

Syringe Pump Cleaning and Maintenance

Background

A syringe pump is an instrument that requires regular cleaning and maintenance to ensure its reliability and accuracy. A few simple steps can improve its condition and greatly extend its service life.

Cleaning Plan

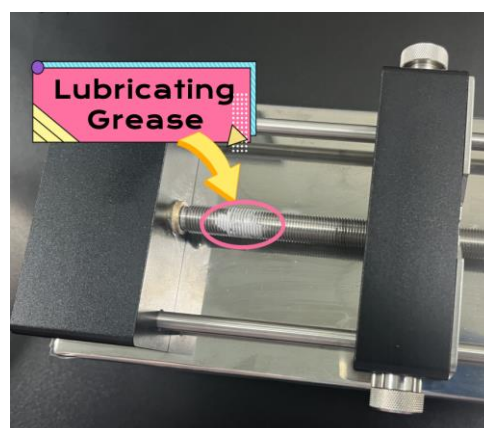
- In general laboratory environment:
It is recommended to clean and maintain the instrument twice a year.
A normal environment refers to an office or similar area where there are no chemicals or biological compounds existed.
- In fume hood environment with corrosive smoke:
It should be cleaned once a month. This can effectively prevent damage to the screw and guide rod, as well as the accumulation of residues on the screen.
- In GMP environment:
Clean and disinfect according to specific GMP environmental standards to reduce dust and microbial contamination.

Pump Lubrication

Proper lubrication of the pump can ensure a long service life and smooth flow performance, while also preventing corrosive laboratory smoke and rust.

Notice: When the new pump being received, there will be white MOLYKOTE grease on the lead screw, and other grease can also be used for the future maintenance (Please refer to the content in Recommended Lubricants).

If you are using a pump in high-pressure applications, it is recommended to do the lubrication every day.





Cleaning/Lubrication Steps

1. Clean the pump housing with a clean cloth. Clean all scraps on the screw and guide rod.
2. Apply lubricant along the screw and guide rod.
3. Run the syringe pump to move the sliding block along the entire length of the screw. This should allow the lubricant to enter the groove/component.


Lubrication Notes

Please clean and lubricate the screw and guide rod according to your usage. If the following situations occur, your pump may not have received sufficient lubrication:

1. There is grinding sound at the lead screw when the pump is working.
2. The block release button decouples under the load before the pump stalls.
3. The stalling frequency of the pump increases.

Recommended Lubricants (Varies depending on environment)

- ◆ General laboratory: Any lubricant from the following recommended list can be used
 - ◇ Engine/Motor/Machine oil
 - ◇ Silicone oil
 - ◇ Lithium-based grease
 - ◇ Carbon graphite

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- ◆ Chemical laboratory: Due to fume environments, it is recommended to use lithium-based grease or engine oil to prevent corrosive fumes from reactors or distillation equipment
 - ✧ Engine/motor oil
 - ✧ Lithium-based grease
 - ◆ GMP/Biological Laboratory: A clean environment is required. Carbon graphite is a solid, mineral oil/silicone oil have low viscosity, allowing for the lowest level of dust accumulation, but may bring pollutants
 - ✧ Carbon graphite
 - ✧ Silicone oil
 - ✧ Oil

The Use and Storage of Pump

Due to the presence of several stainless steel components in the INFUSETEK pumps, please avoid using ordinary plastic syringes to transfer volatile liquids such as concentrated hydrochloric acid. Otherwise, it may cause serious corrosion and rusting of the syringe clamping components and lead screw on the pump. If transferring of volatile strong acid is required, please use airtight glass syringes.

It can be stored in general conditions when not in use. The optimal storage temperature range is 0-40 °C. Do not store together with chemical reagents.

Maintenance Knowledge



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