



**SDVLP 5000**  
**SINGLE DUCT VARIABLE VOLUME**  
**CONTROL ASSEMBLIES**  
**c/w DIRECT DIGITAL CONTROLS**  
**INSTALLATION MANUAL**

Date: 04/11  
Reference #: F-42

## SDVLP 5000

### General Description

The 5000 assembly is designed to accept direct digital controls (DDC) for VAV pressure independent operation.

The terminal unit controls are supplied by the controls contractor and either factory or field mounted and wired. For information concerning controls, components, sequence of operation, etc., please refer to the documentation provided by the controls contractor.

### Receiving Inspection

After unpacking the assembly, check it for shipping damage. If any shipping damage is found, report it immediately to the delivering carrier. During unpacking and installation do not handle by the inlet velocity sensor, damper shaft, or tubing. Damage may result.

### Wiring

If controls have been factory mounted, a wiring diagram will be included with the unit indicating the factory mounted components. For field wiring of room sensors and other accessories, refer to the controls contractor's documentation. If the controls have been field mounted, refer to the controls contractor's documentation for all wiring information.

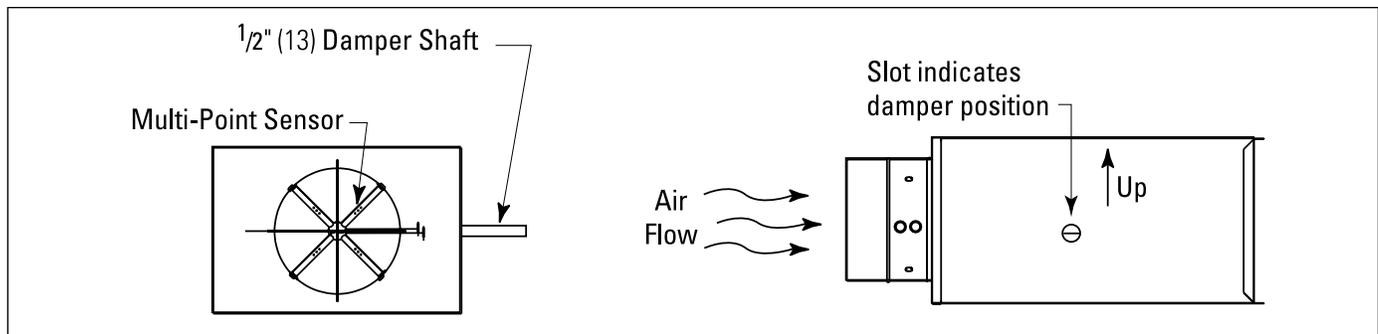
### Installing the SDVLP 5000 Terminal Unit

The basic SDVLP 5000 is light enough that it can be supported by the ductwork in which it is installed. Where accessory modules, such as coils, attenuators or multiple outlets are included, the assembly should be supported directly. Use the support method prescribed for the rectangular duct in the job specifications.

**Important:** For optimum performance there should be a minimum of three duct diameters of straight inlet duct, **same size as the inlet**, between the inlet and any transition, take off or fitting.

The assembly should be mounted right side up. It should be level within  $\pm 10$  degrees of horizontal, both parallel to the air flow and at right angles to the air flow. The side of the assembly is labelled with an arrow indicating UP. Do not mount the control side of the assembly tight to a wall, pipe or other obstruction. Allow sufficient room for access to the controls.

To prevent excess air leakage, all joints should be sealed with an approved duct sealer. This would apply to all accessory module connections as well as the basic assembly.



Damper rotation is always clockwise to the open position. An identification mark on the end of the shaft indicates the damper position.

The factory supplied sensing lines are color coded. Red indicates the total pressure or "HI" line which should be located on the upstream side. Green indicates the static pressure or "LO" line which should be located on the downstream side.

An optional protective enclosure may be provided to house the terminal unit control components. The enclosure cover is removable with two sheet metal screws.

The velocity sensor is normally supplied as standard with the terminal unit. However, in some cases a flow sensing device supplied by the controls contractor may be factory or field mounted. Refer to the submittal drawing for illustration.

The air volume ranges listed are recommended for optimum performance. A minimum value of zero is also acceptable if no heating coils are attached.

Selection of air flow limits below the listed values is not recommended. Stability and accuracy may not be acceptable at lower than recommended air flow limits. The actual performance will vary depending on the terminal unit controls supplied.

### Air Volume Ranges

Unit Size	CFM	L/S
	Min. - Max	Min. - Max
4	50 - 225	24 - 106
5	63 - 350	30 - 165
6	66 - 450	31 - 212
7	99 - 650	47 - 307
8	132 - 800	62 - 378
9	226 - 1050	108 - 496
10	262 - 1350	126 - 637
12	362 - 2100	173 - 991
14	471 - 3000	226 - 1416
16	657 - 4000	315 - 1888

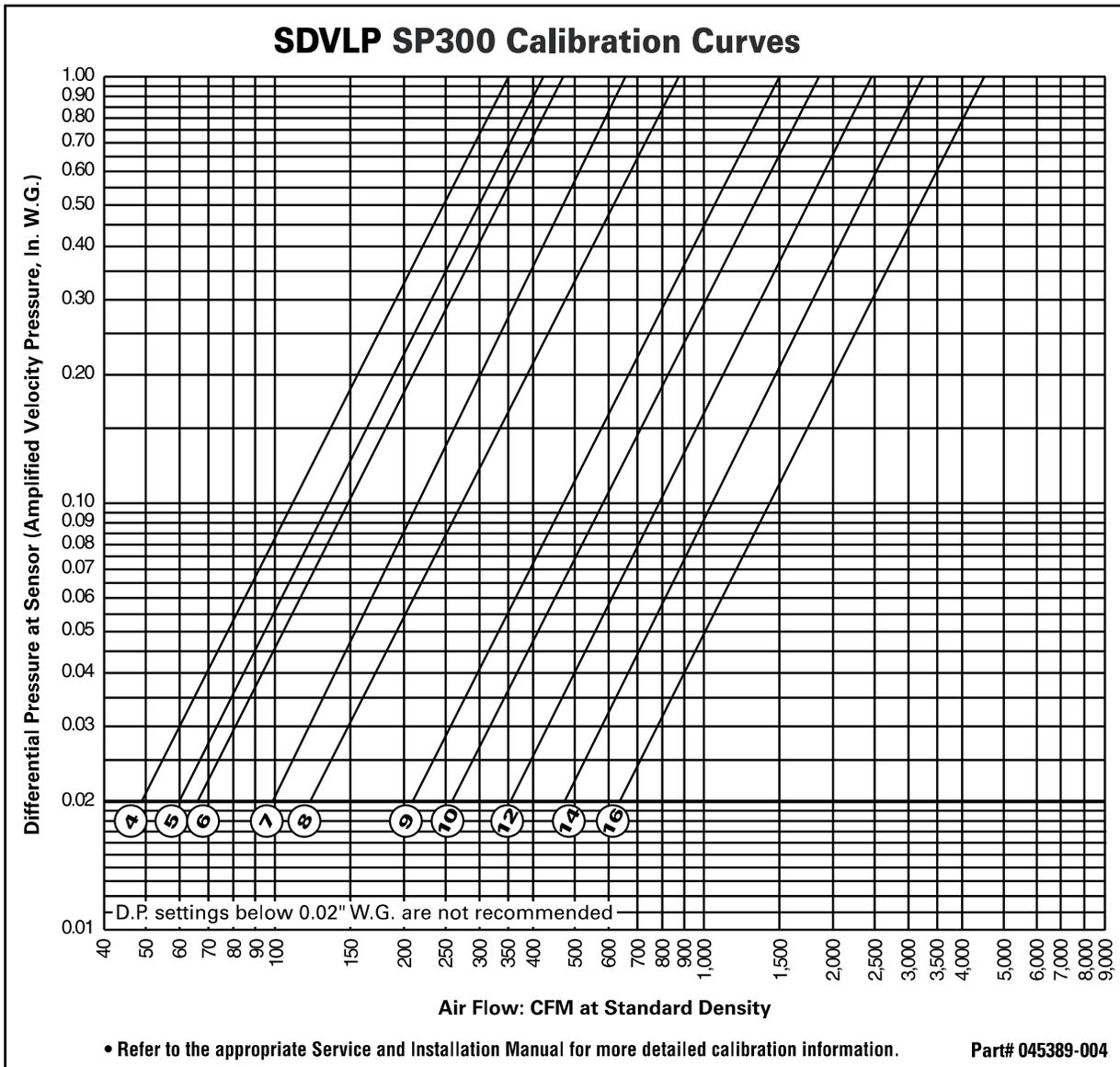
#### Notes:

Factory calibrated controls must be selected within the above flow range limits. A minimum value of zero is also available. When an auxiliary flow setting is specified, the value must be greater than the minimum setting and within the range limits.

On controls mounted by Price but supplied by others, the air volume ranges are guidelines only.

Selection of air flow limits below the listed values is not recommended. Stability and accuracy may not be acceptable at lower than recommended air flow limits. The actual performance will vary depending on the terminal unit controls supplied.

# SP300 Calibration Curves



## Calibration Equation

$$VP = \left(\frac{Q}{K}\right)^2$$

- VP** - differential pressure at sensor, inches w.g.
- Q** - air flow rate, cfm at standard density.
- K** - calibration constant

Unit Size	K
4	340
5	426
6	468
7	673
8	890
9	1506
10	1837
12	2499
14	3326
16	4650

## NOTES

1. Gauge taps are normally supplied with the pneumatic controls to allow field measurement of the differential pressure at the sensor with a manometer, magnahelic or other measuring device.  
If the terminal velocity controls utilize a flow-through transducer, a proper velocity pressure reading will NOT be read at the gauge taps and the calibration curves CANNOT be used for field measurement. The flow-through transducer operates on the principle of mass flow rather than pressure differential.  
Controls utilizing a dead-ended pressure transducer will allow field measurement with the gauge taps and calibration curves provided.
2. Setting flow limits for a differential pressure of less than 0.02 inches in NOT recommended. Stability and accuracy of flow limits may not be acceptable due to low velocity pressure signal. Performance will vary depending on the terminal unit controls provided.
3. For field calibration of air flow limits refer to the control contractor's documentation.



**PRICE**  
INDUSTRIES

2975 Shawnee Ridge Court  
Suwanee, Georgia USA 30024  
Ph: 770.623.8050 Fax: 770.623.6404



**PRICE**  
INDUSTRIES

1290 Barrow Industrial Parkway  
Auburn, Georgia USA 30011



**PRICE**  
INDUSTRIES

999 North Thornton Road  
Casa Grande, Arizona USA 85222-3809



**e.h. price**  
LIMITED

638 Raleigh Street  
Winnipeg, Manitoba Canada R2K 3Z9  
Ph: 204.669.4220 Fax: 204.663.2715

The founding principles of our company have never changed - business integrity, first class service and a commitment to people. Price manufacturing endeavors arose from our belief that we could supply superior products and services at a reasonable price. Our mission is to become the world-wide supplier of preference for air distribution products and services. You can rely on Price – our products and services – with confidence.

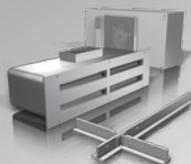
**Warranty:** The Company warrants and guarantees that all goods within this catalog that have been manufactured by the Company have been manufactured in accordance with the specifications published herein and will be free from defects in material and workmanship for a period of twelve (12) months from the date of Bill of Lading issued by the Company. The Company will replace defective product at its option, but will not be responsible for labor or material charges in replacing product or consequential damages. Any installation not conforming with the Company's specifications, manuals, bulletins or instructions or any misuse or any modification not authorized by the Company voids this warranty. This warranty is in lieu of all Provincial, State, and Federal statutory warranties and the conditions herein are in substitution and replacement of such warranties, statutory or otherwise.

Your Local Price Representative:

Grilles & Diffusers



Critical Environments



Terminals



Sustainable Building



Noise Control

