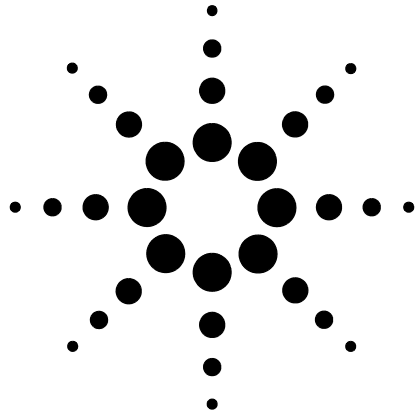




Agilent G6012A Quiet Cover DS

User Information



Agilent Technologies

Notices

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Safety Notices

CAUTION

A **CAUTION** notice denotes a hazard. It calls attention to an operating procedure, practice, or the like that, if not correctly performed or adhered to, could result in damage to the product or loss of important data. Do not proceed beyond a **CAUTION** notice until the indicated conditions are fully understood and met.

WARNING

A **WARNING** notice denotes a hazard. It calls attention to an operating procedure, practice, or the like that, if not correctly performed or adhered to, could result in personal injury or death. Do not proceed beyond a **WARNING** notice until the indicated conditions are fully understood and met.

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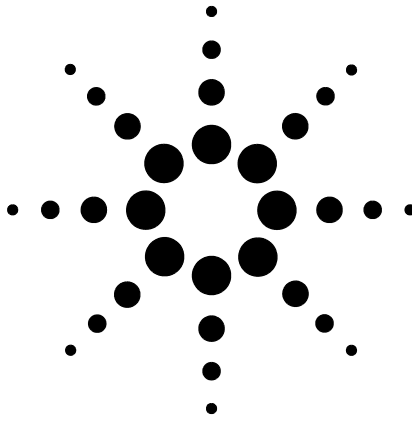
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This manual describes how to install, operate, and troubleshoot the G6012A Quiet Cover DS for GC/MS, LC/MS and ICP/MS rough pumps.

The Quiet Cover DS encloses your rough pump to significantly reduce noise, while two internal fans ensure your pump will not overheat. There is an easy-to-use kickstand and a full-size oil tray to facilitate changing the oil. There are also multiple access panels to easily access the pump for routine maintenance.

The Quiet Cover DS is compatible with Agilent DS 202, DS 302, DS 402, and DS 602 pumps.



General Information

The Quiet Cover DS conforms to the International Electrotechnical Commission (IEC) 61010–1 safety standard.

It also conforms to the following regulations on Electromagnetic Compatibility (EMC) and Radio Frequency Interference (RFI):

- CISPR 11/EN 55011: Group 1, Class A
- IEC/EN 61326
- AUS/NZ 

This ISM device complies with Canadian ICES-001. Cet appareil ISM est conforme à la norme NMB–001 du Canada.



The Quiet Cover DS is designed and manufactured under a quality system registered to ISO 9001.

Information

The Agilent Technologies Quiet Cover DS meets the following IEC classifications: Category II, Pollution Degree 2, Class III.

Quiet Cover DS has been designed and tested in accordance with recognized safety standards and is designed for use indoors. If it is used in a manner not specified by the manufacturer, the protection provided by the instrument may be impaired. Whenever the safety protection of the Quiet Cover DS has been compromised, disconnect it from all power sources and secure it against unintended operation.

Refer servicing to qualified service personnel. Substituting parts or performing any unauthorized modification to the instrument may result in a safety hazard.

Symbols

Warnings in the manual or on the instrument must be observed during all phases of operation, service, and repair of this instrument. Failure to comply with these precautions violates safety standards of design and the intended use of the instrument. Agilent Technologies assumes no liability for the customer's failure to comply with these requirements. Table 1 lists the safety symbols that may appear on Quiet Cover DS.

Table 1 Safety symbols

Description	Symbol
See accompanying instructions for more information.	
Indicates a hot surface.	
Pinch hazard.	
Indicates earth (ground) terminal.	
Indicates that you must not discard this electrical/electronic product in domestic household waste.	

Important Safety Warnings

Safety cautions and warnings must be observed during all phases of operation, service, and repair of Quiet Cover DS. Failure to comply with these precautions violates safety standards of design and Quiet Cover DS's intended use. Agilent Technologies assumes no liability for the customer's failure to comply with these requirements.

WARNING

Never run the pump without also running Quiet Cover DS.

CAUTION

While running Quiet Cover DS:

- Do not block air flow to the fans.
- Do not set items on top of Quiet Cover DS.
- It is important that the Quiet Cover DS not recirculate hot air. Always position the back end of the Quiet Cover DS where it can draw cool air.

CAUTION

Be sure to position Quiet Cover DS so that there is plenty of room to allow access to panels and controls. See Table 3 on page 13 for more information.

WARNING

In the event of a temperature alarm malfunction or if the alarm has been on for an extended period of time, Quiet Cover DS and the pump may be dangerously hot. Check that the Quiet Cover DS and pump are cool before you touch them.

Electromagnetic compatibility

This device complies with the requirements of CISPR 11. Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try one or more of the following measures:

- Relocate the radio or antenna.
- Move the device away from the radio or television.
- Plug the device into a different electrical outlet, so that the device and the radio or television are on separate electrical circuits.
- Make sure that all peripheral devices are also certified.
- Make sure that appropriate cables are used to connect the device to peripheral equipment.
- Consult your equipment dealer, Agilent Technologies, or an experienced technician for assistance.
- Changes or modifications not expressly approved by Agilent Technologies could void the user's authority to operate the equipment.

Sound emission certification for Federal Republic of Germany

- Sound pressure – $L_p < 70$ dB according to EN 27779:1991.
- Schalldruckpegel – $LP < 70$ dB am nach EN 27779:1991.

Cleaning

To clean the oil tray:

- 1** Reach under the front of Quiet Cover DS and pull out the tray.
- 2** Wipe out excess oil with a clean, lint-free cloth.
- 3** Wash the tray with a mild soap solution.

Recycling the Product

For recycling, contact your local Agilent sales office.

Parts Identification

Table 2 lists the major parts of the Quiet Cover DS kit. Figure 1 and Figure 2 depict the parts of the Quiet Cover DS.

Table 2 Quiet Cover DS parts

Part	Quantity	Part number
Quiet Cover DS	1	G6012-64000
• Oil tray	1	5188-1184
• Mist filter extension	1	5188-1181
• Clamp for mist filter extension	1	0100-0549
• Seal for mist filter extension	1	0100-1597
Power supply	1	5188-1164

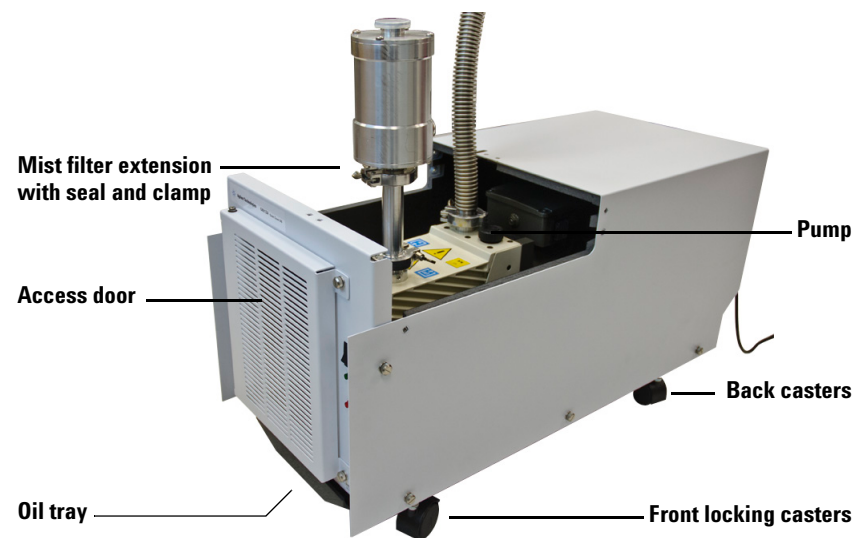


Figure 1 Quiet Cover DS (front view)

NOTE

See Figure 13 on page 28 for a view of the front panel controls.

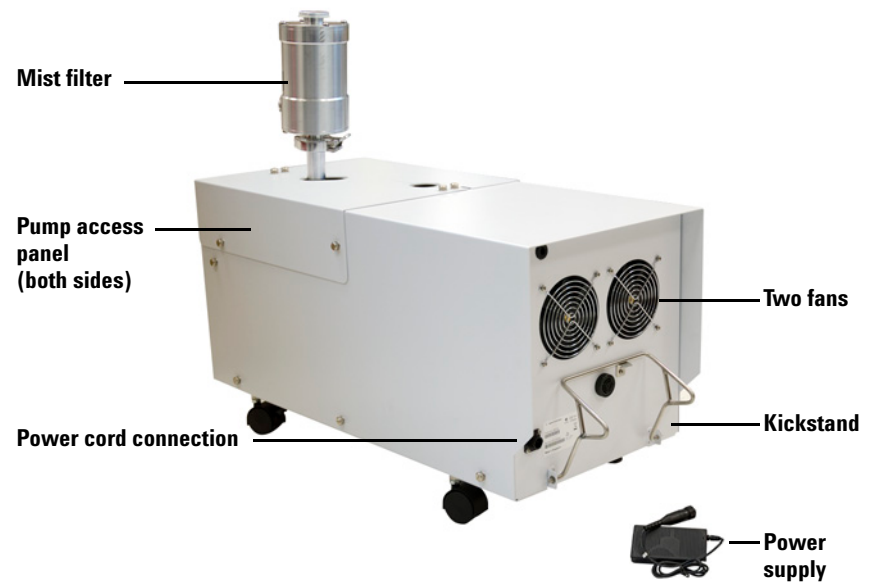


Figure 2 Quiet Cover DS (back view)

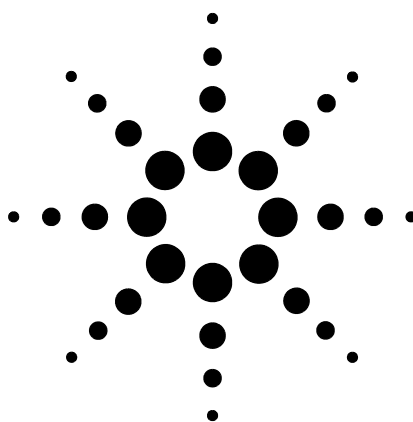
Site Preparation

Prepare the installation site to meet the criteria in Table 3.

Table 3 Site prep information

Criteria	Description
Physical dimensions	
Weight	24.5 kg (54 lbs)
Dimensions	Kickstand up: 89 × 39 × 44 cm (35 × 15.4 × 17.3 in) (L × W × H)
Power supply	
AC input voltage	100 to 240 VAC ±10%
DC output voltage	+24 V
Output load (max.)	1.25 A
Input frequency	47 to 63 Hz
Power consumption	11 W
Rated current	450 mA
Temperature and humidity ranges	
Ambient temperature	5 to 35 °C (41 to 95 °F)
Humidity	15 to 95%
Altitude	≤ 4600 m (14950 ft)

1 Introduction



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Installation

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This chapter describes how to assemble the Quiet Cover DS and install the rough pump.



Installing the Oil Tray

Your Quiet Cover DS is shipped to you with the oil tray packaged separately. You need to install it prior to using Quiet Cover DS.

To install it, slide it into the bottom of Quiet Cover DS, with the deep part of the tray forward. There are a set of rails along the bottom edges of the frame that guide the tray into place (Figure 3).



Figure 3 Installing the oil tray

Installing the Rough Pump Inside Quiet Cover DS

To install the rough pump inside Quiet Cover DS:

- 1 Remove the two pump access panels by loosening the thumbscrews on the top and sides.
- 2 Remove the lid by loosening the thumbscrews on each side.

WARNING**The pump:**

- May be hot. Use gloves when moving it or wait until it is cool.
 - Is heavy. For your safety, two people should move it together.
-

2 Installation

- 3 For Agilent DS 202 and DS 302 pumps, align the back edge of the vibration foam with the back end of the pump base (Figure 4). Center the pump on the vibration foam.

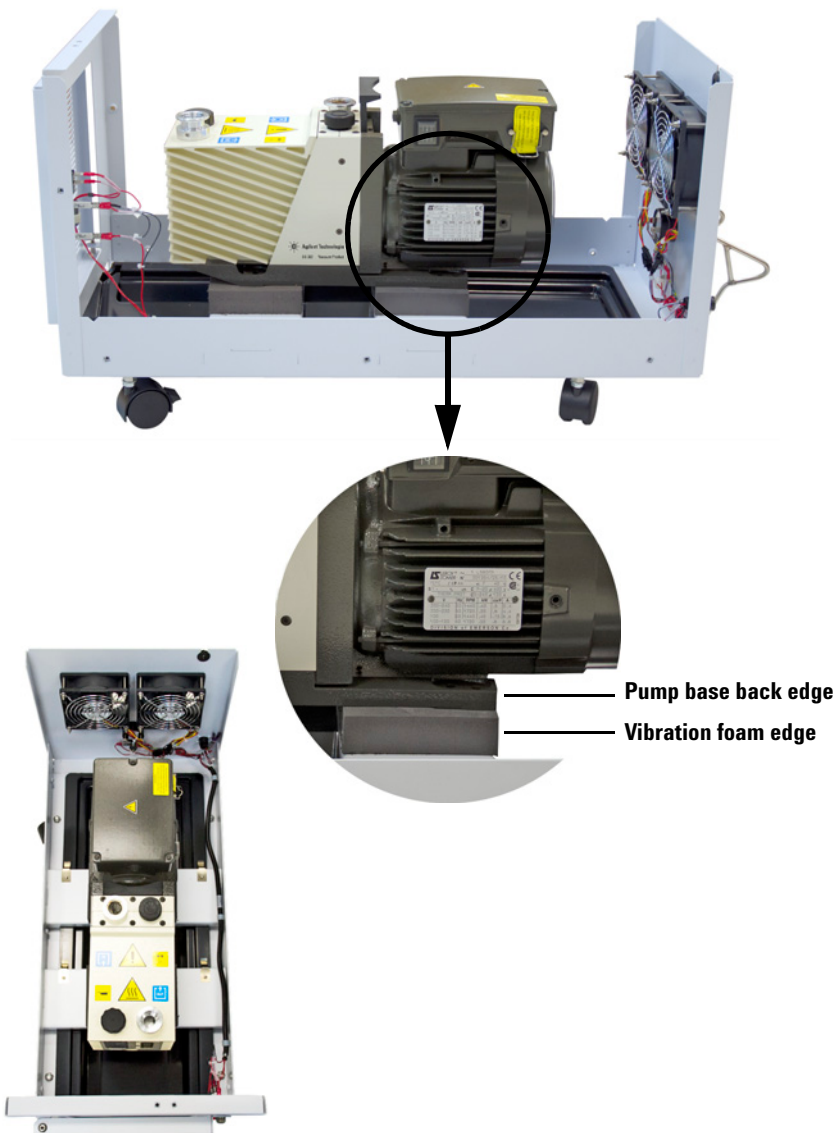


Figure 4 Proper installation of the DS 202/302 pumps

For Agilent DS 402 and DS 602 pumps, align the front edge of the vibration foam with the front end of the pump base (Figure 5). Be sure that the sides of the pump base align with the sides of the vibration foam.

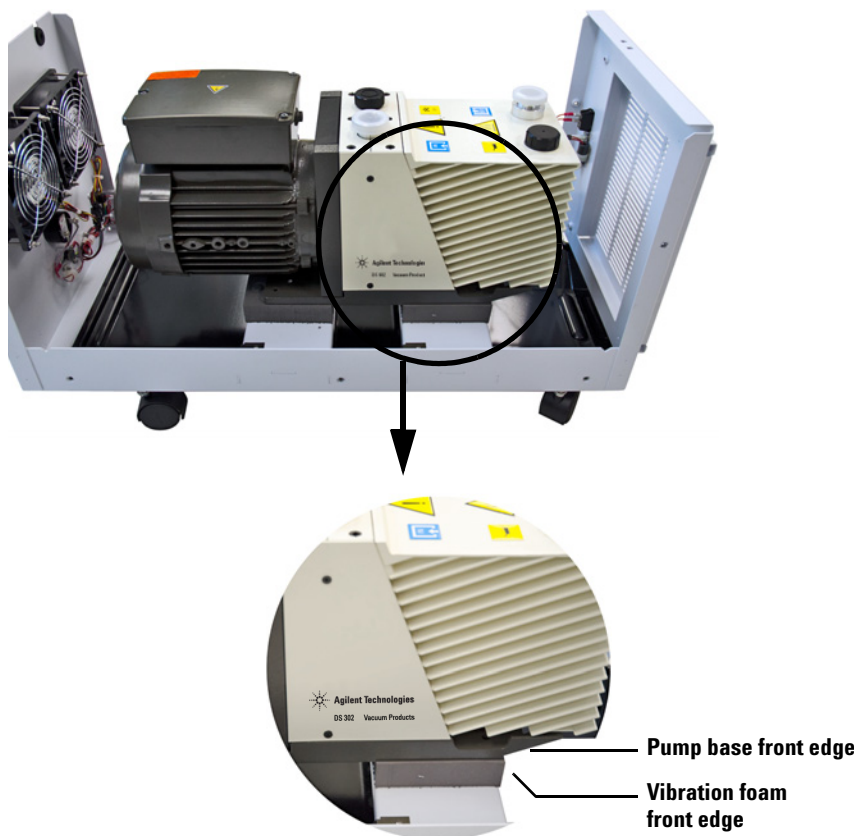


Figure 5 Proper installation of the DS 402/602 pumps

- 4 Check your pump orientation inside the Quiet Cover DS. The oil level window (sight glass) must face the front door of the Quiet Cover DS. Make sure the pump power cord is not crimped or under the pump.

2 Installation

- 5 Remove the grommet (Figure 6) from the back upper edge of the Quiet Cover DS frame and place the grommet around the pump power cord.



Figure 6 Grommet location on Quiet Cover DS

- 6 Plug the pump power cord into the pump, then slide the grommet with the power cord back into the groove on the back of the frame (Figure 7).



Figure 7 Installed pump power cord (DS 302 shown)

Installing the Mist Filter Extension

The Quiet Cover DS requires that the rough pump use a mist filter extension. If a suitable extension is not already installed, install it as follows:

- 1 If necessary, shut off the rough pump.
- 2 Remove the existing mist filter, if installed.
- 3 Install the mist filter extension, the new seal, and clamps onto the outlet port.
- 4 Install the mist filter with the seal and clamp onto the top of the extension (Figure 8).



Figure 8 Mist filter attached to rough pump (DS 302 shown)

Refer also to your rough pump documentation for more information.

Installing the Hose

Install the pump hose to the rough pump (Figure 9).



Figure 9 Pump hose connected to the rough pump (DS 302 shown)

Refer also to your rough pump documentation for more information.

Installing the Lid

To install the lid, place the lid on the base. Make sure the studs (posts) on the inner wall of the top lid align with the grooves along the frame, and the retained thumbscrews align with the screw holes. Tighten the retained thumbscrews on both sides (Figure 10).

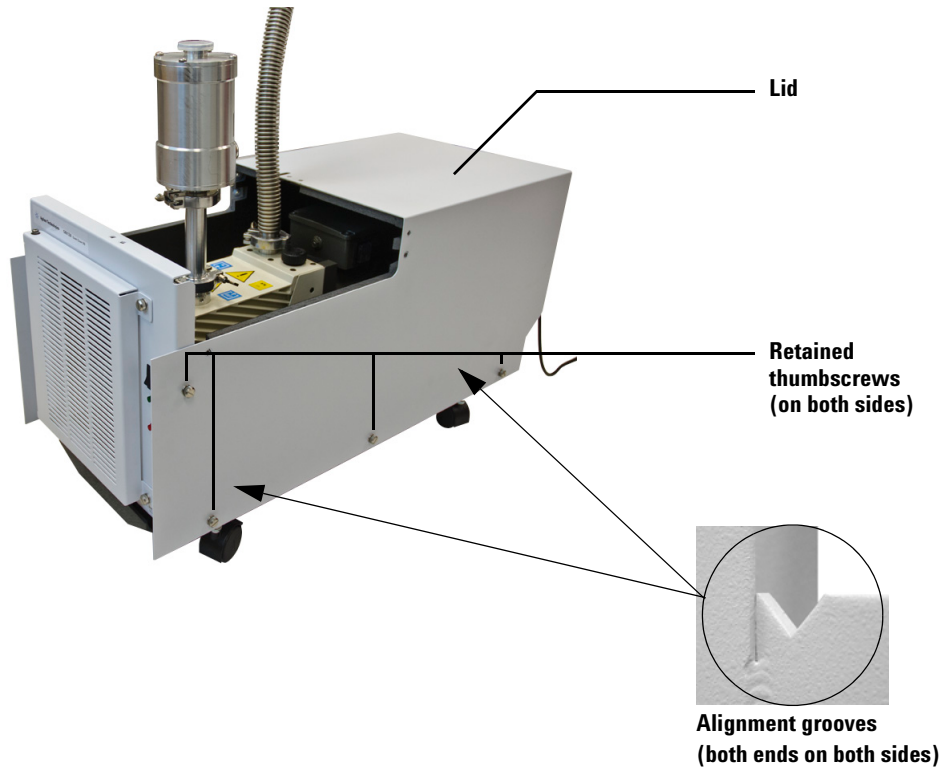


Figure 10 Placing the lid on Quiet Cover DS (DS 302 shown)

Installing the Pump Access Panels

To install the pump access panels, place the access panels on the lid and base as shown in Figure 11. Align the retained thumbscrews with the screw holes along the frame and lid. Tighten the retained thumbscrews on both panels.

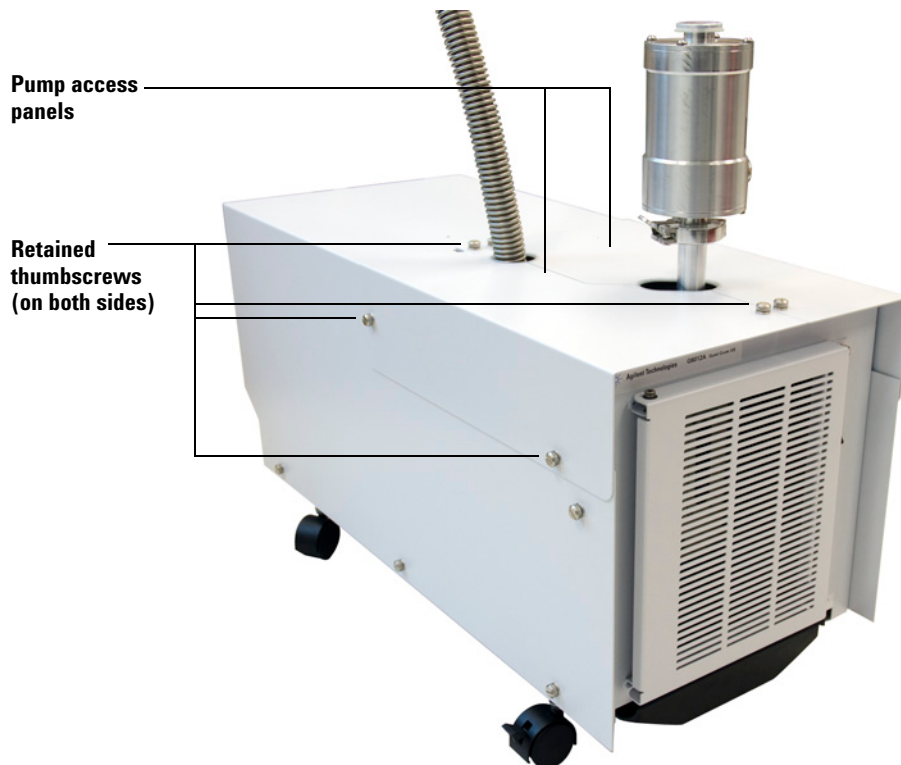


Figure 11 Installing the pump access panels on Quiet Cover DS

Connecting the Power Supply

Connect the power supply to the back of Quiet Cover DS by twisting the ring on the circular connector of the power cord (Figure 12).

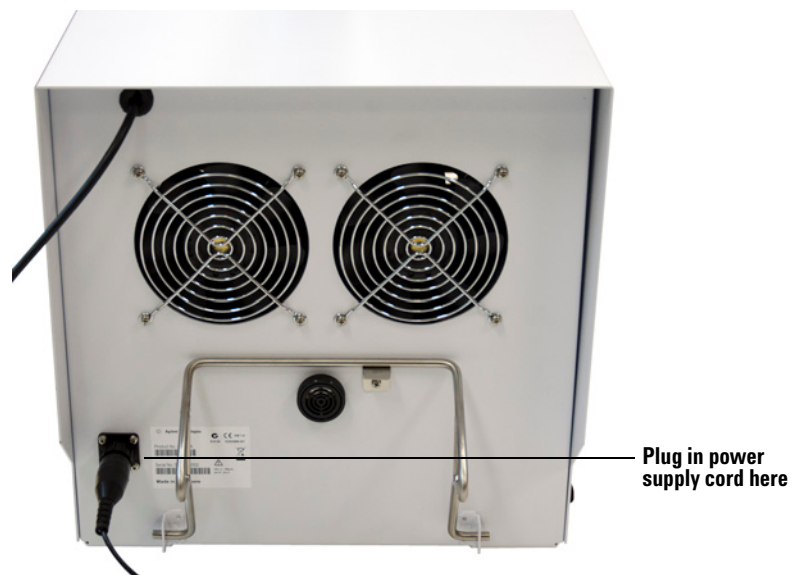


Figure 12 Connecting the power supply

Plug the pronged end of the power cable into the wall outlet.

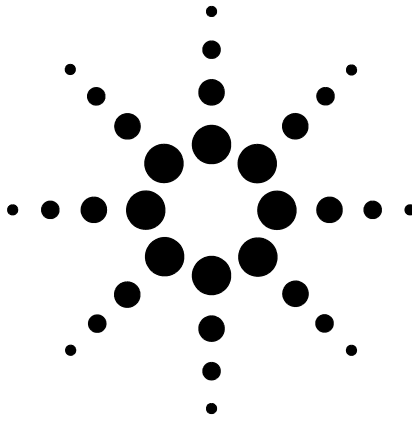
Verifying the Installation

To verify that you installed Quiet Cover DS correctly, press the on/off switch located on the right side of the front panel.

- The green LED should light and the fans should start turning.
- The temperature alarm should be off and the red light should not be lit. If either are on, remove the access panels and lid. Refer to Chapter 4, “Troubleshooting,” for more information.
- There should be neither excessive noise nor vibration. If either condition is true, go back over each installation step to be sure everything was done correctly and all nuts are securely fastened.

The power cords should be positioned so as to not interfere with the kickstand.

The front locking casters should be locked to avoid unwanted movement of the Quiet Cover DS.



3 **Operation**

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To operate Quiet Cover DS, you will need to:

- Understand the controls and indicators on the front panel
- Know how to handle temperature alarms and signals
- Know how to drain oil from the rough pump and oil tray
- Be able to tilt the Quiet Cover DS using the kickstand for draining the oil



Front Panel Controls and Indicators

Figure 13 shows the location of the On/Off switch and indicators of the Quiet Cover DS front panel.

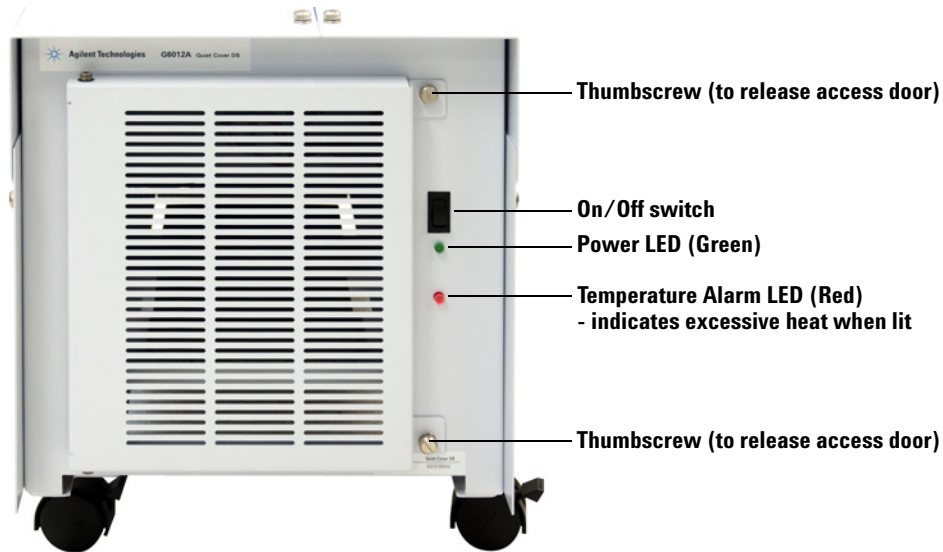


Figure 13 The front panel of Quiet Cover DS

Handling Temperature Alarms

If the air flow to the Quiet Cover DS is restricted or if the room temperature is above 35 °C (95 °F), the red LED on the front panel lights and the temperature alarm sounds.

When this condition occurs, remove the panels to cool the pump. Check that both fans are turning and that air flow to the Quiet Cover DS is not restricted.

NOTE

It is important that the Quiet Cover DS not recirculate hot air. Always position the back end of the Quiet Cover DS where it can draw cool air.

You cannot turn the alarm off. It will stop when the temperature returns to an acceptable level.

See “Troubleshooting” on page 37 for more information.

Changing Rough Pump Oil

Periodically, you must change the rough pump oil. The oil tray of the Quiet Cover DS is designed to collect the oil as it drains from the pump. Please refer to your pump documentation for detailed information regarding changing your pump oil.

To change the oil:

- 1** Properly prepare your system for release of primary vacuum.
- 2** Turn off the rough pump.
- 3** Turn off Quiet Cover DS.
- 4** Unplug the power supply from the Quiet Cover DS.
- 5** Open the front access door of Quiet Cover DS by loosening the retained thumbscrews.
- 6** Lock the front locking casters to secure the Quiet Cover DS.
- 7** Be sure the oil tray is securely seated.
- 8** Tilt the Quiet Cover DS by using the kickstand located at the back of the Quiet Cover DS (See “Using the Kickstand” on page 33.) This technique is the most efficient way to drain the pump oil.

- 9 Remove the oil drain plug from your rough pump (Figure 14). Refer to your pump documentation.

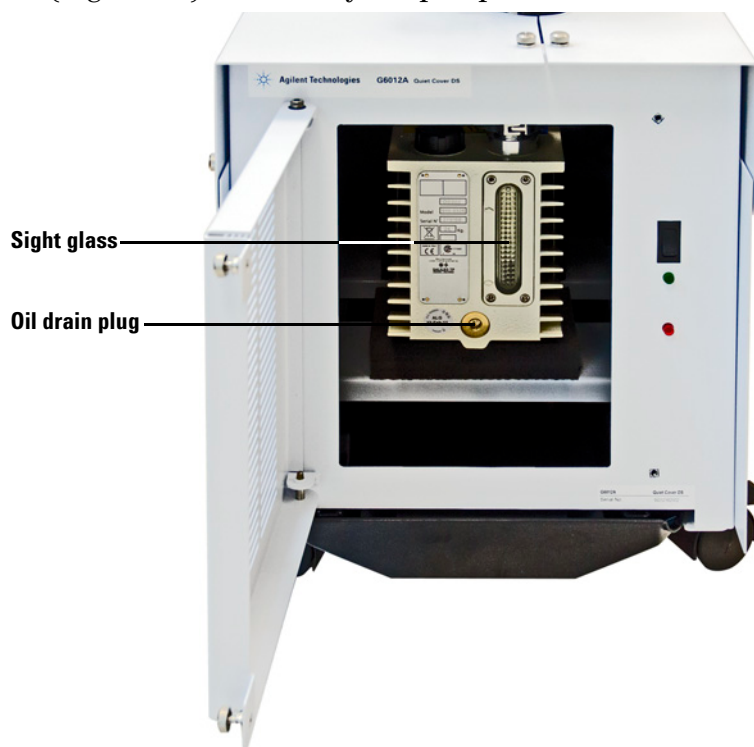


Figure 14 DS 302 pump through access door (other DS models are similar)

- 10 Reinstall the drain plug when the oil has completely drained.
- 11 Carefully remove the oil tray and dispose of the oil according to local safety and environmental guidelines.
- 12 Return the Quiet Cover DS to its untilted position. See “Using the Kickstand” on page 33.
- 13 Reinsert the oil tray. See “Installing the Oil Tray” on page 16.

3 Operation

- 14 Remove the access panel over the oil fill plug and refill the pump (Figure 15). Refer to the pump documentation for more information.

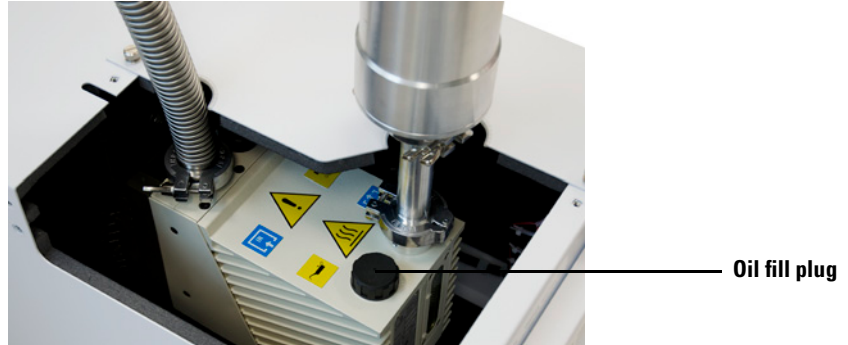


Figure 15 Oil fill plug location (DS 302 shown)

- 15 Replace the pump access panel and close the access door.

Using the Kickstand

To tilt the Quiet Cover DS:

- 1 Make sure the Quiet Cover DS is on a level surface.
- 2 Lock the two front locking casters to secure the Quiet Cover DS (Figure 16).

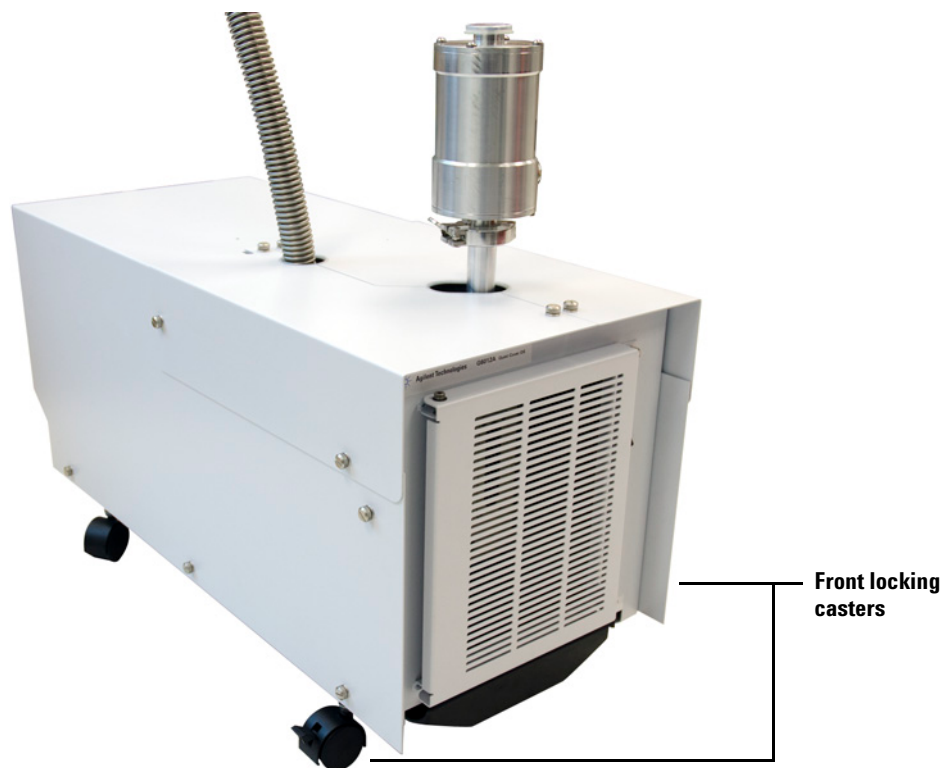


Figure 16 Locking the front casters

3 Operation

- 3 Release the kickstand from the retaining clip (Figure 17).

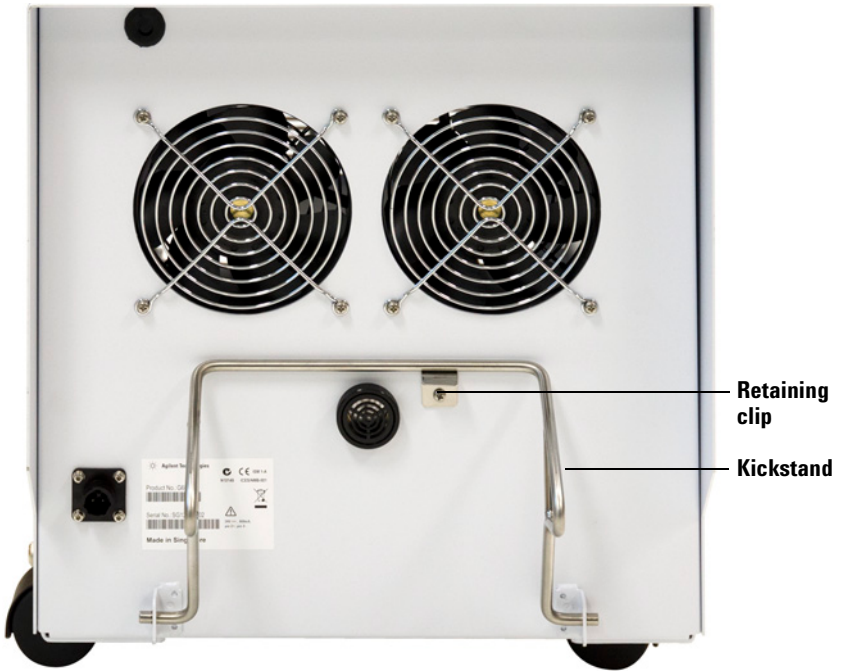


Figure 17 Releasing the kickstand

- 4 With the kickstand released from the clip, step down on the horizontal bar until the Quiet Cover DS is in its tilted position (Figure 18).

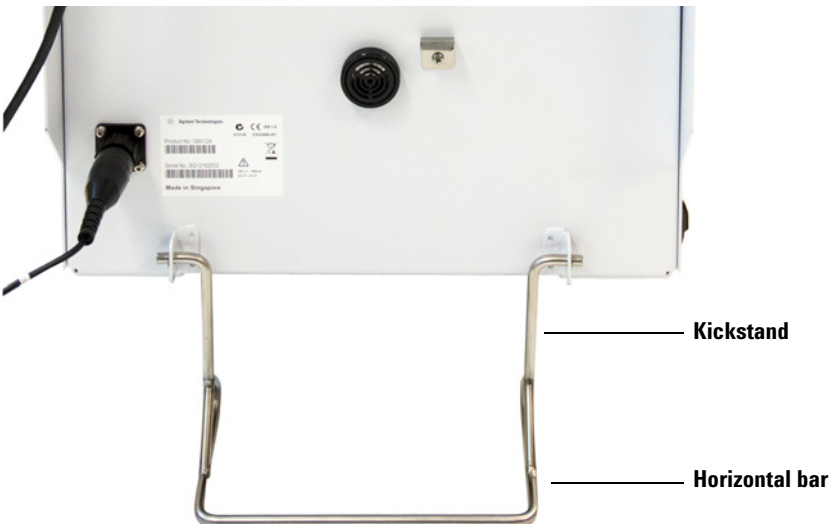


Figure 18 Quiet Cover DS in a tilted position

For larger pumps, lift gently on the lid above the fans while stepping on the kickstand to help tilt the Quiet Cover DS.

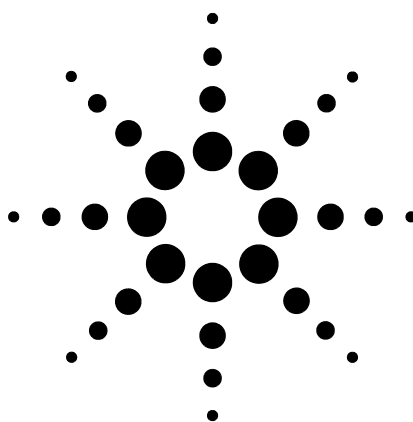
CAUTION

The kickstand's horizontal bar must sit flat on the floor when Quiet Cover DS is tilted.

To return Quiet Cover DS to its operational position:

- 1 Grasp the back of the lid above the fans and gently push the Quiet Cover DS forward until it moves off of the kickstand. To avoid dropping it, stand on the kickstand as you lower the unit.
- 2 Raise the kickstand and secure it with the retaining clip.
- 3 If necessary, unlock the front locking casters, push the Quiet Cover DS back to its operating location, and lock the front locking casters to secure the Quiet Cover DS.

3 Operation



4 Troubleshooting

Table 4 describes solutions to problems that may occur with Quiet Cover DS. If your problem is not listed or the solution listed does not work, consult your pump documentation or contact your Agilent service representative.

WARNING

Hot surfaces can cause burns. Observe the cautions and warnings covered elsewhere in this manual.

Table 4 Problems and solutions

Problem	Solution
Pump does not fit in Quiet Cover DS.	- Check that your pump model is supported. See “Introduction” on page 5. - Check for proper pump orientation and alignment on the vibration foam. See “Installing the Rough Pump Inside Quiet Cover DS” on page 17. Call your Agilent service representative if the pump model, orientation, and configuration are correct.
Temperature alarm does not turn off.	- Check that ambient room temperature is below 35 °C (95 °F). - Remove the Quiet Cover DS access panels and lid. - Ensure there are no air restrictions and that adequate cool air is available to the Quiet Cover DS. - Check that both fans are turning. Call your Agilent service representative if the lab temperature is within specifications.
Quiet Cover DS does not turn on.	Check that the power supply is plugged securely into both Quiet Cover DS and the wall outlet. If it is, call your Agilent service representative. Do not continue to use your rough pump in the Quiet Cover DS.
Quiet Cover DS poorly muffles the sound of the pump.	- Ensure that the lid is fastened tightly to the base and that the pump access panels are securely in place. - Check for proper pump alignment on the vibration foam.
The rough pump oil does not drain completely.	Be sure the kickstand is down, with the bar sitting flat on the floor. If so, refer to the rough pump documentation for more information.



Table 4 Problems and solutions (continued)

Problem	Solution
Green LED does not light.	Check that power is supplied to Quiet Cover DS and the power switch is on. If it is, call your Agilent service representative.
Fans do not turn.	Check that power is supplied to Quiet Cover DS and the power switch is on. If it is, call your Agilent service representative. Do not continue to use your rough pump in the Quiet Cover DS.
The temperature alarm does not sound even though the room temperature is above 35 °C (95 °F) and the red over-temperature LED is lit.	Call your Agilent service representative. Do not continue to use your rough pump in the Quiet Cover DS— the alarm may have failed.
The red over-temperature LED is not lit even though the room temperature is above 35 °C (95 °F) and the alarm is sounding.	Call your Agilent service representative. Do not continue to use your rough pump in the Quiet Cover DS— the LED may have failed.
The temperature alarm is not sounding and the red over-temperature LED is not lit even though the room temperature is above 35 °C (95 °F).	Check that power is supplied to Quiet Cover DS and the power switch is on. If it is, call your Agilent service representative. Do not continue to use your rough pump in the Quiet Cover DS— the thermostat may have failed.

The Service Manual (part number G6012-90020) contains part replacement information (procedures performed by Agilent service representatives). Visit www.agilent.com/chem to download a copy of the Service Manual and look for any other current information.