

CHAMP MULTI 400

The world class inverter based Multipurpose DC welder



Superior welding with minimum spatter, excellent weld bead finish - advanced dynamic characteristics built in the Power Source and control software



Complies to the latest
International Standards
IEC EN 60974-1, 60974-10

- CHAMP MULTI- 400 is a Multi process 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) & constant voltage characteristics (CV), which are suitable for MMA & 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
- 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, wire feeder, torch and inter connecting cables and control cables between wire feeder and power source
- Complies to the latest International Standards IEC EN 60974-1, 60974-10

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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 & 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:**
 1. Red LED glows if input supply voltage goes below 330V AC
 2. 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

DETAILS OF COMPLETE SYSTEM:

SR. NO.	DESCRIPTION	MODEL - CHAMP MULTI 400
1	POWER SOURCE	ICCCVR- 401
2	WIRE FEEDER	FEEDLITE 40 (NEM)- C
3	TORCH	TW 402 (E) / MTG 400 (E)
4	GAS PRESSURE REGULATOR CUM FLOW METER (OPTIONAL)	ARGON OR CO2 REGULATOR
5	GAS HEATER (OPTIONAL)	110 V AC, IN CASE OF CO ₂ REGULATOR

ERROR CODES DISPLAY:

The following ERROR Codes are displayed on the digital read out for easy diagnostics

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

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TECHNICAL SPECIFICATIONS:

SR. NO.	PARAMETER	UNIT	VALUE
			CHAMP MULTI 400
1	NOMINAL INPUT VOLTAGE	V AC	415 V, 3 PH
2	INPUT VOLTAGE RANGE	V AC	415 (+15% - 10%)
3	PHASE	NO.	3
4	FREQUENCY	HZ	50-60
5	EFFICIENCY @ 100 % DUTY CYCLE	%	> 85
6	POWER FACTOR @ 100 % DUTY CYCLE		0.82 MAX
7	OPEN CIRCUIT VOLTAGE IN MMA MODE @415V, 3 PHASE	V DC	84 V
	OPEN CIRCUIT VOLTAGE IN MIG MODE @415V, 3 PHASE		55 V
	OPEN CIRCUIT VOLTAGE IN TIG MODE @415V, 3 PHASE		84 V
8	WELDING CURRENT RANGE IN MMA MODE	A DC	50-400
	WELDING CURRENT RANGE IN TIG MODE		10- 400
	WELDING CURRENT RANGE IN MIG MODE		40- 400
9	WELDING CURRENT @ 100 % DUTY CYCLE (10 MINUTE CYCLE)	A DC	310
	WELDING CURRENT @ 60 % DUTY CYCLE (10 MINUTE CYCLE)		400
10	INPUT POWER (IN MMA MODE) @ 100 % DUTY CYCLE	KVA	12.0
	INPUT POWER (IN MIG MODE) @ 100 % DUTY CYCLE		11.0
	INPUT POWER (IN TIG MODE) @ 100 % DUTY CYCLE		9.0
11	CRATER CURRENT RANGE IN MIG MODE	-	50 – 400 A
12	CRATER VOLTAGE RANGE IN MIG MODE	-	14-40 V
13	COOLING	TYPE	FORCED AIR
14	CLASS OF INSULATION	CLASS	H
15	DEGREE OF PROTECTION	-	IP 23S
16	PROTECTIONS AUTO RESETTABLE	-	OVER VOLTAGE, UNDERVOLTAGE, SINGLE – PHASING, OVER TEMPERATURE
17	SUITABLE WELDING ELECTRODE SIZE DIA. - IN MMA MODE	MM	2.5-5 MM DIAMETER
18	SUITABLE WIRE SIZE DIA. - IN MIG MODE	MM	0.8, 1.0, 1.2, 1.6 MM DIAMETER
19	DIMENSIONS L X W X H	MM	650 X 450 X 570
20	AUXILIARY OUTPUTS ON BACK PANEL	V AC	110 V AC, 110 VA – GAS HEATER
21	FRONT PANEL FUNCTIONS	-	Ø MMA /TIG/ MIG /FCAW PROCESS SELECTION
		MIG / FCAW MODE	Ø WELDING / CRATER CURRENT, WELDING / CRATER VOLTAGE ADJUSTMENT THROUGH ENCODER.
			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 SELCTION SWITCH
			Ø AUTO/MANUAL SELECTION SWITCH.
			Ø SAVE & RECALL SWITCHES TO SAVE & RECALL 10 PROGRAMS.
Ø FACILITY TO SET PREFLOW, POST FLOW BURNBACK, SPOT & PAUSE TIME BEFORE WELDING			

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TECHNICAL SPECIFICATIONS:

SR. NO.	PARAMETER	UNIT	VALUE
			CHAMP MULTI 400
21	FRONT PANEL FUNCTIONS	-	Ø 3 DIGITS DIGITAL DISPLAY FOR VOLTAGE AND CURRENT
		MMA / TIG MODE	Ø CURRENT SETTING BY ENCODER Ø ENCODER FOR ARC FORCE SETTING WITH ON/OFF FACILITY SWITCH ONLY IN MMA MODE.
22	REMOTE CONTROL	-	REMOTE CONTROL WITH CABLE FOR SETTING VOLTAGE AND CURRENT
23	MOUNTING WHEELS OF THE POWER SOURCE	-	WHEEL MOUNT
		-	FRONT: SWIVEL, REAR: FIXED
24	LIFTING ARRANGEMENT	-	HANDLE PROVIDED
25	WEIGHT (APPROX.)	KG	52

TECHNICAL PARAMETERS – WIRE FEEDER

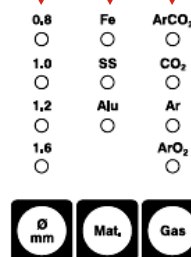
PARAMETER	FEEDLITE 40 NEM(C)	PARAMETER	FEEDLITE 40 NEM(C)
SUITABLE FOR WIRE SIZES		WIRE DRIVE MOTOR (TYPE)	PERMANENT MAGNET D.C. 42V, 80 WATTS
STEEL	0.8, 1.0, 1.2, 1.6	DIMENSIONS (APPX) LENGTH (MM)	563
FLUX CORED	1.2, 1.6	WIDTH (MM)	230
ALUMINIUM	1.2, 1.6	HEIGHT (MM)	410
WIRE FEED SPEED (MTR/MIN)	0-18	WEIGHT (APPROX.) KGS (WITHOUT SPOOL)	16
WIRE ROLL DRIVE (TYPE)	4 ROLL		

SYNERGIC FUNCTIONS:

Select the right program

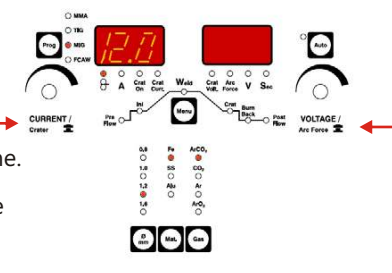
The Synergic Panel shows weld-programs loaded inside the power source

- Shielding Gas selection- ArCO₂ / CO₂ / Ar / Ar O₂
- 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



- **Warranty:** One year 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.

ADOR WELDING LIMITED

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