

# CHAMPMULTI 400

Inverter based Multipurpose MIG /  
FCAW / MMA / TIG Welder



Superior welding with minimum spatter and excellent weld bead finish – advanced dynamic characteristics built in the power unit and control software



## **CHAMP MULTI- 400 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

CREATING THE BEST WELDING EXPERIENCE

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

Corporate Marketing Office: Survey No. 147 / 2B +3, Near Akurdi Chowk, Chinchwad, Pune – 411 019. Maharashtra, INDIA.

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## SALIENT FEATURES:

- ❖ The salient features of the Equipment are:
- ❖ 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 overheating 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

## 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. No Output Voltage will be available in both conditions.

### Over Temperature Trip:

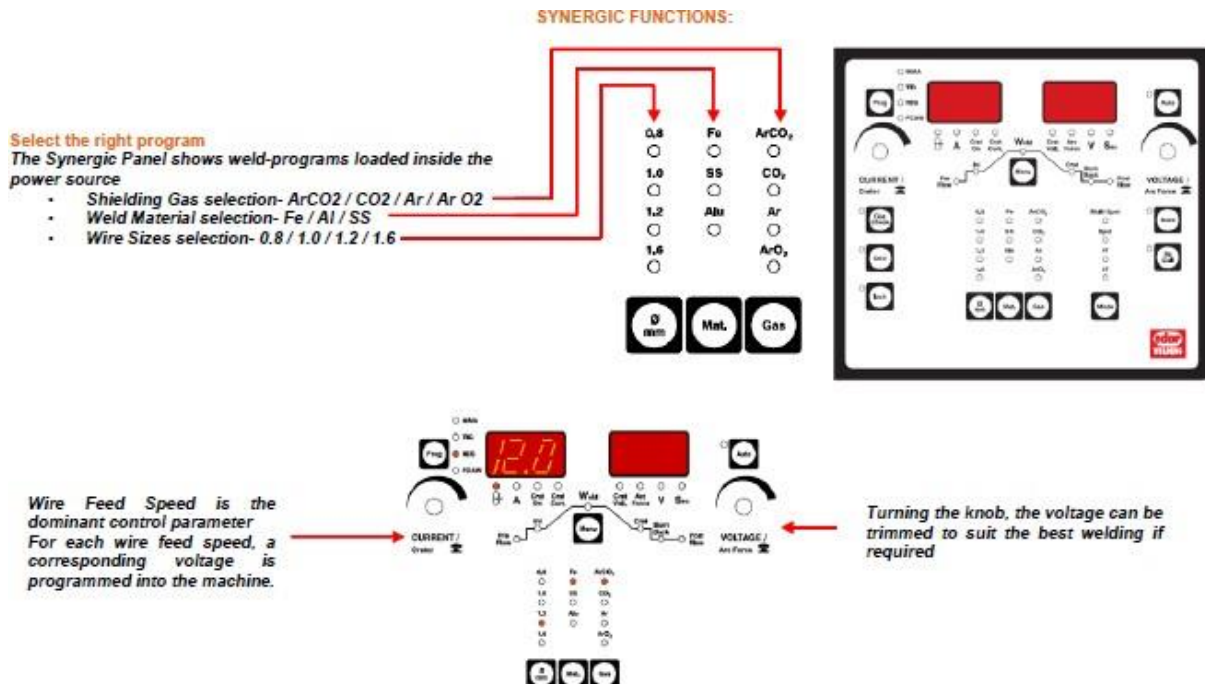
If the temperature of the Semiconductor Component is increased above safety limits, then machine goes in safety mode (Trip Mode). In this condition welding voltage will not be available and welding will stop.

### 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.



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## TECHNICAL SPECIFICATIONS – POWER SOURCE MODEL ICCV 401

PARAMETER	VALUE	UNIT
<b>INPUT</b>		
SUPPLY VOLTAGE, PHASE, FREQUENCY	415 (+15% - 10%)	V AC
INPUT POWER	13 @ 100% DUTY CYCLE; 19 @ 60% DUTY CYCLE; 0.2 @ NO LOAD	KVA
INPUT CURRENT	18 @ 100% DUTY CYCLE; 26 @ 60% DUTY CYCLE	AMPS AC
EFFICIENCY	> 85	%
POWER FACTOR	0.93 MAX	
<b>OUTPUT</b>		
OPEN CIRCUIT VOLTAGE @ 415V INPUT SUPPLY	84 - MMA MODE; 55 - MIG MODE; 84 - TIG MODE	V DC
WELDING AND CRATER CURRENT RANGE - MIG / FCAW	40 - 500	A DC
WELDING CURRENT RANGE - MMA AND TIG	MMA MODE: 50-400; TIG MODE: 10-400	A DC
DUTY CYCLE RATING (10 MINUTE CYCLE)	310 @ 100%; 400 @ 60%	A DC
WELDING AND CRATER VOLTAGE RANGE - MIG / FCAW	14-40 V	V DC
WELDING VOLTAGE RANGE - MMA AND TIG	MMA MODE: 22 - 36 V; TIG MODE: 10.4 - 26 V	V DC
<b>GENERAL</b>		
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 WELDING / CRATER CURRENT SELECTION AND ADJUSTMENT ENCODER. 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.	
ARC FORCE CONTROL IN MMA MODE	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	
COOLING	FORCED AIR	TYPE
CLASS OF INSULATION	H	CLASS
DEGREE OF PROTECTION	IP23 (S)	-
DIMENSIONS L X W X H	670 X 315 X 570	MM
WEIGHT (APPROX.)	52	KG

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## TECHNICAL SPECIFICATIONS – WIRE FEEDER MODEL FEEDLITE 40 NEM (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
TORCH (3 METER)	ADOR HIPRO 403 (E) / ADOR MTG 400 (E)	

## OUTFIT

DESCRIPTION	CHAMP MULTI 400
POWER SOURCE	ICCCVR- 401
WIRE FEEDER	FEEDLITE 40 (NEM)- C
TORCH	HIPRO 403 (E) / MTG 400 (E)
GAS PRESSURE REGULATOR CUM FLOW METER (OPTIONAL)	ARGON OR CO <sub>2</sub> REGULATOR
GAS HEATER (OPTIONAL)	110 V AC, IN CASE OF CO <sub>2</sub> REGULATOR

## 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	-
ERR 008	COMMUNICATION ERROR

**Warranty:** Three years from the date of commissioning. ADOR WELDING LIMITED warrants that all new equipment sold from Plant/Area Offices / Authorized 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.

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