

Ceiling convector TKW



Silent ceiling convector for cooling and heating, for water connection

Ceiling convector TKW provides both heating and cooling in one product, making it ideal for applications such as offices, shops, conference facilities and restaurants. Front grilles in different designs are available allowing air distribution in 2, 3 or 4 directions. There is also the possibility of distributing air to adjoining areas via duct connections.

A perfect solution for suspended ceilings

Designed for fast, simple installation and ease of maintenance. TKW is especially adapted for installation in standard suspended ceilings, and can also be suspended from the ceiling.

Optimal comfort without disturbing noise

The unique circular heat exchanger, aerodynamic fan blades and acoustic insulation, along with optimising the fan speed, result in a low sound level.

Multiple options for indoor environments

Available in versions with 2-pipe or 4-pipe systems and with AC- or EC motor. EC motors ensure energy efficient operation and stepless control of the air flow.

Product specifications

- To be used with a front grille TKWFG or TKWDG (design).
- Integrated condensation water pump.
- Low profile height with perfect integration in standard suspended ceiling of 600x600 or 900x900 ceiling tiles.
- Can be controlled and monitored by a BMS system.



Ceiling convector TKW, 2-pipe system, with water heating/cooling, EC motor (IP10)

Item number	Type	Heat output* ¹ [kW]	Cooling output (total)* ² [kW]	Cooling output (sensible)* ² [kW]	Airflow [m ³ /h]	Sound power* ³ [dB(A)]	Sound pressure* ⁴ [dB(A)]	Motor [W]	Amperage motor [A]	Voltage [V]	Weight [kg]
414580	TKW202EC	2,71	2,38	1,98	660	49	27/40	29	0,13	230V~	14,8
414581	TKW302EC	3,65	3,99	3,04	735	53	26/44	32	0,13	230V~	16,5
414582	TKW402EC	5,23	4,69	3,61	900	57	33/48	57	0,25	230V~	16,5
414583	TKW502EC	7,32	6,09	4,72	980	49	26/40	25	0,11	230V~	37,0
414584	TKW602EC	9,10	7,22	5,44	1160	54	29/45	25	0,11	230V~	39,6
414585	TKW702EC	11,8	9,58	7,15	1600	61	31/52	115	0,50	230V~	39,6

Ceiling convector TKW, 4-pipe system, with water heating/cooling, EC motor (IP10)

Item number	Type	Heat output* ¹ [kW]	Cooling output (total)* ² [kW]	Cooling output (sensible)* ² [kW]	Airflow [m ³ /h]	Sound power* ³ [dB(A)]	Sound pressure* ⁴ [dB(A)]	Motor [W]	Amperage motor [A]	Voltage [V]	Weight [kg]
414592	TKW204EC	0,97	2,00	1,86	660	49	27/40	29	0,13	230V~	14,8
414593	TKW304EC	3,16	3,37	2,64	735	53	26/44	32	0,14	230V~	16,5
414594	TKW404EC	3,36	4,01	3,29	900	57	33/48	57	0,25	230V~	16,5
414595	TKW604EC	5,82	6,64	5,12	1160	49	29/45	46	0,20	230V~	37,1
414596	TKW704EC	8,11	7,93	6,28	1600	54	31/52	115	0,50	230V~	39,6

Ceiling convector TKW, 2-pipe system, with water heating/cooling, AC motor (IP10)

Item number	Type	Heat output* ¹ [kW]	Cooling output (total)* ² [kW]	Cooling output (sensible)* ² [kW]	Airflow [m ³ /h]	Sound power* ³ [dB(A)]	Sound pressure* ⁴ [dB(A)]	Motor [W]	Amperage motor [A]	Voltage [V]	Weight [kg]
391765	TKW202AC	2,71	2,35	1,95	660	49	27/40	58	0,25	230V~	14,8
391766	TKW302AC	3,65	3,96	3,01	735	53	26/44	58	0,25	230V~	16,5
391767	TKW402AC	5,23	4,65	3,57	900	57	33/48	99	0,43	230V~	16,5
391768	TKW502AC	7,32	6,05	4,67	980	49	26/40	66	0,29	230V~	37,0
391769	TKW602AC	9,10	7,16	5,37	1160	54	29/45	88	0,38	230V~	39,6
391770	TKW702AC	11,0	8,57	6,40	1450	59	31/50	125	0,54	230V~	39,6

Ceiling convector TKW, 4-pipe system, with water heating/cooling, AC motor (IP10)

Item number	Type	Heat output* ¹ [kW]	Cooling output (total)* ² [kW]	Cooling output (sensible)* ² [kW]	Airflow [m ³ /h]	Sound power* ³ [dB(A)]	Sound pressure* ⁴ [dB(A)]	Motor [W]	Amperage motor [A]	Voltage [V]	Weight [kg]
391771	TKW204AC	0,97	1,97	1,84	660	49	27/40	58	0,25	230V~	14,8
391772	TKW404AC	3,36	3,97	3,20	900	57	33/48	99	0,43	230V~	16,5
391773	TKW704AC	7,41	7,51	5,88	1450	59	31/50	125	0,54	230V~	39,6

*¹) Applicable at water temperature 50/40 °C, air temperature, in +20 °C.

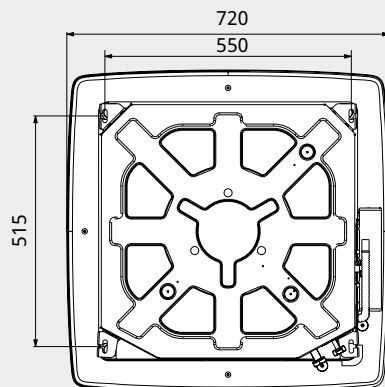
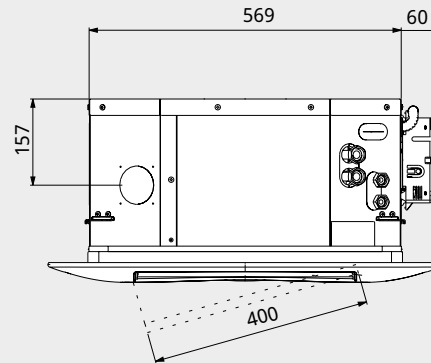
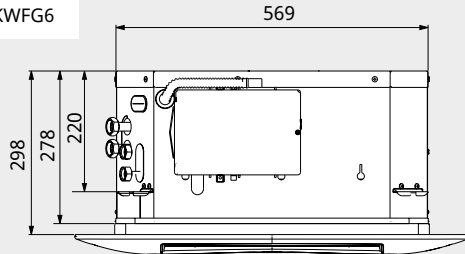
*²) Applicable at water temperature +7/12 °C, air temperature in +27 °C, relative humidity 47%.

*³) Sound power (L_{WA}).

*⁴) Sound pressure (L_{pA}). Conditions: Distance to the unit 3 metres. Directional factor: 2. Equivalent absorption area: 40 m². At lowest/highest airflow.

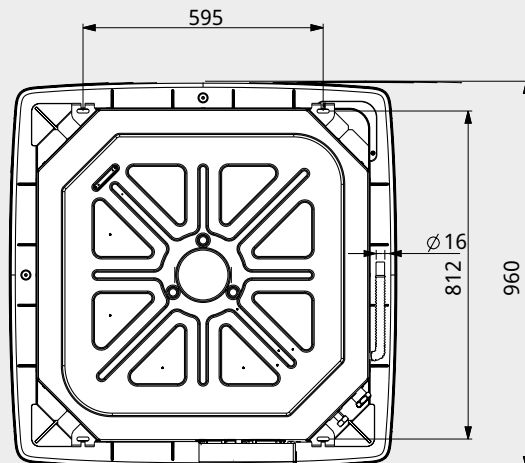
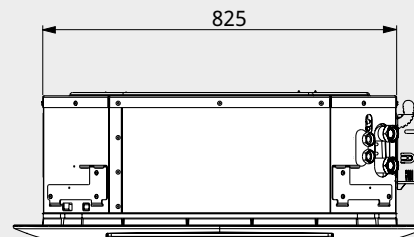
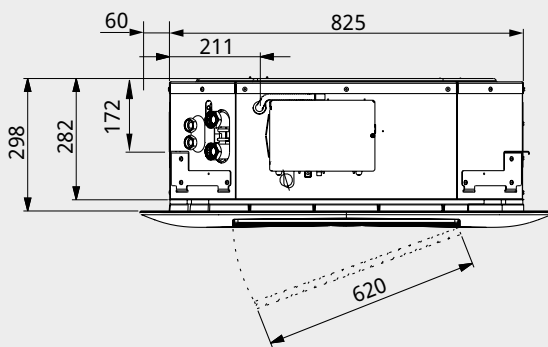
Dimensions - TKW with standard front grille

TKW20-40 + TKWFG6



TKW20	DN20 (3/4")
TKW30	DN20 (3/4")
TKW40	DN20 (3/4")
TKW204	DN15 (1/2")
TKW304	DN15 (1/2")
TKW404	DN15 (1/2")

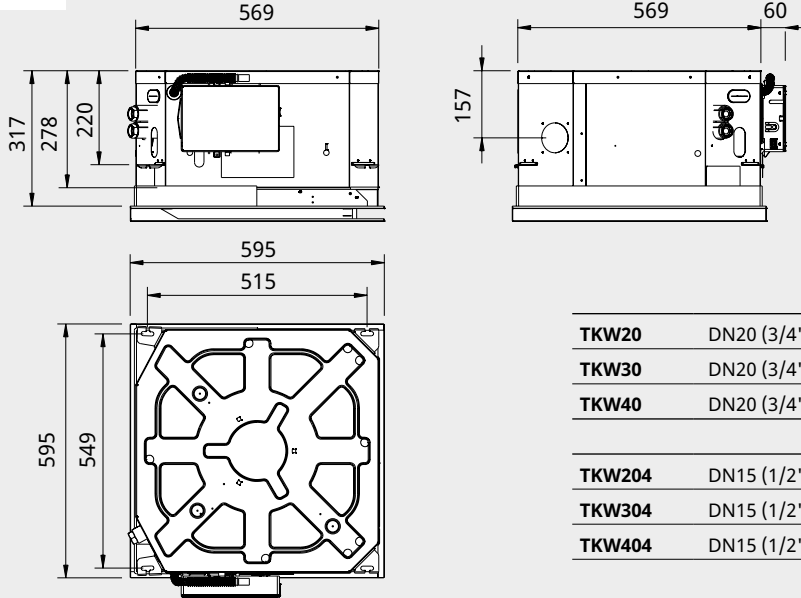
TKW50-70 + TKWFG9



TKW50	DN25 (1")
TKW60	DN25 (1")
TKW70	DN25 (1")
TKW604	DN20 (3/4")
TKW704	DN20 (3/4")

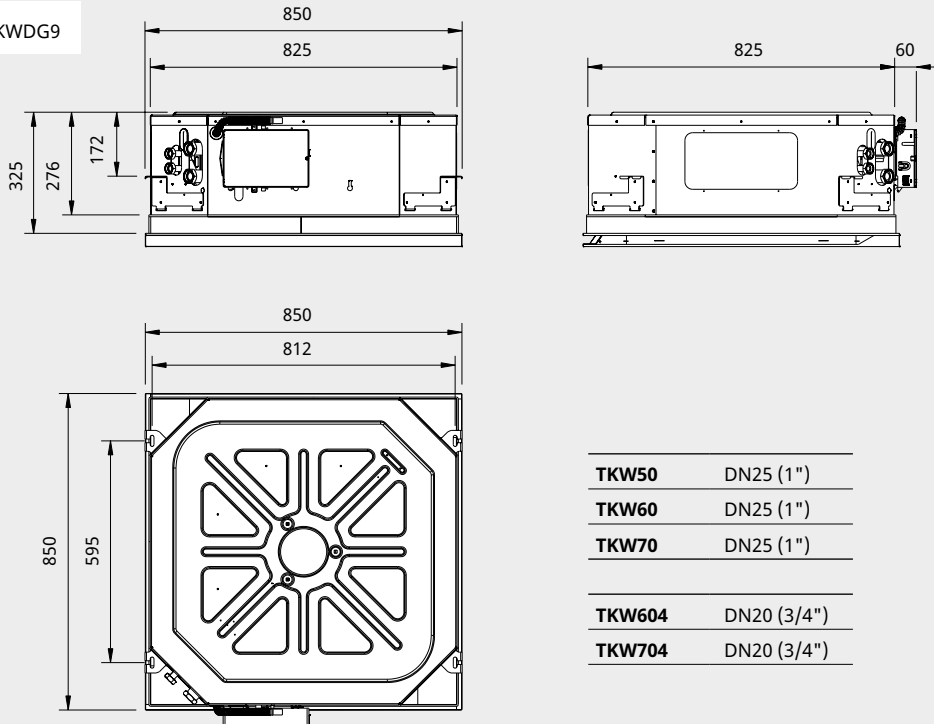
Dimensions - TKW with design front grille

TKW20-40 + TKWDG6

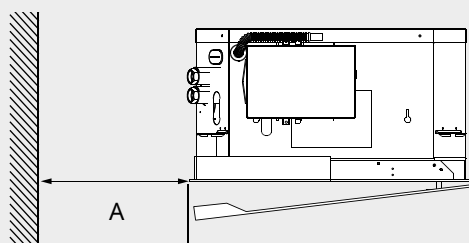


TKW20	DN20 (3/4")
TKW30	DN20 (3/4")
TKW40	DN20 (3/4")
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TKW204	DN15 (1/2")
TKW304	DN15 (1/2")
TKW404	DN15 (1/2")

TKW50-70 + TKWDG9



TKW50	DN25 (1")
TKW60	DN25 (1")
TKW70	DN25 (1")
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TKW604	DN20 (3/4")
TKW704	DN20 (3/4")



A	
TKW20/30/40 + TKWDG6	450 mm
TKW50/60/70 + TKWDG9	600 mm



Mounting and connection

Mounting

Ceiling convector TKW is adapted for installation within suspended ceiling systems, but can also be suspended from the ceiling. There are four fittings on the sides of the unit for suspension. See figure.

The front grille is mounted on the underside of the fan, guiding the air in several directions (min. 2, max. 4 directions). For minimum distances for TKW with design front grille, see dimension diagrams.

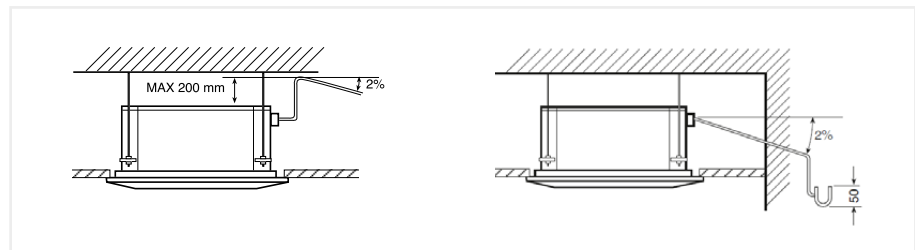
Connection

The fan motor is connected to a terminal box located on one side of the unit.

Water connection

The ceiling convector is fitted with pipe connections with female coupling (for connection dimensions, see dimension diagram).

The condensate drain has a 16 mm diameter connection. Condensate may be discharged at a maximum height of 200 mm above the unit. To ensure correct condensate water flow, the drain pipe should have a gradient of 2% without obstructions. If the drain pipe cannot be led to a floor drain with a water trap, it is recommended that a water trap of at least 50 mm depth be made to prevent unpleasant odors from reaching the room. See figure.



TKWFG



TKWDG A (360°)



TKWDG B (180°)



TKWDT

Accessories

TKWFG, front grille

TKWFG allows air distribution in 2, 3 or 4 directions and is made of plastic. Colour: white, RAL 9010.

TKWDG, design front grille

TKWDG has an appealing design in galvanized and powder coated steel panels. TKWDGxA allows air distribution in 4 directions, TKWDGxB in 3 directions. Colour: white, RAL 9003.

TKWDT, drip tray

Used to collect condensation when the unit is used for cooling.

Item number	Type	Dimensions					
		TKW20	TKW30	TKW40	TKW50	TKW60	TKW70
372698	TKWFG6	•	•	•			720x720x35 mm
372706	TKWFG9				•	•	960x960x35 mm
247276	TKWDG6A	•	•	•			595x595x24 mm
247278	TKWDG9A				•	•	849x849x30 mm
247277	TKWDG6B	•	•	•			595x595x36 mm
247279	TKWDG9B				•	•	849x849x38 mm
157024	TKWDT6	•	•	•			394x141 mm
157025	TKWDT9				•	•	250x145 mm



Control options

Heating/cooling

The FCR230 regulates the airflow according to the set room temperature. Complete regulation kit:

- FCR230, stepless room regulator for TKW EC or FCR230AC, 3-step room regulator for TKW AC
- VPTK, valve kit

Change over

The FCR230 regulates the airflow according to the set room temperature. In "change over" mode between heating and cooling, the clamp-on sensor TG-A1/PT1000 must be used, which detects the temperature in the supply pipe. Complete regulation kit:

- FCR230, stepless room regulator for TKW EC or FCR230AC, 3-step room regulator for TKW AC
- TG-A1/PT1000, clamp-on sensor
- VPTK, valve kit

Control

FCR230, room regulator

FCR230 is a room regulator for control of heating and/or cooling in a room. It is intended to control 230V thermic actuators and has fan control that regulates the fan speed steplessly with an analogue 0-10V signal. Communication via Modbus, BACnet or EXOline. The regulator has an integrated sensor, alternatively an external room sensor (ECG1) can be connected.

FCR230 can control up to 5 ceiling convectors.



FCR230
FCR230AC



ECG1



TG-A1/PT1000

FCR230AC, 3-step room regulator

The FCR230AC has the same features as the FCR230 except that it regulates the fan speed in 3 steps via relays.

ECG1, external room temperature sensor

Room sensor which is used in the event of concealed installation in conjunction with room regulator FCR230/FCR230AC.

TG-A1/PT1000, clamp-on sensor

Sensor in "change over" mode when unit is switching between heating and cooling. The sensor detects the temperature in the supply pipe.

VPTK, valve kit

Valve kit with two-way valve and 230V actuator. Available in four models: DN15 Kvs 0.4 or 0.6 and DN20 Kvs 2.4 or 4.0. Two valve kits are required for TKW with 4-pipe system.

VPTK



Item number	Type	Description	Dimensions
76649	FCR230	Room regulator 0-10, TKW EC, IP20	120x102x29 mm
398206	FCR230AC	Room regulator 3 steps, TKW AC, IP20	120x102x29 mm
11929	ECG1	External room temperature sensor, IP30	86x86x30 mm
7284	TG-A1/PT1000	Clamp-on sensor PT1000, IP65	
157457	VPTK1504	Valve kit DN15 Kvs 0,4	
157458	VPTK1506	Valve kit DN15 Kvs 0,6	
157459	VPTK2025	Valve kit DN20 Kvs 2,5	
157460	VPTK2040	Valve kit DN20 Kvs 4,0	