



Via Sacco e Vanzetti, 9/11
41015 NONANTOLA (Mo) Italy
Tel: +39 - 059 - 549283
Fax: +39 - 059 - 547673
E-mail: info@cempumps.com
www.cempumps.com

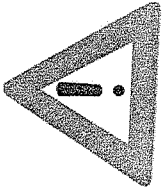
ELETTROMECCANICA
COSTRUZIONE ELETTROPOMPE E MOTORI IN CORRENTE CONTINUA

16.021.24

Peripheral pump type

PB

Use and maintenance manual



WARNINGS

- This manual must be read carefully in every detail before using the machine.
- This is an electrical apparatus with moving parts to be kept away from children and unauthorised people.
- Before using the machine, carefully check whether it has been damaged during transport; small breakages or dents could be detrimental to its operation.
- Do not touch electrical parts or carry out electrical operations with wet hands.
- Do not use the pump to transfer either inflammable or explosive liquids, or in an explosive environment, since the motor is not explosion proof. Moreover, do not use and submerge the pump (in case the pump is not a submersible one) and protect it from humidity. Never use water in attempt to put out possible fire of electrical parts, always use the appropriate fire-extinguisher which must be present in the workshop or working areas.
- Gloves and other protective clothing are recommended when toxic or polluting fluids and substances are used. Plan out the working area so as to protect the environment.
- Before carrying out any maintenance operation, disconnect the power supply. Any type of intervention, overhaul or repairs made to the mechanical or electrical parts must be carried out only by authorised, skilled personnel.
- Keep this manual with care and make it available to all users of the machine.
- The manufacturer shall not be held responsible for any damage or harm to objects or individuals deriving from carelessness, non-compliance or improper use of the motor pump.

CONTENTS

1.0	Description	
1.1	Use	2.1 Positioning
1.2	Scope	2.2 Electric connection for D.C. & A.C motor
1.3	Dimensions and weight	
1.4	Accessories	2.3 Pipe connection
1.5	Transport	2.4 Operation
2.0	Installation and use	3.0 Maintenance
		4.0 Cleaning

1.0 DESCRIPTION

Bronze peripheral pump type PB with pump body and the motor support are made in bronze, the impeller is made in brass alloy and the drive shaft is in stainless steel. Special corrosion-proof gaskets ensure full sealing of the liquid to be transferred.

1.1 USE

These pump are widely used in the nautical sector to deliver pressurized fresh water to all on board appliances (showers, washbasins, etc.)
 The liquid to be pumped must be free of solid impurities and have a temperature ranging between +0 and +70 °C.

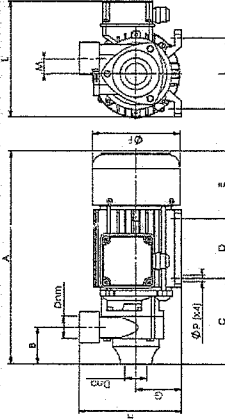
To eliminate any impurity a filter may be inserted in the suction pipe (on request).

A non-return valve installed in the inlet is necessary for proper operation.

1.2 SCOPE

- Liquid free of solid impurities.
- Temperature range of the liquid: from +0 a +70° C
- Max. suction depth: 6 m.
- Max. voltage range: +- 5%.
- Acoustic pressure: <70 dB.
- Max. static pressure inside the pump body: 6 bar.
- Protection: DC: IP23 ÷ AC: IP54
- Continuous service (S1).
- Max. number of starts: 30/h.

1.3 DIMENSIONS AND WEIGHT



Modello Type	Corrente Current	Dna (Gas/BSP)	Ddia (Gas/BSP)	A	B	C	D	E	ØF	G	H	I	L	M	ØP	Peso /Weight (Kg)
PB	C.C.-0.6	1"	1"	295	52	118	84	93	123	53	142	100	160	21	7	7.0
	C.A.-0.6	1"	1"	265	52	118	84	63	123	63	142	100	125	21	7	5.7
PCC	C.C.-0.6	1"	1"	295	52	118	84	93	123	63	142	100	160	21	7	7.0
	C.A.-0.6	1"	1"	265	52	118	84	63	123	63	142	100	125	21	7	5.7

1.4 ACCESSORIES ON REQUEST

Omega base with anti-vibrations

1.5 TRANSPORT

The pump may be transported manually or by trolley.

2.0 INSTALLATION AND USE

Installing the pump is a delicate operation which, if it is not properly carried out, may jeopardise the correct operation of the machine; therefore, it must always be carried out by expert staff in a dry and ventilated environment.

2.1 POSITIONING

When it is operating, the electric pump needs to remain fixed and stable (to avoid vibrations or damage) and must be positioned horizontally. The level of the liquid to be transferred must be at a max. depth of 6 m. as compared to the axis of the pump. The available head (H) depends upon the type of electric pump used and is reported in the catalogue in the performance data diagram. When H increases, the Q flow-rate decreases and vice versa.

2.2 ELECTRIC CONNECTIONS FOR D.C. MOTOR

Electrical connection must be carried out only by a qualified electrician and in accordance with local regulation.

To feed power to the electric pumps a battery and a direct current generator are needed to match the requirements reported in the electric motor plate (V). The connection is to be carried out by means of (positive and negative) cables to be inserted and locked into the outputs of the motor. The diameter of the cables needs to be calculated according to the distance between the battery and the electric pump and must always be at least 1 mm² for every 4 Amperes of absorption. ; the cables must have a max. length of 5/6 m

ELECTRIC CONNECTIONS FOR A.C. MOTOR

Electrical connection must be carried out only by a qualified electrician and in accordance with local regulation.

Connect the earthing (grounding) conductor to the terminal
Compare the frequency and main voltage with name-plate data and connect the supply conductors to the terminals in accordance with the appropriate diagram inside the terminal box cover.

Install a device for disconnecting from mains (switch) and provide and overload protection device in line with the name-plate current.

WARNING: Once the cables are inserted, the connection will be operating and the pump will start working.

Check that the direction of rotation is as show by the arrow on the pump casing, otherwise disconnect electrical power and reverse the connection of two phases

Attention: NEVER RUN THE PUMP DRY – not even for a short trial run.

Start the pump after filling the pump body completely with liquid

2.3 PIPE CONNECTION

Before connecting the pipes, put some liquid to be transferred into the pump body until full capacity is reached. This operation is necessary to achieve priming (i.e. suction by the pump) and is to be carried out at start-up and each time the pump body remains empty.
The pipes must be rigid and reinforced and secured to the pipe fittings using pipe-clamps. Position the pipe fittings on the nozzles of the pump and fully tighten in order to avoid any

suction of air. We recommend to keep the suction pipe as short as possible in order to make the priming easier.

2.4 OPERATION

Start the electric pump and it will prime in a few seconds. After 10/15 seconds, if the pump is not primed, switch off the motor and check that the suction pipe does not show any air leaks caused by holes or improper connection to the joints.

If the liquid to be pumped lies below 6 metres, a foot valve is necessary.

After operation, stop the pump and proceed to cleaning operations.
Before storing the electric pump, disconnect from the mains.

3.0 MAINTENANCE

WARNING: before carrying out any maintenance operation, disconnect from the mains!
Normally our electric pumps do not need any maintenance since all their components are calibrated and tested in our works during the assembly operations.

Therefore, a few measures are sufficient to ensure the constant operation of the pump, e.g.: periodically check if the brushes are worn out (only for 12/24V D.C. models), make sure that the pump never operates when it is empty, make sure that the impeller does not jam owing to foreign bodies inside the pump casing or encrustation due to a long period of non-operation, check that the foot valve and the filter at the suction side (if present) work correctly.

Any overhauling or fixing operation requires the intervention by skilled personnel and original "C.E.M." spare parts.

In such cases, contact the nearest dealer or the manufacturer directly.

If leaks of liquid emerge, the mechanical seal do not work correctly and need to be replaced. If an operation or performance loss emerge, which may not be due to troubles with the motor, the pump casing or impeller may be worn out. Another possible cause is that the impeller has jammed owing to the presence of solid bodies in the liquid; in this case, switch off the motor immediately to prevent it from overheating and then proceed to overhaul the pump.

4.0 CLEANING

The pump always needs to be cleaned after operation so as to safeguard its mechanical and hygienic characteristics.

Motor: the motor can be cleaned externally by using a dry cloth. Do not use solvents or petrol.

Pump: Operate the pump for 1-2 minutes with clean water or a solution of water and neutral soap or dish detergent at a temperature of 70-80 °C. Then empty the pump body and the pipes completely.



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DESCRIZIONE / DESCRIPTION / DESCRIPTION:

*Pompa periferica in bronza indicata per il trasferimento di acqua in pressione
Pump suitable for deliver pressurized water*

MODELLO-TIPO / MODEL-TYPE

PB

DICHIARAZIONE DI CONFORMITA' / DECLARATION OF CONFORMITY

Noi, C.E.M. Elettromeccanica S.r.l., dichiariamo sotto la nostra esclusiva responsabilità, che la macchina in oggetto è conforme a quanto prescritto dalle Direttive 2006-42/CE, 2006-95/CE, 2004-108/CE, 2002-95/CE (ROHS). È fatto divieto di mettere in servizio il componente in oggetto prima che la macchina in cui sarà incorporata sia stata dichiarata conforme alle disposizioni contenute nelle direttive 2006-42/CE, 2006-95/CE, 2004-108/CE, 2002-95/CE (ROHS) e seguenti.

We C.E.M. Elettromeccanica S.r.l., under our exclusive responsibility declare that the above mentioned machine is in compliance with the Directives 2006-42/CE, 2006-95/CE, 2004-108/CE, 2002-95/CE (ROHS). It is highly forbidden to operate the above mentioned component before the machine in which it has to be assembled has been declared "in compliance with the standards" laid down by the directive 2006-42/CE, 2006-95/CE, 2004-108/CE, 2002-95/CE (ROHS) and all other amendments.

Nonantola (MO), 07/01/2014

Giancarlo Corradi
L'administratore - Managing Director

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