

User guide for pump series 2COP1, 2CPP1, 4COP2, 4, 6

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Universally

This user guide is for pump series 2COP1, 2CPP1, 4COP2, 4, 6. It contains instruction for instalation, use and maintenance. It is essential that all work in the transportation, installation, integration into the operation and maintenance by a **qualified, responsible and professional staff.**

Safety

Before connecting the pump to the power network is necessary to ascertain whether that is not under stress and that is protected against accidental switching on.

The terminal must not be foreign objects, dirt and moisture. After prolonged use, the device can occur heat the surface of the stator and touching can occur burns.

Transport and storage

When you transporting pumps, you must protect it before damage. Store the pump in a dry environment.

Specification of product

Pumps of this series are single stage centrifugal pumps. They are designed for pumping cooling and cutting oils and emulsions with a viscosity according to the table below. The values indicated on the label in the table below are defined for the fluid viscosity 150mm²s⁻¹. With increasing viscosity decreasing the quantity delivered.

These pumps can not draw any flammable or volatile substances and may not work in explosive environments.

Motors of these series pumps correspond to the standards EN60034 (IP54 rating). When isn't on the rating label says other, the motors are dimensioned for ambient temperature from -15 ° C to +40 ° C and the installation height is up to 1000m above sea level.

Technical data

	2COP1 2CPP1	4COP2	4COP4	4COA6
Protective power (for 400V) [A]	0,22	0,35	0,45	0,60
Maximum operating pressure * [kPa]	~ 28	~ 48	~ 50	~ 58
Maximum operating flow * [l/min]	~ 45	~ 70	~ 80	~ 85
Min. operating flow * [l/min]	0			
Intake height (by immersion) min.-max. [cm]	90-170	90-270		
Kinematic viscosity min.-max. [mm ² /s]	1-90	1-150		

* Values are dependent on the viscosity of the pumped liquid. Overload protection provides locking power.

Voltage values:

three-phase motor variant	3x 400 V (380-420 V)	50Hz/60Hz
one-phase motor variant	1x 230 V (220-240 V)	50Hz/60Hz

Installation

- Before installation make a careful inspection the pump and remove any defects professional manner.
- Pumps are designed for vertical installation with flange to the tank with the pumped liquid. They are connected securely using four screws M6 pitch of 115 mm.
- Hydraulic intake hole cover must be at least 25 mm above the bottom of the tank to prevent suction of sediment.
- Minimum height of the liquid level must be above the impeller, the maximum liquid level must be 20 mm below the seating surface mounting flange.

Put into operation

- When you connecting the pump to the electricity grid is necessary to comply with the requirements of applicable regulations and standards, especially ČSN 33 2000-4.41 and 5.54..
- All work on the pump motor is limited to qualified persons when the engine is off and secured against reconnection.
- You must pay attention to details of the power plate and connection diagram in the terminal.
- After connection the terminal to the suction's cable and cover terminal's cover, you must let the engine run and check the rotation of the rotor. (For types 2COP1, 2CPP1, 4COP2, 4, 6 - rotor is not freely visible, and therefore the wrong direction of rotation to find only the absence of hydraulic power, or. You must pull the pump from the tank and control the direction of rotation of the collar). In the case of incorrect direction of rotation the motor terminal can re-pole. The terminal cover can be rotated to any position at 90 degrees.

End of operation

- You must disconnect device from electrical distribution.
- You must remove the terminal cover and disconnect the wires.
- You must unscrew and remove pump from tank.

Maintenance

Pumps does not need any special maintenance. In operation you have to pay attention to the pump did not work "dry" because pumped liquid also provides prevention against seizing hydraulic parts and partially cooling.

Service

During the lifetime of the pump may occur during operation (when pumping abrasive media) to wear on some parts, especially the impeller and hydraulic lid.

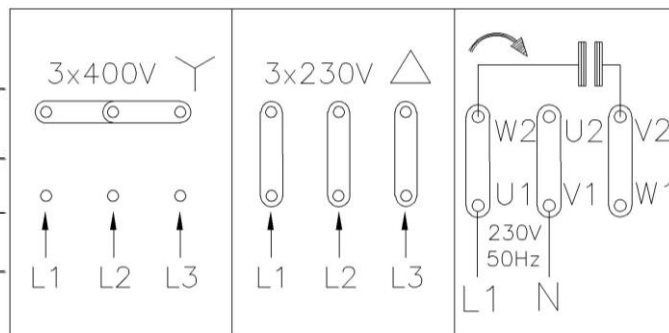
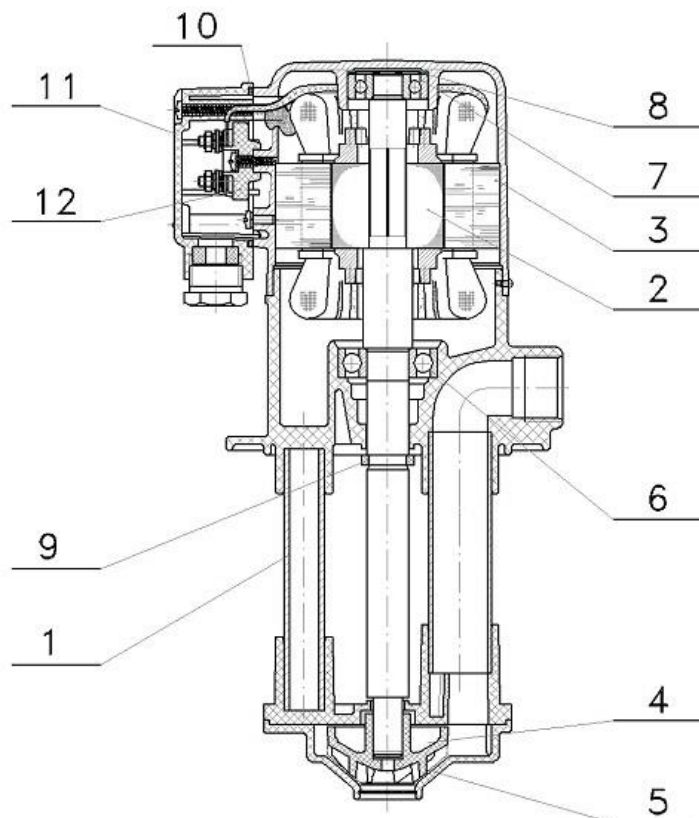
The pump can be easily reversible way to disassemble the lid only of hydraulics for the replacement of the runner:

- Unscrew the two screws the lid hydraulics.
- The impeller you must carefully using a suitable tool to download from the shaft down (the wheel is pressed on the shaft).
- Re-pressing the runner must carry out carefully or it will damage the motor bearings.

Another possible repairs performed by the manufacturer.

List of basic parts

Usually the parts supplied only **4, 5** and **11**:



- 01 BODY - (Pa6, steel)
- 02 ROTOR WITH SHAFT - (steel, Al)
- 03 STATOR - (alloy Al, Cu, steel)
- 04 IMPELLER - (POM)
- 05 COVER OF HYDRAULICS - (Pa6)
- 06 BEARINGS LOWER - (6203 2Z)
- 07 BEARING UPPER - (6201 2Z)
- 08 WASHER EQUALIZING - (steel)
- 09 RING JET - (rubber)
- 10 SEAL CORD - (rubber)
- 11 COVER OF TERMINAL - (Pa6)
- 12 TERMINAL - (plastic)

Removal

Any liquidation of this product and its individual parts must be made in a manner friendly to the environment for companies this purpose.

Kind of waste	Code	Categ.	Means of treatment
Waste from Elektor. A electron. Equipment-discarded devices.	16 02 14	O	Other waste-usable waste-sorting needs to be transmitted by an authorized person conducting the purchase of waste or secondary raw materials.
Paper and / or cardboard packaging	15 01 01	O	
Other discarded equipment, metal parts of pumps (without residuals oil)	17 04 07	O	
Other discarded equipment, no-metal parts of pumps (eg carbon, carbide, ceramics)	16 02 16	O	Other waste-to be collected and provide the operator dumps
Other discarded equipment, pumps, rubber parts	16 02 16	O	Other waste to be collected and send for disposal in a waste incinerator
Wooden package	15 01 03	O	
Plastic package film made of PE	15 01 02	O	
Small plastic items ²⁾	16 02 16	O	
Other engine, gear or lubrication oil	13 02 08	N	Hazardous waste must be collected and send for disposal to the authorized person
Other solvents and their mixtures with preservatives (including biodegradable)	14 06 01	N	
	14 06 02 14 06 03		

²⁾ Beware of polytetrafluoroethylene (Teflon, PTFE) must not be due to the toxicity of burning gases other than in the incinerator.



EMP s.r.o.
Nádražní 394, 684 01 Slavkov u Brna

tel.: 544 423 020

544 423 021

fax: 544 221 828

e-mail: odbyt@emp-slavkov.cz