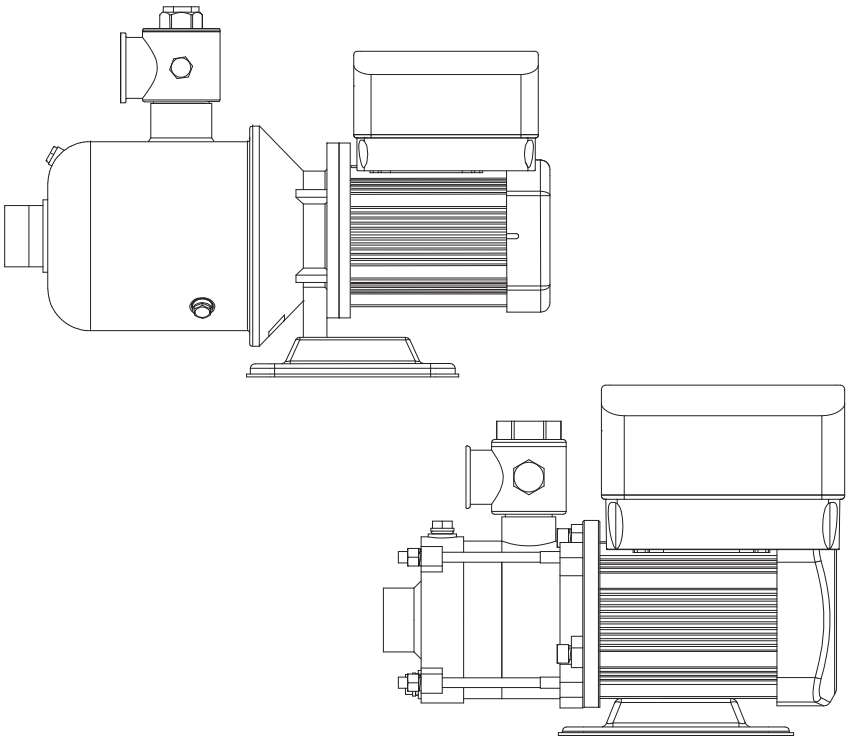
Stream®

Sign of Quality

Operation Instructions



SHS/SHJS Series

WARN

★Please carefully read the users' manual before installation and operation.

★ Reliable ground connection is necessary before operating.

★ Forbidden to touch the pump when it is energized.

★ In order to prevent electric shock, please ensure the power switch is "OFF", or remove the plug before maintenance and cleaning.

★ When operate the pump, do not remove or open the safety protection device.

★ In order to avoid the pump over-loading, the pump shall be operated within the scope of prescribed conditions.

Content

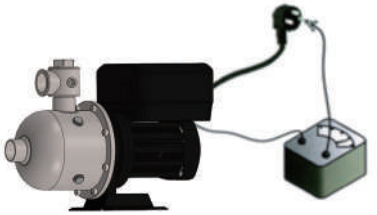
Installation precautions

1. Power requirements

1.1Power supply voltage:ensure that the AC voltage 220V-240V can be used (160V-260V), but the voltage is too low, the pressure will be reduced. (160V-260V) ,

1.2Electrical connection

1.2.1Before installation and use, should check the pump whether it is damage during transport and storage,Such as whether cable or plug, lead wire, etc. is intact, whether insulation resistance is greater than 50MΩ.



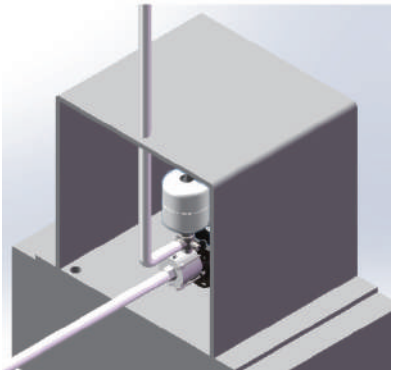
1.2.2The pump should be properly installed leakage protection device, the power outlet which connect to the plug should be reliable grounding.

1.2.3To extend the power cord, in order to prevent the voltage drop caused by the pump cannot start normally, according to the requirements of the following table to use the cord.

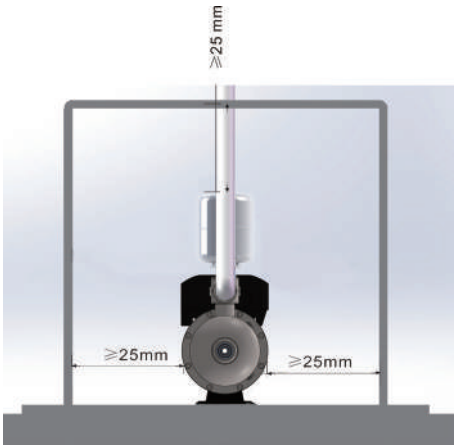
Use the length of the cable	Cross-sectional area of cable
50m below	1.5mm^2 above
50m~200m	2.5mm^2 above

2.Pump installation environment requirements

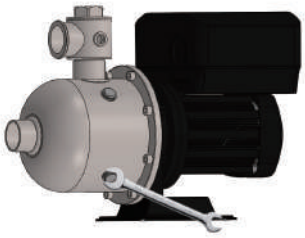
2.1Water pump cannot be used in lying in the water or diving, installed in the outdoors, need to have a suitable cover to prevent sun and rain, and anti-freeze.



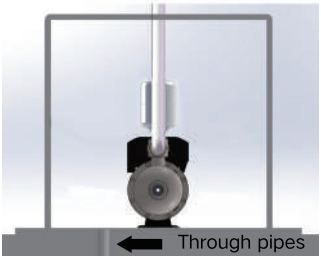
2.2The pump should be installed in a convenient maintenance, inspection of the place, and keep dry and ventilated; When in a narrow place to install the pump, the following figure for the reference installation.



2.3.1Ambient temperature is -15℃ to + 40℃.
2.3.2When the ambient temperature is below 4 ℃, the water pump and the pipeline in the water is easy to ice, causing the pump body and pipe rupture, so when not in use, need to open the drain screw , the pump cavity of the water drained and tightened drain screws, exposed pipes also need to protect, to prevent cracking. (Anti-freeze type do not need this operation).



2.4If cold-proof measures are taken, it is strictly forbidden to enclose the pump with flammable materials, to avoid fire.
2.5Around pump installation area need to set the drain, the formation of natural drainage, to prevent the use, maintenance, replacement of the pump, due to leakage caused by loss (especially in the basement, kitchen, stairs and other places).



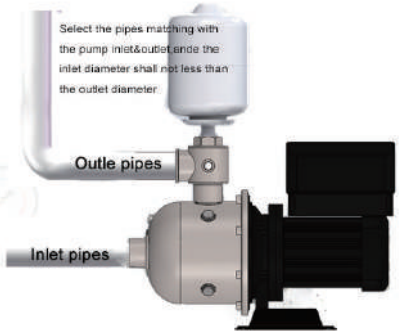
3.Water inlet pressure requirements.
3.1For tap water pressurization, the pressure should be 0.12MP <P <0.35MPa.

4.Water temperature and water quality requirements.
4.1 0 ℃ ⩽ water temperature ⩽ 70 ℃.
4.2The water quality must be clean, the volume ratio of solid impurities is not more than 0.1%, the particle size is not more than 0.2mm, and the pH is between 6.5 and 8.5.

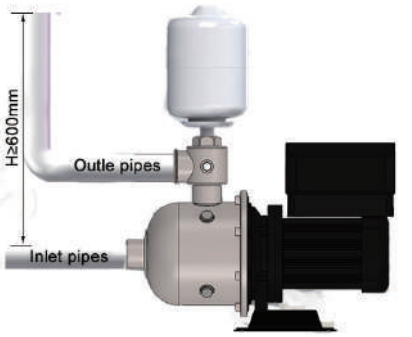
0 ℃ ⩽ water temperature ⩽ 80 ℃

Installation precautions

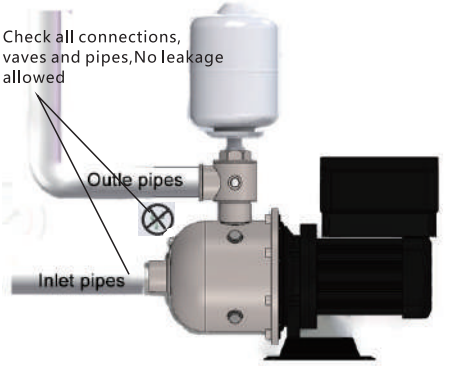
5.Piping requirements.
5.1Should use piping diameter which is matching pump inlet and outlet and the outlet piping diameter shall not be less than the outlet piping diameter.



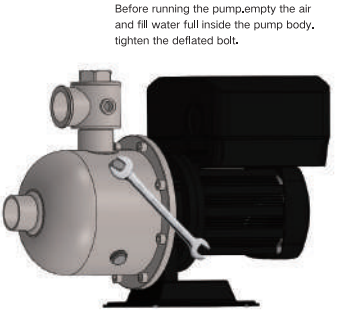
5.2Outlet piping is higher than the inlet 600mm above and then turn a corner.



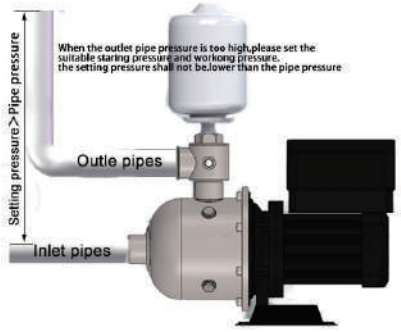
5.3Make sure that the pipeline without leakage.



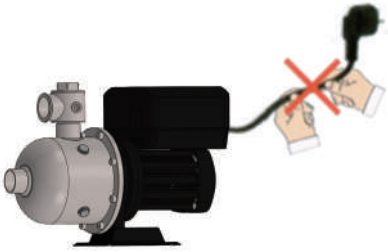
6. The first time to use, fill the water in pump cavity for exhausting air.



7.Setting the requirements.
7.1The pressure setting should not be less than the pressure of the outlet piping itself.
7.2The starting pressure value is set to about 80% of the constant pressure value.



8.Others
8.1When transport, installation of the pump, it is strictly forbidden to grasp the power cord, avoid to leakage, electric shock due to power cord damage.



8.2 When the pump is in operation, you must turn off the power when you want to adjust the pump position or touch the pump.

1、Purpose and scope of application

SHS/SHJS for non-self-priming horizontal multi-stage centrifugal pump (hereinafter referred to as the pump), with high-efficiency, low noise, corrosion resistant and compact structure, perfect appearance, small volume, light weight, et.

1、Application

- Products applicable to low viscosity, neutral, non-explosive, containing no solid particles or fibers liquid, liquid can't be transported material has the chemical corrosion to pump material. (Oil or oil-based liquid can be pumped with a special type of pump);
- The circulation of air conditioning system;
- The cooling system;
- Water treatment (Purification of water);
- Industrial cleaning system;
- The liquid transportation, circulation and ascend;
- Hot and cold water;
- Food, beverages, agricultural and other ingredients system.

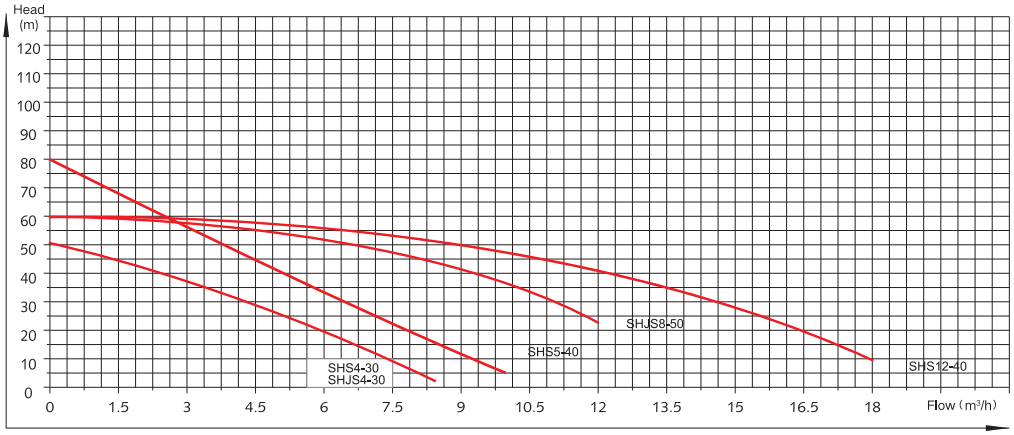
2、Scope of application

- Clean water, the volume of solid particles lower than 0.1%,the size less than 0.2mm;
- Liquid temperature: 0℃ < water temperature≤70℃;
- Ambient temperature range: 0℃~40℃;
- PH level: 6.5~8.5;
- Relative humidity:Max85%(RH).

WARN	When the liquid density and viscosity is larger than water, shaft power will rise, so must use motor which match the shaft power.

II、Technical data

Model	Power Range (W)	Voltage (V)	Frequency (Hz)	Speed range (r/min)	Inlet/outlet pipe thread	Max. head (m)	Rated head (m)	Max.flow (m^3/h)	Rated flow (m^3/h)
SHS4-30	100-900	220±20%	50/60	4000	$G1^1/_4$/$G1^1/_4$	50	30	8	4
SHJS4-30	100-1100	220±20%	50/60	5000	$G1^1/_4$/G1	50	30	8	4
SHS5-40	100-1100	220±20%	50/60	5000	$G1^1/_4$/$G1^1/_4$	80	40	8	5
SHJS8-50	400-2200	220±20%	50/60	4500	$G1^1/_2$/$G1^1/_4$	60	50	12	8
SHS12-40	400-2200	220±20%	50/60	4500	G2/G2	60	40	18	12



Performance Curve

III、Structure Instruction

SHS/SHJS series of pumps are horizontal, multi-stage sectional, pump shaft is the extension of motor shaft, the pump inlet and outlet direction is axial suction, radial discharge.

● SHS/SHJS series cylinder pump consist of the motor, sealing seat, guide vane, impeller, inlet and outlet part, pump shaft, mechanical seal and other major components. SHJS series sectional pump consist of motor, inlet body, outlet body, guide vane, impeller, pump shaft, mechanical seal and other major components.

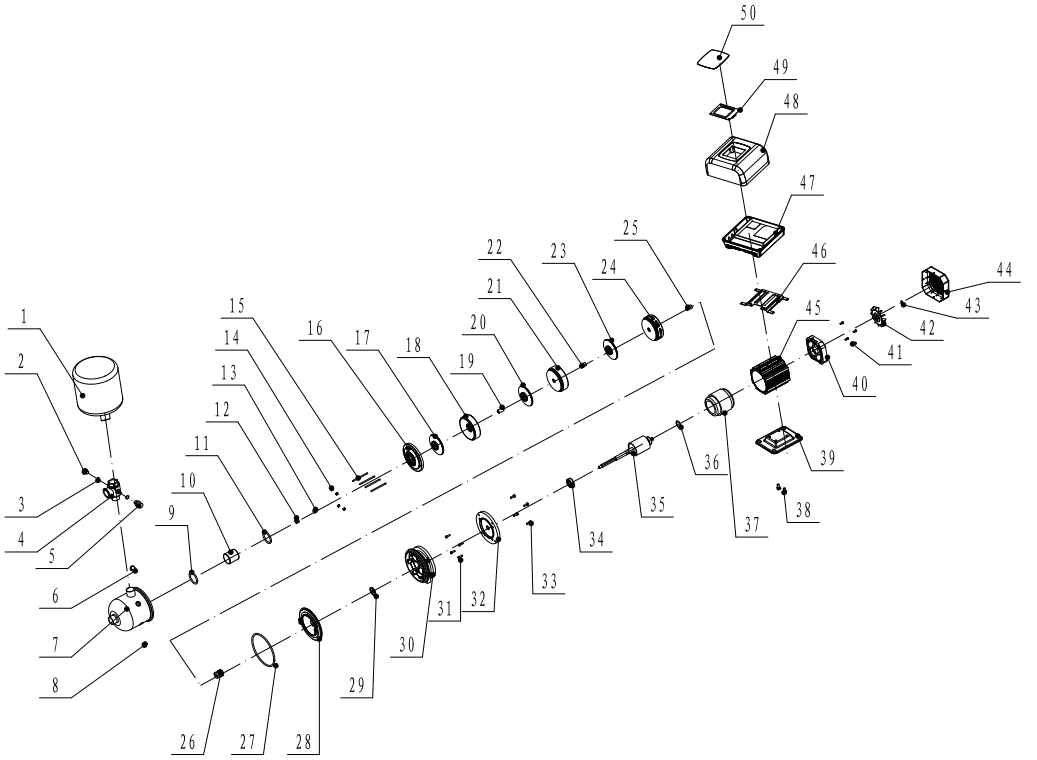
III、Structure Instruction

●The key of pump parts like guide vane, impeller, inlet and outlet part, pump shaft all adopt stainless steel material, sectional pump inlet and outlet body is made of stainless steel.

●Shaft seal is single-end mechanical seal, grinding block made of the silicon carbide / graphite, according to customer needs, can also use other materials of grinding block.

●The basic form of pump and pipe connection is in line with pipe thread connection in GB7307, pump structure shown in Figure.

SHS Sectional Centrifugal Pump Explosive View

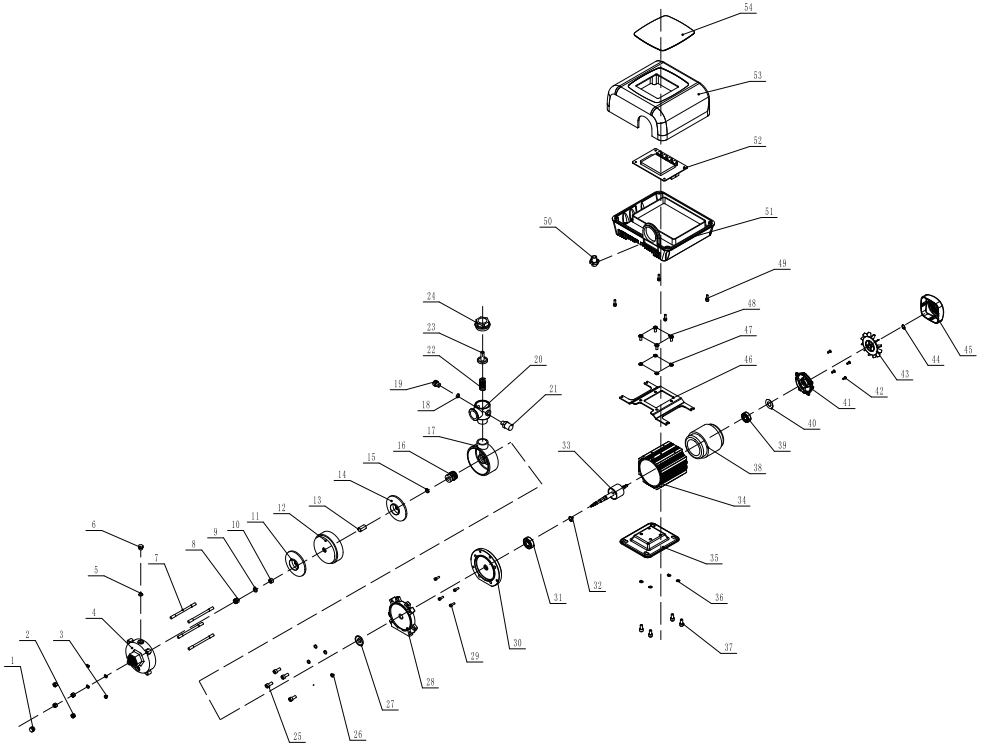


Explosive View Details

No.	Name	No.	Name
1	Pressure tank	28	Seal seat
2	Plug	29	Single lip seal
3	Type O sealing ring	30	The connection
4	Five-way valve body	31	Socket head cap screw
5	Pressure sensor	32	Front end cover
6	Plug	33	Socket head cap screw
7	Pump body	34	Bearing
8	Plug	35	Rotor
9	Type O sealing ring	36	Wave gasket
10	Spacer	37	Stator
11	Type O sealing ring	38	Socket head cap screw
12	Lock nut	39	Bottom baseboard
13	Spacer	40	Rear end cover
14	Hexagonal nut	41	Socket head cap screw
15	Double-ended stud	42	Fan blade
16	Plate	43	Circlip
17	Impeller	44	Wind hood
18	Diversion fluid	45	Barrel
19	Spacer	46	Adapter
20	Impeller	47	Terminal box
21	Diversion fluid	48	Terminal box cover
22	Spacer	49	Touching panel
23	Impeller	50	Acrylic board
24	Diversion fluid	51	
25	Spacer	52	
26	Mechanical seal	53	
27	Type O sealing ring	54	

III、Structure Instruction

SHJS Sectional Centrifugal Pump Explosive View

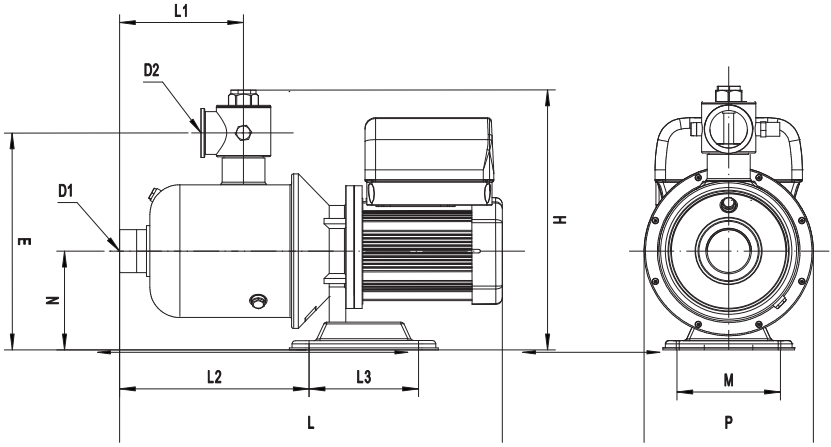


Explosive View Details

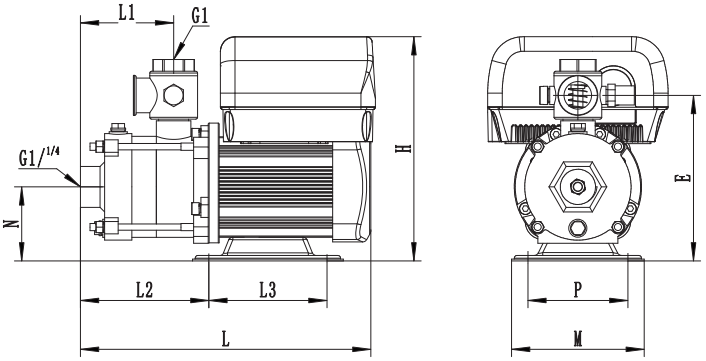
No.	Name	No.	Name
1	Plug	28	Front half of front cover
2	Socket head cap screw	29	Socket headcap screw
3	Spring washer	30	Rear half of front end cover
4	Inlet body	31	Bearing
5	Type O sealing ring	32	Shaft with elastic ring
6	Plug	33	Rotor
7	Pull rod	34	Barrel
8	Lock nut	35	Bottom baseboard
9	Spring washer	36	Spring washer
10	Impeller gland	37	The trough pan head screws
11	Impeller	38	Stator
12	Guide vane	39	Bearing
13	Spacer	40	Wave gasket
14	Impeller	41	Rear end cover
15	Spacer	42	The trough pan head screws
16	Mechanical seal	43	Fan blade
17	Outlet body	44	Circlip
18	Type O sealing ring	45	Wind hood
19	Plug	46	Support plate
20	Five-way valve	47	Spring washer
21	Pressure sensor	48	The trough pan head screws
22	Check valve spring	49	Socket head cap screw
23	Check valve seat	50	Outlet nut
24	Five-way valve nut	51	Terminal box seat
25	Socket headcap screw	52	Touching panel
26	Spring washer	53	Terminal box cover
27	Waterproof ring	54	Acrylic board

IV、Installation and connection

The appearance of SHS/SHJS pump and installation size(mm)



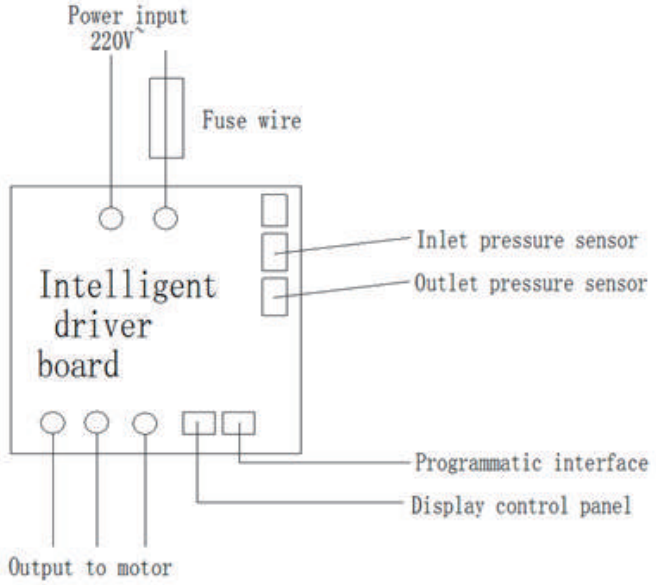
Model	D1	D2	N	E	L1	L2	L3	L	H	P	M	Weight (kg)
SHS4-30 SHS5-40	G1 1/4	G1 1/4	113.5	247	120.5	168	134	405	283	193	104	13
SHS12-40	G2	G2	141	328.5	195	287.5	166	595	350	234	157	28



Model	D1	D2	N	E	L1	L2	L3	L	H	P	M	Weight (kg)
SHJS4-30	G1 1/4	G1	82	182	107	135.5	134	324	250	104	146	11
SHJS8-50	G1 1/2	G1 1/4	117	255	137	181	179	408	303	157	190	25

IV. Installation and connection

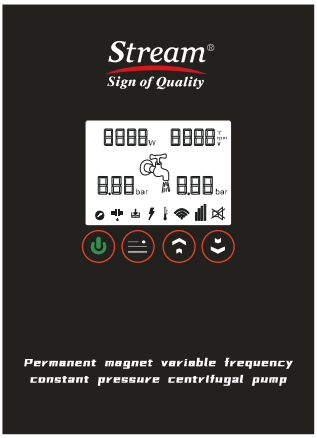
Unless the power has been shut down, please don't do the terminal connection. Pump should be reliable grounding to prevent leakage, and should match the leakage protection switch; electrical connections and protection should be performed accordingly; working voltage is marked on the nameplate, please ensure the supply power is match with the motor power. If pumps' operate places are far away from power supply, please properly add the transmission line, otherwise the drop of the voltage will influence the pump working. If pumps operated outdoors, extension cable must use outdoor special rubber cable and ensure the pump is well running and the direction is same as the pump body.



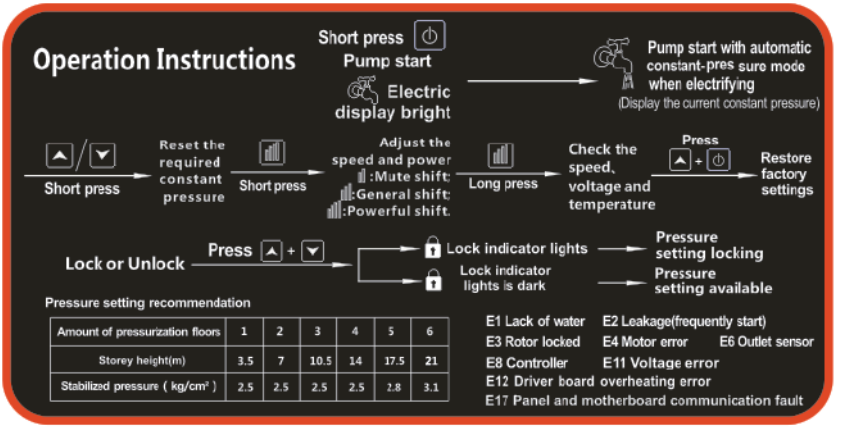
Intelligent pump electrical schematic diagram
(Because of products constantly updated, please in kind prevail)

Power wire length / Model	0~50m	Fuse A	50~100m	Fuse A	100~150m	Fuse A
SHS4-30 SHJS4-30 SHS5-40	1.5mm²	10	2mm²	15	2.5mm²	18
SHJS8-50 SHS12-40	2.5mm²	27	4mm²	30	6mm²	30

Ⅴ、Control panel operation instructions



- Outlet water pressure transmitter fault
- Temperature protection
- Leakage
- Wifi
- Lack of water
- Stalls
- Voltage protection
- Mute



Amount of pressurization floors	1	2	3	4	5	6
Storey height(m)	3.5	7	10.5	14	17.5	21
Stabilized pressure (kg/cm²)	2.5	2.5	2.5	2.5	2.8	3.1

Ⅵ、Fault code display and troubleshooting

	Before removing the motor terminal box cover and removing the pump, make sure that the power supply has been cut off.

Fault phenomenon	Cause analysis	Method
Motor can't start	a)Power source error	a)check the power source
	b)The fuse is broken	b)Replace the fuse
	c)Motor overheating protection	c)After cooling, pump automatically start
	d)Motor damaged	d)Consulting service provider or maintenance service
	e)Water pressure is higher than the starting pressure	e)Pump automatically start when the pressure drop to the starting pressure.
	f)Driver error	f)Consulting service provider or maintenance department
	g)Motor lead plug is not inserted or lead is loose(display E4)	g)Connect the lead-wire to re-plug the plug
	h)low-water will be protected (display E1)	h)Every 30 minutes to restart the motor once, when the pipe have water, the pump will resume operation
	i)Inlet pressure sensor is damaged (display E5) or plug is not inserted	i)Replace the inlet pressure sensor or re-plug the plug again
	j)Outlet pressure sensor is damaged (display E6) or plug is not inserted	j)Replace the sensor or re-plug the plug again
	k)When voltage operating range is over, motor will be protected. (display E6)	k)Adjust the voltage to the range of use, then restart the pump
	l)Motor stall (display E3)	l) Check whether the pump has a foreign body stuck
	m)Drive error (display E8)	m)Long press the set button to switch Manual / Auto ,if the error could not be removed, please repair or change
	n)Drive board overheat error (display E12)	n)The pump will stop and automatically troubleshoot after cooling

VII、Fault code display and troubleshooting

Fault phenomenon	Cause analysis	Method
Pump water uneven	a)The inlet pipe is too small	a)Increase the inlet pipe
	b)At the pump inlet, there is not enough water	b)Improve the system, try to increase water
	c)Liquid level is too low	c)Try to raise the liquid level
	d)Inlet pressure is too small compared to water temperature, pipe loss and flow	d)Improve the system, try to increase inlet pressure
	e)Part of pressure pipe is impurities clogging	e)Check and clean
The pump is running but the water is small and the pressure is insufficient	a)Pump rotation direction is wrong	a)Check the motor rotation direction (From the motor side should be counterclockwise rotation)
	b)Inlet pipe, filter, bottom valve or pump body is clogged	b)Clean the pipe, bottom valve, filter or pump body to remove debris
	c)Low motor voltage or the wire is too long	c)Check the motor end part voltage, increase the wire cross section
	d)Incorrect model selection	d)Select the suitable model
	e)Impeller wear serious	e)Replace the impeller
	f)Mechanical seal leak	f)Clean or replace mechanical seals
	g)Outlet pipe leak	g)Check and repair the outlet pipe
The motor running but no water	a)Pump body is not full filled with water	a)Open the vent screw, remove the air in pump chamber and inlet pipe
	b)Impeller damage	b)Replace the impeller
	c)Water level is lower than bottom valve	c)Adjust the inlet pipe to immerse the bottom valve into water
	d)Suction pipe air leakage	d)Check the inlet pipe and the connections' s sealing
	e)The inlet pipe is clogged	e)Check and clean up

Ⅵ、Fault code display and troubleshooting

Fault phenomenon	Cause analysis	Method
The motor running but no water	f)Bottom valve or check valve in the closed position	f)Check the bottom valve and the check valve
Pump has abnormal vibration and noise	a)Inlet pipe leak	a)Check the water inlet pipe
	b)The inlet pipe is too small or part is clogged with sundries	b)Increase or repair the inlet line
	c)The inlet pipe or pump has air	c)Fill water again and remove the air
	d)The mechanical part of the pump is rubbed	d)Check and repair the pump
	e)Base fixed is not strong	e)Sturdy the base, tighten the bolts
Pump frequently start	a)Water flow is too small	a)Appropriate increase in water flow
	b)Outlet pipe leak or faucet drip, it will display E2	b)Check the water pipe and tighten or replace the faucet

Ⅶ、Important items

1、The contents of this instruction are subject to change without prior notice.

2、Users in the selection of appropriate and correct use of cases, the pump has One year warranty except wearing parts of normal wear and tear.

3、User self-demolition caused by quality problems in warranty period, all consequences shall be the responsibility of the user.

Packing List

Factory No.	TIANJIN STREAMPUMPS INDUSTRY CO., LTD
Packing Dimension	SHJS4-30: 405×252×331mm SHS4-30: 494×257×360mm SHS5-40: 494×257×360mm SHJS8-50: 505×284×390mm SHS12-40: 680×295×438mm
G.W./N.W.	SHJS4-30: 11/13kg SHS4-30: 13/15kg SHS5-40: 13/15kg SHJS8-50: 25/27kg SHS12-40: 28/30kg

No	Name	Model	Unit	Quantity	Remark
1	Intelligent constant pressure efficiency multistage centrifugal pump	SHS/SHJS	Pcs	1	Inner
2	Pressure tank	/	Pcs	1	Assembled & ready to use
3	Warranty card	/	Pcs	1	Inner
4	Specification, packing list	/	Pcs	1	Inner
5	Certificate of approval	/	Pcs	1	Inner

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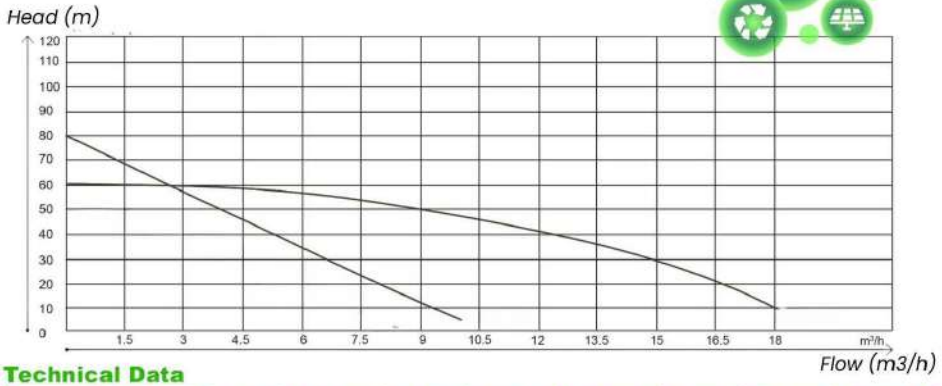
SHS Range

Intelligent Permanent Magnet Multistage Centrifugal Pump

- Multi-protection
- **IE5** Permanent Magnet Motor
- Compact Design
- Constant Pressure
- LCD Display Screen
- Adjustable Pressure
- High Flow Rate
- Energy Saving
- Wider Range of Voltage
- Low Noise



Technical Data

Model	Power Range (Kw)	Max. Head (m)	Rated Head (m)	Max. Flow (m^3/h)	Rated Head (m^3/h)	Max. Speed (rpm)	Voltage (v)	Frequency (Hz)	Inlet&Outlet (inch)
SHS 5-40	1.1Kw	80	40	8	5	5000	220±20%	50/60	1¼" 1"
SHS 12-50	2.2Kw	60	40	18	12	4500	220±20%	50/60	2"/2"