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2 MACHINE AND MANUFACTURER IDENTIFICATION



Table with 2 columns: AVAILABLE MODELS and MANUFACTURER. Lists pump models and company details.

3 DECLARATION OF CONFORMITY

The undersigned: Piusi S.p.A. declares that the equipment described below is in conformity with the legal provisions indicated in the directives:
- Machine Directive 2006/42/EC
- Electromagnetic Compatibility Directive 2014/53/EU

4 MACHINE DESCRIPTION

PUMP: Electric self-priming rotary external gear pump, equipped with a by-pass valve.
MOTOR: Brush motor powered by continuous current, low voltage, with intermittent cyclostyled type, IP55 protection class.

4.1 HANDLING AND TRANSPORT

Forward: Due to the limited weight and dimensions of the pumps, special lifting equipment is not required to handle them.

PACKAGING

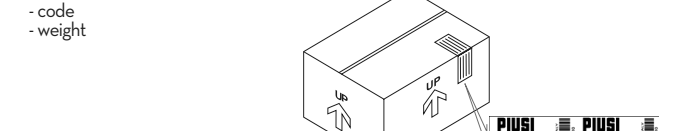


Table with 3 columns: MODEL, WEIGHT (Kg), PACKAGING DIMENSION (mm). Lists technical specifications for different pump models.

5 GENERAL WARNINGS

Warnings: To ensure operator safety and to protect the dispensing system from potential damage, workers must be fully acquainted with this instruction manual before attempting to operate the dispensing system.
Safety shoes: Safety shoes must be worn at all times.

6 SAFETY INSTRUCTIONS

ATTENTION: You must avoid any contact between the electrical power supply and the fluid that flows to the FILTERED.
Before any checks or maintenance work are carried out, disconnect the power source.
To help prevent fire and explosion: Use equipment only in well ventilated areas.

ELECTRIC SHOCK: Turn off and disconnect power cord before servicing equipment.
Connect only to a grounded electrical outlets.
Use only 3 wire extension cords in accordance with local electrical codes.

EQUIPMENT MISUSE: Do not leave the work area while equipment is energized or under pressure. Turn off all equipment when equipment is not in use.

10.1 ENVIRONMENTAL CONDITIONS: The temperature limits shown apply to the pump components and must be respected to avoid possible damage or malfunction.
It is understood, nevertheless, that for a given oil, the real functioning temperature range also depends on the variability of the viscosity of the oil itself with the temperature. Specifically:
- The minimum temperature allowed (>0°C) could cause the viscosity of some oils to greatly exceed the maximum allowed.

10.2 ELECTRICAL POWER SUPPLY: Depending on the model, the pump must be fed by three-phase or single-phase alternating current whose nominal voltage is the one indicated in the table of paragraph TECHNICAL DATA.
The maximum acceptable variations from the electrical parameters are:
Voltage: +/- 5% of the nominal value

10.3 WORKING CYCLE: The pumps are designed for INTERMITTENT use with a 30-minute work cycle under conditions of maximum back pressure.

10.4 PERMITTED AND NON-PERMITTED FLUIDS

- FLUIDS PERMITTED: OIL with a viscosity from 50 to 2000 cSt (at working temperature). Viscosity from 50 to 600 cSt for VISCOMAT 60/1 12V and VISCOMAT 60/2 24V.
FLUIDS NON PERMITTED AND RELATED DANGERS: GASOLINE, INFLAMMABLE LIQUIDS with PM > 55°C, WATER, FOOD LIQUIDS, CORROSIVE CHEMICAL PRODUCTS, SOLVENTS, DIESEL.

7 FIRST AID RULES

Electrocution: Disconnect the unit from the mains, or use a dry insulator as protection while moving the electrocuted person far from any conductor. Do not touch the electrocuted person with bare hands until he/she is far from any conductor.

8 GENERAL SAFETY RULES

Wear protective equipment that is:
- suitable to the operations that need to be performed;
- resistant to cleaning products.
Safety shoes: Safety shoes must be worn at all times.
Close-fitting clothing: Close-fitting clothing must be worn at all times.

9 TECHNICAL DATA

Table with 5 columns: PUMP MODEL, Qmax (l/min), Qmin (l/min), Pmax (bar), P by-pass (bar). Lists flow and pressure characteristics for various pump models.

ATTENTION: The power absorbed by the pump depends on the functioning point and the viscosity of the oil being pumped. The data for MAXIMUM CURRENT provided in the Table refer to pumps functioning at the point of maximum compression. Pmax, with oils of a viscosity equal to approximately 500 cSt.

9.2 ELECTRICAL DATA

Table with 4 columns: PUMP MODEL, FUSES (A), TENSION (V), ABSORPTION (A), POWER (W). Lists electrical specifications for different pump models.

10 OPERATING CONDITIONS

10.1 ENVIRONMENTAL CONDITIONS: TEMPERATURE: min. -10 °C / max. +60 °C. HUMIDITY: max. 90%.

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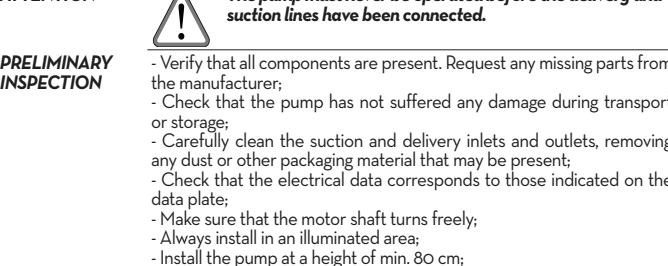
11 INSTALLATION

ATTENTION: The pump must never be operated before the delivery and suction lines have been connected.

PRELIMINARY INSPECTION: Verify that all components are present. Request any missing parts from the manufacturer.
Check that the pump has not suffered any damage during transport or storage.

11.1 POSITIONING, CONFIGURATIONS AND ACCESSORIES

NOTE: In the case of installation in the open air, proceed to protect the pump by providing a protection roof.



12 CONNECTIONS

It is recommended to install a check valve in order to resume the system operation quickly and easily even after the first priming.
The pump must be secured in a stable way using the holes on the bed of the motor and vibration damping devices.
Under conditions C and D, a check valve is to be installed. However, during the initial start-up phase, the suction tube is to be filled with oil.

12.1 ELECTRICAL CONNECTIONS: Comply with the following (not exhaustive) instructions to ensure a proper electrical connection.
Before installation and maintenance make sure that power supply to the electric lines has been turned off.

12.2 CONSIDERATIONS REGARDING DELIVERY AND SUCTION LINES: The choice of pump model to use should be made keeping in mind the viscosity of the oil to be pumped and the characteristics of the system attached to the delivery of the pump.

SUCTION FOREWORD: VISCOMAT series pumps are characterized by excellent suction capacity. In fact, the characteristic flow rate/back pressure curve remains unchanged even at high pump suction pressure values.

ATTENTION: The pumps are supplied without line accessories. The most common line accessories are listed below. Their use is compatible with proper use of the pumps.

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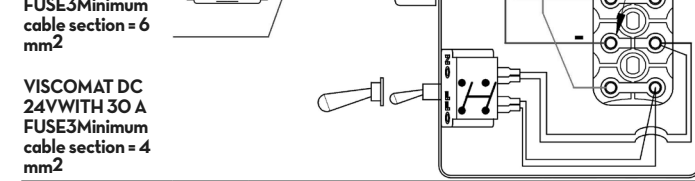
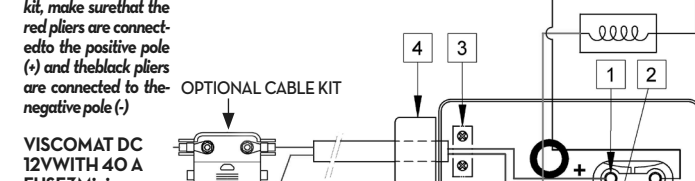
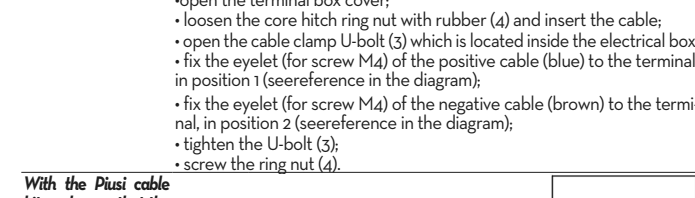
12.5 INITIAL START-UP: VISCOMAT DC series pumps are self-priming and, therefore, able to draw oil from the tank even when the suction hose is empty on start-up.

12.6 PIPING CONNECTIONS: Before carrying out any connection, refer to the visual indications in the diagram. Wrong connection can cause serious pump damage.

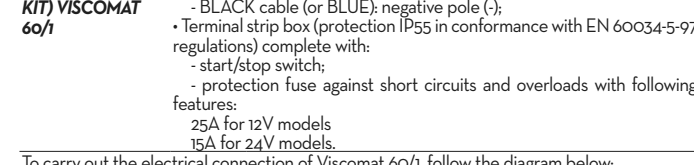
PRELIMINARY INSPECTION: Check that the machine has not suffered any damage during transport or storage. Clean the inlet and outlet openings, removing any dust or residual packing material.

CONNECTION: Make sure that the hoses and the suction tank are free of dirt and filling residue that might damage the pump. Always install a metal mesh filter in the suction hose.

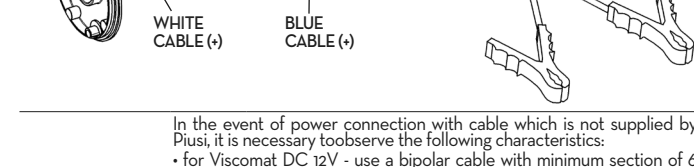
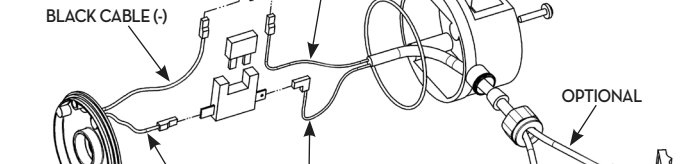
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13 INITIAL START-UP



ATTENTION: NEVER start the pump by simply inserting the plug in the outlet. Fluid exits at high pressure from a delivery gun fed by a VISCOMAT pump. Never point the outlet of the gun towards any part of the body.



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13.2 PIPING CONNECTIONS: Before carrying out any connection, refer to the visual indications in the diagram. Wrong connection can cause serious pump damage.

PRELIMINARY INSPECTION: Check that the machine has not suffered any damage during transport or storage. Clean the inlet and outlet openings, removing any dust or residual packing material.

CONNECTION: Make sure that the hoses and the suction tank are free of dirt and filling residue that might damage the pump. Always install a metal mesh filter in the suction hose.

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14 EVERY DAY USE

FOREWORD: No special preliminary operation is required for every day use of VISCOMAT pumps.

MANUAL OPERATION: Before starting the pumps, make sure that the ultimate shut-off device (delivery nozzle or line valve) is closed.

ATTENTION: NEVER start the pump by simply inserting the plug in the outlet. Fluid exits at high pressure from a delivery gun fed by a VISCOMAT pump. Never point the outlet of the gun towards any part of the body.

ATTENTION: Closing the delivery gun or the line valve to stop delivery. The pump will immediately enter by-pass mode.

15 MAINTENANCE: VISCOMAT DC series pumps are designed and constructed to require a minimal amount of maintenance.

16 NOISE LEVEL: In normal operating conditions, noise emissions of all models do not exceed 70 dB at a distance of 1 meter from the electric pump.

17 PROBLEMS ET SOLUTIONS

Table with 3 columns: PROBLEM, POSSIBLE CAUSE, CORRECTIVE ACTION. Lists common issues and solutions.

18 DEMOLITION AND DISPOSAL

FOREWORD: If the system needs to be disposed, the parts which make it up must be delivered to companies that specialize in the recycling and disposal of industrial waste and, in particular:

DISPOSAL OF PACKAGING MATERIALS: The packaging consists of biodegradable cardboard which can be delivered to companies for non-recycling of cellulose.

METAL PARTS DISPOSAL: These metal parts can be disposed of separately. These parts must be disposed of by companies that specialize in the disposal of electronic components, in accordance with the indications of directive 2012/19/EU (see text of directive below).

DISPOSAL OF ELECTRIC AND ELECTRONIC COMPONENTS: European Directive 2012/19/EU requires that all equipment marked with this symbol on the product and/or packaging must be disposed of together with non-differentiated urban waste.

MISCELLANEOUS PARTS DISPOSAL: Disposing of RAEE equipment as household wastes is strictly forbidden. Such wastes must be disposed of separately.

