Venkon

Fan coils, recirculation air.
Heating, cooling and filtering for the ultimate in comfort

Technical catalogue

KAMPMANN

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Contents

Venkon: Market-leading quiet.

With the Venkon, you are opting for a decentralised air treatment unit, at the same time as meeting all the expectations of a peaceful environment.

01 Product information

Schlosshotel Bad Wilhelmshöhe Conference & Spa, Kassel (Germany)

Venkon – The right solution for every challenge

Fan coils are used in comfort buildings of all types with high heating and cooling requirements as well as exacting user requirements. Venkon EC and AC models are based on the same construction and can be enhanced with a comprehensive range of accessories and controls.

EC technology
EC fans can be operated infinitely variably within a low fan speed range even at low air volumes with intelligent, integrated electronics on demand and this energy-efficiently. Low fan speeds have a positive effect on noise levels in areas, like hotels and offices, where the noise levels lie far below the audible threshold or the usual measuring range.

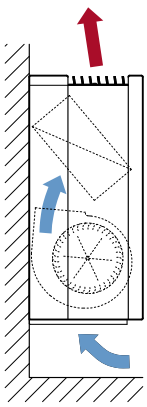
The energy-saving Venkon EC is designed in such a way that the lowest sound emissions can be reached at low speed stages as well as at very high speed stages. The right solution can therefore be combined in a single unit for every application, whether for living rooms and bedrooms, or rooms with internal loads.

Intelligent motor management permanently detects the operating state of the fans and keeps the pre-set speed constant, regardless of the fan length and external influences. All EC fans are fitted with a running motor thermal contact.

Kampmann is incorporating innovative knowledge and expertise in efficient, cost-saving technology with GreenTech EC fans from ebm-papst.

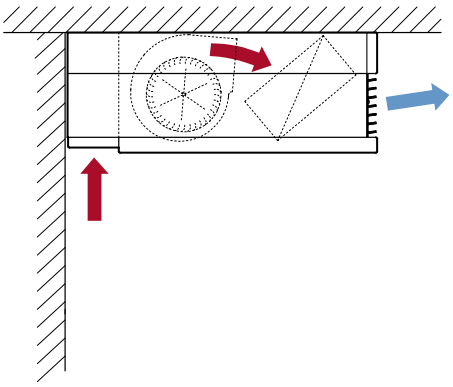
Heating example

Cross-section of wall-mounted without inlet grille



Cooling example

Cross-section of the ceiling with inlet grille



Product data

Product advantages

- hygiene-compliant in accordance with VDI 6022 in conjunction with optional ePM10 >50% filter
- market-leading quiet and nevertheless enormous outputs, at high speed ranges
- short delivery times
- easy to install
- fully automatic KaControl or connection to an existing, external building automation system
- customisation for projects and customers, even small quantities
- wide range of options

Example of ceiling casing

Features

- four sizes
- versatile combination of basic unit and casing
- staged AC fans or continuously variable EC fans
- optional fresh air connection
- 2-, 3-way valve kits or differential pressure-independent valve kit as an accessory
- comprehensive range of accessories

Heating
- LPHW

Cooling
- CHW

Installation
- wall- and ceiling-mounted

Heat exchanger
- 2-pipe
- 4-pipe

KaControl
- optional

Filter class:
- ISO Coarse as standard
- optional with ePM10>50% (M5) or ePM1>50% (F7)

Condensation pump
- head up to 5 m at 5 l / h

Condensation connection:
- outside diameter 15 mm

Casing designs:
- wall-mounted
- wall-standing
- free-standing
- ceiling

Performance data

Cooling output [1] [kW]
- 0.79 – 11.26

Heat output [2] [kW]
- 1.54 – 26.20

Operating limits
- max. operating pressure: 10 bar
- min. entering water temperature: 4 °C
- max. entering water temperature: 90 °C
- min. entering air temperature: 15 °C
- max. entering air temperature: 40 °C
- relative humidity: 20 – 60 %

Applications

Buildings of all kinds, which require whisper-quiet cooling and/or heating from a visually subtle design.

Hotels

Showrooms and shop floors

Offices and commercial buildings

Restaurants and cafés

[1] at CPW 7 / 12 °C and t_{L1} = 27 °C, 50% relative humidity
[2] at LPHW 75 / 65, t_L = 20 °C

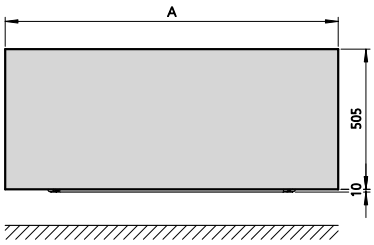
Selection guide: Overview of models

Model	Type	2 - 4 pipe system	Range of basic units (including casing)	Cooling outputs[1]	Heat outputs[2]	Further information
			[mm]	Q_k [kW]	Q_h [kW]	
61	AC	2-pipe	625 (900)	0.84 – 3.27	1.91 – 7.74	Pages 14 – 15
		4-pipe		0.79 – 3.08	1.54 – 4.99	Pages 16 – 17
	EC	2-pipe		0.86 – 3.42	1.95 – 8.24	Pages 18 – 19
		4-pipe		0.81 – 3.23	1.57 – 5.28	Pages 20 – 21
63	AC	2-pipe	925 (1200)	1.57 – 4.52	3.66 – 10.65	Pages 14 – 15
		4-pipe		1.43 – 4.10	2.89 – 7.04	Pages 16 – 17
	EC	2-pipe		1.18 – 5.26	2.86 – 12.82	Pages 18 – 19
		4-pipe		1.07 – 4.77	2.40 – 8.31	Pages 20 – 21
66	AC	2-pipe	1375 (1650)	2.23 – 7.67	5.12 – 17.74	Pages 14 – 15
		4-pipe		1.86 – 6.40	4.01 – 11.27	Pages 16 – 17
	EC	2-pipe		1.93 – 8.54	4.54 – 20.30	Pages 18 – 19
		4-pipe		1.61 – 7.13	3.67 – 12.71	Pages 20 – 21
67	AC	2-pipe	1725 (2000)	3.12 – 10.19	7.09 – 23.21	Pages 14 – 15
		4-pipe		2.72 – 8.91	5.44 – 14.55	Pages 16 – 17
	EC	2-pipe		2.28 – 11.26	5.45 – 26.20	Pages 18 – 19
		4-pipe		1.99 – 9.84	4.50 – 16.22	Pages 20 – 21

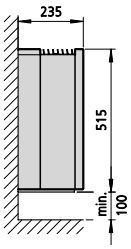
All models are available as wall-mounted and ceiling-mounted types and with left-hand and right-hand connection. These features do not have an impact on the outputs of the units.

Dimensions

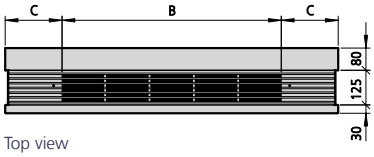
Venkon recirculating air unit, standard casing, wall model



Front view



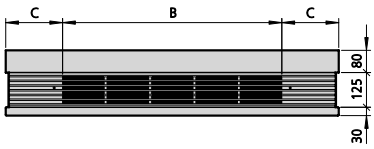
Side view



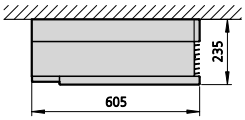
Top view

Model	Casing width A	Discharge opening B	C
	[mm]	[mm]	[mm]
61	900	470	215
63	1200	790	205
66	1650	1270	190
67	2000	1590	205

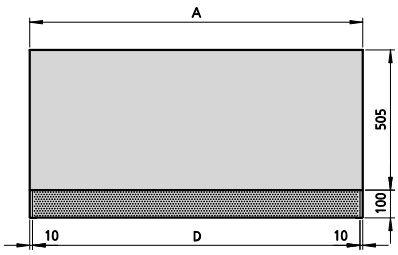
Venkon recirculating air unit, standard casing, ceiling model



Front view



Side view

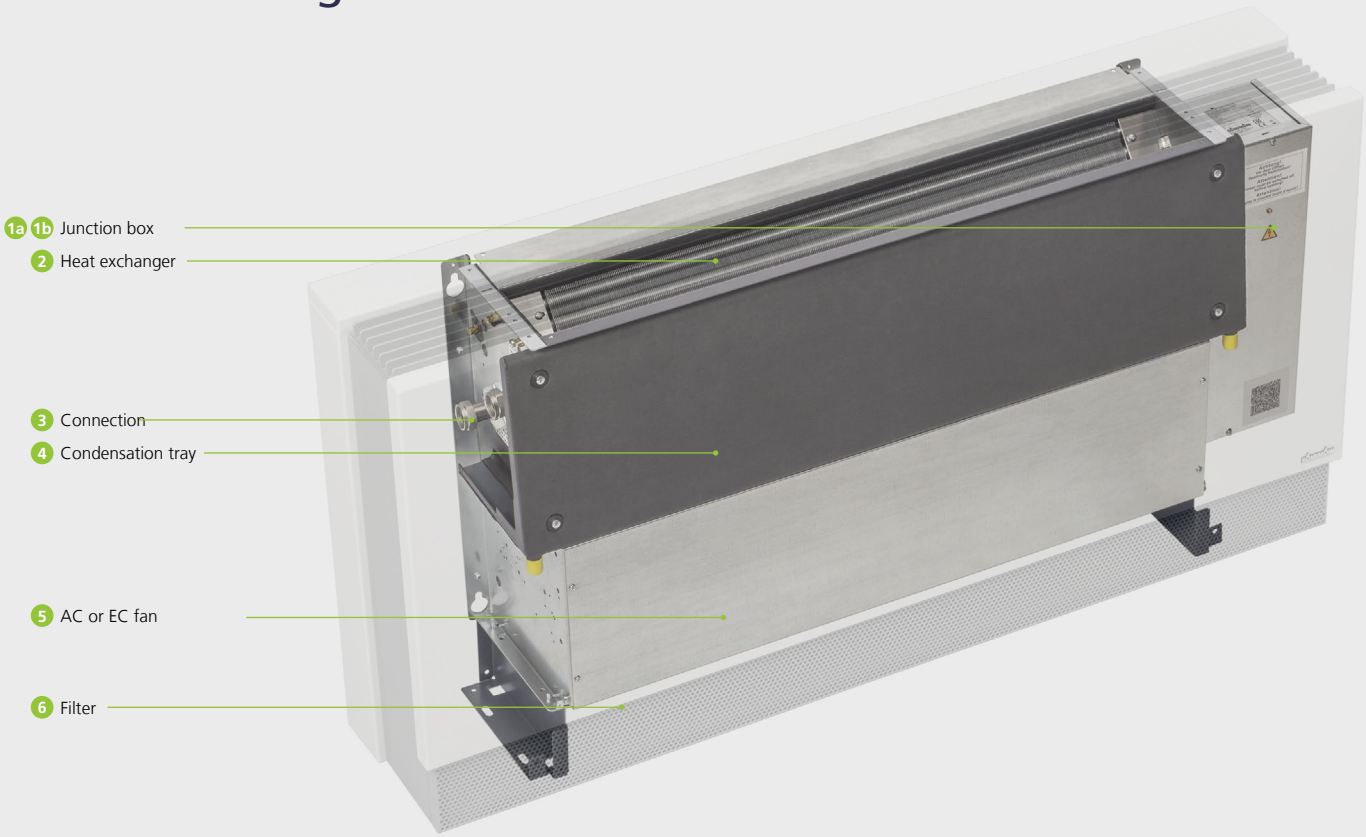


View from below

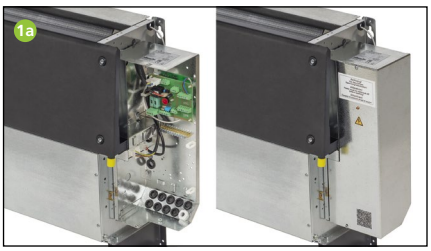
Model	Casing width A	Discharge opening B	C	Intake opening D
	[mm]	[mm]	[mm]	[mm]
61	900	470	215	880
63	1200	790	205	1180
66	1650	1270	190	1630
67	2000	1590	205	1980

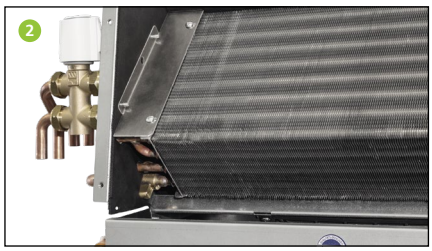
[1] at CPW 7 /12, t_L = 27 °C, 50 % relative humidity
[2] at LPHW 75/65, t_{L1} = 20 °C

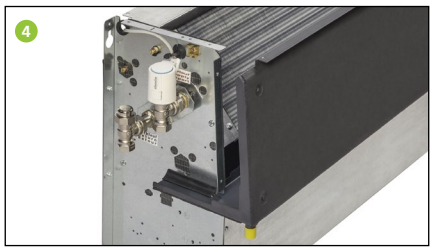
Venkon at a glance

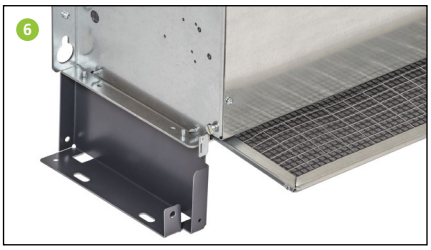


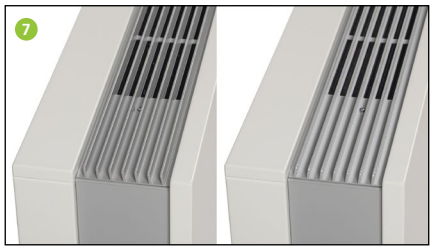
Features

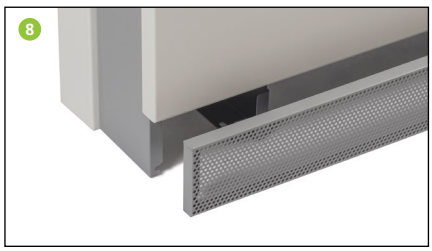


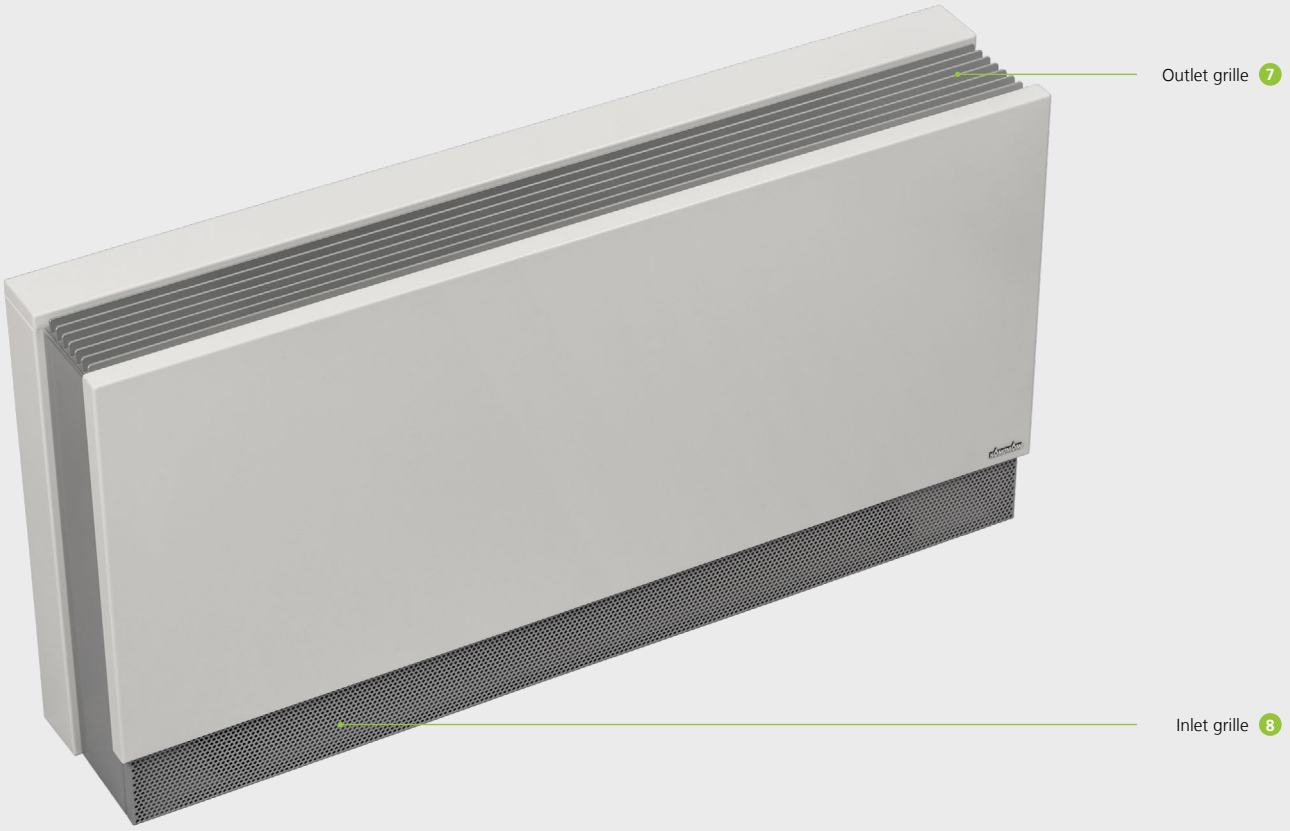












Example of wall-standing casing

1a Control configuration C1 with KaControl in the junction box
- wired ready for connection
- ease of access for maintenance by removable casing
- also available as a remote control box with 2.5 m long cable

1b Electromechanical control model
- wired ready for connection
- ease of access for maintenance by removable casing
- installation using Velcro strips for simple removal and handling on site

2 High-performance heat exchanger
- copper-aluminium
- optimised air- and water-side flow for maximum heat and cold discharge

3 Connection
- with anti-twist device to avoid damage to the connector when screwing in the valves
- different valve kits (optional) fixed to the unit and printed on the water side
- actuators (optional) connected and wired to valve kit

4 Condensation tray
- can be simply and conveniently removed for maintenance / cleaning

5 EC or AC fans
- lowest noise levels at low speeds and high outputs at high speeds

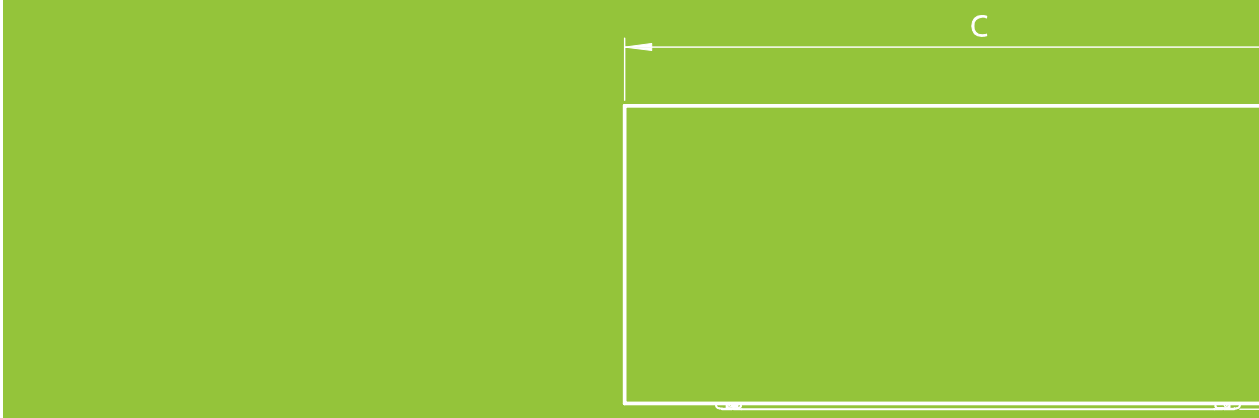
6 Filter
- maintenance-friendly filter removal at each installation position
- washable and hence recyclable filter

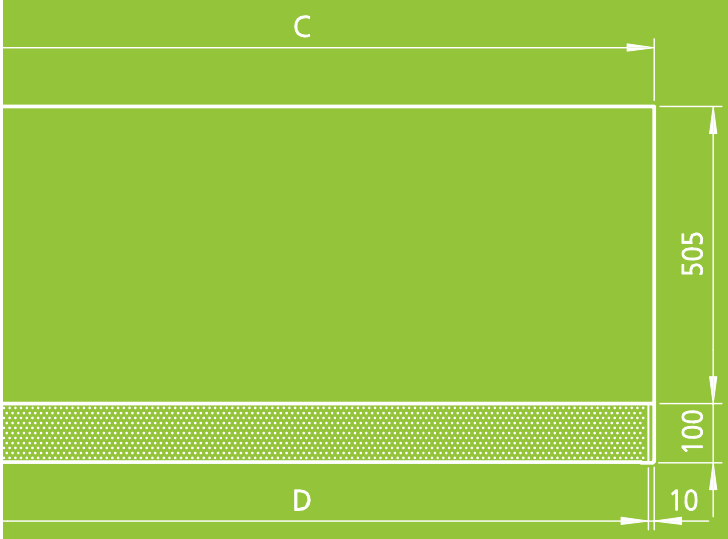
7 Output grille
- flow-optimised output behaviour by means of outlet grille
- change of outlet air angle, can also be subsequently retrofitted

8 Inlet grille
- simple installation and dismantling without a tool
- in an attractive, slimline design

Example of wall-mounted casing

02 Technical data





Advice on measuring conditions

The cooling and heat outputs have been calculated in line with DIN EN 1397:2015 "Water-air fan convectors, test methods for establishing the performance".

The specific requirements for cooling and heating mode are taken into account in DIN EN 1397. They are also based on Eurovent Certification.

Normative reference
The standard refers to:

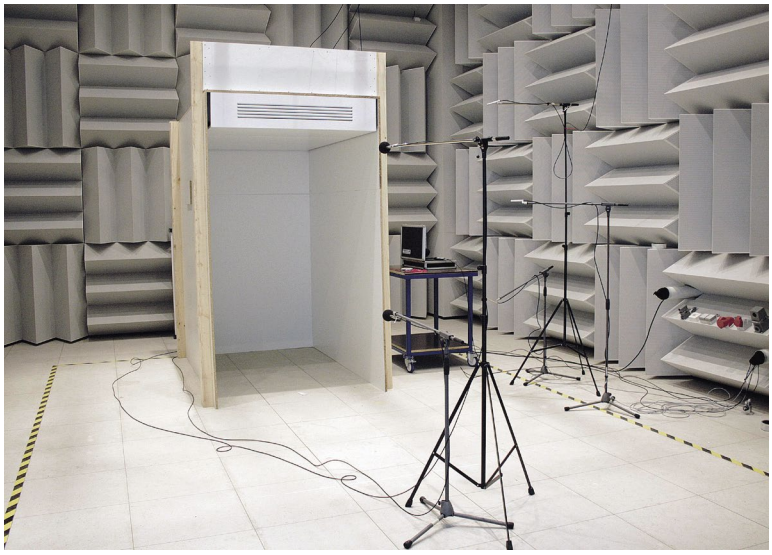
- EN 16583; Determining the sound power levels of noise sources
- EN 45001; General criteria for the operation of test laboratories
- ISO 5801; Industrial fans; Performance testing using standardised airways
- ISO 5221; Air distribution and air diffusion; Rules to methods of measuring air flow rate in an air handling duct

The entering air temperature of the fan convector is selected as the reference / air temperature, which should not be confused with the ambient temperature.

In practice, fan coils are positioned within a suspended ceiling or as sill units along the façade. Due to the temperature stratification that occurs, the entering air temperature differs from the air temperature in the room (measured at a height of 1.5 m).

Acoustics
Fan coils are very often used in acoustically sensitive areas. The units have therefore been optimised in terms of sound emissions.

The acoustic data were recorded in accordance with the provisions of DIN EN 16583 by DIN EN ISO 3744 and DIN EN ISO 3741 in the Kampmann GmbH laboratories.

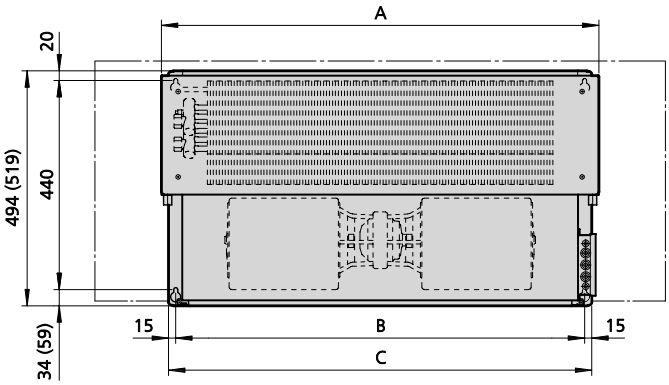


Acoustic laboratory

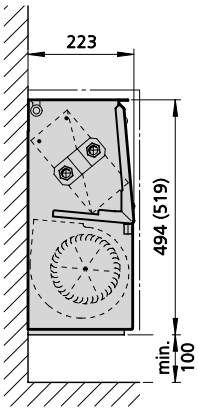
Venkon AC

Models 61 – 67, stage-controlled AC fans, 2-pipe

Technical drawings, wall-mounted model (dimensions in mm)

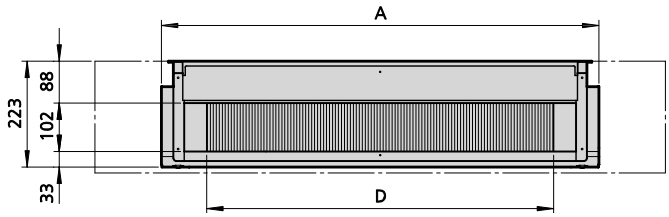


Front view (wall-mounted model)



Side view

Dimensions in brackets = model with cassette filter ePM10>50% (M5) or ePM1>5O% (F7)



Top view

Model	Basic unit width A	Spacing of suspension points B	Rear wall C	Outlet opening D
	[mm]	[mm]	[mm]	[mm]
61	625	560	590	431
63	925	860	890	731
66	1375	1310	1340	1181
67	1725	1660	1690	1531

Specifications

Water connections

	Models 61 – 63	Models 66 – 67
Heat exchanger	C / H*	C / H*
Connection	1/2"	3/4"

Water content of heat exchanger

Model	Internal volume 2-pipe
	[l]
61	1.3
63	2.0
66	3.1
67	3.9

Technology

Model	Weight (basic unit)	Number of impellers	Number of motors
	[kg]		
61	19.0	1	1
63	24.5	2	1
66	36.5	3	2
67	46.5	4	2

* C = Cooling / H = Heating

Make use of our online calculation programs to calculate your heat outputs and flow rates with a couple of clicks!

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Model:
2-stage AC fans

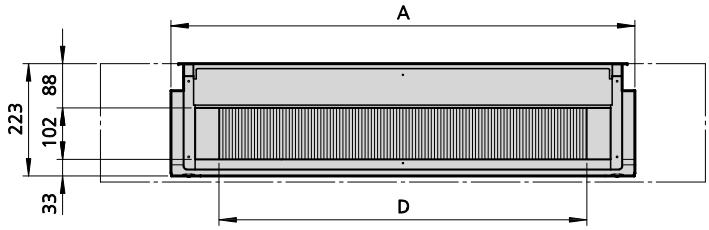
Model	Fan stage	Air volume	Cooling outputs [1]		Outlet air temperature [1]	Water volume Cooling [1]	Pressure loss Cooling [1]	Heat outputs [2]	Outlet air temperature [2]	Water volume Heating [2]	Pressure loss Heating [2]	Power consumption	Current consumption	Specific fan power	Sound pressure level [3]	Sound power level
		V [m³/h]	Q_{kg} [W]	Q_{ks} [W]	t_{L2} [°C]	[l/h]	[kPa]	Q_h [W]	t_{L2} [°C]	[l/h]	[kPa]	P [W]	I [A]	[Ws/m³]	[dB(A)]	[dB(A)]
61	1	125	839	571	13.3	144	2.7	1910	64.6	164	2.9	13	0.13	374	< 20	27
	2	175	1199	809	12.8	206	5.2	2635	64.9	226	5.3	19	0.08	391	23	31
	3	255	1745	1174	12.7	300	10.3	3802	64.9	327	10.6	29	0.12	409	30	38
	4	410	2678	1811	13.2	460	22.7	6053	64.7	520	25.1	47	0.20	413	43	51
	5	530	3267	2230	13.8	561	32.6	7739	64.4	665	39.8	62	0.27	421	49	57
63	1	240	1570	1065	13.3	270	4.4	3664	65.6	315	5.4	12	0.15	180	<20	28
	2	300	1972	1330	13.1	339	6.7	4511	65.8	388	8.0	20	0.09	240	29	37
	3	400	2701	1816	13.0	464	12.2	6117	65.9	526	14.1	30	0.14	270	35	43
	4	570	3769	2540	13.2	648	23.1	8671	65.8	745	27.3	49	0.23	309	43	51
	5	705	4518	3058	13.5	776	32.6	10653	65.6	915	40.2	68	0.34	347	47	55
66	1	350	2228	1516	13.7	383	1.3	5120	63.7	440	1.6	26	0.28	267	25	33
	2	480	3104	2094	13.3	533	2.5	6896	63.9	593	2.8	39	0.17	293	29	37
	3	655	4349	2925	13.1	747	4.8	9553	64.0	821	5.2	58	0.26	319	35	43
	4	970	6299	4247	13.4	1082	9.9	14116	63.9	1213	10.9	94	0.42	349	43	51
	5	1230	7669	5201	13.8	1318	14.6	17738	63.7	1524	16.8	129	0.59	378	50	58
67	1	460	3117	2121	12.7	536	2.8	7090	66.5	609	3.5	26	0.30	203	26	34
	2	620	4319	2914	12.3	742	5.4	9511	66.7	817	6.1	42	0.19	244	31	39
	3	840	5976	4019	12.1	1027	10.2	13022	66.8	1119	10.9	62	0.28	266	36	44
	4	1210	8461	5702	12.4	1454	20.3	18754	66.7	1611	21.7	103	0.47	306	41	49
	5	1510	10194	6903	12.7	1752	29.3	23205	66.5	1994	32.4	145	0.71	346	50	58

[1] at CPW 7 /12, t_L = 27 °C, 50 % relative humidity
[2] at LPHW 75/65, t_{L1} = 20 °C
[3] The sound pressure levels were calculated with an assumed room insulation of 8 dB(A).
This corresponds to a distance of 2 m, a room volume of 100 m³ and a reverberation time of 0.5 s (in accordance with VDI 2081).

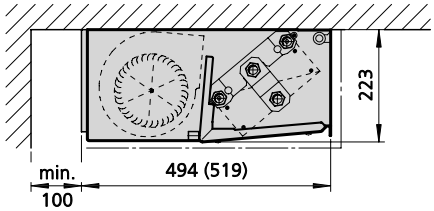
Venkon AC

Models 61 – 67, stage-controlled AC fans, 4-pipe

Technical drawings, ceiling-mounted model (dimensions in mm)

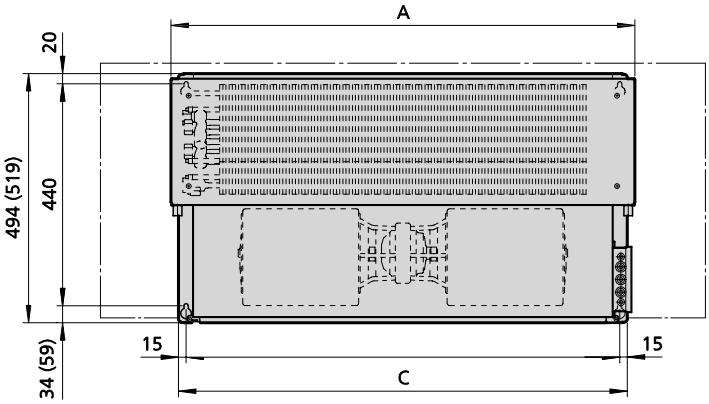


Front view (ceiling-mounted model)



Side view

Dimensions in brackets = model with cassette filter ePM10>50% (M5) or ePM1>5O% (F7)



View from below

Model	Basic unit width A	Spacing of suspension points B	Rear wall C	Outlet opening D
	[mm]	[mm]	[mm]	[mm]
61	625	560	590	431
63	925	860	890	731
66	1375	1310	1340	1181
67	1725	1660	1690	1531

Specifications

Water connections

	Models 61 – 63	Models 66 – 67	
Heat exchanger	C / H*	C*	H*
Connection	1/2"	3/4"	1/2"

Water content of heat exchanger

Model	Internal volume 4-pipe cooling	Internal volume 4-pipe heating
	[l]	[l]
61	1.0	0.5
63	1.6	0.6
66	2.4	0.9
67	2.9	1.1

Technology

Model	Weight (basic unit)	Number of impellers	Number of motors
	[kg]		
61	19.0	1	1
63	24.5	2	1
66	36.5	3	2
67	46.5	4	2

* C = Cooling / H = Heating

Make use of our online calculation programs to calculate your heat outputs and flow rates with a couple of clicks!
▸ **kampmanngroup.com/venkon**

Model:
4-stage AC fans

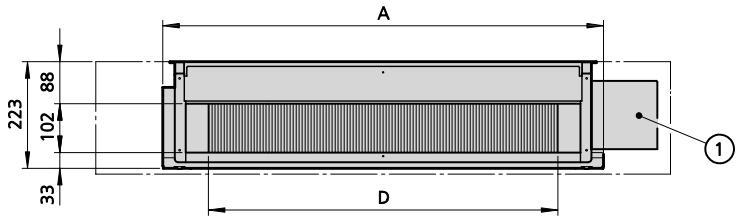
Model	Fan stage	Air volume	Cooling outputs [1]		Outlet air temperature [1]	Water volume Cooling [1]	Pressure loss Cooling [1]	Heat outputs [2]	Outlet air temperature [2]	Water volume Heating [2]	Pressure loss Heating [2]	Power consumption	Current consumption	Specific fan power	Sound pressure level [3]	Sound power level
		V [m³/h]	Q_{kg} [W]	Q_{ks} [W]	t_{L2} [°C]	[l/h]	[kPa]	Q_h [W]	t_{L2} [°C]	[l/h]	[kPa]	P [W]	I [A]	[Ws/m³]	[dB(A)]	[dB(A)]
61	1	125	792	574	13.2	136	1.9	1543	56.0	133	3.5	13	0.13	374	< 20	27
	2	175	1131	813	12.7	194	3.7	1979	53.7	170	5.6	19	0.08	391	23	31
	3	255	1647	1179	12.6	283	7.3	2677	51.6	230	10.0	29	0.12	409	30	38
	4	410	2527	1821	13.1	434	15.9	4008	49.6	344	21.3	47	0.20	413	43	51
	5	530	3082	2241	13.7	530	22.9	4991	48.7	429	32.3	62	0.27	421	49	57
63	1	240	1426	1030	13.8	245	2.9	2886	55.9	248	12.7	12	0.15	180	<20	28
	2	300	1791	1287	13.5	308	4.6	3395	54.5	292	17.1	20	0.09	240	29	37
	3	400	2453	1757	13.4	421	8.4	4357	52.7	374	26.7	30	0.14	270	35	43
	4	570	3422	2456	13.6	588	16.1	5873	51.0	505	45.8	49	0.23	309	43	51
	5	705	4102	2957	14.0	705	22.8	7041	50.1	605	63.5	68	0.34	347	47	55
66	1	350	1859	1348	15.1	319	1.0	4007	54.2	344	6.6	26	0.28	267	25	33
	2	480	2591	1862	14.8	445	1.8	5043	52.1	433	9.9	39	0.17	293	29	37
	3	655	3630	2600	14.7	624	3.3	6584	50.3	566	15.9	58	0.26	319	35	43
	4	970	5257	3776	14.9	903	6.3	9207	48.6	791	28.9	94	0.42	349	43	51
	5	1230	6400	4624	15.3	1100	9.0	11268	47.8	968	41.4	129	0.59	378	50	58
67	1	460	2723	1974	13.7	468	2.2	5440	55.6	467	13.3	26	0.30	203	26	34
	2	620	3773	2712	13.3	648	4.0	6826	53.5	586	19.9	42	0.19	244	31	39
	3	840	5222	3740	13.2	897	7.3	8825	51.7	758	31.6	62	0.28	266	36	44
	4	1210	7392	5306	13.4	1270	14.0	12062	50.0	1036	55.5	103	0.47	306	41	49
	5	1510	8906	6424	13.7	1530	19.8	14552	49.2	1250	77.7	145	0.71	346	50	58

[1] at CPW 7 /12, t_L = 27 °C, 50 % relative humidity
[2] at LPHW 75/65, t_{L1} = 20 °C
[3] The sound pressure levels were calculated with an assumed room insulation of 8 dB(A).
This corresponds to a distance of 2 m, a room volume of 100 m³ and a reverberation time of 0.5 s (in accordance with VDI 2081).

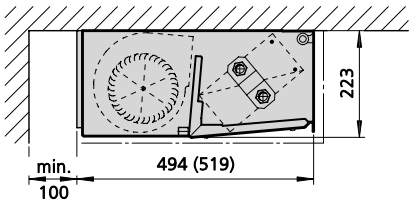
Venkon EC

Models 61 – 67, continuously variable EC fans, 2-pipe

Technical drawings, ceiling-mounted model (dimensions in mm)

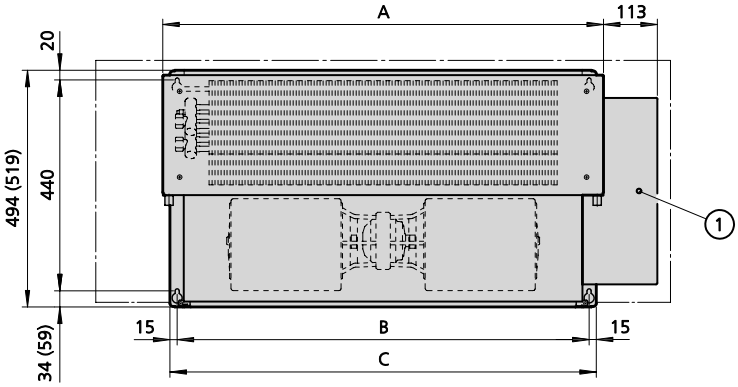


Front view (ceiling-mounted model)



Side view

Dimensions in brackets = model with cassette filter ePM10>50% (M5) or ePM1> 50% (F7)



View from below

(1) There is no need for EC1M control with electromechanical or external control model

Model	Basic unit width A	Spacing of suspension points B	Rear wall C	Outlet opening D
	[mm]	[mm]	[mm]	[mm]
61	625	560	590	431
63	925	860	890	731
66	1375	1310	1340	1181
67	1725	1660	1690	1531

Specifications

Water connections

	Models 61 – 63	Models 66 – 67
Heat exchanger	C / H*	C / H*
Connection	1/2"	3/4"

Water content of heat exchanger

Model	Internal volume 2-pipe
	[l]
61	1.3
63	2.0
66	3.1
67	3.9

Technology

Model	Weight (basic unit)	Number of impellers	Number of motors
	[kg]		
61	19.0	1	1
63	24.5	2	1
66	36.5	3	2
67	46.5	4	2

* C = Cooling / H = Heating

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Model:
2-pipe,
EC fans

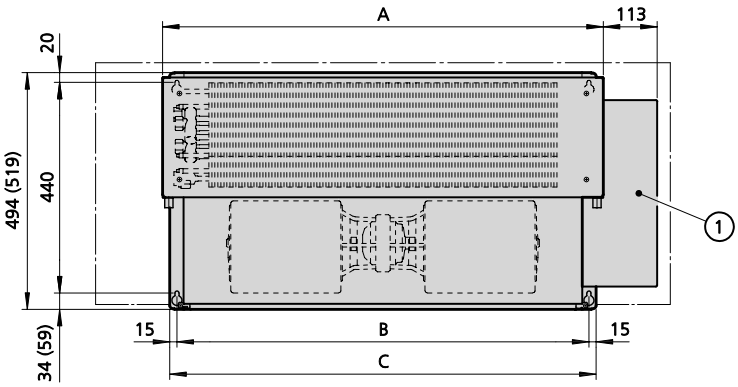
Model	Control signal	Air volume	Cooling outputs [1]		Outlet air temperature [1]	Water volume Cooling [1]	Pressure loss Cooling [1]	Heat outputs [2]	Outlet air temperature [2]	Water volume Heating [2]	Pressure loss Heating [2]	Power consumption	Current consumption	Specific fan power	Sound pressure level [3]	Sound power level
	[V]	V [m³/h]	Q_{kg} [W]	Q_{ks} [W]	t_{L2} [°C]	[l/h]	[kPa]	Q_h [W]	t_{L2} [°C]	[l/h]	[kPa]	P [W]	I [A]	[Ws/m³]	[dB(A)]	[dB(A)]
61	1.5	135	860	585	13.2	148	2.8	1951	64.7	168	3.0	3	0.06	80	20	28
	2	150	986	668	13.0	169	3.6	2201	64.8	189	3.8	3	0.06	72	22	30
	4	205	1402	944	12.7	241	6.9	3058	64.9	263	7.0	5	0.07	88	29	37
	6	265	1801	1211	12.7	309	10.9	3926	64.9	337	11.2	7	0.08	95	34	42
	8	455	2934	1991	13.4	504	26.8	6752	64.6	580	30.8	25	0.23	198	48	56
	10	560	3423	2344	14.0	588	35.5	8240	64.3	708	44.7	45	0.39	289	53	61
63	1.5	190	1176	805	13.8	202	2.5	2856	65.4	245	3.4	3	0.06	57	<20	23
	2	205	1291	881	13.6	222	3.0	3090	65.5	265	3.9	3	0.06	53	<20	25
	4	295	1957	1320	13.1	336	6.6	4479	65.8	385	7.9	4	0.07	49	24	32
	6	380	2546	1713	13.0	438	10.9	5768	65.9	496	12.7	7	0.08	66	30	38
	8	685	4403	2977	13.5	757	31.1	10335	65.6	888	38.0	27	0.24	142	44	52
	10	850	5255	3579	13.9	903	43.5	12824	65.4	1102	57.1	51	0.44	216	50	58
66	1.5	315	1934	1323	13.9	332	1.0	4540	64.0	390	1.2	5	0.22	57	21	29
	2	350	2202	1499	13.7	378	1.2	5069	63.7	436	1.5	6	0.22	62	22	30
	4	485	3191	2153	13.2	548	2.6	7078	64.0	608	2.9	9	0.23	67	29	37
	6	635	4227	2842	13.1	726	4.5	9284	64.0	798	4.9	13	0.25	74	35	43
	8	1105	7067	4779	13.6	1214	12.5	16095	63.8	1383	14.0	47	0.46	153	48	56
	10	1405	8540	5823	14.1	1468	18.1	20303	63.6	1744	21.8	95	0.84	243	54	62
67	1.5	355	2275	1568	13.3	391	1.5	5447	66.1	468	2.1	5	0.23	51	<20	27
	2	405	2689	1839	13.0	462	2.1	6249	66.3	537	2.7	6	0.23	53	21	29
	4	580	4045	2733	12.3	695	4.7	8951	66.7	769	5.4	9	0.23	56	27	35
	6	765	5452	3668	12.1	937	8.5	11888	66.8	1021	9.2	13	0.25	61	33	41
	8	1355	9347	6313	12.6	1606	24.7	20973	66.6	1802	26.8	53	0.51	141	47	55
	10	1700	11260	7656	13.0	1935	35.7	26199	66.4	2251	40.8	102	0.89	216	53	61

[1] at CPW 7 /12, t_L = 27 °C, 50 % relative humidity
[2] at LPHW 75/65, t_{L1} = 20 °C
[3] The sound pressure levels were calculated with an assumed room insulation of 8 dB(A).
This corresponds to a distance of 2 m, a room volume of 100 m³ and a reverberation time of 0.5 s (in accordance with VDI 2081).

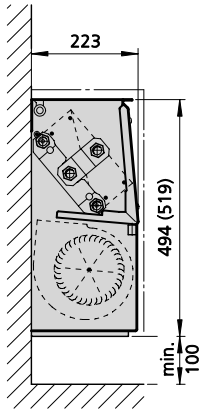
Venkon EC

Models 61 – 67, continuously variable EC fans, 4-pipe

Technical drawings, wall-mounted model (dimensions in mm)



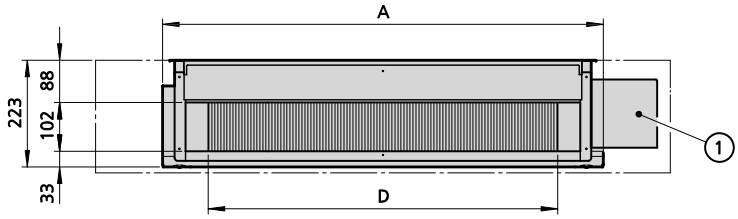
Front view (wall-mounted model)



Side view

Dimensions in brackets = model with cassette filter ePM10>50% (M5) or ePM1>50% (F7)

(1) There is no need for EC1M control with electromechanical or external control model



Top view

Model	Basic unit width A	Spacing of suspension points B	Rear wall C	Outlet opening D
	[mm]	[mm]	[mm]	[mm]
61	625	560	590	431
63	925	860	890	731
66	1375	1310	1340	1181
67	1725	1660	1690	1531

Specifications

Water connections

	Models 61 – 63	Models 66 – 67	
Heat exchanger	C / H*	C*	H*
Connection	1/2"	3/4"	1/2"

Water content of heat exchanger

Model	Internal volume 4-pipe cooling	Internal volume 4-pipe heating
	[l]	[l]
61	1.0	0.5
63	1.6	0.6
66	2.4	0.9
67	2.9	1.1

Technology

Model	Weight (basic unit)	Number of impellers	Number of motors
	[kg]		
61	19.0	1	1
63	24.5	2	1
66	36.5	3	2
67	46.5	4	2

* C = Cooling / H = Heating

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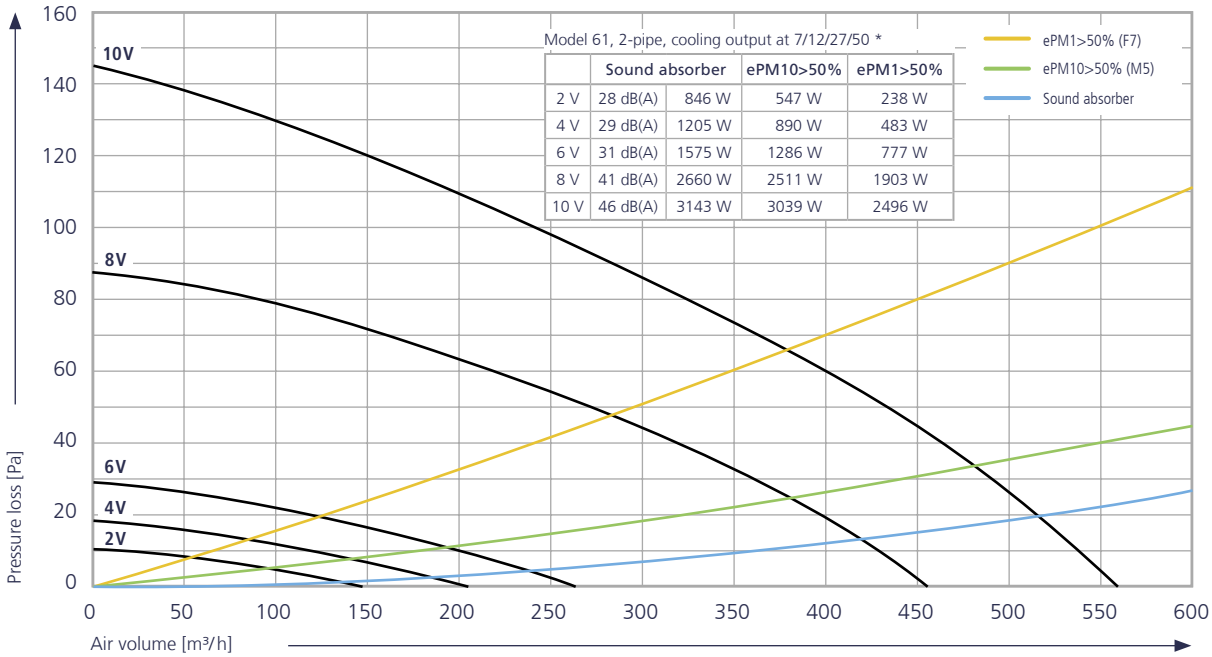
Model:
4-pipe,
EC fans

Model	Control signal	Air volume	Cooling outputs [1]		Outlet air temperature [1]	Water volume Cooling [1]	Pressure loss Cooling [1]	Heat outputs [2]	Outlet air temperature [2]	Water volume Heating [2]	Pressure loss Heating [2]	Power consumption	Current consumption	Specific fan power	Sound pressure level [3]	Sound power level
	[V]	V [m³/h]	Q_{kg} [W]	Q_{ks} [W]	t_{L2} [°C]	[l/h]	[kPa]	Q_h [W]	t_{L2} [°C]	[l/h]	[kPa]	P [W]	I [A]	[Ws/m³]	[dB(A)]	[dB(A)]
61	1.5	135	811	588	13.1	139	2.0	1567	55.9	135	3.6	3	0.06	80	20	28
	2	150	930	671	12.9	160	2.6	1718	54.9	148	4.3	3	0.06	72	22	30
	4	205	1323	948	12.6	227	4.9	2233	52.8	192	7.1	5	0.07	88	29	37
	6	265	1699	1217	12.6	292	7.7	2751	51.5	236	10.5	7	0.08	95	34	42
	8	455	2768	2002	13.4	476	18.8	4417	49.2	380	25.6	25	0.23	198	48	56
	10	560	3229	2356	13.9	555	24.9	5281	48.4	454	35.9	45	0.39	289	53	61
63	1.5	190	1068	779	14.3	183	1.7	2399	58.1	206	9.1	3	0.06	57	<20	23
	2	205	1172	852	14.1	201	2.0	2540	57.4	218	10.1	3	0.06	53	<20	25
	4	295	1777	1277	13.6	305	4.5	3376	54.5	290	16.9	4	0.07	49	24	32
	6	380	2312	1656	13.4	397	7.5	4148	53.0	356	24.5	7	0.08	66	30	38
	8	685	3997	2879	13.9	687	21.7	6854	50.3	589	60.5	27	0.24	142	44	52
	10	850	4771	3462	14.4	820	30.6	8308	49.4	714	85.5	51	0.44	216	50	58
66	1.5	315	1614	1176	15.4	277	0.8	3668	55	315	5.6	5	0.22	57	21	29
	2	350	1838	1333	15.2	316	1.0	3978	54.3	342	6.5	6	0.22	62	22	30
	4	485	2664	1914	14.8	458	1.9	5148	52.0	442	10.3	9	0.23	67	29	37
	6	635	3528	2527	14.7	606	3.1	6428	50.5	552	15.3	13	0.25	74	35	43
	8	1105	5898	4249	15.1	1014	7.8	10335	48.1	888	35.5	47	0.46	153	48	56
	10	1405	7127	5177	15.6	1225	10.9	12714	47.3	1092	51.4	95	0.84	243	54	62
67	1.5	355	1988	1459	14.3	342	1.2	4496	58.1	386	9.4	5	0.23	51	<20	27
	2	405	2349	1712	13.9	404	1.6	4957	56.7	426	11.2	6	0.23	53	21	29
	4	580	3534	2543	13.3	607	3.5	6506	53.9	559	18.3	9	0.23	56	27	35
	6	765	4763	3413	13.2	819	6.1	8180	52.2	703	27.6	13	0.25	61	33	41
	8	1355	8166	5875	13.6	1403	16.8	13306	49.6	1143	66.2	53	0.51	141	47	55
	10	1700	9837	7125	14.0	1690	23.9	16215	48.7	1393	94.4	102	0.89	216	53	61

[1] at CPW 7 /12, t_L = 27 °C, 50 % relative humidity
[2] at LPHW 75/65, t_{L1} = 20 °C
[3] The sound pressure levels were calculated with an assumed room insulation of 8 dB(A).
This corresponds to a distance of 2 m, a room volume of 100 m³ and a reverberation time of 0.5 s (in accordance with VDI 2081).

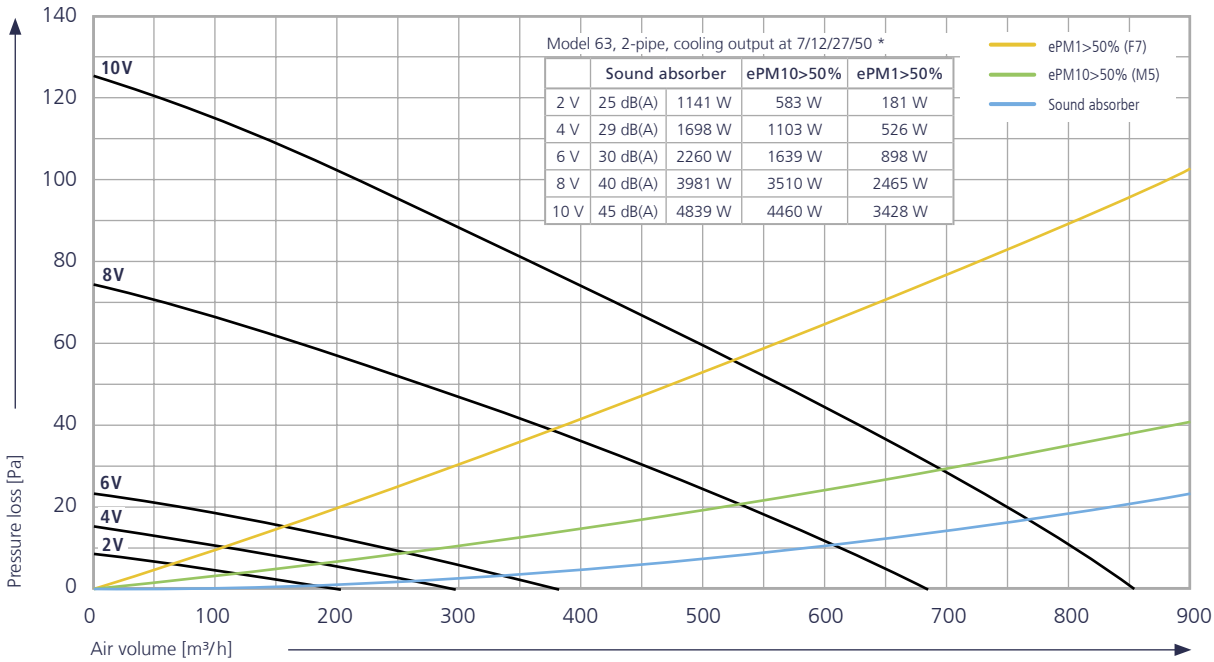
Air output diagrams for Venkon EC with filter and sound attenuator

Model 61



	Sound absorber		ePM10>50%	ePM1>50%
2 V	28 dB(A)	846 W	547 W	238 W
4 V	29 dB(A)	1205 W	890 W	483 W
6 V	31 dB(A)	1575 W	1286 W	777 W
8 V	41 dB(A)	2660 W	2511 W	1903 W
10 V	46 dB(A)	3143 W	3039 W	2496 W

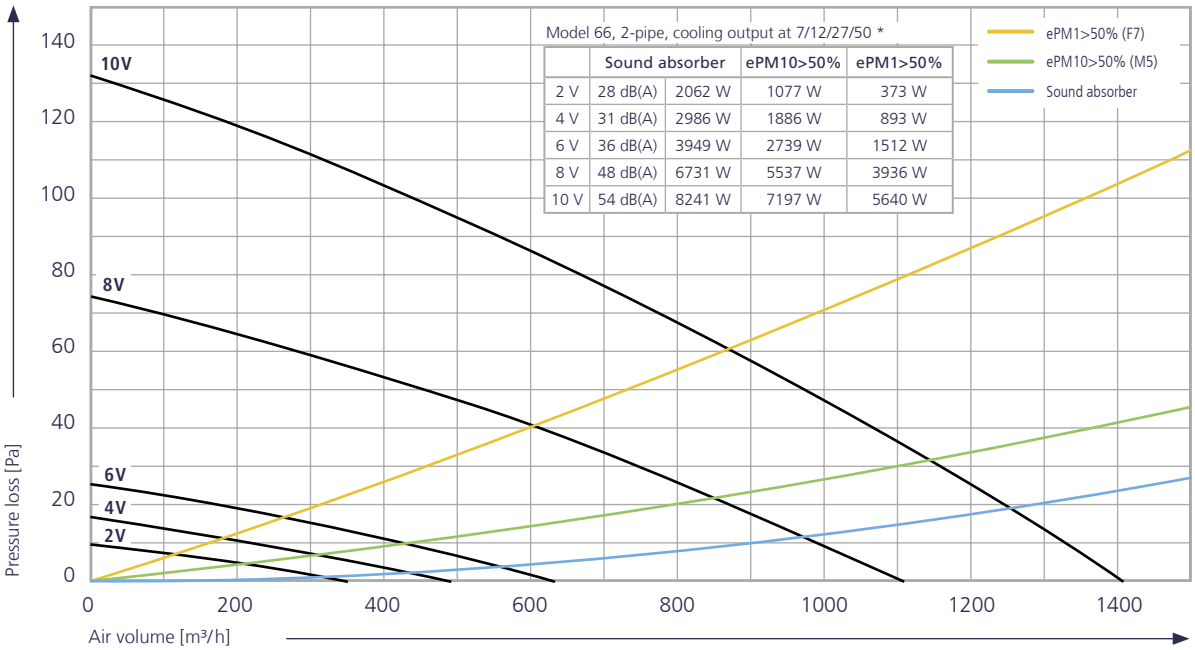
Model 63



	Sound absorber		ePM10>50%	ePM1>50%
2 V	25 dB(A)	1141 W	583 W	181 W
4 V	29 dB(A)	1698 W	1103 W	526 W
6 V	30 dB(A)	2260 W	1639 W	898 W
8 V	40 dB(A)	3981 W	3510 W	2465 W
10 V	45 dB(A)	4839 W	4460 W	3428 W

* The stated sound power levels are only valid in conjunction with a sound attenuator and describe the air outlet sound power level. (Intake and housing sound levels were not taken into account here)

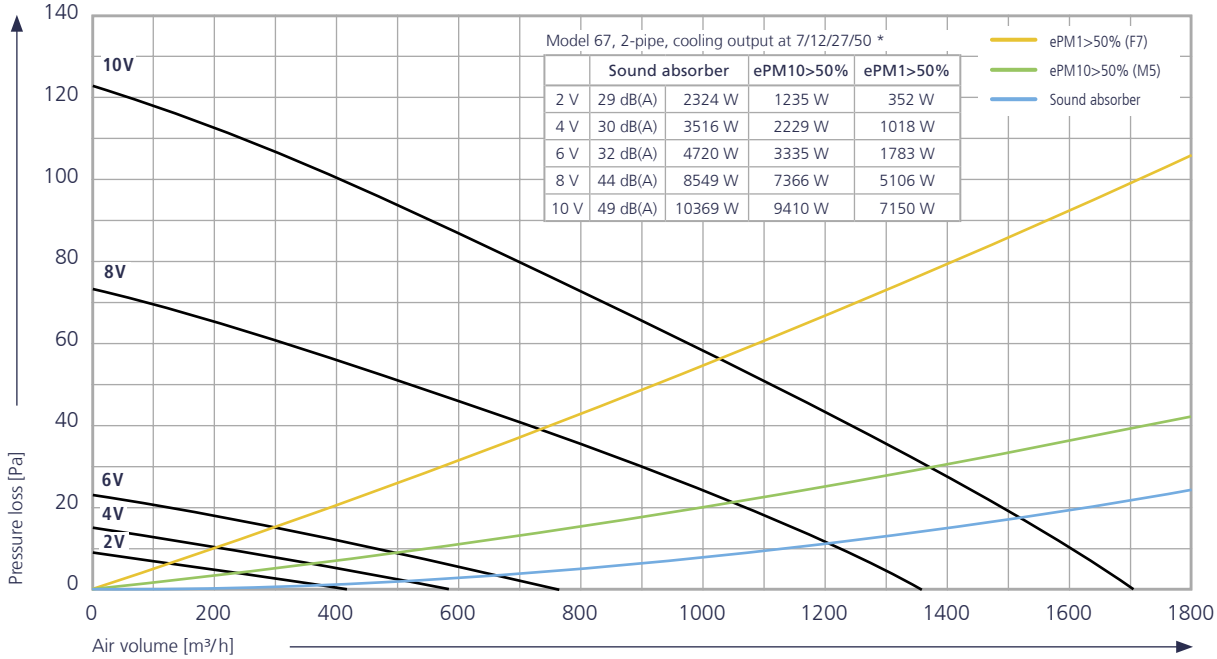
Model 66



Model 66, 2-pipe, cooling output at 7/12/27/50 *

	Sound absorber		ePM10>50%	ePM1>50%
2 V	28 dB(A)	2062 W	1077 W	373 W
4 V	31 dB(A)	2986 W	1886 W	893 W
6 V	36 dB(A)	3949 W	2739 W	1512 W
8 V	48 dB(A)	6731 W	5537 W	3936 W
10 V	54 dB(A)	8241 W	7197 W	5640 W

Model 67



Model 67, 2-pipe, cooling output at 7/12/27/50 *

	Sound absorber		ePM10>50%	ePM1>50%
2 V	29 dB(A)	2324 W	1235 W	352 W
4 V	30 dB(A)	3516 W	2229 W	1018 W
6 V	32 dB(A)	4720 W	3335 W	1783 W
8 V	44 dB(A)	8549 W	7366 W	5106 W
10 V	49 dB(A)	10369 W	9410 W	7150 W

* The stated sound power levels are only valid in conjunction with a sound attenuator and describe the air outlet sound power level. (Intake and housing sound levels were not taken into account here)

03 Design information

Information on planning and design

Venkons are suitable for use in all kinds of buildings in which there is a cooling load owing to internal loads and the effects of sunlight and/or a heating load in winter.

Cooling load

The cooling load required is calculated in line with VDI 2078 (VDI regulations governing cooling loads).

The usual cold water temperature spread is approximately 5 K. Take into account the effective unit outputs in line with the technical conditions of installation and use. Check the suitability of all components (circulation pump etc.) for use with cold water is, noting the minimum temperatures.

Heating load

The required heating load is calculated in accordance with DIN EN 12831.

Choice of the installation site

Take into account the following requirements when choosing your installation location:

- no obstacles to air distribution and air inlet
- option to inspect the entire unit
- wall-mounted minimum distance from the occupied zone 1 m
- positioning of the PowerKon NT in coordination with the architecture and building services planning

Acoustics

When designing a system, note that disruptive noise may occur at higher fan speeds. The respective sound power levels of a Venkon are listed in the tables (see "Technical data"). The sound pressure level was calculated with an assumed room insulation of 8 dB(A). This corresponds to a distance of 2 m, a room volume of 100 m³ and a reverberation time of 0.5 s (in accordance with VDI 2081).

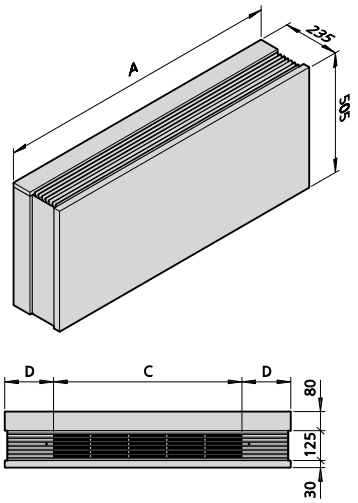
As the sound level is not only due to the Venkon but is also influenced by the number of units and also very significantly by the acoustic characteristics of the room, the actual figure may vary in practice. We would recommend designing Venkons taking into account the respective permitted sound pressure level in the room.

Comfort

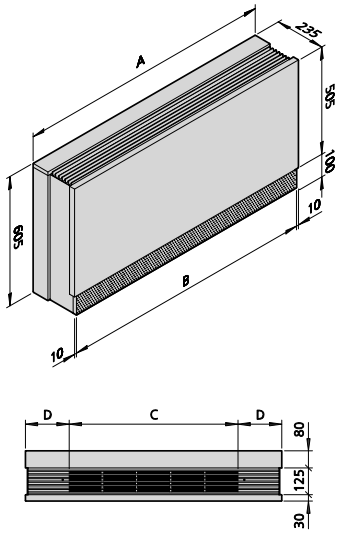
The comfort was calculated taking into consideration DIN EN ISO 7730 (May 2006) "Ergonomics of the thermal environment – analytical determination and interpretation of thermal comfort by calculation of the PMV and the PDB indexes and criteria of local thermal comfort (ISO 7730: 2005). The air outlet and air flows are optimised in detail in accordance with this standard.

Casing selection

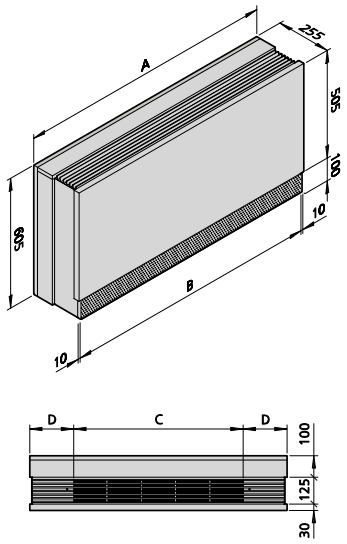
Casing, wall-mounted without inlet grille



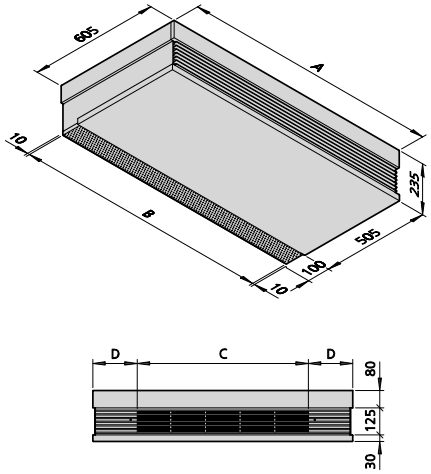
Casing, wall-mounted with inlet grille



Free-standing casing without air inlet grille with rear panel



Casing, ceiling-mounted with inlet grille

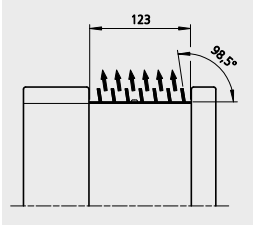


Dimensions

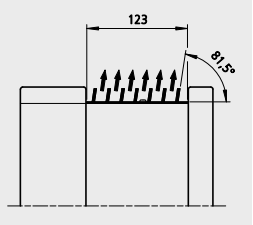
Model	A	W	C	D
	[mm]	[mm]	[mm]	[mm]
61	900	880	470	215
63	1200	1180	790	205
66	1650	1630	1270	190
67	2000	1980	1590	205

Air discharge direction

The air flow direction is defined by the mounting position of the ventilation grille. As standard, the air flows towards the wall/ceiling from the air grille. The air can also be discharged on the room side by rotating the ventilation grille.



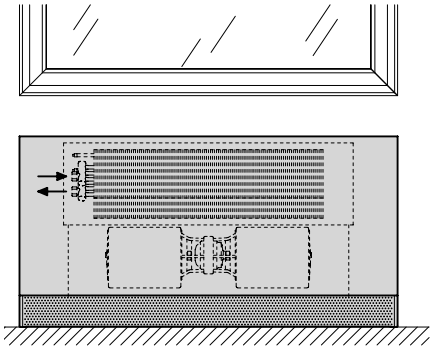
Standard air discharge direction



Alternative air discharge direction

Connections, definition of the water connection side

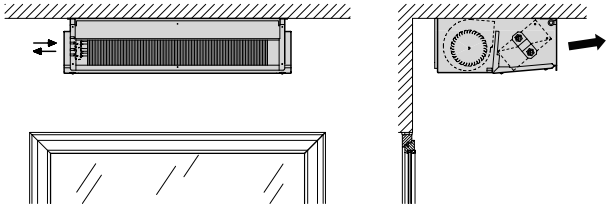
Water connection on left, illustrated by Venkon with casing, wall-standing



Front view

Side view

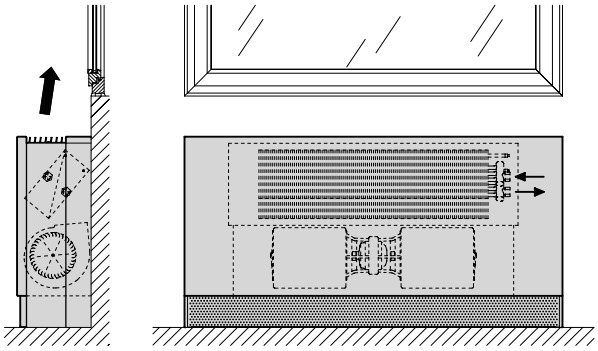
Water connection on left, illustrated by Venkon basic unit, ceiling-mounted model



Front view

Side view

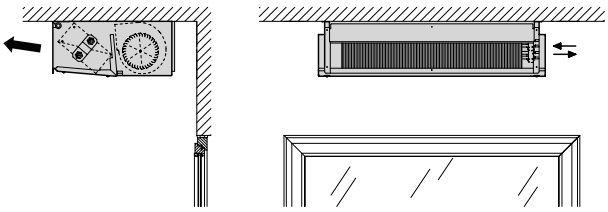
Water connection on right, illustrated by Venkon with casing, wall-standing



Side view

Front view

Water connection on right, illustrated by Venkon basic unit, ceiling-mounted model



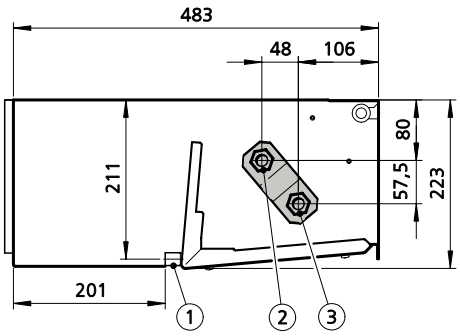
Side view

Front view

Water connections

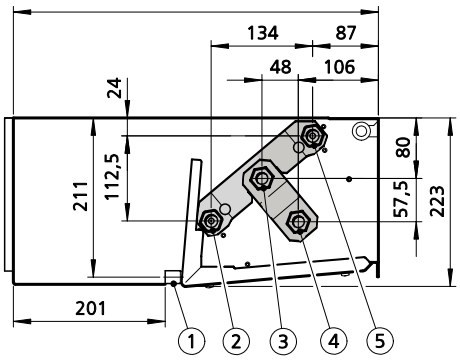
2-pipe

(all dimensions in mm)



① Condensation connection Ø 15 mm
② Heating or cooling return Rp 1/2" / Rp 3/4"*
③ Heating or cooling flow Rp 1/2" / Rp 3/4"*

4-pipe

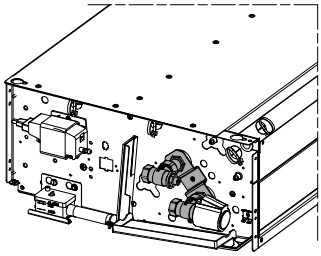


① Condensation connection Ø 15 mm
② Heating return Rp 1/2"
③ Cooling return Rp 1/2" / Rp 3/4"*
④ Cooling flow Rp 1/2" / Rp 3/4"*
⑤ Heating flow Rp 1/2"

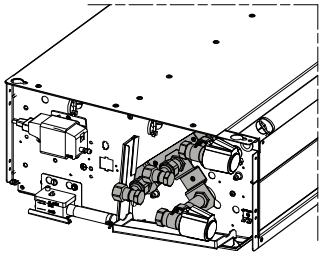
Models 61 – 63 1 / 2", models 66 – 67: 3/4"

Water connection accessories, valve kit selection

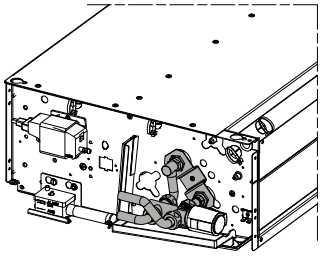
2-way valve kit, 2-pipe



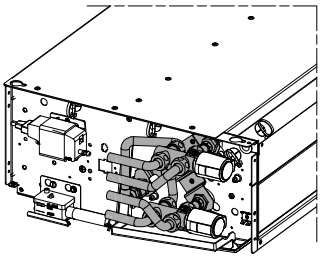
2-way valve kit, 4-pipe



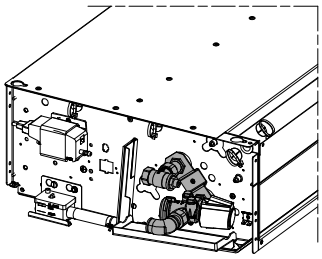
3-way valve kit, 2-pipe



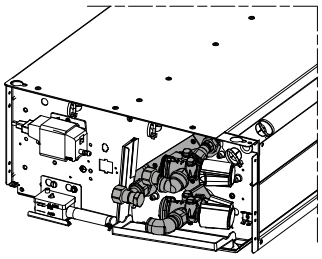
3-way valve kit, 4-pipe



Differential pressure-independent valve kit, 2-pipe



Differential pressure-independent valve kit, 4-pipe

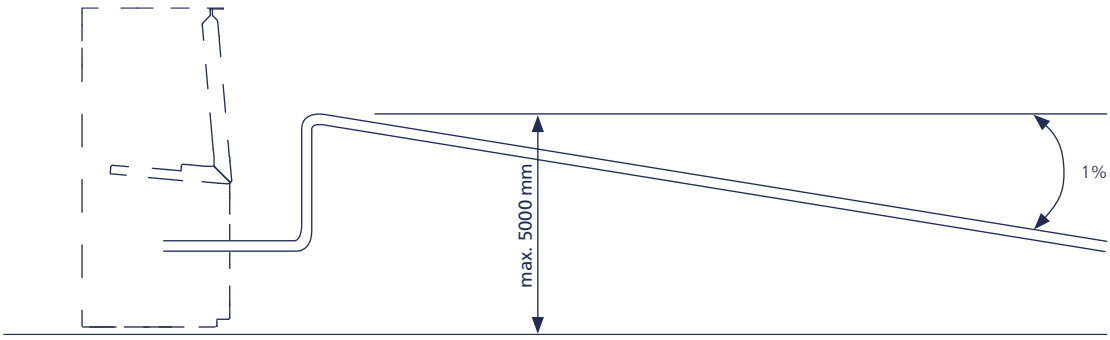


Condensation drain

Condensation is produced if Venkons are operated at a system temperature below the dew point. The condensation from the heat exchanger drips into the condensate tray underneath. You will need a condensation pump (optional accessories) should a natural gradient be impossible on site. This is used to pump the condensation into higher collection or discharge equipment.

The condensation to be disposed of from the Venkon, directly from the condensation tray or from the condensation pump hose, has to follow a minimum 1% gradient. The condensation has to be collected in a pool pump on site if it has to be drained higher than the integrated pump allows.

Important:
The condensation can be monitored via a dewpoint sensor fitted to the basic unit with "dry cooling" (optional accessories).

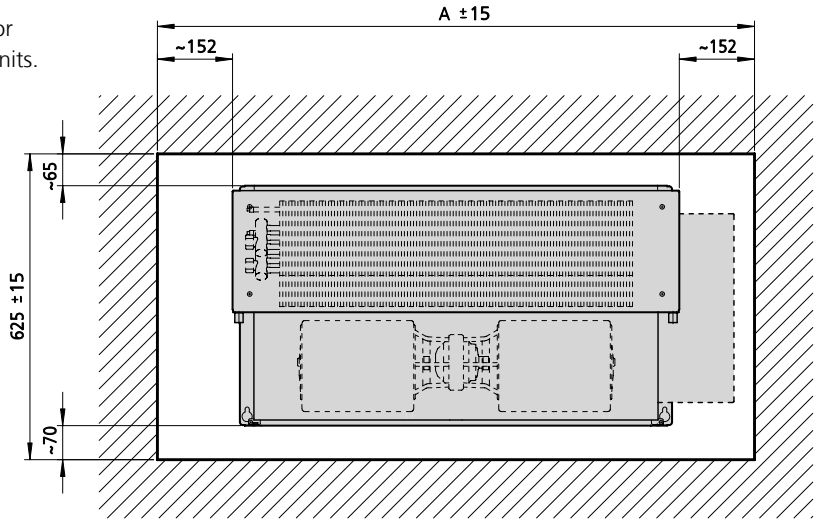


Schematic diagram

Inspection hatch

Provide the following service opening dimensions for maintenance and inspection of suspended ceiling units.

Model	Opening dimension ceiling width A ±15
	[mm]
61	925
63	1225
66	1675
67	2025



04 Controls

Control – Venkon AC electromechanical model

Product features
Factory-fitted actuators are wired to the terminal with the electromechanical model. If no valve actuators are factory-fitted, support terminals are available for on-site valve actuators.

Fans
The AC fans used can be controlled between 5 stages via switched voltage terminals 230 V~, 50 Hz.
Control version *00M: The built-in thermal contact automatically switches off the fan when it heats up impermissibly and switches it on when it cools down again.

Control version *01M: The built-in thermal contact is wired to terminals. It needs to be evaluated by the external control. When the thermal contact is triggered, the fan needs to be de-energised.

Operating units
Different operating units are available for the control version *00M.

Room thermostat with 3-stage switch
type 196000148916

Electronic room thermostat for 3-stage speed control for surface wall-mounted installation in an attractive restrained design

Product features
- colour pure white, similar to RAL 9010
- simple to operate
- functional and robust design
- 2- and 4-pipe applications
- built-in room sensor, connection option for external room sensor
- digital input for switchover between ECO and OFF
- digital output for heating/cooling changeover with 2-pipe systems
- parallel operation of 2 units is possible

Room thermostat with 3-stage switch,
type 196000100915 (heating only)
type 196000148918 (cooling only)
type 196000148917 (heating/cooling changeover)

Room thermostat for 3-stage speed control for surface wall-mounted installation in an attractive restrained design

Product features
- colour pure white, similar to RAL 9010
- simple to operate
- functional and robust design
- 2-pipe application
- heating/cooling switchover (only with type 196000148917)
- heating-only (type 109000100915) cooling-only (type 196000148918)
- parallel operation of 2 units is possible

Cabling information

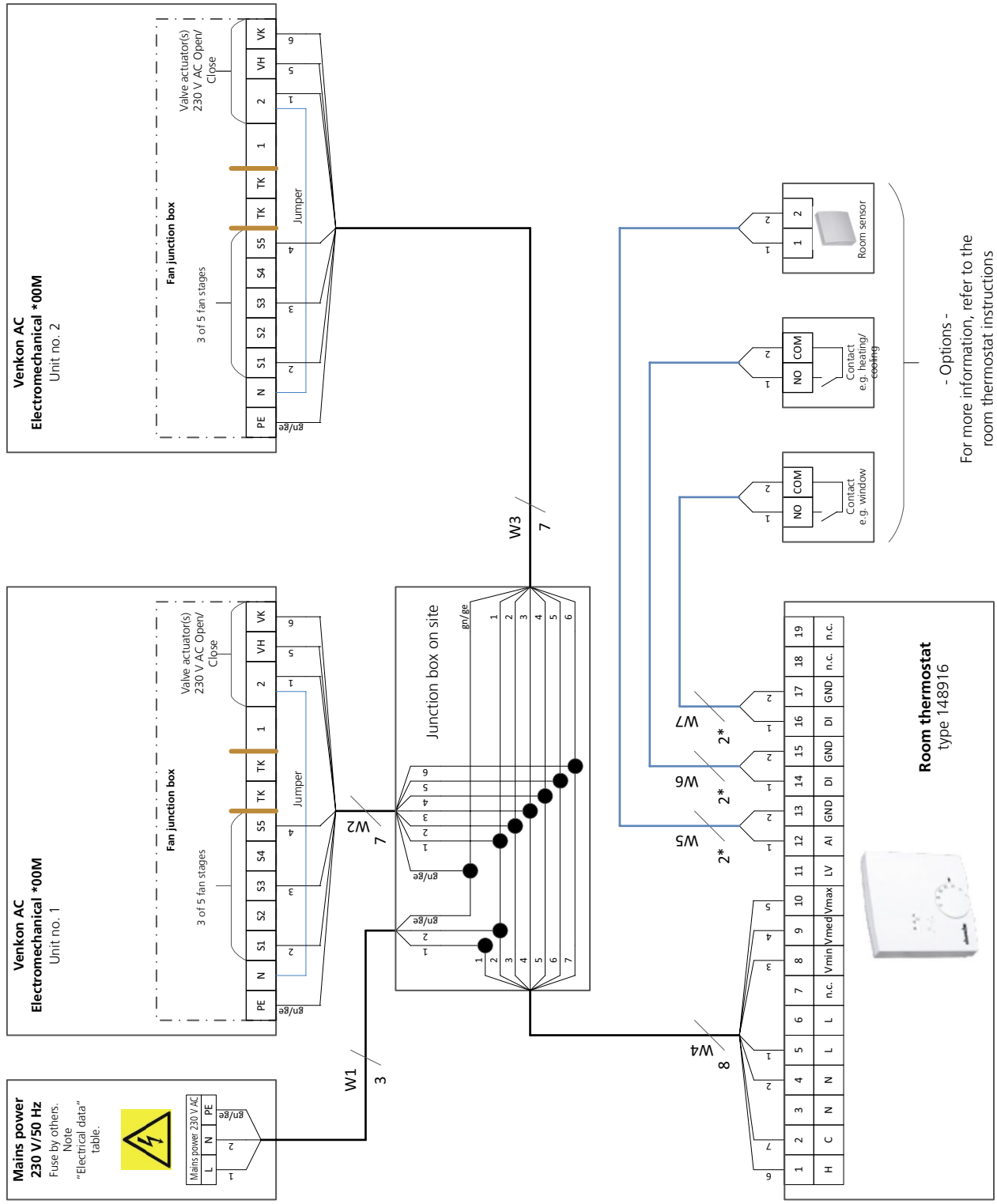
The following points need to be taken into account with the cabling and wiring plans stated for the electrical installation.

- Comply with the details on type of cable and cabling taking into consideration VDE 0100.
- None *: NYM-J. The requisite number of wires including fuse is stated on the cable. Cross-sections are not indicated as the cable length is involved in the calculation of the cross-section.
- With *: J-Y(ST)Y 0.8 mm. Lay separately from high-voltage cables.
- If you are using different cable types they must be at least equivalent to these.
- The terminals on the unit are suitable for a maximum wire cross-section of 2.5 mm².
- The electrical data listed in the following table needs to be considered when configuring the on-site mains supply and fuses.

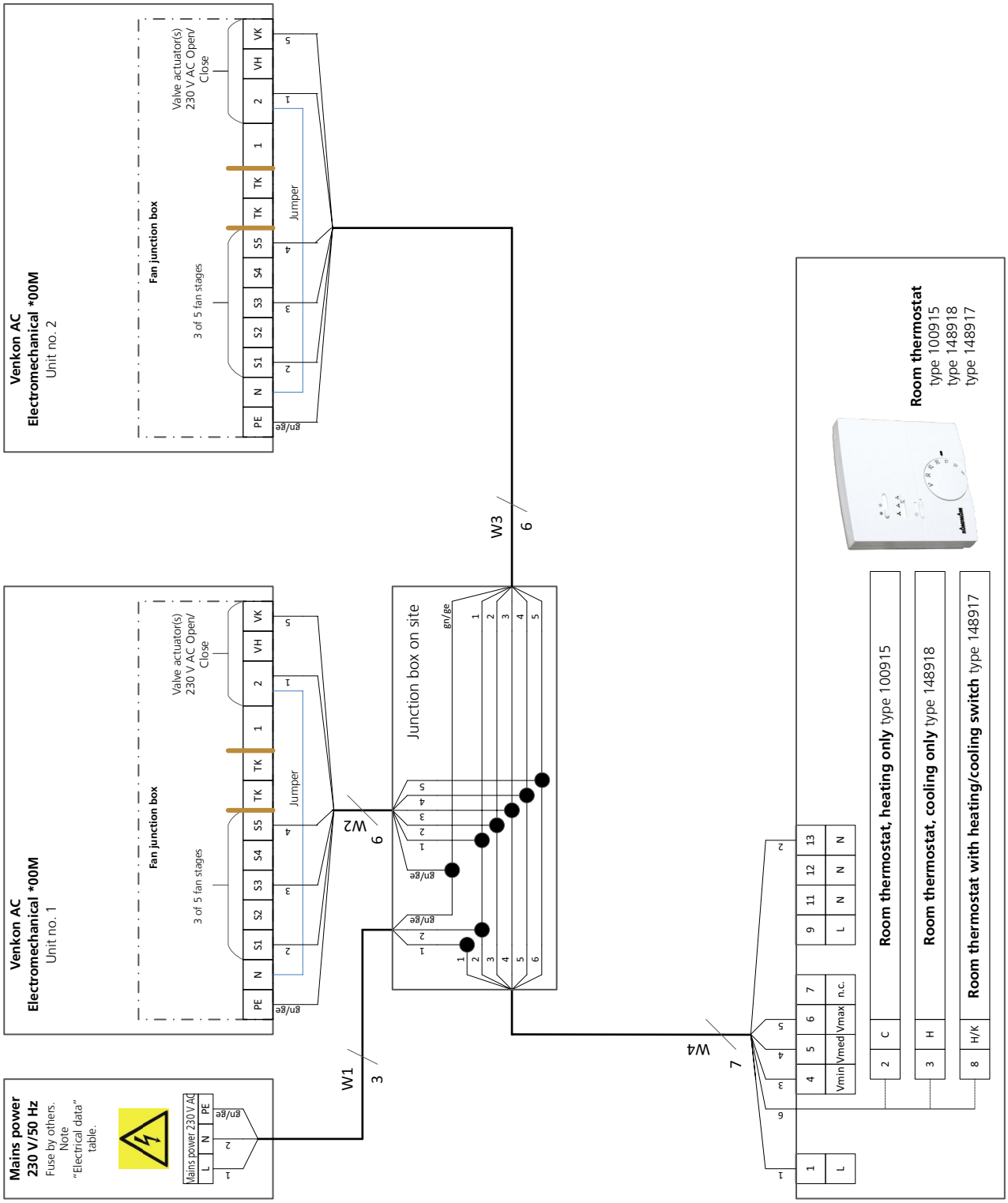
Electrical data for Venkon AC, electromechanical model (*00M / *01M)

Model	Fans	Nominal voltage	Mains frequency	Nominal power	Nominal current	Enclosure type	Protection class
	[Quantity]	[V~]	[Hz]	[W]	[A]		
61	1 x Single	230	50	62	0.27	IP21	I
63	1 x Tandem	230	50	68	0.34	IP21	I
66	1 x Single, 1 x Tandem	230	50	129	0.59	IP21	I
67	2 x Tandem	230	50	145	0.71	IP21	I

Cabling and wiring of Venkon AC electromechanical (*00M), 2- or 4-pipe, valve actuator(s) 230 V AC Open/Close, room thermostat type 196000148916



Cabling and wiring for Venkon AC electromechanical (*))M), 2-pipe, valve actuator 230 V AC, Open/Closed, room thermostat, type 196000100915 / 196000148917 / 196000148918



Control - Venkon EC electromechanical model

Product features
All factory-fitted actuators are wired to the terminal with the electromechanical model. If no valve actuators are factory-fitted, support terminals are available for on-site valve actuators.

Fans
The speed of EC fans used is continuously variably controlled by a 0-10 V DC signal. The"intelligent" motor electronics detects any possible motor fault and automatically switched the fan off.

A potential-free motor fault signal contact is also available for external evaluation with the *01M control version.

Operating units
Three different operating units are available for operation and control.

Room thermostat type 196000030155

Room thermostat for 3-stage speed control for surface wall-mounted installation in an attractive restrained design

Product features:
- 2- and 4-pipe applications, thermal valve actuators 230 V AC Open/Closed, normally closed
- ABS plastic housing, functional and robust design, pure white, similar to RAL 9010, for surface-mounting on a flush back box or surface-mounted using a surface-mounted frame (accessory)
- simple operation using a large dial for temperature setting with mechanical range limitation of the temperature setpoint, operating mode selector switch: Standby, Manual fan, Automatic an, 3-stage switch to pre-select fan speed when operating mode selector switch is in the "Manual fan" position
- control input for heating/cooling changeover with 2-pipe systems
- control input can either be set to Comfort/ECO or ON/OFF switchover
- room frost protection function < 5 °C ➞ heating valve open, fan stage 3
- optional use of the internal or external room temperature sensor (accessory)
- parallel operation of 2 units is possible

Clock thermostat type 196000030256

Clock thermostat for speed control for surface wall-mounted installation in an attractive restrained design

Product features:
- 2- and 4-pipe applications, thermal valve actuators 230 V AC Open/Closed, normally closed
- ABS plastic housing, robust design, pure white, similar to RAL 9010, for surface-mounting on a flush back box, integration in switch product range with dimensions 50 x 50 mm
- display with adjustable backlight
- operation using 4 sensor keys
- timer with automatic summer/winter changeover
- control input for heating/cooling changeover with 2-pipe systems
- control input can either be set to Comfort/ECO or ON/OFF switchover
- unit frost protection function < 5 °C ➞ valve(s) open
- optional use of the internal or external room temperature sensor (accessory)
- parallel operation of 2 units is possible

Klima controller type 196000148941 / type 196000148942 / type 196000148943 / type 196000148944

The Klima controller is a control unit with a high-quality glass finish

Product features:

- 2- and 4-pipe - applications, thermal valve actuators 230 V AC Open/Closed, normally closed
- 2.5" LCD display
- high-quality glass surface with capacitive keys
- LED ring acts as key feedback
- selection of the value to be displayed (room temperature, setpoint, setpoint offset)
- automatic LED backlight
- optional use of the internal or external room temperature sensor (accessory)
- room temperature control
- parametrisable room frost protection function ➞ RT < 8 °C = heating valve open, fan stage 1
- parametrisable unit frost protection function ➞ RT < 4° C = valve(s) on, fan off
- standby mode
- Eco/day changeover
- manual or automatic mode
- functional display
- alarm display
- timer program with 3 time channels, each with 4 switchover points
- cleaning mode
- parametrisable language: German or English
- Modbus RTU slave interface to wire to higher-level building automation system (only with type 148943 and type 148944)
- 3 control inputs with type 148941 and type 148942 or 2 control inputs with type 148943 and type 148944 (parametrisable functions e.g. window contact, motion detector, heating/cooling changeover, external room sensor
- password-protected parameter level
- surface-mounted installation without back box
- pure white (type 148941 and type 148943) or black (type 148942 and type 148944)
- parallel operation of 2 units is possible

Operating using on-site systems

Control via analogue and digital signals is also possible as an alternative to the Kampmann operating units. The following analogue and digital inputs and / or outputs are needed:

- speed control via a 0-10 VDC signal, the fan starts up safely at 1.5 V DC
- control input for the detection of any possible motor fault ➞ only with electromechanical model with fault signal contact (*01M)
- control input for the detection of a possible condensation alarm ➞ only with electromechanical model with condensation pump or dewpoint sensor
- analogue or digital signals to control the fan actuator(s) according to the actuator model

Cabling information

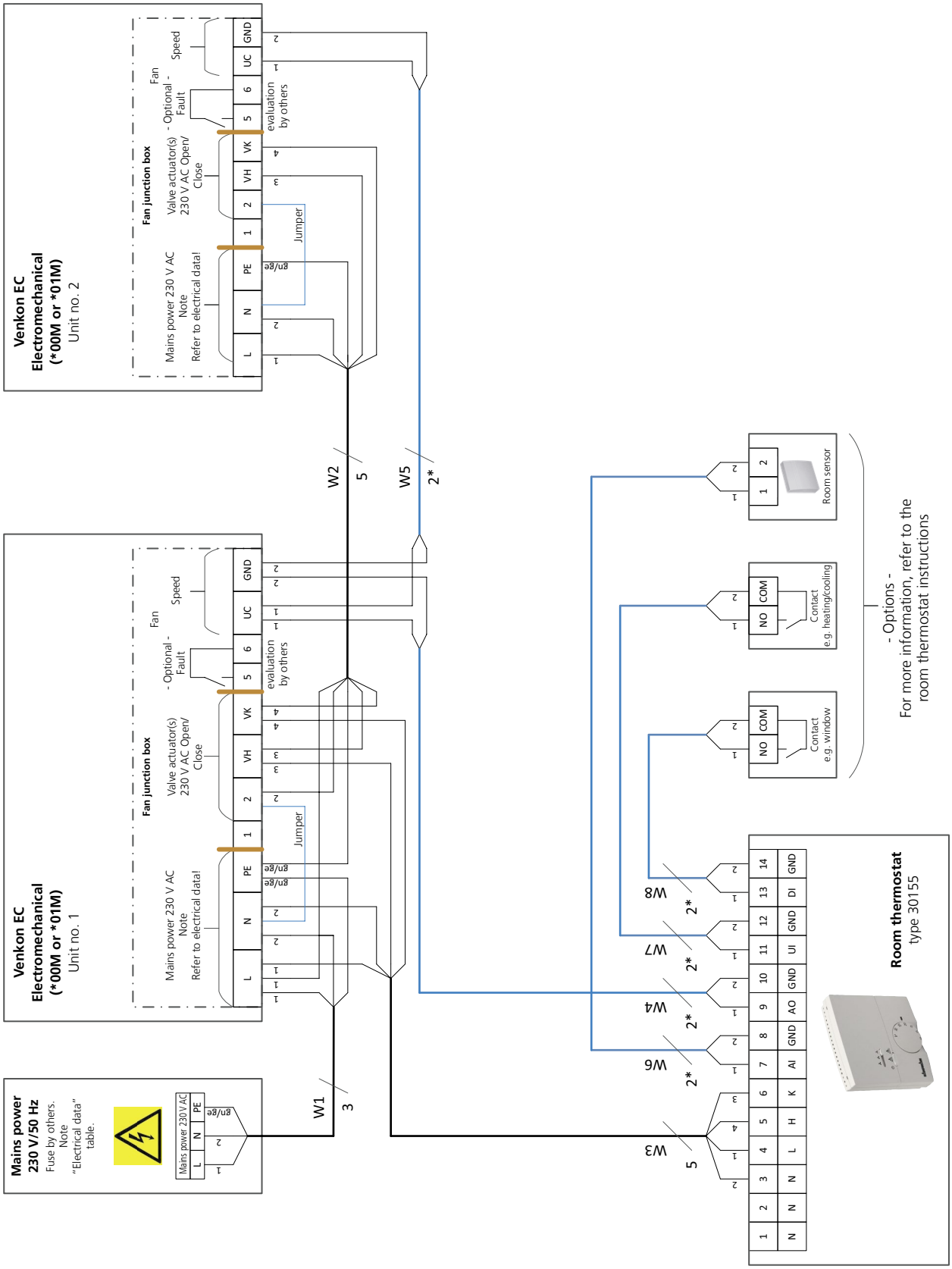
The following points need to be taken into account with the cabling and wiring plans stated for the electrical installation.

- Comply with the details on type of cable and cabling taking into consideration VDE 0100.
- None *: NYM-J. The requisite number of wires including fuse is stated on the cable. Cross-sections are not indicated as the cable length is involved in the calculation of the cross-section.
- With *: J-Y(ST)Y 0.8 mm. Lay separately from high-voltage cables.
- If you are using different cable types they must be at least equivalent to these.
- The terminals on the unit are suitable for a maximum wire cross-section of 2.5 mm².
- Only pulse and/or all-current sensitive residual current protective devices (type A or B) are permitted when using residual current protective devices. When power is applied to the unit, pulse-like capacitor load currents in the integrated EMC filter can lead to the RCCB being immediately tripped. We recommend residual current protective switches with a threshold of 300 mA and delayed triggering (super resistant, characteristic K).
- The electrical data listed in the following table needs to be considered when configuring the on-site mains supply and fuses.

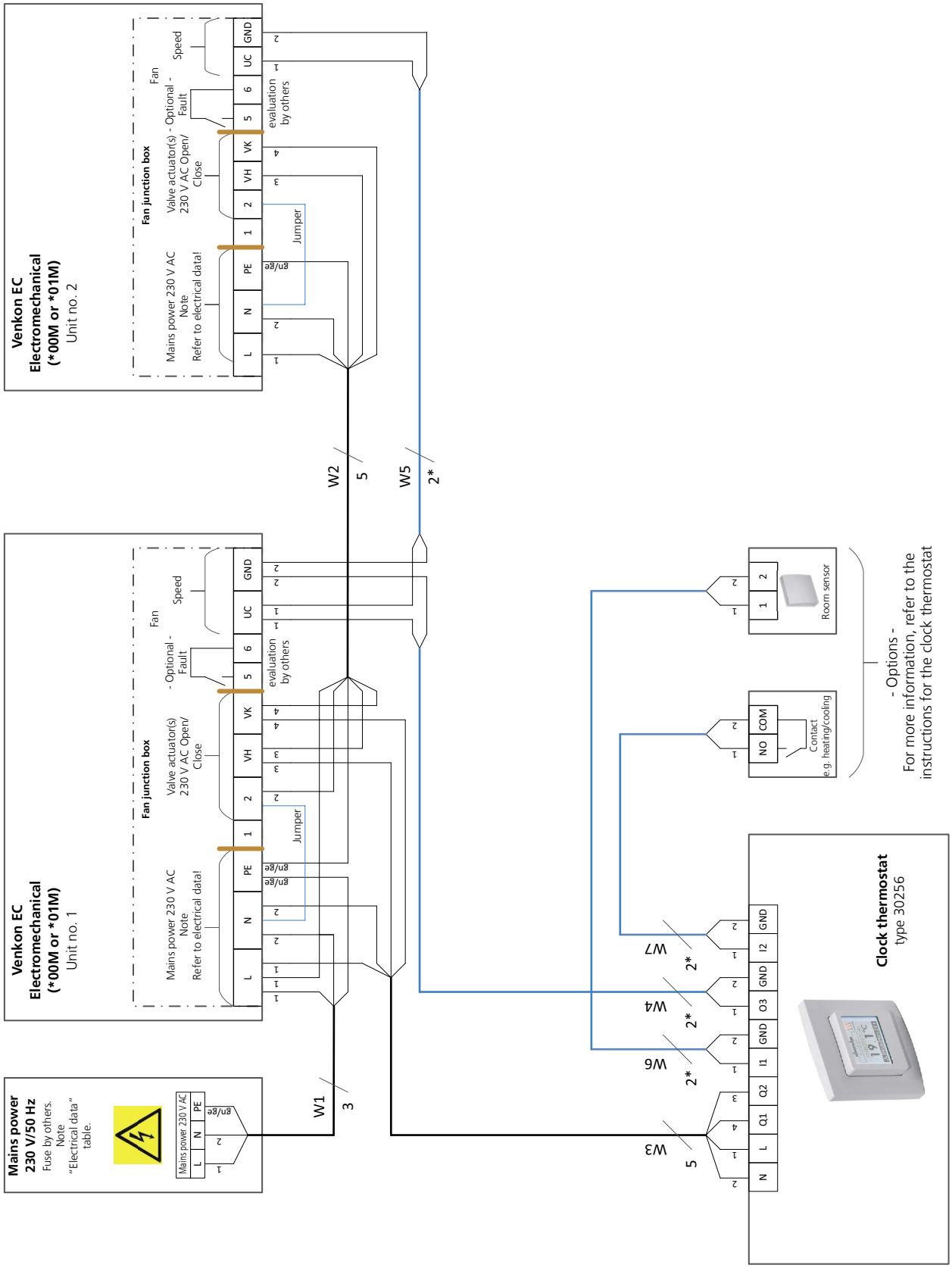
Electrical data for Venkon EC, electromechanical model (*00M / *01M)

Model	Fans	Nominal voltage	Mains frequency	Nominal power	Nominal current	Leakage current	Ri analogue input	Enclosure type	Protection class
	[Quantity]	[V AC]	[Hz]	[W]	[A]	[mA]	[kΩ]		
61	1 x Single	230	50	45	0.39	< 3.5	100	IP21	I
63	1 x Tandem	230	50	51	0.44	< 3.5	100	IP21	I
66	1 x Single, 1 x Tandem	230	50	95	0.84	< 3.5	50	IP21	I
67	2 x Tandem	230	50	102	0.89	< 3.5	50	IP21	I

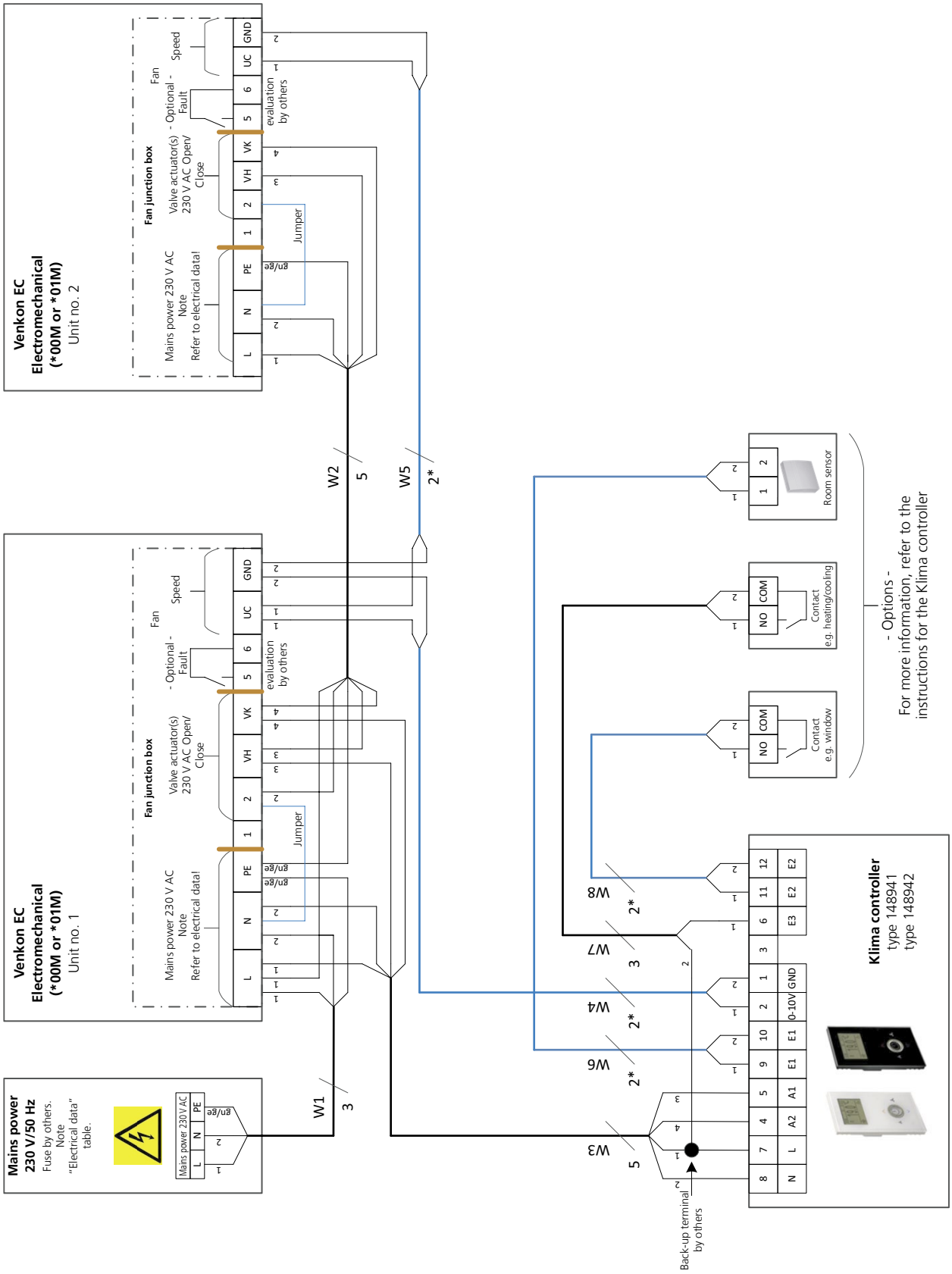
Cabling and wiring for Venkon EC electromechanical (*00M, *01M), 2- or 4-pipe, valve actuator(s) 230 V AC Open/Closed, motor fault optional, room thermostat type 196000030155



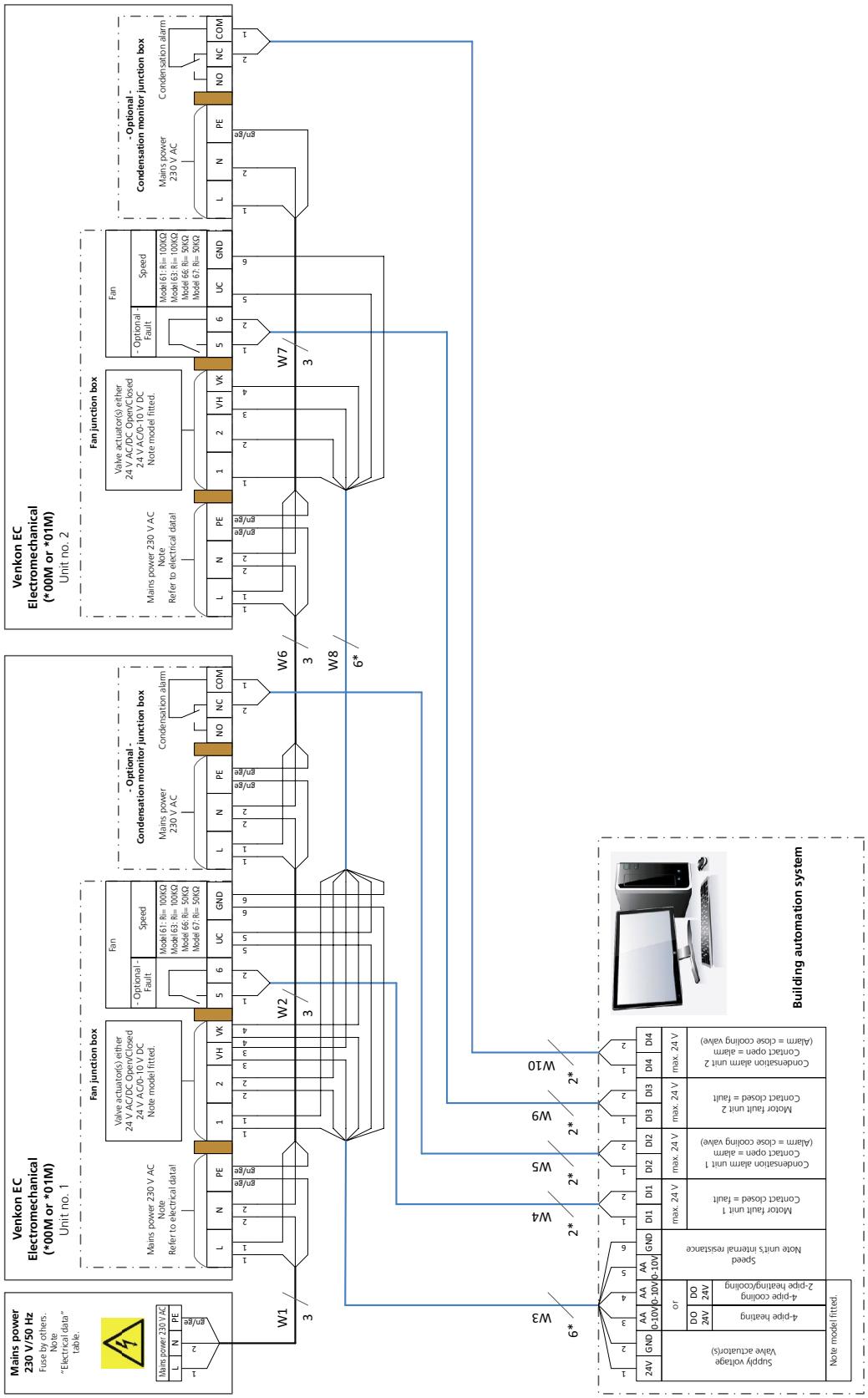
Cabling and wiring for Venkon EC electromechanical (*00M, *01M), 2- or 4-pipe, valve actuator(s) 230 V AC Open/Closed, motor fault optional, Clock thermostat type 196000030256



Cabling and wiring for Venkon EC electromechanical (*00M, *01M), 2- or 4-pipe, valve actuator(s) 230 V AC Open/Closed, motor fault optional, Klima controller type 196000148941 / 196000148942



Cabling and wiring for Venkon EC electromechanical (*00M, *01M), 2- or 4-pipe, valve actuator(s) 24 V AC/DC Open/Closed or 24 V AC 0-10 V DC, optional motor fault, optional condensation monitoring, control via DDC/BMS



Control – Venkon EC, KaControl model
The all-inclusive solution!

Product features
Units configured for operation with KaControl are fully wired and fitted with all electrical parts ready for connection (with the exception of optional accessories).
The built-in, high-performance, parametrisable KaControl microprocessor control provides all the functions the Venkon needs.
The "face" of the KaControl is the KaController operating unit.
A group of up to six units can be formed using a KaController unit without the need for additional addressing.
Optional plug-in interface cards offer the option of connecting to higher-level control systems.

Fans
The speed of the EC fans used in the units are controlled by a 0-10 V DC signal from the KaControl.
The"intelligent" motor electronics detect any possible motor fault and automatically switch the fan off.
A motor fault on the unit to which the KaController is connected is displayed on the KaController.

Control unit
Various versions of KaController operating unit are available for operation and control.

KaController
type 196003210001

type 196003210002

type 196003210006

The KaController offers maximum operating convenience with a large display, one-touch operation and optionally also with side operating keys for quick access. Based on the principle of "as little as possible, as much as required", even untrained users can intuitively get to grips with the control options. The displays are language-independent using pictograms. The basic functions are inputted in a user-friendly way using the KaController.

Product features of the KaController

- plastic housing, colour similar to RAL 9010 (type 196003210001 and 196003210002 or black (type 196003210006)for surface-mounting on a flush back box or surface-mounting a surface-mounted frame (accessory)
- high-quality design of room control units, large PCD multifunctional display with energy-saving, automatically switching LED backlight
- push-turn navigator dial with endless turn/lock function
- side function keys for quick access (only with type 196003210002)
- integral temperature sensor
- individually adjustable basic display
- display of fault messages
- built-in weekly switching program
- password-protected parameter level

KaControl

The parametrisable KaControl microprocessor control offers a wealth of functions. The following default settings are factory set for the Venkon product:

- 2- and 4-pipe - applications, thermal valve actuators 24 V DC Open/Closed, normally closed
- room temperature control with 2-point valve control and demand-led fan control in Automatic mode or optionally fixed stage selection
- room frost protection function ➞ RT < 8 °C = heating valve open, fan stage 1
- unit frost protection function ➞ RT < 4° = valve(s), fan off
- optional use of the internal or external room temperature sensor (accessory)
- in the event of an alarm being triggered on a device to which the KaController room control unit is connected, e.g. a motor fault or condensation alarm is detected by the KaControl and indicated on the KaController control unit
- control input for heating/cooling changeover with 2-pipe systems
- control input can either be set to Comfort/ECO or ON/OFF switchover
- 24 V DC/max 0.5 A switch output parametrisable to unit alarm, heat or cooling demand (only with 2-pipe applications)
- sequential control of valve (Open/Closed) and fan speed via a (2-pipe) or two data points 0-10 V DC (4-pipe) ➞ only with control without KaController
- one slot for optional interface cards for connection to a higher-level building automation system ➞ optionally Modbus, KNX, BACnet (accessory)
- password-protected parameter level
- parallel operation of a maximum of 6 units is possible, extendible to a maximum of 30 units using additional CANbus cards type 3260301 (accessory) per unit

Any additional functions required can be parametrised and correspondingly coordinated.

Cabling information

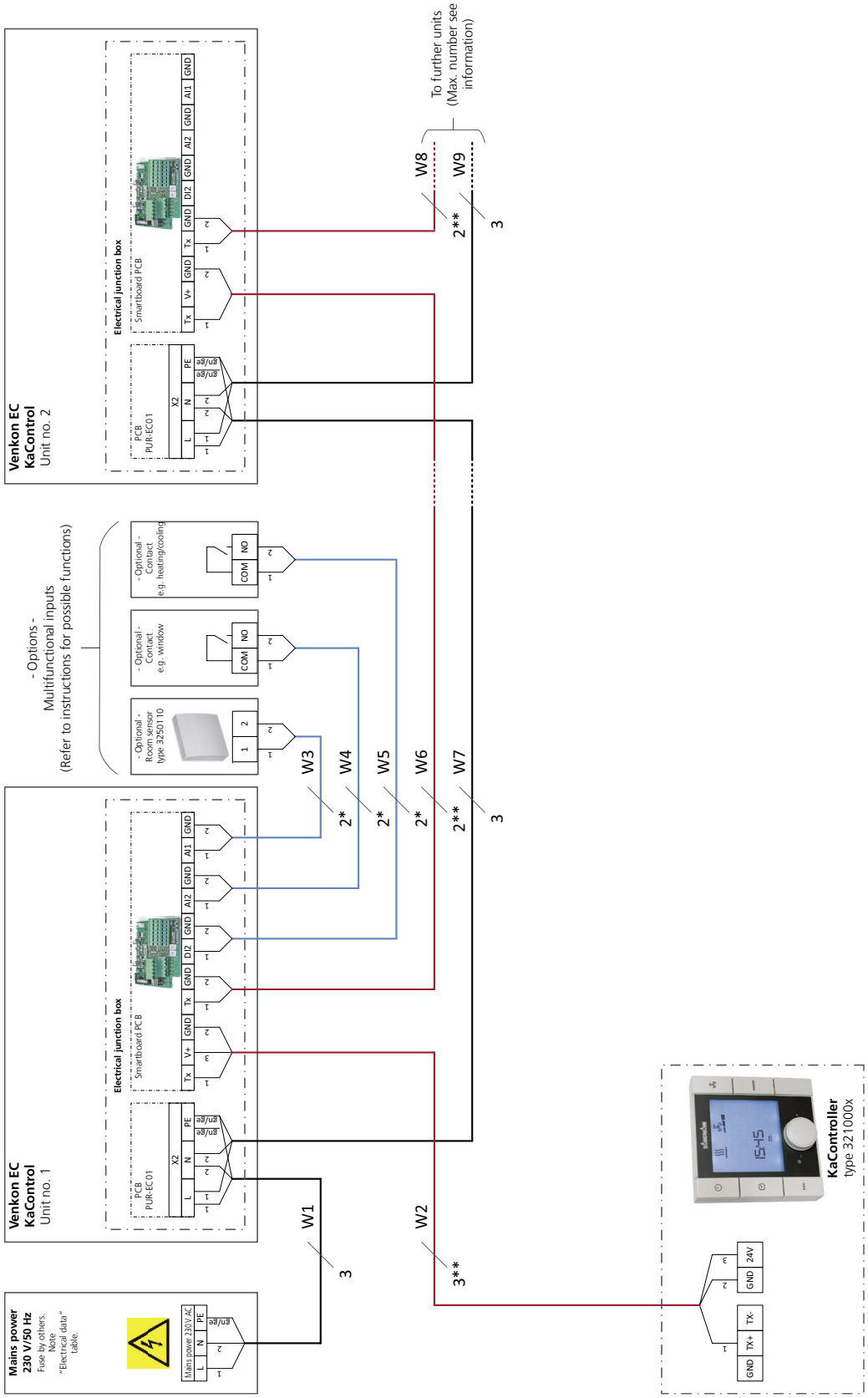
The following points need to be taken into account with the cabling and wiring plans stated for the electrical installation.

- Comply with the details on type of cable and cabling taking into consideration VDE 0100.
- None *: NYM-J. The requisite number of wires including fuse is stated on the cable. Cross-sections are not indicated as the cable length is involved in the calculation of the cross-section.
- With *: J-Y(ST)Y 0.8 mm. Lay separately from high-voltage cables.
- With**: UNITRONIC BUS LD 0.22 mm². Lay separately from high-voltage cables.
- If you are using different cable types they must be at least equivalent to these.
- Length of BUS cable from the KaController to unit 1: max. 30 m
- Maximum number of parallel units: 6 no. CANbus cards type 3260301 needed for each unit (see accessories) maximum 30 no.
- Length of BUS cable from unit 1 to the last unit max. 30 m. The cable length can be increased to 500 m using CANBUS cards type 3260301 (see accessories).
- The terminals on the unit for the mains power supply are suitable for a maximum wire cross-section of 2.5 mm².
- Only pulse and/or all-current sensitive residual current protective devices (type A or B) are permitted when using residual current protective devices. When power is applied to the unit, pulse-like capacitor load currents in the integrated EMC filter can lead to the RCCB being immediately tripped. We recommend residual current protective switches with a threshold of 300 mA and delayed triggering (super resistant, characteristic K).
- The electrical data listed in the following table needs to be considered when configuring the on-site mains supply and fuses.

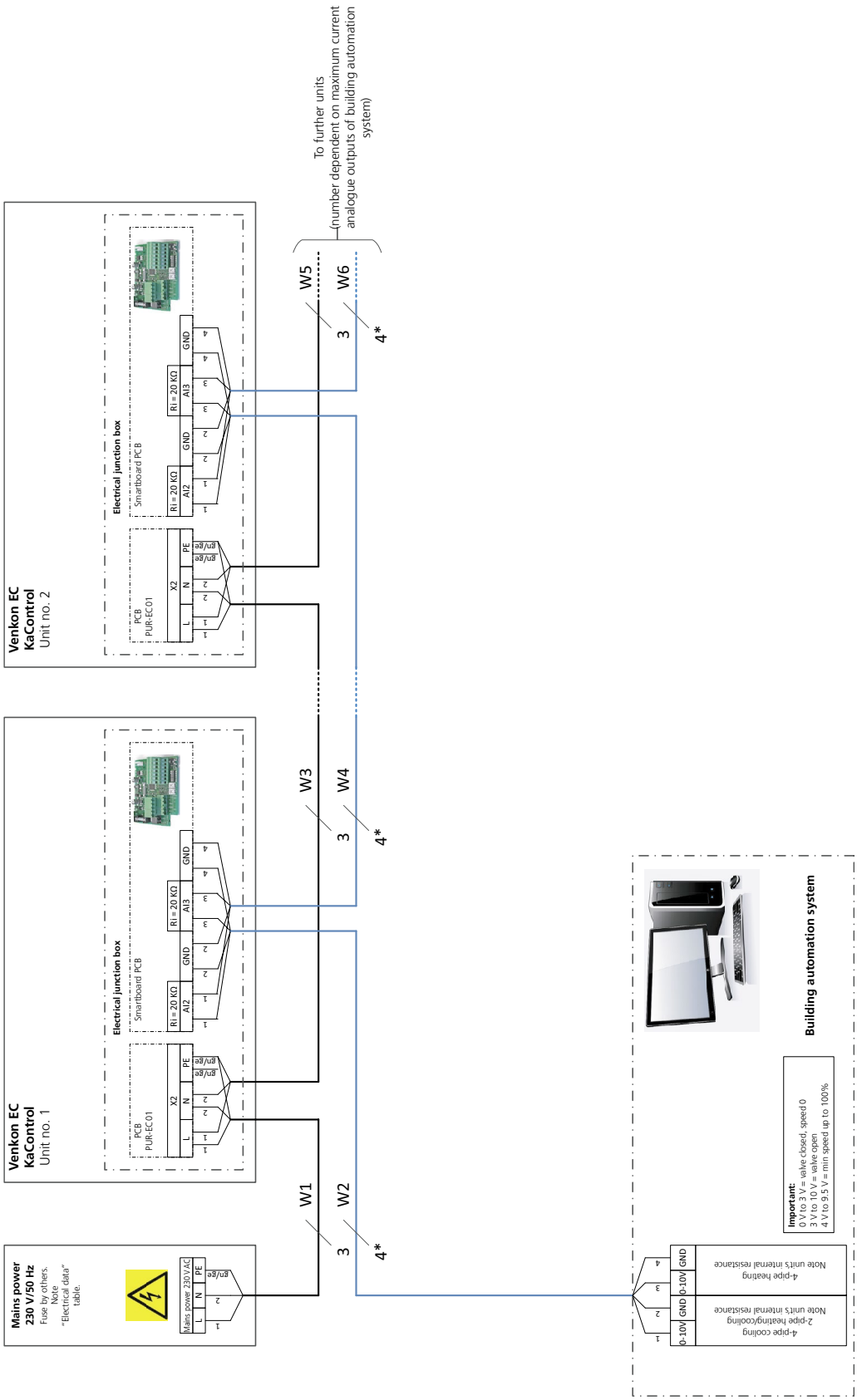
Electrical data for Venkon EC, KaControl model (*C1M / *C1E)

Model	Fans	Nominal voltage	Mains frequency	Nominal power	Nominal current	Leakage current	Ri analogue inputs	Enclosure type	Protection class
	[Quantity]	[V AC]	[Hz]	[W]	[A]	[mA]	[kΩ]		
61	1 x Single	230	50	48	0.42	< 3.5	20	IP21	I
63	1 x Tandem	230	50	54	0.47	< 3.5	20	IP21	I
66	1 x Single, 1 x Tandem	230	50	98	0.87	< 3.5	20	IP21	I
67	2 x Tandem	230	50	105	0.92	< 3.5	20	IP21	I

Venkon EC with KaControl (*C1M or *C1E)
2- or 4-pipe, valve actuator(s) 24 V AC/DC, Open/Closed, optional condensation monitoring, KaController activation



Venkon EC with KaControl (*C1M or *C1E)
2- or 4-pipe, valve actuator(s) 24 V AC/DC, Open/Closed, optional condensation monitoring, Control via a 0-10 V DC signal



KaControl – integration into intelligent building networks (IoT)

KaControl offers a wealth of options for integration into established communication networks. Various building automation strategies can be configured using various options.

Individual switching of units
Units with KaControl configuration can be directly integrated into on-site networks using optional communication interfaces. Control and monitoring is provided via fixed data points. Operation is provided via the KaController operating unit or via the operating units that belong to the network.

Switching of groups
Up to six units with KaControl configuration can be operated in a single group. Groups of units can be directly integrated into on-site networks using optional communication interfaces. Control and monitoring is provided via fixed data points. Operation of a group is provided via the KaController operating unit or via the operating units that belong to the network.

Communication interfaces
The following communication interfaces can be supplied separately of factory-fitted.

- Modbus RTU
- KNX
- BACnet IP

Important:
More information on integration into intelligent building networks and the associated communication interfaces is available on request!

KaControl – system controller

The optional Modbus interface allows units with KaControl configuration to be networked into systems individually or in groups with factory-programmed higher-level Kampmann system controllers.

KaControl SEL control panel

- up to 24 secondary air units or door air curtains split into up to 24 groups (zones), identical units needed within a group
- optional: KaController for each group possible
- central heating (winter) / cooling (summer) switch-over of secondary air units or heating (winter) / ventilation (summer) of door air curtains
- central timer programs
- optional: BACnet IP gateway for connection to higher-level control systems for the units/zones

KaControl AUL control panel

- one Kampmann ventilation system
- up to 10 groups (zones) with up to 6 Kampmann secondary air units or door air curtains, identical units needed within a group
- optional: KaController for each group
- central heating (winter) / cooling (summer) switch-over of secondary air units or heating (winter) / ventilation (summer) of door air curtains
- 5 timer programs can be assigned to groups
- optional: BACnet IP gateway for connection to higher-level control systems for the units/zones

KaControl visualisation

- up to 100/300 units
- optional: KaController for each group
- central heating (winter) / cooling (summer) switch-over of secondary air units or heating (winter) / ventilation (summer) of door air curtains
- central timer programs
- visualisation of Kampmann secondary air units, door air curtains and ventilation systems

Important:
More information on KaControl system controller can be provided on request!

05 Ordering information

Venkon AC

Model	Air volume	Sound pressure level [1]	2-/4-pipe	Heat output Q_H [2]	Cooling output Q_K [3]	Control options [4]	Art. no.
	[m³/h]	[dB(A)]		[kW]	[kW]		
61	125 – 530	<20 - 49	2-pipe basic unit	1.91 – 7.74	0.84 – 3.27	00M	**14861*UL21*A00M**
			4-pipe basic cooling unit, 1 row for heating	1.54 – 4.99	0.79 – 3.08	00M	**14861*UL41*A00M**
63	240 – 705	<20 - 47	2-pipe basic unit	3.66 – 10.65	1.57 – 4.52	00M	**14861*UL23*A00M**
			4-pipe basic cooling unit, 1 row for heating	2.89 – 7.04	1.43 – 4.10	00M	**14861*UL43*A00M**
66	350 – 1230	25 – 50	2-pipe basic unit	5.12 – 17.74	2.23 – 7.67	00M	**14861*UL26*A00M**
			4-pipe basic cooling unit, 1 row for heating	4.01 – 11.27	1.86 – 6.40	00M	**14861*UL46*A00M**
67	460 – 1510	26 – 50	2-pipe basic unit	7.09 – 23.21	3.12 – 10.20	00M	**14861*UL27*A00M**
			4-pipe basic cooling unit, 1 row for heating	5.44 – 14.55	2.72 – 8.91	00M	**14861*UL47*A00M**

Article key for wall-mounted/ceiling-mounted units and filter selection
(Example of art. no.)

14861*UL21*A00M

- **0** → Model with ISO Coarse filter
- **5** → Model with ePM10>50% (formerly M5) filter
- **7** → Model with ePM1>50% (formerly F7) filter
- **W** → Wall-mounted unit
- **D** → Ceiling-mounted unit

[1] at CHW 7 / 12 °C, t_L = 27 °C, 50% rel. humidity with ISO Coarse filter
[2] at LPHW 75 / 65 °C, t_L = 20 °C with ISO Coarse filter
[3] Sound pressure data at: Room size 100 m³, reverberation time 0.5 seconds, sound absorption 8 dB(A)
[4] Control configuration 00M = electromechanical control for connection to factory-fitted and wired junction box

Venkon EC

Model	Air volume	Sound pressure level [1]	2-/4-pipe	Heat output Q_H [2]	Cooling output Q_K [3]	Control options [4]	Art. no.
	[m³/h]	[dB(A)]		[kW]	[kW]		
61	135 – 560	20 – 53	2-pipe basic unit	1.95 – 8.24	0.86 – 3.42	00M	**14861*UL21*E00M**
						01M	**14861*UL21*E01M**
						C1M	**14861*UL21*EC1M**
						C1E	**14861*UL21*EC1E**
			4-pipe basic unit	1.57 – 5.28	0.81 – 3.23	00M	**14861*UL41*E00M**
						01M	**14861*UL41*E01M**
						C1M	**14861*UL41*EC1M**
						C1E	**14861*UL41*EC1E**
63	190 – 850	<20 - 50	2-pipe basic unit	2.86 – 12.82	1.18 – 5.26	00M	**14861*UL23*E00M**
						01M	**14861*UL23*E01M**
						C1M	**14861*UL23*EC1M**
						C1E	**14861*UL23*EC1E**
			4-pipe basic unit	2.40 – 8.31	1.07 – 4.77	00M	**14861*UL43*E00M**
						01M	**14861*UL43*E01M**
						C1M	**14861*UL43*EC1M**
						C1E	**14861*UL43*EC1E**
66	315 – 1405	21 – 54	2-pipe basic unit	4.54 – 20.30	1.93 – 8.54	00M	**14861*UL26*E00M**
						01M	**14861*UL26*E01M**
						C1M	**14861*UL26*EC1M**
						C1E	**14861*UL26*EC1E**
			4-pipe basic unit	3.67 – 12.71	1.61 – 7.13	00M	**14861*UL46*E00M**
						01M	**14861*UL46*E01M**
						C1M	**14861*UL46*EC1M**
						C1E	**14861*UL46*EC1E**
67	355 – 1700	<20 - 53	2-pipe basic unit	5.45 – 26.20	2.28 – 11.26	00M	**14861*UL27*E00M**
						01M	**14861*UL27*E01M**
						C1M	**14861*UL27*EC1M**
						C1E	**14861*UL27*EC1E**
			4-pipe basic unit	4.50 – 16.22	1.99 – 9.84	00M	**14861*UL47*E00M**
						01M	**14861*UL47*E01M**
						C1M	**14861*UL47*EC1M**
						C1E	**14861*UL47*EC1E**

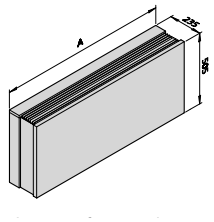
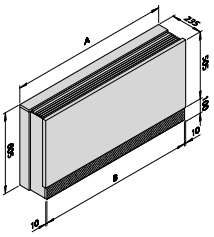
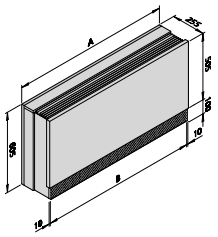
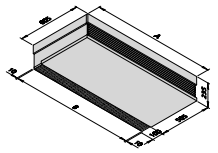
Article key for wall-mounted/ceiling-mounted units and filter selection
(Example of art. no.)

14861*UL21*A00M

- **0** → Model with ISO Coarse filter
- **5** → Model with ePM10>50% (formerly M5) filter
- **7** → Model with ePM1>50% (formerly F7) filter
- **W** → Wall-mounted unit
- **D** → Ceiling-mounted unit

[1] at CHW 7 / 12 °C, t_L = 27 °C, 50% rel. humidity with ISO Coarse filter
[2] at LPHW 75 / 65 °C, t_L = 20 °C with ISO Coarse filter
[3] Sound pressure data at: Room size 100 m³, reverberation time 0.5 seconds, sound absorption 8 dB(A)
[4] Control configuration 00M = electromechanical control without fault signal for connection to factory-fitted and wired junction box
Control configuration 01M = electromechanical control with fault message for connection to factory-fitted and wired junction box
Control configuration C1M = control with KaControl PCB as master or slave unit - 24 V Open/Close valve actuation
Control configuration C1E = control with KaControl PCB as with control version C1M but with remote control box

Accessories

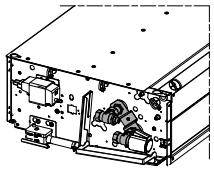
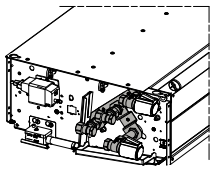
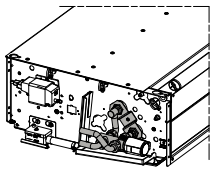
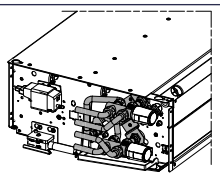
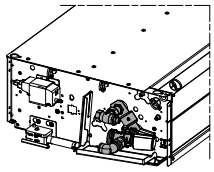
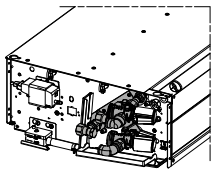
Figure	Article	Properties	Suitable for	Art. no.
	Casings			
	**Casing, wall-mounted**	without inlet grille	Model 61	**14862WUBH100**
			Model 63	**14862WUBH300**
			Model 66	**14862WUBH600**
			Model 67	**14862WUBH700**
	**Casing, wall-standing**	with inlet grille	Model 61	**14862WUBS100**
			Model 63	**14862WUBS300**
			Model 66	**14862WUBS600**
			Model 67	**14862WUBS700**
	**Free-standing casing**	with rear panel and inlet grille	Model 61	**14862WUBF100**
			Model 63	**14862WUBF300**
			Model 66	**14862WUBF600**
			Model 67	**14862WUBF700**
	**Ceiling casing**	with inlet grille	Model 61	**14862DUBH100**
			Model 63	**14862DUBH300**
			Model 66	**14862DUBH600**
			Model 67	**14862DUBH700**

more »

Dimensions

Model	A	W
	[mm]	[mm]
61	900	880
63	1200	1180
66	1650	1630
67	2000	1980

Accessories

Figure	Article		Properties	Suitable for	Art. no.
Accessories for recirculating air basic unit, water-side, factory-fitted on the basic unit					
	**2-way valve kit**	water connection on left	2-pipe version with pre-settable 2-way valve with lockable return shut-off valve	all models, combinable control: -00M, -01M, -C1M, -C1E	**14863BBL2*2A**
		water connection on right			**14863BBR2*2A**
		water connection on left	4-pipe version with pre-settable 2-way valves with lockable return shut-off valve	all models, combinable control: -00M, -01M, -C1M, -C1E	**14863BBL4*2A**
		water connection on right			**14863BBR4*2A**
	**3-way valve kit**	water connection on left	2-pipe version with 3-way valve	all models, combinable control: -00M, -01M, -C1M, -C1E	**14863BBL2*3A**
		water connection on right			**14863BBR2*3A**
		water connection on left	4-pipe version with 3-way valve	all models, combinable control: -00M, -01M, -C1M, -C1E	**14863BBL4*3A**
		water connection on right			**14863BBR4*3A**
	**"Differential pressure-independent valve kit"**	water connection on left	2-pipe differential pressure-independent valve kit with lockable return shut-off valve	all models, combinable control: -00M, -01M, -C1M, -C1E	**14863BBL2*DA**
		water connection on right			**14863BBR2*DA**
		water connection on left	4-pipe differential pressure-independent valve kit with lockable return shut-off valve	all models, combinable control: -00M, -01M, -C1M, -C1E	**14863BBL4*DA**
		water connection on right			**14863BBR4*DA**

more »

Article key for model (Example of art. no.)

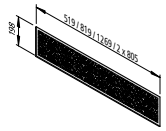
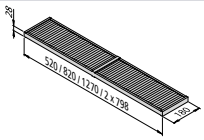
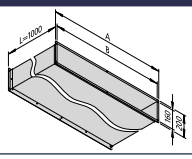
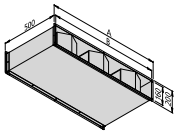
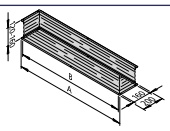
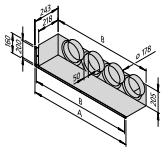
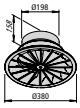
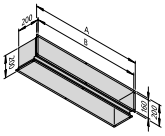
14863BBL2 12A
- **3** → Model 63
- **6** → Model 66
- **7** → Model 67

Accessories

Figure	Article	Properties	Suitable for	Art. no.
	Valve actuators for pre-fitted valve kits, factory-fitted and wired to the basic unit			
	**Valve actuator 230 V OPEN/CLOSED for 2-pipe**	1x 230 V OPEN/CLOSED valve actuator including plug-in line and valve adapter, factory-fitted and wired to the basic unit	valve kits for 2-pipe and electromechanical control (00M and 01M)	**14866BBB201A**
	Valve actuator 230 V OPEN/CLOSED for 4-pipe	2x 230 V OPEN/CLOSED valve actuators including plug-in line and valve adapter, factory-fitted and wired to the basic unit	valve kits for 4-pipe and electromechanical control (00M and 01M)	**14866BBB401A**
	**Valve actuator 24 V AC/DC Open/Close 2-pipe**	1x 24 V OPEN/CLOSED valve actuator including plug-in line and valve adapter, factory-fitted and wired to the basic unit	valve kits for 2-pipe and electromechanical control (00M and 01M) or KaControl (C1M and C1E)	**14866BBB202A**
	Valve actuator 24 V AC/DC OPEN/CLOSED 4-pipe	2x 24 V OPEN/CLOSED valve actuators including plug-in line and valve adapter, factory-fitted and wired to the basic unit	valve kits for 4-pipe and electromechanical control (00M and 01M) or KaControl (C1M and C1E)	**14866BBB402A**
	**Valve actuator 24 V AC 0-10 V continuous valve actuation**	1x 0-10 V continuous valve actuator including plug-in line and valve adapter, factory-fitted and wired to the basic unit	valve kits for 2-pipe and electromechanical control (00M and 01M)	**14866BBB203A**
	Valve actuator 24 V AC 0-10 V continuous valve actuation	2x 0-10 V continuous valve actuators including plug-in line and valve adapter, factory-fitted and wired to the basic unit	valve kits for 4-pipe and electromechanical control (00M and 01M)	**14866BBB403A**
	Condensation accessories, factory-fitted to the basic unit			
	**Valve condensation tray, wall-mounted unit**	factory-fitted to the basic unit, to collect any condensation produced on the valve fitting for left-hand water connection and 2-way valve kit on wall-mounted units	all models	**14864WBL002A**
		factory-fitted to the basic unit, to collect any condensation produced on the valve fitting for right-hand water connection and 2-way valve kit on wall-mounted units		**14864WBR002A**
		factory-fitted to the basic unit, to collect any condensation produced on the valve fitting for left-hand water connection and 3-way valve kit and differential pressure-independent valve kit on wall-mounted units		**14864WBL003A**
		factory-fitted to the basic unit, to collect any condensation produced on the valve fitting for right-hand water connection and 3-way valve kit and differential pressure-independent kit on wall-mounted units		**14864WBR003A**
	Valve condensation tray for ceiling-mounted units	factory-fitted on the basic unit to collect the condensation produced on the valve assembly with ceiling-mounted units	all models	**14864DBB000A**
	**Condensation pump**	condensation pump fitted and wired on the basic unit, for pumping away the condensation produced on the valve fitting and in the basic unit with "wet" cooling including signalling of condensation overflow via potential-free contact to external control systems	all models with valve condensation tray	**14866BBB00KA**
	**Dewpoint monitor sensor**	condensation monitor fitted and wired to the basic unit, to detect the formation of condensation with "dry" cooling at the water flow to the heat exchanger, including signalling of condensation via potential-free contact to external control systems	all models without valve condensation tray	**14866BBB00TA**

more »

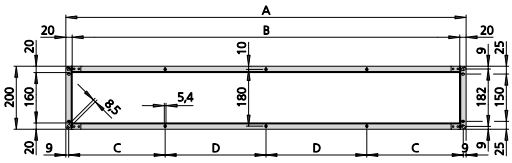
Accessories

Figure	Article	Properties	Suitable for	Art. no.
Spare filter and filter accessories, factory-fitted to the basic unit				
	**ISO Coarse spare filter**	dry layer filter, filter grade ISO Coarse	all models	**14869BBB0*01**
	**ePM10>50% spare filter (M5)**	cassette filter used as spare filter, filter grade ePM10>50% (formerly M5) (only for use with basic units with filter box for cassette filter ePM10>50% or ePM1>50%)	all models	**14869BBB0*05**
	ePM1>50% spare filter (F7)	cassette filter used as spare filter, filter grade ePM1>50% (formerly F7) (only for use with basic units with filter box for cassette filter ePM10>50% or ePM1>50%)		**14869BBB0*07**
Sheet steel accessories – recirculating air, provided separately				
	**Air duct**	standard length 1000 mm, non-standard lengths on request	all models	**14865BBB0*01**
	**Sound attenuator baffle silencer type**	length 500 mm	all models	**14865BBB0*06**
	**Flexible connector**	with frame on both sides and flexible canvas connection for structure-borne noise decoupling and length compensation of on-site dimensional inaccuracies; Length: 120 –160 mm	all models	**14865BBB0*04**
	**Flexible pipe connection unit spigot Ø 180 mm**	number of adaptors model 61 = 2 model 63 = 3 model 66 = 4 model 67 = 5	all models	**14865BBB0*05**
	**Ceiling swirl diffuser DN 180**	circular, white painted, for connection to ø 158 mm flexible pipe, outer diameter of swirl diffuser 280 mm, type DRS with clamping flange for installation in suspended ceilings	all models	**14867BBB0001**
	**90° duct bend**	short bend, e.g. with ceiling arrangement as a transition from horizontal to vertical ductwork	all models	**14865BBB0*03**

more »

Dimensions / Frame connection dimensions

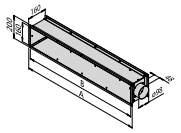
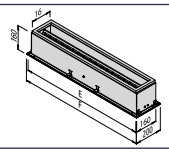
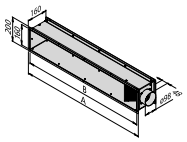
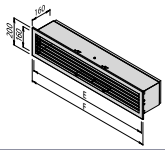
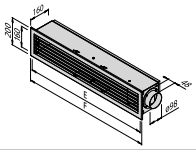
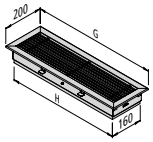
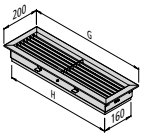
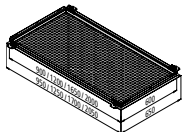
Model	A	B	C	D
	[mm]	[mm]	[mm]	[mm]
61	570	530	276	–
63	870	830	426	–
66	1320	1280	651	–
67	1670	1630	406	420



Article key for model (Example of art. no.)

14865BBB0101
- 3 → model 63
- 6 → model 66
- 7 → model 67

Accessories

Figure	Article	Properties	Suitable for	Art. no.
	Sheet steel accessories – recirculating air, provided separately			
	**Inlet box with primary air connection spigot**	unit for fitting on the air inlet of the Venkon, dimensions of connecting sockets DN 100	all models	**14865BBB0*07**
	**Hotel air opening with inlet box and filter**	unit for fitting on the air inlet of the Venkon	all models	**14867BBB0*05**
	**Outlet box with primary air connection spigot**	unit for fitting on the air outlet of the Venkon, dimensions of connecting sockets DN 100	all models	**14865BBB0*08**
	**Outlet box with hotel opening**	unit for installation onto the air discharge of the Venkon	all models	**14867BBB0*03**
	**Outlet box with primary air connection spigot and hotel opening**	unit for fitting on the air outlet of the Venkon, dimensions of connecting sockets DN 100	all models	**14867BBB0*04**
	**Air grille, natural aluminium inside, rigid design with connection box**	unit for installation onto the air discharge of the Venkon	all models	**14867BBB0*02**
	**Air grille, natural aluminium inside, with adjustable air outlet angle with connection box**	unit for installation onto the air discharge of the Venkon	all models	**14867BBB0*12**
	**Inspection hatch, perforated metal with frame**	unit for subsequent maintenance in suspended ceilings, colour RAL 9016, suitable for clamping to plasterboard ceilings or for suspending from concrete slab ceilings, 25 mm wide frame on all sides width without frame: 600 mm length without frame: model 61 = 900 mm / model 63 = 1200 mm / model 66 = 1650 mm / model 67 = 2000 mm	all models	**14866BBB0*10**

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Dimensions / Frame connection dimensions

Model	A	B	C	D	E	F	G	H
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
61	570	530	276	–	586	620	625	586
63	870	830	426	–	886	920	925	886
66	1320	1280	651	–	1336	1370	1375	1336
67	1670	1630	406	420	1686	1720	1725	1686

Article key for model (Example of art. no.)

14865BBB0101 → model 61
3 → model 63
6 → model 66
7 → model 67

Ordering information for Venkon AC electromechanical

Figure	Article	Properties	Suitable for	Art. no.
	Accessories for electromechanical control			
	**Electromechanical room thermostat**	only suitable for cooling with 3-stage fan speed switch, colour: white, voltage: 230 V, 50 Hz, max. 3 A, W x H x D: 170 x 70 x 44 mm	Venkon AC electromechanical all models, 2-pipe heating-only	**196000100915**
	**Electromechanical room thermostat**	only suitable for cooling, with 3-stage fan speed switch, colour: white, voltage: 230 V, 50 Hz, max. 3 A, W x H x D: 170 x 70 x 44 mm	Venkon AC electromechanical all models, 2-pipe cooling ONLY	**196000148918**
	**Electromechanical room thermostat**	with manual cooling/heating switch, with 3-speed fan speed switch colour: white, voltage: 230 V, 50 Hz, max. 3 A, W x H x D: 170 x 70 x 44 mm	Venkon AC electromechanical all models, 2-pipe heating/cooling	**196000148917**
	**Electromechanical room thermostat**	with automatic cooling / heating switchover, with 3-speed fan speed switch, colour: white	Venkon AC electromechanical all models, 2- and 4-pipe	**196000148916**
	**Remote sensor**	sensor type NTC47K, surface-mounted/wall-mounted, pure white similar to RAL9010 protection class IP30 dimensions W x H x D: 78 x 13.9 x 78.5 mm	electromechanical room thermostat type 196000148916	**196000148921**
	**Surface-mounted frame**	for surface mounting of the room thermostat types 196000100915, 196000148916, 196000148917 and 196000148918 if no back box is possible	electromechanical room thermostat type 196000100915, 196000148916, 196000148917, 196000148918	**196000030159**

Ordering information for Venkon EC electromechanical

Figure	Article	Properties	Suitable for	Art. no.
	Accessories for electromechanical control			
	**Room thermostat**	for heating and/or cooling in 2-pipe and 4-pipe applications, 3-stage switch, fan speed, operating mode selector switch Off/Manual/Automatic, room temperature setpoint between 5 and 30 °C, integrated temperature sensor and connection option for external room sensors, pure white similar to RAL 9010, protection class IP30, voltage supply 230 V, 50 Hz dimensions W x H x D: 110 x 111 x 26 mm	Venkon EC electromechanical all models, 2- and 4-pipe	**196000030155**
	**Surface-mounted frame**	for surface mounting of the room thermostat type 196000030155 if no back box is possible	room thermostat type 196000030155	**196000030159**
	**Clock thermostat**	for heating and/or cooling in 2-pipe and 4-pipe applications, display with adjustable backlight, 4 sensor keys for operation, integrated temperature sensor and connection option for external room sensors, pure white similar to RAL 9010, protection class IP30 voltage supply 230 V, 50 Hz, dimensions W x H x D: 81 x 85 x 18 mm (including frame)	Venkon EC electromechanical all models, 2- and 4-pipe	**196000030256**
	**Remote sensor**	sensor type NTC47K, surface-mounted/wall-mounted, pure white similar to RAL 9010, protection class IP30 dimensions W x H x D: 78 x 13.9 x 78.5 mm	room thermostat type 196000030155 and clock thermostat type 196000030256	**196000148921**

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Ordering information for Venkon EC electromechanical

Figure	Article	Properties	Suitable for	Art. no.
	Accessories for electromechanical control			
	**Klima controller, without Modbus**	suitable for heating and/or cooling in 2-pipe and 4-pipe applications, parallel operation of a maximum of 2 units is possible, 2.5″ LCD display with high-quality glass finish, with capacitative keys, LED ring as key feedback, 3-stage automatic switching, built-in timer programme, room temperature control with setpoint adjustment, built-in temperature sensors and connection option for external rooms sensors, pure white protection class IP30 voltage supply 230 V, 50 Hz, dimensions W x H x D: 78 x 140 x 15 mm when fitted on flush back box	Venkon EC electromechanical all models, 2- and 4-pipe	**196000148941**
	**Klima controller, without Modbus**	suitable for heating and/or cooling in 2-pipe and 4-pipe applications, parallel operation of a maximum of 2 units is possible, 2.5″ LCD display with high-quality glass finish, with capacitative keys, LED ring as key feedback, 3-stage automatic switching, built-in timer programme, room temperature control with setpoint adjustment, built-in temperature sensors and connection option for external rooms sensors, black, protection class IP30 voltage supply 230 V, 50 Hz, dimensions W x H x D: 78 x 140 x 15 mm when fitted on flush back box	Venkon EC electromechanical all models, 2- and 4-pipe	**196000148942**
	**Klima controller, with Modbus**	as type 196000148941, but with Modbus interface	Venkon EC electromechanical all models, 2- and 4-pipe	**196000148943**
	**Klima controller, with Modbus**	as type 196000148942, but with Modbus interface	Venkon EC electromechanical all models, 2- and 4-pipe	**196000148944**
	**Room temperature sensor**	for wall mounting, IP30 surface-mounted, colour white RAL 9010, alternative to the temperature sensor in the Klima Controller	Klima controller type 19600148941, 19600148942, 19600148943 and 19600148944	**196003250110**

Control accessories – Venkon with KaControl

Figure	Article	Properties	Suitable for	Art. no.
	KaControl accessories			
	**KaController operating unit** with one-touch operation	operating unit, wall-mounted, in high-grade design, plastic housing, colour similar to RAL 9010, large LCD multifunctional display, integrated room temperature sensor, communication interface to Kampmann T-LAN bus system, automatically switching LED backlight, press / turn dial with click stop function, individually adjustable basic display, integrated day, night and week program, password-protected parameter level for C1 control option	Venkon EC with KaControl, all models, 2- and 4-pipe	**196003210001**
	**KaController operating unit** with side function keys	as KaController room control unit type 19600320001, but with for quick access to fan setting, operating modes, Eco mode, time and timer program	Venkon EC with KaControl, all models, 2- and 4-pipe	**196003210002**
	**KaController operating unit** with one-touch operation	as KaController room control unit type 196003210001, but in black	Venkon EC with KaControl, all models, 2- and 4-pipe	**196003210006**
	**Surface-mounted frame for KaController**	for surface mounting of KaController room control units	KaController control unit type 196003210001, 196003210002, 196003210006	**197901081889**
	**KaControl room temperature sensor**	for wall mounting, IP30 surface-mounted, white RAL 9010, alternative to the temperature sensor in the KaController	Venkon EC with KaControl, all models, 2- and 4-pipe	**196003250110**
	**Pipe clip-on sensor**	only in conjunction with 3-way valves, for decentralised heating / cooling changeover via the temperature of the medium in a 2-pipe system (changeover), for fan activation via the temperature of the medium, one sensor needed with 2-pipe systems, two sensors needed with 4-pipe systems	Venkon EC with KaControl, all models, 2- and 4-pipe	**196003250115**
	**Serial CANBus card**	to extend the number of units from 7 to 30 units in a control circuit, to extend the length of the BUS line from the first unit to the last unit from 30 m up to 500 m in a single control circuit.	Venkon EC with KaControl, all models, 2- and 4-pipe	**196003260301**

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