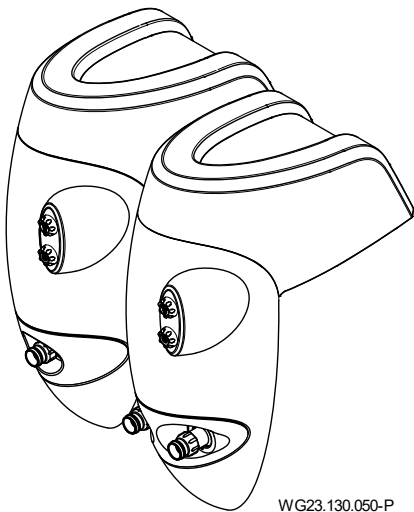




**EN Translation of original operation manual for overhang counter swim unit**

**BADUJET Perla** **BADUJET Riva**  
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## **Glossary**

### **Unit**

Pump built into the system.

### **Pressure line**

Pipe connected to the pressure discharge.

### **Pump**

Machine with motor.

### **Suction line**

Pipe connected to the suction discharge.

# 1 About this document

## 1.1 Using this manual

This manual is a component of the pump/unit. The pump/unit was manufactured and tested according to the generally accepted rules of technology. However, if the pump/unit is used incorrectly, not serviced enough or tampered with, danger to life and limb or material damage could result.

- Read the manual carefully before use.
- Keep the manual during the service life of the product.
- Provide access to the manual for operating and service personnel at all times.
- Pass the manual on to any future owners or operators of the product.

## 1.2 Target group

This manual is aimed both at qualified specialists and the end customer. Descriptions aimed only at qualified specialists are indicated accordingly (qualified specialist). This indication applies to the whole point. All other points are universally valid.

## 1.3 Other applicable documents

- Packing list

### 1.3.1 Symbols and means of representation

Warnings are used in this manual to warn you of personal injury.

- Always read and observe warnings.

#### **DANGER**

Danger for people.  
Non-observance results in death or serious injury.

#### **WARNING**

Danger for people.  
Non-observance can result in death or serious injury.

#### **CAUTION**

Danger for people.  
Non-observance can result in light to moderate injury.

#### **NOTICE**

Notes to prevent material damage, for better understanding or to optimise the workflow.

Important information and technical notes are specially marked to explain correct operation.

Symbol	Meaning
→	Instructions for a one-step action.
1. 2.	Directions for a multi-step action.
	→ Observe the order of the steps.

## 2 Safety

### 2.1 Intended use

For installation in all types of swimming pool as a talking point, for fitness training, as a wave or air bubble bath, for underwater massage, after medical consultation, for endless no-turn swimming.

Observing the following information is vital for intended use:

- This manual

The pump/unit may only be operated within the application limits, as specified in this manual. Use in water with a salt content exceeding 0.66 g/l must be authorised by the manufacturer/ supplier.

The device can be used commercially.

Any other use or use exceeding this is **not** an intended use and must first be authorised by the manufacturer/supplier.

#### 2.1.1 Possible misuse

- Installing the pump/unit with stress on the pipes.
- The pump/unit is not attached sufficiently.
- Opening and servicing of the pump/unit by unqualified personnel.

### 2.2 Personnel qualification

This unit can be used by **children** aged 8 and over as well as by persons with limited physical, sensory or mental capacity or by people with a lack of experience or knowledge, provided that they are supervised or have been instructed in the safe use of the unit and understand the resulting dangers.

**Children** may not play with the unit. Cleaning and **user maintenance** may not be carried out by **children** without supervision.

→ Ensure that the following work is only performed by trained professionals with the following qualifications:

- For mechanical work, for example replacing ball bearings or mechanical seals: qualified mechanics.
- For work on the electric system: electricians.

→ Ensure that the following requirements are fulfilled:

- Personnel who do not yet have the appropriate qualifications must receive the required training before being allowed to work on the system.
- The personnell's responsibilities, for example working on the product, electric equipment or hydraulic systems, are set based on their qualifications and the job description.
- The personnel have read this manual and understand the necessary working steps.

### 2.3 Safety regulations

The operator of the system is responsible for the adherence to all relevant statutory regulations and guidelines.

→ Observe the following regulations when using the pump/unit:

- This manual
- Warning and information signs on the product
- Other applicable documents
- The valid national regulations for accident prevention
- The internal occupational, operational and safety regulations of the operator

### 2.4 Protective equipment

Reaching into moving parts, e.g. coupling and/or impeller fan, can cause serious injury.

→ Never operate the pump/unit without protective covers.

### 2.5 Structural modifications and spare parts

Alterations or modifications can affect operational safety.

→ Never modify or alter the pump/unit without the manufacturer's permission.

→ Only use original spare parts and accessories authorised by the manufacturer.

### 2.6 Signs

→ Ensure that all the signs on the complete pump/unit remain legible.

## 2.7 Residual risk

### 2.7.1 Falling parts

The lifting hooks on the motor are designed for the weight of the motor. If they are used to lift a complete overhang counter swim unit the hooks can break off.

- The overhang counter swim unit must be mounted on the base plate.
- Only use hoisting and load-bearing equipment which is suitable and technically sound.
- Do not stand under suspended loads.

### 2.7.2 Rotating parts

There is a risk of shearing and crushing due to exposed rotating parts.

- Only perform servicing when the pump/unit is not in operation.
- Prior to servicing, ensure the pump/unit cannot be switched back on.
- Immediately after finishing servicing, reattach or reactivate all protective equipment.

### 2.7.3 Electrical energy

There is an increased risk of electric shock when working on the electrical system due to the humid environment.

Electrical protective earth conductors which were not installed correctly can also result in electric shocks, for example due to oxidation or cable breakage.

- Observe VDE and utility company regulations.
- Build swimming pools and their protection according to DIN VDE 0100-702.
- Before working on the electrical system, take the following measures:
  - Disconnect system from the power supply.
  - Attach a warning sign: "Do not switch on! The system is being worked on."
  - Ensure that the system is free of voltage.
- Check the electrical system regularly to ensure it is in proper working condition.

### 2.7.4 Hot surfaces

The electric motor can reach temperatures of up to 70 °C. There is a risk of being burned.

- Do not touch the motor during operation.
- Allow the pump/unit to cool down before servicing it.

### 2.7.5 Suction danger

The following dangers can result:

- Sucking towards, sucking in or jamming of the body or body parts, clothing, jewellery
- Knotting of the hair
- Maintain installation distance to the pool wall of  $\leq 45$  mm
- Never operate the system without a cover and light cover.
- Do not wear loose swimwear.
- Use a bathing cap if you have longer hair.
- Check and clean the suction openings regularly.

### 2.7.6 Danger of injury at the inlet nozzles

Inlet nozzles and massage accessories operate at high pressure and with high flow speeds. This can result in injuries to eyes or other sensitive body parts.

- Avoid direct contact of these body parts with the water jet from the inlet nozzles or the massage accessories.

## 2.8 Faults

- In case of a fault, immediately switch the pump off and remove it from operation.
- Have all faults repaired immediately.

### Seized pump

If a pump seizes, and is switched on several times repeatedly, the motor can be damaged. Observe the following points:

- Do not switch the pump/unit on repeatedly.
- Turn the motor shaft by hand. See point 6.1.2 on page 53.
- Clean pump.

## 2.9 Preventing material damage

### 2.9.1 Leakage and pipe breakage

Vibrations and thermal expansion can cause pipes to break.

- Install the pump/unit in a manner which reduces structure-borne and airborne noise transmission. When doing so, observe relevant regulations.

Excessive force on the housing components can cause damage.

- The cover should not be stood on or used as a diving board.
- If the pump leaks, the unit may not be operated and must be disconnected from the mains power supply.

### 2.9.2 Dry running

If run dry, mechanical seals and synthetic parts can be destroyed within only a few seconds.

- Do not allow the pump to run dry. This also applies to checking the rotation direction.
- Purge air from pump and suction line prior to start-up.

### 2.9.3 Overheating

The following factors can result in the pump overheating:

- Motor overload switch set incorrectly.
- Air vents blocked by leaves, branches, ...
- Lack of insulation wall.
- For pumps with a three-phase motor, install a built-in or external overload switch and set it correctly.
- Only operate the unit with the insulation wall (55) installed.
- Do not exceed the permitted ambient temperature of 40 °C.

### 2.9.4 Blockages in the pump

Pieces of dirt in the suction line can clog and block the pump.

- Remove foreign matter (branches, leaves, clothes, ...) from the suction opening.
- Check how easily the pump rotates before starting it up and after longer idle or storage periods.

### 2.9.5 Drainage

An insufficient drain gap can damage the motor.

- Do not block or seal the drain gap between the pump housing and the motor.

### 2.9.6 Risk of frost

- Drain the pump/unit and pipes at risk of freezing in plenty of time.
- Remove the pump/unit during periods of frost and store it in a dry room.

### 2.9.7 Water temperature

The water temperature must not exceed 35 °C.

### 2.9.8 Safe use of the product

Safe use of the product is no longer guaranteed in the following instances:

- If the pipework is not in proper condition.
- If the pump seizes. See point 2.8 on page 39.
- If protective devices are damaged or missing, e.g. protection against accidental contact.
- If there is stress on the pump/unit or pipes during installation.

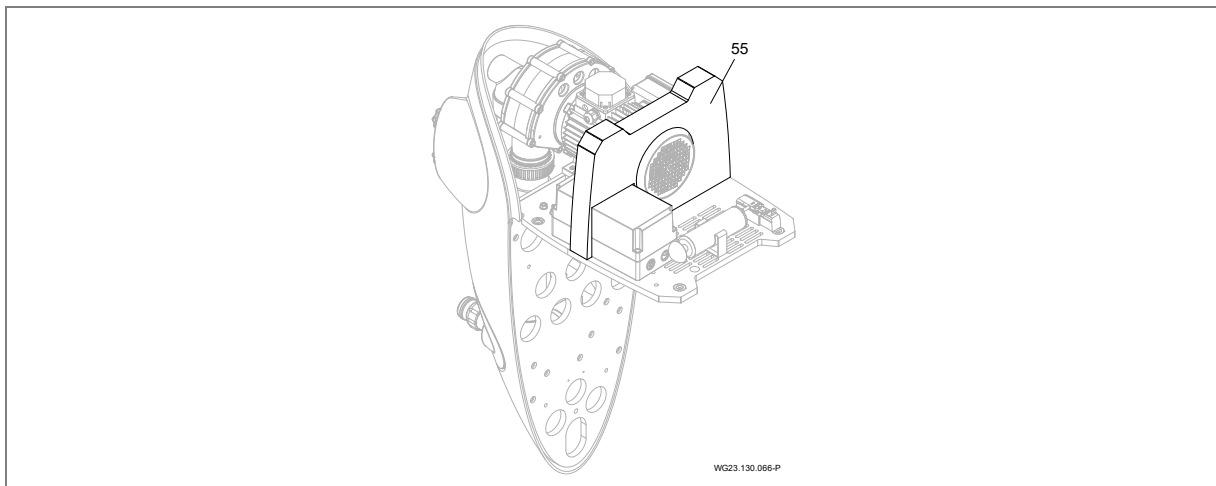


Fig. 20



### 3 Description

#### 3.1 Components

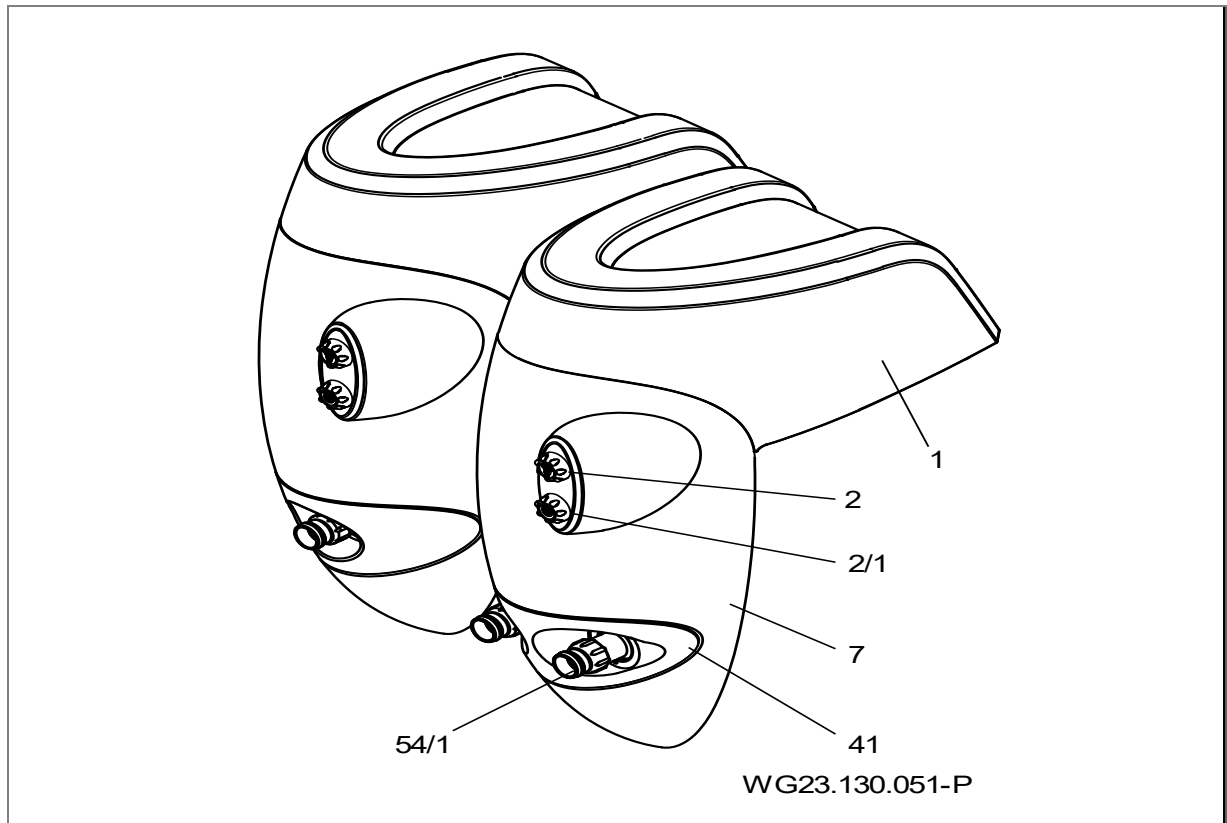


Fig. 21

(1)	Cover	(2)	Light ON/OFF
(2/1)	Unit ON/OFF; Air regulator	(7)	Cover
(41)	Light protection cover	(54/1)	Nozzle(s)

#### 3.2 Function

The overhang counter swim unit draws water from the swimming pool via a suction line and pumps it back into the swimming pool via the pressure line through the nozzle(s). The pump is turned ON/OFF using the pneumatic button (2/1). By turning the pneumatic button (2/1), air can also be added to the nozzle flow as an option. The flow rate, and therefore the effect of the counter swim unit, can be set using the adjustable nozzle (54/1). The unit is equipped with integrated, underwater LED lighting for effect lighting that can be switched ON/OFF using the pneumatic button (2).

## 4 Transport and intermediate storage

### 4.1 Transport

- Check the delivery conditions:
  - Check the packaging for transport damage.
  - Determine damages, document them with photographs and contact the distributor.

### 4.2 Lifting the overhang counter swim unit

#### **▲ DANGER**

Goods being transported can fall and result in death or crushing of limbs!

The lifting hooks on the motor are only designed to hold weight of the motor. If they are used to lift a complete overhang counter swim unit the hooks can break off.

- The overhang counter swim unit must be mounted on the base plate.
- Only use hoisting and load-bearing equipment which is suitable, technically sound and can bear sufficient weight.
- Do not stand under suspended loads.

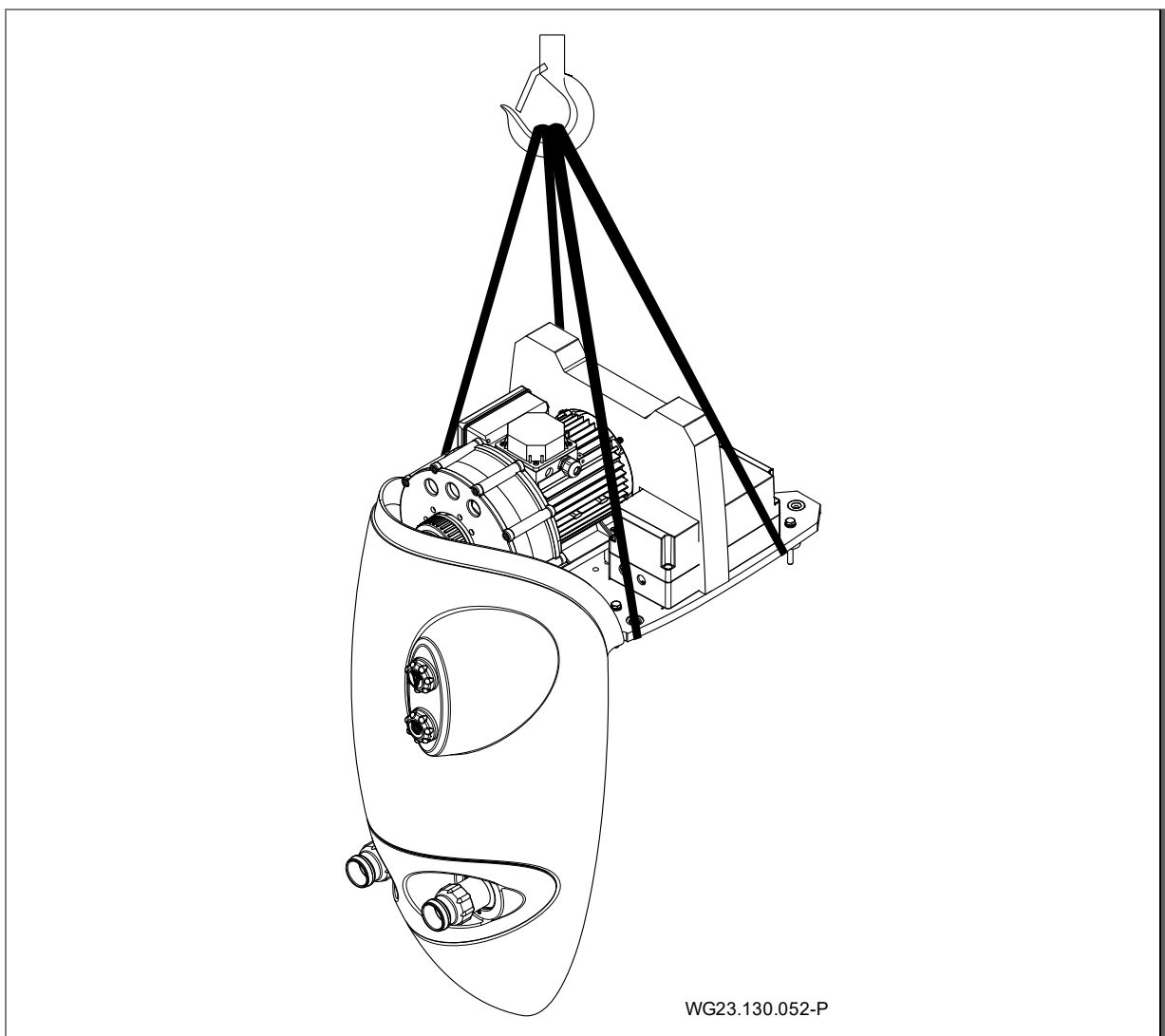


Fig. 22

### 4.3 Storage

**NOTICE**

Corrosion is possible due to storage in humid conditions with fluctuating temperatures!  
Condensation can corrode windings and metal parts.

- Store the pump/unit in a dry environment at a temperature which is as constant as possible.
- 

**NOTICE**

Damage or loss of individual parts!

- Do not open the original packaging until installation or keep individual parts in the original packaging until installation.
- 

### 4.4 Returns

- Drain the pump/unit completely.
- Rinse and clean the pump/unit with clear water.
- Pack the pump/unit in a box and send it to the specialist retailer or manufacturer.

## 5 Installation

### 5.1 Installation site (Qualified specialist)

#### 5.1.1 Assembly site

- Select the assembly site and prepare it in accordance with "Fig. 23" on page 45. If the unit is being used in an above ground pool, the telescopic support foot must be used, for attachment instructions see "Fig. 24" on page 45.

#### 5.1.2 Installation position

- The unit is normally installed on the narrow side of the pool with a recommended minimum pool length of 4 m.
- From a pool width of 4 m, installation on the longer side is also possible.
- For round and oval pools made from smooth sheet steel or plastic, a minimum radius of 2 m is required.
- For round and oval pools made from made from stone or concrete, a flat surface with a minimum width of 480 mm is required.
- The water depth at the position of installation should be between 1.2 m and 1.5 m. Thus the massage hose can be used appropriately and optimally.
- The volume flow in the system can lead to circulation in the pool. This can cause an overlap of the volume flow and the return flow which becomes noticeable in the form of an apparent stall in the flow. This happens, above all, when special pool shapes or, for example, steps are installed. Generally, this has only happened very rarely so far and does not constitute a defect. Adjusting the nozzle is usually the simplest remedy here to favourably influence the flow in the pool.

#### 5.1.3 Checklist

- Check the unit contains all parts listed in the packing list.

#### 5.1.4 Fastening the unit to the ground

- Set the unit on the edge of the pool and mark the mounting holes.

#### 5.1.5 Drilling the mounting holes

- Lift the unit and drill the Ø10 mm holes on the markings. See "Fig. 23" on page 45.

#### 5.1.6 Inserting the brass dowels

- Insert brass dowels (25) and screw on the metal vibration buffers (26). See --- fehlender Linktext -- - on page 46.
- Ensure that the bolts anchor the buffers securely into the base, so that the unit sits securely.

#### 5.1.7 Securing the unit

- Set the unit on the metal vibration buffers and secure it with hexagonal bolts (32), toothed locked washers (31) and flat washers (30). See "Fig. 24" and "Fig. 25" on page 46.

#### 5.1.8 Distance compensation

Maintain the same overall distance between the housing and the pool edge. This adjustment gives the unit added stability. See "Fig. 26" on page 46.

### 5.1.9 Power supply

Before connecting the power supply take into account the "Elektrischer Anschluss (Fachpersonal)" on page 47 and "Connection by customer" on page 47.

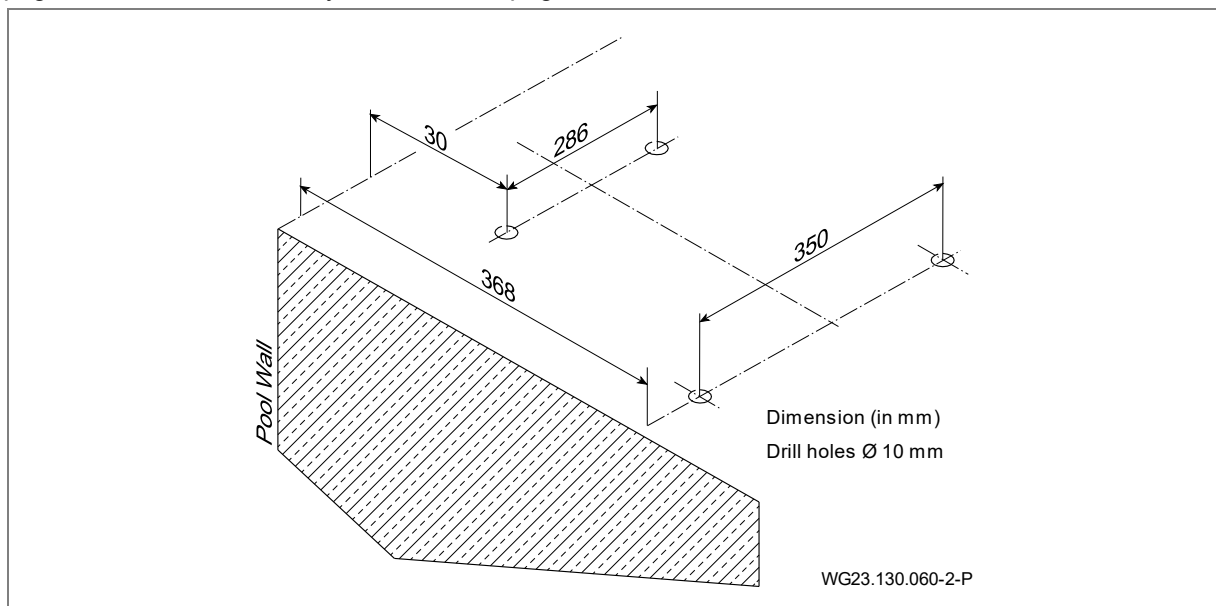


Fig. 23

### Attaching the unit with the telescopic support foot

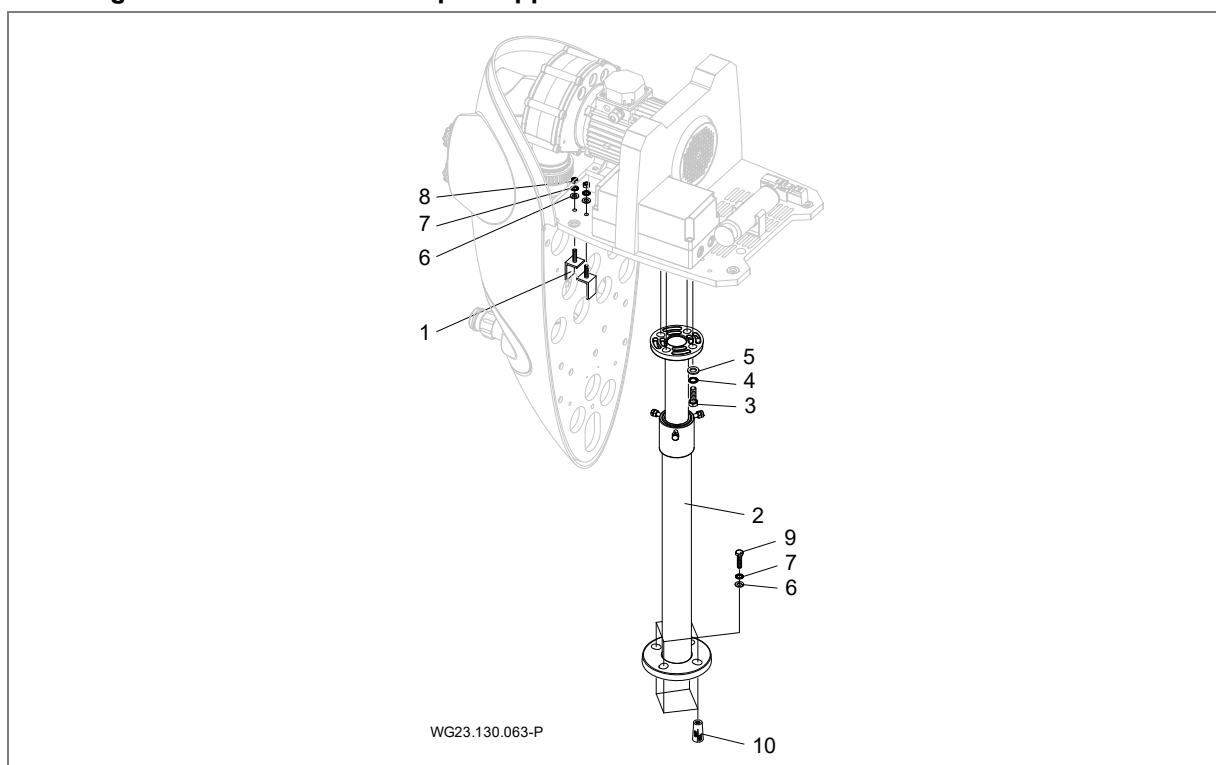


Fig. 24

Part	Piece	Description	Article no.
1	4	Elbow	231.9007.001
2	1	Telescopic support foot	231.9851.000
3	4	Hexagon bolt M12x35, Ks	586.9331.235
4	4	Lock Washer Ø13, A2	587.6797.120
5	4	Washer Ø13, A2	587.1251.200
6	8	Washer Ø8,4, A2	587.9021.080
7	8	Lock Washer Ø8,4, A2	578.6797.080
8	4	Nut M8, A2	587.9340.800
9	4	Hexagon bolt M8x50, A2	587.9330.850
10	4	Dowel M8, Brass	587.9330.816

**Fastening the unit to the ground**

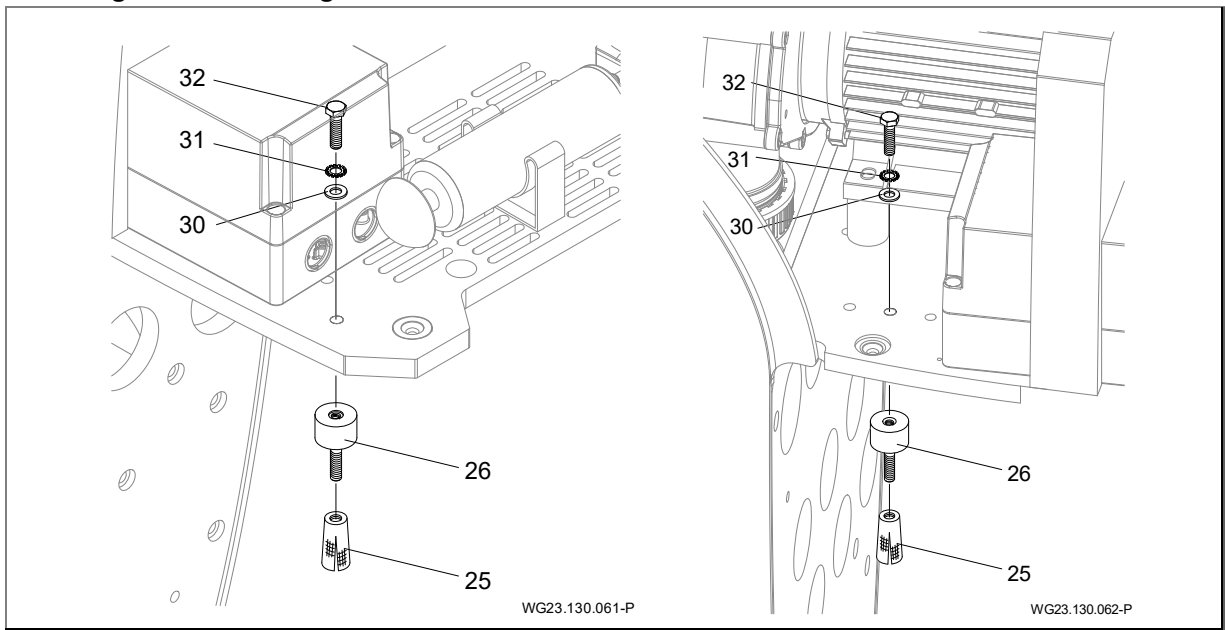


Fig. 25

Part	Piece	Description	Article no.
25	4	Dowel, M8, Brass	230.6006.006
26	4	Rubber metal buffer M8x36	230.6006.005
30	4	Washer Ø8,4, A2	587.9021.080
31	4	Lock washer Ø8,4, A2	587.6797.080
32	4	Hexagon bolt M8x25, A2	587.9330.825

**5.2 Assembly Recommendation**

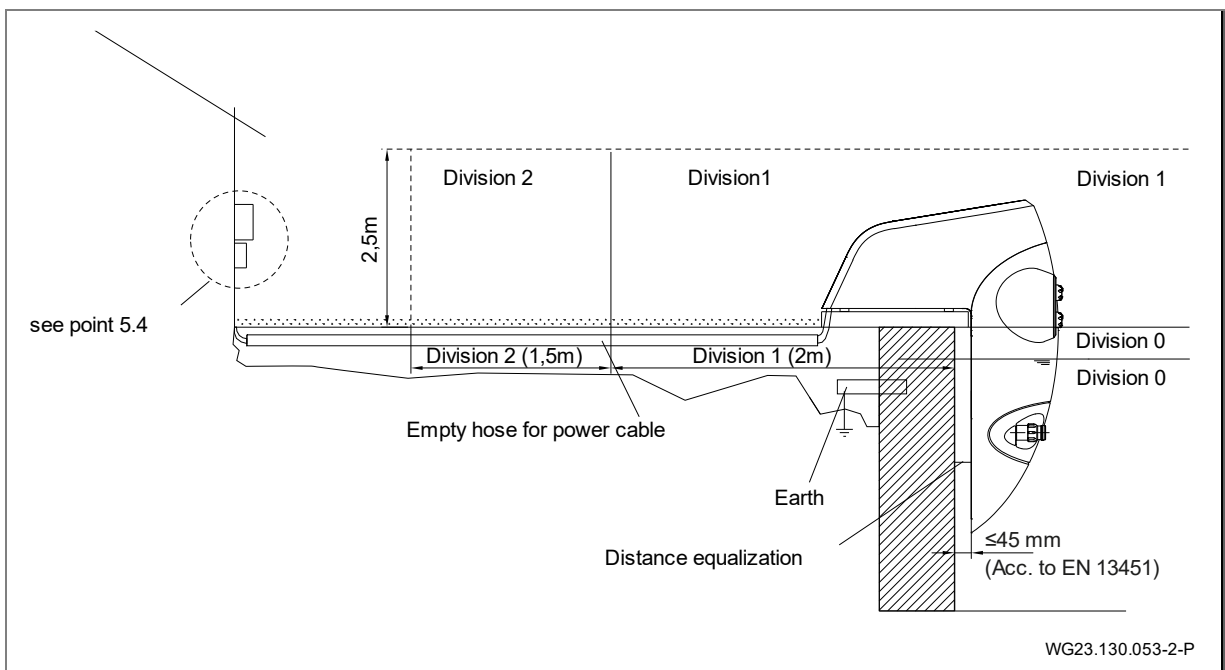


Fig. 26

### 5.3 Electrical connection (Qualified specialist)

#### ⚠ WARNING

Risk of electric shock due to incorrect connections!

- ➔ Electrical connections must always be carried out by authorised specialists.
- ➔ Observe VDE and utility company regulations.
- ➔ Install pumps for swimming pools and their protection according to DIN VDE 0100-702.

- ➔ Install a disconnecting device with at least a 3 mm contact gap per pole to interrupt the power supply.

#### ⚠ WARNING

Risk of electric shock due to voltage on the housing!

- ➔ A built-in or external overload switch which is set correctly must be installed for pumps with three-phase or A.C. motors without motor protection. In doing so, observe the values on the motor name plate.
- ➔ Protect power supply with a ground fault circuit interrupter, nominal residual current  $I_{FN} \leq 30$  mA.
- ➔ Only use suitable pipe types according to regional regulations.
- ➔ Adjust minimum diameter of the electrical pipes to accommodate the motor output and pipe length.
- ➔ If hazardous situations can occur, provide an emergency off switch according to DIN EN 809. The builder/operator must make a decision according to this standard.

#### 5.3.1 Connection by customer

#### ⚠ WARNING

Danger of electric shock!

- ➔ The motor housing must be connected to the equipotential bonding (ground strap). There is an appropriate clamp on the motor housing.

- ground fault circuit interrupter  $I_{FN} \leq 30$  mA
- Lines must be protected and laid in accordance with the pertinent standards and local conditions (line length, ambient temperature, type of laying, etc.). These are DIN VDE 0100 Part 400 and DIN VDE 0100 Part 500 i.a. The rated flow of the pump must also be observed.
- We recommend the use of an automatic circuit breaker with a tripping characteristic for higher starting currents (motors, pumps).
- All-pole emergency switch off with 0 and 1 label

Further information is provided in the connection diagram. The above-mentioned parts are not included in delivery and must be provided on site for the installation of the unit.

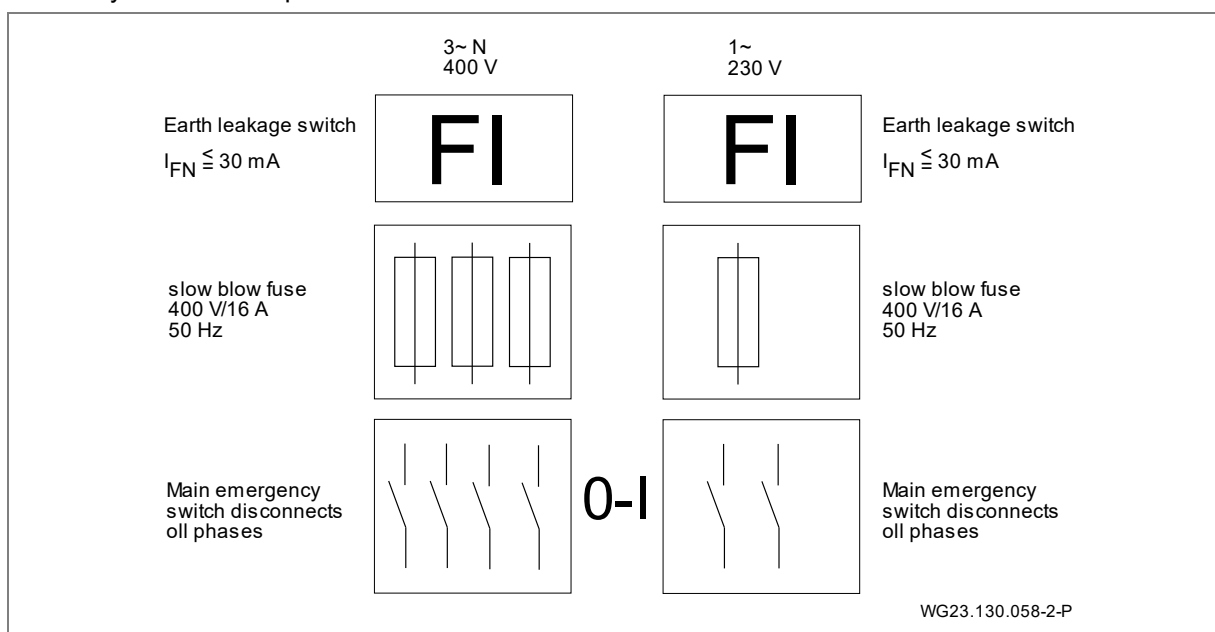
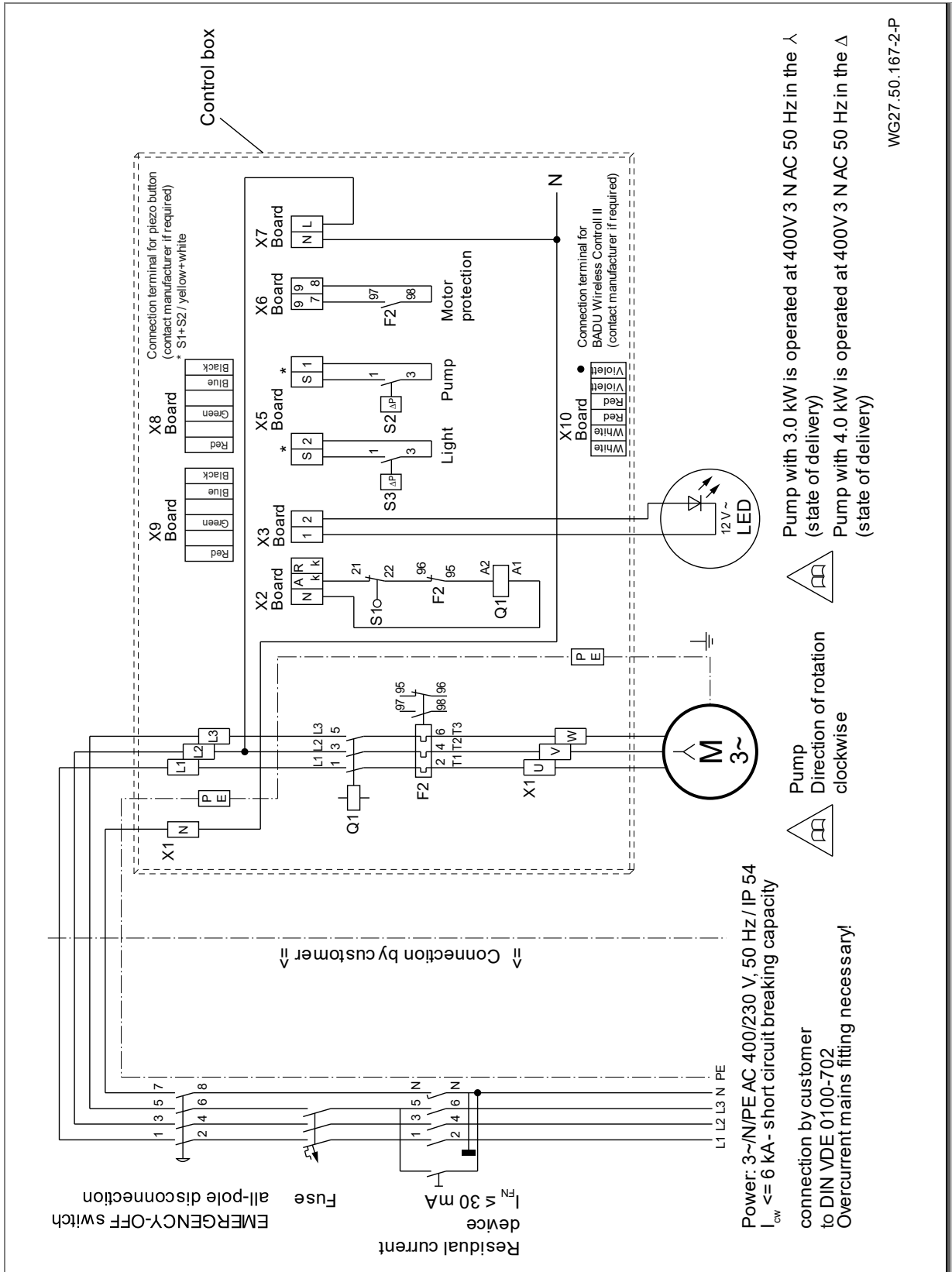


Fig. 27

5.3.2 Wiring diagrama 3-phase 400/230V 50 Hz

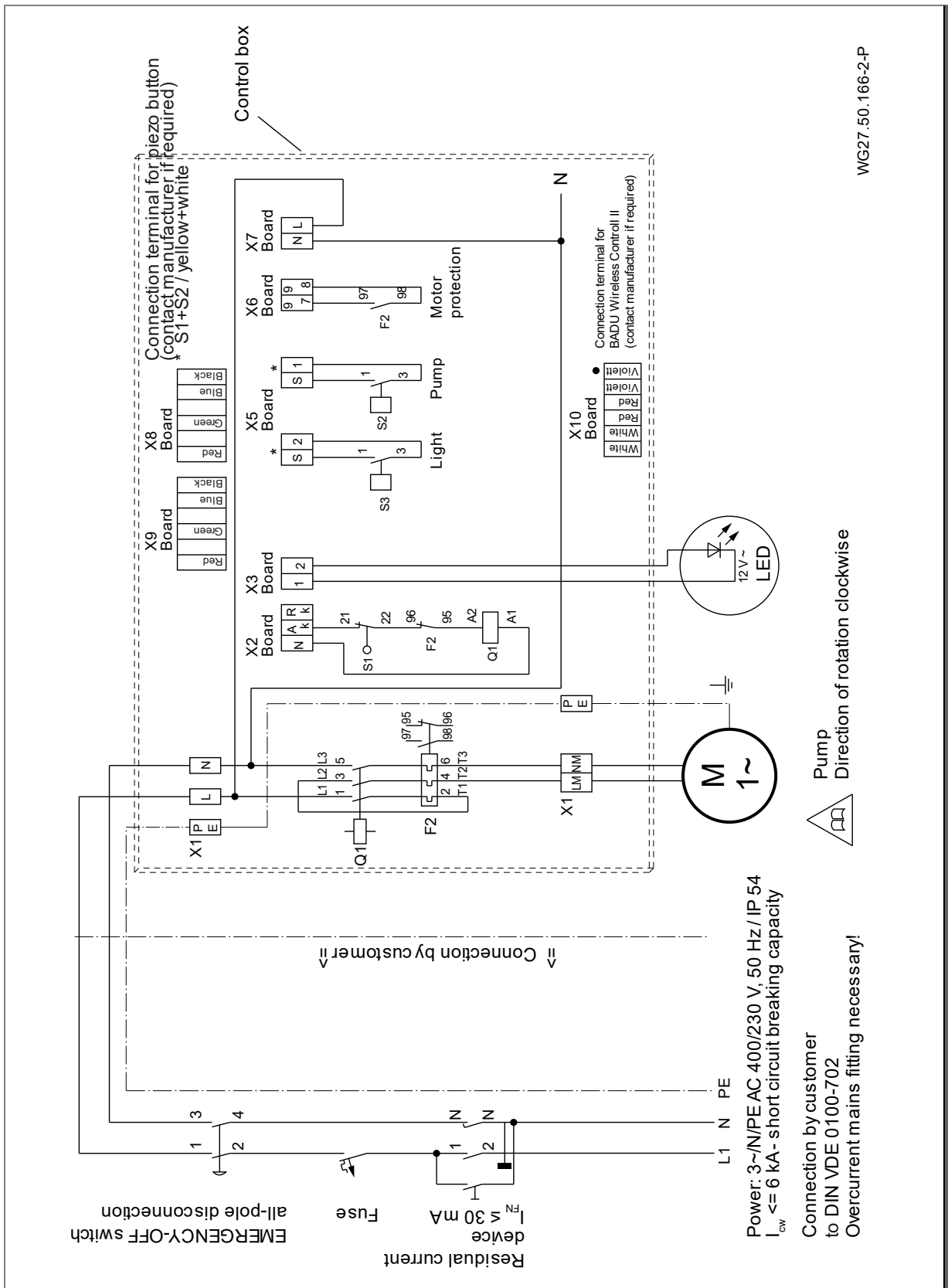


WG27.50.167-2-P

Fig. 28



5.3.3 Wiring diagram 1-phase 230V 50 Hz



WG27.50.166-2-P

Fig. 29

### 5.3.4 Connection diagram

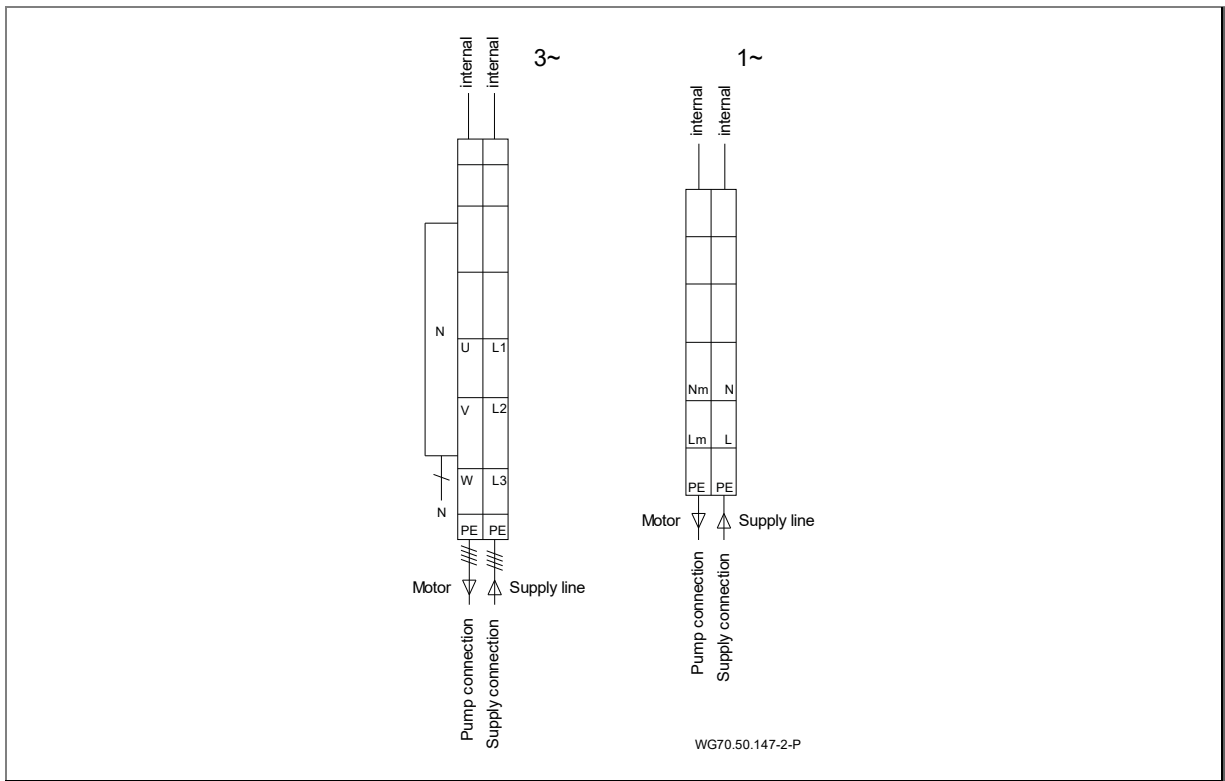


Fig. 30

## 5.4 Supplements for the control boxes with circuit board

### 5.4.1 Benefits

- Pump/LED turns off after a certain amount of time (time mode).
- Error recognition due to circuit board display.
- Clear recognition when the motor protection is triggered.
- Safety benefits.
- Overloading the transformer is impossible.

### 5.4.2 Segment display, green and orange LED, fuse

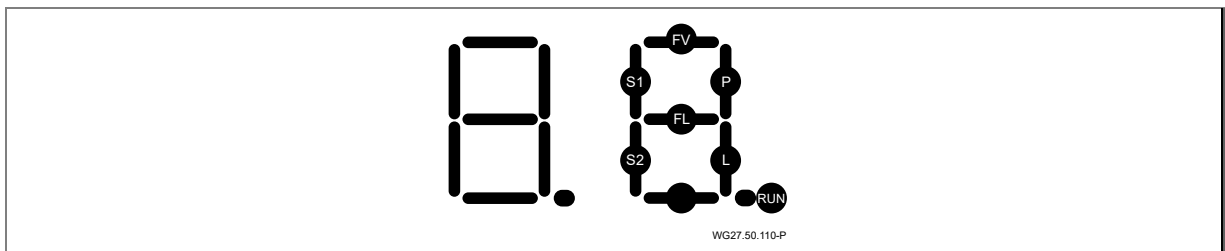


Fig. 31

- \*RUN\* flashes when the microprocessor is working.
- \*S1\* lights up when one of the pump's buttons is pressed.
- \*P\* lights up, the pump should now work and the pump's protection should be on.
- \*P\* flashes, the pump should be turned on in time mode and the pump's protection should be on.
- \*S2\* lights up when the LED light button is pressed.
- \*L\* lights up, the LED light should now be on.
- \*L\* flashes, the LED light should now be on in time mode.

#### Error message

- \*FL\* lights up if there is a short circuit in the cable to the LED floodlight.
- \*FL\* flashes if there is a disruption in the cable to the LED floodlight.

**Note:** The error message \*FL\* only occurs if the condition "LED light turned on" is met. Normally, without there being an error in the lighting circuit, this segment can light up briefly due to the inrush current in the LED lighting module!

- \*FV\* lights up if the voltage in the microprocessor overloads.

### Green and orange LEDs on the circuit board

\*green LED\* lights up: Power supply present in the circuit board [Volt].

\*orange LED\* lights up: Motor protection has triggered (over current).

→ Check the motor protection settings.

### Circuit board fuse

Replaceable fuse: 3.15 A T

The fuse only needs replacing if the green LED [V] is not lit up.

### 5.4.3 Dipswitch for time mode settings

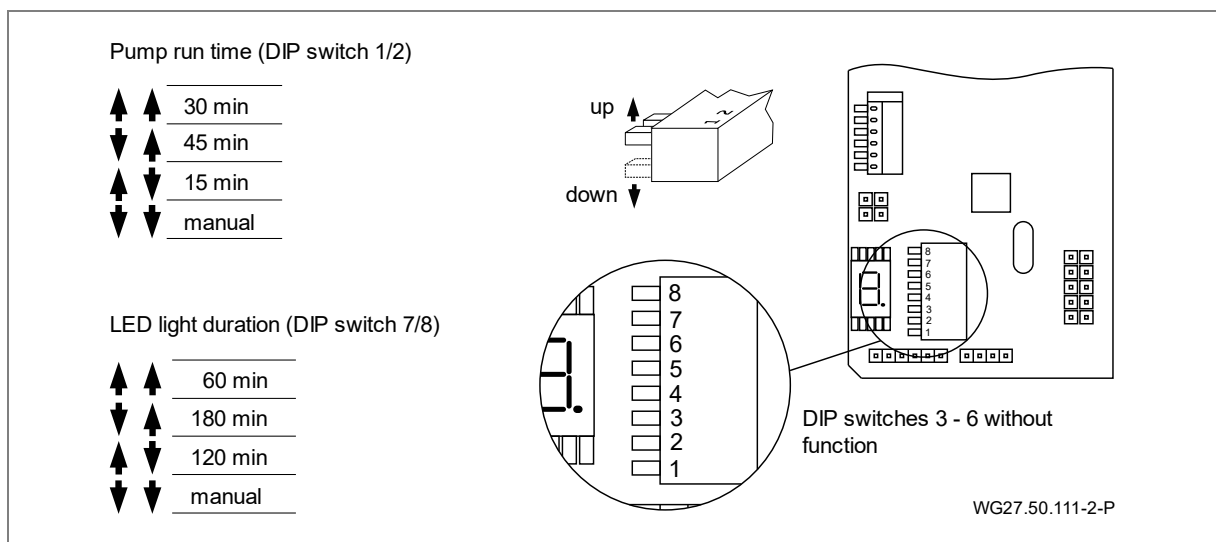


Fig. 32

### 5.4.4 Stripping the cable

→ The cable for the power supply should be stripped to a length of 15 – 17 cm.

## 6 Commissioning/Decommissioning

### 6.1 Commissioning

#### NOTICE

The pump/unit can be damaged if it runs dry!

- ➔ Ensure that the pump/unit is always full of water. This also applies to checking the rotation direction.

#### 6.1.1 Fill the overhang counter swim unit with water

1. Remove the cover.

#### NOTICE

Cover is clipped on. No tools are required to remove it.

- ➔ Do not use force.

2. Using the hand pump included (attached to the base plate) ventilate the unit as follows.
  - Attach the hose of the hand pump to the air drain valve on the pump.
  - Turn the air drain valve anti-clockwise to open.
  - Pump until water flows out.
  - Close the air drain valve clockwise and remove the hand pump.
  - Replace the hand pump in the attachment provided.

#### NOTICE

- ➔ Close the air regulation valve to prevent any air being sucked in.

3. Replace the cover.

#### NOTICE

- ➔ Ensure that the position switch on the cover is seated correctly.

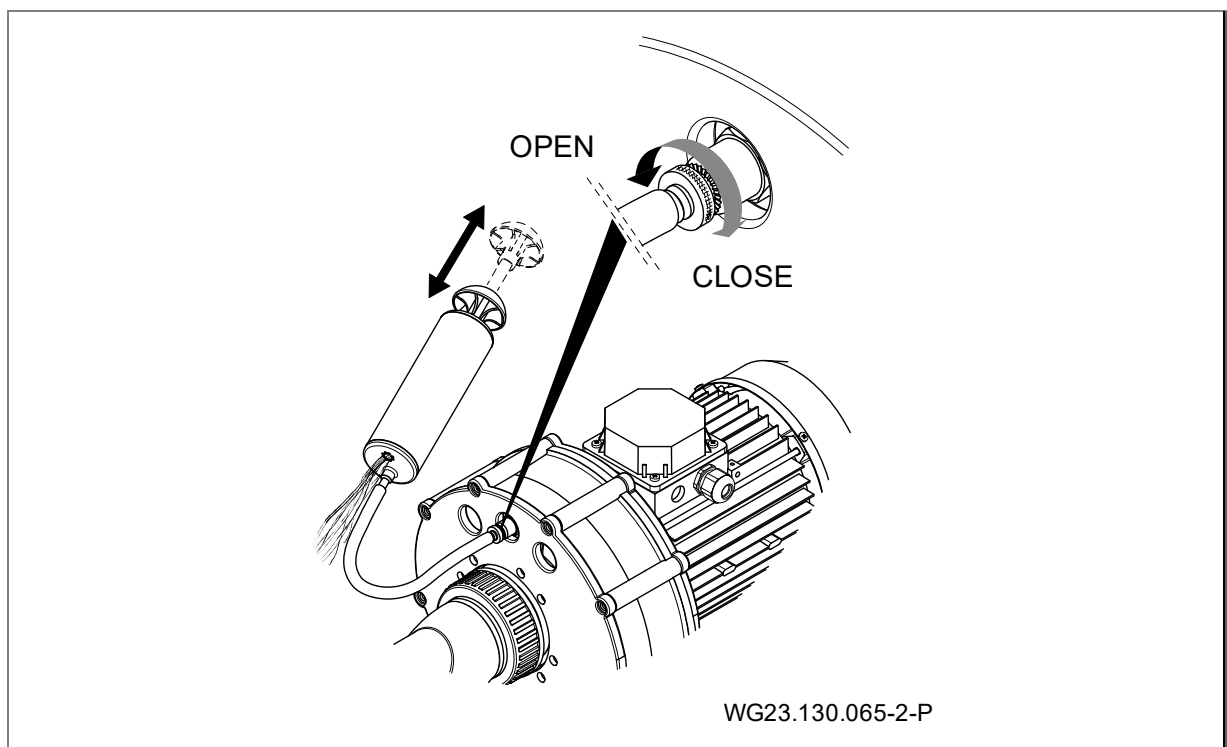


Fig. 33

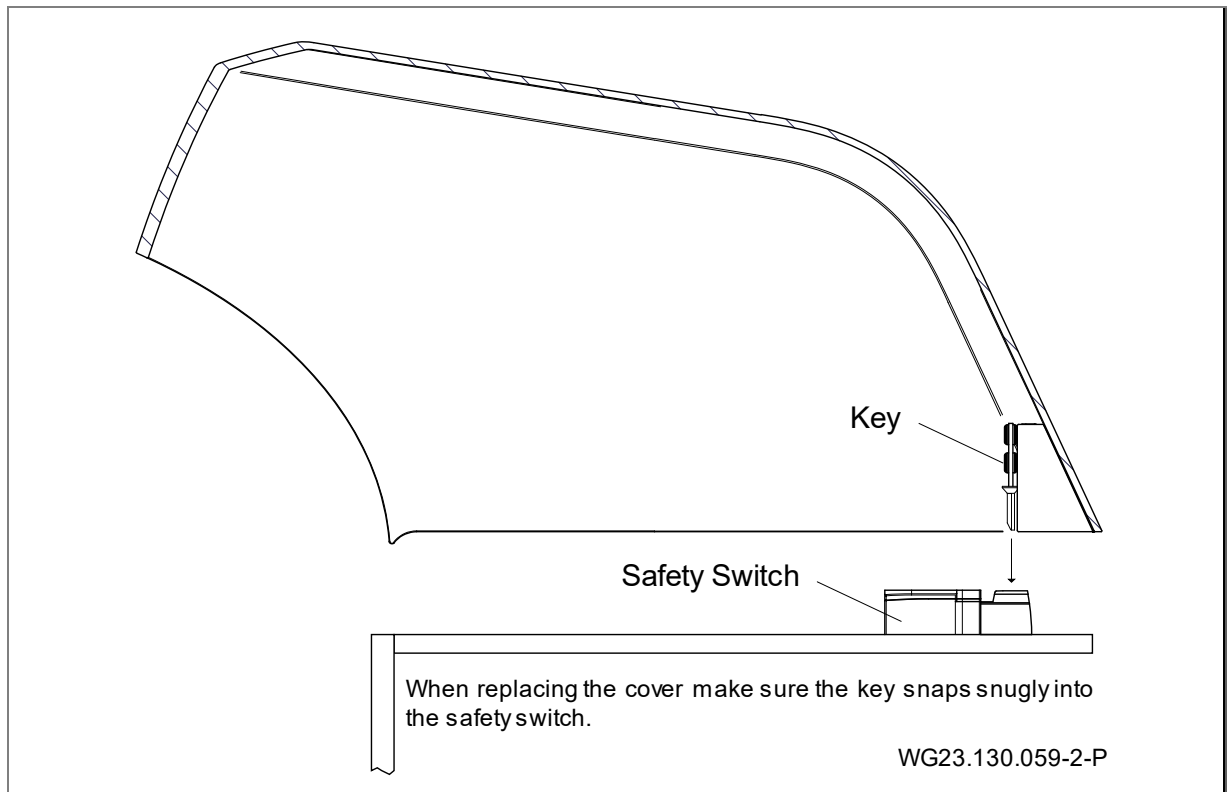


Fig. 34

### 6.1.2 Checking how easily the pump rotates

After longer idle periods, the pump must be checked for how easily it rotates while it is switched off.

- ➔ Place a screwdriver in the groove on the end of the motor shaft on the fan side and turn it.
  - or –
- ➔ If there is not a groove on the end of the motor shaft: Remove the fan cover and turn the fan wheel manually in the motor rotation direction.

### 6.1.3 Switch the overhang counter swim unit on

Pre-requisites:

- Unit must be filled with water
- Cover must be on

#### NOTICE

The pump can be damaged if it runs dry!

- ➔ Purge air from the pump and suction line.

1. Switch the pump/unit on.

#### NOTICE

If the pump has a three-phase motor and it turns in the wrong direction, the pump/unit is louder and has a lower capacity.

2. For three-phase motors: Ensure that the motor turns in the direction of the arrow labeled on the fan hood. If the motor rotates in the wrong direction, notify an electrician.
  - ➔ This can also be carried out when the cover is not on by pressing the contactor.
3. Check the mechanical seal for leaking.

## 6.2 Operation

### 6.2.1 Switching the unit on and off

The unit can be switched on and off by pressing the pneumatic button (2/1) which is built into the cover. There is no electrical operating unit in the pool.

### 6.2.2 Volume regulator

The performance of the pump can be controlled using the adjustable nozzle (54/1). In this way, each swimmer can set the nozzle stream individually.

#### CAUTION

Injury due to massage with full nozzle stream.

➔ Maintain a sufficient distance in order to avoid damage to health.

#### NOTICE

The pump/unit may be damaged due to operation with a closed volume regulator.

➔ Only operate the pump/unit with an open volume regulator.

### 6.2.3 LED colour variations

The LED colour variations can be changed by pressing the button (2) repeatedly within five seconds.

#### Colour sequence:

- Red
- Green
- Blue
- Green – Red
- Green – Blue
- Red – Blue
- Green – Red – Blue

#### Change of colour:

- one second discrete
- 30 seconds slowly dimming
- flashing
- seven seconds dimming
- flickering “rolling out”

The colour variation will be maintained when pressed for longer than five seconds.

### 6.2.4 Ball nozzle(s)

The direction of the ball nozzle(s) (54) can be adjusted. The nozzles should normally be set horizontally or pointing slightly upwards. This provides the greatest effect for swimming against the current.

### 6.2.5 Air regulator

The air regulator (2/1) allows air to be added to the water jet so that an air bubble bath effect can be attained. The amount of air can be adjusted.

### 6.2.6 Optional accessories

- Attachable massage nozzle
- Massage hose (with pulsator)
- Attachable pulsator
- Wireless control

### 6.2.7 Do not stand on the cover

#### NOTICE

Damage to the cover.

➔ Do not stand on or load the cover.

➔ Do not use the cover as a starting block.

## 6.2.8 Optimal unit function

**NOTICE**

The unit may not function optimally if the water level is insufficient.

➔ Observe the optimal water level.

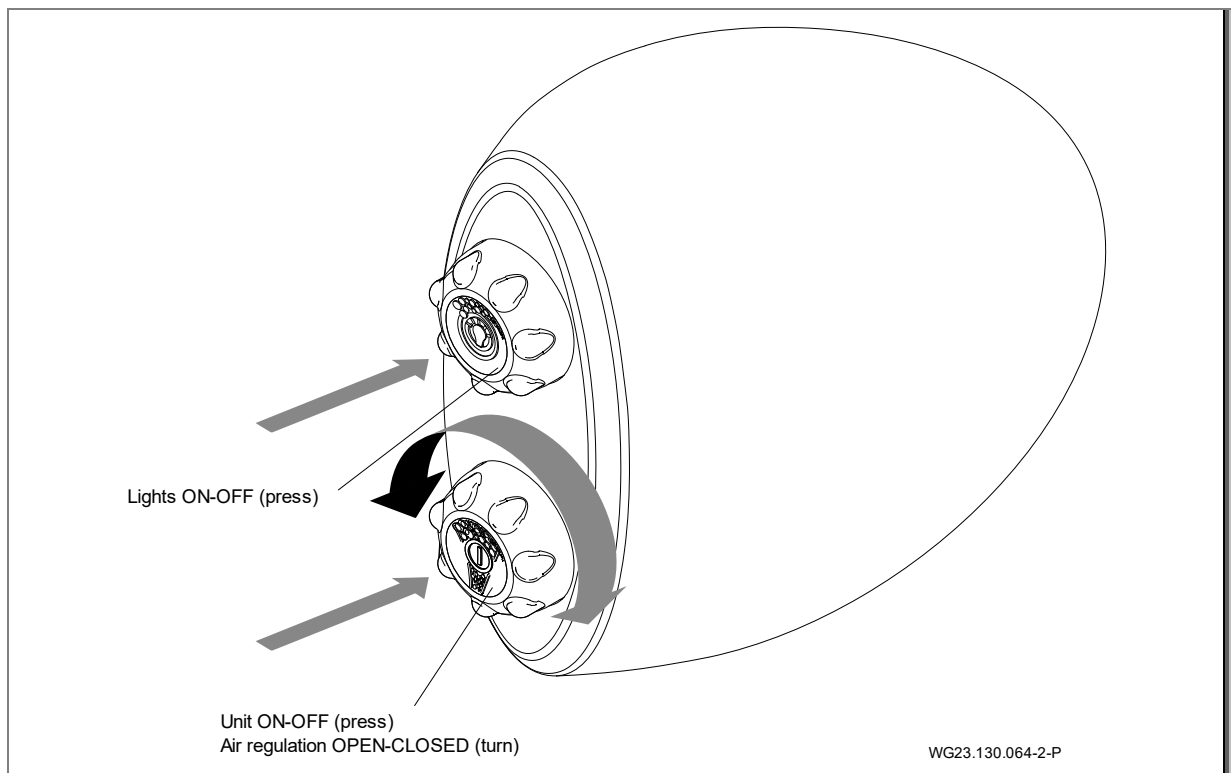


Fig. 35

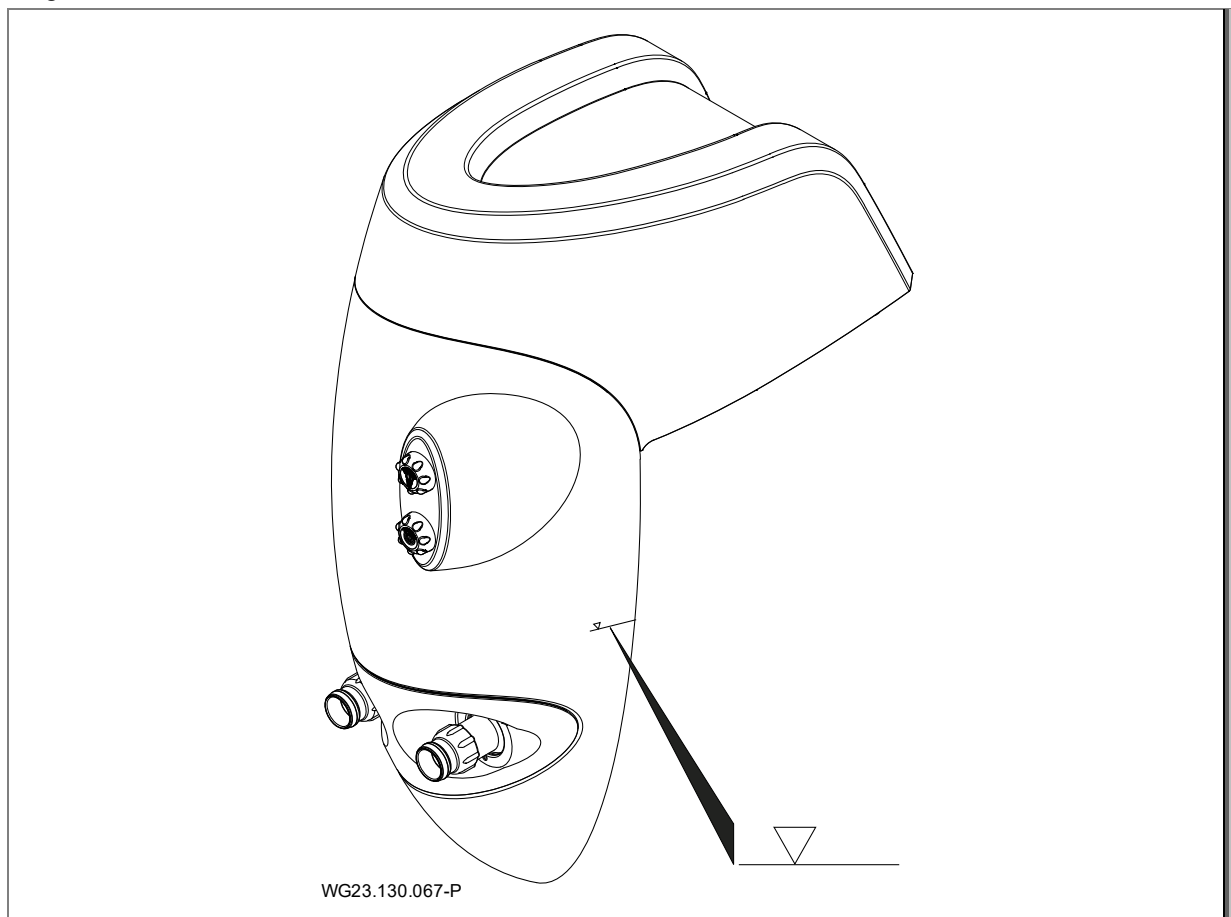


Fig. 36

## 6.3 Using the massage hose

### **WARNING**

Injury due to incorrect use!

- ➔ Consult a doctor before using the massage hose on the affected body parts. No liability is accepted for misuse of the massage hose.
- ➔ Children may not use the massage hose!

#### **BADU Jet Perla / BADU Jet Riva**

1. Close the air regulation valve (2/1) before the massage otherwise waer may leak out due to the increased pressure.
2. Put the coupling of the massage hose on the nozzle and latch it in.
3. Hold the massage hose, **do not let it lie loosely** in the pool.
4. Switch the counter swim unit on.
5. Re-open the air regulation valve (2/1) if required.

#### **BADU Jet Stella**

1. Close the air regulation valve before the massage otherwise waer may leak out due to the increased pressure.
2. Place a blind coupling exactly on one of the nozzles and latch it in.
3. Put the coupling of the massage hose on the second nozzle and also latch it in.
4. Hold the massage hose, **do not let it lie loosely** in the pool.
5. Switch the counter swim unit on.
6. Re-open the air regulation valve (2/1) if required.

## 6.4 Decommissioning

1. Turn the pump off and disconnect it from the power supply.
2. Lower the water level of the pool down to the lower edge of the inlet connection.

### 6.4.1 Suggestion for winter conditions

For outdoor counter swim units that could be subjected to frost during the winter.

- ➔ Please observe the point "Decommissioning" on page 56.
- ➔ Remove the pump during periods of frost and store it in a dry room.



## 7 Faults

### NOTICE

It is normal for a few drops of water to escape from the mechanical seal from time to time. This is especially true during the break-in period.  
Depending on the water quality and number of operating hours, the mechanical seal can begin to leak.  
→ If water leaks constantly, have the mechanical seal replaced by a qualified technician.

### NOTICE

We recommend first informing the swimming pool contractor if there are irregularities.

### 7.1 Overview

**Problem:** Unit cannot be switched on

Possible cause	Solution
Positional switch is not snapped into place.	→ Check the cover position.

**Problem:** Pump is switched off by the built-in or external overload switch.

Possible cause	Solution
Overload.	→ Check pump. See point 0 on page 58.
Media temperature too high.	→ Wait for the motor winding to cool down and the motor protection to turn back on. → Reduce the media temperature.

**Problem:** Pump seizes.

Possible cause	Solution
Mechanical seal is stuck.	→ Turn the motor shaft. See point 6.1.2 on page 53. → Clean pump and pump parts.

**Problem:** Pump leaks.

Possible cause	Solution
Mechanical seal is worn or damaged.	→ Have a professional replace the mechanical seal.

**Problem:** Loud motor noise.

Possible cause	Solution
Faulty ball bearings.	→ Have a mechanic replace the ball bearings.
Direction of rotation is wrong (3~).	→ Have a qualified electrician check it.

**Problem:** No water jet despite the unit being turned on.

Possible cause	Solution
Air in the system.	→ Tighten screw connections. → Replace the seals. → Ventilate pump.
Leakage in the suction line.	→ Tighten screw connections. → Check for leaks.
Air drain valve leaking or not closed.	→ Close the tap. → Check for leaks.

### 7.1.1 Check the pump after the overload switch has tripped

If the motor has been switched off by the built-in or external overload switch, carry out the following steps:

1. Disconnect the system from the power supply.
2. Turn the motor shaft on the fan side using a screwdriver and check whether it turns easily.

#### **If the motor shaft is difficult to turn:**

1. Remove the screwdriver.
2. Notify Customer Services or your swimming pool builder and have the pump tested.

#### **If the motor shaft is easy to turn:**

1. Remove the screwdriver.
2. Reconnect to the power supply.

### NOTICE

If the pump seizes and is repeatedly switched on, the motor can be damaged.

➔ Ensure that the pump/unit is only switched on once.

3. Wait until the built-in overload switch automatically switches the motor on after it has cooled down.  
– or –  
Reset the motor overload switch.
4. Have an electrician test the power supply, fuses and power consumption.
5. If the built-in or external overload switch switches the motor off again, notify Customer Services.

### 7.1.2 Spare parts lists

Spare parts lists for each pump can be found on the website [www.speck-pumps.com](http://www.speck-pumps.com).

## 8 Maintenance

### NOTICE

→ Before maintenance work, close all shut-off valves and drain all pipes.

When?	What?
Regularly	<ul style="list-style-type: none"> <li>→ Check the pump is not leaking</li> <li>→ Check the stability of the unit, all impurities should be removed</li> <li>→ Check the electrical contacts in general</li> <li>→ Separate potential connector</li> </ul>
If there is a chance of frost	→ Remove the unit from the pool. Empty and store it in a dry location.

→ After completing all maintenance work, perform all necessary measures for start-up. See point 6.1 on page 52.

### 8.1 Care Instructions

If needed, wash the unit with water and wipe with a damp cloth.

#### **Do not use abrasive cleaning agents!**

A few sprays of a cleaning agent especially for use on acrylic surfaces can be used occasionally. Wipe with a clean, dry cloth. Heavily soiled surfaces can be cleaned with warm soapy water or a mild cleanser.

Limescale deposits/water spots can be removed with a mixture of spirit vinegar and water. Removal of light scratches or rough spots on shiny surfaces can be carried out using a care kit found in sanitary supply stores.

### 8.2 Warranty

The warranty includes the devices delivered and all components. However natural wear and tear (DIN 3151/DIN-EN 13306) on all turning and dynamically loaded components, including electronic components under tension, is not covered under the warranty.

Failure to comply with the safety instructions may void the warranty.

#### 8.2.1 Safety related spare parts

- Safety switch (cover)
- Guide wall
- Telescopic support foot

### 8.3 Service addresses

Service addresses can be found on our website

[www.speck-pumps.com](http://www.speck-pumps.com).

### 9 Disposal

- Collect harmful media and dispose of it according to the regulations.
- At the end of its service life, the pump/unit or individual components must be disposed of correctly. Disposal in the household waste is not permitted!
- Dispose of the packaging materials in the household waste in accordance with the local regulations.

## 10 Technical data

Technical data 50 Hz	BADU JET		
	Perla	Riva	Stella
Jet pump	21-81/31 RG	21-81/32 G 21-81/32 RG	21-81/33 G
Pump flow rate [m³/h]	40/40	58/54	75
Voltage [V] 3~ 1~	400/230 / 230	400/230 / 230	400/230
Power input P <sub>1</sub> 3~/1~ [kW]	2.07/2.12	3.18/2.89	3.74
Power output P <sub>2</sub> 3~/1~ [kW]	1.60/1.60	2.60/2.20	3.00
Number of nozzles Ø 40 mm	1/1	1/1	2
Outlet pressure at nozzle [bar]	0.90/0.90	1.10/1.00	1.00
Outlet speed centred 2 m in front of the nozzle [m/s]	1.10/1.10	1.20/1.15	1.40
Max. massage pressure [bar]	1.20/1.20	1.60/1.60	1.60
Nozzles can be swiveled in all directions [degrees]	60	60	60
Control	Pneumatic		
On/off from pool	Yes		
Attachable massage hose	Yes, against surcharge optional		
Plug in pulsator	Yes, against surcharge optional		
Telescopic support foot	Yes, against surcharge optional		
Salt content	0.66 g/l		
Energy efficiency	IE 2		
Class of isolation (motor)	F		
Weight (pump)	36/41	52/52	54/60

### 10.1 Dimensional drawing

#### BADU Jet Perla/BADU Jet Riva

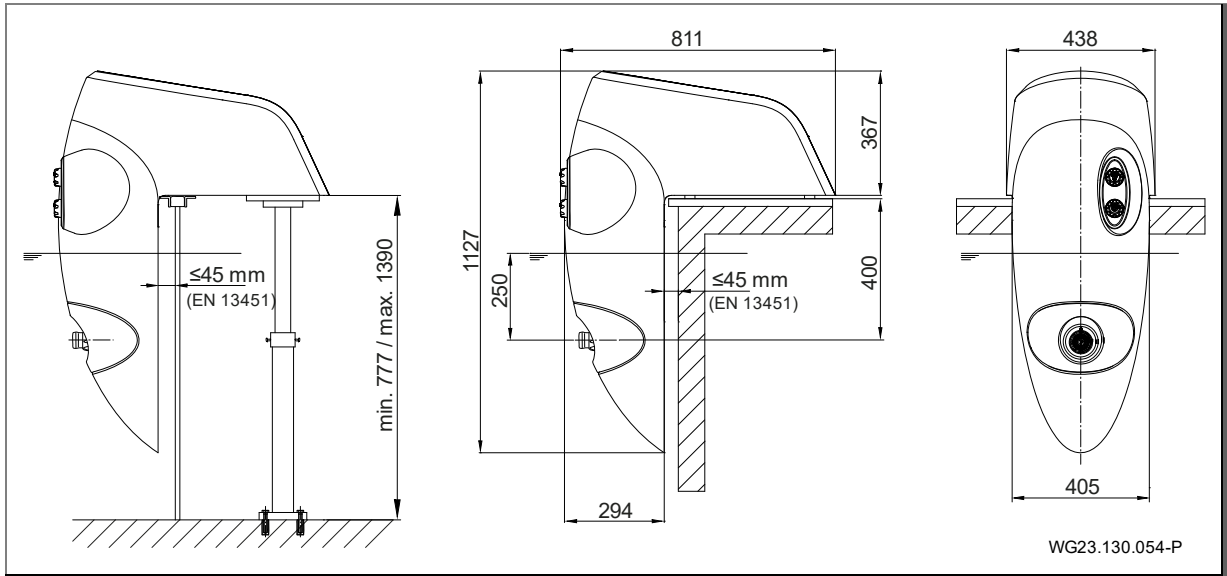


Fig. 37

#### BADU Jet Stella

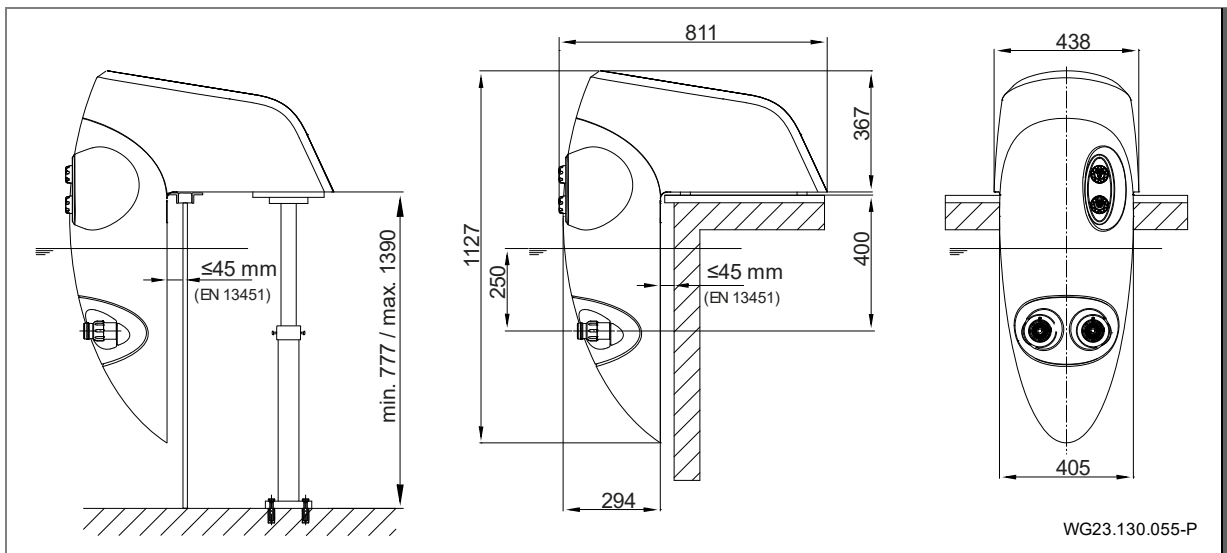


Fig. 38