

ADOR WELDING LIMITED



WELDING AUTOMATION PRODUCTS & SYSTEM (WAPS)

CNC CUTTING MACHINE KING CUT PRO SERIES
ROBOTIC WELDING SOLUTIONS | SPMs FOR AUTOMATED SOLUTIONS
AUTOMATIC PLUS/H/BOX BEAM | WELDING SOLUTION | TILTING SYSTEM
V BLOCK | ROTATORS | POSITIONERS | COLUMN & BOOM
RESISTANCE WELDING MACHINES | WELDING FUME EXTRACTORS | TIG - TIG



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Welding Automation Products & System (WAPS)



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CNC CUTTING MACHINE KING CUT PRO SERIES



HIGH PRECISION CUTTING HIGH DEFINITION CUTTING MACHINE

- The machine is very robust designed for High Speed High Definition Plasma Cutting, Strip Cutting and Oxyfuel cutting
- Contour cutting in profile / holes with very high precision
- 15inch high brightness LCD with Touch Screen with all standard Menus for Cutting and Marking
- The machine has the option of automatic Torch Ignition
- Can be used with upto 4 torches as standard. (2 Plasma / 1Plasma +3 Oxyfuel / 4 Oxyfuel)

TECHNICAL SPECIFICATIONS

Descriptions	Particulars		
Effective Cutting Width	1500 to 4000mm Standard		
Effective Cutting Length	3000 to 12000 mm Standard		
Machine rapid Speed	15000mm/Min		
Cutting Thickness by Oxyfuel	6mm – 250mm		
Cutting Thickness by Plasma	0.5 mm – 120mm		
Programming Accuracy	±0.1mm		
Repeatability Accuracy	±0.2mm		
Cutting Accuracies	As Per Standard : ISO9013		
PLASMA POWER SOURCE			
Models	Smart Focus 130	Smart Focus 200	Smart Focus 300
Cutting current	35 – 130A	35 – 200A	35 – 300A
Marking current	12 - 50A	12 - 50A	12 - 50A
CNC Controller			
Operation Panel	15 inch LCD with Touch Screen		
Language	English		
Max Programme Lines	15 million lines		
Program Input	Keypad or USB port (160 mm)		
Data Memory	256 MB RAM ,1MB CMOS –RAM, Battery Buffered.		
Contouring	4 axes control		
Controller Accuracy	+/- 0.001mm		
User Programme Space	1 GB Flash		
Program Format	RS-274-Dformat(Metric or Inch)		
Operation Function	Trial Run, Reverse, Plate Alignment, Mirror, Array		
Nesting software	FASTCAM / MOST 2D		



CNC CUTTING MACHINE KING CUT EDGE SERIES

AVAILABLE WITH OXYFUEL & PLASMA

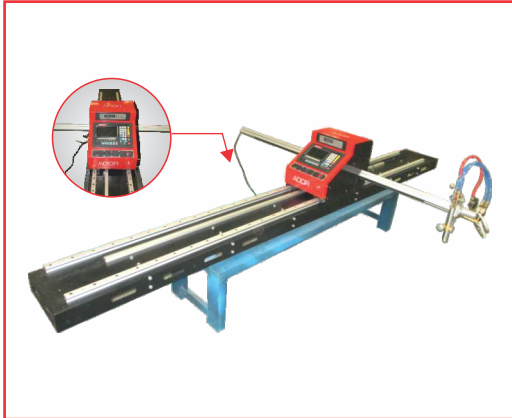


ECONOMICAL RANGE OF PROFILE CUTTING MACHINE

- The machine is an economic machine suitable for oxyfuel cutting and Air Plasma
- Dual drive mechanism with linear guide ways
- The machine is Ergonomically designed
- 15 inch high brightness LCD with all standard Menu
- The machine has the option of Automatic Torch Ignition for Oxyfuel cutting
- The machine has both automatic and manual torch height control option
- Can be used with upto 2 torches as standard. (1 Plasma +1 Oxyfuel or 2 Oxyfuel)

TECHNICAL SPECIFICATIONS

Descriptions	Particulars
Effective Cutting Width	1500, 2000, 2500,mm, 3000, 3500, 4000 (mm) Standard
Effective Cutting Length	3000 to 12000 mm Standard in the incremental of 2m
Machine rapid Speed	12000 mm/Min
Gas Required	Air, Oxygen and Acetylene or LPG
Cutting Thickness by Oxyfuel	6mm – 250mm
Cutting Thickness by Plasma	3 mm to 30 mm as a standard
Programming Accuracy	±0.1mm
Repeatability Accuracy	±0.2mm
Cutting Accuracies	As Per Standard: ISO 9013
Plasma Power Source	with 100 amps ~ 125 amps as a standard
CNC Controller	
Operation Panel	15 inch LCD graphic display
Language	English
Program Input	Key Pad or USB port
Contouring	X and Y, 2 axes control (160 mm)
Program Format	RS-274-D format (Metric or Inch)
Shape Library	45 patterns-Metriconly Program
Operation Function	Trial Run, Reverse, Plate Alignment, Mirror, Array
Nesting software	FASTCAM or MOST 2D



CNC CUTTING MACHINE KING CUT SMARTY SERIES

AVAILABLE WITH OXYFUEL & PLASMA

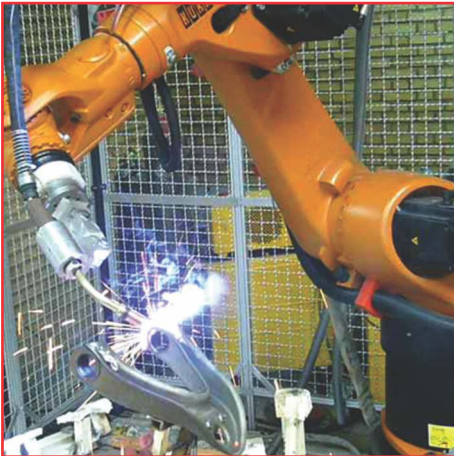


PORTABLE TYPE CNC PROFILE CUTTING MACHINE

- Very easy and user friendly programming
- Suitable for both Air Plasma and Oxyfuel Cutting
- The file storage is flexible and supports interface to USB
- It can be used with semi-automatic trolley and as a Portable cutting Machine
- 5.7 inch high brightness LCD with all standard Menu
- The machine has the option of Automatic Torch Ignition
- The Machine has both automatic and manual torch height control option

TECHNICAL SPECIFICATIONS

Descriptions	Particulars
Effective Cutting Width	1500 mm Standard
Effective Cutting Length	3000 to 6000 mm Standard
Machine Rapid Speed	12000 mm/Min
Gas Required	Air, Oxygen and Acetylene or LPG
Cutting Thickness by Oxyfuel	6 mm – 100mm
Cutting Thickness by Plasma	1mm - 20 mm in M.S. and S.S
Programming Accuracy	±0.1mm
Repeatability Accuracy	±0.2mm
Cutting Accuracies	As Per Standard : ISO 9013
CNC Controller	
Operation Panel	5.7inch LCD graphic display
Language	English
Program Input	Key pad or USB port
Contouring	X and Y, 2 axes control
Program Format	RS-274-D format (Metric or Inch)
Shape Library	45 patterns-Metriconly Program
Operation Function	Trial Run, Reverse, Plate Alignment, Mirror, Array
Nesting Software	MOST 2D



ROBOTIC WELDING SOLUTIONS



INTRODUCTION

- ADOR provides high end Robotic Solutions to serve Indian industry's needs. We provide Robotic MIG systems for automobile, material handling and heavy engineering. We also carry Robot integration job
- With 6 axis robot we can achieve high precision and greater productivity
- Robot can be interfaced with external axis to increase the reach ability and complex weld positions

CHAMPMIG 400 R



INTRODUCTION

- ADOR has developed its own Inverter based 400 Amps MIG welding outfit for Robotic welding solution, CHAMP MIG 400 R.
- Highly engineered indigenous Inverter designs provide reliable welding process



SPMs FOR AUTOMATED SOLUTIONS

L SEAM WELDING SPM



INTRODUCTION

- Linear Welding of Rolled Sheet 0.8 mm to 3.00 mm (4.0 mm on special case), Material: MS, SS, AL
- With pneumatic clamping No need of pre tack component
- AC VFD Drive for linear motion
- Mandrel with Copper backing and gas purging arrangement for good penetration
- Flux Recovery Unit (Optional)

APPLICATION:

Dairy Industry, Automotive Industry, Household utensils mfg.

CONCEPT:

In this construction of machine torch will move and job will be stationary.



C SEAM WELDING SPM



INTRODUCTION

- Twin head SAW welding set-up
- Pneumatic head stock -Tail stock fixuring
- AC VFD Drive for Head stock
- Multi pass for wider welding bead
- Flux recovery unit. (Optional)

APPLICATION:

- Automotive and non automotive industry.
- LPG Cylinders, Air Receivers, Brake Cylinders. Cylinders with dish end.

CONCEPT:

In this construction of machine – Job will rotate and torch will be stationary but in some application job and torch will move in synchronized speed.



SQUARE AXLE WELDING MACHINE



INTRODUCTION

- All Servo Drive Control
- Dual Welding Station
- Oscillation with auto height control
- Continuous Multi pass

APPLICATION:

- Automotive Industry for Axle welding.
- Dead Axle / Dummy Axle of Trailer, Trucks.

CONCEPT:

In this construction of machine – Job will rotate and torch will be stationary but in some application job and torch will move in synchronized speed.



APPLICATION:

Pipe line industry.

SPMs FOR AUTOMATED SOLUTIONS

PIPE WELDING SPM



INTRODUCTION

- 2" to 6" Pipe welding
- Pneumatic rollers for holding of pipe
- AC VFD drive for speed variation
- Pipe to flange welding also possible
- Process: GTAW & GMAW

CONCEPT:

In this construction of machine torch will be stationary and job will move.



APPLICATION:

High pressure Industrial valve mfg industry.

VALVE WELDING SPM



INTRODUCTION

- Ring Groove Welding application
- Inlay continuous cladding with job rotation and torch retract function
- Seat-pocket welding also possible

CONCEPT:

In this construction of machine during welding job will rotate and torch will be stationary but in some application job and torch will move with synchronized speed.



APPLICATION:

Automotive and non automotive Industry.

TORCH ROTARY MACHINE



INTRODUCTION

- Extremely useful for circular joints
- Completely PLC controlled high end automation
- Consistent quality and high productivity
- Different jobs can be welded by changing fixture on the same machine
- Popular in exhaust system manufacturers

CONCEPT:

In this construction of machine torch will rotate and job will be stationary.



SPMs FOR AUTOMATED SOLUTIONS



L – SEAM WELDING SPM

Recently we have designed, manufactured & supplied an, “L – Seam Welding SPM” to Aakanksha Industries, Ahmednagar. This SPM will be used for MIG L Seam welding of stator frame which can be used in gensets.

CONSTRUCTION OF THE SPM:

- 1. BASE ASSEMBLY:** This assembly consists of both banks of hold-down fingers and the pressure hoses contained in a single weldment. It includes a mounting plate for the mandrel and also mounts the filter, regulator, gauge, and solenoid valve.
- 2. MANDREL ASSEMBLY:** The backup mandrel is a steel support grooved on top to hold and position interchangeable inserts. The mandrel is normally furnished to customer specifications to suit the part to be welded. Additional mandrels for other applications may be ordered and are interchangeable. Copper backup are part of the mandrel assembly and are available to suit a wide variety of applications. They are made of copper, steel or stainless steel. A drop through groove is machined the length of the insert to control the weld root bead size and contour. An inert gas backup insert is available. Water cooling of the insert is also available.
- 3. ANVIL ASSEMBLY:** This is fabricated type structure made up of plate. This assembly consists of both banks of hold-down fingers and the pressure hoses contained in a single weldment.
- 4. MADREL SUPPORT ASSEMBLY:** This is fabricated type structure made up of plate. This is a manually operated swing-type latch for the outboard end of the mandrel support. It includes a safety switch to ensure that the fingers cannot clamp unless the support latch is closed.

OPERATION SEQUENCE

- Manually remove the swing type latch.
- Load the stator frame on to the mandrel.
- Position the component correctly to match the welding start point.
- Fix the swing type latch.
- Cross check the centre line of the job to match the same with the weld torch.
- Press the push button to clamp the component on to the mandrel from one anvil & again press the push button to clamp the component from the second anvil.
- Press the cycle start button to start the welding process.
- After completion of the complete weld length, press the push button to stop welding.
- Press the push button to unclamp the component.
- Manually remove the swing type latch & manually unload the component.
- Repeat the same sequence for the next component.

ADVANTAGES

- Perfect alignment of job
- Consistent weld quality
- Can achieve RT/UT quality
- Reduced Re-work



SPMs FOR AUTOMATED SOLUTIONS

IDLER ROLLER WELDING SPM

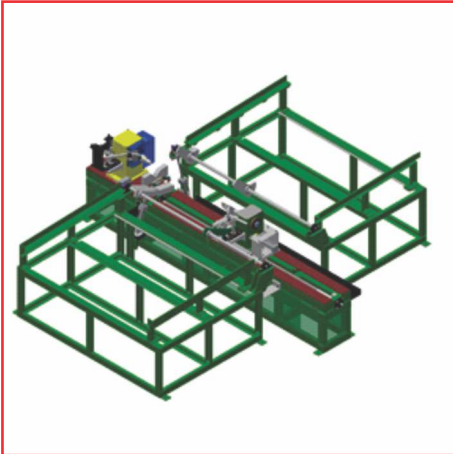


The Idler Roller Welding System consists of Loading Table, Unloading Table, Welding Base and Welding outfit. AWL Idler Roller Welding System is a versatile piece of equipment specially suited for welding of Idler Rollers. Sturdiness is the key word since these equipments will be used generally to fabrication shops.

Construction of the SPM & Operation sequence:

- | | |
|--------------------|-------------------------|
| A) Loading Table | D) Control System |
| B) Welding Base | E) Power Source |
| C) Unloading Table | F) Hydraulic power pack |

A) LOADING TABLE is fabricated from "C" channel, plates and bend angles. Number of jobs are placed on Taper table (one is fixed and other is adjustable to accommodate different length of Jobs). Loading arrangement is mounted on two pillow blocks fixed on base. The Job is rested against the Cam fixed on the Loading Shaft. One Cam is fixed and the other is Movable to accommodate different lengths of Job. The Cam is operated by Pneumatic Cylinder. The presence of Job is sensed by the Job Sensing Proximity mounted under the Cam.



SPMs FOR AUTOMATED SOLUTIONS



IDLER ROLLER WELDING SPM

B) WELDING BASE consists of Head Stock, Tail Stock and the Base Frame.

- Head stock and Tail stock are similar in structure and is fabricated from Machined plates, LM Guides and pneumatic cylinders.
- Head stock is fixed. It is driven by a geared motor. The geared motor is mounted directly on the head stock.
- The tail stock, along with the slides holding the welding torches, also can be moved axially by around 2000mm, using a lead screw, to accommodate the different lengths of the Roller jobs.
- Job is clamped under the pressure created by pneumatic cylinder mounted at head stock and tail stock end.
- Manual horizontal slides are mounted at both the ends, near the head stock & tail stock, for holding the welding torches.
- The V blocks are mounted on scissor lifts for the height adjustment for different Job diameters.

C) Base Frame is fabricated from Tubes and Plates. The Lead Screw is mounted on pillow blocks. The Tail Stock is bolted to two nuts. One is for the sliding the tail stock forward and reverse and the other is for Guide and extra support.

D) Unloading conveyor Table is fabricated from "c" channel, plates and bend angles. The Table is locked with the Welding Base with the help of Locking Bracket. The Welded jobs are unloaded on Taper table (one is fixed and other is adjustable to accommodate different length of Jobs). Unloading arrangement is mounted on two pillow blocks fixed on base. Once the welding of Idler Roller is completed, the Cam is activated by Pneumatic Cylinder and the Job is unloaded and stored on the Taper Table. Same as Loading Table, there are two cams, one is fixed and the other is Movable to accommodate different lengths of Job.

ADVANTAGES

- Auto Loading - unloading
- Higher productivity
- Good and consistent weld quality
- Less man power



SPMs FOR AUTOMATED SOLUTIONS



TWIN HEAD WELD LATHE

This SPM consists of a sturdy base frame, a machined plate mounted on the base structure which will be used for smooth sliding motion of the tailstock on top of it, a headstock & a tailstock to mount the component for welding. The headstock is fixed while the tailstock serves as a idler support for component rotation & can be slid manually with the help of a hand wheel to match the lengths of variety of components. It also consists of a gantry which enables mounting of TIG welding head which can slide on LM shaft with the help of motor through rack and pinion pair. The welding torch is brought to the required welding point by pneumatic slides and fine adjustment is done with manual slides. At the back of the machine we have provided a fume extraction unit which works on the principle of two stage electrostatic air filtration

OPERATION SEQUENCE:

- Move the tailstock by hand wheel to adjust the length of the component being loaded.
- Load the component manually between the headstock & tailstock over the idler rollers.
- Press the push button to clamp the component firmly between headstock & tailstock with the help of pneumatic actuated locator.
- Press the push button to slide the welding torch head on the cross beam, after reaching to the required point press the push button to bring the torch forward to the point of welding & then manually do the fine adjustment for the same.
- Manually close the doors to supervise the welding process safely without affecting eyes/vision.
- Press the cycle start button which will actuate the welding torch & commence the job rotation simultaneously. As a result of this welding for 360° & pre-specified overlap will be done.
- Press cycle stop button to retract the torch to the home position.
- Manually open the doors & press the push button to retract the tailstock.
- Manually unload the component.
- Repeat the sequence for the next components.

ADVANTAGES

- Auto TIG with cold wire feeding
- Oscillation can be provided
- Increased Productivity with RT quality
- Leak proof joints
- Consistent weld quality
- Reduced Re-work



SPMs FOR AUTOMATED SOLUTIONS

PIPE TO FLANGE WELDING & INTERNAL PIPE WELDING MACHINE



SPM for pipe longitudinal welding and pipe to to flange circular welding.

Different combination of pipes (12 types of combination) and flanges can be welded on single machine. Internal welding of pipe is also possible on this same this single machine.

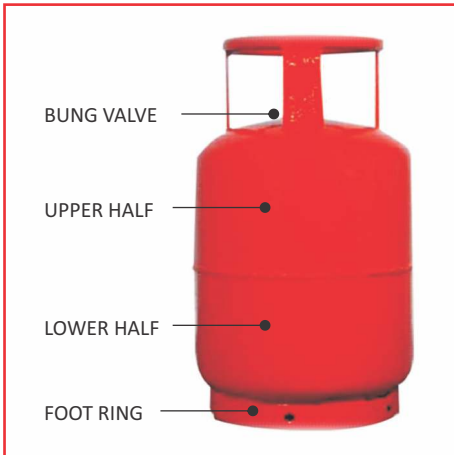
This machine consist of sturdy base frame. Job holding and Pneumatic clamping arrangement. This machine consist of motorized movement of twin torch on rack pinion. Headstock side torch having fixed position and Tailstock side torch is movable according to length of Pipe.

Job is tested (after pipe to flange welding) by Hydro Pneumatic test upto 200 bar pressure with following sequence of operation.

- Operator will load the job manually and he will keep the job on the idler support unit of the machine
- Operator will align the Tails stock position according to length of the job
- Operator will clamp the job by electro pneumatic system
- Once job gets clamp operator will align both the torches as per weld joint
- Operator will press the cycle start button as a result both the torches will come forward
- Welding and forward motion will start simultaneously
- After completion of 360 degree and some overlap machine and welding will start automatically
- Torch will move up to its home position
- Job reverse rotation will gets start and stops at home position
- Operator will unload the component
- Repeat the sequence for next job

ADVANTAGES

- By this machine we will get high productivity
- By using this single machine, we can perform linear welding (straight & taper welding), Circular outer welding & Circular internal welding.
- We will get good welding quality because uniform arc length
- Uniform and consistent output results
- Quick change over
- PLC and HMI logic controlled control panel
- User friendly
- Less maintenance
- Skill operator does not required to operate this machine, Semi skill operator can operate this machine
- Machine Can be shift from one place to other very easily



SPMs FOR AUTOMATED SOLUTIONS

CYLINDER WELDING SPM



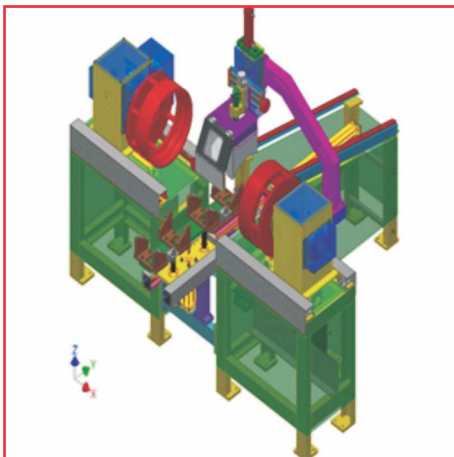
SECTOR : LPG Cylinder

APPLICATION:

1. Upper Shell to Lower Shell welding,
2. Foot Ring to Lower Shell Welding,
3. Bung Valve to Upper Shell Welding

ADVANTAGE :

1. Good productivity
2. Good and consistent weld quality
3. Automatic loading and unloading so this will reduce the human efforts



CYLINDER WELDING SPM



SECTOR :

Domestic LPG Cylinder

APPLICATION:

Upper Shell to Lower Shell Welding of Domestic LPG Cylinder

ADVANTAGE :

1. Higher Productivity
2. Good and consistent weld quality
3. Auto Loading - unloading station
4. Less man power
5. On single machine minimum and maximum sizes of jobs can be weld



SPMs FOR AUTOMATED SOLUTIONS

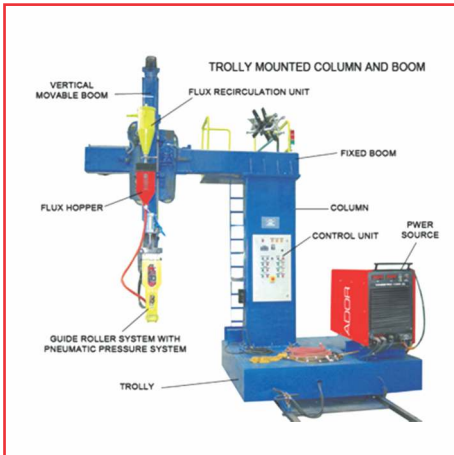


CIRCULAR WELDING SPM WITH QUICK CENTERING DEVICE TO THE JOB CENTRE

- This SPM consists of a sturdy columnar frame with a rotational arm used for smooth movement radially which is further equipped with smooth horizontal slides. The vertical movement is by pneumatic slide.
- Micro slides are placed near the welding head for fine adjustments before start of weld also during each pass.
- The Job holding device is a sturdy Base with case hardened pins on a fixture platform, where the job is placed using EOT.
- It is equipped with two stations facilitating working at both stations keeping the higher arcing time.
- Orbital Welding Head with:
 - i) Pneumatic slide for quick positioning of the torch,
 - ii) Manual slide for micro adjustment
- PLC based Control Panel & Operator Pendant

OPERATION SEQUENCE:

- Job is placed and located on case hardened pins of fixture platform using EOT crane.
- Radial movement of the MIG welding head at welding station using combination of slides.
- Actuate locating pin to guide into job centre
- Press 'Cycle Start' push button to start welding and Rotation of MIG welding head w.r.t. centre axis.
- After 360°+Overlap, welding and torch rotation will stop.
- For second pass, adjust torch position manually with 'micro slide' if necessary.
- Press 'oscillator start' push button to start oscillation/weaving of torch, oscillation was necessary for second pass
- Press 'Cycle Start' push button to start welding and Rotation of MIG welding head & torch oscillation w.r.t. centre axis.
- Actuate gantry movement by selector switch, to bring Orbital MIG welding head to another welding station.
- Repeat steps 3 to 10 to complete welding
- Unload job from fixture with the help of EOT crane manually



SPMs FOR AUTOMATED SOLUTIONS



SYSTEM CONSISTS OF

- Trolley Mounted Column & Boom
- V Blocks for Beam Support
- Tilting System for beam rotation
- 1200 Amps SAW outfit with Flux Recovery Unit
- A remote pendant for operation

APPLICATION:

Structural welding and heavy fabrication sector

CONCEPT:

In this construction of machine job is stationary and torch will move with Gantry but in some application welding torches will be stationary and job will push & pull. This type of construction of machine is called pull through welding.

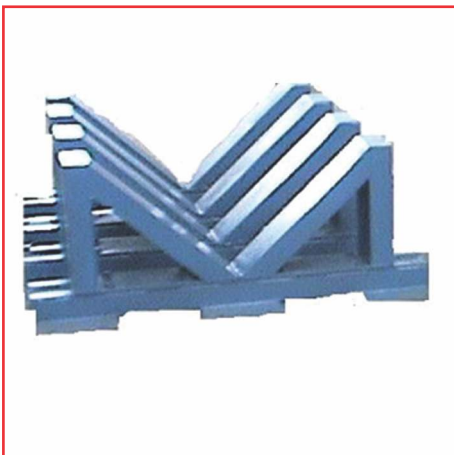


TILTING SYSTEM



INTRODUCTION

- Tilting mechanism is fabricated from channel and plates. Each is equipped with heavy chain, with which beams can be lifted and rotated
- Lifting System works on Hydraulic



V BLOCK



INTRODUCTION

V blocks are used to rest the beam during welding. V blocks and Tilting system are aligned in-line and exact parallel to trolley movement.



DUAL HEAD SAW WELDING GANTRY



Gantry Box welding with SAW process and which was delivered for heavy duty Railway Bridge Girder welding application having Beam width 2500 mm. Different thickness, width and length of the box can be welded on same machine.

This machine consist of sturdy Gantry structure and two vertical motorized column. Vision system is also provided along with the machine so that operator need not required to move with Gantry movement. Operator can see the torch position on the screen by sitting at one fixed chair. Operator can also adjust the torch position with the help of joystick, if torch position gets aside / offset to the weld joint.

Longitudinal fillet and butt welding is possible by this machine.

Earlier for this application tractor mounting head was being to be used. Advantages of dual head gantry over Tractor head are as follows.

- By using dual head Gantry customer gets high productivity.
- Different sizes of jobs can be welded on single machine.
- Flexibility of keeping different angle of welding torch.
- No constraint of Width and Length (machine will be manufactured according to min and max sizes of the job).
- By using of vision system, operator can adjust the torch w.r.t weld joint by standing or sitting from one remote place.
- By using Automatic flux recovery unit, flux will gets automatically suck simultaneously during welding cycle. This will save the time and this will be removed manual extra operation which is needed in tractor mounting head.

APPLICATION:

- Railway Bridge Girders
- H Beam for Roofing
- H Beam for Structural Steel Construction
- Columns or Piles
- Other structural applications



ROTATORS

WELDING ROTATORS & IDLERS

- Pedestal and Trolley mounted type
- Range : 5T to 150T
- Digital speed read out
- Foot Switch (Optional)



MODEL:

MANUAL INDEXING TYPE - Model WR - Ranging 5 ton 150 Tons.

SELF-CENTERING LEAD SCREW ADJUSTMENT TYPE: Model RSCLA - Ranging 5 ton 150 Tons.

SELF-ALIGNING TYPE Model SAR - Ranging 5 ton 50 Tons.

APPLICATION:

- Pipe Welding
- Pressure vessels & Boilers
- Tanks
- Wind Tower
- Street pole Industry

CONCEPT:

This is used to rotate the job, depending on weight of job this rotator model can be selected.



INCLINED ROTATORS

Capacity upto 10 ton capacity for Pulley / roller welding





COLUMN & BOOM

Vibration & Jerk free Column & Boom can be used to manipulate the weld head position to weld variety of applications viz Linear, circular welding of sheets.



- Range : 2020 to 6060
- ACVFD Drive for Longitudinal movement
- Anti-fall mechanism to protect in case of accident
- Available in pedestal as well as trolley mounted design
- Joy stick controlled XY Slides (Optional)
- Vision System (Optional)
- Seam Tracker (Optional)
- Oscillator (Optional)

APPLICATION:

Pressure vessel industry, Pole industry,
High pressure industrial Valve welding

CONCEPT:

This is used for long seam welding of pressure vessel and pole industry. This model can be selected according to job length and min & max diameter of the job.



POSITIONERS

WELDING POSITIONERS

- Variable rotational speed
- Motorized Tilting (Std.0°-135°)
- Digital Read out of rotational speed
- Foot Switch (Optional)



MODEL:

Model: WPM 50 Kg to 500 Kg (Manual tilting & Motorised Rotation)
Model: WPH 1 Ton to 30 Ton (Tilting & Rotation - Both Motorised).

APPLICATION:

- Pipe Welding
- Pipe-Flange Welding
- Valve Industry
- Crusher Industry
- Automotive and non Automotive sector

CONCEPT:

This is used for Tilt and Rotate together to achieve down-hand welding condition which is required for best welding quality.
suitable for manual and automated welding.



RESISTANCE WELDING MACHINES

AC & MFDC Based Seam Welding Machine



SMART SEAM WELDERS

- Rigid Frame
- Low Inertia Ram
- Electrode Housing With Silver Bearing
- AC Drive With Variable speed Control and Microprocessor Based Welding Controller
- Machines available can be configured to be suitable for Circumferential, Longitudinal and
- Universal Seam Welding
- Low Impedance Transformer (AC / 3 Phase MFDC)

DESCRIPTION

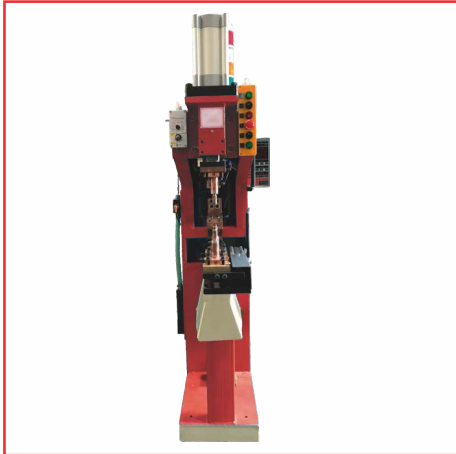
- Seam Welders have excellent efficiency and hassle free functionality, fitted with high quality transformer, cooling system and high quality weld assembly which are corrosion and abrasion resistant.
- SPMs are designed as per components to achieve high production rates & cycle time. Performance proved PLC, HMI, Servo Motors offered as per ratings.

OPTIONAL ACCESSORIES

- Water Flow Indicator
- Water Flow Switch
- Pressure Switch
- 25 Ltr. Water Tank with Motor
- Tower Lamp without Silver Housing
- Water Collection Tray or Tube (SS Material)
- Rejection Chute
- Narrow Track
- MCB / ELCB
- Chiller Unit
- Anti Vibration Pads
- Special Wheel
- Wheel with Internal Cooling
- Knurling Wheel Arrangement (Spring
- Diamond Impression on Wheel)
- Knurling Wheel Arrangement (Pneumatic With Diamond Impression on Wheel)

PARAMETERS

Model		SWPL-75 C	SWPL-100 C	SWPL-150 C
TRANSFORMER	kVA	75	100	150
Duty cycle	%	50	50	50
Weld Head				
Cylinder Dia. X Stroke	mm	100 X 100	125 X 100	150 X 150
Max. Weld Force @ 6 Bar	KgF	425	680	680
Throat Gap	mm	200	400	400



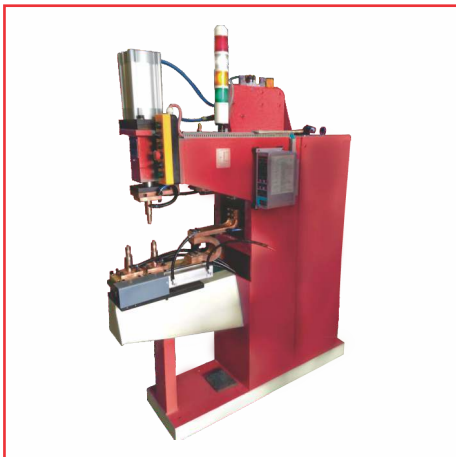
RESISTANCE WELDING MACHINES STATIONARY PROJECTION & SPOT



SMART PROJECTION WELDERS

TRANSFORMER :

- Excellent current conductivity
- Minimum electrical losses
- Water-cooled transformer



DESCRIPTION :

- Stationary Projection & Spot Welders having High Strength Robust Sturdy Pedestal type frame for high speed spot welding operation.
- SPMs Designed as per component to achieve high production rates & cycle time. Performance proved PLC, HMI, Servo.Motors offered as per ratings.

FEATURES :

- Electro-valve and gas cylinder are connected directly, thus increasing speed of responding and spot welding and reducing air flow cost.
- Perfect pressurization speed adjustment descending speed of the machine head pressurization can be adjusted as per requirement which softens impact and lowers noise when the workpiece is pressurized.
- High strength steel performance-shock resistant and firm.
- High power SCR element is adjusted for the main loop-ensures stability and reliability.
- Straight type pressing structure and high welding speed.

PARAMETERS :

- Pneumatic cylinder operation, having single or double stroke.
- Water cooled electrode and welding arm
- Variable arm length (custom-built)
- Transformer rating : 35 to 200 kVA
- Controllers-AC / MFDC
- Force up to-600 KGF
- Energy Efficient
- High reliability and repeatability
- Higher welding efficiency
- Easy to install, operate and maintain

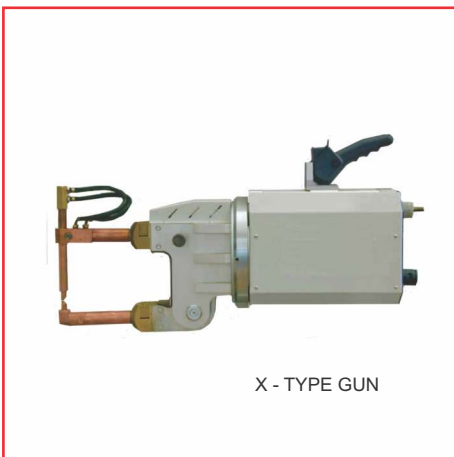


RESISTANCE WELDING CONTROLLER



FEATURES:

- Smart Weld Monitor gives signal instantly if the welded spot is not OK.
- Welding controller supplies stable welding current by secondary feed-back constant current method.
- Resistance welding controller has spot welding, 2-head spot welding and seam welding compatibility.
- Networking of up to 32 machines (optional).
- Parts of different thickness can be welded in the same welding sequence by setting multiple weld schedules. 15 such programs can be set in this welding controller.
- External schedule select.
- Controller has self-adjustment for maximum current.
- Large LED display gives instant view of the program
- Controller has 3 easy-to-operate counters to aid in systematic quality control and tip dressing schedules.
- Up and down slopes.
- Resistance welding controller can be retrofitted to your existing machines.



SMART IT GUNS

INTEGRATED TRANSFORMER WELDING GUNS



SUPERIOR TECHNOLOGY:

SMART IT Guns are manufactured with highest care to deliver peak performance. They are being extensively used by several reputed auto-ancillaries and automakers in India. Trouble-free performance over long working hours, light weight construction, precision welding and high maneuverability make our IT Guns the first choice of operators.

FEATURES

- Unique 360° rotation arrangement
- Water cooled electrode and welding arm with variable length
- Compact and light weight due to ductile aluminum material gunbody construction
- Energy-efficient with higher welding efficiency
- High reliability and repeatability
- Easy to install, operate and maintain -Transformer rating: 26 to 76 kVA

- AC Transformer mounted on gun assembly as per rating
- Pneumatic Cylinder with weld and retract strokes as per specification.
- Spring balancer for Gun - Sando make. Solenoid valves – FESTO make for weld and retract strokes.

Gyro ring with roller for smooth easy rotation of gun in 360 deg.

- Hanger assembly
- All internal tubing on the gun fire air and water are quick-couple type PU tubing-FESTO / LEGRIS make
- All internal connectors on gun for air and water are quick-couple type-FESTO/LEGRIS make
- Emergency stop on gun.
- Tail harness -1 Mtr for water in, water out and air from the gun with ball valves at end connection.
- Multi pin contact for control cable connection.

Scope of Supply for Arm Assembly :

- Gun arms – Forged Cr.Cu.Zr and machined.
- Electrode holder / shank with threading adopters-forged Cr.Cu.Zr.and machined.
- Cap Tip- Cold forged 16 mm dia., dome type.
- Internal cooling water tubing – Teflon /Brass / Copper.
- Insulation provided on the arms.

Scope of Supply for Controller & Harness Assembly :

- Controller module – FORWEL with secondary current feedback facility and panel programming.
- Water cooled thyristor assembly.
- MCCB with RCCB leakage protection unit 30mA / 30mS Schneider Make
- Media plate on controller consisting of

SMART IT GUNS



INTEGRATED TRANSFORMER WELDING GUNS

- Gun handle with weld / retract, weld 1 / weld 2 and weld start switches.
 - Multi pin contact for handle cable connection on gun.
 - Additional holding handle on brackets for better ergonomics.
 - Spring balancer for cable loom with cable support - Sando make.
- a) FRL – FESTO make
 - b) Water flow indicator.
 - c) Water flow switch Cable harness 12.50 mtrs consisting of:
 - i. Control cable with multi pin contacts at both ends for easy connection.
 - ii. Hoses for air, water in and water out with connectors to connect to loom tail at the guns side.
 - iii. Sensor cable for secondary current feedback.
 - iv. Operating pendant with weld / no weld, error reset with illumination, weld 3 / weld 4 program selector switches and cable with multi pin contact at controller end.

Model		SMIT-26	SMIT-38	SMIT-54	SMIT-76
Rating	kVA	26	38	54	76
Duty cycle	%	50	50	50	50
Supply	Volt	400	400	400	400
Frequency	Hz	50	50	50	50



KING EXTRACTOR

WELDING FUME EXTRACTOR FROM ADOR WELDING



KING EXTRACTOR - I, II (FILTER CLEANING WITH EXTERNAL COMPRESSED AIR SUPPLY)

This mobile mechanical self-cleaning filter is a high-efficiency filter designed for mobile workplaces. This filter cleans air from different kinds of dry dust, welding aerosols and other dry contaminants from most industrial processes. The filter cartridge is cleaned automatically without interrupting the filtration process. The cleaning extends the cartridge service periods and minimizes its maintenance.

This filter is designed for continuous indoor operation under the following climatic conditions:

- Air temperature from +10°C to +45°C
- Relative humidity 80 % at 25°C
- The environment and the air being processed shall be free of explosive substances, aggressive vapour or gases.
- Do not use the filter for grinding or polishing using sand paper
- Other paper-based abrasives

Design features:

- Highly efficient cartridge cleaning system, using compressed air
- Higher efficiency of contaminants removal due to the automatic cartridge cleaning function
- The compact construction integrates the filter, extraction arm and fan
- This filter can be used at workplaces unreachable to other ventilating equipment, the filter requires connection to a general compressed air supply.

The standard delivery set includes:

- Built-in fan
- Control console
- Filtering cartridges of respective type
- Spark arrester
- Oil separator with reduction box for compressed air system
- Electrical grounded cable L = 5 m with plug



KING EXTRACTOR

WELDING FUME EXTRACTOR FROM ADOR WELDING



KING EXTRACTOR-III-MU 3

(FILTER CLEANING WITH - BUILT IN AIR COMPRESSOR)

This mobile mechanical self-cleaning filter is designed for standalone servicing mobile workplaces. This unit can be used for - Cleaning air from dust, welding aerosols, fumes and similar fine contaminant particles from various industrial processes within production shops, welding laboratories, certifications centers, mechanic shops and many other industrial facilities.

- The cartridge has larger dimensions and extended active filtration area (20 m²).
- The filtering cartridge is placed vertically to improve the dust distribution, regeneration efficiency and service life of the cartridge.
- The inner cartridge integrates a special air splitter. This allows the compressed air consumption and improves the self-cleaning system efficiency.
- The filter construction has a built-in air compressor supplying the automatic self-cleaning system.
- Thanks to the built-in compressor the unit works completely independent from any compressed air supply.
- An optional active carbon cartridge can help with cleaning the air from gas components and odors.
- The filtering cartridge is replaced without dismounting. The whole replacement procedure takes just few minutes.
- The duct collector is made in form of withdrawable tray in the lower part of the filter and is separated from dirty zone.

The following components are included in all delivery sets:

- Built-in fan
- Control console
- Filtering cartridge of respective type
- Electrical grounded cable L = 5 m with plug
- Oil separator with gauge and reduction box (only for models without integrated compressor)



TIP - TIG

ORBITAL SYSTEM KD/HD TECHNOLOGIE



PROCESS DESCRIPTION

The TiPTiG wire feeder system provides a linear, steady forward movement of the wire electrode. Simultaneously, this movement is superimposed by a second forward/backward motion. The result is a kinematic energy, providing a dynamic and process-stable weld puddle. A second power source provides an resistance-preheated wire electrode, while touching the weld puddle.

CONTENT

- TiPTiG Orbital Control Cabinet with Beckhoff PLC
- TiPTiG Touch Panel 12", 2 GB Flash
- TiPTiG Tractor complete with stroke extension +-30 mm, y-axis
- TiPTiG Tractor hot wire feeder
- TiPTiG Tractor hot wire modul
- TiPTiG Interconnecting cable modul to feeder 1,4 m
- TiPTiG Orbital TIG S00iDC
- TiPTiG Aluminium profil box complete with wheels and rings for fork lift
- TiPTiG Interconnecting cable TIG S00iDC / 3,0 m
- TiPTiG Torch 410-5 "A", water cooled
- TiPTiG Tractor torch interconnecting cable 4,0 m
- TiPTiG Spare box torch 400-5 "A" large
- TiPTiG Tractor remote control box, 5,0 m cable

TIP - TIG



APPLICATION RANGE

TIG AC for Cold Wire applications, TIG DC for Hot Wire application, pipe butt welds in forced positions and longitudinal fillet-or butt welds.

APPLICATION RANGE

Low-, medium- and high alloyed steel, Duplex, Superduplex, Copper and Titanium, Stellite, highly heat resistant materials PS,24,91,92

APPLICATION ADVANTAGE

- HDTM technology
- **Universal automation for all butt weld applications**
- **Compact size**
- Easy-to-use control unit for all parameters#
- Active interference while welding with remote control
- **Welding parameter memory**
- **AVC, AEA, OSC control**
- **Welding with combined parameters**
- **Easy processing of all materials**
- **Deposition rate up to 5,Sk/h**
- **Lowest energy per unit**
- **Environmental friendly, nos patter, low emission, no arc noise**
- **Narrow gap welding technologies possible**
- Smaller aperture angles, less weld preparation time= less welding time



Inconel 625



P91



Carbon Steel



8+8 mm Cr-Ni Full
Penetration weld

TIP - TIG (MANUAL WELDED SAMPLES WITH TIP-TIG PROCESS)



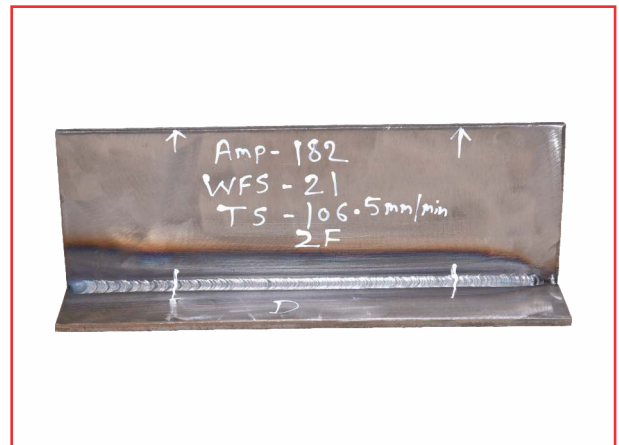
Welded on Stainless Steel



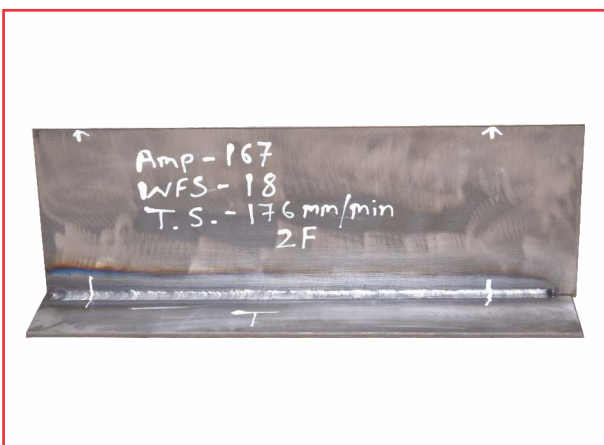
Welded on Stainless Steel



Welded on Stainless Steel



Welded on carbon Steel



Welded on carbon Steel



Welded on carbon Steel



TIP - TIG



TIP-TIG Manual Welding
All in one with ADOR ChampTIG 400
& ChampTIG 500 AD.

DESCRIPTION

- TIG cold wire and hot wire welding with dynamic wire feed system
Dynamic wire feeding for a controllable weld pool even with positional welding:
The wire feeding is superimposed in parallel using a forward and backward movement
- Up to 300 % faster welding speeds compared to TIG welding
- Up to 200 % improvement in deposition rate
- Dilution reduced by up to 80 %
- High process reliability and reproducible welding results

- Higher welding speed and easy handling
- Heat supply to the wire for improved deposition rate and an even lower risk of weld errors
- Perfect weld appearance, no weld spatters
- 4-roll drive
- Equipped for 0,8 mm / 0,9 mm / 1,0 mm / 1,2 mm wires
- Available in India with ChampTig 400 (DC), ChampTig 500 AD (AC/DC)

APPLICATION RANGE

TIG DC for Hot Wire applications, TIG AC for Cold Wire applications

MATERIALS FOR HOT WIRE APPLICATIONS

Low, medium and high alloyed steel, Duplex, Superduplex, Copper and Titanium, Stellite, highly heat resistant and galvanized materials.

TECHNICAL DATA

Input Voltage	230 V (+/- 20 %)
Input Phase	1
Input Hz	50 / 60 Hz
Duty Cycle (40 °C)	500 A / 100 %
Wire Feed Speed	0,15 - 17 m/min
Wire Frequency	17 Hz
Net Width	352 mm
Net Height	525 mm
Net Length	600 mm
Weight, wire feeder	34 kg

TIP - TIG



TIP-TIG Welding Applications in different industries





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