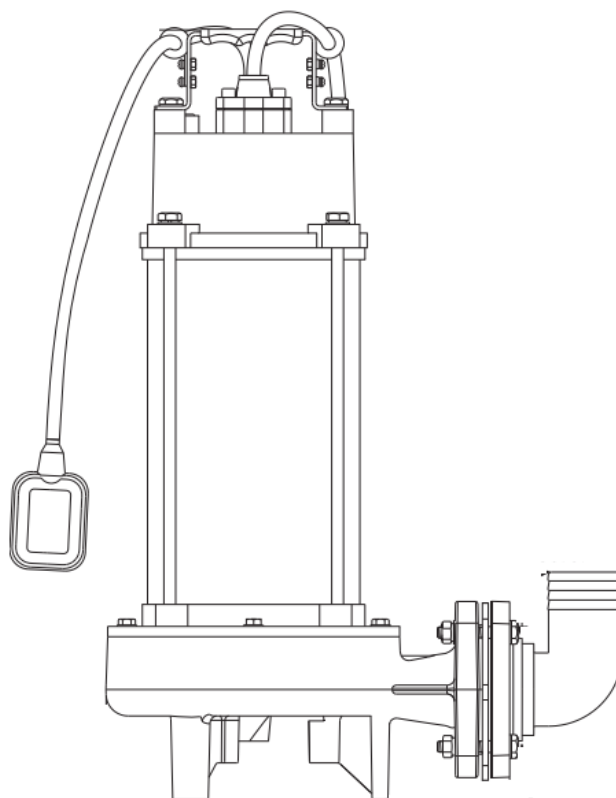


STARING



STP-1500MG/1800MG

(Anti-blockage GRINDER pump)

Operating Instructions

WARNING :

Note: Read carefully and follow guidelines and warnings:



- **Only qualified and trained personnel** should install the pump. The electrical installation must comply with the national regulations for e.g. cables etc. (AS/NZS 3000).



- **The pump operator must have read these instructions before start-up and follow them during operation.**



- These instructions are a **guide only**. Users who are not familiar with pumps and other electrical equipment should seek advice from experienced and trained individuals in the field of pumping equipment and installation.



- The pump is designed to be used with "**clean**" **water and most often in a home**. Do not use it with alternative liquids, especially abrasive, corrosive, or explosive liquids. Do not install or operate the pump in an explosive environment or near flammable materials. Do not pump hydrocarbons (hydrocarbons) with this pump.



- **Incorrectly installed, mounted and tested material can fail**, which can result in serious injury to both people and equipment.



- To avoid burns when handling the pump/motor, allow it to cool at a maximum of 20°C for at least **20 minutes before working on it**.



- A **thermal overload switch protects the motor from heat damage** during operation. [If the supply cable is damaged, it must be replaced by the manufacturer, its co-workers or trained persons in order to avoid a hazard¹².](#)



1. **Contamination of the fluid** can occur due to leakage of lubricants from the pump.



2. The pump is **electrically connected**. Ensure that it is isolated from the power supply during installation and any subsequent servicing work.



3. This appliance is not intended for use by persons (including children) with **reduced physical, sensory or mental capabilities**, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.



4. **Children should be supervised** to ensure that they do not play with the appliance.



5. The pump shall be supplied through a **residual current circuit breaker (RCD)** with a rated residual current operating current of not more than 30 mA.

USAGE RESTRICTIONS:

- [Type of liquid: Water without suspended abrasive material, pH value: 6.5-8.5¹².](#)

CONSTRUCTION

Pump housing	Cast iron (HT200)
Pump shaft	Stainless steel S 304 (welded)
Mechanical Shaft Seal	SIC+GRAPHITE (Pumpeside)
Power Cable	H07RN-F 10M
Level Switch Cable	H07RN-F

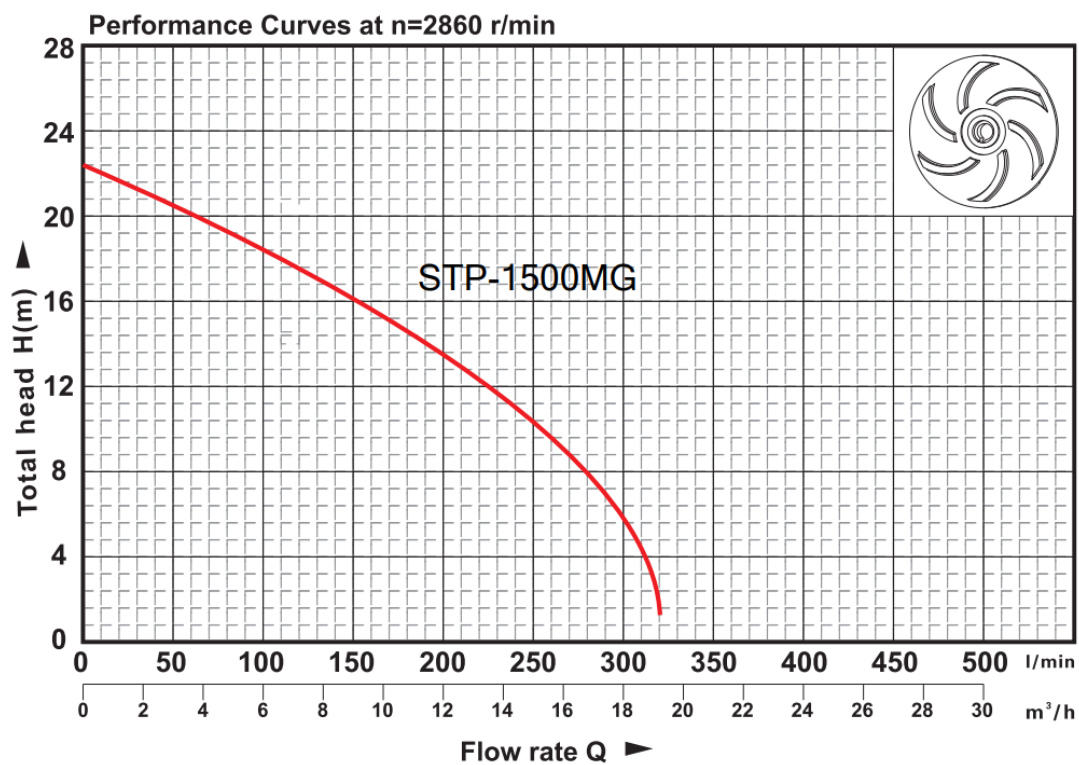
Motorhus	Stainless Steel
Scooters	Cast iron

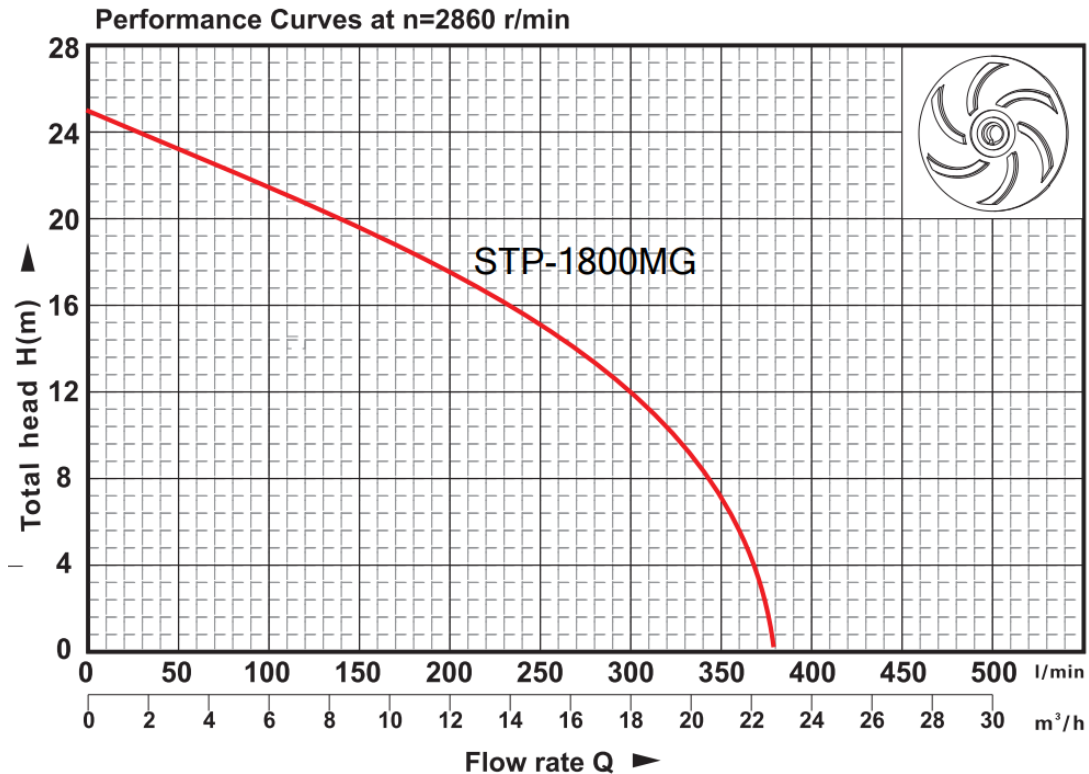
USER RESTRICTIONS

Fluid type	Water without abrasive particles, PH value: 6.5-8.5
Max fluid temperature	40°C
Max Immersion Depth	6m
Protection class	IP68
Insulation class	B

TECHNICAL DATA

Pump Model	Engine Performance (W)	Outlet Diameter	Excitement V/HZ	Max. Power (m3/h)	Max. Lifting Height	Max. Power (l/min)	Weight (kg)
STP-1500MG	1100	50mm	230/50	300	22m	300	28.5
STP-1800MG	1800	50mm	230/50	360	25m	360	37.6





GENERAL INTRODUCTION

This type anti-block cutting pump are consisted of motor, water pump and seal, the motor is in upper position of the electric pump and it is single-phase or three-phase asynchronous motor; the pump body is under the motor, with semi-open impeller and volute structure; the characteristic of this type is that high-speed rotation cutting system is set at the inlet position, cutting long-fiber and solid dirty like cotton fabrics, vegetation in the fluid into smaller size, so that making them easy to be drained and avoiding the impeller is entwined and blocked.

Anti-sand and anti-winding design is adopted, improving the reliability of pump seal and working life. There is a protector in the motor, and it will cut off the power automatically on the condition of default phase, overload and overheat etc., so that protecting the motor. Auto on/off can be realized by float switch (single-phase electric pump) according to change of liquid level.

Application and Characteristics

This type of anti-block cutting pump has the following characteristics: big flow, high efficient and **broad coverage**; it could cut long-fiber like silk socks, cloth strip, glove, sanitary napkins, plastic bags, ropes as well as vegetation in the fluid into smaller size and discharge, they are extensively applicable in sewage drainage for factory, agriculture and animal husbandry; city sewage treatment, sewage drainage for construction sites, farm, hospital, hotel, school; particularly applicable in cleaning septic tank, marsh gas tank and the likes.

SAFE HANDLING & NOTICE

- A. Please check thoroughly if any damage occurrence for electric pump during transportation and storage, and if breakage or scratch occurrence for cable before using; please consult service provider or ask technician to replace timely if above occur.
- B. Please check if the power is consistent with the nominal on name plate for the pump, and the pump needs to be connected with the power which is equipped with **electric shock protector**; the power fluctuation voltage should be controlled within rate voltage $\pm 10\%$, otherwise the power can not be used in case of damaging the electric motor.
- C. Please check if the insulation electric resistance complies with standards before running pump, the insulation electric resistance must be more than $1M\Omega$ when **closing to working temperature**.
- D. Reliable earthing protection must be taken before using the pump.
- E. Idle trial running should be performed before submerge the pump and the trial running time should not exceed 5 seconds, at the same time, check if the rotation direction of pump is consistent with indicating arrow; in case of reverse rotation for three phase pump, the power should be cut off immediately and **adjust two phase randomly of pump**.
- F. Connecting the matched piping to outlet, fasten the connection by iron wire or clamp if the piping is flexible, and tie the handle with lifting rope for lifting when needed.
- G. Knocking and pressing cable or taking cable as lifting rope are prohibited. The cable should not be pulled randomly when the pump is running, in case of electric shock due to the damage of cable.
- H. Warning board shows “**electricity, dangerous, people and animals are prohibited to close**” should be set on site of pump running, in case of the happening of accident.
- I. When the power is far from the pump using place, thicken the added cable according to the distance. (added cable diameter should be more than the one of pump)
- J. Built-in protector will not work under normal running condition, once frequent cut-off of protector occurs, the power should be cut off and check the reason, reuse the pump after removing the fault.

PUMP MAINTENANCE

- A. Check the cable frequently, and replace timely when finding crack or damages happenings.
- B. After normal running of 2000 hours, the following maintenance measures should be adopted for the pump (In case that the water pumped contains more sands, checking intervals should be shortened):
- Disconnect the pump: check every wearing parts such as bearing, mechanical seal, **oil seal**, impeller and O ring for every parts etc., and replace them timely in case of damage.
- Changing the oil: loosing the oil-injection screw near the oil tank cover (there may generate pressure in the oil chamber, unscrew the screw after the pressure is released completely), and inject 10# mechanical oil up to 80-85% of the tank chamber. (edible peanut oil is also available)
- Air pressure test: air pressure test must be performed after disconnecting the pump for repair and changing the seal, the testing pressure should be 0.2Mpa, and the pump is ok after 3-minute test without leakage and **sweat**.
- C. The pump should not be submersed in the water in case that the pump is not used for long time. Running the pump in the clean water for several minutes, cleaning the accumulated dirty inside and

outside the pump and wipe dry, anti-rust handling and put the pump in the dry and ventilated place, pay attention to moistureproof and heatproof.

D. Before reusing the pump, which was in non-use condition for long time, stir the impeller by screwdriver to make it rotate, restart the pump after confirming the rotating bearing is flexible.

TROUBLE SHOOTING GUIDE

Fault	Main reason	Handling method
Hard start	<ol style="list-style-type: none"> 1. Power source voltage is too low 2. Impeller is blocked 3. Friction between rotating blade and fixed cutting disc 4. Burnout of stator winding 5. Capacitor to be break down (single-phase) 6. Possible default phase for three-phase electric pump 7. Voltage drop is too big for cable 	<ol style="list-style-type: none"> 1. Adjust the voltage to rated voltage $\pm 10\%$ 2. Repair the blocked position 3. Adjust the blade and disc 4. Reinserting coil (finished by qualified technician) 5. Change the capacitor 6. Check the switch and outgoing plug 7. Chose proper cable
Less outgoing water	<ol style="list-style-type: none"> 1. Too high head 2. Flow channel in pump body is blocked 3. Serious wear for impeller 4. Serious wear for cutting blade 5. Submersible depth is too shallow, there is air sucked 6. Reverse rotation of impeller for there-phase electric pump 	<ol style="list-style-type: none"> 1. Using according to head range 2. Clear the dirty in the flow channel 3. Change the impeller 4. Change the cutting device 5. Adjust submersible depth, the depth should be more than 0.5m 6. Adjust random two phase for three-phase power source
Sudden shut down	<ol style="list-style-type: none"> 1. Switch off or burnout of fuse wire 2. Impeller or cutting device is blocked 3. Burnout of stator winding 	<ol style="list-style-type: none"> 1. Check the power source or change the fuse wire 2. Turn off the power and clear the dirty 3. Please find the details as below
Burnout of stator winding	<ol style="list-style-type: none"> 1. Running time is too long for three-phase electric pump under default phase condition 2. Mechanical seal is damaged and leading to water leakage, causing short circuit between interturn and interphase 	Removal of fault, remove the winding and reinsert the coil according to original technical requirement, soak and bake the insulation paint or ask the qualified technician to repair

	3. Impeller or cutting device is blocked 4. Frequent start or running without water for long time 5. Overload running time is too long for electric pump	
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SERVICE



- Pump should only be serviced by qualified personnel. For best results, use only genuine service parts.
- To avoid dangerous or fatal electrical shock hazard, turn OFF power to motor and remove plug from power outlet before working on pump or motor.

WARRANTY

You have purchased a quality product from ***Staring Denmark***. This product is covered by a 12 month warranty. This warranty covers faults in the product construction, material and assembly. Faulty products will be repaired or exchanged free of charge. Faulty items become our property.

This warranty **DOES NOT** include faults caused by

- Unsuitable or improper use
- Incorrect installation
- Inadequate or complete lack of maintenance
- Chemical, electrochemical or electrical influences

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