



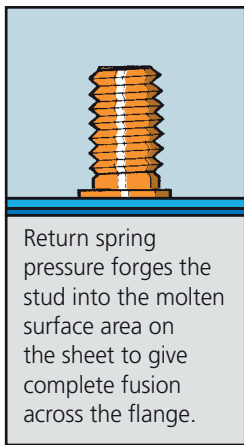
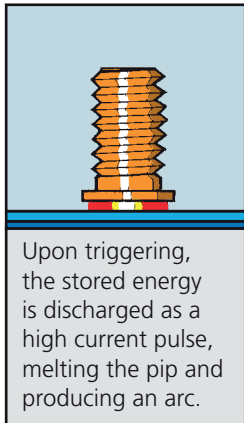
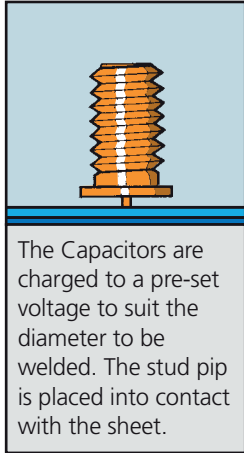
# TAYLOR STUDWELDING SYSTEMS LIMITED



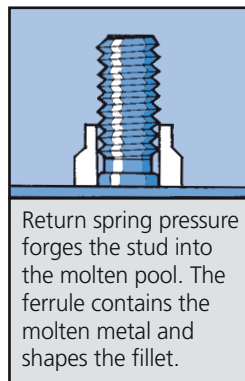
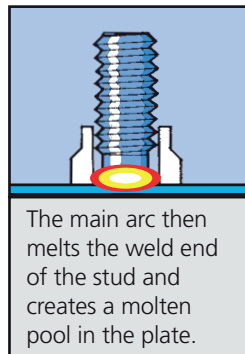
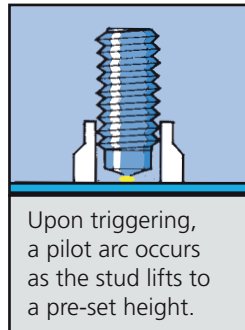
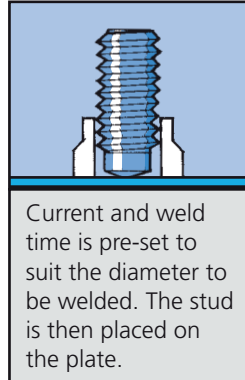
# SELECTING THE BEST PROCESS

In all processes the stud is held in a handtool or a production head.

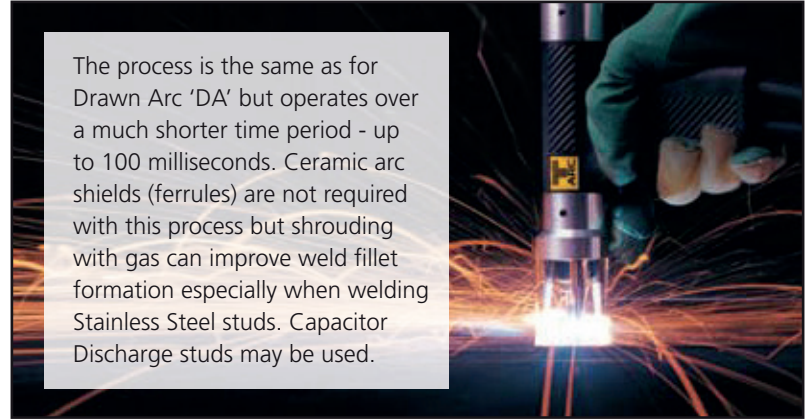
## THE CAPACITOR DISCHARGE 'CD' PROCESS



## THE DRAWN ARC 'DA' PROCESS



## THE SHORT CYCLE 'SC' PROCESS



PROCESS	STUD/MATERIAL/POWER	ADVANTAGES
<b>Capacitor Discharge "CD"</b> Designed specifically for thin gauge materials where reverse marking must be minimal. Sheet surface should be clean and flat. Stud has a weld pip.	<b>Stud Diameter</b> 1mm – M10	Low cost equipment, low cost studs, fast to load and weld, easy to jig and automate, small light equipment, no ferrules or shrouding gas required, good weld results with aluminium or brass in addition to mild and stainless steel. Weld is clean and requires no finishing.
	<b>Material Thickness</b> 0.7mm & above	
	<b>Power Requirements</b> Single Phase 240/110 Volt	
<b>Drawn Arc "DA"</b> Very strong penetrative welds are achieved with this process. Ferrules required to contain and shape molten metal. Weld end of stud is fluxed.	<b>Stud Diameter</b> 3mm to 30mm	Burns through parent material laminations, tolerates surface curvature and imperfections e.g. light rust, scale, grease and some coatings. Gives neat and controlled weld fillet. The only method of Studwelding large diameters. This process also lends itself to multi-gun applications.
	<b>Material Thickness</b> 2mm & above	
	<b>Power Requirements</b> Three Phase 415 Volt	
<b>Short Cycle "SC"</b> More penetrative welds than "CD" and is suitable for hot rolled/coated materials.	<b>Stud Diameter</b> M3 to M8	This process is more tolerant than CD of uneven or dirty surfaces. Can be easily automated and can utilise low cost "CD" studs. Ferrules are not required however shrouding gas improves weld spatter.
	<b>Material Thickness</b> 1.5mm & above	
	<b>Power Requirements</b> Three Phase 415 Volt	



# “ WHAT IS STUDWELDING? ”

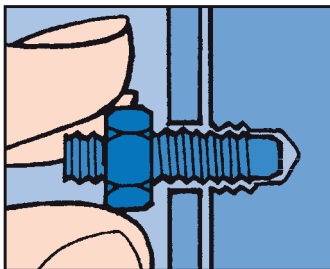
A method of applying a single side fastening to a metal component

Taylor Studwelding Systems Limited with over 35 years in the industry has, by blending professional experience with extensive resources, built up an enviable reputation exporting products worldwide. Simultaneously Taylor Studwelding Systems Limited has developed its position as the UK's leading supplier, designer and manufacturer of studwelding equipment and studs from handheld, lightweight units to fully automated CNC and robotic studwelding systems.

At our purpose built computerised office and factory complex our service is fast and efficient and, with over 10,000,000 items constantly in stock, no order is too complex to fulfil.

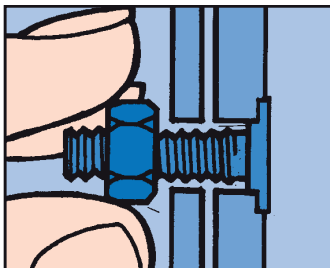
## THE PROBLEMS FIXING & FASTENING

During the manufacture of your products, do you experience any of the disadvantages of the following processes?



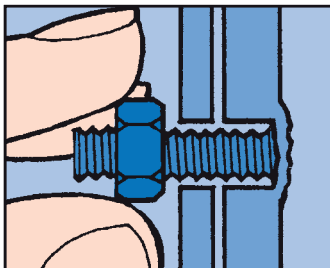
### DRILLING & TAPPING

These processes are very slow. Thicker parent material is required. Longer studs are required.



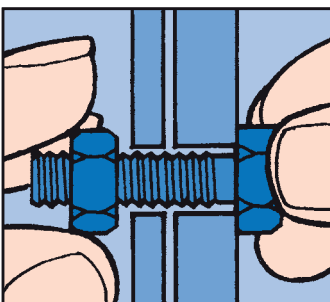
### INSERTS

They can eventually work loose. They can crack paint and leave unsightly stains. Holes need to be punched and deburred in parent material. The reverse side is not always clean and flat. The parent material is weakened by holes



### BACK WELDING

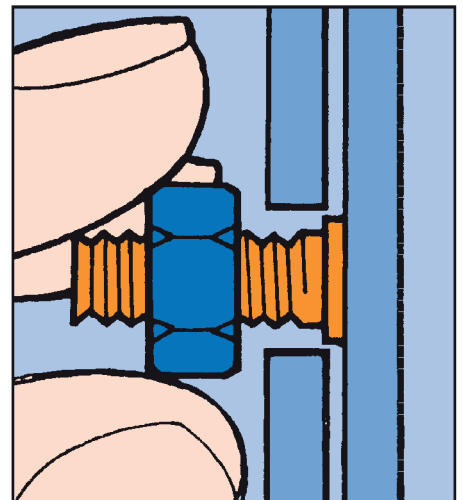
The process is slow. Holes need to be punched and deburred in parent material. The excess weld needs grinding off for a clean flat finish. The parent material is weakened by holes.



### THROUGH BOLTING

Requires two handed assembly and access from both sides. Holes need to be punched and deburred in parent material. Bolt heads are unsightly and stains can come from the bolt holes. The assembly is not leakproof and the parent material is weakened by the presence of holes.

## THE SOLUTION STUDWELDING



The benefits of this system are: Fast attachment. No reverse marking. The welded joint is stronger than the parent material or the stud. Access is only required from one side. No holes hence no leaking or weakening of the sheet. Tamperproof, pre-coated or painted materials can be welded. The equipment is portable and easily jiggged, in fact, Studwelding overcomes all of the disadvantages of the previous processes.

# THE INDUSTRIES USING STUDWELDING

## ELECTRICAL

Industrial Control, Lighting Equipment, Domestic Appliances, Power Generation and Distribution.

## ELECTRONICS

Control and Security Equipment, Medical Instruments, Office Automation, Data Transmission, Communications, Test Equipment.

## MECHANICAL

Material Handling and Conveyors, Lifts, Metal Furniture, Transportation, Construction and General Machinery.

## HEATING & VENTILATING

Domestic and Industrial Boilers, Air Conditioning and Ventilation Units, Refrigeration Systems.

## DECORATIVE & CONSUMER

Signs, Nameplates, Panels, Badges, Emblems, Jewellery, Kettles, Saucepans.

## MISCELLANEOUS INDUSTRIAL

Catering & Food Processing, Insulation and Fireproofing.

# THE APPLICATIONS

## ELECTRICAL

Mounting components on panels and in cabinets. Earthing components. Bonding doors and panels. Fixing wiring looms.

## ELECTRONICS

Fixing fascia panels. Mounting switches, push buttons and instruments. Mounting printed circuit boards.

## MECHANICAL

Fixing cover plates and maintenance inspection hatches. Attaching machinery guards. Fixing fluid and air lines. mounting handles and other components.

## HEATING & VENTILATING

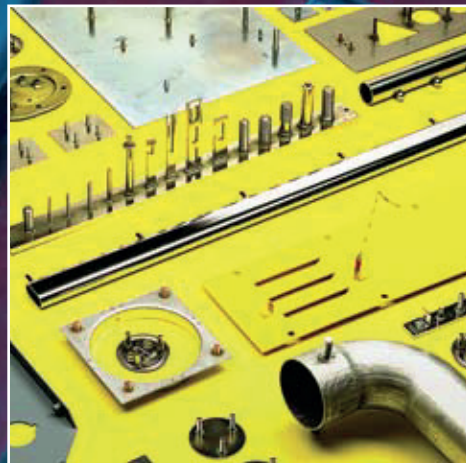
Attaching flanges, covers and hatches. Mounting fluid chambers. Fixing burners and heating elements. Securing pipes and insulating material.

## DECORATIVE & CONSUMER

Fixing of signs, plates, panels and badges. Attaching pins, findings and clasps to jewellery. Attaching feet to kettles and handles to pans.

## MISCELLANEOUS INDUSTRIAL

Hygienic fixing of legs, brackets and stiffener strips to counters and table tops. Securing acoustic insulation. Fixing fireproofing material.



# STUDWELDING EQUIPMENT

## CNC X-Y SYSTEMS

These give the fastest and most accurate results and utilise automatic stud feed. Each system is custom built according to size, speed, accuracy and cost considerations. The welding head, production table or both may be driven positionally. Accuracies of  $\pm 0.15\text{mm}$  from a fixed datum can be achieved.



CNC X-Y Systems

## BENCH MOUNTED SYSTEMS

A simple mounted system comprises a handtool or production head clamped in a drill stand, the addition of a foot switch speeds production. The Universal Bench operates pneumatically and is suitable for larger components. The Manual X-Y System gives higher productivity and is best where stud positions are numerous. Twin Linear bearings ensure the production head is highly accurate. If stud loading time is significant than a semi or fully automatic stud feed system should be considered.

## MANUAL WELDING SYSTEMS

British built to BS EN ISO 9001, of robust construction and fully portable. High reliability and long working life is obtained by using grade one soak tested components and extensive durability testing. Power options enable stud diameters of 1mm to 30mm to be welded. Some controllers can power up to four handtools.



Controllers

## Handtools



## HANDTOOLS

Strong, comfortable, light and well balanced. Weld control is via adjustments to spring pressure or lift, which only take a few seconds. The shaft bearing systems produce highly accurate results. The heavy spring pressure of the Drawn Arc tool combines with the hydraulic damper to overcome ferrule hangup and give excellent fillet control. There are many accessories to enable welding into inaccessible places and keep noise levels low.



# STRONG FASTENINGS • FAST DELIVERIES • BETTER DESIGN • LOWER COSTS

Our stock range is vast. Fasteners are stocked in Mild Steel, Stainless Steel, Aluminium Alloy and Brass. In addition to externally threaded studs we stock internally threaded studs, plain pins, earth tags, brackets and speedfix washers. For special (design or material) studs we offer the shortest lead times and are prepared to stock them for clients who use regularly. The highest standard of inspection criteria is used, because most of the range must be suitable for our automatic stud feed systems.

To accurately position weld studs with hand held systems a consistent depth of shallow centre punch mark may be used. For higher productivity a simple template should be made from sheet steel, aluminium or tufnol. We offer free advice on the manufacture of templates. For fixed head bench operation a more sophisticated template block will be required, especially when welding more than one stud to a component. We are able to manufacture these blocks or again advise on their construction.

## FOR SERVICE, QUALITY AND EXPERIENCE JUST CONTACT THE EXPERTS

# 10,000,000 ITEMS CONSTANTLY IN STOCK

THIS IS A SMALL SECTION OF WHAT WE CAN OFFER



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