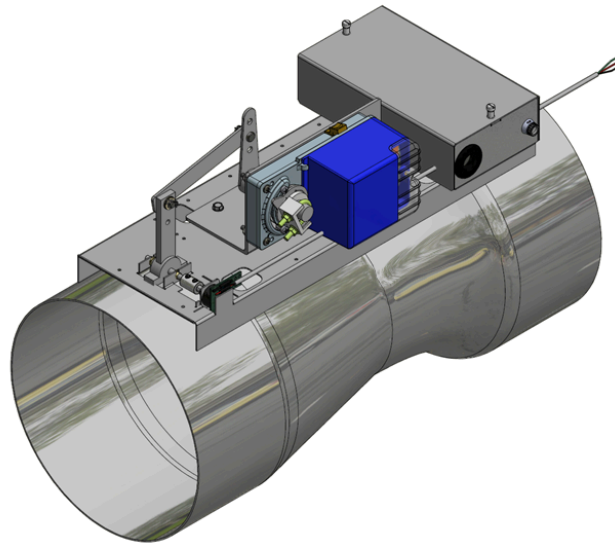

Description

The Venturi Valve Upgrade Kit converts legacy Venturi valves and tracking pair control systems to a digital system compatible with any building automation system (BAS). The original valve body can remain in the duct work if it is in good condition. The installer can simply remove the existing valve hardware and install the upgrade kit components.

Figure 1: Upgrade kit with UVM applied to a valve



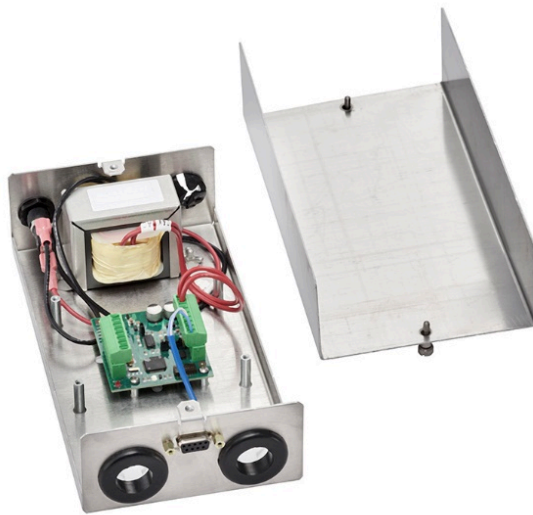
Features and Benefits

The upgrade kit enables your legacy valves to connect to your BAS and the optional digital fume hood controls, if installed on your corresponding fume hoods.

- Cost effective when compared to a complete laboratory renovation.
- Eliminates pneumatics and associated maintenance.
- Eliminates need for proprietary technology maintenance visits.
- Ability to integrate lab controls into any BAS, which eliminates gateways.
- Capability to control labs remotely with increased visibility and flexibility.
- Allows for phased in upgrades to fit your budget and schedule.
- Fast-acting digital actuators and digital controls eliminate pneumatics and associated maintenance.
- Enables replacement of legacy potentiometers with hall effect sensors that have longer life spans and less maintenance.
- Enables facility management to troubleshoot and maintain the lab system, which eliminates expensive maintenance visits.

UVM1000

Figure 2: Universal valve module



The Universal Valve Module (UVM) can enable interoperability between Venturi valves and third party controllers.

Each Venturi valve is individually characterized on a calibrated air line at the factory to generate its own unique position to cubic feet per minute (CFM) curve. You can use the UVM to create a linearization curve in each UVM1000 module for each associated valve. The linearization curve is accessible through 0 VDC to 10 VDC command control signal. You can also use the UVM to span, scale, and linearize the feedback sensor to obtain useful information from the UVM.

You only need a single UVM1000 for the whole valve unit assembly, even if multiple valve bodies are ganged together.

For a list of Venturi Air Valve with UVM1000 documents, see the following table:

Note: The part order number for the UVM is UVM1000.

Table 1: Venturi Air Valve brand specific documents

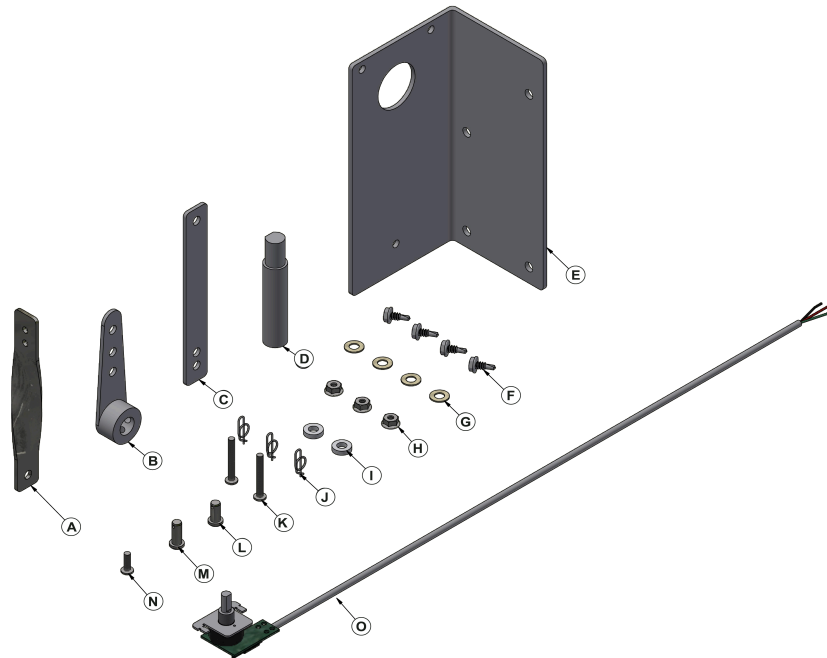
Brand	Venturi Air Valve Product Bulletin	Venturi Air Valve Installation Guide
ADTI	LIT-12013206	LIT-12014272
Triatek	LIT-12013220	LIT-12014273
Titus	LIT-12014050	LIT-12014051

Linkage and Hardware

The individual components of the upgrade kit are listed in the following table, along with the Universal Valve Module (UVM1000) which is required to integrate with your chosen BAS.

① **Note:** The UVM1000 does not come included in the upgrade kit. You must purchase it separately.

Figure 3: Upgrade kit components



Item	Quantity	Part No.	Description
A	1	N-104111	Twisted crank arm connector dual gang upgrade
B	1	N-103938	Crank arm 1/2 in. 3 hole
C	1	N-105070	Retro kit 1/4 in. hole crank arm
D	1	N-104462	Shaft actuator coupler short
E	1	N-101860	Retro kit actuator bracket
F	4	N-106010	Sheet metal screw 5/16 in. x 1/2 in.
G	4	N-104750	Nylatron washer 1/4 in. hole, 0.262 in. ID
H	3	N-104162	Nut lock ZPS 8-32 nylon insert
I	2	N-104750	Nylon sleeve washer 1/4 in. ID x 1 in.
J	3	N-104341	Cotter ring SS302 F/14 in. SH
K	2	N-103895	Screw 8-32 x 1-1/4 in. RND PHIL
L	1	N-104702	Clevis pin 1/4 in. diameter x 1/2 in. length
M	1	N-104826	Clevis pin 1/4 in. diameter x 5/8 in. length
N	1	N-104653	Screw 8-32 x 1/2 in. SS PHIL PH
O	1	S-300253	Hall Effect position sensor assembly

Actuator Selection

Figure 4: Actuator



You can select an actuator based on the valve body diameters. The larger air valves require higher torque ratings to ensure sufficient drive power to actuate the air valve across its entire flow range. See the following table for available actuator options.

Table 2: Air Distribution Technologies, Inc actuator options

Valve body diameter	ADTI SKU	Torque	Fail safe options
14 in.	LB-SM060-TK7	70 in.lb. (5.6 Nm)	Fail safe through charged capacitor
8 in., 10 in., 12 in.	LB-BM060-TK6	50 in.lb. (5.6 Nm)	Fail safe through charged capacitor
14 in.	LB-SM00-TK7	70 in.lb. (8 Nm)	No fail safe. Fails in last position
8 in, 10 in., 12 in.	LB-BM00-TK6	50 in.lb. (8 Nm)	No fail safe. Fails in last position

Table 3: Triatek actuator options

Valve body diameter	Triatek SKU	Torque	Fail safe options
14 in.	SM060-TK7	70 in.lb. (5.6 Nm)	Fail safe through charged capacitor
8 in., 10 in., 12 in.	BM060-TK6	50 in.lb. (5.6 Nm)	Fail safe through charged capacitor
14 in.	SM00-TK7	70 in.lb. (8 Nm)	No fail safe. Fails in last position
8 in, 10 in., 12 in.	BM00-TK6	50 in.lb. (8 Nm)	No fail safe. Fails in last position

Table 4: Titus actuator options

Valve body diameter	Titus SKU	Torque	Fail safe options
14 in.	TT-SM060-TK7	70 in.lb. (5.6 Nm)	Fail safe through charged capacitor
8 in., 10 in., 12 in.	TT-BM060-TK6	50 in.lb. (5.6 Nm)	Fail safe through charged capacitor
14 in.	TT-SM00-TK7	70 in.lb. (8 Nm)	No fail safe. Fails in last position
8 in, 10 in., 12 in.	TT-BM00-TK6	50 in.lb. (8 Nm)	No fail safe. Fails in last position

Table 5: Actuator specifications

Brand SKU	Description
Air Distribution Technologies, Inc SKU	
LB-SM060-TK7	Actuator TK7 70 in.lb. open/close
LB-BM060-TK6	Actuator TK6 50 in.lb. open/close
LB-SM00-TK7	Actuator TK7 70 in.lb. last
LB-BM00-TK6	Actuator TK6 50 in.lb. last
Triatek SKU	
SM060-TK7	Actuator TK7 70 in.lb. open/close
BM060-TK6	Actuator TK6 50 in.lb. open/close
SM00-TK7	Actuator TK7 70 in.lb. last
BM00-TK6	Actuator TK6 50 in.lb. last
Titus SKU	
TT-SM060-TK7	Actuator TK7 70 in.lb. open/close
TT-BM060-TK6	Actuator TK6 50 in.lb. open/close
TT-SM00-TK7	Actuator TK7 70 in.lb. last
TT-BM00-TK6	Actuator TK6 50 in.lb. last

Ordering Process

The quantity of kits you need to order depends on the quantity of valve bodies that you need to upgrade. Single valves require a single actuator, single hardware kit, and a single UVM. Dual ganged valves require two actuators, two hardware kits, and a single UVM. Triple ganged valves require three actuators, three hardware kits, and one UVM.

Enter each component as a separate line item:

- **Venturi valve upgrade kit:** The hardware and linkage upgrades you need for a single valve body. You need multiple kits for ganged valves. Part No. VV-UPGRADE-KIT.
- **Actuator:** Fast acting actuator replaces the legacy two position pneumatic actuator. You need multiple actuators for ganged valves. To select to correct actuator SKU, see [Table 5](#).
- **UVM1000:** Venturi air valve flow linearization module commands and controls the device. You only need one UVM for the entire unit, regardless of the number of ganged valve bodies. Part no. UVM1000.

North American Emissions Compliance

United States

This equipment has been tested and found to comply with the limits for a Class A digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when this equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area may cause harmful interference, in which case the users will be required to correct the interference at their own expense.

Warning (Part 15.21)

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Canada

This Class (A) digital apparatus meets all the requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numérique de la Classe (A) respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

Industry Canada Statement(s)

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions:

1. This device may not cause interference, and
2. This device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

1. L'appareil ne doit pas produire de brouillage, et
2. L'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Product Warranty

This product is covered by a limited warranty, details of which can be found at <https://www.airdistribution.com/sales-terms/>

Software Terms

Use of the software that is in (or constitutes) this product, or access to the cloud, or hosted services applicable to this product, if any, is subject to applicable end-user license, open-source software information, and other terms set forth at ?? Your use of this product constitutes an agreement to such terms

Single Point of Contact

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Contact Information

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