

## Product Highlight - 100% OA (Outside Air) Fresh Air Units

### Introduction

It is becoming increasingly important to create a whole set of solutions for 100% fresh air units, where all the features can be presented, furnished and controlled with an optimum performance and quality in a single unit.

Petra Engineering Industries is providing a unique solution for air quality and humidity control in addition to the vast choices of extra features that can be installed upon request. Petra manufactures units from 35 kW (10 T.R) up to 1055 kW (300 T.R) distinguished by their small footprints & high efficiencies.

### Features

Petra offers a wide variety of options for the unit construction, components and controls as follows:

- Painted, galvanized steel, welded C-channel base.
- 50mm thick (2" thick), polyurethane injected insulation with a minimum of 48 kg/m<sup>3</sup> (3 lb/ft<sup>3</sup>) density.
- Double wall construction with 1.2/0.7mm thick (18/22 gauge) G-90 galvanized steel panels.
- Galvanized steel, stainless steel or aluminum panels.
- Electro-static powder coat, oven baked from both sides (outer and inner walls).
- Variable frequency drives for head pressure control applications.
- Aluminum fins for coils. Also available with corrosion protection coating (polyurethane anti-corrosive pre & post coat).
- Constant volume or variable air volume units (VAV).
- Refrigerants: R-22, R-134a & R-407c.
- Double sloped painted galvanized or stainless steel drain pan, insulated from outside with closed- cell foam insulation.
- DWDI fans (forward, backward or airfoil) or SWSI aerofoil fans. All fans are AMCA certified.
- Heating solutions: Gas heat, electric heaters, hot water & heat pump.
- Energy recovery: Energy wheel, plate heat exchanger & heat pipe.
- Modulating hot gas reheat coils for humidity control.
- Painted galvanized steel or stainless steel coil casing.
- Low noise construction.
- Dual power entry (supply fan on a separate entry for smoke/fire mode purposes).
- Premium efficiency motors.
- High energy efficiency ratio EER up to 14.5 at ARI conditions.
- Available with shell & tube or brazed plate water-cooled condensers.
- One water inlet/outlet for water cooled option.
- Capability to match site requirements or custom design units with regards to:
  - Supply Duct location (side/top/bottom/end)
  - Limitation in dimension (length & height)
  - Matching existing unit weight & dimensions with better efficiency
  - Flexibility in unit construction design (compact design with small footprint & stacked type design)
  - Capability to ship two units of water cooled condenser with a capacity up to 1125 kW (320 T.R) in one container.



Petra 100% OA (Outside Air) fresh air units, with water or air cooled condenser