



Factory-fit option

OW MULTIVOLT 351/451/551

Observe additional system documents!

General instructions

CAUTION



Read the operating instructions!

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

- Read the operating instructions for all system components!
- Observe accident prevention regulations!
- Observe all local regulations!
- Confirm with a signature where appropriate.

NOTE



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.

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.

1 Contents

1	Contents	3
2	General	4
3	Technical data	5
4	Commissioning	6
4.1	General.....	6
4.2	Mains connection.....	6
4.2.1	Mains configuration.....	7
4.2.2	Check the mains input voltage.....	7
4.2.3	Adjusting the machine to the mains input voltage.....	8
4.2.4	Identifying the mains input voltage.....	9
4.2.5	Re-commissioning.....	9
5	Circuit diagrams	10
5.1	Multivolt (MV) welding machine series.....	10

2 General

CAUTION



These supplementary sheets are valid in addition to the standard document!
These supplementary sheets are only valid in combination with the relevant standard operating instructions and expand on or replace a section in the corresponding standard descriptions.

CAUTION



Pre-selection transformer!
A pre-selection transformer has been integrated into this welding machine to permit the adjustment of the welding machine to different mains voltages (see technical data).

- The adjustment is carried out by reconnecting the relevant mains supply leads (see Commissioning).

NOTE



Factory configuration!

The welding machine is supplied from the factory with the mains connection voltage 3 x 480V.



When ordering spare parts, ensure that the project number and serial number of the welding machine are quoted.

3 Technical data

Performance class	351 MV	451 MV	551 MV
Mains voltage (tolerances)	3 x 230 V (-25 % to +20 %) 3 x 400 V (-25 % to +20 %) 3 x 480 V (-25 % to +20 %)		
Mains fuse (safety fuse, slow-blow)			
3 ~ 230V	3 x 50 A	3 x 50 A	3 x 63 A
3 ~ 400V/415V/480V	3 x 25 A	3 x 35 A	3 x 35 A
Mains connection lead	H07RN-F4G6	H07RN-F4G10	H07RN-F4G10
Tank capacity	7 l		
Cooling capacity at 1l/min	1000 W		
weights			
Phoenix DW MV	167,0 kg		
Tetrix DC FWD MV	173,0 kg		
Tetrix AC/DC FWD MV	166,0 kg	223,5 kg	
Taurus DG MV	152 kg		
Taurus DW MV	167 kg		
alpha Q DW MV	167 kg	-	167 kg

4 Commissioning

4.1 General



DANGER



Risk of injury from electric shock!

Contact with live parts, e.g. welding current sockets, is potentially fatal!

- Follow safety instructions on the opening pages of the operating instructions.
- Commissioning may only be carried out by persons who have the relevant expertise of working with arc welding machines!
- Connection and welding leads (e.g. electrode holder, welding torch, workpiece lead, interfaces) may only be connected when the machine is switched off!

NOTE



The "OW Reinforced Pump" option is not possible in combination with the Multivolt welding machine series.

4.2 Mains connection



DANGER



Hazard caused by improper mains connection!

An improper mains connection can cause injuries or damage property!

- Only use machine with a plug socket that has a correctly fitted protective conductor.
- If a mains plug must be fitted, this may only be carried out by an electrician in accordance with the relevant national provisions or regulations (any phase sequence for three-phase machines)!
- Mains plug, socket and lead must be checked regularly by an electrician!
- When operating the generator always ensure it is earthed as stated in the operating instructions. The resulting network has to be suitable for operating devices according to protection class 1.

CAUTION



Operating voltage and mains voltage!

The operating voltage given on the "mains connection voltage" sticker must match the mains voltage to ensure optimum operation and to avoid damage to the machine!

- For mains fuse protection, please refer to the "Technical data" chapter.

4.2.1 Mains configuration

NOTE

- The machine may be connected to:
- a three-phase system with four conductors and an earthed neutral conductor
 - a three-phase system with three conductors of which any one can be earthed, e.g. the outer conductor

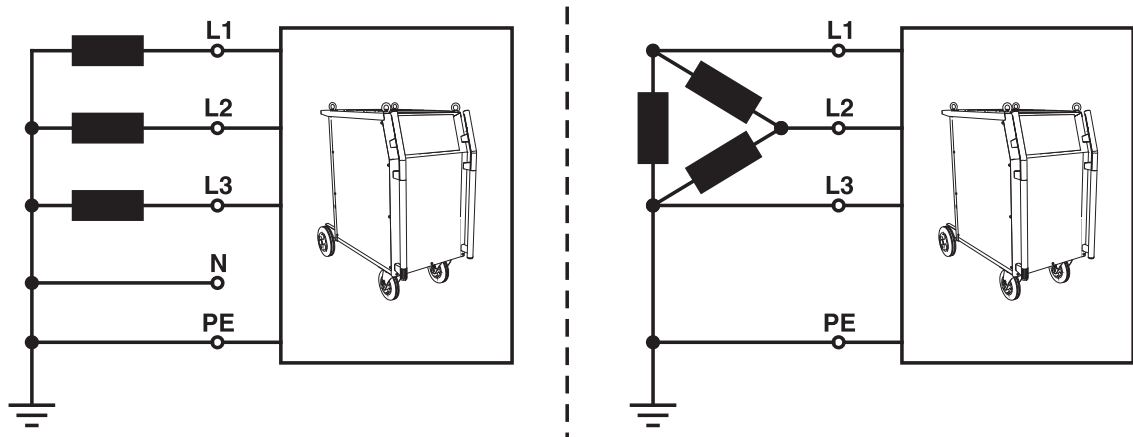


Figure 4-1

Legend

Item	Designation	Colour code
L1	Outer conductor 1	black
L2	Outer conductor 2	brown
L3	Outer conductor 3	grey
PE	Protective conductor	green-yellow

CAUTION



Operating voltage - mains voltage!

The operating voltage shown on the rating plate must be consistent with the mains voltage, in order to avoid damage to the machine!

- For mains fuse protection, please refer to the "Technical data" chapter!

- Insert mains plug of the switched-off machine into the appropriate socket.

4.2.2 Check the mains input voltage

NOTE

The "mains connection voltage" sticker can be found on the back of the machine.



The current mains voltage configuration for the machine is given on this sticker.

4.2.3 Adjusting the machine to the mains input voltage

⚠ DANGER



Electric shock!

Welding machines use high voltages which can result in potentially fatal electric shocks and burns on contact. Even low voltages can cause you to get a shock and lead to accidents.

- Do not touch any live parts in or on the machine!
- Connection cables and leads must be free of faults!
- Switching off alone is not sufficient!
- Place welding torch and stick electrode holder on an insulated surface!
- The unit should only be opened by specialist staff after the mains plug has been unplugged!
- Only wear dry protective clothing!
- Wait for 4 minutes until the capacitors have discharged!



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!

The mains input voltage is adjusted by reconnecting the relevant mains leads on the preselection transformer in the welding machine.

- Unscrew the left machine cover and remove the protective conductor.

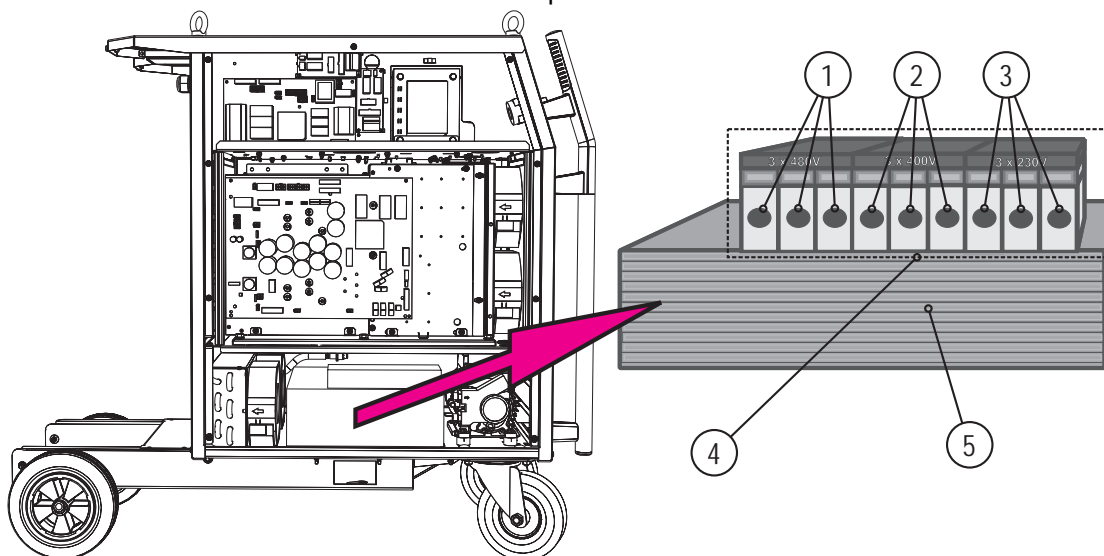


Figure 4-2

Item	Symbol	Description
1		3 x 480V
2		3 x 400V
3		3 x 230V
4		Connection terminals Adjusting the input voltage
5		Pre-selection transformer

- Connect all three mains leads on the preselection transformer to the existing mains input voltage 3 x 480V, 3 x 400V or 3 x 230V.

4.2.4 Identifying the mains input voltage

NOTE



Sample labels with special voltages are included with each machine (see illustration on the right).

- If the mains voltage configuration is changed, the corresponding label with the current mains voltage printed on it must be affixed over the "mains connection voltage" sticker on the back of the machine.

4.2.5 Re-commissioning

CAUTION



Test!

Before re-commissioning, it is essential that an "inspection and test during operation" is carried out conforming to IEC / DIN EN 60974-4 "Arc welding devices - inspection and testing during operation"!

- For detailed instructions, please see the standard operating instructions for the welding machine.

