



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

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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
- 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 ₂ Regulator	ARGON Or CO ₂ Regulator
5	Gas Heater (optional)	110V AC, In Case of CO ₂ Regulator	110V AC, In Case of CO ₂ 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

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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	
		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.	
	MIG / FCAW MODE	Ø Auto/manual Selection Switch.	

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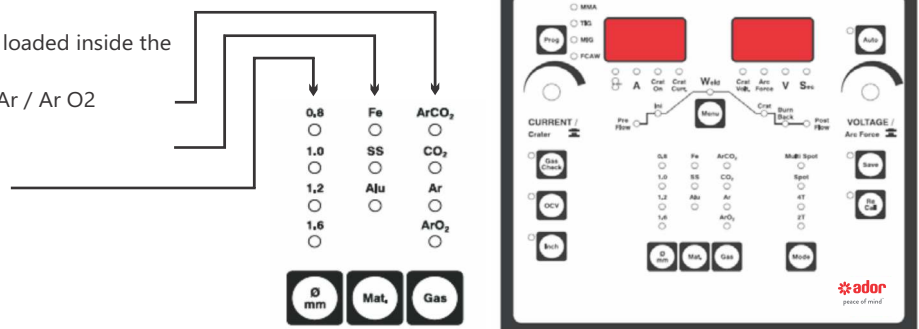
Front Panel Functions	MIG / FCAW Mode	Ø Save & Recall Switches To Save & Recall 10 Programs. Ø Facility To Set Preflow, Post Flow Burnback, Spot & Pause Time Before Welding.	
	-	Ø 3 Digits Digital Display For Voltage and Current.	
	MMA / TIG Mode	Ø Current Setting By Encoder	
		Ø Encoder For Arc Force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

SYNERGIC FUNCTIONS

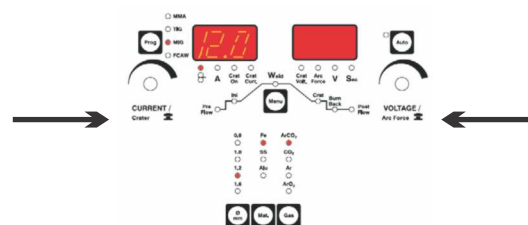
Select the right program

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.

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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.