

Safety Consideration

The equipment covered by this manual is designed for safe and reliable operation within its design specification limits. To avoid personal injury or damage to equipment or property while installing or operating this equipment, it is essential that qualified, experienced personnel perform these functions using good judgment and safe practices. Equipment is not to be used by persons (including children) with reduced physical, sensory, or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction. Children being supervised should NOT play with equipment. Equipment's maximum altitude of use is 2,200 m.

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 or the control package.

Supporting the Assembly

Dual duct units are designed to be independently supported. When requested, unit is supplied with field mounted hanger brackets for use with hanger rod up to 3/8" (9.5) dia. Hanger brackets should be screwed into the top of the unit casing sides and/or the inlet and outlet ends. Hanger straps may alternately be used and screwed directly into the sides of the unit casing. Use the support method prescribed for the rectangular duct in the job specifications.



Important: If unit is equipped with pneumatic controls, it should be mounted right side up and level within ± 10 degrees of horizontal and parallel to the airflow. The terminal is marked with a label stating "Top of Unit".

The first letter in the model number indicates control type (P is for pneumatic). If the unit is mounted upside down, the controllers will have to be re-positioned, re-piped, and re-calibrated. Analog control units (A-analog model number pre-fix) may be installed in any orientation. Some Digital (DDC) controls (D-digital model number pre-fix) are position sensitive dependent on the airflow sensor transducer. Check with the controls manufacturer for verification.

Duct Connections

Slip each inlet duct over the inlet collar of the terminal. Fasten and seal the connection as described in the job specification. The diameter of the inlet duct "D" (see Figure 1) for round inlets (Models 3230 and 3240 with mixing attenuators) must be equal to the listed size of the terminal; i.e., a duct that actually measures 8" (203) must be fitted to a size 8 terminal inlet. The inlet collar is made 1/8" (3) smaller than nominal duct size in order to fit inside the duct. Model 3210 (no mixing attenuator) utilizes flat oval inlet collars on unit sizes 12 through 16. They are undersized for flexible duct connection. For hard inlet duct connections, refer to submittal drawing for dimensional data. The supply ductwork should be insulated up to the face of the terminal unit.



Important: Do not insert duct work inside the inlet collar of the assembly. For optimum performance, 2 to 3 equivalent diameter of straight duct should be installed prior to the inlet of the unit. All ducts should be installed in accordance with SMACNA guidelines. The outlet end of the terminal for models 3230 and 3240 is supplied with a rectangular collar. A rectangular duct the size of the terminal outlet should be attached.

Model 3210 is supplied with slip and drive duct connections. A rectangular duct, the size of the terminal outlet should be installed.

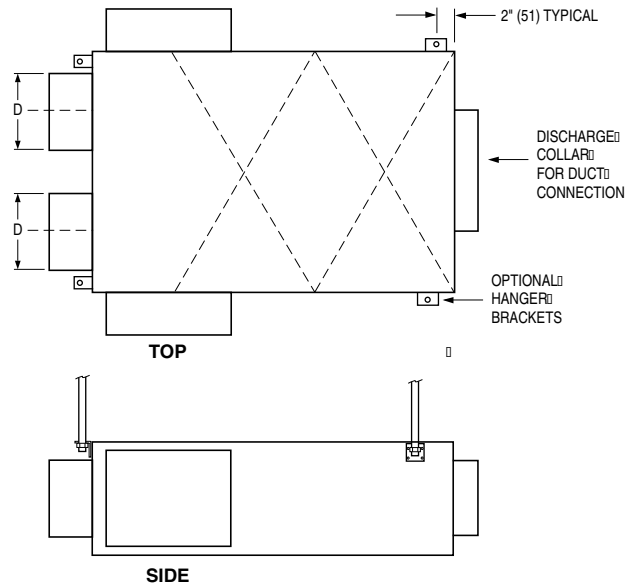


Figure 1: Dual Duct Terminal Unit Support using hanger brackets and rods.

Field Wiring

All field wiring must comply with NEC and local codes. Electrical, control, and piping diagrams can be found on labels affixed to the exterior/interior of the control enclosure box.

Control Start-up, Operation

Your local Nailor Representative can provide detailed information about start-up and operating procedures for Nailor's digital, analog, and pneumatic controls. For specific information on controls provided by other manufacturers, contact the specific manufacturer's local or national office. This applies whether the controls were factory or field mounted.




Note: Digital controllers may use specific communication addresses based on Building Management Systems Architecture and original engineering drawings. Installing the terminal in a location other than that noted on the label may result in excessive start-up labor.

Labels

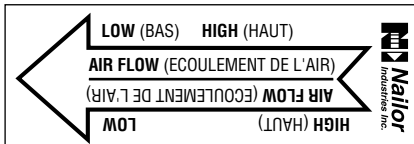
Dual duct terminal units are shipped from the factory with the following information labels.

1) Nameplate Label – affixed to the air terminal casing on the control mounting panel. Shows tagging information, serial number, model number, size, cfm, etc.

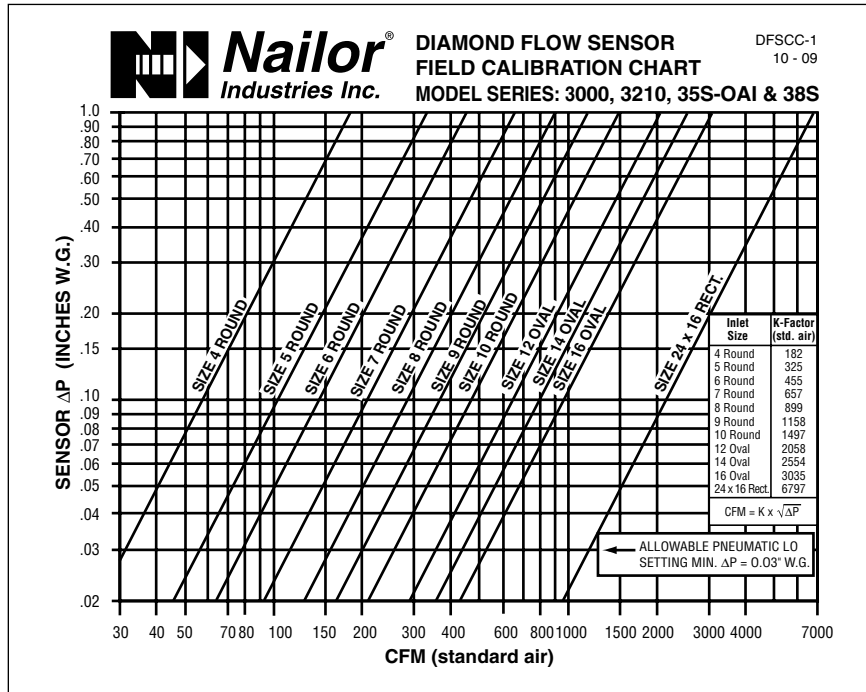
Nameplate Label

	DUAL DUCT TERMINAL UNIT	(UNITE TERMINALE @ VENTILATEUR INTEGRÉ)
DATE (DATE) : 7-Nov-2001	SERIAL NO. (NO. DE SÉRIE)	: 11673-2
MODEL (MODÈLE) :	P3230	TAG NO. (NO. D'ÉTIQUETTE) : JBH
UNIT SIZE-INLET SIZE : 8		VOLTAGE (VOLTAGE) :
<i>(DIAMÈTRE D'ENTRÉE)</i>		
CONTROL VOLTAGE : 24		
<i>(VOLTAGE DE CONTRÔLE)</i>		
CONTROL SEQUENCE : DP3		
<i>(SEQUENCE DE CONTRÔLE)</i>		
<div style="border: 1px solid black; padding: 5px; width: fit-content;"><p>USE WIRE SUITABLE FOR AT LEAST 75 °C L1 IS COLOR CODED BLACK, L2 IS BLUE, L3 IS RED CONTROL WIRES CODED AS MARKED USE COPPER CONDUCTORS ONLY.</p></div>	<div style="border: 1px solid black; padding: 5px; width: fit-content;"><p>UTILISER UN FIL MÉTALLIQUE QUI CONVIENT AU MOINS 75 °C L1 EST COLORÉ NOIR, L2 EST BLEU, L3 EST ROUGE, LES FILS DE CONTRÔLE SONT IDENTIFIÉS COMME MARQUÉS, UTILISER DES CONDUCTEURS DE CUIVRE SEULEMENT.</p></div>	
<small>USE CLASS K, RK1, A2D OR A6D FUSE OR HACR BREAKERS.</small>	<small>UTILISER DES FUSIBLES CLASS K, RK1, A2D, OU A6D OU HACR DISJONCTEURS.</small>	
CFM (MAX/MIN) :	L/S (MAX/-MIN) :	

Airflow Direction (affixed to inlet collars)



Sample Calibration Label - affixed near the control mounting panel. Shows airflow calibration data.



Replacement Parts

Primary Damper Valve

Models 3230 and 3240

Size	Part Number
Size 4", 5", 6"	VB3-331
Size 7", 8"	VB3-333
Size 9", 10"	VB3-334
Size 12"	VB3-335
Size 14"	VB3-336
Size 16"	VB3-337
Models 3210	
Size 4", 5", 6"	VB3-231
Size 7", 8"	VB3-233
Size 9", 10"	VB3-234
Size 12"	VB3-235
Size 14"	VB3-236
Size 16"	VB3-237

Pneumatic FR Tubing (1/4" O.D.)

Black	VB3-066
Blue stripe	VB3-068
Red stripe	VB3-067

Tee for Sensor Tap

Barbed, 1/8" VB3-058

Cap for Sensor Tee

Rubber, for 1/8" Tee VB3-059

Diamond Flow Sensor

Inlet Size	Part Number
4"	3/16" O.D. tube V1104
5"	3/16" O.D. tube V1105
6"	3/16" O.D. tube V1106
7"	3/16" O.D. tube V1107
8"	3/16" O.D. tube V1108
9"	3/16" O.D. tube V1109
10"	3/16" O.D. tube V1110
12"	3/16" O.D. tube V1112
14"	3/16" O.D. tube V1114
16" 3/16" O.D. tube	V1116

Control Components

Digital - See Digital Operation Manual
 Analog - See Analog Operation Manual
 Pneumatic - See Pneumatic Operation Manual



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