

Slimline Airside II Fan Coil Unit



Features: **Compact easy to install versatile design**
Powerful low noise, external rotor motor fans
Quiet Operation, full sound power levels available
Proven airside damper mechanism developed
Many control options available
Multi-tapped (11), fan speed transformer
Suitable for ceiling just 170mm deep and floor void (189mm) mounting
Available with LPHW or electric heat and cooling only formats

INTRODUCTION

The Slimline II unit follows its predecessor, which was first introduced in 1986, with many of its unique space saving features, but now updated with the use of highly efficient external rotor fans with power factors >0.95 (+/-2%) and attenuation that has been developed over more than 15 years. The draw through fans have been selected to provide a unique balance of external pressure capability and low noise levels. In common with the successful Highline range of units, significant attention to detail has been paid in achieving "Best in Class" thermal crossover performances that have been regularly demonstrated in laboratory tests and functional site operation. Being only 170mm deep, the Slimline unit is ideally suited for those applications requiring high outputs, but very little ceiling void space. In applications as shallow as 180mm, the unit can be installed with quiet but effective condensate lift devices that will pump condensate vertically up to 400mm. Applications include ceiling or floor void spaces in offices, airports, hotels, retail, schools hotels & leisure centres.

GENERAL

Units shall be manufactured from 1.2mm (minimum) hot dipped galvanised steel. The overall size of the unit will be as detailed on the drawing and wiring diagram (available on request). All bearings and moving surfaces in contact will operate without requiring further lubrication. The unit shall be constructed with bolts and captive fastenings no self-tapping screws will be used. All foam, gasket and acoustic materials used within the unit shall be Class "O" fire rated and CFC/HCFC friendly. Each unit will be manufactured in accordance with ISO 9001 procedures and functionally tested before leaving the factory, to ensure that it will perform with the minimum of maintenance throughout its life. All electrical components will be tested to ensure that each unit and its associated wiring comply with the 16th edition of IEE (BS7671) regulations. All key components will be fitted to allow easy access for removal and maintenance. Each model is CE approved.

FAN AND MOTOR ASSEMBLY

Each fan and motor assembly shall be fitted with a high output permanent split phase capacitor, continuously rated external rotor motor to IP44, with built in thermal overload protection complying with EN60730, BS5000 and DIN IEC38. The motor shall be fitted with maintenance free sealed for life bearings. Motors shall be insulated to IEC 85 class B.

The fan scrolls shall be single inlet, single width centrifugal with steel impellers.

All fan and motor assemblies shall be statically balanced to prevent the transmission of vibration.

Each fan coil unit shall be set to operate at 3 speeds, low, medium and boost. The speed control shall be achieved by variation of the voltage onto the fan motor, via an eleven step multi-tapped transformer. The transformer will incorporate a safety fuse for the control circuit.

HEAT EXCHANGERS

All coils shall be manufactured from 9mm solid drawn copper tubes, mechanically expanded into accurately pre-formed collars in rippled aluminium fins. To ensure long life, the coil tube thickness shall not be less than 0.35mm and aluminium fins not less than 0.12mm. The coil shall have single/multiple circuits with headers. Each coil shall be fitted with air vents and drain points. All coils shall be tested after manufacture to 20 Bar and shall be suitable for an operating pressure of up to 12 bar static head. They shall be fitted with 15mm plain copper connections.

CONDENSATE DRIP TRAY

The condensate drip tray shall be manufactured from a minimum 1.2mm hot dipped galvanised steel, welded at each corner. The tray shall be degreased before a Class O anti-condensation insulation is applied to all internal and external surfaces. The tray shall be fitted with 15mm o/d as standard (22mm also available) plain tail brass connection.

The condensate tray shall be fitted to ensure that all condensate drains effectively when the unit back plate is installed level. The condensate tray is retained with a maximum of four bolts, allowing easy access for regular cleaning in wetted coil applications.

TEMPERATURE CONTROLS

The temperature controls shall operate at 230 / 24v through a transformer. Airside units are supplied as standard with a Landis and Staefa 24 volt mini push pull, linear magnetic clutch actuator, arranged to modulate the dampers in the necessary sequence to maintain the required set air temperature. The optional temperature control components comprise a controller with built in set point adjustment and return air sensor. The air temperature sensor shall be fitted in the unit intake and wired to the controller with 2.5 metres of cable. The cable can be uncoiled to allow site location of the sensor, ideally within a return air grille. Various DDC/BMS and room temperature / sensor control options are also available upon request.

DISCHARGE PLENUM & ACOUSTIC LINING

Units shall be supplied with attenuated discharge plenums lined with Class "O" fire retardant acoustic material, which is vermin proof, rot proof and non-migratory. The material has been produced to be CFC & HCFC friendly and shall not be impregnated with carbon granules. The standard spigots shall be 157mm diameter, however optional 197mm diameter and rectangular spigots can also be supplied.

FAN COIL CHASSIS & ACCESS PANEL

The chassis shall be manufactured from 1.2mm hot dipped galvanised steel. The access panel shall be sufficiently rigid to ensure the quiet and reliable operation of the unit. The unit back plate shall have 4 off, symmetrically located slot type punched holes for suspending the unit from underside of slab, via drop rods.