STEELPUMPS

SPH-DWF

SPH-DWJT

Centrifugal multi stage pumps

EN Original instructions

Dichiarazione CE di conformità

Noi STEELPUMPS srl dichiariamo sotto la nostra esclusiva responsabilità che le pompe SPH tipo e numero di serie riportati in targa, sono conformi alle prescrizioni di sicurezza della Direttiva Macchine 2006/42/CE, della Direttiva Bassa Tensione 2014/35/UE e della Direttiva sulla Compatibilità Elettromagnetica 2014/30/UE.

EC Declaration of Conformity

STEELPUMPS srl declares, under its own responsibility, that the SPH pumps, with the models and serial numbers specified on the nameplate, are compliant with the safety requirements of the Machine Directive 2006/42/CE, of the Low Voltage Directive 2014/35/UE and in the Electromagnetic Compatibility Directive 2014/30/UE.

Déclaration de conformité CE

STEELPUMPS srl déclare sous son entière responsabilité que les pompes SPH et numéro de série reportés sur la plaque - sont confonmes aux prescriptions de sécurité imposées par la Directive Machines 2006/42/CE par la Directive Bass~ Tension 2014/35/UE et par la Directive sur la Compatibilité Electromagnétique 2014/30/UE.

EG-Konformitatserklarung

Wir, das STEELPUMPS, erklaren unter unserer ausschlieBlichen Verantwortung, dass die Pumpen SPH mit dem am Typenschild angegebenen Modelltyp und Seriennummer den Schutzanforderungen der EG~ aschinenrichtlinie 2006/42/CE sowie der Niederspannungsrichtlinie 2014/35/UE und der EWGRichtlinie über die elektromagn~!ische Vertraglichkeit 2014/30/UE.

Declaraci6n de conformidad CE

STEELPUMPS srl. declara bajo su exclusiva responsabilidad, que las bombas SPH, tipo y numero de serie tal como resultan en la placa de identificacion correspondiente, son confonmes con las prescripciones de seguridad estipuladas por la Directiva de Maquinas 2006/42/CE con la Directiva de Baja Tension 2014/35/UE y con la Directiva sobre Compatibilidad Electromagnética 2014/30/UE.

Declaraçao CE de conformidade

A STEELPUMPS srl declara, baixo a propria e exclusiva responsabilidade, que as bombas SPH tipo e numero de série anotados na placa, estao conforme às prescriç6es de segurança da Directiva Maquinas 2006/42/CE, da Directiva Baixa Tensao 2014/35/UE e da Directiva sobre a Compatibilidade Electromagnética 2014/30/UE.

STEELPUMPS Srl

Via Sicilia, 119

56035 - Perignano (PI) ITALY

Tel. 0587 466722

info@steelpumps.it

L'amministratore

Luca Pinori

1. GENERAL SAFETY INFORMATION

Please follow the directions in this manual carefully.

- This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, except under the supervision or instruction concerning use of the appliance by a person responsible for their safety. It is necessary to ensure that children do not play with this apparatus.

- The user must always observe the local accident prevention regulations in force in the country where the product is installed.

- During repair or maintenance services of the electric pump, remove the plug from the socket and/or disconnect the switch (if any), thus cutting off the power supply to the electric pump. This is to prevent accidental start-up that could cause damage to people and/or property.

- Do not service, install or move the electric pump when the electrical system is live: this can cause serious accidents, even fatal ones, to people.

- During operation, do not remove or move the electric pump.

- Check each time, before using the electric pump, that the cable and all electrical devices are efficient, repaired and protected. When starting the electric pump (by inserting the plug in the socket and/or turning on the switch), avoid being barefoot and having wet hands.

- Failure to comply with the procedures and safety precautions contained in the documentation provided will exclude STEELPUMPS S.r.l. from any responsibility.

2. SCHEDULED USES

The machine is designed, manufactured and protected to allow the transfer, circulation and pressure increase of the following types of liquids:

- Water temperature up to +70 °C and ambient temperature up to +40 °C
- Liquids with water-like viscosity, neutral, non-explosive
- The machine has been designed, manufactured and protected to allow a liquid flow rate depending on the desired head (see "Product sheet")
- The pump should not be used with acidic and/or corrosive substances

3. REQUIRED INSTALLATION CONDITIONS

The machine is designed, manufactured and protected to be installed in environments:

- Interiors
- Outdoors, with weather protection

The machine is designed, manufactured and protected to be:

- Installed horizontally on a flat foundation with dimensions at least equal to the maximum length and width of the pump
- Fixed permanently to the flat foundation using the 4 holes in the motor mount and using matching bolts and self-locking nuts to prevent them from loosening due to vibration with the pump in service

The machine has been designed, manufactured and protected to be powered by electricity having one of the following characteristics:

- 230 V, 50 Hz, single-phase
- 230/400 V, 50 Hz, three-phase

NOTE: STEELPUMPS S.r.l. does not assume any responsibility for any damage to people, animals or things deriving from an unintended use of the machine.

4. CHARACTERISTICS OF THE INSTALLATION AREA

The installation site for the machine should have the following characteristics:

- Allow for easy positioning and access to the machine
- Allow safe connection to the electrical system
- Allow safe connections to piping
- Provide adequate natural and/or artificial lighting to allow safe operation
- Provide a minimum distance of 150 mm between each point of the machine and any obstacle
- Provide sufficient ventilation for the motor fan

CAUTION: Do not cover or obstruct the engine fan cover grille.

5. CONNECTION

The piping to which the machine is to be connected must have the following characteristics:

- Minimum diameters appropriate to the machine
- Suction line length reduced to a minimum (< 0.5 mt)
- If the machine is mounted on top of the machine, check valve on the suction line
- Gate valves on delivery and suction piping
- If the machine feeds a boiler, check valve on the delivery piping

The power supply shall have the following characteristics:

- Have differential protection
- Have voltage and frequency values corresponding to the values indicated on the machine motor data plate
- Have a power output that is not less than the value indicated on the nameplate of the machine motor
- Have a contactor with adequate thermal protection
- Have a self-compensated thermal relay regulated according to the actual current absorbed

- Have a disconnecting switch with protection fuses
- Have cables of sufficient section for the current absorbed by the motor

6. ELECTRICAL SYSTEM CONNECTION

- It will be the responsibility of the installer to make sure that the power supply system has an efficient grounding system in accordance with current regulations
- Before removing the motor terminal board cover and before any work on the electric pump, make sure that the power supply line has been disconnected
- Electrical connections should only be made by qualified personnel in accordance with local regulations regarding electrical connections

To connect the machine to the electrical system, for THREE-PHASE ENGINES, carry out the following operations:

- Make sure the motor is suitable for the mains voltage
- Disconnect the electrical system by means of a disconnecting switch
- Unscrew the screws that secure the terminal box cover
- Insert the power cable in the cable gland
- Connect the phases and ground to the terminals
- Put back the terminal box cover with the gasket and tighten the screws that fix the terminal box cover
- Switch on the power supply through the disconnecting switch
- Check the direction of rotation

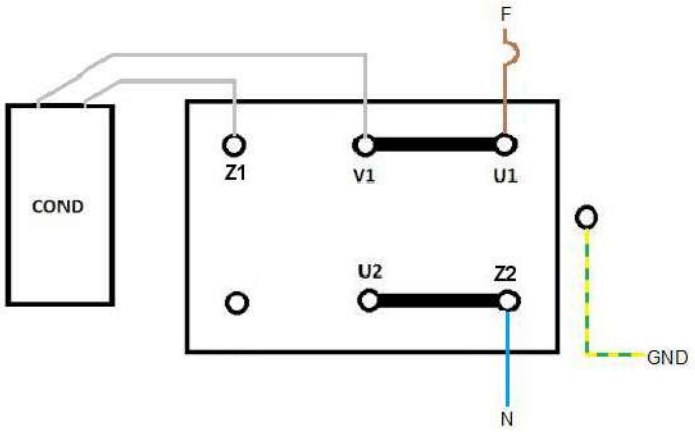
If the direction of rotation agrees with the direction of rotation indicated by the arrows on the machine head, the connections are correct.

If the direction of rotation is contrary to the direction of rotation indicated by the arrows on the machine head, perform the following operations:

- Disconnect the electrical system using the disconnect switch
- Reverse the connection of two phases

To connect the machine to the electrical system, for SINGLE-PHASE ENGINES, carry out the following operations:

- Make sure the motor is suitable for the mains voltage
- Disconnect the electrical system using a disconnect switch
- Unscrew the screws of the terminal cover
- Insert the power cable into the cable gland
- Connect the lines and ground and replace the terminal cover with the gasket



- Tighten the screws of the terminal cover and switch on the power supply through the disconnecting switch
- Check the direction of rotation

If the direction of rotation agrees with the direction of rotation indicated by the arrows on the machine head, the connections are correct.

If the direction of rotation is contrary to the direction of rotation indicated by the arrows on the machine head, perform the following operations:

- Disconnecting the electrical system using a disconnect switch
- Unscrew the screws that secure the terminal cover
- Using a jumper, momentarily short-circuit the ends of the capacitor
- Change the position of the jumpers and remove the jumper
- Replace the terminal cover with the gasket
- Tighten the screws on the terminal cover

7. PRIMING

To fill a machine under a swing, perform the following steps:

- Close the gate valve on the delivery pipeline
- Unscrew the priming plug and slowly open the gate on the suction line

When liquid comes out of the priming cap continuously, perform the following steps:

- Screw back the priming cap
- Completely open the gate valve on the suction line
- Open the gate on the delivery piping
- Screw back the priming cap
- Completely open the gate on the suction line
- Open the gate on the delivery pipeline

To fill an overhead machine, perform the following steps:

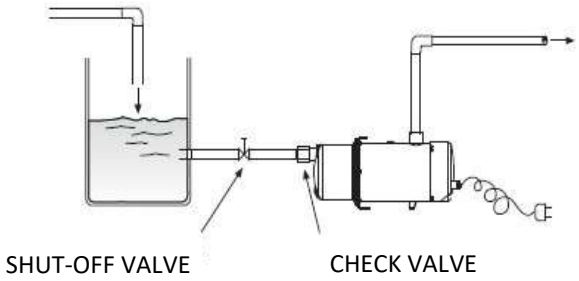
- Check that the length of the suction pipe is < 0.5 m
- Check the presence of the check valve on the bottom of the suction pipe
- Check the presence of gate valves on delivery and suction pipes
- If the machine feeds a boiler, check valve on the delivery pipe
- Open the gate valve on the suction pipe and, if possible, fill it with liquid
- Close the gate valve on the delivery line
- Open the priming cap and pour liquid into the machine through the cap until liquid comes out of the cap

When liquid comes out of the priming cap continuously, perform the following steps:

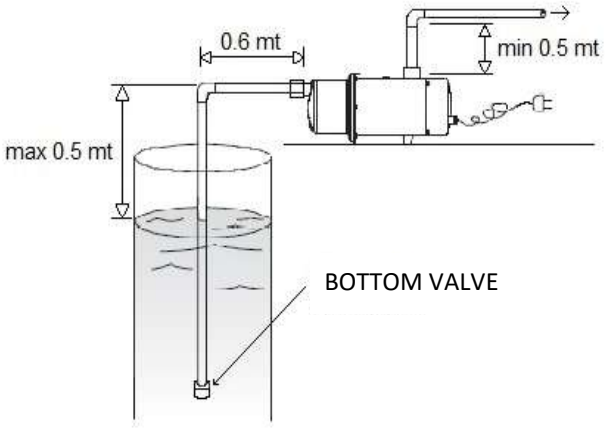
- Screw back the priming cap
- Open the gate valve on the suction line completely
- Open the gate valve on the delivery pipe halfway
- Start the machine for about 10 seconds
- If no liquid is dispensed, it may be necessary to repeat the filling operation

The following steps are also recommended for initial start-up:

- Open the gate on the discharge line and start the machine
- Slowly open the gate on the delivery piping to avoid water hammer on the delivery piping
- Adjust the connection and disconnection pressure of the start-up automatism and, if present, check the setting of the expansion tank according to the start/stop device



UNDERCOUNTER INSTALLATION



OVERHEAD INSTALLATION

8. OPERATING PROBLEMS

PROBLEM	CAUSES
THE ENGINE DOES NOT RUN WHEN STARTING	1) Line voltage is interrupted.
	2) Blown fuse.
	3) Thermal relay has tripped.
	4) Motor starter contacts do not conduct or coil is defective.
	5) Auxiliary circuit fuses are blown.
	6) The machine motor is faulty.
THE THERMAL MOTOR STARTER TRIPS WHEN VOLTAGE IS APPLIED	1) Blown fuse.
	2) Motor starter contacts are faulty.
	3) Electrical connections are faulty.
	4) Motor windings are defective.
	5) The machine is mechanically blocked.
	6) The setting of the thermal relay is too low.
THE THERMAL RELAY OCCASIONALLY TRIPS FOR NO APPARENT REASON	1) The setting of the thermal relay is too low.
	2) Line voltage is missing periodically.
	3) Line voltage during peak periods is too low.
THE THERMAL RELAY DID NOT INTERVENE BUT THE MACHINE DOES NOT WORK	1) Line voltage is interrupted.
	2) Blown fuse.
	3) Motor starter contacts do not conduct or coil is defective.
	4) Auxiliary circuit fuses are blown.
THE FLOW RATE OF THE MACHINE IS NOT CONSTANT	1) Suction tube is undersized.
	2) Suction liquid availability is insufficient.
	3) Liquid level is too low.
	4) The suction pressure is insufficient.
	5) Suction tube is partially clogged.
THE MACHINE WORKS BUT DOES NOT DISPENSE LIQUID	1) The suction pipe or pump is clogged.
	2) The foot valve (or check valve) is stuck in the closed position.
	3) There are leaks in the suction pipe.
	4) There is air in the suction line or pump.
AT THE MOMENT OF STOPPING THE MACHINE TURNS BACKWARDS	1) There are leaks in the suction pipe.
	2) The foot valve (or check valve) is defective.
	3) The foot valve (or check valve) is blocked in partial or total opening position.

9. DISPOSAL

STEELPUMPS S.r.l declines any responsibility in case of recycling or reuse of machine parts.

WARNING: The machine is made of non-biodegradable materials.

NOTE: Please take the machine to an equipped deposit for disposal.

10. NOTES

STEELPUMPS Srl

Steel Building Line

Via Sicilia, 119 - Z.I. Perignano

56035 Lari (PI) ITALY

+39 0587 466722 / +39 0587 466188

+39 0587 466775 / +39 0587 466747

E-mail:

info@steelpumps.it

venditeitalia@steelpumps.it

tecnico@steelpumps.it

assistenza@steelpumps.it