

First in Quality, First in Service.

# MECHANICAL PRODUCTS

**VOLUME 6** 

VANCOUVER

### **COMMERCIAL GAS FIRED** *Make-Up Air Units*

### **HVAC Products and Services for the Commercial Sector**

Gas fired make-up air units and air handling units are used throughout the warehouse, transportation garage, restaurant, and manufacturing industries. The rigorous demands of these applications form the backbone of the Commercial Gas Fired Make-Up Air Series of products. Contractors, engineers and building owners are challenged daily with HVAC construction, design and performance – both in new and retrofit applications. Designers must meet stringent requirements regarding energy efficiency, indoor air quality (IAQ) standards, and life cycle cost. To meet these challenges, SolutionAir has developed the PMI-IF, AW-I, and AW-D series of gas fired make-up air units.









# REGENCORE

### THE INDUSTRY'S ONLY HIGH-EFFECTIVENESS ENERGY RECOVERY UNIT WITH FULLY TESTED INDOOR AND OUTDOOR PERFORMANCE DATA

This alternating mass exchanger ERU recovers **both sensible and latent energy** during both heating and cooling seasons, with no preheat required down to outdoor air temperatures of -40°C. Both of these design elements allow all downstream heating and cooling mechanisms to be downsized, leading to **additional savings**.

Our environmental chamber allows for precision testing from 40°c to -40°c	Industry-leading sensible effectiveness rates up to <b>92%</b>
	RegenCore - 92%
	Energy Wheel - 80%
	Fixed Plate - 75% Heat Pipe - 60%
The Environmental Chamber at the SolutionAir Tech Centre in Winnipeg, MB	Source: 2016 ASHRAE Handbook – HVAC Systems and Equipment, Chapter 26, Table 3

Discover the RegenCore ERU and SolutionAir's trusted line of air handlers, precision environmental control units, DX cooling and energy recovery options at **www.solutionairgroup.com** 

# e.h.price

Now the **Exclusive Representative** for **Carrier** Applied and VRF Equipment in **British Columbia** 

**CONTACT** your local rep today to find out more!





- Water-Cooled Chillers
- Rotary Hermetic
   Centrifugal: 200 –
   3,400 Tons
- High Efficiency Variable Speed Screw: 175 – 550 Tons
- Rotary Screw: 75 400 Tons
- Packaged Scroll: 15 71 Tons
- Heat Recovery and Free Cooling Options Available

- Air-Cooled Chillers
  - Packaged Scroll: 10 390 Tons
  - Packaged Screw: 80 500 Tons
  - Remote Air-Cooled Scroll: 15 – 71 Tons
  - Remote Air-Cooled Screw: 70 – 265 Tons
  - High Efficiency Variable Screw: 140 – 500 Tons
  - Brine Capability (+14°F to 40°F LWT)
  - Heat Recovery Options

- Modular Chillers
  - Module Sizes From 16 – 71 Tons
  - Up to 8 Modules Can be Combined for a Total Capacity of 560 Tons
  - Heat Recovery Capability Up to 140°F (60°C)

- Condensing Units
  - Remote Condensing Units: 5 – 182 Tons

Carrier

www.carrier.com





Carrier www.carrier.com



- Toshiba Carrier
  - 1ph Heat Pump (3, 4, 5 Tons)
  - 1ph Heat Recovery (6, 12 Tons)
  - 3ph Heat Pump (6 38 Tons)
  - 3ph Heat Recovery (6 38 Tons)
  - Inverter Driven Twin Rotary Compressors
  - Connected Capacity Up to 150%
  - DC Inverter Condenser Fan Motor



- Carrier
  - 1ph Heat Pump (3, 4, 5 Tons)
  - 3ph Heat Pump (6 36 Tons)
  - 3ph Heat Recovery (6 28 Tons)
  - Invertor Driven Scroll Compressor
  - Connected Capacity Up to 135%
  - DC Inverter Condenser Fan Motor



- · Ducted
  - Low Static Duct:
  - 7,000 24,000 Btuh Cooling - Medium Static Duct: 7,000 – 48,000 Btuh Cooling
  - High Static Duct:
    - 24,000 53,500 Btuh Cooling
  - Vertical Duct:
- 12,000 53,500 Btuh Cooling
- Outside Air Duct:
- 36,000 53,500 Btuh Cooling
- Non-Ducted
  - 4-Way Cassette:
  - 4-Way Compact Cassette:
  - High Wall:
  - Underceiling:
  - Floor Console:
  - Floor Console Recessed:
- 9,000 48,000 Btuh Cooling

  - 7,000 18,000 Btuh Cooling
  - 5,000 30,000 Btuh Cooling
  - 12,000 48,000 Btuh Cooling
  - 12,000 48,000 Btuh Cooling
  - 7,000 24,000 Btuh Cooling

www.ehpricevancouver.com



Carrier www.carrier.com



- Induction Units
  - 2 and 4 Pipe: 20 130 CFM



 Packaged Rooftop Units
 Gas Heating / Electric Cooling Units: 20 –

100 Nominal Tons

 Dedicated Outdoor Air Units: 6 – 55 Tons



- Indoor Self-Contained Units
  - Water-Cooled: 5 30 Nominal Tons
  - DX: 5 10 Nominal Tons



- Commerical Split Systems Over 25
   Tons
  - Packaged Air Handling Units DX: 6 30 Tons
  - Commercial Split System Cooling Only Single Stage: 25 – 65 Tons
  - Commercial Split System Cooling Only Dual-Circuit: 25 – 130 Nominal Tons



- · Air Handlers
  - Semi-Custom Central Station Air Handler: 1,500 – 60,500 CFM
  - Packaged Air Handling Units Chiller Water: 7.5 – 30 Tons



- Fan Coils
  - Belt Drive Fan Coils: 600 4,000 CFM
  - Ducted Fan Coils: 600 3,000 CFM
  - Horizontal Fan Coils: 200 1,200 CFM
  - Stack Fan Coils: 300 2,000 CFM
  - Vertical Fan Coils: 200 1,200 CFM
  - Hydronic Cassette Ceiling Fan Coil Units: 3/4 – 3 Nominal Tons Cooling



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#### Valves

- Venturi Valves High Turndown Ratio and Mechanical Pressure Independence
- Venturi FX Measured Airflow and Low Pressure Operation
- Integrated Venturi Valve Assembly Options
  - Performance Guaranteed Venturi with Integrated Silencer Assemblies
  - AHRI 410 Certified Venturi with Hot Water Coil Assemblies
  - UL1995 Certified Venturi with Electric Coil Assemblies

- · Monitors and Controls
  - Room Monitors
    - Touchscreen Room Pressure Monitor – High Resolution Touchscreen Display
    - Multi-Variable Monitor High Resolution Touchscreen Displaying up to 8 Rooms on Main Screen
    - All Monitors Have Native BACnet MS/TP Connection
  - Pace<sup>™</sup> Critical Space Controller
    - Volumetric Offset or Pressure Control
    - · Temperature and Humidity Control

- Antec Controls www.anteccontrols.com
- Fume Hood Controls
  - Fume Hood Controller
    - Sash Position Sensing Fume Hood Control
    - Sidewall Sensing Fume Hood Control
    - Hybrid Fume Hood Control
    - Presence Sensing
    - · Fume Hood Interface





UNITECH www.unitechair.com

- Units ranging from 2,000 CFM to 300,000 CFM (Catalogued from 5,000 CFM to 91,000 CFM)
- Maximum sound attenuation with four inch, double wall construction
- · Penthouse units available up to 400,000 CFM
- · Factory-installed controls and piping available

- Cooling Options: Hydronic or DX (Packaged Air-Cooled or Water-Cooled available)
- · Heating Options: Hydronic, Steam, Electric or Gas
- · Humidification Options: Gas, Electric or Steam-to-steam
- Knockdown construction available
- · Custom Air Handlers





- · Air-Cooled DOAS Units
  - Up to 20,000 CFM
  - Heating Options: Gas, Electric, Steam and Hydronic
  - Cooling Options: Hydronic and DX (Packaged or Split)
  - Energy Recovery Options

- Customizable Air Handlers
  - Up to 100,000 CFM
  - Indoor / Outdoor Construction
  - Single / Double Wall Construction
  - Heating Options: Gas, Electric, Steam and Hydronic
  - Cooling Options: Hydronic and DX (Packaged or Split)
  - Energy Recovery
  - Packaged Control

- · Make-Up Air Units
  - Direct Fired: 250 15,000 MBH
  - Indirect Fired Drum and Tube: 200 – 6,000 MBH
  - Indirect Fired Convoluted Tube: 75 – 1,200 MBH
  - 90% Efficient Indirect Fired: 250 – 1,600 MBH

www.solutionairgroup.com

SolutionAir

- Rooftop Units (8 250 Tons)
  - Highly Configurable
  - Heating Options: Indirect Gas, Electric, Steam and Hydronic
- Cooling Options: Hydronic and DX (Packaged Up to 160 Tons and Split Up to 250 Tons)
- Energy Recovery Options





SolutionAir www.solutionairgroup.com

- RegenCore Alternating Mass-Exchanger Energy Recovery Units
  - No Pre-Heat Requirements Down to Outdoor Temperatures of -40°C
  - Up to 92% Effectiveness



### GREENHECK Building Value in Air.

- Direct and Indirect Gas-Fired Make-Up Air Units
- Indoor Air Handling Units
- Fan Coils
- Heat Recovery Products
- Packaged Cooling Option
- Coils
  - Chilled Water
  - DX Evaporator
  - Condenser
  - Non-Freeze Steam Distributing
  - Booster / Duct Mounted
  - Hot Water
  - Heat Reclaim
  - Standard Steam

- ERV Energy Recovery Ventilator
  - 400 to 12,000 cfm
  - 1.5 in. wg external static pressure
  - Louvered intake weatherhood lowers supply air intake velocities to prevent rain and snow from being pulled into the unit
  - 2-inch outdoor and return air filters with a MERV 8 (30% efficiency) rating
  - 18 gauge outer wall construction
  - Multiple energy wheel options allow selection of a unit by what is critical in the design or application:
  - Effectiveness
  - Recovery Efficiency Ratio (RER)
  - Low blower horsepower

- ERH Energy Recovery Ventilator with Heating and Cooling
- 10,000 cfm

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- 1.5 in. wg external static pressure

Greenheck

www.greenheck.com

- Fresh outdoor air is preconditioned by the total enthalpy wheel, recovering a majority of the energy from the exhaust air
- Saves 3-4 tons of cooling per 1000 cfm
- Saves 50-60 MBH of heating per 1000 cfm
- The heating section further tempers cold outdoor air to desired conditions
- Chilled water coils, split DX cooling, packaged DX cooling

www.ehpricevancouver.com



### GREENHECK Building Value in Air.

- Wall, Island Proximity and Heat, Condensate Hoods
- Internal and External Supply Plenums Optional
- Variable Volume Control Packages
- Ecology Odor Control Units
- Standard Baffle Filter,
   High Velocity Cartridge,
   High Efficiency Grease X-Tractor and Dual Stage
   Grease Grabber, Filtration
- FlexConnect Utility Distribution System
  - Factory Built Wall Utility Systems Offering Single Point Connections for Gas, Water and Electricity
  - Easy to Clean Stainless Steel Exterior

Greenheck www.greenheck.com

 Adds Flexibility, Easy Relocation of Equipment, Reduces Installation Time, Allows Integration of Controls and Concealment of All Pipes and Wiring



### fisar, air humidity control

- · DFRA
  - Highly reliable units with drying capacities
  - Drying capacities from 3 to 42 kg/h
  - Dry air flows from 450 to 6,000 m<sup>3</sup>/h (265 CFM to 3532 CFM)
- DFRD
  - Drying capacities from 3 to 4.2 kg/h and dry air flow rates from 300 to 700 m<sup>3</sup>/h (177 CFM to 412 CFM)
  - Double fan for deep drying in closed circuit
  - Compact stainlesssteel series, ready for operation
  - Smart heaters

- DFRB
  - Drying capacities from 0.5 to 4.2 kg/h and dry air flow rates from 140 to 700 m<sup>3</sup>/h (82 CFM to 412 CFM)
  - Compact stainlesssteel series, ready for operation
  - Smart heaters
  - Desiccant rotor with heat recovery sector
- · DFLOW
  - Excellent low dew point performance with low energy consumption
  - Modular capacity, low maintenance, uniform operation and low cost

### · DFRC

- Mobile and heavy duty drying. Series aimed at temporary drying with a robust chassis and finish to protect against corrosion. Ideal for surface treatment and rental applications
- Drying capacities from 9 to 106 kg/h and dry air flow rates from 1,200 to 15,000 m<sup>3</sup>/h (705 CFM to 8824 CFM)
- Robust construction for harsh environments and weathering
- Simple and reliable operation
- High static pressures available

### • DFLEX

· Flexible modular range

Fisair www.fisair.com

- Adaptable to specific solutions
- Highly reliable equipment with drying capacities from 51 to 152 kg/h and dry air flow rates from 7,500 to 24,000 m<sup>3</sup>/h (4,412 CFM to 14,118 CFM)

www.ehpricevancouver.com



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- Heating and Energy Recovery
  - HRVs and ERVs for Residential Applications
  - HRVs and ERVs for Commercial Applications

- Nu-Air Ventilation www.nu-airventilation.com
- Central Air and Fan Coils
- Air Exchangers
- Controls and Accessories







- Inline Fans
- Heat Recovery Ventilators
- Lifebreath www.lifebreath.com
- Turbulent Flow Precipitators
- · Clean Air Furnace



- · Chilled Beams
  - Linear, Modular, Horizontal, Vertical and Floor-Mounted Active
  - Linear Passive

Price Industries Limited www.priceindustries.com

- Passive with Integrated Returns
- Controls and Hose Kits
- Retrofit Perimeter
   Induction Units



### FAN & BLOWER COILS

- High Performance Fan Coils
- Optional Integrated Silencer
- Standard ECM Motor

#### Price Industries Limited www.priceindustries.com

- · Horizontal Blower Coils
- · Vertical Fan Coils
  - Concealed and Exposed

www.ehpricevancouver.com



### CONTROLS

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### www.priceindustries.com

- **Application Specific** Controls for:
- Networked or Stand-Alone Applications
- VAV / VVT Controllers (BTL Certified)
- Mini-Front-End Solutions
- Pneumatic Stand-Alone Controls

**Price Industries Limited** 

- · Control Applications: Rooftop Controls
  - Bypass Controls
  - Single Duct Controls \_
  - Fan Powered Controls
  - Prodigy Smart Diffusers
  - Web Server Graphical Interface
  - Hydronic Controls
  - Underfloor Controls





HVAC Specialty Products

Starters

Starters

Controls

BACnet

NEMA Rated

**Building Automation** 

- Standard Automation

- Cooling Tower Controls

- Kitchen Hood Controls

- Pump and HVAC

- Variable Frequency

Drives (VFD)

#### Franklin Control Systems www.franklin-controls.com

- · Industrial Products
  - Contactors and -**Overload Relays**
  - Manual Motor Starters
  - **Circuit Breakers** \_
  - Starters \_
  - Soft Starters
  - Soft Starters with \_ Integrated Bypass
  - Programmable Logic Controllers
  - Terminal Blocks \_
  - **Pilot-Devices** \_
  - Enclosures \_





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Belimo www.belimo.com

Electronic Control Valves

**Zone Control Valves** 

Actuators

Butterfly Valves

Globe Valves



### ulcan

- **Commercial Hydronic** Heating Products Including:
  - Commercial Wall-Fin Radiation
  - Light Commercial Wall-Fin Radiation
  - Cabinet Unit Heaters

- Vulcan Radiator www.vulcanrad.com
- \_ Convectors
- Horizontal and Vertical \_ Unit Heaters
- Panel Radiators
- **Custom Enclosure**
- Security Enclosure -

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## **LABORATORY** PRODUCT APPLICATION

### **Room Pressure Sensor**

- Maintenance and calibration-free sensor technology
- · Accurate to 3% of reading
- · Designed to prevent buildup of airborne particulates

### **Supply Venturi Valves**

- Medium (0.6 to 3.0 in.w.c.) or low (0.3 to 3.0 in.w.c.) pressure operation
- High-speed actuation
- Characterized and calibrated using NVLAP
   accredited test stations (Lab Code: 201067-0)
- · Operating pressure feedback

### Pace™

- Pressure or volumetric offset control strategies
- Airflow control utilizing Venturi Valves, Venturi FX Valves or Terminal Units
- High speed room level network for communication to Pace and FHC controllers
- BACnet MS/TP

### **Integrated Reheat Coil**

- $\cdot$   $\;$  Factory mounted transition
- Coil access door

### Thermostat

- · LCD or blank-face options
- $\cdot$  Optional humidity or  $\rm CO_2$  sensing

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 Optional connection to room level network for commissioning

#### General Exhaust Venturi Valve

- Medium (0.6 to 3.0 in.w.c.) or low (0.3 to 3.0 in.w.c.) pressure operation
- High-speed actuation
- Characterized and calibrated using NVLAP
   accredited test stations (Lab Code: 201067-0)
- · Operating pressure feedback

### Pace™

- Pressure or volumetric offset control strategies
- Airflow control utilizing Venturi Valves, Venturi FX Valves or Terminal Units
- High speed room level network for communication to Pace and FHC controllers
- · BACnet MS/TP

### Integrated Silencer

- Factory mounted transition
- Specifically designed for Venturi Valves

#### **Fume Hood Venturi Valve**

- Medium (0.6 to 3.0 in.w.c.) or low
   (0.3 to 3.0 in.w.c.) pressure operation
- High-speed actuation
- Characterized and calibrated using NVLAP
   accredited test stations (Lab Code: 201067-0)
- · Operating pressure feedback
- Optional corrosion resistant coatings

### **Fume Hood Controller**

- Sash position, sidewall sensor or combination face velocity control
- High speed response
- · LCD fume hood interface
- Connection to room level network



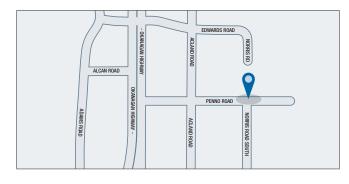


· Water source heat pumps

### NOTES







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