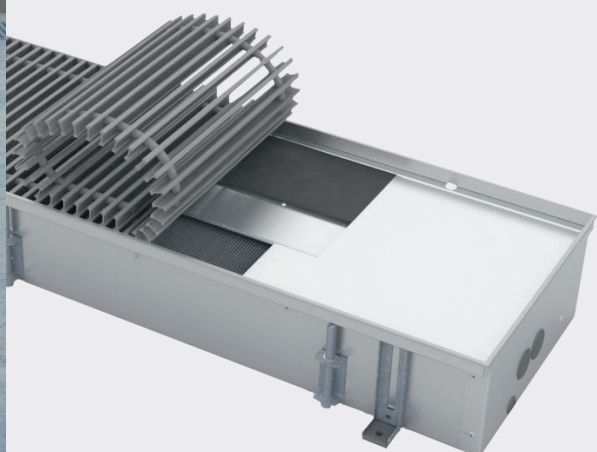
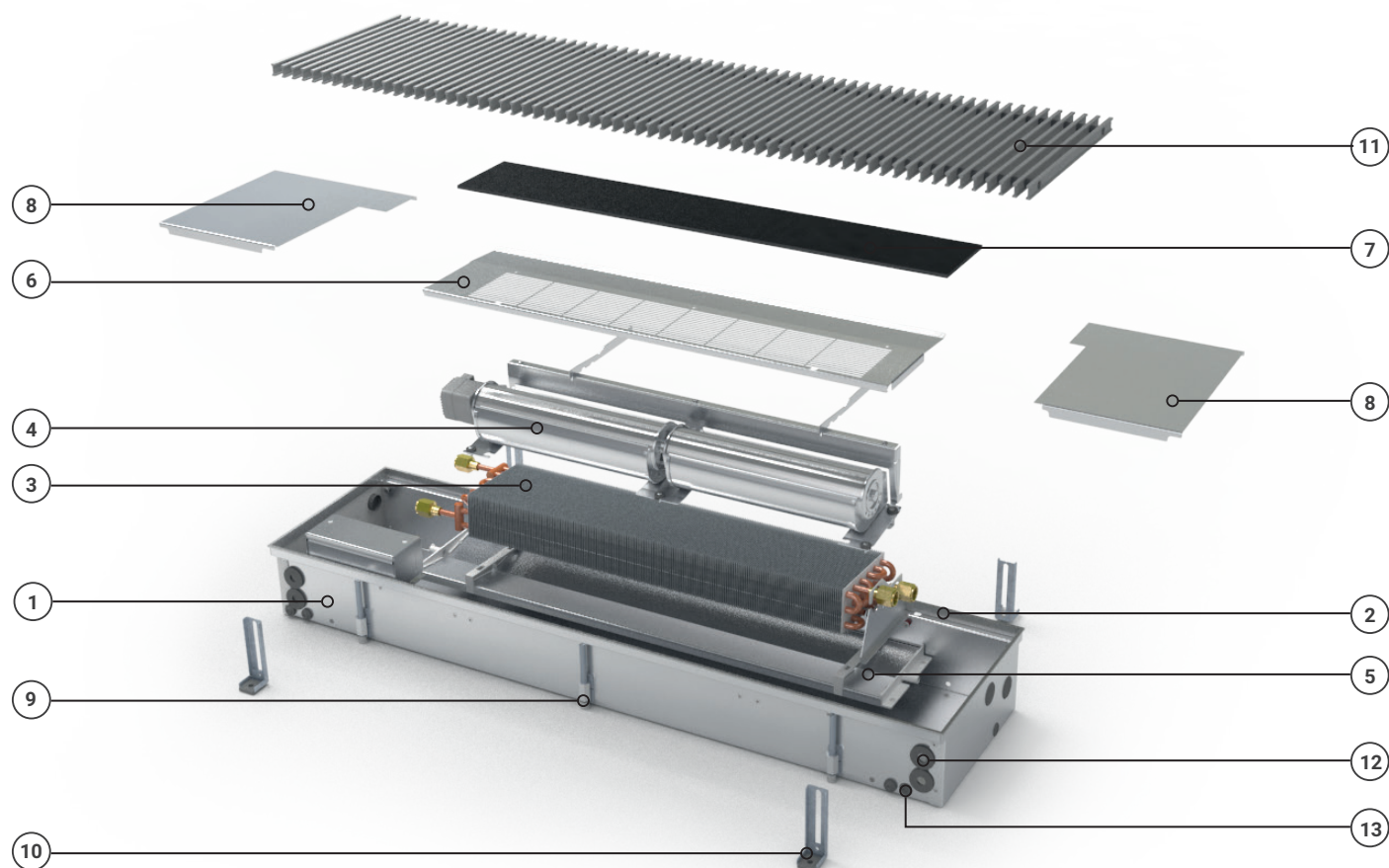




TRENCH CONVECTORS WITH FORCED CONVECTION FOR HEATING AND COOLING **FCH**

- 2-pipe and 4-pipe models
- Wet cooling and dry cooling ready
- Perfect compatibility with heat pumps
- One of the highest heat output and cooling capacity in the market
- Tested according to EN 16430 in independent accredited laboratory
- High rise of cooled air
- Stainless steel casings
- Low noise levels
- Fans with most economical EC-type motors
- Safe voltage of fans
- Exceptional rigidity of casings
- Highly efficient, rapid (have very small water content) and economic copper - aluminium heat exchangers
- Possibility to change level of casing at anytime during exploitation
- All fixing brackets and bolts have soundproofing elements
- Possibility to control up to 30 units with 1 thermostat
- Wide range of wooden and aluminium grilles
- Supply air filters are in standard sets





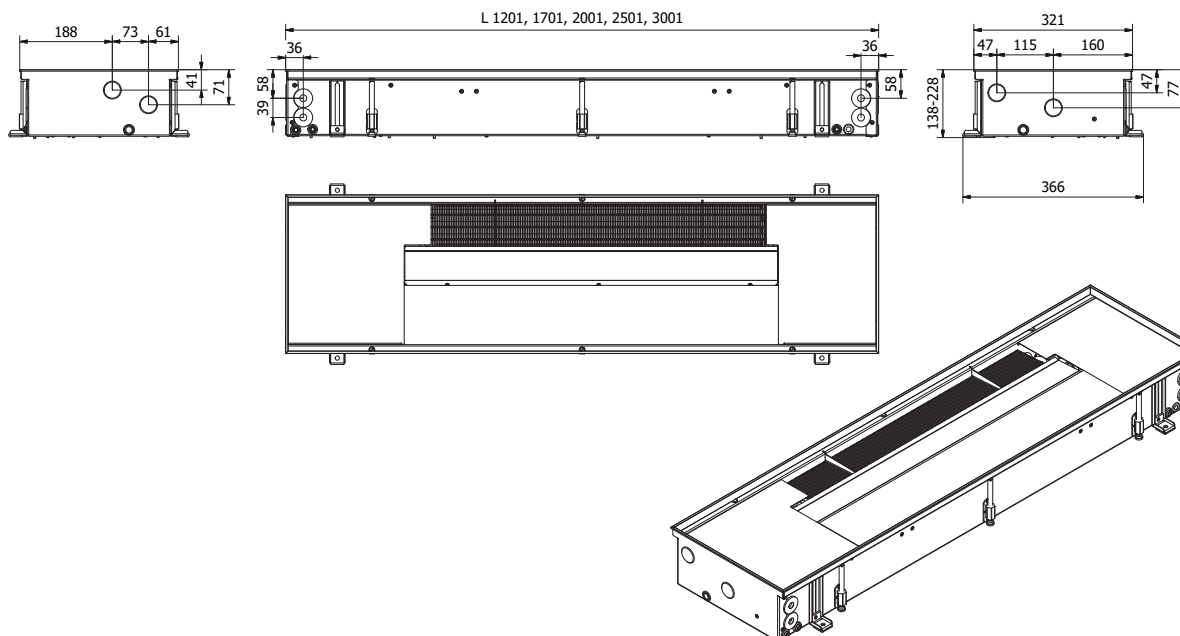
- | | |
|--|---|
| ① Stainless steel casing | ⑧ Cover for the hydraulic connections |
| ② Anodized aluminium frame, with the colour matching the colour of the grilles | ⑨ Sound-proofing mounting feet to regulate and strengthen the device |
| ③ Copper - aluminium heat exchanger | ⑩ Elements for fixing the casing to the floor with sound-proofing gaskets |
| ④ Tangential fan with an EC motor | ⑪ Grilles |
| ⑤ Drain pan | ⑫ Sealing element for pipes |
| ⑥ Fan protection / air deflector / filter holder | ⑬ Sealing element for cables |
| ⑦ Inlet air filter | |

SCOPE OF APPLICATION AND ADVANTAGES

- Scope of application: for indoor heating and cooling
- Fast achievement and precise maintaining of the desired temperature
- Excellent compatibility with heat pumps
- Availability of 2-pipe and 4-pipe models
- Quiet-running, powerful fans with cost-efficient EC type motors
- Extremely rigid stainless steel body casing (1,2 mm thickness) with up to 12 pcs. of supports for bearing the maximum load
- The possibility of adjusting the height of the device after mounting (when mounting into raised floor) is provided
- All supporting elements are equipped with sound insulation - the noise entering the room below is reduced
- Good tightness of casings prevents the concrete from entering inside. Sealing elements for pipes and cables are also supplied
- All fasteners required for mounting are included in the standard kit

STANDART SET

Stainless steel casing	1 pc	Air filter	1 pc
Anodized aluminium frame	1 kit	Fasteners	1 kit
Copper-aluminium heat exchanger	1 pc	Installation Instructions	1 pc
Fan with protection and airflow deflectors	1-2 pc	Corrugated cardboard box	1 pc
Bath for condensate	1 pc		



TECHNICAL DATA FCH4 (4 pipe version)

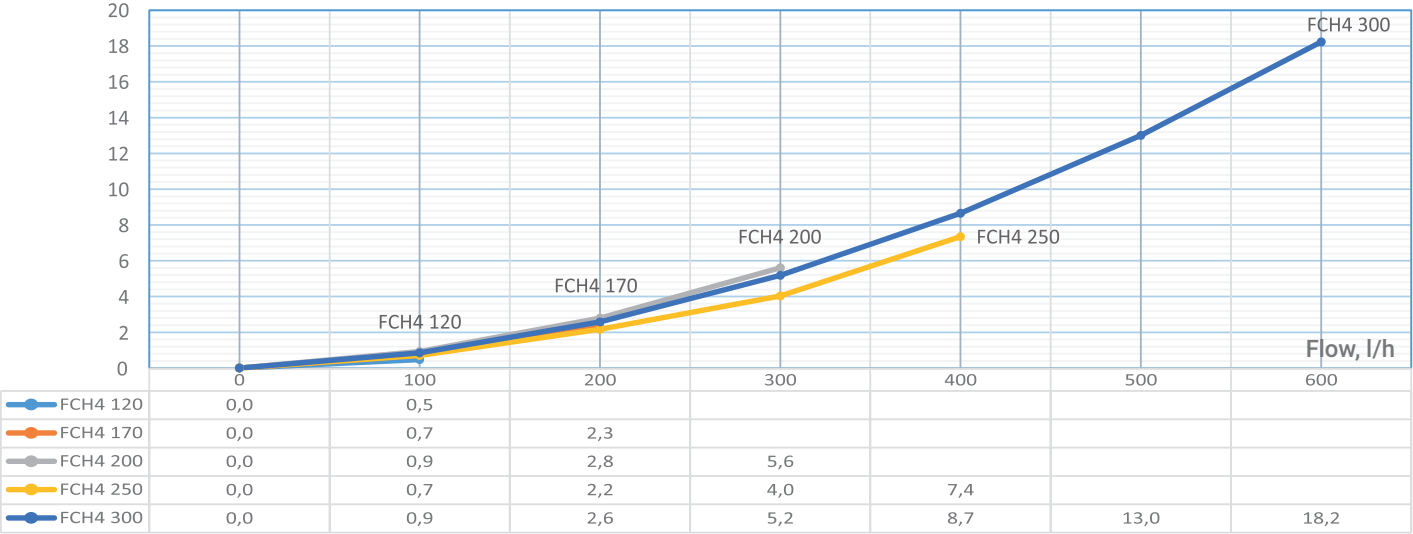
Length	1200 - 3000 mm	Thread of the hydraulic connections	G 1/2"
Width	320 mm	Type of thread for the hydraulic connections	inner
Height	130 mm	Position of the hydraulic connections	in both sides of the appliance
Type of fan motors	EC	Test pressure	30 bar
Fan operating voltage	24V DC	Operating pressure	20 bar
Fan speed control voltage	0 - 10V	Operating temperature	5 - 120°C

Fan speed	Heat output, W			Sensible cooling output, W			Sound levels		Air flow, m3/h
	75/65/20°C	55/45/20°C	35/30/20°C	7/12/27°C	7/12/25°C	14/17/25°C	Sound pressure level, dB(A)	Sound power level, dB(A)	
FCH4 120-32-13									
5	2 013	1 196	490	960	857	544	41	49	0 - 383
4	1 859	1 104	452	808	722	458	36	45	
3	1 661	986	404	647	578	367	28	37	
2	1 380	820	336	473	423	268	23	32	
1	901	535	219	277	247	157	20	29	
FCH4 170-32-13									
5	3 624	2 152	881	1 728	1 542	979	42	51	0 - 520
4	3 347	1 988	814	1 454	1 299	824	41	50	
3	2 989	1 775	727	1 165	1 040	660	34	44	
2	2 485	1 476	604	852	761	482	29	38	
1	1 623	964	395	499	445	283	25	35	
FCH4 200-32-13									
5	4 026	2 392	980	1 920	1 714	1 088	44	53	0 - 766
4	3 718	2 208	904	1 616	1 444	916	39	48	
3	3 322	1 972	808	1 294	1 156	734	31	41	
2	2 760	1 640	672	946	846	536	24	34	
1	1 802	1 070	438	554	494	314	22	32	
FCH4 250-32-13									
5	5 637	3 348	1 371	2 688	2 399	1 523	43	54	0 - 903
4	5 206	3 092	1 266	2 262	2 021	1 282	40	50	
3	4 650	2 761	1 131	1 812	1 618	1 027	33	43	
2	3 865	2 296	940	1 325	1 184	750	26	37	
1	2 524	1 499	614	776	692	440	24	33	
FCH4 300-32-13									
5	7 248	4 304	1 762	3 456	3 084	1 958	43	54	0 - 1040
4	6 694	3 976	1 628	2 908	2 598	1 648	42	53	
3	5 978	3 550	1 454	2 330	2 080	1 320	33	44	
2	4 970	2 952	1 208	1 704	1 522	964	27	38	
1	3 246	1 928	790	998	890	566	24	35	

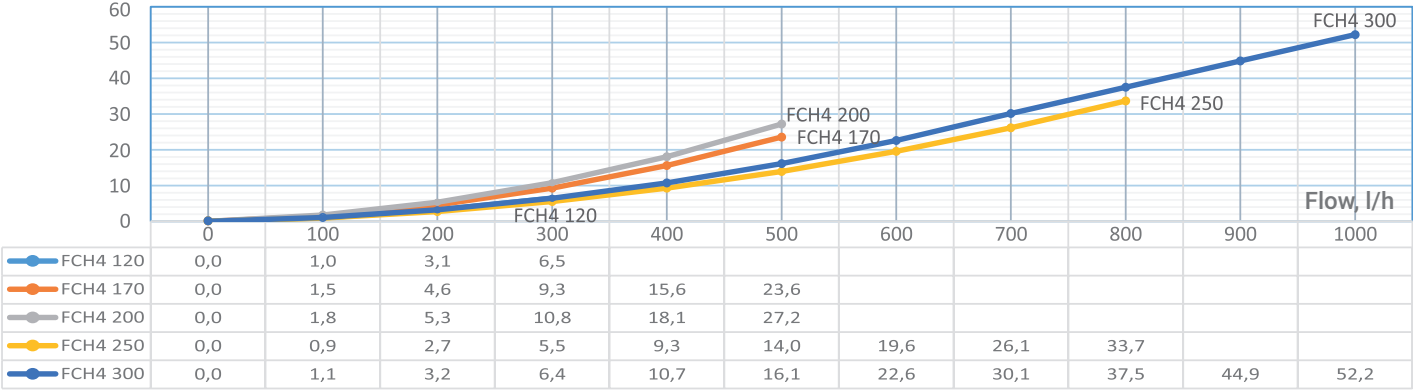
More detailed information about product you can find in our website www.konveka.it

Model	Length, mm	No. of fans, pc	Max el. power, A	Max el. power, V	Length of heat exchanger, mm	Weight, kg	Water volume FCH4, ltr	
							Heating	Cooling
FCH4 120-32-13	1200	1	0,63	15	675	21,2	0,17	0,6
FCH4 170-32-13	1700	1	0,75	18	1189	28,9	0,3	1,05
FCH4 200-32-13	2000	2	1,25	30	1431	33,9	0,36	1,26
FCH4 250-32-13	2500	2	1,38	33	1945	42,2	0,49	1,72
FCH4 300-32-13	3000	2	1,5	36	2458	51,5	0,62	2,17

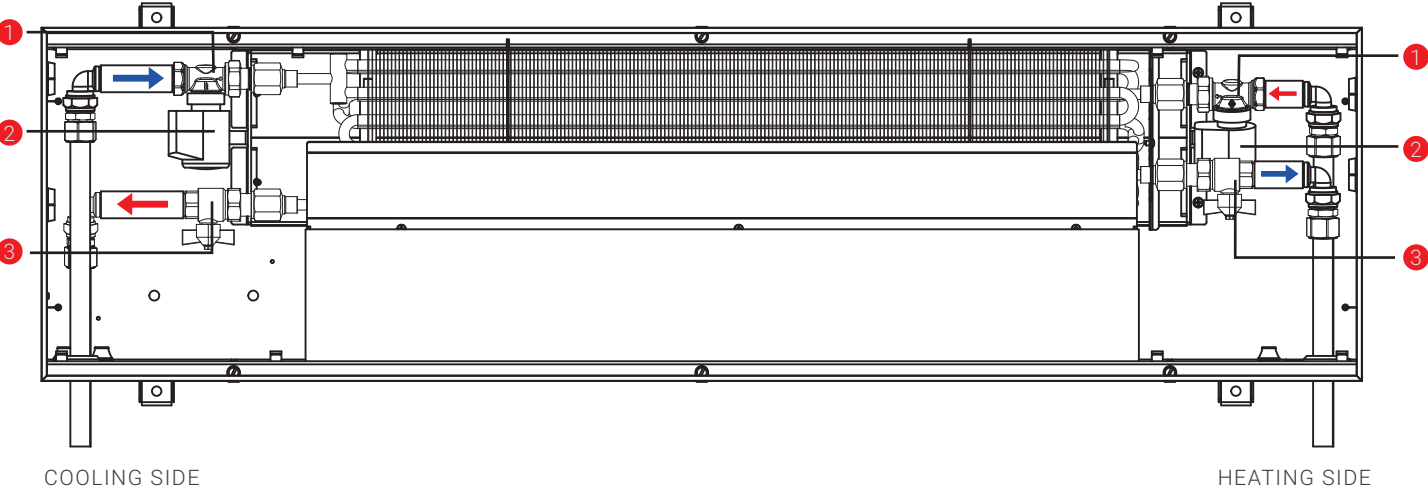
FCH4 pressure losses (heating), kPa



FCH4 pressure losses (cooling), kPa



EXAMPLE OF CONNECTIONS FCH4

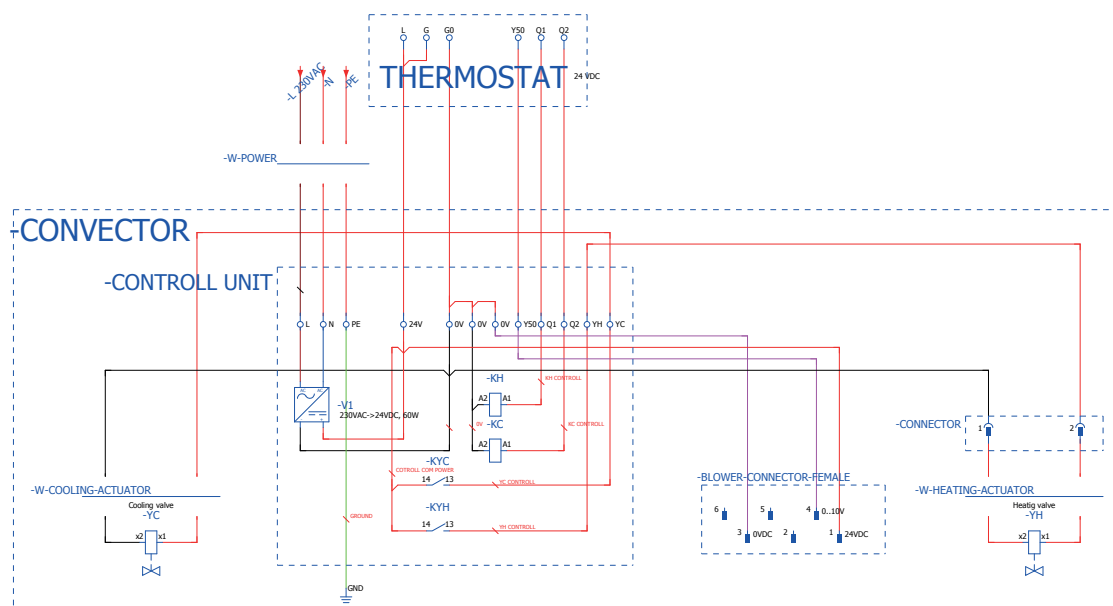


FCH4 INSTALLATION FEATURES

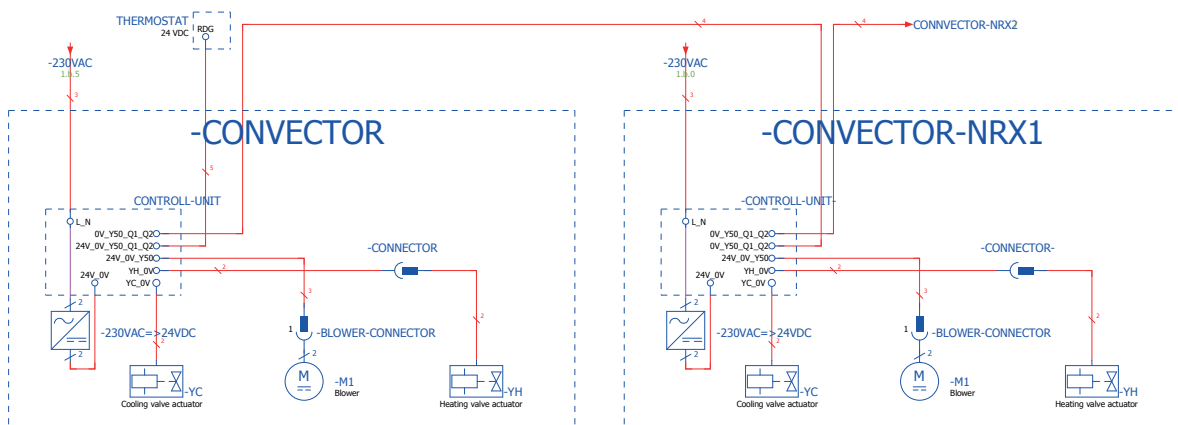
- The side with the heat exchanger is always mounted closer to the window (wall)
- Provided possibility to connect pipes through the side or end of the convector
- The 4-pipe heat exchanger has two independent circuits. They are connected to the heating and cooling systems on both sides of the device as follows:
 - To a cooling system – on a side of the control box;
 - To a heating system – on a side of condensate water outlet.
- Energy carrier supply have to be connected to heat exchanger connection which is further from fans
- Outgoing pipes of both circuits have to be connected to the heat exchanger's connection which is closer to fans
- All fasteners required for mounting are included in the standard kit.
- The possibility of adjusting the height of the device after mounting (when mounting into raised floor) is provided

FCH4 DEVICE ELECTRICAL CIRCUIT

ELECTRICAL CONNECTION DIAGRAM FOR FCH4



ELECTRICAL CONNECTION DIAGRAM FOR FEW FCH4 TO SAME THERMOSTAT



- Convectors installed in the same room are controlled based on the Master - Slave principle
- A 220V power supply is connected to the master control unit
- Fans are controlled by 0 – 10V from the indoor thermostat, with a 24V power supply
- Valve actuators are controlled either with the 0 – 10V or the ON/OFF switch, depending on the type of actuators chosen

ORDER CODE

Type	Length, cm	Width, cm	Height, cm	Example
FCH4	250	32	13	FCH4 250-32-13
FCH4 + ECB	250	32	13	FCH4 250-32-13 + ECB

TECHNICAL DATA FCH2 (2 pipe version)

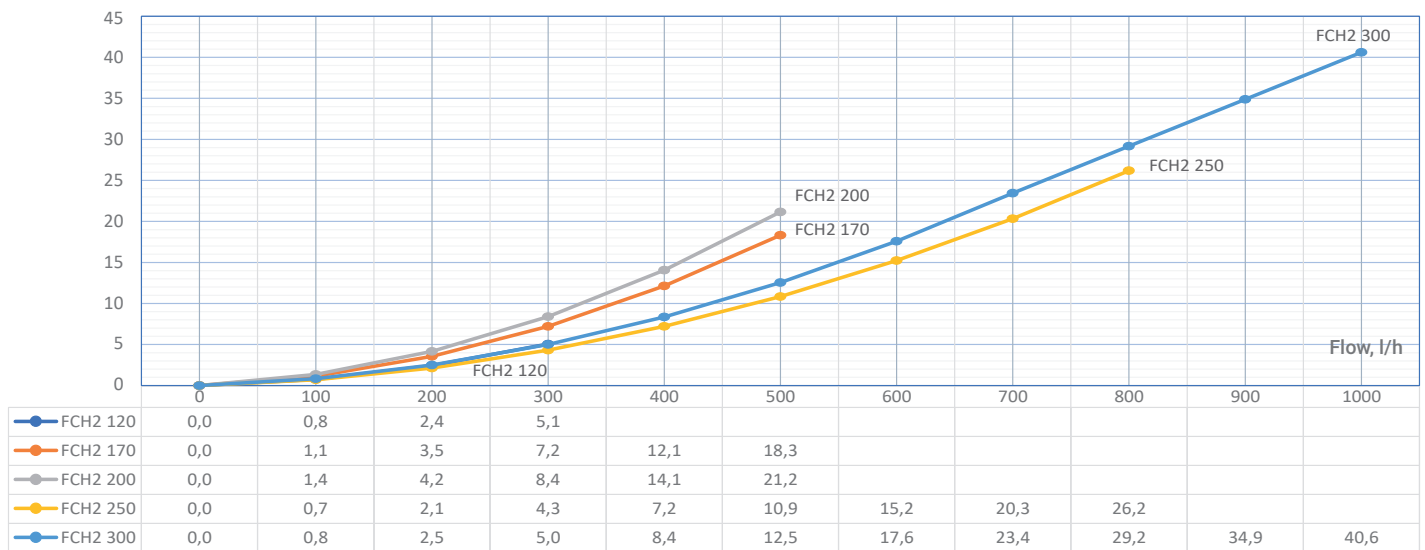
Length	1200 - 3000 mm	Thread of the hydraulic connections	G 1/2"
Width	320 mm	Type of thread for the hydraulic connections	inner
Height	130 mm	Position of the hydraulic connections	1 side
Type of fan motors	EC	Test pressure	30 bar
Fan operating voltage	24V DC	Operating pressure	20 bar
Fan speed control voltage	0 - 10V	Operating temperature	5 - 120°C

Fan speed	Heat output, W			Sensible cooling output, W			Sound levels		Air flow, m3/h
	75/65/20°C	55/45/20°C	35/30/20°C	7/12/27°C	7/12/25°C	14/17/25°C	Sound pressure level, dB(A)	Sound power level, dB(A)	
FCH2 120-32-13									
5	3326	1975	809	974	870	552	41	49	0 - 383
4	2962	1759	720	815	728	462	36	45	
3	2487	1477	605	652	582	369	28	37	
2	1912	1135	465	475	424	269	23	32	
1	1132	672	275	277	248	157	20	29	
FCH2 170-32-13									
5	5781	3433	1405	1755	1568	994	42	51	0 - 520
4	5264	3126	1280	1473	1316	835	41	50	
3	4427	2629	1076	1174	1049	665	34	44	
2	3399	2019	826	856	765	485	29	38	
1	2014	1196	490	500	446	283	25	35	
FCH2 200-32-13									
5	6653	3951	1617	1949	1741	1104	44	53	0 - 766
4	5924	3518	1440	1630	1456	924	39	48	
3	4975	2954	1210	1303	1164	738	31	41	
2	3824	2271	930	949	848	538	24	34	
1	2264	1345	551	554	495	314	22	32	
FCH2 250-32-13									
5	9107	5408	2214	2730	2438	1546	43	54	0 - 903
4	8226	4885	2000	2289	2044	1296	40	50	
3	6914	4106	1681	1826	1631	1034	33	43	
2	5311	3154	1291	1331	1188	754	26	37	
1	3146	1868	765	777	694	440	24	33	
FCH2 300-32-13									
5	11561	6866	2811	3511	3136	1989	43	54	0 - 1040
4	10529	6253	2560	2947	2632	1669	42	53	
3	8853	5258	2153	2348	2097	1330	33	44	
2	6798	4037	1653	1712	1529	970	27	38	
1	4027	2392	979	999	893	566	24	35	

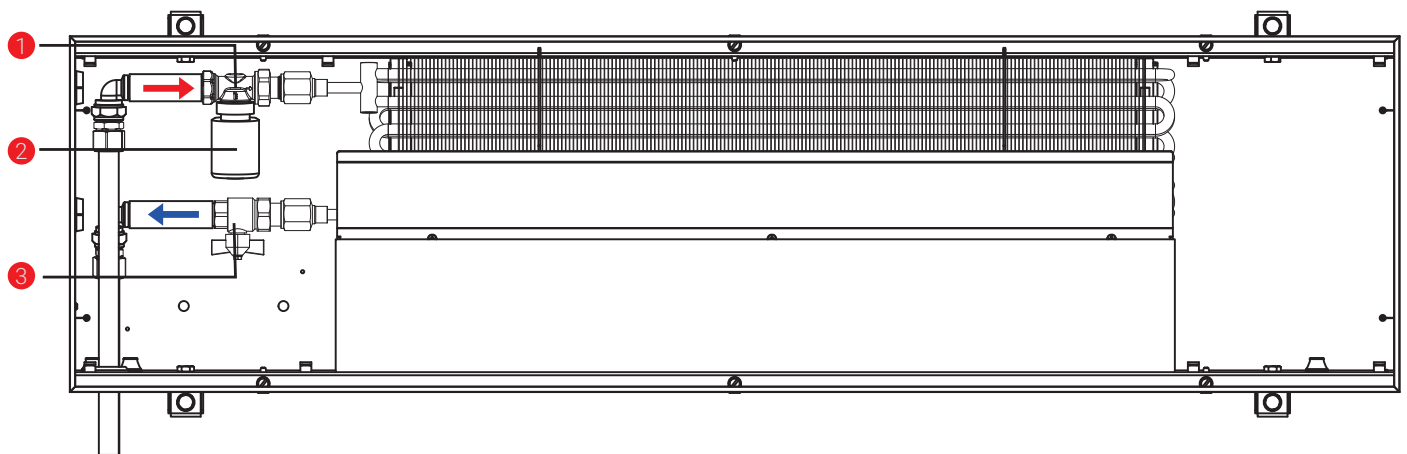
More detailed information about product you can find in our website www.konveka.it

Model	Length, mm	No. of fans, pc	Max el. power, A	Max el. power, V	Length of heat exchanger, mm	Weight, kg	Water volume FCH2, ltr
							Heating/Cooling
FCH2 120-32-13	1200	1	0,63	15	675	21,2	0,77
FCH2 170-32-13	1700	1	0,75	18	1189	28,9	1,35
FCH2 200-32-13	2000	2	1,25	30	1431	33,9	1,62
FCH2 250-32-13	2500	2	1,38	33	1945	42,2	2,21
FCH2 300-32-13	3000	2	1,5	36	2458	51,5	2,79

FCH2 pressure losses, kPa



EXAMPLE OF CONNECTIONS FCH2

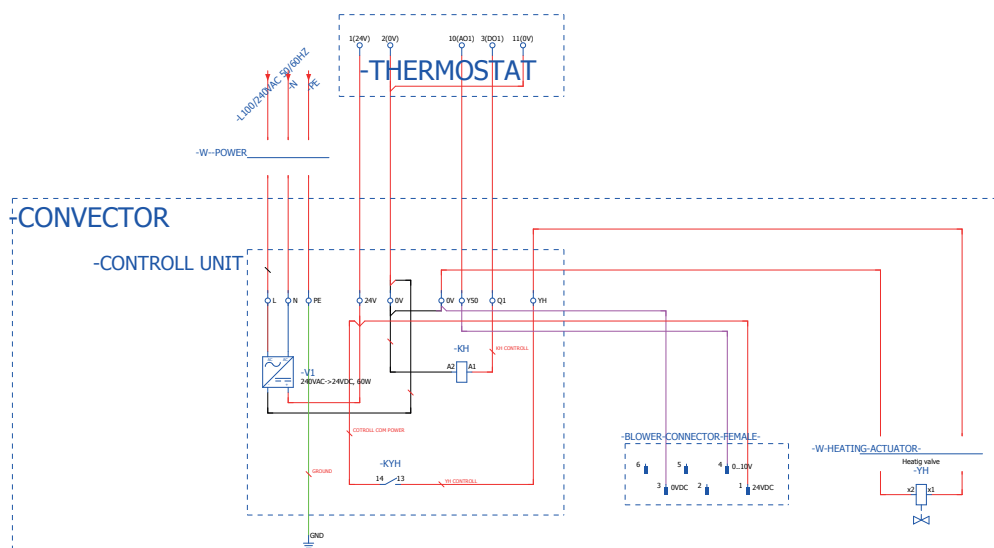


FCH2 INSTALLATION FEATURES

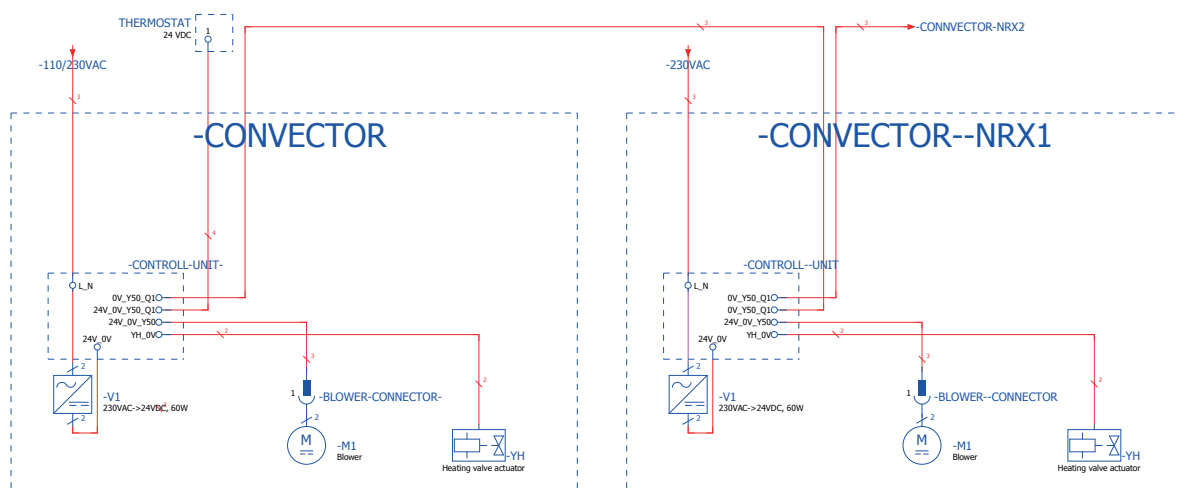
- The side with the heat exchanger is always mounted closer to the window (wall)
- Provided possibility to connect pipes through the side or end of the convector
- Thermostatic valves have to be attached to the heat exchanger to connections with air vents
- Energy carrier supply pipes have to be connected to thermostatic valves
- Pipes have to be connected to the heat exchanger through detachable shut-off valves
- All fasteners required for mounting are included in the standard kit
- The possibility of adjusting the height of the device after mounting (when mounting into raised floor) is provided

FCH2 DEVICE ELECTRICAL CIRCUIT

ELECTRICAL CONNECTION DIAGRAM FOR FCH2



ELECTRICAL CONNECTION DIAGRAM FOR FEW FCH2 TO SAME THERMOSTAT



- Convectors installed in the same room are controlled based on the Master - Slave principle
- A 220V power supply is connected to the master control unit

- Fans are controlled by 0 – 10V from the indoor thermostat, with a 24V power supply
- Valve actuators are controlled either with the 0 – 10V or the ON/OFF switch, depending on the type of actuators chosen

ACCESSORIES FOR FCH MODELS

1 ELECTRIC CONTROL BOX (ECB) (CAN BE INSTALLED INSIDE CONVECTOR'S CASING)



Ensures easy and fast connection between convector and room thermostat

Additional place for power supply is not required

24V DC power supply included

Relays for actuators of thermostatic valves included

El. connectors for fast connection of the cables included

2 THERMOSTATIC VALVE (FOR AN ENERGY CARRIER INTLET)



Controls flow with an electro-thermic actuator or thermostatic head

Possibility to set maximum flow

Total flow closure

3 THERMOSTATIC VALVE ACTUATOR



Adjustment of the thermostatic valves

Thermoelectric

Opened/Closed indicator

Voltage 24V DC

4 SHUT-OFF VALVE (FOR ENERGY CARRIER OUTLET)



For opening / closing of the flow

For disconnecting the heat exchanger from the heating / cooling system without draining

ROOM THERMOSTAT



For setting and control of the room temperature

Automatic or manual switch of the heating/cooling mode

Day/night and weekly temperature programmes

Accuracy of temperature control $\pm 0.5^{\circ}\text{C}$

Power supply of 24V DC

Stepless fan rotating speed control, 0 – 10V

Valve actuator control, 0 – 10V or On/OFF

Backlit LED display

ORDER CODE

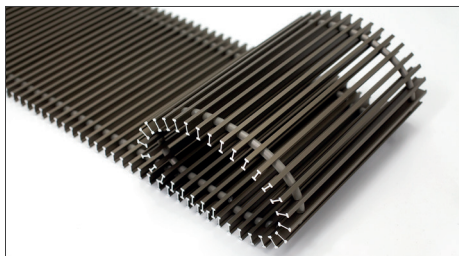
Type	Length, cm	Width, cm	Height, cm	Example
FCH2	250	32	13	FCH2 250-32-13
FCH2 + ECB	250	32	13	FCH2 250-32-13 + ECB

ALUMINIUM GRILLES

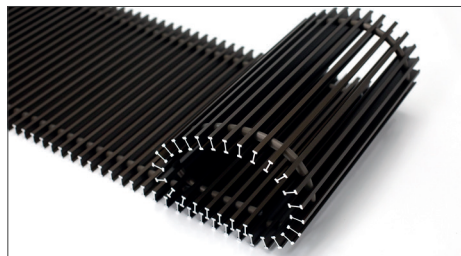
SILVER (ALS)



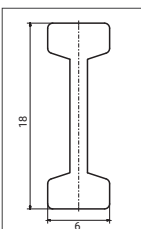
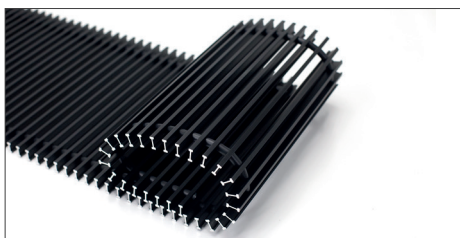
CHAMPAGNE (AL 10)



DARK BRONZE (AL 20)



BLACK (AL 50)



ALUMINIUM GRILLE PROFILE

Dimensions

Profile height	18 mm
Profile width	6 mm
Distance between profiles	12 mm

ALUMINIUM LINEAR GRILLES

SILVER (ALS)



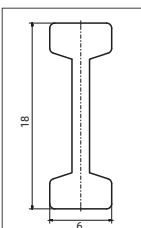
CHAMPAGNE (AL 10)



LIGHT BRONZE (AL 20)



BLACK (AL 50)



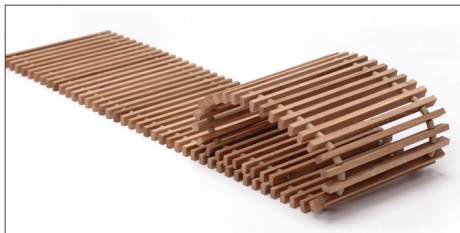
ALUMINIUM GRILLE PROFILE

Dimensions

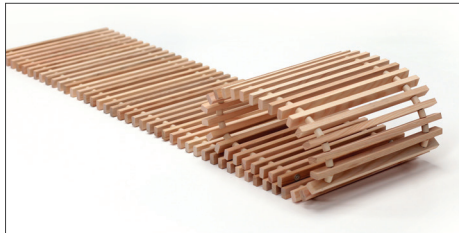
Profile height	18 mm
Profile width	6 mm
Distance between profiles	12 mm

WOODEN GRILLES

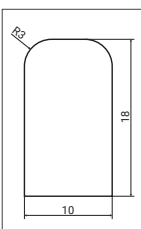
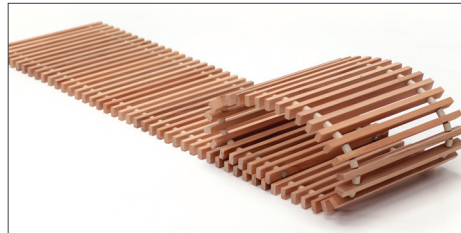
OAK



ASH



BEECH



WOODEN GRILLE PROFILE

Dimensions

Profile height	18 mm
Profile width	10 mm
Distance between profiles	13 mm

ORDER CODE FOR GRILLES

Type	Length, cm	Width, cm	Material	Example
GR	200	36	ALS	GR 200-36 ALS



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