Founded in 2004 by a well-experienced group looking to reinvent the HVAC market, Ingenia quickly rose to become THE North American reference for air handling units of superior quality. Strong from its experience, and leveraging the commitment to innovation and quality, Ingenia continually strives to excel at providing the best value and service to its customers. We have revolutionized the industry by introducing the highest performance air handler.

Ingenia’s custom air handlers give the designer the broadest portfolio of options in the industry to provide solutions to the most unique situations. Ingenia air handlers can be configured to fit the most challenging spaces and difficult installations. Whether your need is related to a limited footprint, acoustics, specialized ventilation-monitoring capabilities or humidity control, we can design and build your air handler to your exact specifications. Moreover, electrostatic antimicrobial powder coating applied to all of the AHU’s interior surfaces and bacteria defeating UV lights are both examples of Ingenia’s options to prevent contamination and produce a healthier living environment.

Ingenia’s systems are engineered and built by our highly trained employees using the most precise design and automated manufacturing processes in the HVAC industry. Ingenia’s exclusive software offers a quick and easy way to design, select, price and fabricate the simplest to the most sophisticated AHUs. By including an extensive list of options, our software allows the designer to compare various configurations, monitor all cost variables and ultimately design the optimal configuration in record time.

Ingenia’s team has streamlined the production cycle into a structured process where sales, engineering and manufacturing are totally integrated and fully automated to ensure repetitive and predictable accuracy. With the introduction of manufacturing 4.0 digital technologies, Ingenia’s production lines now offer state of the art sheet metal machine tools and robots to handle, shear, bend and powder coat all parts to perfection.

Ingenia’s innovative systems offer the lowest total cost to the end user by providing high efficiency thermal cabinets and air leakage rates lower than 0.5% of the peak airflow at 15 inches w.g. static pressure.

Ingenia’s indoor and outdoor custom air handlers can range from 5,000 to 200,000 cfm. The cabinet construction materials include high quality injected polyurethane foam insulation and a variety of metal types combined with a perfect mechanical assembly and butyl seals. The cabinet panels incorporate an integral wall, floor and ceiling no-through metal construction resulting in a full thermal break which eliminates all potential sources of energy losses.

The combination of innovative manufacturing 4.0 digital technologies, superior cabinet materials, electrostatic powder coating, integral no-through metal cabinet construction, as well as extensive testing capabilities ensure that every Ingenia system is of the highest quality and longevity at the lowest initial and operating costs.
Cabinets made of injected polyurethane foam panels with integral no-through metal construction on all floors, walls, doors and roof panels.

Motor removal rail and support system.

Coil connections sealed with dual rubber grommets.

Outdoor air hoods with removable aluminum moisture eliminators.

Piping support structural system.

Ultra-low leak airfoil dampers.

Powder coated exterior finish with a minimum resistance to salt spray test of 10,000 hr.

Heavy-duty fans with AC motors - fan arrays with EC or PM motors are available for other applications.

Floor grating over floor mounted dampers.

Air mixers to ensure uniform downstream temperature.

Heavy-duty and variable height G-90 galv. steel framing channels with removable lifting lugs.

Individual heat transfer coil racks with individual 304 s.s. drain pans.

Ingenia Ultra-seal filter frames with closed cell urethane foam gaskets - mechanical holding clips.

Hygienic wash-down duty floors - drain in every section.

Ingenia

Multi-sloped

IAQ s.s drain pans.

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Ingenia custom air handlers are designed to easily meet the precise demands of any building’s environmental conditions and physical constraints.

- Indoor and outdoor units.
- Capacity range from 5,000 to 200,000 cfm.
- Unlimited physical sizes.
- Cabinet with integral no-through metal construction at all locations, including base frame, floors, walls and roof panels.
- Cabinet materials: G-90 galvanized steel, aluminum as well as 304 or 316 stainless steel or a combination of these materials.
- High-quality polyurethane injected foam insulation. Optional fiberglass insulation.
- Acoustic and thermal resistance flexibility for any application: 2.0”, 2.5”, 3.0” and 4.0” wall thicknesses.
- Acoustical wall lining for high sound absorption applications.
- Air handlers are designed for up to 15” water column static pressure and a wall deflection less than 1/240 at rated cabinet pressure.
- Cabinet design exceeds the requirements of AHRI 1350 with the following minimum ratings: CT1 for thermal transmittance, CB0 for thermal bridging, CL1 for casing air leakage and CD1 for casing deflection.
- Outdoor units are built with an absolute weatherproof roofing system whereby the pressure seals and weather seals are completely independent from each other.

- Exceptional casing longevity with exterior and/or interior baked electrostatic powder coating with up to 10,000 hr resistance to the salt spray test.
- Powder coating is also available with an antimicrobial sterile coating agent.
- No-through metal access doors, door frames and inspection window frames with double seal gaskets.
- Wash-down hygienic cabinets have a smooth finish on the interior without fasteners on the interior surfaces.
- Multi-slope stainless steel drain pans.
- Wash-down duty floors include a complete water management system with recessed floors and floor drains in all sections.
- Coil rack assemblies are designed for individual coil removal for servicing purposes.
- Stacked cooling coils have individual drain pans.
- Single fans or fan arrays with internally mounted motors. Complete choice of fan and motor types.
- Factory hydraulic piping.
- Factory installed controls.

QUIET AIR MOVEMENT USING THE LEAST AMOUNT OF ENERGY

Ingenia’s uniquely integrated fan array system uses high efficiency, electronically commutated (EC) motors that offer electrical power savings ranging from 10% at full airflow to 50% at partial duty flow.

In most HVAC applications, average fan energy savings of 30% are easily achievable in conjunction with superior quality acoustical performances and fan redundancy. The Ingenia fan array system’s high flexibility does not require variable frequency drives to control the fan RPM and offers more data gathering options than traditional fan systems. The intelligent design allows multiple EC motors to be controlled and monitored via internet/modem interface using a 0-10 volt signal or optional BACnet MS/TP. The manual interface is via a controllable touch screen. In the event of a malfunctioning fan, the speed of the remaining fans increases to compensate and also send an alarm to the BMS, therefore providing a notice and ample time for an easy replacement of the non-operating fan.

INGENIA SYSTEMS CAN BE CUSTOMIZED TO MEET THE MOST STRINGENT REQUIREMENTS FOR VARIOUS APPLICATIONS:

- Health care
- Education
- Pharmaceutical
- Biotechnology
- Museum and archives
- Food processing
- Commercial and industrial
- Clean rooms