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I. Two-year warranty

KT-620 cased pumps

For any KT-620 cased pump purchased after 1 January 2022, KavoshTeb Co. warrants, subject to the conditions and exceptions below, through either KavoshTeb, to repair or replace free of charge, any part of the product which fails within two years of the day of manufacture of the product. Such failure must have occurred because of defect in material or workmanship and not as a result of operation of the product other than in normal operation as defined in this pump manual.

KavoshTeb shall not be liable for any loss, damage, or expense directly or indirectly related to or arising out of the use of its products, including damage or injury caused to other products, machinery, buildings, or property, and KavoshTeb shall not be liable for consequential damages, including, without limitation, lost profits, loss of time, inconvenience, loss of product being pumped, and loss of production.

Conditions of and specific exceptions to the above warranty are:

Conditions

Products must be returned by pre-arrangement, carriage-paid, to KavoshTeb,

All repairs or modifications must have been made by KavoshTeb Co. or a KavoshTeb approved service center or with the express permission of KavoshTeb.

Exceptions

The warranty shall not apply to repairs or service necessitated by normal wear and tear or for lack of reasonable and proper maintenance.

All tubing and pumping elements as consumable items are excluded.

Products which, in the judgment of KavoshTeb, have been abused, misused, or subjected to malicious or accidental damage or neglect are excluded.

Electrical surge as a cause of failure is excluded.

Chemical attack is excluded

All pump head rollers are excluded.

2. When you unpack your pump

Unpack all parts carefully, retaining the packaging until you are sure all components are present and in good order. Check against the components supplied list, below.

Packaging disposal

Dispose of packaging materials safely, and in accordance with regulations in your area. The outer carton is made of corrugated cardboard and can be recycled. Inspection Check that all components are present. Inspect components for damage in transit. If anything is missing or damaged, contact your distributor immediately.

Components supplied

The designated mains power lead for your pump

Quick Start manual

Note: Some versions of this product will include components different from those listed above. Check against your purchase order.

Storage

This product has an extended shelf life. However, care should be taken after storage to ensure that all parts function correctly. Users should be aware that the pump contains a battery with an unused life of seven years. Long-term storage is not recommended for peristaltic pump tubing. Please observe the storage recommendations and use-by dates which apply to tubing you may wish to bring into service after storage.

3. Information for returning pumps

Equipment which has been contaminated with, or exposed to, body fluids, toxic chemicals or any other substance hazardous to health must be decontaminated before it is returned to KavoshTeb.

A certificate included at the rear of these operating instructions, or signed statement, must be attached to the outside of the shipping carton. This certificate is required even if the pump is unused. If the pump has been used, the fluids that have been in contact with the pump and the cleaning procedure must be specified along with a statement that the equipment has been decontaminated.

4. Peristaltic pumps - an overview

Peristaltic pumps are the simplest pump, with no valves, seals or glands to clog or corrode. The fluid contacts only the bore of a tube, eliminating the risk of the pump contaminating the fluid, or the fluid contaminating the pump. Peristaltic pumps can run dry.

How they work

A compressible tube is squeezed between a roller and a track on an arc of a circle, creating a seal at the point of contact. As the roller advances along the tube, the seal also advances. After the roller has passed, the tube returns to its original shape, creating a partial vacuum which is filled by fluid drawn from the inlet port. Before the roller reaches the end of the track, a second roller compresses the tube at the start of the track, isolating a packet of fluid between the compression points. As the first roller

leaves the track, the second continues to advance, expelling the packet of fluid through the pump's discharge port. At the same time, a new partial vacuum is created behind the second roller into which more fluid is drawn from the inlet port. Backflow and siphoning do not occur, and the pump effectively seals the tube when it is inactive. No valves are needed. The principle may be demonstrated by squeezing a soft tube between thumb and finger and sliding it along: fluid is expelled from one end of the tube while more is drawn in at the other. Animal digestive tracts function in a similar way.

Suitable applications

Peristaltic pumping is ideal for most fluids, including viscous, shear-sensitive, corrosive and abrasive fluids, and those containing suspended solids. They are especially useful for pumping operations where hygiene is important. Peristaltic pumps operate on the positive displacement principle. They are particularly suitable for metering, dosing and dispensing applications. Pumps are easy to install, simple to operate and inexpensive to maintain.

5.Safety notes

In the interests of safety, this pump and the tubing selected should only be used by competent, suitably trained personnel after they have read and understood this manual, and considered any hazard involved. If the pump is used in a manner not specified by KavoshTeb co., the protection provided by the pump may be impaired.



**This Symbol, used on the pump and in this manual,
Means: Caution, refer to accompanying documents.**



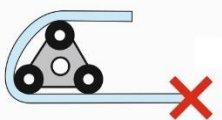
**This Symbol, used on the pump and in this manual,
Means: do not allow fingers to contact moving parts.**



**This Symbol, used on the pump and in this manual,
Means: Recycle this product under the terms of the EU Waste Electrical and Electronic Equipment (WEEE) Directive.**



**Use both hands to lift and move the device with the help of the side handles
Or carry the back handle and under the head. For lift the pump off the ground,
first sit and then lift the pump.**



Ensure that on longer tube runs at least 1m of smooth bore flexible tubing is connected to the inlet and discharge port of the pump.

Any person who is involved in the installation or periodic maintenance of this equipment should be suitably skilled or instructed and supervised using a safe system of work.

There are moving parts inside the pumphead. Before opening the tool unlockable pumphead guard,

ensure that the following safety directions are followed.

- Ensure that the pump is isolated from the mains power.
- Ensure that there is no pressure in the pipeline.
- If a tube failure has occurred, ensure that any fluid in the pumphead has been allowed to drain to a suitable vessel, container or drain.
- Ensure that protective clothing and eye protection are worn if hazardous fluids are pumped.
- Primary operator protection from rotating parts of the pump is provided by the pumphead safeguard. Note that safeguards differ, depending on the type of pumphead.
- Secondary operator protection from rotating parts of the pump is provided by electrical interlocking of the pumphead guard. This function will stop the pump if the guard is inadvertently opened while the pump is running.

This product does not comply with the ATEX directive and must not be used in explosive atmospheres.



This pump must be used only for its intended purpose. The pump must be accessible at all times to facilitate operation and maintenance. Access points must not be obstructed or blocked. The pump's mains plug is the disconnecting device (for isolating the motor drive from the mains supply in an emergency). Do not position the pump so that it is difficult to disconnect the mains plug. Do not fit any devices to the drive unit other than those tested and approved by KavoshTeb. Doing so could

lead to injury to persons or damage to property for which no liability can be accepted.

If hazardous fluids are to be pumped, safety procedures specific to the particular fluid and application must be put in place to protect against injury to persons.

The exterior surfaces of the pump may get hot during operation. Do not take hold of the pump while it is running. Let it cool after use before handling it.

No attempt should be made to run the drive without a pumphead fitted.

The pump weighs more than 18kg (the exact weight depends on model and pumphead—see 8 Pump specifications). Lifting should be performed according to standard Health and Safety guidelines. Finger recesses are built into the sides of the lower shell for convenience in lifting.

6.Pump specifications

Labels fixed to the rear of the pump contain manufacturer and contact details, serial number and model details.



KAVOSH TEB

Model: **KT-520** S/N: **KT XXXXXX**
Voltage: **220_230V AC 50_60Hz 1.8A**
Tube Size: **T=3.3mm OD=16.2_19.6mm**
Speed: **Max=600rpm**
Net. Weight: **18kg**

tel.: +9821 65536644
www.kavoshteb.com

Made in IRAN

This pump can be controlled from the keypad or remotely. It features:

Manual control

Speed adjustment; run and stop; direction control.

High Speed Mode

Running the pump at maximum speed (600 rpm)

Flow Rate Mode

After the defined volume entered to calibrate the flow of the pump, you can run the pump according to defined flow rate.

Manual Filling Mode (Pulse Mode)

Allows precise repeat dosing. this count is repeated each time START is pressed to provide a single-shot dose.

External Start Mode (Remote control)

The pump can be digitally controlled with a contact closure or logic input signal to operate the pump.

Pump specifications

Control range (turndown ratio)	0.1-225rpm (2650:1)
Supply voltage/frequency Filtered	200-240V 50/60Hz 1ph
Maximum voltage fluctuation	±10% of nominal voltage. A well regulated electrical mains supply is required along with cable connections conforming to the best practice of noise immunity Installation category (overvoltage category) II
Power consumption	750VA Full load current
Full load current	<3.2A at 230V
Operating temperature range	5°C to 40°C
Storage temperature range	-25C to 65C
Maximum altitude	2,000m, 6,560ft
Humidity (non-condensing)	50% at 40°C
Weight	17.5kg KT-620
Noise	<70dB(A) at 1m

6.1 Pressure capability

0-4 bar higher pressure pumping

This pump's default running speed is KT-620: 245rpm. It can be run at any speed up to 225/245rpm. Please note, however:

The KT-620 rotor warranty is limited to 2 bar from 30rpm to 245rpm.

7. Good pump installation practice

7.1 General recommendations

Position

A correctly engineered installation will promote long tube life. Site the pump on a flat, horizontal, rigid surface, free from excessive vibration, to ensure correct lubrication of the gearbox. Allow a flow of air around the pump to ensure that heat can be dissipated. Ensure that the temperature around the pump does not exceed 40°C. Do not stack other pumps on top of this pump. It is, however, acceptable to stack other equipment on the upper surface of the Pump (as long as the ambient temperature does not exceed 40°C).

Emergency disconnection

The pump's mains plug is the disconnecting device (for isolating the motor drive from the mains supply in an emergency). Do not position the pump so that it is difficult to disconnect the mains plug. The STOP key on the keypad will always stop the pump. However, it is recommended that a suitable local emergency stop device is fitted into the mains supply to the pump.

Valves

Peristaltic pumps are self-priming and self-sealing against backflow. No valves are required in inlet or discharge lines. Valves in the process flow must be opened before the pump operates. Users are advised to fit a pressure relief device between the pump and any valve on the discharge side of the pump to protect against damage caused by accidental operation with the discharge valve closed. The pump may be set up so that the direction of rotor rotation is clockwise or counter-clockwise, whichever is convenient

Tubing materials: run-in advice

Sta-Pure, Chem-Sure and Marprene TM tubing are hard to compress when new. When using tubing made of these materials, the first five pumphead revolutions should be at a speed of 10rpm or greater. If the pump is run slower, the safety system built into pump drive's software may cause it to stop and display an over current error message.

Pressure advice

In most circumstances, rotor and tube life are maximized if the pumphead is run slowly, particularly when pumping at high pressure. However, to maintain performance at pressures above 2 bar, avoid running the pumphead below 50rpm. If low-flow, high-pressure operation is necessary, switching to a smaller tube is recommended.

7.2 Do's and do not's

Do not build a pump into a tight location without adequate airflow around the pump.

Do not strap the control and mains power cables together.

Do keep delivery and suction tubes as short and direct as possible - though ideally not shorter than 1 m - and follow the straightest route. Use bends of large radius: at least four times the tubing diameter.

Do use suction and delivery pipes equal to or larger than the bore of the tube in the pumphead. When pumping viscous fluids use pipe runs with a bore several times larger than the pump tube.

Do ensure that on longer tube runs at least 1 m of smooth bore flexible tubing is connected to the inlet and discharge port of the pumphead to help to minimize impulse losses and pulsation in the pipeline. This is especially important with viscous fluids and when connecting to rigid pipework.

Do site the pump at or just below the level of the fluid to be pumped if possible. This will ensure flooded suction and maximum pumping efficiency.

Do keep the pumphead track and all moving parts clean and free from contamination and debris.

Do run at slow speed when pumping viscous fluids. Flooded suction will enhance pumping performance in all cases, particularly for materials of a viscous nature.

Do recalibrate after changing pump tubes, fluid, or any connecting pipework. It is also recommended that the pump is recalibrated periodically to maintain accuracy.

8. Connecting this product to a power supply

A well regulated electrical mains supply is required along with cable connections conforming to the best practice of noise immunity. It is not recommended to site these drives alongside "dirty" electrical mains supply such as 3-phase contactors and inductive heaters without special attention being paid to unacceptable mains-borne noise.

Power cable: The pump is supplied fitted with either of a cable glands and approximately 2.8m of power cable.

Input line fusing: type T5A H 250V 20mm time-delayed cartridge fuse, located in a fuse holder at the rear of the pump.

Stop / start power cycles: Do not power up/power down for more than 100 starts per hour, whether manually or by means of the auto-restart facility. We recommend remote control where a high number of starts is required.

9.Start-up check list

Note: See also 26.6 and 26.7 Tube loading.

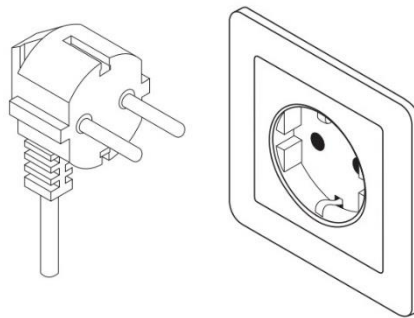
Ensure that proper connections are achieved between the pump tube and suction and discharge piping.
Ensure proper connection has been made to a suitable power supply.

Ensure that the recommendations in section 7. Good pump installation practice is followed.

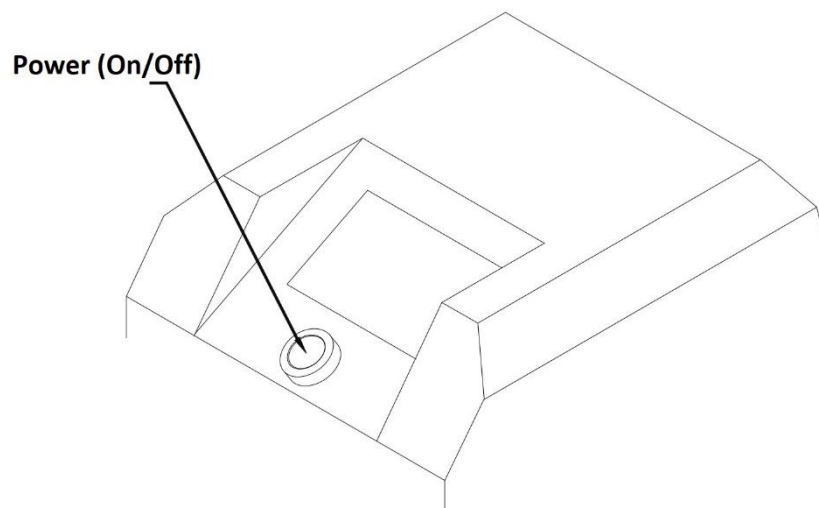
10.Switching the pump on for the first time

10-1. Pump fuse and power cable.

Check the pump fuse and power cable. Connect the plug to the electrical outlet. 220_230V AC 50 Hz type F.



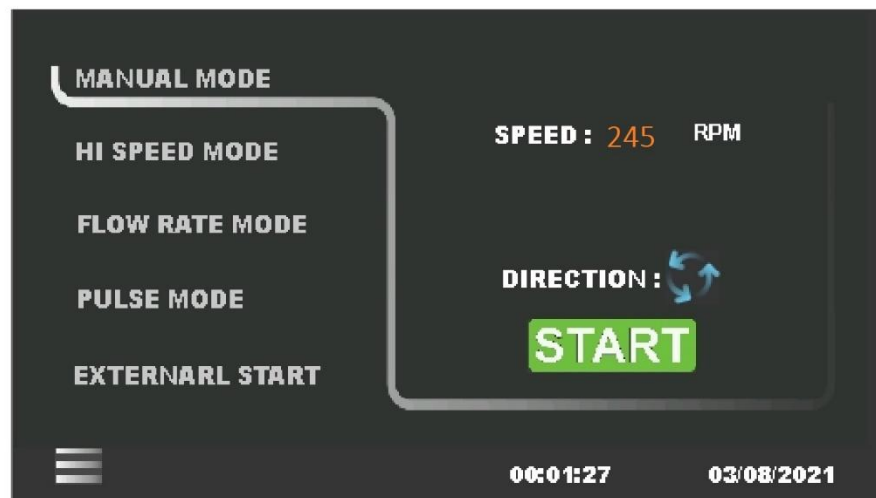
10.2. press the power switch On:



10.3. After a while, the pump displays the KAVOSHTEB start-up screen as below:



10.4. Touch the display and enter to main screen:



10.5. This pump can be operating as:

10.5.1 Manual Mode

- Speed adjustment
- direction control
- run and stop



The rotation symbol on the display indicates counterclockwise rotation. The optimum speed setting is 165rpm, but 225/245rpm is available (you can set maximum allowed speed). than press start.

Note: If the pump is running when DIRECTION is pressed, the change takes effect immediately.

10.5.2 High Speed Mode

MAX operates the pump at the maximum allowed speed (KT-620, 245 rpm) and in the direction shown on the display.



10.5.3 Flow Rate Mode

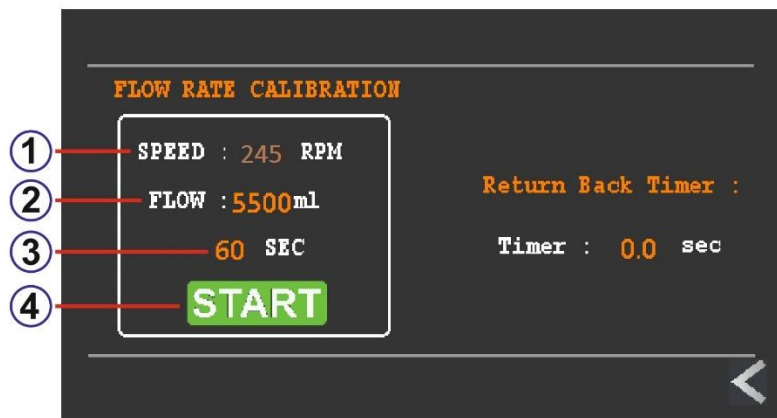
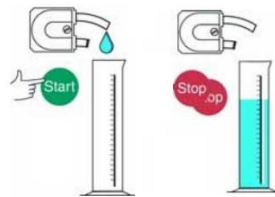
The flow rate mode facility allows the user to repeat-dose a precise volume of fluid. To do so, a quantity of fluid must be dispensed as the master dose which the flow rate mode facility can repeat exactly or proportionately.



10.5.3.1 Calibration

1. Set the Speed for example 165rpm.

2. Each time the pump is started by pressing START, Counter Counts Down from 60 seconds the amounts of fluids which has been dispensed: the dose, until counter reach to STOP gives a "flow rate" per ml.



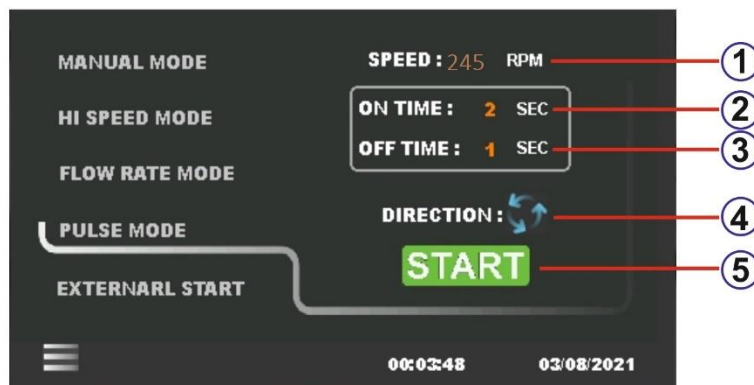
10.5.3.2 Return back time

In the flow rate calibration menu there is an option you can use by giving the appropriate number above zero. In this case, in all modes, before each stop, the direction of rotation will have reversed to avoid dropping drops (Carryover).

10.5.4 Pulse Mode (Manual Filling Mode)

This menu is prepared for manual filling bottles or containers, thus for manual filling precise repeat dosing in a series of containers or bottles:

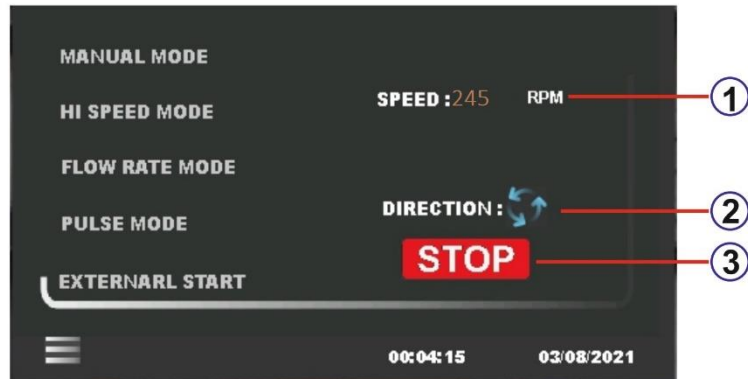
1. Set the RPM
2. Set the filling time per second (On time)
3. Set the off time per second (off time)
4. Select Direction of rotation
5. Press start



Note: If the pump is running, when DIRECTION is pressed, the change takes effect immediately.

10.5.5 External Start Mode (Remote control)

A footswitch can be used to trigger dispensing as a hands-free alternative to pressing START.



To operate external mode, there is a 3.5 mm port at rear of the pump to connect the footswitch or handswitch.



briefly press the footswitch while the flow rate value is entered base on the same rpm (after flow rate Calibration). The remote run/stop input is operational. If a dose is interrupted by a remote stop signal, the dose will continue from display or where it stopped when the state is changed to run.

10.6 Date and Time

The pump's real-time clock can be set with the date and time.

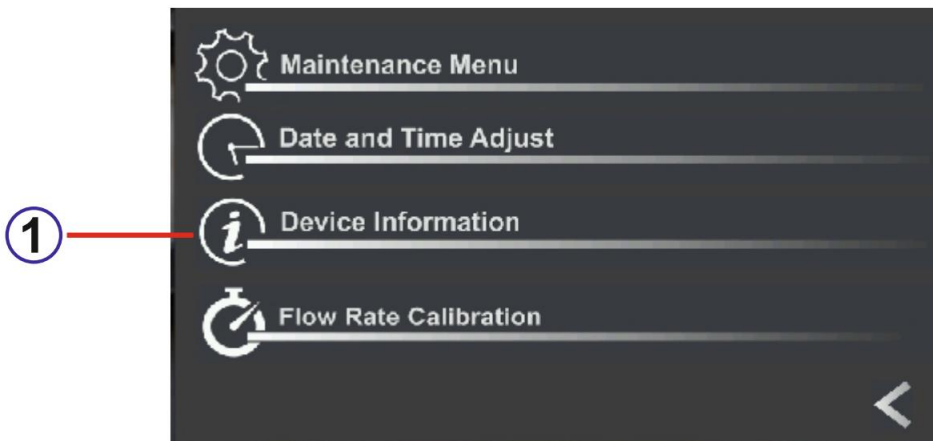
1. Select the Setup menu
2. Select the Date and Time adjust
3. In the third screen of the Setup menu select Date using the UP and DOWN keys or select time
Press ENTER to confirm your choice.



10.7 Device Information

In this menu the pump's information can be see:

- Model
- Serial number
- Date of manufacture
- Guaranty expiration date.



11. Pumping conditions

11.1 Pressure and viscosity

- All pressure values in this operating instruction, from which performance and life figures have been calculated, relate to peak pipeline pressures.
- Although rated to 4 bar peak pressure, this pump will generate in excess of 4 bar peak pressure if pipeline restrictions are in place. In instances where it is critical that a peak pressure of 4 bar is not exceeded, pressure relief valves should be installed in the pipeline.
- For pumping duties of 2-4 bar pressure, fit hard Marprene/Bioprene or standard Sta-Pure or Chem-Sure tube elements. “M” or “P” in the tube element’s product order code denotes suitability for higher pressure use.
- For pumping duties of 0-2 bar pressure, use standard hardness elements or the standard range of continuous peristaltic pump tubing.
- Viscosity handling is maximized by using hard Marprene/Bioprene or Sta-Pure tube elements in the pumphead.
- Ensure that there is always a minimum of one meter of smooth bore flexible tubing connected to the discharge port of the pumphead. This will help minimize any impulse losses and pulsation in the pipeline. This is especially important with viscous fluids and rigid pipework.

11.2 Pump installation

- A correctly engineered installation will promote the best possible tube life, so please ensure that the following guidelines are followed:
- Avoid tight pipeline bends, pipe reducers and excessive lengths of smaller bore tubing than that in the pumphead, particularly in pipelines on the suction side.
- Ensure that connecting pipe work and fittings are suitably rated to handle the predicted pipeline pressure.
- If rigid pipe work comes in close proximity to the pumphead, a drop out section of pipe work will simplify tube replacement.
- Ensure that the controlled waste blanking plug is in position if the controlled waste port is not in use. See below.
- It is advisable to use controlled waste pipe work if pumping hazardous, aggressive or abrasive fluids or products which will harden in contact with air.



- Connect waste pipe work to the waste port using the coupling adaptor supplied.
- Push out the blanking plug. Drop the threaded waste fitting into place. Secure it with the supplied locking nut. Fully tighten by hand. Ensure that there is adequate clearance underneath the pumphead. Waste pipe work should run to a suitable container or drain.
- The leak detector installation procedure is included in the leak detector kit.
- If unsure of an installation, please contact KavoshTeb Technical Support Office.

11.3 General operation

Opening the pumphead guard

- Unlock the guard with the 5mm Allen key provided (or a screwdriver).
- Open the guard to its full extent. This creates the maximum clearance between the tube ports and guard to remove the tubing.

Engaging/disengaging the rollers



- The extent of travel of the roller release levers is clear from pictures 2 and 3 above. Do not try and force the levers beyond their normal extent of travel as this will damage the rotor.
- To engage the rollers, snap the roller release levers counter-clockwise making sure that the rollers lock out against the tubing. To disengage the rollers, snap the release levers clockwise to their disengaged position. For high pressure tubing elements or four roller pumpheads, a 5mm Allen key can be used to aid leverage when engaging/disengaging the rollers with the release levers.



Make sure that fingers are clear of the rollers and the front face of the rotor hub when using the roller release levers.

Pre-load checks

- Before loading tubing, ensure that all rollers rotate freely, that the tube ports and location grooves are clean and that if in use, the controlled waste pipe work is free of any obstructions.

Closing the pumphead guard and start-up

- Ensure that the guard seal is clean, replacing it if necessary.
- Ensure that the rollers are engaged and locked out against the tubing
- Close the guard and push it against the track until the latch engages.
- Connect suitable pipe work to the pumphead using the appropriate connectors for the tube element. See below.

11.4 Tube element loading



Always isolate the pump from the mains power supply before opening the guard or performing any positioning, removal or maintenance.

620RE element pumpheads are factory set to accept LoadSure tube elements. Pumping performance will be adversely affected if LoadSure elements are not used.



- Open the guard using a suitable screwdriver or a 5mm Allen key. Disengage the rollers.
- Locate one of the “D”-shaped flanges into the lower port. (The “D” flange ensures that the element can only be loaded correctly).
- Wrap the tube element around the disengaged rollers of the rotor.
- Locate the second “D”-shaped flange into the upper port.
- Ensure the flat face of each “D” flange sits flush to the flange sealing face of the track.
- Engage the rollers.
- Close the guard and push it against the track until the latch engages.

Connecting LoadSure elements to supply and discharge tubes

LoadSure sanitary elements - which have white connectors - are connected to a tubing system using Tri-clamps and EPDM gaskets



- Hold the connector end of the supply or discharge tube against the element connector, with an EPDM gasket between them.
- Use a Tri-clamp to engage both flanges squarely, close it and tighten.

11.5 Continues tube loading



Always isolate the pump from the mains power supply before opening the guard or performing any positioning, removal or maintenance.



- 620R continuous tubing pumpheads are factory set to accept 3.2mm wall tubing.
- Select the tube clamp set which is correct for the tubing size to be used.
- Locate the two “U”-shaped track clamp halves into the pumphead ports (The “U”-shape ensures correct loading).
- Locate the corresponding guard clamp halves which have raised “T” locating sections, into the slots on the inner guard face above and below the guard hinge. Push and slide into their locked position.
- Closing the guard will align the two halves of the clamp around the tubing.
- Disengage the rollers.
- Locate one end of the tubing into the lower port “U” clamp and hold firmly in position.
- Wrap the tubing tightly around the retracted rollers, making sure that there is no twisting through its length.
- Locate the other end of the tubing into the upper port “U” clamp.
- Hold both ends of the tubing in one hand maintaining tension around the retracted rollers.
- Engage the rollers.
- Close the guard and push it against the track until the latch engages.
- Ensure that continuous tubing is not loosely clamped at the pumphead ports.
- Ensure that when the pump is re-started all of the rollers have re-engaged. A roller which has not re-engaged will “click” continuously. No damage will occur if this happens but the roller should be re-engaged manually using the 5mm Allen key.

Tube element or continuous tube removal



Always isolate the pump from the mains power supply before opening the guard or performing any positioning, removal or maintenance.

- Unlock the guard and disengage the rollers.
- Disconnect the tubing from the external pipeline.
- Remove the tubing from the pumphead.

12.maintenance

Scheduled maintenance

- The stainless steel pumping rollers run on sealed bearings and do not require lubrication.
- Remove the rotor and lubricate the follower rollers and roller engaging mechanisms with a lithium-based grease. This should be carried out every six months for intermittent duties and every three months for 24 hour duties.
- If fluid is spilled inside the pumphead, flush the pumphead out with water and mild detergent as soon as possible. If specific cleaning agents are required to clean the spillage, please consult KavoshTeb Technical Support Office before proceeding, in order to confirm chemical compatibility.
- If the rotor needs to be removed, refer to the guidelines below.

Roller adjustment

620 pumpheads have provision for adjustment to reset the roller/track gap to compensate for wear after extended service in arduous applications.

Roller/track gaps can only be accurately judged without tubing in the pumphead. The gap should be 4.6mm for 3.2mm wall tubing and 5.5mm for LoadSure elements. If the gap is more than 0.2mm greater than these dimensions, the following may be carried out:

- Note the number on the roller arm to which the engraved line on the hexagon
- headed main roller pin corresponds.
- Remove the circlip (snap-ring) and roller pin.
- Relocate the main roller pin, resetting the engraved line to one number lower. For example, if the engraved line was at "-1", reset it to "-2" to reduce the roller track gap.
- Ensure the roller pin is correctly seated into the roller arm thrust washer

Rotor Removal



- Remove the rotor cover by hand and the central locating bolt using a 5mm Allen key. Pull the rotor off the keyed shaft. Do not use tools to lever the rear face of the rotor away from the inner face of the track: it should come off by hand.

Rotor re-location



- Before replacing the rotor, locate the key into the driveshaft keyway and apply a thin layer of grease over the shaft and key. The rotor keyway is the largest of the four slots radiating from the driveshaft socket: the top one in the first picture, above. Align the rotor keyway with the shaft key and slide the rotor into position, ensuring that a positive “stop” is achieved and ensure that the full length of the drive shaft is fitted into the rotor.
- Do not force the rotor into position. The rotor will slide into place easily if correctly aligned.
- Secure the rotor with the hexagonal locating bolt (complete with washer) to a nominal torque of 10Nm using a 5mm Allen key.

- The rotor bolt, which is impregnated with “Loctite 218” thread lock, should be subjected to a maximum of three removals/relocations before renewal. To avoid rotor bolt renewal after three removals, apply “Loctite 222” thread lock to the rotor thread before relocation. This is critical to ensure prolonged, secure location of the rotor hub to the drive shaft. Failure to complete this action will invalidate the terms and conditions of the warranty.
- Replace the rotor cover.

When closing the guard, check it does not make contact with the rotor. If it does, the rotor has been fitted incorrectly. Re-open the guard, remove and refit the rotor, and close the guard.

CIP and SIP

General

- Unlock the guard and disengage the rollers within the tube zone.
- Close the guard and squeeze against the track until the latch clicks.
- Observe a 1m safety area.

CIP

- LoadSure tube elements and continuous tubing can be cleaned using CIP processes.
- Ensure that the tubing material is chemically compatible with the cleaning agent that is to be used.
- If cleaning agents are spilled over the pumphead, wash down immediately.
- Ensure that controlled waste pipework is fitted to allow a safe release of cleaning agent in the event of a tube failure.

SIP

- Only STA-PURE tube elements can be used in a steam in place sterilization processes.
- STA-PURE tubing elements can be sterilized to 3A Class two and FDA minimum recommended standard which is 121C (250F) at 1bar (14.5 psi) saturated steam for 20 minutes.
- Monitor the process continuously.
- If a tube failure occurs, shut down the process. Do not touch the pumphead until a 20-minute cooling period has been observed.
- Ensure a 20-minute acclimatization period is observed before running the pump following SIP.
- Ensure that controlled waste pipework is fitted to allow a safe release of steam in the event of a tube failure.
- Ensure a 1m safety zone is maintained around the pumphead during SIP cycles.



Ensure that the pumphead door is closed and locked before SIP cleaning commences.

13 Decontamination Certificate

In compliance with the Iran Health and Safety at Work Act and the Control of Substances Hazardous to Health Regulations, you are required to declare the substances which have been in contact with product(s) you return to Kavoshteb. Failure to do so will cause delays. Please ensure that you fax us this form and receive an RGA (Returned Goods Authorization) before you dispatch the product(s). A copy of this form must be attached to the outside of the packaging containing the product(s). Please complete a separate decontamination certificate for each product. You are responsible for cleaning and decontaminating the product(s) before return.

Your name	<input type="text"/>	Company	<input type="text"/>
Address	<input type="text"/>		
Postcode/zip	<input type="text"/>	Country	<input type="text"/>
Telephone	<input type="text"/>	Fax	<input type="text"/>
Product type	<input type="text"/>	Serial number	<input type="text"/>
To speed the repair, please describe all known faults	<input type="text"/>		
The product has ...	<input type="checkbox"/> Been used <input type="checkbox"/> Not been used		
	<i>If the product has been used, please complete all the following sections. If the product has not been used, please just sign this form.</i>		
Names of chemicals handled with product(s)	<input type="text"/>		
Precautions to be taken in handling these chemicals	<input type="text"/>		
Action to be taken in the event of human contact	<input type="text"/>		
Signature	<input type="text"/>	RGA number	<input type="text"/>
		Your position	<input type="text"/>
		Date	<input type="text"/>
<i>Please print out, sign and send it to info@kavoshteb.com</i>		<i>service : +989105038832</i>	