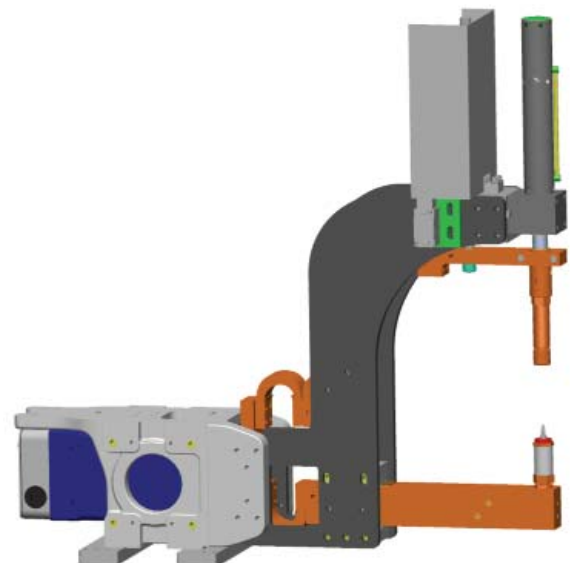
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CFAB9N-075-185-001

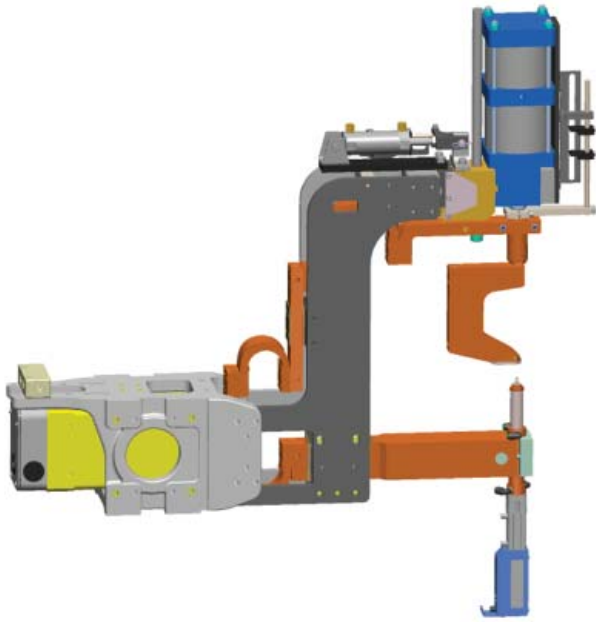


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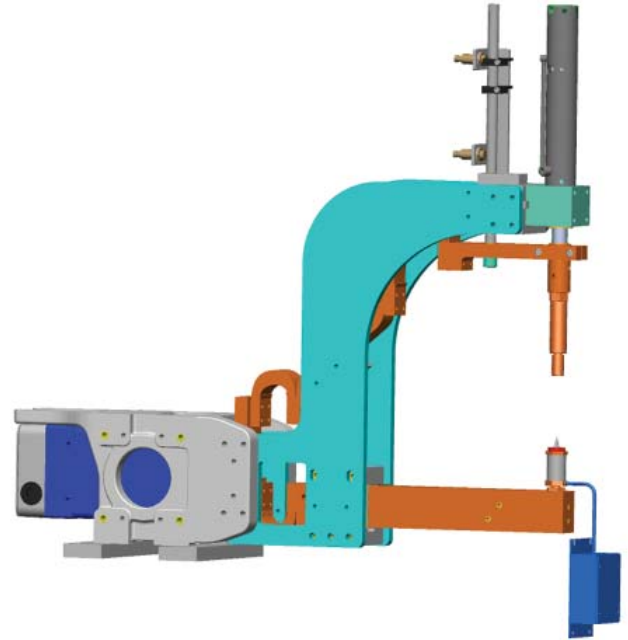


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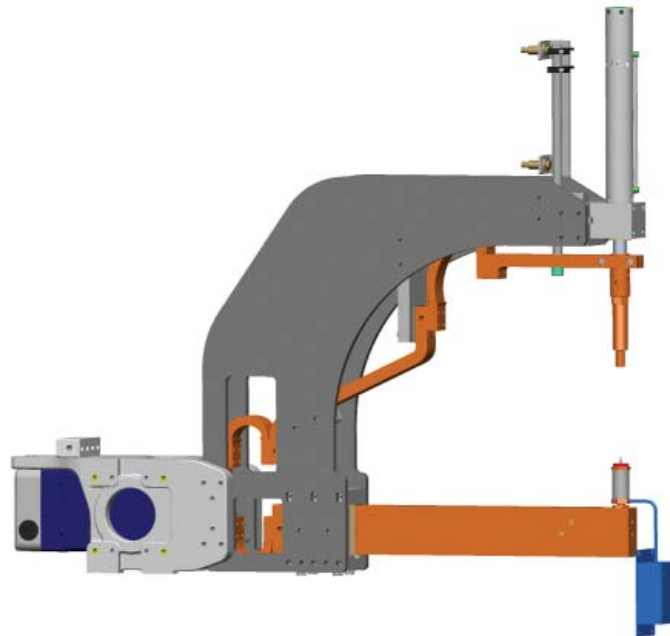
Bench Type Welding Guns



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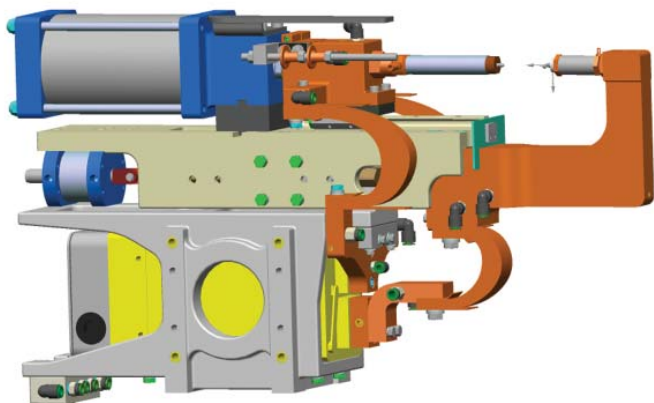


CF0B9N-140-185-001

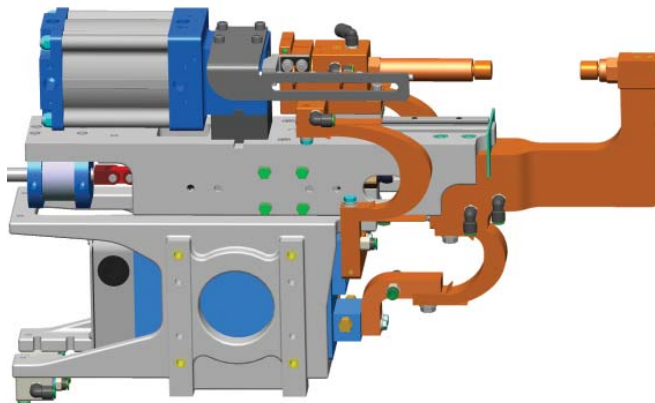


CF0B9N-240-215-001

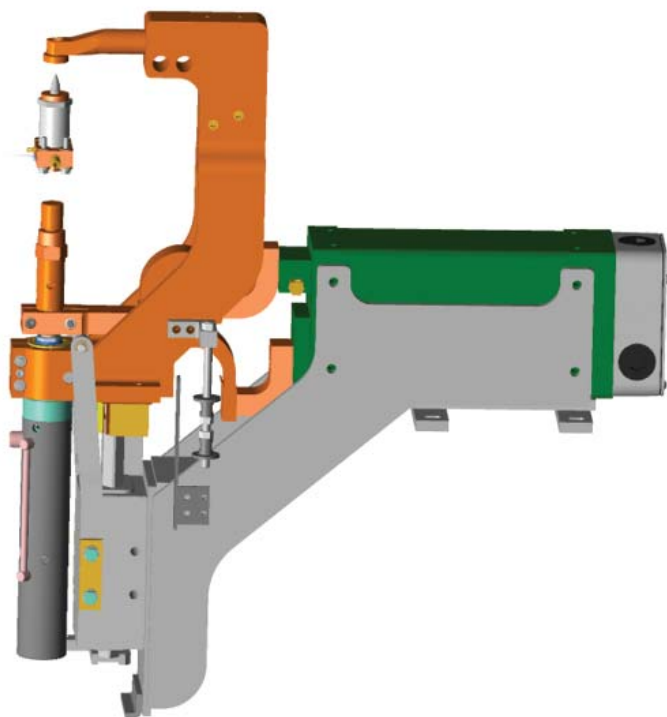
Gun Number #	Max Weld Force		Max Air Press		Tip Ratio	Weight		Throat Depth		Total Tip Opening		Actuator
	lbs	N	psi	Bar		lbs	kg	in	mm	in	mm	
CFACIE-043-070-004	1700	7562	100	6.9	17:1	239	108.4	4.3	109.22	3.1	78.74	AIR
CFACIE-043-070-002	1700	7562	100	6.9	31:1	230	104.3	4.3	109.22	4.7	119.38	AIR
CLTG-9943-168	1400	6228	67	4.6	21.1:1	240	108.9	6.5	165.1	6.6	167.64	OHMA
CLTG-6434	1500	6672	48	3.3	31:1	420	190.5	16	406.4	9.9	251.46	OHMA



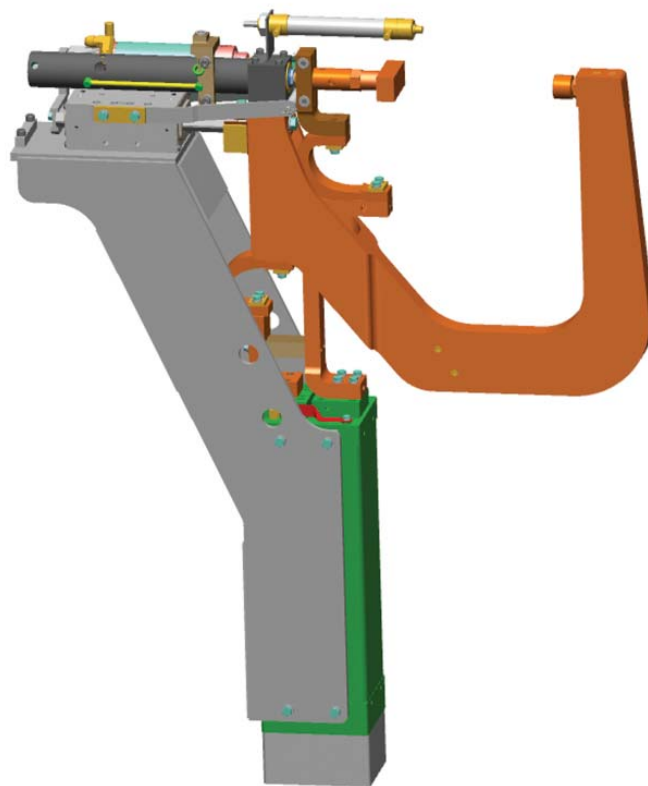
CFACIE-043-070-004



CFACIE-043-070-002



CLTG-9943-168



CLTG-6434

Optional Components

- Nut Detection – to verify nut presence, nut orientation, pre and post weld position, part eject. Available in two main sensor types to satisfy specific application profiles.
 - VeriFast™ – laser sensing
 - Smart™ Electrodes – fiber optic sensing system
- Pin Return sensing
- Proximity switches for part and or obstruction verification
- Pneumatic Equalizing – simple and completely adjustable system that compensates for varying weld plane positions.
- Tip Pivot – to eliminate pinch points in manual load applications
- OHMA air/oil intensifier cylinders – common mounting enables users to change cylinder models to increase or decrease weld forces. Enables gun to be used for multiple programs
- CenterLine FX Air Cylinders – single or dual piston models that operate at low impact closure to minimize electrode wear and prevent part deformation
- Full integration with standard CenterLine Nut and Stud Electrode packages and pins.

CenterLine Nut and Stud Detection Systems & Components



VeriFast™ Laser Nut and Stud Detection System



Smart Electrode™





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