

CHAMPTIG 400 AD

INVERTER BASED AC/DC MIXED PULSED TIG WELDING SYSTEM



CHAMPTIG 400AD is an I.G.B.T inverter-based 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 400AD 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 front panel
- 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.

CREATING THE BEST WELDING EXPERIENCE

www.adorwelding.com

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

Tel.: +91 20 4070 6000, Fax: +91 20 4070 6001

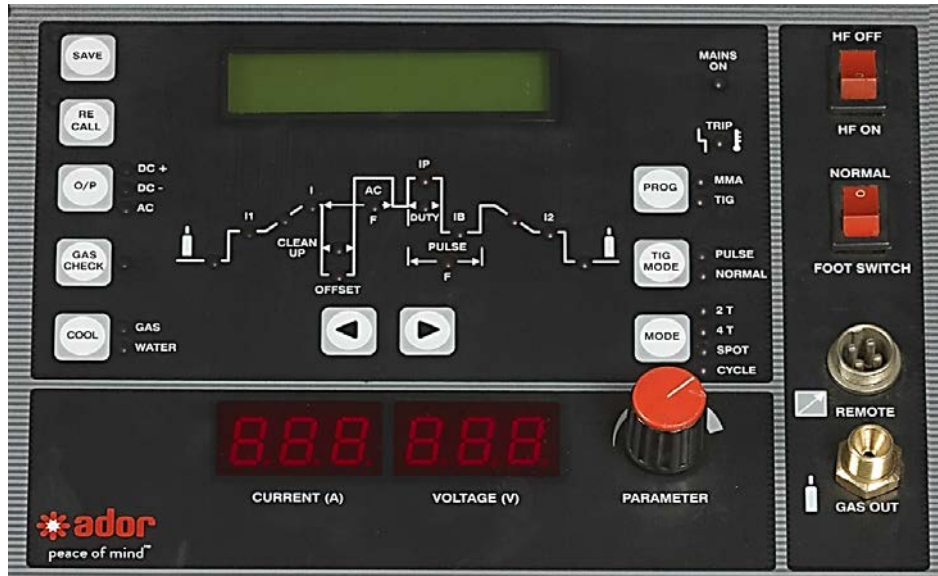
Email: cmo@adorians.com

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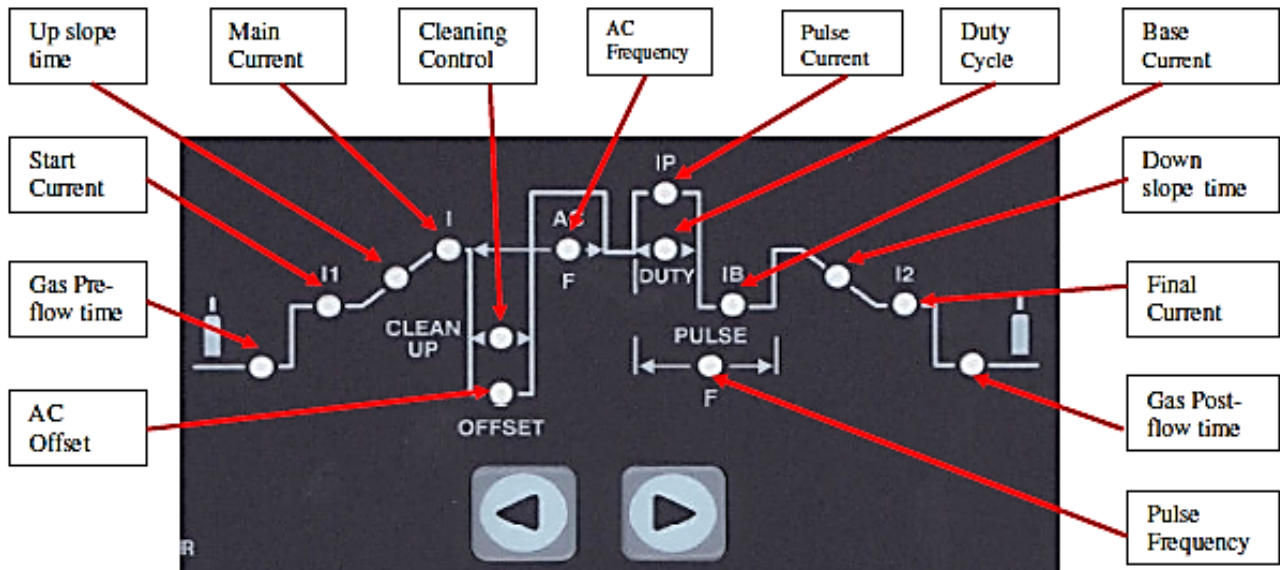
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CONTROL PANEL



PARAMETER SETTINGS AND ADJUSTMENTS



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TECHNICAL SPECIFICATIONS – POWER SOURCE

PARAMETER	VALUE	UNIT
INPUT		
SUPPLY VOLTAGE, PHASE, FREQUENCY	415 V +15%, -10%; 3; 50 / 60	VOLTS, AC; NOS.; HZ
INPUT POWER @ 415VAC	@ 100% DUTY CYCLE: MMA MODE = 19, TIG MODE = 15; @ 60% DUTY CYCLE: MMA MODE = 26, TIG MODE = 20;	KVA
INPUT CURRENT @ 415VAC	@ 100% DUTY CYCLE: MMA MODE = 26, TIG MODE = 21; @ 60% DUTY CYCLE: MMA MODE = 36, TIG MODE = 28;	AMPS, AC
EFFICIENCY	UP TO 82	%
POWER FACTOR	0.8 MAX.	
OUTPUT		
OPEN CIRCUIT VOLTAGE @ 415V INPUT SUPPLY	78 V DC (+/- 5 V)- DC MMA, TIG; 78 V AC (+/- 5 V)- AC TIG	VOLTS
WELDING CURRENT RANGE	MMA MODE 50 - 400, AC / DC TIG MODE 20 - 400	AMPS
WELDING CURRENT AT 40 DEG C, 10 MINUTE CYCLE	310 @ 100% DUTY CYCLE, 400 @ 60% DUTY CYCLE,	AMPS
GENERAL		
REMOTE CONTROLLER / FOOT SWITCH CONTROLLER	PROVIDED AS OPTIONAL FOR CURRENT SETTING.	10 METER
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, PULSE / NORMAL MODE, HF ON / OFF, NORMAL / FOOT SWITCH CONTROL, WATER / GAS COOLED TORCH SELECTION 2) GAS CHECK SWITCH	-
	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.	
	4) CONNECTORS FOR TORCH SWITCH, FOOT SWITCH, REMOTE, GAS OUT, CAMLOCK POWER OUTPUT	
	5) MAINS ON 'GREEN' COLOR AND TRIP 'RED' INDICATION	
	6) ENCODER FOR SELECTED PARAMETER VALUE INCREMENT / DECREMENT.	
COOLING	FORCED AIR	TYPE
CLASS OF INSULATION	H	-
DEGREE OF PROTECTION	IP23(S)	-
DIMENSIONS LENGTH X WIDTH X HEIGHT	780 X 355 X 620	MM
WEIGHT (APPROX.)	66	KG.

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TIG WELDING PARAMETER SPECIFICATIONS

PARAMETER	VALUE	UNIT
GAS PRE FLOW TIME	0 – 5	SEC.
INITIAL WELDING CURRENT - TIG	20 – 400	AMPS
CURRENT UPSLOPE TIME	0 – 10	SEC.
BASE CURRENT (TIG)	20 – 400	AMPS
PULSE CURRENT (TIG)	20 – 400	AMP.
PULSE WIDTH	10 - 90% OF PULSE TIME PERIOD (1 SECOND - 2 MILLISECOND)	%
PULSE FREQUENCY	1 – 500	HZ
CURRENT DOWNSLOPE TIME	0 – 10	SEC.
CRATER CURRENT (TIG)	20 – 500	AMPS
GAS POST-FLOW TIME	0.1 – 20	SEC.
SOPT TIME	1 – 10	SEC.
CLEANING CONTROL	- 40 TO + 40	
AC FREQUENCY CONTROL	20 – 50	HZ
AC OFFSET CONTROL	- 50 TO + 30	%

SPECIFICATIONS - WATER COOLING UNIT MODEL WCU 302

PARAMETER	VALUE	UNIT
INPUT SUPPLY VOLTAGE, PHASE, FREQUENCY	230 V; SINGLE; 50	V AC; NO., HZ
COOLING CAPACITY	750-1000	W
MAX MOTOR POWER	220	W
MAX PUMP PRESSURE	2.5	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	MM	560 X 325 X 285
WEIGHT	KG	18

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.

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