

HYDRAULIC BUTT WELDING MACHINE

OPERATING INSTRUCTIONS

PSA 40 - 160
PSA 50 - 200
PSA 50 - 250
PSA 90 - 315
PSA 90 - 355
PSA 200 - 450
PSA 315 - 630
PSA 450 - 800
PSA 630 - 1000



PIPESTAR
AFRICA



PIPESTAR
AFRICA

INTRODUCTION

This is the manual for PSA40-160 | PSA50-200 | PSA50-250 | PSA90-315 | PSA90-355 | PSA200-450 | PSA315-630 | PSA450-800 and PSA630-1000 butt fusion welding machines, please read it carefully. Please handle and maintain the machine according to this manual.



TECHNICAL PARAMETERS

Model NO.		PSA40-160	PSA50-200	PSA50-250	PSA90-315	PSA90-355
Application Materials		PE/PP/PVDF				
Welding Range		40~160mm	50~200mm	50~250mm	90~315mm	90~355mm
Ambient Temperature		-5~45°C				
Voltage		220V±10%,50HZ				
Total Power		3.55kw	3.95kw	5.75kw	6.25kw	6.75kw
Heating Plate		1.6kw	2kw	2.5kw	3kw	3.5kw
Trimmer		1.2kw	1.2kw	2.5kw	2.5kw	2.5kw
Hydraulic Unit		0.75kw	0.75kw	0.75kw	0.75kw	0.75kw
Insulation Resistance to earth		>1 MΩ	>1 MΩ	>1 MΩ	>1 MΩ	>1 MΩ
Max. Pressure		6.3MPa	6.3MPa	6.3MPa	6.3MPa	>6.3MPa
Total area of hydraulic cylinders		11.00cm ²	11.00cm ²	11.00cm ²	20.02cm ²	20.02cm ²
Type of hydraulic oil		Type 46 hydraulic oil				
Oil tank capacity		3L				
Max. Temperature		<270°C				
Temp. difference on heater		±5°C				
Frame	Size [cm]	82*44*40	85*48*44	85*53*43	94*62*60	94*64*62
	Weight [kg]	38	42	52	80	112.3
Hydraulic Unit	Size [cm]	58*47*47	58*47*47	58*47*47	58*47*47	58*47*47
	Weight [kg]	41.5	41.5	41.5	41.5	41.5
Trimmer	Size [cm]	31*24*32	35*36*35	36*47*47	59*38*58	60*39*63
	Weight [kg]	6	7	17.5	22	32
Heating Plate	Size [cm]	37*5*35	37*5*40	44*5.5*47	44*5*53	50*6*57
	Weight [kg]	3	3.8	5.5	7.8	10.3
Support	Size [cm]	30*18.5*42	33.5*18.5*46	39*28*56.5	48*28.5*56.5	52*29*59
	Weight [kg]	1.5	2.1	2.6	3.5	5.9
Total weight [kg]		90	96.4	119.1	154.8	255



PIPESTAR
AFRICA

TECHNICAL PARAMETERS

TECHNICAL PARAMETERS

Model NO.		PSA200-450	PSA315-630	PSA450-800	PSA630-1000
Application Materials		PE/PP/PVDF			
Welding Range		200~450mm	315~630mm	450~800mm	630~1000mm
Ambient Temperature		-5~45℃			
Voltage		380V±10%,50HZ			
Total Power		7.8KW	11.8KW	17KW	23.2KW
Heating Plate		5.2KW	9.2 KW	12.8KW	18KW
Trimmer		1.5KW	1.5KW	2.2KW	3KW
Hydraulic Unit		1.1KW	1.1KW	2KW	2.2KW
Total area of hydraulic cylinders		22.37cm²	23.06cm²	43.96cm²	50.24cm²
IP Level		IP54			
Insulation Resistance to earth		>1 MΩ			
Max. Pressure		6.3Mpa		10Mpa	
Oil tank capacity		3L		6L	
Type of hydraulic oil		Type 46 hydraulic oil			
Max. Temperature		<270℃			
Temp. difference on heater		±7℃			
Frame	Size [cm]	120*74*79	131*97*92	175*130*128	200*160*160
	Weight [kg]	200	330	802	1300
Hydraulic Unit	Size [cm]	58*46*45	58*46*45	74*50*45	74*50*45
	Weight [kg]	49	49	52	52
Trimmer	Size [cm]	63*16*98	78*29*109	97*36*150	110*34*170
	Weight [kg]	59	103	202	320
Heating Plate	Size [cm]	71*10*70	91*7*100	98*9*104	122*10*135
	Weight [kg]	16	34	61	84
Support	Size [cm]	50*50*60	63*58*71	81*67*90	117*76*99
	Weight [kg]	12	14	48	110
Total weight [kg]		400Kg	645Kg	1345Kg	2100 Kg

SPECIAL INSTRUCTIONS

Before operating the machine, the user should read this user manual to ensure the equipment and operator's safety, as well as the safety of others:

1. The machine is used to weld pipes made from PE, PP, PVDF and should not be used to weld material that cannot be identified, otherwise the machine may be damaged, and accidents may occur;
2. Don't use the machine in a place with flammable or explosive hazards.
3. The machine should be operated by responsible, qualified and trained personnel;
4. The machine should be operated on a dry area. Protective measures should be adopted when used in wet conditions.
5. Note that the Voltage of PSA160-PSA355 is 220V±10% / 50HZ Voltage of PSA400-PSA1000 is 380V±10% / 50Hz.
6. Before using the machine, fill the hydraulic oil reservoir with 46# hydraulic oil. Make sure the hydraulic oil is sufficient for smooth operation. Replace the metal oil tank cap by the red plastic air bleed cap provided



SAFETY SUGGESTIONS

The welding machine - should be operated by professional and certified personnel. Non-professional use of equipment may pose a hazard to operators and people around them.

Heating plate - The Heating plate temperature can reach 270°C, please take the necessary precautions to prevent burns such as wearing protective gloves. Once pipe heating is completed return the heating plate to the frame for storage.

Trimming Cutter - Before trimming pipe or fittings ends, ensure that pipe and fittings surfaces are clean in order to prevent damage to the trimmer blades. Once trimming is completed, the trimmer should be returned to the frame for storage.

Hydraulic Unit - The hydraulic unit should be placed so as to avoid a tripping hazard. Hydraulic seals should be inspected regularly to ensure that there are no leakages of hydraulic oil. All debugging should be performed by a qualified professional.

Clamping Frame - Ensure that prior to welding pipe and fittings to be welded are properly seated and secure. Ensure screws that hold aluminium clamp inserts in place are properly fastened.

Crane Use - 315 - 630 / 450 - 800 / 630 - 1000.

Crane assembly should only be done by qualified and competent persons.



INSTRUCTIONS FOR USE

All parts of equipment should be placed on a stable and dry area to operate.

Before operation ensure the following:

- ✓ The machine is in a working good condition;
- ✓ The power supply complies with the requirements according to the butt fusion machine;
- ✓ Electrical wires are not broken or exposed;
- ✓ All instruments are functioning normally;
- ✓ The blades of trimmer tool are sharp;
- ✓ All necessary parts and tools are available.

Connection and preparation:

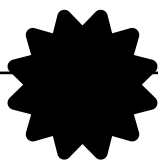
1. Connect the hydraulic cylinder on the frame to hydraulic unit by quick couplers;
2. Connect the heating plate to the hydraulic unit with the special cable;
3. Connect the hydraulic unit with the electrical box;
4. Connect electrical supply to the trimmer;
5. Install appropriate inserts to clamping frame according to the outside diameter of pipes/fittings to be welded, ensure clamps are securely fastened.



INSTRUCTIONS FOR USE



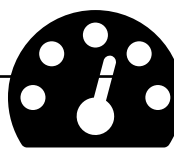
PIPESTAR
AFRICA



Welding Standard

We suggest that welding procedures are performed in compliance with SANS 10268 -1 or DVS 2207-1.

Refer to the attached welding parameter tables for the specific machine in use.

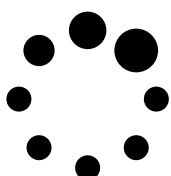


Temperature Controller

Setting of the temperature controller

Application

1. Press "SET" for more than 3 seconds till "sd" is shown in the upper window;
2. Press "▲" or "▼" to change the value to specified (press "▼" or "▲" continuously, the value will plus or minus automatically);
3. After setting, press "SET" to go back to the monitoring and controlling interface.



Timer setting and use

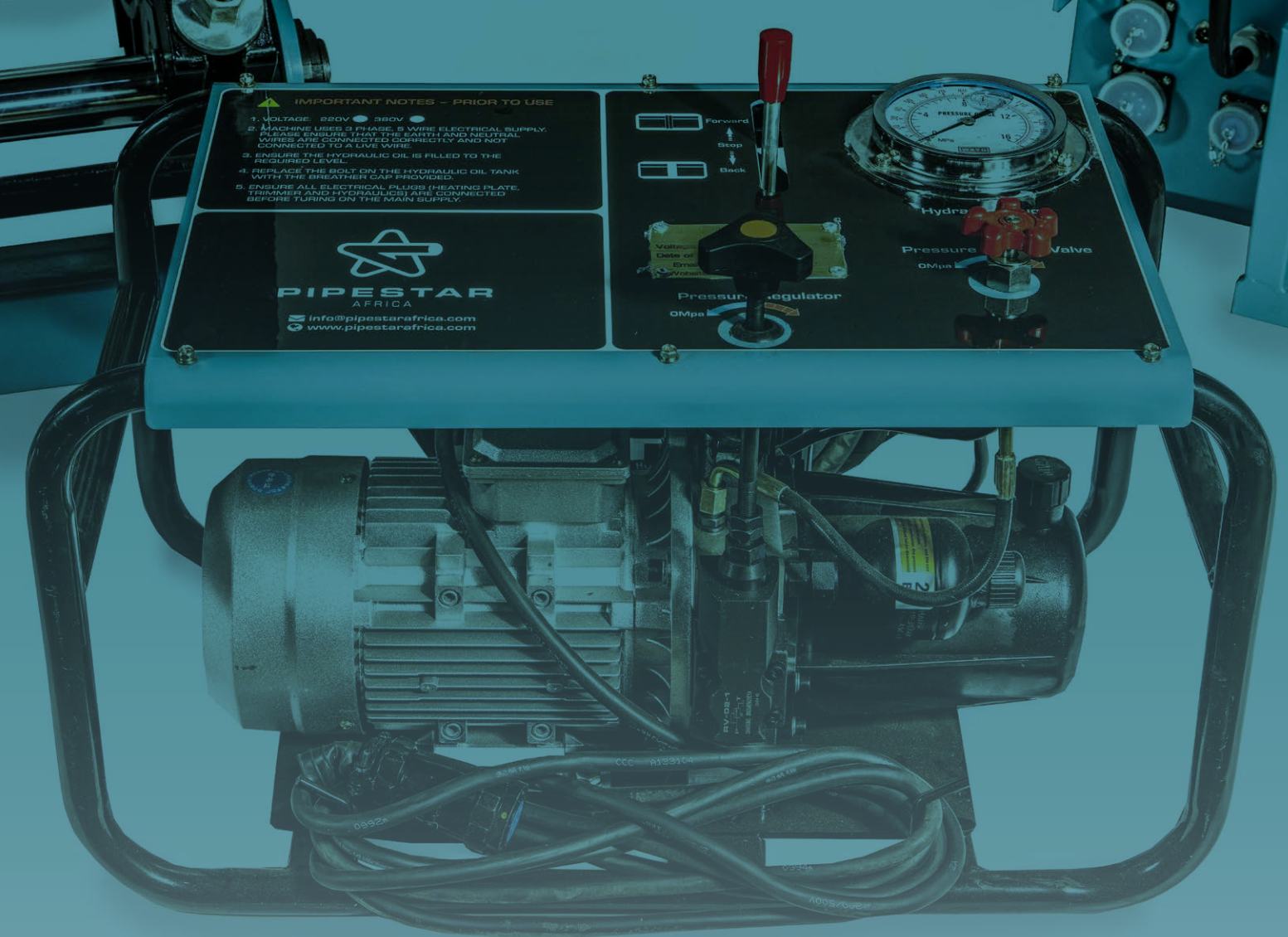
If one of the parameters is changed, such as outside diameter, SDR or material of pipes, the soaking time and cooling time should be reset according to the welding parameters.

TIMER SETTING

Select "set"	Lamp T2 is on and Lamp T5 is off
Select ▲ or ▼	To set soaking time in seconds
Select "set"	The lamp T2 is off and Lamp T5 is on
Select ▲ or ▼	To set cooling time in seconds
Select "set"	Timer setting is over

INSTRUCTION FOR TIMER USE

Select T2	<ul style="list-style-type: none">• The soaking time is counted in seconds, and the alarm will sound once completed.• Alarm stops after 5 seconds - intermittent tone
Select T5	<ul style="list-style-type: none">• The cooling time is counted in seconds and the alarm will sound once completed.• Alarm stops after 8 seconds - long tone.
Select ▲ or ▼	Timer stops



CONTACT

22 Old Vereeniging Road, Kliprivier,
Midvaal, South Africa, 1871
Tel: +27 87 655 4390

Registration Number: 1964/006605/07
VAT Number: 4170232781

✉ info@pipestarafrica.com
🌐 www.pipestarafrica.com

+ disclaimer: Whilst every care has been taken in the preparation of this brochure, neither Pipestar Africa nor any of their agencies can be held liable for any errors in this publication. It should also be noted that this brochure is intended for reference only. Due consultation is required when designing for particular applications, and no liability will be entertained in this regard.