

# AX'R

Dual-flow air handling units with heat recovery  
20 models, from 300 to 18000 m<sup>3</sup>/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

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



Hydronic participates in the ECC program for AHUs.  
Check ongoing validity of certificate:  
[www.eurovent-certification.com](http://www.eurovent-certification.com)

# 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 CO<sub>2</sub> 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/m<sup>3</sup>
- 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

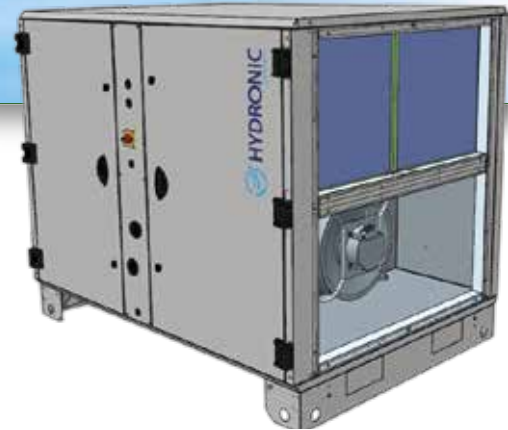


### RHE conventional configuration

#### 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 m³/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

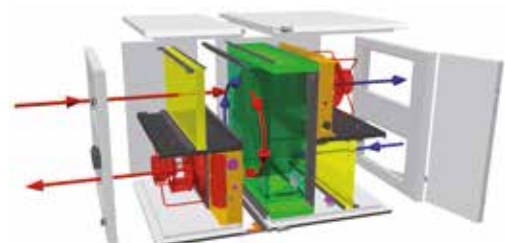
- Dual fresh air filtration stage
- Total bypass
- Five sizes, from 300 to 6600 m³/h
- Plug and play, control system built into the unit
- M5, F7 filtration
- Counter-flow plate heat exchanger
- High efficiency: zero air leakage.
- Size 10: single-phase 230 V - Other sizes: three-phase 400 V

Flow rate	Dimensions			Air flow rate m³/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.



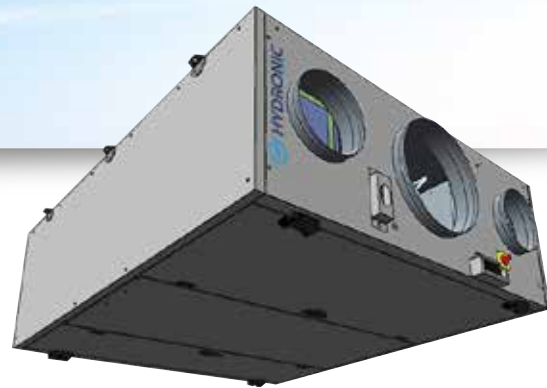
Conventional configuration



**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 m<sup>3</sup>/h
- Motorised and controlled bypass damper
- M5, F7 filtration
- Size 7: single-phase 230 V - Sizes 15-20: three-phase 400 V

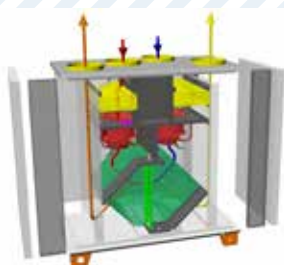
Flow rate	Dimensions			Air flow rate m <sup>3</sup> /h	Dimensions mm intake/exhaust	Weight (kg)
	Height	Length	Width			
7	1385	1313	730	300 to 1200	Ø 250	202
15	1758	1593	832	700 to 2000	Ø 355	330
20	1901	1735	832	700 to 2600	Ø 355	389



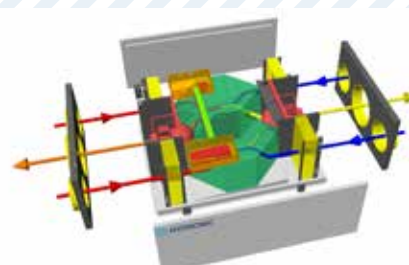
**Ceiling configuration**  
**Total discretion**

- 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 m<sup>3</sup>/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 m <sup>3</sup> /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

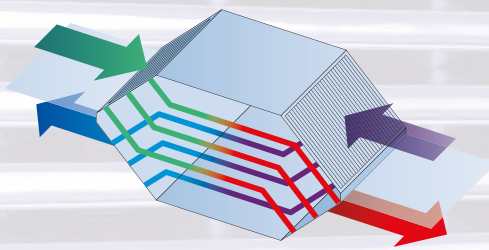
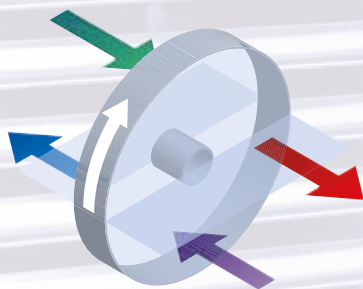


Plate exchanger



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 aeraulic 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.



# 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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