



EN

Retrofit option

ON 12pol Retox TG.0008/F.0001/F.0002

Connection socket, welding torch control cable

099-001807-EW501

Observe additional system documents!

30.04.2020

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General instructions

WARNING



Read the operating instructions!

The operating instructions provide an introduction to the safe use of the products.

- Read and observe the operating instructions for all system components, especially the safety instructions and warning notices!
- Observe the accident prevention regulations and any regional regulations!
- The operating instructions must be kept at the location where the machine is operated.
- Safety and warning labels on the machine indicate any possible risks. Keep these labels clean and legible at all times.
- The machine has been constructed to state-of-the-art standards in line with any applicable regulations and industrial standards. Only trained personnel may operate, service and repair the machine.
- Technical changes due to further development in machine technology may lead to a differing welding behaviour.

In the event of queries on installation, commissioning, operation or special conditions at the installation site, or on usage, please contact your sales partner or our customer service department on +49 2680 181-0.

A list of authorised sales partners can be found at www.ewm-group.com/en/specialist-dealers.

Liability relating to the operation of this equipment is restricted solely to the function of the equipment. No other form of liability, regardless of type, shall be accepted. This exclusion of liability shall be deemed accepted by the user on commissioning the equipment.

The manufacturer is unable to monitor whether or not these instructions or the conditions and methods are observed during installation, operation, usage and maintenance of the equipment.

An incorrectly performed installation can result in material damage and injure persons as a result. For this reason, we do not accept any responsibility or liability for losses, damages or costs arising from incorrect installation, improper operation or incorrect usage and maintenance or any actions connected to this in any way.

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The content of this document has been prepared and reviewed with all reasonable care. The information provided is subject to change; errors excepted.

1 Safety instructions**1.1 For your safety****⚠ WARNING**

Do not carry out any unauthorised repairs or modifications!

To avoid injury and equipment damage, the unit must only be repaired or modified by specialist, skilled persons!

The warranty becomes null and void in the event of unauthorised interference.

- Appoint only skilled persons for repair work (trained service personnel)!



Risk of accidents due to non-compliance with the safety instructions!

Non-compliance with the safety instructions can be fatal!

- Carefully read the safety instructions in this manual!
- Observe the accident prevention regulations and any regional regulations!
- Inform persons in the working area that they must comply with the regulations!

⚠ CAUTION

Obligations of the operator!

The respective national directives and laws must be complied with when operating the machine!

- Implementation of national legislation relating to framework directive 89/391/EEC on the introduction of measures to encourage improvements in the safety and health of workers at work and associated individual guidelines.
- In particular, directive 89/655/EEC concerning the minimum safety and health requirements for the use of work equipment by workers at work.
- The regulations applicable to occupational safety and accident prevention in the country concerned.
- Setting up and operating the machine as per IEC 60974.-9.
- Brief the user on safety-conscious work practices on a regular basis.
- Regularly inspect the machine as per IEC 60974.-4.

These supplementary sheets must be used in conjunction with the appropriate standard operating instructions for the described product! These supplementary sheets expand or replace one or more chapters of the same name(s) in the standard description.

Read and observe the operating instructions for all system components, especially the safety instructions!

2 Intended use

2.1 General

WARNING



Hazards due to improper usage!

The machine has been constructed to the state of the art and any regulations and standards applicable for use in industry and trade. It may only be used for the welding procedures indicated at the rating plate. Hazards may arise for persons, animals and material objects if the equipment is not used correctly. No liability is accepted for any damages arising from improper usage!

- The equipment must only be used in line with its designated purpose and by trained or expert personnel!
- Do not improperly modify or convert the equipment!

These instructions apply only for the conversion of the following machines:

- Tetrax 300 Comfort TM
- Tetrax 351, -401, -451, -551 Comfort FW
- Tetrax 351, -401, -451, -551 DC Comfort 2.0 puls
- Tetrax 351, -401, -451, -551 Synergic FW
- Tetrax 351, -451, -551 AC/DC Comfort FW
- Tetrax 351, -451, -551 AC/DC Comfort 2.0 puls
- Tetrax 351, -451, -551 AC/DC Synergic FW
- TETRAX 351, -451, -551 AC/DC Comfort FWD
- TETRAX 351, -451, -551 AC/DC Synergic FWD

2.2 Short description of the working steps required

ON 12pol Retox ON 12pol Retox TG.0008/F.0001/F.0002:

- Connect the joint plate to the connection socket.
- Install the PCB torch trigger filers.
- Replace the torch connection socket.
- Wire the components.

3 Conversion

3.1 General

DANGER



Risk of injury from electric shock!

Servicing machines that are not disconnected from the mains can lead to serious injuries!

- Disconnect the machine completely from the mains.
Pull out the mains plug!
- Wait for 4 minutes until the capacitors have discharged!



Wiring the accessories has to follow the machine's circuit diagrams at all times!

The circuit diagrams can be found in the machine (document pouch on the casing cover) and may also be included in these conversion instructions!

3.2 Parts list

Before conversion, check that the retrofit kit is complete (see parts list).

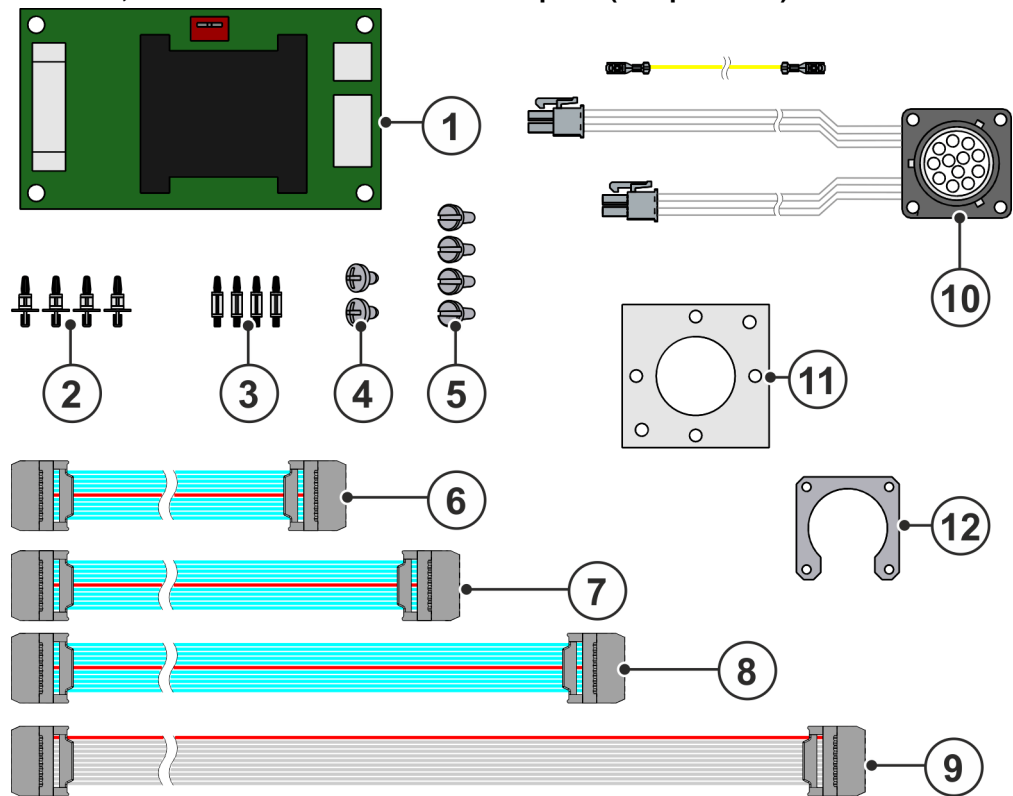


Figure 3-1

| Item | Quantity | Description | Item number |
|------|----------|---------------------------------|------------------|
| 1 | 1 | PCB torch trigger filter | 040-000545-00010 |
| 2 | 4 | Spacer | 064-000567-00000 |
| 3 | 4 | Spacer | 094-007309-00000 |
| 4 | 2 | Flat head screw, cross-recessed | 094-003240-00000 |
| 5 | 4 | Slotted cheese head screw | 094-014151-00000 |
| 6 | 1 | Flat cable, 230 mm | 094-000114-00000 |
| 7 | 1 | Flat cable, 460 mm | 094-000003-00000 |
| 8 | 1 | Flat cable, 630 mm | 094-000697-00000 |
| 9 | 1 | Flat cable, 1000 mm | 094-009095-00000 |
| 10 | 1 | Cable harness | 094-008113-00000 |
| 11 | 1 | Joint plate | 094-008111-00002 |
| 12 | 1 | Mounting plate | 094-009378-00000 |

3.3 Installation position

Depending on the machine version, a cover or an 8-pole connection socket is installed at the installation position of the connection socket.

F.0001, F.0002

TG.0008

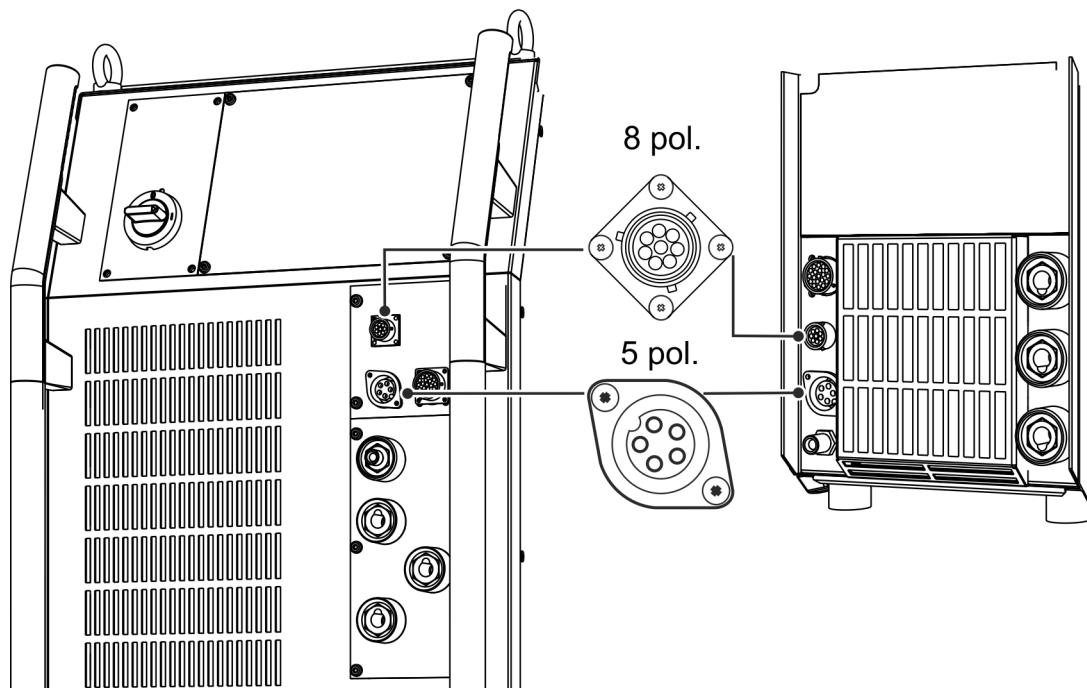


Figure 3-2

F.0001, F.0002

TG.0008

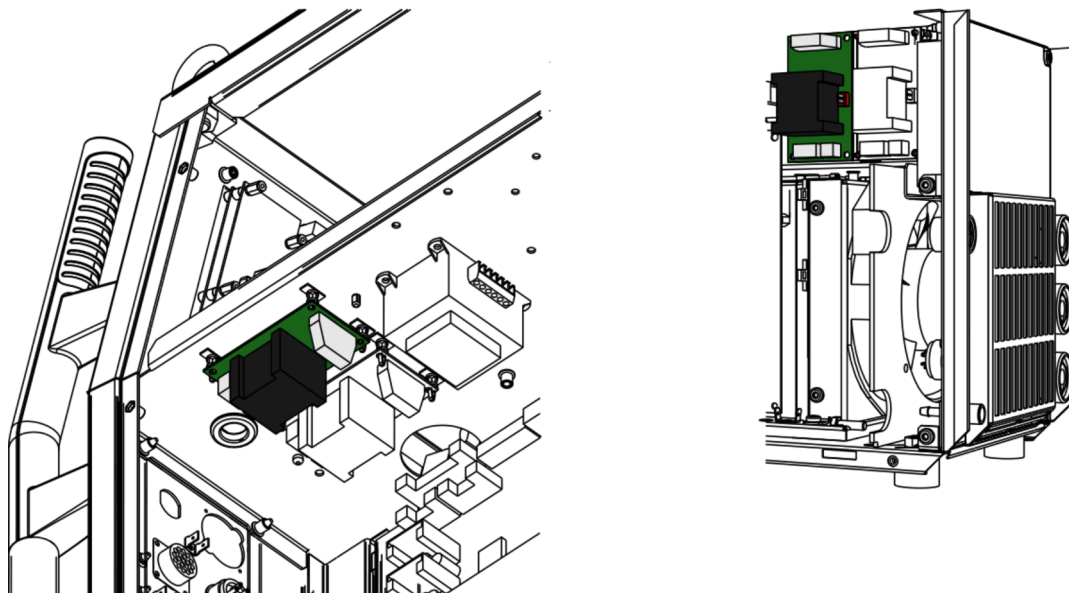


Figure 3-3

3.4 Assembly

3.4.1 Machine series xx0

3.4.1.1 Removal for factory-fitted cover

- Unscrew the left part of the casing using a Torx TX25 screwdriver.
- Remove protective earth from unscrewed component.
- From inside, push the cover out of the casing.

3.4.1.2 Removal for factory-fitted 8-pole connection socket

- Unscrew the left part of the casing using a Torx TX25 screwdriver.
- Remove protective earth from unscrewed component.
- Remove the 8-pole connection cable from the X2 connection of the installed BTF1 torch trigger filter.
- At the casing front section, undo the fastening screws of the 8-pole connection socket.
- Pull the 8-pole connection socket including the cable harness out through the casing front section.

3.4.1.3 Installation

- Insert the spacers in the recesses of the intermediate plate on the left next to the factory-fitted BTF 1 filter PCB.
- Place the supplied BTF 1 filter PCB on the spacers.
- Pull the cable harness through the joint plate.
- Position the fastening plate behind the joint plate.
- Connect the connection socket of the cable harness to the fastening plate using cheese head screws.

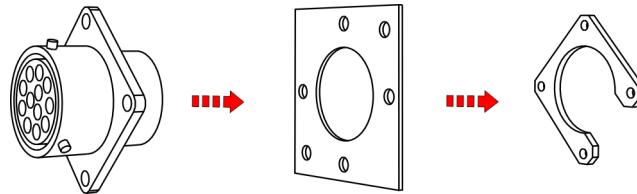


Figure 3-4

- Pull the cable harness through the casing front section.
- Connect the connection socket of the cable harness to the casing front section using flat head screws.
- Insert the short 8-pole connection cable of the 12-pole connector in the X2 connection of the factory-fitted filter PCB.
- Insert the long 8-pole connection cable of the 12-pole connector in the X2 connection of the additionally fitted filter PCB.
- Plug the protective earth into the PE connection of the additionally fitted filter PCB and connect to the machine casing.
- Plug the flat cable into the X1 connection of the additionally fitted filter PCB (allow for sufficient length) and connect to the X22 connection of the T320/1 PCB.

3.4.2 Machine series xx1

3.4.2.1 Removal for factory-fitted cover

- Unscrew the right part of the casing using a Torx TX25 screwdriver.
- Remove protective earth from unscrewed component.
- From inside, push the cover out of the casing.

3.4.2.2 Removal for factory-fitted 8-pole connection socket

- Unscrew the left part of the casing using a Torx TX25 screwdriver.
- Remove protective earth from unscrewed component.
- Remove the 8-pole connection cable from the X2 connection of the installed BTF1 torch trigger filter.
- At the casing front section, undo the fastening screws of the 8-pole connection socket.
- Pull the 8-pole connection socket including the cable harness out through the casing front section.

3.4.2.3 Installation

- Insert the spacers in the recesses of the intermediate plate in front of the factory-fitted BTF 1 filter PCB.
- Place the supplied BTF 1 filter PCB on the spacers.
- Pull the cable harness through the joint plate.
- Position the fastening plate behind the joint plate.
- Connect the connection socket of the cable harness to the fastening plate using cheese head screws.

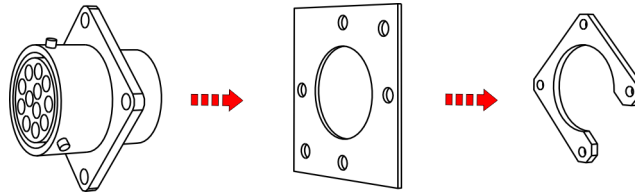


Figure 3-5

- Pull the cable harness through the casing front section.
- Connect the connection socket of the cable harness to the casing front section using flat head screws.
- Insert the short 8-pole connection cable of the 12-pole connector in the X2 connection of the factory-fitted filter PCB.
- Insert the long 8-pole connection cable of the 12-pole connector in the X2 connection of the additionally fitted filter PCB.
- Plug the protective earth into the PE connection of the additionally fitted filter PCB and connect to the machine casing.
- Plug the flat cable into the X1 connection of the additionally fitted filter PCB (allow for sufficient length) and connect to the X22 connection of the T320/1 PCB.

3.5 Final inspection

3.5.1 General

WARNING



Protective earth PE!

To protect persons and animals against dangerous live voltages and electric shocks in the event of a fault, the casing panels on the unit are connected to a green/yellow protective earth.

- After conversion, re-connect the protective earth to the casing panels!



Danger due to failure to carry out the final inspection!

After installation or conversion, all mechanical and electrical connections must be checked for correct installation to avoid any potential injuries.

- No leads or tubes should be squashed or laid on sharp edges.
- Check all mechanical connections to ensure that they are fitted correctly!
- Carry out the final inspection!
- Carry out the functional test!



Dangers resulting from failure to perform test after conversion!

Before reconnection, "Inspection and Testing during Operation" according to IEC/BS EN 60974-4 "Arc welding systems – Inspection and Testing during Operation" has to be performed!

- Perform test to IEC / DIN EN 60974-4!

Keep the conversion instructions with the machine documentation!

When ordering spare parts, ensure that the item number and serial number of the machine are quoted!