

IMDL SERIES – LOW PROFILE FAN COIL UNITS

GENERAL

Fan coil units are an integral part of an overall air conditioning system where the energy transfer medium (i.e. chilled or hot water) is circulated by a central plant facility.

temperzone offers an extensive range of ducted fan coil units. A variety of options and accessories are available to meet most air conditioning requirements.

Low operating cost, energy efficient fan motors are used in all units. Easy installation and maintenance add to the cost effectiveness of **temperzone** IMDL Series fan coil units.

All IMDL fan coil units can be handed left or right. Unless otherwise ordered units will be supplied 'right handed' which is the standard handing, i.e. when facing the discharge side of the unit, the water and electrical connections are on the right hand side. Stocked units are right handed only.

The IMDL Series units are available with Standard (S), Medium (M) or High (H) capacity motors.

TYPICAL APPLICATIONS

Office Buildings

The low overall height of 250 mm for the smaller units and 260 mm for the larger units makes them ideally suited to office building applications where false ceiling space is at a premium.

Hotels

IMDL units are extremely well suited for individual room control.

A standard above ceiling installed unit with 3 speed control (available option) is normally used for this type of application.

Airport Terminal Buildings

temperzone fan coil units are gaining worldwide popularity in airport terminals. These complexes generally consist of a number of areas with very diverse occupancy and capacity requirements.

Hospitals

The majority of hospital rooms must have a separate and independent air conditioning system. This is to avoid bacterial cross contamination.

temperzone fan coil units have been used successfully in these applications.

STANDARD FEATURES

Drain Tray

The drain tray is removable for ease of cleaning and can be adjusted to slope when the unit is installed level.

Motors

Permanent split capacitor (PSC) sleeve bearing motors are fitted as standard on all units. These three speed motors are resiliently mounted, self aligning and oiled for life.

Fans

Quiet low line, centrifugal type, double width, statically and dynamically balanced, multi-bladed impellers are used. The position and shape of the fan blades and housing has been developed after extensive testing to achieve minimum noise levels while maintaining a smooth pressure vs air flow curve.

Coils

Coils are manufactured in rifled copper tubing. All coils are thoroughly tested to 2100 kPa.

Coil rows are staggered for maximum heat exchange. Three different coil configurations are available – refer table below.

The coil fins are manufactured as a continuous plate, die formed from aluminium with a smooth corrugated surface, specially designed to overcome and prevent lint build up. The coil fins are mechanically bonded to the copper tubing which results in a rigid assembly and provides a permanent metallic contact between fins and tube for maximum heat transfer.

Casing

The casing is manufactured from high quality galvanised steel and internally insulated.

Insulation

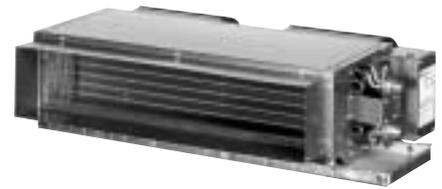
Closed cell foam insulation has been used in the cabinet to ensure no particles are introduced into the air stream. The insulation is foil faced and meets the fire test standards AS 1530.3 (1989) and BS 476 parts 6 and 7. Open cell foam is used in the return air plenum (optional) for noise attenuation.

ELECTRICAL BOX

Wiring from the motors terminate in a terminal block in a sheetmetal enclosed electrical box. The box is supplied on the same side as the water connections, but can be changed on site to the opposite side.

STANDARD OPTIONS

- Return Air Plenum (insulated) with Filter
 - filter is 13 mm thick, washable and rated EU2.
- Multi-Outlet Supply Air Spigot
 - sized to suit flexible ducting.



- Electric Heat
 - element mounted within the unit
 - factory fitted
 - complete with automatic and manual high temperature safety cutout thermostats required to meet AS/NZS 3350.2.40 1997.
- Fan run-on timer (for heat dissipation)
- Control switches
 - on/off and 3 speed rotary switches mounted in a standard or architrave type flush plate.

WIRING

The electrical supply required (including voltage fluctuation limits) is: 1 phase 200-252 V a.c. 50 Hz with neutral and earth. Each IMDL unit is fully wired ready to accept the main power supply.

ORDER DETAIL



Coil Options: — Coil Option

- Three row coil for cooling
- Four row coil for cooling
- 3/1 - Three row cooling / one row heating

Note: Please specify on your order the size, fan motor type and coil option using the above codes.

Examples:

IMDL 130-H 3/1
IMDL 60-S 4

SUMMARY OF CHOICES

Size :	40 / 60 / 90 / 130
Fan Motor Cap. :	Standard / Medium / High
Coil :	3 rows Cooling + 1 row Heating
	3 rows Cooling
	4 rows Cooling
	3 rows Cooling + Electric Heat
	4 rows Cooling + Electric Heat
R/A Plenum with filter	Yes / No
Run-on Timer :	Yes / No
Multi S/A Spigot:	Yes / No
Handing :	Left / Right (std)

SPECIFICATIONS

IMDL Series



Model	IMDL 40			IMDL 60			IMDL 90			IMDL 130			
	Standard	Medium	High	Standard	Medium	High	Standard	Medium	High	Standard	Medium	High	
Fan Capacity													
Nominal Air Flow	l/s	145	170	205	250	300	335	290	350	480	425	525	650
Fan Type	forward curved centrifugal - double inlet double width												
No. of scrolls	1			2			2			3			
Fan Motor Type	three speed, direct drive, permanent split capacitor												
Power Source *	1 phase 230 V a.c. 50 Hz												
No. Motors	1			1			1			2			
Motor Poles	6	4	4	6	4	4	6	4	4	6	4	4	
Motor Rating	W	25	35	50	50	50	75	50	75	150	75	110	225
Full Load Amps	A	0.4	0.45	0.6	0.6	0.6	0.7	0.6	0.7	1.4	1.0	1.2	2.1
Heat Exchange Type	aluminium corrugated plate fins to expanded rifled copper tube												
Source	chilled water or hot water												
Coil Rows	[3 rows cooling] or [3 rows cooling + 1 row heating] or [4 rows cooling]												
Finish	zinc galvanised steel												
Test Pressure	2100 kPa												
Connection Sizes (mm):	Cooling coil	20 BSP male ($\frac{3}{4}$ ")			20 BSP male ($\frac{3}{4}$ ")			25 BSP male (1")			25 BSP male (1")		
	Heating Coil	13 BSP male ($\frac{1}{2}$ ")											
Air Filter	Type	washable – rated EU 2											
	No.	1			1			1			2		
	Thickness (mm)	13			13			13			13		
	Size (mm)	545 x 234			795 x 234			1045 x 243			725 x 243		
Optional Electric Heating	kW	1.5			2			3			4		
Weight (3/1 row unit, incl. water)	kg	18			25			35			52		
Net Weight (3/1 row, excl. water)	kg	17			23			31			47		
Shipping Weight (approx.)	kg	18			25			34			50		
Optional Return Air Plenum	kg	3			3			4			5		

Notes:

* Voltage fluctuation limits 200–252 V.