

Description

TITAN VERSA HIGH-FLOW VALVE KITS	
P/N	Description
TV115787	VERSA C (Compact) High-Flow Evacuation Assembly
TV115787-1	VERSA C (Compact) High-Flow Evacuation w/ High-Flow Vent
TV115801	VERSA L (Horizontal) High-Flow Evacuation Assembly
TV115801-1	VERSA L (Horizontal) High-Flow Evacuation w/High-Flow Vent
TV115802	VERSA T (Tower) High-Flow Evacuation Assembly
TV115802-1	VERSA T (Tower) High-Flow Evacuation w/ High-Flow Vent
TV115803	TITAN VERSA High-Flow Vent Valve Assembly

This manual is intended for users needing to install TITAN VERSA High-Flow valves on their own.

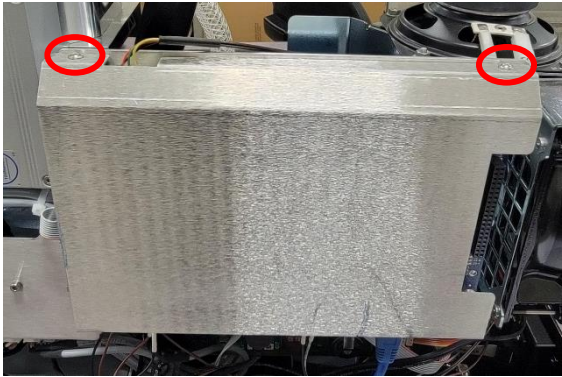
The TITAN VERSA High-Flow Evacuation (Evac) valve reduces pump down times by 50%. The High-Flow vent valves greatly reduce typical vent times thereby improving overall cycle times.

Installation

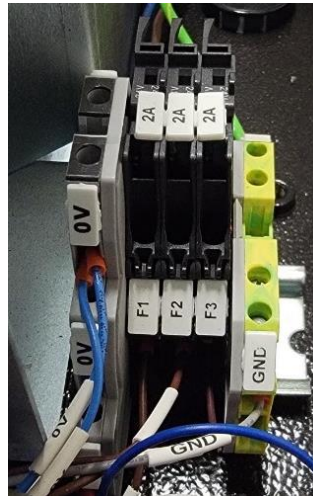
NOTICE: This section references installing both High-Flow Evac and High-Flow Vent valves. Adjust installation if only one of the two valves are being installed.

1. Remove electrical power.
2. Remove external covers (see section 8.8 of main user manual).
 Remove screen connector.

3. Remove the aluminum electrical board cover with a 2mm hex wrench.



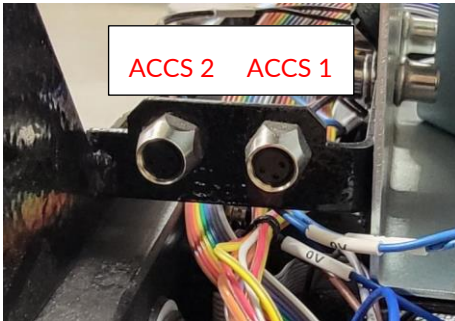
4. Remove Accessory Cables: Disconnect all wires, except middle COM terminal, from the J8 (Relay Contacts) terminal block using a small flat head screwdriver.
5. Remove the two blue 0V wires connection from the 0V terminal block.



6. Remove the two ACCS bulkhead connectors from the back of the side electrical panel using a 10mm end wrench. Pull the cables fully through from the electrical panel. Install the two black plastic plugs on electrical panel.



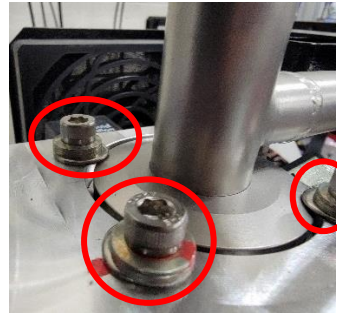
7. Relocate the ACCS connectors to internal bracket on Versa frame (see image below). The ACCS 1 cable (LCA053) to right side of bracket and ACCS 2 cable (LCA074) to left side of bracket.



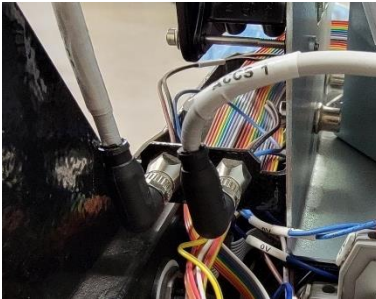
8. Re-connect the ACCS cables to terminal block J8 (Relay Contacts) on Titan Versa electrical board per the table below.

ID	Wire color	Termination
Accessory 1 (LCA053)	Brown	J8, NC-1
	Black	J8, NO-1
	Blue	0 VDC TB
Accessory 2 (LCA074)	Brown	J8, NC-2
	Black	J8, NO-2
	Blue	0 VDC TB

9. **High Flow Evac Only:** Remove exiting Inlet Adapter using a 5mm Allen key. Install new Inlet Tee adapter. Add provided larger OD washer (LACO P/N LMSA4302) to bottom of existing washer set. Verify large od washer is contacting the new vacuum flange.

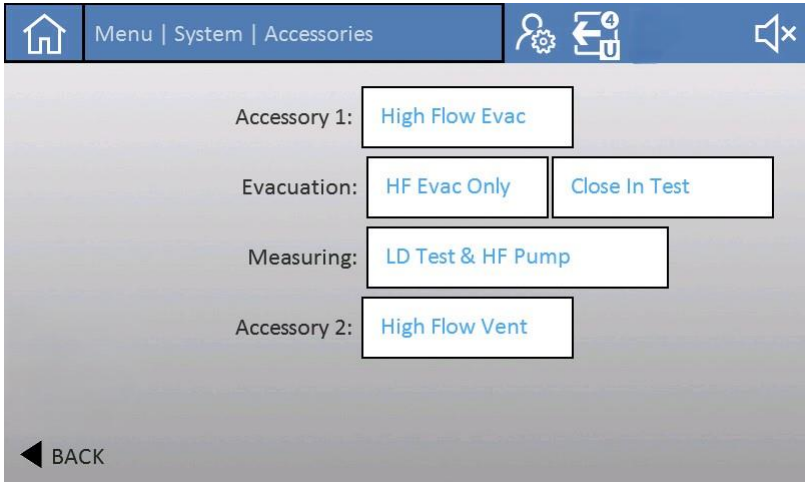


10. **High Flow Evac Only:** Use Table 1 to install the High-Flow Evac Valve in correct location per the users Titan Versa configuration. Connect High-Flow Evac (Bypass) cable to ACCS 1 port.
11. **High-Flow Vent Only:** Use Table 2 to install the High-Flow Vent Valve in correct location per the users Titan Versa configuration. Install High-Flow Vent cable to ACCS 2 port.



Setup

1. Software Setup: Turn on TITAN VERSA and navigate to the accessory screen from the main test screen (Menu > System > Accessories).
2. If applicable change Accessory 1 to High-Flow Evac and press Save. See the main Titan Versa User Manual for details on all the various High-Flow Evac settings.
3. If applicable set Accessory 2 to High-Flow Vent and press save.



- Run preliminary leak tests cycles with the covers off and verify the High-Flow valve LED's in valve DIN connector modules are lighting up.



- Leak Test Instructions: Attach an NW-25 blank off to Inlet Tee (for Compact and Tower Versa, blank off pump port as well). In Vacuum test mode, put leak detector into a test cycle. Spray helium around High-Flow assembly and Inlet Tee. Monitor for 10 seconds, ensure the leak rate does not go above 1.00×10^{-8} mbar.l/s. Leak rate must be below 5.00×10^{-9} mbar.l/s.
- Re-install all covers. Installing new inlet adapter cover.

Table 1: High-Flow Evac. Plumbing


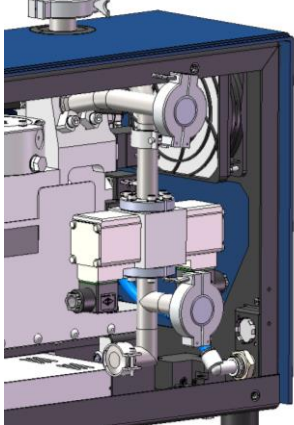
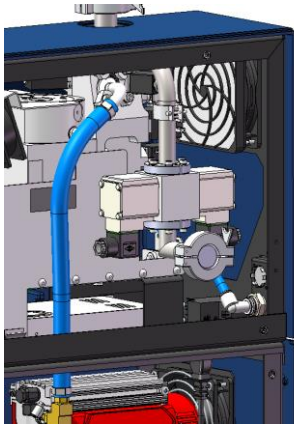
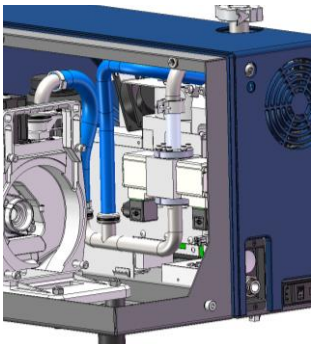
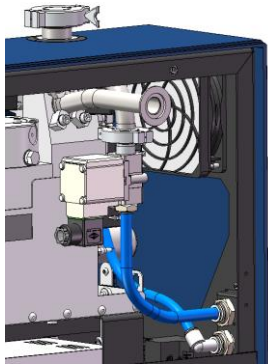
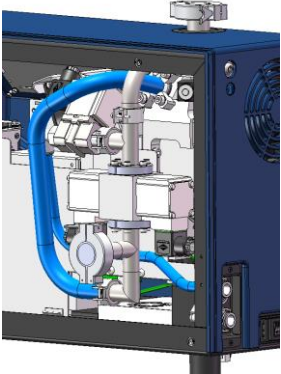
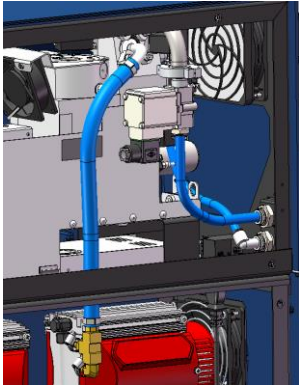
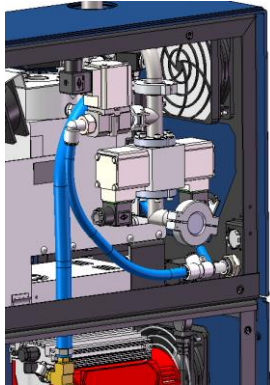


Versa Conf.	1 Pump	2 Pumps
Compact		
Tower	N/A	
Horizontal		N/A

Table 2: High-Flow Vent Plumbing

Versa Conf.	High-Flow Vent Only	High-Flow Evac & Vent
Compact	 <p>A cutaway diagram of a compact machine showing the internal plumbing for high-flow vent only. The blue hoses are connected to a central manifold and exit through the top of the machine. A fan is visible in the background.</p>	 <p>A cutaway diagram of a compact machine showing the internal plumbing for high-flow evacuation and vent. The blue hoses are connected to a central manifold and exit through the top of the machine. A fan is visible in the background.</p>
Tower	 <p>A cutaway diagram of a tower machine showing the internal plumbing for high-flow vent only. The blue hoses are connected to a central manifold and exit through the top of the machine. A fan is visible in the background.</p>	 <p>A cutaway diagram of a tower machine showing the internal plumbing for high-flow evacuation and vent. The blue hoses are connected to a central manifold and exit through the top of the machine. A fan is visible in the background.</p>
Horizontal	 <p>A cutaway diagram of a horizontal machine showing the internal plumbing for high-flow vent only. The blue hoses are connected to a central manifold and exit through the top of the machine. A fan is visible in the background.</p>	 <p>A cutaway diagram of a horizontal machine showing the internal plumbing for high-flow evacuation and vent. The blue hoses are connected to a central manifold and exit through the top of the machine. A fan is visible in the background.</p>

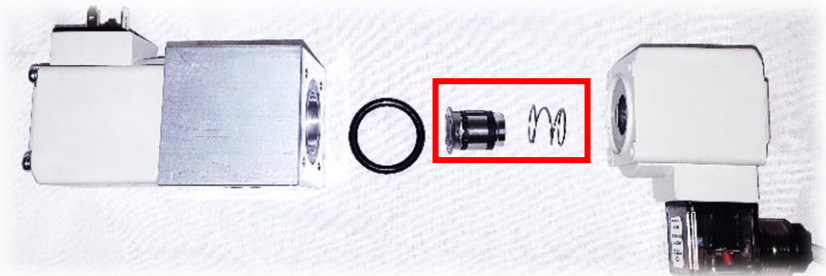
Maintenance

Valves should be inspected and cleaned every 100,000 cycles or every two years (whichever comes first). Valve plunger seals and the internal valve body should be lightly cleaned with methanol or water if dirty or contaminated. Follow the valve replacement instructions below to inspect valves.

Valves should be replaced every 200,000 cycles or every 4 years (whichever comes first).

Valve Replacement

1. Disconnect power and remove back covers.
2. Remove valve electrical (DIN) connectors.
3. Remove 4 long screws on valve coil assembly.
4. Remove valve coil and plunger.
5. Replace with new valve coil and plunger.
6. Reconnect items per instructions above.



HIGH-FLOW VALVE SPARE PARTS

P/N	Description
LMSA0475-K	Solenoid Valve Operator and Plunger Kit