

MANUAL BOOK

DC400A INVERTER DC MMA WELDING MACHINE



I. MAIN USAGE AND THE RANGE OF USAGE

DC400A arc welder produced with Thyristor Rectifier technology is a high reliability welding machine. The welding current is infinitely and independently adjustable. All ferrous metal, copper and stainless steel material can be omnibearing welding in all position. The welding current is stable. The welding seam is nice. few spatters and low noise occurs during welding. The welder has outstanding feature of minimum current. It is particularly suitable for enterprise of plant and mine, build, decoration and maintenance sectors.

II. MAIN TECHNICAL SPECIFICATIONS

	MODEL	DC400A
INPUT	Voltage	AC 380V/400V/415V/420V/440V \pm 10% 50/60Hz Three phase
	No-load Voltage	60~70V
104	current Adjusting	400A
MMA	Rated Output Curre	50-400A
	Rated Duty Cycle	60%
, 1	Efficiency	≥70%
Protection	Class of enclosure	IP21S
	Mass	136Kg
Outline	Dimensions mm ³	376×675×747

III. OPERATING CONDITION AND WORK SURROUNDING

1. Operating condition:

Voltage of power source: three phases AC 380V/400V/415V/420V/440V \pm 10%

Frequency: 50/60Hz

Reliable grounding protection

2. Work surrounding

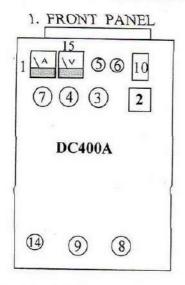
- ①. relative humidity: not more than 90 %(average monthly temperature not more than 20 °C)
- ②. ambient temperature:- 10° C ~ 40° C
- ③. The welding site should have no harmful gas, Chemicals, molds and inflammable matter, explosive and corrosive medium, no big vibration and bump to the welder.
 - 4. Avoiding rain water. Operating in rain is not allowed.

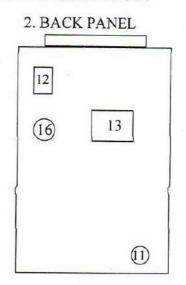
IV. DESCRIPTION OF THE ERECTION

1. Before welding, the operator should read the operation instructions.

- 2. Check the welder appearance for deformation and damage.
- 3. For the safety of the equipment and the persons, the customer must correctly make grounding or protection according to the power supply system:using 4mm2 lead to connect the protection grounding of the welder
- 4. Welding operation should be carried out in dry and good ventilating area. The surrounding objects should be not less than 0.5m away from the welder.
 - 5. Checking the welder output connector for tightness.
- 6. The welder can not be moved and the cover can not be opened during the power is on and welding operation is carried out.
- 7. The welder should be cared, used and managed by specialized person.
- 8. Current of the distribution board:not less than 60A

V.SKETCH SKETCH THE PANEL FUNCTION





1.indication of welding current

2.power switch 3.welding current regulator

4,ARC force regulator

5 indicating light of power

6, warning indicating light 7. surge current

8.output"+" 9 output"-"

10..Control mode switch (remote/local) 11.safety earthing column 12.power supply

13,nameplate

14 remote receptacle

15 .indication of welding voltage 16 FUSE(8A)

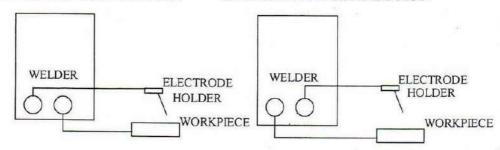
VI.METHOD OF THE OPERATION

1. Hand welding with electrode

①.Regulating Current Knob"4"(base current regulator) to select right welding current select empiric formula:I=40D, D is dia. of the electrode

- ②..Notice positive and negative connection during welding.
 - A. POSITIVE CONNECTION

B. NEGATIVE CONNECTION



- ④ .Connecting input power for the welder, then switch on the power and current indicating light "5" is on .
- ⑤.Pay attention to rated welding current and rated duty cycle of the welder. Overload is not allowed.
- ⑤.After the welding operation is finished, let the welder be ventilated for a few minutes and then cut off the power switch.

VII. This product is sold subject to the understanding that if any defect in manufacture or material shall appear within 12 months from date of consumer sale, the manufacturer will arrange for such defect to be rectified without charge on the sales invoice and warranty card. (except for any personal trouble)

General Troubles and Problem Solving:

Trouble	Causes	Problem Solving
Power lamp not light	1.No electricity input2.Switch of welder fails.3.Absence phase(fan rotating)	1.Check incoming line .2.Replace the switch3.Check incoming line.
Fan not rotating	 1.Fan power line is off. 2.Enclosure blocks the fan due to deformation 3.The fan fails. 4.Absence phase (red_lamp lights). 	1.Reconnect the line 2.Reform the enclosure . 3.Replace the fan 4.Check the input power source.
Warning lamp lights	1.Over heat	1.Welding after cooling.
Output current decreased	 Input Voltage is low Input line is too thin 	2. Power line is thickened
Current can not be regulated	1.Connecting line of the potentiometer is off 2.Potentiometer for current regulation fails	1.Reconnecting the line 2.Replace potentiometer

NOTE: This diagram is for reference only. It may not be accurate for all machines covered by this manual. If the diagram is illegible, write to the Service Department for a replacement. Give the equipment code number.

COMPONENTS LIST

Decripation	0N	mark		III		components number	Gr.		quantity			remark	
TREE MANN transformered 2x54-30020 2x54-40020 2x54-50020 2x54-500200 2x54-50020 2x54-500200 2x		DC400A	C500A		DC250A	DC400A	DC500A	DC250A	DC400A	DC500A	DC250A	DC400A	DC500A
This country	9	TRI		MAIN transformer	ZXS-25020	ZX5-40020	ZX5-50020		-				
Fig. 10 Particle control of the plante center coli Cyche Cyc		TR2		CONTROL transformer		ZX5-50021			-		20+20(0.4	A)/220V(0.55A)/	V(0.5A)x2
SCR.16 Fibre reader ceal Civoble Civo		IPL		balance reactor coil	ZX5-25024	ZX5-40024	ZXS-50027	•		-			
PANSE PANS		DCL		filter reactor coil	(whole)	(whole)	ZX5-50024	-	set	-			
RESYT		SCR1-6		thyristor	PWB60A40	PWB130A40	PWB130A40		2				
FRX2001 FRX3001 FRX3001 Leat		R2		REST	FRW50A39R	FRW50A75R	FRW50A100R		-		50W,39 Q	50W,75 Q	50W,100 D
CAPACITANCE		ZNR1-3,6,G1		input fittings	FRX2001	FRX3501	FRX5001		l set		ZNRI-3,6:ERZ	2C20DK112 G1.E	2D231C131-7
CAPACITANCE FR2012UF400VAC IT CURRENT METER FR2903A400 FR2903A600 1 VOLTAGE METER FR2903A73mV \$600A73mV 1 CONTROL MODE SWITCH KN1-202 1 SURGE CURRENT REGULATOR WX111-2KZ 1 ARC FORCE CURRENT REGULATOR WX111-2KZ 1 POWER BIAT REGULATOR WX111-2KZ 1 WELDING CURRENT REGULATOR FR46-30A2D FR46-30A2D Marning indicator light (red) BT203-2 1 AC connector FR46-30A2DV FR46-30A2DV FR46-30A2DV Heat relay 6-00e jack FR250D2DV 1 Cooting fan FR250D2DV 2X5-400(300) 1 Control board ZX5-400(400) ZX5-400(500) 1		C1,C2		capacitance fittings		FRX5002			l set			ECQE104473KF	
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