

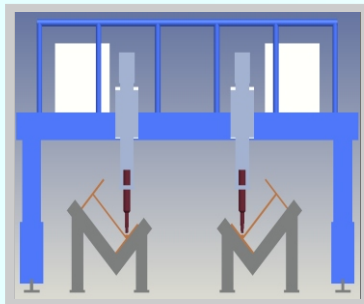
## WELDING AUTOMATION PRODUCTS

Welding processes automation for shell H-beam, Wagon Manufacturing, Vessels Fabrication, Pipe welding, Tube welding

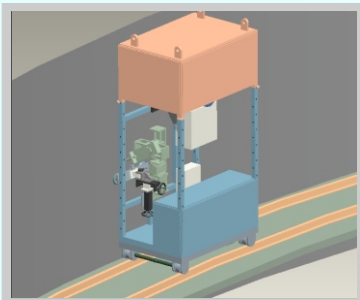
Tailor Made Requirements can be automated.



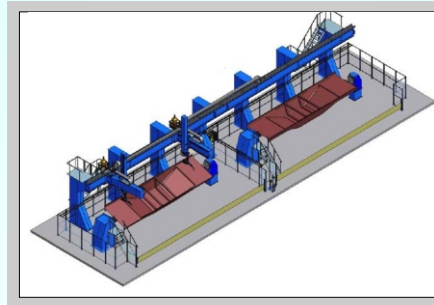
Automated TIG welding machine (portal type)



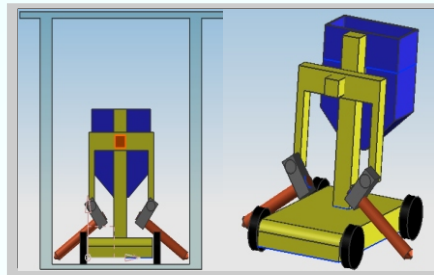
Automated SAW welding machine (portal type)  
for H beam weldign



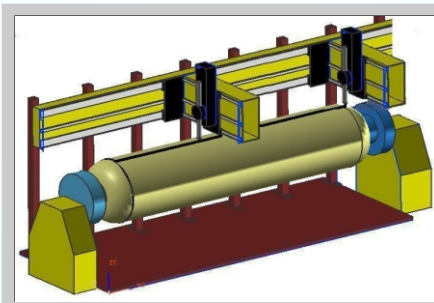
Automatic Girth Tank Welder



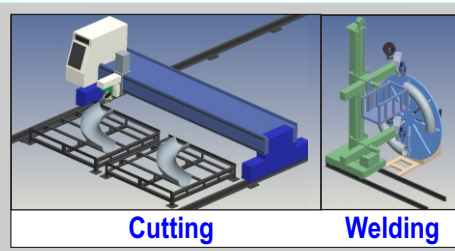
Robotic Welding Systems with Manipulator



Magnetic trolley with twin SAW head  
(for Box Beam welding)



Longitudinal & Tranverse Welding



Cutting

Welding

Elbow Tube Bends



## Products at a Glance

- ▶ **MMA/TIG WELDING PRODUCTS**  
(Inverter, Thyristorised & Transducer Controlled)
- ▶ **MIG/MAG (CO<sub>2</sub>) WELDING PRODUCTS**  
(Inverter Thyristorised & Diode Based)
- ▶ **SUBMERGED ARC WELDING PRODUCTS**
- ▶ **PLASMA CUTTING PRODUCTS**  
(Miniature Large Capacity)
- ▶ **PLASMA /GAS PROFILE CUTTING PRODUCTS**
- ▶ **CNC PIPE PROFILE CUTTING PRODUCTS**
- ▶ **WELDING AUTOMATION PRODUCTS**

## TECHNOCRATS PLASMA SYSTEMS PVT. LTD.

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## STICK/MMA / TIG WELDING PRODUCTS

### A INVERTERISED

IGBT Inverter Technology, Frequency Modulated Welding Machines, Designed to work under toughest of Industrial & Climatic Conditions Efficiency & Power Factor Over 95%

#### Models : SOLARIS 400

**Input :** 3 phase, 400 Volts, +20% -25%, 50/60 Hz  
OCV-85 Volts, 400 A @60% duty cycle  
310 Amps @ 100% duty Cycle,  
310 Amps @ 32 Volts Non Stop for  
60 Minutes without Tripping

**Dimension (WxDxH) mm :** 355 X 640 X 450  
**Weight :** 45 Kgs.



#### Models : SOLARIS 500

**Input :** 3 phase, 400 Volts, +20% -25%, 50/60 Hz  
OCV-85 Volts, 500 A @60% duty cycle  
400 Amps @ 100% duty Cycle,

**Dimension (WxDxH) mm :** 375 X 720 X 480  
**Weight :** 50 Kgs.



#### Model : OSTEC 600/

**Input :** 3 phase, 400 Volts  $\pm$  15% 50 Hz  
**Output :** OCV - 80 Volts, 600A @ 40% duty cycle,  
500 A @ 100% duty cycle,  
400 A Non Stop 60 Minutes

**Dimension (WxDxH) :** 670 X 350 X 580  
**Weight :** 60 kgs



#### Models : SOLARIS 400 TIG

### TIG MACHINES

Micro controller based programmable Machine with all welding parameters such as upslope / downslope / pulsing etc rated at continues duty at 400 Amps for 60 Minutes Non Stop

### TIG Accessories

Water Cooling unit for TIG Torches  
High Frequency Unit (HF) for  
Starting of TIG.  
TIG Torches Water  
Cooled & Gas Cooled



#### Model : SQ 400 AC/DC

Inverterised Based, most advanced & tropicalised power source

TIG welding Machine  
**Input :** 3 phase, 415 Volts,  $\pm$  10%, 50/60 Hz  
AC - Current Range > 20 - 400  
DC - Current Range > 10 - 400



### B THYRISTORISED MACHINES

Fully Thyristorised, hexaphase, robust design for severe climatic conditions:

#### Model : TD 400 H

**Input :** 3 phase, 440 Volts, 50 Hz  
OCV - 85 Volts  
400 Amps at 60%  
308 Amps at 100%

**Dimension (WxDxH) mm :** 620 x 810 x 780  
**Weight :** 220 Kgs.



#### Model : TD 600 H

**Input :** 3 phase, 440 Volts, 50 Hz  
OCV - 85 Volts  
600 Amps at 60%  
462 Amps at 100%

**Dimension (WxDxH) mm :** 780 x 930 x 820  
**Weight :** 300 Kgs.



### C TRANSDUCTOR CONTROLLED :

Most rugged only 6 diodes mounted on heat sinks, No. Electronic PCB, Most reliable for remote site conditions Zero Maintenance

#### Model : Sapphire 400

**Input :** 3 phase, 400 Volts  $\pm$  10%, 50/60 Hz  
**Output :** OCV - 85 Volts  
Current 20 Amps - 400 Amps Stepless  
308 Amps at 100%

**Dimensions :** (WxDxH) mm : 630 x 730 x 690  
**Weight :** 210 Kgs.



#### Model : Sapphire 600

**Input :** 3 phase, 400 Volts  $\pm$  10%, 50/60 Hz  
**Output :** OCV - 85 Volts  
Current 40 Amps - 600 Amps Stepless  
462 Amps at 100%

**Dimensions :** (WxDxH) mm : 630 x 730 x 690  
**Weight :** 310 Kgs.



## MIG/MAG (CO<sub>2</sub>) PRODUCTS

### INVERTERISED :

IGBT Based inverterised Machines incorporated with advance Features and pulsing, designed for most reliable performance under any condition

#### Model : ICP 400

Maximum welding current 400 Amps, OCV 54 Volts  
**Dim. :** (WxDxH) mm : 400 x 700 x 450 **Wt. :** 55 Kgs.



#### Model : ICP 600

Maximum welding current 600 Amps, OCV 68 Volts  
**Dim. :** (WxDxH) mm : 500 x 750 x 450 **Wt. :** 80 Kgs.

#### Model : ICP 800

Maximum Welding Current 800 Amps, OCV 70  
**Dim. :** (WxDxH) mm : 500 x 800 x 500 **Wt. :** 100 Kgs.

### PROGRAMMABLE

#### Models : SICP

Digitally Controlled Synergic Welding

#### Model : SICP - 400/600/800

(Specification same as above machines)



### THYRISTORISED

Thyristorised based hexaphase MIG/MAG (CO<sub>2</sub>) welding Machine suitable to weld wire range of metals like MS, SS, Al, CS and protected against fluctuations.

#### Model : CPT- 400

Maximum welding current 400 Amps, OCV : 54  
**Dim. :** (WxDxH) mm : 650 x 1000 x 900 **Wt. :** 200 Kgs



#### Model : CPT-600 Amps

Maximum welding current 600 Amps, OCV : 68  
**Dim. :** (WxDxH) mm : 800 x 1100 x 900 **Wt. :** 310 Kgs.

### PROGRAMMABLE

#### Models : SCPT

Digitally Controlled Synergic Welding

#### Model : SCPT - 400/ 600

(Specification same as above machines)



### DIODE BASED

#### Model : TCP-250

Maximum Welding Current 250 Amps, OCV. : 16- 36  
**Dim. :** (WxDxH) mm : 600 x 900 x 800 **Wt. :** 145 Kgs

#### Model : TCP-400

Maximum Welding Current 400 Amps, OCV. : 18-54  
**Dim. :** (WxDxH) mm : 650 x 1000 x 900 **Wt. :** 200 Kgs

#### Model : TCP - 600

Maximum Welding Current 600 Amps, OCV 18 -68  
**Dim. :** (WxDxH) mm : 800 x 1100 x 900 **Wt. :** 310 Kgs



## SUBMERGED ARC PRODUCTS

### INVERTERISED :

IGBT Frequency Modulated Very Light Most reliable Power Sources for continues application Designed to work under all conditions

#### Model : SAW 800i (CC/CV)

**Input** : 3 phase, 415 Volts  $\pm 15\%$  50/60Hz  
**Output** : CC / CV, **OCV.**: 60(CV) / 80(CC)  
**Current** : 800 Amps / 36 Volts - 60%  
 700 Amps / 34 Volts - 100%  
 600 Amps / 32 Volts 60 Minutes Non Stop

#### Model : SAW 1600i (CC/CV)

**Input** : 3 phase, 415 Volts  $\pm 15\%$  50/60Hz  
**Output** : CC / CV, **OCV.**: 60(CV) / 80(CC)  
**Current** : 1600 Amps / 36 Volts - 60% DC  
 1200 Amps / 32 Volts Non Stop for 60 Minutes  
 1000 Amps / 30 Volts - Non Stop (24x7)

Other Models SAW 1200i , 2000i & 3000i can be Supplied on request.

### THYRISTORISED :

Fully Thyristorised, hexaphase, designed for Continues welding applications such as Pipes, Wear Plates Manufacturing

#### Model : TD - SA800

**Input** : 3phase, 415 Volts,  $\pm 10\%$ , 50 Hz  
**Output** : 800 Amps  
**Current** : 800 Amps - 60%  
 616 Amps - 100%

#### Model : TD - SA 1200

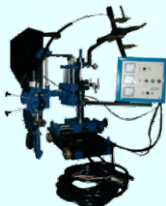
**Input** : 3phase, 415 Volts,  $\pm 10\%$ , 50 Hz  
**Output** : 1200 Amps  
**Current** : 1200 Amps - 60%  
 924 Amps - 100%

#### Model : TD - SA 1600

**Input** : 3phase, 415 Volts,  $\pm 10\%$ , 50 Hz  
**Output** : 1600 Amps  
**Current** : 1600 Amps - 60%  
 1232 Amps - 100%

### DIODE BASED

Diode Based Power Source Are Also Available In This Product Upto 1000 Amps. Capacity



## PLASMA CUTTING PRODUCTS

**INVERTERISED** : Air Plasma Cutting IGBT Based, Frequency Modulated Sources designed to work under all conditions, available in various Models to suit all requirements :

#### Model : Plasma 45i

**Input** : 1ph, 230Volts  $\pm 15\%$ , 50Hz  
 Open Circuit Voltage : 350  
 Current range : 10 to 45Amps  
 Cutting Thickness (Fine/Coarse) : 8/16  
 Duty Cycle : 100 % at 45Amps



**NOTE** : This Model is available with built in air Compressor on request.

#### MODEL : KALI 100 i (Air Plasma Cutting)

**Input** : 3ph, 415Volts,  $\pm 15\%$ , 50Hz  
 Open Circuit Voltage : 300Volts  
 Current Range : 30 - 90Amps  
 Cutting Thickness (Fine/Coarse) : 30/45  
 Duty Cycle : 100% at 100amps



This Model is also available with 80 Amps. Output & Called Kali 80 i

#### Model : KALI 200i

**Input** : 3ph, 415Volts,  $\pm 15\%$ , 50Hz  
 Open Circuit Voltage : 300Volts  
 Current Range : 40 - 300Amps Stepless  
 Cutting Thickness (Fine/Coarse) : 60/80  
 Duty Cycle : 300Amps continuous for 60Min.  
 Plasma Gases Compatibility : Air, Oxygen, Nitrogen  
 Argon, Argon+H<sub>2</sub>



**Thyristorised** : Fully thyristorised, Hexaphase design, Manufactured to meet most Stringent requirements of production

#### Model : KALI -100

**Input** : 3ph, 415Volts,  $\pm 15\%$ , 50Hz  
 Open Circuit Voltage : 330Volts  
 Current Range : 30 - 120Amps Stepless  
 Cutting Thickness (Fine/Coarse) : 32/ 50mm  
 Piercing - 25 mm  
 Duty Cycle - Continuous.



#### Model : KALI 150

**Input** : 3ph, 415Volts,  $\pm 15\%$ , 50Hz  
 Open Circuit Voltage : 330Volts  
 Current Range : 50 - 200Amps Stepless  
 Cutting Thickness (Fine/Coarse) : 50/70 mm  
 Piercing - 35 mm  
 Duty Cycle - Continuous.  
 Plasma Gases : Air, O<sub>2</sub>, N<sub>2</sub>, Ar+H<sub>2</sub>



#### Model : KALI 200

**Input** : 3ph, 415Volts,  $\pm 15\%$ , 50/60 Hz  
 Open Circuit Voltage : 330Volts  
 Current Range : 50 - 300Amps Stepless  
 Cutting Thickness (Fine/Coarse) : 75/ 100mm  
 Piercing - 40 mm  
 Duty Cycle - Continuous.  
 Plasma Gases : Air, O<sub>2</sub>, N<sub>2</sub>, Ar+H<sub>2</sub>  
 Torch Cooling : Water / Chilled Water



**Note.**: Higher models Such as KALI 400, KALI 500 & KALI 1000 are available for cutting higher thickness up to 200 mm.

### DIODE BASED

Air Plasma / Air Cooled Cutting machines with fixed output

#### Models KALI30 F

**Input** : 3ph, 415Volts,  $\pm 15\%$ , 50/60 Hz  
 Open Circuit Voltage : 330Volts  
 Current Range : 40 Amps  
 Cutting Thickness (Fine/Coarse) : 8/16 mm

#### Models KALI MF

**Input** : 3ph, 415Volts,  $\pm 15\%$ , 50/60 Hz  
 Open Circuit Voltage : 330Volts  
 Current Range : 70 Amps  
 Cutting Thickness (Fine/Coarse) : 20/32mm



#### Models KALI80F

**Input** : 3ph, 415Volts,  $\pm 15\%$ , 50/60 Hz  
 Open Circuit Voltage : 330Volts  
 Current Range : 80 Amps  
 Cutting Thickness (Fine/Coarse) : 25/40mm  
 Plasma Gases : Air, Ar, N<sub>2</sub>, Ar+H<sub>2</sub>

#### Models KALI100F

**Input** : 3ph, 415Volts,  $\pm 15\%$ , 50/60 Hz  
 Open Circuit Voltage : 330Volts  
 Current Range : 100Amps  
 Cutting Thickness (Fine/Coarse) : 32/ 50mm  
 Plasma Gases : Air, Ar, N<sub>2</sub>, Ar+H<sub>2</sub>



**Note.**: Higher models Such as KALI 200F & KALI 500F are available for cutting higher thickness up to 200 mm.

### PLASMA CUTTING + WELDING MACHINE

Following models are combined for Air plasma Cutting and MMA/ TIG Welding

**Models** - KALI MFW  
 KALI 80FW



## MICRO PLASMA WELDING MACHINE

### INVERTERISED :

#### Model : MPW 25

Input : 1ph, 230Volts  $\pm 15\%$ , 50Hz, AC  
 Open Circuit Voltage : 100 VDC  
 Current range : 25 Amps  
 Cooled : Forced Air



#### Model : MPW 50

Input : 1ph, 230Volts  $\pm 15\%$ , 50Hz, AC  
 Open Circuit Voltage : 100 VDC  
 Current range : 50 Amps  
 Cooled : Forced Air



## IGBT MMAW/ TIG WELDING RECTIFIER SINGLE PHASE

### INVERTERISED :

#### Model : MINIWELD 100

Input : 1ph, 230Volts  $\pm 15\%$ , 50/60Hz  
 Open Circuit Voltage : 70-90 Volts  
 Current range : 3-100 Amps  
 80 Amps @ 60% duty Cycle  
 61 Amps @ 100% duty Cycle  
 Weight : 5 Kgs.



#### Model : MINIWELD 160

Input : 1ph, 230Volts  $\pm 15\%$ , 50/60Hz  
 Open Circuit Voltage : 70-90 Volts  
 Current range : 3-160 Amps  
 122 Amps @ 60% duty Cycle  
 95 Amps @ 100% duty Cycle  
 Weight : 8 Kgs.



#### Model : MINIWELD 230

Input : 1ph, 230Volts  $\pm 15\%$ , 50/60Hz  
 Open Circuit Voltage : 70-90 Volts  
 Current range : 3-210 Amps  
 160 Amps @ 60% duty Cycle  
 124 Amps @ 100% duty Cycle  
 Weight : 13 Kgs.



## PROFILE CUTTING

### MODEL : MINI OSTRICH

Portable profile cutting machine model "Mini Ostrich" Suitable to cut metal based template from 30mm dia to meter dia, with speed control pot, forward/reverse, toggle switch and tracer, having special facility of inner & outer circle cutting facility just by pressing the tracer in front and weighting only 58Kgs MODEL: Mini Ostrich with gas torch



### MODEL : OXY 1

Motorized trolley Model suitable for straight cutting with 1.8mtrs long track and circle cutting attachment. Straight line or circular cuts upto 180mm thickness.



### Featuers:

elvel cuts up 90 Degree  
 Internally asbestos line body with fibre glass insulated circuit  
 Dynamically balance armature for ultra smooth drive strong and solid construction for longer life  
 Precise control and proven performance

## PLASMA / GAS CNC PROFILE CUTTING PROJECTS

CNC Profile Cutting Machine Miniature type targeted at small and medium scale industries

### MODEL : CUB



Sizes Width : Upto 1,500mm with single torche

Length : Upto 6,000mm

Plasma Cutting interface upto 150mm cutting with beveling etc

## PLASMA / GAS CNC PROFILE CUTTING PROJECTS

### Model : PANTHER

CNC Profile Cutting Machines with advance features to meet requirements of entire Spectrum of industries Such as, Ship Building, Railways, Heavy Engg. Fabrication Etc. Auto Nesting, inventory Management, Job Marking, Auto Height Sensing anti collision and many advance features



Sizes Width : Upto 10,000 mm with multiple torches

Length : Upto 100,000 mm

Plasma Cutting interface upto 150mm cutting with beveling etc

## PIPE PLASMA / GAS CNC PROFILE CUTTING PROJECTS

### Model : PUMA

A Unique Solution to all your Pipe Profile cuttings needs. Available for all Pipe sizes it can either be chuck or conveyor driven.

Boon for Round Pipe / Rectangular Pipe Profile cutting applications.



CNC Pipe Profile Cutting Machines for

Pipe dia upto - 2000mm

Pipe Length - 5000 mm

Wall Thickness - 50mm

GAS / PLASMA Cutting inferface