

# ***Operating Instructions***

***Barrel Pump Type F 427 S3A -, S3 -, S4 - 43/38***  
***for use in***  
***pharmaceutical, cosmetics and food industries***

- sealless version
- insensitive to dry operation
- no contamination of the liquid by lubricants
- 100% cleaning or sterilization
- sterilization of the pump in autoclaves by  
radiation  
dry heating  
gas treatment  
chemical treatment
- max. operating temperature 120°C (248°F)
- max. temperature for cleaning 130°C (266°F)
- easy dismantling and re-assembly of the pump,  
providing an utmost ease of handling and maintenance



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## Possible Motor - Pump Combinations



- Use motors and pump only in the following combinations.

1

Do not use the motor in hazardous locations.  
Do not use the pump for flammable liquids.

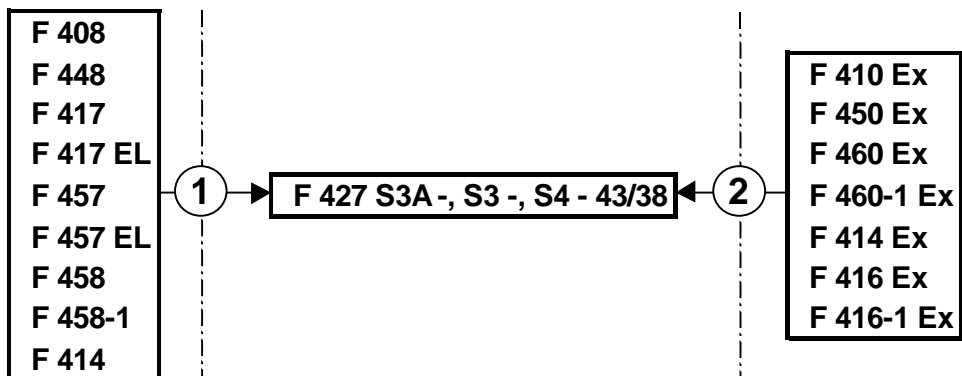
2

When using the pump in hazardous locations,  
only use explosion-proof motors approved for ZONE 1.  
Do not use the pump for flammable liquids.

Motors  
not explosion-proof

Barrel Pumps

Motors  
explosion-proof



## Safety Instructions

- Only use the pump for its intended purpose.
- Never leave the pump unattended.
- The pump must be used in vertical position only.
- Install the pump in a way which ensures that it cannot fall into the container
- Only use the pump with a suitable hose.
- Ensure that the hose is securely fixed to the hosetail.
- Regularly check the hose and connections to ensure safe operation.
- The pump should not be immersed deeper into the liquid than the outlet connection.

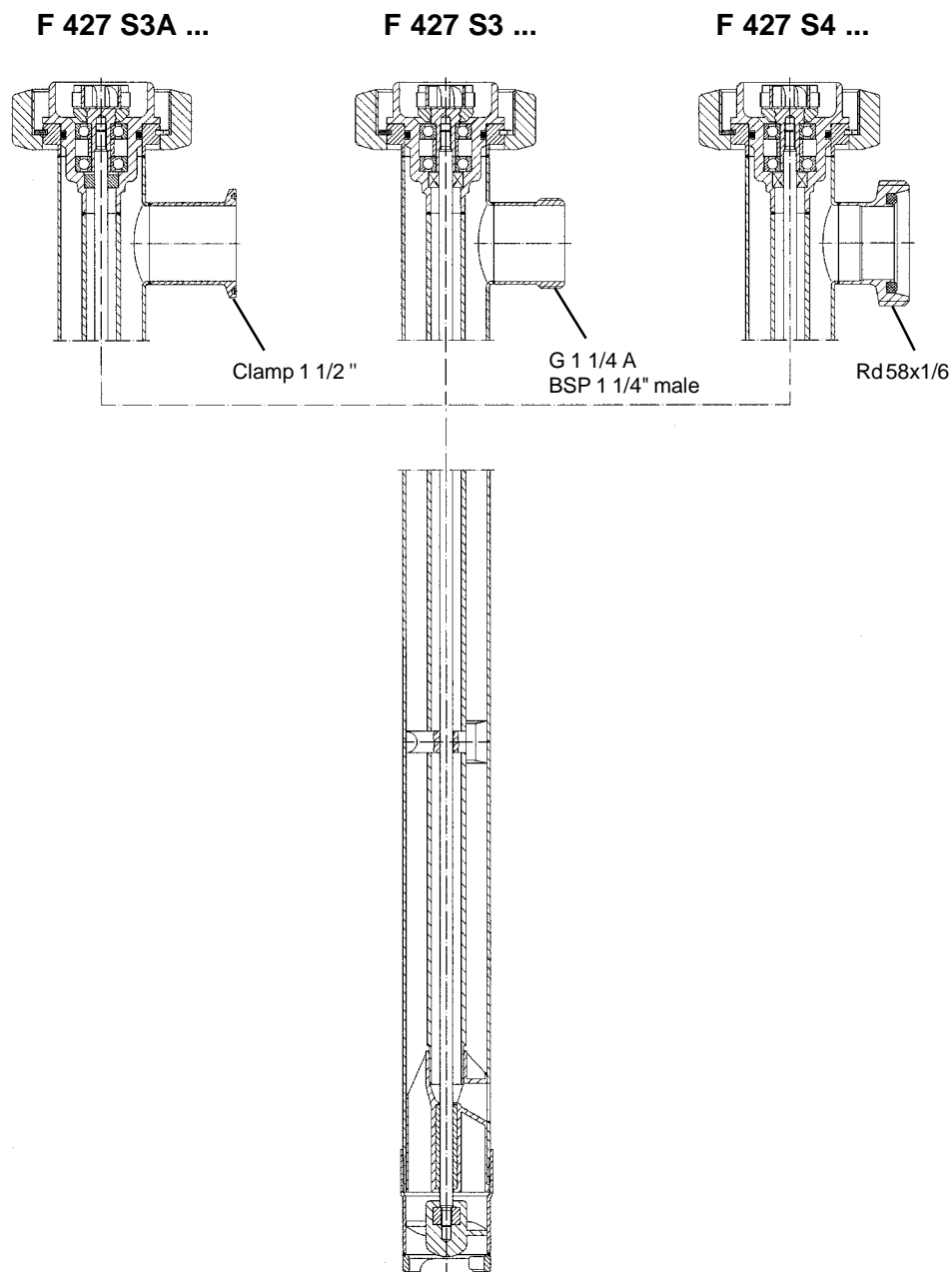


- Comply with all relevant safety instructions.  
Wear appropriate protective clothing.  
(Face shield, protective gloves, etc. ).



- Comply with the operating instructions of the motor.
- The pump should not be exposed to the weather.
- Clean after each operation.
- Never store the motor in areas in which corrosive vapours exist.
- Before inserting the electrical plug into the socket or before connecting the air supply hose to the motor, set the Start/Stop switch to "0" ( Stop ).

## General View on different Pump Models



## Operation of Barrel Pump

- Put the motor onto the pump.
- Firmly tighten union nut by hand.  
Immerse the pump into the liquid and secure it in a vertical position by the use of a compression gland or a container clip.

## Cleaning after each operation

Clean the pump by flushing an appropriate cleaning agent.

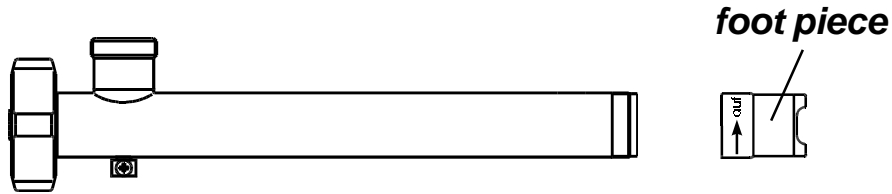
- Do not use flammable liquids for cleaning.
- Do not separate the motor from the pump as long as there is still any back pressure within the system.
- The pump and hose must be compatible with the cleaning agent.
- The pump should not be immersed deeper into the cleaning agent than the outlet connection.

## Dismantling of Pump for Cleaning

- Unplug the pump or disconnect the air supply hose.
- Unscrew union nut between pump and motor.
- Remove motor from the pump.

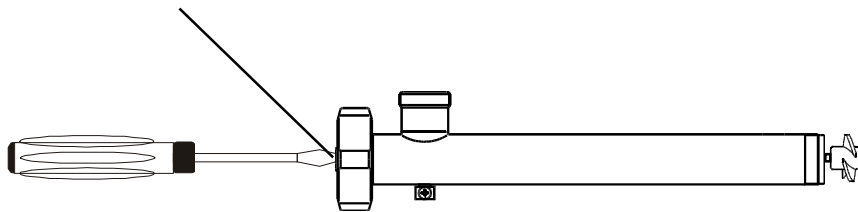
## Dismantling

- 1 Unscrew foot piece ( ! left-hand thread ! )



- 2 Unscrew impellor, then press out shaft together with coupling cage and ball bearings to the top (motor) side.

Hold shaft *by a suitable screwdriver*.



coupling cage with ball bearings

shaft

impellor



If coupling cage and ball bearings come loose first, screw impellor again onto the shaft and screw shaft back into the ball bearings for a few courses.

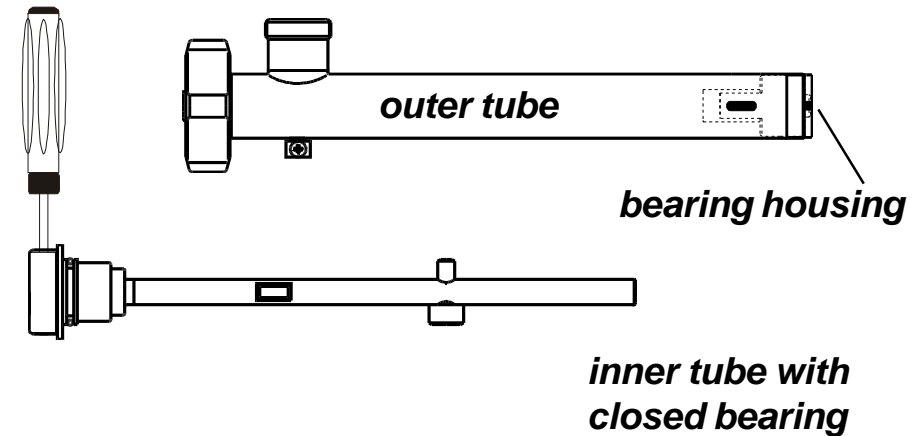
Push out the coupling cage and ball bearings to the top (motor) side by a slight tap onto the impellor. Then unscrew coupling cage and ball bearings and remove them from the inner tube.

Remove shaft from the inner tube together with the impellor.

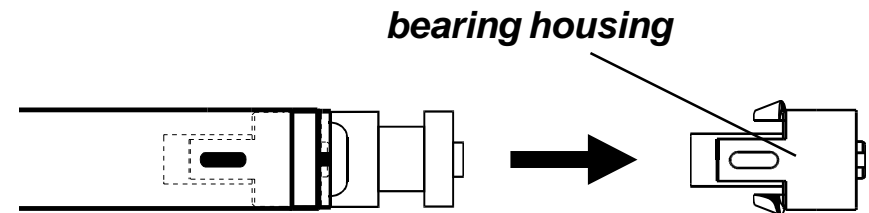
- 6 Unscrew the impellor.

## Dismantling

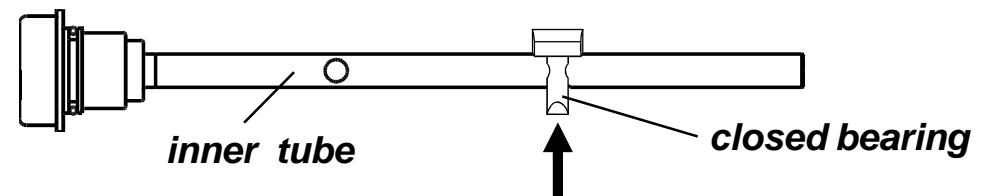
- 3 Use a suitable screwdriver to remove the inner tube from the outer tube by slightly rotating the inner tube to the right.



- 4 Remove bearing housing from the outer tube by using an appropriate tool.



- 5 Push out closed bearings from the inner tube and totally remove them by slight rotations.



## Dismantling

⑥

**On pump model F 427 S3A -43/38:**

Remove PTFE seal

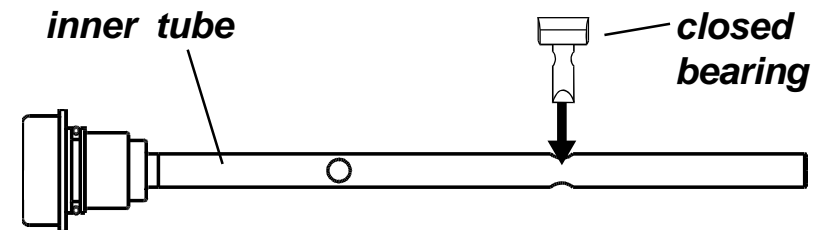
**On pump models F 427 S3 -43/38  
and F 427 S4 -43/38:**

Do NOT remove shaft seal.

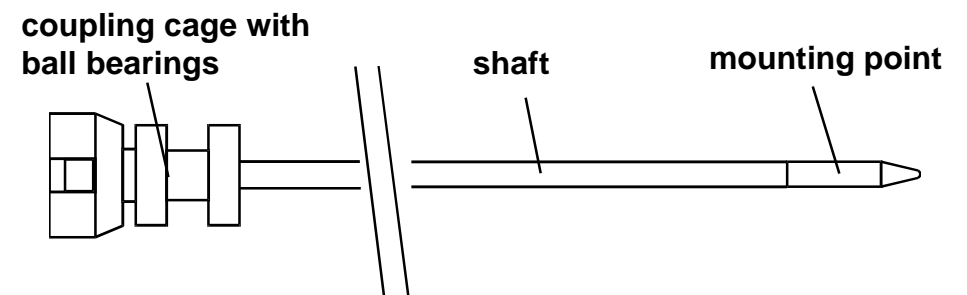
## Assembly

① On pump model F 427 S3A -43/38 insert PTFE seal.

② Press the closed bearings into the inner tube and provide tight fit by slightly rotating them.



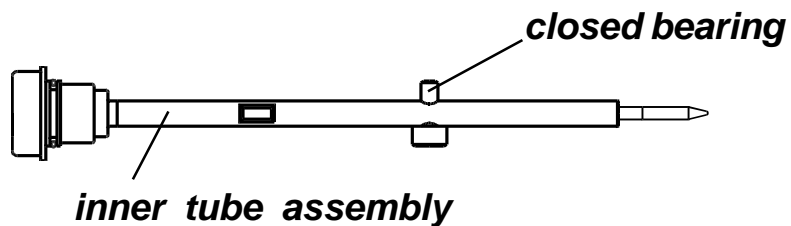
③ Screw ball bearings and coupling cage onto the shaft and slightly tighten them. Screw mounting point onto the opposite shaft end.



## Assembly

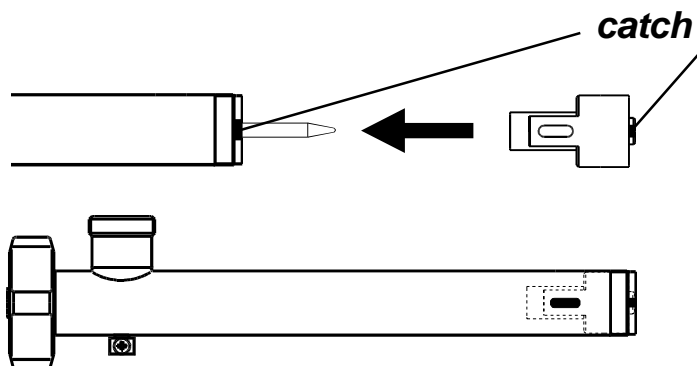
- 4 Push shaft into the inner tube and firmly press it into the "seat".

Check the easy motion of the shaft by slightly twisting the closed bearings.



- 5 Push the inner tube assembly into the outer tube.

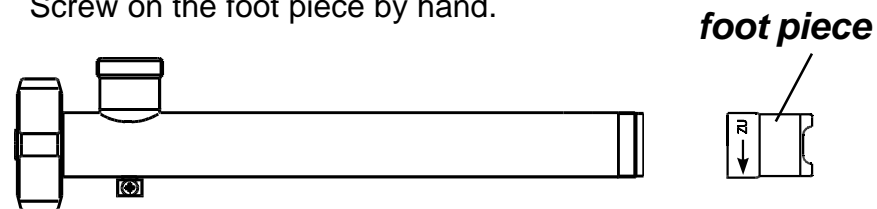
- 6 Press the lower bearing housing into the outer tube by sliding it over the mounting point ( by hand ) until it engages into the catches.



## Assembly

- 7 Use a *suitable screwdriver* to hold the shaft at the top (motor) side. Unscrew mounting tap. Screw on impellor.

- 8 Screw on the foot piece by hand.



- 9 The pump is ready for use.