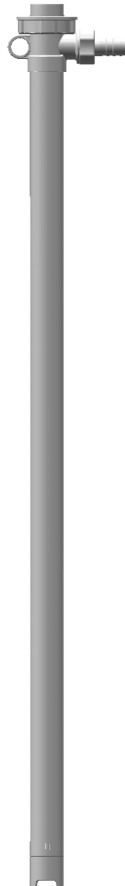


BARREL AND CONTAINER PUMP TUBE USER'S MANUAL



WARNING: Read carefully and understand all INSTRUCTIONS before operating. Failure to follow the safety rules and other basic safety precautions may result in serious personal injury.

MODEL NUMBER: 17441001, 17441201, 17440701

REV 04/23/14

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A. SAFETY

Please read the operating instructions carefully and completely before operating, installation and maintaining.

Before Using

1. There are high-speed rotating parts inside, any abnormal operation may cause unforeseen personal injury, please be sure to operate strictly in accordance with these instructions;
2. Before installing and starting the barrel pump, the corresponding engineer must be familiar with the manuals as well as the considerable qualification;
3. The installation and maintenance required in strict accordance with the existing mechanical and electrical specification or standard operating;
4. The life time of spare parts will be affected by abrasion and corrosion, and some trouble will be caused by different operating environment. The operator has the responsibility to operate and maintain the pump accordingly. Please stop running when the pump working improperly or there is obvious danger occurred.
5. The pump should set up the reliable detection alarm system once it is installed at the possible endanger personal safety points.

Operating

1. Be sure to wear protective clothing, protective eyewear and follow safety procedures when you operating the corrosive and harmful substances;
2. Ensure the pump tube is inserted to the liquids before using and all the connections tight, no leakage and shedding. Make sure using the suitable hose during dispense high temperature liquids.
3. To avoid the liquids temperature, viscosity and density do not exceed the upper limit.
4. Please install the filter in the tube bottom when deliver the liquids with impurity or solid. In the meantime, please have the regular check and clean to avoid blocking.
5. Ensure the motor under closed status before connecting to the power. The pump must only be used under the surveillance of the operator. Close the motor immediately after dispensing. Run dry is not allowed for the pump.
6. Do not touch the tube bottom when the pump connected the power. The high speed rotating impellers may cause the damage or injury of the equipment and personal.
7. Make sure the pump tube working and unworking under vertical position. Upend or lay flat are prohibited. It is suggested to be put on the special holder. Meanwhile, please pay attention the damage or injure to environment and personal from the residual liquids.

B. MACHINE DESCRIPTION

The drum and container pump tube is suitable for universal use, which able to meet 80% applications. The pump material include polypropylene, PVDF, stainless steel, aluminum alloy etc. Also apply to the transfer of low to middle viscosity liquid. The diversion hole designing could avoid the liquid leakage while the sealless structure could avoid any leakage caused by the damage of the mechanical seals. The outlet is G1-1/4 male thread which could connect different kinds of connector conveniently.

There are two Motor drive modes for this pump tube: Electric and Air-operated. The pump tube and motor are connected by quick coupling, which can be assembled and disassembled within several seconds.

The modular designing integrate the least parts of tube and motor in order to convenient cleaning and maintenance without any special tools.



ATTENTION!

- Never operate the motors without pump.
- Never leave the pump unattended.
- Never run dry of the pump.
- The pump should not be immersed deeper into the liquid than the outlet connection.

C. TECHNICAL DATA

C1. Structure Configuration

The pump tube consists of outer tube, drive shaft, impeller, suction inlet and bearing etc. Different liquids require different material pump tube like metal and non-metal. Furthermore, choose the tube length as per the liquids required height.

Attention: As the drive part, the motor include electrical and air-operated types. Please choose the suitable power and anti-explosion grade according to the liquids application.

Pump tube material:

Model#	Pump tube	Shaft	O Ring	Sliding bearing	Lenght
17441001	PP	304SS	FKM	PTFE	1000mm
17441201	PP	304SS	FKM	PTFE	1200mm
17440701	PP	304SS	FKM	PTFE	700mm

P.S.: Some special liquids will require particular O-Ring.

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D. OPERATING CONDITIONS

D1. Environmental Conditions

Temperature

The pump operation temperature is affected by material. See below highest temperature: -PP: 50°C

D2 Viscosity:

The pump enable to transfer the liquids under max.200cps by the adjustable-speed motor. The common motor may cause overload during dispensing high viscosity liquids. The max. allowed viscosity is 200cps.

Attention: The flow rate and head lift of the pump will decrease when dispensing the varying degrees of viscosity liquids. Over the rated viscosity, the motor will be overloaded which may damage the motor.

D3 Proportion: Max.1.80.

Attention: The flow rate and head will decrease when deliver the high viscosity liquids.

D4 Liquid: Only apply to the liquids for cleaning. The filter will be necessary if the liquids include any solid so to avoid damage the motor shaft and bearing.

D5 RPM of the barrel pump motor: No-load speed 20000~22000rpm; Load speed around of 11000rpm.

E. INSTALLATION

Check if there has any damage or missed parts before opening the packing.

Safety Check

- Electric source: The supply voltage must comply with the voltage specified on the nameplate.
- Temperature: The medium temperature has to accord with requirement.
- Viscosity and proportion: The medium viscosity and proportion must comply with the pump tube requirement.
- Corrosion resistance: Check if the pump material has the Chemical resistance with the medium.

F1 Pump tube Installation

1. Put the pump tube into the transportation barrel or container. For ensuring the suitable position of the pump tube in the barrel, please fix it by the fixator.
2. Install outlet pipe: The outlet pipeline require to install plastic hose or metal tube per the actual demand. The required screw is G1-1/4 with the 1" hose connector.



ATTENTION!

The non-metal screw is not allowed to connect the metal screw tube so to avoid damaging the outlet.

3. The outlet must be supported when the tube is longer. The weight should not be undertook by the pump in case out of shaping or tipping.

F2 Motor Installation

1. Check the pump tube: If any loose among each connection. The coupler and pump shaft could be rotated flexibly.
2. Check the Motor: Open the motor and run-in testing for short time to check if the power wire and switch complete and well. Prohibit to put the hands to the motor output shaft.
3. Check the air motor: Check the air source if install the filtration and lubrication elements, if the pressure regulating valve and silencer works very well in the air source inlet.
4. Put the motor coupler point to the pump tube and assemble it. Be sure the tube head insert to the motor head completely.
5. The location of motor and tube could be rotated by 360°, put the tube outlet adjusted to suitable position and lock the screw during installation. Please keep the pump outlet away from motor power wire!

F3 Start

Check all the connections without leakage. The tube liquid outlet should be fixed well in case throwing off the tube by pressure. Support the motor or tube with hands when start the power or air source until running stable.

F4 Running

Normally, the pump need 3mins to pump out one 200L standard barrel. Staff supervision needed during transporting. Close the motor once the liquid was pumped out, and the pump dry running is prohibited.

The pump can not pump out the liquids completely. There will be around 2cm residual liquid in the barrel bottom. Tilt the barrel and pump again could reduce the residual liquid maximum.

Do not take out the running pump from liquid to other barrel.

F5 Stop.

Poweroff the electronic or air source and stop the pump once the barrel liquid was pumped out.

If the pump need to be used in other barrels, please take out it until the liquid backflow but avoid the liquid pollute the environment.

F6 Storage

Please take out the pump if it isn't used by some time. Clean it timely under corrosive or harmful liquids.

Keep putting the pump tube motor upwards. Backwards is prohibited in case the tube inside liquid backflow to the motor and corrosive the bearing or pump. Please place it on the specified holder so to avoid unexpected falling.

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F. MOVING AND TRANSPORT

The barrel pump and motor with the enough protective packing material included in the carton box. It is unable to bear the improper external force, heavy load and so on. Please transport, stack and store the pump according to the instruction. Please keep the warehouse drying so to avoid damaging the pump tube and motor parts.

G. TUBE MAINTENANCE

Clean the tube before maintaining!

Please inspect the sliding bearing wearing after using some time. Replace the shaft and bearing could be extended the lifetime very well.



ATTENTION!

Please replace the sliding bearing and seal ring every 100~150 hours.

H. PROBLEMS AND SOLUTIONS

PROBLEM	POSSIBLE CAUSE	CORRECTIVE ACTION
No flow rate OR Small flow rate	Electric OR air source close.	Open the power
	Motor failure, unable turning	Check Motor
	Outlet close	Open outlet valve
	Too big head lift	Shorten delivery distance and height
	Heavy liquid viscosity	Check the model with supplier
	Without liquids	Stop the pump
Big Noise and Vibration	Inlet blocking	Clean the inlet
	Liquids drain out	Stop the pump
	Motor overload	Check the liquid viscosity and head lift
		Replace the sliding bearing and seal ring
Pump tube leaking	Unworkable seal ring	Replace the coupler
		Replace the seal ring

J. NOISE LEVEL

Under normal working conditions the noise emission from all models does not exceed the valve of **80 db at a distance of 1 meter** from the electric pump.

K. DISPOSING OF CONTAMINATED MATERIALS

In the event of maintenance or demolition of the machine, do not disperse contaminated parts into the environment.

Refer to local regulations for their proper disposal.

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L: DIAGRAM & PARTS LIST

No.	Description	Qty.
1	Coupler bearer	1
2	Coupler down	1
3	Deep groove ball bearing	1
4	Deep groove ball bearing	1
5	Framework oil seal	1
6	Pump head	1
7	O-Ring	1
8	Check ring	1
9	Motor Connector	1
10	Pump head chamber	1
11	O-Ring	1
12	Pump tube	1
13	O-Ring	4
14	Inside tube	2
15	O-Ring	4
16	Centre Bearing	1
17	Axial	1
18	Principal axis	1
19	Upper pump chamber	1
20	Bottom bearing	1
21	Impeller	1
22	Under pump chamber	1
23	Outlet nut	1
24	O-Ring	1
25	Outlet	1

