

## Additel 992,993 Handheld Pneumatic Pressure Pump Quick Start Guide



#### Notes

> When using the pressurization handle to apply pressure to a DUT with a low pressure range and small internal volume, pressurize slowly to help avoid overpressure and potential damage to the DUT.

> The pneumatic pump must be operated within its rated pressure range. Exceeding the maximum safety pressure may cause equipment damage or personal injury.

> When operating in hazardous environments—such as those with explosive or corrosive conditions—be aware of the potential risks associated with compressing the medium.

> Pressure/vacuum switching, quick connector unlocking and rotating must be performed when the pump is vented

> Do not overtighten the connectors or handles to avoid damaging the pump.

> Store the pump in a dry non-corrosive environment for long-term storage.

> Additel is not responsible for personal injuries or damage to the instrument resulting from improper use or operation of the equipment.

### **Technical Specifications**

Items	Specifications
Pressure range	ADT992: 95% vacuum to 700 psi (50 bar)
	ADT993: 95% vacuum to 1,000 psi (70 bar)
Operating temperature	(-10∼60) °C
Storage temperature	(-20∼70) °C
Humidity range	<85%
Adjustment resolution	10Pa
Safety pressure	< 1,500 psi (100 bar)
Volume	12.6" (320mm) x 4.3" (110mm) x 4.8" (122mm)
Weight	3.5 lb (1.6 kg)

Note: When the atmospheric pressure is 1 bar, the pneumatic pump can pump a vacuum above -0.95 bar; When the atmospheric pressure is P, the Pneumatic pump can go to vacuum: -(95P/100).

FAQs

Phenomenon	Reason	Solution
Difficulty in pressing or lifting the handle	Isolation valve is not opened	Open the isolation valve when pressurizing or vacuumizing with the handle
After stopping pressurization using the handle, the pressure changes quickly	1. The vent valve is not closed	The vent valve should be closed when pressurizing or vacuumizing with the handle
	2. The O-ring in the quick connector falls off	Reinstall or replace the O- ring with a new one
	3. Incorrect position of pressure/vacuum selector	Adjust the pressure/vacuum selector to the correct position; Pull it all out for pressurization, push it all in when vacuuming
Difficulty in fine adjusting	1. The isolation valve is not closed during fine adjust	When fine adjusting the output pressure, the isolation valve should be closed
	2. The DUT or reference gauge is not tightened	Tighten the DUT or the reference gauge
	3. The O-ring in the quick connector is worn out or aged	Replace the O-ring with new one
	4. The end surface of the thread of the DUT is uneven	Reinstall or replace the O- ring with a new one
	5. The threads of the DUT do not match	Use adapter
	6. Contaminant is sucked into the pipelines, preventing the valve from closing	Do multiple pressurization and rapid pressure relief, so that the gas in the pump can flow out quickly and contaminants in the pump can be brought out
Overtightening of rotating parts	1. Too much torque was previously applied.	Do not apply excessive force when closing the Isolation valve and vent

		valve
	2. The tightness of the rotatable parts of the new pump might be slightly different	It is normal, needs long term use
	3. The threads have no lubrication	Apply appropriate amount of grease to the threaded part after long-term use

### Basic Structure & Air Diagram



**Basic structure** 



### Air diagram

No.	Name	Description
1	High pressure/ fine adjust handle	High pressure and fine adjustment
2	P/V selector lock	Locks the P/V selector
3	P/V selector	Switch to pressure when pulling out, and switch to vacuum when pushing in. 【1】
4	Vent valve	Clockwise close / Counter-Clockwise open
5	Pressurization handle	Pressurize
6	Isolation valve	Isolate the connection between the pre-pressure side and the high pressure/ fine adjust side to prevent the leakage of the check valve

7	Locating pin	Pull out to unlock, lock when reset
8	Pressure fittings	Pressure connection fittings
9	Quick connector	1/4 NPT, 1/2 NPT, 1/4 BSP, 1/2 BSP, M20*1. 5

[1] Note: Must be switched after vented.

### Typical Operating Position

Handheld







On-table





### Quick Connector Adjustment



Note: The quick connector adjustment must be performed under zero pressure.

### **Basic Operation**

The following operations are illustrated in handheld mode.





# **Metrology Made Simple**

#### Statement

The product technical specifications, accessories and other related information in this manual are subject to change without prior notice. Please contact Additel Corporation if you have any questions.

Additel Corporation Website: www.additel.com Telephone: 714-998-6899



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