



MAINTENANCE INSTRUCTIONS

ACS 25S/60S/100S

DRY SCREW VACUUM PUMPS

1.1 Introduction

- 1.1.1 These instructions offer tips about the proper care and maintenance to ensure the best performance and longest life for your ACS dry screw pump.
- 1.1.2 Please refer to the full Installation and Operation manual included with your pump for more information.

1.2 Oil

- 1.2.1 Oil Level should be between 50-75% on the sight glass when the pump is stopped.
- 1.2.2 Oil should be mostly clear and transparent. The oil will appear foamy while the pump is in operation. Oil that looks dark or dirty should be changed.
- 1.2.3 Change the oil regularly, at least monthly. Severe-duty (high-gas loads, high temperature operation, volatile or condensable process liquids/vapors) use requires more frequent oil changes.
- 1.2.4 Do not run the pump with low oil levels. Do not overfill the oil reservoirs.

1.3 Inlet Screen

- 1.3.1 Check the condition of the inlet screen at each oil change.
- 1.3.2 Clean the inlet screen as needed. Replace if it can't be cleaned.
- 1.3.3 A clogged inlet screen will reduce the performance of the pump and may shorten the pump life.

1.4 Solvent Flushing

- 1.4.1 The pump should be flushed regularly with a solvent/solution that is appropriate for the pumped process. Severe-duty applications could require daily flushing. Consult with Highvac for recommendations about flushing frequency.
- 1.4.2 The pump speed should be reduced using the VFD controller to increase the flushing efficiency.
- 1.4.3 The flushing process should be repeated until the solvent coming out of the pump is almost as clean as when it was put in. Please see the Installation and Operation manual for the full flushing procedure.
- 1.4.4 Consistent flushing cycles of the pump will help to ensure long life.
- 1.4.5 Note: It is imperative that the expelled solvent be collected, and that the collection container be below the level of the pump to prevent the solvent from pooling inside. The collection container should be sealed to the exhaust port of the pump to prevent hazardous vapors from filling the pump room. The used solvent must be properly disposed of, per local regulations.
- 1.4.6 It is **HIGHLY** recommended to flush the pump before shutting down for long periods (i.e., more than 1 hour) to prevent a potentially difficult and time-consuming restart.

- 1.4.7 If the pump is stuck and will not turn, **DO NOT** try to force it or the pump may sustain internal damage. The pump can be filled with solvent through the inlet and allowed to soak. This will usually allow the pump to be freed up. Please see the manual for the full procedure.

1.5 Exterior Cleaning

- 1.5.1 The vent slots in the pump shrouds should be kept clean and free of obstructions to prevent overheating of the pump.
- 1.5.2 The motor fan cover and fins (if applicable) should be kept clean to prevent overheating of the motor.

1.6 Cleaning and Unsticking Videos

1.6.1 Cleaning

- 1.6.1.1 <https://www.youtube.com/watch?v=0HMxFdCuo24>

1.6.2 Unsticking

- 1.6.2.1 <https://www.youtube.com/watch?v=8fnMIUe3dQ4>

1.7 Troubleshooting

1.7.1 Pump will not start or motor is overramping

- A. *Does the motor click or hum when power is turned on?*
- i. *Pump is seized (See 1.7.3)*
- B. *Motor makes no noise when turned on*
- i. *Verify input power/breaker is turned on*
- C. *Pump turns on but operates poorly (low RPM, struggling)*
- i. *Check exhaust for blockage*
 - ii. *Verify supply voltage (use multimeter to check line to line voltage)*

1.7.2 Pump will not achieve base pressure

- A. *Isolate pump with vacuum gauge on inlet*
- i. *If base pressure is reached leak check fore line/chamber*
 - ii. *If base pressure is not reached clean pump, check inlet O-Rings, verify vacuum gauge connections and repeat test.*

1.7.3 Pump is seized

- A. *Try to unstick the pump.*
- i. *See "How to properly unstick an ACS pump video"*
 - ii. *Contact Highvac if all above fails.*