

Operating and Maintenance Instructions

WALFORM Machine

Electronically controlled - Conforms to CE

MEG-WF385X



This Walform machine is intended for the reshaping of hydraulic tubes with diameters of 6 to 42 mm (WALFORM tube fitting system). It is suitable for efficient production of consistent, high quality.

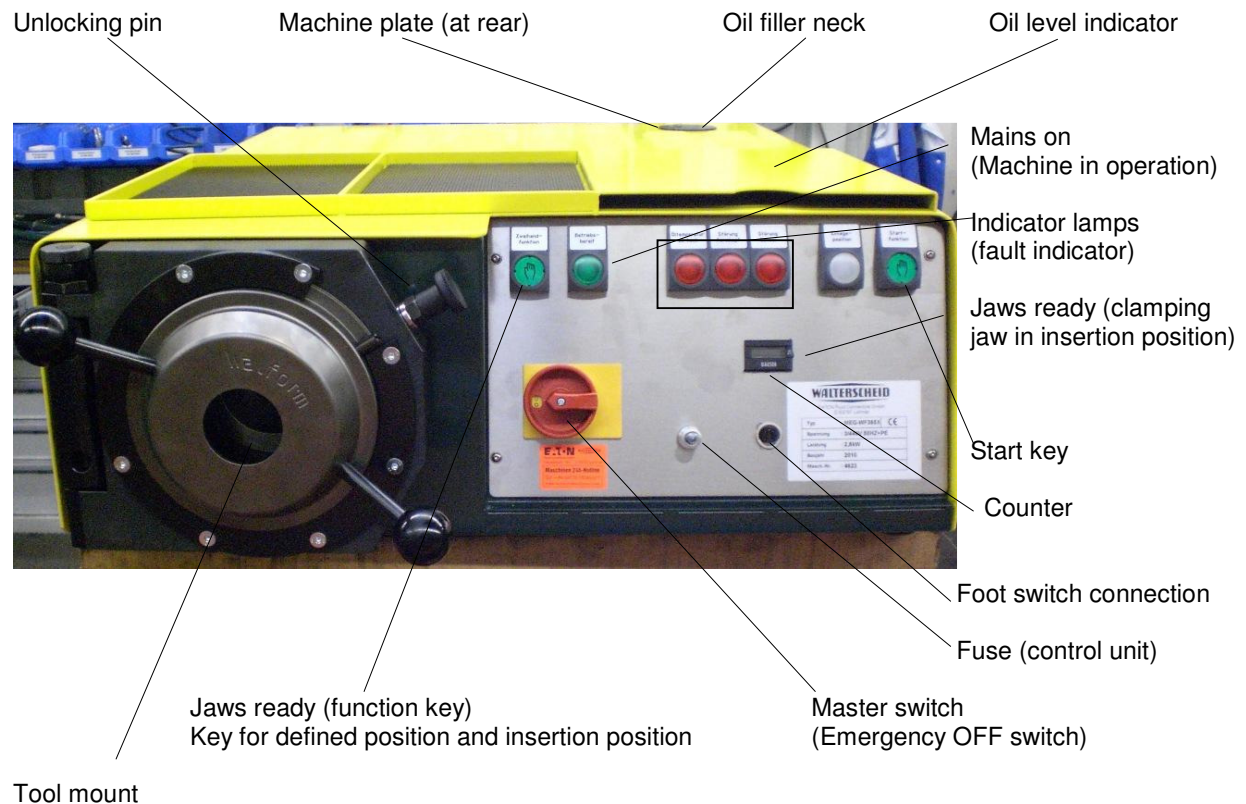
Designation of your WALFORM machine

Type: MEG-WF385X
Reference 623486

Serial No. _____

Delivery date: _____

Operating and monitoring elements



Technical data

| Dimensions / Weight | | Electrical connection | | Hydraulics |
|---------------------|---------|-----------------------|--------------|------------------------|
| Weight | 244 kg | Voltage | 400 V/ 50 Hz | 2-stage pump |
| Depth | 99,0 cm | Fuse | 16 A | Oil: HLP-D 32 |
| Width | 85,0 cm | | | Quantity: 5 litres |
| w/o handles | 67,5 cm | Noise level | < 70 dBA | Pressure: max. 600 bar |
| Height | 26,0 cm | Power consumption | 2,8 kW | |



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Circuit diagram

Assembly Instructions Walform Plus
(Fitting with captive seal)

Declaration of EG-Conformity

1 Obligatory precautions

These instructions must be accessible to all operators!



Read first - Operate later!

First of all, make yourself familiar with the control and operating elements before using the machine.

If in doubt, consult a specialist or the Customer Service Department at EATON Germany GmbH.

This machine from EATON Germany GmbH corresponds to the valid European safety regulations and the latest state of the art. Nevertheless, careless handling of the machine can cause injury or damage.

In order to avoid this, every operator has to :

- be authorised, qualified and well trained
- make sure that absolutely nobody is within the safety area
- wear personal protection clothing (safety shoes, glasses, gloves)
- use the machine for the intended purpose only and, above all, observe the performance limits.
- make sure and understand that unqualified machine changes and intervention are strictly forbidden!

Take safety information seriously!

Warning! indicates direct technical risks.

Caution! points out potentially dangerous conditions.



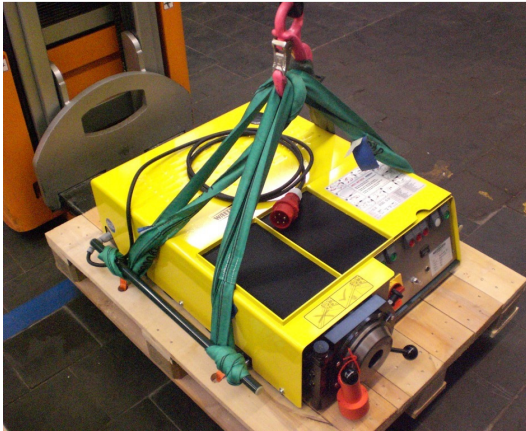
Observe and follow legally binding **industrial safety and environmental protection** regulations!

Disposal of old hydraulic oil in accordance with the regulations!

Failure to observe these instructions makes you liable for any loss or damage suffered by third parties and releases EATON Germany GmbH from any and all compensation obligations.

2 Transport and Installation

Transport



- For the transport use only and exclusively suitable transport packaging and sling-gear (see illustration). Handles are supposed to be used as fixing points.

The workroom



- must be free of chips; attention: a risk of rejects
- may not have an explosive atmosphere (ignition risk due to sparking)
- has to secure a safe and even standing position for the machine (220kg)
- has to provide a user-friendly work-height

Neatness and cleanliness

- protect you against injury, malfunctions and damage

Keep the inside of the housing dry

- Cleaning agents, oil or rain can cause faults and damage the electrical components.

Ambient temperature

- At least +10 °C; lower oil temperatures lead to malfunctions.



Use **only ORIGINAL parts and accessories**; otherwise, we cannot guarantee the perfect, coordinated operation of the components.

3 Operation

3.1 Tubes



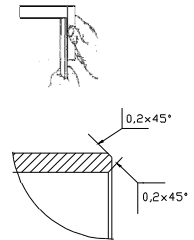
A tube grade suitable for cold-bending and flaring is to be used, pursuant to DIN 1630, Type NBK-3.1 B, material St37.4. Tolerances to DIN 2391, Part C.

Tolerances to DIN 2462, Part 1, result in problems with clamping and fitting.

Tubes made of stainless steel (e.g. 1.4571) must be cold-drawn seamless and scale-free heat-treated, Form m to DIN 17458 and tolerances to DIN 2391, Sheet 1.

3.1.1 Tube preparation

- Saw off at right angles!
Do not use cutters or cutting-off wheels.
- Deburr the tube ends inside and out!
Remove paint in the clamping and reshaping area.
- Clean the bare metal of the tube end!
Use an environment-friendly solvent to remove grease or oil.
- ! Caution ! Make sure that the tube is in perfect condition, i.e.
 - no spalling,
 - no damage.
- Most faults can be avoided simply by paying attention to
 - the tube diameter marked on the clamping jaw and the reshaper,
 - an oil-free clamping surface (avoids the tube slipping) and
 - a chip-free clamping surface (to ensure correct clamping of the tube).



Never switch the machine on

- **without clamping jaws!**
- **without a tube!**

3.2 Start-up

3.2.1 First commissioning



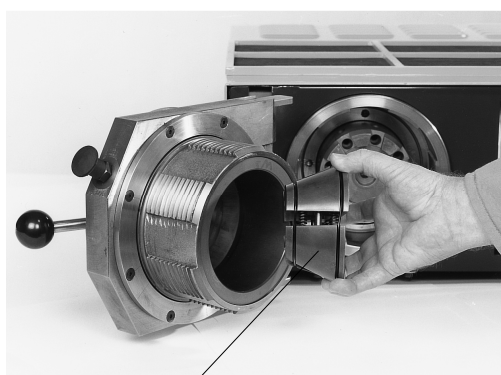
Unlocking pin (attention. Risk of clamping)

Toolholder handles

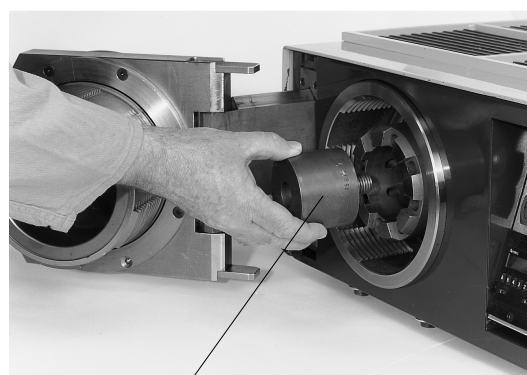
To open the tool holder remove the unlocking pin. Turn both tool holder handles anti clock-wise. Pull tool holder handles and move aside. (attention: risk of clamping) Insert clamping jaw with minor pressure into the tool holder up to a noticeable catch. Fix reshaping stud handtide using the assembly stud.



Attention: sharp-edged tools!



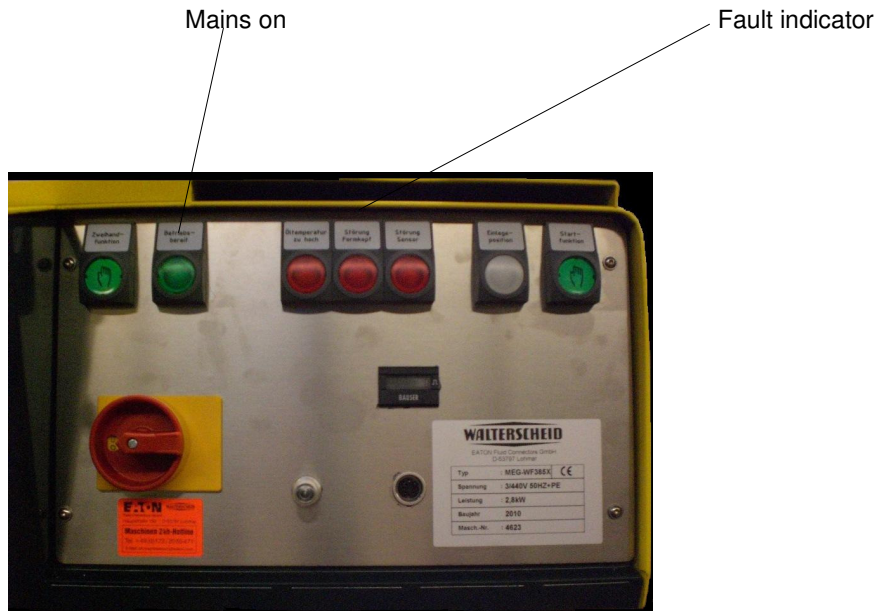
Clamping jaw



Reshaper

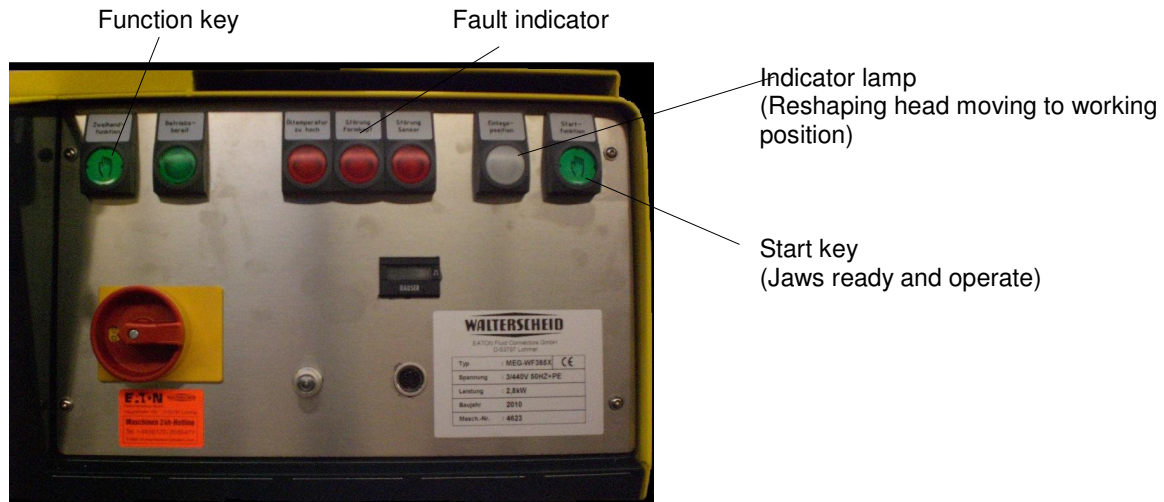
! Caution ! The clamping jaw and reshaper for each size always form a single unit.

- **Close the toolholder.** Swing the toolholder back into position and slide the toolholder back into its mount. Pull out the unlocking pin and turn both toolholder handles clockwise until the unlocking pin engages again.
- **Plug in the mains cable.**
- **Set the master switch to I.** **I ON**
The "Machine ready indicator" (Mains on) light up.



3.3 Series assembly

- Insert the tools (see 3.2) and close the toolholder. The red fault indicator lamp goes out.



- Press the **start key**. The machine is in its basic position. This procedure must also be repeated after every tool change.
- Press the **start key and function key** simultaneously and hold down for approx. 2 sec. The ready indicator (white indicator lamp) lights up. The clamping jaws move to the insertion position.
- Slide the nut onto the tube (thread facing the assembly tool).
- Insert the tube horizontally up to the stop and hold it tight!** (Tube axis and tool axis must coincide.) longer tubes have to be supported additionally.



CAUTION !

- Press the start key.** (Operate the - optional - foot switch.) The procedure runs automatically and cannot be interrupted. Tube has to be firmly fixed during the process.
- Remove the reshaped tube.
- Examine the reshaped tube for detectable quality defects, e.g. surface damage, spalling, cracks, etc.

Check the control diameter (see Appendix for dimensions)

! CAUTION ! Excessively small reshaping diameters impair the function of the fitting.

Start the next reshaping operation at **Step 3.3**

When changing tools, switch off the machine and start with Step 1 (Section 3.2).

3.4 Switching off the machine

Set the master switch to OFF.



4 Help in the event of faults

4.1 Self-correctable faults



| Observation | Possible cause |
|--|--|
| Tube slips | <ul style="list-style-type: none"> Clamping jaw dirty or worn Tube tolerances no to DIN 2391 |
| Reshaped end not fully shaped or too small | <ul style="list-style-type: none"> Tube not pressed against stop Reshaping tools defective |
| Surfaces not clean | Tools worn or material build-up |
| Machine fails to start | Toolholder poorly positioned or function key not pressed after start or tool change |
| Tool mount does not close | Remove clamping jaw, close tool mounts, activate start key |
| Machine operates too slowly | <ul style="list-style-type: none"> Oil too cold. Temperature not below 10 °C |
| In the event of any other problems, call the Walterscheid Customer Service! ! CAUTION ! Unauthorised opening of the housing invalidates our guarantee and liability. | |

If the Emergency STOP switch has been pressed during a fault, the tube can be removed by switching the machine back on and pressing the start key. The tool is then retracted and releases the tube.



Please make sure beforehand that no danger to man and machine can result from switching the machine back on.

4.2 Complaints

Call the Customer Service Department immediately to discuss complaints.

4.3 Customer and repair service

You can reach the EATON Germany GmbH Application Technology Service under the number:

Tel **(+49) 2246 / 12 – 3834 o. -3800**
FAX **(+49) 2246 / 12 – 3846**

Off the regular office hours:

(+49) 172 / 20 85 47 1

We will do our best to help you immediately.

When shipping your machine to us, please use the following address:

EATON Germany GmbH
Werk Lohmar
Wareneingang
Hauptstrasse 150
D-53797 Lohmar
Germany

If possible, please use the original packaging or a Europallet (80 x 120 cm) in order to avoid damage during transport.

You can avoid time-consuming complications in handling the problem by providing us with the following information at the outset:

- Brief description of the **fault symptoms**, preferably a processed sample with the fault marked.
- A copy of the **purchase contract**.
- Information on what steps you have already taken to eliminate the fault.
- Name and telephone number of a contact at your company.

5 Maintenance

5.1 Cleaning the machine

Disconnect the plug!

Cleaning work is restricted to external care of the machine and cleaning of the loading area for the clamping jaws.

! WARNING ! Do not allow any fluids to get inside the housing.

5.2 Care of the clamping jaws and reshaper

- Switch the machine "OFF" - **Disconnect the plug !**
- Unlock the toolholder, pull it forwards, then swing it to the side and secure it.
- Before inserting the clamping jaws, make sure that they, and the mounting area, are free of dirt, grease and chips. Check retaining rings and springs.
- Lightly oil the sliding surfaces of the toolholder from time to time.
- Check the reshaper and clamping jaws for wear.

5.3 Removing the tools

- Switch the machine "OFF" - **Disconnect the plug !**
- Unlock the toolholder, pull it forwards, then swing it to the side and secure it.
- Force out the clamping jaws by applying slight pressure and tilting at the same time.
- Twist out the reshaper.

5.4 Changing the hydraulic oil

- At least **once per year** - **after 2,000 hours of operation** at the latest.
- Use **grade HLP - D 32** to DIN 51 524, Part 2.
e.g. ESSO Nuto H32 or Aral Vitam DE 32.



Ensure that the old oil is disposed of in accordance with the regulations. The statutory provisions apply.

- In order to open the oil drain on the bottom, support the machine (190 kg !) in such a way that it cannot tip over. **! CAUTION !** Use a lifting aid.
- In order to refill, remove the plastic stopper (prise off with a screwdriver) and the screw cap on the top of the machine. After draining off the old oil, pour in the new oil (approx. 5 litres) through a funnel with a fine-mesh filter (mesh width less than 0.4 mm) up to the middle of the oil level window (right-hand side) with the machine in a horizontal position.

Date of last oil change:

| | | | |
|--|--|--|--|
| | | | |
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6 Accessories

Please check that the delivery is complete immediately upon receipt.

6.1 Standard accessories

- Extractor for the reshaper
- Conformity declaration
- Operating instructions
- Machine card
- Lubricant chart

6.2 Optional accessories

- Foot switch
- Counter

