



PRODUCT SELECTION DATA

4-WAY CASSETTE



- Easy installation
- Centralised diffusion
- Low energy consumption
- Optimised comfort
- Aesthetically integrated into suspended ceilings
- Quiet operation

42GW

Rated cooling capacity 1,5 - 9,5 kW
Rated heating capacity 1,3 - 11,3 kW

Carrier's Idrofan cassettes 42GW_AC/LEC offer a modern solution for a host of commercial applications. They are particularly suitable for big offices, stores, restaurants, bars, hotel receptions, meeting rooms, banks, laboratories and exhibition rooms.



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CODING

Product ref.	Range				size & motor type			Coil type	Control	Valves	Electric heater	Valve servomotors	Elec. box
	4	2	G	W	2	0	0	C	A	G	A	A	-
Digit	1	2	3	4	5	6	7	8	9	10	11	12	13

Digit 8
C = 2-pipe
 D = 4-pipe

Digit 5 - 6 - 7

2	0	0	AC motor
2	0	9	EC motor
3	0	0	AC motor
3	0	9	EC motor
4	0	0	AC motor
4	0	9	EC motor
5	0	0	AC motor
5	0	9	EC motor
6	0	0	AC motor
6	0	9	EC motor
7	0	1	AC motor
7	0	9	EC motor

Digit 10
 - = No valves
G = 2-way valve
 H = 4-way valve

Digit 11
 - = None
A = Elec. batt.

Digit 13
 - = Without CARRIER valve, for customer 230V ON/OFF valve
 X = Without CARRIER valve, for customer 230V - 3PTS valve
 Y = Without CARRIER valve, for customer 24V - 3PTS valve
 Z = Without CARRIER valve, for customer 24V ON/OFF valve

Digit 12
 - = None
 A = 230 V ON/OFF actuator
 B = 24V ON/OFF servomotor (mandatory, digit 9 = -)
 C = 3-POINT 230 V actuator (with NTC or WTC)
 B = 24V 3-POINT servomotor (mandatory, digit 9 = -)

Digit 9
 - = None
A = 33TA Thermostat for AC motor (2-PIPE)
 B = 33TB Thermostat for AC motor (4-pipe or 2-pipe + elec.)
 C = 33TC Thermostat for EC motor (2-pipe)
 D = 33TD Thermostat for EC motor (4-pipe or 2-pipe + elec.)
 K = NTC control (AQUASmart EVOLUTION®)
 L = WTC LON control (manual louvres grille, without IR)
 M = WTC BACNET control (manual louvres grille, without IR)
 P = WTC LON control (grille with manual louvres and IR receiver)
 Q = WTC BACNET control (grille with manual louvres and IR receiver)

TECHNICAL DESCRIPTION

- The 42GW_AC is available with a 3-speed AC motor. The 42GW_LEC is available with a variable speed low energy consumption (LEC) motor.
- The 42GW is installed in suspended ceilings, and can provide two, three or four-way diffusion. These units maintain the requisite temperature and humidity degree with precision, while preventing draughts and formation of areas of stagnant air.
- The air inlet grille blends in nicely with all types of interior.
- Carrier's hydraulic cassette is available in 6 sizes, to suit a vast range of applications, with air flows ranging from 100 to 402 l/s (360 to 1450 m³/h). The Idrofan cassette offers an ultra-low noise level, for situations where low noise level is the most important selection criterion.

General specifications

- The slimline 42GW is light and easy to install. The small frame is perfectly suited to conventional ceiling tiles, and is easy to install anywhere.
- Comfort is ensured by four-way air supply. It is possible to adjust the degree of opening on each diffuser.
- Integrated cooling and heating coils, which come factory-fitted, for two-pipe or two-pipe plus electrical heater applications, as well as 4-pipe applications.

Designed for quiet

- 42GW units have been designed especially to operate very quietly, with noise levels which represent new comfort levels for buildings. The unique design of the centrifugal fan ensures very quiet operation.
- The new design of the fan/motor block ensures quiet operation (half the noise of the previous model). Particular attention has been paid to low-speed operation of the fan.
- The special shape of the diffuser ensures a rapid mix of supply air and ambient air. Conditioned air is blown against the ceiling, and then distributed uniformly throughout the room. The return air enters the cassette via a large grille. It is then cleaned by a removable and washable synthetic filter, conditioned and then supplied again.

Motors

- The Idrofan is available with a three-speed AC motor, with ultra-low noise levels, which makes it one of the quietest cassettes on the market.
- The Idrofan is also available with variable speed LEC motors (low energy consumption), which meet the new building energy performance objectives. The low energy consumption solution improves the unit's performances, bringing you:
 - Lower energy costs – the LEC motor reduces the unit's energy consumption by 50 to 70%. This option meets the new regulations in terms of building energy management.
 - Better comfort – the variable speed low energy consumption motor reduces the noise level compared to multi-speed motors, making for an ultra-quiet air flow, even at very low operating levels. Thanks to the NTC control, a maximum fan speed can be set to better manage noise level.
 - Maximum flexibility – the air flow automatically adapts from 0 to 100%, ensuring perfect cooling or heating conditions in the room.
 - Extended service life – low energy consumption LEC technology motors run at lower fan motor temperatures, which extends their service life.

Filters

- The standard filter used for the Idrofan range has a pleated filtration surface, which provides a surface area 87% larger than a traditional filter, as well as the following additional advantages:
 - Low pressure drop, consumption and noise level.
 - The mean filter cleaning interval is three times longer than for standard filters.
 - EU1 grade polypropylene-based filter.
- In the Idrofan cassette range, the filter is situated in the unit's grille. Cleaning is simple: you need only detach the filter manually from the support on the grille. The filter frame can be lowered, and the filter can be easily removed. Refitting is just as simple, you need only follow the procedure in reverse. Washable filters are supplied in the standard version.



Condensate drain pump

- Self-contained, very high-performance condensate drain pump flush-mounted in soundproofing material, for better condensate management - quick and quiet.
- The cassette's main condensate pan has been improved thanks to use of the very latest composite materials, to provide better noise absorption, easier cleaning and better condensed water transfer from the coil to the discharge pump.

TECHNICAL DESCRIPTION

Electrics box

- All the units are equipped with an electrics box, which contains the terminal strips. This box is located on the outside of the unit. The box cover is easy to open: you need only remove a mounting bolt. For more details on the electrical connections, please consult the appropriate wiring prints.



Carrier controllers range

- The Idrofan is available with the complete range of Carrier controllers. Several types facilitate installation. The number of controllers offers an abundance of solutions and makes selection easy, according to its application.
 - A-B-C-D type electronic thermostats
 - The Carrier electronic thermostats range is available for all Carrier hot water terminal ranges
 - Type A: a two-pipe application equipped with alternating current motors
 - Type B: four or two-pipe applications equipped with electric heating and alternating current motors.
 - Type C: a two-pipe application equipped with EC motors
 - Type D: four or two-pipe applications equipped with electric heating and EC motors.
 - The thermostat for FCU with EC motors option manages 3 intermittent and configurable speeds, via a 0-10V signal.
 - The thermostats come in an elegant square shape with a coaxial button enabling the room temperature to be set, as well as three buttons for setting the ventilation speed, cooling or heating mode, and START or STOP mode, as the customer wishes.
 - Wall-mounted controls can easily and discreetly be integrated into any room environment.
 - The operating range of the electronic thermostats goes from 10°C to 30°C, with the option of limiting the temperature in public buildings where low energy consumption is a paramount requirement. This is done via a micro-switch which is inside the control (cooling setpoint between 23°C and 30°C, heating between 10°C and 21°C).
- The following characteristics are available as parameters:
- **Auto ventilation:** the fan speed is automatically set by the thermostat; when the ambient temperature drifts away from the setting, maximum speed is selected. When the ambient temperature nears the desired value, the speed decreases until reaching minimum speed or stopping in the deadband.
 - **Automatic changeover:** automatic changeover from cooling mode to heating mode, depending on the water temperature, ensures that the ideal ambient temperature is maintained.
 - **Remote changeover:** automatic changeover from cooling mode to heating mode, depending on the remote signal emitted by the control system.
 - **Draught protection:** this function stops the fan if the water temperature is too low or too high in relation to demand, thereby ensuring that the room's occupants are not disturbed by a warm draught.
 - **Air temperature sensor:** this sensor is mounted on the unit. If the thermostat is installed on a wall, a second sensor situated in the thermostat may be used to correctly set the desired ambient temperature.
 - **Low water temperature cutout:** this function ensures that the ambient temperature is maintained above the minimum level. If the unit has been shut down and ambient temperature has dropped below 7°C, low water temperature cutout is activated and the unit operates in heating mode until the temperature reaches above 9°C. The unit is then switched off again.
 - **Optimised heating management (available with the electrical heater option):** if the water temperature is below 30°C, the system operates in heating demand mode, and the electrical heater is the only available heating source. If the water temperature is above 35°C, the system operates in auxiliary heating mode, powering up the water coil and electrical heater at the same time. The auxiliary heating function is deactivated if the temperature reaches above 45°C (the electrical heater is then de-energized).
 - **Unoccupied mode:** this temperature function saves energy when the room is unoccupied, without needing to switch off the unit. When the unoccupied mode button is held down, the current setpoint is modified as follows, without changing the position of the setpoint selection button:
 - Cooling: setpoint increased by 4 K
 - Heating: setpoint decreased by 4 K
- The unit reverts to normal operation when the unoccupied mode button is held down again.
- **LED intensity:** for office applications or light commercial applications, 10 seconds after the user interface has last been used, all the necessary LEDs are dimmed. As soon as the user touches the user interface again, the LEDs revert to normal brightness. To prevent disruption to hotel customers, the thermostat can be configured from Night Mode to Dark Mode: in this case, 10 seconds after the user interface has last been used, all the LEDs will switch off. As soon as the user touches the user interface again, the current status LEDs will switch on, and revert to normal brightness.

TECHNICAL DESCRIPTION

- **Air sampling:** if no ventilation demand is made and the air sampling jumper is in the ON position, the command executes the air sampling function: the air moves, to ensure a more reliable ambient temperature reading.
- **Continuous ventilation:** if there is no ventilation demand and the continuous ventilation jumper is in the ON position, the control selects low, medium or high fan speed, depending on the ventilation speed selection, regardless of the thermal conditions. If the fan is controlled by automatic ventilator mode and the control is not in demand phase, the fan is activated permanently in low speed mode.
- **External contact:** a high voltage input signal for external contact is displayed. If the external contact is activated, the device will respond according to its local configuration:
 - Presence detection (empty room with a hotel door card), energy saving mode is activated, the internal temperature is increased by 4°C in cooling mode and is decreased by 4°C in heating mode
 - Window contact: during STOP mode (window open), all the outputs are disconnected (fan, valves, etc.), and only the frost protection function is active if it has been started up via its micro-switch.
- **Lead/Lag control:**
 - Thermostat type A_AC and B_AC: the accessories grouped control panel (42N9006) provides a ventilation speed relay only (the water valves must be wired or related separately) for up to 300 units with air temperature-based control (no water valves), or for 10 two-pipe units with water control, or 5 four-pipe units with water control
 - Thermostat type C_EC and D_EC: the EC motor thermostat version can control up to 10 LEC units thanks to parallel wiring of the analogue output signal with two 0-10 cables (the water valves and electric heaters must be wired or relayed separately).

NTC

- A PID controller can communicate and combine energy savings algorithms with solutions providing complete control functions, compatible with the Aquasmart Evolution system. The NTC control is compatible with the low energy consumption motor option, and combines energy savings with optimised comfort.

Valve types available

- Valve bodies: both types of valve, two-way or four-way (three-way with integral by-pass) are factory-fitted and subjected to factory tests. These chilled water valves are completely insulated in a moulded insulant jacket, which prevents condensation from forming on the valve body. This new jacket reduces the complexity of the range and prevents the risk of water leaks. These valves can be factory-fitted on the unit side.

WTC controller

- Open Communication protocol BACnet or LON
- Communication PID controller
- Large range of user interfaces, wall mounted or remote
- Manages the EC motor for optimised comfort
- Manages a CO₂ sensor to improve air quality
- Optional lighting and/or blinds management modules, controlled from the same user interface
- Large range of sensors (light, presence, etc.)

Valve types available

- Valve bodies: both types of valve, two-way or four-way (three-way with integral by-pass) are factory-fitted and subjected to factory tests. These chilled water valves are completely insulated in a moulded insulant jacket, which prevents condensation from forming on the valve body. This new jacket reduces the complexity of the range and prevents the risk of water leaks. These valves can be factory-fitted on the unit side.



Insulating moulded jacket for the valve

TECHNICAL DESCRIPTION

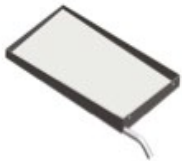
- Valve actuators: Carrier has a vast range of valve actuators with two or four-way valve bodies, which offer the most suitable solution whatever the control type and the customer's requirements, from on/off to proportional type, and a 230 V or 24 V power supply:
 - 230 V on/off actuator
 - 24 V on/off actuator
 - 230 V 3-point floating actuator
 - 24 V 3-point floating actuator
- When combining low energy consumption motors with an NTC control, it is recommended to use 230 V three-point floating actuators, to increase energy savings and improve comfort.

Auxiliary condensate pan

- An auxiliary condensate pan is available as an accessory if the water valves, shut-off valves or balancing valves are customer supplied. Conversely, the auxiliary condensate pan is not required if you have water valves factory-fitted by Carrier, since they come supplied with an insulated valve body (insulating moulded jacket), which prevents condensation.*



Auxiliary drain pan for units 42GW_S/E 200/209, 300/309, 400/409



Auxiliary drain pan for units 42GW_S/E 500/509, 600/609, 701/709

Electrical heater option

- There is an electrical heater option only on models with a two-pipe coil. There is an electrical heater available for each Idrofan cassette size, factory-fitted to ensure reliable and completely safe operation.

Fresh air inlet option

- All the units have couplings provided for fresh air inlet ducts, which can considerably improve the indoor air quality, while the fresh air intake volume is regulated by the CO₂ sensor by means of the NTC control.
- The fresh air flow must represent less than 10% of the total air flow, to prevent operating problems and excessive noise. For a higher air flow, there is a primary air kit which can be fitted on the pre-cut hole provided for an air duct in the adjacent room, and a noise barrier, such that the fresh air enters the room via a diffuser.

Conditioned air supply via a duct in an adjacent room

- This option supplies conditioned air in a room situated near the Idrofan cassette, via an air duct (customer supplied). If this option is used, the supply air opening corresponding to the duct must be closed, using the air discharge outlet closing kit supplied. This kit cannot be used in units fitted with an electrical heater. An air inlet grille must be fitted (if possible near the floor) between the air conditioned room (where the unit is) and the adjacent room; or a cut-out can be made at the bottom of the door.
- The duct lengths can be calculated in accordance with the "air distribution in an adjacent room" diagram, which figures in the installation, operation and maintenance manual, also taking into account the pressure drop via the air diffusers and the fresh air filters.

Ease of maintenance

- All of the main components (motors, fans and discharge pump) are accessible from the unit base; you need only remove the grille. These components can also be removed without having to touch the other components or removing the surrounding ceiling tiles.

PHYSICAL AND ELECTRICAL SPECIFICATIONS, UNITS WITH AC MOTORS

42GW	200C			300C			400C			500C			600C			701C					
Coil type	2-pipe			2-pipe			2-pipe			2-pipe			2-pipe			2-pipe					
Fan speed ⁽¹⁾	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3			
Air flow	l/s			183	125	100	204	140	89	249	173	134	272	199	147	321	229	139	402	299	166
	m ³ /h			660	450	360	735	505	320	900	625	485	980	720	530	1160	825	500	1450	1080	600
Cooling																					
Total cooling capacity	kW			2,33	1,74	1,53	3,96	2,86	1,86	4,64	3,46	2,77	6,03	4,41	3,33	7,13	5,43	3,68	8,54	6,43	4,02
Sensible cooling capacity	kW			1,95	1,46	1,28	3,01	2,16	1,41	3,57	2,64	2,11	4,68	3,44	2,58	5,37	4,03	2,66	6,4	4,81	2,95
Water flow	l/s			0,11	0,09	0,08	0,19	0,14	0,09	0,23	0,17	0,13	0,29	0,21	0,16	0,34	0,26	0,18	0,41	0,31	0,19
	l/h			410	310	270	690	500	320	810	600	480	1050	760	580	1240	940	640	1490	1120	700
Water pressure drop, cooling	kPa			11,1	6,8	5,6	15,2	8,6	4,7	19,8	11,6	7,9	23,8	13,4	8,3	12,4	7,8	4,6	21,9	13,1	6
Heating mode																					
Heating capacity	kW			2,74	2,17	1,92	3,68	3,15	1,94	5,28	3,92	3,16	6,84	5,08	3,8	8,51	6,26	3,85	10,28	7,95	4,38
Water flow	l/s			0,13	0,11	0,09	0,18	0,15	0,09	0,26	0,19	0,15	0,33	0,24	0,18	0,41	0,30	0,19	0,50	0,38	0,21
	l/h			480	380	330	640	550	340	920	680	550	1190	880	660	1480	1090	670	1790	1380	760
Water pressure drop, heating	kPa			11,8	8,4	7,1	12,8	10,1	5,0	18,6	11,7	8,4	23,1	14,4	9,2	15,3	9,6	4,8	18	11	5
Water volume	l			0,55			1,1			1,1			1,6			2,4			2,4		
Sound levels																					
Sound power level	dB(A)			49	41	37	53	47	35	57	48	42	49	40	35	54	46	38	59	52	40
Sound pressure level	dB(A)			40	32	28	44	38	26	48	39	33	40	31	26	45	37	29	50	43	31
NR value ⁽²⁾				36	28	25	40	31	20	43	34	28	35	26	21	40	32	22	45	38	25
Power input	W			58	35	25	58	34	17	99	58	38	66	41	28	88	61	34	125	92	44
Current	A			0,27	0,17	0,12	0,24	0,14	0,07	0,41	0,24	0,16	0,30	0,17	0,12	0,46	0,27	0,14	0,63	0,41	0,19
EUROVENT FCEER energy class (cooling mode)				D			C			D			C			C			D		
EUROVENT FCCOP energy class (heating mode)				E			D			D			C			C			D		
Electrical heater																					
High capacity @240V	W			1500			2500			2500			3000			3000			3000		
Current (high capacity) @240V	A			6,3			10,4			10,4			12,5			12,5			12,5		
Coil connection diameter	inches			3/4 " gas			3/4" gas			3/4 " gas			1" gas			1" gas			1" gas		
Condensate diameter	mm			16			16			16			16			16			12,5		
Weight, unit	kg			14,8			16,5			16,5			37			39,6			39,6		
Weight, grille	kg			3			3			3			5			5			5		

Based on Eurovent conditions:

Cooling mode (2 and 4-pipe coils): entering air temperature 27°C dry bulb/19°C wet bulb, 7°C/12°C entering and leaving water temperature

Heating mode (2-pipe coil): air temperature 20°C, 45°C/40°C entering and leaving water temperature

Heating mode (4-pipe coil): air temperature 20°C, 65°C/55°C entering and leaving water temperature

(1) Speeds: 1 = high, 2 = medium, 3 = low

(2) Sound pressure level and NR values with hypothetical noise attenuation of the room of -9 dB(A).

Note: the version with an electrical heater is available on all 2-pipe units



Eurovent certified values

PHYSICAL AND ELECTRICAL SPECIFICATIONS, UNITS WITH AC MOTORS

42GW		200D			300D			400D			600D			701D		
Coil type		4-pipe			4-pipe			4-pipe			4-pipe			4-pipe		
Fan speed ⁽¹⁾	l/s	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
Air flow	m ³ /h	183	125	100	204	140	89	249	173	134	321	229	139	402	299	166
		660	450	360	735	505	320	900	625	485	1160	825	500	1450	1080	600
Cooling																
Total cooling capacity	kW	1,97	1,49	1,34	3,34	2,67	1,98	3,95	3,18	2,53	6,58	4,93	2,96	7,49	5,97	3,14
Sensible cooling capacity	kW	1,84	1,37	1,18	2,62	2,05	1,49	3,25	2,55	2,04	5,08	3,78	2,31	5,89	4,64	2,53
Water flow	l/s	0,10	0,07	0,06	0,17	0,13	0,10	0,20	0,16	0,12	0,32	0,24	0,14	0,39	0,32	0,18
	l/h	350	260	230	580	460	340	700	560	440	1140	860	510	1310	1040	550
Water pressure drop, cooling	kPa	14,9	9,1	7,6	12,6	8,6	5,6	16,5	11,2	7,6	25,2	15,3	6,5	31,5	21,8	7,1
Water volume, cooling	l	0,4			1,1			1,1			2,4			2,4		
Heating mode																
Heating capacity	kW	1,67	1,27	1,09	5,46	4,4	3,1	5,8	5	4,32	10,04	7,79	5,28	12,77	10,07	6,43
Water flow rate	l/s	0,04	0,03	0,03	0,15	0,12	0,09	0,16	0,14	0,12	0,27	0,21	0,14	0,35	0,27	0,17
	l/h	150	110	100	548	439	310	585	499	430	989	765	516	1247	989	628
Water pressure drop, heating	kPa	29,5	18,8	14,8	21,1	14,8	8,5	24,2	18,9	15	12,3	8,4	5,1	17,9	12,3	6,5
Water volume	l	0,1			0,6			0,6			1,2			1,2		
Sound levels																
Sound power level	dB(A)	49	41	37	53	47	35	57	48	42	54	46	38	59	52	40
Sound pressure level	dB(A)	40	32	28	44	38	26	48	39	33	45	37	29	50	43	31
NR value ⁽²⁾		36	28	25	40	31	20	43	34	28	40	32	22	45	38	25
Power input	W	58	35	25	58	34	17	99	58	38	88	61	34	125	92	44
Current	A	0,27	0,17	0,12	0,24	0,14	0,07	0,41	0,24	0,16	0,46	0,27	0,14	0,63	0,41	0,19
EUROVENT FCEER energy class (cooling mode)		E			C			D			C			D		
EUROVENT FCCOP energy class (heating mode)		E			C			D			C			C		
Connection diameter																
Cooling coil	inches	3/4 " gas			3/4 " gas			3/4 " gas			1" gas			1" gas		
Heating coil	inches	1/2 " gas			1/2 " gas			1/2 " gas			3/4 " gas			3/4 " gas		
Condensate diameter	mm	16			16			16			16			16		
Unit weight	kg	14,8			16,5			16,5			39,6			39,6		
Grille weight	kg	3			3			3			5			5		

Based on Eurovent conditions:

Cooling mode (2 and 4-pipe coils): entering air temperature 27°C dry bulb/19°C wet bulb, 7°C/12°C entering and leaving water temperature

Heating mode (2-pipe coil): air temperature 20°C, 45°C/40°C entering and leaving water temperature

Heating mode (4-pipe coil): air temperature 20°C, 65°C/55°C entering and leaving water temperature

(1) Speeds: 1 = high, 2 = medium, 3 = low

(2) Sound pressure level and NR values with hypothetical noise attenuation of the room of -9 dB(A).

Note: the version with an electrical heater is available on all 2-pipe units



Eurovent certified values

PHYSICAL AND ELECTRICAL SPECIFICATIONS, UNITS WITH AC MOTORS

42GW	209C			309C			409C			509C			609C			709C			
Coil type	2-pipe			2-pipe			2-pipe			2-pipe			2-pipe			2-pipe			
Fan speed ⁽¹⁾	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	
Voltage (DC)	V	10	6	2	10	6	2	10	6	2	10	6	2	10	6	2	10	6	2
Air flow	l/s	183	125	100	204	140	89	249	173	134	272	199	147	321	229	139	443	299	166
	m ³ /h	660	450	360	735	505	320	900	625	485	980	720	530	1160	825	500	1600	1080	600
Cooling																			
Total cooling capacity	kW	2,36	1,77	1,54	3,98	2,88	1,87	4,68	3,5	2,79	6,08	4,44	3,35	7,19	5,47	3,71	9,55	6,49	4,05
Sensible cooling capacity	kW	1,98	1,49	1,29	3,04	2,18	1,42	3,61	2,67	2,13	4,72	3,47	2,6	5,43	4,07	2,68	7,16	4,86	2,98
Water flow rate	l/s	0,11	0,09	0,08	0,19	0,14	0,09	0,23	0,17	0,13	0,29	0,21	0,16	0,34	0,26	0,18	0,46	0,31	0,19
	l/h	410	310	270	690	500	320	810	600	480	1050	760	580	1240	940	640	1660	1120	700
Water side pressure drop, cooling	kPa	11,1	6,8	5,6	15,2	8,6	4,7	19,8	11,6	7,9	23,8	13,4	8,3	12,4	7,8	4,6	26,9	13,1	6
Heating mode																			
Heating capacity	kW	2,74	2,17	1,92	3,68	3,15	1,94	5,28	3,92	3,16	6,84	5,08	3,8	8,51	6,26	3,85	11,03	7,95	4,38
Water flow	l/s	0,13	0,11	0,09	0,18	0,15	0,09	0,26	0,19	0,13	0,33	0,24	0,18	0,41	0,30	0,19	0,53	0,38	0,21
	l/h	480	380	330	640	550	340	920	680	480	1190	880	660	1480	1090	670	1920	1380	760
Water pressure drop, heating	kPa	11,8	8,4	7,1	12,8	10,1	5	18,6	11,7	8,5	23,1	14,4	9,2	15,3	9,6	4,8	30,6	18	7,2
Water volume	l	0,55			1,1			1,1			1,6			2,4			2,4		
Sound levels																			
Sound power level	dB(A)	49	40	36	53	44	35	57	48	42	49	40	35	54	46	38	61	52	40
Sound pressure level	dB(A)	40	31	27	44	35	26	48	39	33	40	31	26	45	37	29	52	43	31
NR value ⁽²⁾		35	27	23	40	31	20	43	35	29	35	26	20	39	32	22	47	38	25
Power input	W	29	13	9	33	14	7	57	23	13	25	12	7	45	23	9	115	40	11
Current	A	0,19	0,1	0,08	0,27	0,13	0,08	0,46	0,2	0,12	0,23	0,12	0,08	0,4	0,22	0,1	0,89	0,35	0,12
EUROVENT FCEER energy class (cooling mode)		B			A			B			A			A			A		
EUROVENT FCCOP energy class (heating mode)		B			B			B			A			A			B		
Electrical heater																			
High capacity @240V	W	1500			2500			2500			3000			3000			3000		
Current (high capacity) @240V	A	6,3			10,4			10,4			12,5			12,5			12,5		
Coil connection diameter	inches	3/4 " gas			3/4" gas			3/4 " gas			1" gas			1" gas			1" gas		
Condensate diameter	mm	16			16			16			16			16			12,5		
Weight, unit	kg	14,8			16,5			16,5			37			39,6			39,6		
Weight, grille	kg	3			3			3			5			5			5		

Based on Eurovent conditions:

Cooling mode (2 and 4-pipe coils): entering air temperature 27°C dry bulb/19°C wet bulb, 7°C/12°C entering and leaving water temperature

Heating mode (2-pipe coil): air temperature 20°C, 45°C/40°C entering and leaving water temperature

Heating mode (4-pipe coil): air temperature 20°C, 65°C/55°C entering and leaving water temperature

(1) Speeds: 1 = high, 2 = medium, 3 = low

(2) Sound pressure level and NR values with hypothetical noise attenuation of the room of -9 dB(A).

Note: the version with an electrical heater is available on all 2-pipe units



Eurovent certified values

PHYSICAL AND ELECTRICAL SPECIFICATIONS, UNITS WITH AC MOTORS

42GW		209D			309D			409D			609D			709D		
Coil type		4-pipe			4-pipe			4-pipe			4-pipe			4-pipe		
Fan speed⁽¹⁾																
Voltage (DC)	V	10	6	2	10	6	2	10	6	2	10	6	2	10	6	2
Air flow	l/s	183	125	100	204	140	89	249	173	134	321	229	139	443	299	166
	m ³ /h	660	450	360	735	505	320	900	625	485	1160	825	500	1600	1080	600
Cooling																
Total cooling capacity	kW	1,97	1,49	1,34	3,34	2,67	1,98	3,95	3,18	2,53	6,58	4,93	2,96	7,49	5,97	3,14
Sensible cooling capacity	kW	1,84	1,37	1,18	2,62	2,05	1,49	3,25	2,55	2,04	5,08	3,78	2,31	5,89	4,64	2,53
Water flow	l/s	0,10	0,07	0,06	0,17	0,13	0,10	0,20	0,16	0,12	0,32	0,24	0,14	0,36	0,29	0,15
	l/h	350	260	230	580	460	340	700	560	440	1140	860	510	1310	1040	550
Water pressure drop, cooling	kPa	14,9	9,1	7,6	12,6	8,6	5,6	16,5	11,2	7,6	25,2	15,3	6,5	31,5	21,8	7,1
Water volume, cooling	l	0,4			1,1			1,1			2,4			2,4		
Heating mode																
Heating capacity	kW	1,67	1,27	1,09	5,46	4,4	3,1	5,8	5	4,32	10,04	7,79	5,28	13,99	10,07	6,43
Water flow	l/s	0,04	0,03	0,03	0,13	0,11	0,08	0,14	0,12	0,11	0,24	0,19	0,13	0,31	0,24	0,16
	l/h	150	110	100	480	390	270	510	440	380	880	680	460	1120	880	560
Water pressure drop, heating	kPa	29,5	18,8	14,8	21,1	14,8	8,5	24,2	18,9	15	12,3	8,4	5,1	20,7	12,3	6,5
Water volume	l	0,1			0,6			0,6			1,2			1,2		
Sound levels																
Sound power level	dB(A)	49	40	36	53	44	35	57	48	42	54	46	38	61	52	40
Sound pressure level	dB(A)	40	31	27	44	35	26	48	39	33	45	37	29	52	43	31
NR value ⁽²⁾		35	27	23	40	31	20	43	35	29	39	32	22	47	38	25
Power input	W	29	13	9	33	14	7	57	23	13	45	23	9	115	40	11
Current	A	0,19	0,1	0,08	0,27	0,13	0,08	0,46	0,2	0,12	0,4	0,22	0,1	0,89	0,35	0,12
EUROVENT FCEER energy class (cooling mode)		B			A			B			A			B		
EUROVENT FCCOP energy class (heating mode)		C			A			B			A			A		
Connection diameter																
Cooling coil	inch	3/4 " gas			3/4 " gas			3/4 " gas			1" gas			1" gas		
Heating coil	inch	1/2 " gas			1/2 " gas			1/2 " gas			3/4 " gas			3/4 " gas		
Condensate diameter	mm	16			16			16			16			12,5		
Weight, unit	kg	14,8			14,8			14,8			39,6			39,6		
Heaters weight	kg	3			3			3			5			5		

Based on Eurovent conditions:

Cooling mode (2 and 4-pipe coils): entering air temperature 27°C dry bulb/19°C wet bulb, 7°C/12°C entering and leaving water temperature

Heating mode (2-pipe coil): air temperature 20°C, 45°C/40°C entering and leaving water temperature

Heating mode (4-pipe coil): air temperature 20°C, 65°C/55°C entering and leaving water temperature

(1) Speeds: 1 = high, 2 = medium, 3 = low

(2) Sound pressure level and NR values with hypothetical noise attenuation of the room of -9 dB(A).

Note: the version with an electrical heater is available on all 2-pipe units

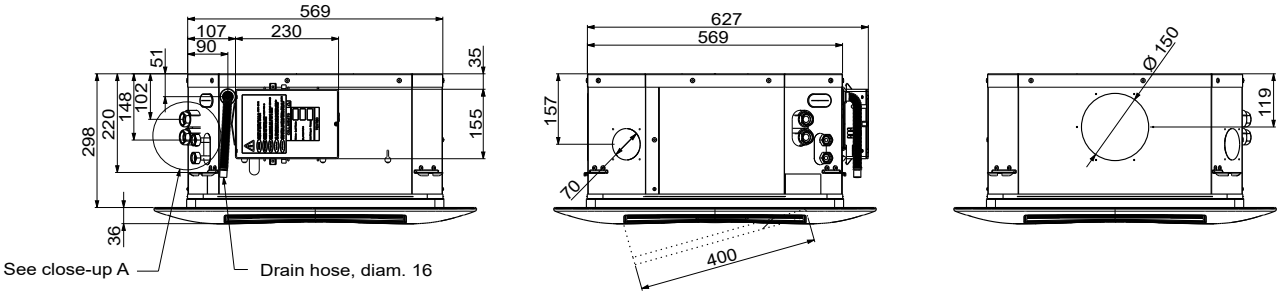


Eurovent certified values

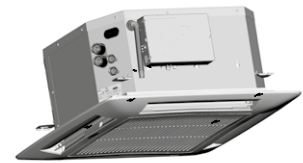
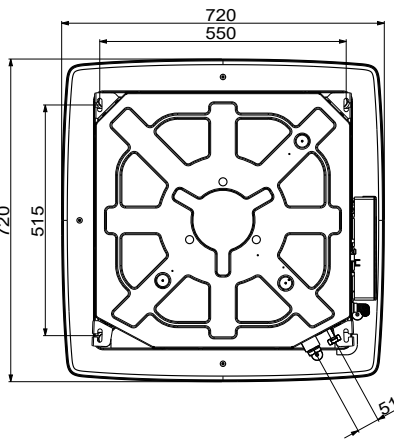
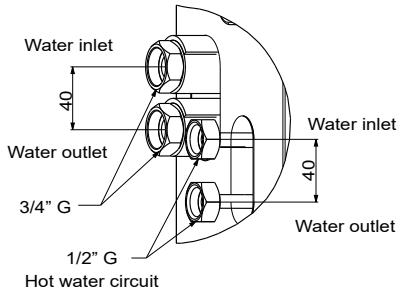
DIMENSIONS, MM

42GW 200/209 - 300/309 - 400/409 (compact chassis)

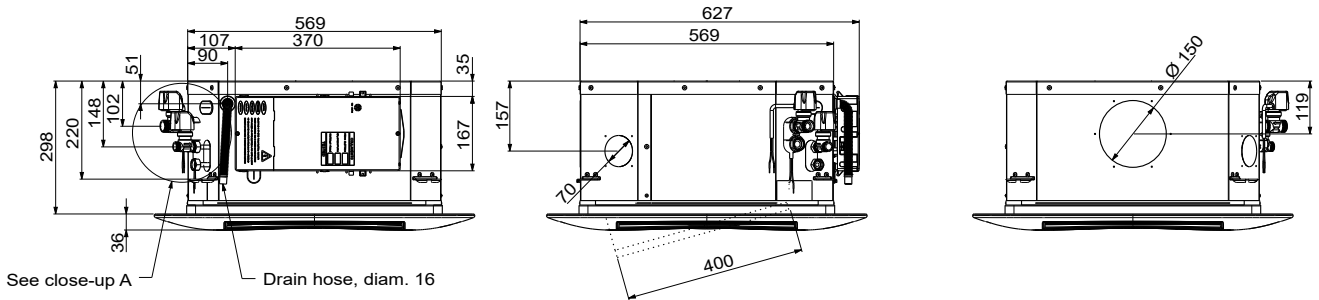
Unit without valve



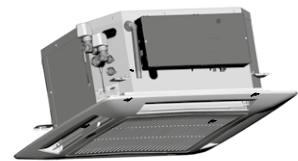
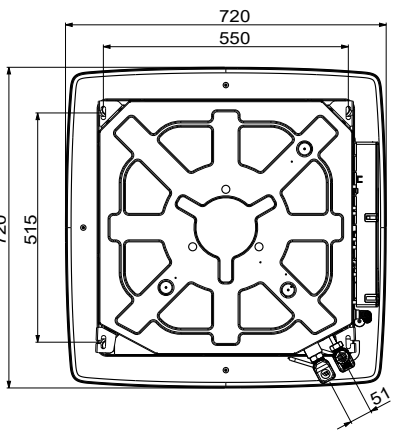
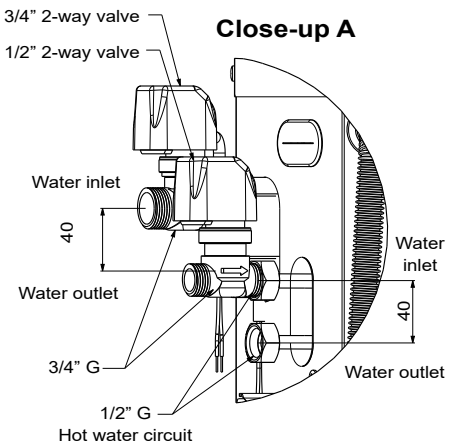
Close-up A



Unit with 2-way valve



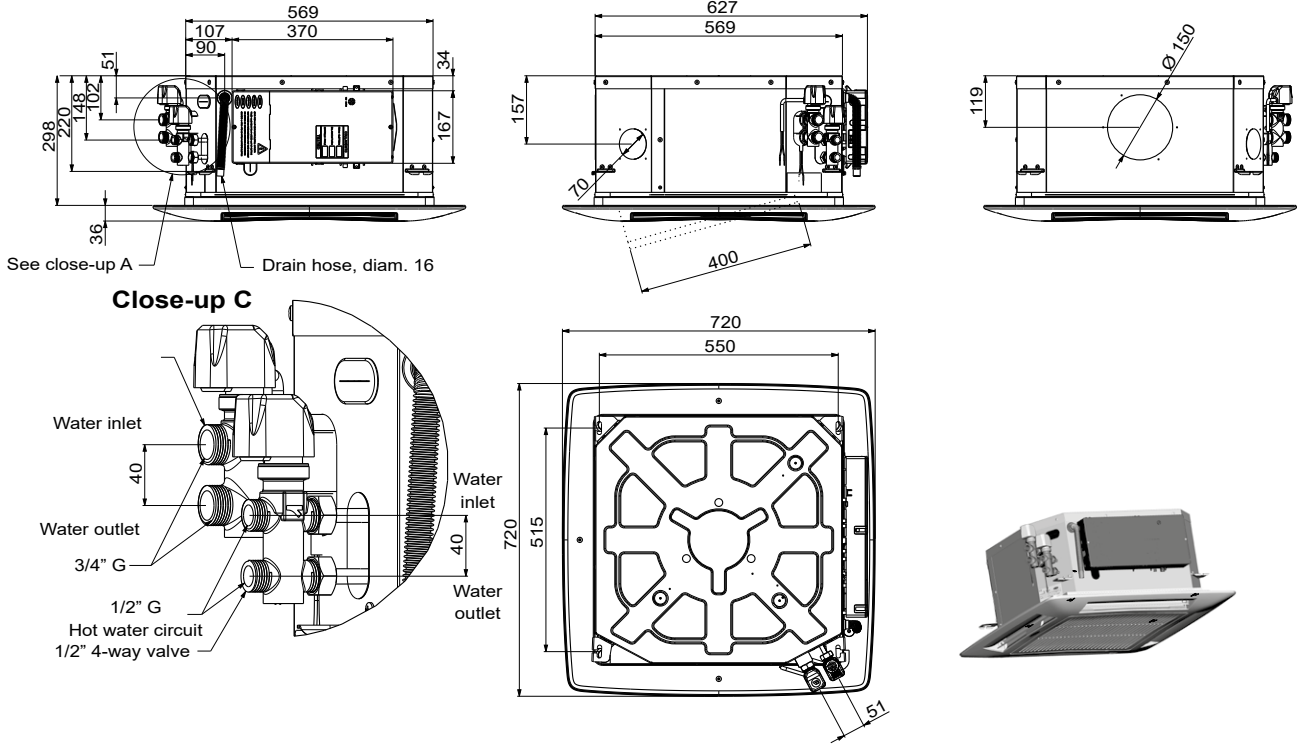
Close-up A



DIMENSIONS, MM

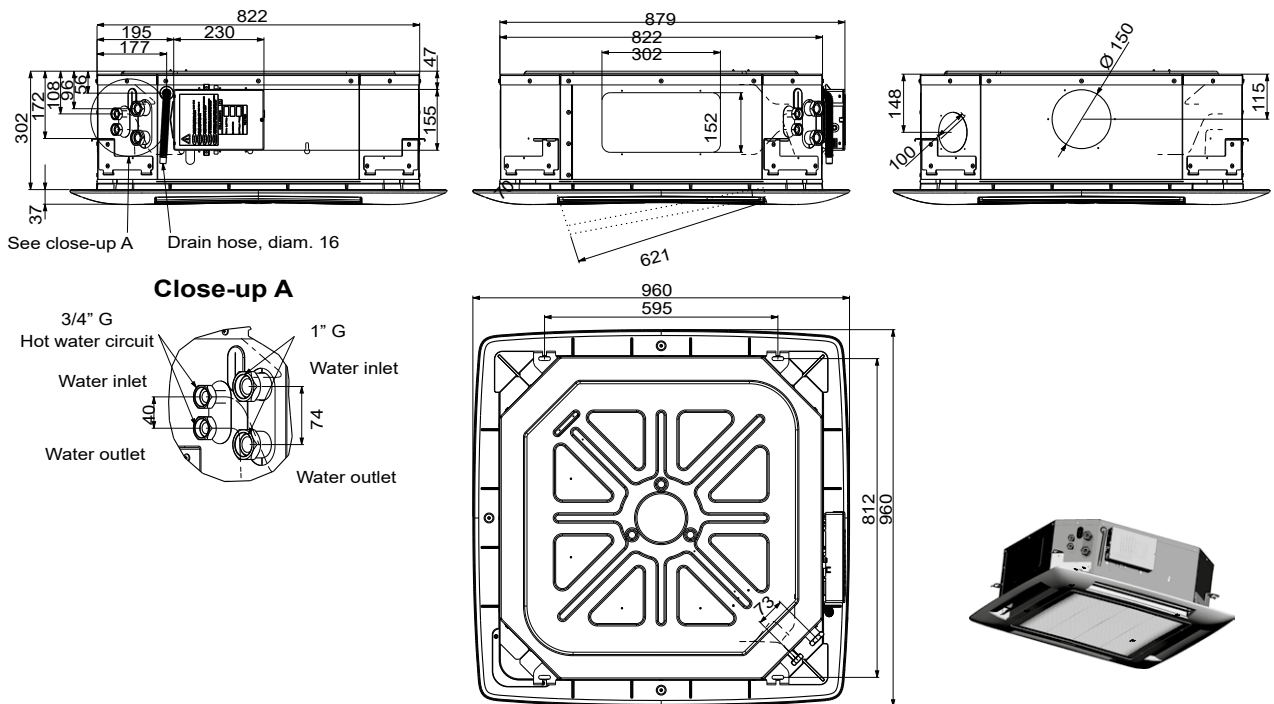
42GW 200/209 - 300/309 - 400/409 (compact chassis)

Unit with 4-way valves



42GW 500/509 - 600/609 - 701/709 (big chassis)

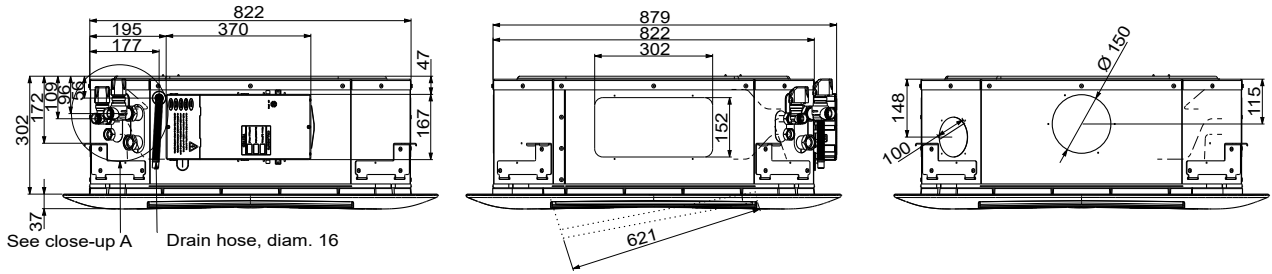
Unit without valve



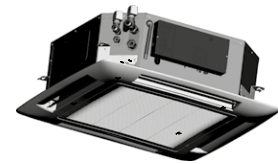
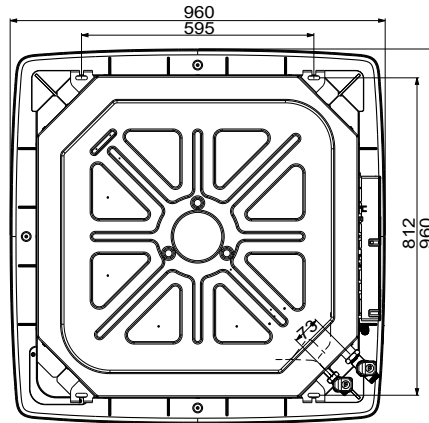
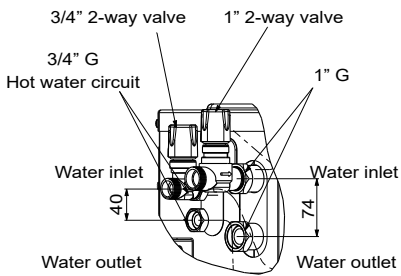
DIMENSIONS, MM

42GW 500/509 - 600/609 - 701/709 (big chassis)

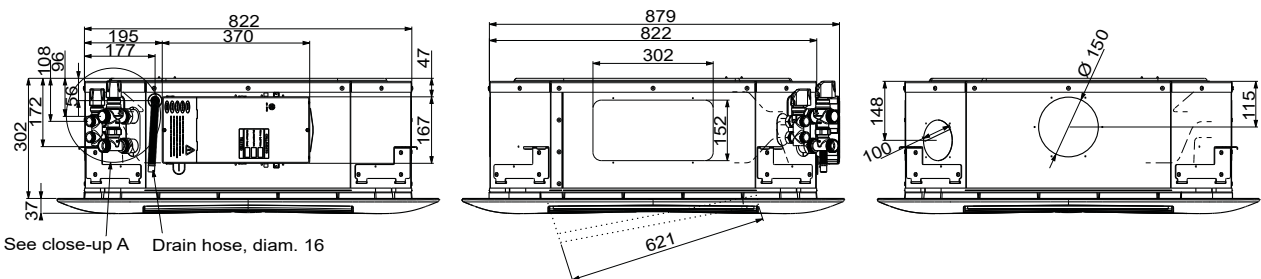
Unit with 2-way valve



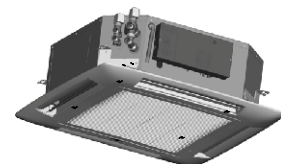
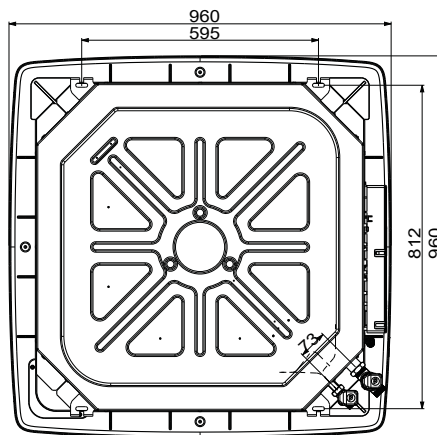
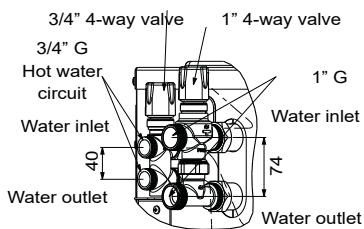
Close-up B



Unit with 4-way valve

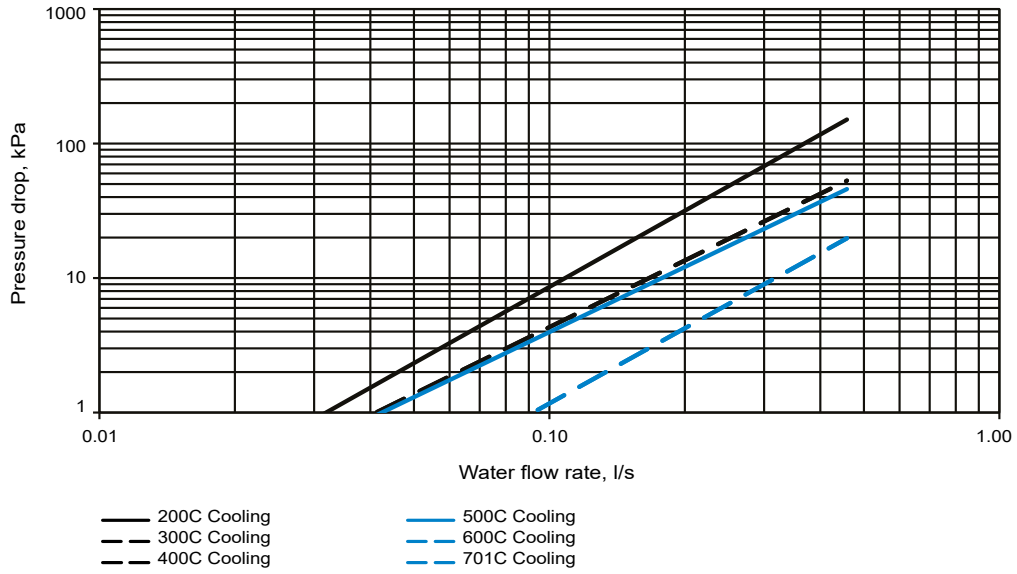


Close-up C

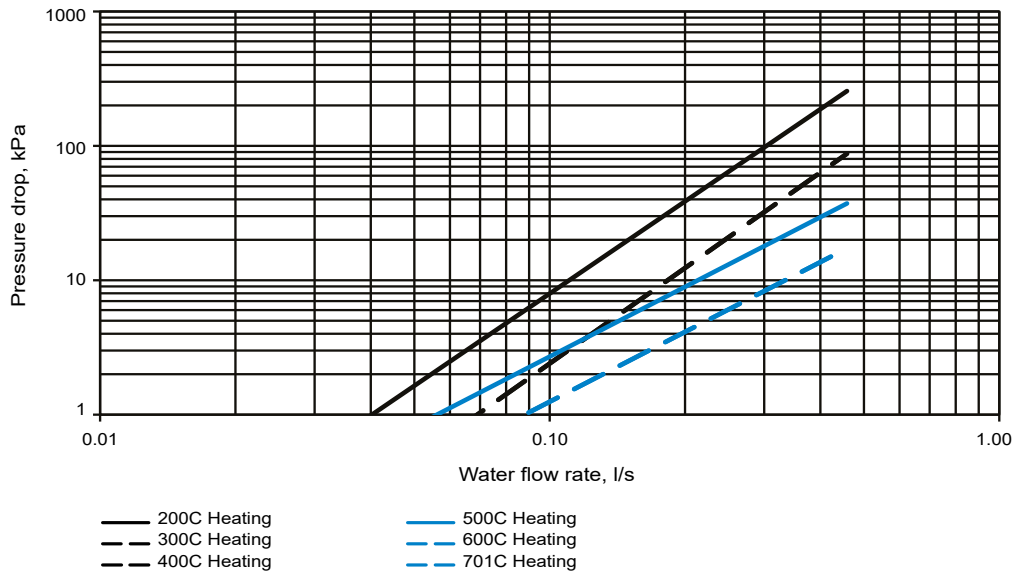


PRESSURE DROPS

Units with two-pipe coil, cooling conditions

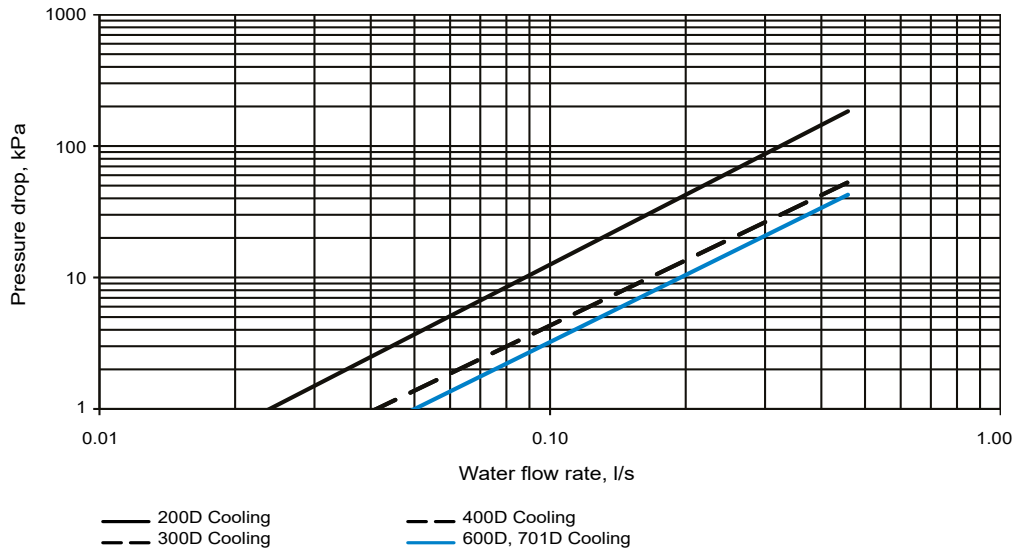


Units with two-pipe coil, heating conditions

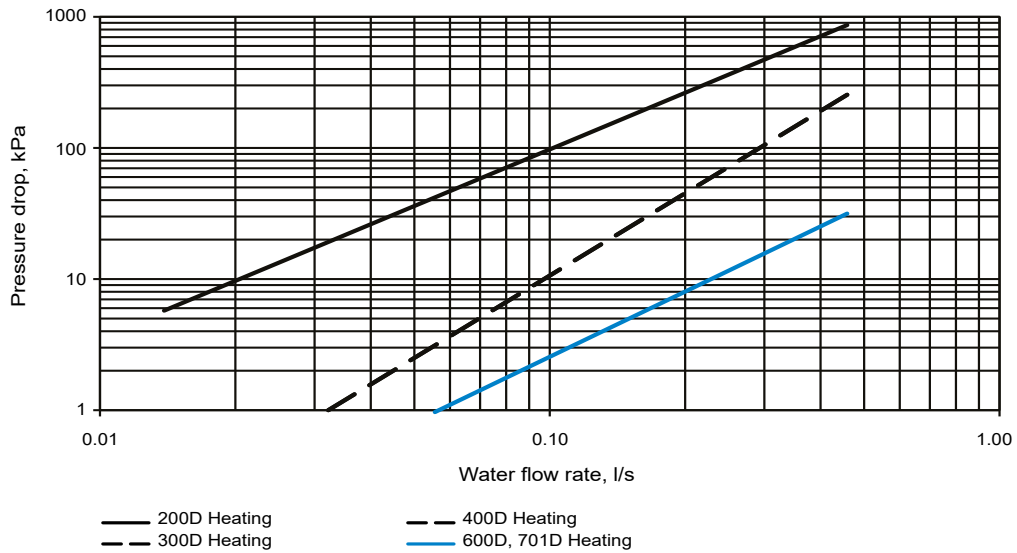


PRESSURE DROPS

Units with 4-pipe coil, cooling conditions



Units with 4-pipe coil, heating conditions



COIL WATER CAPACITY

42GW		200/209	300/309	400/409	500/509	600/609	701/709
Coil volume	l	0,55	1,1	1,1	1,6	2,4	2,4

AIR STREAM, IN METRES

42GW	All louvres open			One louvre closed			Two louvres closed		
	High speed	Medium speed	Low speed	High speed	Medium speed	Low speed	High speed	Medium speed	Low speed
200/209	3,8	3,2	2,7	4,3	3,7	3,0	4,8	4,1	3,4
300/309	4,0	3,4	2,8	4,5	3,8	3,2	5,0	4,3	3,5
400/409	4,8	4,1	3,4	5,3	4,5	3,7	5,8	4,9	4,1
500/509	3,0	2,6	2,1	3,5	3,0	2,5	4,0	3,4	2,8
600/609	3,4	2,9	2,4	3,9	3,3	2,7	4,4	3,7	3,1
701/709	4,3	3,7	3,0	4,8	4,1	3,4	5,3	4,5	3,7

Notes:

- The louvres were set so as to use the Coanda effect to obtain an air flow model parallel to the ceiling, and adhering to it as much as possible.
- The air discharge is defined as the distance between the point where the air flow emerges from the unit parallel to the ceiling, and the point where its speed drops to 0.2 m/s.
- These values are supplied as a guide; they may vary according to the ceiling type, the room dimensions and even its furniture.

OPERATING LIMITS

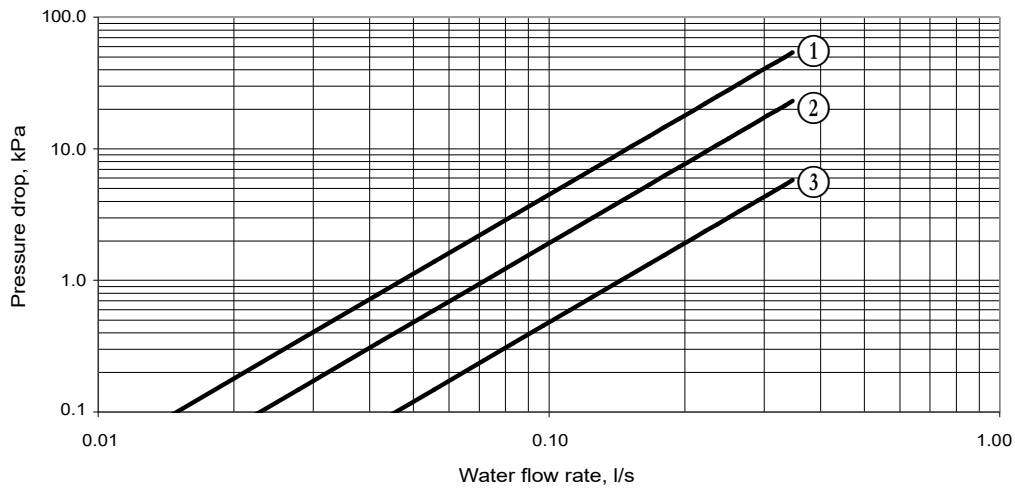
Water circuit	Maximum water side pressure: 1600 kPa (160 m WG)	Minimum entering water temperature: 5°C Maximum entering water temperature: 80°C
Indoor temperature		Minimum temperature: 5°C Maximum temperature: 32°C in heating mode with electric heating device
Power supply	Nominal voltage Operating limits	230 V - 1 ph - 50/60 Hz Min. 207 V - max. 253 V - units without electric heating device Min. 216 V - max. 244 V - units with electric heating device

VALVE KIT

Valve kit	42GW 9029	42GW 9031	42GW 9030	42GW 9032	42GW 9033	42GW 9035	42GW 9034	42GW 9036
Unit option (10th letter)	H - 4-way	H - 4-way	H - 4-way	H - 4-way	G - 2-way	G - 2-way	G - 2-way	G - 2-way
Description	3/4" cooling	1" cooling	3/4" cooling + 1/2" heating	1" cooling + 3/4" heating	3/4" cooling	1" cooling	3/4" cooling + 1/2" heating	1" cooling + 3/4" heating
Valve centre-to-centre, mm	40	73	40/40	73/40	40	73	40/40	73/40
Valve gasket coupling type	Flat	Flat	Flat	Flat	Flat	Flat	Flat	Flat
2-pipe								
200C, 300C, 400C	x				x			
209C, 309C, 409C	x				x			
500C, 600C, 701C		x				x		
509C, 609C, 709C		x				x		
4-pipe								
200D, 300D, 400D			x				x	
209D, 309D, 409D			x				x	
600D, 701D				x				x
609D, 709D				x				x

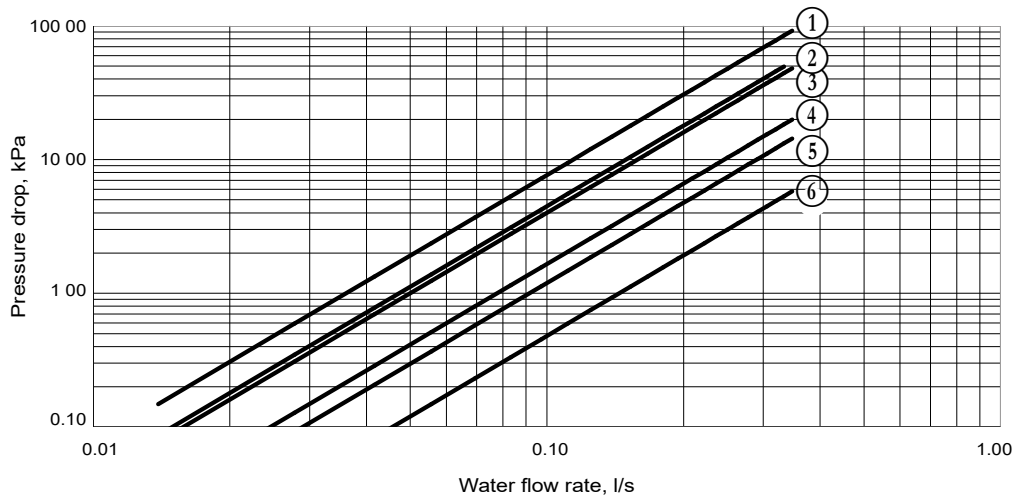
VALVE KIT

2-way valve pressure drop



- ① 1/2", heating
- ② 3/4" heating/cooling
- ③ 1" cooling

3-way valve pressure drop



- ① 1/2" bypass, heating
- ② 1/2" open, heating
- ③ 3/4" bypass, cooling/heating
- ④ 3/4" open heating/cooling
- ⑤ 1" bypass, cooling
- ⑥ 1" open, cooling

The quality management system of this product's assembly site has been certified in accordance with the requirements of the ISO 9001 standard (latest current version) after an assessment conducted by an authorized independent third party.

The environmental management system of this product's assembly site has been certified in accordance with the requirements of the ISO 14001 standard (latest current version) after an assessment conducted by an authorized independent third party.

The occupational health and safety management system of this product's assembly site has been certified in accordance with the requirements of the ISO 45001 standard (latest current version) after an assessment conducted by an authorized independent third party.

Please contact your sales representative for more information.

Order No.: 14202, 01.2024. Supersedes order No.: 14202, 05.2023.

Carrier, Rte de Thil - 01120 Montluel, France.

Manufacturer reserves the right to change any product specifications without notice.

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