

Installation Guide

NOTE: This installation guide is for installing SSS-10xx models. For guidance in installing SSS-111x models, see the [KMC Conquest Airflow Measurement System Installation Guide](#).

Mounting for Differential Pressure Flow

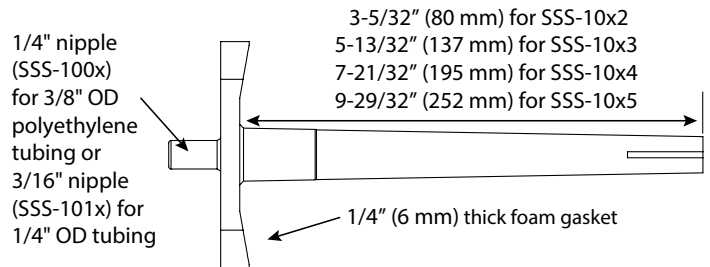
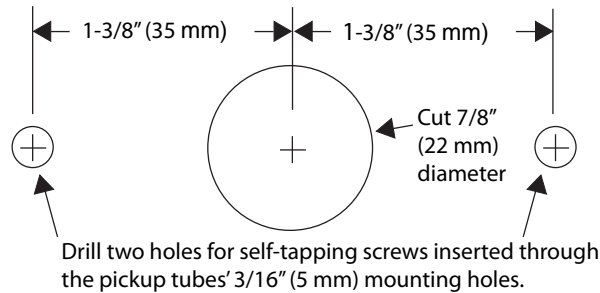
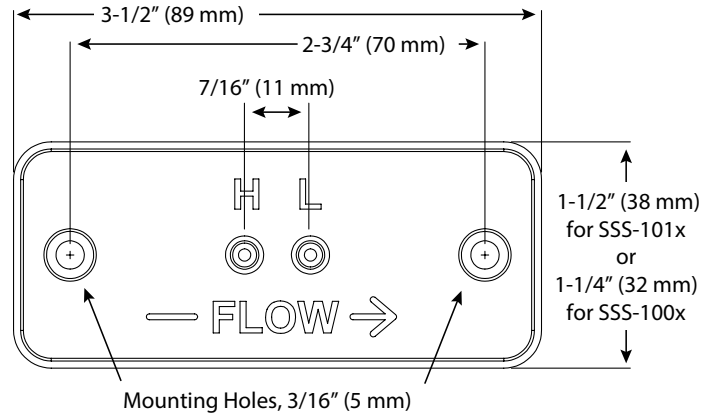
To mount the pickup tubes for differential pressure:

1. Determine the duct's flow direction and install the pickup tubes based on the flow arrow imprint.

NOTE: The pickup tubes must be mounted with the **FLOW** arrow imprint pointing in the direction of the air flow.

2. Cut a 7/8" (22 mm) hole in the duct to accept the pickup tubes.

3. Attach the pickup tubes to the duct using two self-tapping screws inserted through the 3/16" (5 mm) mounting holes.



Connections

Use appropriately sized polyethylene tubing to connect the pickup tubes to the controller:

- For connecting SSS-10xx pickup tubes with CSC-3000 series, CSP-4000/5000 series, KMD-7000 series, and BAC-7000/8000/9000 series controllers, use a barb union adapter and tubing sized appropriately to the pickup tubes and controller. For maximum accuracy in the CSP-5000 series, KMD-7000 series, and BAC-7000 series controllers, the 3/8" OD tubing between the pickup tubes and the adapter should be as short as possible, and the 1/4" OD tubing from the adapter to the controller should be 24" long (on both the High and the Low sides).
- OR use the equivalent SSS-101x pickup tubes and just 1/4" OD tubing (no adapter is necessary). For maximum accuracy in the CSP-5000 series, KMD-7000 series, and BAC-7000 series controllers, the 1/4" OD tubing from

the pickup tubes to the controller should be 24" long (on both the High and the Low sides).

NOTE: For other controllers, the length of the tubing should not be longer than necessary.

NOTE: CSC-2000 series controllers have ports for 3/8" tubing (the same as the SSS-10xx pickup tubes).

Check that there are no sharp bends in the tubing at any connection. Bends and creases may leak as tubing ages.

1. Connect the Port "H" to the "High" input on the VAV controller.
2. Connect the Port "L" to the "Low" input on the VAV controller.

Mounting for Static Pressure

To mount the pickup tubes for static pressure:

1. Determine the duct's flow direction and install the pickup tubes so that the FLOW arrow imprint is **perpendicular** to the direction of the air flow.

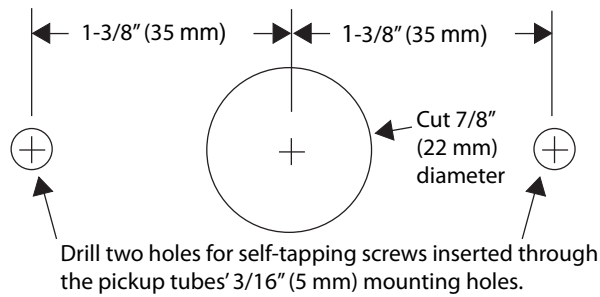
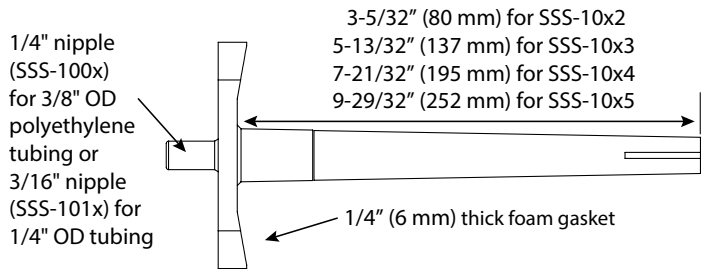
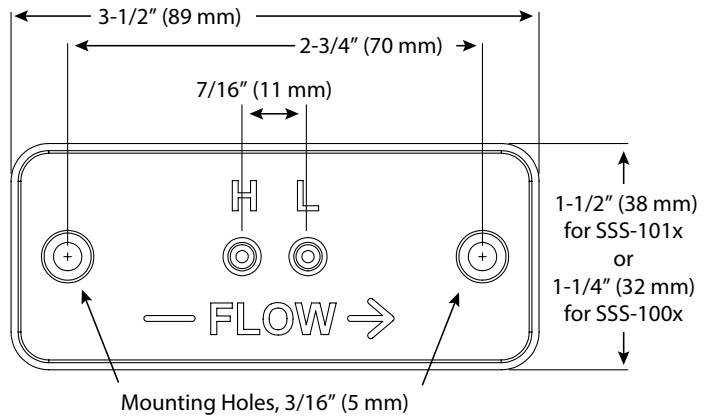
NOTE: The FLOW arrow imprint on the pickup tubes can point either up or down.

NOTE: It is recommended that an indication or marking be applied to the SSS-10xx probe to indicate the intended orientation.

2. Cut a 7/8" (22 mm) hole in the duct to accept the pickup tubes.

3. Attach the pickup tubes to the duct using two self-tapping screws inserted through the 3/16" (5 mm) mounting holes.

NOTE: If mounting SSS-10xx pickup tubes perpendicular to a relatively small diameter round duct, take care not to break the pickup tubes by overtightening the screws and overflexing the plastic mount.

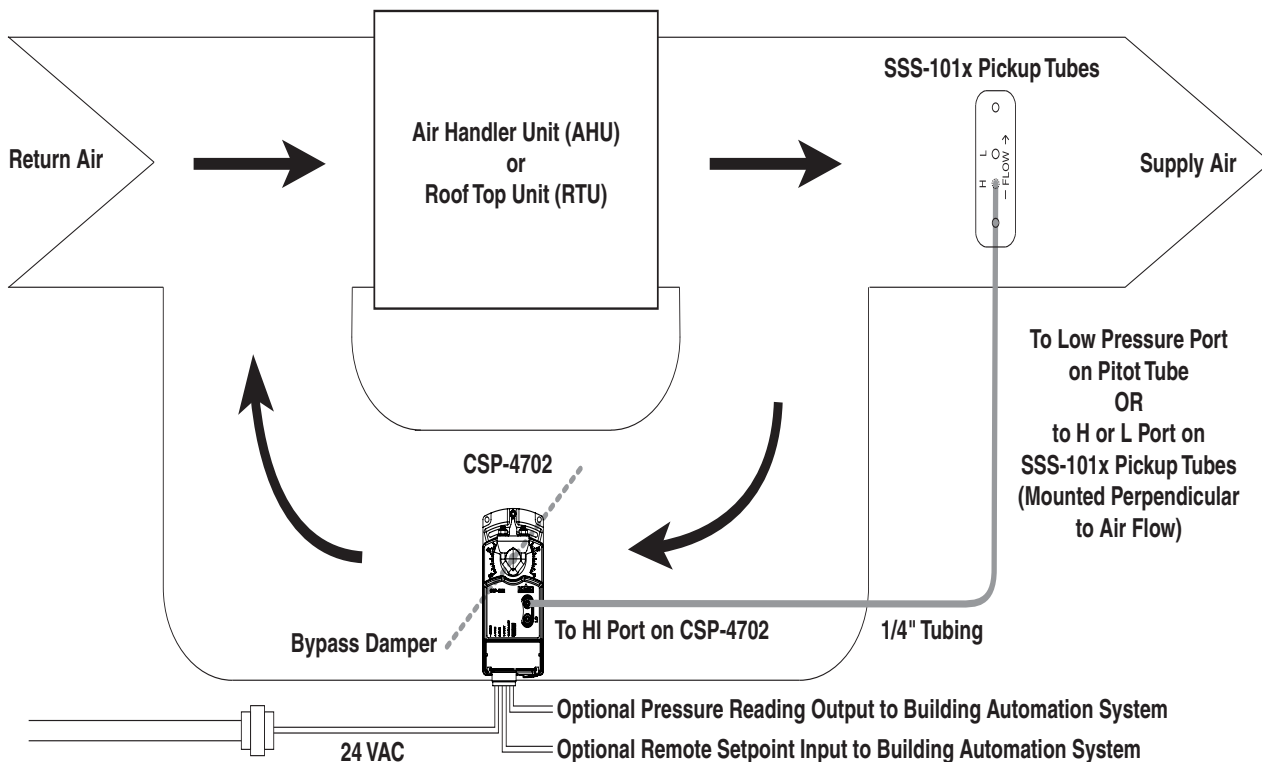


Connections

Using appropriately sized polyethylene tubing, connect either the H or L port on the pickup tubes to the High port on the controller.

NOTE: The other port of the pickup tubes is left unconnected and open to air.

NOTE: Tubing should be free of kinks and restrictions.



Select Specifications

Material	Light gray (SSS-100x) or almond (SSS-101x) ABS/polycarbonate (UL94-5V)
Connection	1/4" nipple (SSS-100x) for 3/8" OD polyethylene tubing or 3/16" nipple (SSS-101x) for 1/4" OD tubing
K Factors	Refer to the data sheet for additional information!

NOTE: The appropriate "K" factor for the pickup tubes depends upon the type of setup required by the VAV controller with which it will be used:

- For VAV controllers that require K_{CFM} for setup, refer to the "Cubic Feet Per Minute (CFM)" chart below and the device documentation for additional information. For rectangular ducts, $K_{CFM} = K_{FPM} \times (W \times H / 144)$ (with duct cross-section measurements in inches).
- For VAV controllers that require K_{FPM} for setup, refer to the "Feet Per Minute" chart below and the device documentation for additional information.

"Cubic Feet Per Minute (CFM)" K Factors				
Round Duct Size (Diameter)	K_{CFM} Factor			
	SSS-10x2	SSS-10x3	SSS-10x4	SSS-10x5
4	301	NA	NA	NA
5	470	NA	NA	NA
6	677	648	NA	NA
7	922	882	NA	NA
8	1204	1152	1117	NA
9	1524	1458	1414	NA
10	1882	1800	1745	1745
12	2710	2592	2513	2513
14	3688	3528	3421	3421
16	4817	4608	4468	4468
18	6097	5832	5655	5655
22	9107	8711	8447	8447
24	10838	10367	10053	10053

"Feet Per Minute" K Factors	
Pickup Tube Model	K_{FPM}
SSS-10x2	3450
SSS-10x3	3300
SSS-10x4	3200
SSS-10x5	3200

Maintenance

The air pickup orifices must be kept free of dust accumulation or debris. The pickup tubes are designed for dependable, long-term reliability and performance.

More Information

For additional K factor and other information, see the data sheet for the SSS-1000 series on the KMC web site (www.kmcccontrols.com).

Important Notices

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