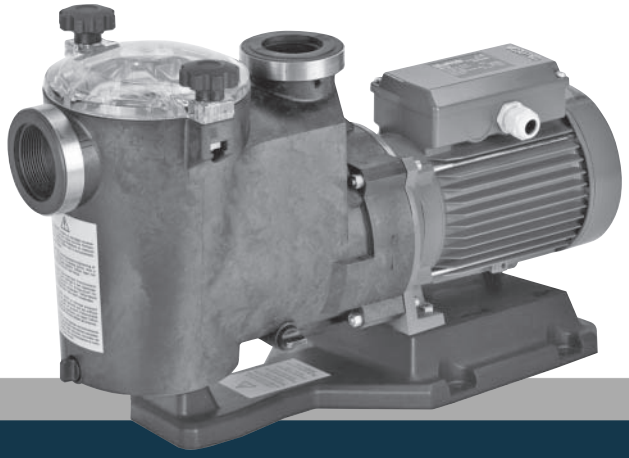
BEDU POMPEN

*Self-priming swimming pool pumps

MPC



OPERATING INSTRUCTIONS

made for your process

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SUMMARY

1. GENERAL INFORMATION

Before using the product carefully read the information contained in this instruction manual, the manual should be kept for future reference.
Italian is the original language of this instruction manual, this language is the reference language in case of discrepancies in the translations.
This manual is part of the essential safety requirement and must be retained until the product is finally de-commissioned.
The customer, in case of loss, can request a copy of the manual by contacting Bedu Pompen or their agent, specifying the type of product data shown on the label of the machine (see 2.3 Marking)
Any changes, alterations or modifications made to the product or part of it, not authorized by the manufacturer, will revoke the “CE declaration” and warranty.

This appliance should not be operated by children younger than 8 years, people with reduced physical, sensory or mental capacities, or inexperienced people who are not familiar with the product, unless they are given close supervision or instructions on how to use it safely and are made aware by a responsible person of the dangers its use might entail.
Children must not play with the appliance.
It is the user's responsibility to clean and maintain the appliance.
Children should never clean or maintain it unless they are given supervision.
Read carefully the installation section which sets forth:
- The maximum permissible structural working pressure (Chapter 3.1).
- The type and section of the power cable (Chapter 6.5).
- The type of electrical protection to be installed (Chapter 6.5).

1.1. Symbols

To improve the understanding of the manual, below are indicated the symbols used with the related meaning.


Information and warnings that must be observed, otherwise there is a risk that the machine could damage or compromise personnel safety.


The failure to observe electrical information and warnings, could damage the machine or compromise personnel safety.


Notes and warnings for the correct management of the machine and its parts.


Operations that could be performed by the final user. After carefully reading of the instructions, is responsible for maintenance under normal conditions. They are authorized to affect standard maintenance operations.


Operations that must be performed by a qualified electrician. Specialized technician authorised to affect all electrical operations including maintenance. They are able to operate with in the presence of high voltages.


Operations that must be done performed by a qualified technician. Specialized technician able to install the device, under normal conditions, working during “maintenance”, and allowed to do electrical and mechanical interventions for maintenance. They must be capable of executing simple electrical and mechanical operations related to the maintenance of the device.


Indicates that it is mandatory to use individual protection devices.

Operations that must be done with the device switched off and disconnected from the power supply.

Operations that must be done with the device switched on.

1.2. Manufacturer name and address

Bedu Pompen B.V.
Poort van Midden Gelderland Rood 10
6666 LT HETEREN, The Netherlands

1.3. Authorized operators

The product is intended for use by expert operators divided into end users and specialized technicians. (see the symbols above).

It's forbidden, for the end user, carry out operations which must be done only by specialized technicians. The manufacturer declines any liability for damage related to the non-compliance of this warning.

1.4. Warranty

For the product warranty refer to the general terms and conditions of sale.

The warranty covers only the replacement and the repair of the defective parts of the goods (recognized by the manufacturer).

The Warranty will not be considered in the following cases:

- Whenever the use of the device does not conform to the instructions and information described in this manual.
- In case of changes or variations made without authorization of the manufacturer.
- In case of technical interventions executed by a non-authorized personnel.
- In case of failing to carry out adequate maintenance.

1.5. Technical assistance

Any further information about the documentation, technical assistance and spare parts, shall be requested from: Bedu Pompen BV (paragraph 1.2).

2. TECHNICAL DESCRIPTION

Self-priming swimming pool pumps with built-in strainer.
The pump is made with high quality plastic materials, corrosion and sand erosion resistant.
With stainless steel diffuser.
Base-plate kit.

2.1. Intended use

For clean or slightly dirty water with solids in suspension, with a maximum temperature of 60 °C.

2.2. Improper use

The device is designed and built only for the purpose described in paragraph 2.1.

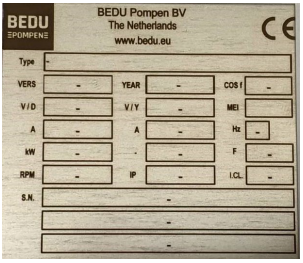
Improper use of the device is forbidden, as is use under conditions other than those indicated in these instructions.

Improper use of the product reduces the safety and the efficiency of the device, Bedu shall not be responsible for failure or accident due to improper use.

2.3. Marking

The following picture is a copy of the name-plate that is on the external case of the pump.

Example plate pump



3. TECHNICAL FEATURES

3.1. Technical data

Dimensions and weight (see technical catalogue).
Nominal speed 2900/3450 rpm
Protection IPX4
Supply voltage / Frequency:
- up to 240V 1~ 50/60 Hz
- up to 480V 3~ 50/60 Hz

Check that the mains frequency and voltage correspond to the electrical characteristics shown on the indicator plate.
The electric data marked on the label are referred to the nominal power of the motor.
Sound pressure: < 70 dB (A). MPC7: 72 dB (A).
Maximum starts/hour: 10 at regular intervals.
Maximum permissible pressure in the pump casing: 25 m (2,5 bar).

3.2. Operating conditions

Installation in well ventilated location protected from the weather, with a maximum ambient temperature of 40 °C.

4. SAFETY

4.1. General provisions

Before using the product it is necessary to know all the safety indications.

Carefully read all operating instructions and the indications defined for the different steps: from transportation to disposal.
The specialized technicians must carefully comply with all applicable standards and laws, including local regulations of the country where the pump is sold.
The device has been built in conformity with the current safety laws. The improper use could damage people, animals and objects.
The manufacturer declines any liability in the event of damage due to improper use or use under conditions other than those indicated on the name-plate and in these instructions.

Follow the routine maintenance schedules and the promptly replace damaged parts, this will allows the device to work in the best conditions.
Use only original spare parts provided from Bedu Pompen BV or from an authorized distributor.

Don't remove or change the labels placed on the device.

Do not start the device in case of defects or damaged parts.

Maintenance operations, requiring full or partial disassembly of the device, must be done only after disconnection from the supply.

4.2. Safety devices
The device has an external case that prevents any contact with internal parts.

4.3. Residual risks
The appliance, designed for use, when used in-line with the design and safety rules, doesn't have residual risks.

4.4. Information and Safety signals
For this kind of product there will not be any signals on the product.

4.5. Individual protection devices
During installation, starting and maintenance it is suggested to the authorized operators to consider the use of individual protection devices suitable for described activities.
During ordinary and extraordinary maintenance interventions, safety gloves are required.

Signal — individual protection device
HAND PROTECTION
(gloves for protection against chemical, thermal and mechanical risks).

5. TRANSPORTATION AND HANDLING
The product is packed to maintain the content intact.
During transportation avoid to stack excessive weights.
Ensure that during the transportation the box cannot move.
It is not necessary to use any special vehicle to transport the packaged device.
The transport vehicles must comply, for the weight and dimensions, with the chosen product (see technical catalogue dimensions and weights).

5.1. Handling
Handle with care, the packages must not receive impacts.
Avoid to impact onto the package materials that could damage the pump.
If the weight exceeds 25 Kg the package must be handled by two person at the same time.

6. INSTALLATION

6.1. Dimensions
For the dimensions of the device (see technical catalogue).

6.2. Ambient requirements and installation site dimensions
The customer has to prepare the installation site in order to guarantee the right installation and in order to fulfill the device requirements (electrical supply, etc...).
The place where the device will be installed must fulfill the requirements in the paragraph 3.2.
It's Absolutely forbidden to install the machine in an environment with potentially explosive atmosphere.

6.3. Unpacking
Inspect the device in order to check any damages which may have occurred during transportation.
Package material, once removed, must be discarded/ recycled according to local laws of the destination country.

6.4. Installation
The **MPC Compact Pool** pumps must be installed in well ventilated locations protected from the weather, with the rotor axis horizontal and feet downwards.
Place the pump as close as practicable to the suction source.

To reduce the risk of electric shock install the pump at least 3 m from the inside walls of a swimming pool. For use as a pump in outdoor locations provide suitable protection and mount the pump on an insulating base of at least 100 mm height. Follow **section 6.5**.

Provide space around the unit for **motor ventilation**, easier inspection, removal of the strainer basket, filling and draining the pump and checking (with a screwdriver) for free rotation of the shaft (**fig. 1**). With three-phase motors a sight check of the direction of shaft rotation will be required.

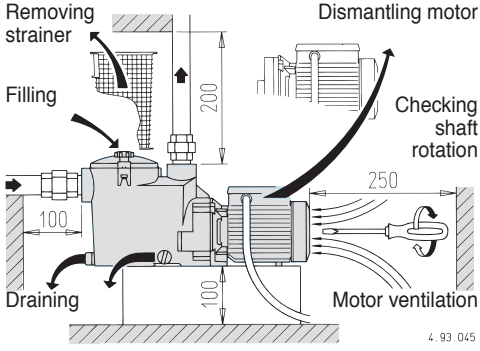


Fig. 1 Minimum access for servicing (mm)

6.4.1. Pipes
Provide a diameter assuring a liquid flow not greater than 1.5 m/s for suction and 3 m/s for delivery.
The pipe diameters must never be smaller than the pump connection ports.

ATTENTION: ensure the inside of pipes are clean and unobstructed before connection.
A **concentrated sand content** with particles larger than the radial clearance between the impeller and the stainless steel wear-ring (about 1 mm) can cause early wear damage and a reduction of the pump performance of about 10%.

For a hydrostatic pressure test of the piping with a pressure higher than 2.5 bar isolate the pump from the rest of the system (close inlet and outlet valves before and after the pump).

6.4.2. Connecting the pipes

Use pipes or fittings in plastic material.
For connection to the threaded ports of the pump casing use a plastic pipe thread sealant (for instance: Loctite 5331).
Teflon tape not recommended. Do not use hemp.

ATTENTION: avoid excessive tightening of pipes or fittings in threaded ports.
Tighten the pipes or fittings only to the degree required to ensure a tight seal.
Excessive torque may cause damage to the pump.
To join metal piping, first connect a transition union with a plastic tailpiece to the threaded port of the pump casing. **Coupling dissimilar materials may cause corrosion and cracks** due to non-uniform expansion and contraction in thermal cycling applications.
Secure all pipes to supports and connect them so that they do not transmit stress, strain or vibration to the pump. The pump must not be subject to the weight or thermal expansion of the piping.
Strain from the piping may damage or warp the pump casing and cause leakage.

6.4.3. Suction pipe

The suction pipe must be perfectly airtight.
With a **pump located below water level** (inflow under positive suction head) (**section 13., fig. 7**), install inlet and outlet valves to isolate the pump.
With a **pump located permanently above the water level** (suction lift operation), with various suction pipes (for skimmers, main drain, fitting for vacuum cleaner), connect all the pipes with their own gate valve to a manifold. As far as possible, locate the pipes and the manifold below water level with the pump being reached by a single vertical pipe (**see section 14., figure 8b and section 7.2.3.**).
With a pump located permanently above the water level of a swimming pool, avoid suction lifts higher than 3 m with respect to the main drain. With a suction lift above 1,5 m fit a check valve (accessible) in the suction line from the main drain.
In operating with flexible hoses, use a reinforced spiral suction hose in order to avoid hose narrowing due to suction vacuum.

6.4.4. Delivery pipe

Fit a gate valve in the delivery pipe to adjust delivery and head.
Install a pressure gauge.

6.5. Electrical connection


Electrical connection must be carried out only by a qualified electrician in accordance with local regulations.
Follow all safety standards.
The unit must be properly earthed (grounded).
Connect the earthing (grounding) conductor to the terminal with the ⏚ marking.
Compare the frequency and mains voltage with the name-plate data and connect the supply conductors to the terminals in accordance with the appropriate diagram inside the terminal box cover.


ATTENTION: never allow washers or other metal parts to fall into the internal cable opening between the terminal box and stator. If this occurs, dismantle the motor to recover the object which has fallen inside.

If the terminal box is provided with an inlet gland, use a flexible power supply cord of the H07 RN-Ftype with section of cable not less than (par. 16 TAB 1).
If the terminal box is provided with an inlet bushing, connect the power supply cord through a conduit.
For use in swimming pools, garden ponds and similar places, **a residual current device** with IΔN not exceeding 30 mA must be installed in the supply circuit.
Install a **device for disconnection from the mains** (switch) with a contact separation of at least 3 mm in all poles.
With a three-phase motor install an overload protection device appropriate for the rated current of the pump.
Single-phase **MPCM**, are supplied with a capacitor connected to the terminals and (for 220-240 V - 50 Hz) with an incorporated thermal protector.
In Austria pumps to be used in swimming pools and garden ponds should be equipped with a fixed connection line according to ÖVE B/ EN 60555 Part 1 to 3; power supply should be via a ÖVEtested isolating transformer whereby the secondary nominal voltage should not exceed 230V.


ATTENTION: When the pump is fed by a frequency converter, the minimum frequency should not fall below 25Hz and in any case the total head of the pump should never be lower than 3 m.

7. STARTUP AND OPERATION

7.1. Preliminary checks before start-up of the pump

Do not start-up the device in case of damaged parts.

7.2. First starting

7.2.1. Checking the direction of rotation

ATTENTION**: when the pump is started for the first time, **with three-phase motors check the direction of rotation.
*With the three-phase models **MPC 51, 61, 71,** check the direction of rotation before filling the pump (see also **section 8.4.**).*

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First check that the shaft turns by hand.
For this purpose use the screwdriver notch on the shaft end at the motor fan side. Turn the shaft by hand only in the direction indicated by the arrows on the pump casing.
Do not start the motor if the shaft is jammed.
If jammed, the impeller may unscrew should the motor start rotating backwards. Reverse rotation can also damage the mechanical seal.
Momentarily start the motor to check rotation of the pump shaft, which must be as shown by the arrows on the pump casing: clockwise when viewing the shaft from the motor end. Otherwise, disconnect electrical power and reverse the connections of two phases.

7.2.2. Filling

ATTENTION: avoid running dry.

When operating with the **pump below water level** (inflow under positive suction head), fill the pump by opening the suction gate valve slowly and completely, keeping the delivery gate valve open to release the air.

When the pump is located above the water level (suction lift operation) fill the pump with water up to suction port level through the opening on the strainer after removing the cover (**fig. 2**).

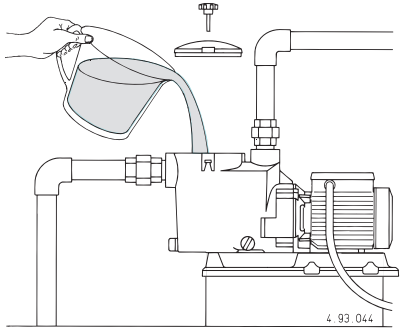


Fig. 2 Filling

After starting, check that the pump works within its field of performance and that the absorbed current shown on the name-plate is not exceeded; otherwise adjust the delivery gate valve.
Avoid long operation with a closed valve.

7.2.3. Self-priming

(Capability to clear the air in the suction pipe when starting **with the pump located above the water level** and when the suction pipe cannot be filled manually, as in the case of a missing foot valve).
Maximum suction lifts and minimum self-priming times (see the data sheet) are reached with a standard electric motor (n = 2900 rpm), air-free water with a temperature below 25 °C and a single suction pipe with inlet diameter equal to that of the suction connection of the pump.

Conditions for self-priming:

- Pump casing filled with water up to suction port level before starting.

Note that with suction lift above 1,5-2 m (without a foot valve or a check valve into the suction pipe) the filling operation must be repeated before each start-up.

- Suction and discharge valves completely opened and pipes not obstructed.
- Strainer basket not obstructed.
- Suction pipe with connections perfectly airtight, and properly immersed in the water to be lifted.
- O-ring on the strainer casing and mechanical seal perfectly airtight (properly seated, clean and not damaged).
- Hand wheels on strainer cover and thumbscrew drain plug on strainer casing tightened to prevent air entering.
- Discharge pipe without check valve, with minimum 80 cm straight vertical free pipe above discharge port. With suction lift below 2 m vertical section on the pump can be 50 cm. With suction lift lower than 1 m, an elbow can be mounted directly onto the delivery port without a vertical section of piping.

On expiry of the foreseen times, make sure (through the transparent strainer cover) pump priming has taken place and that water is flowing regularly.
If the pump does not prime, check all conditions above and remedy where necessary.
Repeat the priming operation again after the pump has been completely filled with cold water.

Avoid long operation with an unprimed pump or with a suction pipe not immersed in the water i.e. if water level of the pool falls too low.
By lowering the water to a level below the skimmers and other suction ports (for emptying of the pool), keep open only the gate valve in the pipe for suction from the bottom (main drain).

7.3. Switch off of the pump

The appliance must be switch off every time there are faults. (see troubleshooting).

The product is designed for a continuous duty, the switch off is performed by disconnecting the power supply by means the expected disconnecting devices. (see paragraph “6.5 Electrical connection”).

8. MAINTENANCE

Before any operations it's necessary to disconnect the power supply.
If required ask to an electrician or to an expert technician.

Every maintenance operations, cleaning or reparation executed with the electrical system under voltage, it could cause serious injuries to people.

If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.

In case of extraordinary maintenance, or maintenance operations that require part-removing, the operator must be a qualified technician able to read schemes and drawings.

It is suggest to register all maintenance operation executed.

During maintenance keep particular attention in order to avoid the introduction of small external parts, that could compromise the device safety.

It is forbidden to execute any operations with the direct use of hands. Use water-resistant, anti-cut gloves to disassemble and clean the filter or in other particular cases.

During maintenance operations external personnel is not allowed.

Maintenance operations that are not described in this manual must be made only by special personnel authorized by Bedu Pompen BV

For further technical information regarding the use or the maintenance of the device, contact Bedu

8.1. Routine maintenance

The motors with supply current directly switched by thermally sensitive switches can start automatically.

Disconnect electrical power before any servicing operation and make sure the pump cannot be accidentally switched on.

Inspect and clean the strainer basket periodically.
The frequency of cleaning depends on operation time of the pump, pool environment, wind (for open air swimming pools) and the number and behaviour of the bathers.

With the **pump located below water level**, close the suction and delivery gate valves before removing the cover.

The strainer can be easily accessed by removing the strainer cover (**fig. 3**).

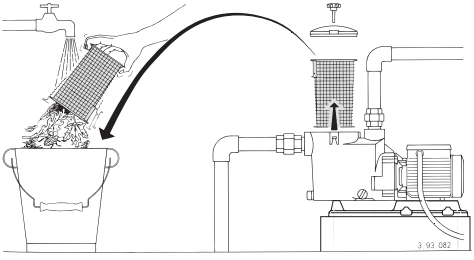


Fig. 3 Removing and cleaning the strainer

ATTENTION: do not use oil to lubricate the O-ring seal. Use only water and neutral soap to clean the transparent strainer cover. Do not use solvents.

After cleaning, put the strainer basket in its proper position. Fill with water up to suction port level (see **section 7.2.2.**).
Position the strainer cover properly with the O-ring seal on the casing and tighten the handwheels uniformly.

Disinfectant or chemical products for water treatment must not be poured directly into the pump.
Risk of reactions and emission of harmful fumes. Risk of corrosion in stagnant water conditions (also with an increase in temperature and decrease of pH value).
If the event of prolonged standstill periods or if freezing may be expected, drain the pump completely by removing the two thumbscrew drain plugs with reusable O-ring gaskets (**fig. 4**).

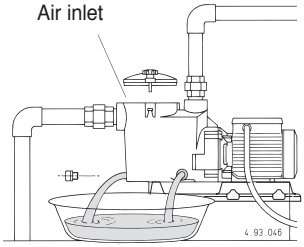


Fig. 4 Draining

Tighten drain plugs by hand. Do not use pliers or other tools.
If necessary, use pliers only to unscrew. Excessive torque may cause damage.

ATTENTION: after a long idle period, before restarting the unit, fill the pump casing with water and check with a screwdriver that the shaft is not jammed.
If the shaft is jammed, dismantle the motor and remove the cause.

8.2. Dismantling the system

Close the suction and delivery gate valves and drain the pump casing before dismantling the pump.

8.3. Dismantling the pump

Drain the pump casing before dismantling (**see fig. 4 and section 12.**). For dismantling and reassembly see construction in the cross-section drawing (**section 15.**).
Remove the motor assembly with the lantern bracket (32.00) from the pump casing (14.00), after removing the screws (14.24), the nuts (14.28) and the washers (14.29), levering them out with two screwdrivers in diametrically opposed positions.
To remove the impeller (28.00) insert a large straight-blade screwdriver in the slot on the shaft (78.00) at the ventilation end.
Grip the impeller with one hand and unscrew it, turning the shaft **counter-clockwise** and twisting with both hands (**fig. 5a**).

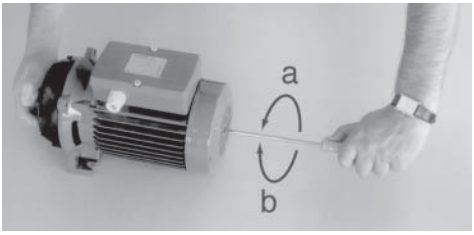


Fig. 5 Dismantling (a) and remounting (b) the impeller

If it is not possible to hold or move the shaft with the screwdriver, remove the fan cover (90.00) and motor fan (88.00) and unscrew the impeller by gripping the shaft with a suitable wrench.
With the impeller the rotating part of the mechanical seal (36.00) will be removed.

8.4. Assembling

To replace to mechanical seal (36.00) place the rotating part of the seal on the impeller hub (28.00) and push the spring right down as far as the front shoulder. In this way, correct spring compression will be ensured in subsequent assembly.
Lubricate the seal with water and align the impeller on the motor shaft.

ATTENTION: with the three-phase models, to avoid the unscrewing (and breaking) of the impeller should the motor start rotating backwards, *clean the threaded shaft end and apply on the first half of the threaded part Loctite 243.*
If this type of product is not used, check the direction of rotation before filling the pump (to avoid unscrewing due to the resistant-force of the water in the case of a backward rotation).

Grip the impeller with one hand and turn the shaft with a screwdriver in the **clockwise** direction until tight.
With this operation the front surfaces of the mechanical seal come into contact without rubbing against each other during tightening (**fig. 5b**). Clean the O-ring (14.20) and seal surfaces with water.
When replacing the motor assembly with the impeller be careful to insert the locating lug inside the pump casing (14.00) into the locating slot on the diffuser cover (27.00) (fig. 6).

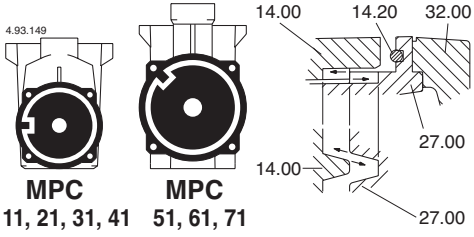


Fig. 6 Locating lug/slot for assembling pump casing (14.00) - diffuser cover (27.00).

ATTENTION: to avoid leakage or failure due to misalignment and localized overstressing, the screws (14.24) with the nuts (14.28) must be uniformly tightened with alternated crossover tightening in diametrically opposed positions. Tightening torque for screws (14.24): 7 Nm.

9. DISPOSAL

The final disposal of the device must be done by specialized company.
Make sure the specialized company follows the classification of the material parts for the separation.
Observe the local regulations and dispose the device accordingly with the international rules for environment protection.

10. SPARE PARTS

10.1. Spare-parts request

When ordering spare parts, please quote their designation, position number in the cross section drawing and rated data from the pump name plate (type, date and serial number).
The spare parts request shall be sent to Bedu Pompen BV by phone, fax, e-mail.

11. ESIGNATION OF PARTS

Nr.	Designation
14.00	Pump casing
14.14	Plug
14.15	O-ring
14.20	O-ring
14.24	Screw
14.28	Nut
14.29	Washer
15.00	Strainer cover
15.04	O-ring
15.12	Hand wheel
15.16	Square nut
15.50	Strainer basket
27.00	Diffuser cover
27.04	Diffuser funnel
27.08	O-ring
28.00	Impeller
28.12	Retaining ring
36.00	Mechanical seal
70.00	Lantern bracket
73.00	Ball bearing
73.08	V-ring, pump side
76.00	Motor casing with winding
76.16	Support
78.00	Shaft with rotor packet
81.00	Ball bearing
82.00	Motor end shield
82.04	Compensating spring
82.08	Screw
88.00	Motor fan
90.00	Fan cover
90.04	Screw
92.00	Tie-bolt
98.00	Terminal box cover

Changes reserved.

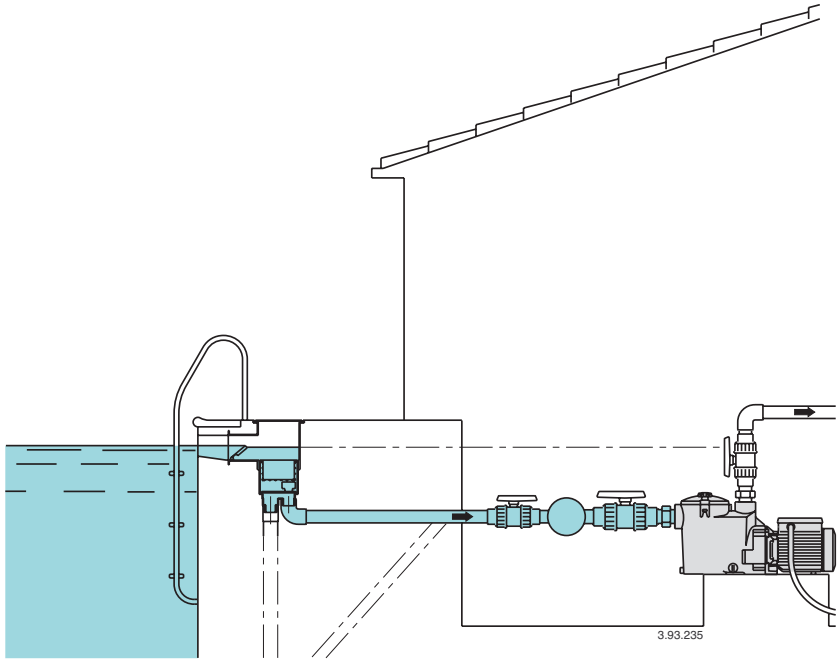
12. TROUBLESHOOTING

WARNING: Turn off the power supply before performing any operations.
Do not allow the pump or motor to run when dry even for a short period.
Strictly follow the user instructions and if necessary contact an authorised service centre.

PROBLEM	PROBABLE CAUSES	POSSIBLE REMEDIES
1) The motor does not start	1a) Unsuitable power supply 1b) Incorrect electrical connections 1c) Engine overload protective device cuts in. 1d) Blown or defective fuses 1e) Shaft blocked 1f) If the above causes have already been checked, the engine may be malfunctioning	1a) Check that the mains frequency and voltage correspond to the electrical characteristics shown on the indicator plate 1b) Connect the power supply cable to the terminal board correctly. Check that the thermal overload protection is set correctly (see data on the engine indicator plate) and make sure that the fuseboard upline of the engine has been properly connected 1c) Check the power supply and make sure that the pump shaft is turning freely. Check that the thermal overload protection has been set correctly (see engine indicator plate) 1d) Replace the fuses, check the electric power supply and points a) and c) 1e) Remove the cause of blockage as indicated in the “Blocked pump” instruction booklet 1f) Repair or replace the engine by applying to an authorised service centre
2) Pump blocked	2a) Prolonged periods of inactivity with formation of rust inside the pump 2b) Presence of solid bodies in the pump rotor 2c) Bearings siezed	2a) Rotation may be started directly from the pump shaft or from the joint (remember to turn off the electricity supply first) or contact an authorised service centre 2b) If possible, dismantle the pump casing and remove any solid foreign bodies inside the rotor, if necessary contact an authorised service centre 2c) If the bearings are damaged replace them or if necessary contact an authorised service centre
3) The pump functions but no water comes out	3a) Possible infiltration of air from suction tube connections, drain plugs or filling of pump or from the gaskets of the suction pipe 3b) Foot valve blocked or suction pipe not fully immersed in liquid 3c) Suction filter blocked	3a) Check which part is not tight and seal the connection adequately 3b) Clean or replace the bottom valve and use a suction pipe suitable for the application 3c) Clean the filter, if necessary, replace it . See point 2a) also.
4) Insufficient flow	4a) Pipes and accessories with diameter too small causing excessive loss of head 4b) Presence of deposits or solid bodies in the internal passages of the rotor 4c) Rotor deteriorated 4d) Worn rotor and pump case 4e) Excessive viscosity of the liquid pumped (if other than water) 4f) Incorrect direction of rotation 4g) Suction head excessive in relation to the suction capacity of pump 4h) Suction pipe too long	4a) Use pipes and accessories suitable for the specific application 4b) Clean the rotor and install a suction filter to prevent other foreign bodies from entering 4c) Replace the rotor, if necessary, contact an authorised service centre 4d) Replace the rotor and the pump casing 4e) The pump is unsuitable 4f) Invert the electrical connections on the terminal board or control panel 4g) Try to close the feeder gate partially and/or reduce the difference in level of the pump and the liquid being aspirated 4h) Bring the pump closer to the suction tank so as to use a shorter pipe. If necessary use a pipe of a wider diameter
5) Noise and vibrations from the pump	5a) Rotating part unbalanced 5b) Worn bearings 5c) Pump and pipes not firmly attached 5d) Flow too strong for the diameter of the delivery pipe 5e) Functioning in cavitation 5f) Unbalanced power supply 5g) Incorrect alignment of pump-motor unit	5a) Check that no solid bodies are obstructing the rotor 5b) Replace the bearings 5c) Anchor the delivery and suction piping as needed 5d) Use bigger diameters or reduce the pump flow 5e) Reduce the flow by adjusting the feeder gate and/or using pipes with a bigger internal diameter. See point 4g) too 5f) Check that the mains voltage is right 5g) If necessary, the unit must be re-aligned
6) Leakage from the mechanical seal	6a) The mechanical seal has functioned when dry or has stuck 6b) Mechanical seal scored by presence of abrasive parts in the liquid pumped 6c) Mechanical seal unsuitable for the type of application 6d) Slight initial drip during filling or on first start-up	In cases 6a), 6b) and 6c), replace the seal, if necessary contact an authorised service centre 6a) Make sure that the pump casing (and the suction pipe if the pump is not self-priming) are full of liquid and that all the air has been expelled. See point 5 e) too. 6b) Install a suction filter and use a seal suited to the characteristics of the liquid being pumped. 6c) Choose a seal with characteristics suitable for the specific application 6d) Wait for the seal to adjust to the rotation of the shaft. If the problem persists, see points 6a), 6b) or 6c) or contact an authorised service centre.

13.

Pump located below the water level



English

ATTENTION: this pump is not submersible.

With the pump located below the water level, close the suction and delivery gate valves before removing the strainer cover.

Lower the water level in the swimming pool below the suction port of the pump before disassembling for servicing operations.

Make sure the thumbscrew drain plugs and the strainer cover are properly seated and tightened before filling the swimming pool.

Deutsch

ACHTUNG! Diese Pumpe ist keine Unterwasserpumpe.

Bei Anordnung der Pumpe unterhalb des Wasserspiegels sind vor Demontage des Filterdeckels die Absperrorgane vor und hinter dem Aggregat zu schließen.

Der Wasserstand ist auf ein Niveau unterhalb des Saugstutzens der Pumpe abzusenken bevor eine evtl. Demontage für Wartungsarbeiten an der Anlage beginnt.

Vor Wiederbefüllung des Swimmingspools ist sicherzustellen, daß Entleerungsstopfen und Filterdeckel korrekt und dicht montiert sind.

Nederlands

ATTENTIE: Deze pomp is geen dompelpomp.

Wanneer de pomp beneden de waterspiegel geplaatst is moeten de afsluiters in zowel de pers- als ook in de zuigleiding gesloten worden voordat het filterdeksel verwijderd wordt.

Laat het waterniveau in het zwembad dalen tot onder het niveau van de zuigaansluiting van de pomp voordat de pomp gedemonteerd wordt in geval van servicewerkzaamheden aan de installatie.

Voordat het zwembad weer gevuld wordt dienen de aftappluggen en het filterdeksel korrekt en waterdicht gemonteerd te zijn.

14.

Pump located above the water level

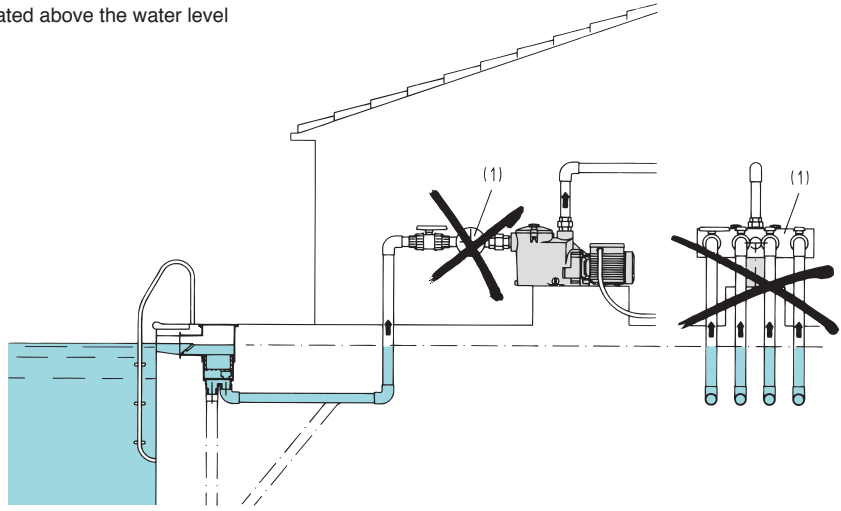


Fig. 8a

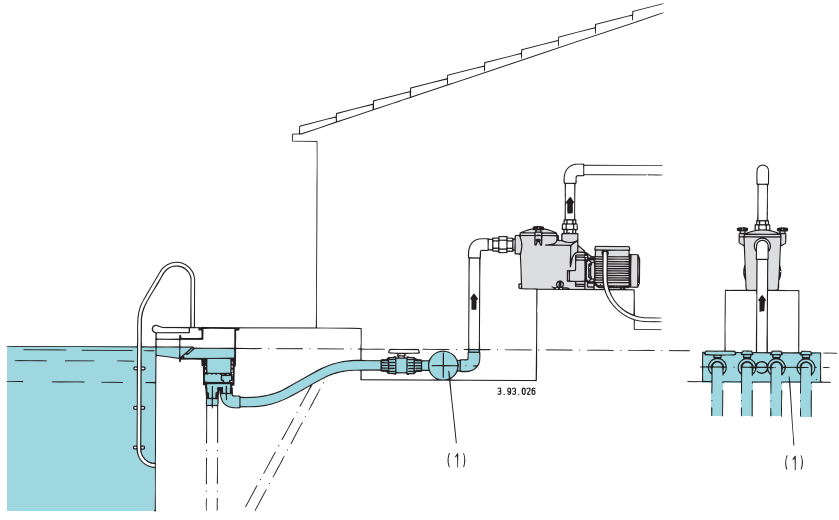


Fig. 8b

(1) Manifold

Preferred solution

English

With various suction pipes (for skimmers, main drain, fitting for vacuum cleaner), as far as possible, locate the pipes and the manifold below water level with the pump being reached by a single vertical pipe (figure 8b).
By reducing the length (volume) of the suction pipe to be filled with water by the pump, you will reduce the priming time (see section 5.3.).

Deutsch

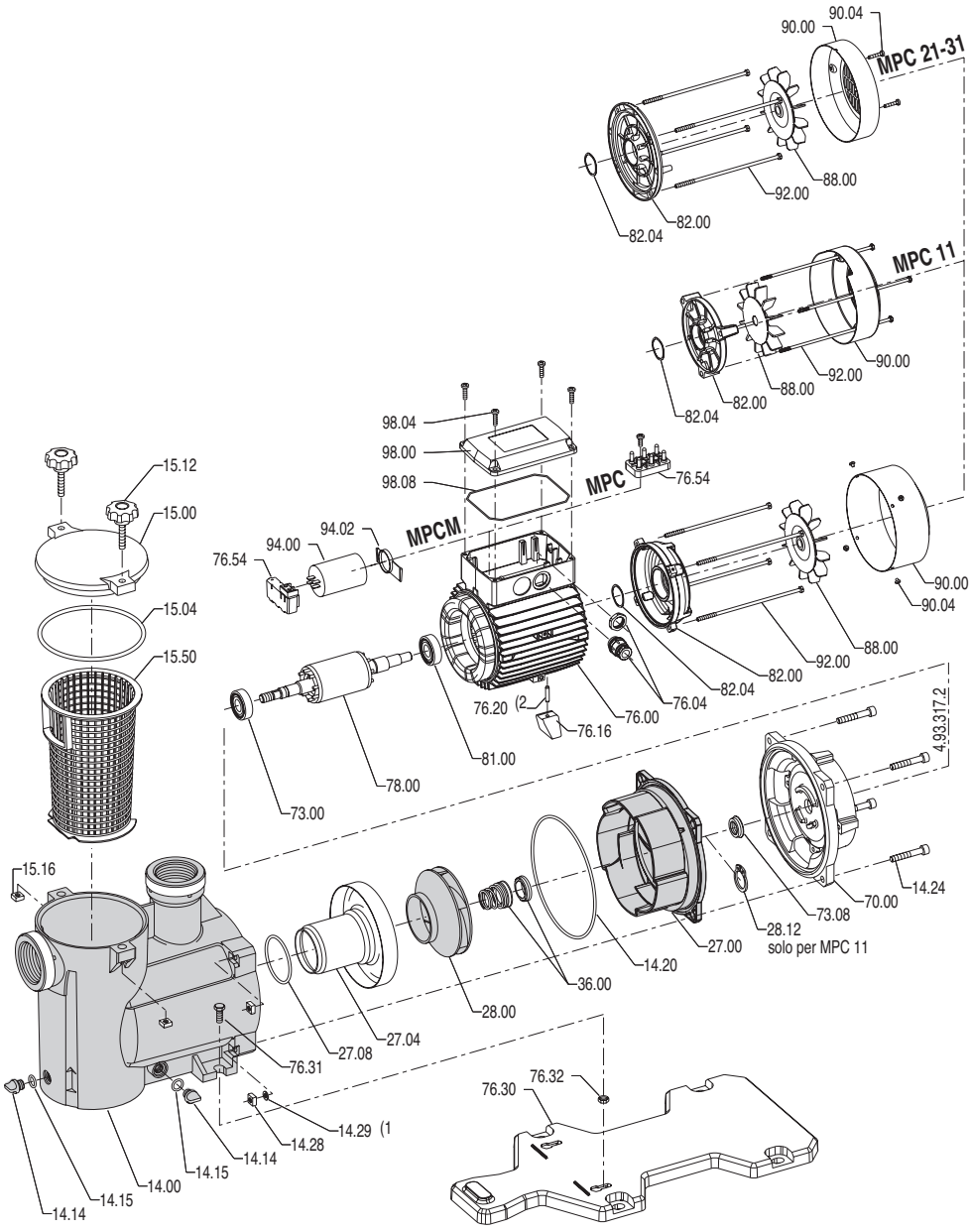
Mit mehreren Saugrohren (für Skimmer, Bodenablauf, Steckkupplung für Bodenabsauggerät), die Saugleitungen und das Sammelrohr möglichst unterhalb des Wasserspiegels zur Pumpe heranführen und die Pumpe nur durch ein vertikales Saugrohr erreichen (Abb. 8b).
Wird die Länge (das Volumen) der Sauglei-tung, die durch die Pumpe gefüllt werden muß, oberhalb des Wasserspiegels so kurz wie möglich gehalten, wird die Ansaugezeit reduziert (Siehe Kapitel 5.3.).

Nederlands

Bij meerdere zuigleidingen (voor skimmers, bodemafvoer, snelkoppeling waterstofzuigers) installeer voor zover mogelijk alle leidingen, inclusief de hoofdleidingen beneden het waterniveau en installeer 1 vertikale leiding naar de pomp (figuur 8b).
Zo hoeft alleen maar het gedeelte van de leiding dat zich boven het waterniveau be-vindt door de pomp met water gevuld te worden en wordt de aanzuigtijd verkort (zie paragraaf 5.3.).

15.

Drawing for dismantling and assembly



Patented

(1 14.29 solo per MPC(M) 11-21-31-41

(2 76.20 solo per MPC(M) 41-51-61-71

16.

Minimum cross-sectional area of conductors

Tab. 1 TAB 1IEC 60335-1

Rated current of appliance A	Nominal cross-sectional area mm ^{2}
>0,2 ÷ ≤3	0,5 [a]
>3 ÷ ≤6	0,75
>6 ÷ ≤10	1,0
>10 ÷ ≤16	1,5
>16 ÷ ≤25	2,5
>25 ÷ ≤32	4
>32 ÷ ≤40	6
>40 ÷ ≤63	10

a These cords may only be used if their length does not exceed 2 m between the point where the cord or cord guard enters the appliance and the entry to the plug.

EC - Declaration of Conformity

Manufacturer Details

Tradename
Bedu Pompen BV

Address
Poort van Midden Gelderland Rood 10, 6666 LT, Heteren, Netherlands

Product Details

Product Name
Centrifugal pumps

Model (+series) Name
MPC series

Applicable Standards Details

Directives	Standards
2006/42/EC (Machinery Directive)	EN-ISO 12100:2010
2014/35/EU (Low Voltage Directive)	EN-IEC 60204-1:2006
2014/30/EU (Electromagnetic compatibility)	EN 809+A1/C1

Additional information

No further details.

Declaration

We hereby declare under our sole responsibility that the product(s) mentioned above to which this declaration relates complies with the above mentioned standards and Directives.

Business Unit Manager: Issued Date:

01/**10**/ 2014

Marco Breunissen

Signature of representative(s)

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