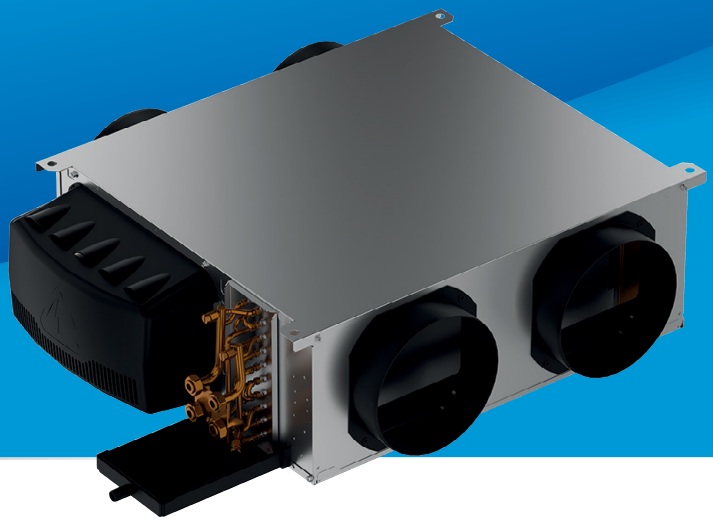
42NX

DUCTABLE FAN COIL UNIT



IDROFAN

Cooling capacity:
0.9 kW – 11 kW
Heating capacity:
1 kW - 14 kW

DUCTABLE UNIT FOR SUSPENDED CEILING AND RAISED FLOOR
EXTREMELY QUIET OPERATION
LOW ENERGY CONSUMPTION
FLEXIBILITY FOR SIMPLIFIED INSTALLATION
IMPROVED COMFORT
INDOOR AIR QUALITY

Carrier 42NX units are available in different sizes with 2-pipe, 2-pipe plus electric heater or 4-pipe coils, with an airflow range from 140 to 1900 m^3/h, a total cooling capacity range from 0.9 kW to 11 kW, and a rated heating capacity range from 1 kW to 14 kW.

EUROVENT CERTIFIED PERFORMANCE
www.eurovent-certification.com

**CARRIER participates in the ECP programme for LCP-HP. Check the ongoing validity of certificate:
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Translation of the original document

DESCRIPTION AND APPLICATIONS

The 42NX terminal unit is a ductable unit specially designed to be compact and modular for installation in any suspended ceiling or raised floor, thanks in particular to its low height, which is 229 mm - 279 mm in the largest size.

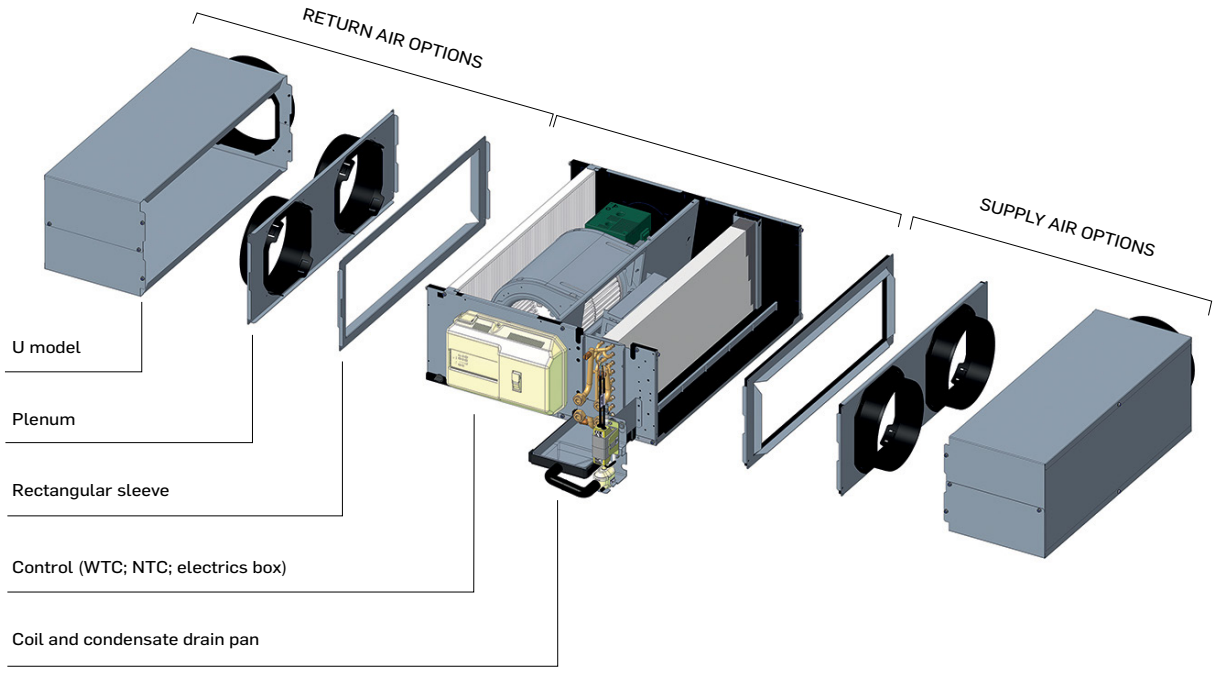
Reliable, economical and quiet, it is ideal for commercial buildings, hotels, guest houses, offices, and light commercial applications.

With its variable-speed EC motor and high-pressure centrifugal fan, this unit will provide optimal operation while ensuring low energy consumption. An ISO coarse 50% filter is fitted as standard to ensure good air quality. The electrical heater is secure and factory-fitted with a choice of capacity levels to suit your needs. The valves are factory-fitted to ensure low hydraulic pressure drops.

The 42NX ductable terminal unit offers a wide choice of factory-fitted options (valves, controllers, etc.) for quick and easy on-site installation. The 42NX terminal unit is highly modular, as each size can be provided with:

- Non-ducted return and/or direct air supply;
- A rectangular sleeve on the return air and/or supply air (ideal for connecting the fan coil unit to the air duct);
- Return air and/or supply air plenums with different diameters: 160, 200 or 250 mm, depending on the size of the unit.

The figure below shows all the available plenum configurations.



CUSTOMER BENEFITS

■ Industry standard

The 42NX range has been developed and designed in France to ensure its robustness and high-quality design, making full use of the company's experience in the field, and its performance has been validated by the Eurovent certification. With an installed base of more than a million units, the Idrofan range has become the standard in the fan coil unit cooler market.

1,000,000
Units installed

■ Energy efficiency

The high static pressure of the 42NX complies with the Eurovent FCP certification specific to ductable fan coil units and, in particular, the limitation of pressure drops. The low energy consumption (LEC) brushless EC motor reduces the energy consumption of the fan coil unit by up to 50% compared to an AC motor, making it easier to comply with new building energy management regulations.

Energy savings

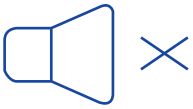
■ Versatile

The 42NX range offers a high external static pressure capacity and is available in a wide choice of plenums and connection diameters. It has been designed to adapt to all room sizes and configurations, whether for applications in hotels, offices, shops or restaurants. It meets customer requirements for heating and cooling capacity (from 0.9 to 11 kW). With an ISO coarse 50% filter fitted as standard and an ePM10 filter available for higher filtration quality, the 42NX range is the ideal solution for ensuring excellent indoor air quality.

Adaptabliity

■ Quiet solution

With its sound insulation and ultra-low-noise fan motor, the 42NX range ensures very quiet operation. Its low energy consumption (LEC) motor with variable fan speed control ensures greater sound comfort than a multi-speed motor, as the air flow rate automatically adjusts from 0 to 100% to perfectly meets occupants' needs. With a Carrier Water Terminal Controller (WTC), the maximum fan speed can also be limited to further improve sound level management.



Quiet

■ Maintenance

The 42NX units are designed for easy installation in suspended ceilings or raised floors in various settings like hotels, offices, shops, and restaurants. These units provide direct access to the air filter, water coil, condensate drain pan and fan motor assembly, making maintenance and compliance with local hygiene regulations easier.

Maintenance

RANGE CONFIGURATION

Several installation configurations are available to meet all on-site requirements.

I model

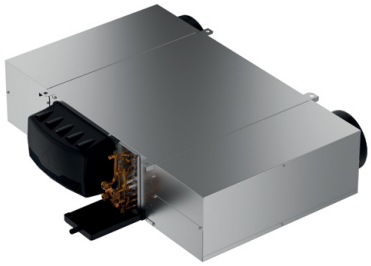
- with or without a rectangular connection sleeve on the supply air and/or return air

H model

- Plenum on the return air and supply air with spigot for connection to round ducts.
- Number and diameter of spigots according to the table on the following page

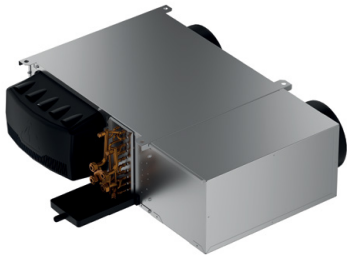
U model

- Plenum on the return air and the supply air with a lateral spigot (diameter 160 or 200 or 250 mm)



Compact U model

- Lateral spigot installed directly on the unit for the return air
- Supply plenum with lateral spigot
- Model not available on size 5

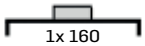
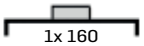
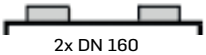
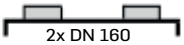
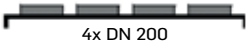
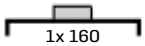
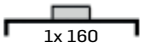
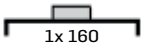
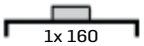


Y model

- Plenum on the supply air and return air with spigots for connection to a round duct
- Number and diameter of spigots according to the table on the following page
- Rectangular connection sleeve available for the return air

RANGE CONFIGURATION

Plenum available depending on the configuration.

	Size 1	Size 2	Size 3	Size 4	Size 5
H or Y model					
					
					
					
U model					
					
					
Compact U model					
					

MAIN MODULES AND COMPONENTS

Frame

In order to further enhance occupant comfort this product range offers especially low noise levels. The casing is made of galvanised sheet steel with full high-efficiency internal lining for optimised thermal and sound insulation of the unit.

In order to comply with the various local regulations (fire class), the fan coil unit is available with both class M1 type insulation (in compliance with NF P 92-507) and Euroclass level B-s3-d0 (in compliance with EN 13501).

In order to reduce the dimensions to the minimum, the units are equipped with high-efficiency heat exchangers with very high cooling capacity/treated air flow ratios. The condensate drain pan height is optimised.

Fan motor assemblies

Low consumption fan motor (variable-speed LEC motor)

Motor description

- Permanent magnet brushless motor
- Electronically commutated
- Class B winding insulation, varnish class F
- For the limits of use, see the "Limits of use" section at the end of the document.

The 42NX units are equipped with the LEC fan motor, which is controlled by a 0-10 V signal, available with the Carrier NTC or WTC type electronic control.

NOTE: In this case, the minimum control signal that allows the motor to start is 2 V for the two- and four-pipe versions. For a unit fitted with an electrical heater, refer to the table below for the minimum permitted flow rate.

	Minimum air flow rates			
	I, Y and H plenum versions		Compact U plenum version	
	500 W	1000 W	500 W	1000 W
42NX 1	NA			
42NX 2	175 m³/h	490 m³/h	140 m³/h	240 m³/h
42NX 3	135 m³/h	170 m³/h	160 m³/h	148 m³/h
42NX 4	NA	480 m³/h	NA	550 m³/h
42NX 5	NA			

If the product is supplied without a Carrier control device, verification of EMC conformity is the responsibility of the installer.

Fan wiring solutions

The motor on the 42NX units can be selected with different wiring solutions

Bare wires with or without plastic protective cover (standard)

In this case, the variable-speed low energy consumption (LEC) motor must be controlled by a 0-10 VDC signal.

A plastic cover can be provided as an option to house a controller supplied by the customer (dimensions L = 333 mm x D = 134.5 mm x H = 190.5 mm). It can be installed on site or at the factory.

With electrical terminal strip

This option allows the installer to connect the unit to a terminal strip located inside an electrical enclosure. The electrics box can be opened with a screwdriver.

The 0-10 VDC signal that controls the variable-speed fan is directly accessible on the terminal strip

The choice of this terminal strip option allows quick installation and wiring of Carrier 33ET or 33TT thermostat range.

Two types of electrical protection are available as options with the electrical box or the NTC and WTC controllers: the circuit breaker or the fuse holder.

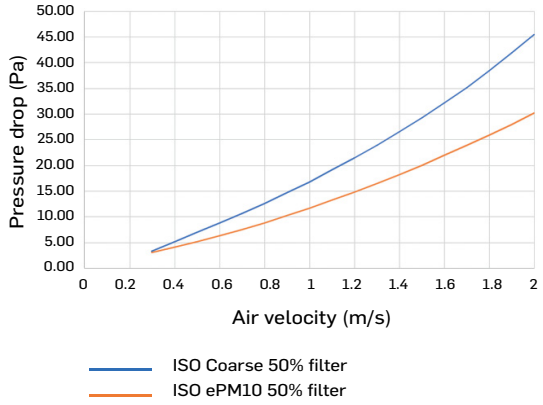
MAIN MODULES AND COMPONENTS

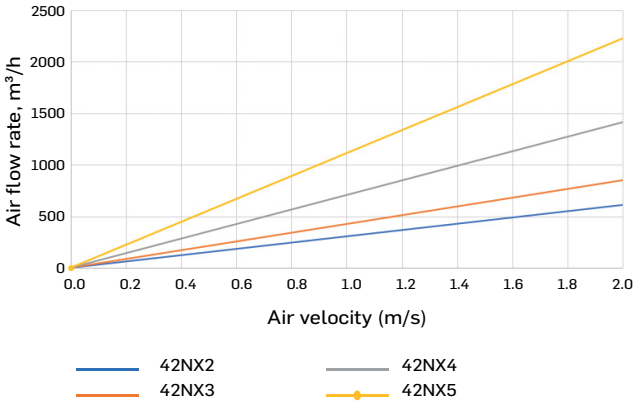
Filter

The 42NX is fitted as standard with a non-regenerative ISO coarse 50% filter in line with the ISO 16890 standard.
A non-regenerative ISO ePM10 50% pleated filter in line with the ISO 16890 standard is also available as an option.
Both types of filter have a moderate fire rating of M1.
To prevent coil fouling, Carrier recommends the use of a filter installed in either the fan coil unit or in the return air grille.
The 42NX offers three filtration configurations:

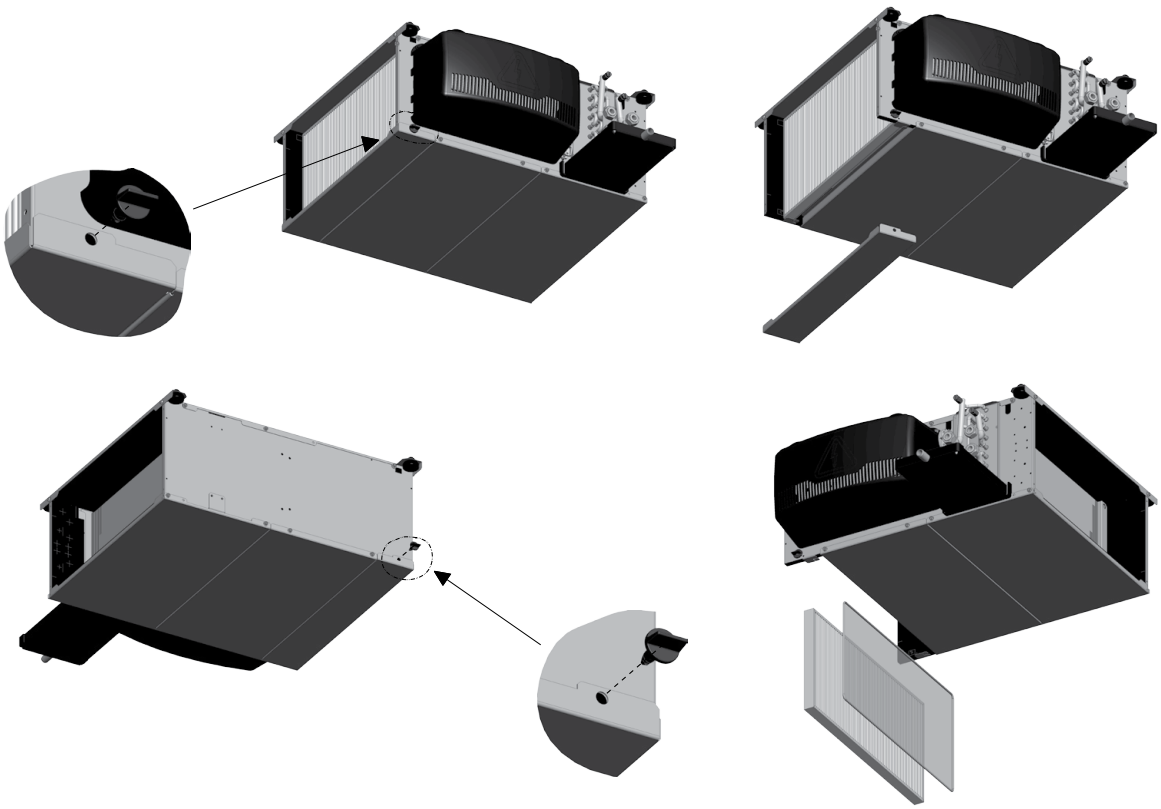
- Without filter
- Filter: ISO coarse 50%, metal frame, medium efficiency, supplied as standard
- Filter: ISO ePM10 50%, high efficiency, 22 mm thick.

Note: The filter option is not available with the Compact U model.



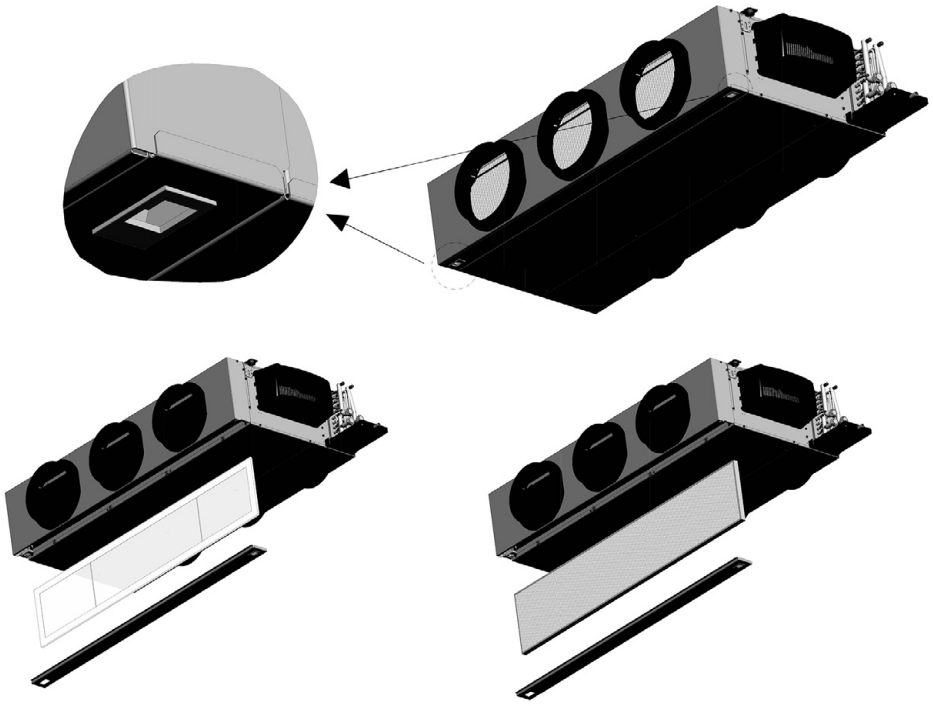


For sizes 0 to 4, the filter is accessed via a hatch on the underside of the unit, which can be removed using two quarter-turn screws.



MAIN MODULES AND COMPONENTS

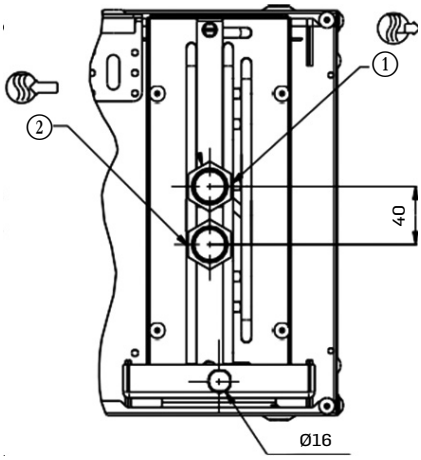
Size 5 also has a hatch, but it is attached in a different way, as shown below.

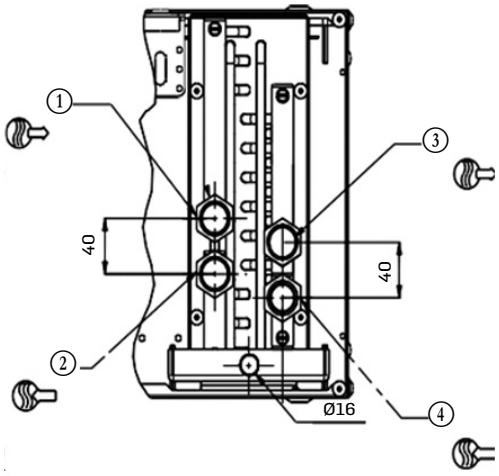


MAIN MODULES AND COMPONENTS

Hydraulic coil

- Aluminium fins mechanically bonded by expansion onto copper pipes
- 1/2-inch threaded female water inlet and outlet connections for sizes 1 to 4
- 3/4-inch threaded female water inlet and outlet connections for size 5
- Air bleed valves and drain as standard.
- 16 bar rated service pressure (at 20 °C), 18 bar test pressure





DN:

1/2" size 1 to 4

3/4" size 5

1. Cooling water outlet for 4-pipe coil and heating/cooling for 2-pipe coil
2. Water inlet, cooling for 4-pipe coil and heating/cooling for 2-pipe coil
3. Heating water outlet (4-pipe coil)
4. Heating water inlet (4-pipe coil)

Single unit condensate drain pan

- Single unit condensate drain pan made from polypropylene and insulated with 5 mm of foam.
- Drain connection diameter: Ø 16 mm external

SPECIFICATIONS FOR THE OPTIONS

Constant volume fresh air controller

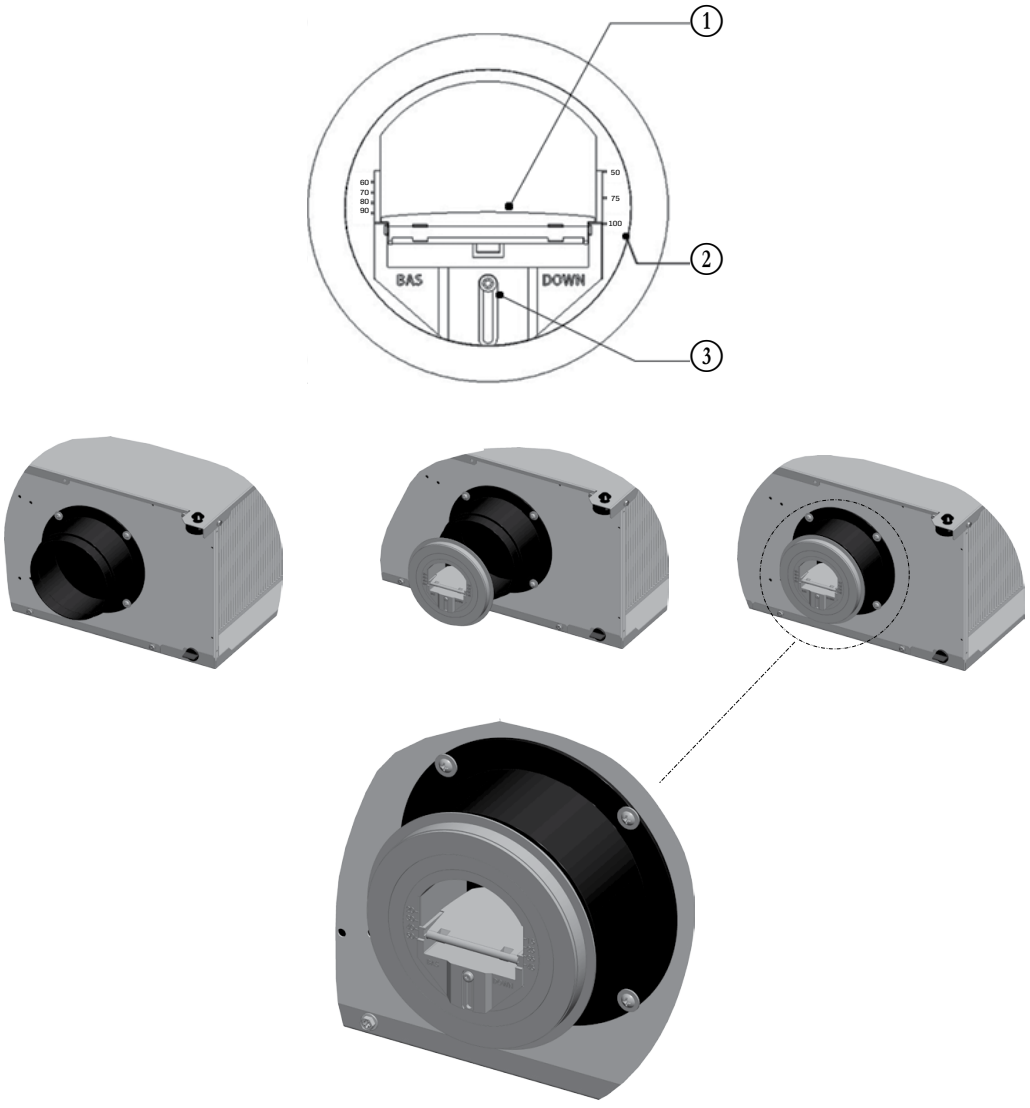
The 42NX ductable terminal unit can be equipped as an option with a constant fresh air flow controller which allows the intake of fresh air and the air change rate to be controlled.

The fresh air supply can be located on the side of the casing or, in the compact U model, on the blanking panel.

Three models are available:

- Ø125 mm - Flow rates of 15 to 50 m³/h
- Ø125 mm - Flow rates of 50 to 100 m³/h
- Ø125 mm - Flow rates of 120 to 180 m³/h

The fresh air controller can be adjusted on-site using the adjustment screw.



NOTE: To ensure the flow rate controllers operate correctly, a differential pressure of between 60 and 210 Pa is required.

① Air damper
② Fresh air damper position setting (in m³/h)
③ Air flow adjustment screw.

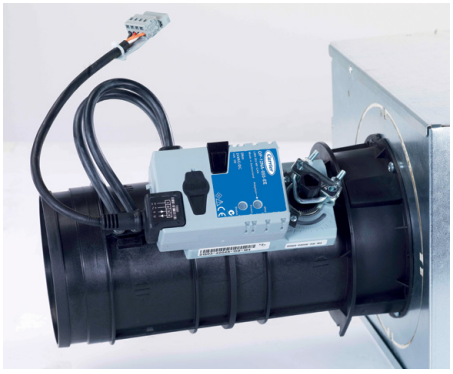
SPECIFICATIONS FOR THE OPTIONS

Variable volume fresh air controller (IAQ valve)

The 42NX ductable terminal unit can accept (as an option) an IAQ valve combining a differential pressure measurement component and a fresh air flow controller with a variable valve (from 0 to 200 m^3/h), driven by a progressive 24 VAC actuator with a 0-10 VDC input signal.

Connected and supplied by the Carrier NTC or WTC digital control, the IAQ valve can regulate the intake of fresh air in two ways:

- Either using a fixed rate set by the installer that can be reconfigured as required,
- or according to the CO_2 concentration. In this case, it is controlled by the CO_2 sensor which is connected via the Carrier digital control.



NOTE: The IAQ valve is supplied separately. Its remote installation on the fresh air network is recommended to limit nuisance noise in the room.

To be able to read the differential pressure correctly, the connection shall be made with a minimum straight length of 180 mm, whilst avoiding any disruption to the air flow upstream of the measurement component. The upstream pressure in the duct network must be 180 Pa or greater.

Sensors

CO_2 sensor

As an option with the Carrier NTC or WTC controls, and combined with the variable flow fresh air flow controller, a CO_2 sensor placed at the unit's air return ensures the correct CO_2 level in the rooms to be conditioned. A 0-10 VDC analogue output is used to precisely adjust the fresh air flow over a measurement range from 0 to 2000 ppm.

Air temperature sensors

Two factory-fitted air temperature sensors are available as an option for NTC and WTC controllers. They measure the temperature at the supply and return side.

Water temperature sensor

A water temperature sensor can be provided as an option for NTC and WTC controllers.

- For a 2-tube coil: the sensor is installed on the hot/cold water coil inlet (for the changeover function).
- For a 4-tube coil: the sensor is installed on the hot water coil inlet (for the cold-draught function that prevents the operation of the unit when the hot water network is off).

While the fan coil unit is delivered with an electrics box, the "water temperature sensor" option is actually a switch that will be connected to the Carrier thermostat. (Only in the case of a 2-pipe coil without electrical heater)

SPECIFICATIONS FOR THE OPTIONS

VALVES AND ACTUATORS

NOTE: The electrothermic valve + actuator assemblies are normally closed when there is no voltage.

Valve actuators

A wide choice of actuators is available with two- or four-way valve bodies (three-way with integral bypass) to offer the right solution for any controller type and customer requirement, from on/off to proportional types, with either 230 V or 24 V power supply:

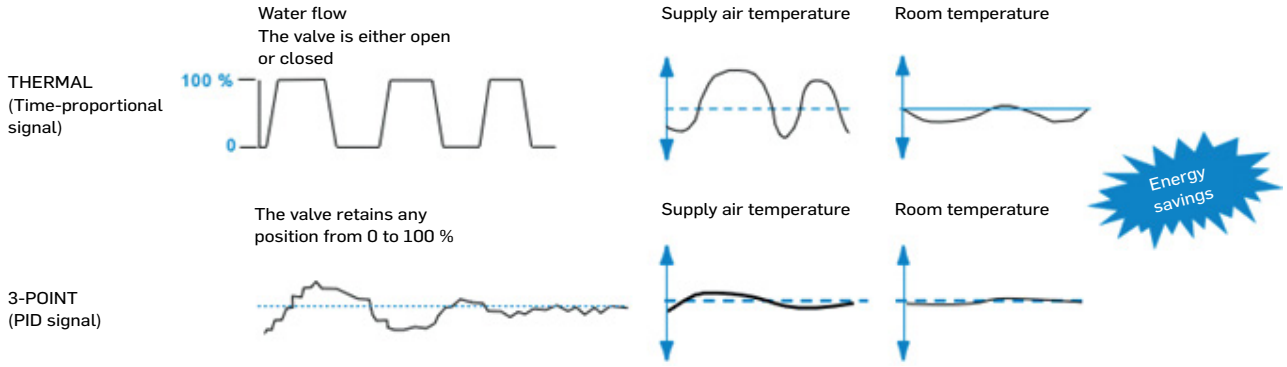
- 230 V ON/OFF actuator
- 24 V ON/OFF actuator
- 230 V 3-point floating actuator
- 24 V 3-point floating actuator
- 0-10 V/24 V modulating actuator

NOTE: The 24 V power supply actuators are not compatible with Carrier controllers (Thermostats C/D, WTC and NTC)

- 3-point floating actuator
  - Supply voltage 230 V~ +/-10% – 50/60 Hz
  - Stepper motor
  - Power up and activity checked using an LED
  - Cable length: 2 m (3 x 0.5 mm²)
  - Index of Protection: IP43 - Vertical or horizontal assembly
  - Quiet, and maintenance-free
  - Assembly on the valve using an M30x1.5 nut
  - Operating limit: room temperature 0 to 50 °C
  - Opening time 0-100% (travel of 3 mm): ~39 sec.
  - Power input during operation: 2 W – 6.5 VA

SPECIFICATIONS FOR THE OPTIONS

When combined with LEC motors and the WTC or NTC, 230 V 3-point floating actuators are recommended to increase energy savings and enhance comfort.



A 3-point motor actuator enables a valve to be actuated as close as possible to the control system requirements, by controlling its position between 0 and 100 % (water flow control). The terminal unit supply air temperature is more stable and the room temperature varies very little (variations cause discomfort).

This temperature stability not only ensures optimal comfort, it also allows energy savings to be made.

The 3-point actuator uses no electricity when the thermal balance is struck, unlike the thermal motor (return on investment on the energy savings made: 2 - 3 years).

Standard two-way valve body and three-way valve body (with integral bypass)

Specifications for the two-way and three-way valves:

- Straight valve body with arrow indicating direction of flow embossed on valve body
- Nominal pressure: PN 16 bar

Diameters and Kvs for standard 2-way or 3-way valves with bypass with thermal actuator

		42NX1	42NX 2	42NX 3	42NX 4	42NX 5
2-pipe system	Ø Female hot or cold water coil Ø Male valve Kvs		G 1/2" G 1/2" Kvs = 1.6	G 1/2" G 1/2" Kvs = 1.6	G 1/2" G 1/2" Kvs = 1.6	G 3/4" G 3/4" Kvs = 3.5
4-pipe system	Ø Female cold water coil Ø Male valve Kvs		G 1/2" G 1/2" Kvs = 1.6	G 1/2" G 1/2" Kvs = 1.6	G 1/2" G 1/2" Kvs = 1.6	G 3/4" G 3/4" Kvs = 3.5
	Ø Female hot water coil Ø Male valve Kvs		G 1/2" G 1/2" Kvs = 1.6	G 1/2" G 1/2" Kvs = 1.6	G 1/2" G 1/2" Kvs = 1.6	G 3/4" G 3/4" Kvs = 2.5

Diameters and Kvs for standard 2-way or 3-way valves with bypass with 3-point actuator

		42NX1	42NX 2	42NX 3	42NX 4	42NX 5
2-pipe system	Ø Female hot or cold water coil Ø Male valve Valve flow rate		G 1/2" G 1/2" Kvs = 0.63	G 1/2" G 1/2" Kvs = 1	G 1/2" G 1/2" Kvs = 1.6	G 3/4" G 3/4" Kvs = 3.5
4-pipe system	Ø Female cold water coil Ø Male valve Valve flow rate		G 1/2" G 1/2" Kvs = 0.63	G 1/2" G 1/2" Kvs = 1	G 1/2" G 1/2" Kvs = 1.6	G 3/4" G 3/4" Kvs = 3.5
	Ø Female hot water coil Ø Male valve Valve flow rate		G 1/2" G 1/2" Kvs = 0.63	G 1/2" G 1/2" Kvs = 1	G 1/2" G 1/2" Kvs = 1.6	G 3/4" G 3/4" Kvs = 2.5

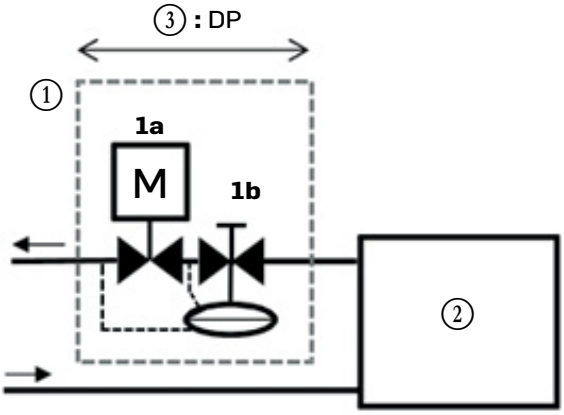
SPECIFICATIONS FOR THE OPTIONS

Two way balancing valve body

Two-way valves with embedded balancing technology are available as an option with 42NX units. The Carrier two-way valve with balancing function combines the functionality of a dynamic balancing valve and a control valve in one product.

The dynamic balancing function maintains a constant differential pressure over the control valve.

The control valve regulates the flow rate by means of a variable orifice which is controlled by the actuator.



Key

① Two-way valve with balancing function
1a. Valve actuator for waterflow control
1b. Differential pressure controller & balancing feature
② Fan coil unit
③ Minimum operating pressure drop at rated water flow rate: 20 kPa for size 5

Diameters and flow rate range for automatic balancing two-way valves

		42NX1	42NX 2	42NX 3	42NX 4	42NX 5
2-pipe system	Ø Female hot or cold water coil Ø Male valve Valve flow rate		G 1/2" G 1/2" 65-370 l/h	G 1/2" G 3/4" 220-1330 l/h	G 1/2" G 3/4" 220-1330 l/h	G 3/4" G 1" 300-1800 l/h
4-pipe system	Ø Female cold water coil Ø Male valve Valve flow rate		G 1/2" G 1/2" 65-370 l/h	G 1/2" G 3/4" 220-1330 l/h	G 1/2" G 3/4" 220-1330 l/h	G 3/4" G 1" 300-1800 l/h
	Ø Female hot water coil Ø Male valve Valve flow rate		G 1/2" G 1/2" 30-200 l/h	G 1/2" G 3/4" 100-575 l/h	G 1/2" G 3/4" 220-1330 l/h	G 3/4" G 3/4" 220-1330 l/h

The constant differential pressure across the control valve ensures accurate control and maximises valve authority, independently of the pressure conditions in the system.

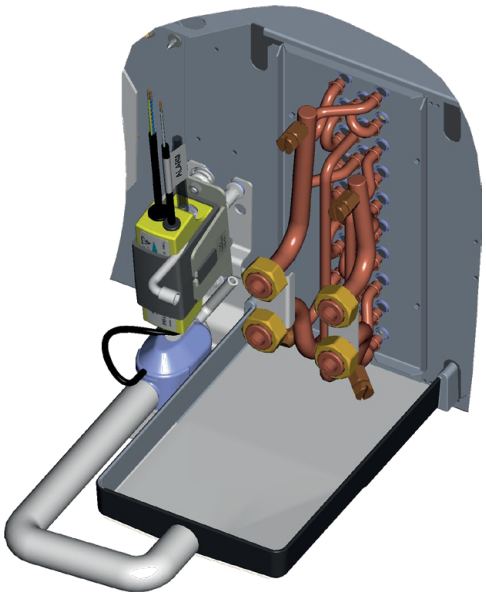
Advantages compared to the standard two-way valve

- Improved and reliable commissioning. The water flow can be set and controlled on site.
- Higher energy efficiency due to optimal waterflow and maximized valve authority.
- Enhanced comfort thanks to stable and precise ambient temperature control.

SPECIFICATIONS FOR THE OPTIONS

Condensate drain pump

The condensate drain pump (optional) is a split unit pump with an oscillating piston designed to fit on the side of the condensate pan. The oscillating piston fulfils the function of a check valve, preventing the return of condensates to the pan and shutting down the pump and blocking the siphoning effect of the pump unit and thereby prevent any risk of damage from running dry.



Technical characteristics	Size 1 to 4	Size 5
Maximum flow rate	10.4 l/h	17 l/h
Max. discharge height	7 m (flow rate = 4 l/h)	> 8 m (flow rate 4 l/h)
Maximum pressure	10 m (flow rate 0 l/h)	14 m (flow rate 0 l/h)
Sound level at 1 m as per EN ISO 3744 and 4871 (Measurement taken at LNE, pump in water, outside of application)	20.2 dBA	<28 dBA
Power supply	230 V +10%/-15% - 50/60 Hz – 19 W	230 V +10%/-15% - 50/60 Hz – 19 W
Electrical insulation class	Class 1	Class 1
Detection levels	ON: 14.7 mm, OFF: 10.7 mm, AL: 17 mm	ON: 14.7 mm, OFF: 10.7 mm, AL: 17 mm
Safety switch	NC: 5 A resistive – 250 V Contacts made from AgNI 90/10, gold-plated	NC: 5 A resistive – 250 V Contacts made from AgNI 90/10, gold-plated
Heat protection (overheating)	70 °C (automatic restart)	70 °C (automatic restart)
Operating cycle (duty factor)	100%	100%
Protection (as per NF EN60529)	IP64	IP64
Safety standard	CE	CE
RoHS directive	Compliant	Compliant
WEEE directive	Compliant	Compliant

Sizes 1 to 4: Water flow rate in litres per hour (-15% / +20%)				
Discharge height	**Horizontal length of the discharge pipe**			
	5 metres	**10 metres**	**20 metres**	**30 metres**
1 metre	10,4	9,1	8,3	7,3
2 metres	8,5	7,8	7	6,4
3 metres	7,9	7,1	6,3	5,8
4 metres	7	6	5,3	4,9

Size 5: Water flow rate in litres per hour (-15% / +20%)				
Discharge height	**Horizontal length of the discharge pipe**			
	5 metres	**10 metres**	**20 metres**	**30 metres**
1 metre	17	17	16	14
2 metres	14	14	13,5	11,2
3 metres	13	13	12	9,5
4 metres	11,5	10,5	10	8,3

Electric heater (option for 2-pipe water coil)

Resistive wire type coil

- Supply voltage: 230 V – 1 ph – 50 Hz
- Number of coils and capacity per unit (+5% ; -10%):
- The coil is protected with a dual safety device:

a) Self-holding automatically reset integrated safety thermostat

b) Destructive thermofuse link

Available for 2-pipe coils only.

Warning: A minimum supply air flow rate must be maintained to avoid damaging the electric heaters.

Electrical heater capacity		
42NX 1	1 x 500 W	
42NX 2	1 x 500 W	1 x 1000 W
42NX 3	1 x 500 W	1 x 1000 W
42NX 4	2 x 500 W	
42NX 5		

Water coil with coating

Hydraulic coil with protected fins for harmful/corrosive atmospheres (coastal locations, or areas close to chemical industries)

Raised floor

The unit is accessed from the top for easy maintenance, and it is attached from the bottom.

SPECIFICATIONS FOR THE OPTIONS

The unit can be supplied with a wide range of Carrier controls. These offer functions to suit the various application requirements, summarised in the table below.

	Thermostats	NTC	WTC
Communication protocols			
Carrier Communication Network (CCN) Aquasmart compatible		x	
BACnet MSTP			x
Control algorithms			
On-off	x		
Proportional-integral		x	x
Carrier Energy saving algorithm		x	x
Fan control			
3 fixed speeds for EC motors	Types C and D	x	x
EC motors Variable speed		x	x
Water valve management			
Air flow control only (no water valve)	x		
230 V On-Off actuators	x	x	x
230 V modulating actuators (floating 3-pt)		x	x
Main functions			
Setpoint control	x	x	x
Occupied/unoccupied mode	x	x	x
Frost protection mode	x	x	x
Window/door contact input	x	x	x
Measurement of water temperature for automatic changeover (2-pipe)	C type	x	x
Measurement of water inlet temperature to prevent cold draughts (4-pipe and 2-pipe + electric heater)	Type D	x	x
Manual changeover	x	x	x
Frost protection mode	x	x	x
Continuous ventilation within dead-band	x	x	x
Periodical ventilation within dead-band	x	x	x
On-site configuration	x	x	x
Group function (lead/lag)	x	x	x
Cassette Louvers control		x	x
Supply air temperature monitoring limiting		x	x
Electrical heater loadshed		x	x
Dirty filter alarm		x	x
Alarm reporting		x	x
Indoor air quality control (CO_2 sensor)		o	o
Demand-controlled ventilation (DCV) (0-10 V fresh air valve)		o	o
Free cooling mode			o
Presence detection			o

Key

x Feature available as standard
o Optional

NOTE: For the features and specifications of the Carrier controllers mentioned above, refer to the technical documentation for each controller. Upon special request, other controller types can be factory-installed on the units (supplied by Carrier or the customer).

SPECIFICATIONS FOR THE OPTIONS

	Thermostats	NTC	WTC
User interfaces			
Automatic or manual fan speed control	x	x	x
Setpoint adjustment	x	x	x
Occupancy (eco) button	x	x	o
Digital display		o	o
CO_2 sensor		o	o
Control kit			
On site control kit solution			o

Key

x Feature available as standard
o optional

NOTE: For the features and specifications of the Carrier controllers mentioned above, refer to the technical documentation for each controller. Upon special request, other controller types can be factory-installed on the units (supplied by Carrier or the customer).

SPECIFICATIONS FOR THE OPTIONS

Name of the feature	Type key digit no.	Value	Description	Compatibility
Range	1-4	42NX		
Chassis size	5	1	Chassis size 1	
		2	Chassis size 2	
		3	Chassis size 3	
		4	Chassis size 4	
		5	Chassis size 5	
Water coil type	6	2	2-pipe coil	
		4	4-pipe coil	
Number of water coil rows	7	2	2-row coil	
		3	3-row coil	
		4	4-row coil	
Efficiency	8	M	Medium efficiency	
		H	High efficiency	
Water coil with coating	9	-	No coating	
		C	With coating	
Water coil side in the air flow direction	10	L	Coil on the left	
		R	Coil on the right	
Electrical heater	11	-	Without electric heater	
		A	500 W electric heater	
		B	1000 W electric heater	
Control	18	I	Electric terminal block	To control the unit with a thermostat, select the electrical terminal block
		G	Bare wires without plastic cover	
		H	Bare wires with plastic cover	
		K	NTC	
		M	WTC BACNET	
Valve body	26	-	Without valve	
		G	Two-way valve	
		H	Four-way valve	
		L	Two-way balancing valve	
		T	Two-way balancing valve and pressure points	
Valve actuator	27	-	Without actuator	The 24 V actuators are not available with the Carrier controllers and the electrical terminal strip
		A	230 V ON/OFF actuator	
		C	230 V floating actuator (3-point)	The 3-point floating actuators are not available with the electrical terminal strip
		B	24 V ON/OFF actuator	
		D	24 V floating actuator (3-point)	
		E	0-10 V/24 V modulating actuator	

SPECIFICATIONS FOR THE OPTIONS

Name of the feature	Type key digit no.	Value	Description	Compatibility
Sensors	28	-	No sensor	
		A	Return air temperature sensor	
		B	Water temperature sensor	
		C	Return air and water temperature sensor	
		D	Return air, water and CO_2 temperature sensor	
		E	Return air, supply air, water and CO_2 temperature sensor	
		F	Return air and supply air temperature sensor	
		G	Supply air and water temperature sensor	
		H	Supply air temperature sensor	
		L	Water and CO_2 temperature sensor	
		M	Return air, supply air and water temperature sensor	
		N	Supply air, water and CO_2 temperature sensor	
		P	Return air, supply air and CO_2 temperature sensor	
		Q	CO_2 sensor	
		R	Return air and CO_2 temperature sensor	
		S	Supply air and CO_2 temperature sensor	
Electrical protection	29	-	No electrical protection	
		F	Fuse holder	
		C	Circuit breaker	
Condensate pump	30	-	Without pump	
		P	With pump	

SPECIFICATIONS FOR THE OPTIONS

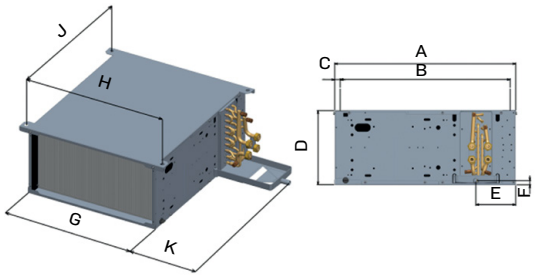
Name of the feature	Type key digit no.	Value	Description	Compatibility
Installation configuration	31-32-33	IFC	Rectangular connection to the return air and supply air for suspended ceiling	For installation in a suspended ceiling
		YFC	Rectangular connection to the return air or supply air and round connection to the supply air or return air for suspended ceiling	For installation in a suspended ceiling
		HFC	Round connection to the return air and supply air for suspended ceiling	For installation in a suspended ceiling
		UFC	Lateral round connection to the return air and supply air for suspended ceiling	For installation in a suspended ceiling
		IFF	Rectangular connection to the return air and supply air for raised floor	For installation in a raised floor
		YFF	Rectangular connection to the return air or supply air and round connection to the supply air or return air for raised floor	For installation in a raised floor
		HFF	Round connection to the return air and supply air for raised floor	For installation in a raised floor
		UFF	Lateral round connection to the return air and supply air for raised floor	For installation in a raised floor
		UC-	Lateral round connection to the return air and supply air for compact suspended ceiling	For installation in a suspended ceiling
Filter	34	-	Without filter	
		G	ISO Coarse 50%	
		P	ePM10 50%	
Rectangular sleeve	35	-	Without rectangular sleeve	
		A	Supply air rectangular sleeve only	
		B	Return air rectangular sleeve only	
		C	Return air and supply air rectangular sleeve	
Diameter and number of return connections	36-37	--	No connection	
		A1	1 connection 160 mm in diameter	
		A2	2 connections 160 mm in diameter	
		A3	3 connections 160 mm in diameter	
		B1	1 connection 200 mm in diameter	
		B2	2 connections 200 mm in diameter	
		B3	3 connections 200 mm in diameter	
		B4	4 connections 200 mm in diameter	
		B5	5 connections 200 mm in diameter	
		C1	1 connection 250 mm in diameter	
		C2	2 connections 250 mm in diameter	
		C3	3 connections 250 mm in diameter	
		C4	4 connections 250 mm in diameter	

SPECIFICATIONS FOR THE OPTIONS

Name of the feature	Type key digit no.	Value	Description	Compatibility
Diameter and number of supply air connections	38-39	--	No connection	
		A1	1 connection 160 mm in diameter	
		A2	2 connections 160 mm in diameter	
		A3	3 connections 160 mm in diameter	
		B1	1 connection 200 mm in diameter	
		B2	2 connections 200 mm in diameter	
		B3	3 connections 200 mm in diameter	
		B4	4 connections 200 mm in diameter	
		B5	5 connections 200 mm in diameter	
		C1	1 connection 250 mm in diameter	
		C2	2 connections 250 mm in diameter	
		C3	3 connections 250 mm in diameter	
		C4	4 connections 250 mm in diameter	
Fresh air	40	-	Without controller	
		A	Sleeve 100 mm in diameter	
		B	15 to 50 m^3/h controller for connection 100 mm in diameter	
		C	50 to 100 m^3/h controller for connection 100 mm in diameter	
		D	Sleeve 125 mm in diameter	
		E	15 to 50 m^3/h controller for connection 125 mm in diameter	
		F	50 to 100 m^3/h controller for connection 125 mm in diameter	
		G	100 to 180 m^3/h controller	
		H	Adapter for motorised air damper (to be ordered separately)	Motorised air damper compatible with NTC and WTC only (position feedback is not available if the WTC and the CO_2 sensor are also selected)
Packaging	41	B	Bundle packaging	
		I	Individual packaging	
Labelling	42	-	No labelling	
		A	With individual labelling	
Anti-vibration mounts	44	-	No mounts	
		A	With mounts	
Condensate drain pan extension	45	-	No extension	
		E	With condensate drain pan extension	
Flexible hose	46	-	Without connection hose	
		F	With flexible connection hose	

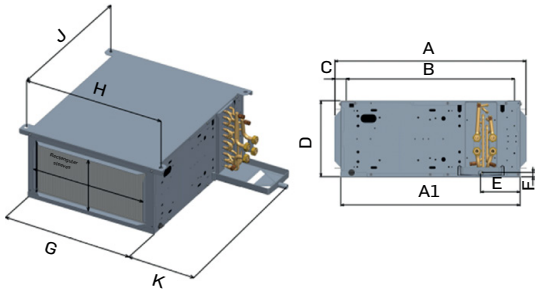
DIMENSIONAL DRAWINGS

I version assembly without sleeve



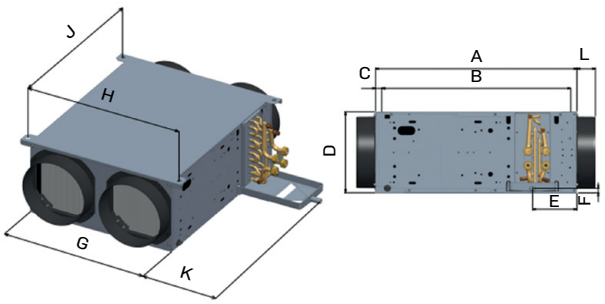
Dimensions in mm					
Size	**42NX 1**	**42NX 2**	**42NX 3**	**42NX 4**	**42 NX 5**
A		560	560	560	568
B		526	526	526	384
C		17	17	17	26
D		229	229	229	279
E		123	123	123	89
F		12	12	12	12
G		455	622	1022	1321
H		485	652	1052	1371
J		526	526	526	384
K		226	226	226	226
G + K		681	848	1248	1547
Weight [kg]		14,8	18,1	26,8	35,3

I version assembly with rectangular return air and supply air sleeves



Dimensions in mm					
Size	**42NX 1**	**42NX 2**	**42NX 3**	**42NX 4**	**42 NX 5**
A		596	596	596	671
B		526	526	526	384
C		35	35	35	103
D		229	229	229	280
E		123	123	123	87
Rectangular sleeves		396X177	563X177	963X177	1252X210
F		12	12	12	12
A1		560	560	560	615
G		455	622	1022	1323
H		485	652	1052	1370
J		526	526	526	384
K		226	226	226	226
G + K		681	848	1248	1549
Weight [kg]		15,4	18,9	28,0	39,8

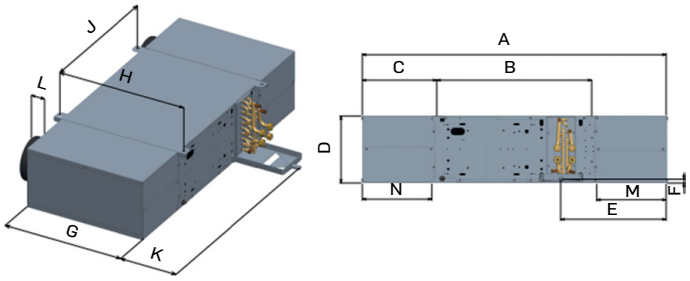
H version assembly



Dimensions in mm						
Size	**42NX 1**	**42NX 2**	**42NX 3**	**42NX 4**	**42 NX 5 - Without filter**	**42 NX 5 - With filter**
A		560	560	560	666	714
B		526	526	526	384	384
C		17	17	17	25	74
D		229	229	229	279	280
E		123	123	123	187	187
F		12	12	12	12	12
G		455	622	1022	1320	1323
H		485	652	1052	1370	1370
J		526	526	526	384	384
K		226	226	226	226	226
L		52	52	52	51	53
G + K		681	848	1248	1546	1549
Weight [kg]		16,2	19,9	29,8	42,1	39,4

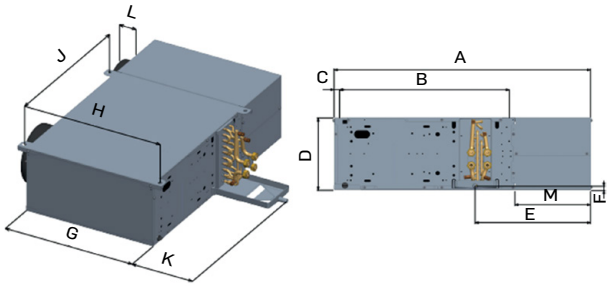
DIMENSIONAL DRAWINGS

U version assembly



Dimensions in mm					
Size	**42NX 1**	**42NX 2**	**42NX 3**	**42NX 4**	**42NX 5**
A		1029	1029	1029	1197
B		526	526	526	384
C		252	252	252	350
D		229	229	229	279
E		358	358	358	395
F		12	12	12	12
G		453	620	1020	1324
H		485	652	1052	1370
J		526	526	526	384
K		227	227	227	226
L		52	52	52	53
M		235	235	235	307
N		235	235	235	324
G + K		680	847	1247	1550
Weight [kg]		21,6	29,8	40	54,9

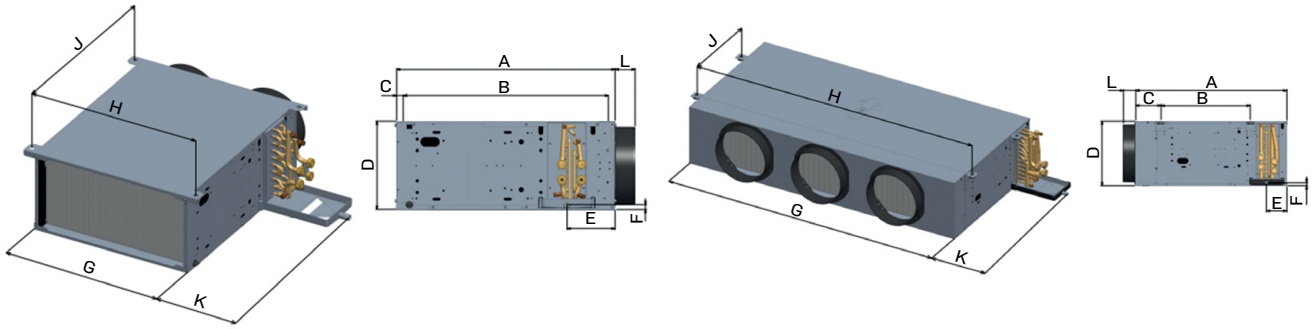
Compact U version assembly



Dimensions in mm					
Size	**42NX 1**	**42NX 2**	**42NX 3**	**42NX 4**	**42 NX 5**
A		795	795	795	
B		526	526	526	
C		17	17	17	
D		229	229	229	
E		358	358	358	
F		12	12	12	
G		455	622	1022	
H		485	652	1052	
J		526	526	526	
K		226	226	226	
L		52	52	52	
M		235	235	235	
G + K		681	848	1248	
Weight [kg]		18,6	22,9	34,1	

DIMENSIONAL DRAWINGS

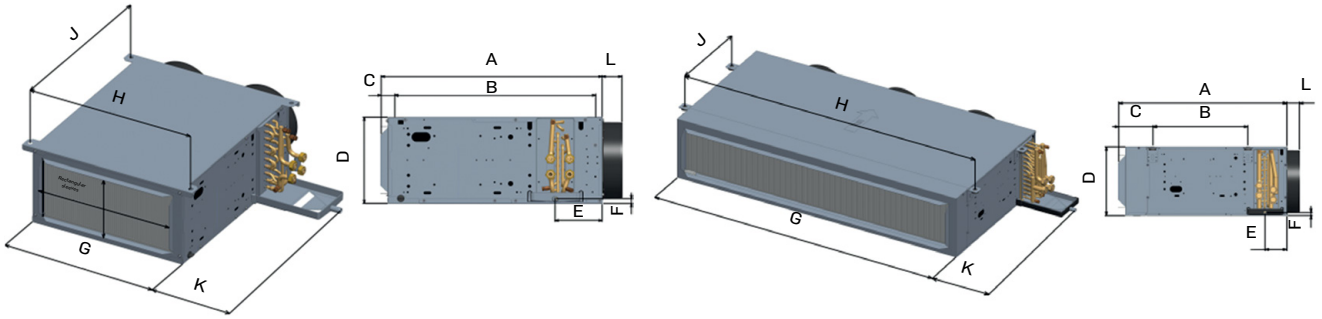
Y version assembly, supply air or return air



Dimensions in mm							
Size	**42NX 1**	**42NX 2**	**42NX 3**	**42NX 4**	**42NX 5 return air without plenum / supply air with plenum**	**42NX 5 return air with plenum / supply air without plenum**	**42NX 5 return air with plenum + filter / supply air without plenum**
A		560	560	560	666	566	615
B		526	526	526	384	384	384
C		17	17	17	25	25	74
D		229	229	229	279	279	279
E		123	123	123	187	87	87
F		12	12	12	12	12	12
G		455	622	1022	1320	1320	1323
H		485	652	1052	1370	1370	1370
J		526	526	526	384	384	384
K		226	226	226	226	226	226
L		52	52	52	53	53	53
M					100		
N							49
G + K		681	848	1248	1546	1546	1549
Weight [kg]		15,6	19,1	28,4	37,7	37,2	40,3

DIMENSIONAL DRAWINGS

Y version assembly, supply air or return air with sleeve



Dimensions in mm								
Size	**42NX 1**	**42NX 2**	**42NX 3**	**42NX 4**	**42NX 5 return air with flange / supply air with plenum**	**42NX 5 return air with plenum / supply air with flange**	**42NX 5 return air with plenum + filter / supply air with flange**	**42NX 5 return air with flange + filter / supply air with plenum**
A		578	578	578	693	593	642	744
B		526	526	526	384	384	384	384
C		35	35	35	52	25	74	103
D		229	229	229	279	279	280	280
E		123	123	123	187	87	87	187
F		12	12	12	12	12	12	12
G		455	622	1022	1320	1320	1323	1323
H		485	652	1052	1370	1370	1370	1370
J		526	526	526	384	384	384	384
K		226	226	226	226	226	226	226
L		52	52	52	53	53	53	53
M					100			100
N							49	78
G + K		681	848	1248	1546	1546	1549	1560
Weight [kg]		15,9	19,5	29	38,2	38,3	41	41,5

PERFORMANCE OF THE 42NX

42NX		222M				223H				243M				243H			
Fan speed		**2V**	**3,6**	**7**	**10V**	**2V**	**3,6**	**7**	**10V**	**2V**	**3,6**	**7**	**10V**	**2V**	**3,6**	**7**	**10V**
(Eurovent certification speeds)		(L)	(M)	(H)	-	(L)	(M)	(H)	-	(L)	(M)	(H)	-	(L)	(M)	(H)	-
Air flow	l/s	0,045	0,091	0,125		0,039	0,092	0,123		0,045	0,091	0,125		0,039	0,092	0,123	
	m^3/h	162	329	451		141	332	442		162	329	451		141	332	442	
Available static pressure	Pa	12	50	94		9	50	89		12	50	94		9	50	89	
Cooling mode, 2 pipes[1]																	
Total cooling capacity	kW	1,03	1,71	2,06		1,11	2,27	2,79									
Sensible cooling capacity	kW	0,78	1,35	1,67		0,79	1,68	2,11									
Water flow	l/s	0,049	0,083	0,101		0,053	0,110	0,136									
	l/h	178	298	363		192	395	489									
Water pressure drop	kPa	11	28	40		8	29	42									
Water volume	l																
Heating mode, 2 pipes[2]																	
Heating capacity	kW	1,07	1,86	2,35		1,07	2,2	2,77									
Water flow	l/s	0,051	0,089	0,111		0,051	0,105	0,131									
	l/h	185	320	399		185	378	471									
Water pressure drop	kPa	11	26	39		7	22	33									
Water volume	l																
Cooling mode, 4 pipes[1]																	
Total cooling capacity	kW									0,96	1,67	2,07		0,86	1,68	2,04	
Sensible cooling capacity	kW									0,76	1,38	1,75		0,68	1,39	1,72	
Water flow	l/s									0,046	0,081	0,101		0,041	0,082	0,100	
	l/h									167	292	365		149	294	360	
Water pressure drop	kPa									4	10	15		3	10	14	
Water volume	l																
Heating mode, 4 pipes[3]																	
Heating capacity	kW									1,22	2	2,45		1,11	2,01	2,43	
Water flow	l/s									0,029	0,048	0,058		0,027	0,048	0,058	
	l/h									106	173	210		96	174	208	
Water pressure drop	kPa									2	4	5		2	4	5	
Water volume	l																
Electric heater																	
Maximum capacity	W	500 / 1000				500 / 1000											
Current input	A	2,20 / 4,30				2,20 / 4,30											
Sound levels																	
INLET+RADIATED sound power level dB(A)		38	52	59		36	53	59		38	52	59		36	53	59	
OUTLET sound power level dB(A)		35	51	59		33	52	59		35	51	59		33	52	59	
OVERALL sound power level dB(A)		40	54	62		38	55	62		40	54	62		38	55	62	
Electrical data, motor																	
Motor consumption	W	7	26	54		6	28	59		7	26	54		6	28	59	
Current input	A	0,1	0,2	0,4		0,1	0,2	0,4		0,1	0,2	0,4		0,1	0,2	0,4	
FCEER [energy class] - Score		85				101				82				76			
FCEER [energy class] - Class		A				A				B				B			
FCCOP [energy class] - Score		94				102				105				99			
FCCOP [energy class] - Class		A				A				A				A			

Fan speed: L = Low, M = Medium, H = High

(1) Eurovent conditions: inlet air temperature = 27 °C db/47 % RH – water inlet temperature = 7 °C, water temperature difference = 5 K.

(2) Eurovent conditions: inlet air temperature = 20 °C, water inlet temperature = 50 °C, water flow identical to cooling mode.

(3) Eurovent conditions: inlet air temperature = 20 °C, water inlet temperature = 70 °C, water temperature difference = 10 K.

PERFORMANCE OF THE 42NX

42NX		322M				323H				343M				343H			
Fan speed		**2V**	**4,3**	**7**	**10V**	**2V**	**4.7V**	**7V**	**10V**	**2V**	**4,3**	**7**	**10V**	**2V**	**4.7V**	**7V**	**10V**
(Eurovent certification speeds)		(L)	(M)	(H)	-	(L)	(M)	(H)	-	(L)	(M)	(H)	-	(L)	(M)	(H)	-
Air flow	l/s	0,040	0,133	0,169	0,169	0,043	0,133	0,169	0,169	0,040	0,133	0,169	0,169	0,043	0,133	0,169	0,169
	m^3/h	145	479	607	609	154	480	607	610	145	479	607	609	154	480	607	607
Available static pressure	Pa	5	50	80	81	5	50	79	79	5	50	80	81	5	50	80	80
Cooling mode, 2 pipes(1)																	
Total cooling capacity	kW	0,97	2,37	2,71	2,75	1,27	3,29	3,88	3,88								
Sensible cooling capacity	kW	0,73	1,9	2,21	2,24	0,88	2,42	2,9	2,9								
Water flow	l/s	0,046	0,115	0,134	0,134	0,061	0,159	0,190	0,190								
	l/h	167	413	483	483	219	572	683	683								
Water pressure drop	kPa	5	22	28	28	3	15	20	20								
Water volume	l																
Heating mode, 2 pipes(2)																	
Heating capacity	kW	1,04	2,74	3,28	3,29	1,25	3,45	4,21	4,21								
Water flow	l/s	0,050	0,131	0,155	0,155	0,060	0,165	0,199	0,199								
	l/h	180	470	557	559	216	593	715	715								
Water pressure drop	kPa	5	22	30	30	3	13	18	18								
Water volume	l																
Cooling mode, 4 pipes(1)																	
Total cooling capacity	kW									1	2,62	3,05	3,06	1,05	2,62	3,04	3,04
Sensible cooling capacity	kW									0,75	2,08	2,45	2,49	0,79	2,08	2,46	2,46
Water flow	l/s									0,048	0,127	0,149	0,150	0,051	0,127	0,149	0,149
	l/h									173	456	537	539	182	457	537	537
Water pressure drop	kPa									5	28	37	37	6	28	37	37
Water volume	l																
Heating mode, 4 pipes(3)																	
Heating capacity	kW									1,25	2,97	3,51	3,51	1,31	2,98	3,5	3,5
Water flow	l/s									0,030	0,071	0,083	0,083	0,032	0,072	0,083	0,083
	l/h									109	257	298	299	115	258	299	300
Water pressure drop	kPa									3	9	12	12	3	9	12	12
Water volume	l																
Electric heater																	
Maximum capacity	W		500 / 1000				500 / 1000										
Current input	A		2,20 / 4,30				2,20 / 4,30										
Sound levels																	
INLET+RADIATED sound power level dB(A)		30	56	62	62	29	55	60	60	30	56	62	62	29	55	60	60
OUTLET sound power level dB(A)		29	55	61	61	28	55	61	61	29	55	61	61	28	55	61	61
OVERALL sound power level dB(A)		32	59	64	64	32	58	63	63	32	59	64	64	32	58	63	63
Electrical data, motor																	
Motor consumption	W	5	39	72	73	5	44	83	83	5	39	72	73	5	43	82	82
Current input	A	0,1	0,3	0,5	0,5	0,1	0,3	0,5	0,5	0,1	0,3	0,5	0,5	0,1	0,3	0,5	0,5
FCEER [energy class] - Score		80				97				86				80			
FCEER [energy class] - Class		B				A				A				B			
FCCOP [energy class] - Score		94				104				182				100			
FCCOP [energy class] - Class		A				A				A				A			

Fan speed: L = Low, M = Medium, H = High

(1) Eurovent conditions: inlet air temperature = 27 °C db/47 % RH – water inlet temperature = 7 °C, water temperature difference = 5 K.

(2) Eurovent conditions: inlet air temperature = 20 °C, water inlet temperature = 50 °C, water flow identical to cooling mode.

(3) Eurovent conditions: inlet air temperature = 20 °C, water inlet temperature = 70 °C, water temperature difference = 10 K.

PERFORMANCE OF THE 42NX

42NX		422M				423H				443M				444H			
Fan speed		**2V**	**5.5V**	**8.0V**	**10V**	**2V**	**5.5V**	**8.0V**	**10V**	**2V**	**5.6V**	**8.0V**	**10V**	**2V**	**5.5V**	**8V**	**10V**
(Eurovent certification speeds)		(L)	(M)	(H)	-	(L)	(M)	(H)	-	(L)	(M)	(H)	-	(L)	(M)	(H)	-
Air flow	l/s	0,057	0,223	0,288	0,308	0,050	0,223	0,278	0,281	0,055	0,222	0,281	0,299	0,050	0,223	0,278	0,281
	m^3/h	204	801	1038	1107	181	802	999	1012	198	800	1013	1076	181	802	999	1012
Available static pressure	Pa	3	50	84	96	3	50	78	80	3	50	80	90	3	50	78	80
Cooling mode, 2 pipes[1]																	
Total cooling capacity	kW	1,35	4,11	4,85	5,01	1,31	5,07	6,25	6,32								
Sensible cooling capacity	kW	1,03	3,36	4,06	4,22	0,95	3,8	4,68	4,73								
Water flow	l/s	0,065	0,199	0,237	0,247	0,063	0,244	0,304	0,308								
	l/h	233	715	853	889	225	879	1094	1108								
Water pressure drop	kPa	3	22	30	32	5	49	71	72								
Water volume	l																
Heating mode, 2 pipes[2]																	
Heating capacity	kW	1,5	5,06	6,25	6,61	1,34	5,56	7,07	7,18								
Water flow	l/s	0,072	0,242	0,296	0,311	0,065	0,265	0,335	0,340								
	l/h	259	870	1067	1121	233	955	1206	1223								
Water pressure drop	kPa	4	25	36	39	5	46	69	70								
Water volume	l																
Cooling mode, 4 pipes[1]																	
Total cooling capacity	kW									1,49	4,63	5,4	5,57	1,6	5,98	7,07	7,07
Sensible cooling capacity	kW									1,07	3,59	4,27	4,42	1,09	4,28	5,1	5,14
Water flow	l/s									0,071	0,224	0,263	0,274	0,077	0,289	0,342	0,345
	l/h									257	805	947	985	276	1039	1230	1242
Water pressure drop	kPa									7	53	70	75	5	48	64	65
Water volume	l																
Heating mode, 4 pipes[3]																	
Heating capacity	kW									1,82	5,16	6,04	6,32	2,03	6,11	7,07	7,14
Water flow	l/s									0,044	0,124	0,144	0,150	0,049	0,147	0,169	0,170
	l/h									159	447	519	539	178	529	608	612
Water pressure drop	kPa									7	36	47	50	2	6	7	7
Water volume	l																
Electric heater																	
Maximum capacity	W	1000				1000											
Current input	A	4,3				4,3											
Sound levels																	
INLET+RADIATED sound power level dB(A)		26	56	62	63	26	57	63	63	26	56	62	63	26	57	63	63
OUTLET sound power level dB(A)		24	56	62	63	24	57	63	63	24	56	62	63	24	57	63	63
OVERALL sound power level dB(A)		28	59	65	66	28	60	66	66	28	59	65	66	28	60	66	66
Electrical data, motor																	
Motor consumption	W	5	57	114	163	4	68	141	155	5	60	116	168	4	68	141	155
Current input	A	0,1	0,3	0,7	0,8	0,1	0,4	0,8	0,8	0,1	0,4	0,7	0,8	0,1	0,4	0,8	0,8
FCEER [energy class] - Score		90				89				97				106			
FCEER [energy class] - Class		A				A				A				A			
FCCOP [energy class] - Score		112				100				118				123			
FCCOP [energy class] - Class		A				A				A				A			

Fan speed: L = Low, M = Medium, H = High

(1) Eurovent conditions: inlet air temperature = 27 °C db/47 % RH – water inlet temperature = 7 °C, water temperature difference = 5 K.

(2) Eurovent conditions: inlet air temperature = 20 °C, water inlet temperature = 50 °C, water flow identical to cooling mode.

(3) Eurovent conditions: inlet air temperature = 20 °C, water inlet temperature = 70 °C, water temperature difference = 10 K.

PERFORMANCE OF THE 42NX

42NX		522M				523M				524M			
Fan speed		**2V**	**7.0V**	**9.0V**	**10V**	**2V**	**7.0V**	**9.0V**	**10V**	**2V**	**7.0V**	**9.0V**	**10V**
(Eurovent certification speeds)		(L)	(M)	(H)	-	(L)	(M)	(H)	-	(L)	(M)	(H)	-
Air flow	l/s	0,123	0,440	0,529	0,529	0,123	0,440	0,529	0,529	0,123	0,440	0,529	0,529
	m^3/h	444	1583	1904	1904	444	1583	1904	1904	444	1583	1904	1904
Available static pressure	Pa	4	50	72	72	4	50	72	72	4	50	72	72
Cooling mode, 2 pipes(1)													
Total cooling capacity	kW	3,14	7,92	8,8	8,8	2,83	8,95	10,12	10,12	3,01	10,07	11,47	11,47
Sensible cooling capacity	kW	2,31	6,38	7,2	7,2	2,17	7,02	8,05	8,05	1,26	7,64	8,82	8,82
Water flow	l/s	0,150	0,384	0,431	0,431	0,136	0,434	0,494	0,494	0,144	0,487	0,558	0,558
	l/h	541	1384	1552	1552	488	1561	1780	1780	519	1753	2010	2010
Water pressure drop	kPa	22	81	104	104	7	54	67	67	6	53	67	67
Water volume	l												
Heating mode, 2 pipes(2)													
Heating capacity	kW	3,34	9,68	11,17	11,17	3,24	10,68	12,7	12,7	3,23	11,35	13,58	13,58
Water flow	l/s	0,161	0,461	0,528	0,528	0,156	0,509	0,602	0,602	0,156	0,542	0,644	0,644
	l/h	580	1660	1902	1902	561	1833	2167	2167	560	1951	2320	2320
Water pressure drop	kPa	15	88	121	121	8	58	78	78	7	52	70	70
Water volume	l												
Cooling mode, 4 pipes(1)													
Total cooling capacity	kW												
Sensible cooling capacity	kW												
Water flow	l/s												
	l/h												
Water pressure drop	kPa												
Water volume	l												
Heating mode, 4 pipes(3)													
Heating capacity	kW												
Water flow	l/s												
	l/h												
Water pressure drop	kPa												
Water volume	l												
Electric heater													
Maximum capacity	W												
Current input	A												
Sound levels													
INLET+RADIATED sound power level	dB(A)	45	60	63	63	45	60	63	63	45	60	63	63
OUTLET sound power level	dB(A)	44	61	65	65	44	61	65	65	44	61	65	65
OVERALL sound power level	dB(A)	48	64	67	67	48	64	67	67	48	64	67	67
Electrical data, motor													
Motor consumption	W	10	137	240	240	10	137	240	240	10	137	240	240
Current input	A												
FCEER [energy class] - Score		111				85				93			
FCEER [energy class] - Class		A				A				A			
FCCOP [energy class] - Score		138				105				108			
FCCOP [energy class] - Class		A				A				A			

Fan speed: L = Low, M = Medium, H = High

(1) Eurovent conditions: inlet air temperature = 27 °C db/47 % RH – water inlet temperature = 7 °C, water temperature difference = 5 K.
(2) Eurovent conditions: inlet air temperature = 20 °C, water inlet temperature = 50 °C, water flow identical to cooling mode.
(3) Eurovent conditions: inlet air temperature = 20 °C, water inlet temperature = 70 °C, water temperature difference = 10 K.

PERFORMANCE OF THE 42NX

42NX		543M				544M			
Fan speed		**2V**	**7.0V**	**9.0V**	**10V**	**2V**	**7.0V**	**9.0V**	**10V**
(Eurovent certification speeds)		(L)	(M)	(H)	-	(L)	(M)	(H)	-
Air flow	l/s	0,123	0,440	0,529	0,529	0,123	0,440	0,529	0,529
	m^3/h	444	1583	1904	1904	444	1583	1904	1904
Available static pressure	Pa	4	50	72	72	4	50	72	72
Cooling mode, 2 pipes[1]									
Total cooling capacity	kW								
Sensible cooling capacity	kW								
Water flow	l/s								
	l/h								
Water pressure drop	kPa								
Water volume	l								
Heating mode, 2 pipes[2]									
Heating capacity	kW								
Water flow	l/s								
	l/h								
Water pressure drop	kPa								
Water volume	l								
Cooling mode, 4 pipes[1]									
Total cooling capacity	kW	2,55	7,41	8,41	8,41	2,93	9,48	10,63	10,63
Sensible cooling capacity	kW	2,03	6,13	7,02	7,02	2,22	7,3	8,33	8,33
Water flow	l/s	0,122	0,203	0,413	0,413	0,140	0,459	0,519	0,519
	l/h	439	729	1485	1485	504	1652	1867	1867
Water pressure drop	kPa	7	46	57	57	7	60	74	74
Water volume	l								
Heating mode, 4 pipes[3]									
Heating capacity	kW	3,09	9,81	11,38	11,38	3,37	12,18	13,96	13,96
Water flow	l/s	0,075	0,236	0,271	0,271	0,082	0,293	0,334	0,334
	l/h	270	848	976	976	295	1056	1202	1202
Water pressure drop	kPa	4	23	30	30	4	30	37	37
Water volume	l								
Electric heater									
Maximum capacity	W								
Current input	A								
Sound levels									
INLET+RADIATED sound power level dB(A)		45	60	63	63	45	60	63	63
OUTLET sound power level dB(A)		44	61	65	65	44	61	65	65
OVERALL sound power level dB(A)		48	64	67	67	48	64	67	67
Electrical data, motor									
Motor consumption	W	10	137	240	240	10	137	240	240
Current input	A								
FCEER [energy class] - Score		72				89			
FCEER [energy class] - Class		B				A			
FCCOP [energy class] - Score		97				115			
FCCOP [energy class] - Class		A				A			

Fan speed: L = Low, M = Medium, H = High

(1) Eurovent conditions: inlet air temperature = 27 °C db/47 % RH – water inlet temperature = 7 °C, water temperature difference = 5 K.
(2) Eurovent conditions: inlet air temperature = 20 °C, water inlet temperature = 50 °C, water flow identical to cooling mode.
(3) Eurovent conditions: inlet air temperature = 20 °C, water inlet temperature = 70 °C, water temperature difference = 10 K.

OPERATING LIMITS

	Limits of use	
Supply voltage	230 V +- 10%. Check that supply voltage and frequency correspond to the values for the unit to be installed.	
Frequency	60 or 50 Hz -1ph	
Index of Protection for the unit	IP 2X	
Impact protection rating	IK 02	
Maximum altitude	2000 m	
Minimum and maximum storage and transport temperatures	-20 °C; +65 °C	
Minimum and maximum operating temperatures	0 °C + 40 °C	
Water coil mode	Cooling	Heating
Water circuit	Min. inlet temperature > 5 °C	Max. inlet temperature < 80 °C
	Ethylene / propylene glycol content < 40%	
	Water side pressure < 1600 kPa (16 bar)	
Ambient temperature and humidity	T < Environment in which the unit is to be used 27 °C / 65 % RH (relative humidity) or humidity weight < 14.7 g/kg dry air	40 °C
Supply air temperature	T > 12°C with maximum ambient humidity conditions (14.7 g/kg dry air)	T < 60°C with supply plenum and application of spigots

SPECIFICATIONS GUIDE FOR THE 42NX

The Carrier 42NX is a new hydraulic ductable fan coil unit designed for all applications

This new range is available with 5 chassis sizes:

- Sizes 2/3/4: low height of 229 mm, cooling capacity up to 7 kW
- Size 5: medium height of 279 mm, cooling capacity from 5 to 12 kW

The 42NX unit complies with the provisions of the following European directives:

- 2014/35/EU (LVD)
- 2014/30/EU (EMC)
- 2011/65/EU (RoHS)
- 2009/125/EC (Ecodesign) and regulation 327/2011/EU

And complies with the following standards:

- EN 60335-2-40 and EN 60335-1 (safety of electrical appliances).
- EN 61000-6-3 (Emission), EN 61000-6-1 (Immunity) (Electromagnetic Compatibility)

General description

The unit(s) shall be designed, manufactured and tested in a facility with a quality assurance system certified ISO 9001 and with an environment management certified ISO 14001.

The unit(s) must be certified by Eurovent. The unit(s) must be tested in operation at the factory before shipment

Technical specifications

Frame

- The 42NL/H is made of galvanised sheet metal with full high efficiency insulation to optimise the thermal and acoustic performances of the unit.
- In order to comply with the various local regulations (fire class), the 42NX unit is available with both class M1 type insulation (in compliance with NF P 92-507) and Euroclass level B-s3-d0 (in compliance with EN 13501).

Fan-motor assembly

- The 42NX is equipped with centrifugal fans with forward-curved fins, double inlet, and single, double or triple wheels with either:
  - A Low Energy Consumption (LEC) EC motor that meets the new building energy performance objectives thanks to auto-adaptive air flow rate adjustment from 0 to 100%, ensuring perfect cooling and heating conditions in the room;

Heating or cooling coil

- 42NX units shall be equipped with a cooling or heating changeover coil, a packaged heating and cooling coil, or a cooling coil and an electric heater. The water coils shall be provided with manual air bleed and drain valves
- The cooling and heating coils shall be made from copper pipes and aluminium fins. The maximum water side working pressure shall not exceed 15.5 bar (1550 kPa).

Filter

- The 42NX must be supplied with at least one ISO Coarse 50% (G3) filter in accordance with ISO standard 16890.
- Other filters available: pleated filter class ISO ePM10 50% (M5) in accordance with ISO standard 16890.

Controller range

- C-D type electronic thermostats for all applications
  - Type C: 2-pipe with electrical heaters and EC motor
  - Type D: 4-pipe with EC motor
- NTC controller
  - Communication PID controller compatible with Aquasmart Evolution System package (proprietary CCN protocol)
  - Manages the motorised louvres of the grille in manual or automatic mode
  - Manages the EC motor to optimise comfort
  - Manages a CO_2 sensor to improve air quality
- WTC
  - BACnet open communication protocol
  - Communication PID controller
  - Large range of user interfaces, wall mounted or remote
  - Manages the motorised louvres of the grille in manual or automatic mode
  - Manages the EC motor to optimise comfort
  - Manages a CO_2 sensor to improve air quality
  - Optional light and/or blinds management modules from the same user interface
  - Large range of sensors (light, presence, etc.)

Valve options

- Controls two- or four-way valve bodies with a 230 V power supply:
  - 230 V On/Off actuator
  - 230 V 3-point floating actuator
- Two-way control and balancing valves. Two-in-one valves designed to enable both the setting of the rated water flow rate in the fan coil unit and the variable water flow control with the NTC or the WTC, with 230 V power supply:
  - 230 V On/Off actuator
  - 230 V 3-point floating actuator