



FLARING Welding Machine User Manual

[Home](#) » [FLARING](#) » FLARING Welding Machine User Manual 

Contents

- 1 FLARING Welding Machine
- 2 Part 1: Machine Introduction
- 3 Part 2: Introduction to the product and configuration list.
- 4 Part 3: Simple test for powering on the machine
 - 4.1 Precautions for Power-on Inspection:
- 5 Part 4: Technical Specifications
- 6 Part 5: Machine Operation Guidance
 - 6.1 MMA Mode
 - 6.2 LIFT TIG Mode:
- 7 Part 6: Strap Installation
- 8 Part 7: Troubleshooting
- 9 Part 8: Welding Parameter Settings
- 10 Documents / Resources
- 11 Related Posts

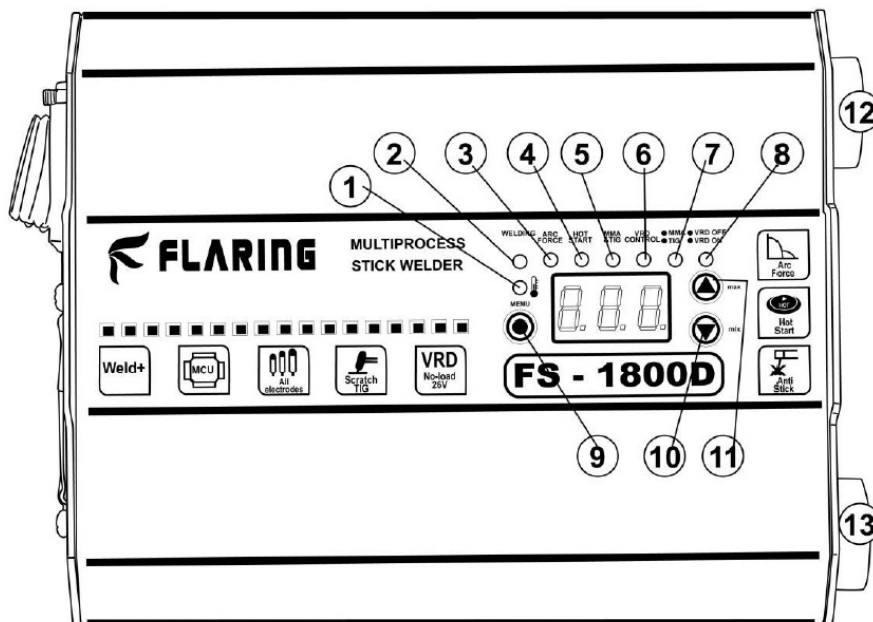


FLARING Welding Machine



Flaring FS-1800 is an intelligent and easy-to-operate welding machine with manual welding mode. It has the characteristics of good welding performance, diversified usage scenarios, and outstanding welding effects. It is highly praised by welding enthusiasts and is also very good for beginners in welding. Friendly and can get started quickly.

Part 1: Machine Introduction



1. Fault light

When the welding load is overloaded and the output current of the machine is too large, this light will be on. This situation is normal and the machine can be restored; when there is damage inside the machine, this light will be on. In this case, the machine is abnormal and requires maintenance.

2. Welding current(Press 9 to select it)

Adjust the welding current, this light shows. Long press 11 to increase the value, long press 10 to decrease the value.

3. **ARC FORCE(Press 9 to select it)**

For MMA mode, it is easier to start arcing when welding with low current, and it is not easy to start the arc during welding. Long press 11 to increase the value, long press 10 to decrease the value.

4. **HOT START(Press 9 to select it)**

For MMA mode, it is easier to start arcing when welding with low current, and it is not easy to start the arc during welding. Long press 11 to increase the value, long press 10 to decrease the value.

5. **MMA and LIFT TIG on(Press 9 to select it)**

When 7 is red light, it is MMA state, when 7 is green light, it is LIFT TIG state.

6. **VRD control(Press 9 to select it)**

It is only for MMA welding. 7 is red light, press 10 or 11, you can choose to change the color of 8, 8 is red light for VRD off, 8 is green light for VRD on.

7. **MMA and LIFT TIG selection**

When the No. 5 light is on, the No. 7 red light is on for MMA, and the No. 7 green light is on for LIFT-TIG, press 10 or 11 to change.

8. **VRD Selection**

When the No. 5 light is on, the No. 7 red light is on, press the 10 or 11 key to select the No. 8, the No. 8 light is red for the VRD off, and the 8 light for the green light is for the VRD on.

MMA VRD ON: The output no-load voltage is below DC15V, Below the safe voltage, there is protection for human safety, but arc starting will be a little more difficult.

MMA VRD OFF: The output no-load voltage is DC 60V.

9. **Function Selection**

- **MIN**








Press this button once to switch the state, long press this button to decrease the value.



- **MAX**

Press this button once to switch the state, long press this button to increase the value.

Note: FS-1800D voltage input is AC 110V OR AC 220V voltage input, FS-1800 voltage input is AC220V.

Part 2: Introduction to the product and configuration list.

No.	Picture	Name	Qty	Remark
1		FS-1800	1	Please check the appearance after receiving the machine, and power on to check
2		Welding holder	1	2m 16MM2 cable, 200A Italian welding holder +10-25mm2 European quick plug
3		Ground clamp	1	2m 16MM2 cable, 300A Ground clamp +10-25mm2 European quick plug
4		Conversion line	1	Conversion line only suit for 220V to 110V dual-voltage input machines, if not dual- voltage machines no this line included.
5		Brush and hammer	1	Clean up welding slag.
6		Simple mask	1	Welding protection.
7		strap	1	

8		Toolbox	1	The whole machine can be put inside, which is very convenient to lift.
9		Manual	1	Normally provides manuals in English, if you need other language like French, German, Italian, Spanish, and Russian please contact us to get electronic version documents.

Part 3: Simple test for powering on the machine

Flaring FS-1800 welding machine will undergo strict various tests when it leaves the factory to ensure that every welding machine that reaches the user is of high quality, because our machine has to go through tens of thousands of kilometers of long-distance transportation from the factory to the delivery to you. And many times of handling, it is inevitable that some uncontrollable factors will cause some internal components of the machine to become loose or even damaged during the process. We recommend that you perform a power-on inspection as soon as you get the welding machine to ensure that what you receive is qualified product.

Precautions for Power-on Inspection:

1. Please make sure your power supply voltage is 110V+/-15% or 220+/-15%. Flaring FS-1800D supports 110V and 220V input voltage in North America and Japan, and Flaring FS-1800 supports 220V input voltage in the UK, EU and other regions; if you have a generator power supply, please ensure that the generator is not less than 4000w.

2. It is recommended to choose 50A circuit breaker protection when your power supply voltage is 110V, and 30A circuit breaker protection when 220V.
3. For the current machine, please choose the power plug that suits your local electrical law requirements
4. Extension cord: #12 AWG or larger; 25' (8m) or shorter.

Turn on the power switch of the machine and the fan on the back of the machine rotates, and the digital display on the panel indicates that the power is normal.

NOTE:

1. In order to reduce the working temperature of the machine, it is normal for the fan to continue to rotate for a few seconds after the power is turned off.
2. In the process of high-strength continuous welding, machine protection may occur, and the temperature control lamp light on the machine panel will be on. After continuous heat dissipation, the machine will return to normal, which is normal.
3. During the welding process, if you feel that the welding is not good, the spatter is too large, or the arc is broken, please exchange the connection of the welding clamp and the grounding clamp with the machine.

Attached table: Self-examination of abnormal conditions without response when turning on the machine:

1. The machine's power switch is not turned on.
2. The power input voltage is wrong.
3. The power plug is loose.
4. The internal circuit is loose (due to long-distance transportation, bumps), you need to open the cover and check the internal connection line.

Part 4: Technical Specifications

TYPE	FS-1800	FS-1800D
Input power voltage (V)	Single-phase 220V±15%, 50/60Hz	Single-phase 110V/220V±15%, 50/60Hz
Rated input current (A)	28A	35A/28A
Rated power capacity (KVA)	6.5KVA	3.9/6.5KVA
Current adjustment range (A)	20-160A	20-160A/20-110A
Welding thickness (mm)	>1.0mm	>1.0mm
Voltage adjustment range (V)	20.8-26.4 V	20.8-26.4 V
No-load voltage (V)	65 V	65 V
Rated duty cycle	60%	60%
Efficiency (%)	85%	85%
Power factor	0.7	0.7
Protection class	IP21S	IP21S
Insulation class	H	H
Size (mm)	340*165*305	340*165*305
Weight (Kg)	6.9	6.9

Part 5: Machine Operation Guidance

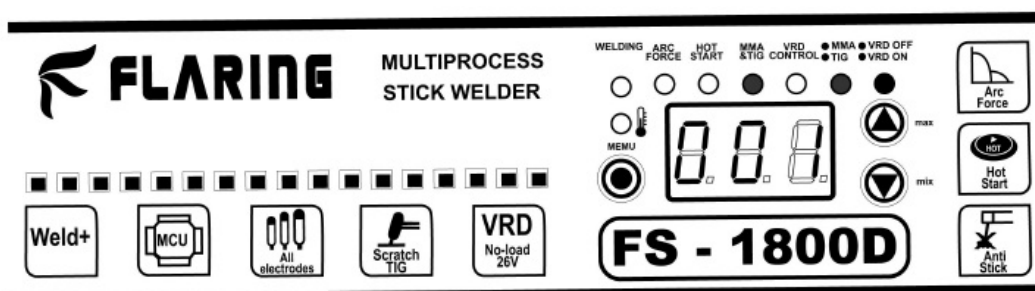
Tips:

1. Wear a welding helmet fitted with a proper shade of filter to protect your face and eyes when welding or watching;
2. Wear approved safety glasses. Side shields recommended;
3. Use protective screens or barriers to protect others from flash and glare; warn others not to watch the arc;
4. Wear protective clothing made from durable, flame-resistant material(wool and leather) and foot protection;
5. Use approved ear plugs or ear muffs if noise level is high;
6. Never wear contact lenses while welding.

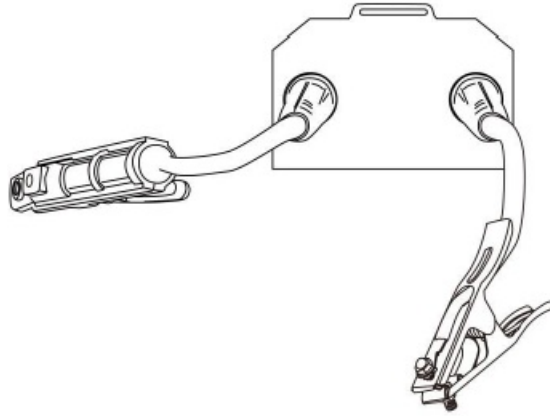
MMA Mode

If you want to repair some broken fences or fix brackets, you like to use traditional welding rods for operation, you can use Flaring FS-1800.

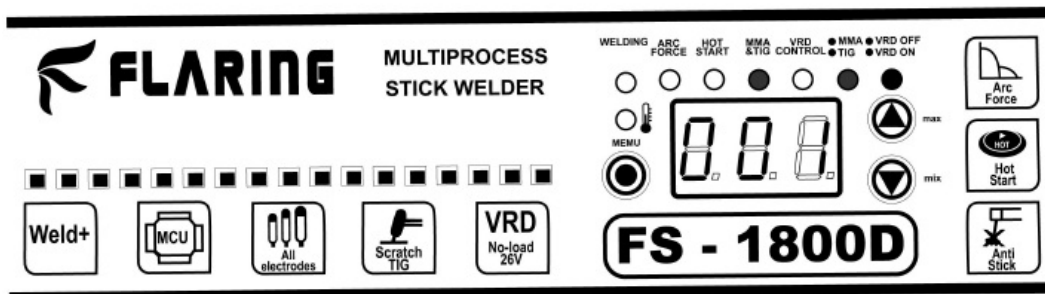
1. Select “MMA” process.



2. Connect welding holder and ground clamp.



3. To adjust the current, only the current can be adjusted.



NOTE:

1. The welding rod specification supported by Flaring FS-1800 is below 4.0(5/32in), usually 2.5(3/32in) and 3.2(1/8in). European style generally uses E6013, American style generally uses E7018 and stainless steel generally uses ER308.
2. It supports welding of 1-8mm(1/64-5/64in) carbon steel and 1-5mm(1/64-7/32in) stainless steel. Aluminum can not be welded. For carbon steel, please use carbon steel electrode. For stainless steel, please use stainless steel electrode.
3. Connect the ground clamp to clean bare metal. No rust, paint or other coatings, and ensure good electrical conductivity.
4. The ideal distance between the welding rod and the welding object is 1-2mm(1/64-5/64in), to ensure that the welding rod and the work piece are in continuous and stable contact. The welding rod should not be too high or pressed too low to avoid arc breaking and adhesion.
5. It is normal for novices to have adhesion during the welding process, and you can try to friction arc to avoid adhesion.
6. Suitable for ordinary welding rods, such as 7018, 6013, etc., but not suitable for special welding rods, such as 7010, 7011.

Possible Problems

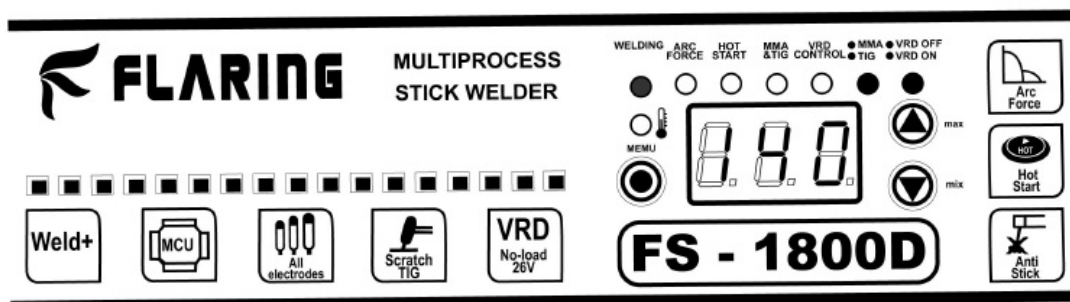
1. There is no arc, check the ground wire to connect the work piece to ensure that there is no rust, paint or other coatings on the work piece.
2. There is no arc, check the direct distance between the welding rod and the welding object, the ideal distance is 1-2 mm; check whether the welding object has rust or oil stains, it is recommended to polish with sandpaper or a grinder.

- During the welding process, the temperature control lamp light is on, and it may be over-current protection. You need to stop working for a few minutes, let the machine cool for a period of time, and automatically recover. If the air cools for more than 10 minutes, the machine does not automatically recover, please shut down and restart.
- The temperature control lamp light is on when the machine is turned on, please contact us.
- If you have any problems that cannot be solved, please contact us.

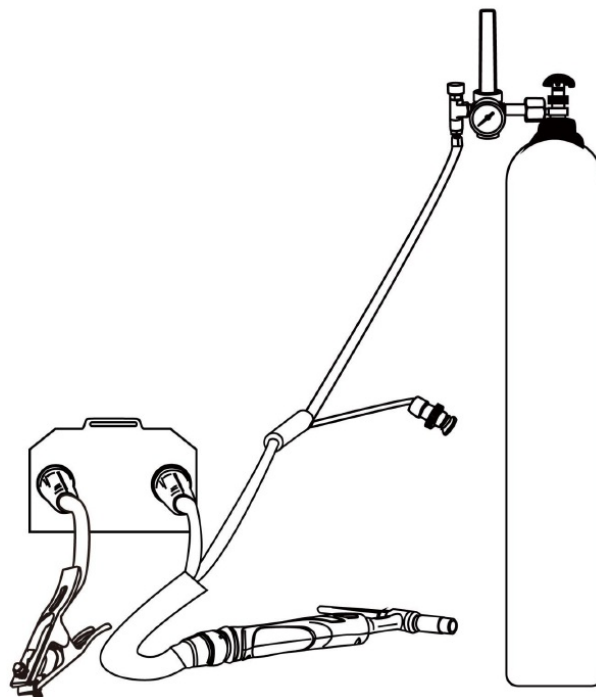
LIFT TIG Mode:

FLARING FS-1800 for thin plates with higher welding process requirements or welding with higher process requirements, especially for stainless steel welding, you can use the LIFT TIG mode, which requires the use of pure argon.

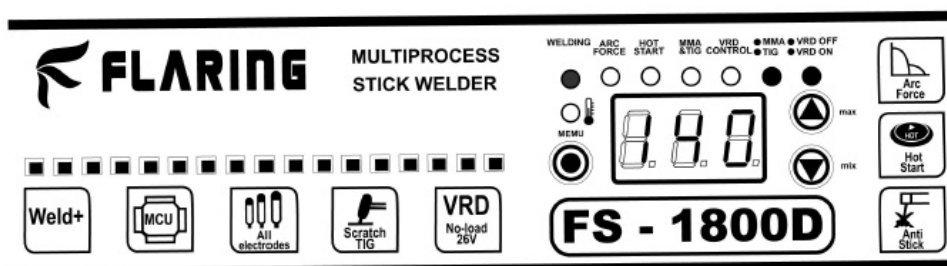
- Select "Lift TIG " process.



- How to connect.

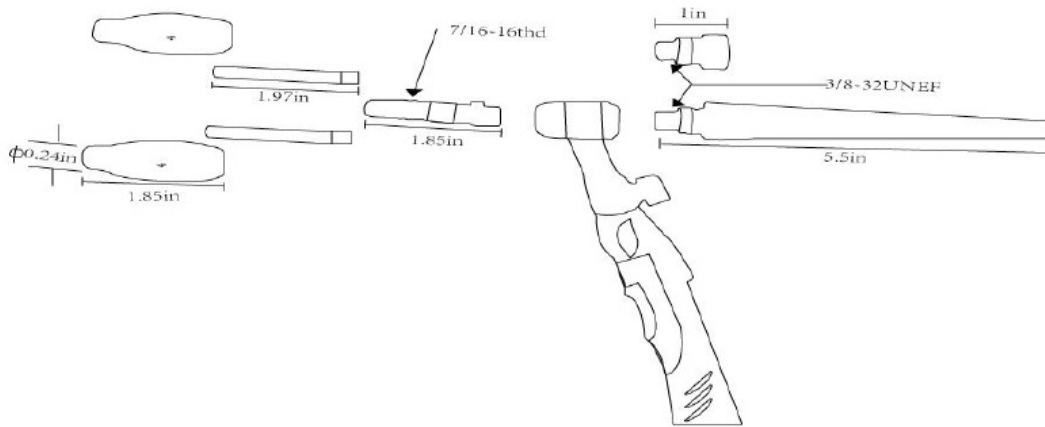


- Adjust the current, only the current can be adjusted.



- WP17V Structure of welding torch.

Note: Standard accessories package kit not included this tig torch.



Remark: 1. ceramic nozzle, 2 .tungsten collet, 3. tungsten collet body, 4 .short back cap, 5. long back cap. The above structure is a wearing part, please keep it in stock.

NOTE:

1. Please connect according to the picture, otherwise it cannot be welded
2. This machine is not a professional high-frequency arc starting argon arc welding machine, it is only a LIFT TIG contact arc starting or friction starting.
3. Need to use TIG, wp17v torch, this torch is not included, you need to buy it yourself
4. Support welding material, carbon steel, stainless steel, alloy steel, aluminum can not be welded.
5. This welding mode requires the use of tungsten needles, which need to be purchased separately, and the size of the tungsten needle must match the collet and collet body of the welding gun, otherwise it cannot be installed
6. In this mode, argon welding must be used.

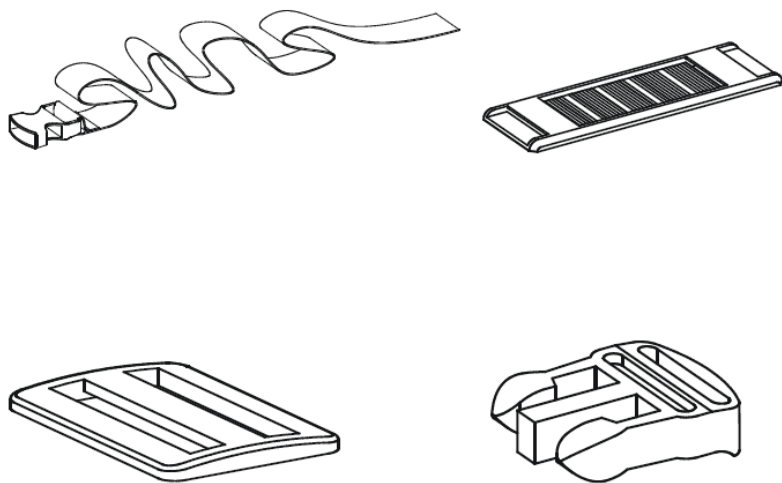
Possible Problems

1. There is no response when starting up, please check the plug connection.
2. There is no response when booting up, please open the cover and check whether the internal connection wires are loose.
3. During the welding process, if the time exceeds 3 minutes, over-current protection may occur. You need to stop working for a few minutes, let the machine cool for a period of time, and automatically recover. If the air cools for more than 10 minutes, the machine does not automatically recover, please shut down and restart.
4. If you have any questions, please contact us.
5. Lift tig is different from professional high-frequency tig. Lift tig needs to be welded after contact with arcing. High-frequency tig does not require contact with arcing. Lift tig is not suitable for spot welding.

Part 6: Strap Installation

Following with the fixing steps of welder belt. The images shown here are indicative only. If there is inconsistency between the image and the actual product, the actual product shall govern.

Take the following parts to fix the belt into the welder..



Fix the belt as figure 1 to 3. The length of the belt is adjustable as needed.

Fig. 1

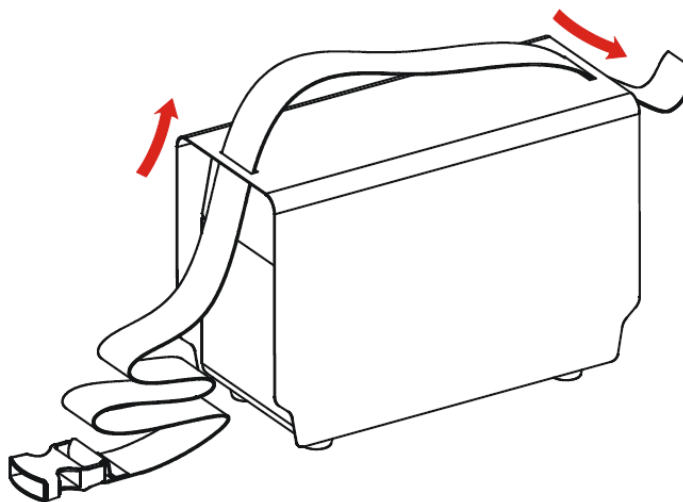


Fig. 2

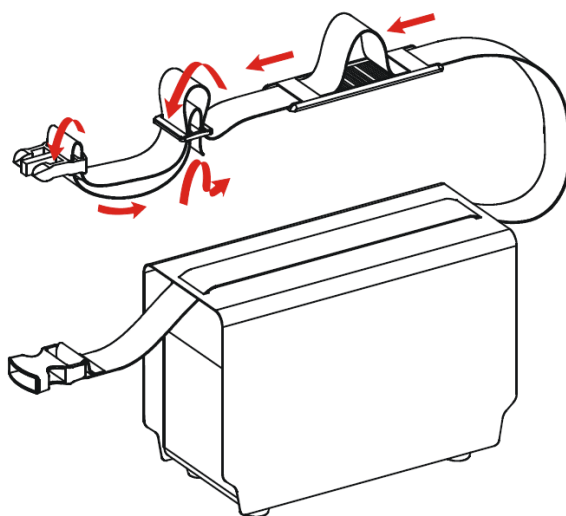
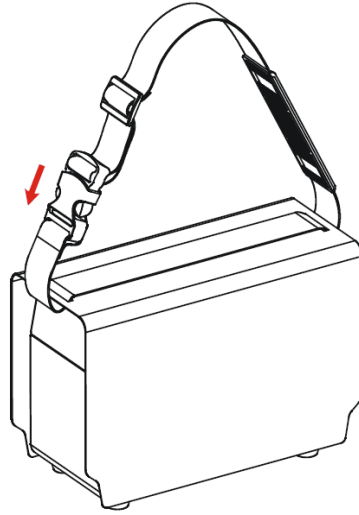


Fig. 3



Part 7: Troubleshooting

PROBLEMS(SYMPTOMS)	POSSIBLE CAUSE
PROBLEMS IN STICK WELDING	
Excessive spatter	<ol style="list-style-type: none">1. Long arc.2. High current.
Craters	<ol style="list-style-type: none">1. Fast movement of the electrode away from piece.
Inclusions	<ol style="list-style-type: none">1. Poor cleanliness or distribution of the Welding passes.2. Improper movement of the electrode.
Insufficient penetration	<ol style="list-style-type: none">1. High progression speed.2. Welding current too low.3. Narrow chamfering.

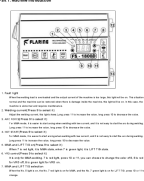
Sticking	<ol style="list-style-type: none"> 1. Arc too short. 2. Current too low.
Porosity	<ol style="list-style-type: none"> 1. Humidity in electrode. 2. Long arc.
Cracks	<ol style="list-style-type: none"> 1. Current too high. 2. Dirty materials. 3. Hydrogen in weld (present on electrode coating).
ELECTRICAL FAILURES	
Machine fails to come on (Power LED off)	<ol style="list-style-type: none"> 1. No Input Voltage. 2. Faulty supply plug or cable. 3. Internal fuse tripped. Allow time to Auto reset.
Thermal overload (Thermal LED on)	<ol style="list-style-type: none"> 1. Unit has been operated beyond its capacity rating. 2. Airflow through machine is restrict- ed or fan has failed.

Part 8: Welding Parameter Settings

Welding Thickness (mm)	2	3	4-5
Electrode Diameter (φmm)	2	3.2	3.2-4
Welding current A	40-65	50-80	100-130



Documents / Resources

 The thumbnail shows the cover of the FLARING FS-1800 User Manual. It features the FLARING logo at the top, followed by the title "Operation Manual" and "FLARING FS-1800". Below the title is a photograph of the welding machine. At the bottom, there is a list of contents in German. <p>Operation Manual FLARING FS-1800</p> <p>1. Sicherheitshinweise 2. Technische Daten 3. Bedienung 4. Wartung 5. Fehlerbehebung 6. Zubehör 7. Sonstiges</p>	<p>FLARING Welding Machine [pdf] User Manual FLARING, FS-1800, Welding Machine</p>
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