



# MAESTRO 1200 (I)

1200 AMP CAPACITY SAW WELDER



## Key Attributes

- MAESTRO 1200 (I) outfit is an Inverter-based submerged arc welder suitable for a wide range of automatic welding applications. It includes main parts like welding head, flux hopper, flux, electrode wire feed unit, electrode, and flux recovery unit, with the welding head supplying filler and flux metal to the joint for welding.
- The applications of submerged arc welding include the following:
  - The submerged arc welding process can be used to weld pressure vessels like boilers.
  - It is used in various applications, including structural outlines, pipes, earth moving tools, shipbuilding, railroad construction, and locomotives.
  - This type of welding can also be used to repair machine parts.



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## SALIENT FEATURES:

- IGBT Inverter-based digitally controlled welding head and power source.
- High efficiency and high power-factor – resulting in substantial energy saving over conventional SAW outfits.
- Power source is CC-CV type and capable of GOUGING and SAW processes.
- SAW Welding can be done in either CV or CC modes. In the constant current mode of SAW welding, advanced adaptive control technology is utilized to obtain the most stable arc parameters, highest level of penetration, and excellent weld bead finish.
- The complete system consists of IGBT inverter-based power source; tractor/boom-mounted welding head, and interconnecting cables. SAW flux is used for shielding weld metal against the external atmosphere.
- User can save and recall up to ten programs.
- Better user interface having 128 X 64-character LCD display for selecting various modes and buttons, LED, and indicator lamp, which helps in easy operation of the equipment.
- Automatically selects the SAW mode based on welding head connections to power source.

## TECHNICAL SPECIFICATIONS

PARAMETERS	VALUE	UNIT
INPUT VOLTAGE, PHASE, FREQUENCY	415 V +15% / -10%, 3 PHASE, 50 / 60 HZ	V AC
INPUT POWER @ 415V AC	55 @ 100% DUTY CYCLE, 66 @ 60% DUTY CYCLE	KVA
INPUT SUPPLY CURRENT @ 415V AC	76 @ 100% DUTY CYCLE, 92 @ 60% DUTY CYCLE	A
EFFICIENCY	> 85	%
POWER FACTOR	UP TO 0.93	-
OPEN CIRCUIT VOLTAGE @ 415V INPUT SUPPLY	90 V	VDC
WELDING CURRENT RANGE (CC - GOUGING MODE)	100-1200	A
WELDING VOLTAGE RANGE (CV - SAW MODE)	26 - 44	A
WELDING CURRENT (40°C)	1000 @ 100% DUTY CYCLE, 1200 @ 60% DUTY CYCLE	A
WELDING ELECTRODE SIZES (DIAMETER) IN MMA APPLICATION	3,2,4,5,6,3 MM	MM
GOUGING ELECTRODE SIZES (DIAMETER) IN GOUGING APPLICATION	UP TO 12 MM	-
SAW WELDING WIRE SIZES (DIAMETER)	2,5,3,2,4,5 MM	MM
COOLING	FORCED AIR	TYPE
CLASS OF INSULATION	H	-



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PARAMETERS	VALUE	UNIT
DEGREE OF PROTECTION	IP23	-
DIMENSIONS (L X W X H - INCLUDING EYEBOLT)	930 X 525 X 950	MM
WEIGHT (APPROX.)	115	KG.

## TECHNICAL SPECIFICATIONS - WELDING HEADS

SAW HEAD	UNIT	WH -15 L1(I)	WH -15 01(I)	WH -15 02(I)	WH -15 03(I)
MAX. WELDING CURRENT @ 60% DUTY CYCLE	AMPS, DC	1500	1500	1500	1500
		1250	1250	1250	1250
RECOMMENDED POWER SOURCE		PS 1200 (I)			
RECOMMENDED WIRE DIAMETER SINGLE WIRE	MM	2.0, 2.5, 3.15, 4.0 AND 5.0			
SPEED RANGE WIRE FEED	M / MIN.	0.5 - 4.0	0.5 - 4.0	0.5 - 4.0	0.5 - 4.0
SPEED RANGE CARRIAGE	M / MIN.	1.5	N. A.	N. A.	N. A.
INPUT TO CONTROL UNIT	VOLTS, AC	42 V, 1 PH, 50 HZ FROM POWER SOURCE			
RANGE OF ADJUSTMENT					
VERTICAL (Z)	MM	140 (MANUAL)	140 (MANUAL)	100 (MOTORIZED)	100 (MOTORIZED)
HORIZONTAL (X) - TRANSVERSE TO TRAVEL DIRECTION	MM	140 (MANUAL)	140 (MANUAL)	100 (MOTORIZED)	100 (MOTORIZED)
HORIZONTAL (Y) - IN DIRECTION OF TRAVEL	MM	-	140 (MANUAL)	100 (MOTORIZED)	100 (MOTORIZED)
MAXIMUM SWIVEL					
TRANSVERSE TO HEAD TRAVEL	DEGREE	45			
PARALLEL TO HEAD TRAVEL	DEGREE	30			
HORIZONTAL SWING	DEGREE	270			
STANDARD BORE FOR SPOOL	MM	285 - 315 (ADJUSTABLE)			



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SAW HEAD	UNIT	WH -15 L1(I)	WH -15 01(I)	WH -15 02(I)	WH -15 03(I)
WEIGHT OF SPOOL (MAX.)	KG	25			
FLUX HOPPER CAPACITY (MAX.)	KG / LITRES	*10 / 7			
DIMENSIONS (L X W X H)	MM	1130 X 638 X 730	1500 X 1030 X 580	1500 X 1050 X 600	1500 X 1050 X 600
WEIGHT (WITHOUT FLUX AND WIRE)	KG	68	80	110	110
NOTES:	* HOPPER 80 MM ADJUSTMENT FOR WELDING HEAD				
	# RANGE OF ADJUSTMENTS: THE THREE AXES OF WELDING HEAD ARE DEFINED AS FOLLOWS				
	X - AXIS: HORIZONTAL AXIS, TRANSVERSE TO DIRECTION OF BOOM TRAVEL				
	Y - AXIS: HORIZONTAL AXIS, ALONG THE DIRECTION OF BOOM TRAVEL				
	Z - AXIS: VERTICAL AXIS, PERPENDICULAR TO DIRECTION OF BOOM TRAVEL				