

AX'B

Ultra-compact air handling units
from 600 to 6000 m³/h



More compact to ensure comfort for everybody, everywhere.

AX'B

The **compact solution**
for small & medium surface areas



Shopping centres

Indoor air quality has become a key success factor for all new service industry projects, from office suites and administrative facilities to shops, hotels, museums and airports, and its importance will only continue to grow.



Service industry



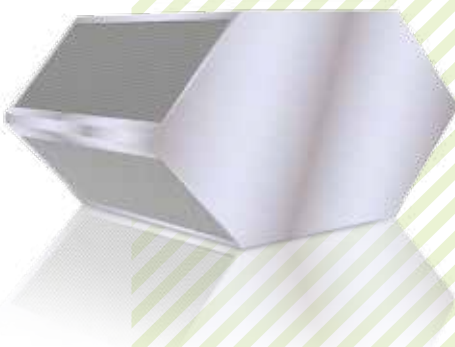
Healthcare

Pre-filtration for ISO 6 and ISO 7 laboratories.

Energy is at a premium

AX'B saves and recovers energy

The AX'B range, with its high efficiency sealed plate heat recovery unit, offering an efficiency of up to 90%, electronically commutated motor, HPE filter and on-board control, offers an optimal energy savings solution for your projects, in line with thermal regulations.



Check ongoing validity of certificate :
www.eurovent-certification.com

The **air handling unit** that **blends in**



Even slimmer design, even quieter operation, even easier to install:
designed for total comfort

- AX'B is the only air handling unit on the market offering pressures of over 1000 Pa from a 400 mm-thick unit.
- High acoustic performance provided by the fan and casing design.
- Easy access to components to facilitate use and maintenance.
- Plug & play: easy installation.

AX'B

Top performance from a compact form-factor

Specifications

- Air flow rate: 600 to 6000 m³/h.
- Ceiling-mounted, floor-mounted or vertical configuration.
- Ultra-compact unit: thickness 400 mm.
- Modular unit adaptable to your needs.
- Self-supporting unit.
- Double-skin panels, thickness 25 mm, with glass wool insulation.
- Housing performance in accordance with standard EN 1886:
 - Air leakage: L2.
 - Mechanical strength: D2.
 - Thermal transmittance: T3.
 - Thermal bridging factor: TB2.
 - Filter bypass leakage: F9.

Energy savings

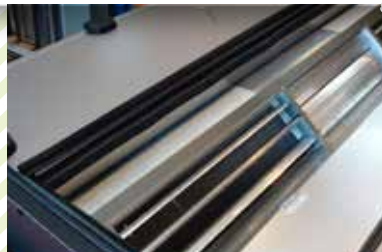
Controlled energy consumption levels, via the use of a heat recovery unit and high-efficiency fans:

Heat recovery unit

- High-efficiency plate heat exchangers, with efficiency level of up to 90%, with full bypass.

Fan motor assembly

- Flow rate managed by varying the fan speed.
- Plug fan, one or two AC direct-drive fans (optional variable frequency drive).
- EC motor with constant efficiency across the full variable-speed operating range (variable speed built-in).





Filtration

Enhanced air quality

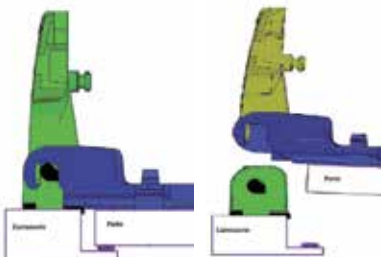
Good-quality, healthy air is essential for well-being, and ensures good conditions for workers, guests and visitors alike. The AX'B range controls the concentration of pollutants in indoor air, and can be used for pre-treatment of air for ISO 6 and ISO 7 laboratories. Filtration class G4 to F9.

Our filters fully comply with the EN 13779 standard

Ease of access

To facilitate maintenance

- Sleek design, with the quality you expect from a Hydronic product.
- Easy installation using effective and ergonomic assembly systems.
- Generous access via doors that can be fully removed from their hinges, to simplify and facilitate maintenance.



Removable door hinges/handles

Hydronic Control

More precise

Full self-regulating control depending on demand to achieve the expected performance.



The electrical control cabinet including PLC is fully **integrated in the unit.**

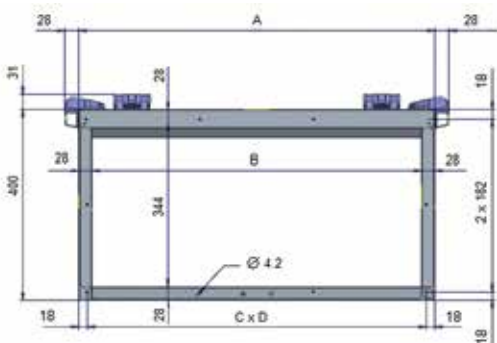


AXB

Ultra-slim air handling units from 600 to 6000 m³/h

TYPE		25	40	60
Configurations		Ceiling-mounted, floor-mounted or vertical configuration		
Width / Height		750×400	1310×400	1880×400
Nominal air flow rate (m³/h) (Speed: 3.1 m/s across finned surface)		2000	4000	6000
Technology Induction motor	Fan motor assembly	1	1	2
	Power ratings	0.55 kW - 4 poles / 1.1 kW - 2 poles / 1.4 kW - 2 poles		
	Number of variable frequency drives (optional)	1	1	1
Technology EC motor	Fan motor assembly	1	1	2
	Power rating	1 kW		
Pleated filters		G4 / M5 / F7 HPE / F9 / F9 HPE		
Opacimetric filters Short flexible bags		M6 / F7 / F8		
Opacimetric filters Rigid bags		M6 / F7 / F8 / F9		
Hot water coil		1 / 2 / 3 rows	1 / 2 / 4 rows	1 / 2 / 4 rows
Cold water coil		3 / 4 / 6 rows		
Direct-expansion cooling coil		3 / 6 rows		
Electric heater		15 kW	24 kW	33 kW
Stacked plate heat exchanger		Yes	Yes	Yes

Air handling connections



Size	A	B	C	D
25	750	694	3	238
40	1310	1254	6	212.3
60	1880	1824	8	230.5

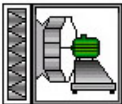
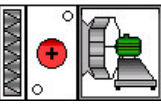
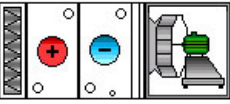
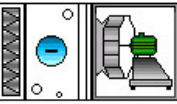
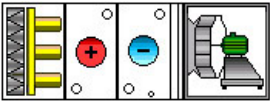
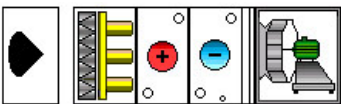
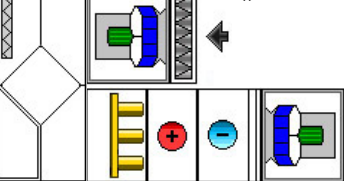
Quick selection

Design calculation with:

- Two-row heating coil.
- Four-row cooling coil.
- Plug fan, EC motor option.

- 250 Pa available pressure.
- M6 and/or F9 filter.

*depending on fan flow rate and pressure specifications

TYPE		25	40	60
	Length (mm)	610	610	610
	Weight (kg)	42	56	96
	Length (mm)	830	830	830
	Weight (kg)	58	81	130
	Length (mm)	1100	1100	1100
	Weight (kg)	85	159	190
	Length (mm)	830	830	830
	Weight (kg)	68	120	152
	Length (mm)	1400	1400	1400
	Weight (kg)	98	162	210
	Length (mm)	1800	1800	1800
	Weight (kg)	114	193	252
	H (mm) × W (mm)	400 × 1620	400 × 2740	
	Length (mm)	2800	2800	
	Weight (kg)	277	473	

* Stacked

Hydronic, wherever **air handling** is crucial



Hydronic has been designing, developing, manufacturing and marketing air handling units at Mortagne-au-Perche for over 50 years. This site is organised as a centre of excellence, placing customer needs and environmental protection at the heart of its industrial organisation. Hydronic's expertise encompasses innovation, manufacturing quality, performance and energy savings.



The Quinoa Group, with its Autogyre, DMO, HBH, Hydronic, Panol, Sotis and Strulik brands, offers extensive technical expertise in the following core construction industry fields:

- Ventilation
- Fire safety
- Air handling
- Air diffusion

Strong distribution via focused brands with specific sales networks.

Top-level **sales** and technical support teams.



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AXM

Air handling units from 1,000 to 30,000 m³/h



Expert solutions for air handling

AX'M

An **extensive range of solutions** for all markets

The AX'M range benefits from Hydronic's expertise in air handling to provide an ideal solution to the needs and constraints of the construction industry. AX'M air handling units offer reliable, tailored solutions in a single compact product.



Air handling units certified for all markets

The AX'M range benefits from the continuous improvement policy applied at our plant, which is a Centre for Industrial Excellence, thus ensuring the highest levels of quality, reliability and durability.



Service industry

Indoor air quality has become a key success factor for all new service industry projects, from office suites and administrative facilities to shops, hotels, museums and airports, and its importance will only continue to grow.



Healthcare

In hospitals, clinics, nursing homes, retirement homes and throughout the healthcare sector, stringent regulations necessitate high sanitary safety levels to protect all patients and residents.



Industry and clean rooms

Numerous high-tech industrial processes, in sectors such as pharmacy, microelectronics, special chemicals and cosmetics, have precise atmosphere requirements to ensure full reliability and safety.

Contributing to **energy optimisation** on your projects



Today, the energy balance of all new and renovated buildings is expected to be favourable for the environment and occupants.

Energy-related regulations are becoming ever stricter (ErP 2018, carbon balance and, for example, the French BBC, HQE and RT 2012 requirements), and this trend is set to continue.

Energy optimisation has become an inescapable reality for all construction industry professionals.

Energy recovery: the choice for the best performance

Three heat exchanger systems are available in the AX'M range, to suit different applications.

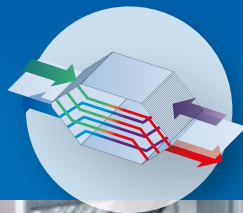
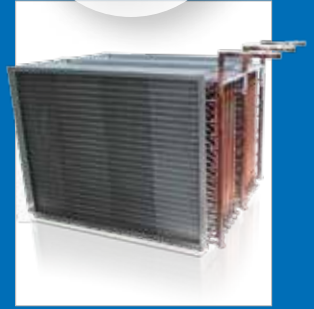
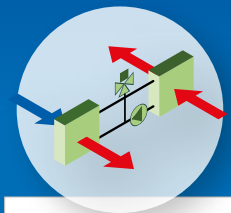


Plate heat exchanger



Rotary heat exchanger



Run-around coils



High-efficiency electronically commutated motors combined with high-efficiency filters to maximise performance

Hydronic has selected components with low power consumption for the AX'M range:

- High-efficiency induction motors (IE2 or IE3) to comply with new standards and directives.
- High-efficiency electronically commutated motors for lower electricity consumption.
- High-efficiency filters to reduce pressure losses, thereby resulting in significantly lower power consumption and sound levels.

A certified range

Eurovent certification provides an impartial guarantee from an independent organisation which tests all equipment on the market under similar conditions, in its accredited laboratory.



AX'M

Maximum performance in a compact form

Self-supporting structure for a consistent, more adaptable design

The self-supporting structure ensures zero air leakage, reduces thermal bridges and lowers the sound level.

The tunnel is made from double-skinned panels, 50 mm thick, insulated using rock wool with a density of 40 kg/m³. The inner and outer panels are made of steel with an Aluzinc coating, offering class C4 corrosion resistance.

Option: galvanised sheet steel with white precoating, or stainless steel.



The housings can be assembled from the inside or the outside, facilitating installation. The AX'M range can be delivered as housings to be assembled, or fully assembled on frames with factory-fitted seals between housings.

Doors for enhanced accessibility and zero air leakage

Generous access via doors with lift-off hinges, and detachable façade panels, to simplify maintenance.



Lift-off hinge



Lock

High-efficiency filters for controlled air quality

The AX'M range offers a wide range of filtration options (G4 to H14 filtration, activated carbon filters, used singly or combined) to suit all requirements.



Clamped rack



Universal frames



Buckets



orm factor



Technical panel to save time with simplified installation

A technical panel towards the top of each AX'M unit comprises all the hydraulic and electrical components, monitoring and adjustment devices, including coil manifolds, pressure switches and lighting switches.

This technical panel frees up space on the façade, facilitating all maintenance and cleaning operations.

The panel also acts as a cable tray, providing easy routing for pressure hoses and electrical cables.



The technical panel provides full access, enabling quick installation of accessories and total or partial wiring of the unit.

Coils for energy optimisation

Hydronic designs and manufactures its own coils: copper, steel or stainless steel pipes; aluminium, coated aluminium or copper fins; and special coatings. Full access to coils and to the condensate drain pan via wide doors. Removable pan with sloped stainless steel base.



Ventilation for controlled consumption

A wide range of high-efficiency fans is available: plug fans with direct drive, induction motor (IE2 or IE3) or electronically commutated motor.

Option: corrosion protection.



Plug fan with induction motor



Plug fan with electronically commutated motor

AX'M

Tailored AHUs...

Hydronic offers a variety of energy recovery options to meet your needs:

- Rotary heat exchangers made from aluminium with epoxy or hygroscopic coatings, constant or variable speed.
- Aluminium or epoxy-coated plate heat exchangers, with partial or full bypass.
- Run-around coils to avoid any cross-contamination between fresh air and return air, with copper pipes and aluminium, coated aluminium or copper fins.

Silencers

Glass fibre or fray-resistant mats

Reduce noise from the unit intake and discharge.



Humidification

- Steam humidifier
- Adiabatic humidifier (runoff or spray)



Frame

for delivery of assembled, factory-sealed units

An AX'M system comprising several units can be delivered on a frame for easy installation, unit by unit or fully assembled.

Flat-packed delivery for difficult-to-access areas

Unit fully assembled on site.

Viewing ports for easier monitoring

Quickly check on the internal components of your unit via viewing ports in the doors.



Unit legs

setting the height of the AX'M range

AX'M units can be mounted on various leg heights, from 100 to 500 mm,

depending on your installation needs.



Electrical cabinet: pre-wired unit

Hydronic can add a factory-fitted electrical cabinet to your AX'M unit.



Outdoor version

to free up indoor space

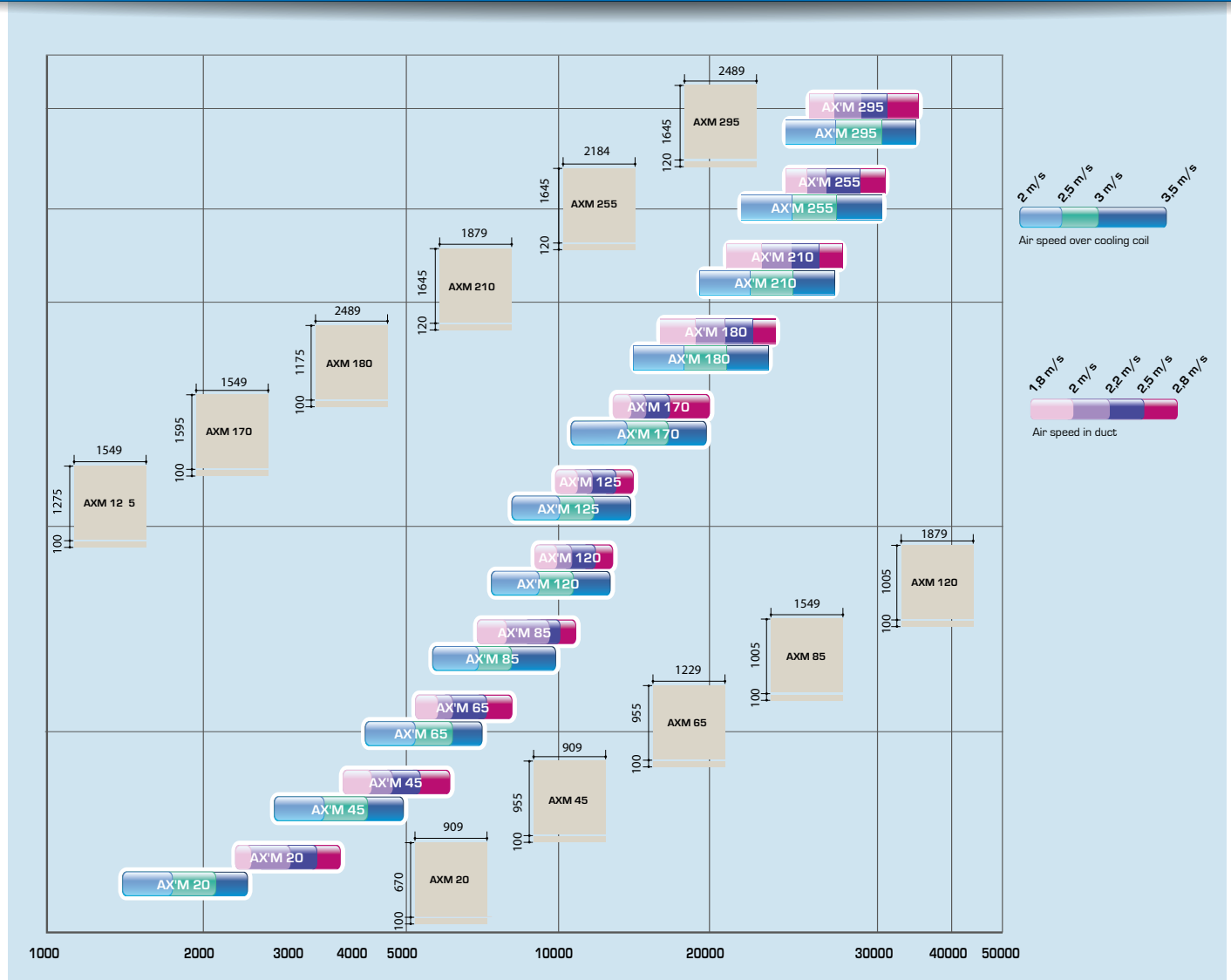
Sloped roof for natural rainwater runoff, with no rain traps.



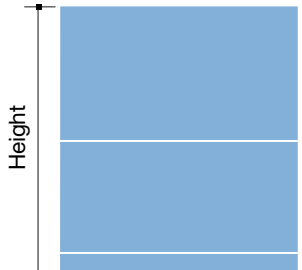
... from 1,000 to 30,000 m³/h

There are 11 standard sizes in the AX'M range of air handling units, covering air flow rates from 1,000 to 30,000 m³/h.

Select the air flow rate and air speed you need: several dimensions are available for a given flow rate. Together, taking account of your needs and conditions of use (available space), we determine the characteristics of your AX'M unit.



Dual-flow / High efficiency, compact	
Size	Height
20	1417
45	1987
65	1987
85	2087
120	2087



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- Ventilation
- Fire protection
- Air handling
- Air diffusion

Strong distribution

Via focused brands with specific sales networks.

Top-level **sales** and technical support teams.



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AX'R

Dual-flow air handling units with heat recovery
20 models, from 300 to 18000 m³/h



Energy recovery for environmentally friendly comfort



Energy is our future, don't waste it!

Fresh air control

Environmental requirements

To ensure healthy and comfortable environments in buildings, regulations specify the control of fresh air / exhaust air via dual-flow ventilation.

This obligation has become an opportunity to save energy, in that the heat energy in the exhaust air can be recovered and transferred to the fresh air.

Offices, institutional facilities, shopping centres, hotels and restaurants, nursing homes:

Eco-comfort

There are already stringent regulations regarding fresh air in certain premises where well-being and health are of prime importance, but these regulations do not yet account for the economical and ecological impacts of these facilities. Hydronic's response, built on its expertise in high-efficiency air handling units, is AX'R, the first French eco-comfort system with dual-flow ventilation and energy recovery.

AX'R meets fresh air intake requirements and optimises the energy efficiency of the system. Heat energy in the exhaust air – which is discharged in standard systems – is recovered and transferred to the fresh air stream. This system eliminates unnecessary energy wastage, protecting the environment and allowing financial savings.

Standards and labels

Ecodesign

Hydronic's reputation stems is built on the excellence of its solutions. For companies applying a high environmental quality approach, Hydronic air handling units comply with French and European standards, including RT 2012, EPBD, EFFINERGIE, MINERGIE and BREEAM.



A certified range

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AX'R

A sense of innovation



The AX'R range, the latest in a long line of air handling units, incorporates Hydronic's extensive experience and key innovations for comfort that is ecologically and economically sound.

Hydronic, the expertise of the leading French specialist

Hydronic is the leading French specialist in high-performance air handling units. We apply our expertise in three particularly demanding markets – healthcare, industrial clean rooms and the service sector – with ranges

specially designed to suit each application and each air flow rate. Air handling is now a critical environmental challenge, and Hydronic air handling units offer optimal performance with low consumption and CO₂ levels.

For Hydronic, expertise must be applied from start to finish.



Installation, use, maintenance:

Designed for total comfort

At all stages of its life cycle, from the design phase through to end-of-life disposal, AX'R units are designed to have minimal impact on the environment and meet the needs of installers and end users:

- Plate or rotary heat exchangers provide optimal efficiency, recovering up to 80% of heat energy at nominal flow rates.
- High acoustic and thermal performance: insulated with long-strand mineral wool, compressed to 50 mm thick, with a density of 28 kg/m³
- An extensive range with three ready-to-install configurations, featuring a compact and lightweight design and self-supporting structure
- Generous access to components for ease of maintenance

Hydronic AX'R solutions

Four versions with high environmental performance

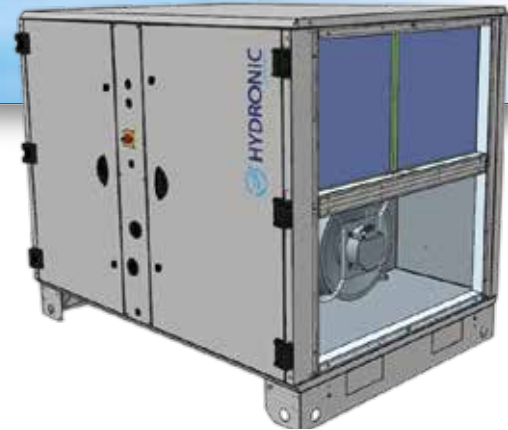


RHE conventional configuration

Universal eco-comfort

- Installed outdoors (on a flat roof or at ground level) or in a technical room
- Rotary heat exchanger technology
- Nine sizes with air flow rates of up to 18,000 m³/h
- M5, F7 filtration
- Size 10: single-phase 230 V - Other sizes: three-phase 400 V

Flow rate	Dimensions			Air flow rate m ³ /h	Dimensions mm intake/exhaust	Weight (kg)
	Height	Length	Width			
10	958	1266	810	300 to 1200	Diam. 250	201
20	1158	510 + 800	1010	500 to 2500	Diam. 355	309
30	1359	800 + 800	1210	700 to 3700	981 × 497	432
40	1659	800 + 800	1510	900 to 5700	1281 × 608	558
50	1659	800 + 800	1510	900 to 7000	1281 × 608	604
60	1959	800 + 800	1810	1400 to 8500	1581 × 777	702
75	1959	800 + 800	1810	1400 to 8500	1581 × 777	751
100	2090	1100 + 1100	1920	2500 to 14000	1588 × 807	955
150	2340	1100 + 1200	2192	3000 to 18000	1908 × 808	1250



Conventional configuration

Comfort for all

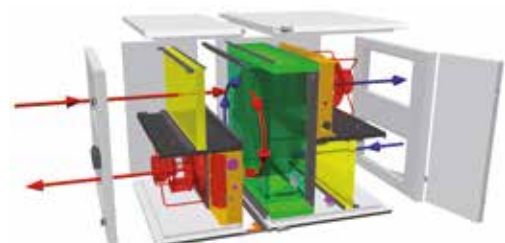
- Dual fresh air filtration stage
- Total bypass
- Five sizes, from 300 to 6600 m³/h
- Plug and play, control system built into the unit
- M5, F7 filtration
- Counter-flow plate heat exchanger
- High efficiency: zero air leakage.
- Size 10: single-phase 230 V - Other sizes: three-phase 400 V

Flow rate	Dimensions			Air flow rate m ³ /h	Dimensions mm intake/exhaust	Weight (kg)
	Height	Length	Width			
10	958	1580	810	300 to 1200	Diam. 250	200
20	1158	1150 + 800	1010	500 to 2200	Diam. 355	350
30	1359	1264 + 800	1210	700 to 3700	981 × 497	465
40	1659	1264 + 800	1510	900 to 5100	1281 × 608	580
60	1959	1407 + 850	1810	1400 to 6600	1581 × 777	765



AX'R technology

The high efficiency of AX'R air handling units is the result of Hydronic's innovative design and manufacturing discipline.



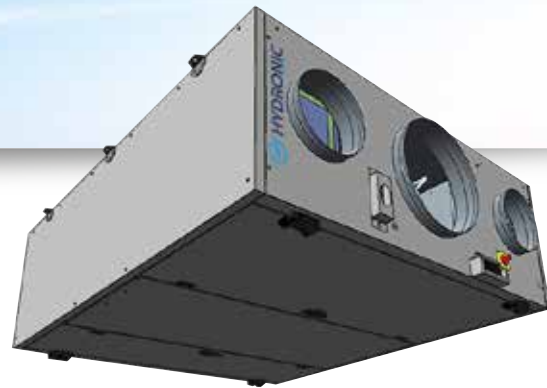
Conventional configuration



Vertical configuration
Universal installation

- Compact unit, easy to install indoors in a cabinet or mini technical room
- Counter-current plate heat exchanger technology
- Three sizes with air flow rates of up to 2600 m³/h
- Motorised and controlled bypass damper
- M5, F7 filtration
- Size 7: single-phase 230 V - Sizes 15-20: three-phase 400 V

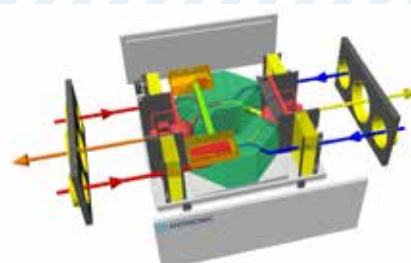
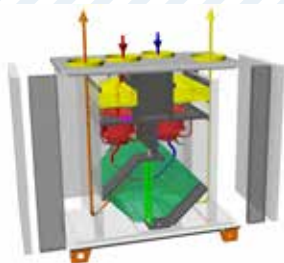
Flow rate	Dimensions			Air flow rate m³/h	Dimensions mm intake/exhaust	Weight (kg)
	Height	Length	Width			
7	1385	1313	730	300 to 1200	Ø 250	202
15	1758	1593	832	700 to 2000	Ø 355	330
20	1901	1735	832	700 to 2600	Ø 355	389



Ceiling configuration
Total discretion

- Compact model, installed in a suspended ceiling or towards the top of a room
- Counter-current plate heat exchanger technology
- Three sizes with air flow rates of up to 1900 m³/h
- Motorised and controlled bypass damper
- M5, F7 filtration
- Size 7: single-phase 230 V - Size 16: three-phase 400 V

Flow rate	Dimensions			Air flow rate m³/h	Dimensions mm intake/exhaust	Weight (kg)
	Height	Length	Width			
7	585	1453	896	300 to 1000	2 x Ø 160 + Ø 315	161
12	585	1592	1174	800 to 1400	2 x Ø 250 + Ø 355	206
16	585	1850	1456	1200 to 1900	2 x Ø 250 + Ø 400	279



Vertical configuration

Ceiling configuration

Innovations

The AX'R revolution

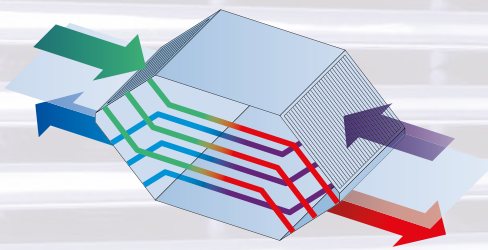
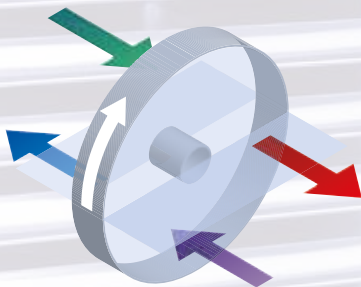


Plate exchanger



Rotary exchanger

Energy recovery

Plate heat exchangers for greater savings and better hygiene

AX'R incorporates either rotary or plate heat exchangers, depending on the model. These systems, fitted as standard on Hydronic air handling units for the first time, offer unbeatable performance levels.

The buildings benefit from up to 90% energy recovery across the full range of flow rates. The technology used reduces pressure losses to less than 150 Pa.

The free cooling mode enables AX'R units to cool premises naturally in spring and autumn. Occupants benefit from equal comfort levels with lower energy costs; the built-in filters ensure total well-being.

The plate exchangers or rotary exchangers in the standard version, exclusive to Hydronic, further optimise the supply air quality.

Hydronic Control

Greater precision

The Hydronic research centre has developed a dedicated control system to ensure optimum performance of AX'R units. This standalone, user-friendly, smart control system handles indoor temperature, flow rates, air pressure and free cooling.

It monitors filter fouling and handles automatic defrosting of the exchanger. The operation of the AX'R units is controlled precisely depending on the outdoor conditions and the requested indoor temperature.

This built-in control system is factory set, ensuring that AX'R units offer Plug & Play operation and are thus easily installed and commissioned.



Innovations

A unique unit

AX'R incorporates a host of innovations stemming from Hydronic's expertise in air handling units.

High aerodynamic efficiency

New performance standards

AX'R is the first air handling unit to feature a plug fan with electronically commutated motor as standard. This fan motor ensures a minimum available pressure of 250 Pa for the duct network, across the full range of flow rates offered by the unit. AX'R incorporates efficient components and optimised pressure drops, ensuring unbeatable efficiency. It is the most economical and best performing unit ever designed by Hydronic.



Indoor air quality

Sustainable filter management

AX'R complies with environmental requirements and is already compatible with RT 2012 regulations. The filters are designed to reduce fouling and minimise maintenance.

The filters, and indeed the entire unit, are fully recyclable. AX'R is economical and ecological to install and throughout its life cycle.



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