

IMD SERIES – CHILLED WATER 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** IMD Series fan coil units.

All **temperzone** IMD fan coil units are right handed, i.e. when facing the discharge side of the unit, the water and electrical connections are on the right hand side.

TYPICAL APPLICATIONS

Office Buildings

IMD units are ideally suited to office building applications where false ceiling space is available and medium static pressure and ductwork is a consideration.

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 on models IMD 95–280 are made of plastic for complete corrosion protection. IMD 420, 550 are powder coated galvanised steel. Drain trays are removable for ease of cleaning and have a built-in slope to ensure condensate water drains freely without ponding.

Motors

Permanent split capacitor (PSC) ball bearing motors are fitted as standard on all units. These multi-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. 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 unit's cabinet to ensure no particles are introduced into the air stream. The insulation is foil faced and meets fire test standards AS 1530.3 (1989) and BS 476 parts 6 and 7.

Mounting

The IMD unit can be mounted rigid, or using the optional spring mounting brackets which minimise transfer of vibration.

ELECTRICAL BOX

Wiring from the motors terminate in a terminal block in a sheetmetal enclosed electrical box within the unit.

ELECTRIC HEAT

Electric Heat is available with some coil configurations (refer table right). Elements are factory mounted within the unit. A fan run-on timer (for heat dissipation) is included. These units are supplied complete with safety cutouts required to meet AS/NZS 3350.2.40 1997.



ACCESSORIES

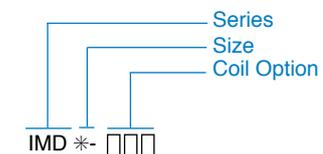
1. Filter Box
integrated with return air spigot – filter is 13 mm thick, washable and rated EU2.
2. Spring Mounting Kit.
3. Supply and return air plenums (IMD 95–280).
4. Control switches (IMD 95–280)
– on/off and 3 speed rotary switches mounted in a standard or architrave type flush plate.

WIRING

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

Note: When installed with electric heat the IMD 135–550 units require a three phase power supply of 342–436 V a.c. 50 Hz.

ORDER DETAIL



Coil Options:

- 1 - One row coil for heating
- 4 - Four row coil for cooling
- 4/1 - Four row cooling / one row heating
- 4/E - Four row cooling + electric heat
- E - Electric heat only

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

Examples:

- IMD 135-4/1
- IMD 210-4E

SUMMARY OF CHOICES

Size :	95/135/170/210/280/420/550
Coil :	1 row Heating
	4 rows Cooling
	4 rows Cooling + 1 row Heating
	4 rows Cooling + Electric Heat
	No Coil - Electric Heat Only
Filter Box:	Yes / No
Spring Mounts:	Yes / No
Plenums:	Yes / No
Control Switch:	Yes / No

SPECIFICATIONS

IMD Series



Model	IMD 95	IMD 135	IMD 170	IMD 210	IMD 280	IMD 420	IMD 550	
Nominal Air Flow l/s	450	600	750	900	1250	1800	2340	
Fan Type	forward curved centrifugal - double inlet double width							
No. of scrolls	1	1	1	2	2	2	2	
Fan Motor Type	4 speed	3 speed, direct drive, permanent split capacitor						
Power Source *	1 phase 230 V a.c. 50 Hz							
No. Motors	1	1	1	1	2	2	2	
Motor Poles	4	4	4	4	4	4	4	
Motor Rating W	316	373	550	550	550	746	746	
Full Load Amps A	3.5	3.7	5.0	5.7	11.4	12.6	12.6	
Heat Exchange Type	aluminium corrugated plate fins to expanded rifled copper tube							
Source	chilled water or hot water							
Coil Rows	[1 row heat] or [4 rows cooling] or [4 rows cooling + 1 row heating] or [4 rows cooling + elec. heat] or [elec. heat only]							
Finish	zinc galvanised steel							
Test Pressure	2100 kPa							
Connection Sizes (mm):								
Cooling coil	25 BSPM (1")	25 BSPM (1")	25 BSPM (1")	25 BSPM (1")	32 BSPM (1 1/4")	32 BSPM (1 1/4")	32 BSPM (1 1/4")	
Heating Coil	15 BSP male (1/2")				25 BSPM (1")	32 BSP male (1 1/4")		
Optional Air Filter **	washable – rated EU 2							
Type								
No.	1	1	1	1	2	2	2	
Thickness (mm)	13	13	13	13	13	13	13	
Size (mm)	593 x 275	767 x 275	914 x 275	1064 x 275	593 x 345	685 x 415	712 x 542	
Optional Electric Heating *	kW	4	6	6	9	9	12	18
Weight (4/1 row unit, incl. water)	kg	49	50	64	66	94	133	162
Net Weight (4/1 row unit, excl. water)	kg	45	45	59	60	86	120	145
Shipping Weight (approx.)	kg	48	48	62	63	96	145	175

Notes:

* Voltage fluctuation limits 200–252 V. IMD 135–550 electric heat models require a 3 phase power supply, 342–436 V a.c 50 Hz.

** Supplied within optional filter box.