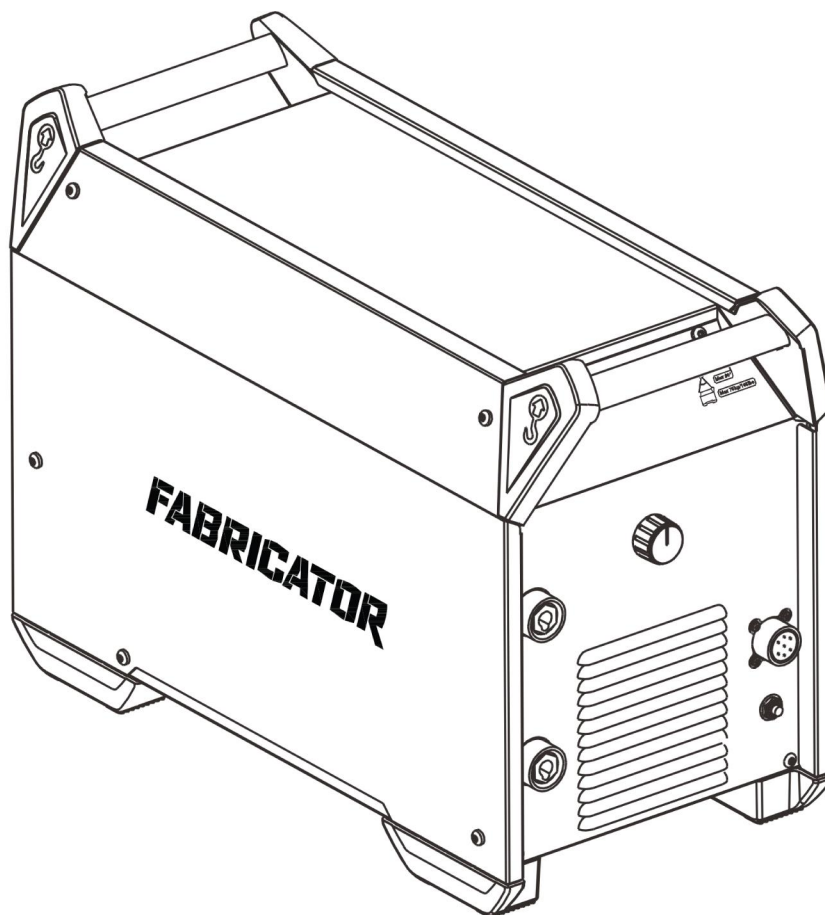


# ***Fabricator EM 400i, Fabricator EM 500i***



## **Instruction manual**

TABLE OF CONTENTS

---

<b>1</b>	<b>SAFETY</b> .....	<b>3</b>
1.1	Meaning of symbols .....	3
1.2	Safety precautions .....	3
<b>2</b>	<b>INTRODUCTION</b> .....	<b>6</b>
2.1	Overview .....	6
2.2	Equipment .....	6
<b>3</b>	<b>TECHNICAL DATA</b> .....	<b>7</b>
<b>4</b>	<b>INSTALLATION</b> .....	<b>9</b>
4.1	Location.....	9
4.2	Lifting instructions .....	10
4.3	Mains supply.....	11
<b>5</b>	<b>OPERATION</b> .....	<b>13</b>
5.1	Connections and control devices .....	13
5.1.1	Welding control mode.....	15
5.2	Connection of welding and return cable .....	16
5.3	Symbols and functions .....	17
5.4	Thermal protection .....	17
5.5	Fan control .....	18
<b>6</b>	<b>MAINTENANCE</b> .....	<b>19</b>
6.1	Routine maintenance .....	19
6.2	Power source.....	19
<b>7</b>	<b>TROUBLESHOOTING</b> .....	<b>21</b>
<b>8</b>	<b>ORDERING SPARE PARTS</b> .....	<b>24</b>
	<b>BLOCK DIAGRAM</b> .....	<b>25</b>
	<b>ORDERING NUMBERS</b> .....	<b>26</b>
	<b>ACCESSORIES</b> .....	<b>27</b>

# 1 SAFETY

## 1.1 Meaning of symbols

As used throughout this manual: Means Attention! Be Alert!

**DANGER!**

Means immediate hazards which, if not avoided, will result in immediate, serious personal injury or loss of life.

**WARNING!**

Means potential hazards which could result in personal injury or loss of life.

**CAUTION!**

Means hazards which could result in minor personal injury.

**WARNING!**

Before use, read and understand the instruction manual and follow all labels, employer's safety practices and Safety Data Sheets (SDSs).



## 1.2 Safety precautions

Users of ESAB equipment have the ultimate responsibility for ensuring that anyone who works on or near the equipment observes all the relevant safety precautions. Safety precautions must meet the requirements that apply to this type of equipment. The following recommendations should be observed in addition to the standard regulations that apply to the workplace.

All work must be carried out by trained personnel well-acquainted with the operation of the equipment. Incorrect operation of the equipment may lead to hazardous situations which can result in injury to the operator and damage to the equipment.

1. Anyone who uses the equipment must be familiar with:
  - its operation
  - location of emergency stops
  - its function
  - relevant safety precautions
  - welding and cutting or other applicable operation of the equipment
2. The operator must ensure that:
  - no unauthorised person is stationed within the working area of the equipment when it is started up
  - no-one is unprotected when the arc is struck or work is started with the equipment
3. The workplace must:
  - be suitable for the purpose
  - be free from drafts

4. Personal safety equipment:
  - Always wear recommended personal safety equipment, such as safety glasses, flame-proof clothing, safety gloves
  - Do not wear loose-fitting items, such as scarves, bracelets, rings, etc., which could become trapped or cause burns
5. General precautions:
  - Make sure the return cable is connected securely
  - Work on high voltage equipment **may only be carried out by a qualified electrician**
  - Appropriate fire extinguishing equipment must be clearly marked and close at hand
  - Lubrication and maintenance must **not** be carried out on the equipment during operation

### If equipped with ESAB cooler

Use ESAB approved coolant only. Non-approved coolant might damage the equipment and jeopardize product safety. In case of such damage, all warranty undertakings from ESAB cease to apply.

Recommended ESAB coolant ordering number: 0465 720 002.

For ordering information, see the "ACCESSORIES" chapter in the instruction manual.



#### WARNING!

Arc welding and cutting can be injurious to yourself and others. Take precautions when welding and cutting.



#### ELECTRIC SHOCK - Can kill

- Install and ground the unit in accordance with instruction manual.
- Do not touch live electrical parts or electrodes with bare skin, wet gloves or wet clothing.
- Insulate yourself from work and ground.
- Ensure your working position is safe



#### ELECTRIC AND MAGNETIC FIELDS - Can be dangerous to health

- Welders having pacemakers should consult their physician before welding. EMF may interfere with some pacemakers.
- Exposure to EMF may have other health effects which are unknown.
- Welders should use the following procedures to minimize exposure to EMF:
  - Route the electrode and work cables together on the same side of your body. Secure them with tape when possible. Do not place your body between the torch and work cables. Never coil the torch or work cable around your body. Keep welding power source and cables as far away from your body as possible.
  - Connect the work cable to the workpiece as close as possible to the area being welded.



#### FUMES AND GASES - Can be dangerous to health

- Keep your head out of the fumes.
- Use ventilation, extraction at the arc, or both, to take fumes and gases away from your breathing zone and the general area.



**ARC RAYS - Can injure eyes and burn skin**

- Protect your eyes and body. Use the correct welding screen and filter lens and wear protective clothing.
- Protect bystanders with suitable screens or curtains.



**NOISE - Excessive noise can damage hearing**

Protect your ears. Use earmuffs or other hearing protection.



**MOVING PARTS - Can cause injuries**

- Keep all doors, panels and covers closed and securely in place. Have only qualified people remove covers for maintenance and troubleshooting as necessary. Reinstall panels or covers and close doors when service is finished and before starting engine.
- Stop engine before installing or connecting unit.
- Keep hands, hair, loose clothing and tools away from moving parts.



**FIRE HAZARD**

- Sparks (spatter) can cause fire. Make sure that there are no inflammable materials nearby.
- Do not use on closed containers.



**HOT SURFACE - Parts can burn**

- Do not touch parts bare handed.
- Allow cooling period before working on equipment.
- To handle hot parts, use proper tools and/or insulated welding gloves to prevent burns.

**MALFUNCTION - Call for expert assistance in the event of malfunction.**

**PROTECT YOURSELF AND OTHERS!**



**CAUTION!**

This product is solely intended for arc welding.



**WARNING!**

Do not use the power source for thawing frozen pipes.

**ESAB has an assortment of welding accessories and personal protection equipment for purchase. For ordering information contact your local ESAB dealer or visit us on our website.**

## 2 INTRODUCTION

---

### 2.1 Overview

The **Fabricator EM 400i** and **Fabricator EM 500i** are welding power sources intended for MIG/MAG welding, welding with powder filled cored wire (FCAW-S) and welding with coated electrodes (MMA). The power sources are intended for use with the following wire feed units:

- Feed 364
- Fabricator Feed 364

**ESAB accessories for the product can be found in the "ACCESSORIES" chapter of this manual.**

### 2.2 Equipment

The power source is supplied with:

- 5m return cable with earth clamp
- 4.5m mains cable
- instruction manual

### 3 TECHNICAL DATA

Fabricator EM 400i				
<b>Mains voltage</b>	380-440 V $\pm$ 10%, 3~50/60 Hz			
<b>Primary current I<sub>max</sub></b>	380 V	400 V	415 V	440 V
MIG/MAG	24 A	23 A	22 A	21 A
MMA	25 A	24 A	23 A	22 A
<b>Setting range (DC)</b>				
MIG/MAG	30 A / 12.0 V - 400 A / 34.0 V			
MMA	30 A / 21.2 V - 400 A / 36.0 V			
<b>Permissible load at MIG/MAG</b>				
60% duty cycle	400 A / 34.0 V			
100% duty cycle	310 A / 29.5 V			
<b>Permissible load at MMA</b>				
60% duty cycle	400 A / 36.0 V			
100% duty cycle	310 A / 32.4 V			
<b>Power factor</b> at maximum current	0.93			
<b>Maximum</b> input power at idle mode	<50W			
<b>Efficiency</b> at maximum current	87%			
<b>Open-circuit voltage</b>	63.7 V			
<b>Operating temperature</b>	-10 to +40°C			
<b>Transportation temperature</b>	-20 to +55°C			
<b>Dimensions l × w × h</b>	712 × 325 × 470 mm (28.1 × 12.8 × 18.5 in.)			
<b>Weight</b>	59 kg (130 lb.)			
<b>Insulation class</b>	H			
<b>Enclosure class</b>	IP 23S			
<b>Application class</b>	S			

Fabricator EM 500i				
<b>Mains voltage</b>	380-440 V $\pm$ 10%, 3~50/60 Hz			
<b>Primary current I<sub>max</sub></b>	380 V	400 V	415 V	440 V
MIG/MAG	34 A	33 A	31 A	30 A
MMA	35 A	34 A	32 A	30 A
<b>Setting range (DC)</b>				
MIG/MAG	30 A / 15.5 V - 500 A / 39.0 V			
MMA	30 A / 21.2 V - 500 A / 40.0 V			
<b>Permissible load at MIG/MAG</b>				
60% duty cycle	500 A / 39.0 V			
100% duty cycle	390 A / 33.5 V			
<b>Permissible load at MMA</b>				
60% duty cycle	500 A / 40.0 V			

<b>Fabricator EM 500i</b>	
100% duty cycle	390 A / 35.6 V
<b>Power factor</b> at maximum current	0.93
<b>Maximum</b> input power at idle mode	<50W
<b>Efficiency</b> at maximum current	87%
<b>Open-circuit voltage</b>	73.3 V
<b>Operating temperature</b>	-10 to +40°C
<b>Transportation temperature</b>	-20 to +55°C
<b>Dimensions l × w × h</b>	712 × 325 × 470 mm (28.1 × 12.8 × 18.5 in.)
<b>Weight</b>	62 kg (136.6 lb.)
<b>Insulation class</b>	H
<b>Enclosure class</b>	IP 23S
<b>Application class</b>	S

### Duty cycle

The duty cycle refers to the time as a percentage of a ten-minute period that you can weld or cut at a certain load without overloading. The duty cycle is valid for 40 °C / 104 °F, or below.

### Enclosure class

The **IP** code indicates the enclosure class, i.e. the degree of protection against penetration by solid objects or water.

Equipment marked IP23S is intended for indoor and outdoor use, but are not intended to be used outside during precipitation unless sheltered.

### Application class

The symbol S indicates that the power source is designed for use in areas with increased electrical hazard.



## 4 INSTALLATION

---

The installation must be carried out by a professional.



**CAUTION!**

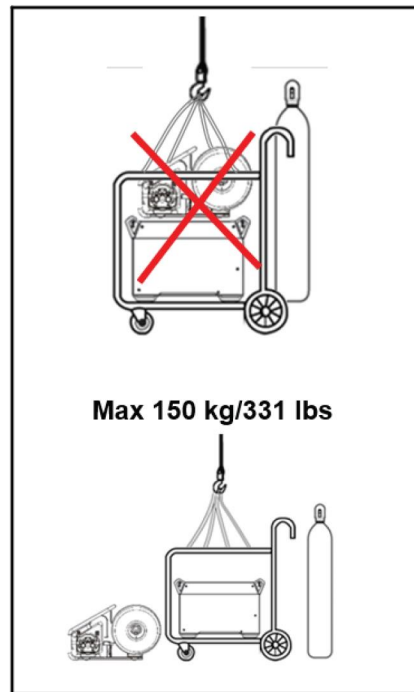
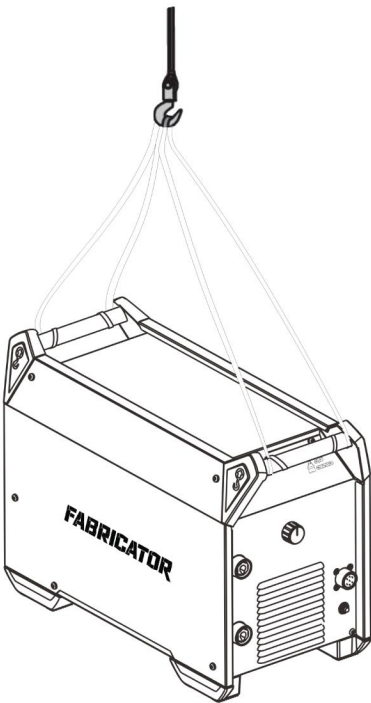
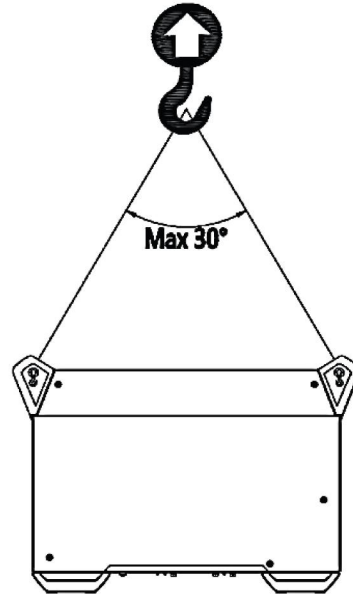
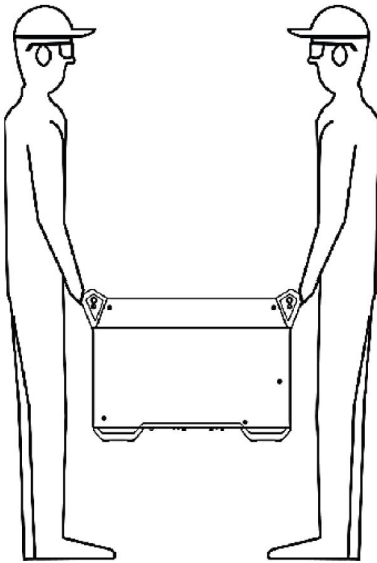
This product is intended for industrial use. In a domestic environment this product may cause radio interference. It is the user's responsibility to take adequate precautions.

### 4.1 Location

Position the power source so that cooling air inlets and outlets are not obstructed.

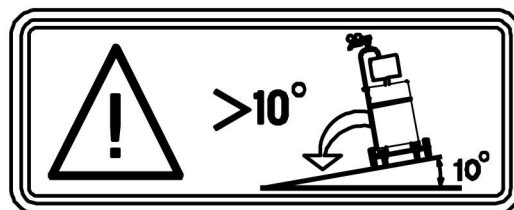
## 4.2 Lifting instructions

Max 80.3 kg/177 lbs



**WARNING!**

Secure the equipment - particularly if the ground is uneven or sloping.



### 4.3 Mains supply


**NOTE!**

This equipment does not comply with IEC 61000-3-12. If it is connected to a public low voltage system, it is the responsibility of installer or the user of the equipment to ensure, by consultation with the distribution network if necessary, that the equipment may be connected.

Make sure that the welding power source is connected to the correct supply voltage and that it is protected by the correct fuse rating. A protective earth connection must be made in accordance with regulations.

The power source will automatically adjust to the supplied input voltage.

**Recommended MCB sizes and minimum cable area**

<b>Fabricator EM 400i</b>				
<b>Mains voltage</b>	380 V 3~ 50/60 Hz	400 V 3~ 50/60 Hz	415 V 3~ 50/60 Hz	440 V 3~ 50/60 Hz
<b>Mains cable area</b>	4 × 6 mm <sup>2</sup>	4 × 6 mm <sup>2</sup>	4 × 6 mm <sup>2</sup>	4 × 6 mm <sup>2</sup>
<b>Maximal current rating I<sub>max</sub></b>	28 A	27 A	25 A	21 A
<b>I<sub>1eff</sub></b>				
MIG/MAG	20 A	19 A	18 A	17 A
MMA	21 A	20 A	19 A	18 A
Input circuit breaker- MCB (distribution box)	Type C & 40 A or greater			

<b>Fabricator EM 500i</b>				
<b>Mains voltage</b>	380 V 3~ 50/60 Hz	400 V 3~ 50/60 Hz	415 V 3~ 50/60 Hz	440 V 3~ 50/60 Hz
<b>Mains cable area</b>	4 × 6 mm <sup>2</sup>	4 × 6 mm <sup>2</sup>	4 × 6 mm <sup>2</sup>	4 × 6 mm <sup>2</sup>
<b>Maximal current rating I<sub>max</sub></b>	38 A	36 A	35 A	31 A
<b>I<sub>1eff</sub></b>				
MIG/MAG	28 A	27 A	26 A	24 A
MMA	29 A	28 A	26 A	24 A
Input circuit breaker- MCB (distribution box)	Type C & 63A or greater			

**NOTE!**

The mains cable areas and fuse sizes as shown above are in accordance with Swedish regulations. For other regions, supply cables must be suitable for the application and meet local and national regulations.

**Supply from power generators**

The power source can be supplied from different types of generators. However, some generators may not provide sufficient power for the welding power source to operate correctly. Generators with Automatic Voltage Regulation (AVR) or with equivalent or better type of regulation, with rated power  $\geq 40$  kW, are recommended.

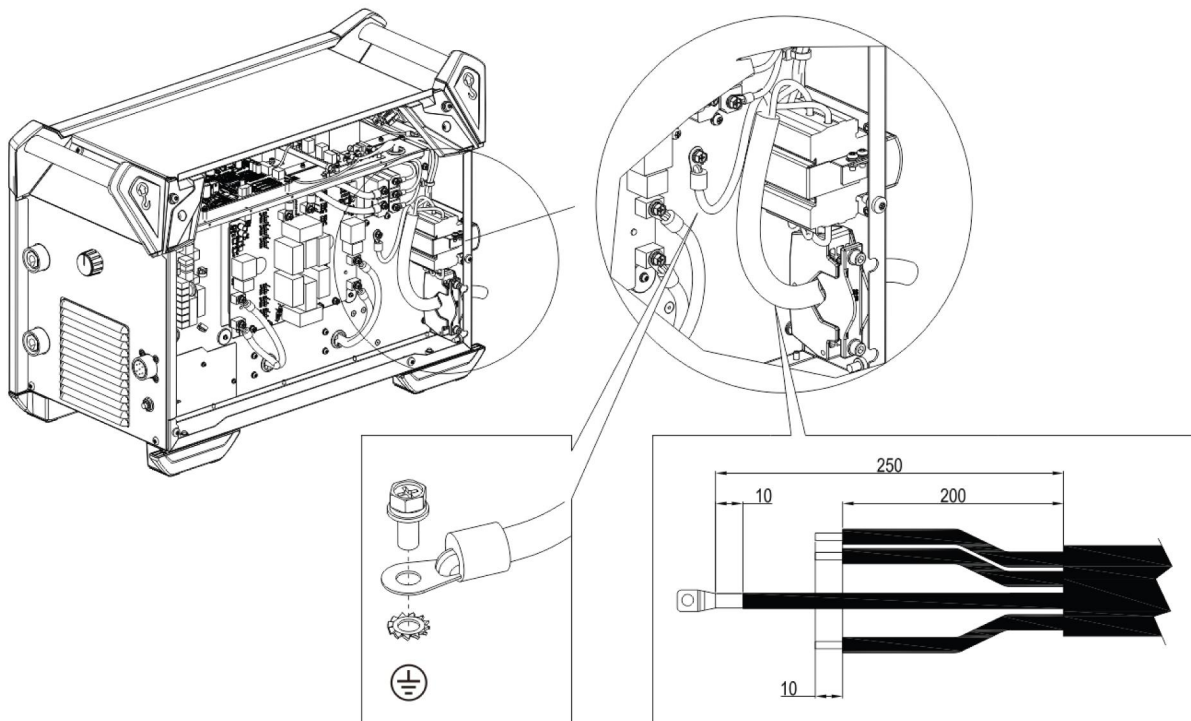
**Connection instruction****WARNING!**

The mains supply must be disconnected during installation.

**WARNING!**

Wait until the DC bus capacitors are discharged. The DC bus capacitor discharge time is at least 2 minutes!

If the mains cable needs to be changed, the earth connection to the bottom plate and the ferrites must be installed correctly. See the picture below for the installation order of the ferrites, washers, nuts and screws.



## 5 OPERATION

General safety regulations for handling the equipment can be found in the "SAFETY" chapter of this manual. Read it through before you start using the equipment!



### NOTE!

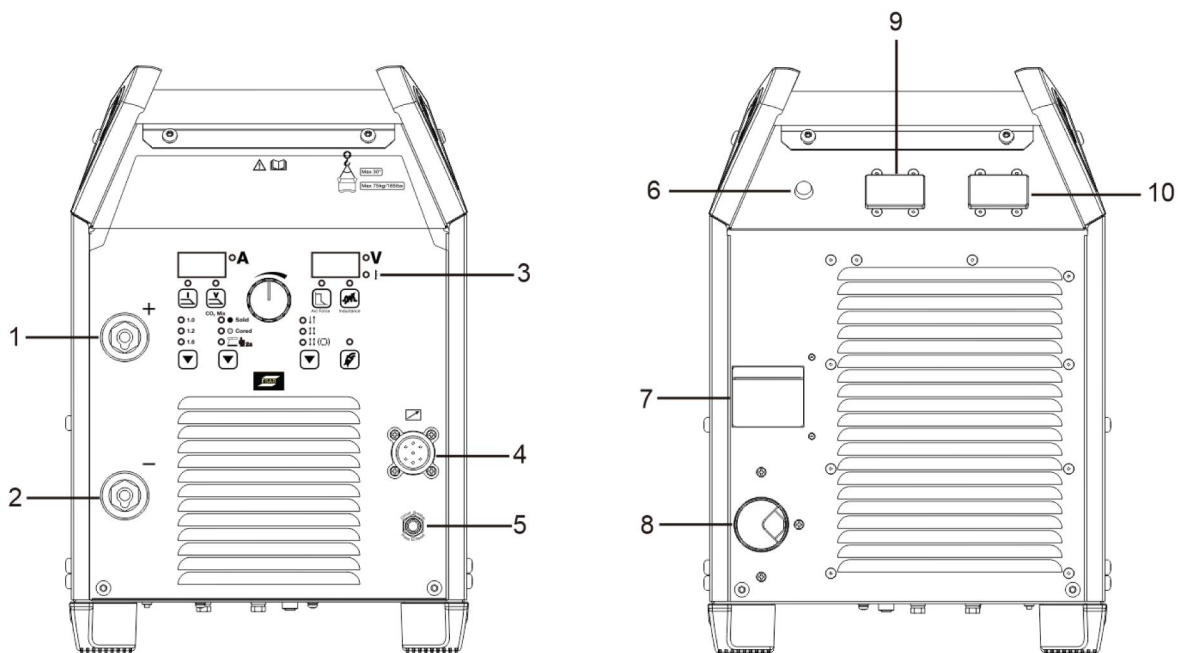
When moving the equipment use intended handle. Never pull the cables.



### WARNING!

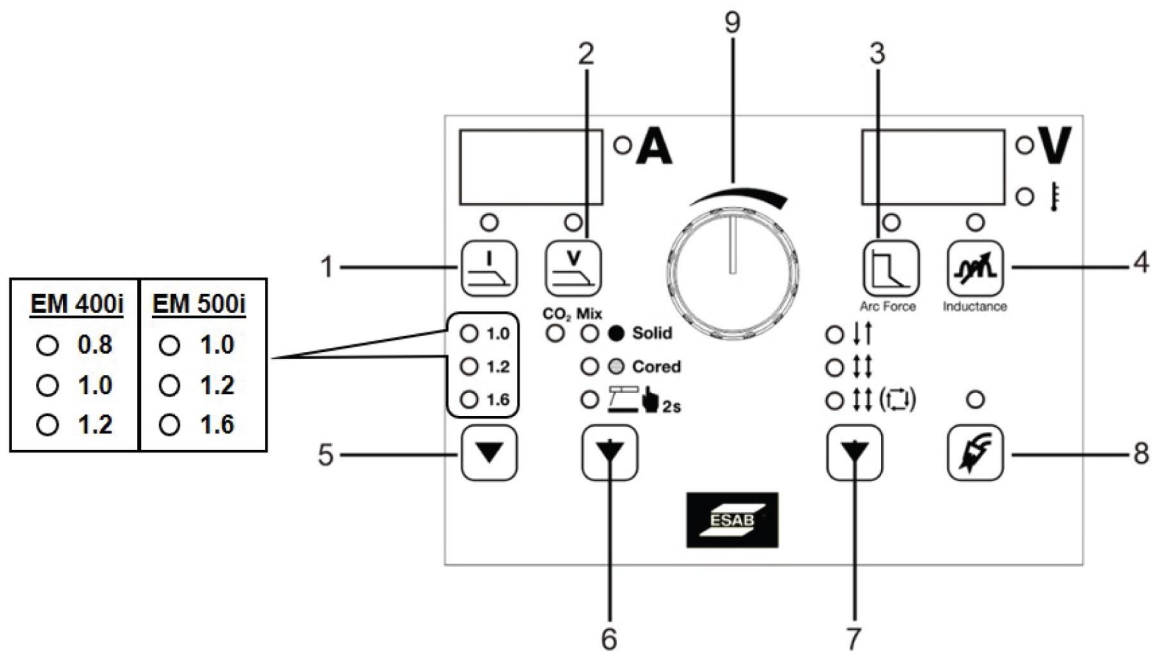
Electric shock! Do not touch the workpiece or the welding head during operation!

### 5.1 Connections and control devices



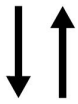
- |   |   |
|---|---|
| 1. Connection (+): MIG/MAG: Welding cable, MMA: Welding cable or return cable   | 6. Fuse for the gas heater input supply       |
| 2. 2. Connection (-): MIG/MAG: Return cable, MMA: Return cable or welding cable | 7. Mains power supply switch, ON/OFF          |
| 3. 3. Indicating LED, Overheating   | 8. Mains cable inlet                          |
| 4. Connection of wire feed unit   | 9. 110V AC power supply socket for gas heater |
| 5. Circuit breaker 10A (wirefeeder motor)                                       | 10. CAN communication connector (Factory use) |

The following figure shows the front control panel and the buttons on the control panel of the welder.



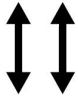
S.no.	Name	Function
1	Ending arc current / Crater fill current	Adjusts the crater fill / Ending arc current in 4T and 4T repeat mode
2	Ending arc voltage / Crater fill voltage	Adjusts the crater fill / Ending arc voltage in 4T and 4T repeat mode
3	Arc force	The arc force is important in determining how the current changes in response to a change in the arc length. A lower value gives a calmer arc with less spatter. It only applies to MMA welding.
4	Inductance	Sets the dynamic of arc. The lower inductance will give softest arc and higher inductance will give hardest arc.
5	Wire diameter	Selects the diameter of the welding wire. Only applicable for MIG welding
6	Welding process / Wire type and gas	<p>Selects the welding process</p> <ul style="list-style-type: none"> <li>• Solid wire-CO<sub>2</sub>, (MIG/MAG)</li> <li>• Solid-Mix gas, (MIG/MAG)</li> <li>• Cored wire (MIG/MAG)</li> <li>• MMA welding</li> </ul> <p>If MMA mode to be selected, press and hold for 2 seconds. To come out from MMA mode again press and hold for 2 seconds.</p>
7	Welding control	Selects the welding control mode.
8	Gas detection	Detects gas flow.
9	Value adjusting knob	<p>Manually adjusts</p> <ul style="list-style-type: none"> <li>• the current for MMA process</li> <li>• the ending arc voltage, ending arc current, Inductance for MIG/MAG process and</li> <li>• the current and voltage within specified ranges.</li> </ul>

### 5.1.1 Welding control mode



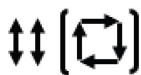
#### 2-stroke

With 2-stroke, gas pre-flow starts when the welding torch trigger switch is pressed. The welding process then starts. Releasing the trigger switch stops welding entirely and starts gas post-flow.



#### 4-stroke

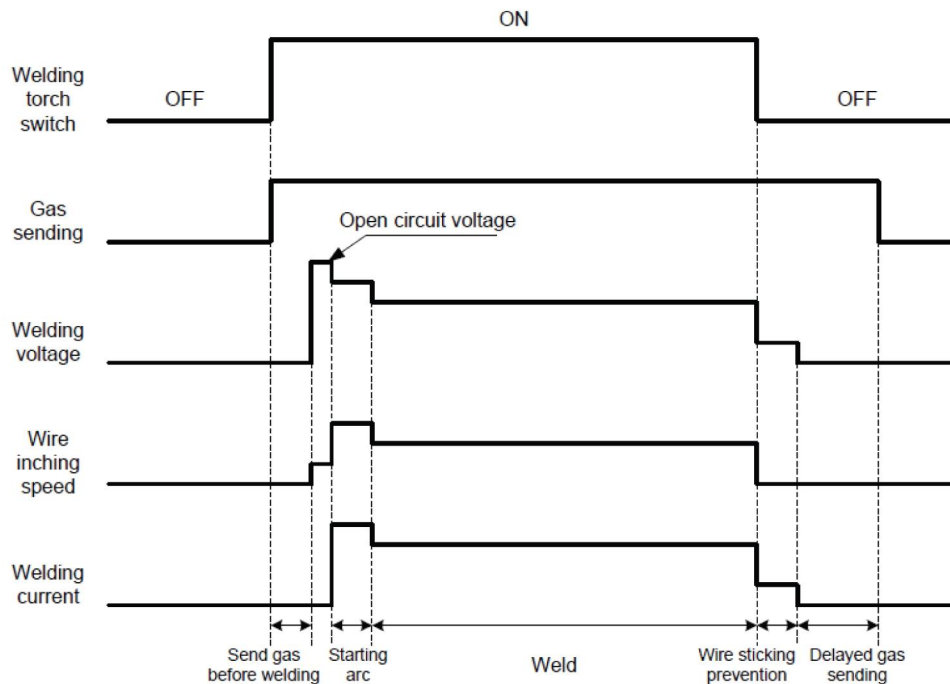
With 4 stroke, the gas pre-flow starts when the welding torch trigger switch is pressed in and the wire feed starts when it is released. The welding process continues until the switch is pressed in again, then the ending arc is generated using the ending arc voltage and current. Releasing the trigger switch stops the welding and gas post-flow starts.



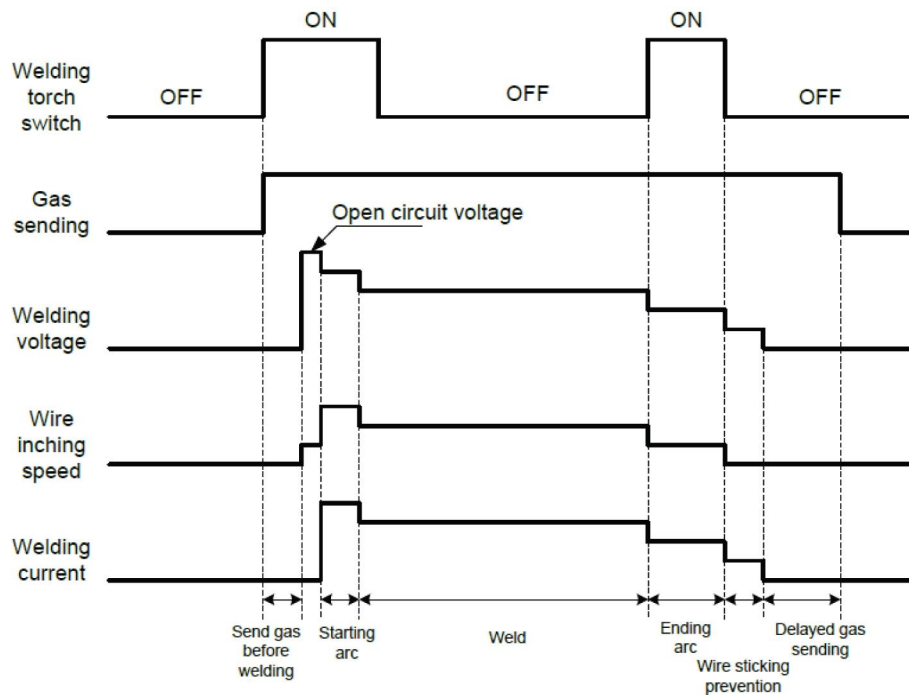
#### 4-stroke repeat

When the torch trigger switch is pressed in, the gas flow starts and an arc is generated. When the trigger switch is released the arc generation is locked. When the trigger switch is pressed in again, the ending arc is generated using the ending arc voltage and current. When the switch is released again, the welding stops. When the trigger switch is pressed in again within two seconds and holding it, welding with repeated ending arc starts. When the switch is released the repeated ending arc stops. If the switch is not pressed in again within 2seconds, the welding with repeated ending arc stops.

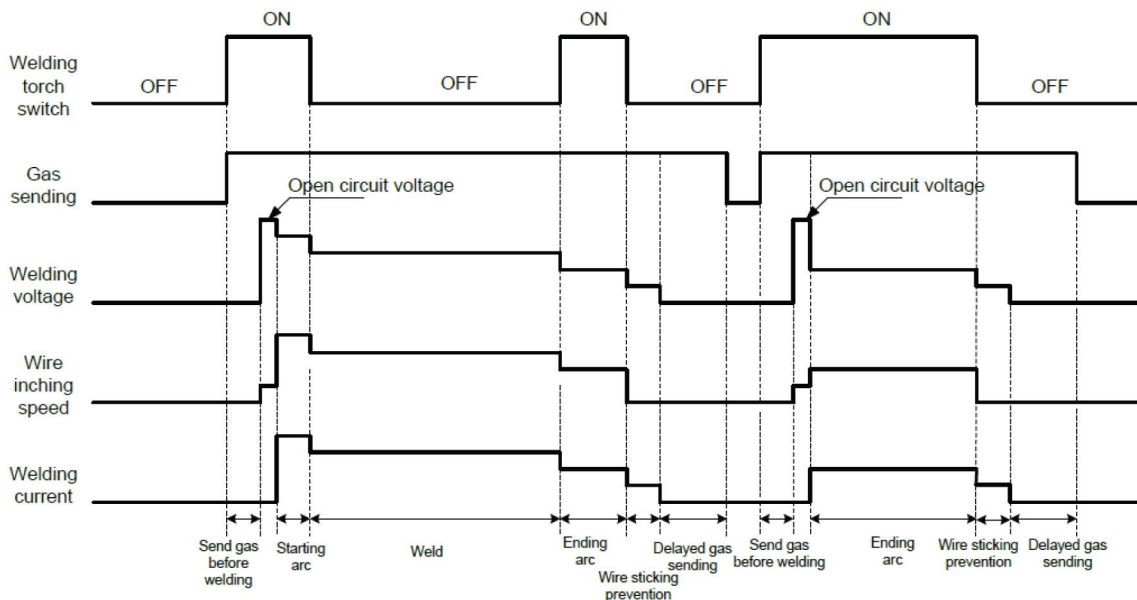
#### 2-stroke mode (welding without ending arc)



### 4-stroke mode (welding with ending arc)



### 4-stroke repeat mode (Welding with repeated ending arc)



## 5.2 Connection of welding and return cable

The power source has two outputs, a positive terminal (+) and a negative terminal (-), for connecting welding and return cables.

Connect the return cable to the negative terminal on the power source. Secure the return cable's contact clamp to the work piece and ensure that there is good contact between the work piece and the output for the return cable on the power source.












**Recommended maximum welding current values for the welding/return cable(copper) at an ambient temperature of +25°C and normal 10minutes cycle**

Cable size mm <sup>2</sup>	Duty cycle			Voltage drop/10m
	100%	60%	35%	
50	285 A	320 A	370 A	0.352 V / 100 A
70	355 A	400 A	480 A	0.254 V / 100 A
95	430 A	500 A	600 A	0.189 V / 100 A

**Recommended maximum welding current values for the welding/return cable(copper) at an ambient temperature of +40°C and normal 10minutes cycle**

Cable size mm <sup>2</sup>	Duty cycle			Voltage drop/10m
	100%	60%	35%	
50	250 A	280 A	320 A	0.352 V / 100 A
70	310 A	350 A	420 A	0.254 V / 100 A
95	375 A	440 A	530 A	0.189 V / 100 A

### 5.3 Symbols and functions

ON — OFF	Mains power supply switch		Overheating (3)
	Protective earth		Positioning of lifting eye
	Arc force		Inductance
	Gas detection		MMA welding
	Ending arc current / Crater fill current		Ending arc voltage / Crater fill voltage

### 5.4 Thermal protection

The welding power source has overheating protection that operates if the temperature becomes too high. When this occurs, the welding current is interrupted, and an overheating indication lamp is lit. The overheating protection resets automatically when the temperature has fallen within its normal working temperature.

## **5.5 Fan control**

The fan will run during the startup of the machine and will continue to run only for 10 minutes if there is no operation.

In Fabricator EM 400i when the welding current is less than 200A, the fan will run at low speed, if the welding current goes above 200A, the fan will run at high speed.

In Fabricator EM 500i when the welding current is less than 300A, the fan will run at low speed, if the welding current goes above 300A, the fan will run at high speed.

After the welding stops, the fan will continue to run for 10 minutes and the power source switches to idle mode (energy-saving mode).

## 6 MAINTENANCE



### WARNING!

The mains supply must be disconnected during cleaning and maintenance.



### CAUTION!

Only persons with the appropriate electrical knowledge (authorised personnel) may remove the safety plates.



### CAUTION!

The product is covered by manufacturer's warranty. Any attempt to carry out repair work by non-authorised service centers or personnel will invalidate the warranty.



### NOTE!

Regular maintenance is important for safe and reliable operation.



### NOTE!



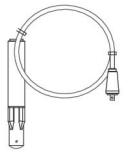

Perform maintenance more often during severe dusty conditions.

Before each use - make sure that:

- Product and cables are not damaged,
- The torch is clean and not damaged.

### 6.1 Routine maintenance

Maintenance schedule during normal conditions. Check equipment prior to every use.

Interval	Area to maintain		
Every 3 months	 Clean or replace unreadable labels.	 Clean weld terminals.	 Check or replace weld cables.
Every 6 months	 Clean inside equipment. Use dry compressed air with reduced pressure.		

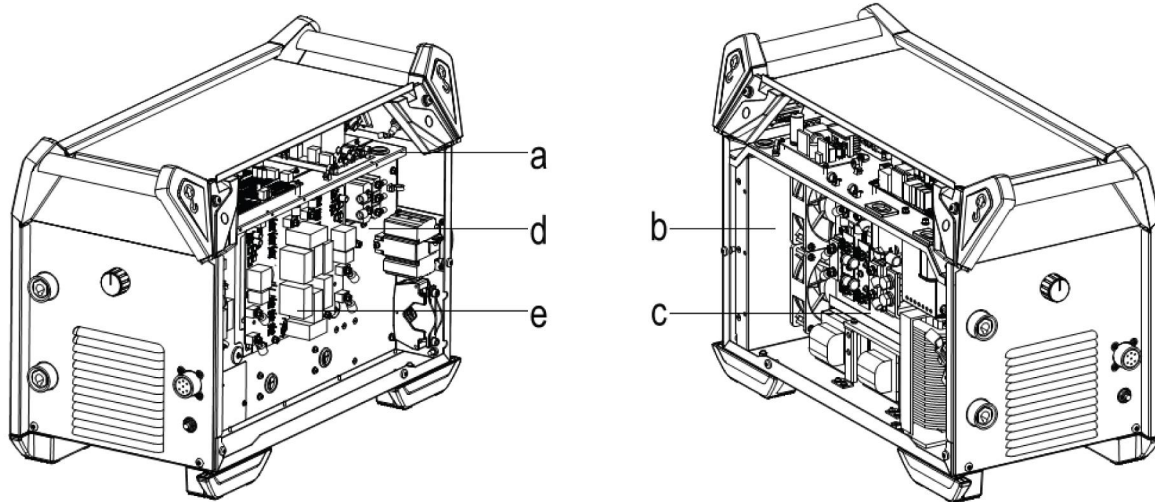
### 6.2 Power source

To maintain the performance and increase the lifetime of the power source it is mandatory to clean it regularly. How often depends on:

- the welding process
- the arc time
- the working environment

**CAUTION!**

Make sure that the cleaning procedure is done in a suitable prepared workspace.

**Cleaning procedure**

1. Disconnect the power source from the mains supply.

**WARNING!**

Wait for 4 minutes for the capacitors to discharge before continuing.

2. Remove the side panels on the power source.
3. Remove the top panel on the power source.
4. Remove the plastic cover between the heat sink and fan (b).
5. Clean the power source with dry compressed air (4 bar) as follows:
  - The upper rear part.
  - From the rear panel through the secondary heat sink.
  - The inductor, transformer and current sensor.
  - The power components side, from the rear side behind PCB15AP1.
  - The PCBs at both sides.
6. Make sure that there is no dust left on any part of the power source.
7. Install the plastic cover between the heat sink and the fan (b) and make sure it is correctly fitted against the heat sink.
8. After having finished cleaning the power source, reattach the power source panels in the reverse order.

## 7 TROUBLESHOOTING

Perform these checks and inspections before sending for an authorised service technician.

### Welder Error Codes and Solutions

Shows the screens



The following table describes the welder error code, as well as the causes and solutions

Error Code	Displayed Content		Fault	Cause	Solution
	Left display	Right display			
F00	F00	None	Power-on self-test		
E1	E1	None	Welding torch fault	When the equipment is turned on, the welding torch trigger switch is on. the switch may be faulty.	Turn off the switch. Replace the welding torch.
E2	E2	None	Output terminal over-temperature	The OKC terminal and welding cable is not connected properly. The copper cross-sectional area of the output power cable is too small. The output cable OKC fails to meet the specification requirement. The fan does not work or slows down.	Verify the OKC terminal and welding cable is connected properly. Use cables with correct cross-sectional areas. Select suitable cable OKC. Verify that the fan blades are not stuck with any foreign objects.

Error Code	Displayed Content		Fault	Cause	Solution
	Left display	Right display			
E3	E3	None	Abnormal input power	The input power cable is not connected properly. Input power overvoltage occurs. Input power under voltage occurs. Input power phase imbalance occurs. The input power frequency exceeds the range.	Verify that the input cables are connected properly. Verify that all the three input phases are present.
E4	E4	None	IGBT or diode over-temperature	The rated duty cycle is exceeded. The air vent of the housing is blocked. The fan does not work or slows down.	Ensure that the user does not exceeds the rated duty cycle range. Verify that the air vent is not blocked. Verify that the fan blades are not stuck with any foreign objects that the fan blades are not stuck with any foreign objects.
E5	E5	1 - 8	Button error	Button is not working. Button does not rebound after being pressed.	Check the button and make sure it does not stick
E6	E6	None	Output overcurrent	The output is short-circuited, or the current is too high.	Verify that the output is not short-circuited.
E7	E7	None	Input power fault	The input power cable is not connected properly. Input power phase loss or phase imbalance occurs.	Verify that the input cables are connected properly. Verify that the input power is normal.
E8	E8	None	Output overvoltage	The input voltage is too high. The output cables are not connected correctly.	Verify that the input voltage is normal. Verify that the output cables are connected correctly.
E9	E9	None	Primary side overcurrent	The output is short-circuited.	Verify that the output is not short-circuited.

Error Code	Displayed Content		Fault	Cause	Solution
	Left display	Right display			
E10	E10	None	Primary side overvoltage	The input voltage is too high.	Verify that the input voltage is normal.
E11	E11	None	Current Hall connector disconnection	The current Hall connector is disconnected.	Refer note below the table*
E12	E12	None	PCB not registered	The PCB is not certified.	Refer note below the table*

**NOTE!**

Call ESAB authorised service personnel.

Perform these checks and inspections before sending for an authorised service technician.

Type of fault	Corrective action
No arc.	<ul style="list-style-type: none"> <li>• Check that the mains power supply switch is turned on.</li> <li>• Check that the mains, welding and return cables are correctly connected.</li> <li>• Check that the correct current value is set.</li> <li>• Check the mains power supply fuses.</li> </ul>
The welding current is interrupted during welding.	<ul style="list-style-type: none"> <li>• Check whether the thermal protection trip has operated (indicated by the orange LED on the front).</li> </ul>
The thermal protection trips frequently	<ul style="list-style-type: none"> <li>• Make sure that you are not exceeding the rated data for the power source (i.e. that the unit is not being overloaded).</li> <li>• Check that the ambient temperature is not above the one for the rated duty cycle 40°C/104°F.</li> </ul>
Poor welding performance	<ul style="list-style-type: none"> <li>• Check that the welding current supply and return cables are correctly connected.</li> <li>• Check that the correct current value is set.</li> <li>• Check that the correct welding wires are being used.</li> <li>• Check the main power supply fuses.</li> </ul>

## 8 ORDERING SPARE PARTS

---



### CAUTION!

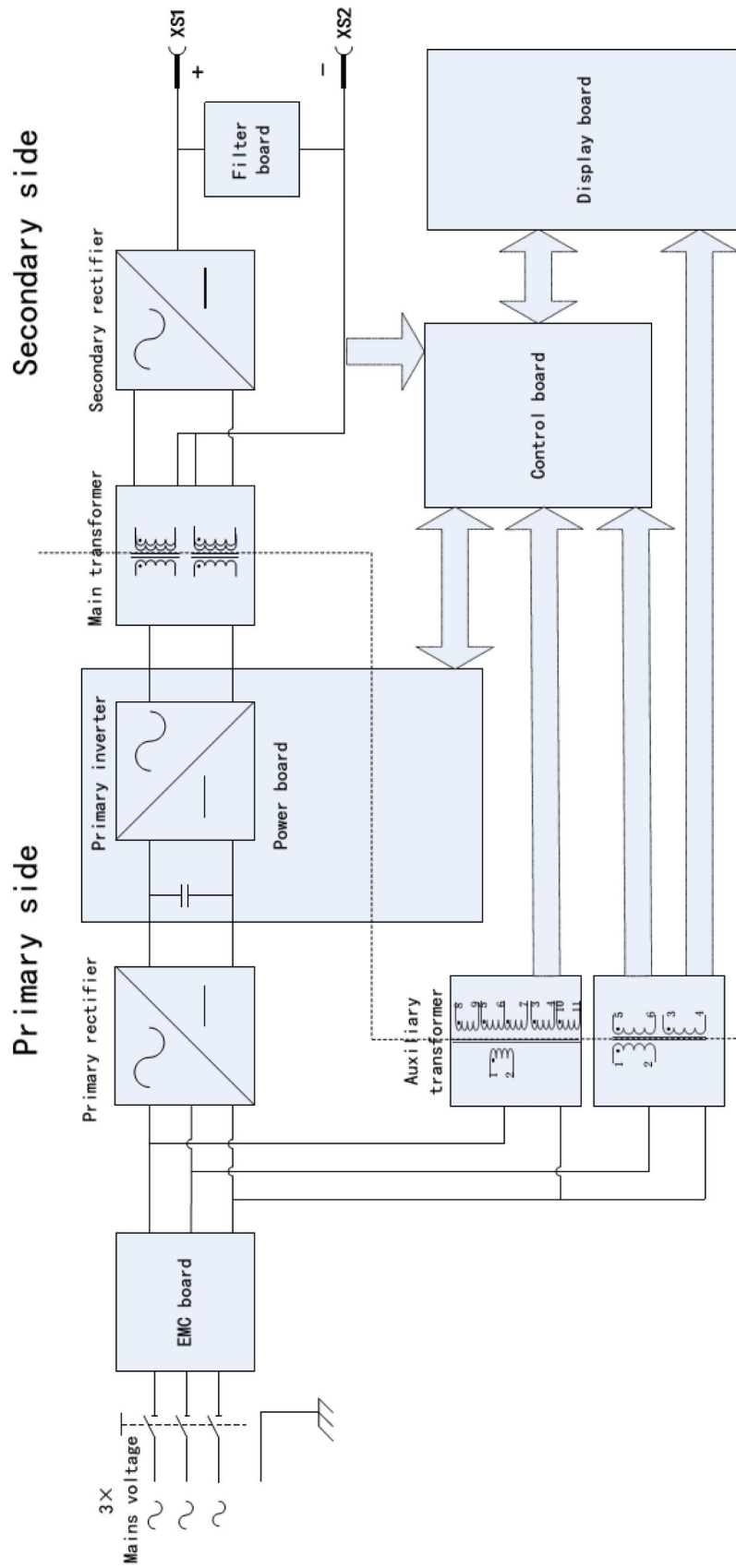
Repair and electrical work should be performed by an authorised ESAB service technician. Use only ESAB original spare and wear parts.

The **Fabricator EM 400i / Fabricator EM 500i** is designed and tested in accordance with international standard GB/T 15579.1 & IEC 60974-1. On completion of service or repair work, it is the responsibility of the person(s) performing the work to ensure that the product still complies with the requirements of the above standards.

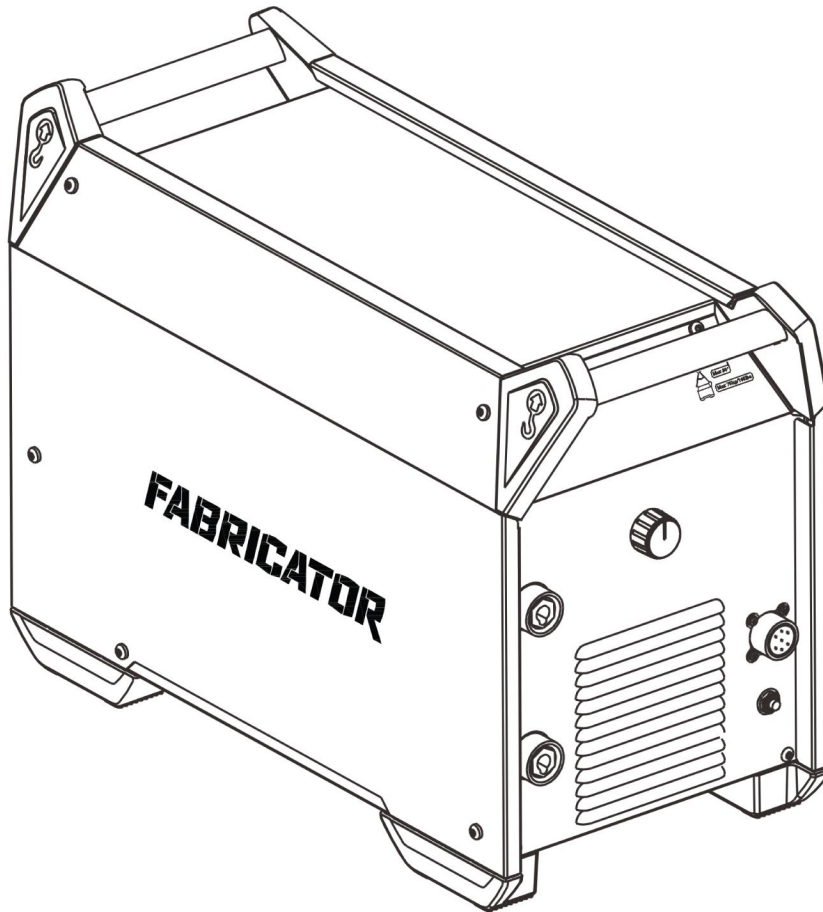
Spare parts and wear parts can be ordered through your nearest ESAB dealer, see [esab.com](http://esab.com). When ordering, please state product type, serial number, designation and spare part number in accordance with the spare parts list. This facilitates dispatch and ensures correct delivery.



# BLOCK DIAGRAM



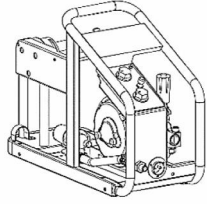
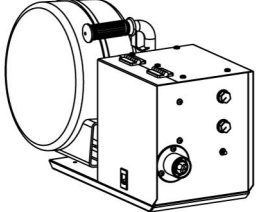
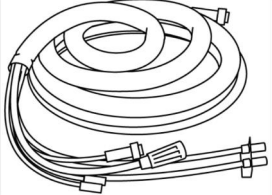
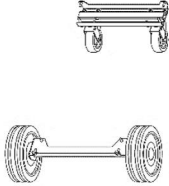
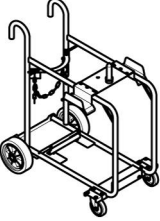
## ORDERING NUMBERS



Ordering number	Denomination	Type	Notes
0700 020 001	Power source	Fabricator EM 400i	CCC
0700 020 002	Power source	Fabricator EM 500i	CCC
0446 575 001	Spare parts list		

Technical documentation is available on the Internet at: [www.esab.com](http://www.esab.com)

## ACCESSORIES

0700 020 003	Feed 364	
0700 020 004	Fabricator Feed 364	
0349 490 624	5m 70mm <sup>2</sup> inter connection cable	
0349 490 608	10m 70mm <sup>2</sup> inter connection cable	
0349 490 607	15m 70mm <sup>2</sup> inter connection cable	
0349 490 606	25m 70mm <sup>2</sup> inter connection cable	
0349 305 138	5m 50mm <sup>2</sup> inter connection cable	
0349 305 357	10m 50mm <sup>2</sup> inter connection cable	
0349 305 355	15m 50mm <sup>2</sup> inter connection cable	
0349 305 356	25m 50mm <sup>2</sup> inter connection cable	
0465 416 880	Wheel Kit	
0349 313 450	Trolley, compatible with Fabricator Feed 364	



# A WORLD OF PRODUCTS AND SOLUTIONS.



For contact information visit [esab.com](http://esab.com)

ESAB AB, Lindholmsallén 9, Box 8004, 402 77 Gothenburg, Sweden, Phone +46 (0) 31 50 90 00

<http://manuals.esab.com>

