

Atreya[®] *Leader in ventilation and heat recovery*



DUPLEX Inter-H

A new generation of school ventilation unit
for under-ceiling installation



29 dB(A)
only

More information www.atrea.eu



ATREA'S PRODUCT RANGE

- **Commercial ventilation**
 - air handling units from 500–15.100 m³/h
- **Residential ventilation**
 - air handling units from 170–580 m³/h
 - VAV solutions (SMART box solution – complete package of VAV boxes, central unit and control system)
- **Kitchen ventilation**
 - whole area ventilation ceilings
 - kitchen hoods
- **School ventilation**
 - floor-standing
 - underceiling

ATREA HISTORY

ATREA was started as a private company in 1990 in the Czech Republic. Very shortly it began to focus on the production of ventilation units with waste heat recovery. The company's founder has authored many authorship certificates, patents and industrial designs in this field.

ATREA's high-quality products started to make their mark also in the demanding markets of Western Europe. The economic and geographic proximity led ATREA to focus primarily on the German market where it has established itself really well as a result of a good partnership and top-quality products, with Denmark, Netherlands, Switzerland, Austria, the UK and other countries to follow.

In 2017, ATREA launched the first school unit **DUPLEX Inter 850**. This floor-standing type of unit has since gained thousands of satisfied customers all over the world. Now comes to the market the new ceiling-suspended decentralized air handling unit **DUPLEX Inter-H**.

DUPLEX INTER-H



The new decentralized **DUPLEX Inter-H** unit builds on the successful floor-standing DUPLEX Inter 850 unit and with its flat under-ceiling design offers solutions for projects where the ceiling suspension of the air-handling unit is requested.

COMPETITIVE ADVANTAGES

- The most quiet unit on the market! Only **29 dB(A)**! Students and teachers are virtually unaware of the operation of the unit.
- Up to **1 100 m³/h** air-flow rate sufficient for a class of 30 pupils and two teachers.
- No need to deal with **condensate drainage!**
- Heat recovery efficiency **up to 93 %!**
- Height only **550 mm!**
- One unit = **4 possible spigot configurations and 2 airflow directions**

Thanks to easy installation and superb sound parameters is suitable not only for the ventilation of school classrooms but to all premises like meeting rooms, libraries, waiting rooms, or even smaller gyms where installation of centralized ventilation with complicated ducting is not possible or costly.

The best air-handling unit is one that the user does not know about! DUPLEX Inter-H fulfills this perfectly because of its **excellent attenuation, fully automatic operation and modern design.**



Top acoustic parameters

Thanks to the unique casing design and integrated silencers the unit achieves great sound parameters – **only 29 dB(A)***.



Electrical pre-heater and reheater

To avoid any problem with frost protection the unit is **standardly equipped with an electrical pre-heater**. An easily installable electrical reheater is part of the optional accessories offer.



No condensate drainage

Smart solution for the evaporation of condensate contributes not only to the final appearance of the installation (no pipes in space) but also substantially **reduces the exigence of installation and thus the total cost**.



High heat recovery efficiency up to 93 %

Our counterflow heat recovery cores reach an exquisite real efficiency **up to 93 %**, which is of course reflected in lower energy consumption, reduction in heating costs and total energy savings of the building.



Draughtles air distribution

Innovative supply diffusers use the **Coanda effect** to distribute the supply air evenly without draughts throughout the ventilated room.



Two performance sizes

DUPLEX Inter-H is available in two sizes, **1000** and **770**, thus 99 % of the projects are covered by a single unit in the room.



Cassette ceiling installation

The unit is **fully ready to be partially installed in the ceiling**, just rotate the front panel with supply diffusers, to minimize even more the interference with the room clearance. In addition, the unit's surface cladding covers the unit's suspension. As a result, the unit has a very clean look.



Compact design

With **only 550 mm** of height is DUPLEX Inter-H one of the flattest unit on the market.

* Sound pressure level 29 dBA at a flow rate of 650 m³/h and room attenuation of 8 dBA

A new generation of school ventilation unit



Control system

All DUPLEX Inter-H units are supplied with an integrated aMotion control system with vast options of settings. Remote control of the device for user and service needs is a matter of course. The **web server** and **ModBus connectivity are for free as a standard, KNX/BacNet interface on request**. Two types of controllers are available, the simpler aDot and the full-screen controller aTouch.

Certification

DUPLEX Inter-H like our other units is in accordance with ErP 2018 – Commission (EU) Regulation No. 1253/2014 (Ecodesign) for 2018. Units are also produced in compliance with German hygienic standard VDI 6022.



Fully autonomous operation

Integrated CO₂ sensor (NDIR type – infrared) ensures the fully autonomous and most energy-efficient operation of the unit. This eliminates the need for installation of the controller, thus saving costs as all the necessary alerts (e.g. filter replacement) are signaled directly on the unit.

Top components

The EC fans are products of the world's leading manufacturers – **ebm-papst** or **Ziehl-Abegg**. German quality ensures a minimum failure rate and maximum performance at low energy consumption. Servo drives from the Swiss company **Belimo** are of top quality.

BELIMO ebmpapst
ZIEHL-ABEGG



100% by-pass

The unit is equipped with a bypass damper that can be either closed for heat recovery ventilation or fully open for night pre-cooling mode.



Fast and easy installation

With a rail suspension system, metal mounting template and all the installation accessories supplied together with the unit the installation of ceiling suspended AHU has never been easier.

For ease of handling and installation, the unit is supplied in 2 blocks. The unit is delivered from the factory in the **Plug'n'Play mode**.



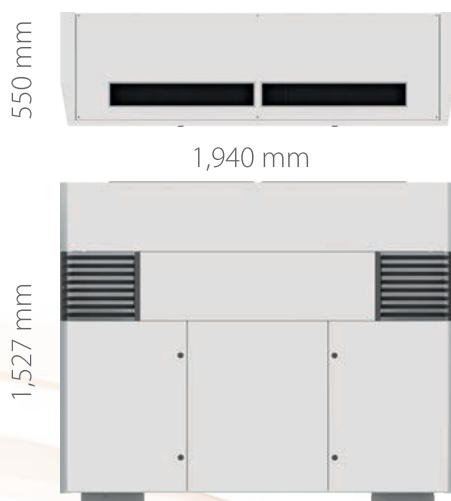
Multipurpose design

The same unit is standardly ready for **8 different installation positions** (4 spigot configurations x 2 airflow directions). Most accessories are also identical for both unit sizes. DUPLEX

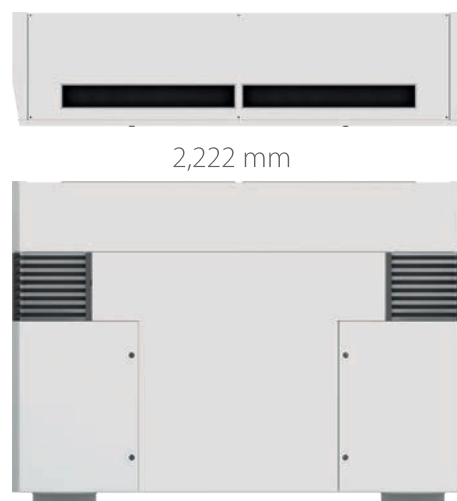
Inter-H is therefore off-the-shelf deliverable and represents an ideal air handling unit for wholesalers and distributors.

For more information please visit www.atrea.com

DUPLEX Inter-H Dimensional diagram



DUPLEX 770 Inter-H



DUPLEX 1100 Inter-H

ATREA Selection software

ATREA offers its proprietary design software that is a highly useful and practical tool to select DUPLEX series units and provides great marketing support!

Very positive feedback from designers of all over Europe gives a good opportunity to easily include ATREA's units in all kinds of projects.

Very detailed calculations on all specifications are standard. It provides all data, drawings and diagrams, exports drawing to DXF in 2D or 3D drawings and is Revit compatible.

The software checks whether all components were selected and whether the selected system is working. This way you can avoid any possible mistakes.



Selection software with all technical details
freely available. **ATREA is transparent!**

aMotion Control system

Our brand-new and yet the most modern control system for comfortable unit control. The aMotion control system offers **integrated Web Server** as a standard. This enables not only remote control from anywhere on Earth, but also remote service access (checking settings, errors, service analysis), which reduces service costs. Also with option of connecting to the higher-ranking systems of centralized building management. A wide range of sensors (temperature, humidity, air quality, etc.) can be included in the system to enable automatic control for economical operation.



aDot controller

Touchscreen
Simple, unassuming yet feature-packed

aMotion Smartphone app



aTouch controller

Touchscreen and fully colourful controller
On the wall design
Similar design with ATREA web interface
Built-in temperature sensor for free
– ambient temperature control

Various functions:

A proper **CO₂ infrared type sensor as a standard part** of the unit for fully automated operation based on real CO₂ concentration in the room.

Relative humidity and air quality sensor – an option to set the intensity of ventilation automatically based on those parameters.

Modbus TCP in standards – communication with a higher-ranking system for BMS.

User preferences – including setting weekly programmes.

The web interface allows fully automatic operation without the need for a controller.

Built-in **web server** for remote service access and error notification.

Functions related to the absence of the controller inside the room: automatic shutdown when the door is opened, automatic filter pressure differential measurement for efficient filter change management

Combined electrical heating and preheating.

External inputs function – ventilation switches as required.

BACnet / KNX – optional converter enables connection to the superior system via BACnet or KNX protocol.

Atreaal®

We save your energy



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