JOHNSON CONTROLS

YMD Air Handling Units

YORK

JOHNSON CONTROLS

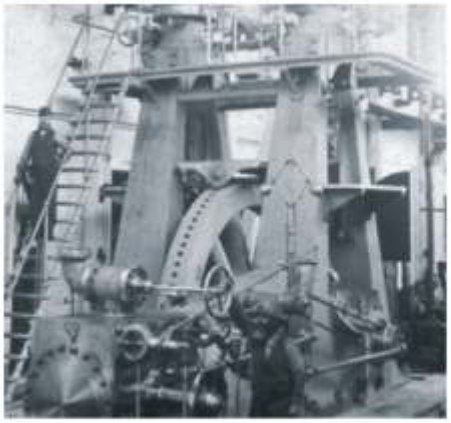
In 1883 Professor Warren Johnson created the first "electric room thermostat". His invention gave the opportuniny to develop a new world of possibilities: building control. In 1885 he established the Johnson Electric Service Company in Milwaukee, now known as **Johnson Controls**.

The company, in order to grow and keep its leadership in it's chosen markets, extended the business to the automotive and battery sectors.

YORK

York International was established in York Pennsylvania U.S.A. in 1874. In 1885, the first ice-making machine was manufactured for a customer in Mississipi.

In 1922 YORK established its first European operation in London. And one year later, the Company completes the first air conditioning system for an office building.



In 1953 YORK developed the first air-to-air heat pump. Then in 1986 YORK became the world's largest independent manufacturer in its field of activity.

Together we do more

Now **Johnson Controls** is market leader in:

- **Building Efficiency:** World's largest provider of energy efficiency and comfort solutions involving heating, cooling, fire, security and lighting.
- **Power solutions:** World's largest manufacturer of automotive batteries.
- **Automotive Experience:** World's largest provider of automotive interiors, including seats, door systems, cockpits, overhead systems and electronics, representing around 60% of the total revenue.

The result of bringing more than 225 years of experience together with strong market leadership and relations forged over generations brings together two complementary businesses with the ability to strengthen the local capabilities, increase our product ranges, grow our service base and give our customers the best solutions to their needs.

Together there are more than 500 offices serving 170 countries around the world, tremendously enlarging our opportunities in each region and the key markets of China, Eastern Europe and the Middle East. As businesses expand their operations globally, and as new markets emerge in developing countries, location means everything. And we have the most extensive network in the industry.

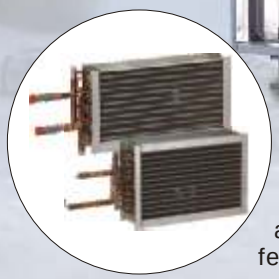
YMD AIR HANDLING UNITS
1500 to 60000 m^3/hr

The filter guarantees a comfort and good health by providing clean air to the facility.

Cross-Flow Heat Exchanger gives 70% of heat recovery, thus reducing running cost.

Fan with variable speed control ensures the AHU operates at maximum efficiency and at reduced noise levels.

The frequency inverter enables the user to control the flow volume of air supplied by the central system.



Cooler means comfort, freshness and a nice cool climate an indispensable feature on hot days.

Thanks to the Heater, the supply air is delivered at the required temperature.

Features

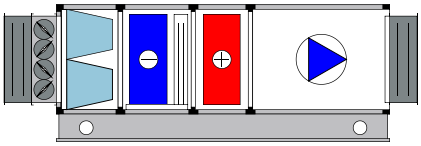
- Fixed aspect ratio design
- Choice of configurations
- Short lead time units fitted with plug fans and frequency inverter as standard
- Suitable for internal or external mounting
- Web based selection tool

Options / Accessories

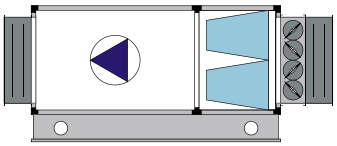
- Choice of heat recovery devices with up to 70% efficiency
- can be supplied with YORK SmartPac
- Factory Packaged Controls
- Hygenic type construction option
- CFC free foam or mineral wool infill
- Sound attenuator option for noise reduction

Types of air handling units

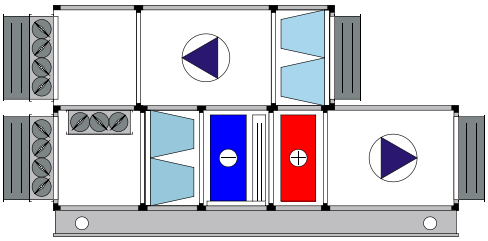
Supply (N)



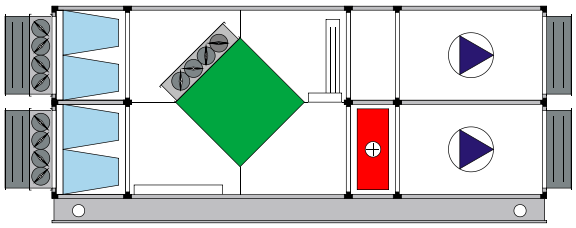
Exhaust (W)



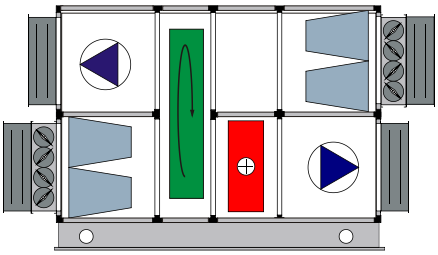
Supply-Exhaust (NW)
with Mixing Chamber



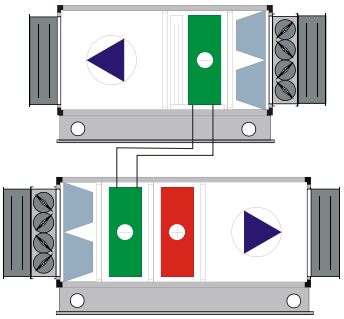
Supply-Exhaust (NW)
with Cross-Flow Heat Exchanger (X)



Supply-Exhaust (NW)
with Rotary Heat Exchanger (O)



Supply-Exhaust (NW)
with Glycol Heat Exchanger (G)



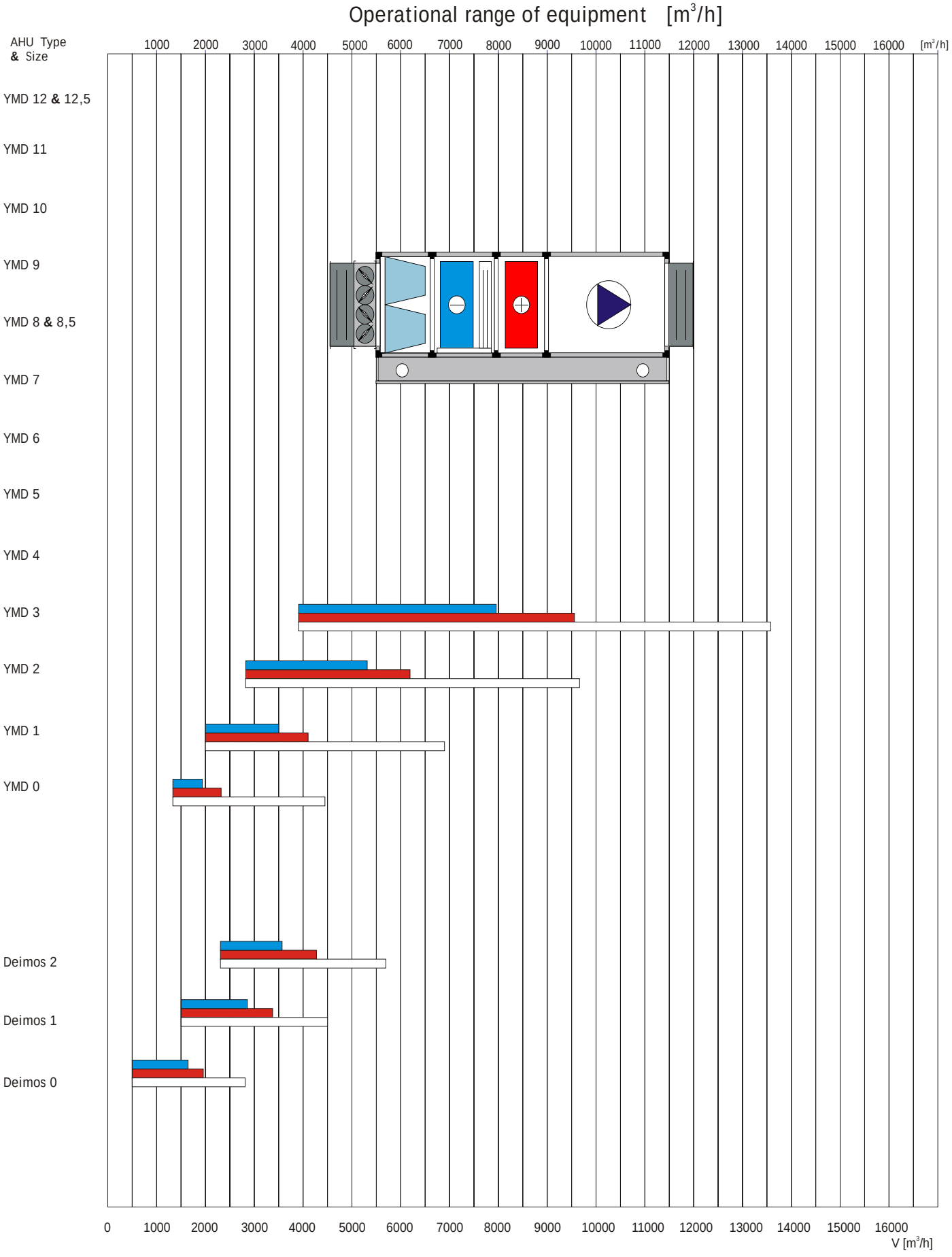
Side of execution

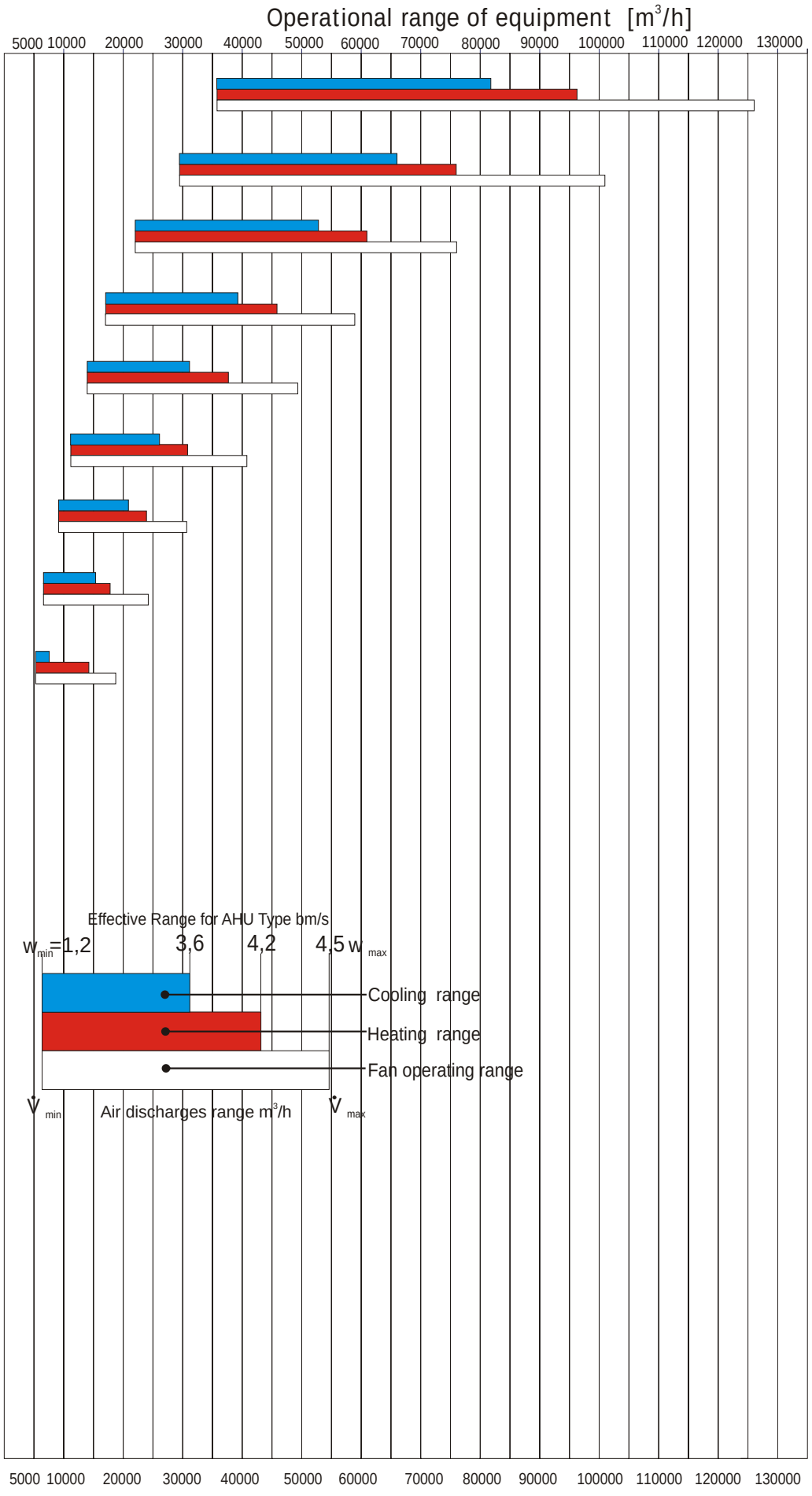
The side of execution shows the location of the connectors of the exchangers and the location of the drainage of condensate. In the case of supply and exhaust units, the designation in the unit code is used both for the supply and ventilating part.

Left-hand version

Right-hand version

Operational range of units



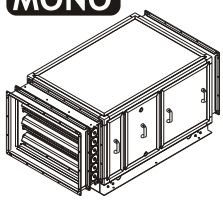


AHU Type & Size	Minimum delivery [m³/h]	Maximum delivery [m³/h]
YMD 12 & 12,5	36300	125550
YMD 11	29250	101250
YMD 10 & 10,5	22250	76950
YMD 9	16900	58500
YMD 8 & 8,5	14250	49250
YMD 7	12250	41500
YMD 6	9150	31650
YMD 5	7000	24100
YMD 4	5250	18150
YMD 3	3950	13650
YMD 2	2800	9750
YMD 1	2000	6900
YMD 0	1300	4450
Deimos 2	2300	5700
Deimos 1	1500	4500
Deimos 0	500	2800

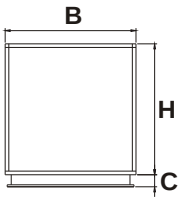
YMD AIR HANDLING UNITS
1500 to 60000 m^3/hr

Configuration of air handlers

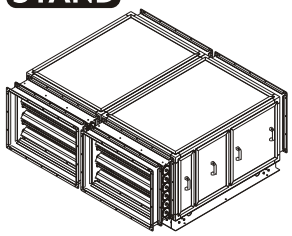
MONO



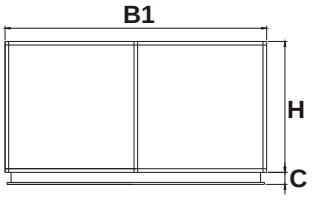
Standard configuration, used in the following Air Handling Units
-Supply and Exhaust N and W
-with the Mixing Chamber NW
-with the Glycol Heat Exchanger G



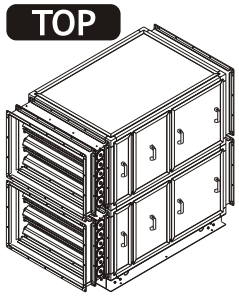
STAND



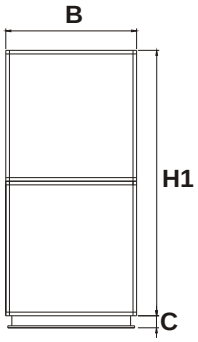
The Air Handling Unit Sections are placed next to each other; the Supply and the Exhaust Units are divided by a side wall:
-with the Mixing Chamber NW
-with the Cross-Flow Heat Exchanger X
-with the Glycol Heat Exchanger G



TOP



The Air Handling Unit Sections are one above the other; the Supply and the Exhaust units are divided by the floor. This configuration is used in the following Air Handling Units types:
-with the Mixing Chamber NW
-with the Cross-Flow Heat Exchanger X
-with the Rotary eat exchanger O
-with the Glycol heat Exchanger G



Dimensions of standard and roof air handling units

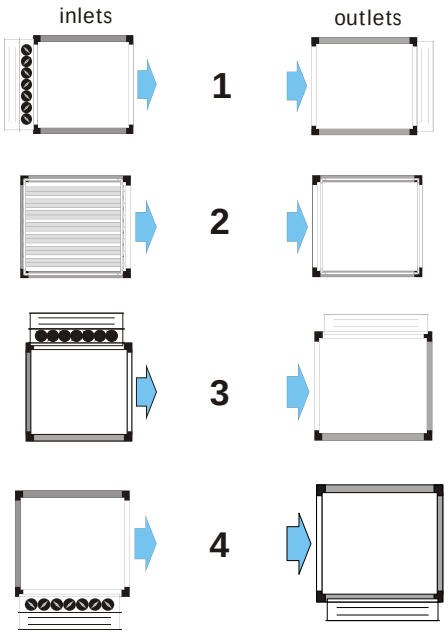
Unit size	External dimensions				
	B	B1	H	H1	C
	[mm]	[mm]	[mm]	[mm]	[mm]
0	753	-	520	1040	120
1	753	-	753	1506	120
2	1018	-	753	1506	120
3	1018	-	1018	2036	120
4	1320	-	1018	2036	120
5	1320	-	1320	2640	120
6	1700	-	1320	2640	120
7	1700	-	1700	3400	160
8	2000	-	1700	3400	160
8,5*	-	3400	2000	-	160
9	2040	4080	2040	-	160
10	2640	-	2040	-	160
10,5*	-	4080	2640	-	160
11	2640	5280	2640	-	160
12	3240	-	2640	-	160
12,5*	-	5280	3240	-	160

* regards horizontal units with cross-flow exchangers

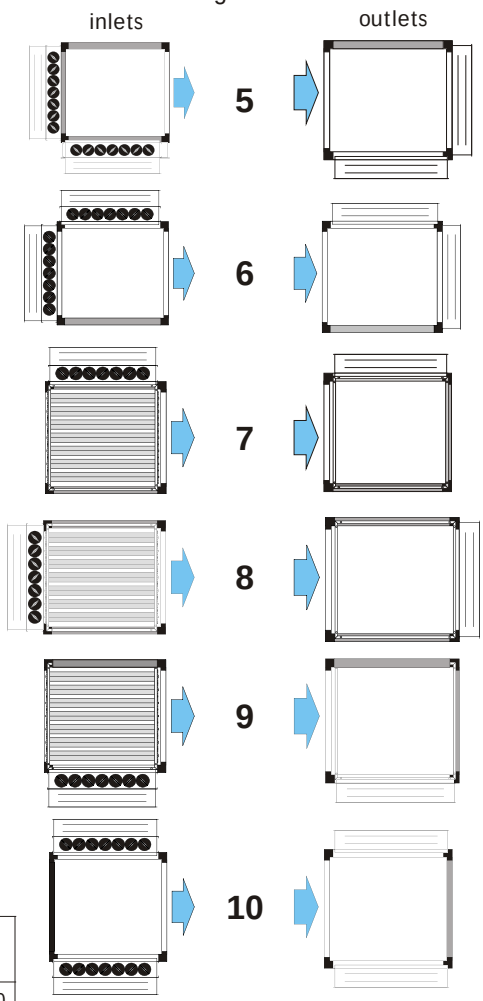
Configuration of inlets and outlets

In response to your needs, YORK offers various combinations of inlet/outlet positioning.

Single inlets and outlets



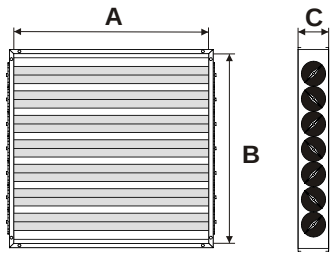
Mixing chamber



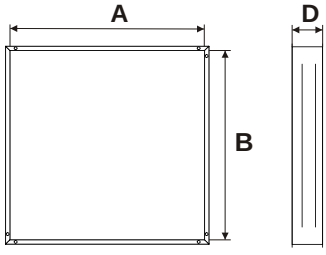
Air Handling Unit connection sizes

AHU size	1	2	3	4	C	D
	A x B	A x B	A x B	A x B		
0	660x430	550x430	550x660	490x590	110	~150
1	660x660	550x660	550x660	490x590	110	~150
2	930x660	670x660	670x930	610x855	110	~150
3	930x930	670x930	670x930	610x855	110	~150
4	1230x930	910x930	910x1230	850x1160	110	~150
5	1230x1230	910x1230	910x1230	850x1160	110	~150
6	1600x1230	1250x1230	1250x1600	1190x1540	110	~150
7	1600x1600	1250x1600	1250x1600	1190x1540	110	~150
8	1900x1600	1450x1600	1450x1900	1390x1840	110	~150
8,5	1600x1900	1250x1900	1250x1600	1190x1540	110	~150
9	1900x1900	1470x1900	1470x1900	1410x1840	110	~150
10	2500x1900	1940x1900	1940x2500	1880x2440	110	~150
10,5	1900x2500	1470x2500	1470x1900	1410x1840	110	~150
11	2500x2500	1940x2500	1940x2500	1880x2440	110	~150
12	3100x2500	2340x2500	2340x3100	2280x3040	110	~150
12,5	2500x3100	1940x3100	1940x2500	1880x2440	110	~150
Suspended unit size						
0	630x315	600x315	630x315	630x315	110	~150
1	1000x315	600x315	1000x315	1000x315	110	~150
2	1250x315	1000x315	1250x315	1250x315	110	~150

Damper

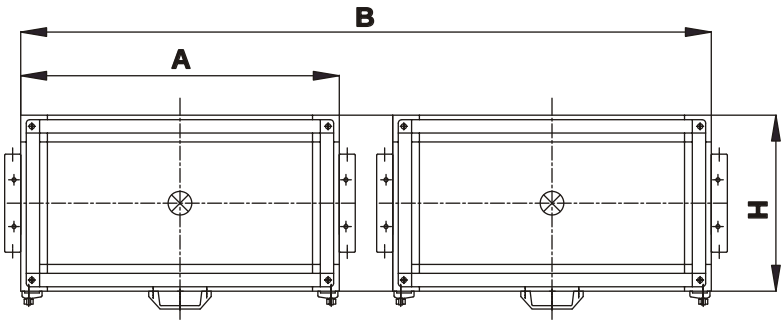


Flexible connection



Suspended air handling unit

The compact dimensions of suspended air handlers make them a good choice for installation above rooms at high level. Special “flat” design allows for installation in suspended ceilings.



Dimensions of suspended air handling units

air handling units size	A [mm]	B* [mm]	H [mm]
0	715	1550	395
1	1060	2240	395
2	1310	-	395

B* width of units with a cross-flow exchanger

Typical performance data of suspended air handling units

air handling units size		0	1	2
Capacity range [m^3/h]	heating	500-1900	1500-3300	2300-4250
	cooling	500-1600	1500-2800	2300-3650
Total fans Pressure [Pa]		150-1200	300-1200	300-1200
Water and Freon coolers capacity [kW]		6,5-35	20-44	30-57
Electric heaters capacity [kW]		max. 18*	max. 36*	max. 45*
Hot water heating capacity [kW]		4-12	9-21	16-28

* continuously variable power adjustment in a given range

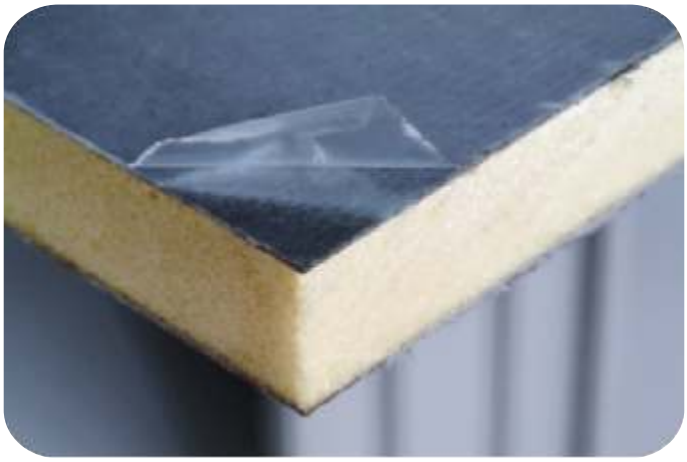
Standard Air Handling Units

These Air Handling Units are intended for internal use, i.e. in plant rooms, basements, etc. The casings are made of sandwich panels filled with rigid polyurethane foam or mineral wool between two sheets of metal.
Panel thickness depends on the application and the weather conditions. Sandwich panels give excellent thermal protection and meet rigorous acoustic requirements.

Roof Air Handling Units

Roof units are equipped with air intake cowls and pitched roof. The roof protects against precipitation and its profile prevents water accumulation and leaks. The air inlet and air discharges are fitted with liquid traps and fine mesh preventing precipitation water and mechanical impurities from entering the inside of units. In order to ensure protection against weather conditions, all control components and movable elements are located inside units. As an option, roof units are equipped with empty sections designed to accommodate control-pumping units.

Construction



Unit enclosures are made from panels filled with polyurethane foam or mineral wool coated on both sides with galvanised iron sheets, epoxide sheets and stainless sheet. During production, sheet surfaces are covered with foil protecting them against damage and dirt.

Panel thickness is 18-35 mm depending on unit design.

The panels provide excellent thermal and acoustic insulation.

Damper

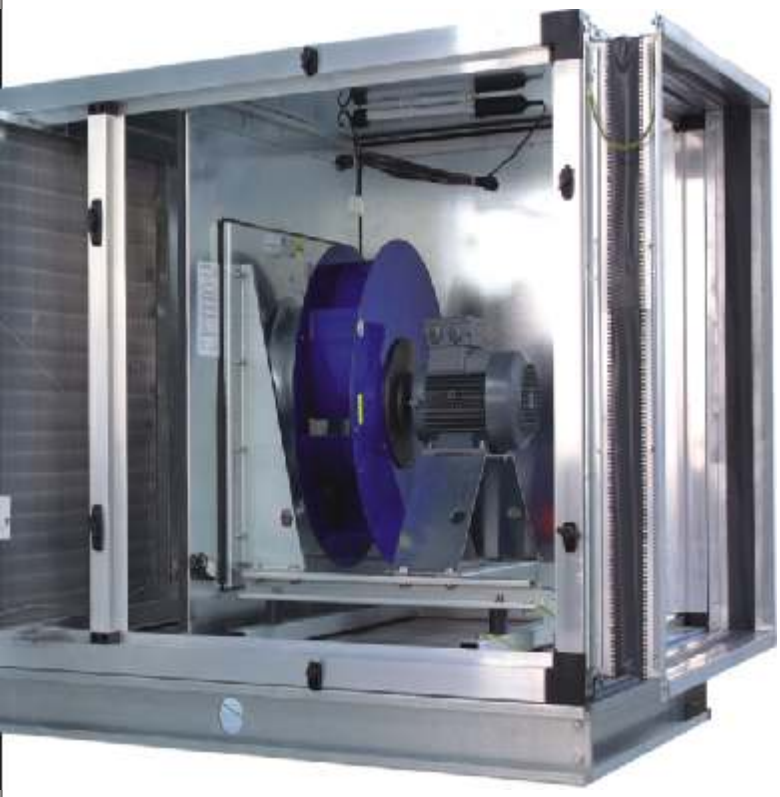
The dampers cut off air supply when the Air Handling Unit is off, or restrict the flow at the unit start-up. In recirculation systems, the dampers function is to regulate the air flow and protect the cross-flow heat exchanger against frosting. Damper opening can be set manually or by an actuator.

Flexible connection

A Flexible connection allows joining of the Air Handling Unit and the duct. It compensates for small positional inaccuracies of the duct and the Air Handling Unit and prevents vibration transmission from the unit to the ducts

The frame of the standard and rooftop Air Handling Unit is made of aluminium profiles fixed with polyamide corners for compactness and stability.

A steel mounting frame gives the structure an extra rigidity.



Excellent tightness of the casing is a result of double door sealing: on the outside surface of the profile and on the inside surface with a gasket.

Enclosure

There are two types of panel thickness used for the body of the central casing:
- 18 mm in suspended demo central systems,
- 35 mm in the other kinds of central systems.

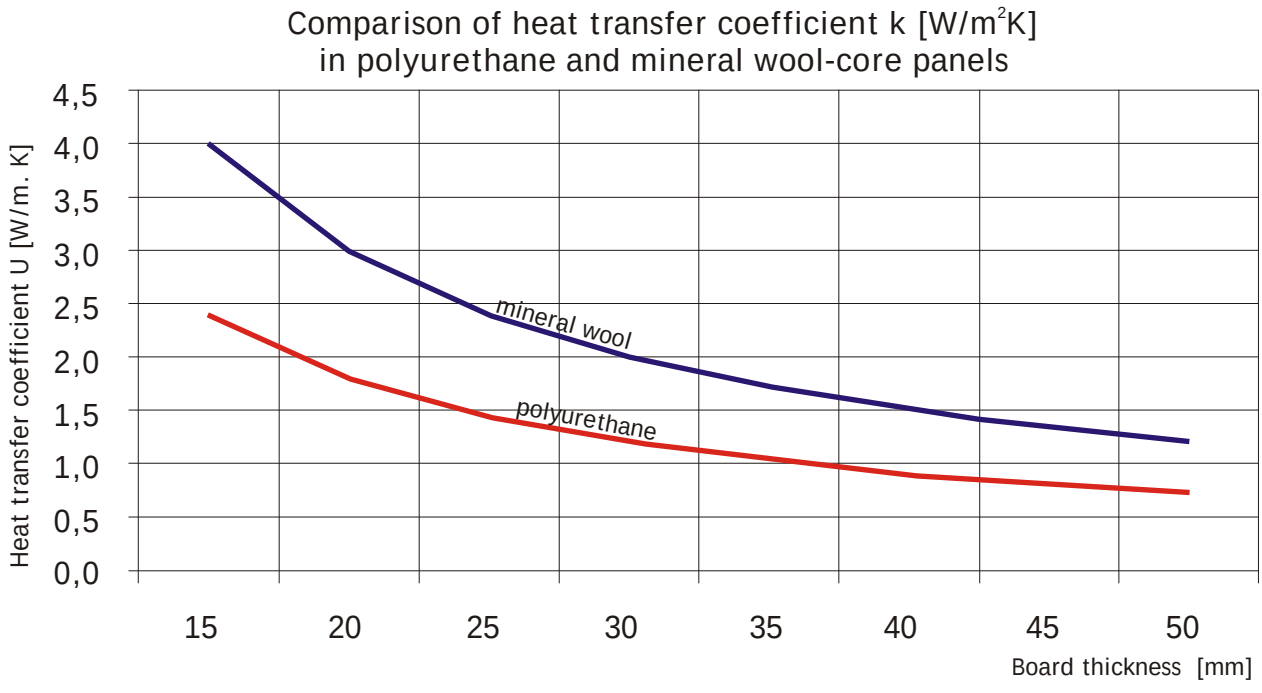
The panels can be protected by tin plate covered with iso-film, tin epoxide or stainless tin coating, depending on particular needs. The panels are filled with stiff and thick polyurethane foam or mineral wool.

Polyurethane-core panel

- thermal conductivity coefficient of the insulation material λ = 0.024 [W/mK]
- sound insulation of the panel ≤ 30 [dB]
- core density = 30-50 [kg/m^3]

Mineral wool-core panel

- thermal conductivity coefficient of the insulation material ?= 0.036 [W/mK]
- sound insulation of the panel ≥ 30 [dB]
- core density = 60-80 [kg/m^3]



Fans

Fans used in our Air Handling Units work in the optimum range of parameters, thus featuring high efficiency and low noise levels.

Centrifugal fan with direct drive
The fan impeller is mounted on the motor shaft. Such a configuration is mounted in a frame insulated from the enclosure by means of vibration insulators preventing transmission of vibrations. Direct drive fans are used in all YORK YMD units

YORK YMD units offer (as a standard) an option for smooth ventilator rotational speed control realised by means of frequency inverters. Rotational speed control and, what follows, air output control is a very useful function especially taking into account the co-operation with the installation.

Centrifugal fan with indirect drive
The drive in such ventilators is conveyed by means of a belt transmission. The ventilator unit and the motor are located on a frame insulated from the enclosure by means of vibration insulators. Indirect drive fans are used in some Deimos 0-2 units.

Number of air changes in the room

Room type	Number of air changes in the room [1/h]
Auditorium	6-8
Bank	2-3
Bar	10-15
Office	3-8
Library	3-5
Department store	3-6
Garage	4-6
Cinema, theatre	4-6
Classroom	3-5
Kitchen	10-30
Physical laboratory	5-15
Material warehouse	4-6
Swimming pool	3-4
Hotel room	4-8
Utility room	1-2
Laundry	10-15
Restaurant	8-12
Session room	6-8
Meeting room	5-10
Shop	6-8
Cloakroom	4-6
Mechanical workshop	3-6

Flat filter

Flat filters
- rough EU3, EU4,
- s3econdary Eu5.

Bag filter

Flat filters
- rough EU3, EU4,
- secondary EU5, EU7, EU8, EU9.

Standard air filters classification

Filter type	Filter class (old classification)	Total filtration effectiveness [%]		Numerical filtration effectiveness [%]	Filter class (according to currently applicable standards)	Application
		Synthetic dust test	Atmospheric dust test	DESHS or DOP aerosol or paraffin oil mist test		
	EUROVENT	PN-EN 779:2004		PN-EN 1822-1:2001	PN-EN 779:2004 PN-EN 1822-5:2002	
Rough (pre-filter)	EU1	h<65			G1	Habitable rooms, offices, public buildings (cinemas, theatres, hotels, etc.)
	EU2	65<η<80			G2	
	EU3	f }. ÝÖ			G3	
	EU4	η≥90			G4	
Secondary	EU5		40<h<60		F5	Rooms with high requirements (hospitals, electronics and pharmaceutical industries, precision mechanics)
	EU6		ŒÙ óÍ		F6	
	EU7		_¸ ŒÇ		F7	
	EU8		¦` `Ł		F8	
	EU9		h≥95		F9	
HEPA	EU10			90	H10	Hospital, sterile operation rooms, optical industry, electronics
	EU11			97,25	H11	
	EU12			99,725	H12	
	EU13			99,97255	H13	
	EU14			99,99725	H14	
ULPA	EU15			99,9997255	U15	Special use labs
	EU16			99,9999725	U16	
	EU17			99,99999725	U17	

Heaters

Water heater

- heating medium: water from local boiler plant or municipal network, water glycol solution,
- the exchanger made of copper pipes with aluminium plate fins put in a galvanized sheet frame
- steel or copper collecting pipe
- connection stubs with male thread on the service side of the Air Handling Unit

Maximum parameters:
- maximum water temperature: 130 [°C]
- maximum water pressure: 1.6 MPa
- maximum air flow velocity: 4.2 [m/s]

Protections:
anti-freezing protection a thermostat indicates when the temperature behind the heater drops below the critical level, simultanoeusly activating the protection procedures

Electric heater

- continuously variable adjustment of heater power
- made of heating elements fixed in the galvanized sheet frame
- heating elements are connected into sections

Maximum parameters:
- recommended minimum air flow velocity in the heater area: 2 m/s
- maximum temperature in the heater area: 65 [°C]

Protections:
- depending on the size, the heater has one or two thermostats protecting against overheating
- continuous variable adjustment also protects against exceeding the maximum temperature.

Size	Power rating [kW]
YMD 0	9-18
YMD 1	18-36
YMD 2	36-54
YMD 3	54-72
YMD 4	54-72
YMD 5	54-72
YMD 6	72-90
YMD 7	90-108
YMD 8	90-108
Deimos 0	6-18
Deimos 1	12-36
Deimos 2	15-45

Gas heater

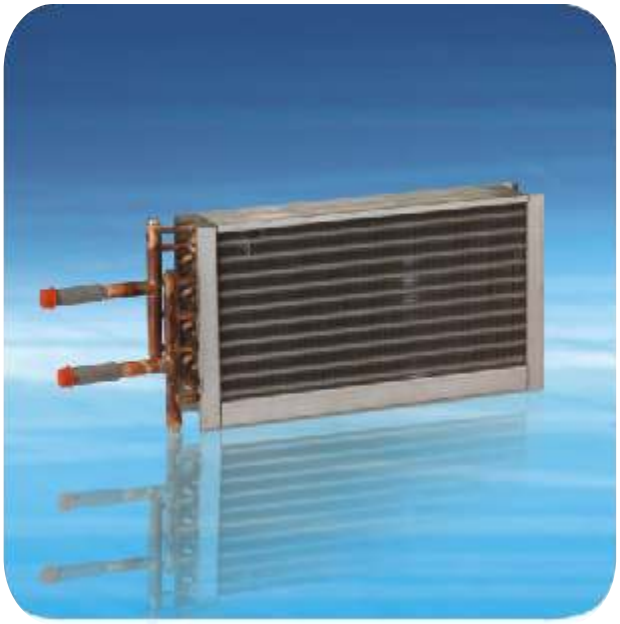
Our central systems are suitable to work with gas heating units. The working efficiency of these heating units are reaching up to 90-100%.
Heating modules are separate units, which maybe added to central system depending on client's choice. Exhaust fumes and water obtaining from condensation are carried out from the central system from its service side
There are several types of gas heating units offered to the market depending on central unit's size and volume:
- 11-96 kW
- 10-200 kW
- 25-920 kW

Compact heating unit

Gas heating unit

Water cooler

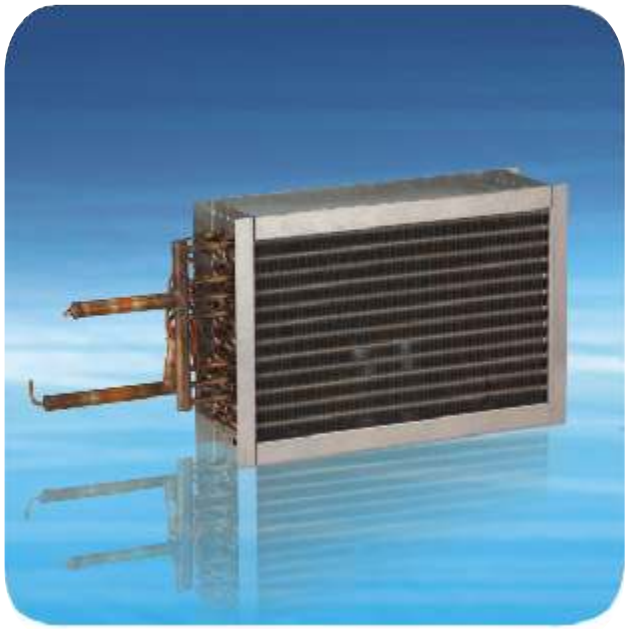
- refrigerant: chilled water or glycol solution
- the exchanger is made of copper pipes with aluminium plate fins put in a galvanized sheet frame
- connection stubs with male thread on the service side of the air handler
- as moisture can condense during the process, the cooling section has a liquid trap and drain tray for condensation removal from the Air Handling Unit.



Parameters:
- maximum refrigerant temperature: 2 [°C]
- maximum refrigerant pressure: 1.6 MPa
- maximum air flow velocity: 3,6 [m/s]

Freon heater

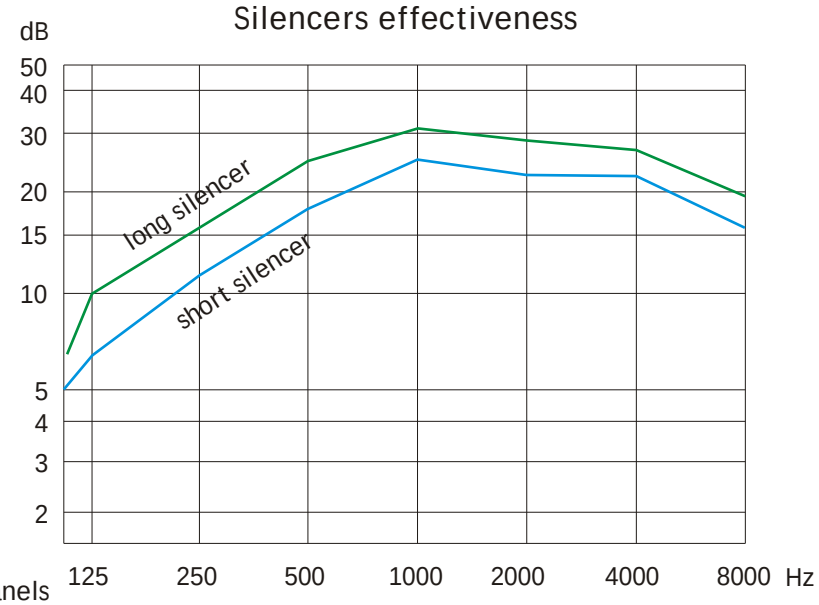
Differences in design of water and Freon coolers are caused by physical parameters of refrigerants.
- freon cooler is apart of the cooling system
- the exchanger made of copper pipes with aluminium plate fin put in a galvanized sheet frame
- copper collecting pipe
- preferable joining method is soldering as this ensures adequate tightness.



Maximum parameters:
- maximum refrigerant pressure: 2,2 MPa
- maximum air flow velocity: 3.6 [m/s]
- various refrigerants can be used, such as:
  - R 407C
  - R 410A
  - R134A and other

Silencer

The main noise source in the Air Handling Unit is the fan. Unpleasant and tiring noise is absorbed to some extent by the environment and the ductwork. But if the noise still exceeds the permissible levels, it is necessary to use the silencers.



The silencers are made of mineral wool panels covered with a non woven 'veil' to prevent dusting. Each pod is encased by galvanized steel sheets.
YORK YMD AHU's are equipped with the silencers of the following lengths:
- 720 mm
- 1200 mm

Sound level limits in rooms inhabited by people according to PN-87/B-02151/02

Room use	Permissible level of sound from all sources reaching the room [dB(A)]		Permissible level of sound from technical equipment and other sources in the building reaching the room [dB(A)]			
			Average level		Maximum level	
	Day	Night	Day	Night	Day	Night
Apartments, boarding houses, hotels and other residential buildings	40	30	35	25	40	30
Kitchens and sanitary rooms	45	40	40	40	45	45
Hotel rooms	45	35	40	30	45	35
Hospital wards	35	30	30	25	35	30
Operation rooms	35	-	30	-	35	-
Classrooms, lecture rooms, auditorium	40	-	35	-	40	-
Conference rooms	40	-	35	-	40	-
Offices	35	-	30	-	35	-
Administration rooms without internal sound sources	40	-	35	-	40	-
Administration rooms with internal sound sources	45	-	40	-	45	-
Restaurants and cafes	50	-	45	-	-	-
Shops	50	-	45	-	-	-

Automation and control

Air Handling Units are optionally equipped with automated systems. Composed of standard components from acclaimed manufacturers, such systems are highly reliable in operation. The basic function of the automation systems is to stabilize the temperature of supplied, exhaust or room air, depending on the needs.
The systems can also control room air humidity by drying it. The other automated function is protecting the air handling unit parts against damage in adverse conditions (freezing of water heater, frosting of cross-flow exchanger, etc.). These functions are performed by sensors and actuators connected with a controller. On customer's request, the automated system can be enhanced by adding the humidifier or gas module control functions.
The AHU operation status (i.e. clogged filter, activation of protections) are signalled by lamps to aid the service personnel to diagnose any problems.
The automated systems feature a weekly clock to reduce energy consumption, for example, on holidays or at night. Each Air Handling Unit has a service switch to disconnect the power supply during maintenance and repair operations.

Pressure Switch gives a signal when the set pressure drop value is exceeded, i.e. it informs about the clogged air filters or incorrect fan operation.

Three-way valve with a servo controls agent flow through water exchanger (heater or cooler).

Damper actuator controls closing and opening of multi-leaf dampers.

Limit switch disconnects the fan's power supply when the inspection doors are open.

Quarrantie
3 year

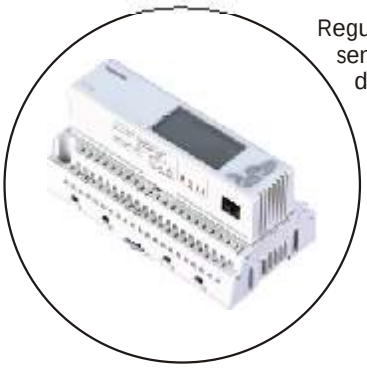
Frequency Inverter controls power supply to the fan motors, thus regulating the AHU supply air rate.

Duct Temperature Sensor is used to measure the temperature of the air supplied to or exhausted from a room.

Room Temperature Sensor is used to measure the room air temperature.

Anti-freezing thermostat signals temperature decrease behind the water heater below the critical value emitting signal for activation of protection procedures.

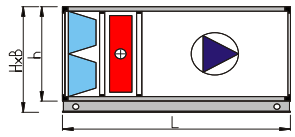
Channel temperature and relative humidity sensor measures temperature and humidity in a channel.

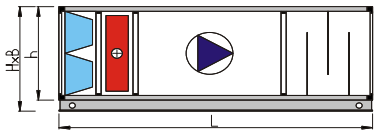


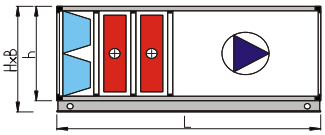
Regulator using sensor signals it determines a proper control signal for executive elements (e.g. throttles and valves servo).

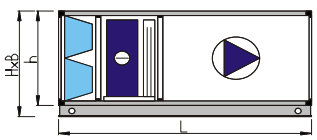
CO detector used for continuous control of carbon monoxide levels in rooms.

Standard Air Handling Units supply

N-5A	Size	Vmin	Vmax	Q_N	H	B	h	L
		[m^3/h]	[m^3/h]	[kW]	[mm]	[mm]	[mm]	[mm]
	0	1300	2250	41	640	753	520	1510
	1	2000	4100	75	873	753	753	1870
	2	2800	6250	119	873	1018	753	1870
	3	3950	9550	192	1138	1018	1018	2230
	4	5250	13250	260	1138	1320	1018	2230
	5	7000	17700	355	1440	1320	1320	2350
	6	9150	37600	452	1440	1700	1320	2900
	7	12000	29400	578	1820	1700	1700	3100
	8	14250	60900	711	1820	2000	1700	3100
	9	16900	42600	790	2200	2040	2040	3420
	10	22250	58800	888	2200	2640	2040	3420
	11	29250	76400	1157	2800	2640	2 640	3620
	12	36300	94850	1956	2800	3240	2 640	3620

N-5D	Size	Vmin	Vmax	Q_N	H	B	h	L
		[m^3/h]	[m^3/h]	[kW]	[mm]	[mm]	[mm]	[mm]
	0	1300	2250	41	640	753	520	2830
	1	2000	4100	75	873	753	753	3190
	2	2800	6250	119	873	1018	753	3190
	3	3950	9550	192	1138	1018	1018	3550
	4	5250	13250	260	1138	1320	1018	3550
	5	7000	17700	355	1440	1320	1320	3670
	6	9150	23900	452	1440	1700	1320	3750
	7	12000	31350	578	1820	1700	1700	3950
	8	14250	37600	711	1820	2000	1700	3950
	9	16900	45600	790	2200	2040	2040	4360
	10	22250	60900	888	2200	2640	2040	4360
	11	29250	76400	1157	2800	2640	2640	4560
	12	36300	94850	1956	2800	3240	2640	4560

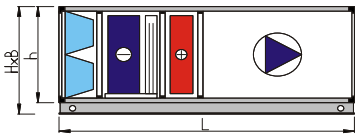
N-13A	Size	Vmin	Vmax	Q_N	H	B	h	L
		[m^3/h]	[m^3/h]	[kW]	[mm]	[mm]	[mm]	[mm]
	0	1300	2250	41	640	753	520	1870
	1	2000	4100	75	873	753	753	2230
	2	2800	6250	119	873	1018	753	2230
	3	3950	9550	192	1138	1018	1018	2590
	4	5250	13250	260	1138	1320	1018	2590
	5	7000	17700	355	1440	1320	1320	2710
	6	9150	23900	452	1440	1700	1320	3350
	7	12000	31350	578	1820	1700	1700	3550
	8	14250	37600	711	1820	2000	1700	3550
	9	16900	45600	790	2200	2040	2040	3890
	10	22250	60900	888	2200	2640	2 040	3890
	11	29250	76400	1157	2800	2640	2 640	4360
	12	36300	94850	1956	2800	3240	2 640	4360

N-17A	Size	Vmin	Vmax	Q_C	H	B	h	L
		[m^3/h]	[m^3/h]	[kW]	[mm]	[mm]	[mm]	[mm]
	0	1300	1900	17	640	753	520	1750
	1	2000	3500	21	873	753	753	2110
	2	2800	5350	57	873	1018	753	2110
	3	3950	7850	86	1138	1018	1018	2470
	4	5250	10900	126	1138	1320	1018	2470
	5	7000	15200	183	1440	1320	1320	2590
	6	9150	20500	236	1440	1700	1320	3100
	7	12000	26900	310	1820	1700	1700	3300
	8	14250	32200	376	1820	2000	1700	3300
	9	16900	39100	421	2200	2040	2040	3620
	10	22250	52200	568	2200	2640	2040	3620
	11	29250	65500	789	2800	2640	2640	3820
	12	36300	81300	978	2800	3240	2640	3820

The units presented in the catalogue are only selected units and do not constitute the full range of appliances. Sizes given in the document are only for information purposes and may vary depending on individual unit parameters.

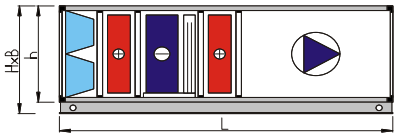
Standard Air Handling Units supply-exhaust

N-21A



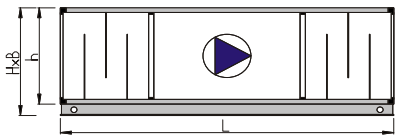
Size	Vmin	Vmax	Q_N	Q_C	H	B	h	L
	[m^3/h]	[m^3/h]	[kW]	[kW]	[mm]	[mm]	[mm]	[mm]
0	1300	1900	41	17	640	753	520	2110
1	2000	3500	75	21	873	753	753	2470
2	2800	5350	119	57	873	1018	753	2470
3	3950	7850	192	86	1138	1018	1018	2830
4	5250	10900	260	126	1138	1320	1018	2830
5	7000	15200	355	183	1440	1320	1320	2950
6	9150	20500	452	236	1440	1700	1320	4000
7	12000	26900	578	310	1820	1700	1700	4250
8	14250	32200	711	376	1820	2000	1700	4250
9	16900	39100	790	421	2200	2040	2040	4830
10	22250	52200	888	568	2200	2640	2040	4830
11	29250	65500	1157	789	2800	2640	2640	5030
12	36300	81300	1956	978	2800	3240	2640	5030

N-29A



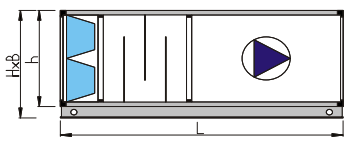
Size	Vmin	Vmax	Q_N	Q_C	H	B	h	L
	[m^3/h]	[m^3/h]	[kW]	[kW]	[mm]	[mm]	[mm]	[mm]
0	1300	1900	41	17	640	753	520	2470
1	2000	3500	75	21	873	753	753	2830
2	2800	5350	119	57	873	1018	753	2830
3	3950	7850	192	86	1138	1018	1018	3190
4	5250	10900	260	126	1138	1320	1018	3190
5	7000	15200	355	183	1440	1320	1320	3310
6	9150	20500	452	236	1440	1700	1320	4500
7	12000	26900	578	310	1820	1700	1700	4700
8	14250	32200	711	376	1820	2000	1700	4700
9	16900	39100	790	421	2200	2040	2040	5300
10	22250	52200	888	568	2200	2640	2040	5300
11	29250	65500	1157	789	2800	2640	2640	5700
12	36300	81300	1956	978	2800	3240	2640	5700

W-0C



Size	Vmin	Vmax	H	B	h	L
	[m^3/h]	[m^3/h]	[mm]	[mm]	[mm]	[mm]
0	1300	4450	640	753	520	3430
1	2000	6900	873	753	753	3790
2	2800	9750	873	1018	753	3790
3	3950	13650	1138	1018	1018	4150
4	5250	18150	1138	1320	1018	4150
5	7000	24100	1440	1320	1320	4270
6	9150	31650	1440	1700	1320	3500
7	12000	41500	1820	1700	1700	3700
8	14250	49250	1820	2000	1700	3700
9	16900	58500	2200	2040	2040	3820
10	22250	76950	2200	2640	2040	3820
11	29250	101250	2800	2640	2640	3820
12	36300	125550	2800	3240	2640	3820

W-128B

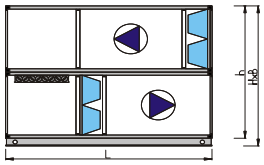


Size	Vmin	Vmax	H	B	h	L
	[m^3/h]	[m^3/h]	[mm]	[mm]	[mm]	[mm]
0	1300	4450	640	753	520	3430
1	2000	6900	873	753	753	3790
2	2800	9750	873	1018	753	3790
3	3950	13650	1138	1018	1018	4150
4	5250	18150	1138	1320	1018	4150
5	7000	24100	1440	1320	1320	4270
6	9150	31650	1440	1700	1320	3500
7	12000	41500	1820	1700	1700	3700
8	14250	49250	1820	2000	1700	3700
9	16900	58500	2200	2040	2040	3820
10	22250	76950	2200	2640	2040	3820
11	29250	101250	2800	2640	2640	3820
12	36300	125550	2800	3240	2640	3820

The units presented in the catalogue are only selected units and do not constitute the full range of appliances. Sizes given in the document are only for information purposes and may vary depending on individual unit parameters.

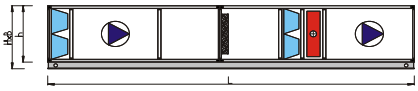
Standard Air Handling with Mixing Chamber

NW-193E



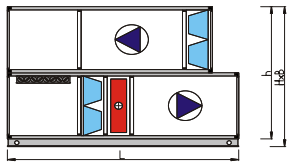
Size	Vmin [m³/h]	Vmax [m³/h]	H [mm]	B [mm]	h [mm]	L [mm]
0	1300	4450	1160	753	1040	1630
1	2000	6900	1626	753	1506	2230
2	2800	9750	1626	1018	1506	2230
3	3950	13650	2156	1018	2036	2830
4	5250	18150	2156	1320	2036	2830
5	7000	24100	2760	1320	2640	3190
6	9150	31650	2760	1700	2640	3500
7	12000	41500	3520	1700	3400	3950
8	14250	49250	3520	2000	3400	4200
9	16900	58500	4200	2040	4080	4560
10	22250	76950	4200	2640	4080	4760
11	29250	101250	5400	2640	5280	4760
12	36300	125550	5400	3240	5280	4560

NW-197A



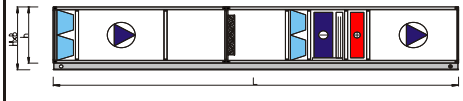
Size	Vmin [m³/h]	Vmax [m³/h]	Q_N [kW]	H [mm]	B [mm]	h [mm]	L [mm]
0	1300	2250	41	640	753	520	3910
1	2000	4100	75	873	753	753	5110
2	2800	6250	119	873	1018	753	5110
3	3950	9550	192	1138	1018	1018	6310
4	5250	13250	260	1138	1320	1018	6310
5	7000	17700	355	1440	1320	1320	7030
6	9150	23900	452	1440	1700	1320	7450
7	12000	31350	578	1820	1700	1700	8400
8	14250	37600	711	1820	2000	1700	8850
9	16900	45600	790	2200	2040	2040	9590
10	22250	60900	888	2200	2640	2040	9990
11	29250	76400	1157	2800	2640	2640	10190
12	36300	94850	1956	2800	3240	2640	9790

NW-197E



Size	Vmin [m³/h]	Vmax [m³/h]	Q_N [kW]	H [mm]	B [mm]	h [mm]	L [mm]
0	1300	2250	41	1160	753	1040	1990
1	2000	4100	75	1626	753	1506	2590
2	2800	6250	119	1626	1018	1506	2590
3	3950	9550	192	2156	1018	2036	3190
4	5250	13250	260	2156	1320	2036	3190
5	7000	17700	355	2760	1320	2640	3550
6	9150	23900	452	2760	1700	2640	3950
7	12000	31350	578	3520	1700	3400	4450
8	14250	37600	711	3520	2000	3400	4650
9	16900	45600	790	4200	2040	4080	5030
10	22250	60900	888	4200	2640	4080	5230
11	29250	76400	1157	5400	2640	5280	5430
12	36300	94850	1956	5400	3240	5280	5230

NW-213A

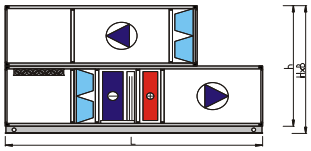


Size	Vmin [m³/h]	Vmax [m³/h]	Q_N [kW]	Q_C [kW]	H [mm]	B [mm]	h [mm]	L [mm]
0	1300	1900	41	17	640	753	520	4510
1	2000	3500	75	21	873	753	753	5710
2	2800	5350	119	57	873	1018	753	5710
3	3950	7850	192	86	1138	1018	1018	6910
4	5250	10900	260	126	1138	1320	1018	6910
5	7000	15200	355	183	1440	1320	1320	7630
6	9150	20500	452	236	1440	1700	1320	8600
7	12000	26900	578	310	1820	1700	1700	9500
8	14250	32200	711	376	1820	2000	1700	9950
9	16900	39100	790	421	2200	2040	2040	10930
10	22250	52200	888	568	2200	2640	2040	11330
11	29250	65500	1157	789	2800	2640	2640	11530
12	36300	81300	1956	978	2800	3240	2640	11130

The units presented in the catalogue are only selected units and do not constitute the full range of DOSPEL professional appliances. Sizes given in the document are only for information purposes and may vary depending on individual unit parameters.

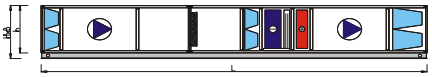
Standard Air Handling with Mixing Chamber

NW-213E



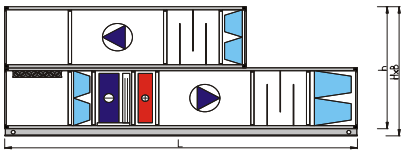
Size	Vmin	Vmax	Q_N	Q_C	H	B	h	L
	[m^3/h]	[m^3/h]	[kW]	[kW]	[mm]	[mm]	[mm]	[mm]
0	1300	1900	41	17	1160	753	1040	2590
1	2000	3500	75	21	1626	753	1506	3190
2	2800	5350	119	57	1626	1018	1506	3190
3	3950	7850	192	86	2156	1018	2036	3790
4	5250	10900	260	126	2156	1320	2036	3790
5	7000	15200	355	183	2760	1320	2640	4150
6	9150	20500	452	236	2760	1700	2640	5100
7	12000	26900	578	310	3520	1700	3400	5550
8	14250	32200	711	376	3520	2000	3400	5750
9	16900	39100	790	421	4200	2040	4080	6370
10	22250	52200	888	568	4200	2640	4080	6570
11	29250	65500	1157	789	5400	2640	5280	6770
12	36300	81300	1956	978	5400	3240	5280	6570

NW-215A



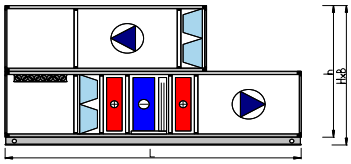
Size	Vmin	Vmax	Q_N	Q_C	H	B	h	L
	[m^3/h]	[m^3/h]	[kW]	[kW]	[mm]	[mm]	[mm]	[mm]
0	1300	1900	41	17	640	753	520	5230
1	2000	3500	75	21	873	753	753	6430
2	2800	5350	119	57	873	1018	753	6430
3	3950	7850	192	86	1138	1018	1018	7630
4	5250	10900	260	126	1138	1320	1018	7630
5	7000	15200	355	183	1440	1320	1320	8350
6	9150	20500	452	236	1440	1700	1320	9450
7	12000	26900	578	310	1820	1700	1700	10350
8	14250	32200	711	376	1820	2000	1700	10800
9	16900	39100	790	421	2200	2040	2040	12000
10	22250	52200	888	568	2200	2640	2040	12400
11	29250	65500	1157	789	2800	2640	2640	12600
12	36300	81300	1956	978	2800	3240	2640	12200

NW-215H



Size	Vmin	Vmax	Q_N	Q_C	H	B	h	L
	[m^3/h]	[m^3/h]	[kW]	[kW]	[mm]	[mm]	[mm]	[mm]
0	1300	1900	41	17	1160	753	1040	4630
1	2000	3500	75	21	1626	753	1506	5230
2	2800	5350	119	57	1626	1018	1506	5230
3	3950	7850	192	86	2156	1018	2036	5830
4	5250	10900	260	126	2156	1320	2036	5830
5	7000	15200	355	183	2760	1320	2640	6190
6	9150	20500	452	236	2760	1700	2640	6800
7	12000	26900	578	310	3520	1700	3400	7250
8	14250	32200	711	376	3520	2000	3400	7450
9	16900	39100	790	421	4200	2040	4080	8380
10	22250	52200	888	568	4200	2640	4080	8580
11	29250	65500	1157	789	5400	2640	5280	8780
12	36300	81300	1956	978	5400	3240	5280	8580

NW-221E

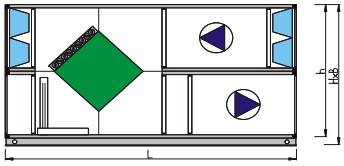


Size	Vmin	Vmax	Q_N	Q_C	H	B	h	L
	[m^3/h]	[m^3/h]	[kW]	[kW]	[mm]	[mm]	[mm]	[mm]
0	1300	1900	41	17	1160	753	1040	2950
1	2000	3500	75	21	1626	753	1506	3550
2	2800	5350	119	57	1626	1018	1506	3550
3	3950	7850	192	86	2156	1018	2036	4150
4	5250	10900	260	126	2156	1320	2036	4150
5	7000	15200	355	183	2760	1320	2640	4510
6	9150	20500	452	236	2760	1700	2640	5550
7	12000	26900	578	310	3520	1700	3400	6000
8	14250	32200	711	376	3520	2000	3400	6200
9	16900	39100	790	421	4200	2040	4080	6840
10	22250	52200	888	568	4200	2640	4080	7040
11	29250	65500	1157	789	5400	2640	5280	7440
12	36300	81300	1956	978	5400	3240	5280	7240

The units presented in the catalogue are only selected units and do not constitute the full range of appliances. Sizes given in the document are only for information purposes and may vary depending on individual unit parameters.

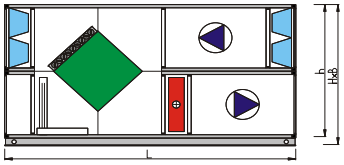
Standard Air Handling with Cross-Flow Heat Exchanger

X-129C



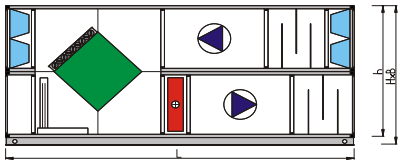
Size	Vmin	Vmax	H	B	h	L
	[m³/h]	[m³/h]	[mm]	[mm]	[mm]	[mm]
0	1300	4450	1160	753	1040	2110
1	2000	6900	1626	753	1506	2950
2	2800	9750	1626	1018	1506	2950
3	3950	13650	2156	1018	2036	3670
4	5250	18150	2156	1320	2036	3670
5	7000	24100	2760	1320	2640	4030
6	9150	31650	2760	1700	2640	5350
7	12000	41500	3520	1700	3400	5950
8	14250	49250	3520	2000	3400	5950
9	16900	58500	4200	2040	4080	6630
10	22250	76950	4200	2640	4080	7230
11	29250	101250	5400	2640	5280	8570
12	36300	125550	5400	3240	5280	8570

X-133C



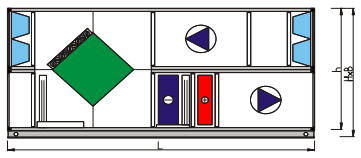
Size	Vmin	Vmax	Q_N	H	B	h	L
	[m³/h]	[m³/h]	[kW]	[mm]	[mm]	[mm]	[mm]
0	1300	2250	41	1160	753	1040	2470
1	2000	4100	75	1626	753	1506	3310
2	2800	6250	119	1626	1018	1506	3310
3	3950	9550	192	2156	1018	2036	4030
4	5250	13250	260	2156	1320	2036	4030
5	7000	17700	355	2760	1320	2640	4390
6	9150	23900	452	2760	1700	2640	5350
7	12000	31350	578	3520	1700	3400	5950
8	14250	37600	711	3520	2000	3400	5950
9	16900	45600	790	4200	2040	4080	6630
10	22250	60900	888	4200	2640	4080	7230
11	29250	76400	1157	5400	2640	5280	8570
12	36300	94850	1956	5400	3240	5280	8570

X-133D



Size	Vmin	Vmax	Q_N	H	B	h	L
	[m³/h]	[m³/h]	[kW]	[mm]	[mm]	[mm]	[mm]
0	1300	2250	41	1160	753	1040	3790
1	2000	4100	75	1626	753	1506	4630
2	2800	6250	119	1626	1018	1506	4630
3	3950	9550	192	2156	1018	2036	5350
4	5250	13250	260	2156	1320	2036	5350
5	7000	17700	355	2760	1320	2640	5710
6	9150	23900	452	2760	1700	2640	6200
7	12000	31350	578	3520	1700	3400	6800
8	14250	37600	711	3520	2000	3400	6800
9	16900	45600	790	4200	2040	4080	7500
10	22250	60900	888	4200	2640	4080	8100
11	29250	76400	1157	5400	2640	5280	9440
12	36300	94850	1956	5400	3240	5280	9440

X-149C



Size	Vmin	Vmax	Q_N	Q_C	H	B	h	L
	[m³/h]	[m³/h]	[kW]	[kW]	[mm]	[mm]	[mm]	[mm]
0	1300	1900	41	17	1160	753	1040	3070
1	2000	3500	75	21	1626	753	1506	3910
2	2800	5350	119	57	1626	1018	1506	3910
3	3950	7850	192	86	2156	1018	2036	4630
4	5250	10900	260	126	2156	1320	2036	4630
5	7000	15200	355	183	2760	1320	2640	4990
6	9150	20500	452	236	2760	1700	2640	6250
7	12000	26900	578	310	3520	1700	3400	6850
8	14250	32200	711	376	3520	2000	3400	6850
9	16900	39100	790	421	4200	2040	4080	7550
10	22250	52200	888	568	4200	2640	4080	8150
11	29250	65500	1157	789	5400	2640	5280	9690
12	36300	81300	1956	978	5400	3240	5280	9690

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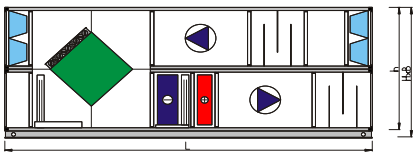
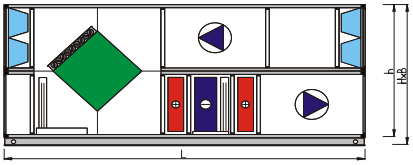
Standard Air Handling with Cross-Flow Heat Exchanger

X-149D



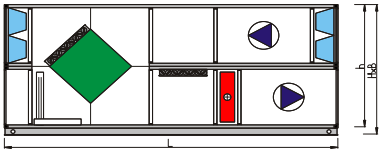
Size	Vmin [m³/h]	Vmax [m³/h]	Q_N [kW]	Q_C [kW]	H [mm]	B [mm]	h [mm]	L [mm]
0	1300	1900	41	17	1160	753	1040	4390
1	2000	3500	75	21	1626	753	1506	5230
2	2800	5350	119	57	1626	1018	1506	5230
3	3950	7850	192	86	2156	1018	2036	5950
4	5250	10900	260	126	2156	1320	2036	5950
5	7000	15200	355	183	2760	1320	2640	6310
6	9150	20500	452	236	2760	1700	2640	7150
7	12000	26900	578	310	3520	1700	3400	7750
8	14250	32200	711	376	3520	2000	3400	7750
9	16900	39100	790	421	4200	2040	4080	8490
10	22250	52200	888	568	4200	2640	4080	9090
11	29250	65500	1157	789	5400	2640	5280	10630
12	36300	81300	1956	978	5400	3240	5280	10630

X-157C



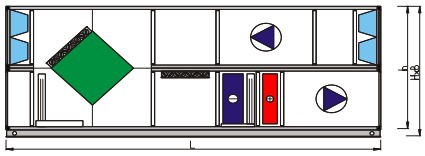
Size	Vmin [m³/h]	Vmax [m³/h]	Q_N [kW]	Q_C [kW]	H [mm]	B [mm]	h [mm]	L [mm]
0	1300	1900	41	17	1160	753	1040	3430
1	2000	3500	75	21	1626	753	1506	4270
2	2800	5350	119	57	1626	1018	1506	4270
3	3950	7850	192	86	2156	1018	2036	4990
4	5250	10900	260	126	2156	1320	2036	4990
5	7000	15200	355	183	2760	1320	2640	5350
6	9150	20500	452	236	2760	1700	2640	6700
7	12000	26900	578	310	3520	1700	3400	7300
8	14250	32200	711	376	3520	2000	3400	7300
9	16900	39100	790	421	4200	2040	4080	8090
10	22250	52200	888	568	4200	2640	4080	8690
11	29250	65500	1157	789	5400	2640	5280	10430
12	36300	81300	1956	978	5400	3240	5280	10430

X-197C



Size	Vmin [m³/h]	Vmax [m³/h]	Q_N [kW]	H [mm]	B [mm]	h [mm]	L [mm]
0	1300	2250	41	1160	753	1040	2950
1	2000	4100	75	1626	753	1506	4030
2	2800	6250	119	1626	1018	1506	4030
3	3950	9550	192	2156	1018	2036	4990
4	5250	13250	260	2156	1320	2036	4990
5	7000	17700	355	2760	1320	2640	5590
6	9150	23900	452	2760	1700	2640	6400
7	12000	31350	578	3520	1700	3400	7250
8	14250	37600	711	3520	2000	3400	7500
9	16900	45600	790	4200	2040	4080	8240
10	22250	60900	888	4200	2640	4080	9040
11	29250	76400	1157	5400	2640	5280	10380
12	36300	94850	1956	5400	3240	5280	10180

X-213C



Size	Vmin [m³/h]	Vmax [m³/h]	Q_N [kW]	Q_C [kW]	H [mm]	B [mm]	h [mm]	L [mm]
0	1300	1900	41	17	1160	753	1040	3550
1	2000	3500	75	21	1626	753	1506	4630
2	2800	5350	119	57	1626	1018	1506	4630
3	3950	7850	192	86	2156	1018	2036	5590
4	5250	10900	260	126	2156	1320	2036	5590
5	7000	15200	355	183	2760	1320	2640	6190
6	9150	20500	452	236	2760	1700	2640	7350
7	12000	26900	578	310	3520	1700	3400	8200
8	14250	32200	711	376	3520	2000	3400	8400
9	16900	39100	790	421	4200	2040	4080	9160
10	22250	52200	888	568	4200	2640	4080	9960
11	29250	65500	1157	789	5400	2640	5280	11500
12	36300	81300	1956	978	5400	3240	5280	11300

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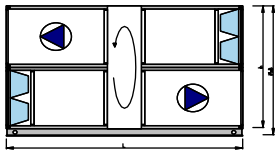
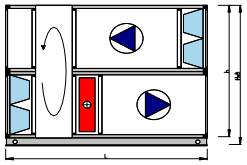
Standard Air Handling with Rotary Heat Exchanger

O-129A



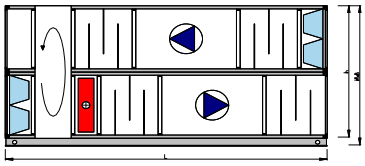
Size	Vmin [m³/h]	Vmax [m³/h]	H [mm]	B [mm]	h [mm]	L [mm]
0	1300	4450	1160	753	1040	1700
1	2000	6900	873	753	753	2060
2	2800	9750	873	1018	753	2060
3	3950	13650	1138	1018	1018	2420
4	5250	18150	1138	1320	1018	2420
5	7000	24100	1440	1320	1320	2540
6	9150	31650	1440	1700	1320	5000
7	12000	41500	1820	1700	1700	5400
8	14250	49250	1820	2000	1700	5400
9	16900	58500	2200	2040	2040	6060
10	22250	76950	2200	2640	2040	6060
11	29250	101250	2800	2640	2640	6060
12	40200	125550	2800	3240	2640	6060

O-133D



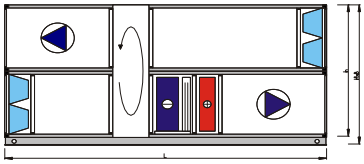
Size	Vmin [m³/h]	Vmax [m³/h]	Q_N [kW]	H [mm]	B [mm]	h [mm]	L [mm]
0	1300	1900	41	1160	753	1040	2060
1	2000	3500	75	873	753	753	2420
2	2800	5350	119	873	1018	753	2420
3	3950	7850	192	1138	1018	1018	2780
4	5250	10900	260	1138	1320	1018	2780
5	7000	15200	355	1440	1320	1320	2900
6	9150	20500	452	1440	1700	1320	5450
7	12000	26900	578	1820	1700	1700	5850
8	14250	32200	711	1820	2000	1700	5850
9	16900	39100	790	2200	2040	2040	6530
10	22250	52200	888	2200	2640	2040	6530
11	29250	65500	1157	2800	2640	2640	6730
12	36300	81300	1956	2800	3240	2640	6730

O-133F



Size	Vmin [m³/h]	Vmax [m³/h]	Q_N [kW]	H [mm]	B [mm]	h [mm]	L [mm]
0	1300	2250	41	1160	753	1040	4700
1	2000	4100	75	873	753	753	5060
2	2800	6250	119	873	1018	753	5060
3	3950	9550	192	1138	1018	1018	5420
4	5250	13250	260	1138	1320	1018	5420
5	7000	17700	355	1440	1320	1320	5540
6	9150	23900	452	1440	1700	1320	8900
7	12000	31350	578	1820	1700	1700	9350
8	14250	37600	711	1820	2000	1700	9350
9	16900	45600	790	2200	2040	2040	10150
10	22250	60900	888	2200	2640	2040	10150
11	29250	76400	1157	2800	2640	2640	10350
12	36300	94850	1956	2800	3240	2640	10350

O-149A



Size	Vmin [m³/h]	Vmax [m³/h]	Q_N [kW]	Q_C [kW]	H [mm]	B [mm]	h [mm]	L [mm]
0	1300	1900	41	17	1160	753	1040	2660
1	2000	3500	75	21	873	753	753	3020
2	2800	5350	119	57	873	1018	753	3020
3	3950	7850	192	86	1138	1018	1018	3380
4	5250	10900	260	126	1138	1320	1018	3380
5	7000	15200	355	183	1440	1320	1320	3500
6	9150	20500	452	236	1440	1700	1320	6550
7	12000	26900	578	310	1820	1700	1700	6950
8	14250	32200	711	376	1820	2000	1700	6950
9	16900	39100	790	421	2200	2040	2040	7870
10	22250	52200	888	568	2200	2640	2040	7870
11	29250	65500	1157	789	2800	2640	2640	8070
12	36300	81300	1956	978	2800	3240	2640	8070

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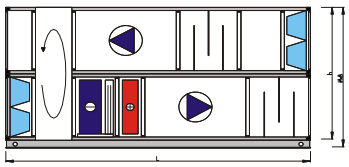
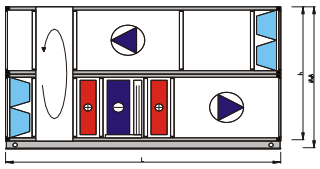
Standard Air Handling with Rotary Heat Exchanger

O-149E



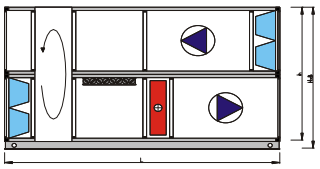
Size	Vmin [m³/h]	Vmax [m³/h]	Q_N [kW]	Q_C [kW]	H [mm]	B [mm]	h [mm]	L [mm]
0	1300	1900	41	17	1160	753	1040	3980
1	2000	3500	75	21	873	753	753	4340
2	2800	5350	119	57	873	1018	753	4340
3	3950	7850	192	86	1138	1018	1018	4700
4	5250	10900	260	126	1138	1320	1018	4700
5	7000	15200	355	183	1440	1320	1320	4820
6	9150	20500	452	236	1440	1700	1320	8300
7	12000	26900	578	310	1820	1700	1700	8700
8	14250	32200	711	376	1820	2000	1700	8700
9	16900	39100	790	421	2200	2040	2040	9680
10	22250	52200	888	568	2200	2640	2040	9680
11	29250	65500	1157	789	2800	2640	2640	9880
12	36300	81300	1956	978	2800	3240	2640	9880

O-157D



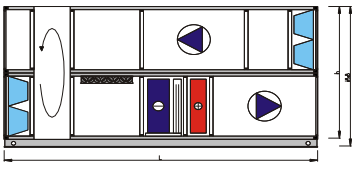
Size	Vmin [m³/h]	Vmax [m³/h]	Q_N [kW]	Q_C [kW]	H [mm]	B [mm]	h [mm]	L [mm]
0	1300	1900	41	17	1160	753	1040	3020
1	2000	3500	75	21	873	753	753	3380
2	2800	5350	119	57	873	1018	753	3380
3	3950	7850	192	86	1138	1018	1018	3740
4	5250	10900	260	126	1138	1320	1018	3740
5	7000	15200	355	183	1440	1320	1320	3860
6	9150	20500	452	236	1440	1700	1320	7000
7	12000	26900	578	310	1820	1700	1700	7400
8	14250	32200	711	376	1820	2000	1700	7400
9	16900	39100	790	421	2200	2040	2040	8410
10	22250	52200	888	568	2200	2640	2040	8410
11	29250	65500	1157	789	2800	2640	2640	8810
12	36300	81300	1956	978	2800	3240	2640	8810

O-197A



Size	Vmin [m³/h]	Vmax [m³/h]	Q_N [kW]	H [mm]	B [mm]	h [mm]	L [mm]
0	1300	2250	41	1160	753	1040	2540
1	2000	4100	75	873	753	753	3140
2	2800	6250	119	873	1018	753	3140
3	3950	9550	192	1138	1018	1018	3740
4	5250	13250	260	1138	1320	1018	3740
5	7000	17700	355	1440	1320	1320	4100
6	9150	23900	452	1440	1700	1320	7550
7	12000	31350	578	1820	1700	1700	8450
8	14250	37600	711	1820	2000	1700	8900
9	16900	45600	790	2200	2040	2040	9680
10	22250	60900	888	2200	2640	2040	10150
11	29250	76400	1157	2800	2640	2640	10350
12	36300	94850	1956	2800	3240	2640	9950

O-213A



Size	Vmin [m³/h]	Vmax [m³/h]	Q_N [kW]	Q_C [kW]	H [mm]	B [mm]	h [mm]	L [mm]
0	1300	1900	41	17	1160	753	1040	3140
1	2000	3500	75	21	873	753	753	3740
2	2800	5350	119	57	873	1018	753	3740
3	3950	7850	192	86	1138	1018	1018	4340
4	5250	10900	260	126	1138	1320	1018	4340
5	7000	15200	355	183	1440	1320	1320	4700
6	9150	20500	452	236	1440	1700	1320	8700
7	12000	26900	578	310	1820	1700	1700	9600
8	14250	32200	711	376	1820	2000	1700	10050
9	16900	39100	790	421	2200	2040	2040	11090
10	22250	52200	888	568	2200	2640	2040	11490
11	29250	65500	1157	789	2800	2640	2640	11690
12	36300	81300	1956	978	2800	3240	2640	11290

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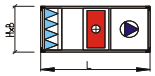
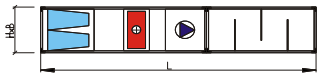
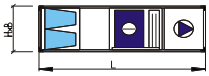
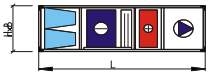
Suspended air handling unit supply-exhaust

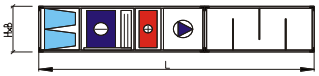
N-5A	Size	Vmin	Vmax	Q_N	H	B	L
		[m^3/h]	[m^3/h]	[kW]	[mm]	[mm]	[mm]
	0	500	1900	35	395	715	850
	1	1500	3300	44	395	1060	850
	2	2300	4250	54	395	1310	850
N-5-HE230	0	500	1200*	18	395	715	1290
N-5-HW230V	0	500	1200*	20	395	715	850

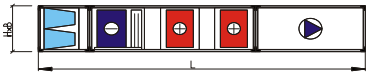
*Przy sprężu dyspozycyjnym 250 Pa

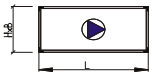
N-5D	Size	Vmin	Vmax	Q_N	H	B	L
		[m^3/h]	[m^3/h]	[kW]	[mm]	[mm]	[mm]
	0	500	1900	35	395	715	2140
	1	1500	3300	44	395	1060	2140
	2	2300	4250	54	395	1310	2140

N-17A	Size	**Vmin**	**Vmax**	Q_c	H	B	L
		[m^3/h]	[m^3/h]	[kW]	[mm]	[mm]	[mm]
	0	500	1600	27	395	715	1290
	1	1500	2800	42	395	1060	1290
	2	2300	3650	57	395	1310	1290

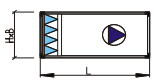
N-21A	Size	**Vmin**	**Vmax**	Q_N	Q_C	H	B	L
		[m^3/h]	[m^3/h]	[kW]	[kW]	[mm]	[mm]	[mm]
	0	500	1600	35	27	395	715	1290
	1	1500	2800	44	42	395	1060	1290
	2	2300	3650	54	57	395	1310	1290

N-21D	Size	Vmin	Vmax	Q_N	Q_C	H	B	L
		[m^3/h]	[m^3/h]	[kW]	[kW]	[mm]	[mm]	[mm]
	0	500	1600	35	27	395	715	2140
	1	1500	2800	44	42	395	1060	2140
	2	2300	3650	54	57	395	1310	2140

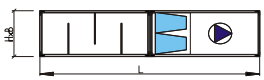
N-29A	Size	Vmin	Vmax	Q_N	Q_C	H	B	L
		[m^3/h]	[m^3/h]	[kW]	[kW]	[mm]	[mm]	[mm]
	0	500	1600	35	27	395	715	2540
	1	1500	2800	44	42	395	1060	2540
	2	2300	3650	54	57	395	1310	2540

W-0A	Size	Vmin	Vmax	H	B	L
		[m^3/h]	[m^3/h]	[mm]	[mm]	[mm]
	0	500	3450	395	715	850
	1	1500	5650	395	1060	850
	2	2300	6900	395	1310	850
W-0-230V	0	500	1450*	395	715	850

*Przy sprężu dyspozycyjnym 250 Pa

W-128A	Size	Vmin	Vmax	H	B	L
		[m^3/h]	[m^3/h]	[mm]	[mm]	[mm]
	0	500	2800	395	715	850
	1	1500	4500	395	1060	850
	2	2300	5700	395	1310	850
W-128-230V	0	500	1300*	395	715	850

*Przy sprężu dyspozycyjnym 250 Pa

W-128B	Size	Vmin	Vmax	H	B	L
		[m^3/h]	[m^3/h]	[mm]	[mm]	[mm]
	0	500	2800	395	715	1700
	1	1500	4500	395	1060	1700
	2	2300	5700	395	1310	1700

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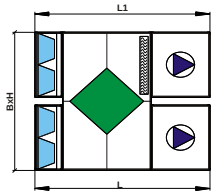
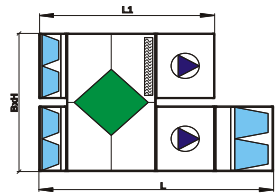
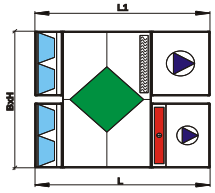
Suspended air handling unit with Cross-Flow Heat Exchanger



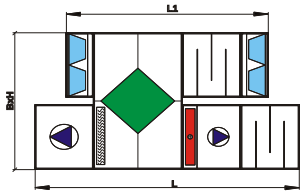
X-129A						
Size	Vmin	Vmax	H	B	L	L_1
	[m^3/h]	[m^3/h]	[mm]	[mm]	[mm]	[mm]
0	500	2800	395	715	2540	2540
1	1500	4500	395	1060	2540	2540



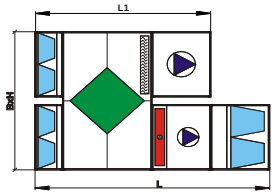
X-131A						
Size	Vmin	Vmax	H	B	L	L_1
	[m^3/h]	[m^3/h]	[mm]	[mm]	[mm]	[mm]
0	500	2800	395	715	3390	2540
1	1500	4500	395	1060	3390	2540



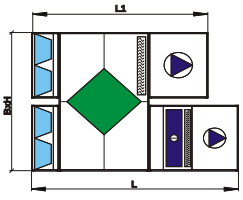
X-133A							
Size	Vmin	Vmax	Q_N	H	B	L	L_1
	[m^3/h]	[m^3/h]	[kW]	[mm]	[mm]	[mm]	[mm]
0	500	1900	35	395	715	2540	2540
1	1500	3300	44	395	1060	2540	2540



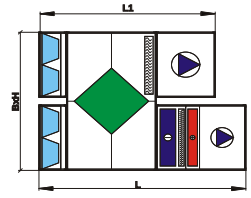
X-133D							
Size	Vmin	Vmax	Q_N	H	B	L	L_1
	[m^3/h]	[m^3/h]	[kW]	[mm]	[mm]	[mm]	[mm]
0	500	1900	35	395	715	3840	2940
1	1500	3300	44	395	1060	3840	2940



X-135A							
Size	Vmin	Vmax	Q_N	H	B	L	L_1
	[m^3/h]	[m^3/h]	[kW]	[mm]	[mm]	[mm]	[mm]
0	500	1900	35	395	715	3390	2540
1	1500	3300	44	395	1060	3390	2540



X-145A							
Size	Vmin	Vmax	Q_N	H	B	L	L_1
	[m^3/h]	[m^3/h]	[kW]	[mm]	[mm]	[mm]	[mm]
0	500	1600	27	395	715	2980	2540
1	1500	2800	42	395	1060	2980	2540



X-149A								
Size	Vmin	Vmax	Q_N	Q_C	H	B	L	L_1
	[m^3/h]	[m^3/h]	[kW]	[kW]	[mm]	[mm]	[mm]	[mm]
0	500	1600	35	27	395	715	2980	2540
1	1500	2800	44	42	395	1060	2980	2540

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