

**ADOR WELDING LIMITED**



## **WELDING EQUIPMENT**

**SMAW EQUIPMENT | GMAW WELDING EQUIPMENT**  
**GTAW WELDING EQUIPMENT | SAW WELDING EQUIPMENT**



[www.adorwelding.com](http://www.adorwelding.com)

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## Welding Equipment



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## SOME BASICS TO KNOW



### MOST COMMON TYPES OF INSULATION CLASSES USED IN WELDING EQUIPMENT

The most common types of Insulation Classes, for which welding equipment are designed, are basically B, F and H. However electrical machines have following range of Insulation classes as per National and International standards. The maximum allowable temperatures are given below for these Insulation classes

- A = Class of Insulation --105 Deg. Centigrade
- E = Class of Insulation --120 Deg. Centigrade
- B = Class of Insulation --130 Deg. Centigrade
- F = Class of Insulation --155 Deg. Centigrade
- H = Class of Insulation --180 Deg. Centigrade
- C = Class of Insulation --220 Deg. Centigrade

### MOST COMMON TYPES OF ENCLOSURE PROTECTIONS USED IN WELDING EQUIPMENT

#### DEGREE OF INGRESS PROTECTION CLASS USED FOR ENCLOSURES OF WELDING EQUIPMENT

The most common Ingress Protection classes (IP class) used for the enclosure of the welding equipment are IP 21, IP 23 and IP 44. These protections classes of enclosures provide different degree of protection against Ingress of foreign body or particle and vertically falling water to the machines

- IP 21 • IP 23 • IP 44

#### FIRST DIGIT – Indicates protection against the ingress of foreign body or the particle

- 2 = Protection against ingress of foreign body / particle > 12 mm dia
- 4 = Protection against ingress of foreign body / particle > 1 mm dia

#### SECOND DIGIT – Indicates protection against the ingress of dripping or vertically falling water

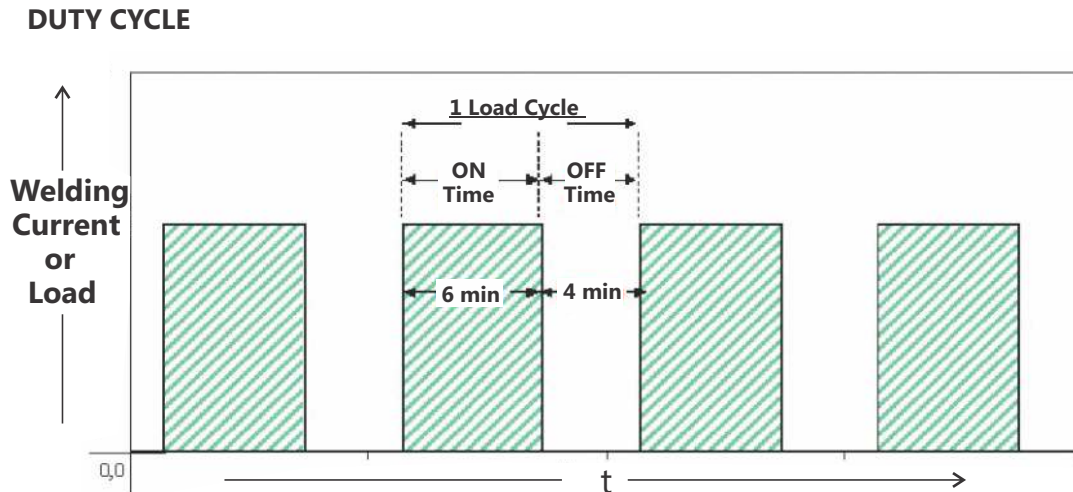
- 1 = Protection against ingress of water i.e.dripping or vertically falling water
- 3 = Protection against ingress of spraying or splashing water up to 60 degrees
- 4 = Protection against the ingress of the splashing water from any direction i.e. all round the machine

### MOST COMMON TYPES OF DUTY CYCLES USED IN WELDING EQUIPMENT

#### DUTY CYCLES OF WELDING EQUIPMENT

Welding equipment are never used continuously for manual or semiautomatic welding processes. The common duty cycles observed for majority of welding applications are 25%, 35%, 40%, 60%. However all welding equipment are also supposed to be specified for 100% duty cycles. The duty cycle of the machine or application indicates how severely machines will be used to complete the jobs to be welded. A typical duty cycle is explained on next page, which indicate the WELD time and OFF time observed during the welding of job. The total CYCLE TIME consists of one WELD time and one OFF time associated with the respective WELD time. The CYCLE TIMES are 5 minute and 10 minute as per Indian and International standards respectively.

## SOME BASICS TO KNOW



$$\begin{aligned}\% \text{ Duty cycle} &= \frac{(\text{ON Time}) \times 100}{(\text{ON Time} + \text{Off Time})} \\ &= \frac{6 \times 100}{(6 + 4)} = 60\%\end{aligned}$$

## FINDING CURRENT FOR THE REQUIRED DUTY CYCLE WHEN CURRENT IS SPECIFIED AT DIFFERENT DUTY CYCLE

### Present specs. are 400 A @ 60 % duty cycle

- Follow following steps to find the welding current at 100% duty cycle
- Losses @ d1 = Losses @ d2
- $(I_1)^2 \times r \times t_1 = (I_2)^2 \times r \times t_2$
- $(400 \times 400) \times 6 = (I_2)^2 \times 10$
- $(I_2)^2 = (6/10) \times 400 \times 400$
- $I_2 = \text{sq. root of } (6/10) \times 400$
- $I_2 = \text{sq. root of } 0.6 \times 400$
- $I_2 = 0.7746 \times 400$
- $I_2 = 309.8$
- $I_2 = 310$

### Present specs. are 310 A @ 100 % duty cycle

- Follow following steps to find the welding current at 60% duty cycle
- Losses @ d1 = Losses @ d2
- $(I_1)^2 \times r \times t_1 = (I_2)^2 \times r \times t_2$
- $(310 \times 310) \times 10 = (I_2)^2 \times 6$
- $(I_2)^2 = (10/6) \times 310 \times 310$
- $I_2 = \text{sq. root of } (10/6) \times 310$
- $I_2 = \text{sq. root of } 1.66 \times 310$
- $I_2 = 1.29 \times 310$
- $I_2 = 400.2$
- $I_2 = 400$

## SOME BASICS TO KNOW



### ELECTRODE TYPES / SIZES VS. RECOMMENDED WELDING CURRENTS

SN.	ELECTRODE TYPE	AWS TYPE	WELDING CURRENTS (AMPS) FOR ELECTRODE SIZE (DIA)						
			1.6MM	2.0MM	2.5MM	3.2MM	4.0MM	5.0MM	6.3MM
1.	Superbond	E6013	30-50	55 40-60	80 60-90	125 100-130	170 140-180	220 180-240	275
2.	Superbond-S	E6013	30-50	55 40-60	80 60-90	125 100-140	170 140-180	220 180-250	250-330
3.	Superbond-SS	E6013	30-50	40-60	90 60-90	135 100-140	180 140-190	240 190-250	300 250-330
4.	Supabase	E7018	40-60	50-70	80 60-90	125 100-140	170 150-200	200 200-240	275 270-360
5.	Supabase-X-Plus	E7018	40-60	50-70	80 60-90	125 90-140	170 150-190	225 200-250	300 270-320
6.	Celwel 70G	E7010-G	-	-	55 50-70	100 80-120	130 110-160	180 140-210	-
7.	Celwel 60	E6010	-	-	55 50-70	100 80-120	130 110-160	-	-

### GUIDING NOTES

#### 1. Recommended Polarities

- Superbond, Superbond-S, Superbond-SS = AC, DC (-)
- Supabase, Supabase-X-Plus = AC (70 OCV), DC (+)
- Celwel 60, Celwel 70G = DC(+) (for all passes), DC(-) (for root pass only)

#### 2. Recommended Welding Positions

- Superbond, Superbond-S, Superbond-SS, Celwel 60, Celwel 70G = All including vertical down (Vertical - Top to Bottom)
- Supabase, Supabase-X-Plus = All except vertical down (Vertical - Top to Bottom)

#### 3. Current Selection Generally Adapted

- For Downhand flat, horizontal and overhead positions = Current at middle of the range is used.
- For Vertical up (Bottom to Top) = Current at maximum of the range is used.
- For vertical down (Top to Bottom) = Current at maximum of the range or slightly more than maximum is used.
- For the same diameter, as the thickness of parent material increases, employed current is increased.

## SELECTION GUIDE

### WELDING & CUTTING EQUIPMENT & PROCESSES



## HELP ME CHOOSE

### THE BEST WELDING EQUIPMENT FOR DESIRED APPLICATION







#### STEP 1 METAL JOINING AND CUTTING PROCESS SELECTION

Select a process for a given metal you want to join or cut from the table given below

METAL TYPE	WELDING PROCESS						CUTTING PROCESS		
	STICK	MIG	FCAW	SAW	AC-TIG	DC-TIG	CAC-A-AC	CAC-A-DC	PLASMA
STEEL	✓	✓	✓	✓		✓		✓	✓
STAINLESS STEEL	✓	✓	✓	✓		✓		✓	✓
ALUMINIUM		✓			✓			✓	✓
CAST IRON	✓							✓	✓
COPPER, BRASS		✓				✓	✓		✓
TITANIUM						✓			✓
MAGNESIUM ALLOYS					✓				✓
SKILL LEVEL	MODERATE	LOW	LOW	MODERATE	HIGH	HIGH	MODERATE	MODERATE	HIGH

#### STEP 2 WELDING PROCESS SELECTION

It is possible that more than one welding process can be used for a given requirement. Hence to facilitate selection, study and understand the advantages of each process as given below.

A		SMAW / MMAW / STICK WELDING	Most suitable for outside/pendoor use One of jobs or less volume jobs. Better accessibility for intricate joints Ideal for dirty/rusty surfaces
B		GMAW/MIG/MAG/SEMI-AUTOMATIC/CONTINUOUS WELDING	Suitable for high welding productivity Most suitable for relatively thinner sheets Very neat and clean welding without slag removable Easy to learn for welders
C		FLUX CORED (FCAW) MIG/MAG	Suitable for deep penetration for welding thick sections with less nos. of runs Provides higher welding deposition rates Gives excellent weld bead shape
D		SUBMERGED ARC WELDING (SAW)	Most suitable where excellent mechanical properties are required Ideally suitable for heavy duty longitudinal structures like girders High deposition rates gives higher welding productivity Gives excellent weld bead shape
E		TIG WELDING (GTAW)	Used where highest quality welding required Gives precise welding with very good welding finish Most suitable for thinnest sheets where better heat input controls are required and very minimal distortions allowed
F		AIR PLASMA ARC CUTTING	Used with almost all electrical conducting metals. Distortion free, dross free, burr free, narrow kerf with clean cuts, compared to carbon ARC cutting.

## HELP ME CHOOSE



### THE BEST WELDING EQUIPMENT FOR DESIRED APPLICATION

#### STEP 3 ADDITIONAL CHECK LIST

Also check for following along with above mentioned process advantages

1.	<b>POWER SUPPLY CONDITIONS*</b>	• Stable / Unstable / Very Low / Very High voltage condition	
2.	<b>ENVIRONMENTAL CONDITIONS*</b>	• Chemical (Acidic) Contamination. Conducting Dust Contamination.	
3.	<b>BUDGET</b>	• Economy	

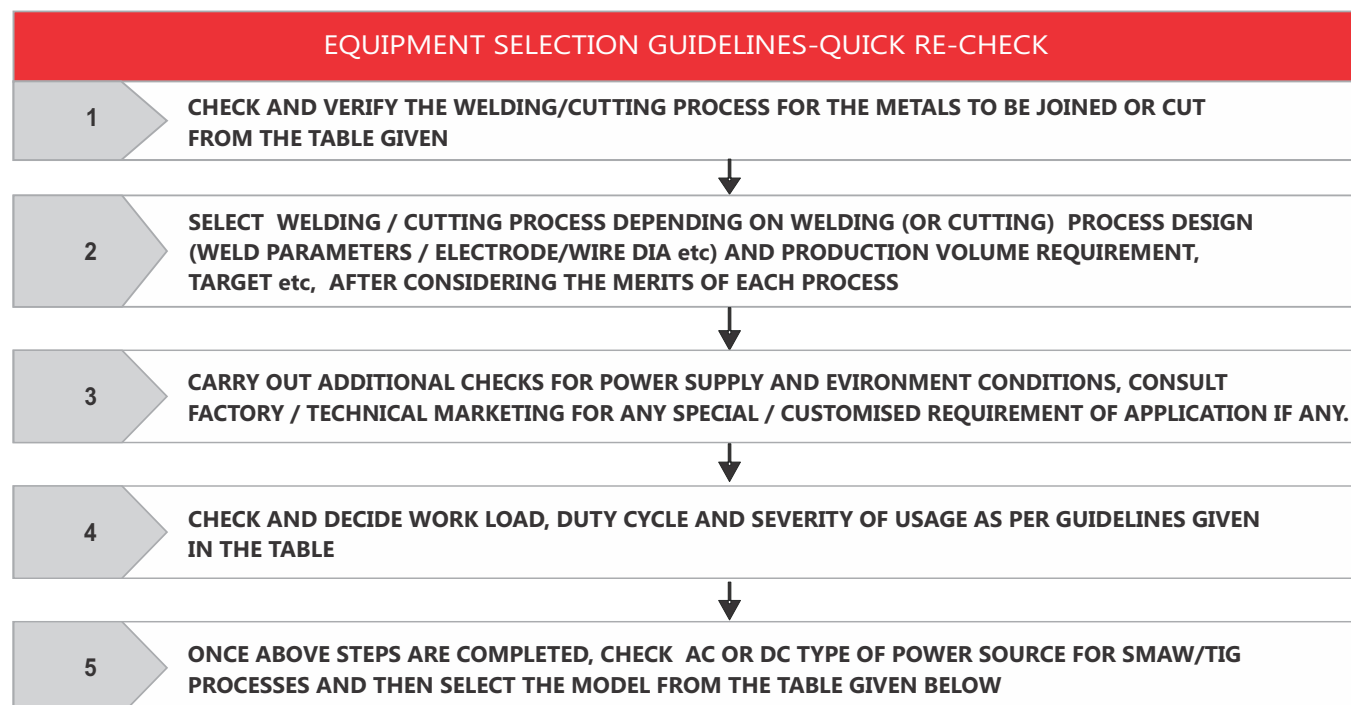
\* Consult factory / Technical Marketing Team for extreme supply and environmental conditions

#### STEP 4 SELECTION OF WORK LOAD AND DUTY CYCLE

Workload/usage/duty	Likely Duty Cycle	Welding Current Range Recommended
<b>Light Duty</b> - Single Shift	20 % to 35 %	Upto 225 Amps
<b>Medium Duty</b> - Single or Two Shift	>35 % to 60 %	225 Amps to 300 Amps
<b>Heavy Duty</b> - Two or Three Shift	>60% to 100 %	More than 300 Amps

#### STEP 5 MODEL SELECTION TABLE

Thus after selecting the process, duty cycle, and going through the additional checklist, please verify once again the steps completed so far as per following FLOW CHART as a QUICK RE-CHECK and select the model for your welding/cutting need from the model selection table





## WELDING TRANSFORMERS WITH FORCED AIR COOLING

### RED SERIES WELDING TRANSFORMERS



#### RED 400 (S) / RED 401 (S)

400 Amp capacity World Class Welding Transformer








- Single phase (2 lines of 3 phase) Welding Transformers
- User friendly AC ARC Welder
- Easily maneuverable from job to job on the shop-floor
- Stepless, smooth and infinitely variable current regulation
- Forced air cooled transformers - less coil temperature resulting in longer service life

### SALIENT FEATURES

- Smooth welding current control by modern moving core magnetic shunt design
- Stepless, smooth and infinitely variable current regulation
- Adjustment of welding current possible even while welding is in progress
- Current Indicator provided on side panel
- ON-OFF switch control and current control provided on the front panel
- A Special design provides for excellent dynamic characteristic and ensures smooth and optimum metal transfer

### SPECIFICATIONS

MODELS	UNIT	RED 400 (S)	RED 401 (S)
<b>INPUT</b>			
Supply Voltage 	Volts	415	415
Phases 	No.	2 lines of 3 phase	2 lines of 3 phase
Frequency		50	50
Input KVA @ 100% Duty Cycle 	KVA	19	12.6
Input switch fuse rating	A	80	63
Recommended Capacitor for P.F. improvement	KVAr	8	8
<b>OUTPUT</b>			
Output Characteristic 	Type	CC	CC
Operating Arc Voltage	Volts	22-36	22-36
Open circuit voltage 	Volts	80	70
Welding current range	A	60-400 in two overlapping ranges	60-400 in two overlapping ranges

Cont.







## RED 400 (S) / RED 401 (S)



400 Amp capacity World Class Welding Transformer

Cont.

Max. Continuous hand welding current @ 60% Duty Cycle		A	300	230
current @100% Duty Cycle		A	230	180
Max. Intermittent welding current		A	400	400
Welding Electrode range				
Minimum		mm	2	2
Maximum		mm	6.3	5
<b>GENERAL</b>				
Cooling		Type	Forced Air	Forced Air
Protection class		Class	IP23	IP23
Dimensions (approx.):				
Length		mm	745	730
Width		mm	460	415
Height		mm	540	490
Weight (approx.)		Kg.	98	81

- **Warranty** : One year from the date of commissioning. ADOR WELDING LIMITED warrants that all new equipment sold from Plant/Area Offices / Authorised Distributors are free from defects in materials and workmanship and will perform in full accordance with applicable specifications.
- In view of continuous development, ADOR WELDING LIMITED reserves the right to modify/change the design and/or the specifications without any prior notice.
- Backed by dedicated customer care package.



## RED SERIES WELDING TRANSFORMERS



### RED SERIES

A Wide Range of World Class Welding Transformers



- Single phase (2 lines of 3 phase) Welding Transformers
- Class F Insulation - enhances services life
- Easily maneuverable from job to job on the shop-floor
- Stepless, smooth and infinitely variable current regulation
- Forced air cooled transformers - less coil temperature resulting in longer service life
- User friendly AC ARC Welders



## TPA SERIES WELDING TRANSFORMERS



### TPA SERIES

A Wide Range of World Class Welding Transformers



- Three phase Welding Transformers
- User friendly AC ARC Welders
- Stepless, smooth and infinitely variable current regulation
- Convenient and easily maneuverable from job to job on the shop-floor
- 'Open-delta' design enables conversion of three phase input into single phase output
- Forced air cooled transformers - less coil temperature resulting in longer service life
- Compact and lightweight

### SALIENT FEATURES










- Smooth welding current control by moving core magnetic shunt design
- Stepless, smooth and infinitely variable current regulation
- Adjustment of welding current possible even while welding is in progress
- 1 swivel front wheel and 2 rear wheel arrangement for easy maneuverability
- ON-OFF switch control, current control and current indicator provided on the front panel
- A Special design provides for excellent dynamic characteristic and ensures smooth and optimum metal transfer - RED Series specifically recommended for low hydrogen electrodes

## RED / TPA SERIES WELDING TRANSFORMERS



A Wide Range of World Class Welding Transformers

Cont.

MODELS	UNIT	RED 403	RED 503	RED 603	TPA 403
<b>INPUT</b>	Volts	415	415	415	415
Supply Voltage 					
Phases 	No.	2 Lines of 3 Phase	2 Lines of 3 Phase	3	3
Frequency 	Hz	50	50	50	50
Input KVA @ 100 % Duty Cycle	KVA	19	25	28.4	19.0
Input switch fuse rating	A	80	100	80	80
Recommended Capacitor for P.F. improvement	KVAr	8	10	10	10
<b>OUTPUT</b>					
Output Characteristic 	Type	CC	CC	CC	CC
Operating Arc Voltage 	Volts	22-36	23-40	24-44	22-36
Open circuit voltage	Volts	80	80	80	80
Welding current range	A	60-400	80-500	100-600	60-400
Max. Continuous hand welding current @ 60% Duty Cycle	A	300	400	450	300
current @100% Duty Cycle 	A	230	300	350	230
Max. Intermittent welding current	A	400	500	600	400
Welding Electrode range					
Minimum	mms	2	2.5	2	2
Maximum	mms	6.3	6.3	6.3	6.3
<b>GENERAL</b>					
Class of Insulation	Class	F	F	F	A
Cooling Type 	Type	Forced Air	Forced Air	Forced Air	Forced Air
Protection class	Class	IP23	IP23	IP23	IP23
Dimensions (mms) L 	mms	720	745	820	800
W	mms	460	500	560	500
H	mms	750	780	850	850
Weight (approx.) 	kgs.	110	132	160	160

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## WELDING TRANSFORMERS WITH NATURAL AIR COOLING

### DOUBLE MUSTANG / DOUBLE RACER DOUBLE HORSE / DOUBLE STALLION



Thoroughbred Series AC ARC Welding Transformers



- Light weight and compact transformers with robust construction - Ideal choice for site usage
- Natural air cooled transformers - coils designed for natural air cooling which eliminates the use of fan and thus risk of coil burning whenever fan fails
- Specially designed transformer coils with minimum joints and better interlayer insulation -eliminates the coil failure and enhances service life of transformer
- Stepless, infinitely variable current adjustment through sturdy and smooth moving core mechanism
- Stepless, smooth and infinitely variable current adjustment possible even while welding is in progress

### SALIENT FEATURES








- Ensures the fine control of welding current to minimise the heat input to the job which reduces the HAZ
- Dynamic output characteristics ensures smooth and uninterrupted arc resulting excellent welding performance throughout the entire welding range
- Provided with input power ON-OFF switch
- Welder friendly usage - easy to operate since all controls like ON-OFF switch, welding current controlling handle, current scale on the same side i.e. front side

## DOUBLE MUSTANG / DOUBLE RACER DOUBLE HORSE / DOUBLE STALLION



### Thoroughbred Series AC ARC Welding Transformers

Cont.

SPECIFICATIONS	UNIT	DOUBLE MUSTANG	DOUBLE RACER	DOUBLE HORSE	DOUBLE STALLION
<b>INPUT</b>	Volts	230/400	415	415	415
Voltage Supply Phases 	No.	1	1	1	1
		(.....2 Lines of 3 Phase AC.....)			
Frequency	Hz	50	50	50	50
Input KVA @ 100% Duty Cycle	KVA	10.5	16.0	21.0	25.5
Recommended Capacitor for PF improvement	KVAr	5.0	8.0	9.0	11.0
<b>OUTPUT</b>					
Open Circuit Voltage 	V	66	80	80	80
Welding Current Range 	A	35-250	50-300	60-400	80-500
		(.....Single Range Control.....)			
Maximum intermittent welding current at 35% duty	A	250	300	400	500
Maximum continuous welding current at 60% duty cycle 	A	190	225	300	375
Maximum automatic welding current at 100% duty cycle	A	150	175	230	300
<b>GENERAL SPECIFICATIONS</b>					
Type of Cooling 		(.....Natural Air Cooled.....)			
Insulation	Class	H	H	H	H
Recommended electrode size/range	mm	2-5	2-2.6	2-6.3	2.5-6.3
Overall dimensions:					
Length 	mm	590	650	650	650
Width	mm	425	475	500	550
Height	mm	660	700	725	755
Weight (approx.) 	kg	92	120	140	170

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## E-WELMAC 190




E-WELMAC AC ARC Welding Transformers



- Light weight, compact AC arc welding transformer - easy to mobilise at sites
- Single phase, natural air cooled transformer with robust construction
- Most reliable and simple transformer - very convenient and welder friendly to use at sites
- Infinitely variable current adjustment through sturdy and smooth moving core mechanism

### SALIENT FEATURES

- Welding current adjustment possible even while welding is in progress
- Dynamic output characteristics ensures smooth and uninterrupted arc resulting excellent welding performance throughout the entire welding range
- H-class insulation of windings enhances reliability and service life
- Provided with input power ON-OFF switch

MODELS	UNIT	E-WELMAC 190
<b>INPUT</b>	Volts	230
Input Supply:	No.	1
Voltage	Hz	50
Phases 		
Frequency	KVA	5.5
Input KVA @ 100% Duty Cycle		







Cont.

## E-WELMAC 190

### E-WELMAC AC ARC Welding Transformers



Cont.

OUTPUT			
Open Circuit Voltage		Volts	50
Welding Current Range		Amps	30-150
Current:			
@20% duty cycle		Amps	200
@60% duty cycle		Amps	115
@100% duty cycle		Amps	90
Welding Electrode range		mm	2.0-4.0
GENERAL			
Cooling		Type	-----Natural Air Cooled-----
Dimensions (approx.):		Class	H
Length		mm	340
Width		mm	315
Height		mm	500
Weight (approx.)		Kg.	39

- **Warranty:** One year from the date of commissioning. ADOR WELDING LIMITED warrants that all new equipment sold from Plant/Area Offices / Authorised Distributors are free from defects in materials and workmanship and will perform in full accordance with applicable specifications.
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## GL SERIES WELDING RECTIFIERS (DIODE BASED)



A Wide of World Class Welding Rectifiers



### SALIENT FEATURES

- Transductor controlled rectifier units.
- 600 Amps ideally suited for gouging application
- Welding rectifiers based on most simple, reliable and maintenance free diode based technology.
- These welding rectifiers are built with most robust and rugged mechanical construction which withstand rough handling at construction and project sites.
- Welding current adjustment and regulation through electromagnetic transductor resulting stepless and smooth current control.

- These welding rectifiers are welder friendly - Very easy to use and operate, maintain and service by ordinary electricians.
- Single knob current control from the front panel or remote control unit (provided optionally.)

- Easy parallel connection of these welding rectifiers possible for high current gouging applications.
- These welding rectifiers can be also used for DC TIG welding applications by connecting suitable TIG control units.




### APPLICATIONS

- Most simple, robust and reliable welding rectifiers ideally recommended for heavy duty structural welding of construction equipment like crane, steel foundries, steel and fertiliser plants, shipyards.
- These welding rectifiers are ideally suitable for heavy fabrication shops, project sites with harsh

environment, where maintenance staff is not well equipped and qualified.

- GL 601 is most recommended for heavy duty welding and gouging applications in foundries, steel plants, heavy engineering workshops etc.

### SPECIFICATIONS

Technical Specifications		Unit	GL 401	GL 601
<b>Input</b>				
Input Supply :				
Supply Voltage		Volt	400/440	400/440
Phase		No	3	3
Frequency		Hz	50	50
Input KVA @ 100% duty cycle		KVA	26	38.5
Input Current @ 100% duty cycle		A	45	70
Recommended switch fuse rating		A	TP50	TP80

Cont.







## GL SERIES WELDING RECTIFIERS (DIODE BASED)



A Wide of World Class Welding Rectifiers

Cont.

Output				
Output Characteristic		Type	CC	CC
Open circuit voltage		Volts	80	80
Welding current range		A	50-400	80-600
@ 35% duty cycle		A	NA	NA
@ 60% duty cycle		A	400	600
@ 100% duty cycle		A	310	465
General				
Class of Insulation		Class	B	B
Cooling Type		Type	Fan cooled	
Protection class		Class	IP23	IP23
Dimensions (mm)				
Length		mm	840	907
Height		mm	705	750
Width		mm	905	1005
Weight (approx.)		Kg	275	430

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**THYROLUXE 401**



**THYROLUXE 600**

## THYROLUXE 401 / THYROLUXE 600



Heavy Duty Thyristor based DC Welders



THYROLUXE 401 and 600 are a series of most reliable and dependable workhorse SMAW welding machines, proven for a wide range of applications. The Thyristor based power source with Dual Star Radial Rectifier full controlled Thyristor bridge, Interphase Reactor and DC Choke enables welder to obtain the desired arc current with ease. The equipments have a rugged design, with reliable performance, superior arc characteristics and minimum maintenance requirements.

### SALIENT FEATURES

- Suitable for Heavy duty Welding application.
- Smooth and stable arc with minimum spatter.
- Stepless current control.
- Welder friendly Remote controller for easy and convenient setting of current from workplace / job.
- Easy arc striking, High OCV for ease in arc start / restart.
- Superior welding performance for the complete welding current range.
- Ideal constant current drooping characteristics.
- Protections against input supply fluctuations i.e. Under voltage, Over voltage, Single-phasing, overload and short circuit.
- Power sources are provided with built in Hot start, Antistick and self-controlled Arc force dynamics.
- Worry-free on maintenance.
- Power sources can be optionally provided with built in VRD to provide safe low voltage of 12-18 V during no-weld condition, RCCB protection at input and Digital Meters

### SPECIFICATIONS

Technical Specifications	Thyroluxe 401	Thyroluxe 600	Unit
<b>INPUT</b>			
Input Supply Voltage, Phase, Frequency	415 +10% / -10%, 3, 50 / 60	415 +10% / -10%, 3, 50 / 60	V Ac, No., Hz
Input Kva @ 100% Duty Cycle	19.5	31.5	
Input Current @ 100% Duty Cycle	26	44	Kva
Recommended Switch Fuse Rating	TP 35	TP 63	A Ac

Cont.

## THYROLUXE 401 / THYROLUXE 600



### Heavy Duty Thyristor based DC Welders

Cont.

OUTPUT			
Open Circuit Voltage	100	100	V DC
Welding Current Range	10 -400	20 - 600	A DC
Current:			
@60% duty cycle	400	600	A DC
@100% duty cycle	310	465	A DC
GENERAL			
Welding Electrode Size	2.5, 3.15, 4.0,5.0 And 6.3	2.5, 3.15, 4.0,5.0 And 6.3	Mm
Current Display	Analog	Analog	Type
Ingress Protection	Ip23	Ip23	Grade
Cooling	Forced Air	Forced Air	Type
Insulation	H	H	Class
Dimensions (l X W X H)	835 X 495 X 820	980 X 550 X 960	Mm
Weight	147	216	Kg
ORDERING INFORMATION	THYROLUXE 401	THYROLUXE 600	
Power Source	F.10.34.401.0060	F10.34.401.0072	
Optional Accessories			
Welding Accessories-wac 400	S10.64.001.0014	-	
Welding Accessories-wac 600	-	S10.64.001.0015	

- **Warranty:** One year from the date of commissioning. ADOR WELDING LIMITED warrants that all new equipment sold from Plant/Area Offices / Authorised Distributors are free from defects in materials and workmanship and will perform in full accordance with applicable specifications.
- In view of continuous development, ADOR WELDING LIMITED reserves the right to modify/change the design and /or the specifications without any prior notice.
- Backed by dedicated customer care package.



## THYROLUXE 1000 THYROLUXE 1200







The world class Thyristor based DC welders



### SALIENT FEATURES

- Thyristor based heavy duty DC Welding and Gouging Rectifiers.
- Stepless control for current adjustments.
- Protections against supply fluctuations i.e Under voltage, Over voltage, Single phasing, over load and short circuit.
- Constant current drooping characteristics – Ideal for Welding and Gouging applications.
- Power source provided with built in Hot start, Antistick and self controlled Arc force dynamics.
- Smooth and stable arc with minimum spatters
- Welder friendly Remote controller for easy and convenient setting of current from the work place or the job

### SPECIFICATIONS

Technical Specifications	Unit	THYROLUXE 1000	THYROLUXE 1200
<b>INPUT</b>			
Input Supply:	Volts	415 , +10%, -10%	415 , +10%, -10%
Voltage	No.	3	3
Phase 	Hz	50/60	50/60
Frequency			
Max. rated Input KVA	KVA	81	96.5
<b>OUTPUT</b>			
Open Circuit Voltage 	Volts DC	100	100
Welding Current Range	Amps DC	100-1000	100-1200
Current:			
@40% duty cycle 	Amps DC	1000	-
@60% duty cycle 	Amps DC	850	1200
@100% duty cycle	Amps DC	650	930




Cont.

## THYROLUXE 1000 THYROLUXE 1200



The world class Thyristor based DC welders

Cont.

GENERAL				
Suitable Gouging Carbon Electrode size	mmØ	6 to 12 mm	6 to 12 mm	
Current Display		Analog	Analog	
Ingress Protection	Class	IP23	IP23	
	Type	Forced Air	Forced Air	
Cooling 	Class	H	H	
Insulation				
Dimensions				
Length 	mm	1130	1200	
Width	mm	770	770	
Height	mm	1080	1175	
Weight (approx.) 	Kg.	403	450	

- **Warranty:** One year from the date of commissioning. ADOR WELDING LIMITED warrants that all new equipment sold from Plant/Area Offices / Authorised Distributors are free from defects in materials and workmanship and will perform in full accordance with applicable specifications.
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## CHAMP 200








The world class Inverter based DC Welder



### SALIENT FEATURES

- Single phase High efficiency DC Welder
- High frequency IGBT based PWM Inverter
- Light weight, compact and portable for easy handling
- Compatible to power generator supply
- Hot start feature available
- Smooth and stable arc with minimum spatter
- TIG welding with scratch/Lift arc start
- Provided with the UV, OV thermal and line Voltage (415V) Protections

### SPECIFICATIONS

Technical Specifications	Unit	CHAMP 200
<b>Input</b>		
Input Supply :		
Voltage 	Volt	240, +10%, -15%
Phase	No	1
Frequency	Hz	50/60
Max input KVA @ 100% duty cycle 	KVA	5
Efficiency	%	>84
<b>Output</b>		
Open Circuit Voltage @ 240 Vac 	Volt	68 +/-3
Welding Current Range 	Amps	10-200
Welding Current (40°C 10 minute cycle)		
@ 35% duty cycle	Amps	200
@ 60% duty cycle 	Amps	150
@ 100% duty cycle	Amps	120
<b>General</b>		
Suitable Welding Electrode size	mm Ø	1.6, 2.5, 3.2 and intermittent 4
Hot Start 	-	120% of the set current
Antistick	-	Built in
Ingress Protection	Class	IP23
Cooling 	Type	Forced Air
Insulation	Class	F
Welding Output Terminals		Stud type / Camlock



Cont.

## CHAMP 200



The world class Inverter based DC Welder

Cont.

Technical Specifications	Unit	CHAMP 200
<b>General</b>		
Dimensions		
Length 	mm	415
Width	mm	155
Height	mm	300
Weight (approx.) 	Kg	7

- **Warranty**: One year from the date of commissioning. ADOR WELDING LIMITED warrants that all new equipment sold from Plant/Area Offices / Authorised Distributors are free from defects in materials and workmanship and will perform in full accordance with applicable specifications.
- In view of continuous development, ADOR WELDING LIMITED reserves the right to modify/change the design and/or the specifications without any prior notice.
- Backed by dedicated customer care package.



## CHAMP 250



The world class Inverter based DC Welder








### SALIENT FEATURES

- Three phase PWM controlled inverter based, high efficiency and high power factor heavy duty DC welder
- Enhanced Reliability due to SMD technology
- High frequency IGBT based Rectifier
- Arc force adjustment on panel
- TIG Welding possible with External HF Unit
- Light weight, compact and portable for easy handling
- High efficiency
- Built in Hot Start
- Smooth and stable arc with minimum Spatter

### PROTECTIONS WITH AUTO RESET

- Input Supply Voltage protections for over and under Voltage
- Over Temperature
- Protection against Single phasing

### SPECIFICATIONS

Technical Specifications	Unit	CHAMP 250
<b>Input</b>		
Input Supply :		
Voltage 	Volt	415, +15%, -10%
Phase	No	3
Frequency	Hz	50/ 60
Input KVA @ 415 Vac 		
@ 100% duty cycle	KVA	7.5
@ No Load	KVA	0.15
Power Factor	CosØ	0.94
Efficiency	%	85
<b>Output</b>		
Open Circuit Voltage 	Volt	84
Welding Current Range 	Amps	10-250
Welding Current (40°C 10 minute cycle)		
@ 60% duty cycle	Amps	250
@ 100% duty cycle 	Amps	195

Cont.







## CHAMP 250



The world class Inverter based DC Welder

Cont.

General		
Suitable Welding Electrode size	mm Ø	1.6, 2.5, 3.2, 4 and intermittent 5 mm
Arc force setting 	-	Adjustable by Potentiometer
Built in Hot Start	-	25% more than set current for 2 seconds
Current Display (Actual)		3 digit –7 segment digital panel pcb
Ingress Protection	Class	IP23
Cooling 	Type	Forced Air
Insulation	Class	H
Insulation		
Dimensions		
Length 	mm	520
Width	mm	260
Height (with handle)	mm	450
Height (without handle)	mm	410
Weight (approx.) 	Kg	26

- **Warranty:** One year from the date of commissioning. ADOR WELDING LIMITED warrants that all new equipment sold from Plant/Area Offices / Authorised Distributors are free from defects in materials and workmanship and will perform in full accordance with applicable specifications.
- In view of continuous development, ADOR WELDING LIMITED reserves the right to modify/change the design and /or the specifications without any prior notice.
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## CHAMP 300



The world class Inverter based DC Welder



### TYPICAL APPLICATIONS

- Three phase inverter based, high efficiency and high power factor DC Welder
- High frequency IGBT based Rectifier
- Arc force adjustment on panel.
- TIG Welding possible with External HF Unit handling
- Light weight, compact and portable for easy handling
- Auto-selection of Remote control when Remote controller (optional) is plugged into the machine
- Can be equipped with VRD, ELCB, Current and Voltage Dual-display meters as optional features



### SALIENT FEATURES

- IGBT based latest PWM inverter technology
- High efficiency
- High OCV and suitable for all types of electrodes.
- Smooth and stable arc with minimum spatter
- Controls provided for adjustments of Arc force
- TIG operation possible with external HF TIG Control unit.

### PROTECTIONS WITH AUTO RESET

- Input Supply Voltage protections for over and under Voltage
- Over Temperature
- Protection against Single phasing

### SPECIFICATIONS

Technical Specifications	Unit	CHAMP 300
<b>Input</b>		
Input Supply :		
Input Supply Voltage, Phase, Frequency 	V Ac, No., Hz	415 , +15%, -10%, 3, 50 / 60
Input KVA @ 415V Supply 	KVA	0.2 @ No Load, 10.5 @ 100% Duty Cycle, 13.5 @ 60% Duty Cycle, 17 @ 35% Duty Cycle
Input Current @ 415V Supply	I AC	0.24 @ No Load, 14.5 @ 100% Duty Cycle, 18.5 @ 60% Duty Cycle, 23.5 @ 35% Duty Cycle
Power Factor	$\lambda$	0.72 Max.






Cont.

## CHAMP 300



The world class Inverter based DC Welder

Cont.

Efficiency		%	>82
<b>Output</b>			
Open Circuit Voltage		V DC	88 V DC + / - 5 V
Welding Current Range		A DC	10-300
Welding Current (40°C, 10 Minute Duty Cycle)		A DC	300 @ 35% Duty Cycle, 250 @ 60% Duty Cycle, 200 @ 100% Duty Cycle
Arc Force Control		A DC	0 - 80 A More Than Set Current
<b>General</b>			
Suitable Welding Electrode size		mm Ø	2.5 - 5 mm For E-6013 & E - 7018, 2.5 - 3.2 For E - 6010
Current Display (Set Current & Actual Current)		A	3 Digit -7 Segment Digital Panel Meter
Remote Control (optional)		10 Meter	Provided As Optional For Current Setting.
Front Panel Functions			1) MMA / Tig Mode Selection Switch. 2) Current & Arc Force Adjustment Pot. 3) Mains on 'green' Colour Led Indication 4) Trip - 'red' Colour LED Indication of "Machine Under Protection Mode". 5) Dpm For Display Of Set Current & Actual Current
Protection (Auto Resettable)			
Ingress Protection		Degree	IP23 S
Cooling		Type	Forced Air
Insulation		Class	H
Dimensions (L x W x H)		mm	536 x 200 x 345
Weight (approx.)		Kg	20

- **Warranty:** One year from the date of commissioning. ADOR WELDING LIMITED warrants that all new equipment sold from Plant/Area Offices / Authorised Distributors are free from defects in materials and workmanship and will perform in full accordance with applicable specifications.
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## CHAMP T400

The world class Inverter based DC Welder







### SALIENT FEATURES

- Three phase IGBT inverter based, high efficiency and high power factor DC Welder
- High OVC and suitable for Long distance welding and cellulosic electrodes
- Enhanced Reliability due to SMD technology
- Capable of Welding with all types of cellulosic electrodes including 6010, 7010G and 8010G I HF Unit
- High frequency IGBT based Rectifier
- Arc force adjustment on panel
- TIG Welding possible with External HF Unit
- Light weight, compact and portable for easy handling
- Capable of Welding with 100 meter + 100 meter welding and return cables
- Smooth and stable arc with minimum spatter
- Controls provided for adjustments of Arc force
- TIG operation possible with external HF TIG Control unit

### PROTECTIONS WITH AUTO RESET

- Input Supply Voltage protections for over and under Voltage
- Over Temperature
- Protection against Single phasing

### SPECIFICATIONS

Technical Specifications		Unit	CHAMP T400
<b>Input</b>			
Input Supply :			
Voltage		Volt	415 , +15%, -10%
Phase		No	3
Frequency		Hz	50/ 60
Input KVA @ 415 Vac			
@ 100% duty cycle		KVA	14
@ No Load		KVA	0.24
Power Factor		CosØ	Upto 0.93
Efficiency		%	≥ 85
<b>Output</b>			
Open Circuit Voltage		Volt	85 V DC
Welding Current Range		Amps	10-400
Welding Current (40°C)			





Cont.

## CHAMP T400



The world class Inverter based DC Welder

Cont.

@ 60% duty cycle (10 minute cycle)	Amps	400
@ 100% duty cycle 	Amps	310
<b>General</b>		
Suitable Welding Electrode size	mm Ø	2.5, 3.2, 4, 5 and 6.3 mm
Arc force setting 	-	Adjustable by Potentiometer
Current Display (Set Current & Actual Current)	A	3 digit –7 segment digital panel pcb
Ingress Protection		IP23
Cooling 	Class	Forced Air
Insulation	Type	H
Welding Output Terminals	Class	Stud type for Lug type cable connections
Dimensions L x W x H	mm	660 X 305 X 530
Weight (approx.) 	Kg	40

- **Warranty** : One year from the date of commissioning. ADOR WELDING LIMITED warrants that all new equipment sold from Plant/Area Offices / Authorised Distributors are free from defects in materials and workmanship and will perform in full accordance with applicable specifications.
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## CHAMP 500 / CHAMP 600



The world class Inverter based DC Welder





### SALIENT FEATURES

- Three phase inverter based, high efficiency and high power factor DC Welders
- Enhanced Reliability due to SMD technology
- High frequency IGBT based Rectifier
- Arc force adjustment on panel
- TIG Welding possible with External HF Unit
- Suitable for all electrodes including 6010, 7010G and 8010G
- Latest PWM inverter technology
- Smooth and stable arc with minimum spatter
- Suitable for Gouging Application and long distant welding
- Arc force adjustments provided on the front panel
- TIG operation possible with external HF TIG Control unit.

### PROTECTIONS WITH AUTO RESET

- Input Supply Voltage protections for over and under Voltage
- Over Temperature
- Protection against Single phasing

### SPECIFICATIONS

Technical Specifications	Unit	CHAMP 500	CHAMP 600
<b>Input</b>			
Input Supply :			
Voltage 	Volt	415 , +15%, -10%	
Phase	No	3	
Frequency	Hz	50/ 60	
Input KVA @ 415 Vac 			
@ 100% duty cycle	KVA	17.5	22.0
@ No Load	KVA	0.27	0.31
Power Factor	CosØ	0.93	
Efficiency	%	87	






Cont.

## CHAMP 500 / CHAMP 600



The world class Inverter based DC Welder

Cont.

Output				
Open Circuit Voltage		Volt	89	
Welding Current Range		Amps	20-500	20-600
Welding Current (40°C 10 minute cycle)				
@ 60% duty cycle		Amps	500	600
@ 100% duty cycle		Amps	387	465
General				
Suitable Welding Electrode size		mm Ø	2.5, 3.2, 4, 5 and 6.3 mm	
Suitable for Gouging Electrode Size		mm Ø	Max. up to 9mm	Max. up to 9 mm 12mm –limited use
Arc force setting			Adjustable by Potentiometer	
Current Display (Actual)			4 digit –7 segment digital panel pcb	
Ingress Protection		Class	IP23	
Cooling		Type	Forced Air	
Insulation		Class	H	
Welding Output Terminals			Stud type for Lug type cable connections	
Dimensions				
Length		mm	700	
Width		mm	460	
Height (with handle)		mm	575	
Height (without handle)		mm	630	
Weight (approx.)		Kg	57	58

- **Warranty:** One year from the date of commissioning. ADOR WELDING LIMITED warrants that all new equipment sold from Plant/Area Offices / Authorised Distributors are free from defects in materials and workmanship and will perform in full accordance with applicable specifications.
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## CHAMP 1200 - GOUGEMASTER



The world class Inverter based DC Welder with High Current Gouging Facility



### GENERAL

- Three phase inverter based, high efficiency and high power factor DC Welder
- Suitable for normal Electrode Welding as well as gouging at high currents
- Enhanced Reliability due to SMD technology

### PROTECTIONS WITH AUTO RESET

- Input Supply Voltage protections for over and under Voltage
- Over Temperature
- Protection against Single phasing

### SPECIFICATIONS

Technical Specifications	Unit	Champ 1200
<b>Input</b>		
Input Supply :		
Voltage	Volt AC	415 , +15%, -10%
Phase	No	3
Frequency	Hz	50/ 60
Max Input KVA @ @ 100% duty cycle	KVA	55
Input Supply Current @ 100% duty cycle (1000 Amps)	Amps, AC	76
Input Supply Current @ 60% duty cycle (1200 Amps)	Amps, AC	92
Power Factor @ 100% duty cycle		0.93
Efficiency @ 100% duty cycle	%	≥ 85
<b>Output</b>		
Open Circuit Voltage	Volt,DC	90
Welding Current Range	Amps,DC	100-1200
Welding Current (40°C 10 minute cycle)		
@ 60% duty cycle	Amps,DC	1200
@ 100% duty cycle	Amps,DC	1000

Cont.



## CHAMP 1200 - GOUGEMASTER



The world class Inverter based DC Welder with High Current Gouging Facility

Cont.

General		
Suitable Welding Electrode size	mm Ø	3.2, 4, 5 and 6.3 mm
Suitable for Gouging Electrode Size	mm Ø	Up to 12 mm
Remote Control (Optional)		10 meter Remote Control provided as optional for current setting
Ingress Protection	Class	IP23
Cooling	Type	Forced Air
Insulation	Class	H
Welding Output Terminals		Stud type for Lug type cable connections
Dimensions		
Length	mm	930
Width	mm	525
Height (with handle)	mm	950
Weight (approx.)	Kg	115
Front Panel Functions		'MAINS ON' - Green LED Indication
		'MMA/GOUGING' - Red LED Indication
		'REMOTE ON' - Red LED Indication
		'TRIP' - Red LED Indication if Machine is under Protection Mode
		Current Adjustment Encoder
		4 Digit Digital Display for Current and Voltage
Protections (Auto - Reset)		Over Voltage, Under Voltage, Single Phasing
		Over Temperature

- **Warranty** : One year from the date of commissioning. ADOR WELDING LIMITED warrants that all new equipment sold from Plant/Area Offices / Authorised Distributors are free from defects in materials and workmanship and will perform in full accordance with applicable specifications.
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## CHAMPCUT 100

The world class Inverter based Air Plasma Cutting Outfit



### TYPICAL APPLICATION

- Three phase inverter based, high efficiency cutting outfit
- Ideal for Heavy duty production jobs
- Suitable for manual cutting as well as with CNC machine
- High frequency IGBT based PWM Inverter
- Enhanced reliability due to SMD technology
- Seven Segment LED display for set and actual cutting current for precise control of cutting current.
- Air pressure indicating meter is provided on front panel
- Emergency stop push button stops the cutting operation instantly in case of emergency.



### SALIENT FEATURES

- Latest inverter based technology
- Emergency stop push button is provided on front panel
- Micro-controller Based control provides precise control on sequence of operation and its interlocking.
- Capability to interface with CNC controllers
- Post flow cooling provides torch cooling after the cut for longer torch life
- Safety device signal provided on front panel for
  - a) Low air pressure
  - b) Thermal failure
  - c) Mains voltage higher or lower than limit..

### PROTECTIONS WITH AUTO RESET

- Under-voltage / Over-voltage protection.
- Thermal protection.
- Low air pressure

### SPECIFICATIONS

Technical Specifications	Unit	CHAMPCUT 100
<b>Input</b>		
Input Supply :		
Voltage 	Volts AC	370 -470
Phase	No	3
Frequency	Hz	50/60
Max input KVA @ 100% duty cycle 	KVA	15.4
Current @ 100% Duty Cycle	Amps AC	23






Cont.

## CHAMPCUT 100



The world class Inverter based Air Plasma Cutting Outfit

Cont.

Output			
Pilot ARC Current		Amps DC	≤ 20
Cutting Current (40°C) @100% Duty cycle		Amps DC	100
Open Current Voltage @415VAC Input Supply		Volts DC	320 +/- 10V
Efficiency @ 100% duty cycle		%	>88
Cutting Current Range		Amps DC	20 - 100
Maximum Cutting Thickness (Severance)		mm	35
Optimum Cutting Thickness		mm	25
Machine Used Protect Cutting Thickness		mm	≤ 20
General			
Front Panel Functions			1) Cutting Current Adjustment Pot 2) Mains LED, Green 3) Trip LED, Red 4) Cutting LED Yellow 5) Switch to Select 2T/4T Functions 6) Switch for Air Check 7) LED Display for Displaying The Cutting Range
Protection (Auto Resettable)			Thermal, UV,-OV, Low Pressure, Emergency Stop Switch
Cooling		Type	Forced Air
Class of Insulation			H
Degree of Protection			IP21
Air Pressure		MPA/BAR	0.45-0.55 / 4.5-5.5
Dimensions (L x W x H)		mm	620 x 300 x 526
Weight (approx.)		Kg	43

- **Warranty** : One year from the date of commissioning. ADOR WELDING LIMITED warrants that all new equipment sold from Plant/Area Offices / Authorised Distributors are free from defects in materials and workmanship and will perform in full accordance with applicable specifications.
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- Backed by dedicated customer care package.



## CHAMPCUT 25C

The world class inverter based Plasma Cutting Machine



### TYPICAL APPLICATION

- Three phase inverter based, soft switching technology high efficiency and high cutting capacity Plasma Cutting Machine
- Suitable for both manual and mechanized cutting operation with suitable Cutting Torch
- High Frequency arc striking for ease of operation
- Digital display for precise setting of cutting current
- Time delay function provides effective protection to cutting torch
- Self Hold ON / OFF setting feature makes themachine typically suitable for use with Automatic CNC Cutting outfit

### SPECIFICATIONS

Technical Specifications	Unit	CHAMPCUT 25C
Characteristic Control		IGBT Inverter Based
Characteristics	Type	Constant Current
<b>Input</b>		
Input Supply Voltage	Volts AC	380 - 415
Phase		3
Frequency	No.	50/60
Rated Input Power	Hz	14.5
<b>Output</b>		
Cutting Current Range	Amps, DC	30-100
Cutting Current @100% Duty Cycle	Amps, DC	100
<b>General</b>		
Maximum Severing Capacity	mm	40
Optimal Cutting Capacity	mm	1-20
Maximum Machine (Automatic) Cutting	mm	≤ 15
Nominal Air Pressure	Mpa/Bar	0.45 / 4.5
Dimensions (L X W X H)	mm	550 / 300 / 500
Weight (Approx)	kg	40

- **Warranty:** One year from the date of commissioning. ADOR WELDING LIMITED warrants that all new equipment sold from Plant/Area Offices / Authorised Distributors are free from defects in materials and workmanship and will perform in full accordance with applicable specifications.
- In view of continuous development, ADOR WELDING LIMITED reserves the right to modify/change the design and/or the specifications without any prior notice.
- Backed by dedicated customer care package.



## CHAMPCUT 150

The world class Inverter based Air Plasma Cutting Outfit



### TYPICAL APPLICATION

- Three phase inverter based, high efficiency cutting outfit
- Ideal for Heavy duty production jobs
- Suitable for manual cutting as well as with CNC machine
- High frequency IGBT based PWM Inverter
- Enhanced reliability due to SMD technology
- Seven Segment LED display for set and actual cutting current for precise control of cutting current.
- Air pressure indicating meter is provided on front panel
- Emergency stop push button stops the cutting operation instantly in case of emergency.



### SALIENT FEATURES

- Latest inverter based technology
- Emergency stop push button is provided on front panel
- Micro-controller Based control provides precise control on sequence of operation and its interlocking.
- Capability to interface with CNC controllers
- Post flow cooling provides torch cooling after the cut for longer torch life
- Safety device signal provided on front panel for
  - a) Low air pressure
  - b) Thermal failure
  - c) Mains voltage higher or lower than limit..

### PROTECTIONS WITH AUTO RESET

- Under-voltage / Over-voltage protection.
- Thermal protection.
- Low air pressure

### SPECIFICATIONS

Technical Specifications - Plasma Cutting Power Source	Unit	CHAMPCUT 150
<b>Input</b>		
Input Supply :		
Voltage 	Volts AC	415 + / -10%
Phase	No	3
Frequency	Hz	50/60
Max input KVA @ 100% duty cycle 	KVA	26.4
Current @ 100% Duty Cycle	Amps AC	38



Cont.

## CHAMPCUT 150



The world class Inverter based Air Plasma Cutting Outfit

Cont.

Output		
Open Current Voltage @415VAC Input Supply	Volts DC	330 +/- 10V
Cutting Current Range	Amps DC	30 - 50
Cutting Current (40°C) @100% Duty cycle	Amps DC	150
Recommended Cutting With Rage (With CNG)	mm	5 -35
Maximum Cutting Capacity (Severance) For as MS Material	mm	50
Maximum Piercing Capacity	mm	20
Machine Used Protect Cutting Capacity (For M.S.)	mm	≤ 25
General		
Type of End Connector for Plasma Cutting Torch		Euro
Type of Cooling 	Type	Forced Air
Class of Insulation		H
Ingress Protection		IP23S
Air Pressure	MPA/BAR	0.45-0.55 / 4.5-5.5
Weight (approx.) 	Kg	60
Plasma Cutting Power Source		
Voltage Glass		M
Standard Length	Mtr	6
Air Pressure	BAR	5
Air Consumption	I/Min	230
Duty Cycle 60%	A	150
Duty Cycle 100%	A	150

- **Warranty:** One year from the date of commissioning. ADOR WELDING LIMITED warrants that all new equipment sold from Plant/Area Offices / Authorised Distributors are free from defects in materials and workmanship and will perform in full accordance with applicable specifications.
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- Backed by dedicated customer care package.



## CUTi 35, 70, 90, 120

The world Class Inverter based Plasma Cutting Machines



### SALIENT FEATURES

- The small power packages of the CUTi series are easy to handle and thus especially suitable for mobile use. From among the models of the series, the user may choose the unit which meets his individual requirements best.
- Using compressed Air as the Plasma Gas, mild steel, stainless steel, aluminium, brass, copper and other electrically conductive materials can be cut.
- All CUTi inverters operate with gas-cooled plasma torches and external compressed air supply.
- Due to the sinusoidal power consumption with PFC (power factor correction), the inverter CUTi 35 draws its maximum power from the single-phase 230 V mains, without major reactive power loss.
- Light, portable, easy to handle
- Contains inlet FRL Unit to ensure flow of clean, dry air
- Productive due to high cutting speed
- Energy saving due to modern inverter technique
- High cut quality
- Versatile use due to a large variety of accessories
- Safe working due to safety shut-down

### DELIVERY CONTENTS OF OUTFIT:

- Plasma Power Source with input cable and power supply plug
- Plasma Cutting Torch (Air cooled) with cutting accessories
- Return cable with Earth clamp
- Air supply hose

### APPLICATION AREAS

- Convenient Hand Torches
- Plasma gouging does not require after-treatment and produces less smoke compared to gouging with carbon electrodes.
- Suitable for industry and craft
- In workshops and training centres
- For repairing and servicing
- At assembly workplaces, on construction sites
- Straight, profile and contour cutting, also with templates
- For piercing and hole cutting
- Bevel cutting at any angle for weld preparation, possible with appropriate accessories
- Plasma gouging in preparation of weld joints, fettling, removal of welding mistakes and surface defects with CUTi 90 and CUTi 120

## CUTi 35, 70, 90, 120



The world Class Inverter based Plasma Cutting Machines

### ERGONOMIC HANDLE DESIGN

- Thanks to the ergonomic handle design and the low weight of the KjellCut plasma torches work is easy. In addition to the convenient operation, safety is also of prime importance here.

### ACCESSORIES FOR CUTi

- A large variety of accessories is available for the flexible use of the CUTi units.

### TECHNICAL SPECIFICATIONS

Parameter	UNIT	CUTi 35	CUTi 70	CUTi 90	CUTi 120
<b>Input</b>					
Mains Voltage	VOLTS, AC	1 X 230 V	3 X 400 V	3 X 400 V	3 X 400 V
Fuse, Slow	AMPS, AC	16 A	16 A	25 A	32 A
Connected Load, Max.	KVA	3.7 KVA	11.1 KVA	15 KVA	16.7 KVA
<b>Output</b>					
Cutting Current Range	AMPS, DC	5-35 A	26 -70 A	26 -90 A	25 -120 A
Duty Cycle	10 min duty cycle	35 A @ 40%	70 A @ 35%	90 A @ 40%	120 A @ 35%
		28 A @ 60%	60 A @ 60%	74 A @ 60%	95 A @ 60%
		22 A @ 100 %	50 A @ 100 %	55 A @ 100 %	80 A @ 100 %
<b>General</b>					
Protection Class	CLASS	IP 21	IP 21	IP 21	IP 21
Cutting Range	MM	12 MM	30 MM	35 MM	50 MM
Ignition	TYPE	DRAWN ARC	HIGH VOLTAGE	HIGH VOLTAGE	HIGH VOLTAGE
Plasma Gas	TYPE	AIR	AIR	AIR	AIR
Pressure	MPA	0.4 MPA	0.5 MPA	0.5 MPA	0.5 MPA
Air Consumption	L / MIN	70 L / MIN	140 L / MIN	195 L / MIN	195 L / MIN
Dimensions (L X W X H)	MM	480 X 150 X 225 MM	470 X 180 X 250 MM	470 X 180 X 270 MM	610 X 230 X 410 MM
Weight	KG	10 KG	16.4 KG	17 KG	28.5 KG

- Warranty :** One year from the date of commissioning. ADOR WELDING LIMITED warrants that all new equipment sold from Plant/Area Offices / Authorised Distributors are free from defects in materials and workmanship and will perform in full accordance with applicable specifications.
- In view of continuous development, ADOR WELDING LIMITED reserves the right to modify/change the design and/or the specifications without any prior notice.
- Backed by dedicated customer care package.





## PLASMACUT - 25

Air plasma cutting system with unmatched cutting speed



### SALIENT FEATURES

- Most dependable and reliable power source
- Distortion-free, dross-free, burr-free, narrow kerf width clean cuts
- Suitable for cutting all conducting metals
- Simple and easy to use

### PLASMACUT - 25

for all your Cutting Needs Whether it's clean cuts that you want or separation cuts

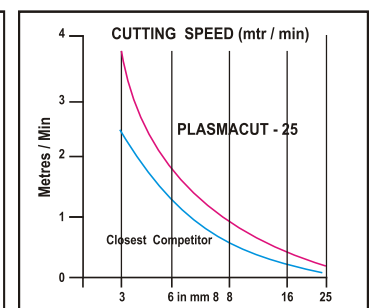
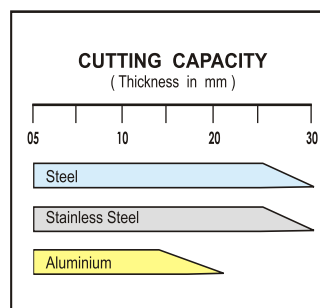
**PLASMACUT - 25** works with equal ease.

### TYPICAL APPLICATION

- Automotive Repairs
- General Fabrication
- Bus and coach Body Building
- Railway and Road Transport Workshops
- Power Stations, Chemical, Petrochemicals or Fertilizer Industry
- Sheet Metal Fabrication
- Construction and Maintenance Workshops
- Manufacture of Food Processing and Pharmaceutical equipment using SS
- Scrap Cutting Demolition, ship-breaking etc.

### MACHINE FEATURES

- Rugged and robust Design
- User Friendly, requires minimum operator training
- Special "Safety-interlock" for operator protection
- Railway and Road Transport Workshops
- Lightweight and Flexible Torch with 8 m long hose assemble
- Air pressure safety switch for "fail-safe cutting"
- Double air filter-cum-pressure regular unit to ensure clean compressed air for excellent cut quality
- Easy manoeuvrability on the shopfloor
- Full range of accessories







## PLASMACUT - 25



Air plasma cutting system with unmatched cutting speed

Cont.

### SPECIFICATIONS

Technical Specifications -	Unit	PLASMACUT 150
<b>Input</b>		
Input Supply :		
Voltage 	Volts AC	415
Phase	No	3
Frequency	Hz	50
Max input KVA @ 100% duty cycle 	KVA	28
Recommended switch fuse rating	Amps AC	TP-45
<b>Output</b>		
Cutting Current	Amps	100
Open Current Voltage	DC Volts	300
Cutting Current @60% Duty cycle	Amps	100
Pilot arc open circuit voltage	DC Volts	300
<b>General</b>		
Insulation	Class	'B'
Type of Cooling 	Type	Forced Air
Overall Dimensions		
Length	mm	800
Width	mm	370
Height	mm	825
Weight (approx.) 	Kg	165
<b>Torch</b>	<b>Model : CCT-25 (A)</b>	
Max Current / Voltage @ 60% duty cycle	Amps/ Volts	100/110
Cooling	Type	Air
Air to be used (Plasma+Cooling)		
Flow	Lit/Min	120 to 150
Pressure	kg/cm <sup>2</sup>	6
Cable Hose Length	Mtrs.	6

- **Warranty** : One year from the date of commissioning. ADOR WELDING LIMITED warrants that all new equipment sold from Plant/Area Offices / Authorised Distributors are free from defects in materials and workmanship and will perform in full accordance with applicable specifications.
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- Backed by dedicated customer care package.



## SUPERGEN 320

MOTOR GENERATOR TYPE WELDING RECTIFIER



### SALIENT FEATURES

- The set consists of three-phase motor as prime mover and DC welding generator of a special patented design
- Excellent high quality welding with big savings in power bills
- Positive protection against overload and single phasing
- Mobile and mounted on wheels with rubber tyres
- Ideal for welding with cellulosic electrodes for cross country pipelines and thermal/nuclear power plants.

### QUANTUM LEAP IN WELDING PRODUCTION FEATURE-WISE COMPARISON

Features you want	Brand X	Ador Breakthrough Technology
Welding with 100 mtr cable length without any current drop	Current drops	Constant current even with longer cable length
Low no load power consumption	3.2 KW	1.1 KW - less than half power consumption and energy cost
Low power consumption at 320 Amp.welding current	22.23 KW	15.5 KW Reduction by 30% in energy
Low maintenance cost	Periodic wear'n tear of brushes	Brushless' technology eliminates frequent Maintenance and down time costs
Freedom from stator failures	No protection	Built-in protection against single phasing, over voltage and under voltage
Insulation class	"B"	Class "H" - provides longer service life- more reliable
Suitable for welding in open/ dusty sites	Screen protected drip proof open type design-sucks in dirt and dust	Totally enclosed preventing entry of dirt and dust inside winding - ideal for site conditions
Ease of mobility	330 kgs in weight	Only 265 kgs in weight i.e.25% lighter-easier to move about
Availability of Spares & service	Spares subject to imports- Limited service network	Easy availability of spares Large network of authorised service centres.

## SUPERGEN 320

MOTOR GENERATOR TYPE WELDING RECTIFIER



### SPECIFICATIONS

Technical Specifications	Value	Unit
<b>Input</b>		
Input Supply Voltage, Phase, Frequency	415±+10%, 3, 50	V Ac, No., Hz
Input Power	15.5 / 20.78	Kw / Kva
Speed (synchronous)	3,000	Rpm
Starting	Star / Delta	Type
Recommended Switch Fuse Rating	Tp 40	Amps, Ac
Protection To Machine	Single Phasing, Undervoltage (340 V) / Overvoltage (480 V), Thermal	
<b>Output</b>		
Open Circuit Voltage	100	V Dc
Welding Current Range	35-320	A Dc
Welding Current		
@ 60% duty cycle	320	
@ 100% duty cycle	250	
<b>General</b>		
Welding Electrode Size	2.5, 3.15, 4.0, 5.0 And 6.3	Mm
Enclosure	Totally Enclosed	Type
Ingress Protection	Ip44 (excluding Fan Side)	Class
Cooling	Forced Air	Type
Insulation	H	Class
Dimensions (L X W X H)	1065 X 540 X 840	Mm
Weight	265	Kg

- **Warranty:** One year from the date of commissioning. ADOR WELDING LIMITED warrants that all new equipment sold from Plant/Area Offices / Authorised Distributors are free from defects in materials and workmanship and will perform in full accordance with applicable specifications.
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## SILENT CHALLENGER 301 S2



New Generation Diesel Engine Driven Silent Welding Set  
Conforming to Latest CPCB II Norms



### SALIENT FEATURES

- Conforms to latest CPCB norms for noise & exhaust emission level
- Versatile applications, including cross country, inplant pipe and tube welding
- Ideal for heavy fabrication & site applications
- Highly reliable even in hostile site conditions
- Big savings in fuel & longer runs before next refuelling
- Specially proven with Cellulosic (6010, 7010G & 8010G types) and other special types of electrodes
- Excellent Pre and Post Sales Services
- Super Silent Operations

### SPECIFICATIONS

Technical Specifications	Unit	Value
<b>Machine Name</b>		<b>SC 301 S2</b>
CPCB compliance	Type	Meets CPCB - II compliance for Exhaust Emission and Noise within 75 dba at 1 mtr
<b>Welding Generator</b>		
Welding Generator	Type	Brushless type, high frequency generator, specially designd for welding applications, constant current (CC) characteristic with winding less, commutator less, magnet less, slip-ring less and rotating diode less rotor construction for maintenance free and reliable operation
Welding process	Type	SMAW (Shielded Metal Arc Welding )
Operators	No	Single
Welding current range	Amps	40 - 300 A
Max. hand welding current	Amps	300 A @ 32 V
Max. hand welding current @ 60% DC	Amps	230 A @ 29V
Max. hand welding current @ 100% DC	Amps	310
Open circuit voltage (Max. / Min)	Volts DC	100 / 45 VDC
Generally, Conforms To	IS	26-35
Diameter of coated electrode	mm	2.5, 3.15, 4, 5, 6
Insulation Class	Type	H

Cont.

## SILENT CHALLENGER 301 S2



New Generation Diesel Engine Driven Silent Welding Set Conforming to Latest CPCB II Norms

Cont.

Auxiliary Power Source (built In)		
Rating 3 Phase / Single Phase	KVA	10 / 3
Voltages (3 Phase/1 Phase)	VOLTS	415 / 240
MCB Rating	AMPS	16 AMPS
Engine Make, Type		
Cylinder	Nos.	2
Engine Cooling	Type	Water Cooled
Engine Rating	BHP	23 BHP @ 1800 RPM
Speed	RPM	1800
Conforms to	Standard	10002/81
Starting (12 V)	Type	Electric
Fuel tank Capacity	Ltrs.	50
Meters/Gauges/Indications	Type/Detail	Lube oil pressure, Fuel level Indication, Battery charging current, Charging failure warning lamp, Engine speed, Hour Meter etc.
<b>OPTIONAL</b> Engine Safety Protection	Type	engine auto shut off in the event of low lube oil pressure (or) high cylinder head temperature
General (Dimensions & Weight)		
Skid Mounted :		
Length/Width/Height	mm	1700 X 820 X 1130
Weight (Net)	Kg	695
Two Wheel Mounted :		
Length/Width/Height	mm	2540 X 1455 X 1725
Weight (Net)	Kg	770
Four Wheel Mounted :		
Length/Width/Height	mm	3200 X 1555 X 1990
Weight (Net)	Kg	845

- **Warranty:** One year from the date of commissioning. ADOR WELDING LIMITED warrants that all new equipment sold from Plant/Area Offices / Authorised Distributors are free from defects in materials and workmanship and will perform in full accordance with applicable specifications.
- In view of continuous development, ADOR WELDING LIMITED reserves the right to modify/change the design and/or the specifications without any prior notice.
- Backed by dedicated customer care package.



## SILENT CHALLENGER 401



New Generation Diesel Engine Driven Silent Welding Set  
Conforming to Latest CPCB II Norms



### SALIENT FEATURES

- Conforming to latest CPCB norms for noise & exhaust emission level
- Versatile applications, including cross country, inplant pipe and tube welding
- Ideal for heavy fabrication & site applications
- Highly reliable even in hostile site conditions
- Big savings in fuel & longer runs before next refueling
- Specially proven with Cellulosic (6010, 7010G & 8010G types) and other special types of electrodes
- Excellent Pre and Post Sales Services
- Super Silent Operations
- Capable of Arc Cutting with up to 4 mm Arc Cutting Electrode

### SPECIFICATIONS

Technical Specifications	Unit	Value
<b>Machine Name</b>		<b>SC 401</b>
CPCB compliance	Type	Meets CPCB - II compliance for Exhaust Emission and Noise within 75 dba at 1 mtr
<b>Welding Generator</b>		
Welding Generator	Type	Brushless type, high frequency generator, specially designd for welding applications, constant current (CC) characteristic with winding less, commutator less, magnet less, slipring less and rotating diode less rotor construction for maintenance free and reliable operation
Welding process	Type	SMAW (Shielded Metal Arc Welding )
Operators	No	Single
Welding current range	Amps	50 - 400
Max. hand welding current	Amps	400
Max. hand welding current @ 60% DC	Amps	400
Max. hand welding current @ 100% DC	Amps	310
Open circuit voltage (Max. / Min)	Volts	100/45
Diameter of coated electrode	mm	2.5-6.3
Insulation Class	Type	H

Cont.

## SILENT CHALLENGER 401



New Generation Diesel Engine Driven Silent Welding Set Conforming to Latest CPCB II Norms

Cont.

Engine Make, Type		SIMPSON, SJ327T CPCB-II Compliant	
Cylinder	No.	3	
Rated engine Speed	RPM	1800	
Engine Cooling	Type	Water Cooled	
Engine Rating	BHP	38.5 BHP @ 1800 RPM	
Conforms to	Standard	IS 10002(BI)	
Starting	Type	Electric (Battery 12 V, 75 AH)	
Fuel Consumption @ 60% Duty Cycle	Ltrs./Hrs.	4.0 ltrs/hr @ 100% Duty Cycle	
Fuel tank Capacity	Ltrs.	70	
Meters/Gauges/Indications	Type/Detail	Lube oil pressure, Fuel level Indication, Battery charging current, Charging failure warning lamp, Engine speed, Hour Meter etc.	
<b>OPTIONAL</b> Engine Safety Protection	Type	Engine Auto Shut off in the event of low lube oil pressure	
<b>Arc Cutting</b>		Arc Cutting with upto 4 mm Cutting Electrode	
<b>Auxiliary Power Source (Indicates rating with simultaneous welding load)</b>			
Rating	KVA	10	3
Voltage	Volts	415	240
Phases	No	3	1
MCCB Rating	Amps	16	
Output Sockets	No	2	
<b>General (Dimensions &amp; Weight)</b>			
Skid Mounted :			
Length/Width/Height	mm	2000 x 820 x 1460	
Weight (Net)	Kg	1100	
Two Wheel Mounted :			
Length/Width/Height	mm	2900 x 1455 x 1990	
Weight (Net)	Kg	1240	
Four Wheel Mounted :			
Length/Width/Height	mm	2900 x 1555 x 1990	
Weight (Net)	Kg	1340	

- **Warranty** : One year from the date of commissioning. ADOR WELDING LIMITED warrants that all new equipment sold from Plant/Area Offices / Authorised Distributors are free from defects in materials and workmanship and will perform in full accordance with applicable specifications.
- In view of continuous development, ADOR WELDING LIMITED reserves the right to modify/change the design and/or the specifications without any prior notice.
- Backed by dedicated customer care package.





## SILENT CHALLENGER 501



New Generation Diesel Engine Driven Silent Welding Set  
Conforming to Latest CPCB II Norms



### SALIENT FEATURES

- Conforming to latest CPCB norms for noise & exhaust emission level
- Versatile applications, including cross country, inplant pipe and tube welding
- Big savings in fuel and longer runs before next refueling
- Arc Cutting and Gouging capability. Maximum size of Gouging Electrode is 6 mm
- Specially proven with Cellulosic (6010, 7010G & 8010G types) and other special types of electrodes
- Excellent Pre and Post Sales Services
- Ideal for heavy fabrication & site applications
- Highly reliable even in hostile site conditions
- Super Silent Operations

### SPECIFICATIONS

Technical Specifications	Unit	Value
<b>Machine Name</b>		<b>SC 501</b>
CPCB compliance	Type	Meets CPCB - II compliance for Exhaust Emission and Noise within 75 dba at 1 mtr
<b>Welding Generator</b>		
Welding Generator	Type	Brushless type, high frequency generator, specially designed for welding applications, constant current (CC) characteristic with winding less, commutator less, magnet less, slipring less and rotating diode less rotor construction for maintenance free and reliable operation
Welding process	Type	SMAW (Shielded Metal Arc Welding )
Operators	No	Single
Welding current range	Amps	50 - 500
Max. hand welding current	Amps	500
Max. hand welding current @ 60% DC	Amps	500
Max. hand welding current @ 100% DC	Amps	400
Open circuit voltage (Max. / Min)	Volts	100/45
Diameter of coated electrode	mm	2.5-6.3
Insulation Class	Type	H

Cont.

## SILENT CHALLENGER 501



New Generation Diesel Engine Driven Silent Welding Set Conforming to Latest CPCB II Norms

Cont.

Engine Make, Type		SIMPSON, SJ327T CPCB-II Compliant	
Cylinder	No.	3	
Rated engine Speed	RPM	1800	
Engine cooling	Type	Water Cooled	
Engine Rating	BHP	38.5 @ 1800 RPM	
Conforms to	Standard	IS 10002(BI)	
Starting	Type	Electric (Battery 12 V, 75 AH)	
Fuel Consumption @ 60% Duty Cycle	Ltrs./Hrs.	4.0 ltrs/hr @ 100% Duty Cycle	
Fuel tank Capacity	Ltrs.	70	
Meters/Gauges/Indications	Type/Detail	Lube oil pressure, Fuel level Indication, Battery charging current, Charging failure warning lamp, Engine speed, Hour Meter etc.	
<b>OPTIONAL</b> Engine Safety Protection	Type	Engine Auto shut of in the event of low lube oil pressure or High Cylinder Head Temperature	
Gouging and Arc Cutting		Capable of Gouging with upto 6 mm Gouging Electrode	
Auxiliary Power Source (Indicates rating with simultaneous welding load)			
Rating	KVA	10	3
Voltage	Volts	415	240
Phases	Nos	3	1
MCCB Rating	Amps	16	
Output Sockets	Nos	2	
General (Dimensions & Weight)			
Skid Mounted :			
Length/Width/Height	mm	1995 X 820 X 1520	
Weight (Net)	Kg	1100	
Two Wheel Mounted :			
Length/Width/Height	mm	2900 x 1455 x 1990	
Weight (Net)	Kg	1240	
Four Wheel Mounted :			
Length/Width/Height	mm	3435 x 1555 x 1990	
Weight (Net)	Kg	1340	

- **Warranty** : One year from the date of commissioning. ADOR WELDING LIMITED warrants that all new equipment sold from Plant/Area Offices / Authorised Distributors are free from defects in materials and workmanship and will perform in full accordance with applicable specifications.
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- Backed by dedicated customer care package.



## SILENT CHALLENGER 2 X 301



The new generation diesel engine driven silent welding set conforming to latest CPCB II norms



### SALIENT FEATURES

- Conforms to latest CPCB norms for noise and exhaust emission level.
- Versatile applications, including cross country, in-plant pipe and tube welding.
- Ideal for heavy fabrication & site applications.
- Highly reliable even in hostile site conditions.
- Big savings in fuel and longer runs before next refueling.
- Specially proven with Cellulosic (6010, 7010 G & 8010G types) and other special types of electrodes.
- Super Silent Operations

### SPECIFICATIONS

Technical Specifications	Unit	Values	
<b>Welding Generator</b>	Type	Double Operator	Single Operator
		Manual (CC)	Manual (CC)
Welding Current Range	Amps, DC	15x300 A	30-600 Amps
Max. Hand Welding Current @ 40% DC	Amps, DC	2x300 A @29V	600 Amps @30V
Max. Hand Welding Current @ 60% DC	Amps, DC	2x250 A @26.5V	500 Amps @30V
Max. Hand Welding Current @ 100% DC	Amps, DC	2x200 A @24V	400 Amps@36V
Open Circuit Voltage (Max)	Volts, DC	92 VDC	92 VDC
Generally Conforms To	IS	2635	
Insulation	Type	H	
<b>Engine Make, Type</b>		<b>SIMPSON, SJ327T CPCB-II Compliant</b>	
Cylinder	Nos.	3	
Engine Colling	Type	Water Cooled	
Engine Rating	BHP	38.5 BHP @ 1800 RPM	
Speed	RPM	1800	
Conforms to	IS	10002/82	
Starting (12V)	Type	Electric	
Fuel Consumption	Ltrs./Hrs.	4	
Fuel tank Capacity	Ltrs.	75	
Meters/Gauges/Indications	Type/Detail	Lube oil pressure, Fuel level Indication, Battery charging current, Charging failure warning lamp, Engine speed, Hour Meter etc.	
<b>OPTIONAL</b> Engine Safety Protections	Type	Engine auto shut off in the event of low lube oil Pressure (or) high cylinder head temperature	

Cont.

## SILENT CHALLENGER 2 X 301



The New generation Diesel Engine Driven Silent Welding Set Conforming To Latest CPCB II norms

Cont.

Auxiliary Power Source (Built In)			
Mode		Weld Load together with Auxiliary Load	Auxiliary Mode without Weld Load
KVA Rating: 415 V, 3 Phase) / 230 V, Single Phase	KVA	8/3	10 & 8 KVA From Each Socket Respectively (18 KVA Total) / 3 KVA From Each Socket Respectively (6 KVA Total)
MCCB Rating	Amps	10/12.5	27/25
Dimensions, Rate & Mounting Details			
Skid Mounted			
Length/Width/Height	mm		1995 x 820 x 1520
Weight (Net)	Kgs		1008
Two Wheel Mounted			
Length/Width/Height	mm		2905 x 1455 x 2100
Weight (Net)	Kgs		1150
Four Wheel Mounted			
Length/Width/Height	mm		3435 x 1555 x 2100
Weight (Net)	Kgs		1250

- **Warranty:** One year from the date of commissioning. ADOR WELDING LIMITED warrants that all new equipment sold from Plant/Area Offices / Authorised Distributors are free from defects in materials and workmanship and will perform in full accordance with applicable specifications.
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- Backed by dedicated customer care package.



## MAXIMIG 251





The Workhorse Diode based Tap controlled MIG / MAG Welding Rectifier



### SALIENT FEATURES

- Recommended for All position MIG / MAG welding applications
- Suitable for welding of wide range of metals like Carbon Steel, Stainless Steel and other steel alloys, with appropriate or recommended consumable
- High volume thin sheet metal fabrication welding as in Auto Industries and other engineering industries, maintenance and repair workshops
- Most ideal for Auto Ancillary units - for increased productivity and quality welding applications
- Most reliable and dependable workhorse welding machines with proven economy
- Diode based power source with traditional tapped transformer, provided with switch on front panel for step control of voltage, enabling welder to obtain the desired arc voltage with ease
- User friendly selection of 2 track / 4track operation for zero defect GMAW welding
- Good and consistent weld quality with low hydrogen content
- Dependable Thyristorized wire-feeder system ensures long, uninterrupted welding
- Quick release wire feed roller mechanism enables operator to change the wire spool quickly, minimising the unproductive time and thus increasing the productivity on the shop floor
- Standard Package comprises of Power Source, Wire feeder (2 Roll Drive) with 5 meter interconnection and Welding Torch only
- Rugged design, reliable performance and superior arc characteristics

### SPECIFICATIONS

Technical Specifications	Unit	Maximig 251
<b>Characteristic Control</b>		Tap Controlled Diode Based
Characteristics	Type	Constant Potential
<b>Input</b> 		
Input Supply:		
Voltage	Volts, Ac	380 / 415 , +10%, -10%
Phase 	No	3
Frequency	Hz	50/60
Maximum Input Current	Amps, AC	13
Input Kva @ 100% Duty Cycle 	KVA	10
Input Kva @ 60% Duty Cycle 	KVA	7
No. Of Welding Steps		16



Cont.

## MAXIMIG 251



### The Workhorse Diode based Tap controlled MIG / MAG Welding Rectifier

Cont.

Output			
Open Current Voltage		Volts, DC	16-36
Welding Current Range		Amps, DC	50-250
Welding Current @ 100% duty cycle		Amps, DC	195 @ 23.8 V
Welding Current @ 60% duty cycle		Amps, DC	250 @ 26.5 V
General			120% of the set current
Cooling		Type	Forced Air
Insulation		Class	F
Welding Output Terminals		Type	Stud Type For Lug Type Cable Connections
Dimensions (L X W X H)		mm	770 x 400 x 740
Weight (Approx)		Kg	93

- **Warranty:** One year from the date of commissioning. ADOR WELDING LIMITED warrants that all new equipment sold from Plant/Area Offices / Authorised Distributors are free from defects in materials and workmanship and will perform in full accordance with applicable specifications.
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- Backed by dedicated customer care package.



## MAXIMIG 400




The Workhorse Diode based Tap controlled MIG / MAG Welding Rectifier



### SALIENT FEATURES

- Most reliable and dependable workhorse MIG / MAG welding machines proven for wide range of applications
- Rugged design, reliable performance and superior arc characteristics – minimum maintenance requirements
- Diode based power source with traditional tapped transformer, provided with switch on front panel for step control of voltage enabling welder to obtain the desired arc voltage with ease
- User friendly selection of 2track / 4track operation for zero defect GMAW welding
- Good and consistent weld quality with low hydrogen content
- Dependable Thyristorized wire feeder system ensures long, uninterrupted welding
- Quick release wire feed roller mechanism enables operator to change the wire spool quickly, minimizing the unproductive time and thus increasing the productivity on the shop floor
- Standard Package comprises of Power Source, Wire feeder (2 Roll Drive) with 5 meter interconnection and Welding Torch only
- Recommended for All position MIG / MAG welding applications
- Suitable for wide range of metals like Carbon Steel, Stainless Steel, with appropriate or recommended consumable
- Ideally recommended for heavy duty MIG / MAG welding applications like crane structure components manufacturing, 3 shift use, rough handling on the shop-floor and fabrication shops where maintenance staff is not very qualified

### SPECIFICATIONS

Technical Specifications	Unit	Maximig 400
<b>Chracteristic Control</b>		Tap Controlled Diode Based
Characteristics	Type	Constant Potential
<b>Input</b> 		
Input Supply:		
Input Supply Voltage	Volts, Ac	415 , +10%, -10%
Phase 	No	3
Frequency	Hz	50/60
Input Kva @ 100% Duty Cycle 	KVA	17.5
No. Of Welding Steps		32

Cont.

## MAXIMIG 400



### The Workhorse Diode based Tap controlled MIG / MAG Welding Rectifier

Cont.

Output			
Open Circuit Voltage	<b>X%</b>	Volts, DC	18-54
Welding Current Range		Amps, DC	50-400
Welding Current @ 100% duty cycle		Amps, DC	310 @ 29.5 V
Welding Current @ 60% duty cycle		Amps, DC	400 @ 34.0 V
General			
Cooling		Type	Forced Air
Insulation		Class	H
Welding Output Terminals	<b>SS</b>	Type	Stud Type
Dimensions (L X W X H)		mm	835 x 435 x 820
Weight (Approx)		Kg	136
Wire Feeder	Model	FEEDLITE 40 NEM(C) - 4 ROLL	
Weight (Without Spool)	Kg	16 KG (Approx)	
Dimensions (LXWXH)	MM	563 X 230 X 410	
Suitable for wire spool capacity	Kg	15 Kg	
Wire Feeder Fitted with rollers	mm	1.2/1.6 for solid wire 2 No.	
Wire Feeder Motor Voltage	Volts DC	42 V DC	
Wire Drive Motor	Type	Permanent Magnet DC Type	
Wire Roll Drive	No	Four	
Wire Feed Speed	Mtr/ min	1.5 to 18	
Suitable for wire sizes	mm	0.8,1,1.2,1.6	
Torch (3 Meter)		ADOR TW 402 (E) / ADOR MTG 400 (E)	

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- Backed by dedicated customer care package.





## STRIKER 400



Thyristor based welding power source, suitable for MIG/MAG Semiautomatic and Automatic welding applications



### SALIENT FEATURES

- Light weight, Compact design of Power source, Wire feeder and Torch
- Crater Voltage and Current control possible with ON/OFF switch
- LED Indications for Mains ON and Trip signal
- Globule Detachment Technique keeps the tip ready without globule formation for next welding cycle
- Protection against overheating and very high secondary short circuit current
- Flux core or solid wire selection switch and Gas check Toggle switch on front panel
- Special construction of transformer – resulting in faster response time and Excellent Arc dynamics
- Digital voltage and current meters on front panel
- Wheels for easy movement of machine on the shop floor

### Details Of Complete System:

The complete system consists of power source, wire feeder, interconnecting cables and Torch as option. Remote control is provided along with the outfit to enable the user to set voltage and current while welding.

Technical Specifications	Unit	TCVR405 (STRIKER) 400
<b>Input</b>		
Voltage	Volts, Ac	415 , +10%, -10%
Phase	No.	3
Frequency	Hz	50
Input Kva	KVA	18.7 @ 100% Duty Cycle, 23 @ 60% Duty Cycle
Rated Input Current (max.)	Amps, Ac	32
<b>Output</b>		
Open Circuit Voltage	Volts, Dc	55 V
Welding Current Range	Amps, Dc	50 - 400
Welding Current @ 100% Duty Cycle	Amps, Dc	310
Welding Current @ 60% Duty Cycle	Amps, Dc	400
Welding Voltage Range	Volts, Dc	16 - 39

Cont.

## STRIKER 400



Thyristor based welding power source, suitable for MIG/MAG Semiautomatic and Automatic welding applications

Cont.

General		
Ingress Protection	Class	IP23
Cooling	Type	Forced Air
Insulation	Class	H
Dimensions (l X W X H)	mm	780 X 450 X 915
Weight	Kg	157

Wire Feeder	Unit	Feedlite 20 ST	Feedlite 40 ST
Drive Unit	Type	2 Roll Print Motor	4 Roll Print Motor
Motor Voltage	Volts, Dc	18.3	18.3
Wire Speed	Meters Per Minute	1.5 - 18	1.5 - 18
Wire Spool Capacity	Kg	15	15
Suitable For Wire Diameter	mm	0.8, 1.0, 1.2 And 1.6	0.8, 1.0, 1.2 AND 1.6
Inch Switch		On Wire Feeder	On Wire Feeder
Dimensions (l X W X H)	mm	530 X 230 X 315	530 X 230 X 315
Weight	Kg	9	9

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## RANGER 600

The Heavy Duty Thyristorized MIG/MAG Welding Rectifier



### SALIENT FEATURES

- Most reliable and dependable thyristor based power source for high quality MIG / MAG semi automatic manual and semiautomatic mechanized welding applications
- Hex phase, full wave full control bridge rectification circuit reduces ripple in the welding output - resulting in spatter free welding
- Special design and construction of Transformer - resulting faster response time and excellent Arc dynamics
- Light weight, Compact design of power source, wire feeder and Torch
- Adjustment of Crater Voltage, Crater Current possible with regulating pots provided on the front panel
- Globule detach technique keeps the tip ready for next welding cycle
- Choice of different types of wire feeder motors and welding torches available for different industrial applications
- Quick release wire feed roller mechanism enables operator to change the wire spool quickly, minimizing the unproductive time and thus increasing the productivity on the shop floor
- Power source protected from Over Voltage, Under Voltage supply, Single phasing, Over load / overheating and very high secondary short circuit current
- Suitable for ALL position MIG / MAG welding applications - both within shop-floor as well as at open yards and project sites (with due protection or shield against windy air)
- Suitable for wide range of metals like Carbon Steel, Stainless Steel, Aluminium and its alloys, with appropriate or recommended consumable
- Specifically designed for heavy duty, structural welding, machine building applications

### SPECIFICATIONS

Technical Specifications	Unit	TCVR 600 (Ranger 600)
Characteristics Control		Constant Potential Thyristorized Phase Control
<b>Input</b>		
Input Supply:		
Voltage	Volts, Ac	415 , +10%, -10%
Phase	No	3
Frequency	Hz	50/60

Cont.

## RANGER 600



### The Heavy Duty Thyristorized MIG/MAG Welding Rectifier

Cont.

Maximum Input Current	Amps, AC	55
Input Kva @ 100% Duty Cycle	KVA	31.7
Input Kva @ 60% Duty Cycle		40
<b>Output</b>		
Open Circuit Voltage	Volts, DC	65 V MAXIMUM
Welding Current Range	Amps, DC	60-600
Welding Current @ 100% duty cycle	Amps, DC	465
Welding Current @ 60% duty cycle	Amps, DC	600
<b>General</b>		
Ingress Protection		IP23
Cooling	Class	Forced Air
Insulation	Type	H
Welding Output Terminals	Class	Stud Type For Lug Type Cable Connections
Dimensions (L X W X H)	mm	980 x 550 x 960
Weight (Approx)	Kg	230
<b>Wire Feeder</b>		
Weight (without spool)	Kg	16 Kg Approx
Dimensions (L X W X H)	mm	563X230X410
Suitable for wire spool capacity	Kg	15 Kg
Wire Feeder Fitted with Rollers	mm	1.2/1.6 for Solid Wire 2 No.
Wire Feeder Motor Voltage	V DC	42 V DC
Wire Driver Motor	Type	Permanent Magnet DC Type
Wire Roll Driver	No	Four
Wire Feed Speed	mtr/min	1.5 to 18
Suitable for Wire sizes	mm	0.8,1,1.2,1.6

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## RANGER 600 MULTI



The Heavy Duty Multipurpose Thyristorized Welding Rectifier for MMA / MIG / TIG / GOUGING Applications



### SALIENT FEATURES

- Heavy duty Thyristorized Multipurpose Welding Rectifier with Double-star configuration
- Suitable for multi process welding applications like SMAW / GMAW / FCAW / GTAW and GOUGING processes within shop floor as well as at open yards and project sites (with due protection or shield against windy air)
- Suitable for wide range of metals like Carbon Steel, Stainless Steel, Aluminium and its alloys, with appropriate or recommended consumable
- Specifically designed for heavy duty, structural welding, machine building application
- Rugged construction -most reliable and dependable thyristor based power source for high quality welding processes
- Hex- phase, full wave full control bridge rectification circuit reduces ripple in the welding output- resulting spatter-free welding
- Automatic Globule Detachment technique keeps the tip ready for next welding cycle
- Choice of 2 roll and 4 roll wire-feeders and different torches available for different industrial applications
- Quick release wire feed roller mechanism enables operator to change the wire spool quickly, minimising the unproductive time and thus increasing the productivity on the shop floor
- Power source protected from Over Voltage, Under Voltage supply, Single phasing, Over load/overheating and very high secondary short circuit current

### SPECIFICATIONS

Technical Specifications	Unit	TCCVR 600
Characteristics Control	CC/CV	Constant Potential Thyristorized Phase Control
<b>Input</b>		
Input Supply:		
Voltage	Volts, Ac	415 , +10%, -10%
Phase	No	3
Frequency	Hz	50/60
Maximum Input Current	Amps, AC	55
Recommended Switch Fuse Rating	Amps, AC	60
Input Kva @ 100% Duty Cycle	KVA	31.7
Input Kva @ 60% Duty Cycle		40

Cont.

## RANGER 600 MULTI



The Heavy Duty Multipurpose Thyristorized Welding Rectifier for  
MMA / MIG / TIG / GOUGING Applications

Cont.

Output		
Open Circuit Voltage	Volts, DC	80 V (CC Mode)
		65 V MAXIMUM
Welding Current Range	Amps, DC	20-600 (CC Mode)
		75-600 (CV Mode)
Welding Current (40°, 10 Min duty cycle) . . . . . °°°		
@ 60% duty cycle	Amps, DC	600
@ 100% duty cycle	Amps, DC	465
General		
Ingress Protection		IP23
Cooling	Class	Forced Air
Insulation	Type	H
Welding Output Terminals	Class	Stud Type For Lug Type Cable Connections
Dimensions		
Lenght	mm	980
Width	mm	550
Height (With Handel)	mm	960
Wire Feeder		FEEDLITE 40 NEH(C)
Weight (without spool)	Kg	16 Kg Approx
Dimensions (L X W X H)	mm	563X230X410
Suitable for wire spool capacity	Kg	15 Kg
Wire Feeder Fitted with Rollers	mm	1.2/1.6 for Solid Wire 2 No.
Wire Feeder Motor Voltage	V DC	42 V DC
Wire Driver Motor	Type	Permanent Magnet DC Type
Wire Roll Driver	No	Four
Wire Feed Speed	mtr/min	1.5 to 18
Suitable for Wire sizes	mm	0.8,1,1.2,1.6

- **Warranty:** One year from the date of commissioning. ADOR WELDING LIMITED warrants that all new equipment sold from Plant/Area Offices / Authorised Distributors are free from defects in materials and workmanship and will perform in full accordance with applicable specifications.
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## CHAMPMIG 250

The world class Inverter based MIG Welder



### INTRODUCTION

CHAMP MIG 250 is IGBT inverter based welding outfit suitable for GMAW applications. The IGBT Power module, ferrite core and fast recovery diode are used as key device for power conversion and trans-mission to assure better efficiency and performance. The complete system consists of power source, wire feeder and MIG torch and interconnecting cables.

### DETAILS OF COMPLETE SYSTEM

Sr. No.	Description	CHAMPMIG 250 A	CHAMPMIG 250 B
1	Power Source	ICVR 250	ICVR 250
2	Wire feeder	FEEDLITE 20 (NELR)	FEEDLITE 20 (NELR)
3	Torch	ADOR HIPRO 253 (E)	ADOR MTG 250 (E)

### SALIENT FEATURES

- Inverter based GMAW outfit
- High efficiency and high power factor – resulting energy saving
- Auto “Weld Stop” when welding torch is taken away from weld job
- Compatible to Power Generator Supply
- Enhanced Reliability due to SMD technology
- Digital Panel for adjusting the welding parameters
- 30% more Energy efficient than conventional machines
- Maximum Power factor is 0.93
- Excellent dynamic response enables superior arc characteristics. 2T, 4T operating modes
- Electronic choke adjustment for better arc control
- Crater voltage and Crater current adjustment through digital panel
- Unique feature of Globule Detachment to stop formation of globules at the tip of wire at the end of welding
- Automatic “Weld Stop” facility

### PROTECTION

The equipment is provided with following protections.

**a) Under Voltage and Over Voltage:** Error message is displayed and the equipment shuts down if the supply voltage exceeds the positive or negative limits specified in the Technical Specifications

**b) Over Temperature:** Error message is displayed and the equipment shuts down if the temperature of the main power components exceeds the safe limits









**c) Single Phasing Protection:** Error message is displayed and the equipment shuts down if any one of the three phase supply line is absent (single-phasing prevention / protection)

## CHAMPMIG 250

The world class Inverter based MIG Welder



### SPECIFICATIONS

Technical Specifications	Unit	ICVR 250
<b>Input</b>		
Input Supply :		
Voltage 	Volt	415, +15%, -10%
Phase	No	3
Frequency	Hz	50/ 60
Input KVA 		
@ 100% duty cycle	KVA	6.5
@ No Load	KVA	0.19
<b>Output</b>		
Open Circuit Voltage 	Volts +/-5%	65
Welding Current Range 	Amp	50-250
Welding Current (40°C 10 minutes cycle)		
@ 100% duty cycle 	Amp	195
Welding Voltage Range	Volt	16-34
Crater Current Range	Amp	50-250
Crater Voltage Range	Volt	16-34
Mode of operation		2 track, 4 track, Gas check, OCV check facility
Remote Control (on wire feeder)		For setting voltage & current
Power Factor		Max 0.93
Efficiency	%	83% @ 100% duty cycle
<b>General</b>		
Compatibility to International standard		As per Std. EN60974-1
Wire feed speed	m/min	1.5-18
Suitable Welding Wire Diameter	mm	Steel 0.8,1.0 and 1.2
Ingress Protection	Class	IP23
Cooling 	Type	Forced Air
Dimensions (Approx.) 		
Length	mm	500
Width	mm	260
Height	mm	470
Weight 	Kg	26
Audio Noise Emission		70

Cont.



## CHAMPMIG 250



The world class Inverter based MIG Welder

Cont.

Technical Specifications	Unit	FEEDLITE 20 (NELR)
Suitable for wire	mm	0.8,1,1.2
Wirefeed speed	mtr/min	1.5 to 18
Wire roll drive	-	TWO
Wire drive motor	Type	Permanent Magnet DC
Wire feeder Motor voltage	V	42
Wire feeder fitted with rollers	-	0.8/1.0/1.2 for sold wire 1no
Suitable for Wire Spool capacity	Kg	15
Dimensions		
Length	mm	460
Width	mm	210
Height	mm	280
Weight (without spool)	Kg	10 (Approx)

Torch Specification			
Technical Specifications	Unit	ADOR HIPRO 253 (E)	ADOR MTG 250 (E)
Rating	A	250A @ 60% Duty cycle for CO <sub>2</sub>	250A @ 60% Duty cycle for CO <sub>2</sub>
End Connection to Torch	Type	Euro	Euro
Suitable for Wire Ø	mm	0.8, 1.0, 1.2	0.8, 1.0, 1.2
Torch Length	meter	3	3

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## OMNIMIG 250



The new Inverter based Compact MIG Welder



### SALIENT FEATURES

- Latest Inverter based technology.
- Low Power Consumption due to Power Factor Correction Technique that brings the Power Factor nearly equal to one.
- Single point controlled synergic MIG welding operation.
- 3-digit Digital Panel Meters to display the set voltage, actual voltage, set current and actual current while welding.
- LED Indications for Mains ON and Trip signal.
- Protections: Over-Voltage, Under -Voltage, Over-Temperature & Output Short Circuit Protection.
- Compact Design with built-in Wirefeeder.
- Gas Trolley for easy movement of machine on the shop floor.

### TECHNICAL SPECIFICATIONS - POWER SOURCE

Technical Specifications	Unit	OMNIMIG
<b>Input</b>		
Input Supply :		
Voltage 	Volts, Ac	230 V +15%, -10%,
Phase		1
Frequency	HZ	50/ 60
Input Power @ 230VAC in MIG Mode		CC - CV
@100% duty cycle 	KVA	4.6 Max.
@ 60% duty cycle	KVA	6.5 Max.
@ 35% duty cycle	KVA	8.5 Max.
@ No Load	KVA	0.15
Input Current 415V Supply		
@ 100% duty cycle	Amps, Ac	18.9
@ 60% duty cycle	Amps, Ac	27.3
@ 35% duty cycle	Amps, Ac	36.2
@ No Load	Amps, Ac	0.3
Power Factor		0.99 Max.
Efficiency	%	>82



Cont.

## OMNIMIG 250



The new Inverter based Compact MIG Welder

Cont.

Output		
Open Circuit Voltage @230V Input Supply	Volts, DC	75V DC (+/-5V)
Welding Voltage Range 	Volts, DC	14 - 34
Welding Current Range	Amps, DC	50 - 250
Crater Voltage Range	Volt, DC	14 - 34
Crater Current Range	Amps, DC	50 - 250
Welding Current (40°C 10 minutes cycle)		
@ 100% duty cycle 	Amps, DC	160
@ 60% duty cycle	Amps, DC	195
@ 35% duty cycle	Amps, DC	250
General		
Gas Preheater Rating	V / A	90 V DC / 1.1 Amps
Welding Wire Sizes (Diameter)	mm	0.8, 1.0, 1.2
Protections (Auto Reset)	-	Over Voltage, Under Voltage, Over Temperature, Output Short Circuit
Front Panel Functions		<ol style="list-style-type: none"> <li>1. 2 Track/ 4 track control and Crater Setting</li> <li>2. Creep Feed</li> <li>3. Adjustable Burn-back</li> <li>4. Display - set Voltage and Wire Speed, actual Voltage and Welding Current</li> <li>5. Pre flow and Post flow</li> <li>6. Wire Diameter Selection- 0.8, 1.0 &amp; 1.2</li> <li>7. Shielding Gas Selection- Co2 And Mixed Arco2</li> </ol>
Cooling	Type	Forced Air
Class of Insulation	-	H
Degree of Protection	-	IP23S
Dimensions (L x W x H) Power Source	mm	600 x 330 x 530
Dimensions (L x W x H) With Trolley	Kg	1040 x 475 x 1140
Weight (Approx. only Power Source)	Kg	32
Weight (Approx. Trolley)	Kg	77

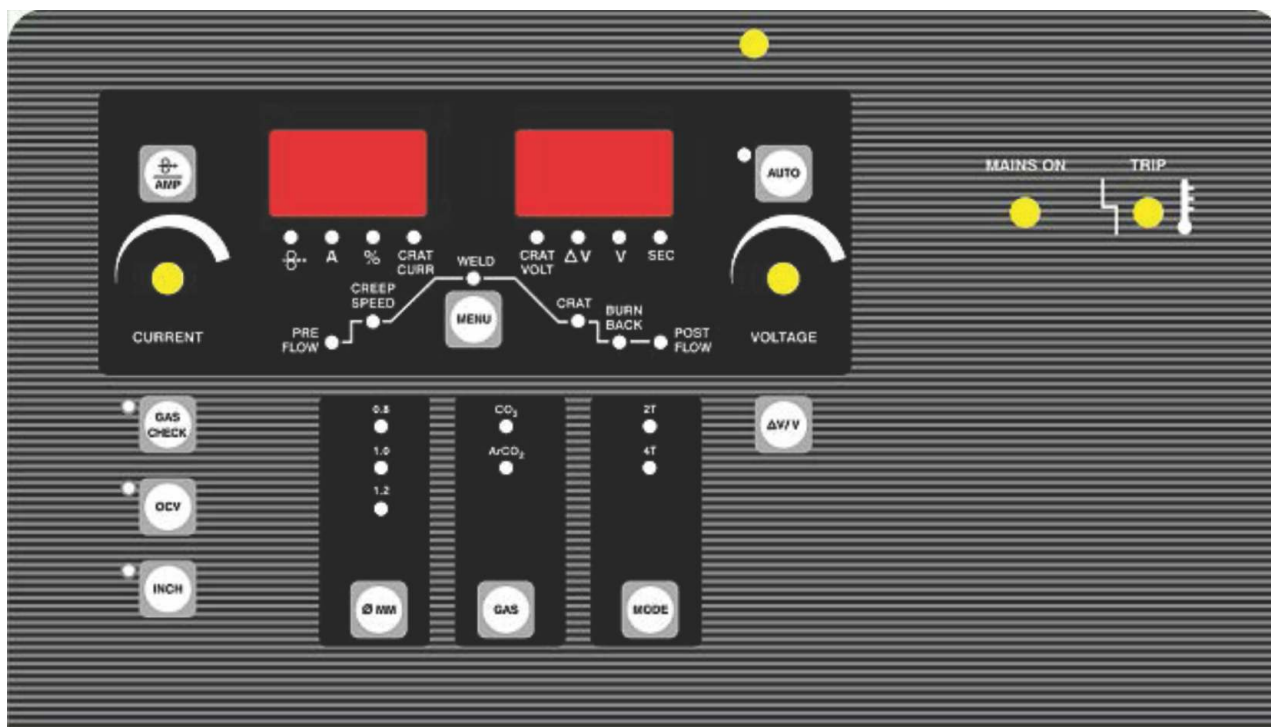
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## OMNIMIG 250

The new Inverter based Compact MIG Welder



### FRONT CONTROL PANEL – OMNIMIG 250



### TECHNICAL SPECIFICATIONS – BUILT-IN WIRE FEEDER

Wire Feeder (built - in)		
Parameter	Unit	Value
Drive Unit	-	2 Roll PMDC Motor
Motor Voltage	Volt, Dc	42 V DC $\pm$ 0.5 V
Rated Power	Watts	90 W
End Connection For Torch	-	Euro Type
Suitable For Wire Sizes	mm	0.8, 1.0, 1.2
Wire Drive Motor.	Type	Permanent Magnet DC Type With Encoder Feedback
Rated Power	Watts	
Wire Roll Drive	No	Four
Wire Feed Speed	Mtrs. / Min.	2-22 (For 0.8 mm Wire), 2-18 (For 1.0 mm Wire), 2-8 (For 1.2 mm Wire)

Cont.

## OMNIMIG 250

The new Inverter based Compact MIG Welder



### TECHNICAL SPECIFICATIONS - WELDING TORCH

Mig Welding Torch		
Parameter	Unit	Value
Maximum Current @ 60% Duty Cycle	Amps	250 Amps With Co2 Gas, 200 Amps With Mixed Gas
Torch Cable Length	Meter	3
Torch Adapter	Type	Euro Type
Suitable For Wire Size Diameter	mm	0.8, 1.0, 1.2
Standard Accessories:		
Gas Hose With Both Side End Connectors		2 Mtr.

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## CHAMPMIG 300






The world class Inverter based MIG / MMA Welder



### TYPICAL APPLICATION

- Three phase inverter based high efficiency and high power factor DC Welder with high frequency switching technology.
- Suitable for both MIG and MMA welding operation.
- User friendly digital front panel interface with 7 segment LED display and multi function encoders.
- Anti stick function to protect the machine from short circuit condition in MMA mode.
- Option of Remote control unit with digital display for setting wire feed speed/current and voltage remotely in MIG/MMA mode.

### SPECIFICATIONS

Technical Specifications	Unit	CHAMPMIG 300
<b>Input</b>		
Input Supply :		
Voltage 	Volts, Ac	415, +15%, -10%
Phase		3
Frequency	HZ	50/ 60
Characteristics		CC - CV
Input KVA @ 100% duty cycle 	KVA	8.1-MIG Mode, 10.66 MMA Mode
Input KVA @ 60% duty cycle	KVA	10.9-MIG Mode, 13.08 MMA Mode
Input KVA @ 35% duty cycle	KVA	12.9-MIG Mode, 17.45 MMA Mode
Input Current @ 100% duty cycle	Amps, Ac	11.2-MIG Mode, 14.9 MMA Mode
Input Current @ 60% duty cycle	Amps, Ac	15.1-MIG Mode, 18.4 MMA Mode
Input Current @ 35% duty cycle 	Amps, Ac	18.2-MIG Mode, 24.6 MMA Mode
Power Factor	%	Up to 85%
Efficiency		0.84 Max.
<b>Output</b>		
Open Circuit Voltage 	Volts, DC	65 V (+/-3V) - MIG mode, 88V (+/-5V) MMA Mode
Welding Current Range 	Amps, DC	50-250

Cont.

## CHAMPMIG 300



The world class Inverter based MIG / MMA Welder

Cont.

Welding Current (40°C 10 minutes cycle)		
@ 100% duty cycle	<b>X%</b>	Amps, DC
@ 60% duty cycle		Amps, DC
@ 35% duty cycle		Amps, DC
Auxiliary Pre Heating Supply	Volts, AC, Watts	

### Front Panel Functions

<b>1.</b> Creep On/Off Switch	<b>2.</b> Crater Current & Voltage Adjustment	<b>3.</b> MMA/MIG Selection Switch
<b>4.</b> 2T/4T selection switch	<b>5.</b> GAS/OVC Check Switch	<b>6.</b> GAS CO2/ARCO2 Selection Switch
<b>7.</b> Segment LED display for displaying set Voltage & Wire Feed speed, while Welding display Actual Current & Voltage	<b>8.</b> Wire Selection 0.8/1.0/1.2 mm selection switch	<b>9.</b> Menu Switch Selecting all Functions - Gas Pre Flow Time, Weld on Current & Voltage, Burn Back Time, Gas Post Flow Time
<b>10.</b> Encoder for selection parameter Value Increment / Decrement	<b>11.</b> 10 memory Location with Save & recall function	<b>12.</b> Remote connector (10 meter remote control can be provide as an option for setting Voltage & wire feed speed)
<b>13.</b> Output Terminal KNOBS	<b>14.</b> Mains on 'Green' Color indication	<b>17.</b> Trip 'Red' Color LED Protection Mode
<b>16.</b> Torch switch gear	<b>17.</b> Gas Out	

General	Unit	Value
Ingress Protection		IP23S
Cooling	Class	Forced Air
Insulation	Type	H
Dimensions (L x W x H)	mm	575 x 225 x 450
Weight (approx.)	Kg	28
MIG Welding Parameter	Unit	Value
Gas Pre Flow Time	Sec.	0 to 10
Current Range in MIG	Amp.	10 to 300
Voltage Range in MIG	Volts.	14 to 40
Crater Current in MIG	Amp.	10 to 300
Crater Voltage in MIG	Volts.	14 to 40
Burn Back Time	Sec.	0 to 2
Gas Post Flow Time	Sec.	0 to 10

- **Warranty :** One year from the date of commissioning. ADOR WELDING LIMITED warrants that all new equipment sold from Plant/Area Offices / Authorised Distributors are free from defects in materials and workmanship and will perform in full accordance with applicable specifications.
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- Backed by dedicated customer care package.



## CHAMP MIG 400

HEAVY DUTY INVERTER BASED GMAW WELDING OUTFIT



### INTRODUCTION

CHAMP MIG 400 is an IGBT inverter based welding power source, suitable for GMAW applications. The IGBT Powermodule, high frequency transformer and fast recovery diode are used as key devices for power conversion and transmission to assure better efficiency and performance. The complete system consists of power source, wirefeeder, gascooled torch and inter connecting cables.

### PROTECTION

The equipment is provided with following protections.

- A) **Under Voltage and Over Voltage:** If supply voltage goes lower or higher than set limit, error message is displayed on Display.
- b) **Over Temperature:** If the temperature of the main power elements is more than safety limits, error message is displayed.
- C) **Single Phasing Protection:** If any one of the three phases (R,Y,andB) is absent, welding will stop. Welding current would not be available in this condition.

### SALIENT FEATURES

- Digital Panel for adjusting the welding.
- 25% more Energy efficient than conventional machines.
- Maximum Power factor is 0.95.
- Excellent dynamic response enables superior arc characteristics.
- 2T, 4T operating modes.
- Dynamic Inductance adjustment for better arc control.
- Crater voltage and Crater current adjustment through digital panel.
- Unique feature of Pinch-off pulse to avoid globule formation.
- Automatic "Weld Stop" facility.
- Normal/ Creep feeding selection available on front panel.

### TECHNICAL SPECIFICATIONS

Technical Specifications	Value	Unit
Supply Voltage, Phase, Frequency	415, +15%, -10%; 3; 50 / 60	Volts, Ac; No.; Hz
Input Kva	12.0 @ 100% Duty Cycle, 0.24 @ No Load	Kva
Power Factor	0.93 Max.	λ

Cont.





## CHAMPMIG 400



The world class Inverter based MIG Welder

### SPECIFICATIONS

Technical Specifications	Value	Unit
Efficiency	87 @ 100% Duty Cycle	%
Open Circuit Voltage 	65 ±5%	Volts, DC
Welding Voltage And Crater Voltage Range	16 -39	Volts, DC
Welding Current Rating	400 @60% Duty Cycle, 310 @100% Duty Cycle	Amps, DC
Welding Current And Crater Current Range	50 - 400	Amps, DC
Front Panel Controls	2 Track, 4 Track, Gas Check, Ocv Check Facility, Potentiometers For Setting Crater Voltage And Current (wire Feed Speed)	
Front Panel Controls	Potentiometers For Setting Main Voltage And Current (wire Feed Speed)	
Cooling	Forced Air	Type
Insulation	H	Class
Compatibility To International Standards	IEC EN 50974-1	General Compatibility
Dimensions (l X W X H) 	700 X 450 X 600	Mm
Weight (approx.)	44	Kg
Wire Feeder	Feedlite 40 Nemr -c (4 Roll)	Model
Weight (without Spool)	16 Kg (approx)	Kg
Dimensions (l X W X H)	563 X 230 X 410	Mm
Suitable For Wire Spool Capacity	15 KG	Kg
Wire Feeder Fitted With Rollers	1.2 / 1.6 For Solid Wire 2 No	Mm
Wire Feeder Motor Voltage	42V DC	Volts DC
Wire Drive Motor.	Permanent Magnet Dc Type	Type
Wire Roll Drive	Four	No
Wire Feed Speed	1.5 TO 18	Meters / Minute
Suitable For Wire Sizes	0.8,1.0,1.2	Mm
Torch (3 Meter)	Hipro 403 (e)	model

- **Warranty** : One year from the date of commissioning. ADOR WELDING LIMITED warrants that all new equipment sold from Plant/Area Offices / Authorised Distributors are free from defects in materials and workmanship and will perform in full accordance with applicable specifications.
- In view of continuous development, ADOR WELDING LIMITED reserves the right to modify/change the design and /or the specifications without any prior notice.
- Backed by dedicated customer care package.



## CHAMPMIG 600

The world class Inverter based MIG Welder



### INTRODUCTION

CHAMP MIG 600 is an IGBT inverter based welding power source, suitable for GMAW applications. The IGBT Power module, high frequency transformer and fast recovery diode are used as key device for power conversion and transmission to assure better efficiency and performance.

The complete system consists of power source, wire feeder, water cooled or gas cooled torch, water cooling unit (for water cooled systems) and interconnecting cables.

### DETAILS OF COMPLETE SYSTEM

Sr. No.	Description	CHAMPMIG 600 A	CHAMPMIG 600 E
1	Power Source	ICVR 600	ICVR 600
2	Wire feeder	FEEDLITE 40 (NEH-RC)	FEEDLITE 40 (NEH-RC)
3	Torch	ADOR-MTG 600 E.	ADOR TW 502 (E)

### SALIENT FEATURES

- Inverter based digitally controlled GMAW outfit
- Auto "Weld Stop" when welding torch is taken away from weld job
- Digital Panel for adjusting the welding
- 25% more Energy efficient than conventional machines.
- Maximum Power factor is 0.95
- Excellent dynamic response enables superior arc characteristics. 2T, 4T operating modes
- Dynamic Inductance adjustment for better arc control
- Crater voltage and Crater current adjustment through digital panel. Unique feature of Pinch off pulse to avoid globule formation.
- Automatic "Weld Stop" facility.
- Normal/ Creep feeding selection available on front panel.

### PROTECTION

The equipment is provided with following protections.









- Under Voltage and Over Voltage:** If supply voltage goes lower or higher than set limit, error message is displayed on Display
- Over Temperature:** If the temperature of the main power elements is more than safety limits, error message is displayed
- Single Phasing Protection:** If any one of the three phases (R, Y, and B) is absent, welding will stop. Welding current would not be available in this condition)

## CHAMPMIG 600

The world class Inverter based MIG Welder



### SPECIFICATIONS

Technical Specifications	Unit	ICVR 600
<b>Input</b>		
Input Supply :		
Voltage 	Volt	415, +15%, -10%
Phase	No	3 Ø
Frequency	Hz	50/ 60
Max Input KVA 		
@ 100% duty cycle	KVA	21.5
@ No Load	KVA	0.31
<b>Output</b>		
Open Circuit Voltage 	Volts +/-5%	65
Welding Current Range 	Amp	65-600
Welding Current (40°C 10 minutes cycle)		
@ 60% duty cycle 	Amp	600
@ 100% duty cycle	Amp	465
Welding Voltage Range	Volt	16-45
Crater Current Range	Amp	65-600
Crater Voltage Range	Volt	16-45
Mode of operation		2 track, 4 track, Gas check, OCV check facility
Remote Control		For setting voltage & current
Power Factor		Max 0.94
Efficiency	%	89% @ 100% duty cycle
<b>General</b>		
Compatibility to International standard		As per Std. EN60974-1
Wire feed speed	m/min	1.5-18
Suitable Welding Wire Diameter	mm	Aluminum 1.2 – 1.6 Steel 0.8,1.0,1.2 & 1.6
Ingress Protection	Class	IP23
Cooling 	Type	Forced Air
Dimensions (Approx.) 		
Length	mm	670
Width	mm	450
Height	mm	620
Weight 	Kg	56
Audio Noise Emission	dB	70

Cont.

## CHAMPMIG 600



The world class Inverter based MIG Welder

Technical Specifications	Unit	Feedlite 40 (NEHR)C
Suitable for wire Ø	mm	0.8,1,1.2,1.6 mm
Wirefeed speed	mtr/min	1.5 to 18 mtr/min
Wire roll drive	-	Four
Wire drive motor	Type	Permanent Magnet DC
Wire feeder Motor voltage	V	42
Wire feeder fitted with rollers	-	1.2/1.6 for sold wire 2 no
Suitable for Wire Spool capacity	Kg	15
Dimensions		
Length	mm	563
Width	mm	230
Height	mm	410
Weight (without spool)	Kg	16 (Approx)

- **Warranty** : One year from the date of commissioning. ADOR WELDING LIMITED warrants that all new equipment sold from Plant/Area Offices / Authorised Distributors are free from defects in materials and workmanship and will perform in full accordance with applicable specifications.
- In view of continuous development, ADOR WELDING LIMITED reserves the right to modify/change the design and /or the specifications without any prior notice.
- Backed by dedicated customer care package.



## CHAMP MULTI 400, 600



The world class Inverter based Multipurpose Welder



### SALIENT FEATURES

- CHAMPMULTI- 400 and CHAMPMULTI- 600 are Multi process welding outfits with Inverter based welding power source
- The IGBT power module, High frequency transformer and fast recovery diode are used as key device for power conversion and transmission to assure better Efficiency and performance
- The welding power source has both constant current (CC) and constant voltage characteristics (CV), which are suitable for MMA and MIG/MAG and FCAW applications

- Set output parameters are constant against input supply variations
- Power source is protected against single phasing, under voltage, over voltage, short circuit and temperature rise
- Water cooled version available for CHAMP MULTI 600 as option
- MMA process with this outfit is most suitable for all kinds of electrodes including CELWEL for fabrication work, pipe welding, site construction etc
- GMAW process is suitable for welding in semiautomatic / automatic mechanism for welding MS, SS and Al materials with Solid and Flux core wires (FCAW Mode)
- Both the models can operate with single point Synergic control in MIG/MAG mode
- The complete system consists of Power Source, wire feeder, torch and inter connecting cables and control cables between wire feeder and power source
- Available with both Gas cooled and Water cooled MIG Torches for 600 Amp model
- High efficiency (>85%)
- Single point Synergic control in GMAW
- User friendly Digital front panel and analog remote controller
- Auto "Weld Stop" when welding torch is taken away from work piece
- 2T, 4T and SPOT and Multi Spot operating modes in MIG Mode as well as FCAW mode
- Dynamic Inductance adjustment in GMAW process and Arc force adjustment in MMA process for better arc control
- Crater voltage and Crater current adjustment through digital panel
- Unique feature of Pinch-off pulse to avoid globule formation

## CHAMP MULTI 400, 600



The world class Inverter based Multipurpose Welder

### PROTECTIONS WITH AUTO RESET

The Equipment is provided with following protections:

- Under / Over Input supply Voltage :
  - Red LED glows if input supply voltage goes below 330V AC
  - Red LED glows if input supply voltage goes above 480V AC
- Over Temperature Trip :  
If the temperature of the Semiconductor Component is increased above safety limits then machine goes in safety mode (Trip Mode). In this condition welding voltage will not be available and welding will stop.
- Single phasing protection :  
If any one of three phases of input supply (R, Y, B) is absent, then Machine will Trip and Red LED will glow. In this condition welding voltage will not be available and welding will stop.
- Output Short Circuit Protection :  
Welding Output is protected against any Short circuit.
- No Output Voltage will be available in both conditions.

### DETAILS OF COMPLETE SYSTEM

Sr. No.	Description	Model	
		Champ Multi 400	Champ Multi 600/600 (W)
1	Power Source	ICCCVR- 401	ICCCVR- 600
2	Wire Feeder	FEEDLITE 40 (NEM)- C	FEEDLITE 40 (NEH - C) / NEHW)
3	Torch	HIPRO 403 (E) / MTG 400 (E)	TW 502 (E) / MTG 600 (E) for Gas cooled systems TW 600 (WE) for Water cooled systems
4	Gas Pressure Regulator Cum Flow Meter (optional)	ARGON Or CO <sub>2</sub> Regulator	ARGON Or CO <sub>2</sub> Regulator
5	Gas Heater (optional)	110V AC, In Case of CO <sub>2</sub> Regulator	110V AC, In Case of CO <sub>2</sub> Regulator
6	Water Cooling Unit (optional)		WCU-302 For Water Cooled Version Only

Sr. No.	Error Code	Error
1	ERR 001	Under Voltage Error
2	ERR 002	Over Voltage Error
3	ERR 003	Thermal Trip Error
4	ERR 004	No Current Flow Error
5	ERR 005	Feeder Motor Overloading Error
6	ERR 006	Wire Feeder Error
7	ERR 007	Water Pressure Error
8	ERR 008	Communication Error

## CHAMP MULTI 400, 600

The world class Inverter based Multipurpose Welder



### SPECIFICATIONS

Parametre	Unit	Value	
		CHAMPMULTI 400	CHAMPMULTI 600
Nominal Input Voltage	V AC	415 V, 3 PH	
Input Voltage Range	V AC	415 (+15% - 10%)	
Phase	No	3	
Frequency	Hz	50/ 60	
Efficiency @ 100% duty cycle	%	>90	>89
Power Factor @ 100% duty cycle		0.93 Max	
Open Circuit Voltage In MMA Mode @415v, 3 Phase	V DC	84 V	90 V
Open Circuit Voltage In MIG Mode @415v, 3 Phase		55 V	65 V
Open Circuit Voltage In TIG Mode @415v, 3 Phase		84 V	90 V
Welding Current Range In MMA Mode	A DC	50-400 A	50-600
Welding Current Range In TIG Mode		10-400	10-600
Welding Current Range In MIG Mode		40-400	40-600
Welding Current @ 100% duty cycle (10 minute cycle)	A DC	310	465
Welding Current @ 60% duty cycle (10 minute cycle)		400	600
Input Power (In MMA Mode) @ 100% duty cycle	KVA	12.0	22.0
Input Power (In MIG Mode) @ 100% duty cycle		11.0	22.0
Input Power (In TIG Mode) @ 100% duty cycle		9.0	16.5
Crater Current Range In MIG Mode		500-400 A	65-600 A
Crater Current Voltage In MIG Mode	-	14-40 V	14-44 V
Cooling	Type	Forced Air	
Class of Insulation	Class	H	
Degree of Protection	-	IP23	
Protections Auto Resettable	-	Over Voltage, Undervoltage, Single-Phasing, Over Temperature	
Suitable Welding Electrode Size Dia. - In MMA Mode	mm	2.5, 3.2 , 4, 5, 6 MM Diameter	
Suitable Welding Electrode Size Dia. - In MIG Mode	mm	0.8, 1.0, 1.2, 1.6 MM Diameter	
Dimensions L x W x H	mm	650 x 450 x 570	700 x 460 x 650
Auxiliary Outputs On Back Panel	V AC	110 V – Gas Heater, 230 V – Water Cooling Unit	
Front Panel Functions	-	Ø MMA /TIG/ MIG /FCAW Process Selection	
	MIG / FCAW MODE	Ø Separate Switches To Check OCV, Gas Flow & Wire Inch.	
		Ø Selection Switches For Wire Dia, Material & Gas For Synergic Application.	
		Ø Welding Mode 2t / 4t / Spot / Multispot Selection Switch.	
		Ø Auto/manual Selection Switch.	

Cont.

## CHAMP MULTI 400, 600



The world class Inverter based Multipurpose Welder

Cont.

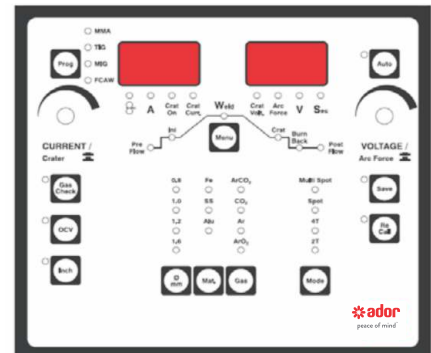
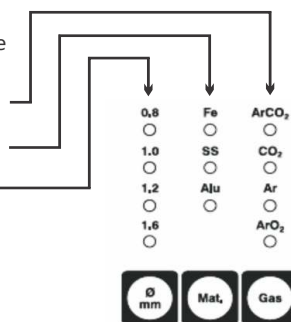
Front Panel Functions	MIG / FCAW Mode	Ø Save & Recall Switches To Save & Recall 10 Programs.	
	-	Ø Facility To Set Preflow, Post Flow Burnback, Spot & Pause Time Before Welding.	
	MMA / TIG Mode	Ø 3 Digits Digital Display For Voltage and Current.	
Remote Control	-	Ø Current Setting By Encoder	
Mounting Wheels Of The Power Source	-	Ø Encoder For Arc Force Setting With On/ Off Facility Switch Only In MMA Mode.	
Lifting Arrangement	-	Remote Control With Cable For Setting Voltage and Current	
Weight (Approx.)	Kg.	Wheel Mount	
		Front: Swivel, Rear: Fixed	
		Handle Provided	
		52	57

## SYNERGIC FUNCTIONS

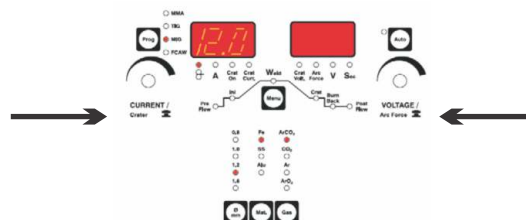
### Select the right program

The Synergic Panel shows weld-programs loaded inside the power source

- Shielding Gas selection- ArCO<sub>2</sub> / CO<sub>2</sub> / Ar / Ar O<sub>2</sub>
- Weld Material selection- Fe / Al / SS
- Wire Sizes selection- 0.8 / 1.0 / 1.2 / 1.6



Wire Feed Speed is the dominant control parameter for each wire feed speed, a corresponding voltage is programmed into the machine.



Turning the knob, the voltage can be trimmed to suit the best welding if required.



## CHAMP MULTI 400, 600

The world class Inverter based Multipurpose Welder



### TECHNICAL SPECIFICATIONS OF WATER COOLING UNIT – TYPE WCU 302

Cont.

Sr. No.	Parameter	Unit	Value
1	Input Supply	V AC	240
2	Phase	No.	1
3	Frequency	Hz	50
4	Cooling Capacity	W	750-1000
5	Maximum Motor Power	W	220
6	Maximum Pump Pressure	Bar	2.5
7	Maximum Pump Flow Rate	L/min	10
8	Tank Capacity	L	8
9	Connector Size	In/out	1/4" X 9
10	Dimensions L X W X H	mm	560 X 325 X 285
11	Weight	Kg.	18

### TECHNICAL SPECIFICATIONS OF WIRE FEEDER – TYPE FEEDLITE 40 NEM(C) / NEH(C)

Sr. No.	Parameter	Unit	Value
1	Suitable for Wire Sizes	mm	
	Steel		0.8, 1.0, 1.2, 1.6
	FCW		1.2, 1.6
	Aluminium		1.2, 1.6
2	Wire Feed Speed	m / min	0 - 18
3	Wire Roll Drive	Type	4 Roll
4	Wire Drive Motor	Type	PMDC, 42 V, 80 W
5	Dimensions L X W X H	mm	563 X 230 X 410
6	Weight	Kg.	16

- **Warranty :** One year from the date of commissioning. ADOR WELDING LIMITED warrants that all new equipment sold from Plant/Area Offices / Authorised Distributors are free from defects in materials and workmanship and will perform in full accordance with applicable specifications.
- In view of continuous development, ADOR WELDING LIMITED reserves the right to modify/change the design and/or the specifications without any prior notice.
- Backed by dedicated customer care package.



## CHAMP MULTI 600

Inverter based Multipurpose MIG / FCAW / MMA / TIG Welder



**CHAMP MULTI 600 is a multiprocess welding outfit with Inverter based welding power source.**

- The IGBT power module, High frequency transformer and fast recovery diode are used as key device for power conversion and transmission to assure better Efficiency and performance.
- The welding power source has both constant current (CC) and constant voltage characteristics (CV), which are suitable for MMA and MIG/MAG and FCAW applications.

- Set output parameters are constant against input supply variations.
- Power source is protected against single phasing, undervoltage, over voltage, short circuit and temperature rise.
- MMA process with this outfit is most suitable for all kinds of electrodes including CELWEL for fabrication work, pipe welding, site construction etc.
- GMAW process is suitable for welding in semiautomatic/automatic mechanism for welding MS, SS and Al materials with Solid and Flux core wires (FCAW Mode).
- It can operate with single point Synergic control in MIG/MAG mode.
- The complete system consists of Power Source, wirefeeder, torch and interconnecting cables and control cables between wire feeder and power source

### SALIENT FEATURES

- Latest Inverter based technology.
- High efficiency (>85%).
- Single point Synergic control in GMAW.
- Protections against over and under input supply voltage and Single-phasing and over heating of power components.
- User friendly Digital front panel and Digital remote controller with display.
- Auto "Weld Stop" when welding torch is taken away from work piece.
- 2T, 4T and SPOT and Multi Spot operating modes in MIG Mode as well as FCAW mode.
- Dynamic Inductance adjustment in GMAW process and Arc force adjustment in MMA process for better arc control
- Crater voltage and Crater current adjustment through digital panel.
- Unique feature of Pinch-off pulse to avoid globule formation.
- Built in VRD (Voltage Reducing Device) unit (Optional) in SMAW mode only.
- ERROR CODE DIGITAL DISPLAY ON FRONT PANEL- for easy fault diagnostics

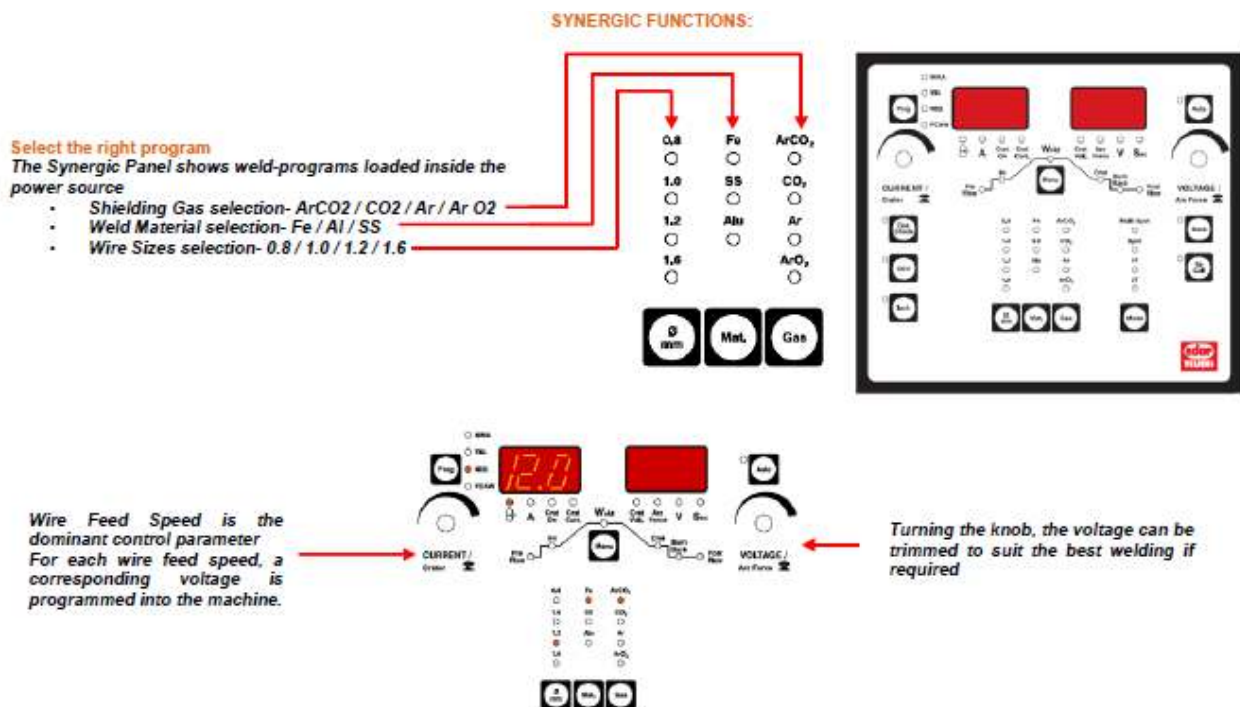
## CHAMP MULTI 600



Inverter based Multipurpose MIG / FCAW / MMA / TIG Welder

### PROTECTIONS WITH AUTO RESET

- The Equipment is provided with following protections:
- Under/Over Input supply Voltage:
- Red LED glows if input supply voltage goes below 330 VAC.
- Red LED glows if input supply voltage goes above 480VAC
- No Output Voltage will be available in both conditions.
- Over Temperature Trip:
- If the temperature of the Semi conductor Component is increased above safety limits, then machine goes in safety mode (Trip Mode). In this condition welding voltage will not be available and welding will stop.
- Single phasing protection:
- If any one of three phases of input supply (R,Y,B) is absent, then Machine will Trip, and Red LED will glow. In this condition welding voltage will not be available and welding will stop.
- Output Short Circuit Protection:
- Welding Out put is protected against any Short circuit.



## CHAMP MULTI 600



Inverter based Multipurpose MIG / FCAW / MMA / TIG Welder

### TECHNICAL SPECIFICATIONS - POWER SOURCE MODEL ICCVR 601

Parameter	Value	Unit
Input		
Supply Voltage, Phase, Frequency	415 (+15% -10%)	Vac
Input Power @ 100% Duty Cycle	Mma / Mig / fcaw Modes: 22; Tig Mode: 16.5	Kva
Efficiency	> 85	%
Power Factor	0.93 MAX	λ
Output		
Open Circuit Voltage @ 415v Input Supply	Mma / Tig Modes: 90; Mig / Fcaw Modes: 76	Vdc
Welding And Crater Current Range -mig / Fcaw	65 -500	Adc
Welding Current Range -mma And Tig	Mma Mode:50-600; Tig Mode:10-600	Adc
Duty Cycle Rating (10 Minute Cycle)	465 @ 100%; 600 @ 60%	Adc
Welding And Crater Voltage Range -mig / Fcaw	14-44 V	Vdc
Welding Voltage Range -mma And Tig	Mma Mode: 22-44 V; Tig Mode: 10.4 -34 V	Type
General		
Suitable Welding Electrode Size Dia.	2.5, 3.2 , 4, 5, 6 Mm Diameter	Mm
Suitable Wire Size Dia.	0.8, 1.0, 1.2, 1.6 Mm Diameter	Mm
Front Panel Functions	Mma /tig/ Mig /fcaw Process Selection	
	Mains On 'green' And Trip 'red' Led Indication	
	Wire Diameter, Material, Gas Selection Switches	
	O.c.v / Gas Check Switch In Mig / Fcaw Mode	
	Arc Force On / Off And Crater On / Off By Pressing Encoder Switch	
	Auto/ Manual Mode / Save / Recall Program Selection Switch	
	2t / 4t / Spot Timer / Multi Spot Selection Switch	
	3 Digit Digital Display For Voltage And Current.	
	By Pressing Arc Force Encoder Switch % Of Arc Force Can Be Adjusted	
Remote Control	Remote Control For Setting Voltage And Current	
Protections Auto Resettable	Over Voltage, Undervoltage, Single –phasing, Over Temperature	

## CHAMP MULTI 600



Inverter based Multipurpose MIG / FCAW / MMA / TIG Welder

### TECHNICAL SPECIFICATIONS – WIRE FEEDER MODEL FEEDLITE 40 NEH (C)

Wire Feeder	Value	Unit
Weight (without Spool)	16 Kg (Approx)	Kg
Dimensions (L X W X H)	563 X 230 X 410	mm
Suitable For Wire Spool Capacity	15 Kg	Kg
Wire Feeder Fitted With Rollers	1.2/1.6 for Solid Wire 2 No	mm
Wire Feeder Motor Voltage	42 V DC	Volts DC
Wire Drive Motor.	Permanent Magnet DC Type.	Type
Wire Roll Drive	Four	No
Wire Feed Speed	1.5 to 18	Meters / Minute
Suitable For Wire Sizes	0.8,1,1.2,1.6	mm

### TECHNICAL SPECIFICATIONS - Optional Water-cooling Unit

Parameter	Value	Unit
Supply Voltage, Phase, Frequency	230 V; Single, 50 / 60	Volts AC; No.; HZ
Cooling Capacity	750-1000	W
Max Motor Power	180	W
Max Pump Pressure	3.2	BAR
Max Pump Flow Rate	10	L/min
Tank Capacity	8	L
Connector Size	1/4" BSP, 19TPI	In/Out
Dimensions (L X W X H)	540 X 315 X 290	mm
Weight (Approx.)	15 (APPROX.)	Kg

### ERROR CODES

Error Code	Error
ERR 001	Under Voltage Error
ERR 002	Over Voltage Error
ERR 003	Thermal Trip Error
ERR 004	No Current Flow Error
ERR 005	Feeder Motor Overloading Error
ERR 006	Wire Feeder Error
ERR 007	Water Pressure Error (in Case Of Water-Cooled Systems)
ERR 008	Communication Error

### OUTFIT

Description	CHAMP MULTI 600
Power Source	ICCCVR-601
WIRE FEEDER	FEEDLITE 40 (NEH)-C
Torch	ADOR TW 502 (E) / MTG 600(E) - For Gas Cooled System HIPRO MIG 502 (W) - For Water Cooled System
Gas Pressure Regulator Cum Flow Meter (optional)	Argon or CO 2 Regulator
Gas Heater (optional)	110 V AC, In Case Of CO2 Regulator

- **Warranty:** One year from the date of commissioning. ADOR WELDING LIMITED warrants that all new equipment sold from Plant/Area Offices / Authorised Distributors are free from defects in materials and workmanship and will perform in full accordance with applicable specifications.
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- Backed by dedicated customer care package.



## CHAMP PULSE 500

INVERTER BASED AC/DC MIXED PULSED TIG  
WELDING SYSTEM



### INTRODUCTION:

CHAMP PULSE 500 outfit is an inverter - based system with advanced IGBT protection mechanism. The equipment supports different welding process modes: SMAW, GTAW, GMAW, PULSE MIG with single and double pulse mode along with pre programmed synergic data. Front panel comes with G-LCD and digital encoder which make situser friendly. Built in various protection features allows it to work in the harsh environment. Machine can be used form anual as well as automatic welding application. With its different welding modes, the machine is suitable for welding with different materials like MS/SS/AL/FCAW/CORTEN STEEL / Al+Mg / Al + Si / DCu.

This complete system comes with Power Source, Wire Feeder, Water Cooling Unit and Water Cooled MIG torch. Power source is capable of Synergic control in PMIG / MIG / MMA / TIG (Lift arc) mode. The complete system consists of Power Source, water-cooling unit, wire feeder, water cooled torch and inter connecting cables and control cables between wire feeder and power source.

CE Marking: The CE marking signifies the manufacturer's declaration of conformity to applicable European directives and standards.

### SALIENT FEATURES:

- Inverter based indigenous advanced digitally controlled SMAW, GTAW, GMAW and SINGLE / TWIN PULSE MIG welding outfit.
- Synergic mode of operation for single point control that allows Automatic parameter selection (Synergic) in MMA, TIG, MIG and Pulse MIG mode.
- Advanced digital control algorithms enable superior arc characteristics.
- Digital control of inverter for spatter less MIG welding application.
- Fine Arc length control in Pulse Mig and MIG welding mode for different types of welding application.
- Excellent arc force and hot start control in MMA mode for low current application.
- Twin pulse mode in Pulse Mig for low heat input.
- Digital pulse feedback from feeding motor for accurate control of wire speed.
- Graphical-LCD for displaying machine's settings along with dual 7 segments LED display for actual current and voltage display.
- Wire Feeder with digital console for remote parameter setting.
- Facility to store 100 welding programs (weld parameter) for easy save and recall operation.
- Addition of synergic program externally for a particular wire using USB facility.

Cont.

## CHAMP PULSE 500



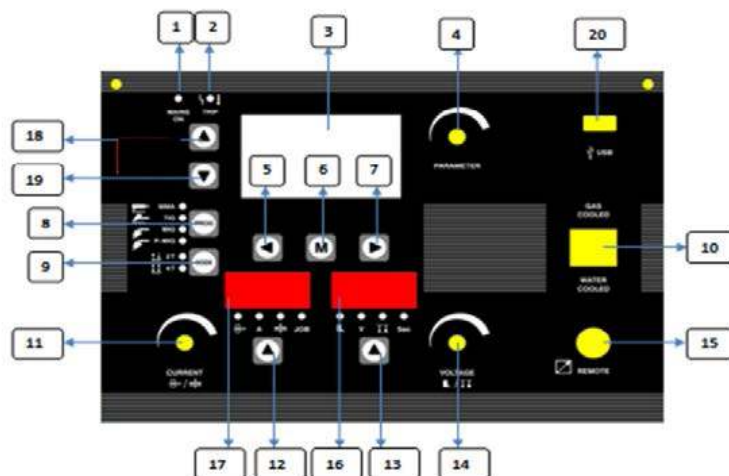
### INVERTER BASED AC/DC MIXED PULSED TIG WELDING SYSTEM

#### PROTECTION:

The equipment is provided with following protections.

- TRIP LED (Red) glows if supply voltage goes low (< 340VAC.)
- Over Voltage: TRIP LED (Red) glows if supply voltage goes high (>470 VAC).
- Over Temperature: TRIP LED (Red) glows if the temperature of the main power components is over the Safety limits
- Single phasing protection: If any one of the three phases (R, Y, and B) is absent, welding will stop, and TRIP LED (Red) will glow
- Motor overload Protection: If during welding Err 005 occurs then it indicates that motor gets overloaded. So, to remove this error just restart the machine.
- Welding current would not be available when TRIP LED (Red) glows.

#### FRONT PANEL DISPLAY



- 1. Mains on indication:** This LED (Green) will glow when machine is turned on.
- 2. Trip Indication:** This LED will glow when any of the trip condition such as Over Voltage, Under Voltage, Thermal Error occurs.
- 3. Graphical LCD:** Displays the current settings of the machine. Parameters set by user for particular job. e.g., set welding current, voltage, material, etc. depending upon the mode selected by PROG key.
- 4. Parameter Knob:**
  - In MMA mode, OCV will appear after pressing parameter knob.
  - In MIG/P-MIG mode by pressing this encoder user will enter into parameter edit, save, and recall mode. It is used for setting selected parameters. By rotating knob clockwise (++) or anticlockwise (--) user can change the selected parameter.
  - In MIG/P-MIG mode, after selection of specific program using menu key, for selection of this program press parameter knob.
- 1. Left Key:**
  - In MMA and TIG modes, switch to select different welding material e.g., SS, MS, AL etc in synergic mode.
  - In Mig and Pulse Mig mode, Used for moving cursor left while setting OTP while USB file reading.



## CHAMP PULSE 500



### INVERTER BASED AC/DC MIXED PULSED TIG WELDING SYSTEM

#### 1. Menu key:

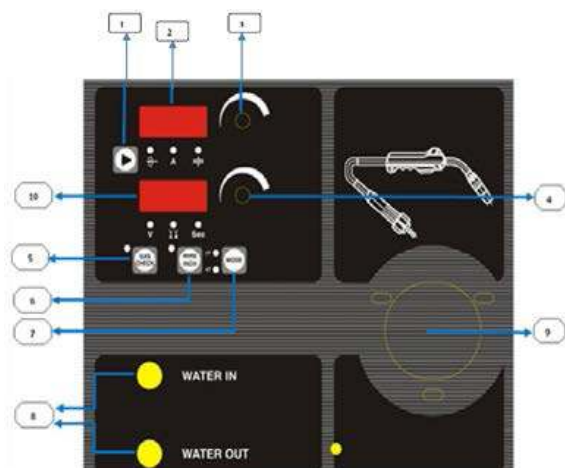
- In MMA and TIG modes, switch to select diameter of feeding wire in P-MIG/MIG and electrode size in MMA mode.
- In Mig and Pulse Mig mode, it is used as menu key. For first press, goes into menu page for selecting particular program (e.g., MS 0.8 ArCo2). Menu mode is exited on pressing the Menu Key once again.

#### 1. Right Key:

- In Mig and Pulse Mig mode, Used for moving cursor right while setting OTP while USB file reading.

- Program selection:** Switch to select between MIG mode, TIG mode, MMA mode and Pulse MIG mode as indicated by left hand side led indication.
- Mode selection:** Key to select between 2T and 4T mode in TIG, MIG and Pulse MIG mode.
- Cooling Mode selection:** Switch to select between gas cooled or water-cooled mode.
- Set Current Knob:** To set welding current, wire feeding speed, material thickness or Job as selected by switch no 12.
- Select parameter:** Welding current, wire feeding speed, material thickness or Job, which is to be set using set current knob.
- Select parameter:** Welding voltage, arc length, arc force, hot start, which is set using set Voltage knob.
- Set Voltage Knob:** To set welding voltage and arc length, Inductance as selected by switch no 13 in and welding process selected.
- Connector for Remote control:** Reserved for future scope.
- Seven segment displays:** To display parameter value selected by switch no 13.
- Seven segment displays:** To display parameter value selected by switch no 12.
- Up Key:** To select the parameter in MIG and P-Mig mode after pressing the Parameter Knob 4.
- Down Key:** To select the parameter in MIG and P-Mig mode after pressing the Parameter Knob 4.
- USB Port:** Used for Reading text file containing program for particular wire from pen-drive.

#### FRONT PANEL DISPLAY



- Select parameter: to select wire feeding speed, welding current, material thickness which is to be set using knob pointed by 3 selected parameters will be indicated by led under seven segment pointed by number 2.
- Seven segment display 1 :to display the parameter selected by key 1 and can be changed by set current knob pointed by 3.
- Set current knob: to set wire feeding speed welding current, material thickness as selected by switch no 1. Current value of selected parameter is displayed in seven segment no 2.
- Set voltage knob: to set welding voltage, arc length as selected in power source display panel.
- Gas checks witch: to check the flow of gas without carrying out welding.
- Wire inch key: to rotate the wire feeder motor when welding is off.
- Mode selection key: to select between 2T and 4T mode in TIG, MIG and PULSE MIG mode.
- Water in and water out connection: connectors for water circulation water in and water out connection to welding torch.
- Welding torch connection.
- Seven segment display 2 :to display the parameter set in power source display panel and can be varied by set voltage knob.



## CHAMP PULSE 500



The New Indigenous World Class Inverter Based MULTIPROCESS PULSED MIG Welder

Cont.

MMA WELDING PARAMETER SPECIFICATIONS		
PARAMETER	VALUE	UNIT
WELDING CURRENT	15 - 500	AMP, DC
ARC FORCE	0 - 100	%
HOT START	0 - 100	%
TIG WELDING PARAMETER SPECIFICATIONS		
PARAMETER	VALUE	UNIT
WELDING CURRENT	15 - 500	AMP, DC
MIG WELDING PARAMETER SPECIFICATIONS		
PARAMETER	VALUE	UNIT
GAS PRE FLOW TIME	0 - 10	SEC.
INDUCTANCE	0 - 40	%
WELDING / CRATER CURRENT	30 - 500	AMP, DC
WELDING / CRATER VOLTAGE	10.0 - 44.0	VOLT, DC
BURN - BACK TIME	0.01 - 5.0	SEC.
GAS POST FLOW TIME	0 - 10	SEC.
PULSED MIG WELDING PARAMETER SPECIFICATIONS - ADDITIONAL		
PARAMETER	VALUE	UNIT
ARC LENGTH	- 40 TO + 40	%
TWIN PULSE FREQUENCY	1.0 - 10.0	HZ
TWIN PULSE DUTY CYCLE	10 - 90	%
TWIN PULSE CURRENT RATIO	0 - 200	%

## CHAMP PULSE 500



The New Indigenous World Class Inverter Based MULTIPROCESS PULSED MIG Welder

Cont.

### PROTECTION:

POWER SOURCE	CHAMP PULSE 500	MODEL
PARAMETER	VALUE	UNIT
SUPPLY VOLTAGE, PHASE, FREQUENCY	415 V +15%, -10%, 3, 50	VOLTS AC, NO., HZ
MAX. INPUT KVA @ 415 V SUPPLY	@ 100% DUTY CYCLE: MMA / TIG / PULSED MIG MODES - 20, MIG MODE -17.5 @ 60% DUTY CYCLE: MMA / TIG / PULSED MIG MODES - 30, MIG MODE -25.5	KVA
INPUT CURRENT @ 415 V SUPPLY	@ 100% DUTY CYCLE: MMA / TIG / PULSED MIG MODES - 28, MIG MODE -24 @ 60% DUTY CYCLE: MMA / TIG / PULSED MIG MODES - 41, MIG MODE -35	AMPS, AC
POWER FACTOR	0.9 MAXIMUM	λ
EFFICIENCY	UPTO 85	%
OPEN CIRCUIT VOLTAGE @ 415V INPUT SUPPLY	MMA / TIG / PULSED MIG / MIG MODES - 84 V ± 5 V	VOLT, DC
WELDING CURRENT RANGE	MMA / TIG: 15 - 500, MIG / PULSED MIG: 30 -500	AMP, DC
WELDING CURRENT AT 40°C, 10 MINUTE CYCLE	387 AMPS @ 100% DUTY CYCLE, 500 AMPS @ 60% DUTY CYCLE	AMPS, DC
PROTECTIONS	OVER VOLTAGE, UNDER VOLTAGE, SINGLE-PHASING, OVER TEMPERATURE, OVER CURRENT	-
FRONT PANEL FUNCTIONS	1) MMA/ TIG / MIG / PULSED MIG SELECTION SWITCH	-
	2) 2T/ 4T SELECTION SWITCH	
	3) MENU KEY FOR SELECTION OF SYNERGIC PROGRAM IS PROVIDED	
	4) GAS COOLING / WATER COOLING SELECTION SWITCH	
	5) WIRE SPEED / CURRENT / PLATE THICKNESS SELECTION SWITCH	
	6) UP / DOWN SWITCHES TO SET THE GAS PRE-FLOW, GAS POST-FLOW AND BURN BACK TIMES	
	7) 3 SEPARATE ENCODERS TO SET CURRENT, VOLTAGE AND ADDITIONAL PARAMETERS	
	8) MAINS ON - GREEN LED AND TRIP - RED LED INDICATORS	
	9) USB PORT FOR LOAD PROGRAM OF PARTICULAR WIRE EXTERNALLY	
PROGRAM STORAGE FACILITY	100 JOBS ALONG WITH PARAMETER LOCKING FACILITY	
AUXILIARY POWER SUPPLY FOR WCU	240 V, 300 VA	VAC, VA
COOLING	FORCED AIR	TYPE
AMBIENT TEMPERATURE RATING	40	°C
CLASS OF INSULATION	H	-
DEGREE OF PROTECTION	IP23S	-
COMPATIBILITY TO INTERNATIONAL STANDARDS	AS PER EN 60974-1	
DIMENSIONS (L X W X H))	1151 X 525 X 1176	MM
WEIGHT	47	KG

- **Warranty** : One year from the date of commissioning. ADOR WELDING LIMITED warrants that all new equipment sold from Plant/Area Offices / Authorised Distributors are free from defects in materials and workmanship and will perform in full accordance with applicable specifications.
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- Backed by dedicated customer care package.



## HF 2000 / HF 2000 AD & HF 3000 / HF 3000 AD



The high efficiency, low power consumption World Class DC and AC/DC TIG control units





### TYPICAL APPLICATIONS

- Light Weight, Compact & Portable for greater flexibility in operation
- Suitable for TIG Welding application with SMAW Power Source of any make
- Gas Preflow / Postflow facility
- Gas flow through solenoid valve for Economical consumption of costly Argon gas

### SALIENT FEATURES

- Portable & Light Weight
- Built in high frequency unit for easy arc striking in AC/DC TIG welding process
- HF on/off switch to prevent high frequency interference (In DC mode only)
- Gas flow through solenoid valve for Economical consumption of costly Argon gas
- Auto HF cut off if arc does not strike within 10 seconds
- Built in gas pre-flow / post-flow facility
- In built water cooling unit with HF 3000/ HF 3000AD

### SPECIFICATIONS

Technical Specifications	Unit	HF 2000	HF 2000 AD	HF 3000	HF 3000 AD
Input		Value	Value	Value	Value
Input Supply :					
Voltage 	Volt	230	230	230	230
Phase	No	1	1	1	1
Frequency	Hz	50	50	50	50
Rating					
Welding Current DC					
@ 60% Duty Cycle 	Amps	200	200	300	300
@ 100% Duty Cycle	Amps	150	150	230	230








Cont.

## HF 2000 / HF 2000 AD & HF 3000 / HF 3000 AD



The high efficiency, low power consumption World Class DC and AC/DC TIG control units

Cont.

Technical Specifications					
Model	Unit	HF 2000	HF 2000 AD	HF 3000	HF 3000 AD
<b>Input</b>					
I/P Supply Voltage	V	230	230	230	230
Phase 	No	1	1	1	1
Frequency	Hz	50	50	50	50
<b>Rating</b>					
<b>Welding Current DC</b>					
@ 60% Duty Cycle 	Amps	200	200	300	300
@ 100% Duty Cycle	Amps	150	150	230	230
<b>Welding Current AC</b>					
@ 60% Duty Cycle 	Amps	-	150	-	250
@ 100% Duty Cycle	Amps	-	110	-	180
Gas Preflow Time 	Sec.	0.1-5	0.1-5	0.1-5	0.1-5
Gas Postflow Time	Sec.	1-30	1-30	1-30	1-30
<b>General</b>					
Water Tank Capacity	Liter	-	-	8	8
Protection Class	Class	IP23	IP23	IP23	IP23
Mode of Operation	Type	2T / 4T	2T / 4T	2T / 4T	2T / 4T
Arc Striking	Type	HF/Touch	HF/Touch(DC)	HF/Touch	HF/Touch(DC)
<b>Dimensions</b>					
Length	mm	440	560	614	614
Width 	mm	165	290	400	400
Height	mm	315	438	580	880
Weight 	Kg	10	25	46(Without water)	50
<b>Torch Model</b>					
	Class	IP23	IP23	IP23	IP23
Max. Current Carrying Capacity		<b>HI-PRO TIG 201-4/201-8</b>		<b>HI-PRO TIG 301-4/301-8</b>	
@ 60% DC	Amps DC/AC	200 / 150		300 / 250	
@ 100 % DC 	Amps DC/AC	150 / 115		230 / 180	
Length	Mtrs.	4 / 8		4 / 8	
Cooling	Type	Gas		Water	
Electrode Capacity		1.6, 2.4 & 3.2		1.6, 2.4, 3.2 & 4.0	

- **Warranty:** One year from the date of commissioning. ADOR WELDING LIMITED warrants that all new equipment sold from Plant/Area Offices / Authorised Distributors are free from defects in materials and workmanship and will perform in full accordance with applicable specifications.
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## CHAMPTIG 220P



The World Class Inverter based DC TIG and DC Pulsed TIG Welder

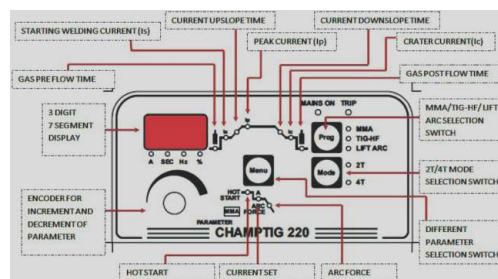


### SALIENT FEATURES





- Single phase (240 V AC) inverter based, high efficiency and high power factor pulse TIG/ MMA DC welder
- Useful for wide variety of material types and thickness.
- Full featured TIG controls possible
- HF ignition
- Intelligent protection: over voltage, line (415V), over Current, temperature
- Latest PWM inverter technology
- High efficiency (Up to 87%)

### CONTROL PANEL FEATURES

#### Control Panel Features CHAMPTIG 220P



#### CHAMPTIG 220P Control Panel Operations

Item	Symbol	Functionality / Description	Mode of Operation
3 Digit Seven Segment Display		SET CURRENT AND ACTUAL WELDING CURRENT DURING WELDING	MMA-TIG
		DISPLAYS PREFLOW, POST FLOW, UP-SLOPE AND DOWN-SLOPE TIME DURING PARAMETER SETTING WITH MENU KEY	TIG
		FREQUENCY OF PULSING IN HZ	TIG
		DISPLAYS HOT START AND ARC FORCE PERCENTAGE DURING PARAMETER SETTING WITH MENU KEY	MMA







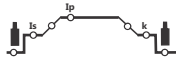




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## CHAMPTIG 220P



The World Class Inverter based DC TIG and DC Pulsed TIG Welder

Cont.

Item	Symbol	Functionality / Description	Mode of Operation
Power Supply On Indicator		<b>MAINS ON</b>  <b>MAINS ON</b>	MMA-TIG
Machine Trip Indication		<b>TRIP</b>  <b>MACHINE TRIP</b>	MMA-TIG
MMA/TIG HF/LIFT ARC Selection	 ○ MIMA ○ TIG-HF ○ LIFT ARC	MMA/TIG HF/ LIFT ARC Selection Through Prog Button (Visual Indications Are Provided For The Same)	MMA-TIG
Panel Encoder		Setting The Welding Current 'A' In MMA Mode & Also The Different Parameters In TIG Mode Clockwise Rotation =>Increase, Anticlockwise Rotation =>Decrease	MMA-TIG
Parameter Setting In MMA Mode	 	MMA Mode Hot Start, Current Set & ARC MMA Force Mode. Visual Indications Are Provided For The Same	MMA-TIG
Parameter Setting In TIG Mode	 	TIG Mode Set Pre Flow Time, Starting Current, Unslope Time, Peak Current, Post Flow Time Respectively. Visual Indications Are Provided For The Same	TIG
Self-Hold On-Off Selection in TIG Mode (2 Track/ 4Track Operation)	 ○ 2T ○ 4T	TIG Mode Set 2T/4T Modes Of Operation. Visual Indications are Provided. Disabled In MMA Mode.	TIG
Menu Key		Menu Key Is Used to Set the Different Parameters In MMA Mode & TIG Mode of Operation in Different Combinations Of 2T, 4T in TIG Mode & Hot Start & ARC Forced In MMA Mode	MMA-TIG
Normal Pulse Selection	 ○ PULSE ○ NORMAL	TIG Mode Select The Modes Pulse/ Normal, Visual Indications Are Provided For The Same. Disabled in MMA Mode.	TIG

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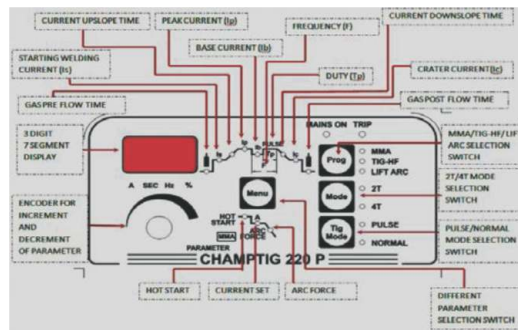
## CHAMPTIG 220P

The World Class Inverter based DC TIG and DC Pulsed TIG Welder



### CONTROL PANEL FEATURES

#### Control Panel Features CHAMPTIG 220P



#### CHAMPTIG 220P Control Panel Operations

Parameter	Unit	Value		Parameter	Unit	Value	
		MMA Mode	TIG Mode			MMA Mode	TIG Mode
Hot Start	%	0-100% of Set Current	NA	Hot Start	%	0-100% of Set Current	NA
Welding Current Set	A	10-200	NA	Welding Current Set	A	10-200	NA
ARC Force	%	0-100%	NA	ARC Force	%	0-100%	NA
Gas Pre Flow Time	Sec	NA	0-5	Gas Pre Flow Time	Sec	NA	0-5
Start Current (IS)	A	NA	5-220	Start Current (IS)	A	NA	5-220
Current Unslope Time	Sec	NA	0-10	Current Unslope Time	Sec	NA	0-10
Peck Current (IP)	A	NA	5-220	Peck Current (IP)	A	NA	5-220
Current Down Slope Time	Sec	NA	0-10	Base Current (IB)	A	NA	5-220
Crater Current (IC)	A	NA	5-220	Pulse Frequency	Hz	NA	1-200
				Duty Cycle (TP)	%	NA	10-90
Gas Post Flow Time	Sec	NA	0-20	Current Down Slope Time	Sec	NA	0-10
				Crater Current (IC)	A	NA	5-220
				Gas Post Flow Time	Sec	NA	0-20

## CHAMPTIG 220P



The World Class Inverter based DC TIG and DC Pulsed TIG Welder

### TECHNICAL SPECIFICATIONS



Parameter	Unit	CHAMPTIG 220P	
Input			
Supply Voltage, Phase Frequency :	Volts AC	240 V +10%-15%, 1 Phase, 50/60 Hz	
Max output Input KVA @ 240 V Supply	KVA	MMA Mode	TIG Mode
@ 100% duty cycle		5.6	4
@ 60% duty cycle		6.7	5.5
@ 25% duty cycle		9.80	7.80
Efficiency	%	Upto 87	
Output			
Open Circuit Voltage	Volts DC	78 V DC (+/- 5V)	
Welding Current Range	Amps DC	MMA Mode	TIG Mode
		10-200	5-220
Welding Current (40°C 10 minutes cycle)	Amps DC		
@ 100% duty cycle		120	130
@ 60% duty cycle		150	170
@ 25% duty cycle		200	220
General			
Suitable for Welding Electrode Size	mm	2.5,3.2 Intermittent 4	
Ingress Protection	Type	IP23	
Cooling	Type	Forced Air	
Insulation	Class	F	
Front Panel Functions		1. Menu Switch For Selections Like Gas Preplow, Gas Post Flow, Unslope Time, Downslope Time, Welding Current As Per Selected Mode Operation ( TIG Mode only)	
		2. MMA/ TIG HF/ LIFT ARC Mode Selection	
		3. Menu Switch For Selection of Hot Start, Welding Current & ARC Force ( In MMA mode only)	
		4. Mains On 'Green' Color Indication	
		5. Trip 'Red' Color LED for indication Machine is Under Protection Mode	
		6. Encoder for Selected Parameter Vaule Increment/Decrement.	
		7. 2T/4T Mode Selection (In TIG Mode only)	

Cont.



## CHAMPTIG 220P



The World Class Inverter based DC TIG and DC Pulsed TIG Welder



Cont.

Additional Functions Specific to CHAMPTIG 220P only		8. Pulse Normal Mode Selection Switch Base Current, Frequency & Duty Cycle Selection By Menu Switch
Protections		Over Voltage, Under Voltage, Single Phasing, Over Temperature
Dimensions L x W x H (Without handle)	mm	480 x 140 x 255
Weight (Approx)	Kg	9

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## CHAMPTIG 300P




The World Class Inverter based DC TIG and DC Pulsed TIG Welder



### SALIENT FEATURES

- Three phase inverter based, High efficiency and High Power Factor Pulse TIG/ MMA DC Welder
- Full featured TIG controls possible
- Power source with built in HF ignition
- Intelligent protection: over/under voltage, over current / temperature
- Option of water cooled Torch with water cooling unit available
- Smooth and stable arc with spatter less welding
- HF start ignition
- Pulse TIG for precision welding

### SPECIFICATIONS

Technical Specifications	Unit	CHAMPTIG 300P	
Input			
Input Supply :			
Voltage 	Volt	415 , +15%, -10%	
Phase	No	3	
Frequency	Hz	50/60	
		MMA Mode	TIG Mode
Efficiency @ 100% duty cycle	%	82	77
Power Factor @ 100% duty cycle	OSØ	0.93	0.93
Input KVA 			
@ 100% duty cycle	KVA	7.5	7
@ No Load	KVA	0.19	0.19
Output			
Open Circuit Voltage 	Volt	70	
Welding Current Range		MMA Mode	TIG Mode
Welding Current	Amps	50-250	5-300
@ 100% duty cycle	Amps	195	230
@ 60% duty cycle (10 min cycle)	Amps	250	300








Cont.

## CHAMPTIG 300P



The World Class Inverter based DC TIG and DC Pulsed TIG Welder

Cont.

Pulse TIG Parameters		
Duty Ratio	%	10-90
Pulse Frequency	Hz	0.5-10
Base Current	Amps	5 - 90% of Ipulse current
Pulse Current ( Ipulse)	Amps	5-300
General		
Start current	Amps	5-300
Current unslope time	Sec	0-10
Current down slope control	Sec	0-10
Pre-Flow	Sec	0-5
Post-Flow	Sec	1-20
Crater current	Amps	5-300
Current / Voltage Display		7 –Segment LED Display for Current & Other parameters
Ingress Protection	Class	IP23
Cooling 	Type	Forced Air
Insulation	Class	H
Welding Output Terminals	-	Cam Lock connections
Dimensions 		
Length	mm	610
Width	mm	295
Height	mm	480
Weight (approx.) 	Kg	38
Water Cooling Unit		
Input Supply Voltage (AC)	Volts	230
Phase	-	1
Frequency	Hz	50-60
Water Reservoir Capacity	Liters	8
Flow rate	Ltr/min	10
Dimensions 		
Length	mm	560
Width	mm	325
Height	mm	285
Weight (approx.) 	Kg	18
Trolley		
Dimensions 		
Length	mm	660
Width	mm	525
Height	mm	415
Weight (approx.) 	Kg	10

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## CHAMPTIG 300 SP





Synergic DC TIG and DC Pulsed TIG Welder  
with Intelligent Control



### TYPICAL APPLICATION

- Latest Inverter based technology.
- IGBT based operating at high frequency.
- Suitable for both DC TIG (Pulse & Normal) and MMA welding operation.
- Available with Synergic mode in TIG for pulse/normal mode. Also suitable for scratch start in TIG mode.
- Built in HF ignition for easy arc striking.
- User friendly front panel interface with LCD display and Multi-functional encoder.
- Anti-stick function to protect the machine from short circuit condition in MMA mode.
- Option of Remote control unit with digital display, for setting current remotely in MMA and TIG mode
- Option of Foot switch control regulator for setting current in TIG mode

### SPECIFICATIONS

Technical Specifications	Unit	ICVR 250
<b>Input</b>		
Input Supply :		
Voltage 	Volts, Ac	415, +15%, -10%
Phase		3
Frequency	HZ	50/ 60
Characteristics		CC - CV
Input KVA @ 100% duty cycle 	KVA	MMA Mode-10.3, TIG Mode-7.1
Input KVA @ 60% duty cycle	KVA	MMA Mode-13.1, TIG Mode-9.5
Input KVA @ 35% duty cycle	KVA	MMA Mode-16.9, TIG Mode-11.9
Input Current 415V Supply @ 100% duty cycle	Amps, Ac	MMA Mode-14.4, TIG Mode-9.8
Input Current 415V Supply @ 60% duty cycle	Amps, Ac	MMA Mode-18.3, TIG Mode-13.2
Input Current 415V Supply @ 35% duty cycle	Amps, Ac	MMA Mode-23.5, TIG Mode-16.5
Power Factor		Up to 0.75
Efficiency	%	Up to 84
<b>Output</b>		
Open Circuit Voltage @415V Input Supply	Volts, DC	80 V DC (+/-5V)
Welding Current Range 	Amps, DC	MMA Mode-50-300, TIG Mode-10-300
Welding Current (40°C 10 minutes cycle)		
@ 100% duty cycle 	Amps, DC	200
@ 60% duty cycle	Amps, DC	250
@ 35% duty cycle	Amps, DC	300

Cont.

## CHAMPTIG 300 SP



Synergic DC TIG and DC Pulsed TIG Welder with Intelligent Control

Cont.

General	Unit	Value
Remote Controller	10 Meter	Provide as optional for Current Setting
Foot Switch Control	5 Meter	Provide as optional for Current Setting
Welding Electrode Size (MMA Mode)	Dia in mm	2.5,3,1.5,4
Protection		Over Voltage, Under Voltage, Single Phasing, Over Temperature
Front Panel Functions		<ol style="list-style-type: none"> <li>1. MMA/HF TIG/ LIFT ARC TIG selection switch</li> <li>2. 2T/4T/Spot/Cycle Switch</li> <li>3. Pulse/Normal Mode selection</li> <li>4. Normal/Foot switch selection switch</li> <li>5. Menu switch for selecting all functions for pulse - Gas pre flow, Gas post flow, pulse frequency, current unslope time current downslope time, welding current (peak current for pulsing mode), Background current (for pulsing mode), set current time - as per selected mode of operation</li> <li>6. Mains on 'Green' color indication</li> <li>7. Trip 'Red' color LED for indication of machine is under protection mode</li> <li>8. Encoder for selection parameter Value Increment / Decrement</li> <li>9. Auto key making synergic mode on/off</li> <li>10. Para/Gas switch to set the parameters in synergic mode &amp; to check gas in normal mode</li> <li>11. Remote controller</li> <li>12. Gas Out</li> <li>13. Water/ Gas cooled selection switch</li> <li>14. Torch switch connector</li> <li>15. Foot switch connector</li> <li>16. Cam lock output connector</li> <li>17. 10 sets of parameter setting can be saved &amp; recalled</li> </ol>

Cont.

## CHAMPTIG 300 SP

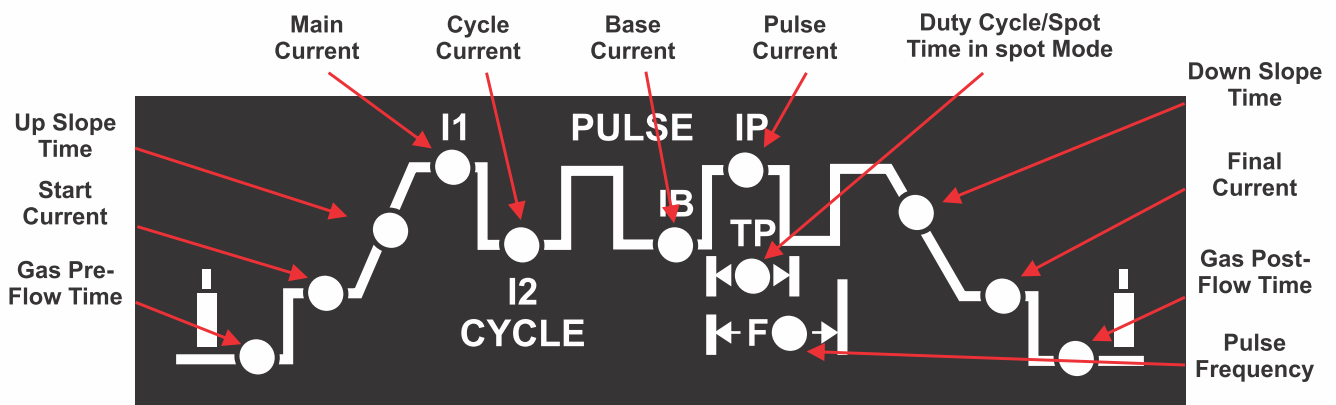
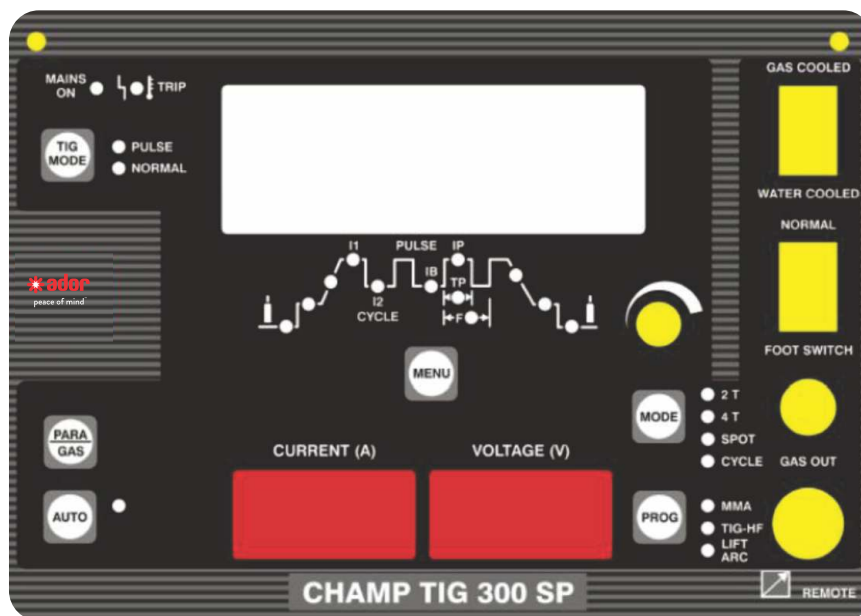


Synergic DC TIG and DC Pulsed TIG Welder with Intelligent Control

Cont.

Auxiliary power supply for water cooling unit	VAC, W	240V, 300W
Cooling	Type	Forced Air
Ambient Temperature rating	°C	40
Class of Insulation	-	H
Degree of Protection	-	IP23S
Dimensions (L x W x H)	mm	600 x 215 x 470
Weight (approx.)	Kg.	27

### DIGITAL PANEL DETAILS FOR MODEL: CHAMPTIG 300SP



Cont.







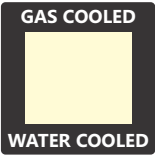

## CHAMPTIG 300 SP

Synergic DC TIG and DC Pulsed TIG Welder with Intelligent Control



### DIGITAL PANEL DETAILS FOR MODEL: CHAMPTIG 300SP

Cont.

Key	Legend	Description
MMA/TIG HF/LIFT ARC Selection Key	 <ul style="list-style-type: none"> <li>○ MMA</li> <li>○ TIG-HF</li> <li>○ LIFT ARC</li> </ul>	Prog key can be used to select MMA / TIG (With HF & Without HF) Process. Visual indications are provide for the same
Encoder		With the help of Encoder we can set the welding current 'A' in MMA TIG mode & also the different parameters in TIG mode. (Encoder rotation clockwise = +, I.E. Increment Encoder Rotation anticlockwise = -, I.E. Decrement
Pulse / Normal Selection	 <ul style="list-style-type: none"> <li>○ PULSE</li> <li>○ NORMAL</li> </ul>	This can be used TIG mode only. In TIG mode, with the help of this button can toggle between Pulse / Normal TIG mode. Visual indication are provide for the same
2T / 4T / Spot / Cycle Selection Key	 <ul style="list-style-type: none"> <li>○ 2T</li> <li>○ 4T</li> <li>○ SPOT</li> <li>○ CYCLE</li> </ul>	This key can be used in TIG mode to select the mode 2T / 4T / Spot / Cycle. Visual indications are provided for the same. This key is inactive in MMA mode.
Para / Gas Selection Key		This key can be used in TIG mode to select different parameters when synergic mode is on. This same key can be used to check Gas in TIG mode when synergic mode is off.
Auto Switch		This key can be used to enabled or disable the synegetic TIG mode. Visual indiction is also provided.
Gas Cooled / Water Cooled Selection Switch		This key is enabled in TIG mode only to select the cooling way depending upon the TIG Torch to be used.
TIG Parameter Selection Switch		Menu Key Is Used to Set the Different Parameters In MMA Mode & TIG Mode of Operation in Different Combinations Of 2T, 4T, Spot, Cycle with pulse & normal. Visual indiction is also provided for all TIG parameters

Cont.







## CHAMPTIG 300 SP

Synergic DC TIG and DC Pulsed TIG Welder with Intelligent Control



### DIGITAL PANEL DETAILS FOR MODEL: CHAMPTIG 300SP

Cont.

Key	Legend	Description
LED Display		7 - SEG LED Display shows actual Welding & Current
Mains on Indication		This Green LED Indicates that Machine is ready for use.
Trip Indication		This Red LED Indicates that Machine is under one of the protection mode via. under Voltage / Over Voltage / Single Phase
Normal Foot Switch		Mini Rocker switch is provided for Normal / Foot switch selection
Remote		This is 4 pin connector provided for interfacing Remote
Gas Out		Gas Nippal is Provided on panel to interface the Gas connection of torch in TIG mode.
LED Display	LED Display shows the selected parameter value which can be set	

Cont.



## CHAMPTIG 300 SP

Synergic DC TIG and DC Pulsed TIG Welder with Intelligent Control



### SPECIFICATION OF WATER COOLING UNIT

Cont.

Parameter	Unit	Value
Supply Voltage, Phase, Frequency	Volts, Ac	230 V, 1 Phase, 50 / 60 HZ
Cooling Capacity	W	750 - 1000
Max Motor Power	W	220
Max Pump Pressure	BAR	2.5
Max Pump Flow Rate	L	10
Tank Capacity	Min	8
Connector Size	In / Out	1/4" BSP, 19TPI
Dimensions (L X W X H)	mm	580 X 215 X 270
Weight (Approx.)	Kg.	14

- **Warranty:** One year from the date of commissioning. ADOR WELDING LIMITED warrants that all new equipment sold from Plant/Area Offices / Authorised Distributors are free from defects in materials and workmanship and will perform in full accordance with applicable specifications.
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- Backed by dedicated customer care package.



## CHAMPTIG 400P



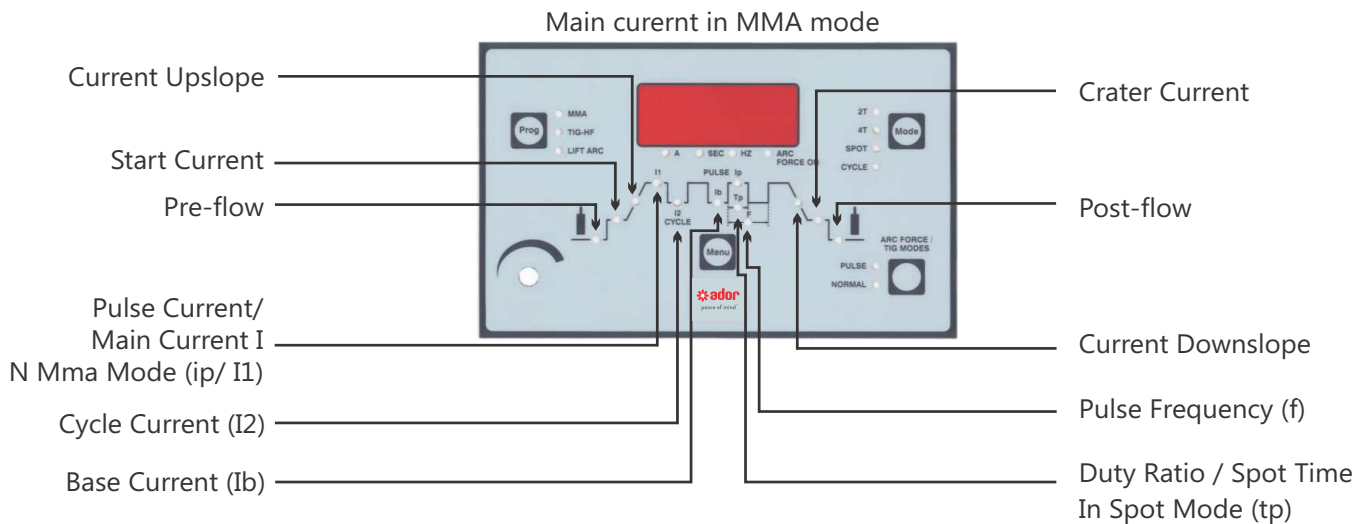
The World Class Inverter based DC TIG and DC Pulsed TIG Welder



### SALIENT FEATURES

- Three phase inverter based, High efficiency and High Power Factor Pulse TIG/ MMA DC Welder
- Useful for wide variety of material types and thickness.
- Full featured TIG controls possible
- HF ignition
- Intelligent protection: over/under voltage, over current / temperature
- Water cooled Torch with water cooling unit option.
- Latest PWM inverter technology
- High efficiency (>85%)
- Smooth and stable arc with spatter less welding

### CONTROL PANEL FEATURES











## CHAMPTIG 400P



The World Class Inverter based DC TIG and DC Pulsed TIG Welder

### SPECIFICATIONS





Technical Specifications	Unit	CHAMPTIG 400P	
Input			
Input Supply :			
Voltage 	Volt	415 , +15%, -10%	
Phase	No	3	
Frequency	Hz	50/60	
Efficiency @ 100% duty cycle	%	85	
Power Factor @ 100% duty cycle		0.94 Max	
Input KVA 		MMA Mode	TIG Mode
@ 100% duty cycle	KVA	13	10
@ No Load	KVA	0.13	0.13
Output			
Open Circuit Voltage 	Volt	70	
Welding Current Range 		MMA Mode	TIG Mode
Welding Current 	Amps	50-400	10-400
@ 100% duty cycle	Amps	310	
@ 60% duty cycle (10 min cycle)	Amps	400	
Pulse TIG Parameters			
Duty Ratio	%	10-90	
Pulse Frequency	Hz	0.5-10	
Base Current	Amps	10 - 90% of Ipulse current	
Pulse Current ( Ipulse)	Amps	10-400	
General			
Start current	Amps	10-400	
Current unslope time	Sec	0-10	
Current down slope control	Sec	0-10	
Pre-Flow	Sec	0-5	
Post-Flow	Sec	0.1-20	
Crater current	Amps	10-400	
Current / Voltage Display		7-Segment LED Display for Current & Other parameters	
Ingress Protection	Class	IP23	
Cooling 	Type	Forced Air	
Insulation	Class	H	
Welding Output Terminals	-	Cam Lock connections	
Dimensions 			
Length	mm	660	
Width	mm	315	
Height	mm	485	
Weight (approx.) 	Kg	46	

## CHAMPTIG 400P



The World Class Inverter based DC TIG and DC Pulsed TIG Welder

Cont.

Water Cooling Unit		
Input Supply Voltage (AC)	Volts	230
Phase	-	1
Frequency	Hz	50-60
Water Reservoir Capacity	Liters	8
Flow rate	Ltr/min	10
Dimensions 		
Length	mm	560
Width	mm	325
Height	mm	285
Weight (approx.) 	Kg	18
Trolley		
Dimensions 		
Length	mm	1005
Width	mm	500
Height	mm	109
Weight (approx.) 	Kg	35

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## CHAMPTIG 300 AD



The World Class Inverter based AC / DC Pulsed / Mixed Pulsed TIG Welding system



### SALIENT FEATURES

- Large input supply voltage range with under/over voltage
- Single phase protection
- Higher efficiency & power factor
- Lower power consumption
- In built spot TIG welding facility, AC/DC as well as mixed TIG Welding facility. In built pulse TIG welding controls with Independent settings of all parameters from front panel. Optionally welding current variation possible by using remote Control (hand held) or foot control regulator
- Cleaning width control in ac TIG welding enables user to adjust Oxide cleaning as well as penetration of weld puddle according to his choice
- Constant current characteristics irrespective of arc length variation
- High efficiency ( $\approx 82\%$ )
- Smooth and stable arc with spatter less welding
- Light weight and compact TIG welding system
- Latest PWM inverter technology

### TECHNICAL SPECIFICATIONS

Parameter	Unit	Value	
Input			
Supply Voltage, Phase Frequency :	Volts, AC	415 (+15%-10%) 3 Phase, 50/60 Hz	
Max output Input KVA @ 416 V Supply	KVA	MMA Mode	TIG Mode
@ 100% duty cycle		7	7.5
@ 60% duty cycle		10	11
Power Factor		Upto 0.92	
Efficiency	%	Upto 82	
Output			
Open Circuit Voltage @ 416 V Supply	Volts, DC	75 V DC (+/- 3V)	
Welding Current Range		AC TIG Mode 20-300 DC TIG Mode 10-300	MMA Mode 50-250
Welding Current (40°C 10 minutes cycle)	Amps		
@ 60% duty cycle		TIG Mode 300 Amps	MMA Mode 250 Amps
@ 100% duty cycle		TIG Mode 230 Amps	MMA Mode195 Amps
General			
Remote Controller	10 Meter	Provide as Optional for Current Settings	
Foot Switch Control	10 Meter	Provide as Optional for Current Settings	

Cont.

## CHAMPTIG 300 AD



The World Class Inverter based AC / DC Pulsed / Mixed Pulsed TIG Welding system

Cont.

Protections		Over Voltage, Under Voltage, Single Phasing, Over Temperature
Front Panel Functions		MMA TIG Selection Switch
		2T/ 4T / Spot/ Cycle Selection Switch
		DC+/ DC-/ AC Welding Method Selection Switch
		Gas Check Switch
		Pulse/ Normal Mode Selection Switch
		HF On/ HF Off Selection Switch
		Normal/ Foot Selection Switch
		Menu Switch for Selecting All Functions Via Gas Pre Flow, Start Current, Up slope Time, Base Current, Pulse Current, Down Slope Time, Crater Current, Gas Post Flow Time, Cleaning for AC, AC Frequency, AC Offset, Pulse Width/Spot Time, Pulse Frequency, As Per Mode Selection Operation
		Torch Switch Connector
		Foot Switch Connector
		Remote Connector
		Gas Out
		CAMLOCK output Connector
		Mains On 'Green' Color Indication
		Trip 'Red' Color LED for indication Machine is Under Protection Mode
		Water/Gas Cooled Selection Switch
		Encoder for Selected Parameter Vaule Increment/Decrement.
Cooling	Type	Forced Air
Ambient Temperature Rating	°C	40
Class of Insulation	-	H
Degree of Protection	-	IP23
Dimensions L x W x H (Without handle)	mm	650 x 425 x 515
Weight (Approx)	Kg	50

Cont.

## CHAMPTIG 300 AD

The World Class Inverter based AC / DC Pulsed / Mixed Pulsed TIG Welding system



### TIG Welding Parameter Setting

#### SPECIFICATIONS

Parameter	Unit	Value
Gas Pre Flow Time	Sec	0-5
Start Current	Amp	5-300
Current Unslope Time	Sec	0-10
Base Current	A	5-300
Pulse Current	A	5-300
Pulse Width	%	10-90% of Width of Pulse Current
Pulse Frequency	Hz	0.5 to 500
Current Down Slope Time	Sec	0-10
Crater Current	A	5-300
Gas Post Flow Time	Sec	0.1-20
Spot Time	Sec	1-10
Cleaning Control	%	(-40) - (+40)
AC Frequency Control	Hz	20-100
AC Offset	%	(-50) - (+30)

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## CHAMPTIG 500 AD

The World Class Inverter based AC / DC Pulsed / Mixed Pulsed TIG Welding system



CHAMPTIG500AD is an I.G.B.T inverter welding power source suitable for TIG (AC & DC) welding application. The IGBT power module, high frequency transformer and fast recovery diode, HF choke are used as key device for power conversion and transmission to assure better efficiency and performance. CHAMPTIG 500 AD power source has constant current characteristics (CC), which is mainly suitable for TIG (AC & DC) welding with normal as well as pulsed mode of operation and for MMA welding also. The complete system consists of Power Source, torch and interconnecting cables. Argon gas is used for shielding weld metal against external atmosphere in TIG mode.

### SALIENT FEATURES

- Latest High Frequency Inverter based technology with constant output current suitable for both TIG (AC & DC) and MMA welding operation
- Positive (DC+) & negative (DC-) polarity selection in MMA mode
- Option of HF ON & HF OFF in TIG mode, hence also suitable for scratch start in TIG mode
- Built HF ignition for easy arc striking.
- Welding process, mode selection and parameter adjustment by using keypad and multi function encoder provided on digital frontpanel
- 7 segment LED display for actual current display & 7 segment LED display for actual voltage display & LCD display for other parameter display setting
- Anti stick function to protect the machine from short circuit condition in MMA mode.
- CRATER OFF (2T), CRATER ON (4T), SPOT, CYCLE mode of operation (TIG).
- Available with Cleaning width control and AC offset adjustment and AC frequency setting for AC TIG welding application.
- Adjustment of pulse current, pulse frequency, pulse width, AC current, AC frequency, cleaning control and AC offset, it can meet the requirement of seam depth, width and ripple, which can prolong the using life of tungsten electrode.
- Option of Remote-control unit for setting current remotely in MMA and TIG mode
- Option of Foot switch control regulator for setting current in TIG mode
- The outfit is provided with Water Cooling Unit and 500 Amp capacity Water cooled TIG Torch for heavy-duty TIG Welding

### PROTECTION

**The Equipment is provided with following protections:**

- Under Voltage: TRIP LED (Red) glows if supply voltage goes low (< 340VAC.)
- Over Voltage: TRIP LED (Red) glows if supply voltage goes high (>470 VAC).
- Over Temperature: TRIP LED (Red) glows if the temperature of the main power components is over the safety limits
- Single phasing protection: If any one of the three phases (R, Y, and B) is absent, welding will stop, and TRIP LED (Red) will glow Welding current wouldn't be available when TRIP LED (Red) glows.

Cont.



## CHAMPTIG 500 AD

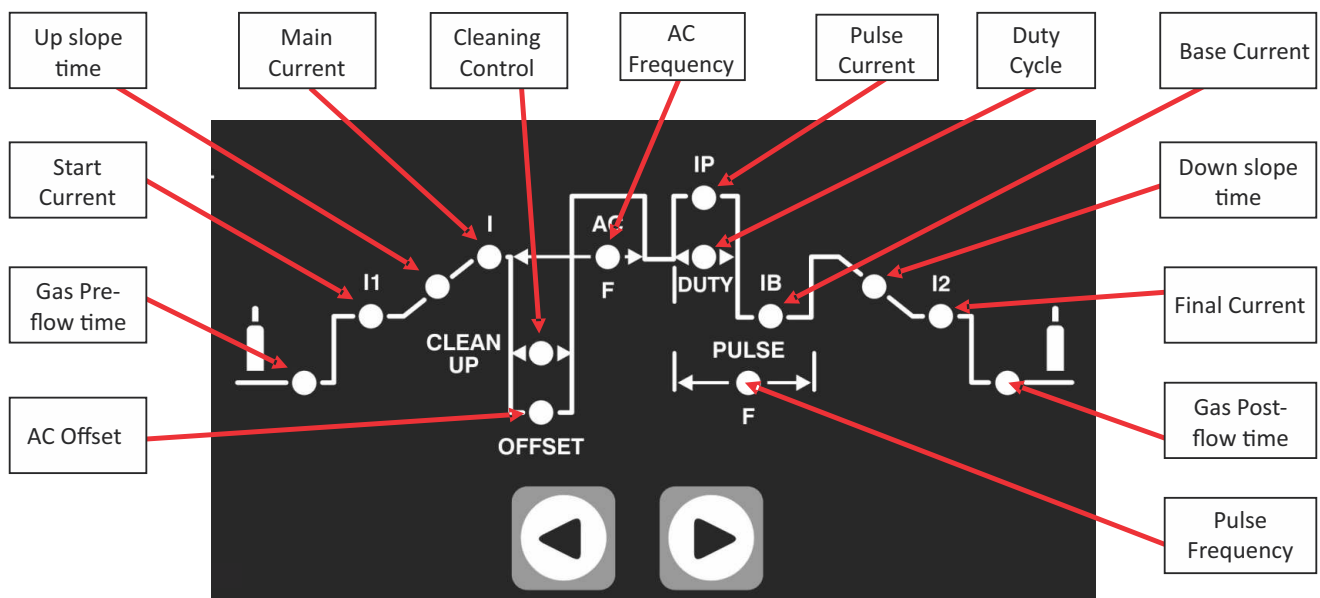
The World Class Inverter based AC / DC Pulsed / Mixed Pulsed TIG Welding system



### CONTROL PANEL



### PARAMETER SETTINGS AND ADJUSTMENTS



## CHAMPTIG 500 AD

The World Class Inverter based AC / DC Pulsed / Mixed Pulsed TIG Welding system



### TECHNICAL SPECIFICATIONS - POWER SOURCE

Parameter	Unit	Value
<b>Input</b>		
Supply Voltage, phase, frequency	Volts, AC	415 V +15%, -10%, 3 Phase, 50 / 60 Hz
Input Power @ 415 AC	KVA	
@ 100 % Duty Cycle	KVA	MMA Mode - 19, TIG Mode - 15
@ 60 % Duty Cycle	KVA	MMA Mode - 26, TIG Mode - 20
@ 35 % Duty Cycle	KVA	MMA Mode - 34, TIG Mode - 27
Input Current @ 415vac	Amps, AC	
@ 100 % Duty Cycle	Amps, AC	MMA Mode - 26, TIG Mode - 21
@ 60 % Duty Cycle	Amps, AC	MMA Mode - 36, TIG Mode - 28
@ 35 % Duty Cycle	Amps, AC	MMA Mode - 47, TIG Mode - 38
Efficiency	%	UP TO 82
Power Factor		0.8 Max
<b>Output</b>		
Open Current Voltage @ 415v Input Supply	Volts, AC	78 V DC (+/-5 V)-DC MMA, TIG; 78 V AC (+/-5 V)-AC TIG
Welding Current Range	Amps	MMA Mode 50 - 500, AC / DC TIG Mode 20 - 500
Welding Current At 40deg C, 10 Minute Cycle		
@ 100 % Duty Cycle		310
@ 60 % Duty Cycle		400
@ 35 % Duty Cycle		500
<b>General</b>		
Remote Controller / Foot Switch Controller	10 Meter	Provided As Optional For Current Setting.
Protections		Over Voltage, Under Voltage, Single-phase, Over-temperature Protection.
Front Panel Functions		1. Selector Switches For Selection of: MMA / TIG, 2T / 4T / Spot / Cycle, Dc+/dc-/ac Welding Method, NormPulse / Normal Mode, Hf On / Off, al / Food Switch Control, Water / Gas Cooled Torch Selection

Cont.

## CHAMPTIG 500 AD



The World Class Inverter based AC / DC Pulsed / Mixed Pulsed TIG Welding system

Cont.

		<b>2. Gas Check Switch</b> <b>3. Menu Switch For Selecting All Functions Via. Gas Pre Flow Start Current, Upslope Time, Base Current, Pulse Current, Down Slope Time, Crater Current, Gas Post Flow Time, Cleaning For Ac, Ac Frequency, Ac Offset, Pulse Width/ Spot Time, Pulse Frequency As Per Selected Mode of Operation.</b>
		<b>4. Connect For Torch Switch, Foot Switch, Remote, Gas Out, Camlock Power Output</b>
		<b>5. Mains On 'green' Colour And Trip 'red' Indication</b>
		<b>6. Encoder For Selected Parameter Value Increment Decrement</b>
Cooling	Type	Forced Air
Class Of Insulation	-	H
Degree Of Protection	-	IP23(S)
Dimension (L x W x H)	mm	780 X 355 X 620
Weight (Approx.)	Kg.	66

## CHAMPTIG 500 AD



The World Class Inverter based AC / DC Pulsed / Mixed Pulsed TIG Welding system

### THE WELDING PARAMETER SETTINGS

Parameter	Unit	Value
Gas Pre Flow Time	Sec.	0 - 5
Initial Welding Current - TIG	Amps	20 - 500
Current Upslope Time	Sec.	0 - 10
Base Current TIG	Amps	20 - 500
Pulse Current (TIG)	Amp.	20 - 500
Pluse Width	%	10 - 90% Of Pulse Time Period (1 Second - 2 Milisecond)
Pluse Frequency	Hz	1 - 500
Cuurent Downslope Time	Sec.	0 - 10
Crater Current (tig)	Amps	20 - 500
Gas Post-flow Time	Sec.	0.1 - 20
Sopt Time	Sec.	1 - 10
Cleaning Control		-40 to +40
Ac Frequency Control	HZ	20 - 50
Ac Frequency Control	%	-50 to +30

### SPECIFICATIONS OF WATER COOLING UNIT

Parameter	Unit	Value
Input Supply	V AC	230
Phase	No.	1
Frequency	Hz	50
Cooling Capacity	W	750 - 1000
Maximum Motor Power	W	220
Maximum Pump Pressure	Bar	2.5
Maximum Pump Flow Rate	L/Min	10
Tank Capacity	L	8
Connector Size	In/Out	1/4" BSP, 19TPI
Dimensions (L x W x H)	Mm	560 X 325 X 285
Weight	Kg.	18

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## MAESTRO SERIES 800, 1000, 1200



A range of SUBMERGED Arc Welding Equipment to suit a wide range of applications

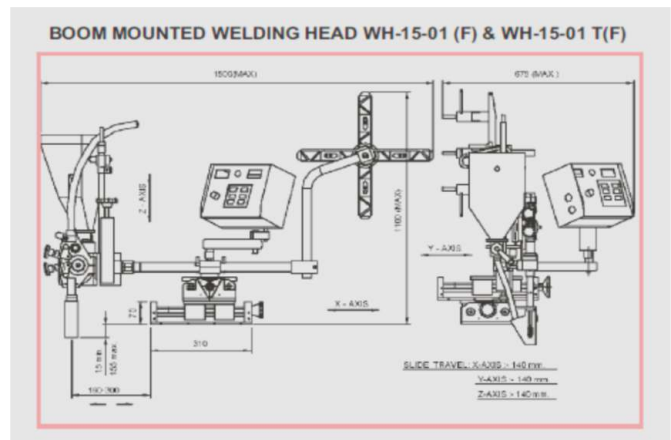
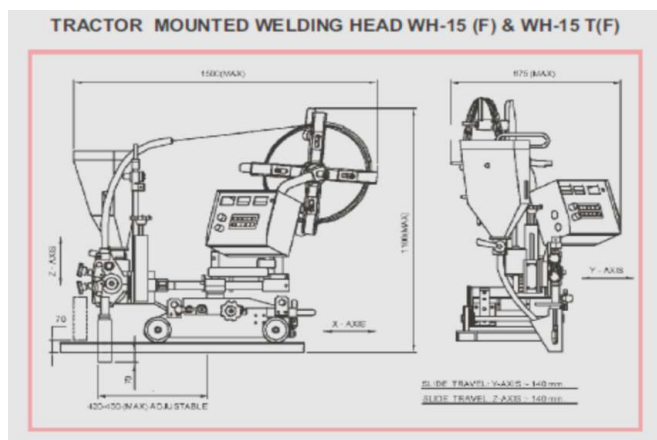
### SALIENT FEATURES

- Choice of Boom mounted or Tractor mounted Welding head models offered with Diode or Thyristorized Power Source
- Boom mounted head comes with a choice of manual, semi – motorized and fully motorized cross slides
- Programmed sequential operations of Power Source, Wire feed and carriage through built- in solid state circuitry
- **Twin Wire Attachment** : Twin Wire Attachment is available for the Tractor as well as boom mounted welding heads. The arrangement consists of one set of each of wire drive roll and nozzle for 2 and 2.5 mm size wire to feed two wires in tandem and increase

the deposition rate substantially. These arrangements is ideal for applications like cladding of hard surfaces as well as for filing weld metal in extra large size preparation grooves. Twin 2.5 mm wires can deliver up to 20% higher deposition rates than a single 5 mm wire at the same welding current and arc voltage parameters.

- **Fillet Welding Attachment** : To enhance the usability of SAW Outfits, a Fillet Welding attachment can be provided to increase shop-floor productivity.
- **Spot Light Projector** : This facility is especially useful for welding operations inside cylindrical jobs where a light source is required to examine the seam

**The Welder - friendly tractor or boom mounted welding head with Diode / Thyristorized Power sources perfectly match; Adopted to local conditions; offering a range of models to suits every budget and need**



## MAESTRO SERIES 800, 1000, 1200

A range of SUBMERGED Arc Welding Equipment to suit a wide range of applications



### TECHNICAL SPECIFICATIONS DOIDE BASED SYSTEMS



Power Source	Unit	PS 800 (F)	PS 1000 (F)	PS 1200 (F)
Input				
Input Supply:				
Voltage	Volts, AC	415	415	415
Phase	No	3	3	3
Frequency	Hz	50	50	50
Input Kva @ 100% Duty Cycle	KVA	37	45	54
Recommended Switch Fuse Rating	Amps, AC	TP-60	TP-80	TP-100
Output				
Static Characteristics	Type	CV	CV	CV
Open Circuit Voltage Range (max. With IPT)	Volts, DC	35-63	35-63	35-63
Open Circuit Voltage Range (Actual)		29-54	29-54	29-54
Welding Voltage		21.15-44	24-44	24-44
Welding Current Range	Amps, DC	150-800	200-100	200-1200
Welding current @ 60% duty cycle		800	100	1200
Welding current @ 100% duty cycle		650	800	1000
General				
Insulation	Class	H	H	H
Cooling	Type	Forced Air	Forced Air	Forced Air
Dimensions L x W x H	mm	1225x800x900	1225x800x900	1225x800x900
Weight (Approx)	Kg	350	365	390

### TECHNICAL SPECIFICATIONS THYRISTOR BASED SYSTEMS



Power Source	Unit	PS 800 T(F)	PS 1000 T(F)	PS 1200 T(F)
<b>Input</b>				
Input Supply:				
Voltage	Volts, AC	415	415	415
Phase	No	3	3	3
Frequency	Hz	50	50	50
Input Kva @ 100% Duty Cycle	KVA	44	50	63
Recommended Switch Fuse Rating	Amps, AC	TP-70	TP-80	TP-100
<b>Output</b>				
Static Characteristics	Type	CV	CV	CV
Open Circuit Voltage Range (max.)	Volts, DC	62	62	62
Open Circuit Voltage Range		150-800	200-1000	200-1200
Welding current @ 60% duty cycle	Amps, DC	800	100	1200
Welding current @ 100% duty cycle		650	800	1000

## MAESTRO SERIES 800, 1000, 1200

A range of SUBMERGED Arc Welding Equipment to suit a wide range of applications



Cont.

General				
Insulation	Class	H	H	H
Cooling	Type	Forced Air	Forced Air	Forced Air
Dimensions L x W x H	mm	1225x800x1060	1225x800x1060	1225x800x1060
Weight (Approx)	Kg	350	365	390

### ORDERING INFORMATION OPTIONAL ACCESSORIES

Description	Product Code
Set Of Welding Cables SAC 800, For PS 800 (F), 800 T (F)	S10.36.011.0005
Set Of Welding Cables SAC 1000, For PS 800 (F), 1000 T (F)	S10.36.011.0006
Set Of Welding Cables SAC 1200, For PS 800 (F), 1200 T (F)	S10.36.011.0004
Description	Product Code
WAS : Set Of Welders Accessories - All Models	S10.36.041.0001
SLP: Spotlight Projector - All Models	S10.36.031.0001
FWA: Fillet Welding Attachment - All Models	S10.36.021.0001
TWA: Twin Wire Attachment (2 And 2.5 Mm) - All Models	S10.36.021.0003

### TECHNICAL SPECIFICATIONS - WELDING HEADS

Saw Head	Unit	WH -15(F)	WH -15-01(F)	WH -15-02(F)	WH -15-03(F)
Max. Welding Current @ 60% Duty Cycle	Amps, DC	1500	1500	1500	1500
Max. Welding Current @ 60% Duty Cycle		1250	1250	1250	1250
Recommended Power Source		PS 800 (F) / PS 1000 (F) / PS 1200 (F)			
Recommended Wire Diameter Single Wire	mm	2, 2.5, 3.2 For 800 (F); 2, 2.5, 3.2, 4.5 For 1000 (F) & 1200 (F)			
Recommended Wire Diameter Twin Wire		2, 2.5 (Optional)			
Speed Range Wire Feed	M / Min.	0.5-4	0.5-4	0.5-4	0.5-4
Speed Range Carriage		0.1-1.5	NA	NA	NA
Input To Control Unit	Volts, AC	42 V, 1 PH, 50 Hz From Power Source			
Range Of Adjustment					
Vertical (Z)	mm	140 (Manual)	140 (Manual)	100 (Motorized)	100 (Motorized)
Horizontal (X)-Transverse To Travel Direction		140 (Manual)	140 (Manual)	100 (Motorized)	100 (Motorized)
Horizontal (7)-In Direction Of Travel		-	140 (Manual)	140 (Manual)	100 (Motorized)
Maximum Swivel					
Transverse To Head Travel	Degree	45			
Parallel To Head Travel		30			
Horizontal Swing		270			
Standard Bore For Spool	mm	285 - 315 (Adjustable)			
Weight Of Spool (max.)	Kg	25			
Flux Hopper Capacity (max.)	Kg/Ltrs	10/7			
Dimensions (L X W X H)	mm	1500x1030x580	1500x1030x580	1500x1030x600	1500x1030x600
Weight (without Flux And Wire)	Kg	80	80	110	110

Cont.

## MAESTRO SERIES 800, 1000, 1200



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**INTERFACE UNIT WITH  
INTERCONNECTION CABLE**



**INTERFACE UNIT WITH  
INTERCONNECTION CABLE**

## UNI - MAESTRO RETROFIT UNIT FOR SAW



The customized Retrofit unit (complete with new welding head) for Interfacing new welding head (diode based) with old model of SAW Power Source

- The UNI-MAESTRO retrofit box is a "BORN AGAIN PACKAGE (Rejuvenate)" to upgrade productivity from existing old working power source, Model: CPR-1204 / CPR-1205 / PS-1200, but with welding head which is in non-working condition or the customer is not having welding head.
- Old version of "UP-15-CP / WH-15" series Welding Heads are upgraded with New "Feather-Touch controlled WH-15 (F)" series (Diode based) Welding Heads, as old version of "UP-15-CP / WH-15" are discontinued from AWL production range.
- The complete outfit consists of Retrofit box, tractor mounted or boom mounted submerged arc welding unit, inter-connection control cable between Power source and Retrofit box. These are interfaced with suitable capacity of old power source CPR-1204 / CPR-1205 / PS-1200, which is already available with the customer.

## COMPLETE SYSTEM

**The complete system or outfit consists of:**

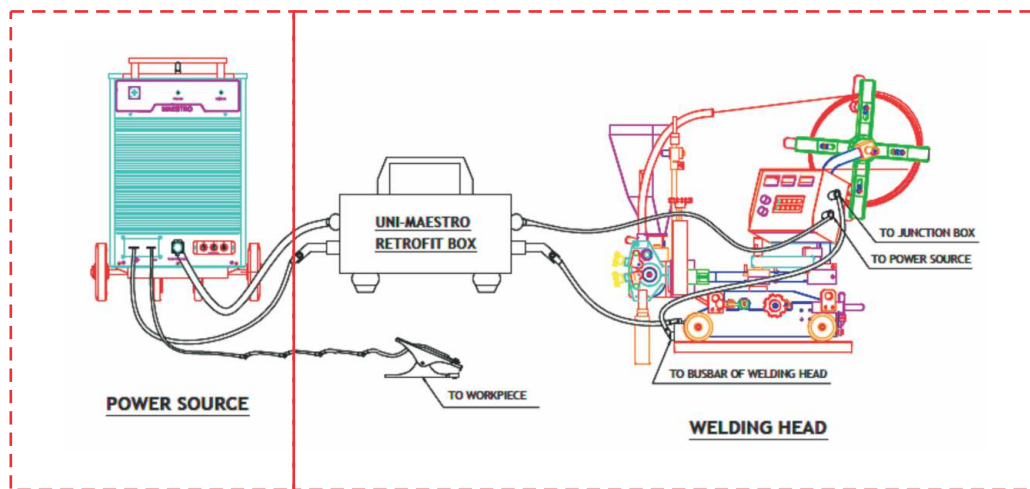
1. Retrofit Box (Interface Box)
2. Welding Head type WH 15 (F) or WH 15-01 (F) => suitable for Diode based systems only
3. Interconnection control cable between power source & Welding Head - 10 meters length

## UNI - MAESTRO RETROFIT UNIT FOR SAW

The customized Retrofit unit (complete with new welding head) for  
Interfacing new welding head (diode based) with old model of SAW Power Source



### CONNECTION SYSTEM



EXISTING OLD DIODE BASED  
SAW POWER SOURCE - CUSTOMER

WELDING HEAD

### ORDERING INFORMATION

UNI - MAESTRO RETROFIT UNIT (Comprising of Interface box, Welding Head Assembly type WH – 15 (F) Tractor mounted, 10 Meter Interconnection cable between Interface Box and Welding Head)	S15.01.001.0601
UNI - MAESTRO RETROFIT UNIT (Comprising of Interface box, Welding Head Assembly type WH – 15 01 (F) Boom mounted, 10 Meter Interconnection cable between Interface Box and Welding Head)	S15.01.001.0602



## THREE WHEEL TRACTOR WELDING HEAD



The new welding head for flexible operations



### SALIENT FEATURES

- The Three wheel tractor is more versatile compared to the 4 wheel tractor; it shortens the welding spacing and has a wider welding range for wires from  $\Phi 2.0$  to  $\Phi 5.0$  mm.
- Besides linear welding, the three wheel tractor can turn left and right and weld around circular curve.
- Easy and flexible regulation, integrated up and down, rotation of the tractor head with the torch.
- Easy adjustable flux container.
- Double driven wire feeding with straightening mechanism, stable wire feeding, good centering, strong drawing force and low dissipation power.

### SPECIFICATIONS

Technical Specifications	Unit	VALUE
<b>Input</b>		
Rated Input Voltage Of Traveling Mechanism	Volts DC	42 V
Rated Input Current Of Traveling Mechanism	Amps DC	5.5 Amps
Rated Input Voltage Of Wire Feeding Mechanism	Volts DC	42 V
Rated Input Current Of Wire Feeding Mechanism	Amps DC	0.75 Amp
Welding Speed	Meters / Minute	0.2 - 1.5 / 0.2 - 2 M / Min
Wire Feeding Speed	Meters / Minute	0.6 - 6 M / Min
Rated Power Source	Capacity	1200 Amps @ 60% Duty Cycle
Wire Diameters	mm	2, 3, 4, 5,
Type Of Wires Applicable		Soft Steel, Solid Core
Adjustable Height Of Tractor Head	mm	70 MM
Adjustable Distance Of Tractor Head	mm	100 X 100 (longitudinal X Transversal)
Rotatable Angle Of Tractor Head Around Cross Beam	Degree	$\pm 90^\circ$
Tractor Head Inclination	Degree	$\pm 45^\circ$
Torch Inclination	Degree	$\pm 45^\circ$
Flux Container Volume	Litres	6 L
Inner Diameter Of Wire Spool	mm	$\varnothing 300$ mm
Wire Spool Capacity	Kg	25 KG
Dimension (L X W X H)	mm	1020 X 480 X 780
Weight	Kg	50 Kg (Does Not Include Wire)
Insulation	Class	F
Welding Output Terminals		Stud type / Camlock



## MAESTRO 1200 (I)



The world Class Inverter based Submerged Arc Welder

### SALIENT FEATURES

- Inverter based digitally controlled Welding head and Power source.
- High efficiency and high power factor resulting in substantial energy saving over conventional SAW outfits
- Enhanced Reliability due to SMD technology.
- Power source is CC-CV type and capable for MMA/GOUGING and SAW processes.
- \*\*\*\*\*SAW Welding can be done in either CV or CC modes. In the Constant Current mode of SAW welding, advanced Adaptive control technology is utilized to obtain the most stable arc parameters, highest level of penetration, and excellent weld bead finish\*\*\*\*\*
- The complete system consists of inverter based power source; tractor / boom mounted welding head and interconnecting cables. SAW flux is used for shielding weld metal against external atmosphere.
- Inverter based power source is energy efficient giving almost 30% energy saving over conventional type of machines.
- User can save and recall up to ten programs.
- Better user interface having 128 X 64 character LCD display for selecting various modes and button, LED and indicator lamp, which helps in easy operation of the equipment.
- Automatically selects the MMA or SAW mode based on welding head connections to power source.

### FRONT PANEL FUNCTIONS

- Mains On 'Green' Colour Led Indication
- Operation Mode Indications (MMA / Gouging, Saw, Remote)
- Trip 'Red' Colour Led Indication of machine is Under Protection Mode.
- 4 digit digital displays for Voltage and Current.
- Current adjustment Encoder .



## MAESTRO 1200 (I)

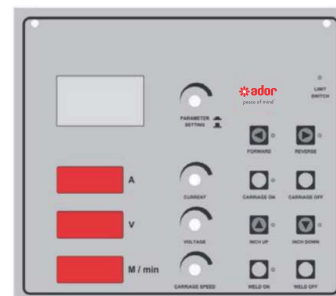
The world Class Inverter based Submerged Arc Welder



### WELDING HEAD CONTROL PANEL :

The Welding Head Control panel consists of four encoders for selecting welding parameters selection, welding current selection, welding voltage selection and carriage speed selection respectively.

- Welding parameters can be seen on 128\*64 character LCD as
  - MATERIAL: MS/SS
  - DIAMETER: 2-5mm
  - WIRESPEED: 0-4 M/MIN
  - UP TIME: 01-10 sec
  - SAVE: 01-10
  - RECALL: 01-10
- Proper parameters can be selected by rotating the respective encoders.
- A facility has been given for saving the welding parameters settings in at most 10 memory locations. So the same settings can again be recalled even after turning On the machine, by rotating RECALL option.
- Another special feature of UP TIME is given to the user in between 1 second to 10 second, so that after welding is OFF, wire won't stick in to the weld pool. In this case wire feeder motor will rotate in opposite direction to pull out the wire for the specified seconds.
- The Front panel consists of seven tact switches, for selecting various functions such as carriage movement direction (FORWARD / REVERSE) selection, carriage motor ON / OFF command, wire inch UP / DOWN switch and welding ON / OFF switch.
- CC-CV Mode Selection switch for SAW is provided on panel to suit specific SAW Welding requirements



### TECHNICAL SPECIFICATIONS WELDING HEAD (WH 15 I)

Input	Unit	Value
Input Supply:		
Voltage	Volt	42 V (From Power Source)
<b>Output</b>		
Welding Current Range	Amps	100-1200
Duty Cycle 100% Continues	Amps	1000
Welding Voltage Range	Volts, DC	26-44
Welding Carriage Speed	M/Min	0.1-1.6
Wire Feed Speed	M/Min	0-4
<b>General</b>		
Range Of Adjustment Vertical	mm	140
Transverse To Head Travel - Horizontal		140
Parallel To Head Travel - Horizontal		140
Max Swivel :		
Transverse To Hand Travel	Degree	45°

Cont.

## MAESTRO 1200 (I)



The world Class Inverter based Submerged Arc Welder

Cont.

Parallel To Head Travel	Degree	30°
Horizontal Open Swing		270°
Standard Bored Spool	mm	285-315 (Adjustable)
Welding Flux-Hooper Capacity	Kg./Ltr.	10/7
Wire Spool Weight	Kg	25
Suitable Welding wire Diameter	mm	2.0,2.5,3.15,4.0,5.0
Dimension (L x W x H)	mm	1500 x 1030 x 580
Total Weight Without Flux & Wire	Kg.	95

### TECHNICAL SPECIFICATIONS - POWER SOURCE



Parameter	Unit	Value
<b>Input</b>		
Supply Voltage, Phase Frequency :	Volts AC	415 V +15% -10%, 1 Phase, 50/60 Hz
Input Power @ 415 VAC @ 100% duty cycle	KVA	55
Input Power @ 415 VAC @ 60% duty cycle		66
Input Supply Current @ 415 VAC @ 100% duty cycle (1000)	Amps DC	76
Input Supply Current @ 415 VAC @ 60% duty cycle (1200)		92
Efficiency	%	≥ 85
Power Factor		Upto 0.93
<b>Output</b>		
Open Circuit Voltage @ 415 V Input Supply	Volts DC	90 V
Welding Current Range (CC-GOUGING Mode)	Amps	100-1200
Welding Voltage Range (CC-SAW Mode)		26-44
Welding Current (40°C) @ 100% duty cycle	Amps DC	1000
Welding Current (40°C) @ 60% duty cycle (10 min DC)		1200
Welding Electrode Sizes (Dia.) In MMA Application	mm	3.2,4,5,6.3 mm
Welding Electrode Sizes (Dia.) In GOUGING Application		Upto 12 mm
SAW Welding Wire Size (Dia.)	mm	2.5,3.2,4,5 mm
Remote Controller Optional (Can be Used In MMA/GOUGING Process only)	10 Meter	Provide as Optional for Remote Current Detting
<b>General</b>		
Front Panel Functions		Mains On 'Green' Coloir Indication
		Operation Mode Indications (MMA/GOUGING, SAW, REMOTE)
		Trip 'Red' Colour LED for indication Machine is Under Protection Mode
		4 Digit Display for Voltage & Current
		Current Adjustment Encoder

Cont.

## MAESTRO 1200 (I)



The world Class Inverter based Submerged Arc Welder

Cont.

Protections	-	Over Voltage, Under Voltage, Single Phasing, Over Temperature
		Over Temperature Protection
Cooling	Type	Forced Air
Class Of Insulation	-	H
Degree Of Protection	-	IP23
Dimensions L x W x H (Without handle)	mm	930 x 525 x 950
Weight (Approx)	Kg	115

- **Warranty:** One year from the date of commissioning. ADOR WELDING LIMITED warrants that all new equipment sold from Plant/Area Offices / Authorised Distributors are free from defects in materials and workmanship and will perform in full accordance with applicable specifications.
- In view of continuous development, ADOR WELDING LIMITED reserves the right to modify/change the design and/or the specifications without any prior notice.
- Backed by dedicated customer care package.



## ELECTRODE AND FLUX DRYING OVENS



For Welding Electrodes and Submerged Arc Welding Fluxes

### TYPICAL APPLICATIONS

**Reliable Ovens** which works hour after hour, day after day the same consistency.

**Temperature Control** : Provided with thermostat control for precise setting of drying temperature required for various types of electrodes.

**Flawless Welds** : Totally dry welding consumables yield radiographic quality welds.

### SALIENT FEATURES

- Heavy duty drying ovens for welding electrode & submerged arc welding fluxes
- Robust constructions
- ADOR HANDY model portable Electrode drying oven for quick shifting from one place to the other
- User friendly
- Uniform heating of charged materials
- Heavy duty thermostats for accurate temperature controls throughout range
- Heavy duty metallic body

### TECHNICAL SPECIFICATIONS

Models	ADOR HANDY	ADORDRY-I	KING OVEN-II	ADORDRY-III	ADORFLUX
<b>Input</b>					
Voltage	230V AC	230V AC	230V AC	230V AC	415V AC
Current (Amps)	2	7.5	10	20	10
Phase	1 Phase	1 Phase	1 Phase	1 Phase	3 Phase
Frequency	50 Hz	50 Hz	50 Hz	50 Hz	50 Hz
Watts	0.5 KW	1.75 KW	2.25 KW	4.5 KW	12 KW



## ELECTRODE AND FLUX DRYING OVENS



For Welding Electrodes and Submerged Arc Welding Fluxes

Cont.

Output					
Temperature	50°C - 300°C	50°C - 250°C	AMBIENT + 5° C - 370° C	50°C - 500°C	50°C - 400°C
Models	ADOR HANDY	ADORDRY-I	KING OVEN-II	ADORDRY-III	ADORFLUX
General Specifications					
Capacity	5 KG ELECTRODES	25 KG ELECTRODES	25 KG ELECTRODES	25 KG ELECTRODES	100 KG FLUX
DIMENSIONS IN MM (L X W X H)	EXTERNAL: 515 X 190 X 190 INTERNAL: 435 (L) X 62 (Ø)	490 X 450 X 440	490 X 450 X 440	490 X 450 X 440	750 X 600 X 600
No.of Shelves	-	Five	Five	Five	Six
Air Circulation		NATURAL CONVECTION	NATURAL CONVECTION	NATURAL CONVECTION	FORCED AIR
Temperature Control	THERMOSTAT	THERMOSTAT	THERMOSTAT WITH ELECTRONIC CONTROLLER & DIGITAL TEMPERATURE INDICATOR		

- **Warranty:** One year from the date of commissioning. ADOR WELDING LIMITED warrants that all new equipment sold from Plant/Area Offices / Authorised Distributors are free from defects in materials and workmanship and will perform in full accordance with applicable specifications.
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