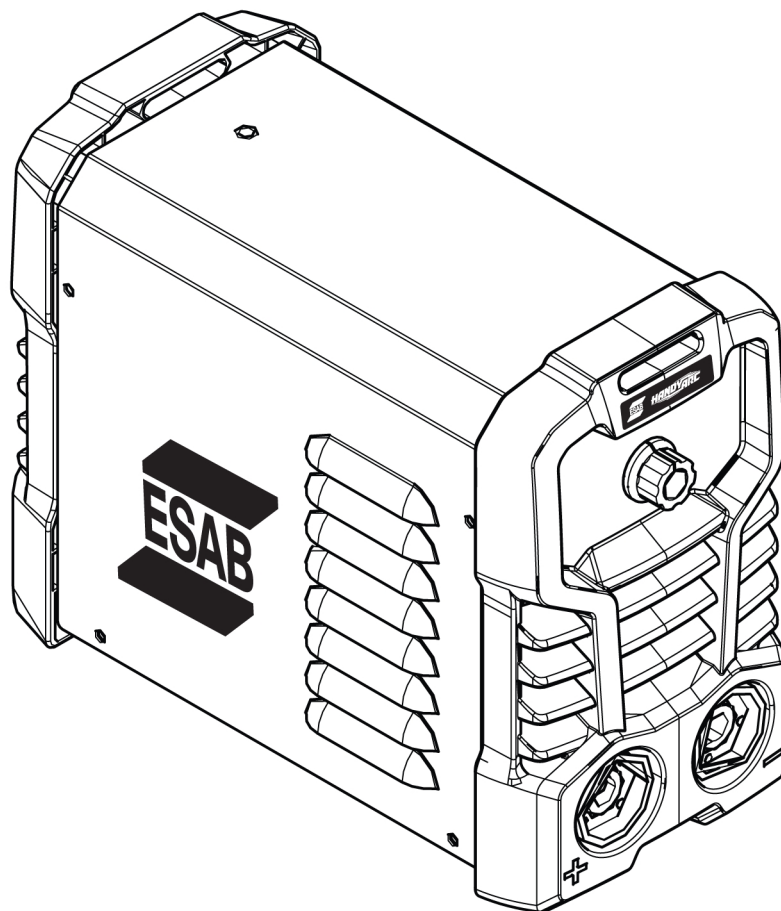




# *HandyArc 1/8*



## Instruction manual

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# 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



### WARNING!

These Safety Precautions are for your protection. They summarize precautionary information from the references listed in the Additional Safety Information section. Before performing any installation or operating procedures, be sure to read and follow the safety precautions listed below as well as all other manuals, material safety data sheets, labels, etc. Failure to observe Safety Precautions can result in injury or death.



### PROTECT YOURSELF AND OTHERS

Some welding, cutting and gouging processes are noisy and require ear protection. The arc, like the sun, emits ultraviolet (UV) and other radiation and can injure skin and eyes. Hot metal can cause burns. Training in the proper use of the processes and equipment is essential to prevent accidents. Therefore:

1. Wear a welding helmet fitted with a proper shade of filter to protect your face and eyes when welding or watching.
2. Always wear safety glasses with side shields in any work area, even if welding helmets, face shields and goggles are also required.
3. Use a face shield fitted with the correct filter and cover plates to protect your eyes, face, neck and ears from sparks and rays of the arc when operating or observing operations. Warn bystanders not to watch the arc and not to expose themselves to the rays of the electric-arc or hot metal.
4. Wear flameproof gauntlet type gloves, heavy long-sleeve shirt, cuffless trousers, high-topped shoes and a welding helmet or cap for protection, to protect against arc rays and hot sparks or hot metal. A flameproof apron may also be desirable as protection against radiated heat and sparks.
5. Hot sparks or metal can lodge in rolled up sleeves, trouser cuffs, or pockets. Sleeves and collars should be kept buttoned and open pockets eliminated from the front of clothing.
6. Protect other personnel from arc rays and hot sparks with a suitable non-flammable partition or curtains.
7. Use goggles over safety glasses when chipping slag or grinding. Chipped slag may be hot and can fly far. Bystanders should also wear goggles over safety glasses.



### FIRES AND EXPLOSIONS

Heat from flames and arcs can start fires. Hot slag or sparks can also cause fires and explosions. Therefore:

1. Protect yourself and others from flying sparks and hot metal.
2. Remove all combustible materials well away from the work area or cover the materials with a protective non-flammable covering. Combustible materials include wood, cloth, sawdust, liquid and gas fuels, solvents, paints and coatings paper, etc.
3. Hot sparks or hot metal can fall through cracks or crevices in floors or wall openings and cause a hidden smoldering fire or fires on the floor below. Make certain that such openings are protected from hot sparks and metal.
4. Do not weld, cut or perform other hot work until the work piece has been completely cleaned so that there are no substances on the work piece which might produce flammable or toxic vapors. Do not do hot work on closed containers, they may explode.
5. Have fire extinguishing equipment handy for instant use, such as a garden hose, water pail, sand bucket, or portable fire extinguisher. Be sure you are trained in its use.
6. Do not use equipment beyond its ratings. For example, an overloaded welding cable can overheat and create a fire hazard.
7. After completing operations, inspect the work area to make certain there are no hot sparks or hot metal which could cause a later fire. Use fire watchers when necessary.



### ELECTRICAL SHOCK

Contact with live electrical parts and ground can cause severe injury or death. DO NOT use AC welding current in damp areas, if movement is confined, or if there is danger of falling. Therefore:

1. Be sure the power source frame (chassis) is connected to the ground system of the input power.
2. Connect the workpiece to a good electrical ground.
3. Connect the work cable to the workpiece. A poor or missing connection can expose you or others to a fatal shock.
4. Use well-maintained equipment. Replace worn or damaged cables.
5. Keep everything dry, including clothing, work area, cables, torch/electrode holder and power source.
6. Make sure that all parts of your body are insulated from both the work piece and from the ground.
7. Do not stand directly on metal or the earth while working in tight quarters or a damp area; stand on dry boards or an insulating platform and wear rubber-soled shoes.
8. Put on dry, hole-free gloves before turning on the power.
9. Turn off the power before removing your gloves.
10. Refer to ANSI/ASC Standard Z49.1 for specific grounding recommendations. Do not mistake the work lead for a ground cable.



### ELECTRIC AND MAGNETIC FIELDS

May be dangerous. Electric current flowing through any conductor causes localized Electric and Magnetic Fields (EMF). Welding and cutting current creates EMF around welding cables and welding machines. Therefore:

1. Welders with pacemakers should consult their physician before welding. EMF may interfere with some pacemakers.
2. Exposure to EMF may have other health effects which are unknown.

3. Welders should use the following procedures to minimize exposure to EMF:
  - a) Route the electrode and work cables together. Secure them with tape when possible.
  - b) Never coil the torch or work cable around your body.
  - c) Do not place your body between the torch and work cables. Route cables on the same side of your body.
  - d) Connect the work cable to the workpiece as close as possible to the area being welded.
  - e) Keep welding power source and cables as far away from your body as possible.



### FUMES AND GASES

**Fumes and gases can cause discomfort or harm, particularly in confined spaces. Shielding gases can cause asphyxiation. Therefore:**

1. Keep your head out of the fumes. Do not breathe the fumes and gases.
2. Always provide adequate ventilation in the work area by natural or mechanical means. Do not weld, cut or gouge on materials such as galvanized steel, stainless steel, copper, zinc, lead, beryllium or cadmium unless positive mechanical ventilation is provided. Do not breathe fumes from these materials.
3. Do not operate near degreasing and spraying operations. The heat or arc can react with chlorinated hydrocarbon vapors to form phosgene, a highly toxic gas, and other irritant gases.
4. If you develop momentary eye, nose or throat irritation while operating, this is an indication that ventilation is not adequate. Stop work and take necessary steps to improve ventilation in the work area. Do not continue to operate if physical discomfort persists.
5. Refer to ANSI/ASC Standard Z49.1 for specific ventilation recommendations.



### CYLINDER HANDLING

**Cylinders, if mishandled, can rupture and violently release gas. A sudden rupture of cylinder valve or relief device can injure or kill. Therefore:**

1. Locate cylinders away from heat, sparks and flames. Never strike an arc on a cylinder.
2. Use the proper gas for the process and use the proper pressure reducing regulator designed to operate from the compressed gas cylinder. Do not use adapters. Maintain hoses and fittings in good condition. Follow manufacturer's operating instructions for mounting regulator to a compressed gas cylinder.
3. Always secure cylinders in an upright position by chain or strap to suitable hand trucks, undercarriages, benches, wall, post or racks. Never secure cylinders to work tables or fixtures where they may become part of an electrical circuit.
4. When not in use, keep cylinder valves closed. Have valve protection cap in place if regulator is not connected. Secure and move cylinders by using suitable hand trucks.



### MOVING PARTS

**Moving parts, such as fans, rotors and belts can cause injury. Therefore:**

1. Keep all doors, panels, guards and covers closed and securely in place.
2. Have only qualified people remove covers for maintenance and troubleshooting as necessary
3. Keep hands, hair, loose clothing and tools away from moving parts.
4. Reinstall panels or covers and close doors when service is finished and before starting the unit.

**WARNING!  
FALLING EQUIPMENT CAN INJURE**

- Only use lifting eye to lift unit. Do NOT use running gear, gas cylinders or any other accessories.
- Use equipment of adequate capacity to lift and support unit.
- If using lift forks to move unit, be sure forks are long enough to extend beyond opposite side of unit.
- Keep cables and cords away from moving vehicles when working from an aerial location.

**WARNING!  
EQUIPMENT MAINTENANCE**

**Faulty or improperly maintained equipment can cause injury or death. Therefore:**

1. Always have qualified personnel perform the installation, troubleshooting and maintenance work. Do not perform any electrical work unless you are qualified to perform such work.
2. Before performing any maintenance work inside a power source, disconnect the power source from the incoming electrical power.
3. Maintain cables, earthing wire, connections, power cord and power supply in safe working order. Do not operate any equipment in faulty condition.
4. Do not abuse any equipment or accessories. Keep equipment away from heat sources such as furnaces, wet conditions such as water puddles, oil or grease, corrosive atmospheres and inclement weather.
5. Keep all safety devices and cabinet covers in position and in good repair.
6. Use equipment only for its intended purpose. Do not modify it in any manner.

**CAUTION!  
ADDITIONAL SAFETY INFORMATION**

**For more information on safe practices for electric arc welding and cutting equipment, ask your supplier for a copy of "Precautions and Safe Practices for Arc Welding, Cutting and Gouging", Form 52-529.**

The following publications are recommended:

- ANSI/ASC Z49.1 - "Safety in Welding and Cutting"
- AWS C5.5 - "Recommended Practices for Gas Tungsten Arc Welding"
- AWS C5.6 - "Recommended Practices for Gas Metal Arc welding"
- AWS SP - "Safe practices" - Reprint, Welding Handbook
- ANSI/AWS F4.1 - "Recommended Safe Practices for Welding and Cutting of Containers That Have Held Hazardous Substances"
- OSHA 29 CFR 1910 - "Safety and health standards"
- CSA W117.2 - "Code for safety in welding and cutting"
- NFPA Standard 51B, "Fire Prevention During Welding, Cutting, and Other Hot Work"
- CGA Standard P-1, "Precautions for Safe Handling of Compressed Gases in Cylinders"
- ANSI Z87.1, "Occupational and Educational Personal Eye and Face Protection Devices"

## 1.3 User responsibility

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 unauthorized 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



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



**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.



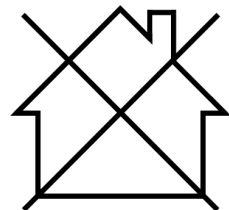
**CAUTION!**

This product is solely intended for arc welding.



**CAUTION!**

Class A equipment is not intended for use in residential locations where the electrical power is provided by the public low-voltage supply system. There may be potential difficulties in ensuring electromagnetic compatibility of class A equipment in those locations, due to conducted as well as radiated disturbances.



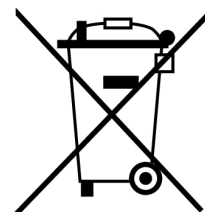
**NOTE!**

**Dispose of electronic equipment at the recycling facility!**

In observance of European Directive 2012/19/EC on Waste Electrical and Electronic Equipment and its implementation in accordance with national law, electrical and/or electronic equipment that has reached the end of its life must be disposed of at a recycling facility.

As the person responsible for the equipment, it is your responsibility to obtain information on approved collection stations.

For further information contact the nearest ESAB dealer.



## 1.4 California proposition 65 warning



**WARNING!**

Welding or cutting equipment produces fumes or gases which contain chemicals known in the State of California to cause birth defects and, in some cases, cancer. (California Health & Safety Code Section 25249.5 et seq.)



**WARNING!**

This product can expose you to chemicals including lead, which are known to the state of California to cause cancer and birth defects or other reproductive harm. Wash hands after use.

For more information, go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**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

---

The **HandyArc 1/8** is a self-contained single phase welding systems that can perform MMA / SMAW / Stick welding processes.

### 2.1 Equipment

The power source is supplied with:

- Electrode holder
- Work clamp
- Shoulder strap
- Instruction manual

## 3 TECHNICAL DATA

	HandyArc 1/8 (120 V)	HandyArc 1/8 (240 V)
<b>Mains voltage</b>	120 V ± 10% 50-60 Hz	240 V ± 10% 50-60 Hz
<b>Mains supply (<math>S_{scmin}</math>)</b>	2.5 kVA	7.4 kVA
<b><math>Z_{max}</math></b>	5.6 Ω	7.7 Ω
<b>Primary current (<math>I_{max}</math>)</b>	21.4 A	31.1 A
<b>Setting range</b>	15-70 A	15-160 A
<b>Permissible load (Duty cycle)</b>		
100% duty cycle	32 A / 21.3 V	62 A / 22.5 V
60% duty cycle	41 A / 21.7 V	80 A / 23.2 V
20% duty cycle	70 A / 22.8 V	-
15% duty cycle	-	160 A / 26.4 V
<b>Apparent power (<math>I_2</math>) at maximum current</b>	2.5 kVA	6.8 kVA
<b>Active power (<math>I_2</math>) at maximum current</b>	1.6 kW	4.2 kW
<b>Power factor at max current</b>	0.62	
<b>Efficiency at max current</b>	83%	
<b>Open-circuit voltage (<math>U_0</math> max)</b>	80.5 V	
<b>Operating temperature</b>	+14 to +104 °F (-10 to +40 °C)	
<b>Transportation temperature</b>	-4 to +161 °F (-20 to +55 °C)	
<b>Continual sound pressure at no-load</b>	<70 dB (A)	
<b>Dimensions l × w × h</b>	4.5 × 10.3 × 7.1 in. (114 × 262 × 180 mm)	
<b>Weight</b>	6.4 lbs (2.9 kg)	
<b>Insulation class transformer</b>	Class-F	
<b>Enclosure class</b>	IP21S	
<b>Application class</b>	<b>S</b>	

### 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 104 °F (40 °C), 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 **IP21S** is intended for indoor and outdoor use; however, it should not be operated in precipitation.

### 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.

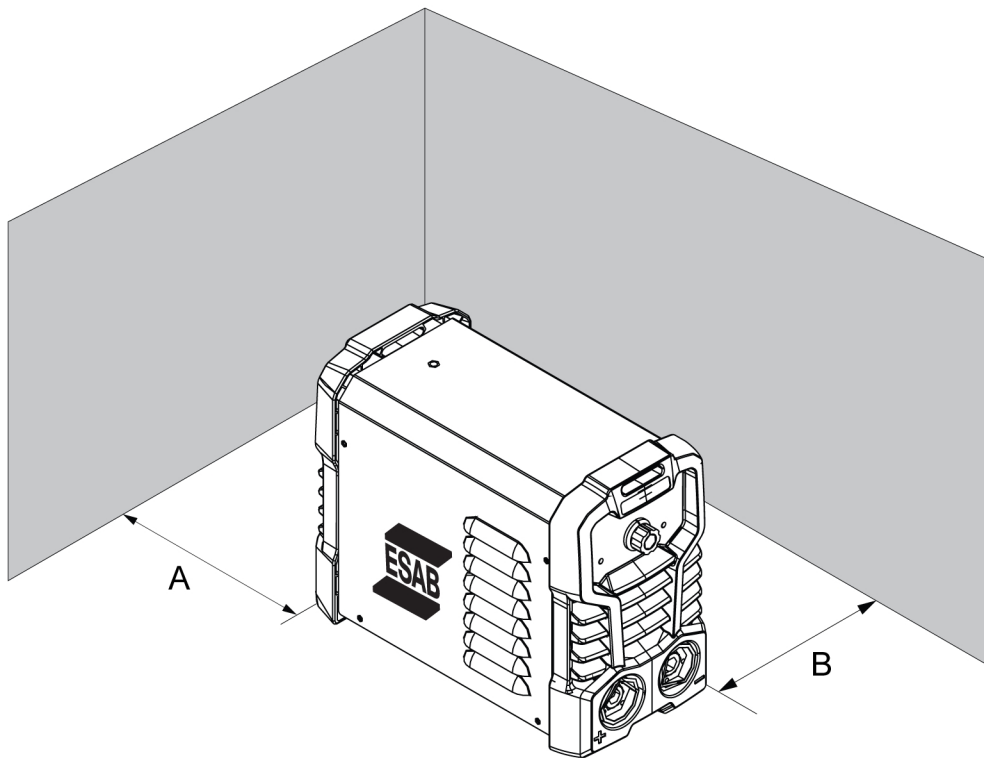


### CAUTION!

Remove any packaging material prior to use. Do not block the air vents at the front or rear of the welding power source.

### 4.1 Location

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



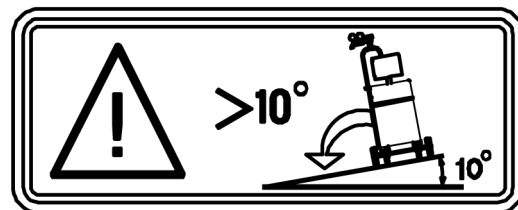
A. Minimum 8 in. (200 mm)

B. Minimum 8 in. (200 mm)



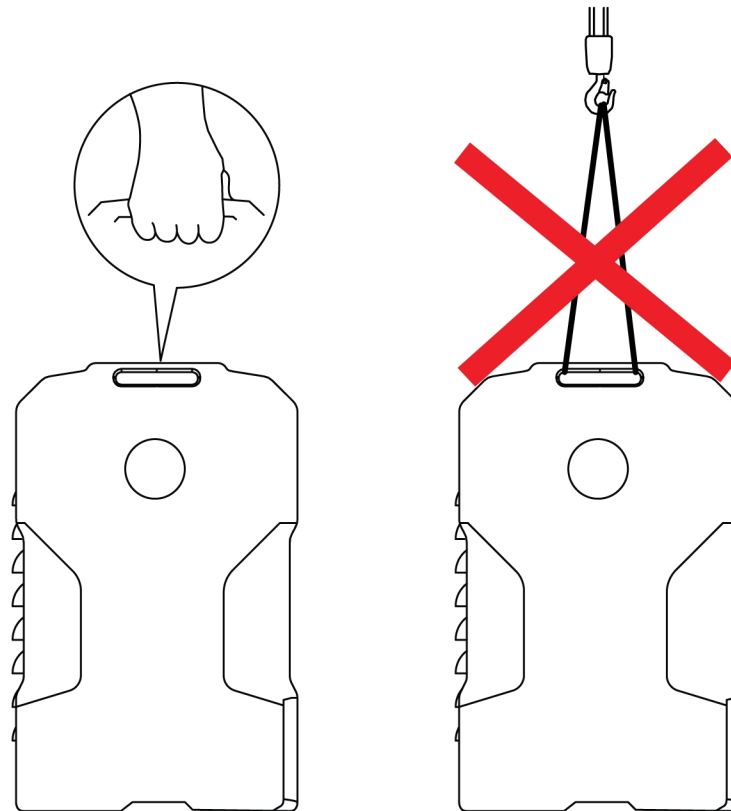
### WARNING!

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



## 4.2 Lifting instructions

The power source can be lifted using any of the handles.



## 4.3 Mains supply

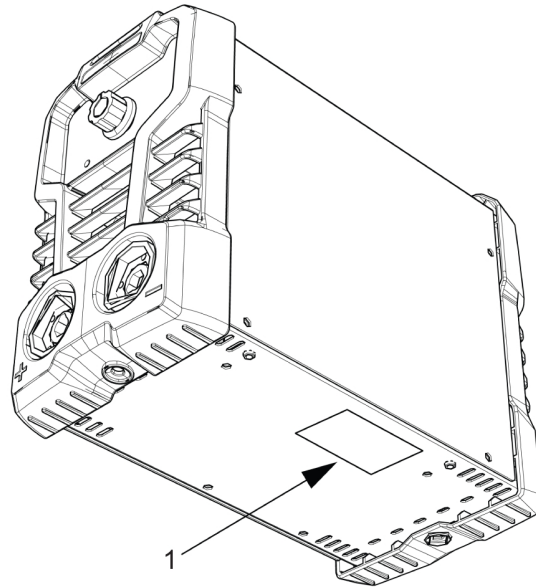


### NOTE! Mains supply requirements

This equipment complies with IEC 61000-3-12 provided that the short-circuit power is greater than or equal to  $S_{scmin}$  at the interface point between the user's supply and the public system. It is the responsibility of the installer or user of the equipment to ensure, by consultation with the distribution network operator if necessary, that the equipment is connected only to a supply with a short-circuit power greater than or equal to  $S_{scmin}$ . Refer to the technical data in the TECHNICAL DATA chapter.

The power source will automatically adjust to the supplied input voltage. Make sure that it is protected by the correct fuse rating. A protective ground connection must be made, in accordance with regulations.

## 1. Rating plate location



#### 4.4 Recommended fuse and cable sizes

	HandyArc 1/8	
<b>Mains voltage</b>	120 V $\Phi$ 150/60 Hz	240 V 1 $\Phi$ 50/60 Hz
<b>Mains cable area</b>	3×12 AWG	
<b>Maximal current <math>I_{max}</math></b>	21.4 A	31.1 A
<b><math>I_{1eff}</math></b>	15 A	
<b>Fuse</b>	15 A	
<b>Anti-surge</b>	35 A	
<b>Type C MCB</b>	32 A	

**NOTE!**

The power 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  $\geq 8.6$  kW, are recommended.

## 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!



### WARNING!

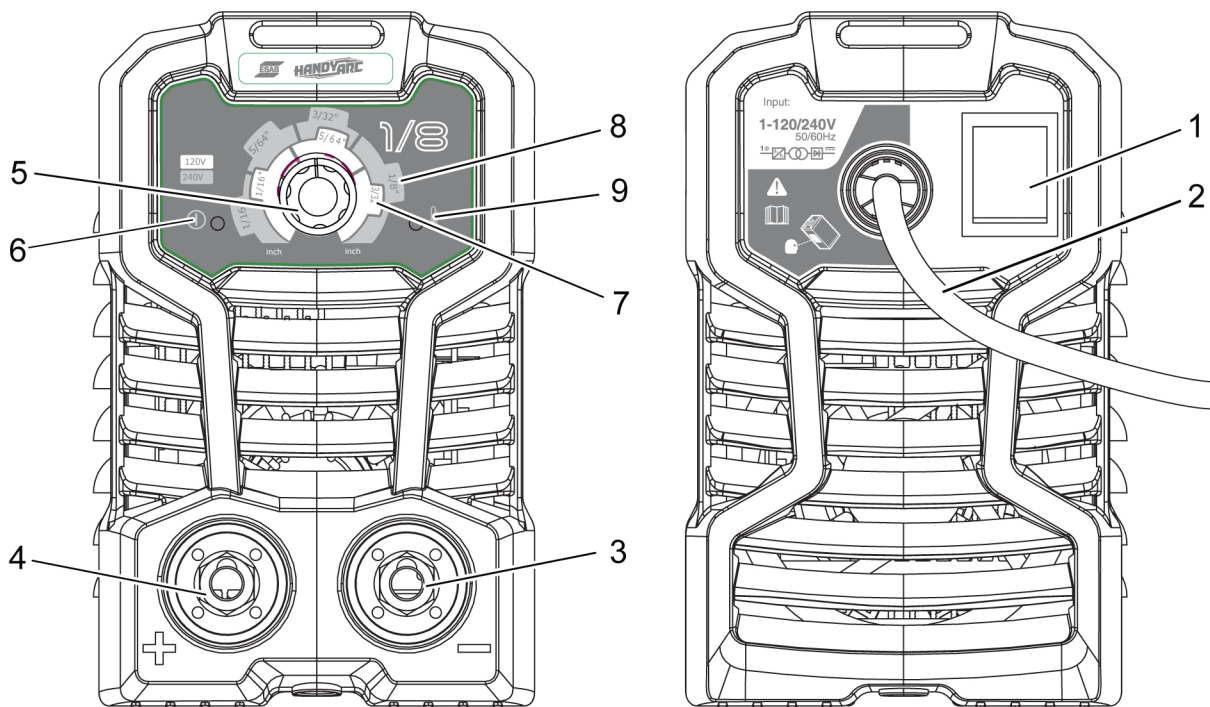
Electric shock! Do not touch the workpiece or the welding head during operation!



### NOTE!

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



### 5.1 Connections and control devices



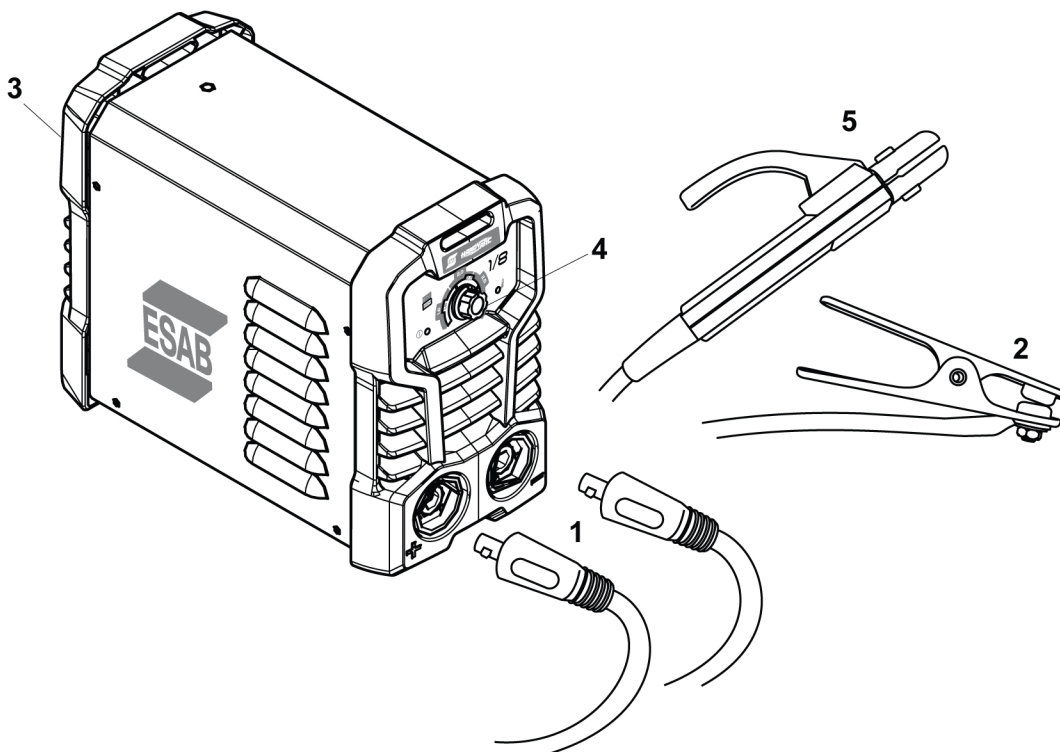
1. Mains power supply switch, I/O
2. Main supply cable
3. Electrode negative terminal -
4. Electrode positive terminal +
5. Control knob

6. Power indicator
7. Electrode size selection for 120 V
8. Electrode size selection for 240 V
9. Overheating indicator

## 5.2 Indicators description

Indicator	Description
	<p><b>Power</b></p> <p>It indicates once the machine is powered on.</p>
	<p><b>Over temperature</b></p> <p>It alarms once the machine attains the maximum temperature.</p> <p>When overheating occurs, the welding is stopped and overheating indicator on the panel will be lit.</p>

## 5.3 Setting up the power source



Items required (included): Work clamp and electrode holder.


- 1) Connect the electrode holder to the positive terminal and the work clamp to the negative terminal.
- 2) Connect the work clamp to the workpiece.
- 3) Turn ON the power source.
- 4) Set the size of the electrode that with respect to voltage.
- 5) The power source is ready to start welding.




## 5.4 ESAB consumables

Use ESAB consumables for better results.

Base material	AWS classification	Recommended consumables
Carbon steel	E7018	Atom Arc 7018
	E7018-1	Atom Arc 7018-1
	E6013	Sureweld 6013
Stainless steel	E308L-16	Arcaloy 308L-16
	E316L-16	Arcaloy 316LF5-16

## 5.5 Symbols

	MMA / Stick / SMAW welding
	Protective ground
	Position for mechanized lifting
	Consult user manual before performing any actions
	Refer to rating plate to check technical data
	Hazardous context
	Orientation of the package
	Fragile

	Keep dry
	Recycle
	No dispose

## 5.6 Connecting the welding and return cable

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

- 1) Connect the return cable to the negative terminal on the power source.
- 2) Secure the return cable's contact clamp to the workpiece, and make sure that there is a good contact between the workpiece and the output for the return cable on the power source.

## 5.7 Turning the mains power ON/OFF

- 1) Turn ON the mains power by turning switch to the "I" position.
- 2) Turn the power source OFF by turning the switch to the "O" position.

Regardless of whether the mains supply is interrupted abnormally, or the power source is switched off in the normal manner, the welding data will be stored, so it will be available next time the unit is turned on.

## 5.8 Fan control

The power source has a time control that means that the fans continue to run for 4 minutes after welding has stopped. The fans start again when welding restarts.

## 5.9 MMA / Stick / SMAW welding



MMA / Stick / SMAW welding may also be referred to as welding with coated electrodes. Striking the arc melts the electrode, and its coating forms protective slag.

For MMA / Stick / SMAW welding the power source shall be supplemented with:

- Welding cable with electrode holder
- Return cable with clamp

## 6 MAINTENANCE

**WARNING!**

The mains supply must be disconnected during cleaning and maintenance.

**CAUTION!**

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

**CAUTION!**

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

**NOTE!**

Regular maintenance is important for safe and reliable operation.

**NOTE!**



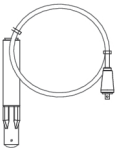

Perform maintenance more often during severe dusty conditions.

Before each use, make sure that the:

- 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 12 months or depending on environmental conditions (by authorized service technician)	 Clean inside equipment. Use dry compressed air with 4 bar pressure.		

### 6.2 Cleaning the power source

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

- The welding process
- The arc time

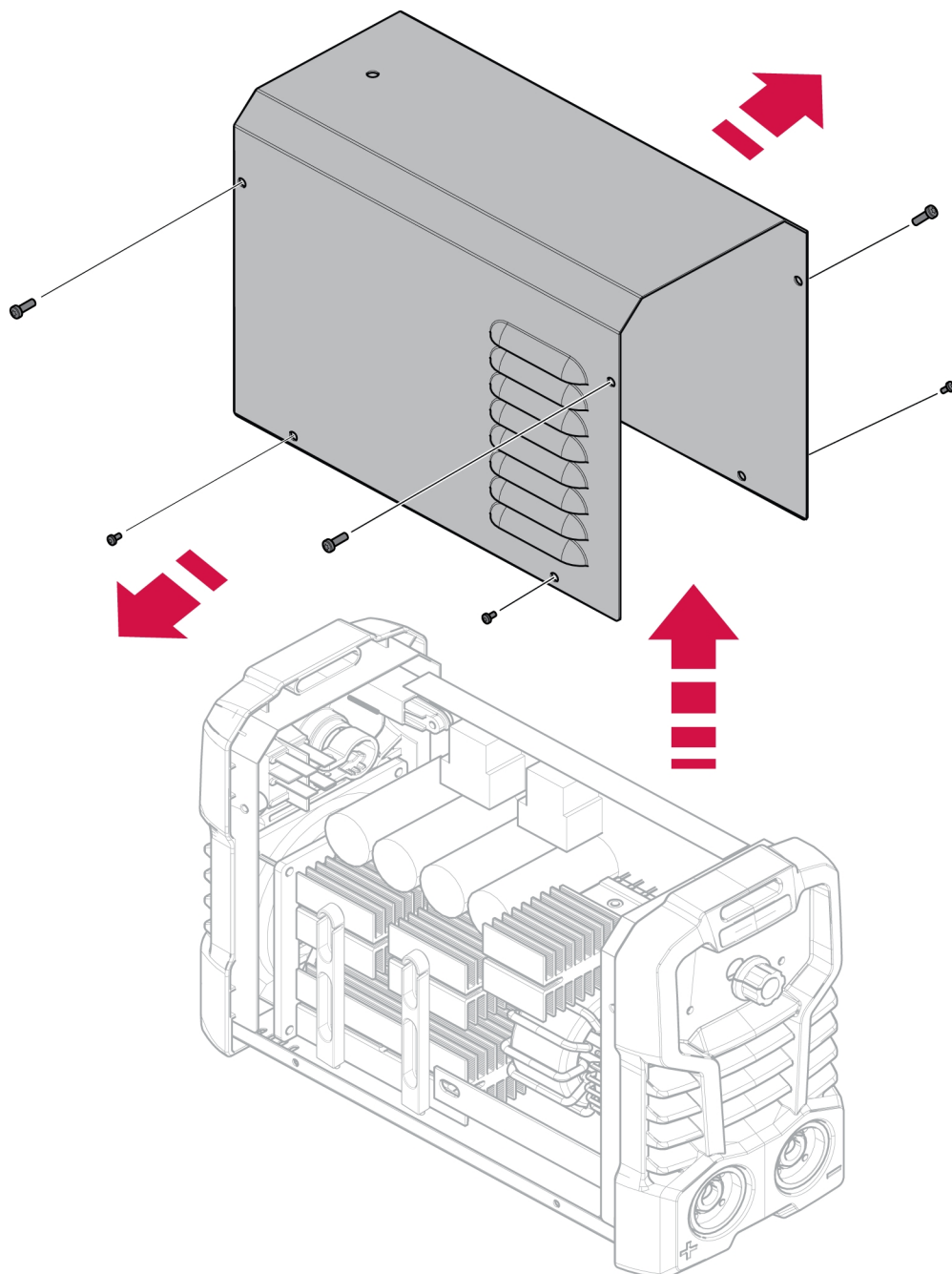
- The working environment
- The surrounding environment (grinding etc.)

Tools needed for the cleaning procedure:

- Torx screwdriver, T25 and T30
- Dry compressed air at a pressure of 4 bar
- Protective equipment like ear plugs, safety glasses, masks, gloves, and safety shoes

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

**CAUTION!**  
The cleaning procedure should be carried out by an authorized service technician.



- 1) Disconnect the power source from the power supply.



**WARNING!**

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

- 2) Remove the top panel of the power source.
- 3) Clean the power source with dry compressed air (4 bar).
- 4) Make sure that no dust remains on any part of the power source.
- 5) Reassemble the power source after cleaning and perform testing according to IEC 60974-4.  
Follow the procedure in the section “After repair, inspection and test” in the service manual.

## 7 TROUBLESHOOTING

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

Check that power is disconnected before starting any type of repair action.

Type of fault	Corrective action
MMA / SMAW / Stick welding problems	Check that the welding and return cables are correctly connected to the power source.
	Make sure that the return clamp has proper contact with the workpiece.
	Check that the correct electrodes and polarity are being used. For polarity, check electrode packaging.
	Check that the correct electrode size is set.
No arc	Check that the mains power supply switch is turned ON.
	Check that the mains, welding, and return cables are correctly connected.
	Check that the correct electrode size is set.
	Check the electrical power supply fuses.
The welding current is interrupted during welding	Check whether the thermal protection trip has operated (indicated by LED on Overtemperature indicator in control panel).
	Check the mains supply fuses.
The thermal protection trips frequently	Make sure that you are not exceeding the rated data for the power source (i.e. that the unit is not being overloaded).
	Check that the ambient temperature is not above the one for the rated duty cycle 40°C/104°F.

## 8 ORDERING SPARE PARTS

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**CAUTION!**

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

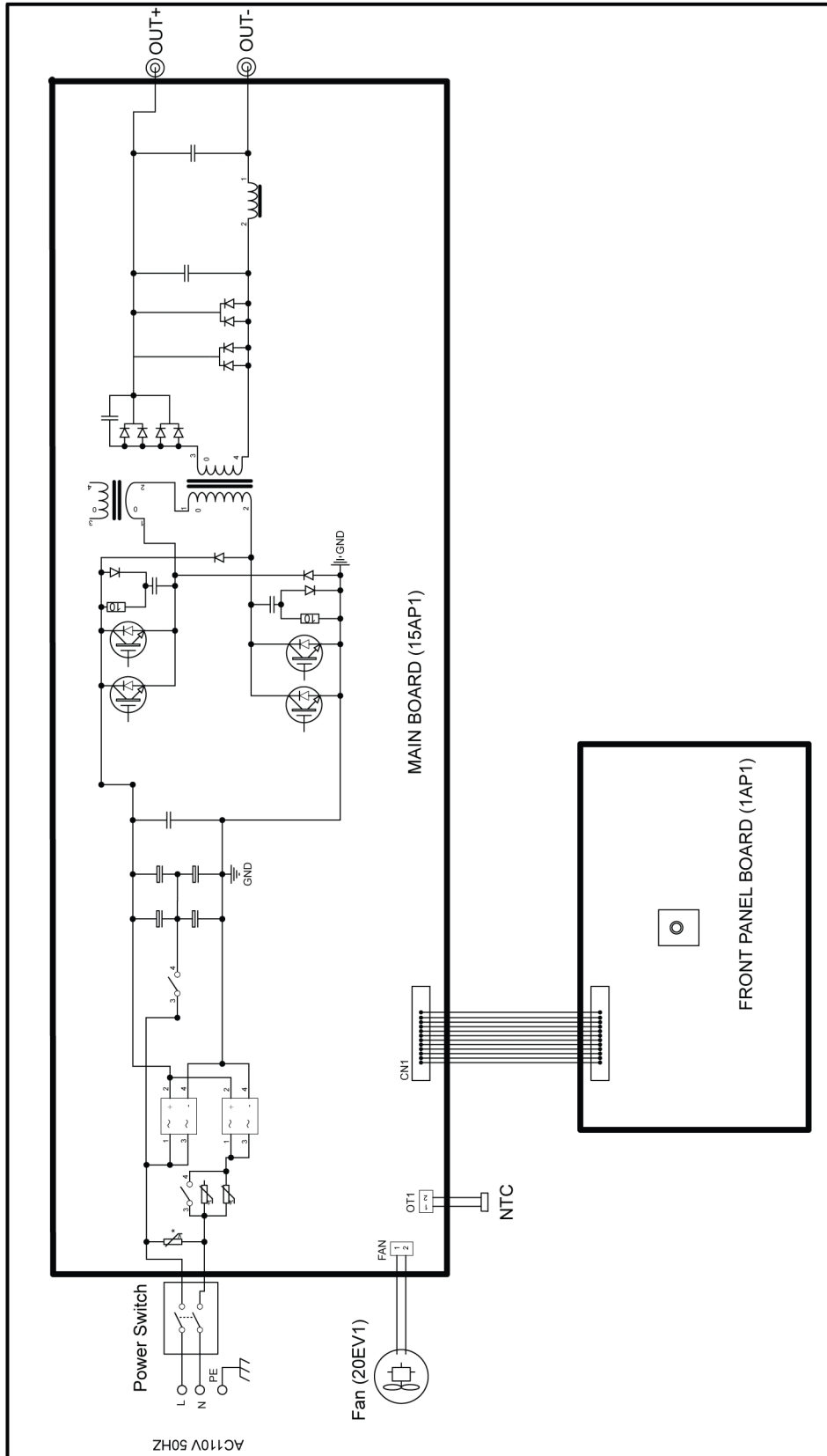
HandyArc 1/8 is designed and tested in accordance with the international Canadian standards **CAN/CSA 60974-1, CAN/CSA 60974-2** and US standards **ANSI/IEC 60974-1, ANSI/IEC 60974-2**.  
On completion of service or repair work, it is the responsibility of the person(s) performing the work to ensure 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](https://www.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.

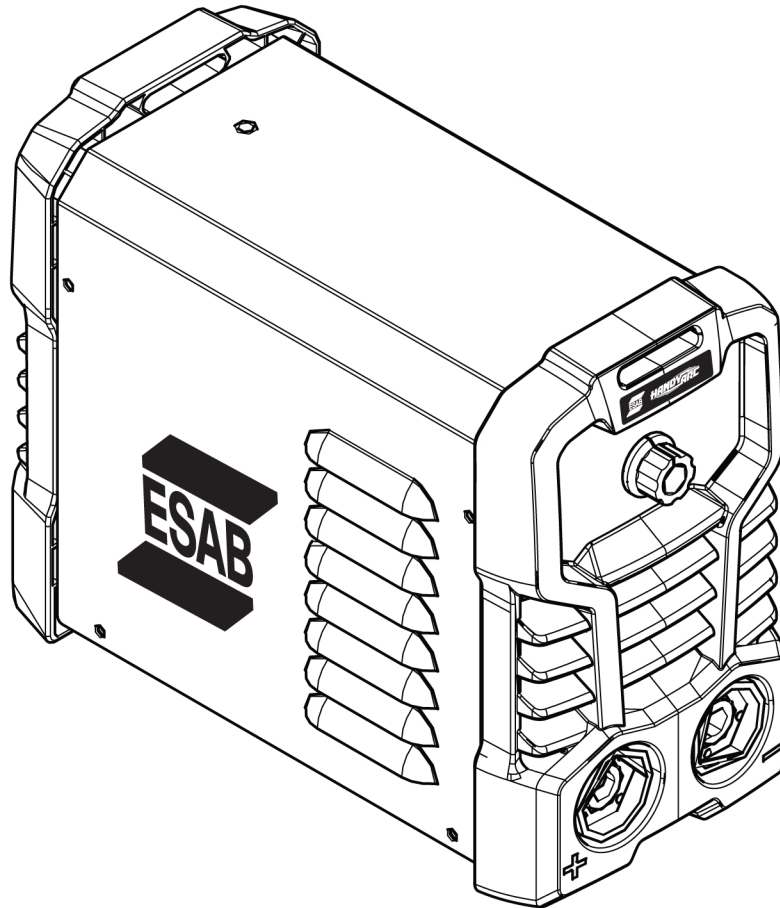
# APPENDIX

## WIRING DIAGRAM

HandyArc 1/8



## ORDERING NUMBERS



Ordering number	Denomination	Type	Notes
0700 734 012	Power source	HandyArc 1/8	NAM
0448 701 001	Spare parts list		

The three last digits in the document number of the manual show the version of the manual. Therefore they are replaced with \* here. Make sure to use a manual with a serial number or software version that corresponds with the product, see the front page of the manual.

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



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