ADT773/783/793 Pressure Controllers
Quick Start Guide

[Version：2410V04]

Safety and Marks

> ⚠ Indicates the user must refer to the user manual prior to use the controller.

> ⚠ Indicates the terminals or sockets may have high voltage and user should avoid contact directly.

⚠ Warning

> Please read the user manual, especially the Safety Instructions before using this product.

> The device should be operated by trained professionals to prevent operator injury or equipment damage.

> Before using the device, please check its appearance for any damage.

> In case of the device is damaged or malfunctions, please do not use it and contact Additel.

> Only after understanding the safety instruction can the user operate the high-pressure system. When using compressed gas or compressed liquid, the pressure energy may be released suddenly, which is dangerous and please take precautions.

> Use only approved accessories. If the accessories are discolored, cracked, or damaged, do not use them.

> Before using the controller, please make sure all the pressure connections are secure.

> Do not disconnect or connect quick connectors under pressure.

> During pressure vent, do not face the vent port to operator.

> Do not disassemble the device without permission as it has internal high pressure during use.

> The ground of the controller must be connected to the AC power grounding.

> The voltage of controller's power supply may cause injuries to personnel. Even after switched off, dangerous voltage may exist in the capacitors for a while.

⚠ Note

> Do not introduce another pressure source to the same UUT when the controller is applying pressure to it at the same time. Any damage incurred by this will not be covered under the warranty.

> Do not apply pressure beyond the range of the controller, any damage caused by over pressuring will not covered by the warranty.

> Do not use in flammable, high humidity, or dusty environments.

> Avoid using the device in vibration, elevated temperature, high humidity or strong magnetic field environments.

> In the case of exposure to condensation, the controller must be dried out before switched on.

> If the UUT utilizes liquid, the liquid must be compatible with SS, aluminum copper alloy, NBR and PU. Corrosive solvent can damage the system's sealing and cause leakage or unable to control.

> For oil media, please use sebacate oil; for water media, please use deionized water.

> We recommend changing the hydraulic medium every three months (for water medium, it should be one week or less). In case the medium is turbid, it needs to be replaced in time.
> Gas: we recommend nitrogen or dry air; oxygen cannot be used as media.
> If using inert gas as pressure media, please make sure to have sufficient ventilation as the inert gas can be exhausted during use and can cause content rising in environment.
> For water media, please drain the water in the event of low temperature storage or extended period of non-use.
> Never apply a voltage over 30V between any two of the terminals.
> In case of device abnormal, please switch it off and contact Additel.
> Make sure the pressure is at zero before switching off the controller.

* **Warning:** Conditions or operations which may cause injury to operator.
* **Note:** Conditions or operations which may cause damage to device or UUTs.

Front Door

The front door is used for pressure modules. Pull the middle of door's upper edge slightly to open it, and the controller will be vented automatically. This allows the user to quickly change the pressure modules (different models support different module ranges), which can adopt for more applications.

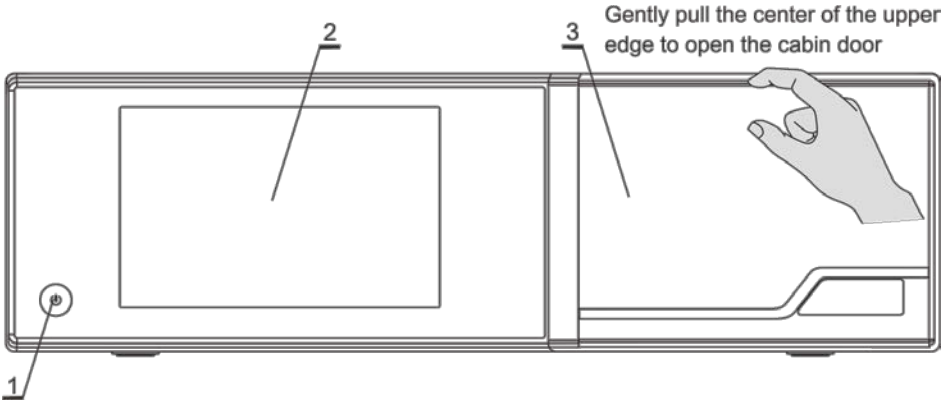
ADT773/783

⚠When there is only one module, it must be placed in the high module bay.

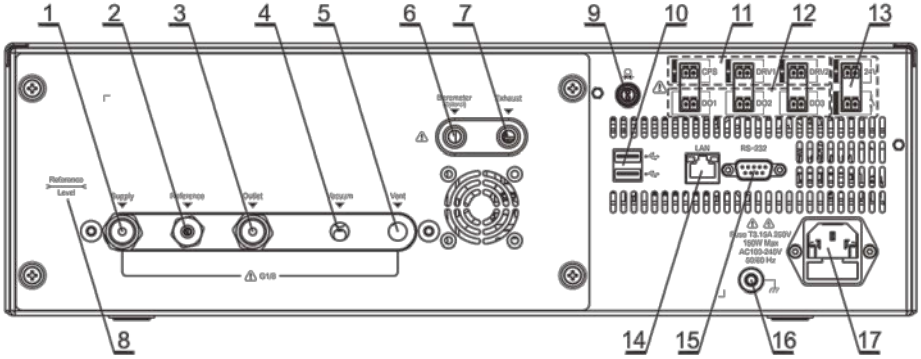
⚠For differential pressure models, the reference port of low module bay must be blocked by the plug in accessories.

ADT793

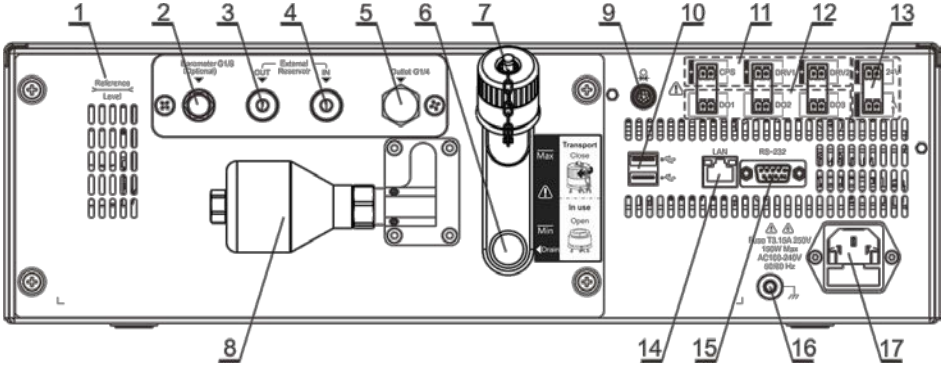
Basic Structure



Front view



Back view (ADT773/783)



Back view (ADT793)

Basic Structure

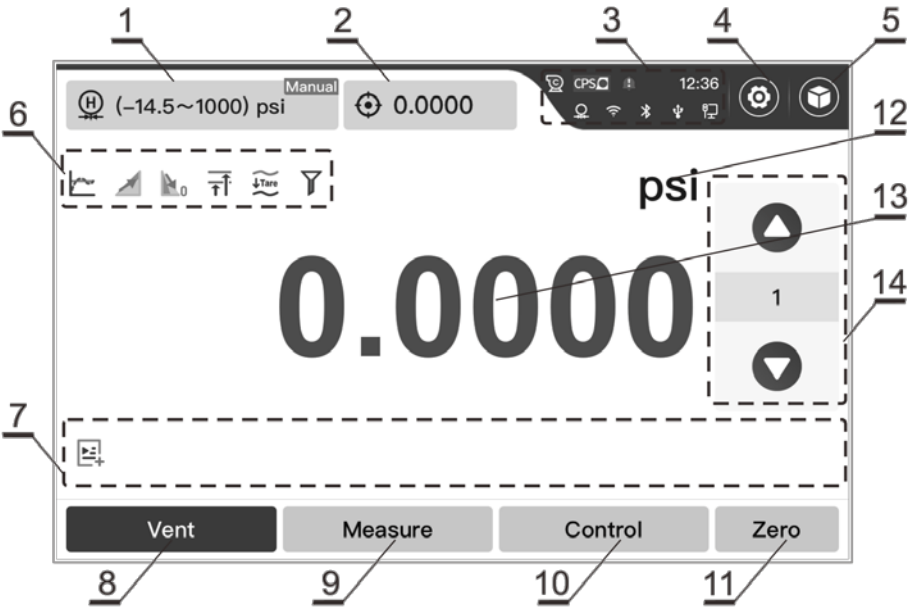
Front view table

No.	Name	Description
1	Power button	Switch on and off
2	Display	Display area, touchable
3	Front door	Position for pressure modules

Back view table

No.	ADT773/783	ADT793
1	Positive pressure source, 1/8 BSP F	Pressure reference level
2	DP reference port, 1/8 BSP F	Barometric measure port, 1/8 BSP F
3	Pressure output/measure port, 1/8 BSP F	External medium reservoir outlet, φ6 hose connected to used medium reservoir
4	Vacuum source port, 1/8 BSP F	External medium reservoir inlet, φ6 hose connected to the clean medium reservoir
5	Vent port, 1/8 BSP F	Pressure output/Measure port, 1/4BSP M
6	Barometric measure port, 1/8 BSP F	Liquid drain port
7	Air exhaust, 1/8 BSP F	Liquid filling, vent valve
8	Pressure reference level mark	Accumulator
9	Lemo port for external module (ADT793 supports external module as controlling module)	
10	USB port	
11	External drive valve ports (One channel fixed to the CPS pollution prevention device, the remaining 2 channels can be used to control the external vacuum pump and external isolation valve)	
12	I/O alarm output port	
13	Pressure switch test port	
14	Ethernet	
15	RS232	
16	Shell grounding	
17	AC power supply (AC100～240V, 50/60Hz, maximum power 150W)	
18	Chassis Size: 17.32×5.23×14.96 in (440(W)×133(H)×380(D) mm) Rack Mount Dimensions: 3U-19” rack, Horizontal Direction	

Main Display



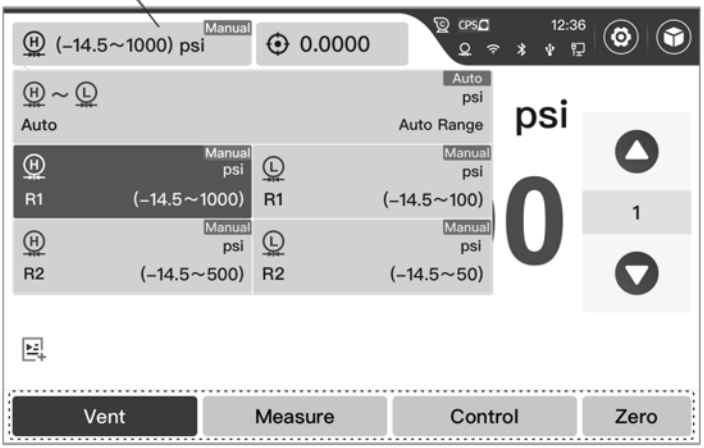
No.	Area	Description
1	Pressure control range	Click to switch the pressure control range, varies by different modules. 773/783: internal high range module (H), internal low range module (L) 793: internal module (I), external module (E)
2	Set point	Click to set the pressure control point
3	Status bar	Touchable, click to enter control center for system settings
		Date and time: show current date and time
		: WIFI status, show WIFI connect status and signal
		: LAN, connected to internet
		: USB device is connected
		: Bluetooth is enabled
		: External pressure module is online
		: Red icon indicates abnormal message
		: Vacuum pump, for DRV1 or DRV2 drives vacuum pump, only for ADT773/783
		CPS: Contamination prevention system

Main Display

No.	Area	Description
4	Settings	Including control Settings, system services, personalization, communication Settings, etc
5	Application	Various applications
6	Parameter preview	 fast  standard  custom, different control mode
		 head correction
		 Slew rate limit
		 Vent rate limit (only for ADT773/783)
		 Filter
		 Tare
7	Running information	View statistic and real time data, select any four of them to display
8	Vent	Quickly release the pressure and vent to atmosphere
9	Measure	In measurement mode, the instrument makes an accurate measurement of the measurement/output port connection
10	Control	In control mode, the controller outputs a high precision pressure value at the output port according to the set point
11	Zero	When the condition is met, zero can be performed. A zero icon will be shown after Auto-zero is enabled in control settings: 1) To perform zero, the current pressure should be no more than vent pressure value (for ADT793: vent pressure is 100kPa; for ADT793W, vent pressure is 500kPa; for ADT773/783, vent pressure can be set and view in control settings) 2) If perform zero when pressure value is higher than vent pressure, it will prompt reduce the pressure and then zero. 3) When performing zero, the controller will vent at first, after the condition is met, then perform zero
12	Pressure units	Click to switch pressure unit
13	Real-time pressure value	Show the real-time pressure of current range, when the real-time pressure reaches set point, the value will turn green, click to set a set point
14	Manual step	Click the number area to set step value, and click upward or downward to adjust the set point

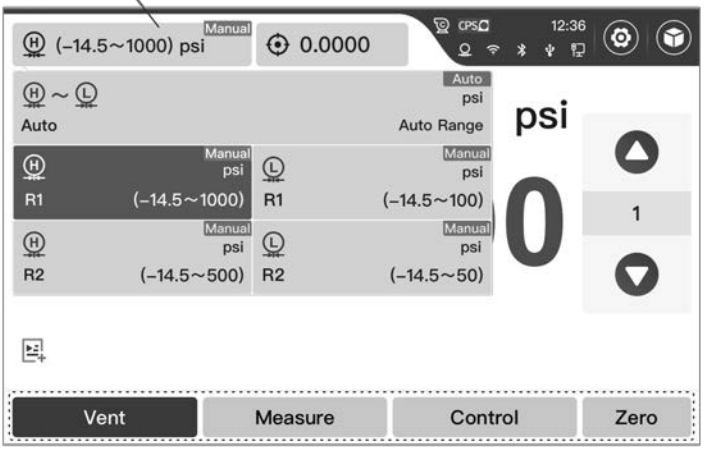
Switch Controlling Modules

Select pressure range here for ADT773/783



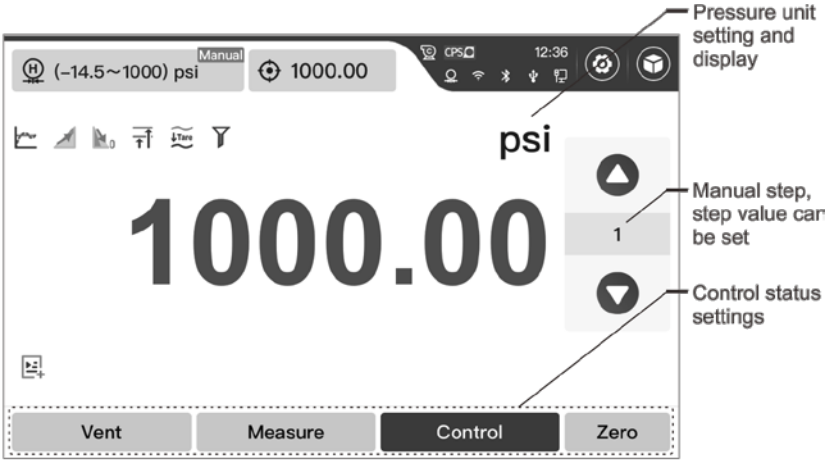
* ADT773/783 only support internal controlling module

Select pressure range here for ADT793



* ADT793 supports both internal and external controlling module

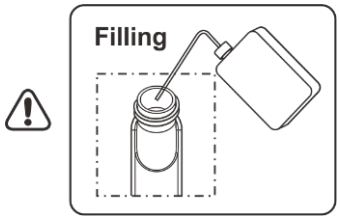
Pressure Control



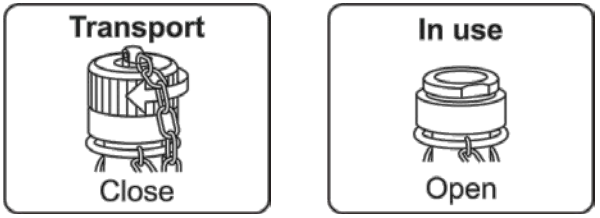
ADT793 First Use

a. Fill in media

* oil media: Recommend diethylhexyl sebacate
* water media: Recommend deionized water



b. Make sure the vent valve is open

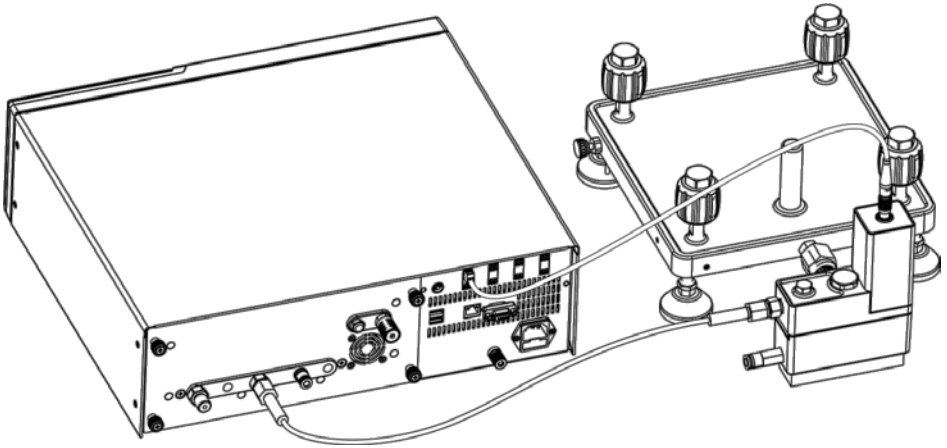


c. Perform Auxiliary aspiration application

When use the controller for first time, please go to System settings -- Maintenance -- Auxiliary aspiration, to make sure the pipelines are filled with media.

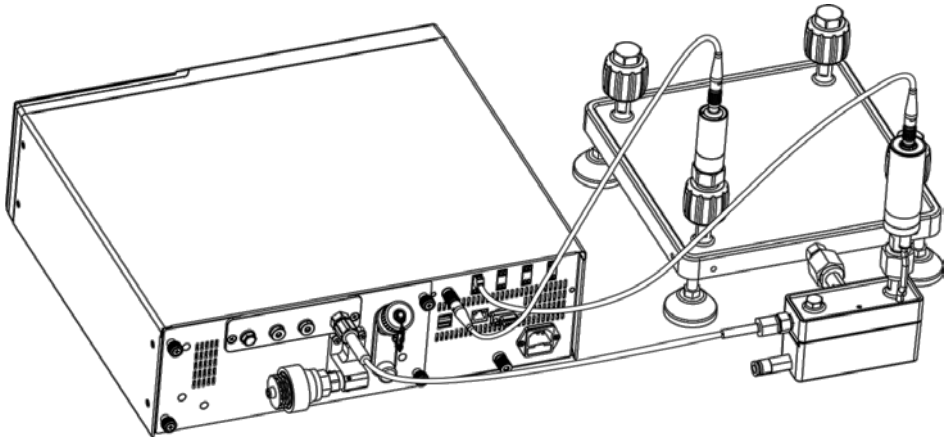
CPS System

ADT773/783



*Only schematic, please refer to actual order.

ADT793



*Only schematic, please refer to actual order.

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.

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Download User Manual