

CEARS Gantry Systems



- Installation of Cears Gantry System including Hoists for entire Body Shop at Maruti Suzuki, Manesar.
- All Hoist Rails & Track changers supplied with Internal Bus bars.
- Track changers - Manual, Pneumatic or Motorised.



CEARS GANTRY SYSTEMS

- Cold rolled sections.
- Low dead weight.
- Extremely smooth running trolleys.
- Available in four sizes - CGS-1G, CGS-1, CGS-2L, CGS-2 and CGS-2-BB
- **Powder coated from inside as well as outside.**
- Also available pillar mounted slewing JIB crane and column mounted slewing crane.

Please refer detailed catalogue.

← Installation of CEARS Gantry System, Guns and controllers at Daimler Chrysler, India.



SEAM

CEARS



Group Catalogue

PROVIDING TURN-KEY SOLUTIONS TO AUTOMOBILE INDUSTRY

AC / MFDC IT Guns



Slimline Series



- Slim line range covers a wide range of forces and currents while preserving optimum ergonomics.
- Multi stage cylinder.
- Multi position handle.
- Centre of gravity at centre of welding gun location.
- Easy maintainability
- Complete range can be equipped with AC or MFDC Transformers.



Robot Gun AC, Servo MFDC



Self Equalising (Auto) Gun



IT Gun with controller mounted

- ISO Transformers 23 KVA - 103 KVA.
- Medium frequency transformers 56KVA - 250 KVA.
- Medium Frequency guns 56KVA - 250 KVA.
- Weld forces upto 600 kgs.
- Hi-Lift facility on all guns.
- Gun locking facility in rotary and vertical plane.
- Easy maintenance as all guns are of modular construction.

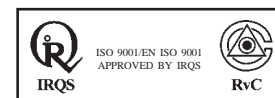
- Constant current through primary and secondary.
- Thermostats on primary and secondary for total thermal protection.
- Emergency switch provided on gun (Optional).
- Selection switches on handle - 2 weld programs, weld on/off, Hi-lift and initiation.
- Special automotive standard safety to give 30ms/30mA tripping.

NASH reserves the right to change specifications and appearance without prior notice.

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ISO 9001 Company



Group V3 2K 1206

Resistance Welding Products & Non-IT Guns

In addition to electrodes, holders, seam welding wheels, forgings, castings, guns, electrode materials, Seam offers diversity of special metals for resistance welding applications like Tungsten Copper and Molybdenum tipped electrodes. Experienced Seam team will provide best possible help in the design and production of standard or special electrodes for your application to ensure maximum efficiency.
 For physical and mechanical properties of Seam Alloys please refer separate catalogue.



Electrodes, Shanks and holders



Wheels and rods



Cap tips



TD-200/TG-70 (Robotic Gun)



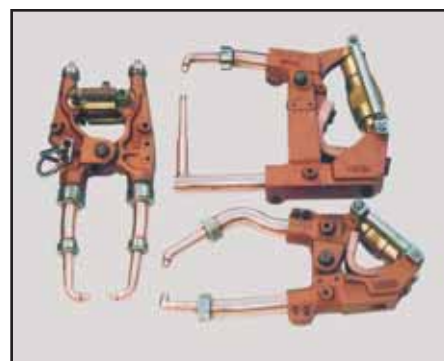
TD-380/TG-110



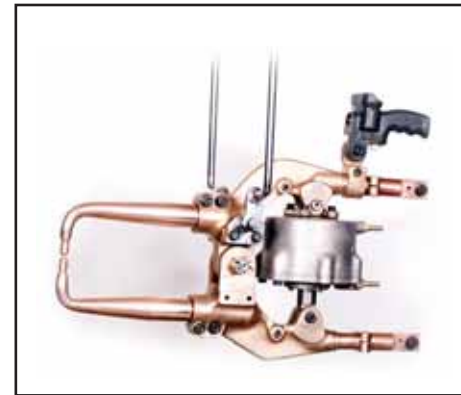
TD-415/TG-800



TD-165/TG-310



Hydro-Pneumatic Guns



High Tensile Brass Gun



TD-130/TG-145



TD-150/TG-125

STATIONARY WELDING MACHINES



100 KVA Spot Welding Machine



30 KVA Spot Welding Machine



Fuel Tank Seam Welding Machine



200 KVA Projection Welder with quick follow up.



50 KVA Spot Welder (Asian Design)



100 KVA Spot Welder (Asian Design)

Capacitor Discharge Welding Machine



Main advantages :

- Dimension of finished parts are maintained due to no distortion and annealing of parts.
- Welding of different material thicknesses.
- Welding of parts having high thermal and electrical conductivity.
- Welding of heat sensitive parts.
- Welding of coated sheets without destruction of coating.
- Welding of hardened steel.
- Fast and reliable setting of machine due to only two parameters. Welding force and welding energy to be controlled.
- High repeatability of welding parameters.
- Longer electrode life.
- Electrodes cooling not required.

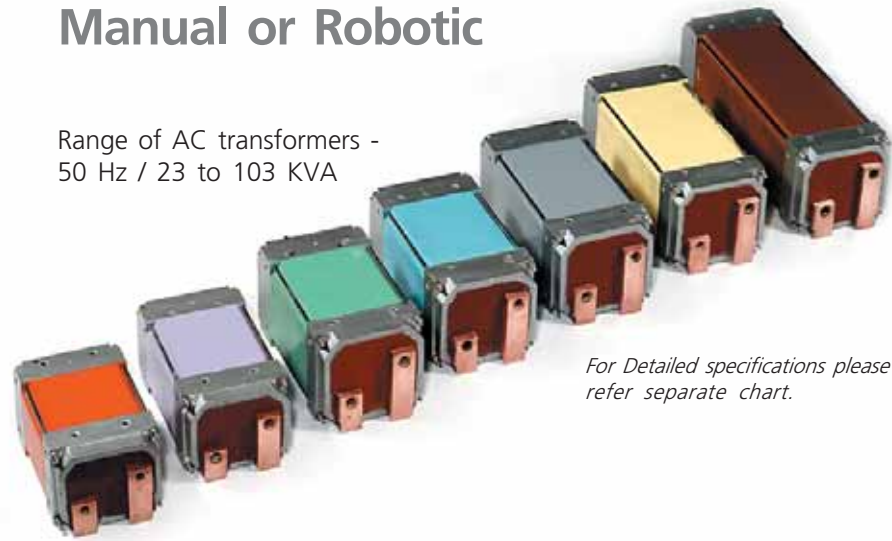
MINIATURE SPOT WELDER



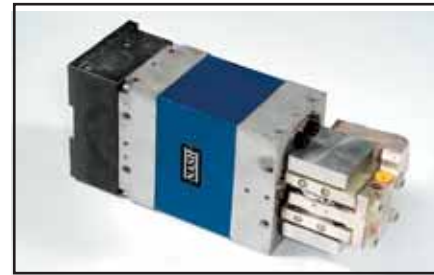
MFDC Bench Spot Welder

ISO 10656 TRANSFORMERS FOR INTEGRAL TRANS GUNS Manual or Robotic

Range of AC transformers -
50 Hz / 23 to 103 KVA



For Detailed specifications please refer separate chart.



Medium frequency transformer
1000 Hz / 56 to 250 KVA



150 KVA Transformer with NASH-NAD 700
Controller Mounted -
Asian Design



150 KVA Transformer with MCCB and Controller
Mounted Dual Gun Station -
European Design (DENS PAK)

Standard Accessories

Water manifolds, Relay terminal box and adjustable lugs (19 mm to 28 mm) for kickless cables suitable for Dual Gun.

KICKLESS CABLES, JUMPER CABLES & SHUNTS



- Alternate polarity.
- Low reactance.
- Forged electrolytic copper terminals.
- Balanced positive and negative water cooling distribution.
- Low electrical resistance.
- Low impedance.
- Reduced operator fatigue.
- Reduced heat generation.
- Longer working life.

For Detailed features please refer separate catalogue.

MICROPROCESSOR WELD TIMERS

NASH 550 (LED), NASH 650, NASH 900



Timer with Built-in Programmer



Timer with MCCB, Detachable
Programmer and Reset Box



Programmer



Mechanical Reset Box



Digital Weld Monitor (Reset
Box) with optional job counter
for easy monitoring and
programming of spot count
and job count from weld
monitor itself.

Capsule Models LCD / LED Display, Vertical / Horizontal



- Constant current facility
- Option of Single Gun / Dual Gun
- Alphanumeric LCD backlit display
- Upto 128 weld programs
- Online programming
- Option of detachable programmer or built-in programmer
- Direct programming in KA
- Impulses
- Slopes
- Stepper
- Clock display
- Tip dress count
- Weld count
- Chain sequencing and batch count
- Error messages are displayed in description form
- Computer networking and serial communication facility
- **Online Graphical Spot Monitoring**
- **Live SPC graphs facility**
- Vehicle Spot history
- Choice of electronic weld monitor or mechanical pendant
- ELR, MCCB optional
- **Kickless Cable Deterioration Monitoring**
- Proportional pressure regulator output
- Calibration of Controller through programmer
- Selection of CT through programmer

For Detailed features please refer separate catalogue.

● **Special Purpose Machines (SPMs)**

Dual Station Auto Multispot Welder for Exhaust Muffler & Baffle



Horizontal SPM for circular welding of exhaust converter



PLC controlled hydraulic press for flanging operation of exhaust muffler



Dual Torch CO₂ Welding SPM for Resonator Assembly with In & Out Pipe



150 KVA Special Purpose Seam Welder for Strut and Shock Absorber Assembly



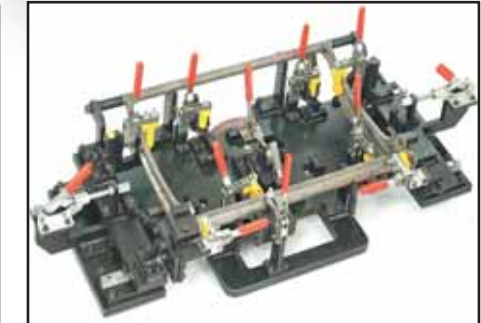
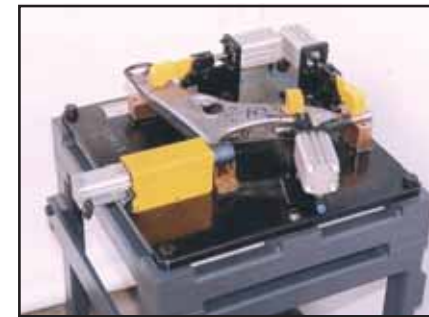
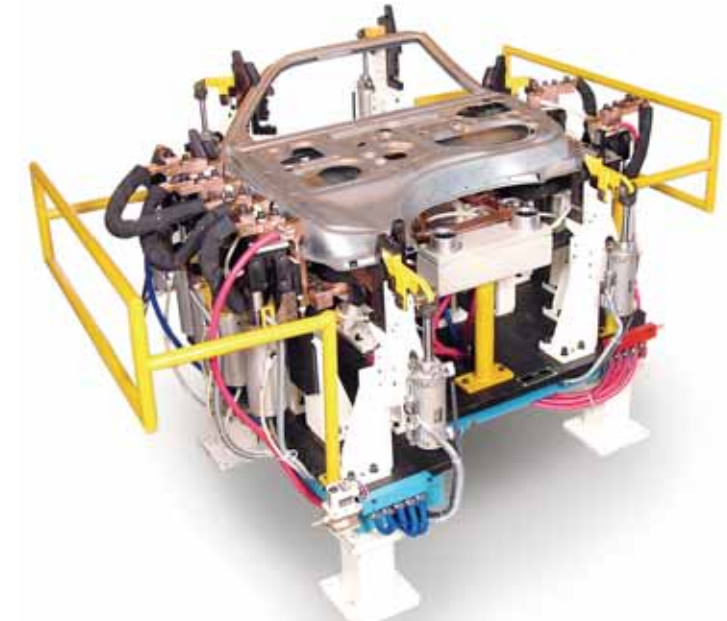
Battery Terminal Post Burning Machine



LAP SEAM WELDER / SERIES LINE SEAM WELDER



Auto Multispot (06 spot) Welder System for Door after Hemming Operation.



Fixtures for Seat Frames



- Welding Robot - 16 Nos.
 - Material Handling Robot - 01 No.
 - Welding Fixtures - 33 Nos.
 - Inspection Jigs - 04 Nos.
 - Pick-Up Jig - 01 No.
 - Final Assembly Fixture - Fully Automatic Welding Control thru PLC including loading and unloading
- (SUPPLIED TO PROTON MALAYSIA)**

Robotic Welding Automation for Fuel Tank



Robotic Welding Cell



**DIGI - N - 350
Digital MIG Welding
Machine**



**Near Zero
Spatter**

- Latest High speed Microprocessor controller
 - Fully digital operation
 - Superior quality welds achieved by CV technique
 - Display of welding current and voltage
 - Spatter free operation
- Also available MIG 251, MIG 401, TIG 400.

**Dent Puller / Extractor for
repairs in Car Body Shop**



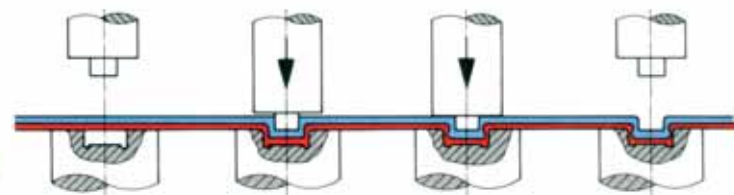
A Quick straightening of panels is carried out with help of 3 point star on the Gun.

Stud Welder



- Microprocessor based digital control
- 2 line alphanumeric LCD Display
- 2 keys for Voltage setting
- Voltage setting in terms of volts with actual voltage feedback
- Light weight and compact pistol gun
- Overheat and hardware fail protection

Clinching Press



An alternative to Spot Welding particularly for joining of Dissimilar materials, Coated Sheets, Aluminium, Copper etc.

Single Point Gun Station



Copper Plate

With Analogue Controller or Microprocessor Controller

Bench Tip Dresser



Dressing of Caps / Electrodes :

- Insert used cap or electrode on Taper Shank or Taper Socket.
- Push Lever to insert cap tip into Pneumatic Dresser.
- Pneumatic Motor will start automatically.
- Cap / Electrode will be dressed in 2/3 seconds.
- Push lever to full right, electrode will be ejected automatically and fall in blue bin.
- Cutters can be supplied to suit the shape of electrodes.
- Cutters can be replaced / changed in 10 seconds.



CEARS Toggle and Pneumatic Clamps
Holding forces 100 - 3000 Kgs.



Force Gauge



Digital Force Gauge



Tip Remover & Tip Dresser (Manual)



Pneumatic Tip Dresser



Weld Analyser



Weld
Checker
AC / DC



Water flow Indicator



Kink
Free
Coloured
Hoses

Special Purpose Welding Machines



Special Purpose Triple Head
Projection Welder.

Special Purpose Spot Welder
for Seat Frame Lower Sliding
Bracket



MFDC
1000 TD
Spot Welder



Bench
SEAM
Welder



Indexing type
Multiprojection welder



Water Impeller



Brake Shoe





PMA AUTOMOTIVE PVT. LTD.

DESIGNERS & MANUFACTURERS OF JIGS & FIXTURES

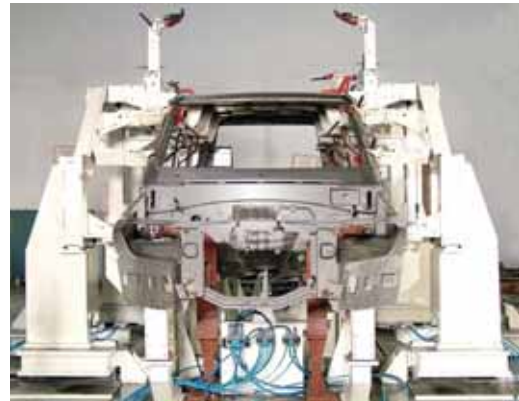


Introduction

PMA specialises in the Automotive Sector, undertaking Turnkey projects for **Body in White** Assembly. The term 'Body in White' denotes the assembled body prior to painting. As a turnkey supplier, our responsibility can be taking an empty factory, **designing and manufacturing** the assembly fixtures, then installing the entire equipment required to assemble and weld the complete body, at all times adhering to specified cycle times and dimensional integrity.

Design and Inspection

Motor vehicle design and inspection is now totally digital. To receive this information we have invested in the latest Computer Aided Design and inspection equipment,



Auto Transfer Line



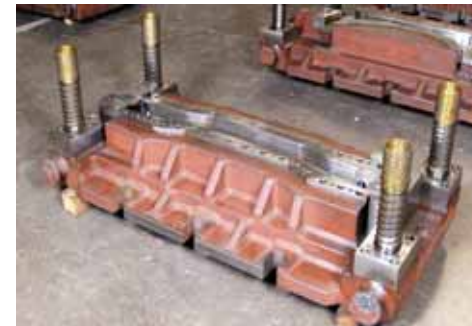
Parts Rack, Dolleys and Trolleys

For Detailed features please refer separate catalogue.

PRESS TOOLS

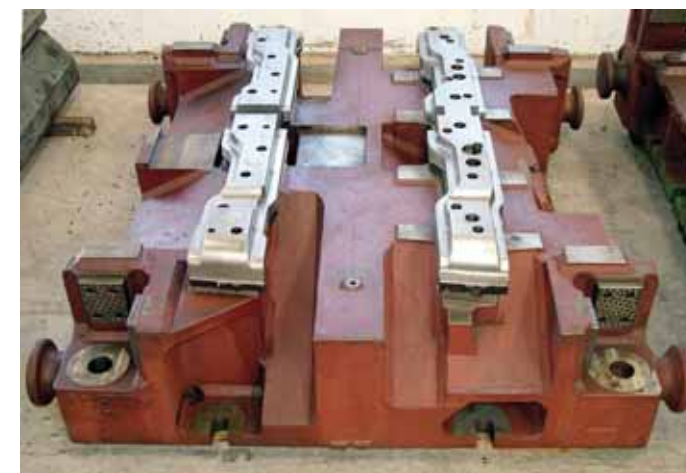


Dies and Try-out Components



Chassis Cross Member Dies

Clinch / Hemming Dies



Trimming Dies

For Detailed features please refer separate catalogue.