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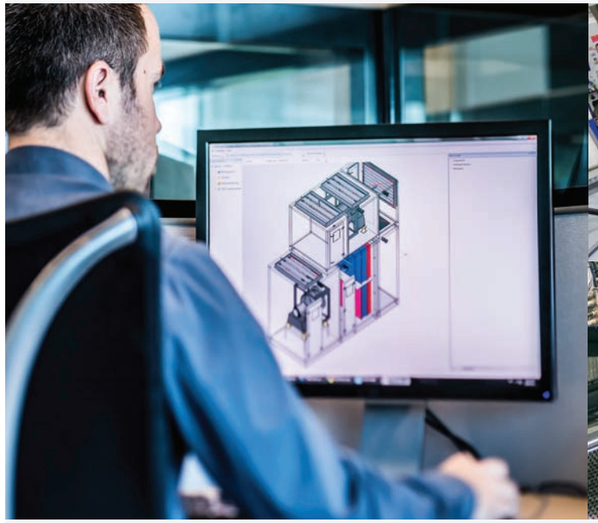
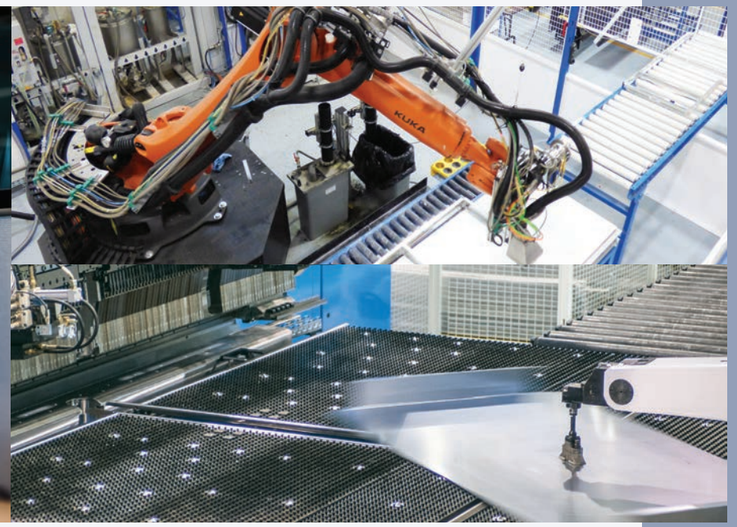
CUSTOM AIR HANDLERS

NEW GENERATION

INGÉNIA'S CUSTOM AIR HANDLING SOLUTIONS

Ingénia's custom air handlers give the designer the broadest portfolio of options in the industry to provide solutions to the most unique situations. Ingénia air handlers can be configured to fit the most challenging spaces and difficult installations. Whether your needs are 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 Ingénia's options to prevent contamination and produce a healthier living environment.





MANUFACTURING TECHNOLOGIES

Ingénia's systems are engineered and built by our highly trained employees using the most precise design and automated manufacturing processes in the HVAC industry.

Ingénia's exclusive software offers a quick and easy way to design the unit, select components, price and fabricate the simplest to the most sophisticated AHUs. By including an extensive list of suppliers, our software allows the designer to compare various configurations, monitor all cost variables and ultimately design the optimal configuration.

Ingénia's team has streamlined the production cycle into a structured process where sales, engineering and manufacturing are totally integrated and fully automated.

With the integration of manufacturing 4.0 digital technologies, Ingénia's production lines now offer state of the art sheet metal machine tools as well as robots to handle, shear, bend and powder coat all parts to perfection.

CUSTOM AIR HANDLING UNIT DESIGN

Ingénia's software gives you the flexibility to simply build your custom air handler from our extensive library of options to meet your exact specifications. Equipment options are modeled and built into the components' library to facilitate the design, integration, and preparation of the final AHU model. Ingénia's flexibility lets you build your units your way, making it the best solution for all custom applications.

Ingénia air handlers are designed with cost effectiveness and quality features in mind. Superior construction methods deliver the industry's highest reliability standards, lowest leakage rates and best thermal performances. We assure design reliability and accuracy by providing lab-tested data and AHRI, AMCA and ETL certified products.

LOWEST TOTAL COST

Ingénia'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 water column static pressure.

Ingénia'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, door and ceiling no-through metal design resulting in a full thermal break which eliminates all potential sources of energy losses.

The combination of innovative manufacturing 4.0 technologies, superior cabinet materials, electrostatic powder coating lines, integral no-through metal cabinet construction, as well as extensive testing capabilities ensure that every Ingénia system is of the highest quality and longevity at the lowest initial and operating costs.

ICON LEGEND

CONTROLS

COOLING

DEHUMIDIFICATION

ELECTRICAL

ENCLOSURE

ENERGY RECOVERY

ENERGY SAVING

FILTRATION

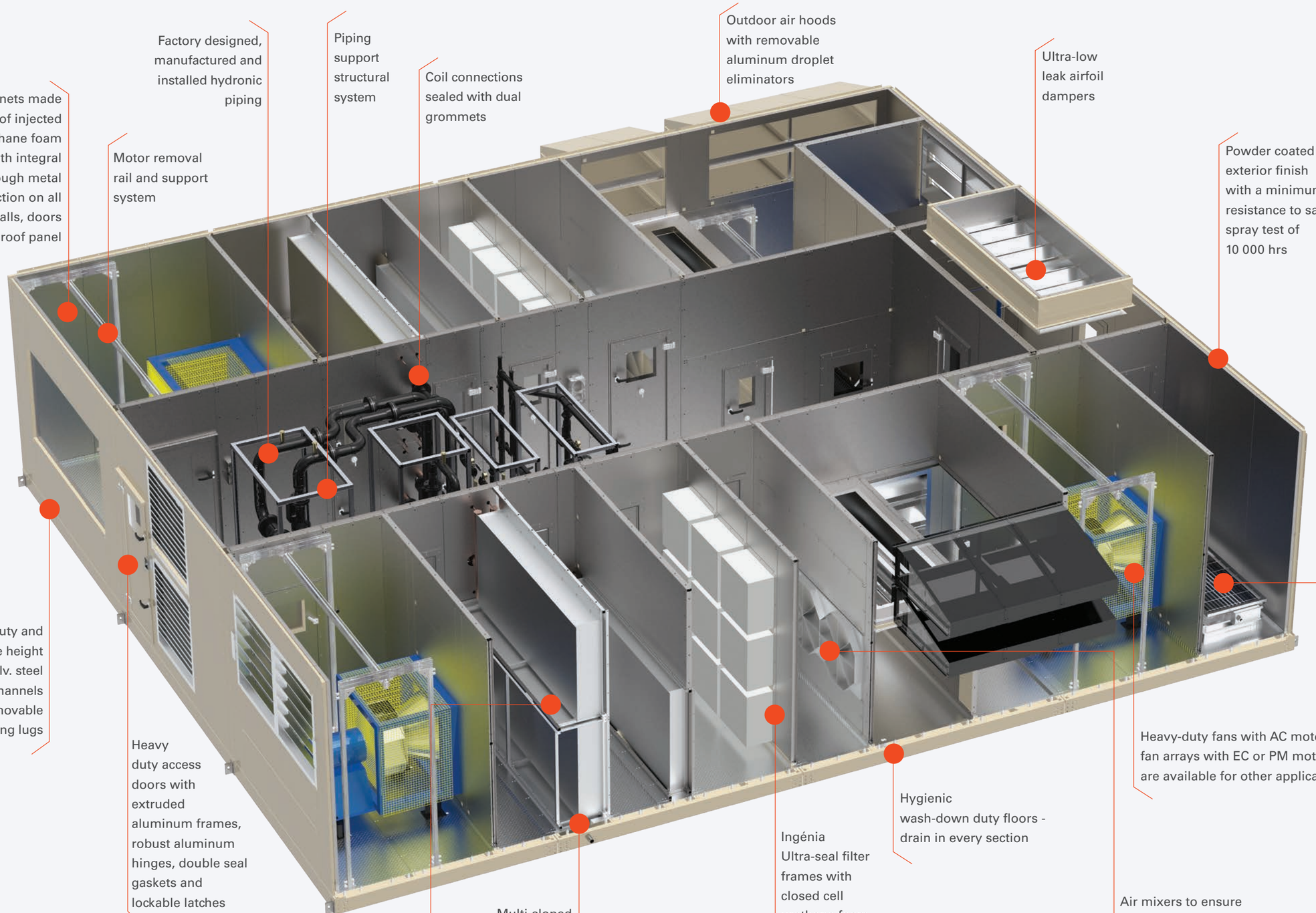
HEATING

FAN MOTORS

HUMIDIFICATION

MICROPROCESSOR

SOUND ATTENUATION



ingénia®

Ingénia 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 walls, doors, floors 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 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 L/240 at rated cabinet pressure.
- Cabinet design exceeds the requirements of AHRI 1350 with the following minimum ratings: CT_1 for thermal transmittance, CB0 for thermal bridging, CL_1 for casing air leakage and CD_1 for casing deflection.
- Factory installed controls.
- Stacked cooling coils have individual drain pans.
- Outdoor units are built with an absolute weatherproof roofing system whereby the pressure seals and weather seals are completely independent from each other.
- For maximum protection of the cabinet, the exterior and / or interior can be coated with an electrostatic powder paint with up to 10,000 hours resistance to the salt spray test in accordance with the ASTBM B117 method.
- Powder coating with antimicrobial agent preventing the growth of molds, bacteria and viruses also available.
- No-through metal access doors, door frames and inspection window frames with double seal gaskets.
- Wash-down hygienic cabinets have a smooth finish on all interior surfaces.
- Multi-slope stainless steel drain pans.
- Wash-down duty floors include a complete water management system, floor drains in all sections.
- Coil rack assemblies are designed for individual coil removal for servicing purposes.
- Single fans or fan arrays. Choice of three fan types with AC or EC motor types.
- Factory installed hydraulic piping.

QUIET AIR MOVEMENT USING THE LEAST AMOUNT OF ENERGY

Ingénia'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 using EC motors, average fan energy savings of 30% are easily achievable in conjunction with superior quality acoustical performances and fan redundancy. The Ingénia 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. A touch screen allows interactions with the system. In the event of a malfunctioning fan, the speed of the remaining fans increases to compensate and also sends an alarm to the BMS, therefore providing a notice and ample time for an easy replacement of the non-operating fan.

INGÉNIA SYSTEMS CAN BE CUSTOMIZED TO MEET THE MOST STRINGENT REQUIREMENTS FOR MANY APPLICATIONS:

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