

ADVICE AND RECOMMENDATIONS

- This instruction manual refers exclusively to the installation of the component on tooling machines.
- ⚠ ● Ensure that the maximum level of the liquid, in any usage condition, remains 20mm under the fastening surface of the motor flange. This is indispensable for operation of the electrical pump in complete safety against possible flooding of the motor.
- After connecting the cables to the terminal board, ensure that the seal and the terminal board cover have been properly re-installed in their places.
- For best performance, ensure that the suction device of the pump is immersed enough to allow the maximum supply of water to the impeller
- Avoid having solid objects in the liquid where the pump is immersed.

INSTRUCTIONS FOR TROUBLESHOOTING

EFFECT	POSSIBLE CAUSE	SUGGESTED ACTION
Pump does not start	<ul style="list-style-type: none"> ● No electrical energy ● Motor protection or circuit breaker disengaged ● Motor burned out or off 	<ul style="list-style-type: none"> ● Restore contact ● Reactivate the motor protection of the circuit ● Rewind the motor
Hydraulic performance less than expected	<ul style="list-style-type: none"> ● Water level too low ● Delivery pipes clogged ● Voltage lower than forecast minimum limit 	<ul style="list-style-type: none"> ● Restore levels ● Clean pipes ● Check voltage
Electrical pump is noisy	<ul style="list-style-type: none"> ● Foreign bodies in liquid ● Bearings worn out 	<ul style="list-style-type: none"> ● Clean tank ● Replace bearings

MANUFACTURER'S DECLARATION

SAP s.r.l., located in Via Pacinotti, 6 PORCIA (PN) Italy declares on its own exclusive responsibility that the PA series of electrical pumps to which this declaration refers are compliant with the basic safety requirements set forth by directives 89/392 EEC and 91/368 EEC. These products are intended exclusively for installation on tooling machines which comply with legal provisions.



Electrical re-circulation pumps for tooling machines type PA 35 PA 70 PA 35-M PA 70-M PA 150

Manual for technicians only (Dir. 98/37/EEC)

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ATTENTION

This symbol is used when failure to observe or incorrect interpretation of the instructions for use may cause harm to individuals.

GUARANTEE

SAP s.r.l. guarantees that the equipment it produces, under normal usage conditions, is free of manufacturing faults or defects. The guarantee is valid for two years from the date stamped on the motor body.

GENERAL INFORMATION AND CHARACTERISTICS

- ⚠ In accordance with current standards, the equipment must be connected to a power socket with efficient earthing. Have its efficiency checked before proceeding with installation.
- ⚠ Have an adequate differential switch installed on your electrical system. Ensure that the power supply line is suitable to the power of the installed machine; the cross section of the electrical cables must never be less than 1.5mm.
- Do not access the electrical parts unless the supply of electrical energy has been shut off.
- ⚠ Installation and maintenance must be carried out by specialized technical service personnel.
- ⚠ The unit is free of radio disturbances as set forth in Ministerial Decree 13-04-1989 (EEC Directive 87/308).
- Unless otherwise indicated on the data plate, the units function at 230/400 V 50 Hz. Variations of voltage greater than 10% of the rated value may damage the electrical parts not covered by the guarantee.
- In the case of fixed installation, provide a device which allows the machine to be shut down, with a distance of aperture between contacts of at least 3mm.
- SAP srl shall not be held responsible for any damage to persons or things due to failure to observe these instructions.
- The user, upon receiving the unit, must ensure that it did not sustain any damage during transport, and he must immediately inform the transporter of any abnormalities. It is advisable to contact SAP s.r.l. for components and original spare parts.

INTRODUCTION

The use of electrical pumps for re-circulation on tooling machines for spraying the tools with liquid refrigerant during mechanical processing with the removal of chips.

A properly cooled and lubricated tool increases its life cycle and improves the manufacturing potential of the working machine.

INSTALLATION AND CONNECTIONS

The electrical pump is to be placed on an upper level of a tank which contains the liquid refrigerant. The suction device and the hydraulic part are completely immersed in the refrigerant (Fig. 1). Each electrical pump may have either a delta \triangle or star Y connection (see fig. 2).

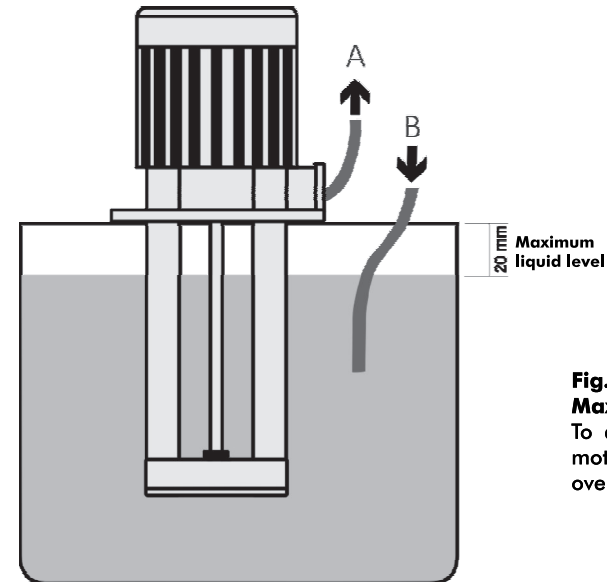


Fig. 1
Maximum liquid level.
To avoid possibly flooding the motor, it is advisable to make overflow holes in the tank.

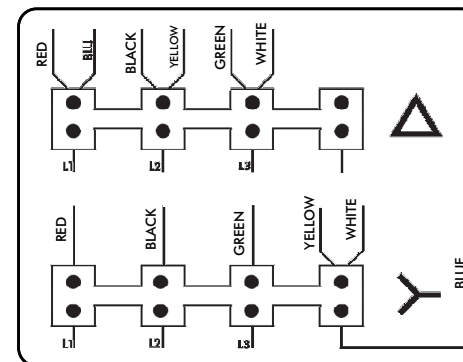


Fig. 2
Electrical connection