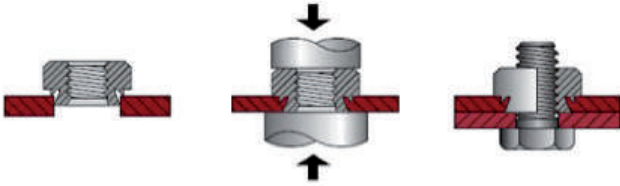




FASTENER INSERTION MACHINES



Quality, efficiency, damage reductions, labour saving



Fasteners utilize self-clinching, broaching, flaring, surface mount, technology to provide strong, reusable, and permanent threads and mounting points in thin sheet metal, P.C. board materials, and other ductile or non-ductile thin material.

Insertion machine is not a part of the manufacturing process where manufacturers want to invest a great deal of human resources. It is often monotonous work and can dramatically impact on production line **quality** and **efficiency**. The machine **optimize labor**, improve quality and increase productivity. The insertion machine also **reduce part handling and part damage**, and can be also customized to suit highly specialized applications.



FASTENER INSERTION MACHINES

**Efficiency
+30%Quality
100%CE
standard**



Machine Basic Features:

- The re-design rigid frame structure to eliminate the deformation during insertion press
- easy to operate, humanized design pattern choice;
- 100% pressure safety system
- use all CE standard of electric, hydraulic, pneumatic components
- LAG special design and precision machining of oil cylinder to ensure long-term stability even in poor working environment;
- Hydraulic system adopt Taiwan Winner valve group ensure high reliability work 24 hours a day, according to the high pressure value stable repeat work requires the freedom to choose the dwell time ensure insertion 100% qualified
- can be equipped with automatic feeding system, clinching joint system



TECHNICAL FEATURES

PRESSURE DURING THE WHOLE TRIP - Pressure on the any point of processing, security system can use, and the system does not need to make any adjustment, it does not increase the time of device initialization and tool change setting.

ENERGY SAVING AND ENVIRONMENT PROTECTION - Hydraulic drive can reduce Energy consumption by about 40% relatively pneumatic and hydraulic drive, greatly reducing the Energy costs of equipment, the machine only press instantly applied in the full-load, standby power consumption is only 15%.

J TYPE HOOK BRACKET (MSTP 33 PIECES OF HAND TOOLS) - J-hook realized insertion after bedding, allowing you to bending easier.

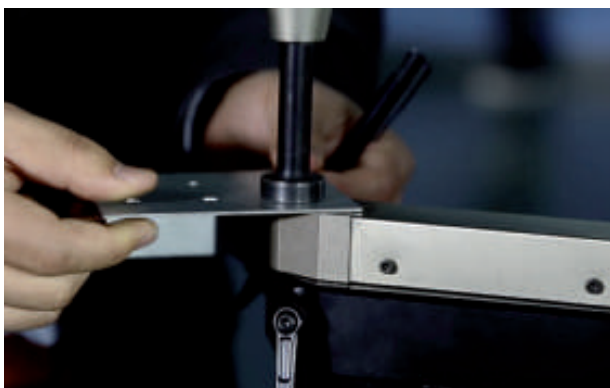
EASY OPERATION - Proprietary stress test adjustment button, allowing you to find the right riveting pressure within 10 seconds the novice can easily operate.

FORWARD LIMITED - Forward limited is specifically designed for the soft material, such as: PC board, plastic, glass and aluminium, which make fasteners plates will not be deformed or crushed.

CUSTOMIZED DESIGN AND DEVELOPMENT - LAG has professional technical team, to produce special pieces suitable production customized tools for customer to solve production problems all insertion.



J TYPE HOOK BRACKET



SAFETY SYSTEM

SAFE AND RELIABLE - Security system of Fastener Insertion Machine make the operator to full protection on the conductive non-conductive work mode, which greatly enhanced the confidence and plug efficiency for the operator. No security risks.

- Allow the operator to work fast and safety without use of protections;
- No lost of time due to the adjust of the safety system;
- The safety function is independent from the machine work;
- It is possible to adjust the power during the work without interfere with the safety system;The start of the working cycle is by pedal;
- Safety on the apply a constant and correct fastener power;
- Adjustable power in every point of the cylinder stroke.

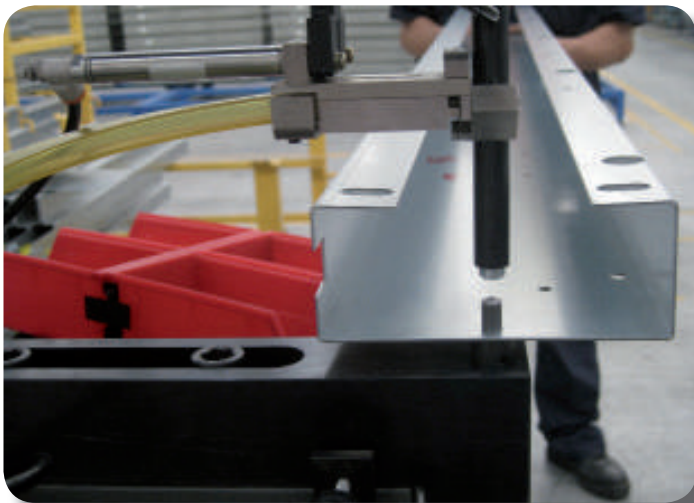


* This picture demonstrates the anti-pressure hand function of the machine refers to the special security mode of processing , only for reference, prohibited imitation



TECHNICAL SPECIFICATION

	416 PLUS	618 PLUS	824 PLUS
FORCE	44KN	54KN	72KN
THROAT DEPTH	406mm	450mm	610mm
THROAT HEIGHT	340mm	381mm	421mm
STROKE LENGHTADJUSTABLE	YES	YES	YES
NUMBERS OF INSERT PER HOUR (MANUALLY)	1200	1200	1200
RAM FORCE REQUEST ACCURACY	±1%	±1%	±1%
SAFETY DEVICE	YES	YES	YES
MANUAL TURNER INSERTION SYSTEM (OPTIONAL)	YES	YES	YES
AUTOMATIC FEEDING SYSTEM (OPTIONAL)	NO	YES	YES
CLINCHING JOINT SYSTEM (OPTIONAL)	YES	YES	YES
DWELL TIME	NO	STANDARD	STANDARD
FORWARD LIMITED	NO	OPTION	STANDARD
BATCH COUNTER (OPTIONAL)	NO	YES	YES
MAIN POWER	1,5kw	2,2kw	3,75kw
TANK CAPACITY	38L	38L	76L
POWER SUPPLY	220V SINGLE PHASE 50HZ	380V 3PHASE 50HZ	380V 3PHASE 50HZ
DIMENSION (W*D*H) mm	740*840*1650	800*810*2100	1025*960*2500
NET WEIGHT (KG)	335	610	950



416 Plus

Main Feature:

- High stiffness, structure, high stability, less deformation, less vibration, high accuracy
- Ergonomic design frame and different size tooling package with easy operation panel to meet most of the complex insertion process by single operator
- Quick press force setting and repeatability $\pm 1\%$
- Force range MAX 44KN
- Throat depth 406 mm
- 100% safety system
- Energy saving re-design reliability and energy efficiency of a full hydraulic system
- Noise reduced to 35db
- Possibility to insert M8 nut with the mild steel
- Equipped with standard tooling storage
- Blue & white color
- Standard power supply 1 phase 220v/50hz



Machine Order Number

ITEM	PART NUM	DESCRIPTION
1	S-000300 BW	416 PIUS
2	S-000354	MSTP 33 PIECES METRIC STANDARD TOOLING PACKGE/33



618 Plus

Main Feature

- High stiffness, structure, high stability, less vibration, high accuracy
- Ergonomic design frame and different size tooling package with easy operation panel to meet most of the complex insertion process by single operator
- Quick press force setting and repeatability $\pm 1\%$
- Ram force range MAX 54KN
- Throat depth 458 mm
- 100% safety system
- Energy saving Re-design reliability and energy efficiency of a full hydraulic system
- Optional auto feeding system and clinching joint system
- Possibility to insert M10 nut with the mild steel
- Blue & white color
- Standard power supply 3 phase 380v/50hz



Machine Order Number

ITEM	PART NUM	DESCRIPTION
1	S-000300 BW Or S-000306 BW	618 PIUS 618Plus with positive stop cylinder
2	S-000364	MSTP 33 Pieces Metric Standard Tooling Package/33
3	S-X-X S-000440	Automatic tooling set Autofeed modular

824 Plus

Main Feature

- High stiffness, structure, high stability, less vibration, high accuracy
- Ergonomic design frame and different size tooling package with easy operation panel to meet most of the complex insertion process by single operator
- Quick press force setting and repeatability $\pm 1\%$
- Ram force range MAX 72KN
- Throat depth 610 mm
- Energy saving Re-design reliability and energy efficiency of a full hydraulic system
- 100% safety system
- Standard Tooling Protection System
- Optional auto feeding system and self-clinch tooling
- Possibility to insert M12 nut with the mild steel
- Variable dwell time for use stainless steel M8 nut and materials and the others hard materials
- Blue & white color
- Standard power supply 3 phase 380v/50hz



Machine Order Number

ITEM	PART NUM	DESCRIPTION
1	S-000309 BW	824 PIUS
2	S-000364	MSTP 33 Pieces Metric Standard Tooling Packge/33
3	S-X-X S-000440	Automatic tooling set Autofeed modular

Options

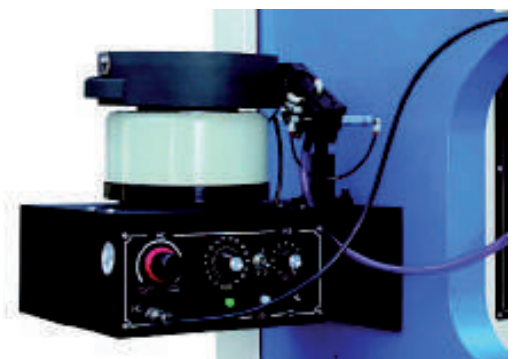
MSTP - Manual Tooling Package

33 pieces of manual work with nuts, studs & standoff different size of punch and dies M2-M8, length up to 35mm, special insertion application for small parts flange die holder and Manual J frame.



Modular autofeed system

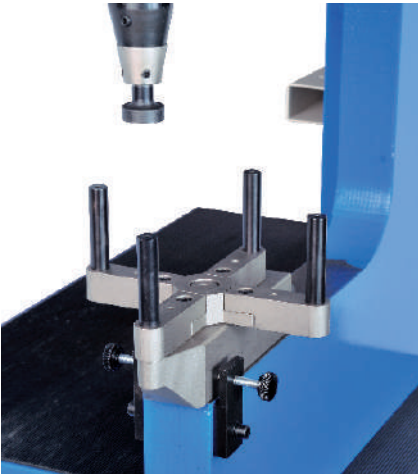
- Including high quality vibration bowl and intelligent digital variable voltage and variable frequency Piezoelectric vibration feeder controller.
- Single and constant working mode
- Integrate Vacuum generator
- work with nuts, studs & standoff size M2-M12, length up to 30mm



Options

TIS – Turret Insertion System

Multiple manual insertion system turret complete with 4 boxes that match with different anvil



Batch Counter



Consists of independent 3 counters and a electronic beepers for audible signals , Set and display the number remaining to be insert in the Workpiece

Forward Limited

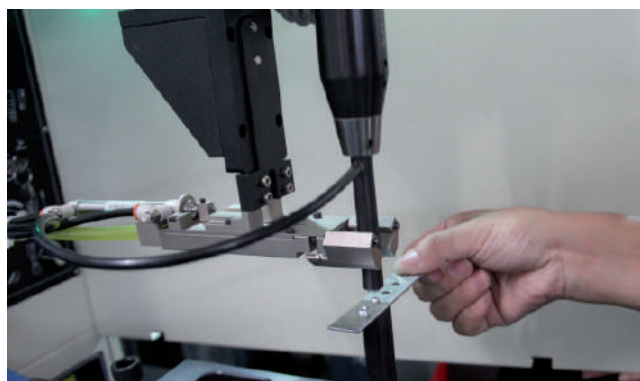
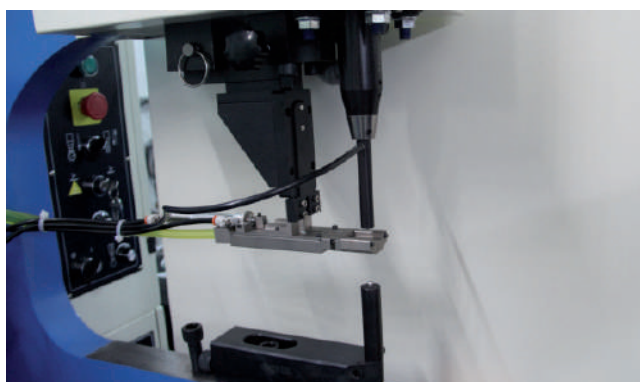


Forward Limited function is designed to protect both the tooling and the workpiece from damage by positive stop cylinder

Lazer locating light



Assist to handling the big workpiece to cover tlower tool by lazer locating light reference

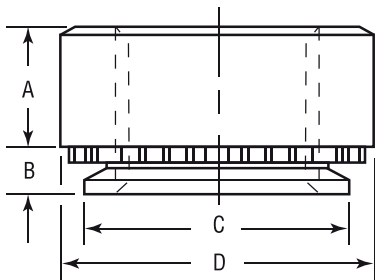
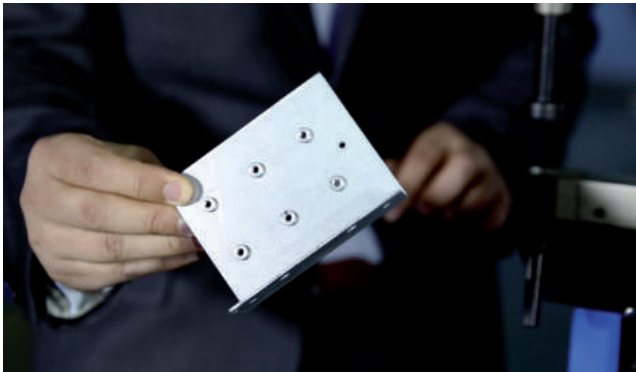
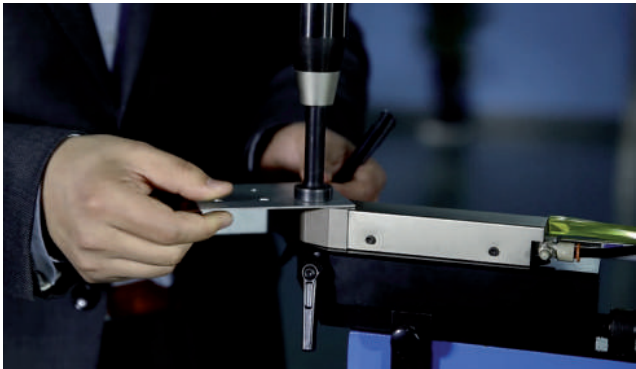


Notes:

1. Please specify your fastener size and supply min 300 PCS sample to LAG for testing and design the automatic tooling
2. A one time purchase of a Shuttle Nut Controller, T-Bracket, and Vacuum Generator is included for Shuttle Nut Tooling set
3. Please specify machine model and serial number when ordering SHUTTLE TOOLING SET as a retrofit item
4. TOOLING for Aluminum nuts are MADE ON REQUEST (Aluminum nuts are larger than steel nuts). Standard tooling will need to be modified o be modified for aluminum fasteners.

Nut Automatic Tooling System Part Num.

FASTENER SIZE (mm) SELF-CLINCHING NUT	SHUTTLE TOOLING SET	AUTOFEED MODULAR
M3-0,1,2	S-000354-3	S-000440
M4-0,1,2	S-000354-4	S-000440
M5-0,1,2	S-000354-5	S-000440
M6-0,1,2	S-000354-6	S-000440
MX-0,1,2 (SPECIAL REQUEST)	S-000354-X	S-000440



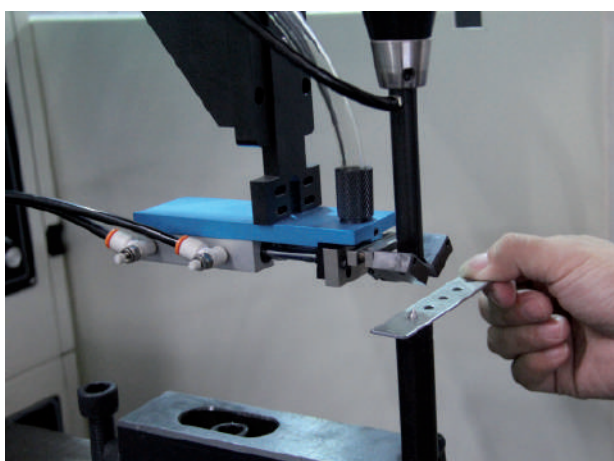
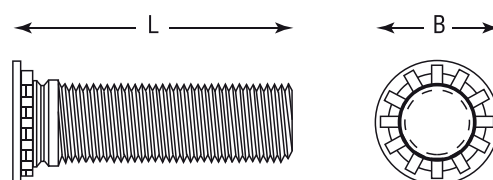
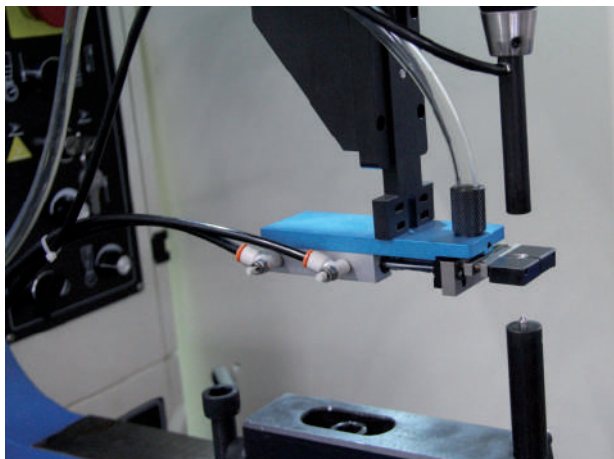
- Notes:
- 1.Please specify your fastener size and supply min 300 PCS sample to LAG for testing and design the automatic tooling
 - 2.Please specify machine model and serial number when ordering a vacuum generator as a retrofit item
 - 3.TOOLING for Aluminum nuts are MADE ON REQUEST (Aluminum nuts are larger than steel nuts). Standard tooling will need to be modified o be modified for aluminum fasteners.

Bottom Feed Nut Automatic Tooling System Part Num.

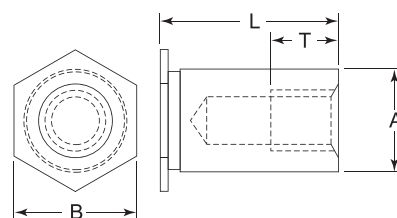
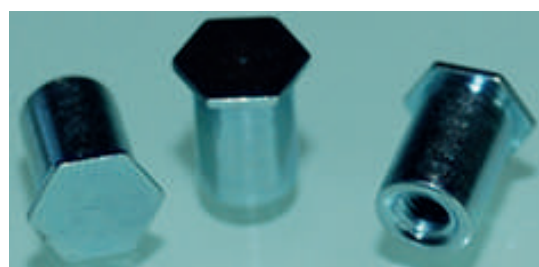
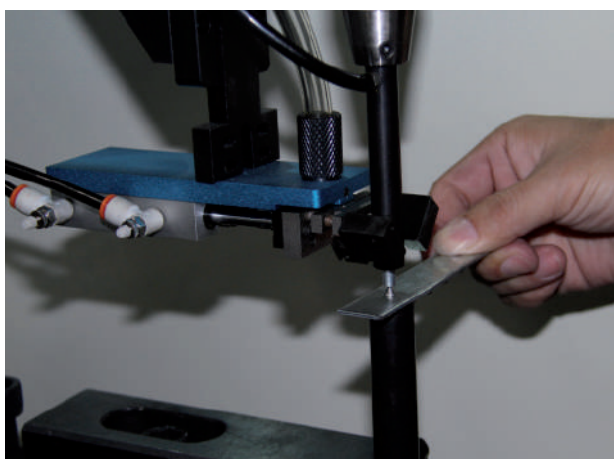
FASTENER SIZE (mm) SELF-CLINCHING NUT	BOTTOM FEED NUT TOOLING SET	AUTOFEED MODULAR
M3-0,1,2	S-000350-3	S-000440
M4-0,1,2	S-000350-4	S-000440
M5-0,1,2	S-000350-5	S-000440
M6-0,1,2	S-000350-6	S-000440
MX-0,1,2 (SPECIAL REQUEST)	S-000350-X	S-000440

Shuttle standoff/stud tooling system

618Plus & 824Plus



1. Please specify your fastener size and supply min 300 PCS sample to LAG for testing and design the automatic tooling.
2. A one time purchase of T-Bracket, and Vacuum Generator is include for Shuttle standoff Tooling set.
3. Please specify machine model and serial number when ordering a vacuum generator as a retrofit item.



Shuttle standoff/stud tooling system

Stud Automatic Tooling System Part Num.

FASTENER SIZE (mm) FLUSH-HEAD STUDS	SHUTTLE TOOLING SET	AUTOFEED MODULAR
M3-8-25	S-000098-12	S-000440
M4-8-25	S-000098-13	S-000440
M5-15-25	S-000098-14	S-000440
MX-X-X (SPECIAL REQUEST)	S-000098-X	S-000440

Standoff Automatic Tooling System Part Num.

FASTENER SIZE (mm) THRU-HOLE THREAD STANDOFFS	SHUTTLE TOOLING SET	AUTOFEED MODULAR
M3-8-25	S-000098-3	S-000440
35M3-8-25	S-000098-5	S-000440
M4-8-25	S-000098-7	S-000440
M5-15-25	S-000098-9	S-000440
MX-X-X (SPECIAL REQUEST)	S-000098-X	S-000440

Blind Standoff Automatic Tooling System Part Num.

FASTENER SIZE (mm) BLIND THREAD STANDOFFS	SHUTTLE TOOLING SET	AUTOFEED MODULAR
M3-8-25	S-000098-3	S-000440
35M3-8-25	S-000098-5	S-000440
M4-8-25	S-000098-7	S-000440
M5-15-25	S-000098-9	S-000440
MX-X-X (SPECIAL REQUEST)	S-000098-X	S-000440

LAG Clinch Joint System



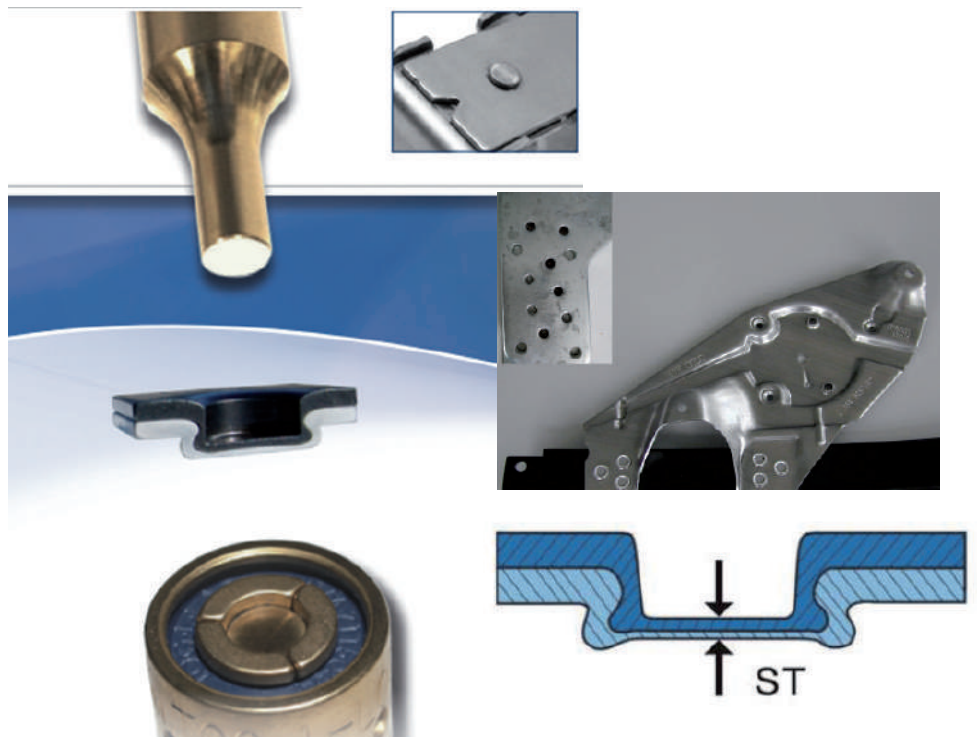
Are you still Welding or Riveting?

SAVE MONEY - Join your parts with a Punch and Die!

LAG and BTM related clinching tools join sheet metal without the expense of welding or purchased fasteners by simply joining the part's own material! Assembly cost is significantly reduced by drawing and forming the part material into an interlock. Join galvanized, pre-painted, or even dissimilar metal combinations using an environmentally friendly process that does not produce sparks, harmful fumes or damaging heat!

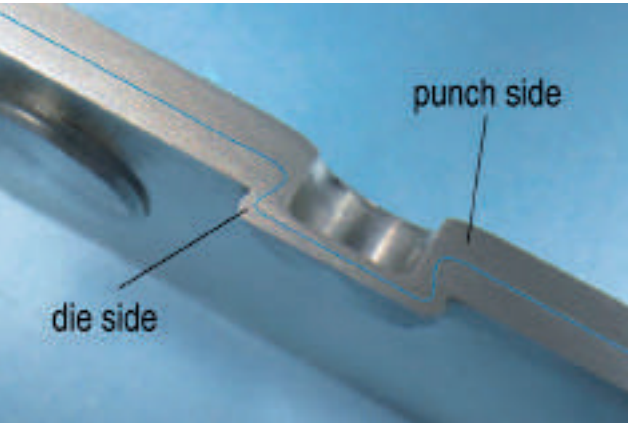
Some Benefits of BTM's Clinching Solutions:

- LAG Clinch Joints system are consistently strong
- LAG Clinch Joints are Non-destructively checked
- LAG Clinching is fast (a joint can typically be created in under one second).



LAG Joint BTM Tooling Set order specification Request

1. Please specify your joint parts material, drawing and supply min 10 PCS sample to LAG for define BTM joint tooling.
A one time purchase of BTM Punch,die and punch/die holder is included for LAG Joint BTM Tooling Set

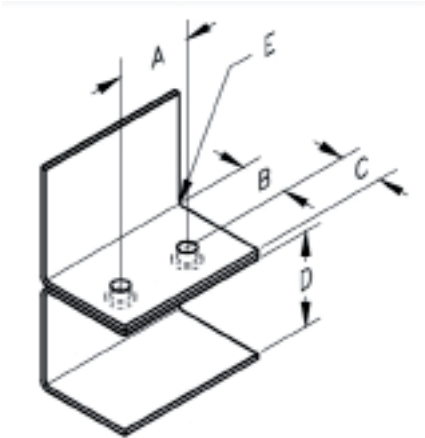


Self clinch mechanical joint tooling set for mild steel sheet thickness from 0,6 mm to 2,5 mm, for Stainless steel sheet thickness on request

JOONT TOOLINGS	PART NUMBER	SHEET MATERIAL	STRENGTHEN	THINKNESS
PUNCH	S-BTM182	MS ☐ SS ☐ AL ☐		
DIE	S-BTM183	MS ☐ SS ☐ AL ☐		
PUNCH/DIE HOLDDER SET	S-BTM181			

Please specify LAG Joint Minium Distance Request

A	B	C	D	E



FASTENER INSETION MACHINES



416 Plus



618 Plus



618 Plus-L



824 Plus