



CHAMPTIG 301 SP

Inverter Based DC TIG and DC Pulsed TIG Welder



Key Attributes

CHAMPTIG 301 SP is an inverter based, High efficiency and High Power-Factor DC Pulse TIG/MMA Welder. It is useful for a wide variety of material types and thickness. Full featured TIG controls is possible with HF ignition. The equipment is provided with Intelligent protection: over/under voltage, over current/temperature. It comes with option of Water-cooled Torch with water cooling unit or with Gas cooled Torch.

- Latest Inverter based technology with constant output current.
- IGBT based with ZVS soft switching technology.
- Suitable for TIG and MMA welding operation.
- Inbuilt VRD function in MMA mode.
- Preset all parameters withhold process.
- DC Pulsed TIG and MMA, adopt IGBT and advanced PWM technology.
- High performance MCU, Digital control, Digital display
- 2T HF/ 4T HF/ 2T Lift TIG/ 4T Lift TIG, current down slope and up slope, gas post-flow, Pulse Frequency
- Intelligent protection: over voltage, under voltage, over current, overheat.
- Reduce the weight of the machine; improve the mobility of the welder.



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TIG WELDING PARAMETER SPECIFICATIONS

PARAMETER	VALUE	UNIT
GAS FLOW TIME	PREFLOW 0.1 -1.0; POSTFLOW 0.1 -10.0	SEC.
INITIAL WELDING CURRENT (IS)	10 – 300	AMP.
CURRENT SLOPE TIME	UP SLOPE 0 -10, DOWN SLOPE 0 -10	SEC.
BASE CURRENT (IB)	10 -300	AMP.
PEAK CURRENT (IP)	10 – 300	AMP.
PULSE WIDTH RANGE (DUTY CYCLE)	5 -100	%
PULSE FREQUENCY	0.5 - 100	HZ
FINAL CURRENT	10 – 300	AMP.

TIG WELDING PARAMETER SPECIFICATIONS

PARAMETER	VALUE	UNIT
HOT START	1 -10 (10 SIGNIFIES 100%)	%
WELDING CURRENT	10 – 300	A
ARC FORCE	1 -10 (10 SIGNIFIES 100%)	%

MMA WELDING PARAMETER SPECIFICATIONS

PARAMETER	VALUE	UNIT
HOT START	1 -10 (10 SIGNIFIES 100%)	%
WELDING CURRENT	10 – 300	A
ARC FORCE	1 -10 (10 SIGNIFIES 100%)	%

TECHNICAL SPECIFICATIONS

POWER SOURCE	MODEL	CHAMP TIG 301 SP
PARAMETER	VALUE	UNIT
SUPPLY VOLTAGE, PHASE, FREQUENCY	1 -10 (10 SIGNIFIES 100%)	VOLTS, AC
INPUT KVA @ 415 V SUPPLY	MMA MODE -9.5, TIG MODE - 6.0 @ 100%; MMA MODE -12.0, TIG MODE - 9.0 @ 60%; MMA MODE -16.0, TIG MODE - 11.5 @ 35%;	KVA
INPUT CURRENT @ 415 V SUPPLY	MMA MODE -13.0, TIG MODE -9.0 @ 100%; MMA MODE -17.0, TIG MODE -12.0 @ 60%; MMA MODE -22.0, TIG MODE -16.0 @ 35%;	AMPS, DC
POWER FACTOR @ 100% DUTY CYCLE	0.8 MAX.	λ
OPEN CIRCUIT VOLTAGE @ 415V SUPPLY	27 V (IN VRD CONDITION - MMA MODE), 68 V DC (+/- 5 V)	VOLTS, DC
WELDING CURRENT RANGE	10 -300 (MMA AND TIG MODES)	AMPS, DC
WELDING CURRENT AT 40 DEG C, 10 MINUTE CYCLE	300 A @ 35%; 240 A @ 60%; 190 A @ 100% DUTY CYCLES	AMPS, DC
PROTECTIONS	OVER VOLTAGE, UNDER VOLTAGE, OVER TEMPERATURE	-



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TECHNICAL SPECIFICATIONS

POWER SOURCE	MODEL	CHAMP TIG 301 SP
PARAMETER	VALUE	UNIT
FRONT PANEL FUNCTIONS	1) MMA/ 2T LIFT/ 4T LIFT / 2T HF / 4T HF SELECTION SWITCH	-
	2) SEVEN SEGMENT DISPLAY FOR CURRENT (SET & ACTUAL) & OTHER PARAMETERS (WHILE SETTING)	
	3) SELECTION ENCODER FOR ALL TIG FUNCTIONS VIA. GAS PRE-FLOW, GAS POST FLOW, FREQUENCY, UPSLOPE TIME, DOWNSLOPE TIME, WELDINGCURRENT, BACKGROUND CURRENT, SET CURRENT TIME AS PER SELECTEDMODE OF OPERATION.	
	4) SELECTION ENCODER FOR SELECTING ALL MMA FUNCTIONS VIA. HOT START, ARC FORCE & WELDING CURRENT	
	5) MAINS ON 'GREEN LED INDICATION	
	6) TRIP 'YELLOW' COLOR LED FOR INDICATION OF MACHINE IS UNDER PROTECTION MODE	
COOLING	FORCED AIR	TYPE
CLASS OF INSULATION	F	-
DEGREE OF PROTECTION	IP23 (S)	-
DIMENSIONS: LENGTH X WIDTH X HEIGHT (WITHOUT HANDLE)	480 X 175 X 310	MM
WEIGHT (APPROX.)	12	KG