

IMD 95Y, 135Y, 170Y, 210Y, 280Y (c/w EC motor)

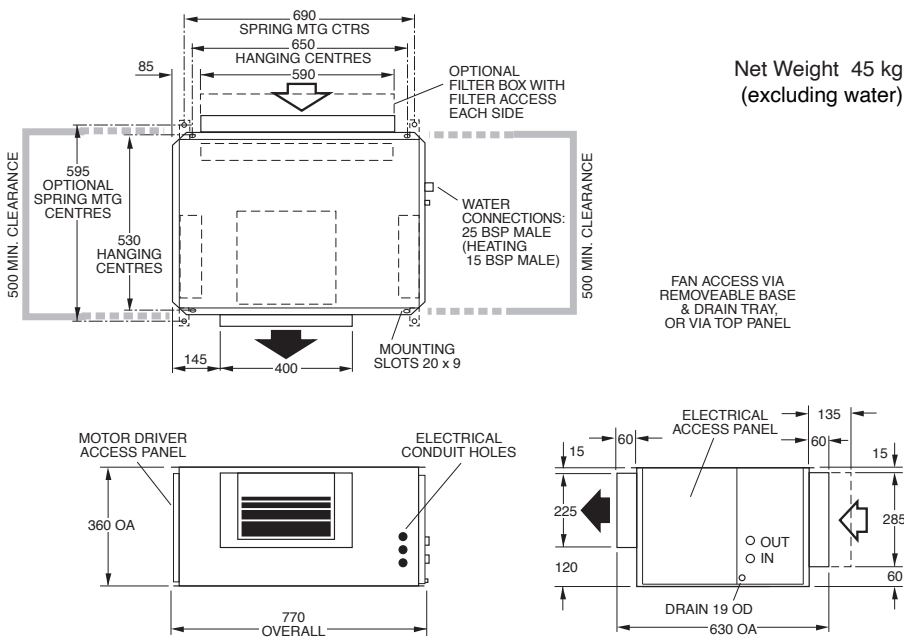
Ducted Fan Coil Unit

Installation & Maintenance

Dimensions (mm)

Not to Scale

Fig. 1 IMD 95Y



Net Weight 45 kg (excluding water)

GENERAL

The IMD ducted fan coil units must be installed in accordance with all national and local safety codes.

Options

1. Filter Box
2. Spring Mounting Kit

FILTER BOX (Option)

The Filter Box is installed by unscrewing the return air spigot and replacing it with the Filter Box's filter-integrated spigot. The filter may be accessed from either side of this spigot. This new spigot has a depth of 135 mm, instead of 60 mm.

INSTALLATION

Positioning & Mounting

When determining the position of the fan coil unit, allow adequate space around the unit to facilitate water pipe/hose connections, future servicing and maintenance. Ensure there is enough working space in front of the electrical access panel. Allow adequate clearance for the filter to be withdrawn to its full length from either end of the unit. Provision should be made for access to remove the unit from the ceiling if the need arises.

If the filter box option is to be used, allow adequate clearance for the filter to be withdrawn to its full length.

If low noise is a critical factor in the installation, refer to Figure 8 for noise isolation recommendations.

It is recommended that the unit be mounted using the spring mounting system, supplied as an optional extra (Fig.5). This system minimises transfer of vibration into the building structure.

If a more rigid installation can be tolerated, then suspend the unit from four threaded rods (not supplied) and use locknuts (not supplied), as shown in Figure 6.

The unit has a built-in sloping drain tray, therefore mount it level.

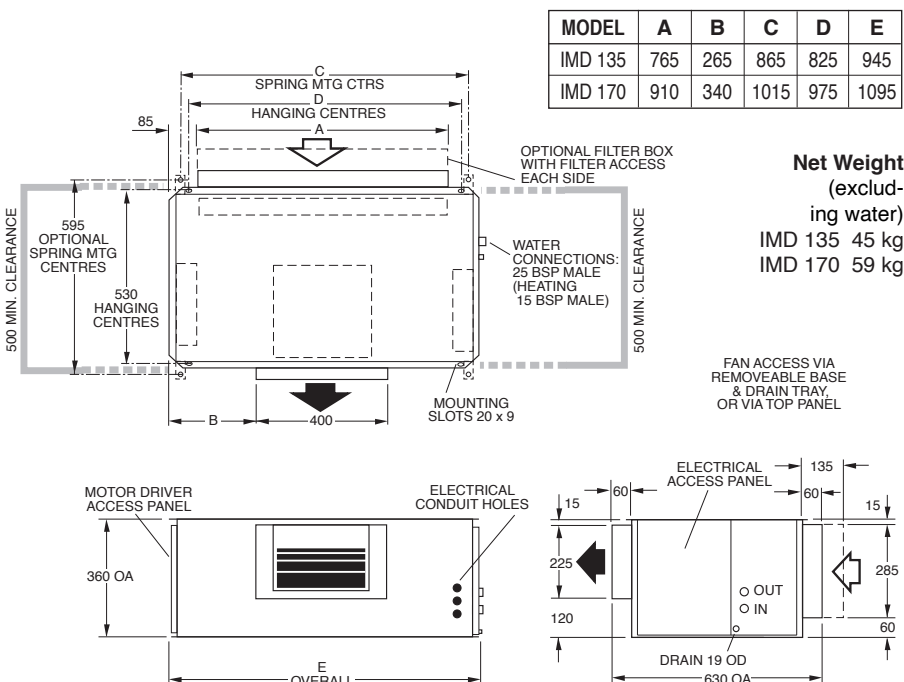
When finally positioned, tighten the lock nuts on the mounting rods from above and below the mounting flange to give a firm installation (see Fig. 6).

Condensate Drain

The condensate drain should be trapped outside the unit cabinet. The trap should have a vertical height of at least 50 mm. The drain should have a slope of at least 1 in 50 and must not be piped to a level above the unit drain tray. (Refer Fig.7). Use flexible tube to connect the unit's drain stub to the external drain pipe.

For long condensate pipe runs, fit a vent pipe near the drain trap. The top of the vent

Fig. 2 IMD 135Y, 170Y



pipe must be at least 100 mm above the IMD unit's drain tray.

It is essential that the drainage system is checked by pouring water in the drain tray and seeing that it discharges at the end of the drain and does not overflow the drain tray.

Note: The built-in drain tray can be removed for cleaning (or fan access) by first removing the unit's base.

ELECTRICAL WIRING

The electrical supply required (including voltage fluctuation limits) is:

1 phase 200-252 V a.c. 50 Hz with neutral and earth. The supply to have an isolation switch adjacent to the unit but not attached to the unit. Recommended external circuit breaker size is 10 amp.

Electrical work must be carried out by a qualified electrician in accordance with local supply authority regulations and the wiring diagram.

FAN CONTROL

Overview

The fan can be controlled between selectable low and high levels using either:
 1. 0-10V DC control voltage (ie continuously variable), **or**
 2. (up to) 3 contact inputs (ie stepped).
 Only one control method must be connected at any one time; **not both**.

Fan run on is provided with durations suiting water sourced and electric heating systems.

Control Levels (Output Voltages)

DIP switches 1-4 of the Analog Level Controller (ALC on wiring schematic) select the low fan control voltage level. DIP switches 5 and 6 select the high fan control voltage level as a set amount above the low level. The medium level setting is half way between the low and high setting levels. The control voltage settings apply to both 0-10V and contact input control levels.

Refer to the wiring schematic diagram for the default settings and the available level settings.

Contact Inputs

Voltage free contact inputs can be used to operate the fan at the selected control levels.

0-10V Input

A 0-10V DC signal can be used to control the fan. The fan is stopped for input signals below 1.6V. The fan operates at the selected low level when the input signal is between 1.6 and 2.0V. As the input signal increases above 2V the fan control signal increases linearly reaching the selected high level when the input signal is 10V.

Run-On

The run-on duration is selected with DIP switch 8 for either 40 seconds or 120 seconds for electric heating systems. If electric heating is fitted ensure DIP switch 8 is set on for 120 seconds run on.

The fan will run-on for the selected period when the 0-10V input falls below 1.6V and all the contact inputs are opened. If the 0-10V input signal remains below 1.6V and the contact inputs remain open the fan will stop at the end of the run-on period.

Note

Select fan control levels that avoid water carry-over problems.

Fig. 3 IMD 210Y

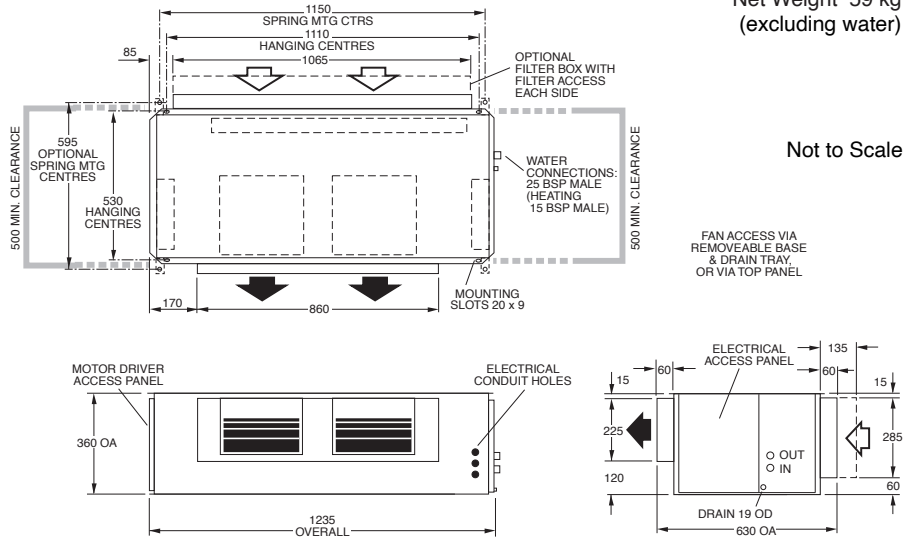


Fig. 4 IMD 280Y

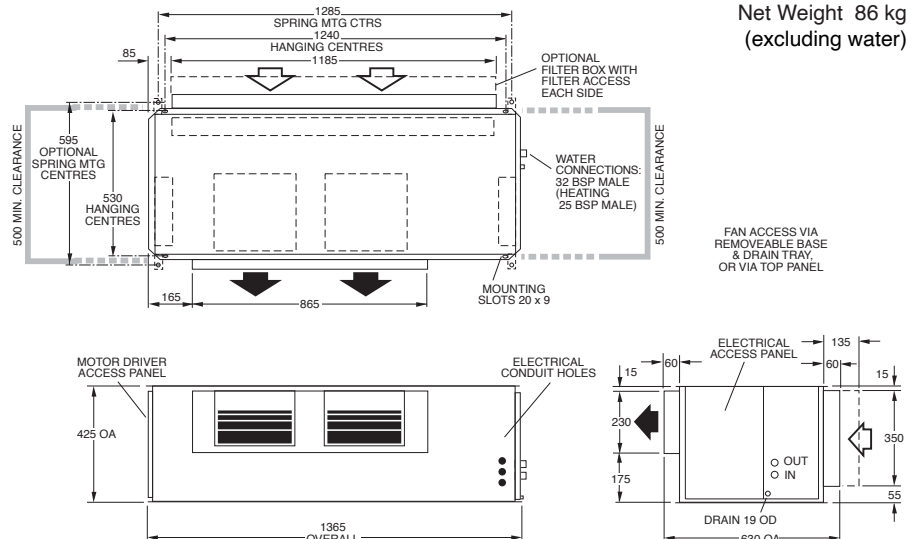


Fig. 5 Spring Mounting

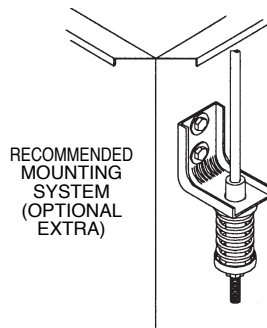


Fig. 6 Solid Mounting

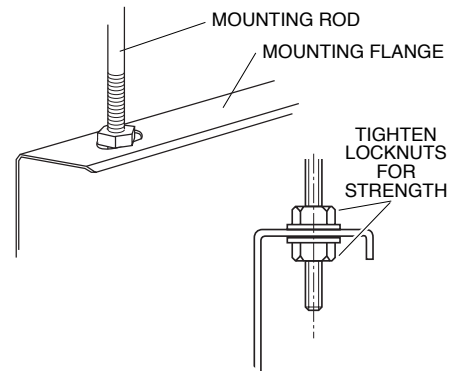
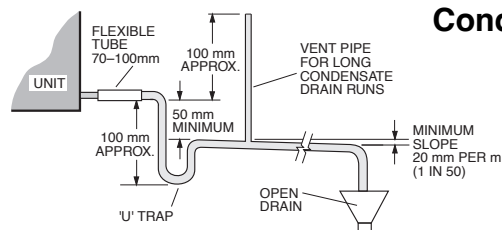


Fig. 7



Condensate Drain

COMMISSIONING

1. Check that the thermostat is correctly wired and set at the desired temperature.
2. Check that the air filter (if fitted) is clean.
3. Check that the fan runs freely without vibration.
4. Check condensate drain for free drainage.

Six Monthly

1. Check condensate drain for free drainage.
2. Check heat exchanger coil; vacuum or brush clean as necessary.
3. Check the tightness of the fan.
4. Check that fan motor is free running.
5. Check tightness of electrical connections.
6. Check air supply at diffuser outlets.

NOTE

The manufacturer reserves the right to change specifications at any time without notice or obligation. Certified dimensions available on request.

This pamphlet replaces the previous issue no. 3989 dated 05/22.
Fig.7 flexible drain conn.

MAINTENANCE

Weekly For First Four Weeks

1. Check air filter (if fitted); vacuum clean as necessary.
2. Check condensate drain for free drainage.

Monthly

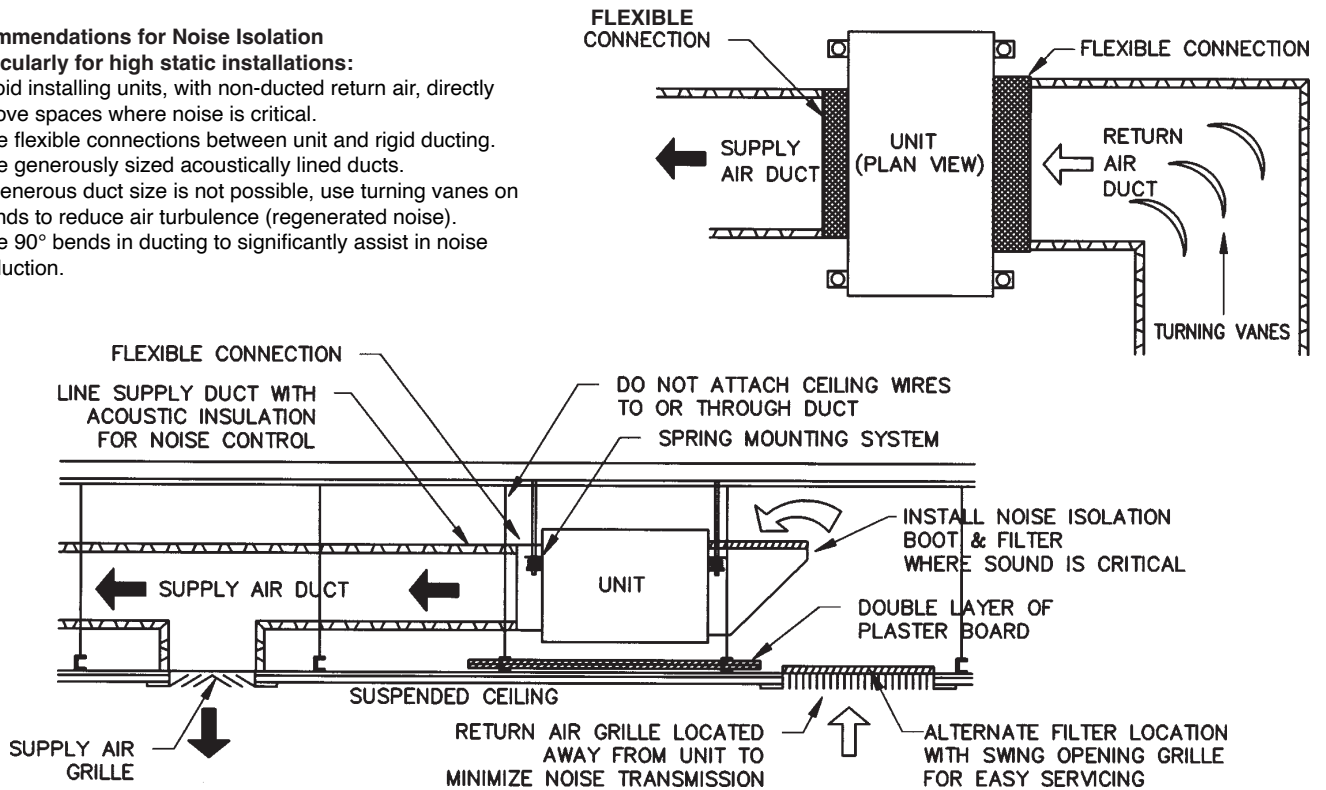
Check air filter (if fitted); vacuum clean as necessary.

Fig. 8 Application Considerations

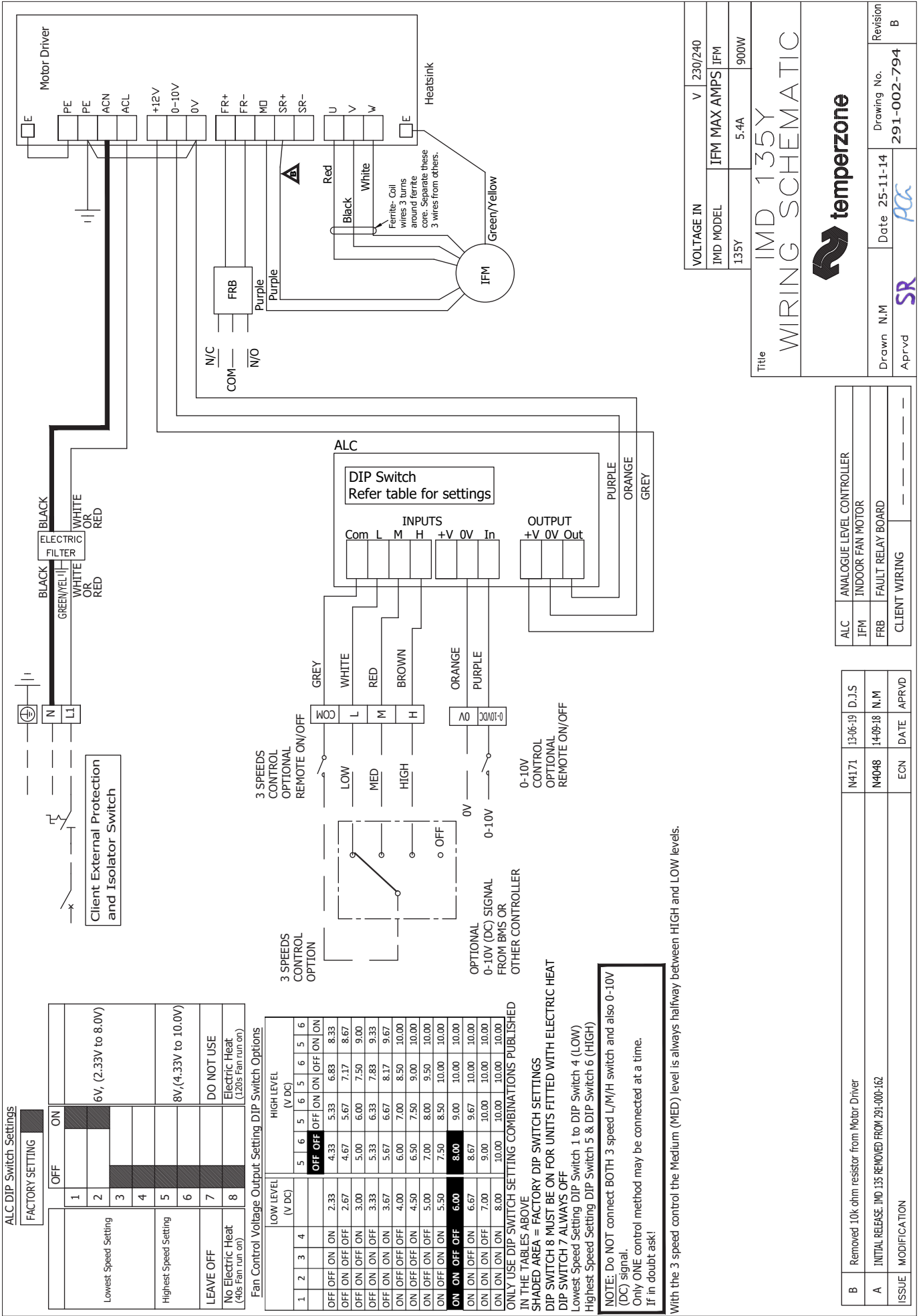
Recommendations for Noise Isolation

- particularly for high static installations:

1. Avoid installing units, with non-ducted return air, directly above spaces where noise is critical.
2. Use flexible connections between unit and rigid ducting.
3. Use generously sized acoustically lined ducts.
4. If generous duct size is not possible, use turning vanes on bends to reduce air turbulence (regenerated noise).
5. Use 90° bends in ducting to significantly assist in noise reduction.



IMD 135Y



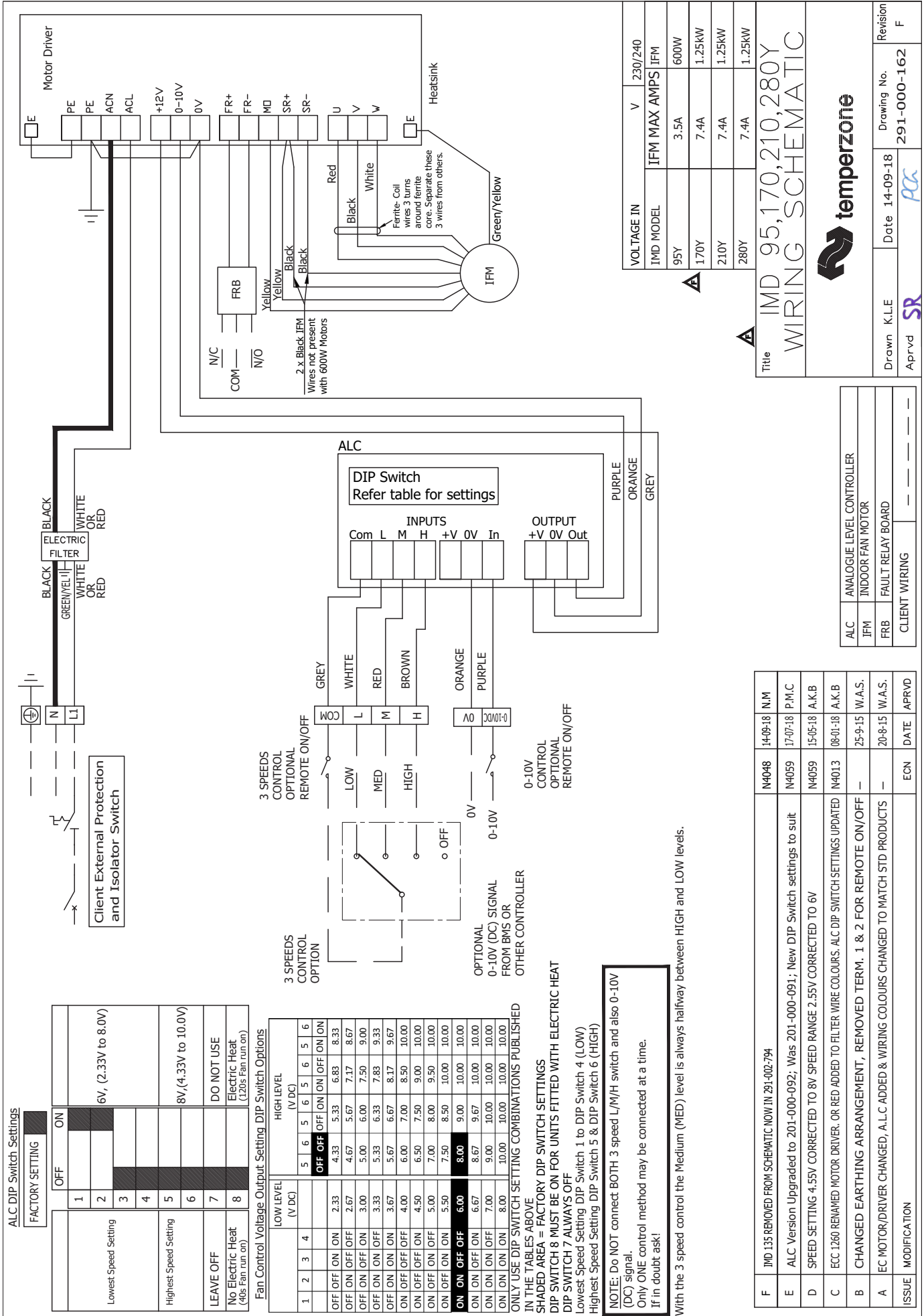
VOLTAGE IN	V	230/240
IMD MODEL	IFM	MAX AMPS IFM
135Y	5-4A	900W

Title **IMD 135Y**
WIRING SCHEMATIC

Drawn N/M Date 25-11-14
 Aprvd SR
 Drawing No. 291-002-794
 Revision B

ALC	ANALOGUE LEVEL CONTROLLER
IFM	INDOOR FAN MOTOR
FRB	FAULT RELAY BOARD
CLIENT WIRING	---

N4171	13-06-19	D.J.S
N4048	14-09-18	N/M
ECN	DATE	APRVD
B	Removed 10k ohm resistor from Motor Driver	
A	INITIAL RELEASE, IMD 135 REMOVED FROM 291-000-162	
ISSUE	MODIFICATION	



VOLTAGE IN	V	230/240
IFM MAX AMPS	IFM	
IFM MODEL		
95Y		3.5A
170Y		7.4A
210Y		7.4A
280Y		7.4A
		600W
		1.25kW
		1.25kW
		1.25kW

temperzone

Title: **IMD 95,170,210,280Y WIRING SCHEMATIC**

Drawn K.L.E. Date 14-09-18

Aprvd SR

Revision No. 291-000-162

Revision F

ALC	ANALOGUE LEVEL CONTROLLER
IFM	INDOOR FAN MOTOR
FRB	FAULT RELAY BOARD
CLIENT WIRING	---

F	IMD 135 REMOVED FROM SCHEMATIC NOW IN 291-002-794	N4048	14-09-18	N.M
E	ALC Version Upgraded to 201-000-092; Was 201-000-091; New DIP Switch settings to suit	N4059	17-07-18	P.M.C
D	SPEED SETTING 4.55V CORRECTED TO 8V SPEED RANGE 2.55V CORRECTED TO 6V	N4059	15-05-18	A.K.B
C	ECC 1260 RENAMED MOTOR DRIVER. OR RED ADDED TO FILTER WIRE COLOURS. ALC DIP SWITCH SETTINGS UPDATED	N4013	08-01-18	A.K.B
B	CHANGED EARTHING ARRANGEMENT, REMOVED TERM. 1 & 2 FOR REMOTE ON/OFF	-	25-9-15	W.A.S.
A	EC MOTOR/DRIVER CHANGED, A.L.C ADDED & WIRING COLOURS CHANGED TO MATCH STD PRODUCTS	-	20-8-15	W.A.S.
ISSUE	MODIFICATION	ECN	DATE	APRVD

