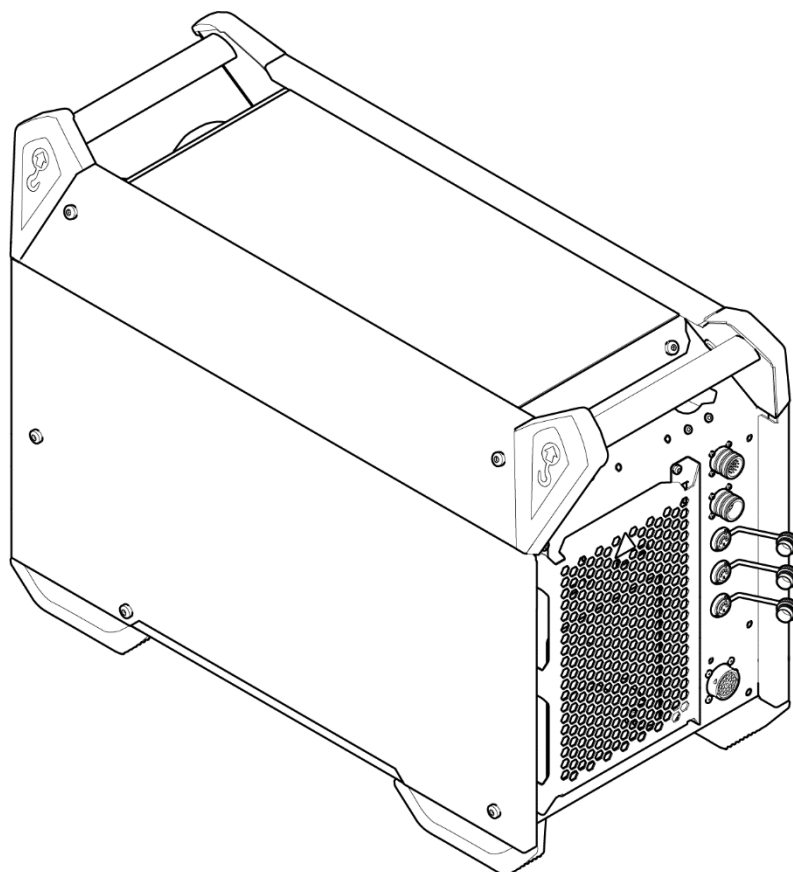


Checkmaster 600R



Instruction manual

0448 724 001 GB 20250108

Valid for:

91XXXXXX
HL507XXXXXXXXX
OP507XXXXXX



EU DECLARATION OF CONFORMITY

According to:

The Low Voltage Directive 2014/35/EU;
The RoHS Directive 2011/65/EU;

The EMC Directive 2014/30/EU;
The Ecodesign Directive 2009/125/EC

Type of equipment

Arc welding calibration loadbank

Type designation

CHECKMASTER 600R

for serial number

91XXXXXX

HL507 XX XX XXXX

OP507 XX XX XXXX

Brand name or trademark

ESAB

Manufacturer or his authorised representative established within the EEA

Name, address, telephone no:

ESAB AB

Lindholmsallén 9, Box 8004, SE-402 77 Göteborg, Sweden

Phone: +46 31 50 90 00, www.esab.com

The following EN standards and regulations in force within the EEA has been used in the design:

| | |
|-----------------------------|--|
| EN IEC 60974-1:2018/A1:2019 | Arc Welding Equipment - Part 1: Welding power sources |
| IEC EN 60974-10:2020 | Arc Welding Equipment - Part 10: Electromagnetic compatibility (EMC) requirements |
| IEC 60974-14:2018 | Arc welding equipment - Part 14: Calibration, validation and consistency testing |
| IEC 61010-1:2010/AMD1:2016 | Safety requirements for electrical equipment for measurement, control, and laboratory use - Part 1: General requirements |

Additional Information:

Restrictive use, Class A equipment, intended for use in locations other than residential.

By signing this document, the undersigned declares as manufacturer, or the manufacturer's authorised representative established within the EEA, that the equipment in question complies with the safety and environmental requirements stated above.

Place/Date

Gothenburg
2025-02-13

Signature

Petter Svensson
Director of Product Management for Robotic Welding



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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

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 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

- Hot air 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!



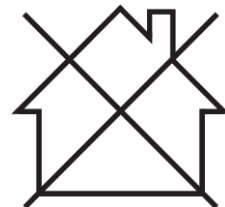
CAUTION!

This product is solely intended for calibration of arc welding equipment.



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.



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 Checkmaster 600R is a resistive load bank designed for simulating arc welding. It features calibrated measurement instruments, making it ideal for calibrating, validating, and testing welding systems. With automated load switching for enhanced safety, it supports welding power sources from 150A to 500A and works with processes like GMAW, GTAW, SAW, and SMAW.

When paired with the ESAB WeldScanner, it requires minimal user intervention for calibration/validation and allows for the parallel operation of two Checkmaster 600R units. This setup facilitates large-scale measurements and supports calibrations up to 1200A.

2.1 Equipment

The load bank is supplied with:

- 5 m sensor cable suitable for WeldScanner Validator use
- 2 m (6.5 ft) mains cable
- Instruction manual

3 TECHNICAL DATA

| Checkmaster 600R | | |
|--|-------------------------------------|--------------|
| Mains voltage | 110–230 V, $\pm 10\%$, 1~ 50/60 Hz | |
| Mains supply S_{scmin} | 600VA | |
| | 110 V | 230 V |
| Primary current I_{max} | 5 A | 2.5 A |
| Primary current I_{eff} | 2.6A | 1.3 A |
| Idle power with fans on | 30 W | |
| Setting range (DC) | | |
| MIG/MAG/MMA | 12 A/15 V – 600A /44 V | |
| MMA | 16 A/20.6 V – 500 A/40 V | |
| TIG | 12 A/10.5 V – 350 A/24 V | |
| Permissible load at MIG/MAG/MMA/SAW | | |
| 30% duty cycle | 600 A/ 44 V | |
| 100% duty cycle | 250 A/ 26.5 V | |
| Permissible load at TIG | | |
| 30% duty cycle | 350 A/24 V | |
| 100% duty cycle | 250 A/20 V | |
| Open-circuit voltage input | 141 V | |
| Operating temperature | 0 to +40 °C | |
| Transportation temperature | -20 to +55 °C | |
| Maximum humidity at 20°C | 90% | |
| Maximum humidity at 40°C: | 50% | |
| Maximum operational altitude | 2000 m | |
| Constant sound pressure when idling | < 70 dB (A) | |
| Dimensions l x w x h | 712x325x470 mm | |
| Weight | 49 kg (109 lbs) | |
| Insulation class | H | |
| Enclosure class | IP21S | |

Mains supply, $S_{sc min}$

Minimum short circuit power on the network in accordance with IEC 61000-3-12.

Duty cycle

The duty cycle refers to the time as a percentage of a ten-minute period that you can weld at a certain load without overloading.

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 only and may not be used in outdoors.

4 INSTALLATION

The installation must be carried out by a professional.



CAUTION!

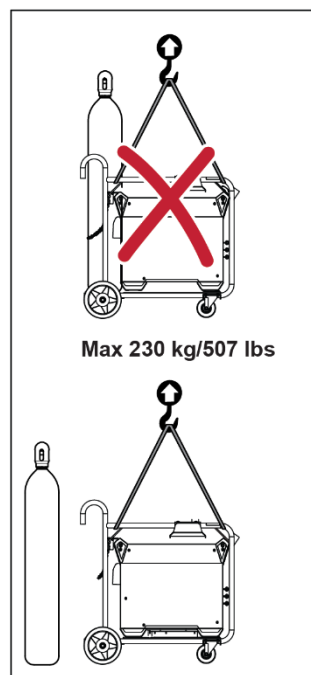
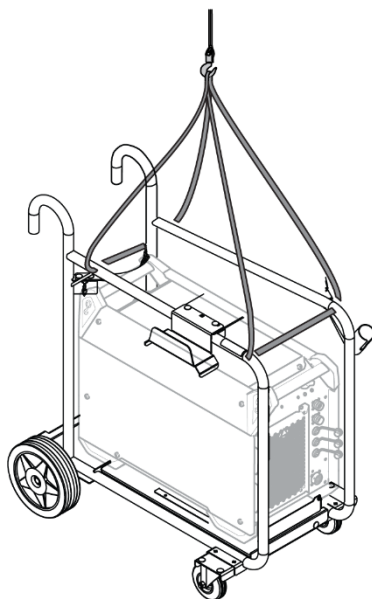
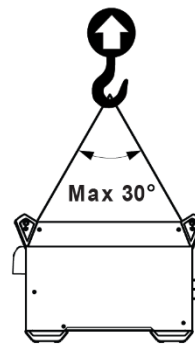
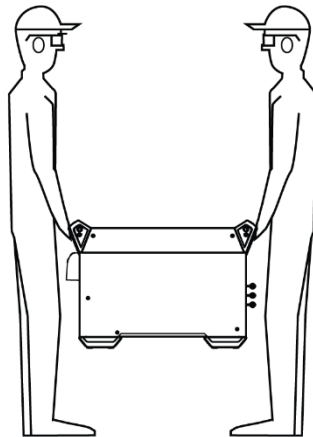
This product is intended for industrial use. In a domestic environment this product may cause radio interference. It is the user's responsibility to take adequate precautions.

4.1 Location

Operate the device in a well-ventilated, dry area. Restrict access to authorized personnel only. Ensure the Checkmaster 600R's cooling air inlets and outlets are unobstructed.

4.2 Lifting instructions

Mechanical lifting must be done with both outer handles.

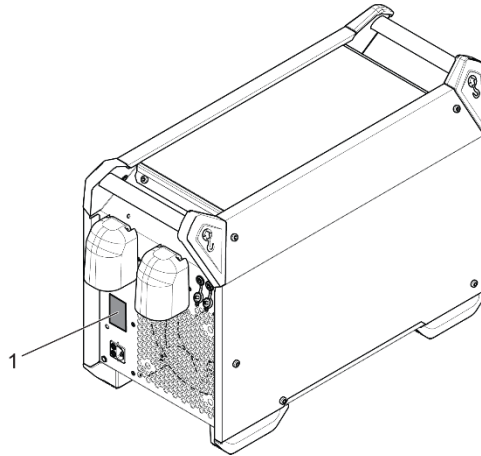


4.3 Mains supply



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.



- 1 Rating plate with supply connection data.

Connection instruction

The Checkmaster 600R is factory set to 110-240 V AC 50-60Hz

Use only IEC 60320 C14 type plug from manufacture SCHURTER Type V-Lock.

Protective Circuit

Ensure the power grid provides proper grounding properties. Verify that low-impedance grounding connections are established via the detachable mains cord.

Overcurrent protection is implemented using two fuses (4A T / 250 V, Glass Cartridge Fuse, 5 x 20 mm, S506-4-R) located inside the power entry module. These fuses must conform to the specified type and rating to ensure reliable protection.

Overvoltage protection is provided by metal-oxide varistors (MOVs) on the filter board module. These varistors effectively handle voltage surges and protect the circuit from overvoltage conditions.

Ensure proper creepage distances are maintained by performing regular cleanups of the equipment as outlined in Chapter 7 Maintenance. This helps prevent the buildup of contaminants that could compromise insulation integrity.

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!

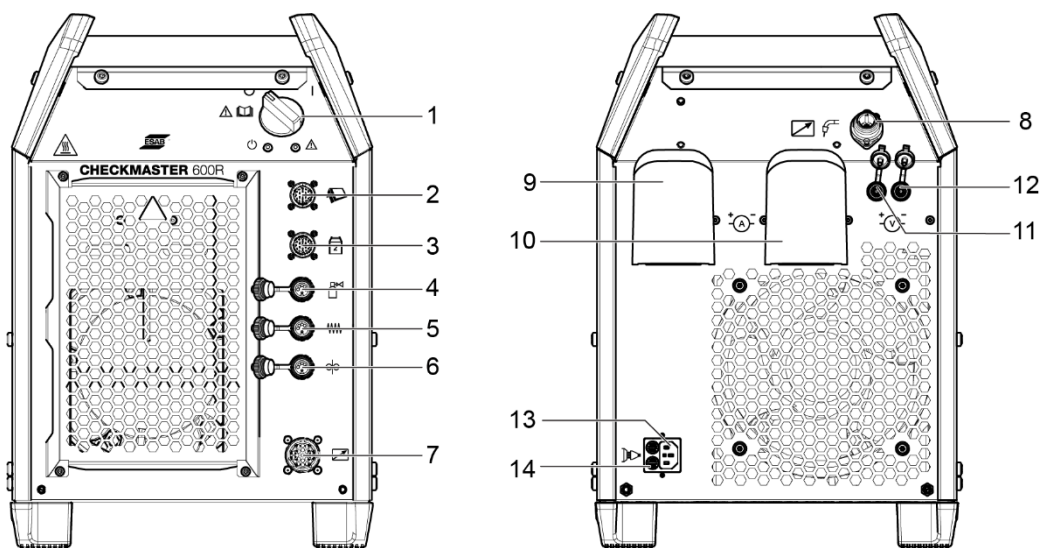
- Familiarize yourself with the manuals for the Checkmaster 600R, Welding Equipment, and WeldScanner (if used).
- Ensure you select either manual mode or calibration mode on your Welding Equipment and disable additional welding features such as hot start, creep, crater fill and high frequency ignition.
- Use a neutral induction setting.
- Use two-stroke torch control.
- Release the pressure from the wire by removing the feed rollers from the feeding mechanism to prevent wire feeding during current and voltage calibration.
- If applicable, provide the arc voltage feedback from the Checkmaster to the welding equipment's arc.
- If possible, choose to display clamp voltage instead of torch voltage.



WARNING!

Electric shock! Do not touch the lugs or connectors during operation!
Hot Air! Careful place the exhaust (front) away from heat sensitive material.

5.1 Connections and control devices



- | | | | |
|---|---|----|---|
| 1 | Mains power supply switch, O/I | 8 | Connection for Remote trigger (OKC Adapter) |
| 2 | Connector for WeldScanner | 9 | Positive welding terminal: Welding cable |
| 3 | Connector for additional Checkmaster 600R | 10 | Negative welding terminal: Welding cable |
| 4 | Connector for Gas sensor | 11 | Connector for positive Voltage feedback |
| 5 | Connector for Wire-feed sensor | 12 | Connector for negative Voltage feedback |
| 6 | Connector for Traversal-speed sensor | 13 | Connector for Mains power |
| 7 | Connection for Remote control unit | 14 | Fuse (10 A) for supply voltage for wire feeder unit |

5.2 Connection of welding and return cable.

The load resistor has two input lugs, a positive terminal (+) and a negative terminal (-), for connecting welding and return cables.

Connect the welding cable to the positive terminal on the power source or Wire feeder's Euro connector via adaptor.

Connect the return cable to the negative terminal on the power source.

Additionally connect two input sockets marked with (+) and (-) for voltage measurement.

Recommended maximum current values for connection set cables

At an ambient temperature of +25 °C and normal 10 minutes cycle:

| Cable area | Duty cycle | | Voltage loss / 10 m |
|--------------------|------------|-----|---------------------|
| | 100% | 25% | |
| 50 mm ² | 285 | 440 | 0.40 V / 100 A |
| 95 mm ² | 430 | 740 | 0.21 V / 100 A |



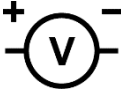







At an ambient temperature of +40 °C and normal 10 minutes cycle:

| Cable area | Duty cycle | | Voltage loss / 10 m |
|--------------------|------------|-----|---------------------|
| | 100% | 25% | |
| 50 mm ² | 240 | 385 | 0.46 V / 100 A |
| 95 mm ² | 370 | 645 | 0.24 V / 100 A |




Duty cycle

The duty cycle refers to the time as a percentage of a ten-minute period that you can weld at a certain load without overloading.

5.3 Symbols

| | | | |
|---|---|---|---------------------------------|
|  | Protective earth |  | Position for mechanized lifting |
|  | Connectors for Voltage Measurement input |  | Connectors for Welding input |
|  | Connector for Mains Power |  | Connector for Wire feed Sensor |
|  | Connector for Traversal speed Sensor |  | Connector for Gas flow Sensor |
|  | Connector for additional Checkmaster 600R |  | Connector for WeldScanner |

5 OPERATION

| | | | |
|---|------------------------|---|--------------------------------|
|  | Red Warning Indicator |  | Connector for external Trigger |
|  | White Status Indicator | | |

5.4 Starting procedure

Turn ON the mains power by turning switch to the “I” position.

To ensure high accuracy measurements turn ON the device 15 minutes prior to heat up.

5.5 Shutdown procedure

Turn OFF by turning the switch to the “O” position and the Checkmaster 600R will shut down when the safe internal temperature is reached.

Do not cut off the power without switching to the 'O' position to ensure proper cooling down.

The load resistor automatically detects the need of cooling based on duty cycle and load applied.

When shutting the main switch while cooling down, **the fan will continue** to operate, indicated by red flashing warning LED, until it is safe to store the load resistor. Do not remove the power cord or mains before the fan stops.

5.6 Emergency cooling procedure

In case of power outage or fan failure place the Checkmaster 600R on the back plate where the connectors for welding equipment and the rating plate are located. The heated air will create a chimney effect to support natural aspiration. This will help removing the heat faster and ensures the components inside the housing to be safe from thermal overload.

6 CALIBRATION AND VALIDATION



WARNING!

Calibration and validation should be performed by a trained service technician, possessing sufficient training in welding and measurement technology. The technician should have knowledge of hazards that may occur during welding and measurement and should take necessary protective actions!

6.1 Measurement methods and tolerances

When calibrating and validating, the reference measuring instrument must use the same measuring method in the DC range (averaging and rectification of the measured values). A number of measurement methods are used for reference instruments, e.g. TRMS (True Root Mean Square), RMS (Root-Mean-Square) and rectified arithmetic mean.

In the field application it will occur that a measuring device and a Checkmaster 600R may display different values even though both systems are validated and calibrated. This is due to the measurement tolerances and the method of measurement of the two measurement systems. This can result in a total deviation up to the sum of both measurement tolerances. If the measurement method differ (TRMS, RMS or rectified arithmetic mean), significantly larger deviations are to be expected!

6.2 Requirements, specifications and standards

Checkmaster 600R together with the WeldScanner is designed to meet the accuracy for indication and meters required by IEC/EN 60974-14, to calibrated welding equipment from 200 A to 500 A (350 A for TIG equipment) maximum rating in standard grade and 250 A to 500 A (350 A for TIG equipment) maximum rating in precision grade. The Checkmaster, when used as a standalone device, offers an accuracy of $\pm 1\%$ relative to its maximum measuring range.

6.3 Welding Process

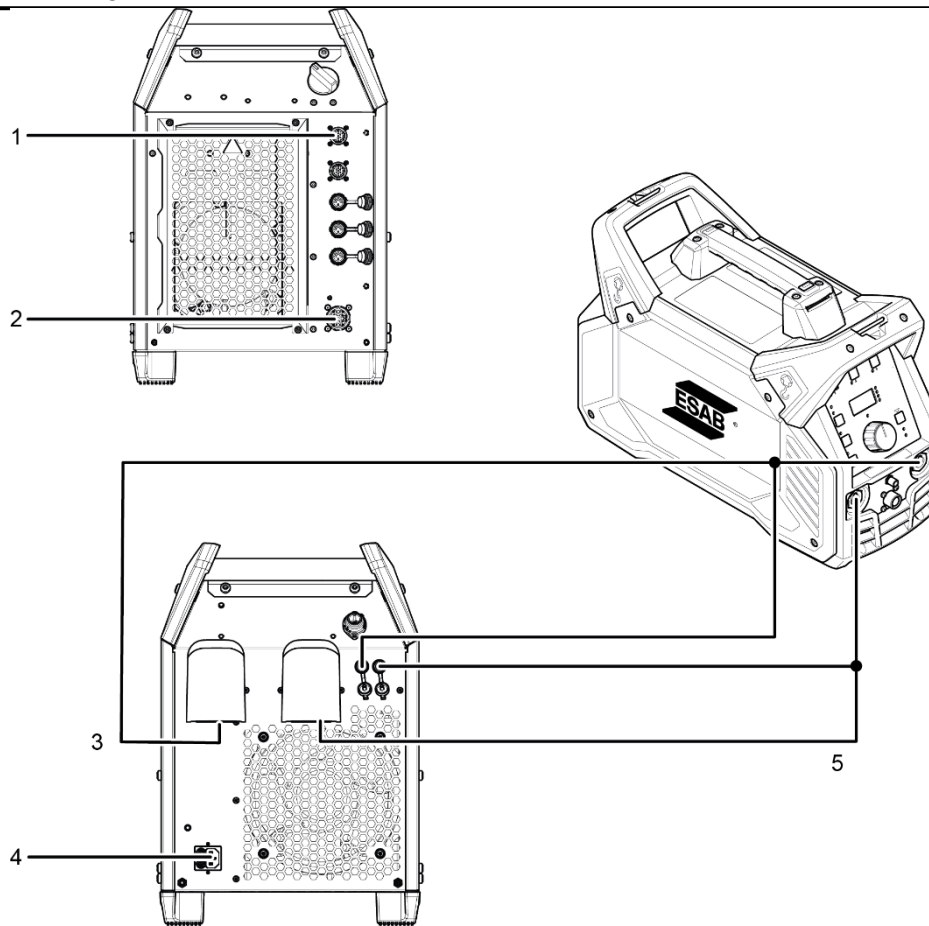
6.3.1 MMA



MMA 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 welding, the Checkmaster 600R shall be supplemented with:

- Welding cable from Power source to Checkmaster 600R
- Voltage plug adapters from Power source to voltage input on Checkmaster 600R
- Return cable from Checkmaster 600R to Power source
- Voltage plug adapters from Power source to voltage input on Checkmaster 600R
- WeldScanner or Remote Control to Checkmaster
- Supply Voltage



1. WeldScanner
2. Remote Control
3. Welding +
4. Supply Voltage
5. Ground –



WARNING!

Due to the nature of the process, automatic switching of resistors requires low current settings to prevent arcing and ensure the longevity of the relays.

6.3.2 TIG



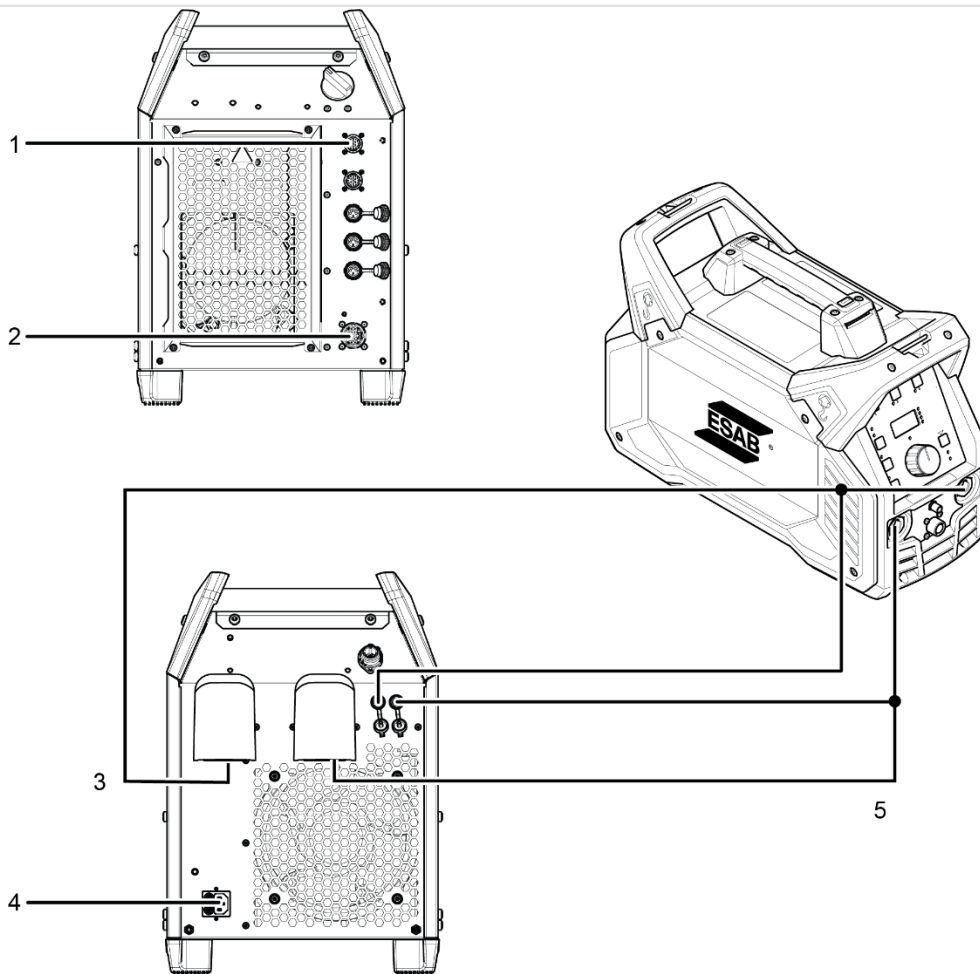
TIG welding melts the metal of the workpiece, with an arc initiated from a non-consuming tungsten electrode. The welding pool and electrode are protected by shielding gas.

For TIG welding, the welding power source shall be supplemented with:

- a TIG torch to start welding
- Welding cable from Power source to Checkmaster 600R
- Voltage plug adapters from Power source to voltage input on Checkmaster 600R
- Return cable from Checkmaster 600R Power source to Power source
- Voltage plug adapters from Power source to voltage input on Checkmaster 600R
- WeldScanner or Remote Control to Checkmaster
- Supply Voltage

**WARNING!**

Turn off the HF ignition to ensure the long lifespan of the devices.



1. WeldScanner
2. Remote Control
3. Welding +
4. Supply Voltage
5. Ground -

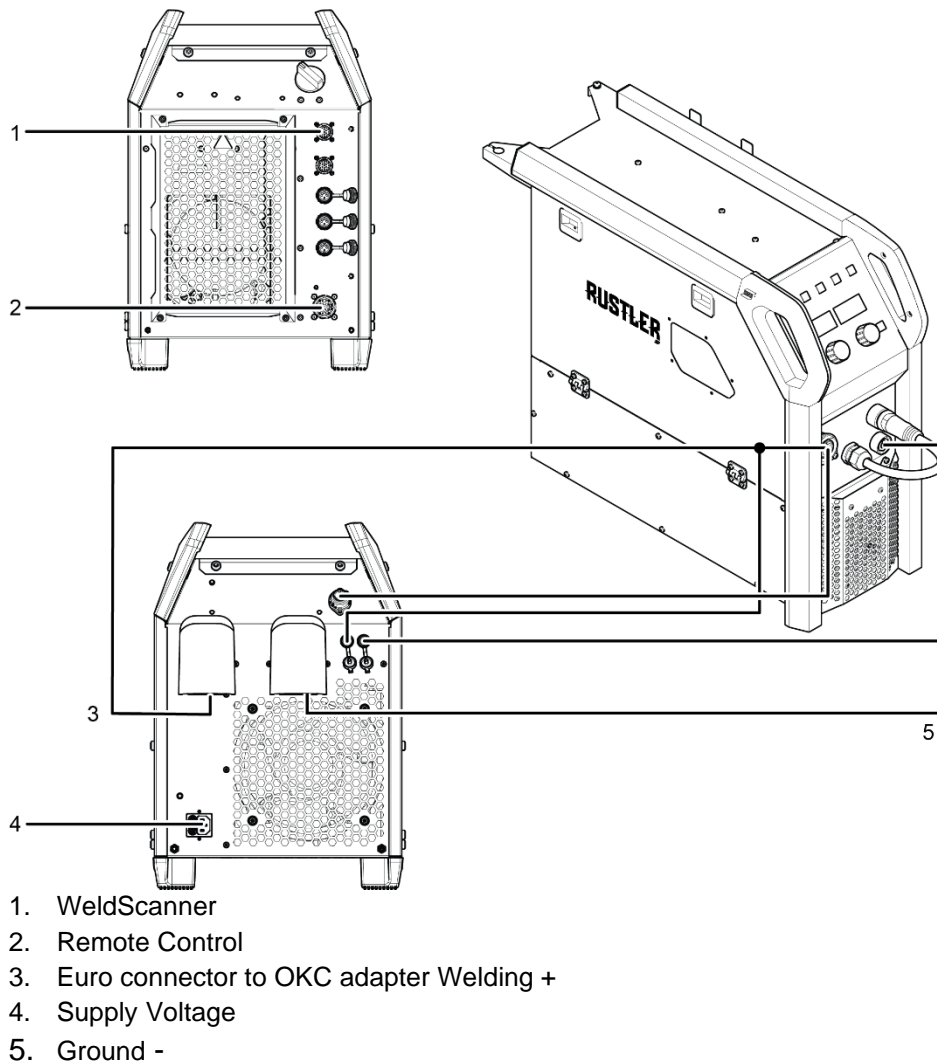
6.3.3 MIG/MAG



An arc melts a continuously supplied wire. The weld pool is protected by shielding gas.

For MIG/MAG welding, the Checkmaster 600R shall be supplemented with:

- Welding cable from wire feeder unit (Euro to OKC adapter) to Checkmaster 600R
- Voltage plug adapters from Euro to OKC adapter to voltage input positive on Checkmaster 600R
- Return cable from Checkmaster 600R Power source to Power source
- Voltage plug adapters from Power source to voltage input negative on Checkmaster 600R
- WeldScanner or Remote Control to Checkmaster
- Supply Voltage
- Optional True Arc Voltage return cable with clamp from Checkmaster Voltage input to Feeder



6.3.4 SAW



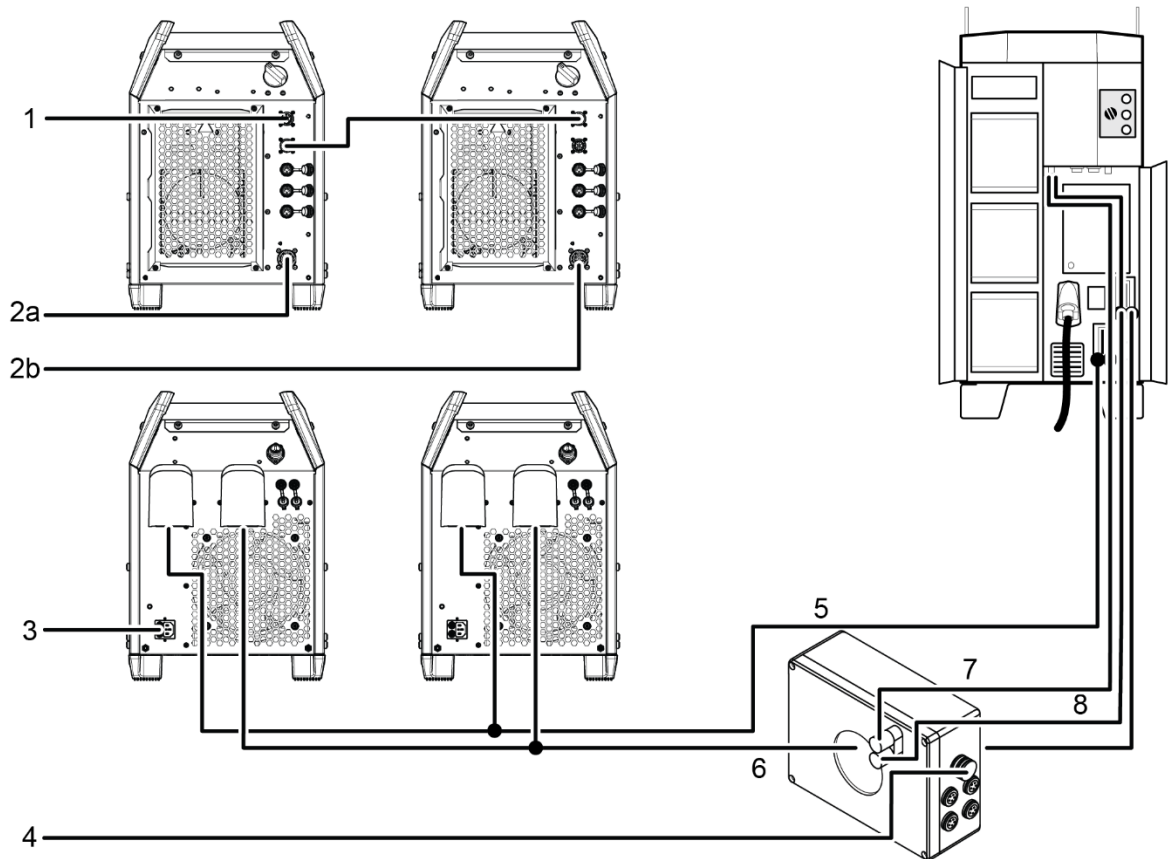
An arc melts a continuously supplied wire. The weld pool is protected by flux

For SAW welding, up to four Checkmaster 600R shall be supplemented with:

- connection cable Checkmaster 600R units
- Welding cable from Checkmaster Connection Box to Checkmaster 600R 1-4
- Welding cable from Checkmaster Connection Box to Power source
- Voltage reference cable from Checkmaster Connection Box to voltage input positive on Checkmaster 600R
- Voltage reference cable from Checkmaster Connection Box to voltage input positive on Power source
- Return cable from Checkmaster Connection Box to Checkmaster 600R 1-4
- Return cable from Checkmaster Connection Box to Power source
- Voltage reference cable from Checkmaster Connection Box to voltage input negative on Checkmaster 600R
- Voltage reference cable from Checkmaster Connection Box to voltage input negative on Power source
- WeldScanner or Remote Control to Checkmaster 600R
- Supply Voltage to each Checkmaster 600R

6 CALIBRATION

- Optional: We recommend using Checkmaster Connection Box GIN 0349 313 562 for equal load distribution



1. WeldScanner (Res)
2. a) Remote Control #1
b) Remote Control #2
3. Supply Voltage
4. Process Sensor P1400/2000
5. Positive Output power source
6. Negative Output power source
7. Positive Voltage Feedback power source
8. Negative Voltage Feedback power source

7 MAINTENANCE

**WARNING!**

The mains supply must be disconnected during cleaning and maintenance.

**WARNING!**

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

**CAUTION!**

Only persons with the 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 connectors are clean and not damaged

7.1 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 earth cables. |
| Every 12 months or depending on environmental conditions (by authorized service technician) |  Clean inside equipment. Use dry compressed air with 4 bar pressure. |  Recalibrate Process sensor and Low Range Current Sensor | |

7.1.1 Cleaning procedure

To maintain the performance and increase the lifetime of the Checkmaster 600R it is mandatory to clean the product regularly. How often depends on:

- the calibration process
- the calibration time
- the working environment
- the surrounding environment

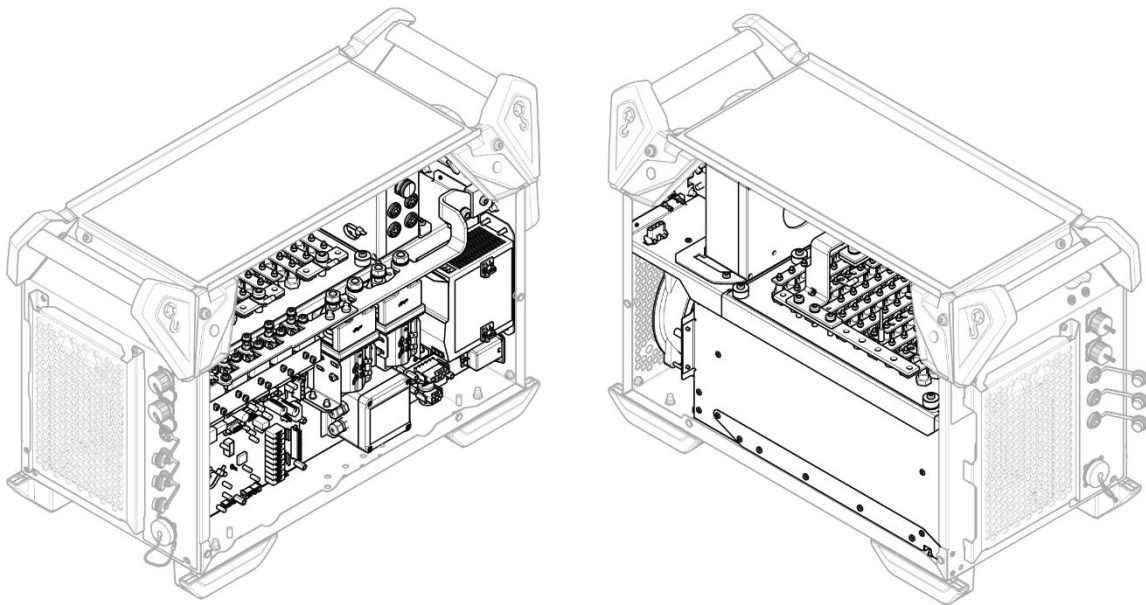
Tools needed for the cleaning procedure:

- 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 authorized service technician.

1. Disconnect the Checkmaster 600R from the mains supply and & welding equipment.



WARNING!

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

2. Remove the side panels on the Checkmaster 600R.
3. Clean with dry compressed air (4 bar) as follows:
 - The upper part.
 - From the rear panel through the fan. Block fan movement during cleaning.
 - The power supply and current sensor.
 - The PCBs.
 - Resistor and fan
4. Make sure that there is no dust left on any part of the Checkmaster 600R.
5. Reassemble the Checkmaster 600R after cleaning

7.1.2 Recalibration

It is advised to recalibrate the sensors annually to ensure any measurements/calibrations done since the last calibration of the Checkmaster 600R are valid. For units with build in current and voltage sensors:

1. Disconnect the Checkmaster 600R from the mains supply & welding equipment



WARNING!

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

2. Remove the side panels on the Checkmaster 600R
3. Remove the P350/500 Process sensor by unscrewing the marked screws and only the marked screws.
4. Remove cables and secure from falling on current bearing components
5. Remove the C20 Current sensor its base plate.
6. Remove cables and secure from falling on current bearing components



CAUTION!

When the sensors are removed do not operate the Checkmaster

7. Send the sensors for recalibration
8. After receiving the calibrated sensors back install them in reversed order and apply the new calibrations sticker on the housing



CAUTION!

Calibration should be done in an accredited metrology laboratory or ESAB only



CAUTION!

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

Checkmaster 600R is designed and tested in accordance with the international and European **EN IEC 60974-1**, and **EN IEC 60974-10 Class A**, Canadian standards **CAN/CSA 60974-1**, and US standards **ANSI/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.

8 EVENT CODES

Event codes are used in order to indicate and identify an error in the equipment. Event codes provide information about the equipment signaled via warning(red) and status(white) LED.

| LED white "Status" | LED red "Warning" | State |
|-----------------------|----------------------|---|
| off | off | System off |
| off | on | System starting, warning indicator self-test |
| off | blinking | Internal Systems Error, contact ESAB |
| on | off | System ready |
| on | blinking | System exceeded designated maximum operation temperature. Load dropped. Wait for systems to cool down. |
| Asynchronous Blinking | | Remote Control connected while switched on Disable switches |
| Blinking | off | (Any) Resistive load switched on Nominal system operation. |
| Synchronous Blinking | | System Shutdown initiated by mains switch Automatic shutdown will occur when the system cools to safe operating temperatures |

9 TROUBLESHOOTING

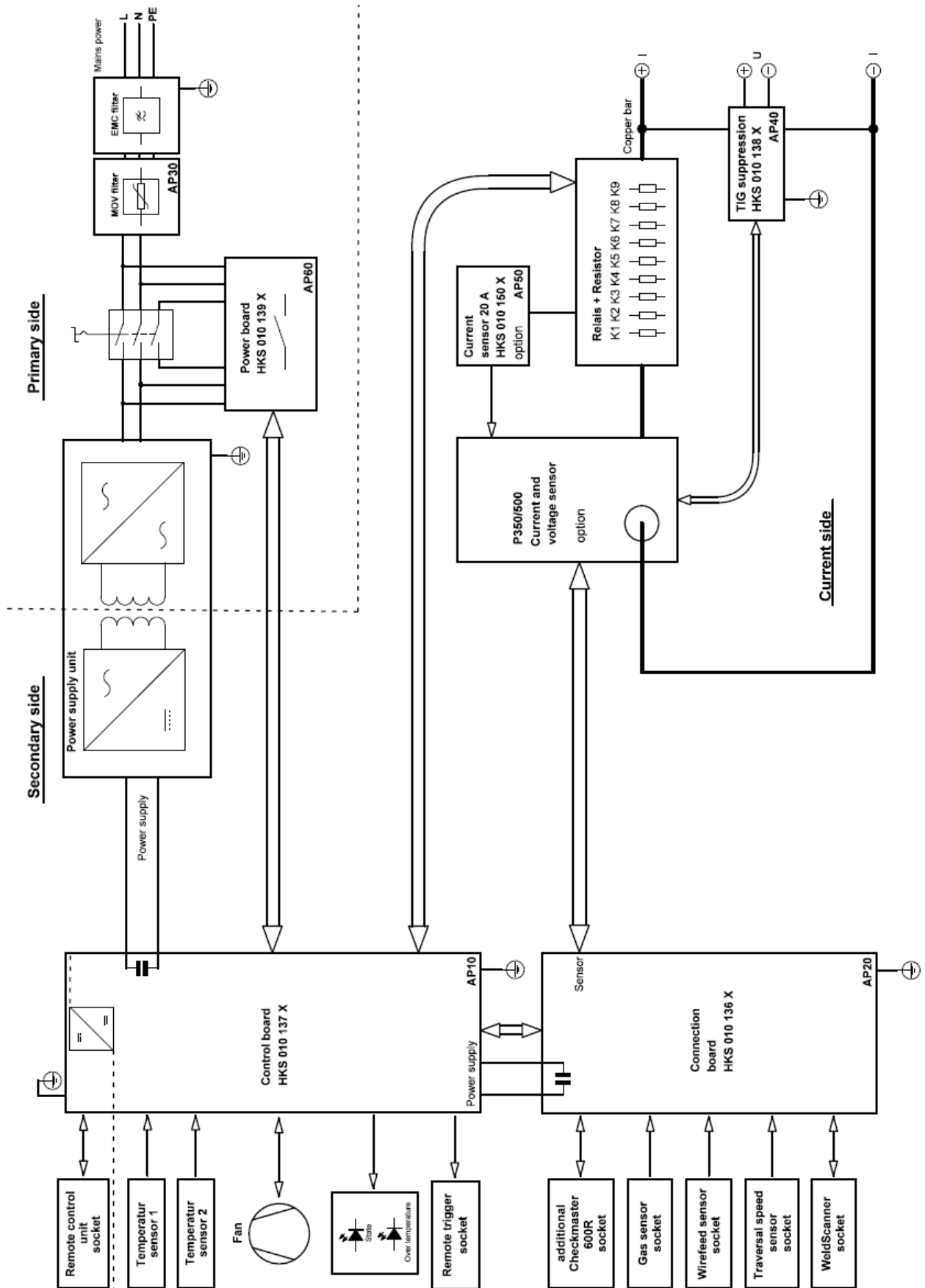
Perform these checks and inspections before sending for an authorized service technician.

Check that the mains voltage is disconnected before starting any type of repair action.

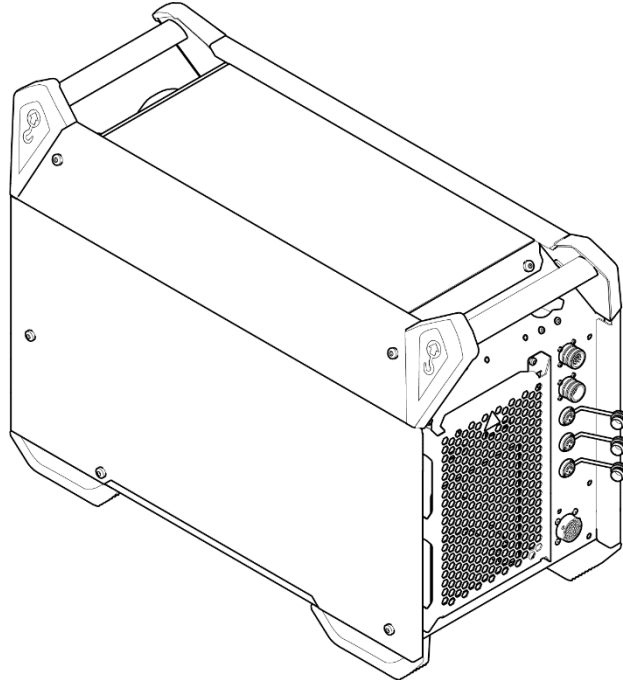
| Type of fault | Corrective action |
|---|--|
| High deviation between set and measured value | Check the voltage cables and connectors |
| | Check the current bearing cables and connectors |
| | Make sure the voltage feedback to the welding power source is working properly |
| | Make sure to run a cable compensation with the cables supplied with the Checkmaster 600R |
| No voltage feedback | Check the voltage cables and connectors |
| System turns off | 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. |
| The system is not powering on | Check the mains switch |
| | Check the mains cable |
| | Check the main power supply fuses. |
| The system is not powering off | Temperature is high, wait for cooling down |
| The relays are not switching off | Turn off Mains |

APPENDIX

BLOCK DIAGRAM



ORDERING NUMBERS


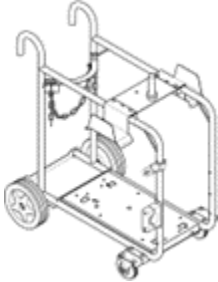
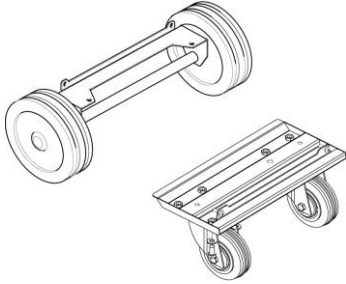


| Ordering number | Denomination | Type | Notes |
|-----------------|--------------|------------------------------------|---|
| HKS0020011 | Loadbank | Checkmaster 600R | |
| HKS0020012 | Loadbank | Checkmaster 600R P350/500 | Process sensor built in |
| HKS0020013 | Loadbank | Checkmaster 600R P350/500 + C20 | Process sensor and Current sensor built in |

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 that corresponds with the product, see the front page of the manual.

Technical documentation is available on the Internet at: www.esab.com

ACCESSORIES

| | | |
|--------------|---|---|
| HKS0003105 | Calibration Lables 100 PCE |  |
| HKS0003103 | Mains Cable NEMA 5-15R | |
| HKS0003104 | Mains Cable CEE7/7 | |
| HKS0000322 | Plugs for Voltage Feedback OKC | |
| B01P701012 | Euro style to OKC Adapter | |
| 25352192 | Tweco to Euro style Adapter | |
| HKS0003101 | Checkmaster Lead Package OKC | |
| HKS0003102 | Manual Control for Checkmaster 600R | |
| 0349 313 562 | Checkmaster Connection Box | |
| 0349 313 450 | Trolley , compatible with RobustFeed Edge and Warrior Edge 500 For assembly instruction, refer to document 0463 357 102 |  |
| 0465 416 880 | Edge wheel kit For assembly instruction, refer to document 0463 360 101 |  |
| HKS0002417 | Recalibration Process Sensor | |
| HKS0000204 | Recalibration Gas flow Sensor | |



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