

User Manual



POWERUNIT



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1 INTRODUCTION

This user manual is intended for the operators and maintenance personnel of this machine. The manual is not intended to replace correct training in operating the machine. We recommend training by qualified employees of EURODIMA GmbH & Co KG or by one of our authorized dealers.



All persons employed in the operation, maintenance and/or repair of this machine must read and understand these instructions completely.

Please direct inquiries to the manufacturer or an authorized dealer.



Please observe our safety features and safety precautions which are highlighted by that sign at the respective locations in the manual.

The saw system is equipped with safety features; however, various dangers can result from errors and misuse. Anyone involved in the setup, start-up, operation or maintenance of the machine must read and observe the safety precautions.



Non-observance of these safety precautions may result in

- **the injury or death of the operator or third persons**
- **damage to the machine and other assets**
- **damage to the building**
- **inefficient operation of the wall saw**

2 EU DECLARATION OF COMPLIANCE

Manufacturer: EURODIMA GmbH & Co KG
Lagerstrasse 6
A-5071 Wals bei Salzburg



Labelling: Supply- and control unit

Type: PowerUnit

We herewith declare that due to its conception and construction and our health requirements, the above-named machine conforms to the essential safety and health requirements of the following EU directives.

Low voltage directive 2006/95/EG
Electromagnetic compatibility 2004/108/EG
Machine directives 2006/42/EG

The following harmonized norms are applied

- EN 61010-1
- EN 61010-2
- EN 50081-1
- EN 50081-2
- EN 6100-series
- EN 614-1
- EN 894-series
- EN 954-1

The following documentation is available in full in the operating instructions

Description of precautions to prevent machine-related dangers

Operator instructions for the machine

This declaration is no longer valid if the machine is modified in any way without prior consultation with us and without our prior approval.

Wals, 7th February 2020



Ludwig Vitzthum
Gewerberechtigter Geschäftsführer

3 INTENDED USE

The EURODIMA GmbH & Co KG supply- and control unit PowerUnit must only be used in conjunction with machines being mentioned at point 4. The electric connection must be done according to the national regulations.



Important safety note

The Eurodima GmbH & Co KG machines may not be used in conjunction with other brands of machines unless recommended or approved by EURODIMA GmbH & Co KG. Non-observance will void the warranty and any product liability.

Any other use of the machine is deemed to be improper use! The manufacturer assumes no liability for any resulting damage. The user has sole liability.

4 GENERAL NOTES

4.1 Function

The PowerUnit is a supply- and control unit for the wall saw WS20(E/H) and the motor WS20PM. The motor rpm is progressively adjustable. Feed and swivel are regulated by the remote control connected to the PowerUnit.

4.2 Scope of application

The PowerUnit is the supply- and control unit for the following machines:

- Motor WS20PM 20kW
- Wall saw WS20(E/H)

5 SAFETY

The whole system is equipped with safety installations, though, when handling incorrectly or misusing the system, there is imminent danger.

At the operation of electric systems, some parts are, inevitably, dangerously energized. All persons who are connected to the set-up, the starting, the operation and the maintenance of this system, must have carefully read the following advice and adhere to it.



Warning

Check the compatibility of the voltage and the frequency with the data on the rating plate prior to use. Repairs must be carried out only by qualified personnel.

The following must be observed:

- ambient and operating conditions contained in the catalogue, the user manual, the rating plate and other product information
- the applicable accident prevention regulations
- proper use of tools
- use of personal safety equipment.

5.1 General safety precautions

- Keep your work area tidy, e.g. completely extend cables and hoses. An untidy workplace can cause accidents.
- Ensure good lighting.
- Use the wall saw only for the purposes and work it was designed for.
- Observe the maintenance regulations.
- Clean the wall saw after every use.
- Do not leave any tools attached to the machine.
- Check the condition and function prior to every use.
- Do not operate the system if it is damaged or if operating elements do not function properly.
- The voltage must correspond with the data on the rating plate.
- Keep electric cables and plug connections dry and clean.
- For safety reasons press the emergency stop button when changing a tool or de-installing the wall saw.
- Use only approved extension cords with an adequate rating.
- Always unplug the wall saw prior to cleaning.
- When unplugging, always pull on the plug, never on the cable.

5.2 Securing the building site

The building site must be secured in coordination with the contractor. The general public must not be allowed on the building site.

Clearances:

From the side of the cut: 3 m
In the direction of the cut - radial from the saw blade: see subparagraph 5.4

5.3 Prohibited uses

Must not be operated:

- In potentially explosive areas
- Near flammable materials
- With materials containing asbestos, aluminum and magnesium as well as highly flammable materials

5.4 Hazards

- Noise
- Dust
- Never stand in the travel direction of the saw blade.

5.5 Protective clothing



Wear suitable protective clothing. Do not wear wide clothing or jewellery that could be caught in moving parts. Wear a helmet, safety glasses, work gloves, safety boots, ear protectors and a hair net for long hair. Wear a dust mask when working in enclosed areas. Provide sufficient fresh-air supply.

5.6 Safety equipment



Operation without safety equipment is prohibited!
Do not undertake any modifications to the machine that impair the safety equipment.

Do not remove or modify any safety equipment. Check the safety equipment prior to cutting.

5.7 Emergency measures

In case of an emergency, switch off the machine with the emergency stop button on the remote control or PowerUnit. Operation may continue only after the malfunction has been repaired.

5.8 Approved operators



Youths under the age of 16 and untrained persons must not operate the machine! Unless under the supervision of qualified personnel for training purposes.

The owner of the machine must provide the operator with the user manual and ensure that he has read and understood it. Only then may he operate the machine.

Areas of responsibility for the various activities with the machine must be clearly defined and observed. There must not be any unclear responsibilities since this can adversely affect user safety. The owner must ensure that only authorized personnel work on the machine. The owner is liable towards third persons within the work area.

5.9 Storage and transport

The storage area must be dry, clean and frost-free. During transport the machine must be secured against sliding and tipping.

Setting up the PowerUnit on-site with the crane:

The PowerUnit may only be lifted on the handle. It is forbidden to use any other bar! Only appropriate and technically acceptable hoisting devices and load-carrying equipment with sufficient load capacity may be used.



Do not stay or work under floating loads!

Furthermore, pay attention to correct hooking in and locking.



The shipping of the PowerUnit via forwarding agency is only permitted in original packaging.

6 TECHNICAL DATA

Power connection	400/460V; 50/60Hz; 3PH, N, PE; <i>optionally</i> 16A or 32A
Frequency range	0-300Hz
Power	20kW
Protection class	IP 44
Dimensions	330x540x240 mm
Total weight	18 kg

Control:

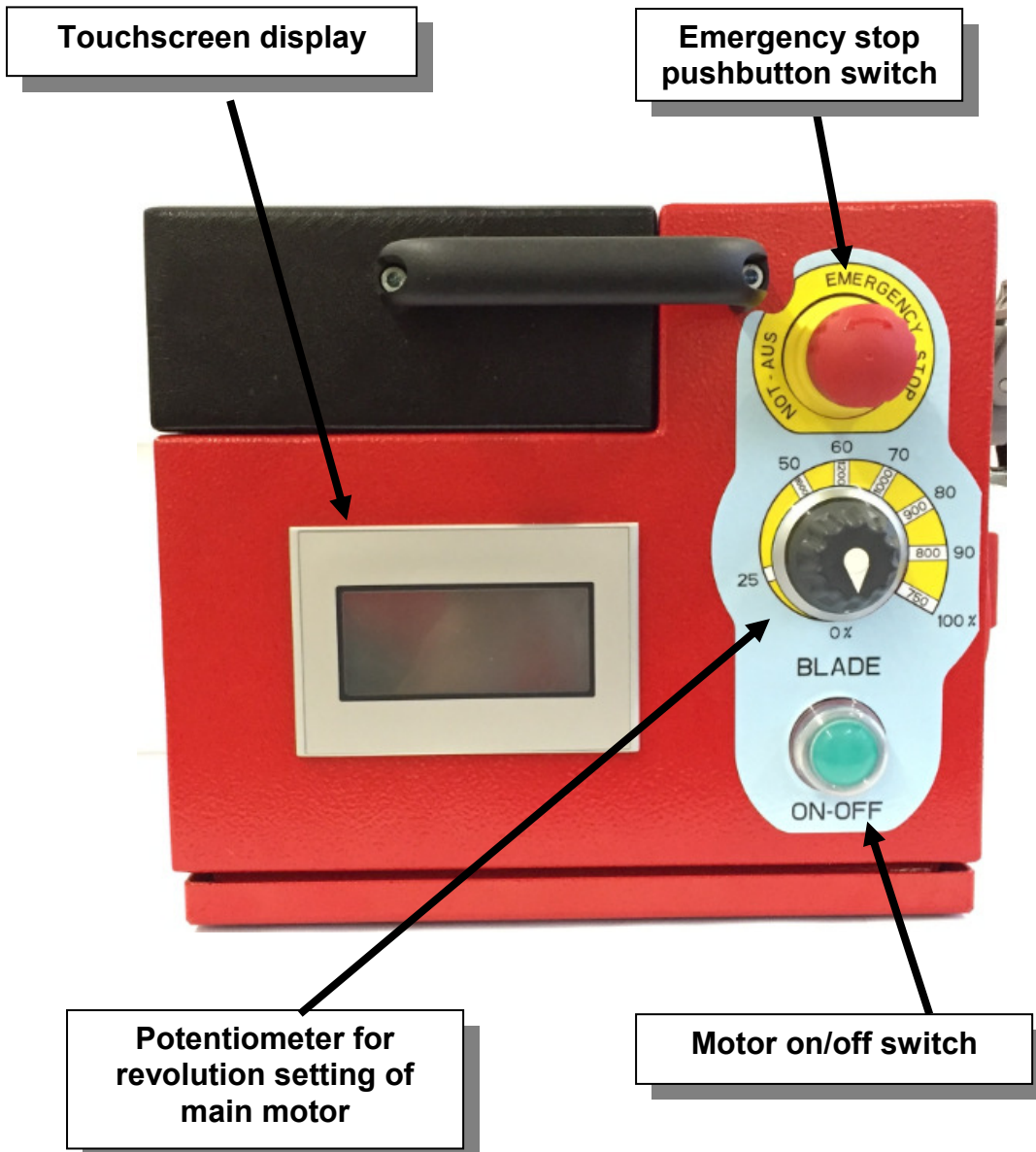
Type EURODIMA GmbH & Co KG PowerUnit, control voltage 24 VCD

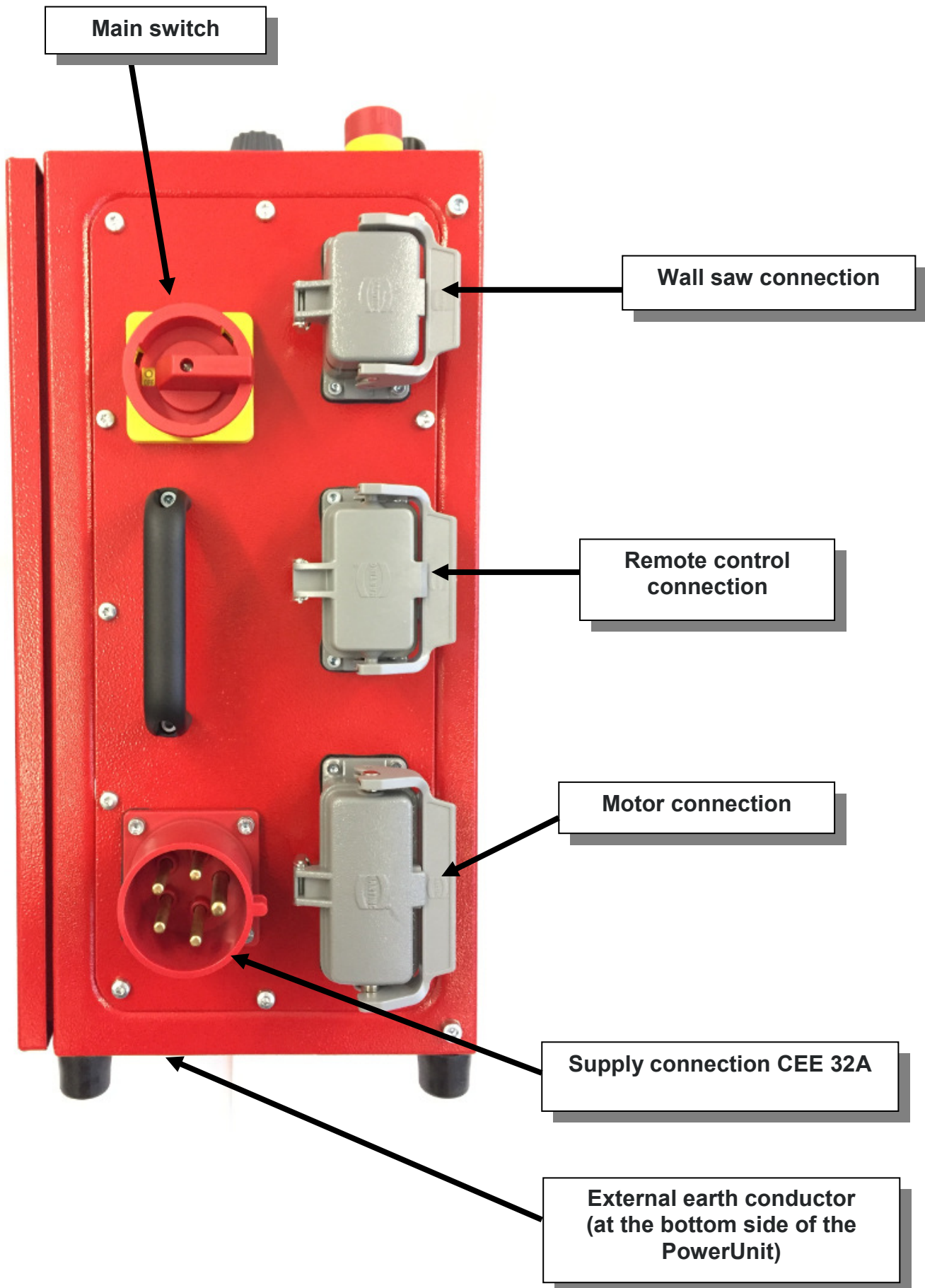
Consisting of:

- Frequency converter 20kW
- 2pcs. Frequency converter 1,5kW
- Switching power supply 24VDC

Interior ventilation: air cooling

7 DESIGN OF THE SUPPLY- AND CONTROL UNIT





7.1 Touchscreen display

All information is shown on the display as plain text or graphically.

7.2 Potentiometer for revolution setting of man motor

With the potentiometer, the revolution of the main motor is being set according to the blade diameter. The chosen revolution is shown on the screen with xxx rpm.

7.3 Emergency stop mushroom-head pushbutton switch

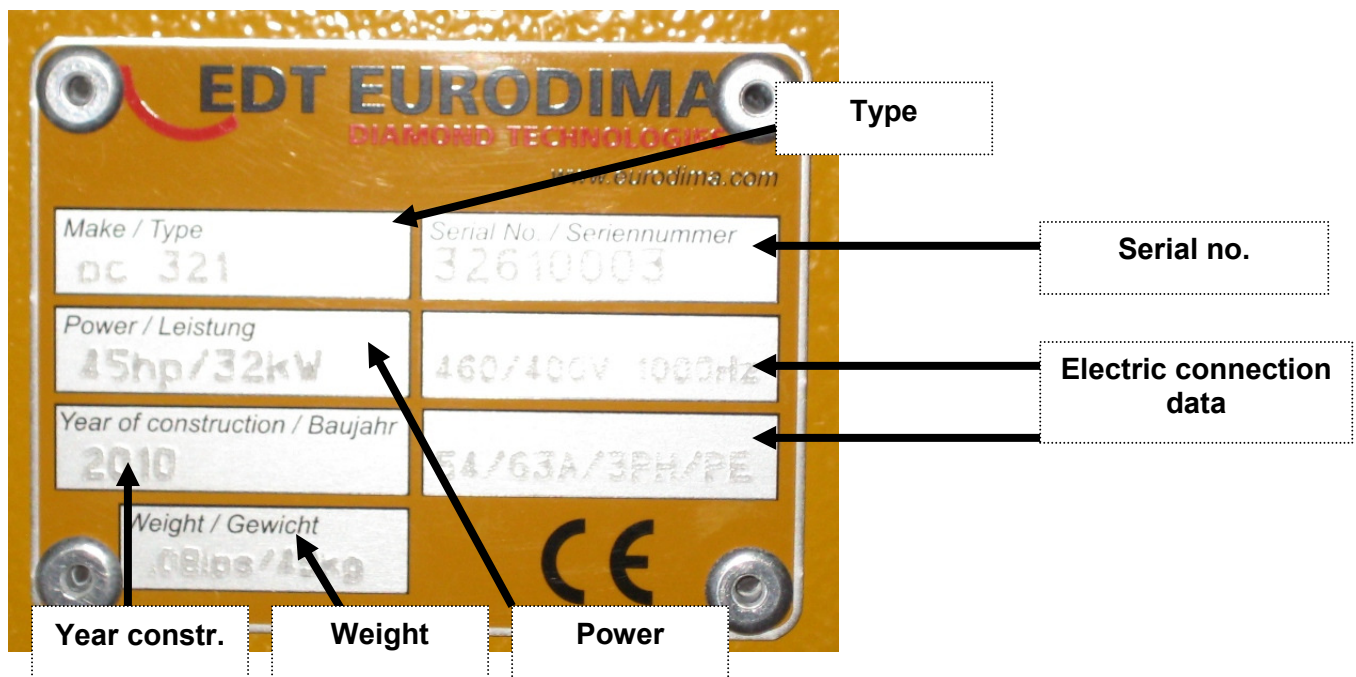
As a rule, only use the emergency stop button in case of emergency or during reconstructions at the connected sawing machines.

When the emergency stop button is pressed, the screen shines red!

When releasing the emergency stop, the screen returns to the operating-screen, and the screen shines green.

7.4 Type plate

At the type plate, the following data are shown:



7.5 Main switch

With the main switch the PowerUnit gets switched on and off. After the network connection, the indoor ventilation is turned on automatically. By turning the main switch into the “ON” position, the PowerUnit is activated and the start screen is shown.

7.6 Remote control connection

10-pin connection plug for remote control with locking bar and locking cap.

7.7 Wall saw connection

6-pin connection plug for wall saw with locking bar and locking cap.

7.8 Motor connection

Connection plug for motor with locking bar and locking cap.

7.9 Supply connection CEE 32A

Connection plug for power supply

7.10 Remote control



8 SETUP

8.1 Preparations at the workplace

Warnings and safety precautions:

Before using the wall saw read the chapter Safety and follow the instructions.

The PowerUnit must be installed distantly on the side of the saw, out of the danger area. The user must always hold the remote control in his hands so that the emergency stop button could be used in emergency situations.

Energy supply:

Ensure that the power supply at the construction site is properly fuse-protected.

8.2 Extension cords

Use only approved extension cords of adequate ladder cross-section.

Euro standard plug in compliance with EN 60309 or UL/CSA 50 A / 480 V

8.3 Cooling water



The cooling water supply must be provided and the water hoses assembled prior to start-up.

Minimum water pressure: 2 bar

Cooling water throughput: 4 – 9.5 l/min

Maximum water pressure: 5.5 bar

Use only clean tap water in order to prevent damage to the drive unit.

The cooling water of the drive unit emerges via the blade flange cooling the saw blade and binding the cutting dust. The motor and gear temperature vary according to the temperature of the cooling water and the water pressure.

Ambient temperature: max. +45°C

At temperatures under -5° C, the cooling water must be preheated or antifreeze must be added.

8.4 Clarification and security in the workplace

Approval of the building supervisor for sawing and planning the cut-outs. Affix the necessary supports, barriers and warnings for third persons.

8.5 Electrical connection

The PowerUnit power is supplied by a 32A-CEE plug connection at the side.

The special regulations of the local electricity network are to be complied with. The voltage may not exceed or fall below the following values as the frequency converter would not release:

Voltage: min. 380 Volt (-10 %)
 max. 480 Volt (+10 %)

The amperage (according the upstream fuse) that is available on the construction site can be set with the power setting mode. If not set, the recently used amperage is active.



The PowerUnit is a system with an integrated frequency converter. Therefore it's necessary to ensure that the control unit is connected to a power supply with a sensitive residual current circuit breaker according to DIN VDE 0100-530. Furthermore, the protective conductor of mobile devices have to be monitored as described in DIN EN 50178 / VDE 0160. This is possible by means of a fixed terminal or laying a second protective conductor (connecting point on the bottom side of the PowerUnit is given)



**Always consider the right order when plugging in:
When starting, first motor cable and remote control,
then power plug.
After shutdown, first power plug,
then motor cable and remote control.**



It is not allowed to use any machines not produced or authorized by EURODIMA GmbH & Co KG with these sockets.



The electrical values are located on the Type plate and the user manual.

All the plugs are coded and each is designed differently to prevent confusion. Never attempt to connect a plug with force!

Secure all the plugs prior to starting up the wall saw. Always close the protective caps after removing the connecting cables in order to keep electrical connections clean.

Bent or broken connection pins must be immediately replaced with new ones. Electric repairs may only be carried out by EURODIMA GmbH & Co KG or its authorized dealers!

9 SAFETY CHECKS, OPERATING AND SAWING

9.1 Pre-start check

Read and observe the user manual and the safety precautions prior to operation.



Nonobservance of the instructions may result in the uncontrolled start-up of the machine or damage to the machine. EURODIMA GmbH & Co KG is not liable for damage caused in this way.

The machine may only be switched on if all the electrical connections and cooling water hoses have been properly connected.

- The safety equipment must be checked
- All bolts and nuts must be tight
- The saw drive must be correctly mounted on the rail and locked.
- The blade cover must be in place.
- The remote control, electric supply cables and water must be connected.
- All control knobs on the remote control and the control unit must be set to zero.




**Only operate the wall saw if the blade cover is attached.
Do not touch any movable parts of the machine during start-up → risk of injury.**

Do not operate the machine with damaged parts or if the controls are not functioning properly. Defects in the wall saw/wire saw must be repaired by EURODIMA GmbH & Co KG or an authorised dealer

9.2 Handling

At activation of the system by use of the main switch, the display first shows “Eurodima”. After about 10 seconds, the display changes to the current selection, on condition that the emergency stop button isn't pushed, a motor and a remote control are connected and the system isn't out of the service time. Out of the service time, the display shows the following:



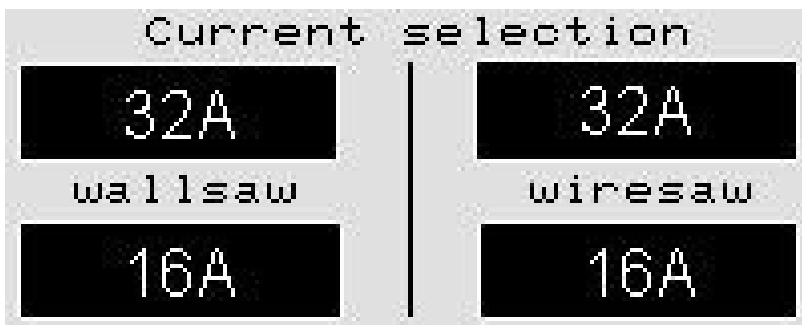
**Service is due!!
by further use
the warranty will
expire**

In this case, contact the company EURODIMA GmbH & Co KG for a service appointment immediately! Any damage of the machine, emerging at usage out of the service time (250 working hours), EURODIMA GmbH & Co KG wouldn't take over any liability.

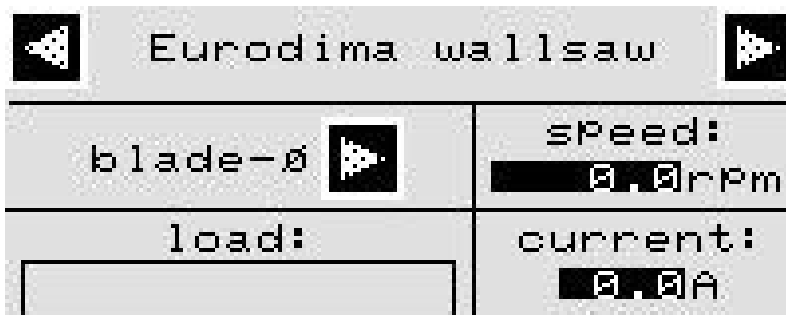
However before the service is due, the display shows a warning notice:



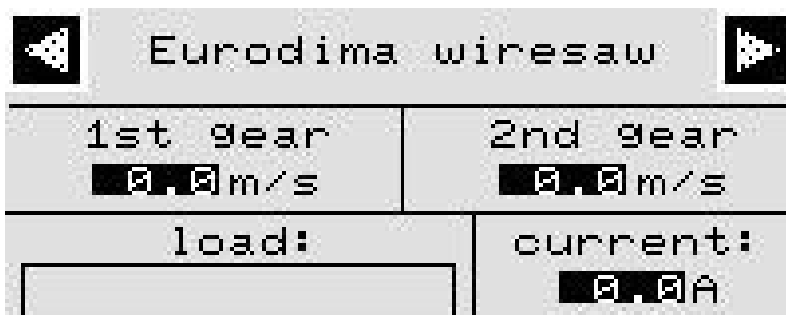
At the current selection, the available amperage of the construction site and the type of work (wallsaw or wiresaw) get set. An amperage selected to high could cause tripping of the preceding circuit breakers.



After selecting the current, the display shows the operating-screen:



or

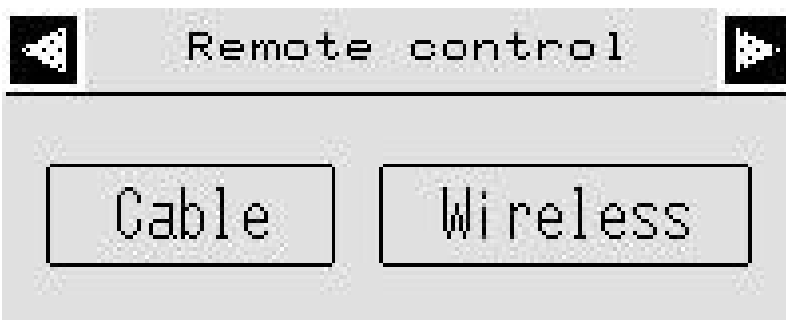


At the first start-up of the machine, the type of the remote control has to be selected (This selection gets defined as standard and gets saved), therefor you have to do the following:

Press the emergency-stop and then the arrow left in the bottom left corner of the display:



Now the Display shows the selection screen for the remote control:

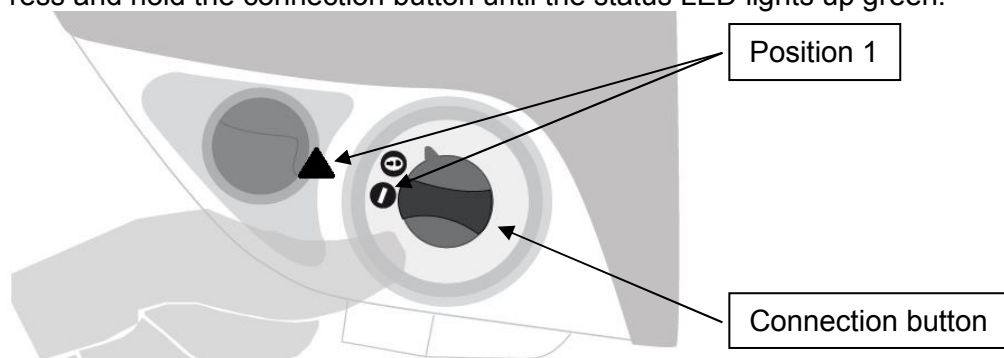


It's not permissible to connect another remote control when the wireless remote control is selected!

When using a cable remote control, you will automatically return to the operating-screen after selecting the remote control and unlocking the emergency stop button.

When using a wireless remote control, it must be coupled to the receiver in the PowerUnit, to do this proceed as follows:

- Unlock the connection button by pressing the button and turning it to position 1.
- Unlock the emergency stop button on the remote control and PowerUnit.
- Wait a short time until the status-LED stops flashing.
- Press and hold the connection button until the status LED lights up green.



- The remote control is now ready for use and the PowerUnit shows the operating-screen again.
- If the emergency stop button on the remote control is pressed, this process must be repeated.

Now the Motor can be started by double-click the on/off switch on the PowerUnit or remote control. Current and load shown on the display, change depending on the load of the Motor and the speed depends on the potentiometer adjustment.

To switch off the motor, the on/off switch must be pressed once.

Feed and lowering are controlled with the two potentiometers on the remote control and can be operated simultaneously.



To avoid any uncontrolled motor start, the emergency-stop button has to be pressed for working at the machine.



Turning the machine on and off permanently by use of the main switch or interrupting the power supply could cause a damage of the frequency converter

Display-lighting:

Is the machine ready for operation and no Error is active, the display shines green.

During operation, the display shines orange.

In case of an error, the display shines red.

Additional function:

If the blade gets stuck and the machine can't be started anymore, you can use the "BOOST" function.

This function gets activated by holding down the on/off button while starting the engine. If the "BOOST" is activated, a higher current is allowed for a short time and thus more power gets released. The display shows the function by displaying "BOOST!" instead of "current:".

10 SERVICE AND MAINTENANCE

We recommend an annual inspection of the wall saw by EURODIMIA GmbH & Co KG or an authorized dealer.

10.1 Safety checks

The electrical and mechanical safety of the drive unit and its accessories must be inspected at the intake and according to the national regulations.



10.2 Maintenance

Every 250 hours of wall saw operation, bring the motor to the EURODIMIA GmbH & Co KG service.

10.3 Daily cleaning

Keep the PowerUnit clean, wipe with a dry or damp cloth only.

Never use a water jet or high pressure cleaner for cleaning.

11 TROUBLE SHOOTING

Current conditions:

Occurring problems at construction site are often due to lossy network. The frequency converter works at 380 – 480V +/- 10%, means a working range between 340V and 530V. If these electrical parameters are beyond this range, the system will show an error. If the system shows low performance, a phase deficiency may be the cause. Furthermore it's absolutely required that the power supply is grounded properly.

Disorders, error analysis and error correction:

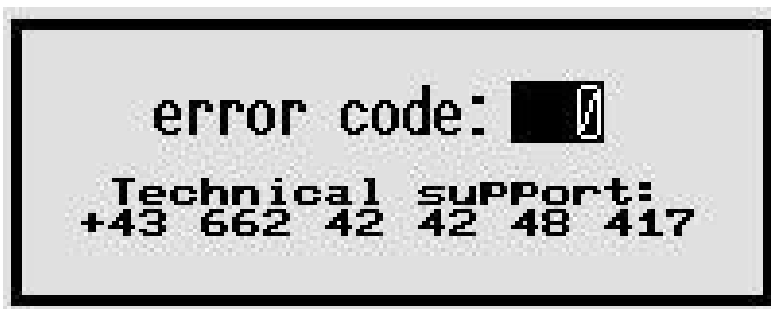
Error indicator on the display:

All errors and failures are indicated with plain text on the display. Except for “emergency stop” (self-quitting), all errors can be quitted with “Reset” as soon as the error is not active any more.

The most occurring errors are shown as a Text with an error description and a suggested solution, as for example:

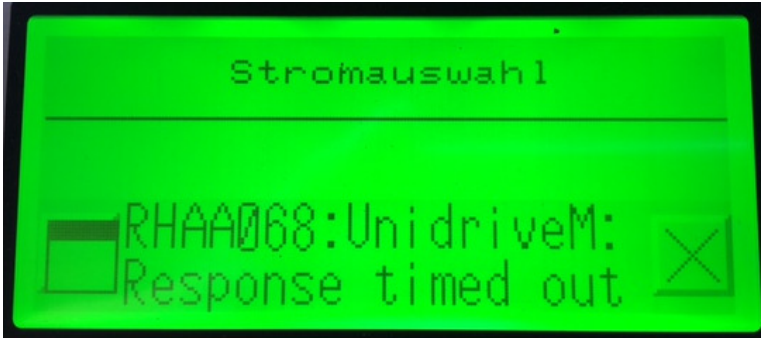


In case of another error the display shows::

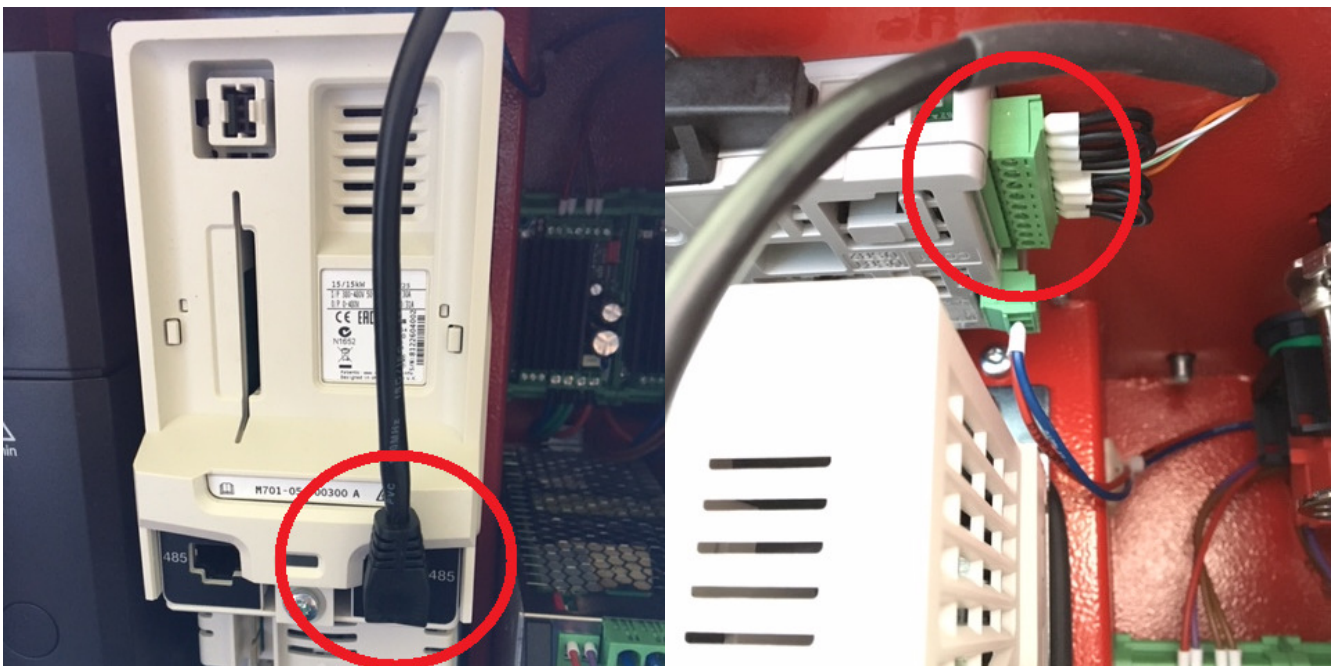


In this case, please call the number shown on the display to reach the technical support.

If the display is showing the following code,



the connection between the frequency converter and the display is broken. In this case please check the connectors from the display and frequency converter.



12 LIABILITY AND WARRANTY

Unauthorized modifications and changes to the machine as well as non-observance of the operating instructions void the manufacturer's liability for resulting damage.

We only warrant error-free operation for original replacement parts manufactured by EURODIMA GmbH & Co KG. Any guarantees and warranty become void if machines or machine parts have been opened. This warranty is valid on condition that the machine is used, handled, maintained and cleaned according to the operating instructions.

Claims under the warranty will be recognized up to 12 months from the date of purchase (invoice date).

The warranty includes the repair or replacement of defective parts free of charge. Parts subject to normal wear are excluded from this warranty.

EURODIMA GmbH & Co KG is not liable for direct, indirect or consequential damage from defects, loss or expenses in connection with or resulting from the unsuitability of the device for a specific purpose. Implied assurances of use or suitability for a specific purpose are expressly excluded.