



IDROFAN®



Quality
Management
Systems

42GW

Nominal cooling capacity 1.5-10 kW

Nominal heating capacity 1.3-16 kW

The new Carrier Idrofan cassette 42GW_AC/LEC offers a modern solution for a wide variety of small and medium-sized commercial and residential applications. It is ideally suited for large offices, shops, restaurants and bars, hotel receptions, meeting rooms, banks, laboratories, showrooms, etc.

The new product series incorporates innovative technologies, resulting in a product that is easy to select with fast, simple and economical system installation.

Features

- The 42GW_AC is available with a new-generation three-speed AC motor. The 42GW_LEC is available with a variable-speed Low Energy Consumption EC motor.
- The 42GW is normally installed in suspended ceilings and offers two, three or four-way air distribution. The units maintain precise temperature and humidity conditions preventing draughts and stale air zones.
- The elegant air inlet grille blends aesthetically with any room decor.
- The Carrier hydronic cassette is available in six sizes suitable for a wide range of applications, with air flows from 100 to 443 l/s (360 to 1600 m³/h). The Idrofan cassette offers an ultra-low-noise solution for applications where a low noise level is the most important selection parameter.

General features

- The low-profile 42GW is light and easy to install. The small chassis fits neatly with standard ceiling tiles and is simple to install wherever it is needed.
- Four-way air distribution gives individual comfort while for localised control each diffuser may be adjusted or even shut down completely.
- Integrated, factory-mounted cooling and heating coils, two-pipe or two-pipe with electric heater, and four-pipe applications.

Designed for silence

- The 42GW units were designed for extremely quiet operation with sound levels that set new comfort standards for buildings. The unique Carrier design of the centrifugal fan ensures extra-quiet operation.
- The new fan/motor assembly design ensures whisper-quiet operation, two times less than the previous generation. Particular attention has been given to the low fan speed.
- The special design of the diffuser ensures rapid blending of the supply and room air. Conditioned air is directed along the ceiling then evenly distributed throughout the room. Return air enters the cassette unit through a large grille. It is then cleaned by an easily removable, washable synthetic filter, treated and recirculated.

Motors

- The Idrofan cassette is available with a three-speed AC motor, with ultra-low noise levels to make it one of the quietest cassettes on the market.
- The Idrofan cassette is also available with variable-speed LEC (= Low Energy Consumption) EC motors, that meet the new building energy performance objectives. The LEC solution enhances unit performance offering:
 - Reduced energy costs - the LEC motor reduces cassette power consumption by 50 to 75%. The LEC option meets the new building energy management regulations.
 - Improved comfort - the LEC motor with variable fan speed reduces operating noise levels compared to multi-speed fans, offering ultra-quiet air flow down to very low operating levels. With the NTC controller, a maximum fan speed can be set to allow better sound level management.
 - Maximum flexibility - auto-adaptive air flow rate adjustment from 0 to 100% ensures perfect cooling and heating conditions in the room.
 - Extended life time - LEC motors with brushless technology use a lower fan motor temperature for extended operating life.

Filters

- The standard filter for the Idrofan cassette range has a pleated filtration surface, resulting in a 87% larger surface than a conventional filter, with the following additional advantages:
 - Lower air flow per unit area, resulting in lower pressure drop and reduced noise level.
 - The average interval between filter cleaning is three times longer, compared to standard filters.
 - The filter material is polypropylene and the grade is EU1.
- In the Idrofan cassette range the filter is located inside the grille of the unit. Cleaning cannot be easier: the filter can be manually unclipped from the grille support. The filter frame is pulled down and the filter can then be removed easily. Re-assembly is just as easy, reversing the sequence. Washable filters are supplied as standard.

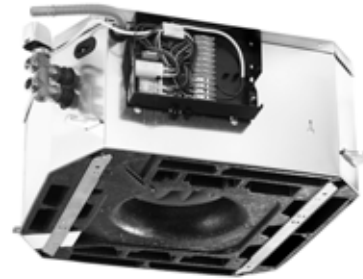


Drain pump

- High-performance autonomous condensate drain pump encased in a special sound-insulating material for improved fast and quiet condensate removal.
- The main Idrofan cassette drain pan has been improved using the latest composite material for increased noise absorption, easier cleaning and coil drain water transfer to the drain pump.

Control box

- All units are equipped with a control box containing the terminal blocks. The box is positioned on the outside of the unit with a fuse for unit and control protection. The control box panel can easily be opened by simply removing one fixing screw. For wiring connection details, please refer to the appropriate wiring diagrams.



Carrier controller range

- The Idrofan cassette is available with the complete range of Carrier controllers. Several tests ensure easy installation. The number of available controllers offers more and enhanced features, and easy selection according to application needs.

Electronic thermostat

- This is available for two-pipe (type A), four-pipe or two-pipe applications with electric heaters (type B). The thermostats have an elegant square shape with two coaxial knobs to set room temperature and fan speed, as desired by the customer.
- Wall-mounted controls are easily and discreetly integrated in any room environment.
- Features of electronic thermostats A and B - set range: From 10°C to 30°C. A dip-switch inside the control allows limiting the temperature in public buildings where low energy consumption is a key requirement.
- The following limitations can be set:
 - Cooling mode: minimum set point allowed - 23°C
 - Heating mode: maximum set point allowed - 20°C
 - Auto fan: The fan speed is automatically set by the control; when the room temperature is far from the set point, high fan speed is selected. As the room temperature approaches the desired value, the fan speed decreases until the minimum speed is reached.
 - Automatic changeover from cooling to heating mode, based on the water temperature, ensures that the ideal room temperature is maintained.
 - Remote changeover: Automatic changeover from cooling to heating mode, based on the remote signal from the monitoring system.
 - Warm and cold draught protection: This feature stops the fan when the set point condition is satisfied and the water temperature is too low or too high, ensuring that air that is too cold or too warm does not cause discomfort to the room occupants.
 - Air sensor: An air sensor located in the control is used for fine tuning of the desired room temperature.
 - Frost protection: This function ensures that the room temperature is kept above a minimum level. If the unit is in off mode, and the room temperature drops below 7°C, frost protection is enabled and the unit operates in heating mode until the temperature rises above 9°C. At this point the unit is switched off again.

- Booster heating management optimisation (available with electric heater option): if the water temperature is below 30°C the system will work in the heat demand mode and the electric heater will be the only available heating source. If the water temperature is above 35°C the system will work in the booster heating mode, energising the water valve and electric heater together. The booster heating function will be deactivated if the water temperature is above 45°C (the electric heater will be de-energised).
- Energy saving: This feature allows saving energy when the room is unoccupied, without the need to switch off the unit. When the energy-saving button is pressed, the actual set point will be modified as follows, without changing the position of the set point selection knob:
 - Cooling mode: Set point raised by 4 K
 - Heating mode: Set point lowered by 4 K
- The unit will resume normal operation, once the energy saving button is pressed again.

HDB (Hydronic Dual Board)

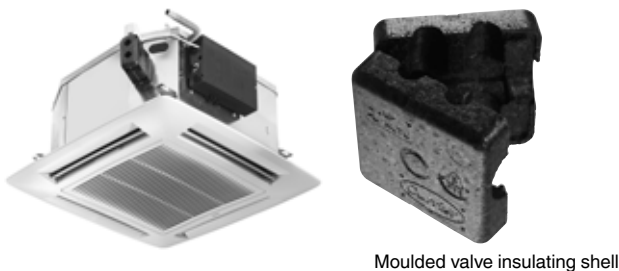
- This electronic thermostat allows master/slave operation. The master unit can manage up to 15 slave units. This controller can be used with a wall-mounted user interface or a remote end user control.

NTC controller

- This is a communicating PID controller, combining energy saving algorithms and full control function solutions, compatible with the Aquasmart Evolution system package.
- The NTC controller can manage the EC motor option, and combines energy savings with optimised comfort.

Valve options

- Valve body: both the two-way or four-way (three-way with integrated bypass) valve options are factory-fitted and tested. The chilled-water valves are fully insulated within a moulded insulating shell, preventing condensation on the valve body. This new shell reduces the complexity of the offer and prevents water leakage risk. Valves are factory-fitted on the unit side.

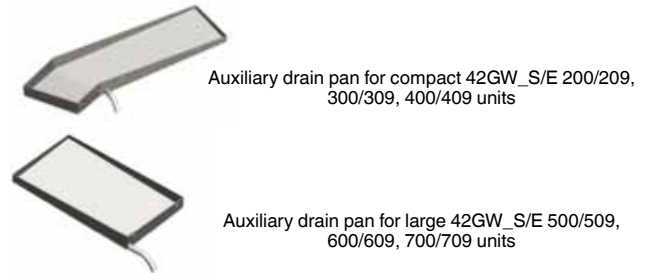


Moulded valve insulating shell

- Valve actuators: a wide choice of actuators is available with two or four-way valve bodies 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:
 - On/off 230 V actuator
 - On/off 24 V actuator
 - Floating 3-point 230 V actuator
 - Floating 3-point 24 V actuator
 - Modulating 0-10 V/24 V actuator
- When combined with LEC motors and the NTC controller, floating three-point 230-V actuators are recommended to increase energy savings and enhance comfort.

Auxiliary drain pan

- An auxiliary drain pan is available as an accessory if the water valves, stop valves or balancing valves are customer-supplied. The auxiliary drain pan is not required with Carrier factory-fitted water valves, as they are factory-supplied with the valve body insulated (moulded insulating shell) to prevent condensation.



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

Auxiliary drain pan for large 42GW_S/E 500/509, 600/609, 700/709 units

Electric heater option

- Electric heater option is available only with 2-pipe coil versions. One heating capacity is available per Idrofan cassette size, factory-fitted to ensure safe and reliable operation.

Fresh air inlet option

- All units have connections for fresh air ducts that can considerably improve indoor air quality while fresh air volume is managed by the CO₂ sensor through NTC control.
- The fresh air flow must be less than 10% of the total air flow, to avoid operating problems and excessive noise. For higher air flow a primary air kit is available that uses the pre-punched hole for air ducting to an adjacent room and a baffle so that the fresh air is introduced into the room through a diffuser.

Supply of conditioned air duct to an adjacent room

- This option allows supply of conditioned air to a room located close to the Idrofan cassette through an air duct (customer-supplied). If this option is used, the outlet corresponding to the duct must be closed, using the air supply outlet obstruction kit provided. The kit cannot be used in units equipped with electric heater. An air inlet grille must be fitted (if possible near the floor) between the air-conditioned room (where the unit is situated) and the adjacent room or, alternatively, the door must be undercut.
- The duct lengths can be calculated in accordance with the "air distribution to an adjacent room" diagram in the IOM, also taking into account the pressure drop through air diffusers and fresh air filters.

Serviceability

- All the key components (motors, fans and drain pump) are accessible from the bottom by simply removing the grille. These components can be removed without disturbing the other components or any surrounding ceiling tiles.

Physical and electrical data of AC motor units

42GW	200C			300C			400C			500C			600C			700C			
Fan																			
Coil type	2 pipes			2 pipes			2 pipes			2 pipes			2 pipes			2 pipes			
Fan speed*	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	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 mode																			
Total cooling capacity	kW	2.40	1.80	1.55	4.00	2.90	1.90	4.70	3.50	2.85	6.30	4.50	3.40	7.20	5.50	3.70	9.60	6.60	4.05
Sensible cooling capacity	kW	2.01	1.49	1.31	3.10	2.20	1.41	3.70	2.70	2.10	4.80	3.60	2.70	5.50	4.10	2.70	7.35	4.85	3.00
Water flow rate	l/s	0.11	0.09	0.07	0.19	0.14	0.09	0.22	0.17	0.14	0.30	0.22	0.16	0.34	0.26	0.18	0.46	0.32	0.19
	l/h	413	310	267	688	499	327	808	602	490	1084	774	585	1238	946	636	1651	1135	697
Water pressure drop, cooling	kPa	11.1	6.5	4.9	11.0	6.2	2.9	14.7	8.6	6.0	23.3	13.6	8.7	11.6	7.0	3.4	19.8	9.9	4.0
Heating mode																			
Heating capacity	kW	3.20	2.50	2.20	5.00	4.00	2.50	6.20	4.60	3.70	8.11	6.00	4.50	10.00	7.40	4.60	13.00	9.30	5.20
Water pressure drop, heating	kPa	10.9	5.6	4.0	11.1	5.2	1.9	16.2	8.1	5.0	18.1	10.1	6.2	10.5	6.6	3.3	17.3	9.1	3.9
Water content	l	0.55			1.1			1.1			1.6			2.4			2.4		
Sound levels																			
Sound power level	dB(A)	47	37	32	52	44	32	57	48	42	47	40	34	53	46	37	61	52	40
Sound pressure level**	dB(A)	38	28	23	43	35	23	48	39	33	38	31	25	44	37	28	52	43	31
NR value**		33	23	18	38	30	18	43	34	28	33	26	20	39	32	23	47	38	26
Power input																			
Power input	W	58	35	25	54	32	16	94	55	35	63	39	27	85	59	33	185	130	60
Current input																			
Current input	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	0.85	0.58	0.26
Eurovent FCEER																			
Eurovent energy class FCEER		D			C			D			C			C			D		
Eurovent FCCOP																			
Eurovent energy class FCCOP		D			C			D			C			C			D		
Electric heater (high capacity)																			
Electric heater (high capacity)	W	1500			2500			2500			3000			3000			3000		
Current input electric heater (high capacity)	A	5.9			9.4			9.4			11.3			11.3			11.3		
Connection diameter																			
Connection diameter	in	3/4" gas			3/4" gas			3/4" gas			1" gas			1" gas			1" gas		
Drain pipe connection outside diameter	mm	16			16			16			16			16			16		
Unit net weight																			
Unit net weight	kg	15			16.5			16.5			37			39.6			39.6		
Grille weight	kg	2.5			2.5			2.5			5			5			5		

42GW	200D			300D			400D			700D			
Fan													
Coil type	4 pipes			4 pipes			4 pipes			4 pipes			
Fan speed*	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	443	299	166
	m ³ /h	660	450	360	735	505	320	900	625	485	1600	1080	600
Cooling mode													
Total cooling capacity	kW	2.20	1.65	1.45	3.50	2.70	2.00	4.10	3.25	2.60	9.10	6.80	3.80
Sensible cooling capacity	kW	2.00	1.48	1.27	2.70	2.10	1.50	3.30	2.60	2.05	7.10	5.20	2.70
Water flow rate, cooling	l/s	0.11	0.08	0.07	0.17	0.13	0.10	0.20	0.16	0.12	0.43	0.32	0.18
	l/h	378	284	249	602	464	344	705	559	447	1565	1170	654
Water pressure drop, cooling	kPa	13.7	8.2	6.6	10.1	6.6	4.0	13.1	8.9	6.2	39.0	23.8	8.9
Water content, cooling	l	0.4			1.1			1.1			2.4		
Heating mode													
Heating capacity	kW	1.90	1.44	1.24	6.37	5.10	3.60	6.80	5.80	5.00	16.00	11.50	7.30
Water flow rate, heating	l/s	0.05	0.03	0.03	0.15	0.12	0.09	0.16	0.14	0.12	0.38	0.27	0.17
	l/h	163	124	107	548	439	310	585	499	430	1376	989	628
Water pressure drop, heating	kPa	31.4	21.1	17.0	25.5	16.1	7.8	29.2	21.0	15.4	23.4	13.6	6.4
Water content, heating	l	0.1			0.6			0.6			1.2		
Sound levels													
Sound power level	dB(A)	47	37	32	54	45	33	57	48	42	61	52	40
Sound pressure level**	dB(A)	38	28	23	45	36	24	48	39	33	52	43	31
NR value**		33	23	18	40	31	19	43	34	28	47	38	26
Power input													
Power input	W	58	35	25	54	32	16	94	55	35	185	130	60
Current input													
Current input	A	0.27	0.17	0.12	0.24	0.14	0.07	0.41	0.24	0.16	0.85	0.58	0.26
Eurovent FCEER													
Eurovent energy class FCEER		E			C			D			D		
Eurovent FCCOP													
Eurovent energy class FCCOP		E			B			C			C		
Connection diameter, cooling													
Connection diameter, cooling	in	3/4" gas			3/4" gas			3/4" gas			1" gas		
Connection diameter, heating													
Connection diameter, heating	in	1/2" gas			1/2" gas			1/2" gas			3/4" gas		
Drain pipe connection outside diameter	mm	16			16			16			16		
Unit net weight													
Unit net weight	kg	19			20			20			46		
Grille weight	kg	2.5			2.5			2.5			5		

Based on Eurovent conditions:

Cooling mode (2 and 4-pipe coil): entering air temperature 27°C db/1 9°C wb, entering/leaving water temperature 7/12°C, high fan speed.

Heating mode (2-pipe coil): entering air temperature 20°C, entering water temperature 50°C, high fan speed, water flow rate as cooling mode.

Heating mode (4-pipe coil): entering air temperature 20°C, entering water temperature 70°C, high fan speed, water Δt = 10 K

* Fan speeds: 1 = high, 2 = medium, 3 = low

** Sound pressure level and NR values are based on a hypothetical sound attenuation for the room of -9 dB(A).

Note: Electrical heater version is available on all 2-pipe units.

Physical and electrical data of LEC motor units

		209C			309C			409C			509C			609C			709C		
42GW																			
Fan																			
Coil type		2 pipes			2 pipes			2 pipes			2 pipes			2 pipes			2 pipes		
Voltage (d.c.)	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 mode																			
Total cooling capacity	kW	2.40	1.80	1.55	4.00	2.90	1.90	4.70	3.50	2.85	6.30	4.50	3.40	7.20	5.50	3.70	9.60	6.60	4.05
Sensible cooling capacity	kW	2.01	1.49	1.31	3.10	2.20	1.41	3.70	2.70	2.10	4.80	3.60	2.70	5.50	4.10	2.70	7.35	4.85	3.00
Water flow rate	l/s	0.11	0.09	0.07	0.19	0.14	0.09	0.22	0.17	0.14	0.30	0.22	0.16	0.34	0.26	0.18	0.46	0.32	0.19
	l/h	413	310	267	688	499	327	808	602	490	1084	774	585	1238	946	636	1651	1135	697
Water pressure drop, cooling	kPa	11.1	6.5	4.9	11.0	6.2	2.9	14.7	8.6	6.0	23.3	13.6	8.7	11.6	7.0	3.4	19.8	9.9	4.0
Heating mode																			
Heating capacity	kW	3.20	2.50	2.20	5.00	4.00	2.50	6.20	4.60	3.70	8.11	6.00	4.50	10.00	7.40	4.60	13.00	9.30	5.20
Water pressure drop, heating	kPa	10.9	5.6	4.0	11.1	5.2	1.9	16.2	8.1	5.0	18.1	10.1	6.2	10.5	6.6	3.3	17.3	9.1	3.9
Water content	l	0.55			1.1			1.1			1.6			2.4			2.4		
Sound levels																			
Sound power level	dB(A)	47	37	32	52	44	32	57	48	42	47	40	34	53	46	37	61	52	40
Sound pressure level*	dB(A)	38	28	23	43	35	23	48	39	33	38	31	25	44	37	28	52	43	31
NR value*		33	23	18	38	30	18	43	34	28	33	26	20	39	32	23	47	38	26
Power input																			
	W	23	10	7	33	14	7	57	23	13	25	12	7	46	23	9	115	40	11
Current input																			
	A	0.19	0.10	0.08	0.27	0.13	0.08	0.46	0.20	0.12	0.23	0.12	0.08	0.40	0.22	0.10	0.89	0.35	0.12
Eurovent FCEER																			
Eurovent energy class FCEER		A			A			B			A			A			A		
Eurovent FCCOP																			
Eurovent energy class FCCOP		A			A			B			A			A			A		
Electric heater (high capacity)																			
Current input electric heater (high capacity)	W	1500			2500			2500			3000			3000			3000		
	A	5.9			9.4			9.4			11.3			11.3			11.3		
Connection diameter																			
Drain pipe connection outside diameter	in	3/4" gas			3/4" gas			3/4" gas			1" gas			1" gas			1" gas		
	mm	16			16			16			16			16			16		
Unit net weight																			
Grille weight	kg	15			16.5			16.5			37			39.6			39.6		
	kg	2.5			2.5			2.5			5			5			5		

		209D			309D			409D			709D		
42GW													
Fan													
Coil type		4 pipes			4 pipes			4 pipes			4 pipes		
Voltage (d.c.)	V	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			
	m ³ /h	660	450	360	735	505	320	900	625	485			
Cooling mode													
Total cooling capacity	kW	2.20	1.65	1.45	3.50	2.70	2.00	4.10	3.25	2.60			
Sensible cooling capacity	kW	2.00	1.48	1.27	2.70	2.10	1.50	3.30	2.60	2.05			
Water flow rate cooling	l/s	0.11	0.08	0.07	0.17	0.13	0.10	0.20	0.16	0.12			
	l/h	378	284	249	602	464	344	705	559	447			
Water pressure drop, cooling	kPa	13.7	8.2	6.6	10.1	6.6	4.0	13.1	8.9	6.2			
Water content, cooling	l	0.4			1.1			1.1					
Heating mode													
Heating capacity	kW	1.90	1.44	1.24	6.37	5.10	3.60	6.80	5.80	5.00			
Water flow rate, heating	l/s	0.05	0.03	0.03	0.15	0.12	0.09	0.16	0.14	0.12			
	l/h	163	124	107	548	439	310	585	499	430			
Water pressure drop, heating	kPa	31.4	21.1	17.0	25.5	16.1	7.8	29.2	21.0	15.4			
Water content, heating	l	0.1			0.6			0.6					
Sound levels													
Sound power level	dB(A)	47	37	32	54	45	33	57	48	42			
Sound pressure level*	dB(A)	38	28	23	45	36	24	48	39	33			
NR value*		33	23	18	40	31	19	43	34	28			
Power input													
	W	23	10	7	32	14	7	57	22	13			
Current input													
	A	0.19	0.10	0.08	0.29	0.14	0.08	0.46	0.21	0.12			
Eurovent FCEER													
Eurovent energy class FCEER		B			A			B			A		
Eurovent FCCOP													
Eurovent energy class FCCOP		B			A			A			A		
Connection diameter, cooling													
Connection diameter, heating	in	3/4" gas			3/4" gas			3/4" gas			1" gas		
Drain pipe connection outside diameter	in	1/2" gas			1/2" gas			1/2" gas			3/4" gas		
	mm	16			16			16			16		
Unit net weight													
Grille weight	kg	19			20			20			46		
	kg	2.5			2.5			2.5			5		

Based on Eurovent conditions:

Cooling mode (2 and 4-pipe coil): entering air temperature 27°C db/19°C wb, entering/leaving water temperature 7/12°C, high fan speed.

Heating mode (2-pipe coil): entering air temperature 20°C, entering water temperature 50°C, high fan speed, water flow rate as cooling mode.

Heating mode (4-pipe coil): entering air temperature 20°C, entering water temperature 70°C, high fan speed, water Δt = 10 K

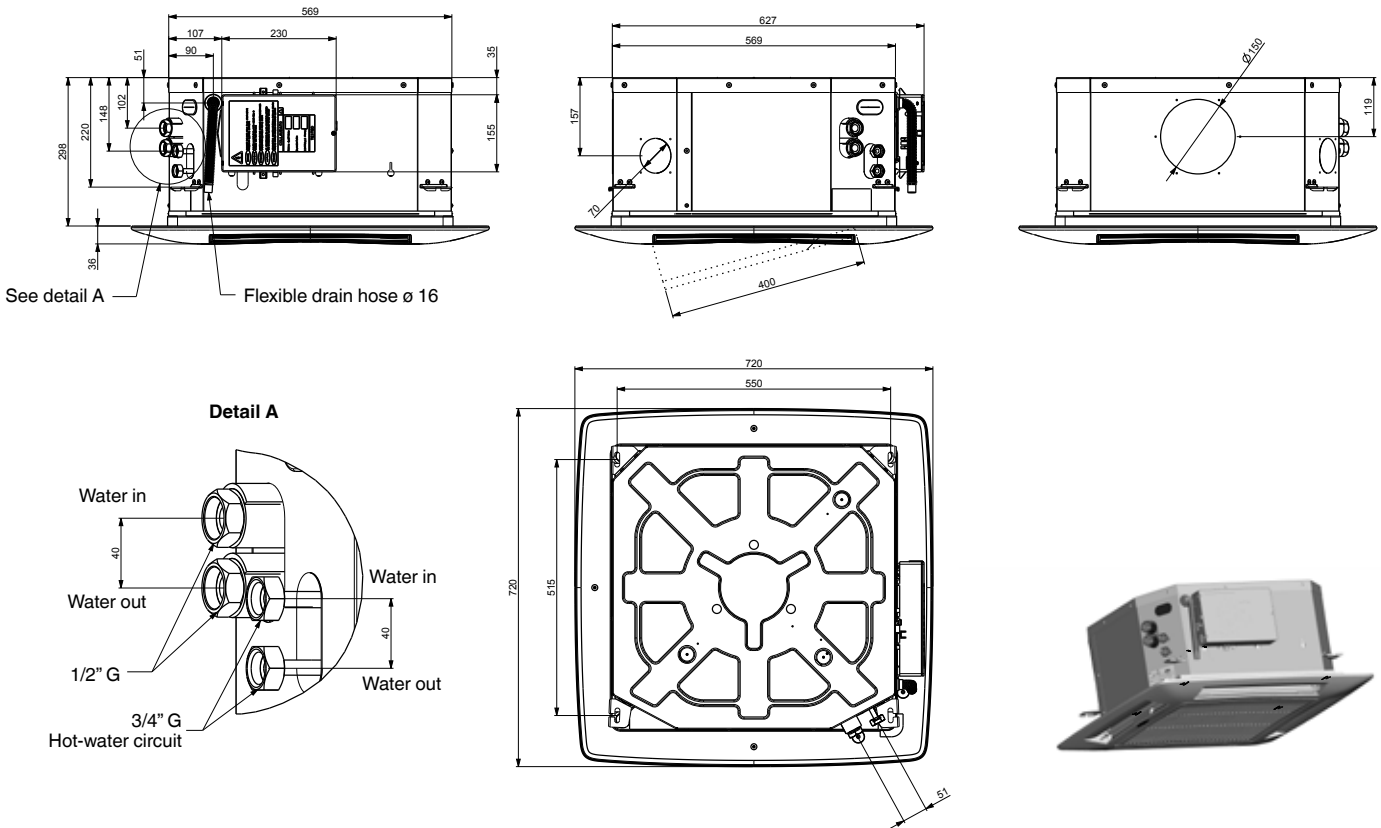
* Sound pressure level and NR values are based on a hypothetical sound attenuation for the room of -9 dB(A).

Note: Electrical heater version is available on all 2-pipe units.

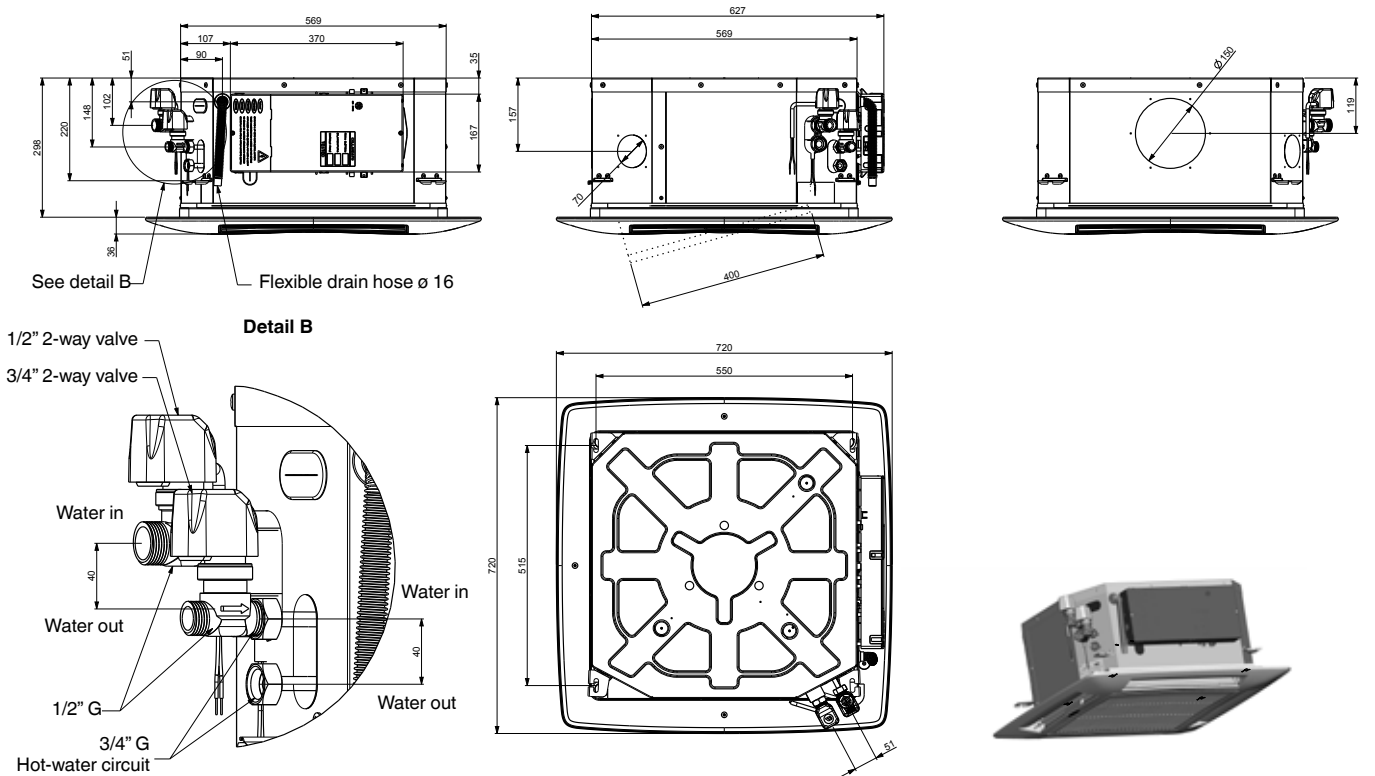
Dimensions, mm

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

Unit without valves



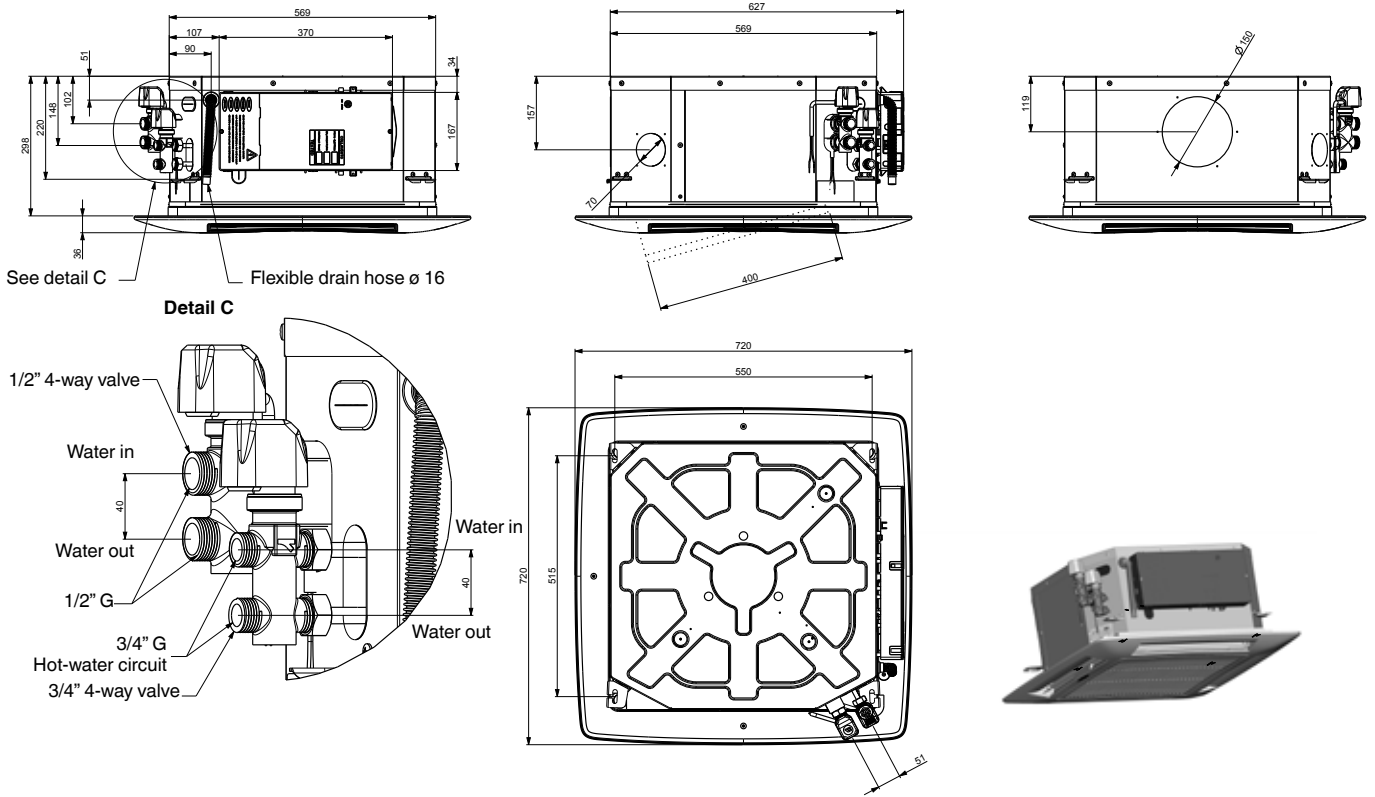
Unit with two-way valves



Dimensions, mm

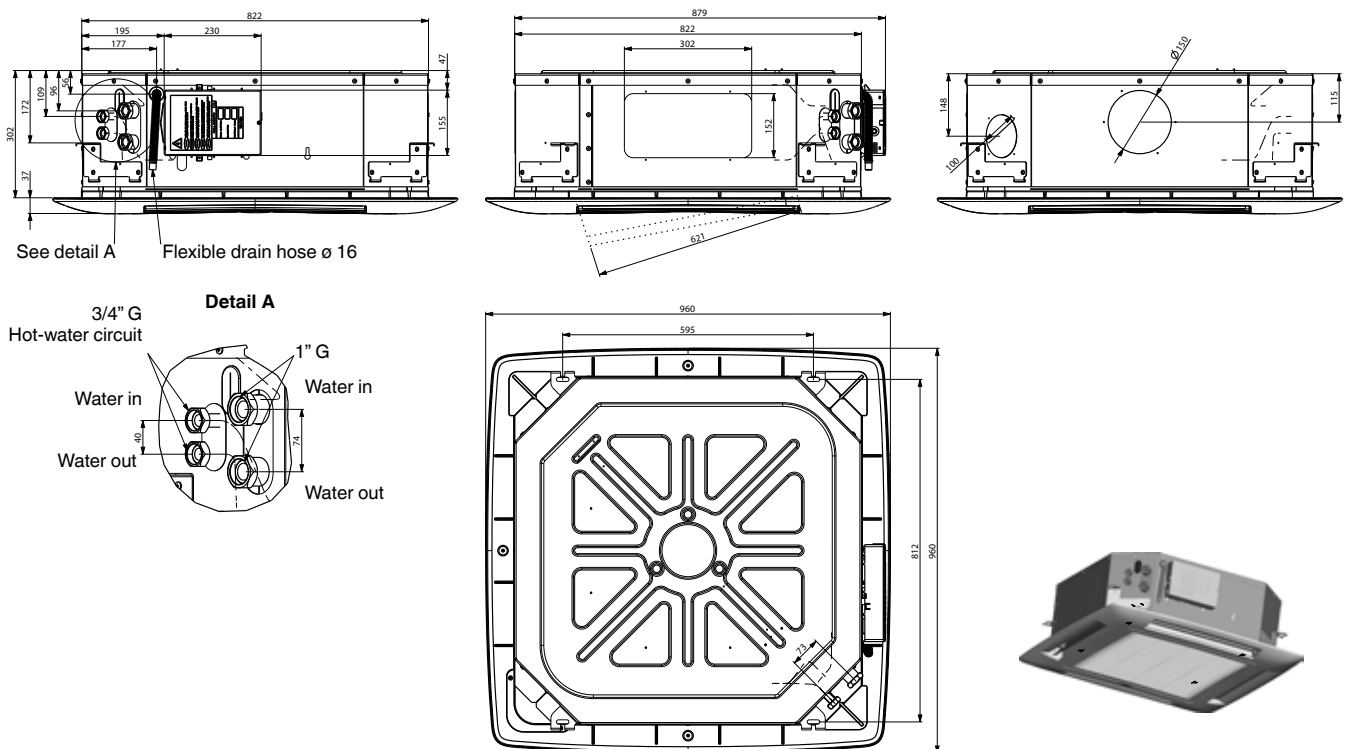
42GW 200/209 - 300/309 - 400/409 (compact chassis)

Unit with four-way valves



42GW 500/509 - 600/609 - 700/709 (large chassis)

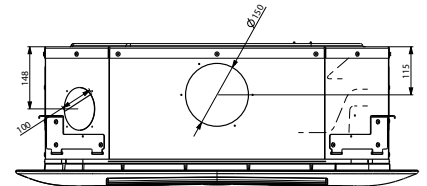
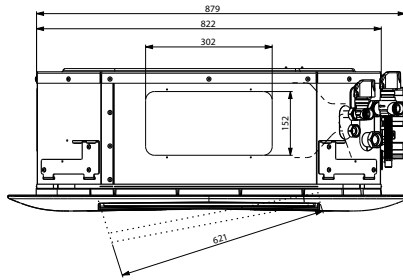
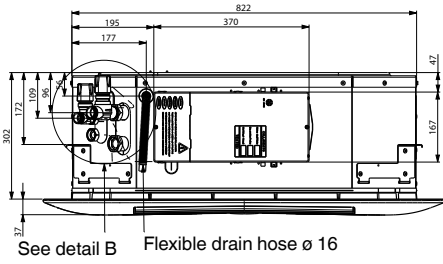
Unit without valves



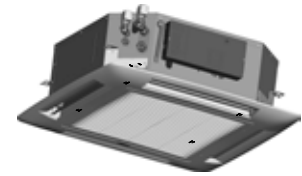
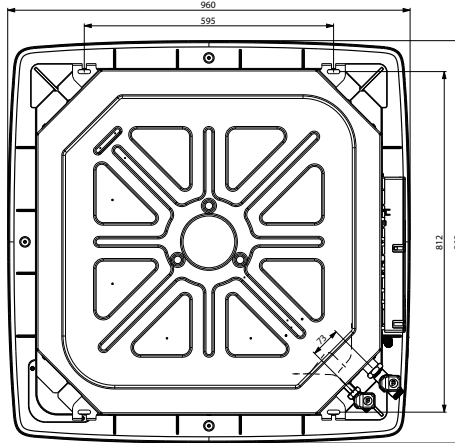
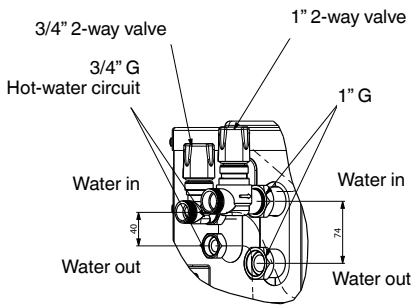
Dimensions, mm

42GW 500/509 - 600/609 - 700/709 (large chassis)

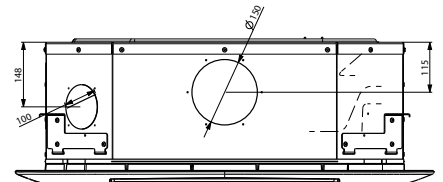
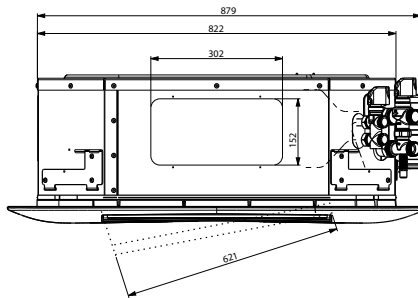
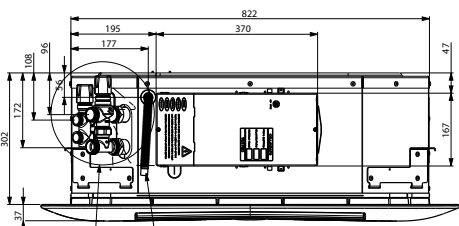
Unit with two-way valves



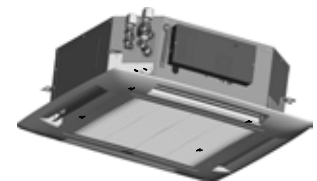
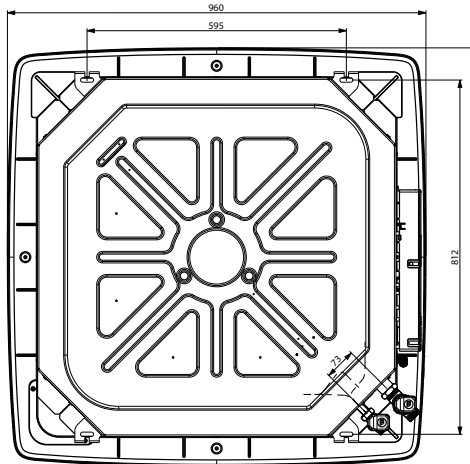
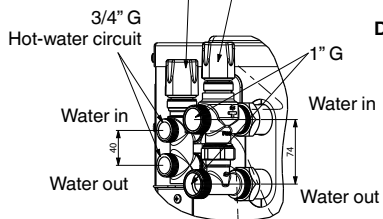
Detail B



Unit with four-way valves



Detail C



Heating capacities in kW, four-pipe coil

EAT	EWT	Δt	Size	200			300			400			700		
				Speed	1	2	3	1	2	3	1	2	3	1	2
EAT	EWT	Δt	Size	209			309			409			709		
		K	Ctrl V	10	6	2	10	6	2	10	6	2	10	6	2
19	50	5	Total	1.21	0.92	0.79	4.10	3.28	2.31	4.39	3.73	3.21	10.19	7.32	6.64
	50	10	Total	1.01	0.77	0.67	2.79	2.24	1.51	2.87	2.57	2.21	8.35	6.01	3.88
	60	5	Total	1.67	1.26	1.08	5.89	4.67	3.26	6.36	5.34	4.56	14.17	10.16	6.39
	60	10	Total	1.48	1.13	0.97	4.72	3.83	2.68	4.99	4.33	3.75	12.38	8.91	5.71
	70	5	Total	2.13	1.61	1.38	7.69	6.06	4.22	8.35	6.96	5.91	18.15	13.00	8.13
	70	10	Total	1.95	1.47	1.27	6.54	5.24	3.69	6.99	5.96	5.13	16.40	11.78	7.48
	80	5	Total	2.60	1.96	1.68	9.49	7.45	5.17	10.34	8.58	7.27	22.13	15.84	9.86
	80	10	Total	2.41	1.82	1.57	8.36	6.65	4.66	8.99	7.60	6.51	20.42	14.65	9.23
20	50	5	Total	1.16	0.88	0.76	3.93	3.14	2.21	4.20	3.58	3.08	9.80	7.04	4.47
	50	10	Total	0.97	0.74	0.64	2.61	2.08	1.42	2.68	2.38	2.05	7.97	5.72	3.70
	60	5	Total	1.63	1.23	1.05	5.72	4.53	3.17	6.17	5.19	4.43	13.78	9.88	6.21
	60	10	Total	1.44	1.09	0.94	4.56	3.69	2.58	4.81	4.18	3.61	11.99	8.63	5.54
	70	5	Total	2.09	1.58	1.35	7.52	5.92	4.12	8.16	6.80	5.78	17.75	12.72	7.95
	70	10	Total	1.90	1.44	1.24	6.37	5.10	3.60	6.80	5.80	5.00	16.01	11.50	7.30
	80	5	Total	2.55	1.92	1.65	9.32	7.31	5.08	10.15	8.42	7.14	21.74	15.55	9.69
	80	10	Total	2.37	1.79	1.54	8.19	6.52	4.57	8.81	7.44	6.37	20.02	14.36	9.05
21	50	5	Total	1.12	0.85	0.73	3.75	3.01	2.12	4.02	3.42	2.95	9.41	6.76	4.30
	50	10	Total	0.92	0.71	0.61	2.40	1.92	1.34	2.45	2.19	1.89	7.58	5.43	3.52
	60	5	Total	1.58	1.19	1.03	5.54	4.40	3.07	5.98	5.03	4.30	13.38	9.60	6.04
	60	10	Total	1.39	1.06	0.91	4.39	3.55	2.48	4.63	4.03	3.48	11.60	8.35	5.36
	70	5	Total	2.04	1.54	1.32	7.34	5.79	4.03	7.96	6.65	5.65	17.36	12.43	7.77
	70	10	Total	1.86	1.41	1.21	6.20	4.97	3.51	6.62	5.65	4.87	15.61	11.22	7.13
	80	5	Total	2.50	1.89	1.62	9.14	7.18	4.98	9.96	8.26	7.00	21.34	15.27	9.51
	80	10	Total	2.32	1.76	1.51	8.01	6.38	4.47	8.62	7.29	6.24	19.63	14.08	8.88

Legend
EAT Entering air temperature, °C
EWT Entering water temperature, °C
Δt Water temperature rise, °C
Total Total heating capacity, kW

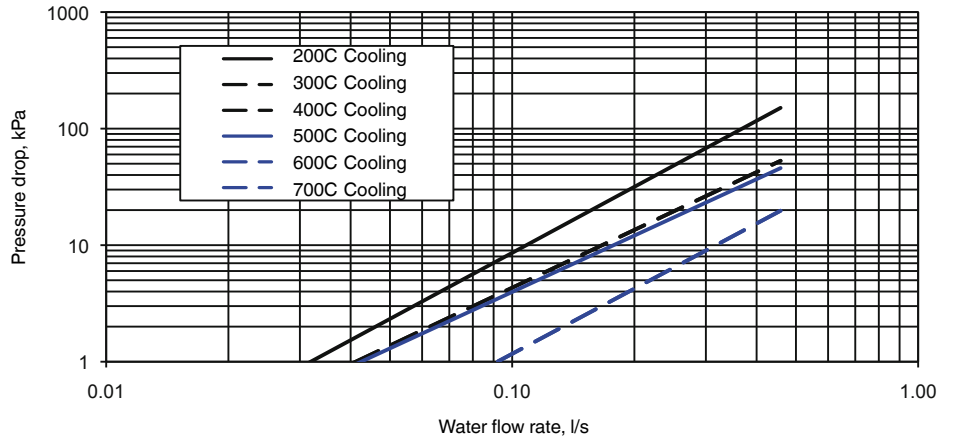
Global sound data

Internal fan diameter	AC motor speed	EC motor speed (V)	Global sound power levels						Sound pressure* dB(A)	NR* dB(A)
			125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	dB(A)		
42GW200/9C	1	10	48.0	49.0	47.0	41.0	33.0	47.0	38.0	33.0
	2	6	40.0	41.0	37.0	28.0	21.0	37.0	28.0	23.0
	3	2	36.0	34.0	33.0	21.0	17.0	32.0	23.0	18.0
42GW300/9C	1	10	54.0	53.0	52.0	47.0	39.0	52.0	43.0	38.0
	2	6	45.0	46.0	44.0	37.0	30.0	44.0	35.0	30.0
	3	2	35.0	35.0	30.0	24.0	23.0	32.0	23.0	18.0
42GW400/9C	1	10	60.0	56.0	56.0	52.0	44.0	57.0	48.0	43.0
	2	6	52.0	50.0	48.0	42.0	34.0	48.0	39.0	34.0
	3	2	46.0	44.0	42.0	35.0	28.0	42.0	33.0	28.0
42GW500/9C	1	10	50.0	51.0	46.0	40.0	31.0	47.0	38.0	33.0
	2	6	44.0	44.0	39.0	33.0	24.0	40.0	31.0	26.0
	3	2	40.0	38.0	32.0	27.0	21.0	34.0	25.0	20.0
42GW600/9C	1	10	55.0	57.0	52.0	47.0	40.0	53.0	44.0	39.0
	2	6	49.0	50.0	45.0	39.0	32.0	46.0	37.0	32.0
	3	2	46.0	41.0	34.0	29.0	27.0	37.0	28.0	23.0
42GW700/9C	1	10	61.0	63.0	60.0	55.0	49.0	61.0	52.0	47.0
	2	6	55.0	56.0	51.0	45.0	38.0	52.0	43.0	38.0
	3	2	47.0	44.0	38.0	31.0	28.0	40.0	31.0	26.0
42GW200/9D	1	10	48.0	49.0	47.0	41.0	33.0	47.0	38.0	33.0
	2	6	40.0	41.0	37.0	28.0	21.0	37.0	28.0	23.0
	3	2	36.0	34.0	33.0	21.0	17.0	32.0	23.0	18.0
42GW300/9D	1	10	57.0	53.0	53.0	49.0	43.0	54.0	45.0	40.0
	2	6	46.0	47.0	45.0	39.0	29.0	45.0	36.0	31.0
	3	2	39.0	37.0	32.0	24.0	18.0	33.0	24.0	19.0
42GW400/9D	1	10	59.0	56.0	56.0	52.0	47.0	57.0	48.0	43.0
	2	6	50.0	49.0	48.0	42.0	36.0	48.0	39.0	34.0
	3	2	44.0	44.0	42.0	35.0	26.0	42.0	33.0	28.0
42GW700/9D	1	10	61.0	63.0	60.0	55.0	49.0	61.0	52.0	47.0
	2	6	55.0	56.0	51.0	45.0	38.0	52.0	43.0	38.0
	3	2	47.0	44.0	38.0	31.0	28.0	40.0	31.0	26.0

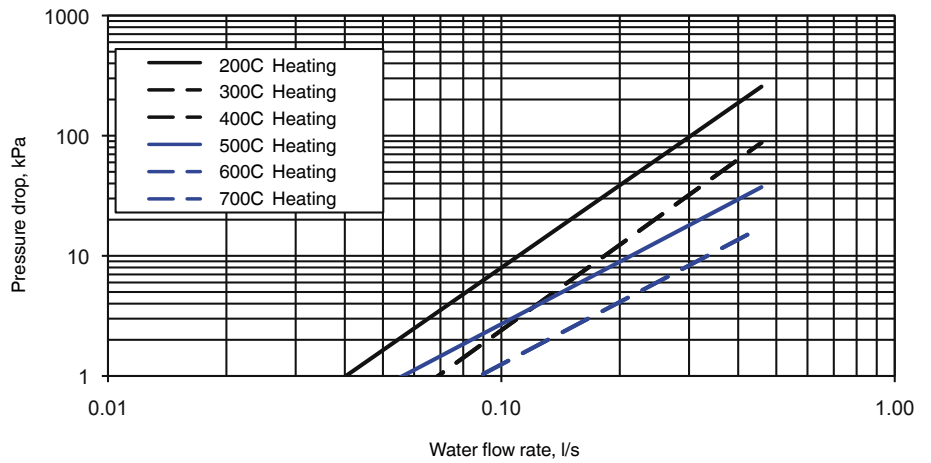
* Sound pressure level and NR values are based on a hypothetical sound attenuation for the room of -9 dB(A).

Coil pressure drops

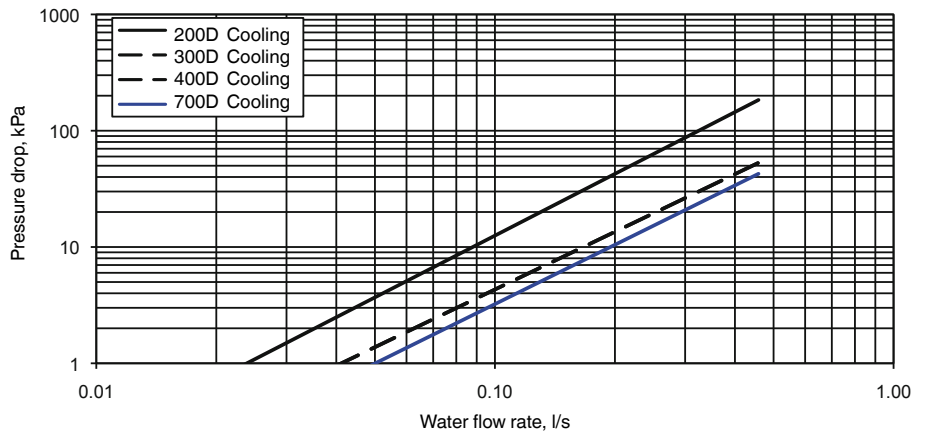
Two-pipe units, cooling



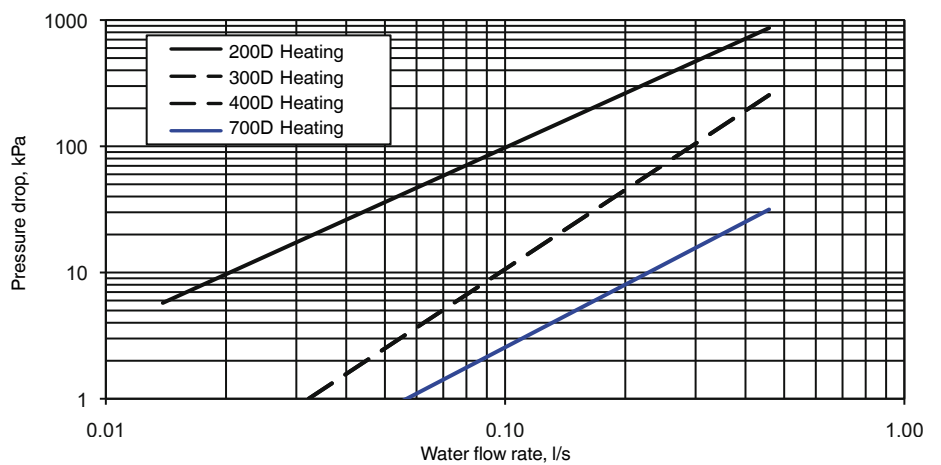
Two-pipe units, heating



Four-pipe units, cooling



Four-pipe units, heating



Coil water content

42GW	200/209	300/309	400/409	500/509	600/609	700/709
Water content	0.55	1.1	1.1	1.6	2.4	2.4

Air throw, m

42GW	Louvres all 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
700/709	4.3	3.7	3.0	4.8	4.1	3.4	5.3	4.5	3.7

Notes:

1. The louvres were adjusted to use the Coanda effect to obtain an air flow pattern that adheres as closely as possible and parallel to the ceiling.
2. The air throw is defined as the distance at which air flow speed falls to 0.2 m/s, when the air flow leaves the unit parallel to the ceiling.
3. The values are to be considered as indicative, as they may vary according to the type of ceiling, room dimensions and even the furniture used.

Operating limits

Water circuit	Maximum water-side pressure: 1400 kPa (142 m WG)	Minimum entering water temperature: 2°C Maximum entering water temperature: 80°C
Indoor temperature		Minimum temperature: 5°C Maximum temperature: 32°C for units with electric heaters
Power supply	Nominal operating limits	230 V - 1 ph - 50 Hz 207-253 V for units without electric heaters 216-244 V for units with electric heaters

Valve kit

Valve kit	42GW 9029	42GW 9031	42GW 9030	42GW 9032	42GW 9033	42GW 9035	42GW 9034	42GW 9036
Unit option (10th digit)	H - 4 ways	H - 4 ways	H - 4 ways	H - 4 ways	G - 2 ways	G - 2 ways	G - 2 ways	G - 2 ways
Description	3/4" cold	1" cold	3/4" cold + 1/2" hot	1" cold + 3/4" hot	3/4" cold	1" cold	3/4" cold + 1/2" hot	1" cold + 3/4" hot
Valve pitch, mm	40	73	40/40	73/40	40	73	40/40	73/40
Valve face	Flat	Flat	Flat	Flat	Flat	Flat	Flat	Flat
2 pipes								
200C, 300C, 400C	x				x			
500C, 600C, 700C		x				x		
4 pipes								
200D, 300D, 400D			x				x	
700D				x				x

