

# INSTALLATION INSTRUCTION

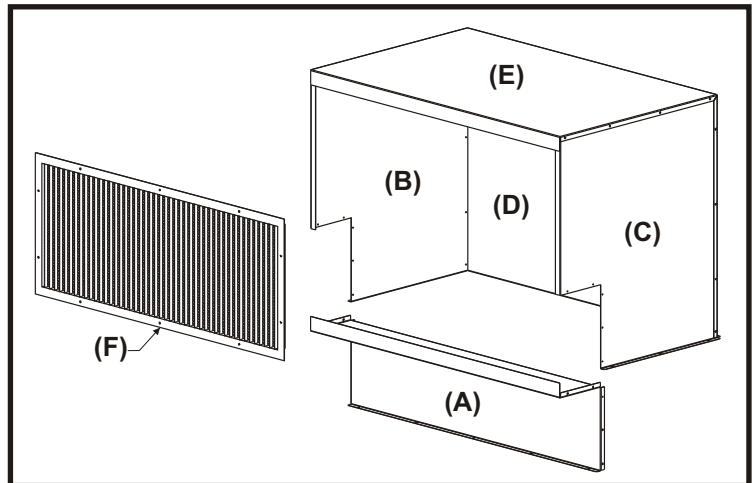
## INSTALLATION INSTRUCTIONS FOR 560201 SUPPLY AIR PLENUM AND GRILLE KIT B5SM-090/120 SERIES AIR HANDLER

FORM# 571D-0210

### I - SHIPPING AND PACKING LIST

Package 1 of 1 contains:

- 1 ea. - Supply Air Plenum - Front (A)
- 1 ea. - Supply Air Plenum - Left (B)
- 1 ea. - Supply Air Plenum - Right (C)
- 1 ea. - Supply Air Plenum - Back (D)
- 1 ea. - Supply Air Plenum - Top (E)
- 1 ea. - Adjustable Supply Register (F)
- 52 ea. - Screws



Check contents for shipping damage. Contact the last carrier immediately if any shipping damage is found.

### II - APPLICATION

This supply air plenum assembly consists of fully insulated 18 gauge painted galvanized steel panels and an adjustable double deflection aluminum discharge air grille. It is designed for application on **NORDYNE's** B5SM Series - 7.5 and 10 ton Light Commercial Air Handlers.

Read these instructions in their entirety before proceeding with the installation of the this accessory kit.

### **Warning:**

This kit is to be installed by a qualified service technician in accordance with these instructions and all codes having jurisdiction. Failure to follow these instructions could result in serious injury, property damage, or death. These instructions are primarily intended to assist qualified individuals experienced in the proper installation of this appliance. Some local codes require licensed installation/service personnel for this type of equipment.

### III - INSTALLATION

1. **DISCONNECT ALL POWER TO UNIT.**
2. Locate plenum front panel (A) and mount to the air handler using holes provided in the unit top pan.
3. Attach left side panel (B) to the air handler top pan and plenum front panel. Repeat for right side panel (C).
4. Attach back panel (D) to air handler and secure to both side panels (B & C).
5. Add top pan (E) to the assembly and secure both sides.
6. **Before attaching adjustable air grille to plenum:**
  - a. Check for all insulation to be securely in place.
  - b. Adjust outlet air pattern of register based on application and louver deflection settings provided. **(See Figure 1)**
7. Mount supply register into the plenum. Align and secure using the screws provided with the kit.
8. **RECONNECT POWER BACK TO THE UNIT.**

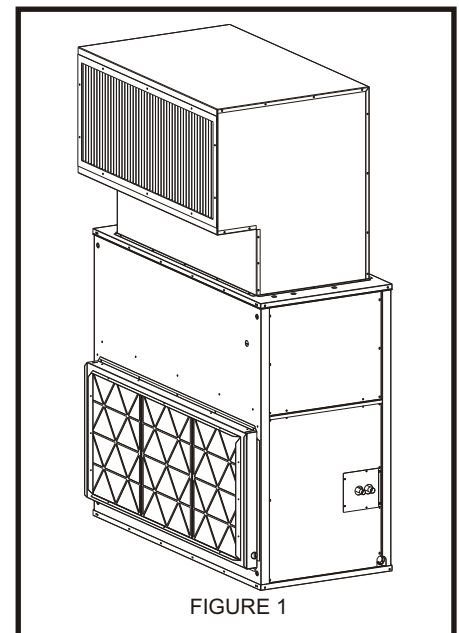


FIGURE 1

\*Air handler shipped from factory for horizontal application. See air handler installation instructions for conversion from horizontal to vertical application.

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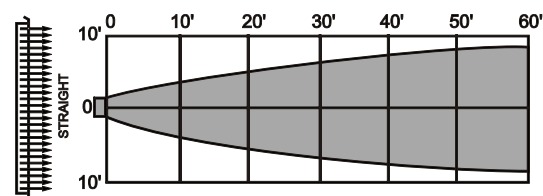
### DOUBLE DEFLECTION DISCHARGE AIR GRILLE KIT - SKU# 560201 (48" x 19" - A<sub>t</sub> = 5.92 Ft.<sup>2</sup>)

Air Handler Model No.	CFM Range	Velocity (FPM)	<sup>(1)</sup> Noise Criteria (NC)	Pressure Loss (in. WC)	Deflection Setting		Feet (Meters) of Throw @ Terminal Velocity Shown		
							150 FPM	100 FPM	50 FPM
B5SM-090*	2750	475	18	0.03	A	0°	39 (11.9)	57 (17.4)	95 (16.8)
					B	22 ½°	31 (9.5)	46 (14.0)	76 (23.2)
					C	45°	20 (6.1)	29 (8.8)	48 (14.6)
	3000	500	20	0.03	A	0°	41 (12.5)	61 (18.6)	98 (29.9)
					B	22 ½°	33 (10.1)	49 (14.9)	78 (23.8)
					C	45°	21 (6.4)	31 (9.4)	49 (14.9)
	3250	550	22	0.03	A	0°	45 (13.7)	67 (20.4)	101 (30.8)
					B	22 ½°	36 (11.0)	54 (16.5)	80 (24.4)
					C	45°	22 (6.7)	34 (10.4)	50 (15.2)
B5SM-120	3750	625	26	0.04	A	0°	51 (15.5)	76 (23.2)	107 (32.6)
					B	22 ½°	41 (12.5)	61 (18.6)	85 (25.9)
					C	45°	25 (7.6)	38 (11.6)	53 (16.2)
	4000	675	28	0.05	A	0°	55 (16.8)	81 (24.7)	113 (34.4)
					B	22 ½°	44 (13.4)	65 (19.8)	90 (27.4)
					C	45°	27 (8.2)	41 (12.5)	57 (17.4)
	4250	725	30	0.06	A	0°	59 (18.0)	85 (25.9)	118 (36)
					B	22 ½°	47 (14.3)	68 (20.7)	94 (28.7)
					C	45°	30 (9.1)	43 (13.1)	60 (18.3)

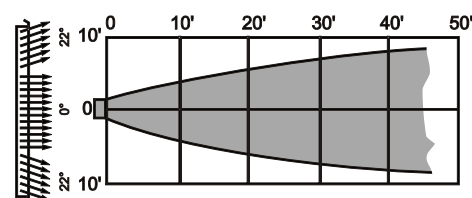
Notes:  
(1) Noise Criteria (NC) values based on a single register operating at 0° deflection. For deflections of 22 ½° and 45°, increase stated sound levels by 1 and 7 NC

### Air Pattern Obtained with Various Deflection Settings

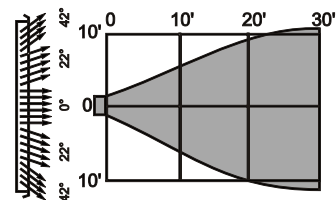
#### A DEFLECTION - 0°



#### B DEFLECTION - 22 ½°



#### C DEFLECTION - 45°



### Recommended Noise Criteria (NC)<sup>(1)</sup>

	Communication Environment	Typical Occupancy
Below NC 25	Extremely quiet environment; suppressed speech is quite audible; suitable for acute pickup of all sounds.	Broadcasting studios, concert halls, music rooms.
NC 30	Very quiet office; suitable for large conferences; telephone use satisfactory.	Residences, theatres, libraries, executive offices, directors rooms.
NC 35	Quiet office; satisfactory for conference at a 15 ft. table; normal voice 10-30 ft.; telephone use satisfactory.	Private offices, schools, hotel rooms, courtrooms, churches, hospitals rooms.
NC 40	Satisfactory for conference at a 6-8 ft. table; normal voice 6-12 ft.; telephone use satisfactory.	General office, labs, dining rooms
NC 45	Satisfactory for conference at a 4-5 ft. table; normal voice 3-6 ft.; raised voice 6-12 ft; telephone use occasionally difficult.	Retail stores, cafeterias, lobby areas, large drafting & engineering offices, reception areas.
Above NC 50	Unsatisfactory for conference of more than two or three persons; normal voice 1-2 ft.; raised voice 3-6 ft; telephone use slightly difficult.	Computer rooms, stenographic pools, print machine rooms, process areas.

### Velocity Limitations for Various Applications

The sound caused by an air outlet in operation is directly proportional to the velocity of the air passing through it. As air velocity increases, so does the noise level.

The following recommended outlet velocities are within the safe sound limits for most applications.

Application	Recommended Velometer Velocities
Broadcasting Studios	500 FPM
Residences, Apartments, Churches, Hotel Bedrooms	500 to 750 FPM
Legitimate Theatres, Private Offices - Acoustically Treated	500 to 1000 FPM
Motion Picture Theatres, Private Offices - not treated	1000 to 1250 FPM
General Offices	1250 to 1500 FPM
Stores, Upper Floors and Main Floors	1500 FPM
Industrial Buildings	1500 to 2000 FPM