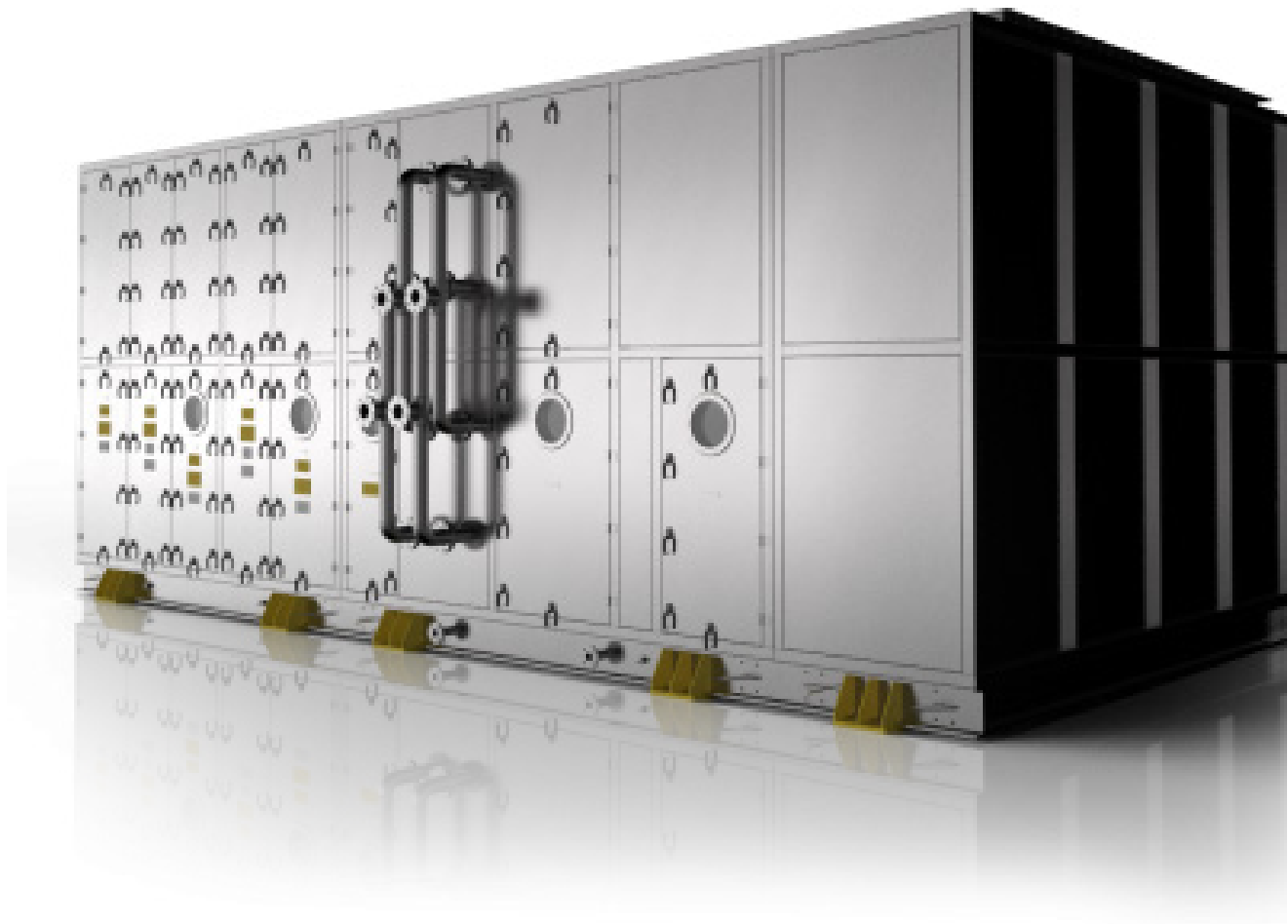


## Air Handling Unit (AHU)

Wozair manufacture and supply high integrity Air Handling Units for the Process Industries. We offer a bespoke design service with units configured to meet project requirements, space limitations and their operating environment.



## Air Handling Unit

Wozair specialise in the manufacture of bespoke Air Handling Units (AHUs) for use in the process industries, such as upstream oil and gas, marine and nuclear.

AHUs are manufactured to customer specifications to achieve the air-flow, external pressure and air conditions required therefore making most units unique. In addition to the AHU providing conditioned air it can be used for pressurisation.

AHUs incorporate a centrifugal or plenum fan. The former is typically a belt driven double inlet, double width design with the latter being direct drive. Motors and fans suitable for operation in a potentially hazardous area, such as zone 1 or zone 2, can be offered. The AHU is constructed using double skin panels designed for low thermal transmittance and to reduce noise breakout.

AHUs are generally designed to be lifted and positioned as one complete assembly to minimise installation time. However, if required, they can be supplied in modular format for reassembly on site. This may be necessary for ventilation systems with larger airflows or when fitting or retrofitting into confined plantrooms.

## Technical Information

### Minimum to Maximum Airflow

0.25 m<sup>3</sup>/s to 45 m<sup>3</sup>/s (900 m<sup>3</sup>/hr to 162,000 m<sup>3</sup>/hr)

### Standards

Wozair design and manufacture its Air Handling Units to comply with EU directives.

Units comply with Directives and any amending Directives:

Machinery Directive	2006/42/EC
Low Voltage Directive	2014/35/EU
ATEX Directive	2014/34/EU
EMC Directive	2014/30/EU
Pressure Equipment Directive	2014/68/EU

Wozair units have been in-house tested and witnessed by BSRIA to EN1886 meeting T2 thermal transmittance and TB1 thermal bridging requirements.

## Materials of Construction

### Casing and Flanges:

#### Materials

Stainless Steel 304L/316L (1.4307/1.4404)  
Aluminium

### Panels:

Stainless Steel 304L or 316L (1.4307/1.4404)  
Galvanised Sheet Steel  
Colorcoat HPS200 Coated Steel

## Skid

The AHU is supplied as a skid mounted assembly with the skid fabricated from rolled structural steel sections hot dip galvanised after manufacture or Stainless Steel.

## Casing

The casing consists of a rigid construction framework with lagged infill panels for thermal insulation and noise attenuation.

Infill panels are double skinned and flush mounted. Infill can be 25 mm or 50 mm thick to provide thermal insulation and noise attenuation. Hinged access panels are provided for inspection and maintenance of equipment. Externally mounted units can be provided with a pitched roof to shed rain.

## Fan Options

- Centrifugal fans
- Plenum (plug) fans

Fans can be provided with the following features and accessories: spark minimising; anti-vibration mounts; flexible connections; speed sensor; bearing monitoring; extended lubricators; automatic grease lubricators; drain plug; access door; inlet and discharge guards; and belt guards.

## Drive Options

- Belt driven
- Direct drive (fixed speed or variable speed)

Low voltage motors can be offered for a range of voltages on 50Hz or 60 Hz supply. Motors can be provided with the following features and accessories: direct-on-line starting; VSD operation; thermistors; sealed for life bearings; and class F insulation/class B temperature rise.



## Cooling Coils

Cooling coils can be selected to operate with refrigerant, sea water or chilled water. Tube and fin materials will be selected based on the application.

The cooling coil can be fitted with moisture eliminator in plastic, aluminium or stainless steel to prevent moisture carryover. A drain tray in stainless steel is standard which is piped to a termination point external to the AHU casing.

Temperature control valves for chilled water and sea water bypass control can be supplied as required.

## Heating Coils

Suitable for operation with steam, hot water or another heating medium.

## Electric Heaters

Electric heaters can be supplied suitable for operation in a zone 1 or zone 2 hazardous area or safe area. Heaters can be supplied suitable for operation as on/off control; multi-stage step control or thyristor control subject to duty and application.

## Filters

A wide selection of panel, bag and HEPA filters are available.

## Humidification

Electrically operated fresh steam humidifiers may be installed if required. Alternative humidifier types can be considered upon request.

## Additional Images



## Other Options

- Heat Recovery
- Weather Louvres
- Control Dampers
- Controls / Wiring

Control panels can be provided; installed on the unit skid or supplied loose.

Lifting and maintenance features.

## Ancillary Components

We can provide temperature, pressure, humidity and vibration instrumentation features.

## Testing

Various testing options are available on the completed Air Handling Unit including:

- Running motors
- Volume/pressure performance testing
- Case leakage testing up to 3000Pa
- Measurement of the fan running speed
- Recording motor running current
- Vibration



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