



# The Leader in Metal Working Technologies

WELDING STUDS | FASTENERS | STUD WELDING SYSTEMS



# Welcome to Keystone Fastening Technologies

## For Uncompromising Fastening Results

With an extensive range of Stud Welding and related Metalworking products, Keystone is the expert when precision, reliability and efficiency is expected. Keystone delivers the extremely precise fastening tolerances that are required in the most demanding applications. Whether it's our Weld Studs or Stud Welding Systems, our products exhibit uniformly precise welding, durability and long term reliability.



## Welding Studs and Equipment

### Capacitor Discharge Stud Welding & Drawn Arc Stud Welding Products

Welding Studs  
Stud Welding Systems

Stud Welding Consumables  
Automation



## Specialty Fasteners

Wire Tie Clips  
(Work with Welding Studs)  
Cap Nuts  
Acorn Nuts  
Grounding Studs

Cable Management Products  
Tagging Products  
Custom Cold Headed Parts  
Custom Screw Machine Parts



## Accessories

Welder Carts  
Welding Consumables  
Tool Balancers  
Torque Tools



## Service & Support

Application Engineering  
R&D Assistance  
Complete Repair Service  
Parts Support  
Contract Stud Welding

**Contact sales or visit our website for specific size and material requirements.**

keystonefastening.com • Ph. 800-659-5972

# Welding Studs

## Productivity Requires Both Quality and Performance

Keystone offers the most comprehensive inventory of welding studs and specialty fasteners in the industry. English, metric and custom sizes are always available. Quality is standard.

### Capacitor Discharge

<b>Weldable Materials</b>	Mild Steel, Stainless Steel, Aluminum, Brass, Copper, Titanium & other alloys
<b>Weldable Stud Range</b>	2-56 thru 3/8" (M2 - M10)

- ▶ **Flanged and Non Flanged**
  - External Thread
  - Internal Thread
- ▶ **Pin Studs - Unthreaded**
- ▶ **Insulation Pins**
- ▶ **Annular Pin Studs**
- ▶ **Collar Studs**
- ▶ **Keyhole Studs**
- ▶ **Knock off Studs**
- ▶ **Ground Space Terminal Studs**
- ▶ **Cable Management Accessories**
- ▶ **Material Tagging Systems**

### Drawn Arc

<b>Weldable Materials</b>	Mild Steel, Stainless Steel, Aluminum, & other alloys
<b>Weldable Stud Range</b>	1/8" thru 1" (M3 - M25)

- ▶ **External Thread**
  - Full, Partial
- ▶ **Reduced Base**
- ▶ **Internal Thread - Tap Pads**
- ▶ **Pin Studs -Unthreaded**
- ▶ **Collar Studs**
- ▶ **Shoulder Studs**
- ▶ **Annular Pin Studs**
- ▶ **Cable Hangers**
- ▶ **Deformed Bars**
- ▶ **Headed Concrete Anchors**
- ▶ **Shear Connectors**
- ▶ **Rectangular Studs**
- ▶ **Refractory Anchors**
- ▶ **Fir Tree Studs**
- ▶ **Grounding Studs**
- ▶ **Short Cycle**



**Contact sales or visit our website for specific size and material requirements.**

keystonefastening.com • Ph. 800-659-5972

## Capacitor Discharge Stud Welding Systems

Keystone Capacitor Discharge Stud Welding Systems are Precision Engineered for Long Term Durability and Performance. Our Unique Technology allows operators to achieve Exceptional Weld Quality and Unparalleled Consistency. Units feature Pre Programmed Voltage Adjustability with a Digital Readout, Fault Protection Circuitry and Dual Grounds to ensure optimal results. Most units are Fully Compatible and Combinable with Keystone Automated Systems.

	<b>TS 306</b>	<b>TS 308</b>	<b>TS 318</b>	<b>BS 308</b>	<b>BS 318</b>
					
<b>Weldable Materials</b>	Mild Steel, Stainless Steel, Aluminum, Brass, Copper, Titanium & other alloys				
<b>Weldable Stud Range</b>	2-56 thru 1/4" (M2.5 thru M6)	2-56 thru 5/16 - 18 (M2.5 thru M8)	2-56 thru 3/8 - 16 (M2.5 thru M10)	2-56 thru 5/16 - 18 (M2.5 thru M8)	2-56 thru 3/8 - 16 (M2.5 thru M10)
<b>Weld Rate</b>	Up to 30 studs per min	Up to 30 studs per min	Up to 30 studs per min	Up to 30 studs per min	Up to 30 studs per min
<b>Input Power</b>	100 VAC to 250 VAC, 50/60Hz, 3A	100 VAC to 250 VAC, 50/60Hz, 3A	100 VAC to 250 VAC, 50/60Hz, 3A	100 VAC to 250 VAC, 50/60Hz, 3A	100 VAC to 250 VAC, 50/60Hz, 3A
<b>Compatible Guns</b>	HP-TSK 310, HP-TSK 150	HP-TSK 310, HP-TSG 310, AH-TSG 310 Automatic, SIK-2 Automatic			

### Capacitor Discharge Guns

**TSK 310**



**TSK 310 with  
Standard Footpiece**



**TSK 310 with  
Tripod option**



**TSK 310 with  
30 mm Template  
Adapter option**

Using Genuine Keystone parts and accessories will ensure performance and long term durability.

### CD Accessories *(Contact us for full range of Accessories)*

#### English & Metric Sizes

Tapered Base Chucks  
B-Collets



B-Collet Stops & Inserts  
Adapters & Foot pieces



*Consumables for other Industry Equipment Brands also Available*

## Drawn Arc Stud Welding Systems

Developed for professional use, Keystone Stud Welding Systems effortlessly respond to the toughest workplace demands. Our Proprietary Microprocessor and Current Regulation Technology allows operators to achieve Exceptional Weld Quality and Unparalleled Consistency. Our D Series Systems feature a Digital Interface that offers Programmable Voltage and Time Parameters allowing for repeatable operator performance and weld quality. All of our ARC systems are shielding gas capable.

	DA 312 D	DA 314 D	DA 322	DA 625
				
<b>Weldable Stud Range: (with ceramic ferrule)</b>	1/8" thru 1/2" (M3 thru M14)	1/8" thru 5/8" (M3 thru M16)	1/8" thru 1" (M3 thru M25)	1/4" thru 1" (M6 thru M25)
<b>Weldable Stud Range: (with short-cycle mode)</b>	1/8" thru 5/16" (M6 thru M8)	1/8" thru 3/8" (M3 thru M10)	1/8" thru 3/8" (M3 thru M10)	1/4" thru 1/2" (M6 thru M14)
<b>Maximum Current (A)</b>	800	1100	2300	3500
<b>Maximum Duty Cycle:</b>	1/8" = unlimited; 1/2" = 3 per minute	1/8" = unlimited; 9/16" = 4 per minute	1/8" = unlimited; 7/8" = 3 per minute	1/4" = 50/minute; 1" = 6/minute
<b>Primary Input:</b>	208/230/400/460 VAC, 3-phase 50/60 Hz	208/230/400/460 VAC 3-phase 50/60 Hz	208/230/400/460 VAC 3-phase 50/60 Hz	208/230/400/460 VAC 3-phase 50/60 Hz
<b>Compatible Guns:</b>	HP 314, HP 319	HP 314, HP 319	HP 319, HP 1022	HP 319, HP 1022

### Drawn Arc Guns

	HP 314	HP 319 with Dampening	HP 1022 - Heavy Duty
			
<b>Weldable Stud Range using ceramic ferrules</b>	1/8" - 1/2" (3 - 14 mm)	1/8" - 3/4" (3 - 19 mm)	3/8" - 1" (10 mm - 25 mm)
<b>Weldable Stud Range using short-cycle</b>	1/8" - 3/8" (3 - 10 mm)	1/8" - 3/8" (3 - 10 mm)	N/A
<b>Weldable Stud Range using shielding gas</b>	1/8" - 3/8" (3 - 10 mm)	1/8" - 5/8" (3 - 16 mm)	N/A
		<i>With Dampening</i>	<i>Heavy Duty</i>

## Drawn Arc Accessories *(Contact us for full range of Accessories)*

### English & Metric Sizes

Headed Anchor Chucks  
Tapered Base Chucks  
Thru-deck Accessories



Ferrule Grips  
& Shielding Gas Kits



Refractory Anchor  
Chucks & Accessories



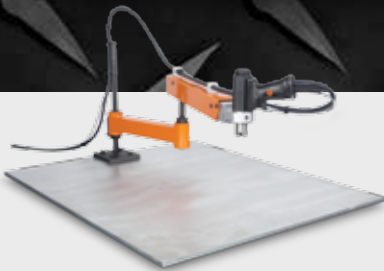
*Consumables for other Industry Equipment Brands also Available*

# Stud Welding Automation

## Efficiency through Automation

Keystone offers a wide range of semi and fully automated stud welding solutions customized for your specific application. Our welding automation provides competitive advantages such as higher quality and repeatability increased capacity and higher productivity all of which help reduce your manufacturing costs.

- ▶ **Time Savings - Welds up to 40 studs per minute**
- ▶ **Accurate, Precise and Repeatable**
- ▶ **Capacitor Discharge & Drawn Arc Stud Welding Systems**
- ▶ **Durable and Dependable**
- ▶ **Keystones Auto Feed Quality Studs Ensure Weld Quality & Feeding Consistency**



**Parallel Positioning**



**CNC Gantry Systems**



**Semi Automated**