

INSTRUCTIONS
FOR USE

A-dec[®] SC

AIR COMPRESSOR



The 'a dec' logo, featuring a stylized caduceus symbol above the text 'a dec'.

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Regulatory Information and Warranty

For required regulatory information and the A-dec warranty, see the *Regulatory Information, Specifications, and Warranty* document (p/n 86.0221.00) available in the Resource Center at www.a-dec.com.



For quick access to this document online, scan, tap, or click this QR code, which points to: a-dec.com/regulatory-guide.

Intended Use

A dental air compressor is intended to provide air pressure to dental devices for use during diagnostic and therapeutic treatment by licensed health care professionals.

Expected Service Life

The Expected Service Life of A-dec compressors is 10 years when following the recommended maintenance schedule.*

Product Service

Product service is available through your local authorized A-dec dealer. For service information, or to locate an authorized dealer, contact A-dec at 1.800.547.1883 in the USA and Canada or 1.503.538.7478 worldwide, or visit www.a-dec.com.

Product Models and Versions Covered in This Document

Models	Versions	Description
SC3/SC3.120/ SC5/SC5.120/ SC7/SC10/SC12	n/a	Air Compressor

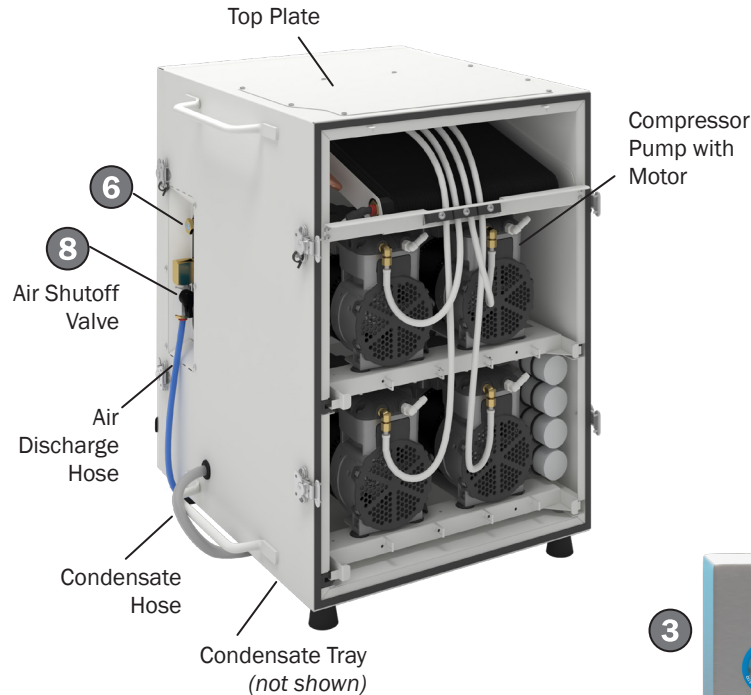
* Service Life information is provided for general planning purposes only and should not be relied upon for any reason. Service Life does not include normal service "wear and tear" components and is separate from the warranty period. There are no implied or explicit extensions of the warranty period. For complete warranty details, see the *Regulatory Information, Specifications, and Warranty* document referenced above.

Content Map



WARNING Do not open or remove the compressor service panels. These are intended for qualified service technician access only and are removed from the systems below for informational purposes only.

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Safety Precautions and Other Regulatory Information

Identification of Symbols

These symbols appear on the actual product or are used in documentation to alert the user about cautions, warnings, hazards, or tips.

Symbol	Description
	Protective earth (ground).
	Electrical and electronic waste. Do not dispose of with domestic waste.
	Date of manufacture.
	Manufacturer of equipment.
	General mandatory action sign. Not a caution. Take note of additional important instructions. e.g., NOTE: Assemble parts as shown.
	Caution. Failure to follow instructions may result in product damage or minor injury. e.g., CAUTION: Do not overtighten the adjustment screw. Overtightening could break the screw.
	Warning. Biological hazard. e.g., WARNING: Infectious waste may be present. Follow asepsis protocol to prevent cross contamination.
	Warning. Failure to follow instructions may result in product damage or serious injury or death. e.g., WARNING: Turn off the power before removing the pump cover. Failure to turn off the power before you begin this procedure can lead to product damage and result in serious injury or death.
	Temperature shipping and storage limits.
	Relative humidity shipping and storage limits.
	Atmospheric pressure shipping and storage limits.
	This way up.
	Fragile.
	Keep dry.
	Do not stack.
	Model Number
	Serial number.
	Part Number.
	Lot Code.

Safety Precautions



WARNING Failure to follow these safety and operation precautions can result in injuries or equipment damage.

The following safety precautions listed below must be observed:

- Read all instructions completely before operating the air compressor.
- For installation, follow all local electrical and safety codes, as well as the National Electrical Code (NEC) and the Occupational Safety and Health Act (OSHA).
- Protect the power cable from coming into contact with sharp objects. Do not kink the power cable and never allow it to come in contact with oil, grease, hot surfaces, or chemicals.
- Make certain that the power source conforms to the requirements of your equipment.
- Pull the main electrical disconnect switch and disconnect any separate control lines, if used, before attempting to work or perform maintenance on the air compressor or unit. "Tag Out" or "Lock Out" all power sources.
- Do not attempt to remove any compressor parts without first relieving the entire system of pressure.
- Do not attempt to service any part while the compressor is in an operational mode.
- Do not operate the compressor at pressures in excess of its rating.
- Periodically check all safety devices for proper operation. Do not change the pressure setting or restrict operation.
- Be sure that no tools, rags, or loose parts are left on the compressor or drive parts.
- Do not use flammable solvents for cleaning any parts.

Safety Precautions (continued)

- Maintain a clean workspace during maintenance and when making repairs. Use a clean piece of paper or cloth to cover and keep dirt away from parts and openings.
- Do not operate the compressor without the service panels in place.
- Do not operate the compressor in an environment that exceeds 104°F (40°C).
- Do not operate compressor in areas where it might intake flammable or toxic fumes.
- Inspect the unit daily to observe and correct any unsafe operating condition.
- Compressed air is a hazard and can result in air embolisms if it enters the blood stream. Take care when using compressed air and only use air powered medical products consistent with their intended use and user instructions.
- Compressed air from this machine must not, under any circumstances, be used for food processing or breathing air without adequate downstream filters, purifiers, and controls.
- Always use an air pressure regulating device at the point of use. Do not use air pressure greater than the marked maximum pressure of attachment.
- Check hoses for weak or worn condition before each use, and make certain that all connections are secure.

Decommissioning and Disposal of A-dec Equipment

A-dec dental equipment removed from service should be decommissioned in accordance with local regulatory requirements. Circuit boards and electrical cabling should be recycled as electrical salvage. Aluminum, brass, iron, and steel components should be recycled as metal salvage. Molded plastic components include mold marks indicating the type of plastic and should be recycled accordingly. Any material unsuitable for recycling should be disposed of appropriately. For information regarding material type of A-dec equipment, please contact A-dec Customer Service.

Environmental Specifications

Temperature/Humidity	Specification
Storage/Transportation Temperature	32°F to 158°F (0°C to 70°C); relative humidity to 90%, no condensation.
Operating Temperature (Room Ambient Temperature)	40°F to 104°F (4°C to 40°C); relative humidity to 80%, no condensation.

Classification of Equipment (IEC-60601-1)

Type/Mode	Classification
Types of Shock Protection	CLASS I EQUIPMENT: All A-dec products with mains voltage.
Degree of Shock Protection	Not Classified—no applied parts.
Degree of Protection Against Water Ingress	Not Classified—IPX0.
Mode of Operation	Continuous with 50% full load duty cycle.
Flammable Gasses	Not suitable for use in the presence of a flammable anesthetic mixture with air, oxygen, or nitrous oxide, where such gasses may accumulate in concentration (closed space).



NOTE Allowable mains voltage fluctuations $\pm 10\%$ of rated voltage.

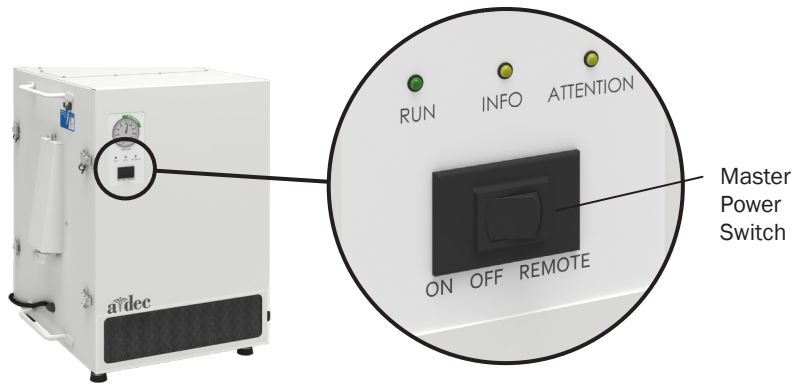
Electromagnetic Interference

A-dec mechanical room systems are designed and built to minimize electromagnetic interference with other devices. However, if interference is noticed between another device and your vacuum system:

- Remove interfering device from room.
- Plug interfering device into an isolated circuit.
- Increase separation between unit and interfering device.
- Contact your authorized A-dec dealer if interference persists.

Operate

Turn On/Turn Off Power

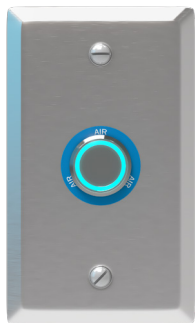


NOTE For longer periods of non-use, such as an extended shutdown of the office, disconnect power to the compressor to save energy and reduce the chance of air leaks in your piping system and treatment rooms.

Master Power Switch

The master power switch turns the vacuum unit on or off. It also overrides the other remote power functions. If your compressor is connected to remote LED push-button controls or a Smart Shield touchscreen, this switch should be in the REMOTE position.

LED Push-Button Control
(single-button)



LED Push-Button Control
(four-button)



Optional LED Push-Button Controls

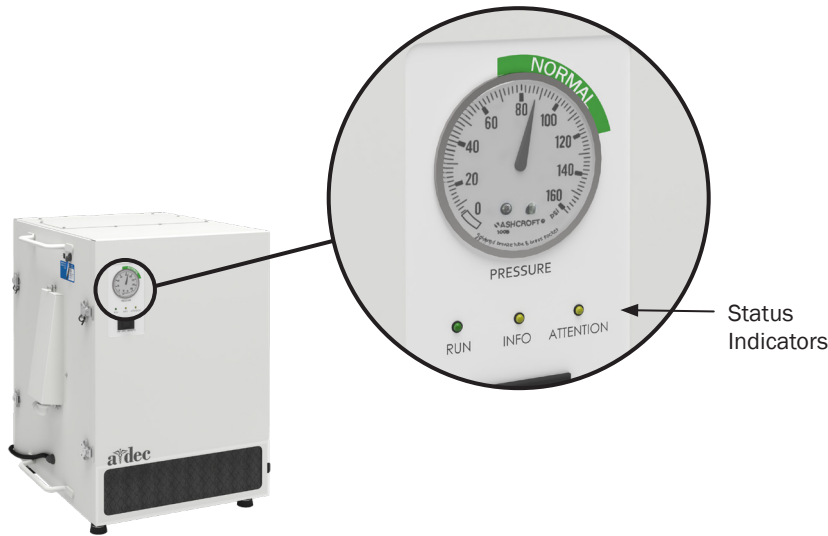
If you have LED push-button controls, press the button once to turn the compressor on or off. Blue LED lighting indicates that the compressor is on. If the LED does not illuminate, check and verify that the master power switch on the compressor is in the REMOTE position.

Optional Smart Shield Touchscreen Controls

For configurations with the Smart Shield touchscreen, use the power switch icon at the bottom of the screen or tap the AIR icon to turn the compressor on or off. If the Smart Shield does not operate, check and verify that the master power switch on the compressor is in the REMOTE position. For more information on the touchscreen, see "Smart Shield Touchscreen Controls" on page 6.



Control Panel Gauge and Operational Status






Pressure Gauge

After initial startup, when the system is fully pressurized, the pressure gauge indicator should stay within the normal range. Contact your authorized A-dec dealer if the pressure remains outside this range during normal operation.

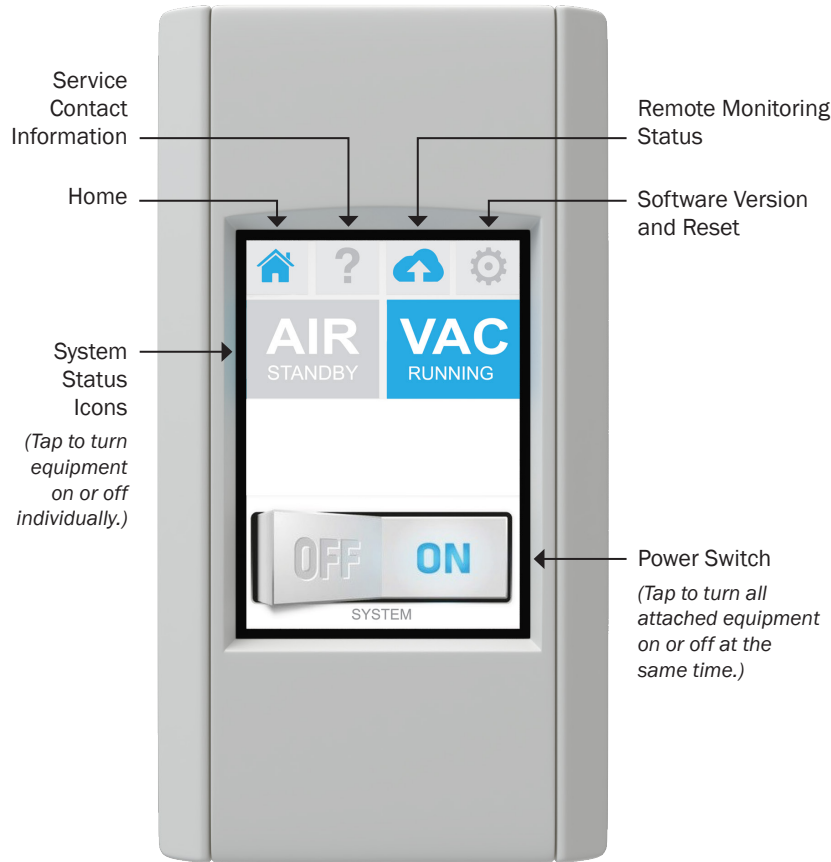
Status Indicators

The control panel includes three status indicators. These illuminate differently, according to various conditions:

Indicator/ Color	Illumination State	Condition
RUN/ Green 	Solid illumination.	A motor is running.
	Flashes continuously.	The system is in standby (full pressure reached, no motors running).
INFO/ Yellow 	Flashes once every 10 seconds.	The unit is connected to power.
	Flashes in intervals.	The number of flashes per interval indicates the number of motors running.
ATTENTION/ Yellow 	Flashes in intervals.	Fault code. For more information, see “Troubleshooting Tasks” on page 12.

NOTE In addition to hearing the motors and pumps operate, you may also hear other noises from the compressor. These are normal and come from the cooling fans, air dryer, and other components during various operational cycles.

Smart Shield Touchscreen Controls

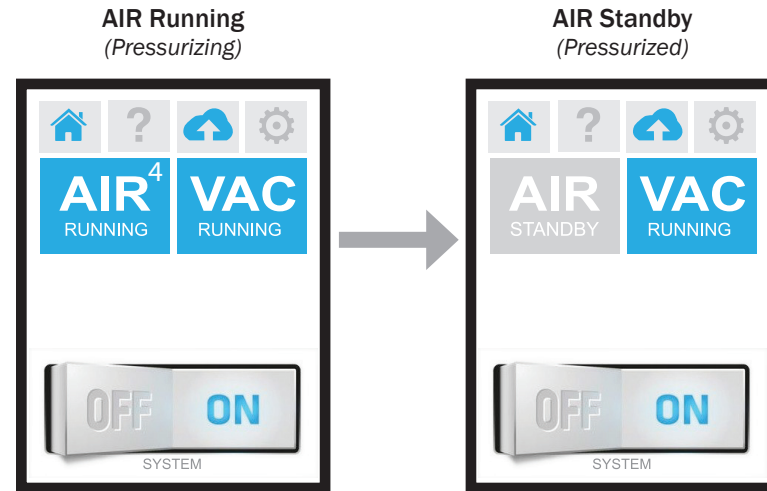


The optional Smart Shield touchscreen provides power control and system status of your mechanical room equipment.

Tap the power switch icon at the bottom of the screen to turn all connected equipment on or off at the same time. Tap the blue system status icons to turn individual equipment on or off. These status icons also dynamically change according to the operational state of the equipment (see "Compressor System Status Icons" table on page 7).

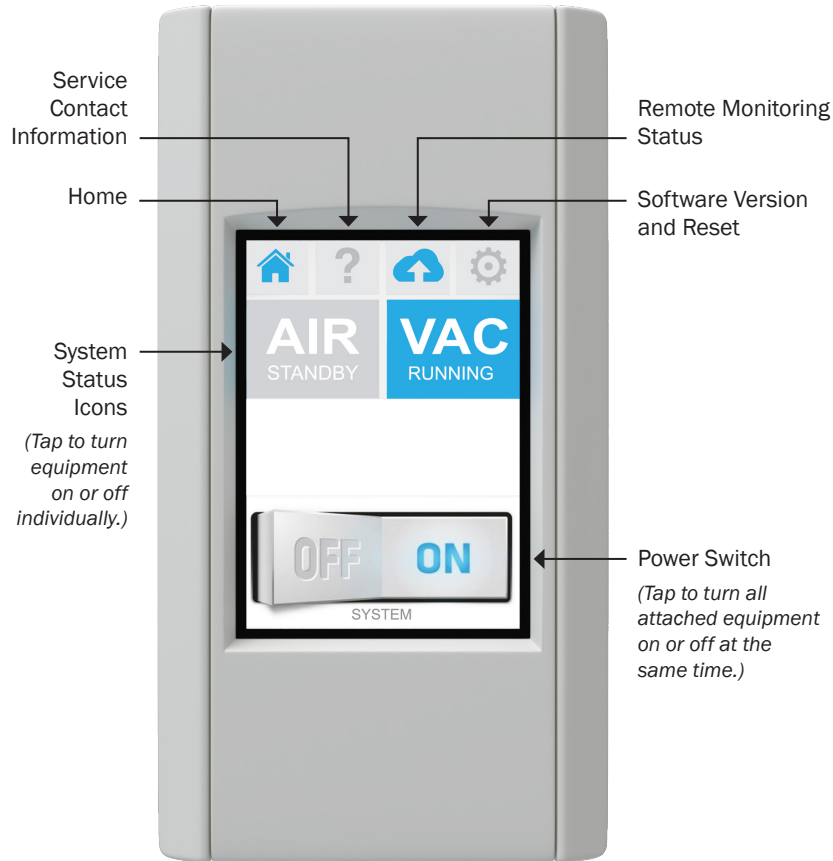
Compressor Startup

When you first start the compressor, Smart Shield displays the AIR RUNNING icon, which includes the number of motors currently running to increase air pressure (in the upper right corner of the icon). When the system has reached the normal operating pressure range, the AIR STANDBY icon appears.



NOTE If the Smart Shield does not operate, check and verify that the master power switch on the compressor is in the REMOTE position. For more information, see "Troubleshooting Tasks" on page 11.

Smart Shield Touchscreen Controls *(continued)*

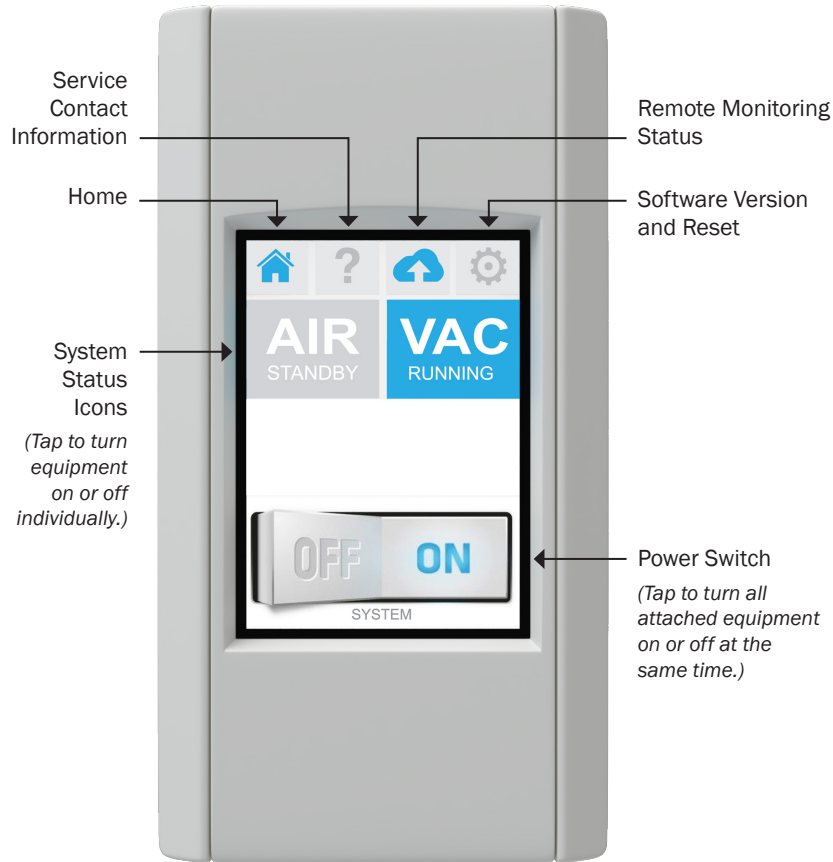


NOTE If additional warning icons appear on your screen and are not shown here, contact your authorized A-dec dealer for more information.


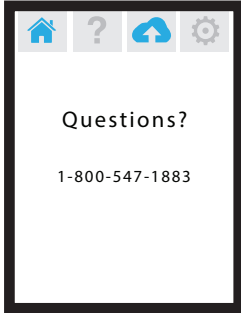

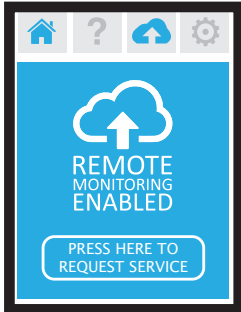

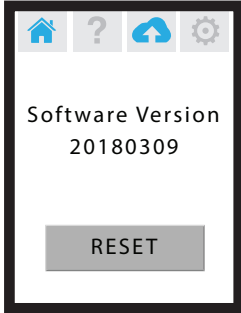
Compressor System Status Icons

Icon	State/Status
	Displays during initial startup while the compressor motors are pressurizing. The number in the upper right corner indicates how many motors are currently running, which varies per model (SC3: 2, SC5: 3, SC7: 4, SC10: 5, SC12: 6).
	Displays intermittently while the compressor motors are pressurizing the system, typically during initial system startup.
	Displays when the compressor motors have finished pressurizing the system.
	MANUAL appears on status icons when the master power switch on the compressor is in the ON or OFF position. To control power through the Smart Shield touchscreen, ensure that the master power switch on the compressor is in the REMOTE position.
	Displays when the compressor is turned off from the Smart Shield touchscreen controls.
	Displays when the annual maintenance interval is reached. This caution/reminder is reset whenever power to the system is disconnected.
	Displays when there is a fault in the system. Contact your authorized A-dec dealer for service.

Smart Shield Touchscreen Controls *(continued)*



Additional Smart Shield Functions

Icon	State/Status
	 <p>Displays contact information.</p>
	 <p>Displays your status as enabled if you are connected to the remote monitoring service. For questions, contact your authorized A-dec dealer, or call A-dec Customer Service.</p>
	 <p>Displays software version. The reset button turns off the screen, reboots the software, and reloads the equipment status. You can use RESET during specific faults with the equipment. For more information, see "Troubleshooting Tasks" on page 11.</p>

Maintain/Troubleshoot

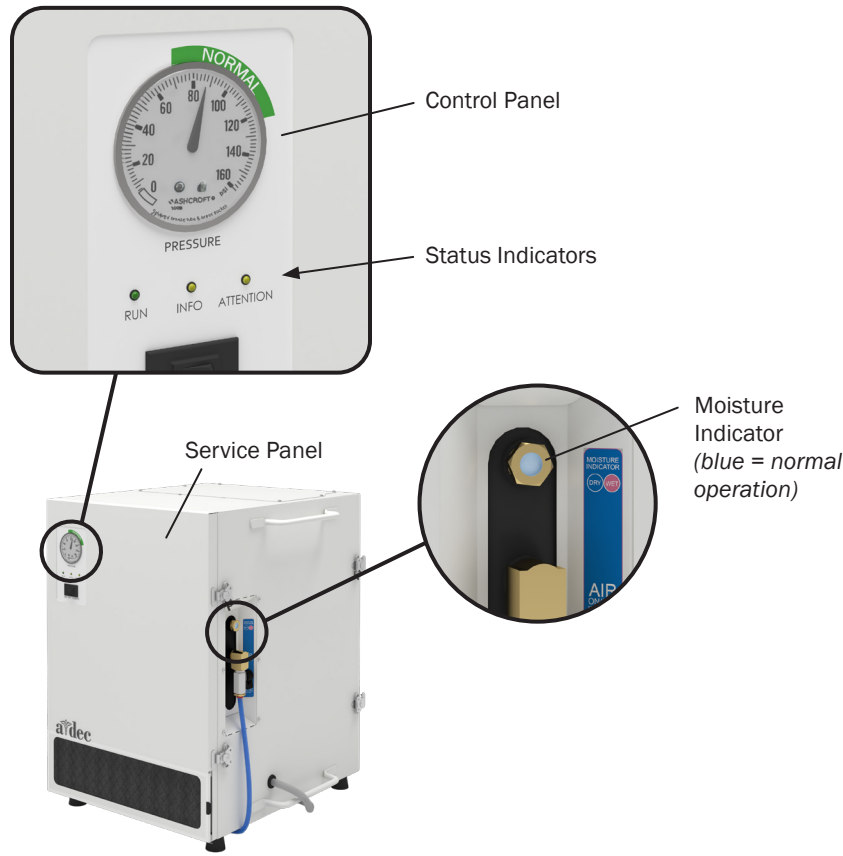
Regular Maintenance Tasks



WARNING Do not attempt to open or remove the compressor service panels. These are intended for qualified service technician access only.



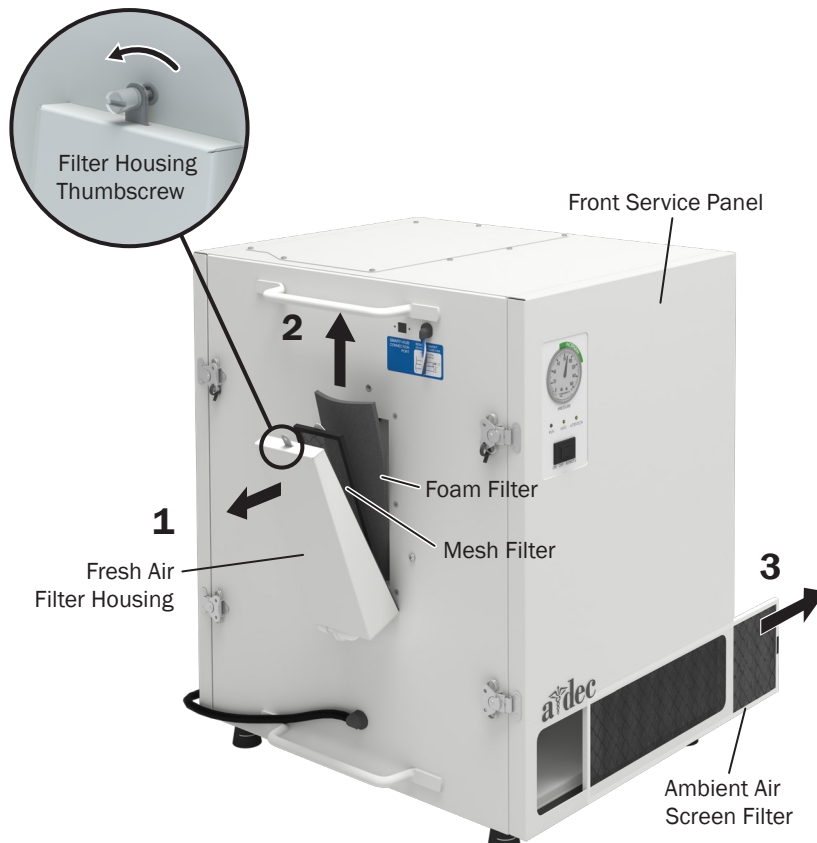
WARNING Before performing any maintenance function, disconnect main power to the compressor and ensure that all air pressure is relieved. Failure to do so may result in injury or equipment damage.



To keep your compressor running smoothly, be sure to schedule a service checkup with your authorized A-dec dealer every year. And although the SC compressor requires very little maintenance, see the table below for important recommended maintenance tasks.

Frequency	Item	Task/Procedure
Weekly	Control panel and moisture indicator.	Visually inspect the control panel. If the air pressure does not remain in the normal operation zone after initial startup, contact your authorized A-dec dealer for service. Ensure that the RUN and INFO status indicators are illuminating properly (see “Status Indicators” on page 5 for more information). Visually inspect the moisture indicator. Blue indicates normal operation. If the indicator is pink, there’s moisture in your compressed air. Contact your authorized A-dec dealer for service.
Monthly	Exterior case and tubing connections.	Use a dry, lint-free cloth to dust off and clean the exterior. Listen for any noticeable air leaks.

Regular Maintenance Tasks *(continued)*



WARNING Before performing any maintenance function, disconnect main power to the compressor and ensure that all air pressure is relieved. Failure to do so may result in injury or equipment damage.

Contact your authorized A-dec dealer if you are unable to access the air filters. Do not attempt to open or remove the compressor service panels. These are intended for qualified service technician access only.




Frequency	Item	Task/Procedure
Yearly	Air filters: <ul style="list-style-type: none"> • Fresh air foam • Fresh air mesh • Ambient air screen 	Replace the fresh air and ambient air filters once a year. Turn off power to the compressor before following these steps: <ol style="list-style-type: none"> 1. Loosen and remove the fresh air filter housing thumbscrew, then remove the housing to access the fresh air filters. 2. Pull out and replace the foam and mesh filters. Reinstall the housing. 3. Slide the ambient air filter out from the front service panel and replace. <p><i>*For air filter replacement, order the following maintenance kits:</i></p> <ul style="list-style-type: none"> • p/n A0050, for model SC3/SC5/SC7 SC3.120/SC5.120 • p/n A0150, for model SC10/SC12
Every 5 years	Internal dryer cartridge filter. p/n A0051	This task requires a service technician. Contact your local authorized A-dec dealer for the internal cartridge filter replacement.

Troubleshooting Tasks



WARNING Do not attempt to open or remove the compressor service panels. These are intended for qualified service technician access only.

The following table is intended to help you identify common issues with your compressor that may or may not require attention. For problems that require access to internal compressor components, always contact your local authorized A-dec dealer for service.

Condition	Potential Cause	Procedure/Remedy
LED push-button or Smart Shield controls do not function	Master power switch on the compressor is not in the REMOTE position.	Ensure that the master power switch on the compressor is in the REMOTE position. If it is, and you have push-button controls, contact your authorized A-dec dealer for service. If the master power switch is in the REMOTE position and you have the Smart Shield touchscreen, see the remedy below.
	Communication disruption/fault between system and Smart Shield touchscreen.	Tap on  at the top of the touchscreen, then tap RESET. If this does not resolve the condition, unplug the Smart Hub router power cord, wait 10 seconds, then plug it back in. If this does not resolve the condition, contact your authorized A-dec dealer for service.
Air pressure outside the normal range	Incomplete initial startup and pressurization.	Check the INFO status indicator on the compressor control panel. If the indicator is flashing in intervals, the compressor motors are still working to reach full pressurization. Recheck after the compressor has completed the initial startup sequence. If the pressure remains outside the normal range, contact your authorized A-dec dealer for service.
	A leak in the compressor, piping, or dental equipment.	Turn the air shutoff valve to the OFF (or “closed”) position to help identify if the air leak is within the compressor or external to the compressor. <div style="display: flex; justify-content: space-around; align-items: center;">   </div> <p>With the valve closed (which shuts off the air supply to the treatment rooms), watch the pressure gauge to see if the compressor has an internal leak. If you detect any leaks, contact your authorized A-dec dealer for service.</p> <p>Be sure to return the air shutoff valve to the ON (or “open”) position for normal operation.</p>

Troubleshooting Tasks *(continued)*



WARNING Do not attempt to open or remove the compressor service panels. These are intended for qualified service technician access only.

Condition	Potential Cause	Procedure/Remedy
ATTENTION status indicator is flashing		
<i>1 time per interval</i>	Excessive demand on the compressor (<i>greater than 100 percent capacity</i>).	Contact your authorized A-dec dealer for service.
<i>2-3 times per interval</i>	High ambient temperature warning/shutdown.	Contact your authorized A-dec dealer for service.
<i>4 times per interval</i>	Annual maintenance timeout.	Schedule an annual service checkup with your authorized A-dec dealer.
<i>5 times per interval</i>	5-year maintenance timeout.	Schedule service with your authorized A-dec dealer to remove and replace the internal dryer cartridge filter.
<i>6-12 times per interval</i>	Mechanical fault with motor or fan.	Contact your authorized A-dec dealer for service.
Moisture indicator is pink	Dryer not cycling properly.	Contact your authorized A-dec dealer for service.
	Dryer cartridge past working life (<i>5 years</i>).	Contact your authorized A-dec dealer to remove and replace the internal dryer cartridge filter.
Excessive vibration	Worn vibration/tray isolators.	Contact your authorized A-dec dealer for service.



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86.0887.00 Rev C
Date of Issue 2023-07-31
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