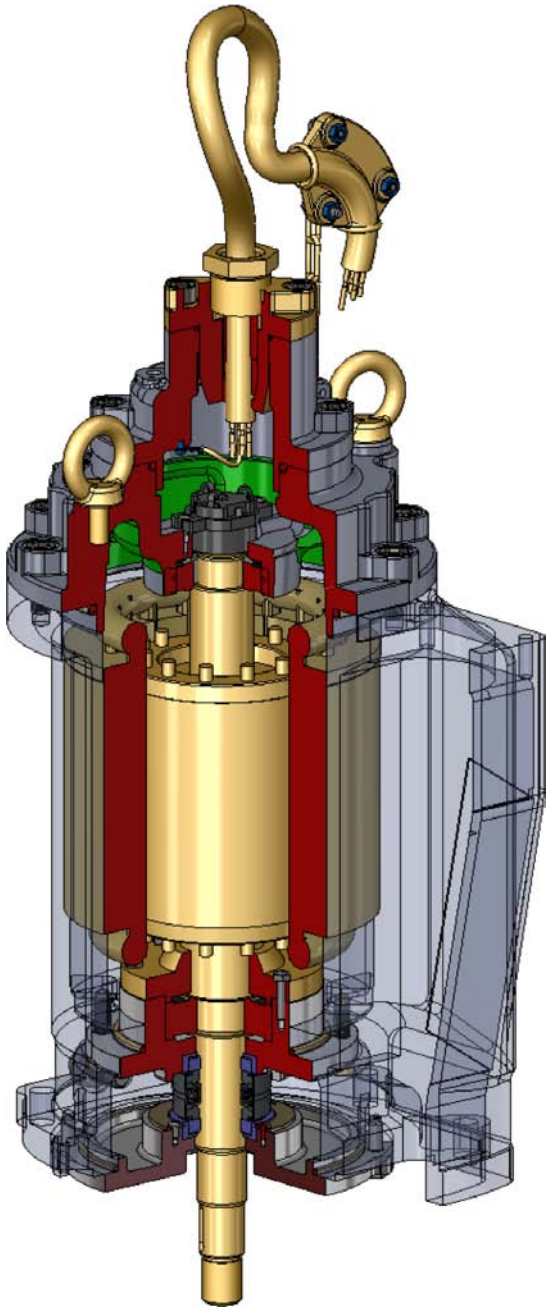
NO. 0430507000008
VER. 8

INSTRUCTION MANUAL FOR AXT SERIES OF SUBMERSIBLE PUMPS



Professional dewatering pumps

JOUNG SHIN ELECTRIC CORP.
NO.83-9, DAPIANTOU, SANZHI DIST.,
NEW TAIPEI CITY 252,TAIWAN
(DAPIANTOU INDUSTRIAL PARK)

Warranty:

JS will provide warranty on its products only if the following conditions have been met:

- The defect is a direct result of a fault in design, material or assembly.
- The defect has been reported to JS or a certified JS dealer within the warranty period (which is 1 year after the date of purchase).
- The products has been used in accordance to the conditions stated in the user manual and has been used in applications for which the products was intended by JS pumps.
- All modifications and repairs have been carried out by JS pumps or a certified JS pumps' dealer.
- That the pumps have been serviced and repaired with genuine JS pumps' spare parts.

The JS Pumps warranty does not cover faults which can be retraced to lack of maintenance, wrong installation, inadequate repairs or faults which are to be considered normal wear and tear of parts.

JS Pumps cannot be held responsible for physical damage to persons, material or economic damages in whatever form or size.

The AXT series pumps (AXT75/55/37) are explosion proof pumps. The pumps are built with other parts as pumps to put into use. Thus, the pump parts (including external parts) must meet the relevant mechanical standards.

Introduction:

Thank you for choosing our AXT series of submersible pumps for dewatering purposes.

This manual will instruct you on the general usage of this product and will provide details and precautions, in order for you to be able to use this pump under a secure and safe conditions.

To be able to use this product to its fullest capacity and performance it is of utmost importance to read this manual carefully. In case of defects or accidents, JS pumps and its distributors cannot be held responsible for any damages. We advise you to keep this manual with the pump unit, so that it can be consulted in case of doubt on the usage.

In case this product is to be rented to a third party, please kindly ensure that this manual is supplied together with the product and that the user has read this manual before putting this product into operation.

Should this manual be lost or destroyed, please kindly contact your nearest JS Pump distributor, who will be able to supply you a back-up copy of the manual.

This manual has been prepared with care, however should you find any discrepancies or mistakes in the manual or have any questions regarding the operation of the product, please kindly contact your nearest JS Pump dealer immediately.

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The AXT pumps are designed for pumping applications in mining, construction, dredging and other heavy duty dewatering.

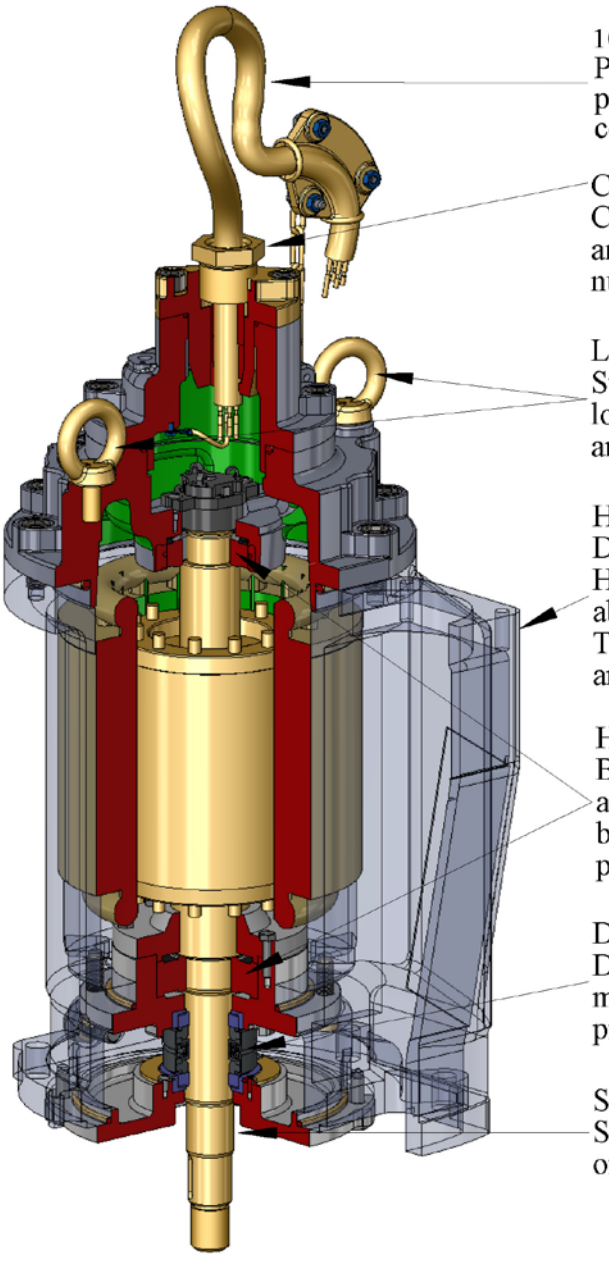
Technical data

Product name:	**Submersible PUMP**		
Phase:	**3**		
Efficiency:	**85%**		
Time rating:	**CONT**		
Voltage:	**200-1000 VAC**		
Ampere:	**AXT37**	**AXT55**	**AXT75**
	3.7kW	**5.5kW**	**7.5kW**
Insulation:	**H**		
Frequency:	**50&60 Hz**		
Rated full load speed:	**1450&1800**		
IECEx Certificate NO.:	**IECEx TUR 15.0016X**		
ATEX Certificate NO.:	**TÜV 18 ATEX 8260 X**		
Certification Marking:	Ex db I Mb , Ⓔx I M2 Ex db I Mb		
Ambient temperature:	**0℃~ 40℃**		
IECEx Certificate NO.:	**IECEx TUR 15.0016X**		
Approval of the production Quality assurance:	**DE/TUR/QAR15.0016/02** **QAN certificate number: 01 220 1509022**		
Fasteners:	**All external fasteners stainless steel**		

Application:

The AXT explosion proof pumps are designed for operation in hazardous areas in which explosion atmosphere could present, such as sewage treatment plants, industrial sumps and mines.

AXT SERIES



10M STANDARD POWER CORD
Power cable is a hard wearing rubber flexible power cable that can operate in tough weather conditions and high thermal stresses.

CABLE GLAND
Cable gland is firmly potted to resist any moisture and corrosion and is tightened with a compression nut which prevents any leaking through the gland.

LIFTING RINGS
Steel lifting rings allows the motor to be lifted or lowered safely and effortlessly. The lifting rings are replaceable if damaged.

HARDENED DUCTILE IRON TOP DISCHARGE MOTOR CASING
Hardened FCD400 ductile iron is twice as abrasive resistant as standard ductile iron. Top discharge allows superior motor cooling and easier pipe connection.

HEAVY DUTY BALL BEARINGS
Bearings are lubricated with grease to cool down and extend bearing life. Special designed lower bearing cover helps to secure lower bearing and prevent leakage through lower bearing bore.

DOUBLE MECHANICAL SEAL
Double silicon carbide mechanical seals provide more abrasive resistance and longer wear life and prevent particles from entering into motor.

SHAFT SLEEVE
SKD alloy shaft sleeve protects the shaft and saves on shaft wear due to abrasives and corrosions.

*To operate safely in hazardous areas, the pump upper cover and the pump casing are made of a stronger FCD400 ductile iron and the joint is secured using eight bolts to ensure zero leaking. A special designed lower bearing cover is in place to secure and protect the lower bearing and acts as a firewall to prevent any leaking through bearing bore.

Applicable standards:

IEC/EN IEC 60079-0 Explosive atmospheres - Part 0: Equipment - General requirements
IEC/EN 60079-1 Explosive atmospheres - Part 1: Equipment protection by flame proof enclosures "d"
The pumps are designed, constructed and tested in accordance to IEC/EN 60079-0 and IEC/EN 60079-1 standards.

IEC/EN 60079-14 Explosive atmospheres - Part 14: Electrical installations design, selection and erection
This standard contains the specific requirements for the design, selection and erection of electrical installations in hazardous areas associated with explosive atmospheres. The pumps must be correctly installed based on principles from IEC/EN 60079-14 to reduce explosion risk from flammable materials.

IEC/EN 60079-17 Explosive atmosphere - Part 17: Electrical installations, inspection and maintenance
This standard covers the aspects of the inspection and maintenance of electrical installations within hazardous areas only. The pumps, when installed in hazardous areas, require regular periodic inspection and continuous supervision by skilled personnel in accordance to IEC/EN 60079-17 standards.

Machinery Directive: 2006/42/EC
Low Voltage Directive: 2014/35/EU
ATEX Directive: 2014/34/EU

EN 60204-1:2006+A1:2009
EN 60335-1:2002+A1:2004+A12:2006+A2:2006+A11:2004+A13:2008+A14:2010
EN 60335-2-41:2003+A1:2004+A2:2010
prEN 13386:1998

Before installing:

Please check the following before installing the pump:

• **Inspection of pump**

Remove the packaging and ensure that the unit did not incur any transport damage and that all bolts and nuts did not loosen during transport. Also ensure that all standard accessories have been received together with the unit.

• **Specification inspection**

Check the nameplate to ensure that the unit received is the same model as you ordered.
Specifically check the voltage and frequency mentioned on the nameplate.
Make sure that all safety guards are in place and secure.

Note: In case of transport damage or specification discrepancies, please contact your nearest JS Pump dealer.

• **Product specification**

Pump design specification:

Medium		Drainage of water and discharge with sand contents
Pump	Sealing	Double Mechanical seal
	Bearing	Permanently lubricated Ball Bearings
	Pole-type	Dry submersible 4-pole induction type
	Insulation class	Class H
	Pump protection	Thermal protection in star-point
Delivery Flange		Hose nipple

Specification for pumps completed with hardware, 50/60Hz models:

Discharge	**Model**	**kW**	**HP**	**Head M**	**Capacity M^3/min**	**Weight kg**	**Max. Solids**	**Cable**	**Voltage**	**Dimension(mm)**		
										L	**W**	**H**
3”	**AXT37***	3.7	5	15	1.7	120	20mm	10M	200-1000	365	258	634.5
4”	**AXT55***	5.5	7.5	19	2.4	138	25mm	10M	200-1000	365	258	634.5
4”	**AXT75***	7.5	10	21	2.6	168	25mm	10M	200-1000	365	258	664.5

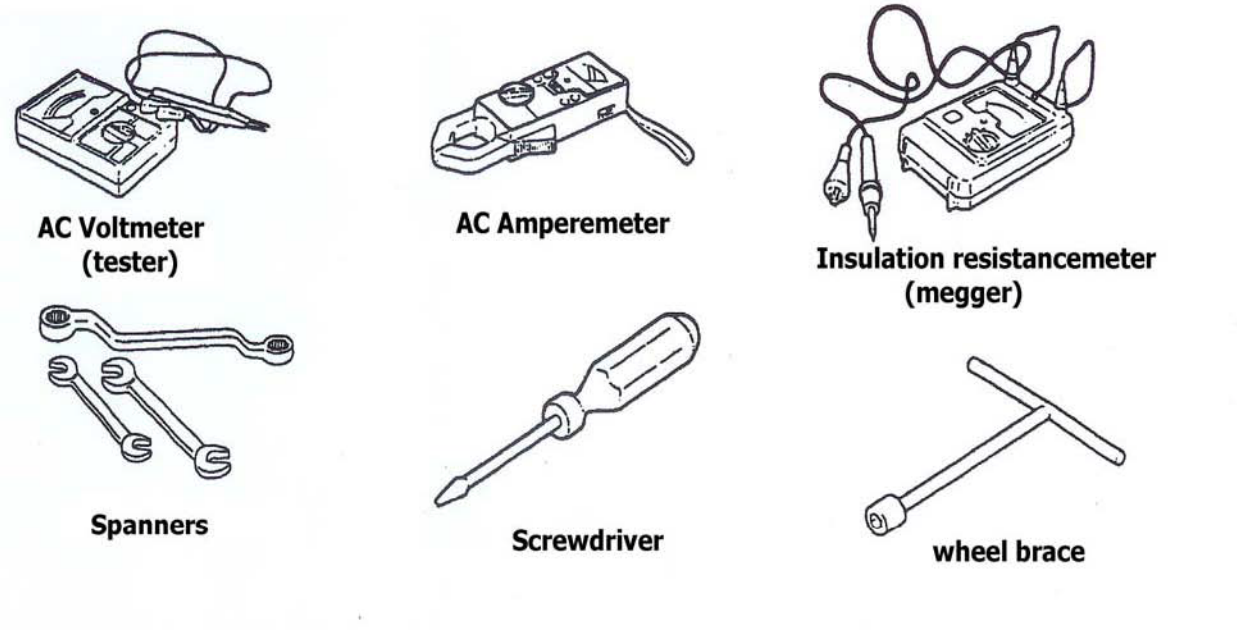
*: blank or H (High head)

Installation:

NOTE Should you wish to use this pump unit in special conditions or special applications, please consult your nearest JS Pump dealer first.

⇒ **Tools needed for installation.**

Below you will find pictures of tools that you will require to install the pump correctly.



NOTE Before using the above tools, please ensure that you have studied their respective manuals to ensure correct usage of these tools.

⇒ **Inspection before installation**

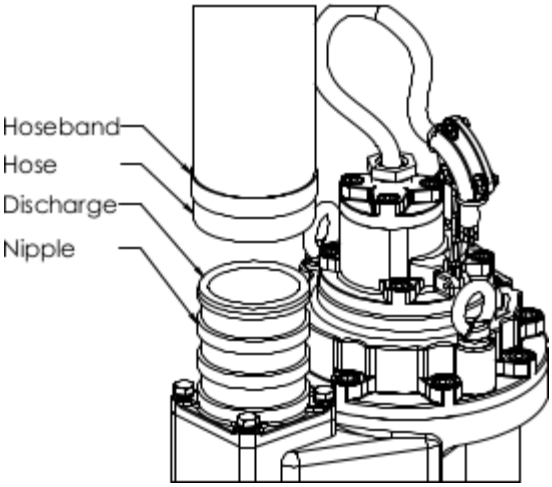
Use the megger to test the insulation resistance between the pump winding and all wires as well as the earth. Use AC voltmeter or AC Amperemeter to check if voltage and electric current of the power source conform to the specs shown on the pump nameplate.

∗ Reference value of resistance = 20MΩ.

NOTE The reference no. of 20MΩ minis based on a new or recently refurbished pump unit.

⇒ **Pump installation steps**

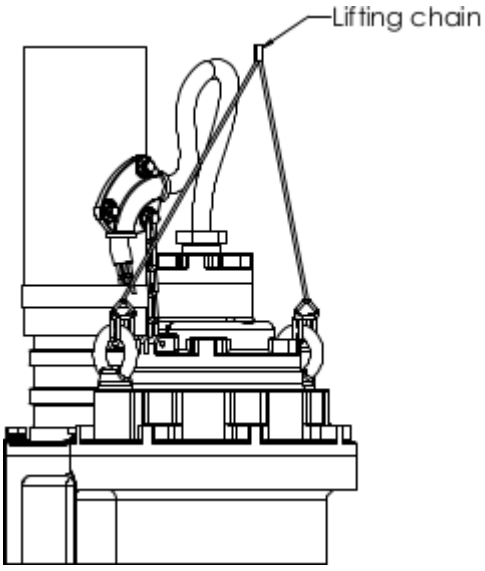
(1) Place the hose on the nipple as deep as possible and tighten it with one or more hosebands.



CAUTION During transport, test-running, installation and handling of the pump, the unit should always be placed on a solid and flat surface, in order to prevent the pump from falling over.

CAUTION Never lift of handle the pump by pulling the power cord, doing so, may result in a shortcircuit, electric shock or fire.

Handle the pump with care, do not drop or expose the unit to shocks. When lifting or lowering the pump, mount a sufficiently strong cable or chain to the unit. Never lift or lower the unit by its power cord



(3) When installing and operating the pump, make sure the pump is fully submerged in the water.

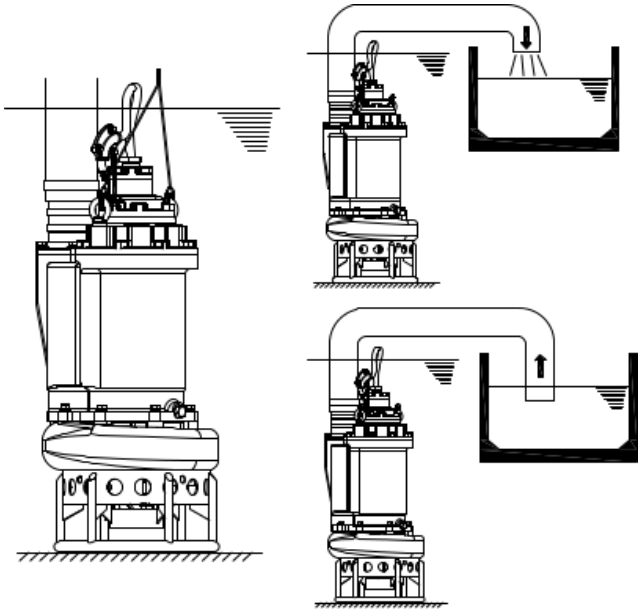
(4) When installing the pump to fitted pipes, ensure the following conditions are met.

The discharge pipe should be as short as possible with a minimum of bends. Ensure that the discharge of the pipe has a free outflow. Should the discharge end of the pipe be submerged, there is a possibility that when the pump is stopped the water will flow backwards toward the pump.

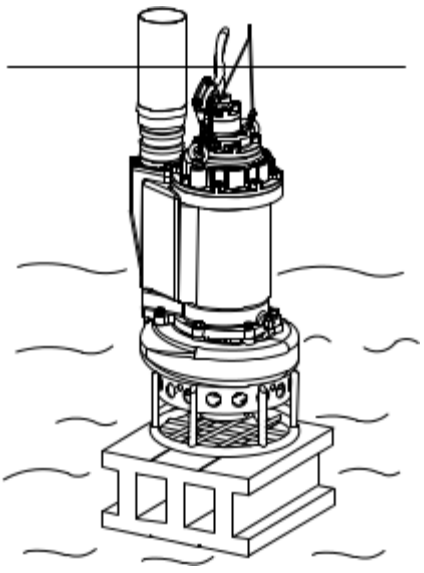
If the discharge is lower than the pump unit, there is a possibility that the water will continue to flow, even when the pump has been turned off.

Users will need to prepare their own pipes or hoses. Pipes and hoses are not standard accessories delivered together with this pump.

The end-user shall use the level detector or equivalent, to make the pump never have dry run.



(5) The pump should be used in an upright position. If the danger exists that the pump will dig itself into the ground, sufficient support for the pump should be installed.



⚠ CAUTION

The flameproof enclosure is not allowed to be open for installation or maintenance.

⇒**Pump assembly**

1. Objective: To ensure pump parts are assembled with the right procedures and achieve high quality end products.
2. Application: All pump parts.
3. Definition: None
4. Responsibility: Assembly department is responsible to operate according to the instructions.
5. Production Flow Chart: YES
6. Assembly Procedures:
    6.1 Parts Assembly

6.1 Parts Assembly

6.1.1 Assemble stator and pump casing

A Tools Used:

Hydraulic Presser, jig

B Operation:

Step 1: Turn on the power of the hydraulic press

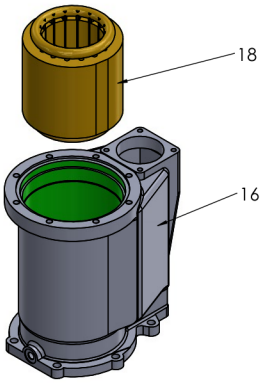
Step 2: Secure pump casing (16) with the lower jig

Step 3: Place the stator (18) on top of the casing (16). Stator must be placed at the center of the hydraulic press.

Step 4: Secure with the upper jig.

Step 5: Keep both hand away and press the stator into the casing to the right position.

Step 6: Assembly completed.



6.1 Parts Assembly

6.1.2 Assemble rotor shaft and bearings

A Tools Used

Hand press, jig

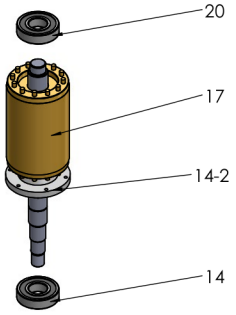
B Operation:

Step 1: Set the bearing cover (14-2) into lower end of the shaft (17) Put the bearings (14, 20) into both end of the shaft (17).

Step 2: Secure with jig.

Step 3: Place the shaft at the centre of the hand press

Step 4: After visual checking, press the bearings (14, 20) into both ends of the shaft (17).

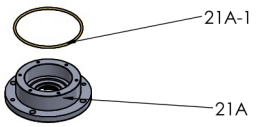


6.2 Pump completion

6.2.1 Operation:

Step 1: Place the bearing housing (21A) at the center of the hand press

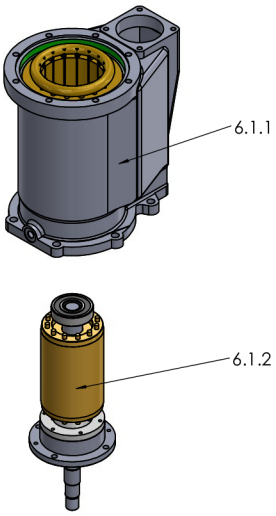
Step 2: Insert Oring (21A-1)



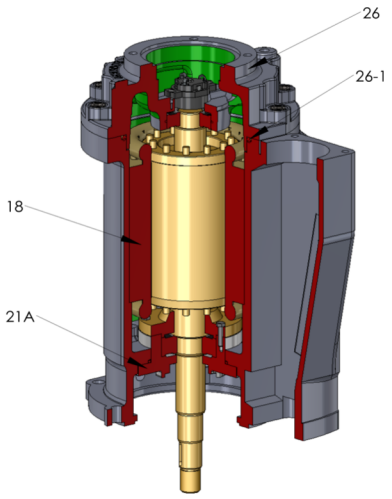
6.2 Pump completion

6.2.1 Operation:

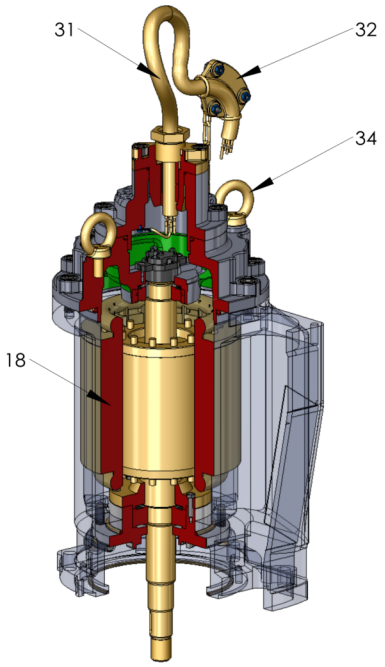
Step 3: Assemble parts from(6.1.1) and (6.1.2) and press the shaft into the bearing bore of the bearing housing (21A).



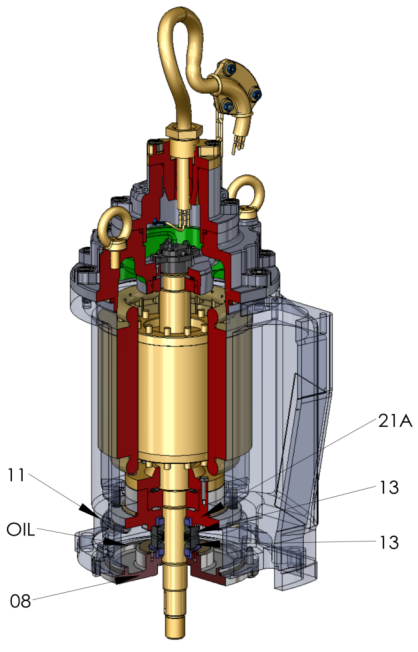
6.2 Pump completion
6.2.1 Operation:
Step 4: Insert Oring (26-1)
Step 5: Place the pump upper cover (26) and pull out the stator (18) cords
Step 6: Secure pump upper cover (26) and bearing housing (21A) with screws



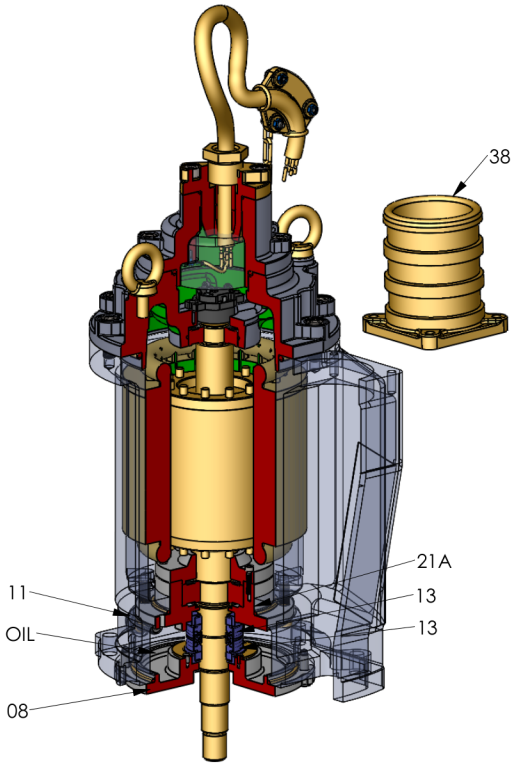
6.2 Pump completion
6.2.1 Operation:
Step 7: Connect power cable (31) to the stator (18) cords.
Step 8: Secure eyebolts (34) on the pump upper cover (26) with screws.
Step 9: Secure power cable with cable clamp.



6.2 Pump completion
6.2.1 Operation:
Step 10: Clean bearing housing (21A) and mechanical seal (13) with air blow gun
Step 11: Insert the mechanical seal (13) into the oil chamber of the bearing housing (21A)
Step 12: Close the oil chamber cover (08) and tighten with screws
Step 13: Air test
Step 14: Inject oil into the oil chamber
Step 15: Seal the test hole on the oil chamber cover (08) with plug (11) and Oring (11-1).
Step 16: Secure mechanical seal (13) on the oil chamber cover (08) through shaft (17)



Pump Assembly:



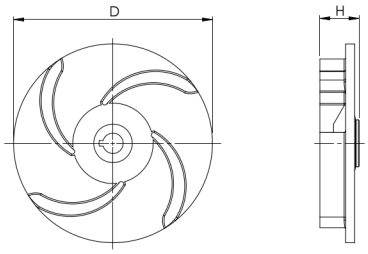
Assemble pump housing and strainer

A Tools used:
Air screw driver

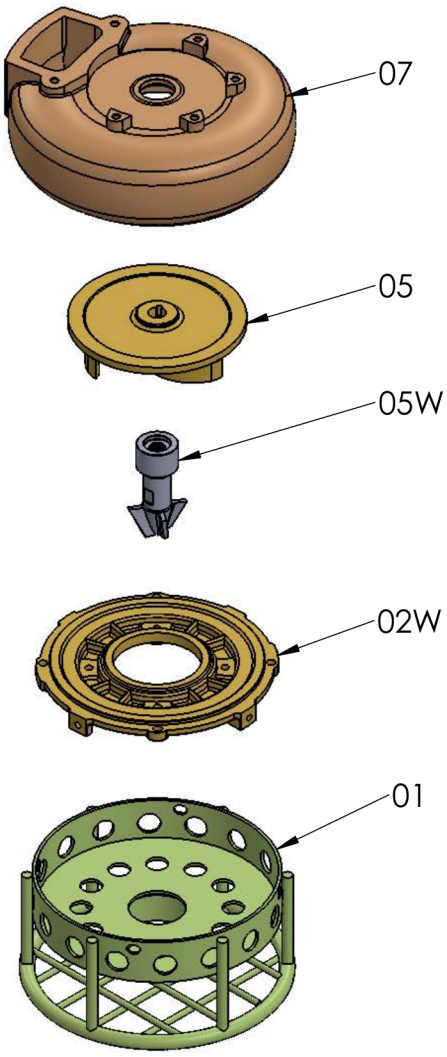
B Operation:
Step 1: Align the screw holes of the pump housing (07) and the suction cover holder(02W) and the strainer(01)
Step 2: Secured with screws
Step 3: Assemble discharge outlet(38)

All assembled pumps must pass all below tests before packaging

1. Pump pressure test
2. Pump performance test
3. Ampere test



PUMP TYPE	50Hz		60Hz	
	D	H	D	H
AXT37	236	37	195	37
AXT55	251	50	220	37
AXT55H	295	50	275	50
AXT75	263	50	228	50
AXT75H	311	50	296	50



Electrical installation:

⇒ **Electrical wiring**



Electrical installations should be carried out under the supervision of a certified electrical engineer and according to the local rules and regulations. Installations prepared by an not certified person, may be against the law and can be very dangerous.

Incorrect installed wiring may lead to power leakage, electric shocks and can be a fire hazard.

All electrical equipment should be properly earthed. This accounts for both the pump and any possible control equipment.

⇒ **Grounding**



To avoid damage to the pump and any power leakage, which could result in electric shocks, please ensure that the grounding has been properly installed and checked.



To avoid electric shocks by improper grounding, please do **NOT** connect the earth wire to gas– or water pipes or telephone lines.

***The pump is able to move during operation and acts in accordance to **IEC60079-0 15.2** by having its earthing incorporated in the power cable. The earthing shall be connected to appropriate devices or control panel separately. However, when moving pump during operation, it is important that the power cable shall never be stretched.

⇒ **Power Cord**



Please do not extend the power cord, unless this extension is carried out by a certified JS Pump distributor.

If the power cord has been damaged or cut, water may enter the cable, leading to possible damage to the pump, electric shocks or fire.

Please refrain from driving over the cable, to avoid any possible damage.

Cable specs:

H07RN8-F 6.0x4Gx10M (Ø16.9~17.5mm)
NSSHOU, 3x2.5+3x2.5/3E+3x1.5ST (Ø17.1~19.1mm)
Type 2S individually screened, 3x2.5+3x1.0ST (Ø17.3~18.3mm)
Type 41, 3x2.5SC+1x2.5 (Ø18.5~20.4mm)

Refer to Annex Cable specification.

Cable gland specs:M36*4mm-6H/6g-ISO965-3

CAUTION Never submerge the end of the cable under water

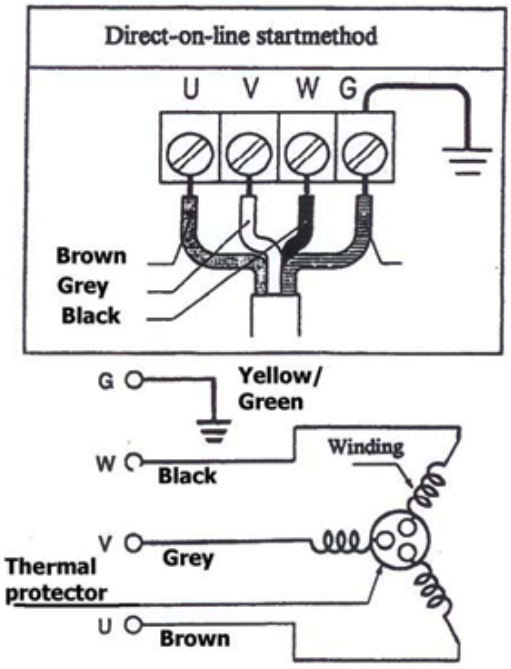
To prevent the cable from damage, do not excessively bend the cable leading to the power source. Also do not lead the cable past sharp edges, as these may cut into the cable.

⇒ **Connecting power cable**

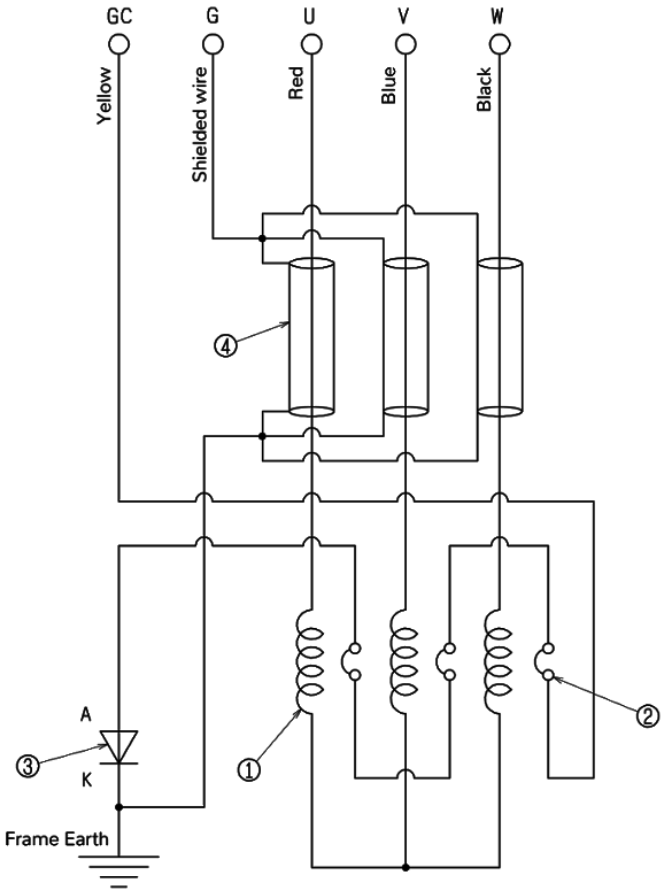
CAUTION Before connecting the cable, ensure that the power to the control panel or thermal protection unit has been switched off. Disregarding this caution may lead to electric shocks, short circuits and / or injury due to a sudden start-up of the pump.

(1) Securely connect the cable to the mounting points in the control panel or pump protection.
(2) The figure on the right shows the correct fitting of the cable to the mounting points.

(200-600V)



(1000V)



① Motor Coil
② Motor Protector (Miniature Protector, "B" contact)
③ Diode
④ Shielded Wire

⇑ ⇒ **Wiring diagram**

Direct online starting method

***IEC/EN 60079-14 Explosive atmospheres - Part 14: Electrical installations design, selection and erection**

This standard contains the specific requirements for the design, selection and erection of electrical installations in hazardous areas associated with explosive atmospheres. The pumps must be correctly installed based on principles from IEC/EN 60079-14 to reduce explosion risk from flammable materials.

Operating pump:

(1) Re-check the nameplate for the correct voltage and frequency

(2) Check the wiring, power source and the capacity of the earth leakage protector and the insulation resistance of the pump



Incorrect voltage, frequency of the power source can lead to incorrect functioning of the pump, even power leakage or prove to be a fire hazard.

(3) Set the thermal protector to the nominal current value, as mentioned on the nameplate of the pump.

(4) When used with a generator, limit the number of appliances used on the generator at the same time.

⇒ **Test run**

(1) Let the pump run for a short period (1 or 2 seconds) en check with a phase rotation indicator what the direction of rotation is.



Never run the pump when hanging from a chain or cable, where the starting torque may cause the pump to move and cause injury.

Never start the pump in the neighborhood of people, who run the risk of electric shocks, due to power leakage.

Do not run the pump at low head with a clogged inlet. This will cause the pump to overload and could lead to vibrations and noise. This situation could cause damage to the pump, electric shocks and fire.



When using a phase indicator, please consult the manual of the unit before usage.



Do not use the pump in any other application or condition than specified in this manual. Should you do so, you may risk electrical shocks, fire or the incorrect usage of the pump.

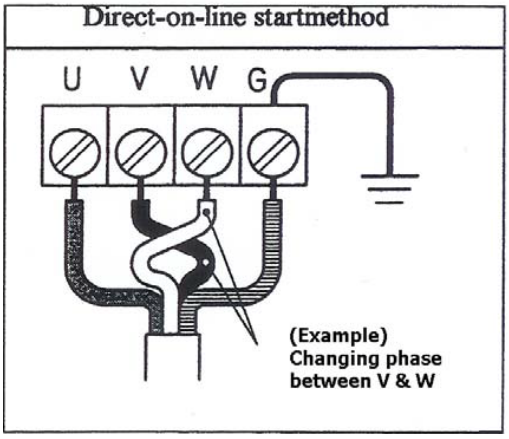


Do not run pump dry. Doing so will result in damaging the pump and possibly a short circuit and/or electric shocks. Hoses, pipes and valves should be measured correctly according to the specification of the pump. Incorrectly sized accessories could lead to leakage and malfunctioning of the pump.

(2) Run the pump for a short period (3 – 10 minutes) and check the following:

⇒ To change the rotational direction of the pump, please do the following.

CHANGE 2 OF THE 3 PHASE WIRES DESIGNATED WITH U, V OR W



CAUTION

Before switching the phase to change the direction of the rotation of the pump, ensure that there is no current on the wires and that the impeller is stopped. Failure to do so may result in serious consequences, such as short circuits, electric shocks and personal injury.

• **Used current**

Use an ampere meter and measure the current on each separate phase-wires U, V, W, which are connected to the control panel or pump-protection switch.

Overloading the pump could be a result of a too high amperage, which exceeds the nominal current. Please check the specifications to adjust the thermal overload protection.

• **Voltage**

Use an AC voltmeter to check the voltage on the control panel or pump-protection switch.

• **Tolerance for the voltage is ± 5% of the voltage as mentioned on the nameplate of the pump**.

If the voltage if outside of the tolerance, the power source may be too small for the pump or the power cable may be too long.

• **Vibrations**

CAUTION

If the pump vibrates or emits noise and/or smells, immediately turn off the power and contact your nearest JS Pump dealer.

Only operate the pump, when no abnormalities have been detected during testing.

CAUTION

- The voltage may vary a maximum of ± 5% of the nominal voltage mentioned on the nameplate.
- The pump can only be used in an environment with a temperature of 0° and 40°C.
- The pump can only be used for pumping water. Do not use for pumping liquids such as oil, sea-water or organic solvents.
- Do not run the pump when the pump is partially or completely dismantled.

CAUTION

The pump can become very hot during operation. To avoid burns, do not touch the pump with bare hands.

Never insert body parts in the inlet of the pump. It could cause severe injury, electric shocks, short circuit or fire.

When the pump is not used for a prolonged period of time, ensure that the current is switched off from the power source. Aging may cause a reduced insulation of the power cable and cores. If connected with power, this may lead to power leakage, electric shocks and fire.

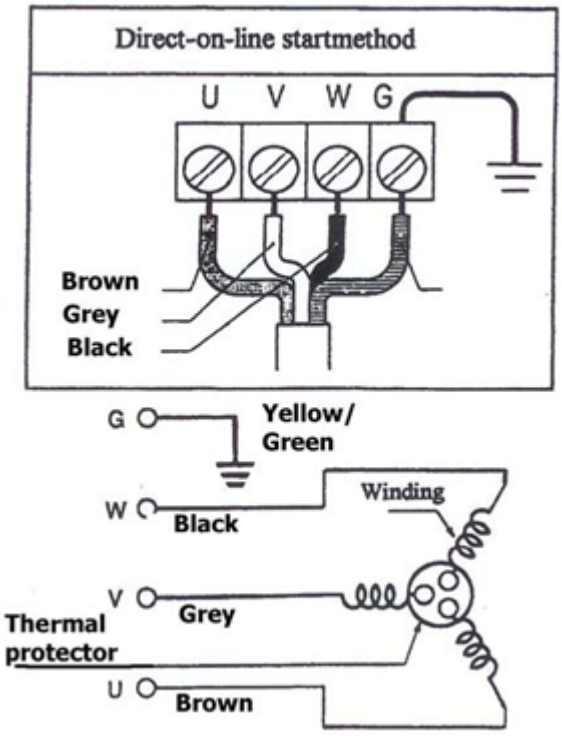
Carefully check the water level during operation of the pump. The pump may be damaged when running dry.

⇒ **Thermal protection**

The pump is equipped with an internal thermal protector (Thermal protector in a star-point winding)

The thermal overload protector is connected to both the stator and the power cable. It protects the pump from burning by automatically intercept and shut down the pump when the current or the temperature is too high, and resume when the current or temperature of the pump drops down to normal.

The overload protector will also activate if the temperature of the mechanical seals rises too high. The pump shall operate for 24 hours under correct application unless stopped by overload protector when abnormal rise in pump temperature or excessive current are occurred.



	overload protector			miniature thermal protector
Thermal protection / Voltage / Model	200-240V	380-480V	525-575V	200-1000V
AXT37	KA314-HKXL00	KA314-HRTL202	KA313-GCTL103	9700K*3
AXT55	KA314-HLXL00	KA314-HRXL00	KA314-HRTL202	9700K*3
AXT75	KA314-HLBL00	KA314-HKXL00	KA314-HRXL00	9700K*3

Maintenance and inspection:

It is of the utmost importance to provide regular maintenance and service to ensure a correct operation of the pump. Please contact your nearest JS Pump dealer to provide details on service and parts.

⇒ **Periodic Check**

(1) Cleaning the pump
Remove all dirt from the outer casing of the pump and clean the pump with clean water. Particular attention should be given to the pump inlet, strainer and impeller and remove all dirt and solids in these areas.

(2) Inspection of pump surface
Check the coating of the pump for serious damage or whether any other damages can be detected. Check whether all bolts and nuts are still tightened sufficiently. Should the coating be seriously damaged, let the pump dry and repair the damages.

The coating of the pump should be provided by the user themselves. Should the pump need to be disassembled in order to repair or rework damages, please contact you nearest JS Pump dealer.



Ensure that the pump has been disconnected from the power source before attempting any maintenance or checks. Negligence could have serious consequences, such as electric shocks and personal injury due to unexpected startup of the pump.



Cut the power during inspection and repair, so that the unit cannot be started by accident. In case of neglect, this could lead to serious injury, electric shocks or fire.

During a power outage, please shutdown the power source. Unexpected startup of the pump after the power has been restored can be very dangerous for people in the direct neighborhood of the pump.



Until the cause of a problem with the pump has been resolved, the pump may switch on and off on its pump-protection. This will eventually lead to damage to the pump and could lead to electric shocks and power leakage. It is therefore advised to immediately check and resolve problems when the pump switches off.

⇒ **Periodic maintenance**

Monthly	—	Check Insulation values with megger
	—	Measure input current
	—	Check voltage
	—	Inspect impeller
Half-year	—	Check and change oil in oil chamber
Yearly	—	Change oil and replace mechanical seal
Once in 2-5 years	—	Complete overhaul (even when pump is functioning correctly)

⇒ **Storage of pump**

When the pump is to be stored for a prolonged period, lift the pump from the water. Let it dry and store in a dry area.

> When the pump is to be put into operation after a prolonged period of storage, please test the pump, as indicated in this manual, before putting into operation again.

When the pump is stored under water, perform regular tests (once a week) to avoid the impeller rusting against the casing.

⇒ **Oil check and oil change**

- ◊ Check interval : every 3000 hrs or after 6 months (whichever comes first)
- ◊ Change interval : every 6000 hrs or after 12 months (whichever comes first)

⇒ **Oil Check**

Remove the oil plug and drain a small quantity of oil by tipping the pump over. If the oil is discoloured or is mixed with water, the mechanical seal has probably been damaged and will need to be changed.



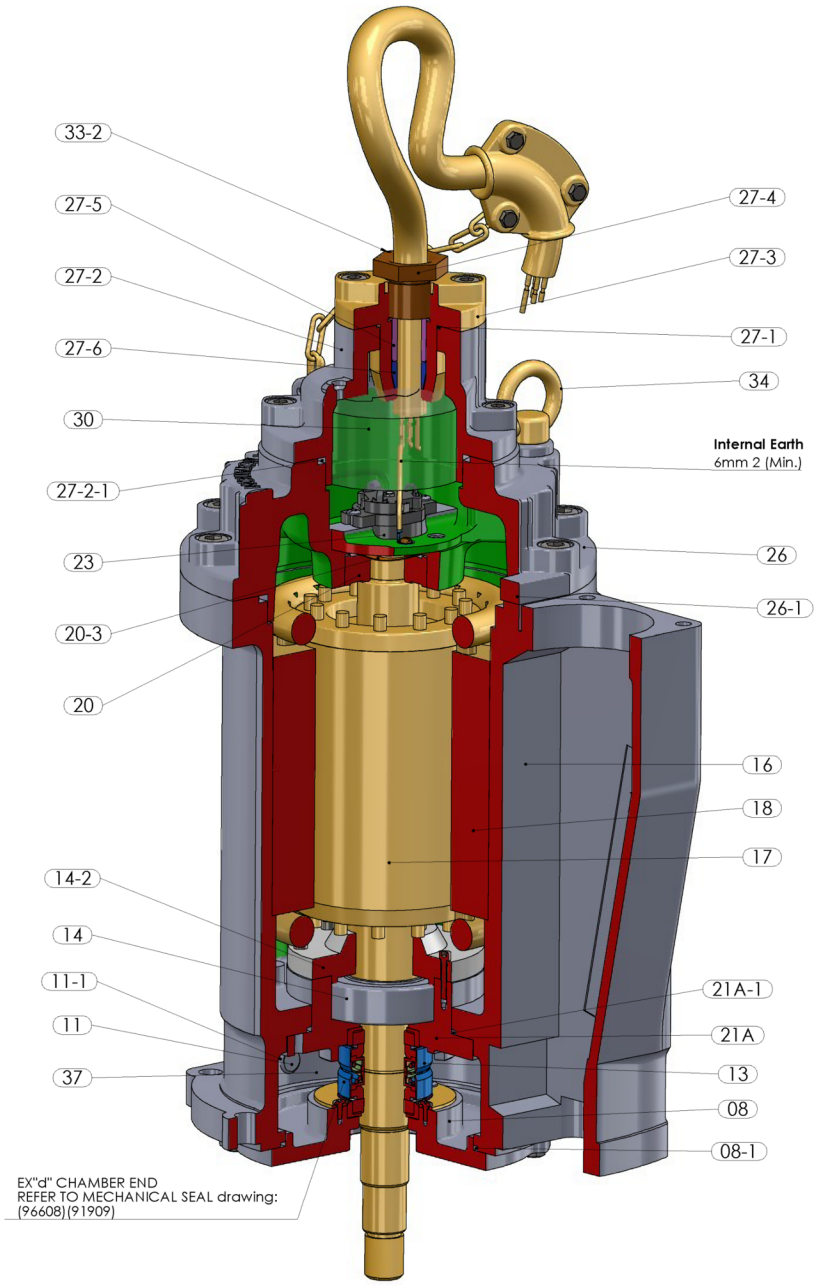
⇒ **Oil change**

Remove the oil plug and drain the oil completely from the chamber. Refill the chamber with the correct type of oil.

***IEC/EN 60079-17 Explosive atmosphere - Part 17: Electrical installations, inspection and maintenance**

This standard covers the aspects of the inspection and maintenance of electrical installations within hazardous areas only. The pumps, when installed in hazardous areas, require regular periodic inspection and continuous supervision by skilled personnel in accordance to IEC/EN 60079-17 standards.

Parts list and description:

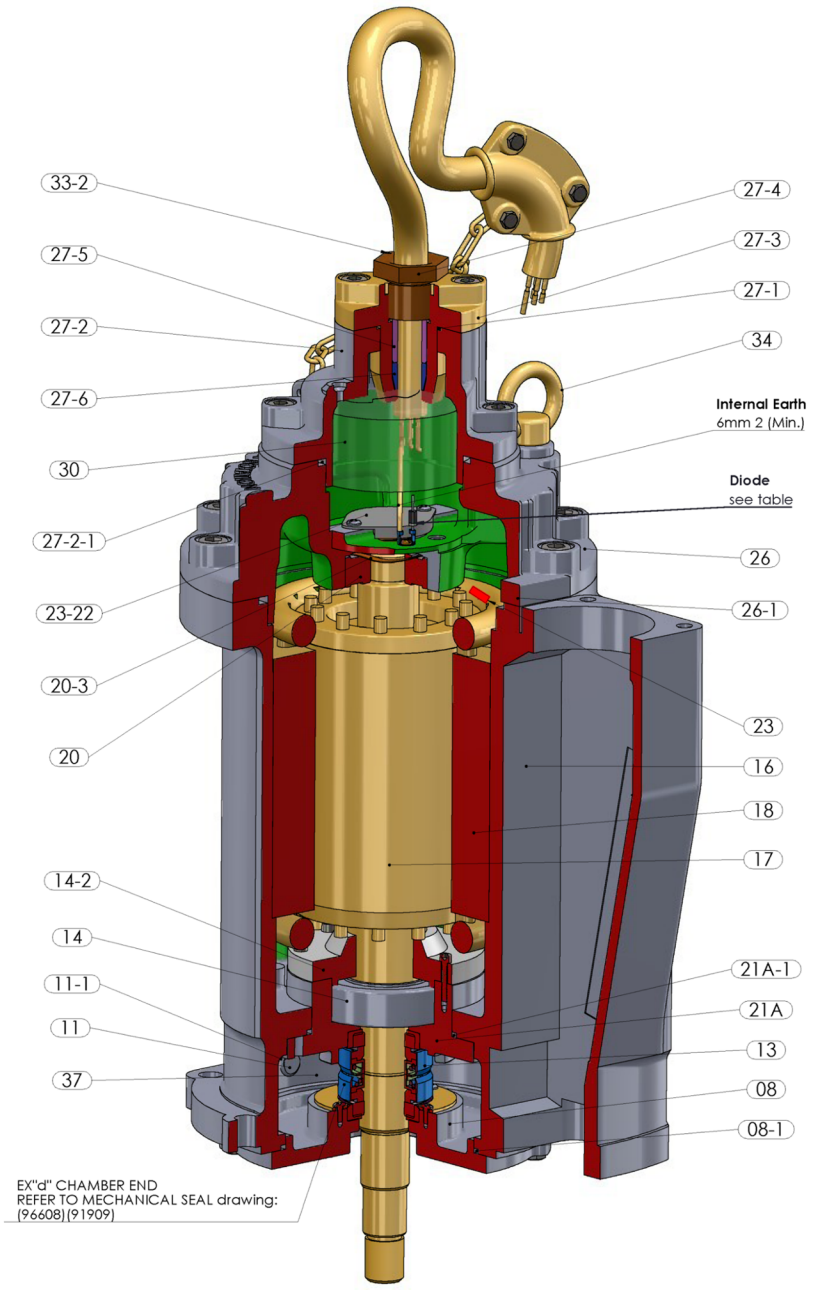


AXT37/AXT55/AXT/75
(200V~575V)

with overload protector

NO	DESCRIPTION	MATERIAL
08	COVER OF OIL CHAMBER	FCD 400 NODULAR CAST IRON
08-1	ORING	NBR
11	PLUG	SUS 304
11-1	ORING	NBR
13	MECHANICAL SEAL	SILICONCARBIDE x 2
14	BEARING BOTTOM	
14-2	BEARING COVER(AXT37&55)	FCD 400 NODULAR CAST IRON
16	MOTOR CASING	FCD 400 NODULAR CAST IRON
17	ROTOR SHAFT	SUS 410
18	STATOR	H-60
20	BEARING UP	
20-3	WASHER ROOFING	
21A	MOTOR BOTTOM COVER	FCD 400 NODULAR CAST IRON
21A-1	ORING	NBR
23	OVERLOAD PROTECTOR	see table
26	UPPER COVER	FCD 400 NODULAR CAST IRON
26-1	ORING	NBR
27-1	ORING	NBR
27-2	CABLE GLAND STAND	FCD 400 NODULAR CAST IRON
27-2-1	ORING	NBR
27-3	CABLE HIDES THE BOARD	FCD 400 NODULAR CAST IRON
27-4	CABLE GLAND	ST
27-5	WASHER	ST
27-6	RUBBER ELASTOMER	NBR
30	SEALING AGENT	EPOXY(EIP4260)
31	CABLE	
32	CABLE CLAMPS	FCD 400 NODULAR CAST IRON
33-2(27-4)	PIN (FOR CABLE GLAND)	SUS 304
34	EYEBOLT	STEEL
37	OIL	TURBINE OIL, ISO VG32

Thermal protection			
Model	Voltage		
	200-240V	380-480V	525-575V
AXT37	KA314-HKXL00	KA314-HRTL202	KA313-GCTL103
AXT55	KA314-HLXL00	KA314-HRXL00	KA314-HRTL202
AXT75	KA314-HLBL00	KA314-HKXL00	KA314-HRXL00

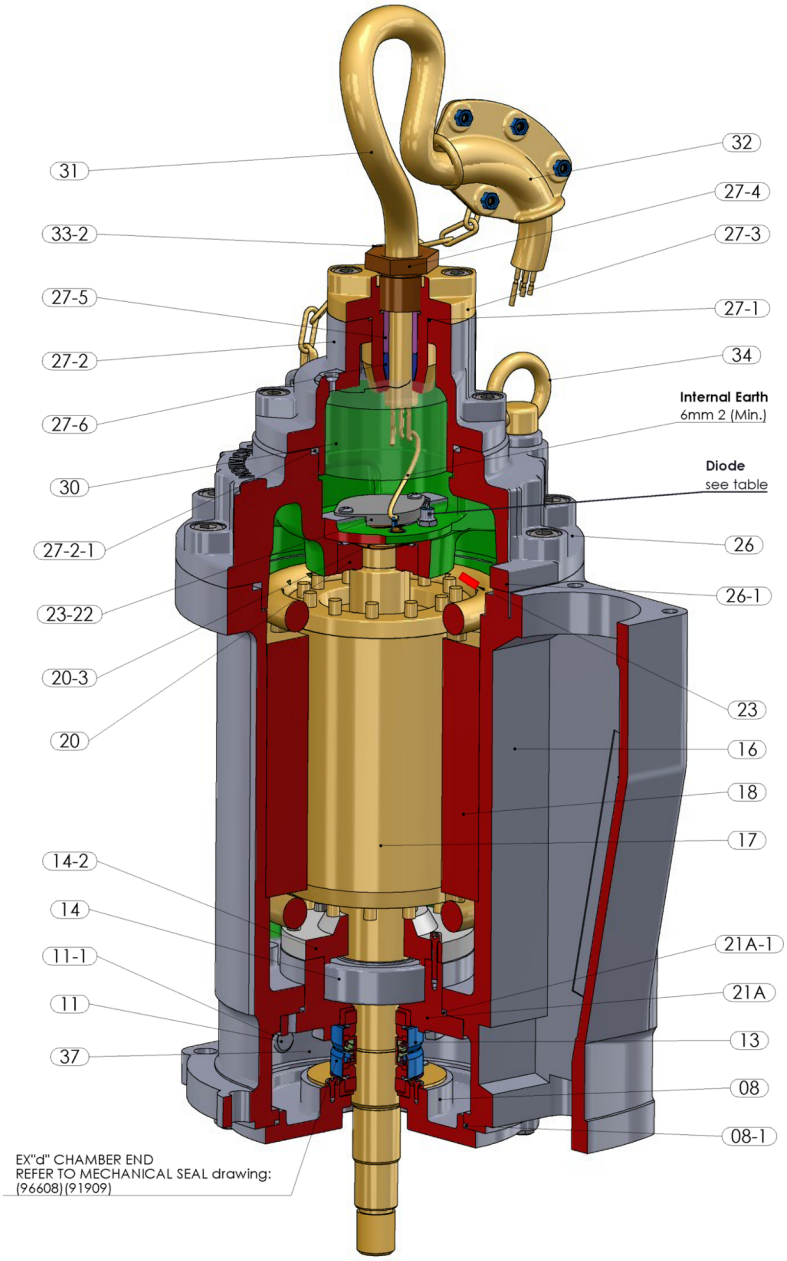


AXT37/AXT55/AXT/75 (200V~1000V)

with miniature thermal protector

NO	DESCRIPTION	MATERIAL
08	COVER OF OIL CHAMBER	FCD 400 NODULAR CAST IRON
08-1	ORING	NBR
11	PLUG	SUS 304
11-1	ORING	NBR
13	MECHANICAL SEAL	SILICONCARBIDE x 2
14	BEARING BOTTOM	
14-2	BEARING COVER	FCD 400 NODULAR CAST IRON
16	MOTOR CASING	FCD 400 NODULAR CAST IRON
17	ROTOR SHAFT	SUS 410
18	STATOR	H-60
20	BEARING UP	
20-3	WASHER ROOFING	
21A	MOTOR BOTTOM COVER	FCD 400 NODULAR CAST IRON
21A-1	ORING	NBR
23	MINIATURE THERMAL PROTECTOR	9700K-46-1748Z5AB (come with Stator)
23-22	COVER PLATE	GALVANIZED STEEL
26	UPPER COVER	FCD 400 NODULAR CAST IRON
26-1	ORING	NBR
27-1	ORING	NBR
27-2	CABLE GLAND STAND	FCD 400 NODULAR CAST IRON
27-2-1	ORING	NBR
27-3	CABLE HIDES THE BOARD	FCD 400 NODULAR CAST IRON
27-4	CABLE GLAND	ST
27-5	WASHER	ST
27-6	RUBBER ELASTOMER	NBR
30	SEALING AGENT	EPOXY(EIP4260)
31	CABLE	
32	CABLE CLAMPS	FCD 400 NODULAR CAST IRON
33-2(27-4)	PIN (FOR CABLE GLAND)	SUS 304
34	EYEBOLT	STEEL
37	OIL	TURBINE OIL, ISO VG32

Diode		
Manufacturer	**Type**	**Standard**
VISHAY Intertechnology, Inc.	1N5408 (JEDEC Diode No.)	N/A



AXT37/AXT55/AXT/75 (200V~1000V)

with miniature thermal protector

NO	DESCRIPTION	MATERIAL
08	COVER OF OIL CHAMBER	FCD 400 NODULAR CAST IRON
08-1	ORING	NBR
11	PLUG	SUS 304
11-1	ORING	NBR
13	MECHANICAL SEAL	SILICONCARBIDE x 2
14	BEARING BOTTOM	
14-2	BEARING COVER	FCD 400 NODULAR CAST IRON
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27-4	CABLE GLAND	ST
27-5	WASHER	ST
27-6	RUBBER ELASTOMER	NBR
30	SEALING AGENT	EPOXY(EIP4260)
31	CABLE	
32	CABLE CLAMPS	FCD 400 NODULAR CAST IRON
33-2(27-4)	PIN (FOR CABLE GLAND)	SUS 304
34	EYEBOLT	STEEL
37	OIL	TURBINE OIL, ISO VG32

Diode		
Manufacturer	**Type**	**Standard**
PHD Powertex (Pty.) Ltd.	D16K 1K6VC (or DA25K 1K6VC)	N/A

Fault finding:

CAUTION Before attempting any maintenance of checks, please ensure that the pump has been disconnected from the power source. Neglecting to do so, may result in serious injury, damage, electrical shocks or fire.

Before attempting any repair, please study this complete manual carefully. Should the pump not function correctly after a 2nd inspection. Please contact a your nearest certified JS Pump dealer immediately.

Pump does not start	Insufficient or no power supply	Contact power supply company or a certified electrician
	Disconnected or bad connection of power cable	Check for loose or open connections.
	Impeller is blocked	Check the pump and remove obstruction
Pump starts, but stops again immediately	The impeller is blocked	Check the pump and remove obstruction
	Current drop	Check the voltage for the nominal current or change cable thickness
	A 50Hz pump is being run at 60Hz	Check nameplate and change impeller or pump
	The strainer is clogged causing the pump to run dry	Clean strainer
	Pump is malfunctioning	Repair or replace pump
	Pump is pumping too much solids	Clean strainer and place pump on a solid surface
The pressure and volume of the pump is low	The impeller is worn out	Replace impeller
	The hose is clogged or bent	Remove excessive bends in the delivery hose
	The strainer is clogged or pump is digging itself in	Clean strainer and place pump on a solid surface
	The pump is rotating in the wrong direction	Switch 2 of the 3 phase wires and check the rotation.
Pump is noisy and vibrating	The bearings of the pump may be worn	Replace bearings. Contact your nearest JS Pump dealer