



► **Venkon**
Fan coils

Venkon

Fan coils, recirculation air.

Heating, cooling and filtering for the ultimate in comfort

► **Technical catalogue**

KAMPMANN

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◆ 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

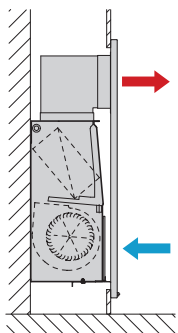
EC fans can be operated infinitely variably within a low fan speed range even at low air volumes with intelligent, integrated electronics on demand and this energy-efficiently. Low fan speeds have a positive effect on noise levels in areas, like hotels

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.

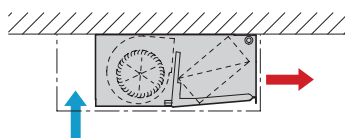
Intelligent motor management permanently detects the operating state of the fans and keeps the pre-set speed constant, regardless of the fan length and external influences. All EC fans are fitted with a running motor thermal contact.

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

Heating example

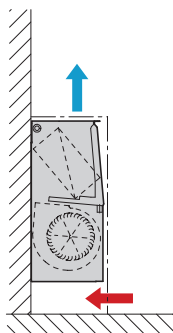


Venkon, ceiling-mounted
Side view

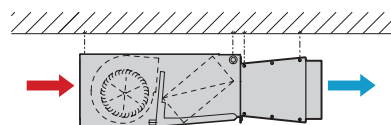


Venkon, ceiling-mounted
Side view

Cooling example



Venkon, wall-mounted
Side view



Venkon XL with connection unit for circular pipe
Side view

Product data



Product benefits

- ▶ Ultra-versatile in terms of length and appearance
- ▶ Versatile combination by the use of basic unit and casing
- ▶ Continuously variable EC fans (stage AC fans on request)
- ▶ Whisper-quiet operating sounds like no other unit on the market
- ▶ Low noise at low operating stages and high output at high speeds due to progressive power characteristic curve
- ▶ Made in Germany quality
- ▶ Life Cycle Assessment data published in the form of an EPD according to EN 15804 and available to download from the International EPD System. Registered in the DGNB Navigator construction product platform.



Features

- ▶ Four sizes
- ▶ Versatile combination of basic unit and casing
- ▶ 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

Installation

- ▶ Free-standing
- ▶ Freely suspended
- ▶ Wall- or ceiling-mounted

Primary air supply

- ▶ Optionally possible by way of accessories

Heating

- ▶ LPHW

Cooling

- ▶ CHW

Performance data

Air flow [cfm]	▶ 27 – 1785
Heat output [BTU] ¹⁾	▶ 2041 – 141357
Cooling output [BTU] ²⁾	▶ 1004 – 60510
Sound pressure level [dB(A)] ³⁾	▶ 18 – 69
Sound power level [dB(A)]	▶ 26 – 77

¹⁾ at LPHW 160/140 °F, $t_{L1} = 68$ °F

²⁾ at CHW 45/55 °F, $t_{L1} = 80$ °F, 48% relative humidity

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)

Operating limits

- ▶ Max. operating pressure: 145 psi
- ▶ Min. entering water temperature: 39 °F
- ▶ Max. entering water temperature: 194 °F
- ▶ Min. air inlet temp.: 59 °F
- ▶ Max. air inlet temp.: 104 °F
- ▶ Rel. air humidity: 20 % – 60 %
- ▶ Max. glycol volume: 50 %

Applications

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



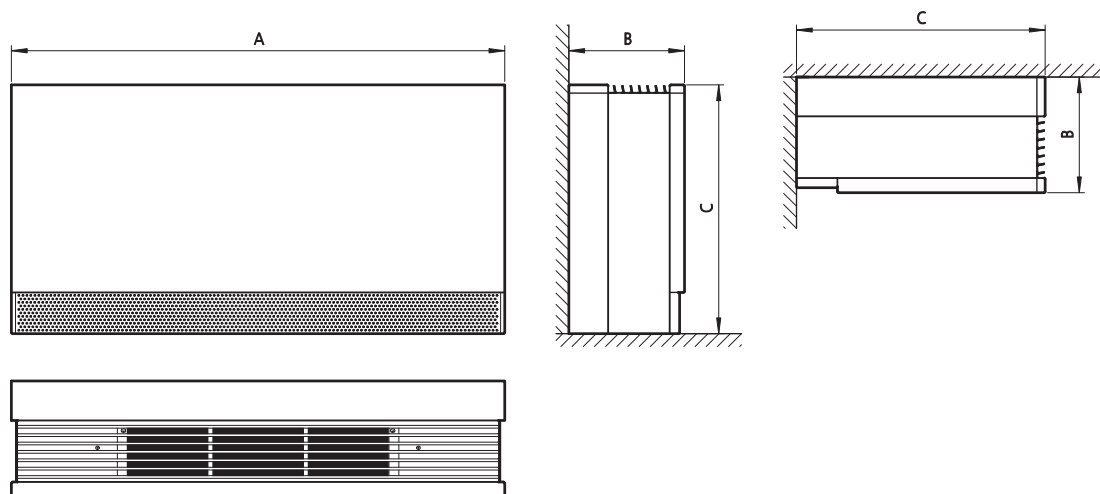
Selection guide

Filter class	System				Model size	Dimensions including casing Length (A) [in]
	2-pipe		4-pipe			
	Heat output ¹⁾ [BTU]	Cooling output ²⁾ [BTU]	Heat output ¹⁾ [BTU]	Cooling output ²⁾ [BTU]		
ISO Coarse filter	7582 – 41677	3174 – 17383	5720 – 23014	3124 – 17042	61	35.4
	14359 – 70429	5730 – 27522	9793 – 35073	5421 – 25599	63	47.2
	23698 – 108221	10108 – 46387	15055 – 51201	8612 – 37392	66	65
	28498 – 141357	12086 – 60510	18620 – 66704	11010 – 53017	67	78.7
MERV 8 / ePM10 filter >50% (M5)	4519 – 38602	1879 – 16101	3574 – 21669	1860 – 15793	61	35.4
	8392 – 58699	3371 – 22998	6062 – 30468	3213 – 21437	63	47.2
	13648 – 91778	5793 – 39328	9174 – 45142	5074 – 31887	66	65
	16761 – 117960	7058 – 50449	11648 – 58073	6540 – 44409	67	78.7
MERV 13 / ePM1 filter >50% (F7)	2465 – 34646	1004 – 14456	2041 – 19899	1006 – 14184	61	35.4
	4477 – 47243	1788 – 18564	3440 – 25736	1737 – 17348	63	47.2
	7603 – 74593	3168 – 31948	5474 – 38484	2862 – 26091	66	65
	8789 – 96158	3629 – 41074	6594 – 49614	3463 – 36350	67	78.7

¹⁾ at LPHW 160/140 °F, $t_{l,1}$ = 68 °F

²⁾ at CHW 45/55 °F, $t_{l,1}$ = 80 °F, 48% relative humidity

Technical drawing (Dimensions in mm)



model	A	B	C
	[inch]	[inch]	[inch]
61	35.43	9.25	23.8
63	47.24	9.25	23.8
66	64.96	9.25	23.8
67	78.74	9.25	23.8

Venkon at a glance

2 Heat exchanger

1 Junction box

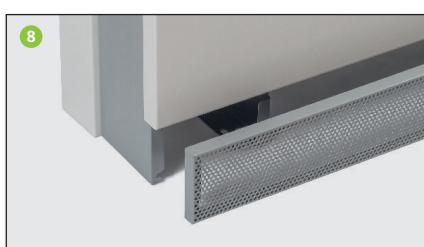
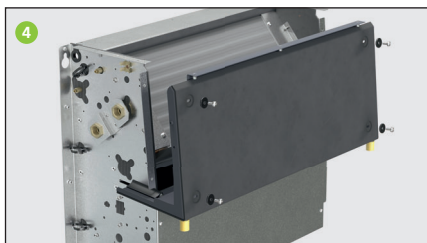
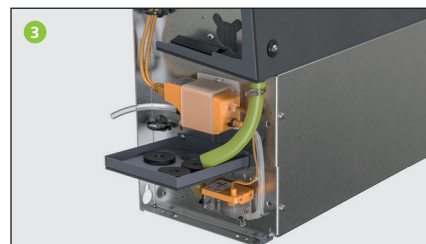
3 Condensate pump

4 Condensation tray

5 EC fan

6 Filter

Features





Example of wall-standing casing

1 Control electromechanical

- › wired ready for connection
- › ease of access for maintenance by removable casing

2 High-performance heat exchanger

- › copper-aluminium
- › optimised air- and water-side flow for maximum heat and cold discharge

3 Condensate pump

- › available as an accessory
- › for controlled discharge of condensation produced with wet cooling
- › includes mounting bracket for float switch

4 Condensation tray

- › can be simply and conveniently removed for maintenance / cleaning

5 EC Radial fan

- › lowest noise levels at low speeds and high outputs at high speeds

6 Filter

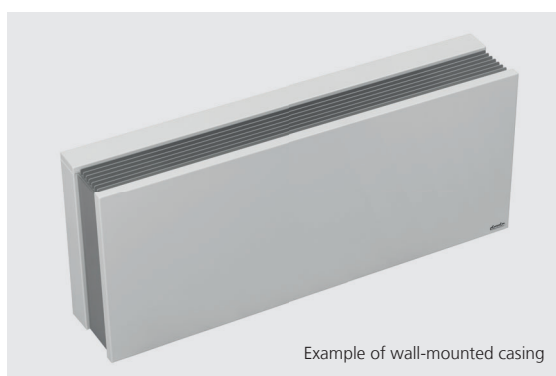
- › maintenance-friendly filter removal at each installation position
- › washable and hence recyclable filter
- › also available in MERV 8 or MERV 13 in 1" thickness

7 Output grille

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

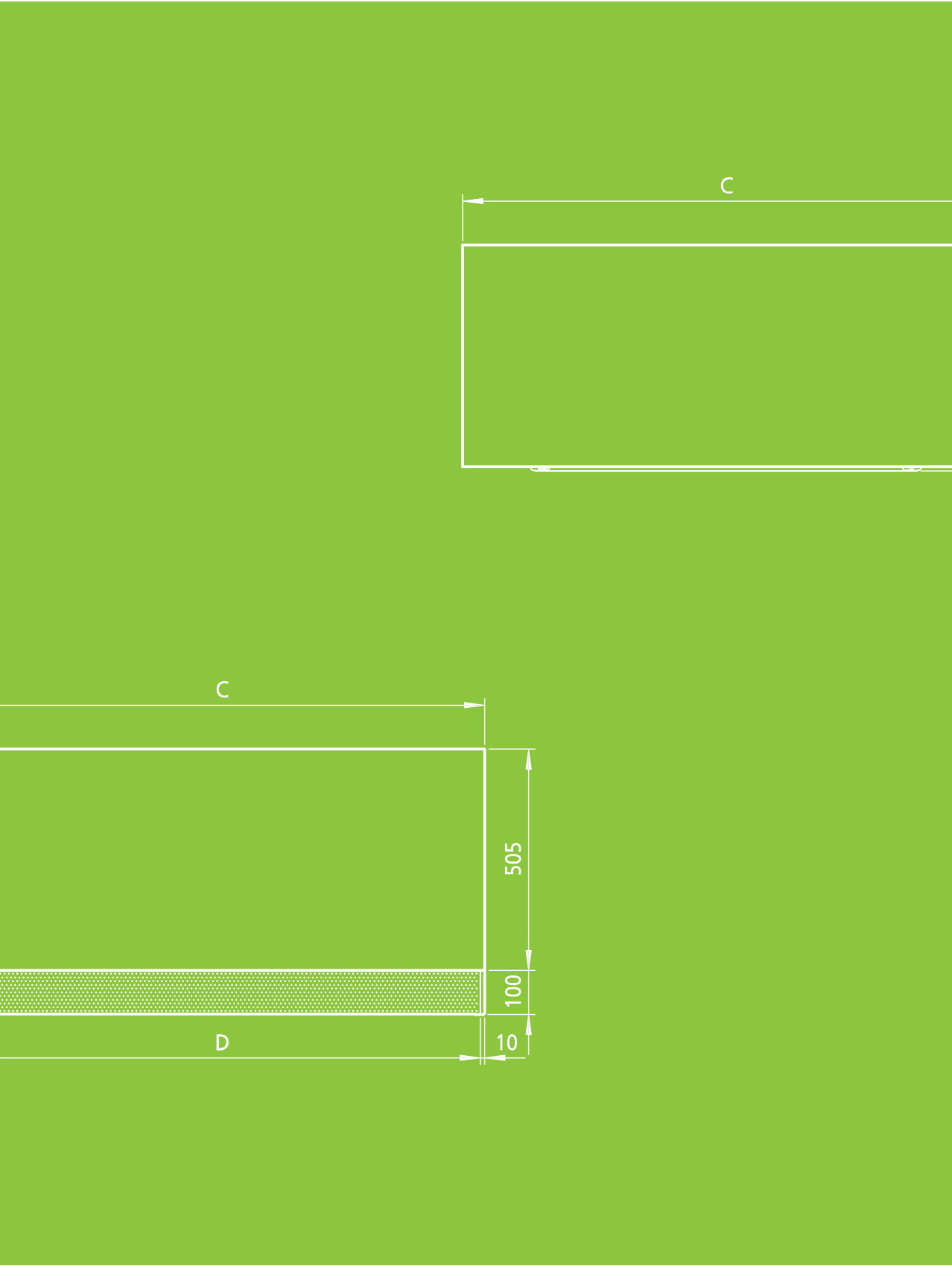
8 Inlet grille

- › 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

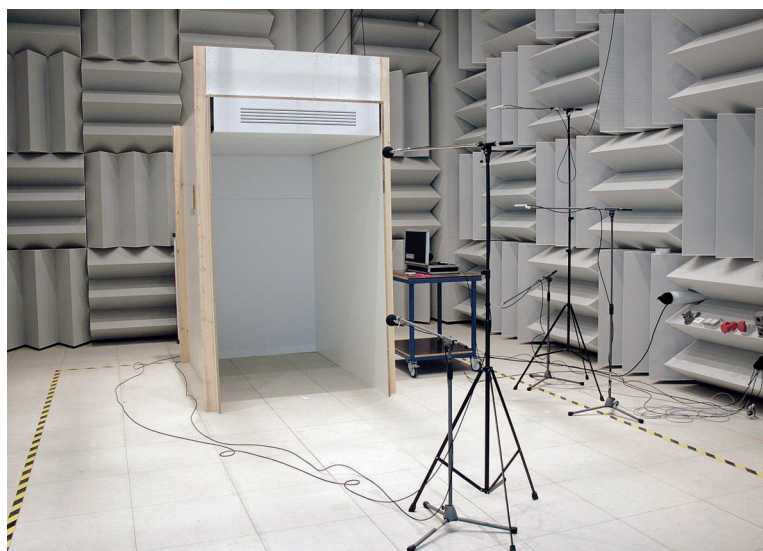
The entering air temperature of the fan convector is selected as the reference / air temperature, which should not be confused with the ambient temperature.

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.



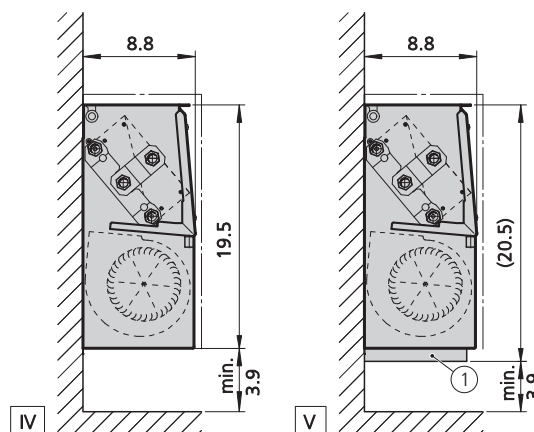
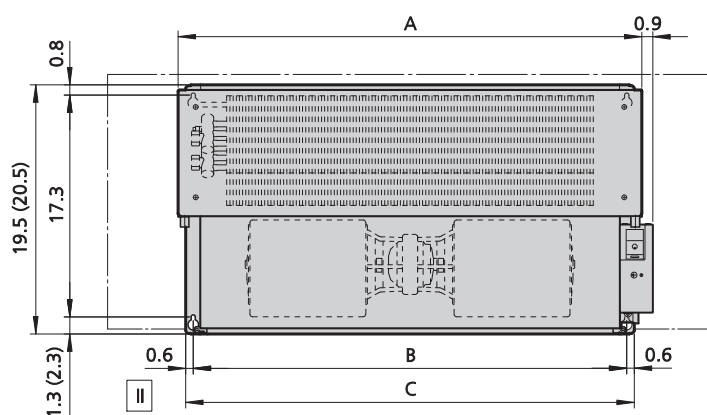
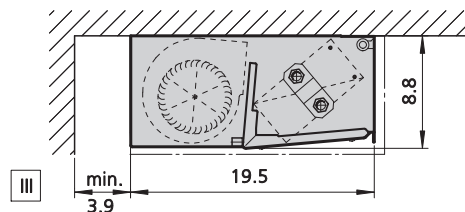
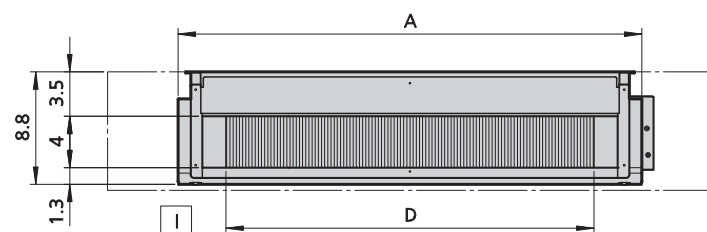
Acoustic laboratory

Venkon

Model size 61

Nominal voltage 120 V

Technical drawing (Dimensions in mm)



① Filter MERV 8 or 13

View

- I front view (ceiling-mounted model)
II view from below (ceiling version)

- III side view (ceiling version, 2-pipe)
IV side view (ceiling version, 4-pipe)
V side view (ceiling version, 4-pipe)

dimensions for all nominal voltages

size	unit width (A) [inch]	Spacing of suspension points (B) [inch]	rear wall (C) [inch]	Air discharge opening (D) [inch]	filter class [kg]	connection 2-pipe	connection 4-pipe heating	connection 4-pipe cooling
61	24,61	22,05	23,23	16,97	MERV 8 and MERV 13	1/2 "	1/2 "	1/2 "
63	36,42	33,86	35,04	28,38	MERV 8 and MERV 13	1/2 "	1/2 "	1/2 "
66	54,13	51,57	52,76	46,50	MERV 8 and MERV 13	3/4 "	1/2 "	3/4 "
67	67,91	65,35	66,54	60,28	MERV 8 and MERV 13	3/4 "	1/2 "	3/4 "

Performance data Model size 61, nominal voltage 120 V

Filter class	System	Control voltage	Air flow	Cooling output, total ¹⁾	Cooling output, sensible	Outlet air temperature	Mass Flow	Pressure loss	Heat output ²⁾	Outlet air temperature	Mass Flow	Pressure loss	Power consumption	Current consumption	SFP value	Sound pressure level ³⁾	Sound power level
		[V]	[cfm]	[BTU]	[BTU]	[°F]	[GPM]	[ft. H ₂ O]	[BTU]	[°F]	[GPM]	[ft. H ₂ O]	[W]	[mA]	[W/cfm]	[dB(A)]	[dB(A)]
ISO Coarse filter	2-pipe	10	454	14447	11087	56.5	3	3.9	34625	139.3	4	5.4	96	1455	–	61	69
		8	396	12706	9751	56.3	3	3.1	30440	139.9	3	4.3	64	988	–	56	64
		6	313	10191	7820	56.0	2	2.1	24405	140.9	2	2.9	33	526	–	50	58
		4	221	7331	5626	55.5	1	1.1	17549	142.4	2	1.6	14	230	–	40	48
		2	91	3174	2436	54.2	1	0.3	7582	146.3	1	0.4	2	41	–	18	26
ISO Coarse filter	4-pipe	10	454	14176	10879	57.0	3	10.9	19889	109.0	2	11.9	96	1455	–	61	69
		8	396	12473	9572	56.8	2	8.6	17962	110.4	2	9.8	64	988	–	56	64
		6	313	10013	7684	56.4	2	5.8	15059	113.0	2	7.0	33	526	–	50	58
		4	221	7213	5535	55.9	1	3.2	11549	117.0	1	4.2	14	230	–	40	48
		2	91	3124	2398	54.6	1	0.7	5720	127.0	1	1.1	2	41	–	18	26
MERV 8 / ePM10 filter >50% (M5)	2-pipe	10	398	12759	9791	56.3	3	3.1	30567	139.9	3	4.4	89	1358	–	61	69
		8	337	10927	8385	56.1	2	2.3	26170	140.6	3	3.3	58	892	–	56	64
		6	257	8459	6492	55.7	2	1.5	20254	141.8	2	2.1	29	461	–	50	58
		4	169	5704	4377	55.1	1	0.7	13649	143.5	1	1.0	12	197	–	40	48
		2	52	1879	1442	53.2	–	0.1	4519	149.6	–	0.1	2	37	–	18	26
MERV 8 / ePM10 filter >50% (M5)	4-pipe	10	398	12525	9612	56.8	3	8.7	18022	110.4	2	9.8	89	1358	–	61	69
		8	337	10733	8237	56.5	2	6.6	15927	112.2	2	7.8	58	892	–	56	64
		6	257	8318	6384	56.1	2	4.1	12966	115.2	1	5.3	29	461	–	50	58
		4	169	5616	4310	55.5	1	2.0	9409	120.0	1	2.9	12	197	–	40	48
		2	52	1860	1427	53.5	–	0.3	3574	132.6	–	0.5	2	37	–	18	26
MERV 13 / ePM1 filter >50% (F7)	2-pipe	10	328	10640	8165	56.0	2	2.2	25483	140.7	3	3.2	78	1193	–	61	69
		8	270	8851	6793	55.8	2	1.6	21194	141.6	2	2.3	49	767	–	56	64
		6	193	6460	4958	55.3	1	0.9	15462	142.9	2	1.3	24	383	–	50	58
		4	114	3931	3016	54.5	1	0.4	9392	145.2	1	0.5	10	163	–	40	48
		2	27	1004	770	52.3	–	0.0	2465	154.1	–	0.1	2	34	–	18	26
MERV 13 / ePM1 filter >50% (F7)	4-pipe	10	328	10453	8022	56.5	2	6.2	15591	112.5	2	7.5	78	1193	–	61	69
		8	270	8702	6678	56.2	2	4.5	13448	114.7	1	5.7	49	767	–	56	64
		6	193	6358	4879	55.7	1	2.5	10420	118.5	1	3.5	24	383	–	50	58
		4	114	3869	2969	54.9	1	1.0	6884	124.6	1	1.6	10	163	–	40	48
		2	27	1006	772	52.3	–	0.1	2041	139.3	–	0.2	2	34	–	18	26

Use our calculation tools on our website to easily calculate heat outputs and other technical data with just a few clicks!
 ► <https://www.kampmanngroup.com/hvac/products/fan-coils/venkon#Calculate-performance-data>

¹⁾ at CHW 45/55 °F, t_{L1} = 80 °F, 48% relative humidity

²⁾ at LPHW 160/140 °F, t_{L1} = 68 °F

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)

Performance data Model size 63, nominal voltage 120 V

Filter class	System	Control voltage	Air flow	Cooling output, total ¹⁾	Cooling output, sensible	Outlet air temperature	Mass Flow	Pressure loss	Heat output ²⁾	Outlet air temperature	Mass Flow	Pressure loss	Power consumption	Current consumption	SFP value	Sound pressure level ³⁾	Sound power level
		[V]	[cfm]	[BTU]	[BTU]	[°F]	[GPM]	[ft. H ₂ O]	[BTU]	[°F]	[GPM]	[ft. H ₂ O]	[W]	[mA]	[W/cfm]	[dB(A)]	[dB(A)]
ISO Coarse filter	2-pipe	10	866	25930	19899	57.9	5	7.4	66297	139.6	7	10.9	167	2462	–	60	68
		8	790	23820	18280	57.7	5	6.5	60828	140.0	6	9.4	126	1912	–	57	65
		6	652	19938	15301	57.4	4	4.9	50788	140.9	5	6.8	74	1144	–	52	60
		4	476	14887	111424	56.9	3	3.1	37785	142.2	4	4.1	32	511	–	44	52
		2	196	6495	4984	55.5	1	0.8	16306	145.8	2	0.9	4	78	–	26	34
ISO Coarse filter	4-pipe	10	866	24136	18522	59.4	5	17.9	33476	104.2	3	5.3	167	2462	–	60	68
		8	790	22194	17032	59.3	4	15.2	31321	105.1	3	4.7	126	1912	–	57	65
		6	652	18616	14287	58.9	4	10.8	27229	107.1	3	3.7	74	1144	–	52	60
		4	476	13951	10707	58.4	3	6.2	21604	110.4	2	2.5	32	511	–	44	52
		2	196	6137	4710	56.9	1	1.3	10920	120.1	1	0.7	4	78	–	26	34
MERV 8 / ePM10 filter >50% (M5)	2-pipe	10	741	22445	17225	57.6	4	5.9	57268	140.3	6	8.4	159	2373	–	60	68
		8	654	20005	15352	57.4	4	4.9	50960	140.9	5	6.9	115	1746	–	57	65
		6	525	16299	12508	57.1	3	3.6	41405	141.8	4	4.8	65	1026	–	52	60
		4	350	11177	8577	56.5	2	2.0	28271	143.5	3	2.4	26	432	–	44	52
		2	115	3963	3041	54.5	1	0.4	9876	148.5	1	0.4	3	65	–	26	34
MERV 8 / ePM10 filter >50% (M5)	4-pipe	10	741	20928	16061	59.2	4	13.6	29891	105.7	3	4.4	159	2373	–	60	68
		8	654	18678	14334	58.9	4	10.9	27301	107.0	3	3.7	115	1746	–	57	65
		6	525	15255	11707	58.6	3	7.4	23214	109.4	2	2.8	65	1026	–	52	60
		4	350	10507	8064	57.9	2	3.6	17164	113.8	2	1.6	26	432	–	44	52
		2	115	3765	2889	55.8	1	0.5	7030	125.3	1	0.3	3	65	–	26	34
MERV 13 / ePM1 filter >50% (F7)	2-pipe	10	600	18455	14162	57.3	4	4.3	46962	141.2	5	6.0	142	2135	–	60	68
		8	517	16060	12325	57.1	3	3.5	40792	141.9	4	4.6	100	1532	–	57	65
		6	394	12479	9576	56.6	2	2.3	31605	143.0	3	3.0	55	872	–	52	60
		4	236	7731	5933	55.9	2	1.1	19462	145.1	2	1.3	21	351	–	44	52
		2	59	2161	1658	53.2	–	0.1	5393	152.9	1	0.1	3	56	–	26	34
MERV 13 / ePM1 filter >50% (F7)	4-pipe	10	600	17248	13236	58.8	3	9.3	25616	107.9	3	3.3	142	2135	–	60	68
		8	517	15035	11538	58.5	3	7.1	22944	109.5	2	2.7	100	1532	–	57	65
		6	394	11716	8991	58.1	2	4.4	18759	112.5	2	1.9	55	872	–	52	60
		4	236	7295	5599	57.2	1	1.8	12669	118.2	1	1.0	21	351	–	44	52
		2	59	2086	1601	54.1	–	0.2	4059	131.9	–	0.1	3	56	–	26	34

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► <https://www.kampmanngroup.com/hvac/products/fan-coils/venkon#Calculate-performance-data>

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²⁾ at LPHW 160/140 °F, t_{r1} = 68 °F

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)

Performance data Model size 66, nominal voltage 120 V

Filter class	System	Control voltage	Air flow	Cooling output, total ¹⁾	Cooling output, sensible	Outlet air temperature	Mass Flow	Pressure loss	Heat output ²⁾	Outlet air temperature	Mass Flow	Pressure loss	Power consumption	Current consumption	SFP value	Sound pressure level ³⁾	Sound power level
		[V]	[cfm]	[BTU]	[BTU]	[°F]	[GPM]	[ft. H ₂ O]	[BTU]	[°F]	[GPM]	[ft. H ₂ O]	[W]	[mA]	[W/cfm]	[dB(A)]	[dB(A)]
ISO Coarse filter	2-pipe	10	1324	42507	32620	56.3	8	10.4	99182	138.1	10	11.8	263	3681	–	61	69
		8	1187	38392	29462	56.1	8	8.5	89598	138.6	9	9.8	192	2774	–	58	66
		6	970	31739	24357	55.8	6	5.8	74108	139.5	8	6.8	110	1667	–	53	61
		4	691	23069	17704	55.4	5	3.1	53927	141.0	6	3.7	46	743	–	46	54
		2	289	10108	7757	54.2	2	0.6	23698	144.7	2	0.8	6	132	–	32	40
ISO Coarse filter	4-pipe	10	1324	34370	26376	60.8	7	5.6	47903	101.9	5	2.1	263	3681	–	61	69
		8	1187	31154	23908	60.6	6	4.7	44318	102.9	5	1.8	192	2774	–	58	66
		6	970	25927	19897	60.3	5	3.4	38291	104.9	4	1.4	110	1667	–	53	61
		4	691	19054	14622	59.7	4	2.0	29865	108.4	3	0.9	46	743	–	46	54
		2	289	8612	6609	58.0	2	0.5	15055	116.7	2	0.3	6	132	–	32	40
MERV 8 / ePM10 filter >50% (M5)	2-pipe	10	1116	36209	27787	56.0	7	7.5	84516	138.9	9	8.7	242	3419	–	61	69
		8	976	31948	24517	55.9	6	5.9	74593	139.5	8	6.9	172	2516	–	58	66
		6	770	25554	19611	55.5	5	3.8	59716	140.5	6	4.5	96	1469	–	53	61
		4	506	17170	13177	54.9	3	1.7	40181	142.3	4	2.1	38	629	–	46	54
		2	160	5793	4445	53.2	1	0.2	13648	148.1	1	0.3	5	115	–	32	40
MERV 8 / ePM10 filter >50% (M5)	4-pipe	10	1116	29443	22595	60.5	6	4.2	42374	103.5	4	1.7	242	3419	–	61	69
		8	976	26091	20023	60.3	5	3.4	38484	104.9	4	1.4	172	2516	–	58	66
		6	770	21033	16141	59.8	4	2.3	32364	107.3	3	1.0	96	1469	–	53	61
		4	506	14322	10991	59.1	3	1.2	23570	111.6	2	0.6	38	629	–	46	54
		2	160	5074	3894	56.5	1	0.2	9174	121.8	1	0.1	5	115	–	32	40
MERV 13 / ePM1 filter >50% (F7)	2-pipe	10	889	29250	22447	55.7	6	5.0	68311	139.9	7	5.8	211	3012	–	61	69
		8	763	25305	19420	55.5	5	3.7	59137	140.6	6	4.4	148	2189	–	58	66
		6	569	19178	14717	55.1	4	2.2	44861	141.8	5	2.6	79	1237	–	53	61
		4	332	11522	8842	54.4	2	0.8	26999	144.1	3	1.0	31	525	–	46	54
		2	84	3168	2431	52.1	1	0.1	7603	152.8	1	0.1	5	107	–	32	40
MERV 13 / ePM1 filter >50% (F7)	4-pipe	10	889	23961	18388	60.1	5	2.9	35947	105.8	4	1.3	211	3012	–	61	69
		8	763	20836	15990	59.8	4	2.3	32117	107.4	3	1.0	148	2189	–	58	66
		6	569	15936	12229	59.3	3	1.4	25779	110.4	3	0.7	79	1237	–	53	61
		4	332	9760	7490	58.3	2	0.6	16868	115.5	2	0.3	31	525	–	46	54
		2	84	2862	2197	54.8	1	0.1	5474	129.1	1	0.0	5	107	–	32	40

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¹⁾ at CHW 45/55 °F, t_{L1} = 80 °F, 48% relative humidity

²⁾ at LPHW 160/140 °F, t_{L1} = 68 °F

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)

Performance data Model size 67, nominal voltage 120 V

Filter class	System	Control voltage	Air flow	Cooling output, total ¹⁾	Cooling output, sensible	Outlet air temperature	Mass Flow	Pressure loss	Heat output ²⁾	Outlet air temperature	Mass Flow	Pressure loss	Power consumption	Current consumption	SFP value	Sound pressure level ³⁾	Sound power level
		[V]	[cfm]	[BTU]	[BTU]	[°F]	[GPM]	[ft. H ₂ O]	[BTU]	[°F]	[GPM]	[ft. H ₂ O]	[W]	[mA]	[W/cfm]	[dB(A)]	[dB(A)]
ISO Coarse filter	2-pipe	10	1732	58807	45129	54.9	12	7.7	137397	142.2	14	10.3	333	4924	–	61	69
		8	1580	53896	41361	54.8	11	6.7	125977	142.6	13	8.8	253	3823	–	59	67
		6	1304	44917	34470	54.6	9	5.0	105090	143.4	11	6.4	147	2287	–	54	62
		4	952	33292	25549	54.2	7	3.1	78031	144.7	8	3.8	63	1022	–	47	55
		2	394	14297	10972	53.2	3	0.8	33677	148.0	3	0.9	8	156	–	31	39
ISO Coarse filter	4-pipe	10	1732	51563	39570	58.0	10	14.6	65271	103.3	7	4.5	333	4924	–	61	69
		8	1580	47363	36347	57.9	9	12.5	61077	104.2	6	4.0	253	3823	–	59	67
		6	1304	39657	30433	57.6	8	9.0	53135	106.1	5	3.1	147	2287	–	54	62
		4	952	29616	22728	57.0	6	5.2	42189	109.4	4	2.1	63	1022	–	47	55
		2	394	12972	9955	55.7	3	1.1	21462	119.0	2	0.6	8	156	–	31	39
MERV 8 / ePM10 filter >50% (M5)	2-pipe	10	1474	50449	38716	54.7	10	6.0	117960	142.9	12	7.8	318	4734	–	61	69
		8	1301	44811	34389	54.6	9	5.0	108484	143.4	11	6.4	228	3480	–	59	67
		6	1043	36298	27855	54.3	7	3.6	85034	144.3	9	4.4	130	2044	–	54	62
		4	695	24630	18901	53.8	5	1.9	57833	145.9	6	2.2	51	859	–	47	55
		2	229	8534	6549	52.5	2	0.4	20195	150.5	2	0.4	6	131	–	31	39
MERV 8 / ePM10 filter >50% (M5)	4-pipe	10	1474	44409	34081	57.8	9	11.1	58073	104.9	6	3.6	318	4734	–	61	69
		8	1301	39565	30363	57.5	8	8.9	53038	106.2	5	3.1	228	3480	–	59	67
		6	1043	32221	24727	57.2	6	6.1	45106	108.5	5	2.3	130	2044	–	54	62
		4	695	22070	16937	56.6	4	3.0	33337	112.9	3	1.4	51	859	–	47	55
		2	229	7851	6025	54.7	2	0.4	13762	124.2	1	0.3	6	131	–	31	39
MERV 13 / ePM1 filter >50% (F7)	2-pipe	10	1187	41074	31521	54.5	8	4.3	96158	143.8	10	5.5	282	4244	–	61	69
		8	1022	35623	27338	54.3	7	3.5	83463	144.4	9	4.3	198	3046	–	59	67
		6	779	27477	21087	54.0	5	2.3	64477	145.4	7	2.7	108	1731	–	54	62
		4	466	16783	12880	53.4	3	1.0	39495	147.4	4	1.2	41	696	–	47	55
		2	120	4614	3541	51.6	1	0.1	11088	154.4	1	0.1	6	116	–	31	39
MERV 13 / ePM1 filter >50% (F7)	4-pipe	10	1187	36350	27896	57.4	7	7.6	49614	107.1	5	2.8	282	4244	–	61	69
		8	1022	31637	24279	57.2	6	5.9	44458	108.7	5	2.3	198	3046	–	59	67
		6	779	24558	18846	56.7	5	3.7	36327	111.6	4	1.6	108	1731	–	54	62
		4	466	15171	11643	55.9	3	1.5	24506	117.2	3	0.8	41	696	–	47	55
		2	120	4356	3343	53.2	1	0.1	8063	130.8	1	0.1	6	116	–	31	39

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¹⁾ at CHW 45/55 °F, t_{11} = 80 °F, 48% relative humidity

²⁾ at LPHW 160/140 °F, t_{11} = 68 °F

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)

Performance data Model size 61 – 67, continuously variable EC fans, 2-pipe, metric units

Filter class	System	Control voltage	Air flow	Cooling output, total ¹⁾	Cooling output, sensible	Outlet air temperature	Mass Flow	Pressure loss	Heat output ²⁾	Outlet air temperature	Mass Flow	Pressure loss	Power consumption	Current consumption	SFP value	Sound pressure level ³⁾	Sound power level
		[V]	[cfm]	[BTU]	[BTU]	[°F]	[GPM]	[ft. H ₂ O]	[BTU]	[°F]	[GPM]	[ft. H ₂ O]	[W]	[mA]	[W/cfm]	[dB(A)]	[dB(A)]
ISO Coarse filter	2-pipe	10	554	17383	13340	56.8	3	5.4	41677	138.4	4	7.5	167	1546	–	66	74
		8	542	17030	13069	56.8	3	5.2	40827	138.5	4	7.3	157	1461	–	65	73
		6	446	14193	10892	56.5	3	3.7	34015	139.4	3	5.3	86	816	–	61	69
		4	325	10568	8110	56.0	2	2.2	25310	140.8	3	3.1	36	360	–	53	61
		2	141	4793	3678	54.9	1	0.5	11461	144.2	1	0.8	6	86	–	32	40
ISO Coarse filter	4-pipe	10	554	17042	13078	57.3	3	15.2	23014	106.9	2	15.6	167	1546	–	66	74
		8	542	16696	12813	57.3	3	14.7	22645	107.1	2	15.1	157	1461	–	65	73
		6	446	13928	10688	56.9	3	10.5	19612	109.2	2	11.5	86	816	–	61	69
		4	325	10383	7968	56.5	2	6.2	15504	112.6	2	7.4	36	360	–	53	61
		2	141	4719	3621	55.2	1	1.5	8143	122.2	1	2.2	6	86	–	32	40
MERV 8 / ePM10 filter >50% (M5)	2-pipe	10	510	16101	12356	56.7	3	4.7	38602	138.8	4	6.6	170	1570	–	66	74
		8	481	15241	11696	56.6	3	4.2	36534	139.0	4	6.0	143	1336	–	65	73
		6	385	12369	9493	56.3	2	2.9	29632	140.0	3	4.1	78	739	–	61	69
		4	268	8788	6744	55.8	2	1.6	21041	141.6	2	2.2	32	317	–	53	61
		2	92	3232	2480	54.2	1	0.3	7720	146.2	1	0.4	5	79	–	32	40
MERV 8 / ePM10 filter >50% (M5)	4-pipe	10	510	15793	12119	57.2	3	13.3	21669	107.7	2	13.9	170	1570	–	66	74
		8	481	14952	11474	57.1	3	12.0	20750	108.3	2	12.8	143	1336	–	65	73
		6	385	12144	9320	56.7	2	8.2	17583	110.7	2	9.4	78	739	–	61	69
		4	268	8640	6630	56.2	2	4.4	13370	114.8	1	5.6	32	317	–	53	61
		2	92	3181	2441	54.6	1	0.7	5811	126.8	1	1.2	5	79	–	32	40
MERV 13 / ePM1 filter >50% (F7)	2-pipe	10	455	14456	11094	56.5	3	3.9	34646	139.3	4	5.4	171	1575	–	66	74
		8	406	12997	9974	56.4	3	3.2	31140	139.8	3	4.5	128	1196	–	65	73
		6	308	10020	7689	56.0	2	2.0	23995	141.0	2	2.8	67	645	–	61	69
		4	195	6516	5001	55.3	1	0.9	15596	142.9	2	1.3	26	267	–	53	61
		2	51	1859	1427	53.2	–	0.1	4472	149.7	–	0.1	5	74	–	32	40
MERV 13 / ePM1 filter >50% (F7)	4-pipe	10	455	14184	10885	57.0	3	10.9	19899	108.9	2	11.9	171	1575	–	66	74
		8	406	12758	9791	56.8	3	9.0	18289	110.2	2	10.1	128	1196	–	65	73
		6	308	9846	7556	56.4	2	5.6	14856	113.2	2	6.8	67	645	–	61	69
		4	195	6413	4921	55.7	1	2.6	10493	118.4	1	3.5	26	267	–	53	61
		2	51	1840	1412	53.5	–	0.3	3540	132.7	–	0.5	5	74	–	32	40

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¹⁾ at CHW 45/55 °F, t_{L1} = 80 °F, 48% relative humidity

²⁾ at LPHW 160/140 °F, t_{L1} = 68 °F

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)

Performance data Model size 63, nominal voltage 208 V

Filter class	System	Control voltage	Air flow	Cooling output, total ¹⁾	Cooling output, sensible	Outlet air temperature	Mass Flow	Pressure loss	Heat output ²⁾	Outlet air temperature	Mass Flow	Pressure loss	Power consumption	Current consumption	SFP value	Sound pressure level ³⁾	Sound power level
		[V]	[cfm]	[BTU]	[BTU]	[°F]	[GPM]	[ft. H ₂ O]	[BTU]	[°F]	[GPM]	[ft. H ₂ O]	[W]	[mA]	[W/cfm]	[dB(A)]	[dB(A)]
ISO Coarse filter	2-pipe	10	924	27522	21121	58.0	5	8.1	70429	139.3	7	12.1	185	1626	–	64	72
		8	815	24526	18821	57.8	5	6.8	62655	139.9	6	9.9	130	1141	–	60	68
		6	642	19662	15089	57.4	4	4.8	50076	140.9	5	6.7	68	609	–	54	62
		4	442	13881	10653	56.8	3	2.8	35202	142.5	6	3.6	27	257	–	46	54
		2	171	5730	4398	55.3	1	0.7	14359	146.4	1	0.7	5	73	–	37	45
ISO Coarse filter	4-pipe	10	924	25599	19645	59.5	5	20.0	35073	103.5	4	5.8	185	1626	–	64	72
		8	815	22844	17530	59.3	5	16.1	32046	104.8	3	4.9	130	1141	–	60	68
		6	642	18362	14091	58.9	4	1.5	26931	107.2	3	3.6	68	609	–	54	62
		4	442	13020	9992	58.3	3	5.4	20431	111.2	2	2.2	27	257	–	46	54
		2	171	5421	4160	26.6	1	1.0	9793	121.5	1	0.6	5	73	–	37	45
MERV 8 / ePM10 filter >50% (M5)	2-pipe	10	761	22998	17649	57.7	5	6.1	58699	140.2	6	8.8	162	1432	–	64	72
		8	659	20138	15454	57.5	4	5.0	51305	140.8	5	6.9	112	993	–	60	68
		6	501	15617	11985	57.0	3	3.3	39653	142.0	4	4.4	58	525	–	54	62
		4	317	10173	7807	56.3	2	1.7	25703	143.9	3	2.1	22	217	–	46	54
		2	96	3371	2587	54.1	1	0.3	8392	149.6	1	0.3	5	69	–	37	45
MERV 8 / ePM10 filter >50% (M5)	4-pipe	10	761	21437	16451	59.2	4	14.2	30468	105.5	3	4.5	162	1432	–	64	72
		8	659	18801	14428	58.9	4	11.0	27444	107.0	3	3.8	112	993	–	60	68
		6	501	14624	11223	58.5	3	6.8	22439	109.9	2	2.6	58	525	–	54	62
		4	317	9574	7347	57.5	2	3.0	15900	114.9	2	1.4	22	217	–	46	54
		2	96	3213	2466	55.4	1	0.4	6062	126.9	1	0.3	5	69	–	37	45
MERV 13 / ePM1 filter >50% (F7)	2-pipe	10	604	18564	14246	57.3	4	4.4	47243	141.2	5	6.0	139	1232	–	64	72
		8	505	15719	12063	57.0	3	3.4	39916	142.0	4	4.5	94	840	–	60	68
		6	360	11449	8786	56.5	2	2.0	28967	143.4	3	2.5	47	431	–	54	62
		4	202	6667	5116	55.6	1	0.9	16745	145.7	2	1.0	18	178	–	46	54
		2	49	1788	1372	52.8	–	0.1	4477	154.3	–	0.1	4	66	–	37	45
MERV 13 / ePM1 filter >50% (F7)	4-pipe	10	604	17348	13313	58.8	3	9.4	25736	107.9	3	3.4	139	1232	–	64	72
		8	505	14719	11296	58.5	3	6.9	22556	109.8	2	2.7	94	840	–	60	68
		6	360	10760	8257	57.9	2	3.7	17501	113.5	2	1.7	47	431	–	54	62
		4	202	6299	4834	56.9	1	1.3	11169	119.8	1	0.8	18	178	–	46	54
		2	49	1737	1333	53.6	–	0.1	3440	134.3	–	0.1	4	66	–	37	45

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¹⁾ at CHW 45/55 °F, t_{r1} = 80 °F, 48% relative humidity

²⁾ at LPHW 160/140 °F, t_{r1} = 68 °F

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)

Performance data Model size 66, nominal voltage 208 V

Filter class	System	Control voltage	Air flow	Cooling output, total ¹⁾	Cooling output, sensible	Outlet air temperature	Mass Flow	Pressure loss	Heat output ²⁾	Outlet air temperature	Mass Flow	Pressure loss	Power consumption	Current consumption	SFP value	Sound pressure level ³⁾	Sound power level
		[V]	[cfm]	[BTU]	[BTU]	[°F]	[GPM]	[ft. H ₂ O]	[BTU]	[°F]	[GPM]	[ft. H ₂ O]	[W]	[mA]	[W/cfm]	[dB(A)]	[dB(A)]
ISO Coarse filter	2-pipe	10	1453	46387	35598	56.4	9	12.3	108221	137.7	11	14.0	350	2960	–	69	77
		8	1314	42206	32389	56.3	8	10.2	98480	138.1	10	11.7	270	2339	–	68	76
		6	1035	33737	25890	55.9	7	6.6	78758	139.2	8	7.6	145	1309	–	64	72
		4	726	24171	18549	55.4	5	3.4	56494	140.8	6	4.0	61	589	–	57	65
		2	290	10127	7772	54.2	2	0.6	23743	144.7	2	0.8	11	190	–	37	45
ISO Coarse filter	4-pipe	10	1453	37392	28695	61.0	7	6.5	51201	101.0	5	2.3	350	2960	–	69	77
		8	1314	34135	26196	60.8	7	5.5	47644	101.9	5	2.0	270	2339	–	68	76
		6	1035	27500	21104	60.4	5	3.8	40134	104.3	4	1.5	145	1309	–	64	72
		4	726	19932	15296	59.7	4	2.1	30982	107.9	3	1.0	61	589	–	57	65
		2	290	8628	6621	58.0	2	0.5	15080	116.7	2	0.3	11	190	–	37	45
MERV 8 / ePM10 filter >50% (M5)	2-pipe	10	1218	39328	30181	56.2	8	8.9	91778	138.5	9	10.2	320	2727	–	69	77
		8	1067	34709	26636	56.0	7	6.9	81023	139.1	8	8.0	242	2100	–	68	76
		6	814	26923	20661	55.6	5	4.2	62904	140.3	6	5.0	127	1159	–	64	72
		4	532	18011	13822	55.0	4	1.9	42141	142.1	4	2.3	52	518	–	57	65
		2	168	6082	4667	53.3	1	0.2	14316	147.7	1	0.3	10	183	–	37	45
MERV 8 / ePM10 filter >50% (M5)	4-pipe	10	1218	31887	24470	60.7	6	4.9	45142	102.7	5	1.9	320	2727	–	69	77
		8	1067	28265	21691	60.4	6	3.9	41020	104.0	4	1.6	242	2100	–	68	76
		6	814	22121	16976	59.9	4	2.5	33709	106.7	3	1.1	127	1159	–	64	72
		4	532	14999	11510	59.2	3	1.3	24504	111.1	3	0.6	52	518	–	57	65
		2	168	5313	4077	56.7	1	0.2	9581	121.3	1	0.1	10	183	–	37	45
MERV 13 / ePM1 filter >50% (F7)	2-pipe	10	976	31948	24517	55.9	6	5.9	74593	139.5	8	6.9	288	2464	–	69	77
		8	827	27317	20963	55.6	5	4.3	63822	140.2	7	5.1	212	1850	–	68	76
		6	595	20031	15372	55.2	4	2.3	46850	141.6	5	2.8	109	1003	–	64	72
		4	349	12081	9271	54.5	2	0.9	28305	143.9	3	1.1	44	449	–	57	65
		2	91	3420	2625	52.2	1	0.1	8183	152.2	1	0.1	10	179	–	37	45
MERV 13 / ePM1 filter >50% (F7)	4-pipe	10	976	26091	20023	60.3	5	3.4	38484	104.9	4	1.4	288	2464	–	69	77
		8	827	22433	17216	60.0	4	2.6	34093	106.6	3	1.1	212	1850	–	68	76
		6	595	16620	12755	59.4	3	1.5	26695	110.0	3	0.7	109	1003	–	64	72
		4	349	10213	7838	58.4	2	0.6	17570	115.1	2	0.4	44	449	–	57	65
		2	91	3079	2363	55.0	1	0.1	5833	128.0	1	0.1	10	179	–	37	45

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 ► <https://www.kampmanngroup.com/hvac/products/fan-coils/venkon#Calculate-performance-data>

¹⁾ at CHW 45/55 °F, t_{L1} = 80 °F, 48% relative humidity

²⁾ at LPHW 160/140 °F, t_{L1} = 68 °F

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)

Performance data Model size 67, nominal voltage 208 V

Filter class	System	Control voltage	Air flow	Cooling output, total ¹⁾	Cooling output, sensible	Outlet air temperature	Mass Flow	Pressure loss	Heat output ²⁾	Outlet air temperature	Mass Flow	Pressure loss	Power consumption	Current consumption	SFP value	Sound pressure level ³⁾	Sound power level
		[V]	[cfm]	[BTU]	[BTU]	[°F]	[GPM]	[ft. H ₂ O]	[BTU]	[°F]	[GPM]	[ft. H ₂ O]	[W]	[mA]	[W/cfm]	[dB(A)]	[dB(A)]
ISO Coarse filter	2-pipe	10	1785	60510	46436	55.0	12	8.0	141357	142.1	14	10.8	361	3033	–	66	74
		8	1560	53257	40871	54.8	11	6.6	124492	142.7	13	8.6	247	2126	–	62	70
		6	1226	42352	32502	54.5	8	4.6	99134	143.7	10	5.8	130	1155	–	56	64
		4	863	30309	23259	54.1	6	2.7	71078	145.0	7	3.2	54	519	–	48	56
		2	330	12086	9275	53.0	2	0.6	28498	148.8	3	0.7	11	184	–	39	47
ISO Coarse filter	4-pipe	10	1785	53017	40686	58.1	11	15.4	66704	103.0	7	4.7	361	3033	–	66	74
		8	1560	46816	35928	57.8	9	12.2	60525	104.3	6	3.9	247	2126	–	62	70
		6	1226	37452	28742	57.5	7	8.0	50796	106.8	5	2.9	130	1155	–	56	64
		4	863	27024	20739	56.9	5	4.4	39215	110.5	4	1.8	54	519	–	48	56
		2	330	11010	8449	55.4	2	0.8	18620	120.8	2	0.5	11	184	–	39	47
MERV 8 / ePM10 filter >50% (M5)	2-pipe	10	1472	50411	38686	54.7	10	6.0	117871	142.9	12	7.8	320	2726	–	66	74
		8	1257	43367	33280	54.5	9	4.7	101497	143.6	10	6.0	213	1870	–	62	70
		6	953	33321	25571	54.2	7	3.1	78099	144.7	8	3.8	109	989	–	56	64
		4	625	22247	17073	53.7	4	1.6	52270	146.3	5	1.9	45	442	–	48	56
		2	187	7058	5416	52.2	1	0.3	16761	151.7	2	0.3	10	179	–	39	47
MERV 8 / ePM10 filter >50% (M5)	4-pipe	10	1472	44377	34055	57.8	9	11.0	58039	104.9	6	3.6	320	2726	–	66	74
		8	1257	38327	29413	57.5	8	8.4	51728	106.5	5	3.0	213	1870	–	62	70
		6	953	29641	22747	57.0	6	5.2	42218	109.4	4	2.1	109	989	–	56	64
		4	625	19979	15332	56.4	4	2.5	30757	114.1	3	1.2	45	442	–	48	56
		2	187	6540	5019	54.3	1	0.3	11648	126.1	1	0.2	10	179	–	39	47
MERV 13 / ePM1 filter >50% (F7)	2-pipe	10	1171	40541	31112	54.4	8	4.3	94917	143.8	10	5.4	276	2383	–	66	74
		8	963	33655	25827	54.2	7	3.2	78877	144.6	8	3.9	179	1591	–	62	70
		6	688	24390	18717	53.8	5	1.9	57273	145.9	6	2.2	90	828	–	56	64
		4	401	14552	11168	53.2	3	0.8	34275	147.9	4	0.9	36	372	–	48	56
		2	94	3629	2785	51.4	1	0.1	8789	155.9	1	0.1	9	176	–	39	47
MERV 13 / ePM1 filter >50% (F7)	4-pipe	10	1171	35890	27542	57.4	7	7.4	49118	107.2	5	2.7	276	2383	–	66	74
		8	963	29931	22969	57.1	6	5.3	42545	109.3	4	2.1	179	1591	–	62	70
		6	688	21861	16776	56.5	4	2.9	33080	113.0	3	1.3	90	828	–	56	64
		4	401	13198	10129	55.7	3	1.1	21781	118.8	2	0.6	36	372	–	48	56
		2	94	3463	2658	52.7	1	0.1	6594	133.9	1	0.1	9	176	–	39	47

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► <https://www.kampmanngroup.com/hvac/products/fan-coils/venkon#Calculate-performance-data>

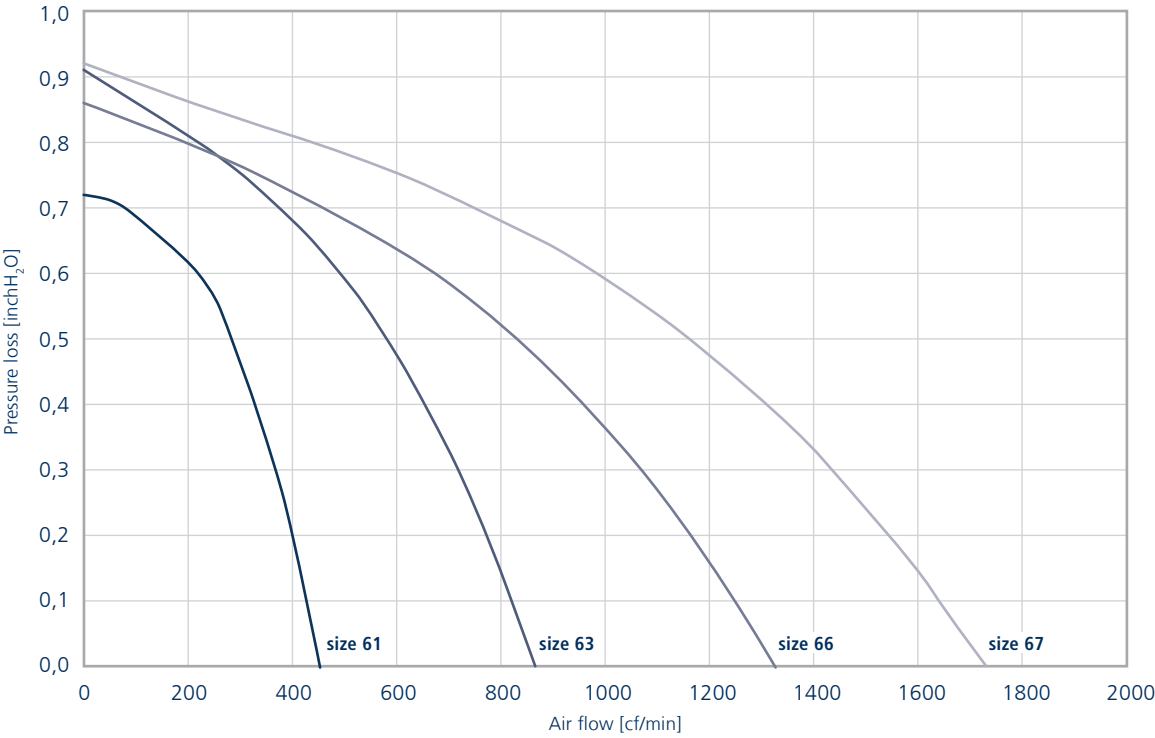
¹⁾ at CHW 45/55 °F, t_{r1} = 80 °F, 48% relative humidity

²⁾ at LPHW 160/140 °F, t_{r1} = 68 °F

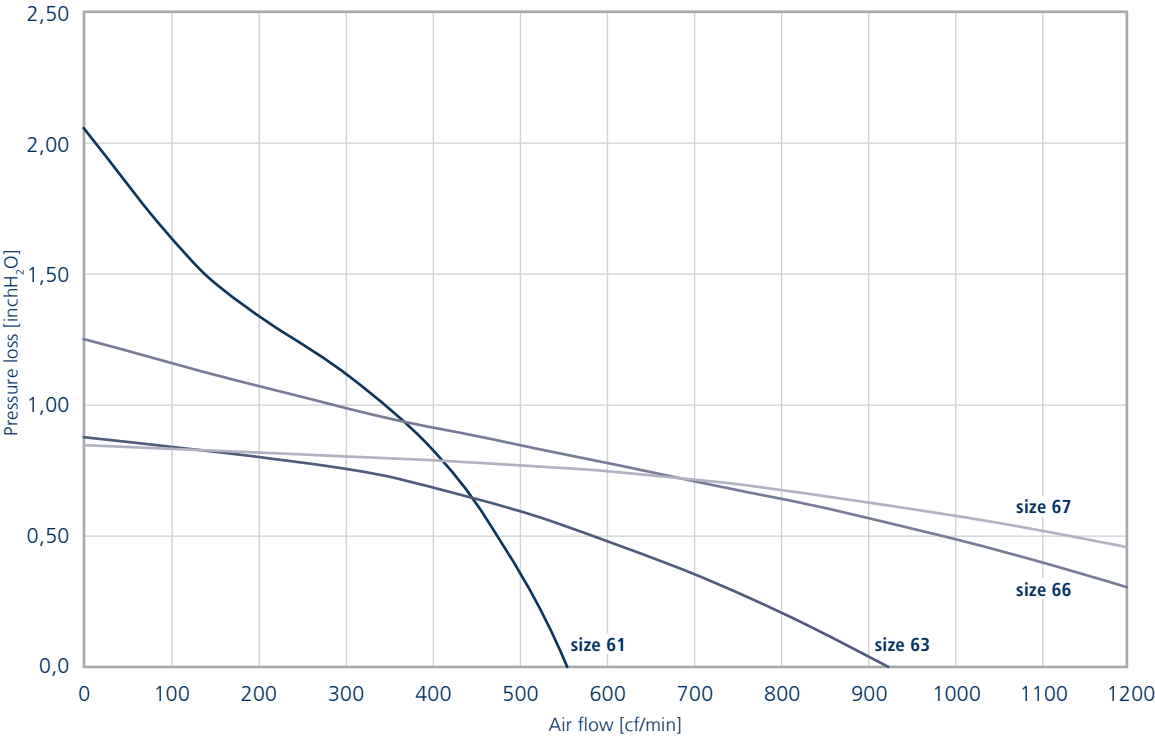
³⁾ The sound pressure levels were calculated with an assumed room insulation of 8 dB(A). This corresponds to a distance of 2 m, a room volume of 100 m³ and a reverberation time of 0.5 s (in accordance with VDI 2081)

Air flow diagrams for Venkon

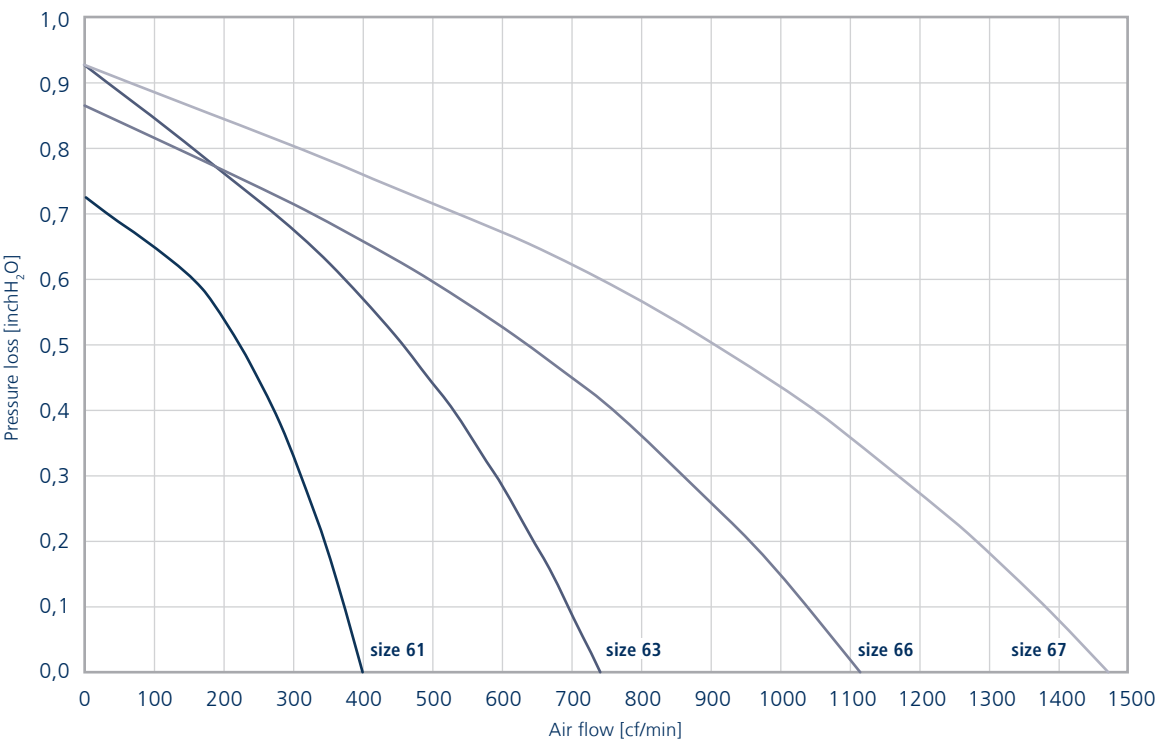
Air flow - pressure loss Venkon 120 Volt (ISO Coarse)



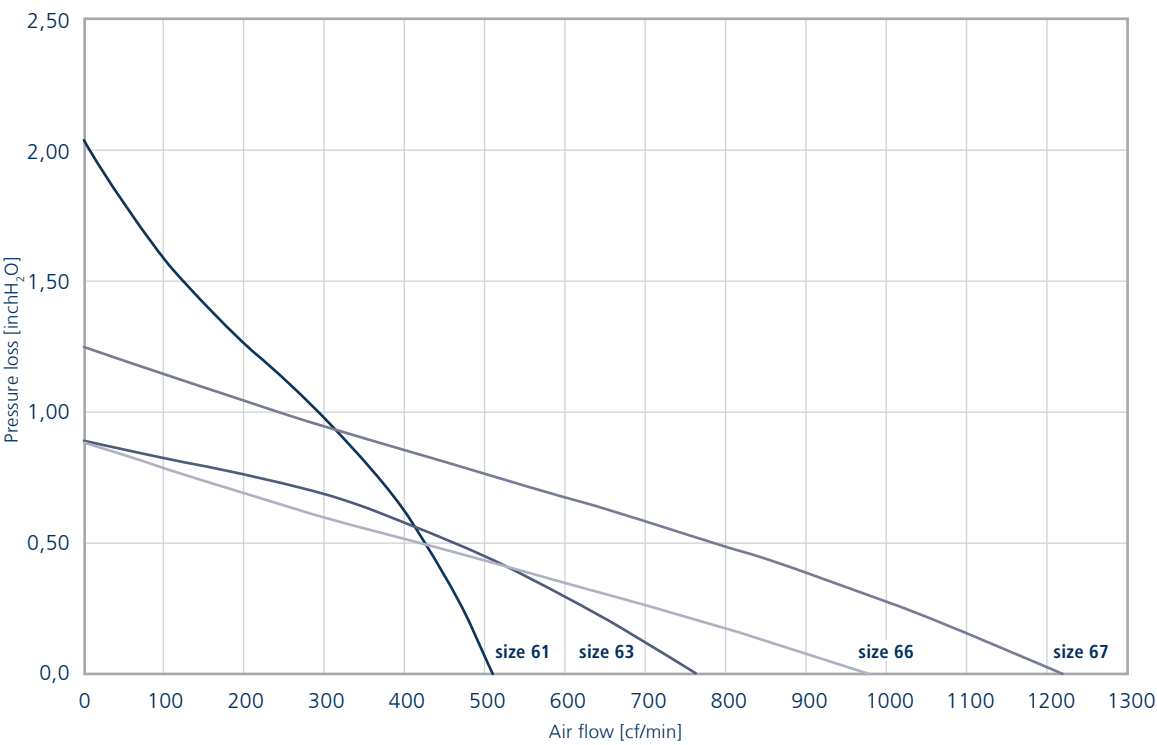
Air flow - pressure loss Venkon 208 Volt (ISO Coarse)



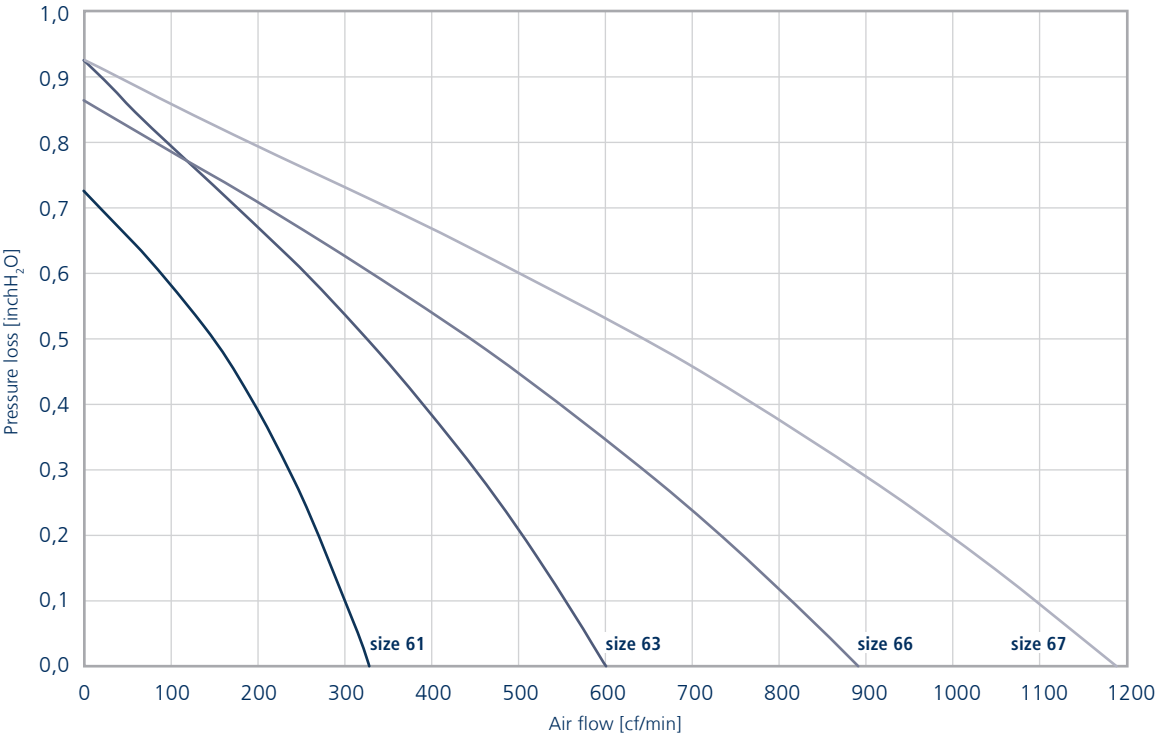
Air flow - pressure loss Venkon 120 Volt (Merve 8)



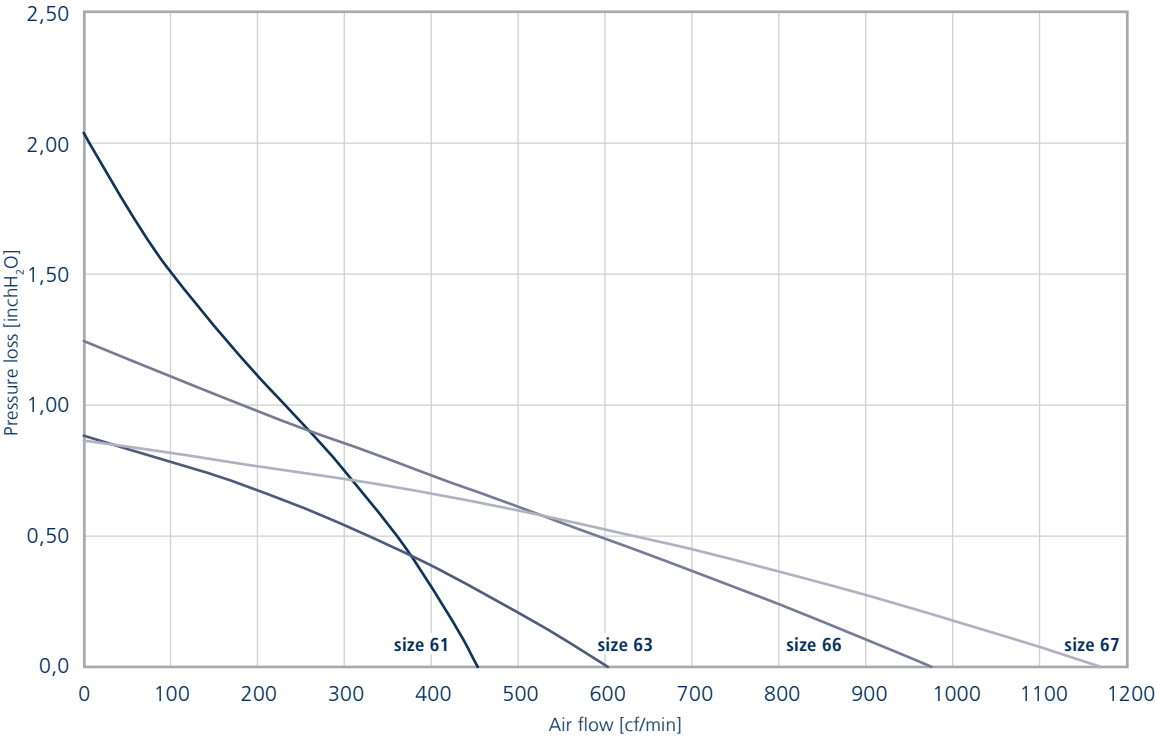
Air flow - pressure loss Venkon 208 Volt (Merve 8)



Air flow - pressure loss Venkon 120 Volt (Merve 13)



Air flow - pressure loss Venkon 208 Volt (Merve 13)



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).

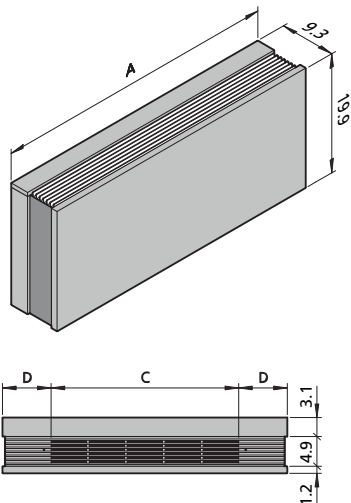
As the sound level is not only due to the Venkon but is also influenced by the number of units and also very significantly by the acoustic characteristics of the room, the actual figure may vary in practice. We would recommend designing Venkons taking into account the respective permitted sound pressure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

Comfort

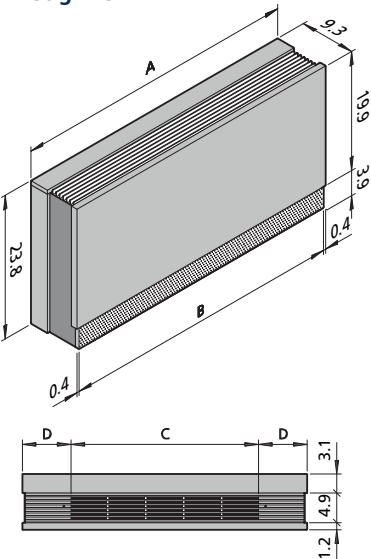
The comfort was calculated taking into consideration DIN EN ISO 7730 (May 2006) "Ergonomics of the thermal environment – analytical determination and interpretation of thermal comfort by calculation of the PMV and the PDB indexes and criteria of local thermal comfort (ISO 7730: 2005). The air outlet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

Casing selection

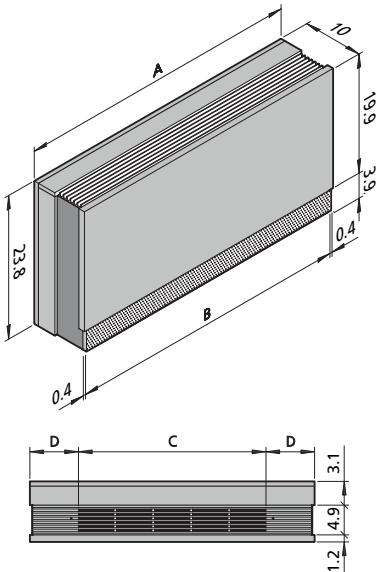
Casing, wall-mounted without inlet grille



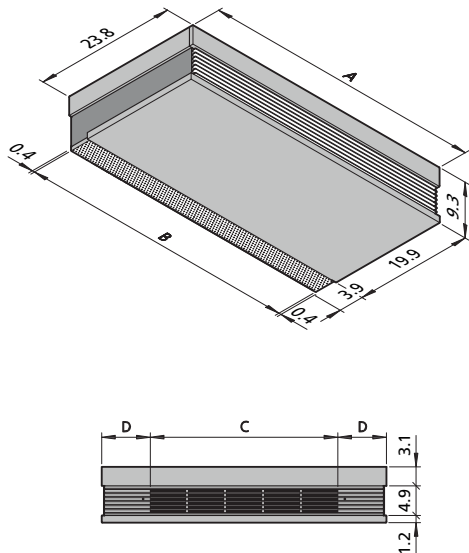
Casing, wall-mounted with inlet grille



Free-standing casing without air inlet grille with rear panel



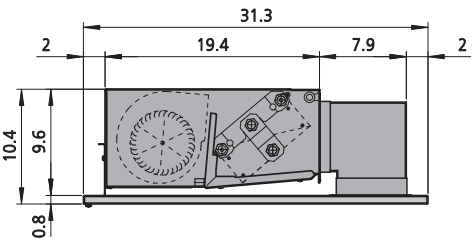
Casing, ceiling-mounted with inlet grille



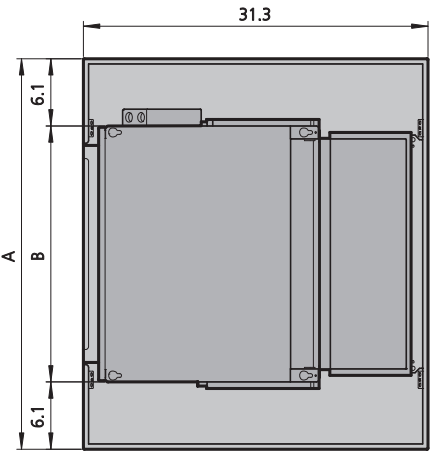
Dimensions

model	A	B	C	D
	[inch]	[inch]	[inch]	[inch]
61	35,43	34,65	18,50	8,46
63	47,24	46,46	31,10	8,07
66	64,96	64,17	50,00	7,48
67	78,74	77,95	62,60	8,07

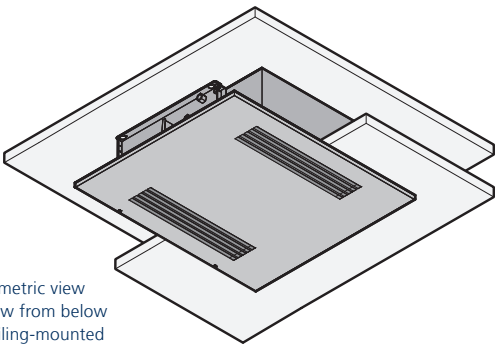
Recessed wall and ceiling version



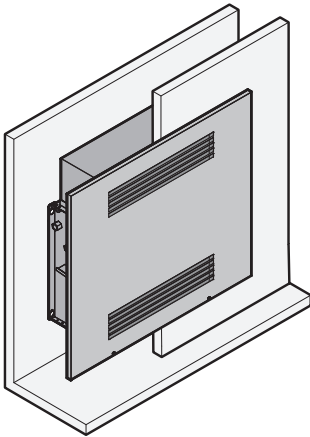
Front view



Top view



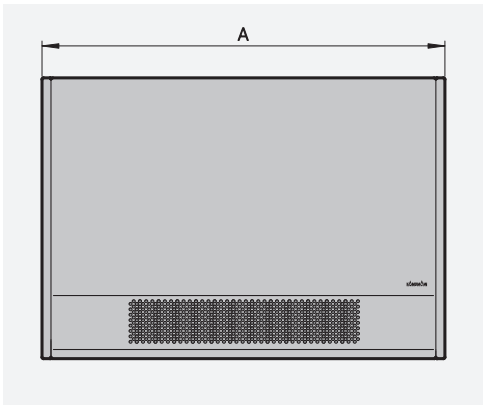
Isometric view
View from below
Ceiling-mounted



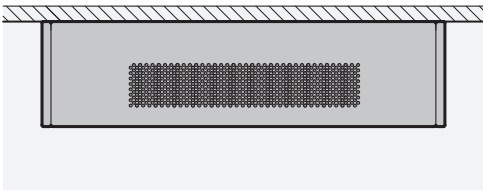
Isometric view
Wall-mounted

model	A	B
	[inch]	[inch]
61	35.4	23.2
63	47.2	35.0
66	66.9	54.7
67	78.7	66.5

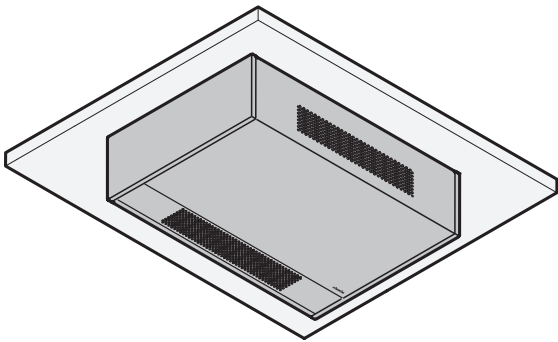
Ceiling mounted version



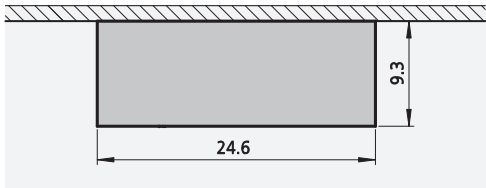
View from below, ceiling-mounted



Front view, ceiling-mounted



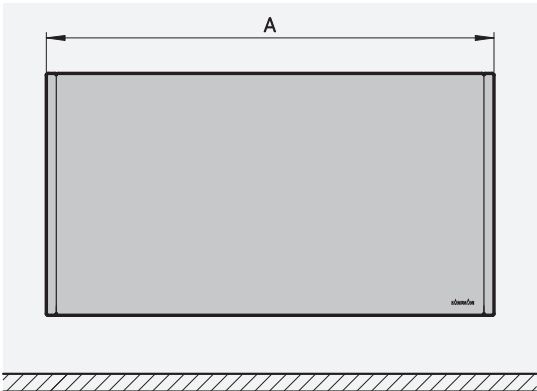
Isometric view
View from below
Ceiling-mounted



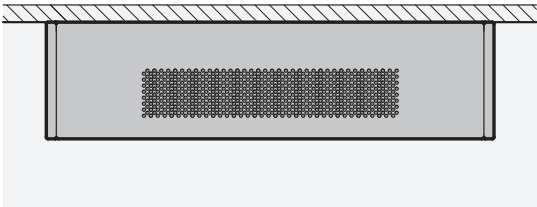
Side view, ceiling-mounted

model	A
	[inch]
61	35.4
63	47.2
66	66.9
67	78.7

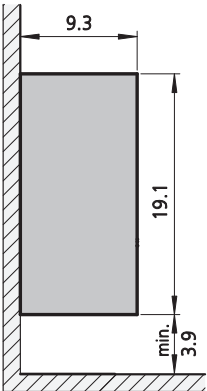
Wall-mounted version



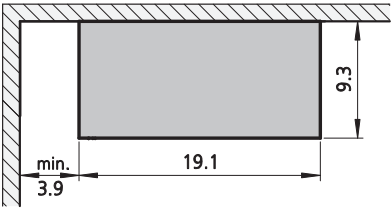
Front view



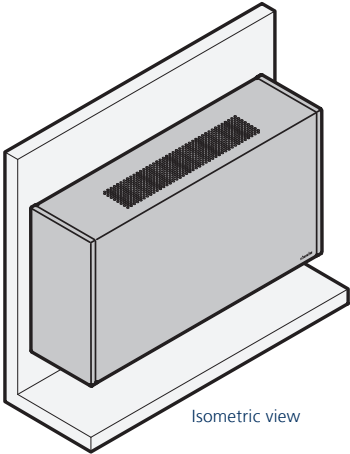
Top view



Side view



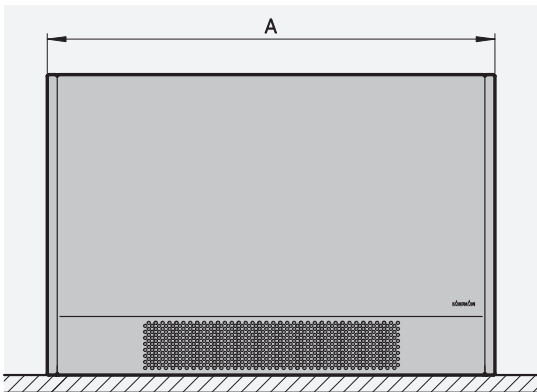
Side view
ceiling-mounted



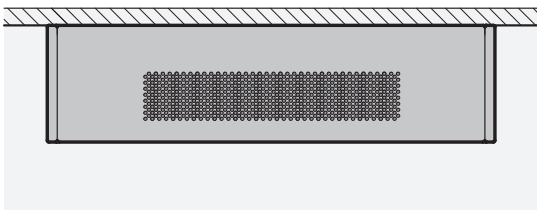
Isometric view

model	A
	[inch]
61	35.4
63	47.2
66	66.9
67	78.7

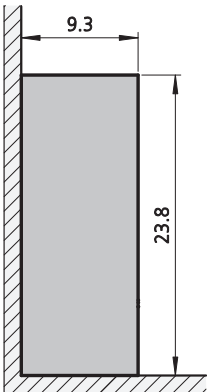
Wall-mounted version (standing)



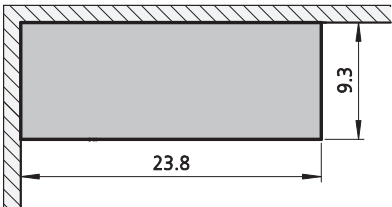
Front view



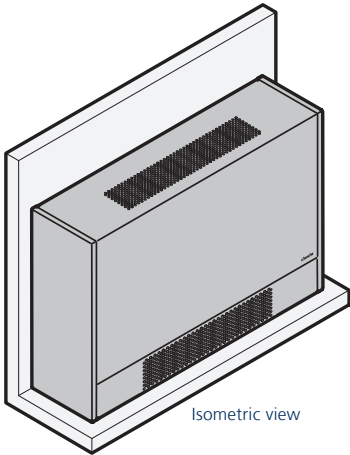
Top view



Side view



Side view
ceiling-mounted

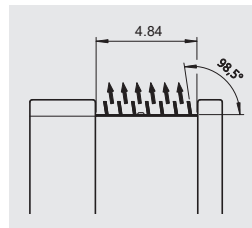


Isometric view

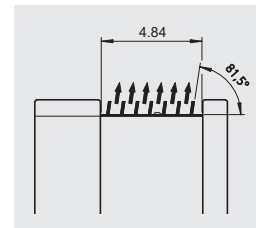
model	A
	[inch]
61	35.4
63	47.2
66	66.9
67	78.7

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.



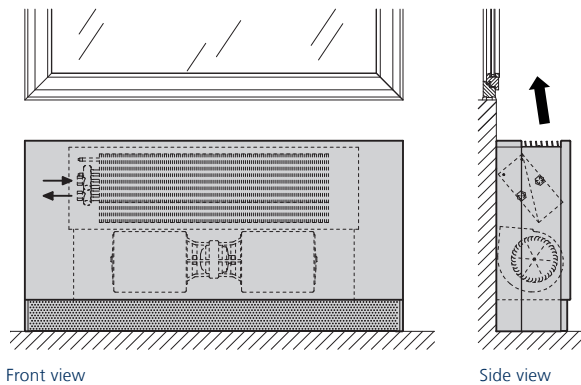
Standard air discharge direction



Alternative air discharge direction

Connections, definition of the water connection side

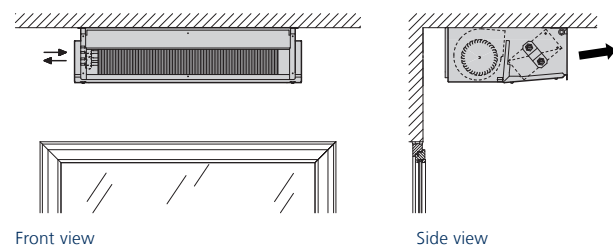
Water connection on left, illustrated by Venkon with casing, wall-standing



Front view

Side view

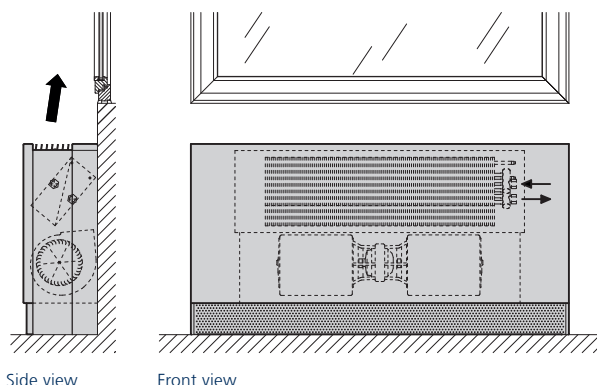
Water connection on left, illustrated by Venkon basic unit, ceiling-mounted model



Front view

Side view

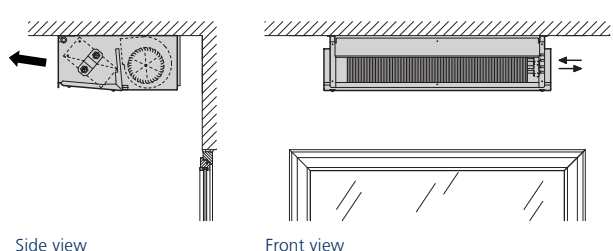
Water connection on right, illustrated by Venkon with casing, wall-standing



Side view

Front view

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



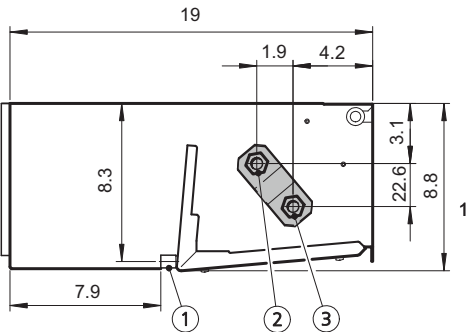
Side view

Front view

Water connections

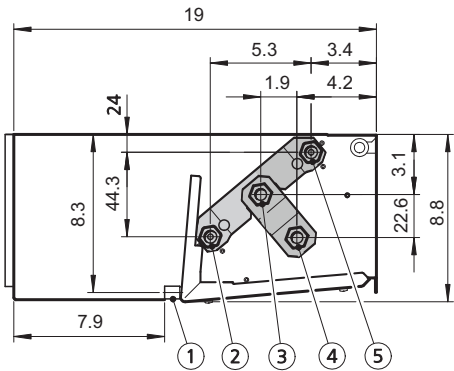
2-pipe

(all dimensions in inch)



- ① Condensation connection $\varnothing 0.59$ inch
- ② Heating or cooling return Rp 1/2" / Rp 3/4"*
- ③ Heating or cooling flow Rp 1/2" / Rp 3/4"*

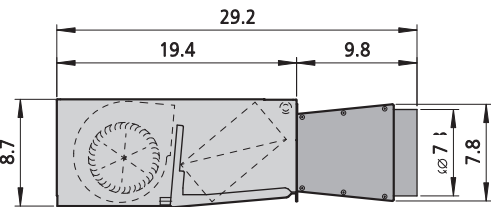
4-pipe



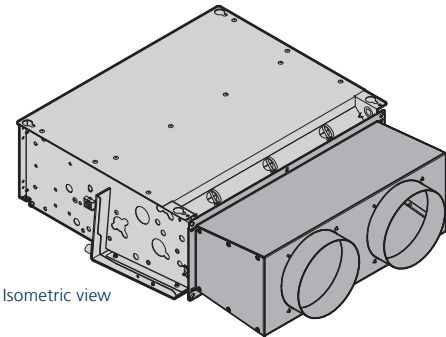
- ① Condensation connection $\varnothing 0.59$ inch
- ② Heating return Rp 1/2"
- ③ Cooling return Rp 1/2" / Rp 3/4"*
- ④ Cooling flow Rp 1/2" / Rp 3/4"*
- ⑤ Heating flow Rp 1/2"

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

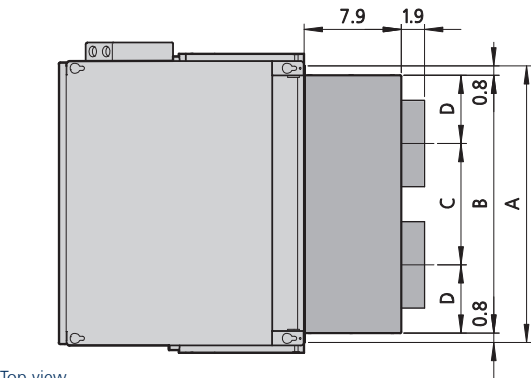
Water connection accessories, valve kit selection



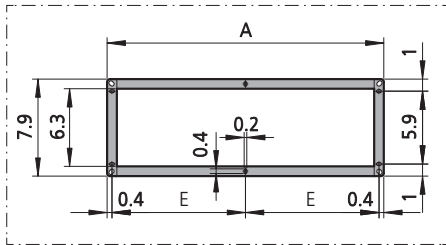
Front view



Isometric view



Top view



Front view, Connection frame

model	A	B	C	D	E	Flex-Anschluss
	[inch]	[inch]	[inch]	[inch]	[inch]	[Stück]
61	22.4	20.9	9.8	5.5	10.8	2
63	34.3	32.7	10.8	5.5	16.7	3
66	52.0	50.4	12.8	6.0	25.6	4
67	65.8	64.2	13.4	5.3	32.5	5

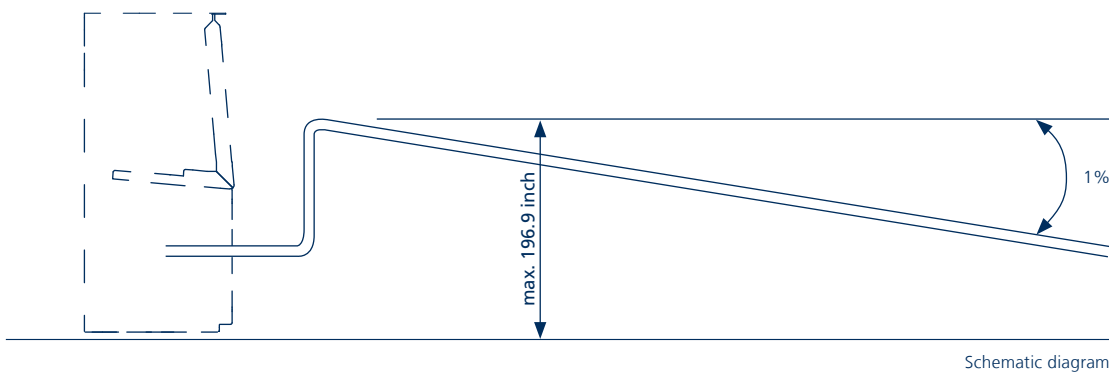
Condensation drain

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:

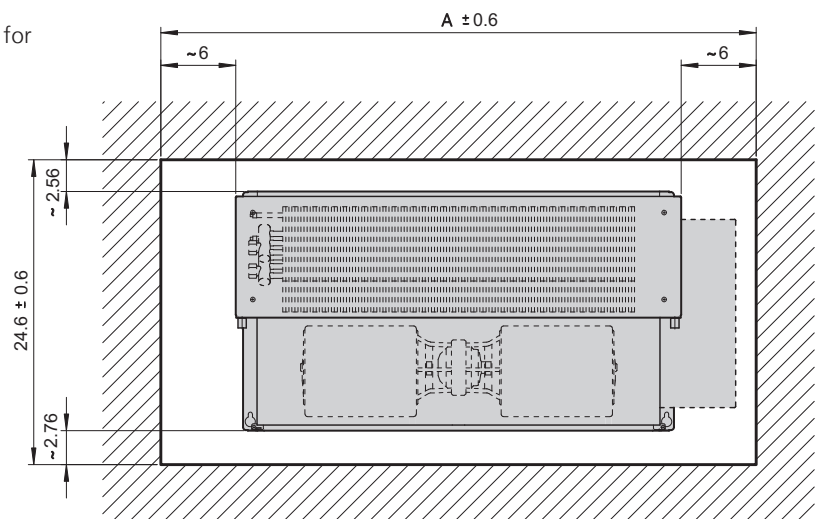
The condensation can be monitored via a dewpoint sensor fitted to the basic unit with "dry cooling" (optional accessories).



Inspection hatch

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

Model	Opening dimension ceiling width A ±15 [inch]
61	36.4
63	48.2
66	65.9
67	79.7



04 ▶ Controls

Control of Venkon electromechanical model

Product features

The fans are wired to the terminal with the electro-mechanical model. The appropriate terminals are available for valve drives on site.

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 switches the fan off.

Maximum electrical rating values

Venkon, electromechanical version (115 V) (*S02M)

Size	Number of fans	Rated voltage	Power frequency	Rated power	Rated current	Leakage current	Ri analog input	MCA	MOP	Protection type	Protection class
	[Quantity]	[VAC]	[Hz]	[W]	[A]	[mA]	[kΩ]				
61	1 x Single	115	60	92	1.40	1.29	100	1.75	15	IP21	I
63	1 x Tandem	115	60	164	2.40	1.29	100	3	15	IP21	I
66	1 x Single, 1 x Tandem	115	60	259	3.60	2.58	50	4.5	15	IP21	I
67	2 x Tandem	115	60	334	4.70	2.58	50	5.88	15	IP21	I

Venkon, electromechanical version (208 V) (*P02M)

Size	Number of fans	Rated voltage	Power frequency	Rated power	Rated current	Leakage current	Ri analog input	MCA	MOP	Protection type	Protection class
	[Quantity]	[VAC]	[Hz]	[W]	[A]	[mA]	[kΩ]				
61	1 x Single	208	60	170	1.60	1.29	100	2	15	IP21	I
63	1 x Tandem	208	60	186	1.70	1.29	100	2.13	15	IP21	I
66	1 x Single, 1 x Tandem	208	60	354	3.10	2.58	50	3.88	15	IP21	I
67	2 x Tandem	208	60	372	3.20	2.58	50	4	15	IP21	I

05 ▶ Ordering information

Accessories

Article	Article	Properties	Dimensions	Suitable for	Article no.
			[in]		


Perimeter Casings

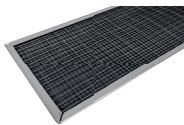
	Casing, ceiling-mounted	no rear panel, including air inlet grille, air grille and side panel in RAL 9006 white aluminium, RAL 9016 traffic white casing, powder coated, ISO Coarse filter	23.8 x 9.3 x 35.4	ISO Coarse filter Model size 61	14862DUBH100
			23.8 x 9.3 x 47.2	ISO Coarse filter Model size 63	14862DUBH300
			23.8 x 9.3 x 65	ISO Coarse filter Model size 66	14862DUBH600
			23.8 x 9.3 x 78.7	ISO Coarse filter Model size 67	14862DUBH700
		no rear panel, including air inlet grille, air grille and side panel in RAL 9006 white aluminium, RAL 9016 traffic white casing, powder coated, Cassette filter	23.8 x 9.3 x 35.4	Cassette filter Model size 61	14862DUBH110
			23.8 x 9.3 x 47.2	Cassette filter Model size 63	14862DUBH310
			23.8 x 9.3 x 65	Cassette filter Model size 66	14862DUBH610
			23.8 x 9.3 x 78.7	Cassette filter Model size 67	14862DUBH710
	Casing, free-standing	including air inlet grille, air grille and side panel in RAL 9006 white aluminium, RAL 9016 traffic white casing, powder coated, ISO Coarse filter	10 x 23.8 x 35.4	ISO Coarse filter Model size 61	14862WUBF100
			10 x 23.8 x 47.2	ISO Coarse filter Model size 63	14862WUBF300
			10 x 23.8 x 65	ISO Coarse filter Model size 66	14862WUBF600
			10 x 23.8 x 78.7	ISO Coarse filter Model size 67	14862WUBF700
		including air inlet grille, air grille and side panel in RAL 9006 white aluminium, RAL 9016 traffic white casing, powder coated, Cassette filter	10 x 23.8 x 35.4	Cassette filter Model size 61	14862WUBF110
			10 x 23.8 x 47.2	Cassette filter Model size 63	14862WUBF310
			10 x 23.8 x 65	Cassette filter Model size 66	14862WUBF610
			10 x 23.8 x 78.7	Cassette filter Model size 67	14862WUBF710
	Casing, wall-hanging	without air inlet grille, air grille and side panel in RAL 9006 white aluminium, RAL 9016 traffic white casing, powder coated, ISO Coarse filter	9.6 x 19.9 x 35.4	ISO Coarse filter Model size 61	14862WUBH100
			9.6 x 19.9 x 47.2	ISO Coarse filter Model size 63	14862WUBH300
			9.6 x 19.9 x 65	ISO Coarse filter Model size 66	14862WUBH600
			9.6 x 19.9 x 78.7	ISO Coarse filter Model size 67	14862WUBH700
	Casing, wall-standing	including air inlet grille, air grille and side panel in RAL 9006 white aluminium, RAL 9016 traffic white casing, powder coated, ISO Coarse filter	9.3 x 23.8 x 35.4	ISO Coarse filter Model size 61	14862WUBS100
			9.3 x 23.8 x 47.2	ISO Coarse filter Model size 63	14862WUBS300
			9.3 x 23.8 x 65	ISO Coarse filter Model size 66	14862WUBS600
			9.3 x 23.8 x 78.7	ISO Coarse filter Model size 67	14862WUBS700
		including air inlet grille, air grille and side panel in RAL 9006 white aluminium, RAL 9016 traffic white casing, powder coated, Cassette filter	9.3 x 23.8 x 35.4	Cassette filter Model size 61	14862WUBS110
			9.3 x 23.8 x 47.2	Cassette filter Model size 63	14862WUBS310
			9.3 x 23.8 x 65	Cassette filter Model size 66	14862WUBS610
			9.3 x 23.8 x 78.7	Cassette filter Model size 67	14862WUBS710

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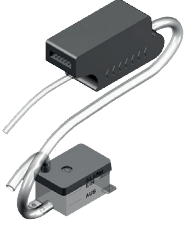

Article	Article	Properties	Dimensions	Suitable for	Article no.
			[in]		

Filter

	Filter	Cassette filter used as spare filter (only for use with basic unit with filter box for cassette filter ePM10>50% or ePM1>50%), Filter ePM1>50% (F7), 1 set = 1 piece(s)	7.1 x 1.1 x 20.5	1 Filter ePM1>50% (F7) Model size 61	14869BBB0107	
			7.1 x 1.1 x 32.3	1 Filter ePM1>50% (F7) Model size 63	14869BBB0307	
			7.1 x 1.1 x 50	1 Filter ePM1>50% (F7) Model size 66	14869BBB0607	
		Cassette filter used as spare filter (only for use with basic unit with filter box for cassette filter ePM10>50% or ePM1>50%), Filter ePM1>50% (F7), 1 set = 2 piece(s)	7.1 x 1.1 x 31.4	2 Filter ePM1>50% (F7) Model size 67	14869BBB0707	
			Cassette filter used as spare filter (only for use with basic unit with filter box for cassette filter ePM10>50% or ePM1>50%), Filter ePM10>50% (M5), 1 set = 1 piece(s)	7.1 x 1.1 x 20.5	1 Filter ePM10>50% (M5) Model size 61	14869BBB0105
				7.1 x 1.1 x 32.3	1 Filter ePM10>50% (M5) Model size 63	14869BBB0305
		7.1 x 1.1 x 50		1 Filter ePM10>50% (M5) Model size 66	14869BBB0605	
		Cassette filter used as spare filter (only for use with basic unit with filter box for cassette filter ePM10>50% or ePM1>50%), Filter ePM10>50% (M5), 1 set = 2 piece(s)	7.1 x 1.1 x 31.4	2 Filter ePM10>50% (M5) Model size 67	14869BBB0705	

	Filter	Dry layer filter, regenerable filter, washable, ISO Coarse filter, 1 set = 1 piece(s)	7.8 x 0.2 x 20.4	1 ISO Coarse filter Model size 61	14869BBB0101
			7.8 x 0.2 x 32.2	1 ISO Coarse filter Model size 63	14869BBB0301
			7.8 x 0.2 x 50	1 ISO Coarse filter Model size 66	14869BBB0601
		Dry layer filter, regenerable filter, washable, ISO Coarse filter, 1 set = 2 piece(s)	7.8 x 0.2 x 31.7	2 ISO Coarse filter Model size 67	14869BBB0701

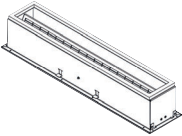
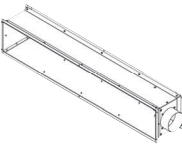
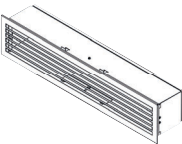
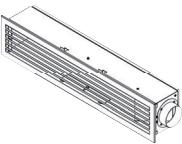
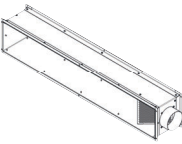
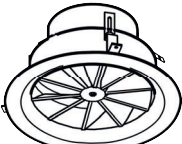
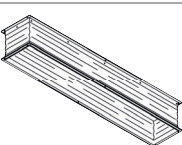
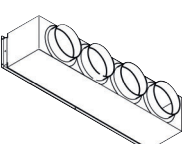
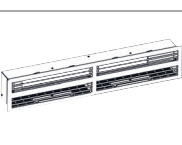
Condensate tray/pump

	Condensate pump	to drain condensate produced on the valves and in the unit, including condensate overflow signalling, factory-fitted and wired	3.9 x 3.9 x 3.9	Model size 61 - 67, with valve condensate tray	14866BBB00KA
	Dewpoint monitor sensor	Condensate monitor for the detection of condensate formation on the water flow, factory-installed and wired on the basic unit	3.9 x 3.9 x 3.9	Model size 61 - 67, without valve condensate tray	14866BBB00TA


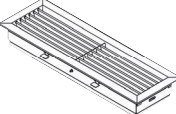
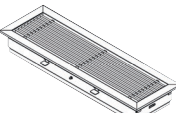
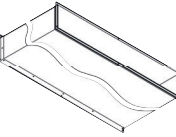
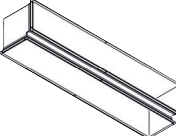
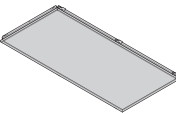
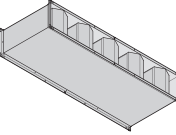

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Article	Article	Properties	Dimensions	Suitable for	Article no.
			[in]		

Accessories for recirculation air basic unit, air-side

	Air intake box with hotel diffuser and filter	Unit for installation onto the air inlet of the Venkon	7.9 x 6.3 x 24.4	Model size 61	14867BBB0105
			7.9 x 6.3 x 36.2	Model size 63	14867BBB0305
			7.9 x 6.3 x 53.9	Model size 66	14867BBB0605
			7.9 x 6.3 x 67.7	Model size 67	14867BBB0705
	Inlet box with primary air connection spigot	Unit for installation onto the air inlet of the Venkon	7.9 x 6.3 x 23.1	Model size 61, DN 100	14865BBB0107
			7.9 x 6.3 x 35	Model size 63, DN 100	14865BBB0307
			7.9 x 6.3 x 52.7	Model size 66, DN 100	14865BBB0607
			7.9 x 6.3 x 66.5	Model size 67, DN 100	14865BBB0707
	Outlet box with hotel diffuser	unit for installation onto the air discharge of the Venkon	7.9 x 6.3 x 24.4	Model size 61	14867BBB0103
			7.9 x 6.3 x 36.2	Model size 63	14867BBB0303
			7.9 x 6.3 x 53.9	Model size 66	14867BBB0603
			7.9 x 6.3 x 67.7	Model size 67	14867BBB0703
	Outlet box with primary air connection spigot and hotel opening	unit for installation onto the air discharge of the Venkon	7.9 x 6.3 x 24.4	Model size 61, DN 100	14867BBB0104
			7.9 x 6.3 x 36.2	Model size 63, DN 100	14867BBB0304
			7.9 x 6.3 x 53.9	Model size 66, DN 100	14867BBB0604
			7.9 x 6.3 x 67.7	Model size 67, DN 100	14867BBB0704
	Outlet box with primary air connection spigot	unit for installation onto the air discharge of the Venkon	7.9 x 6.3 x 23.1	Model size 61, DN 100	14865BBB0108
			7.9 x 6.3 x 35	Model size 63, DN 100	14865BBB0308
			7.9 x 6.3 x 52.7	Model size 66, DN 100	14865BBB0608
			7.9 x 6.3 x 66.5	Model size 67, DN 100	14865BBB0708
	Ceiling swirl diffuser	round, on flexible pipe, Connection diameter 7.8 inch, painted, Colour white	11 x 5.7 x 11	Model size 61 - 67	14867BBB0001
	Flexible connection	with frame on both sides, including canvas for structure-borne noise decoupling and length compensation of on-site dimensional inaccuracies	7.9 x 6.3 x 22.4	Model size 61	14865BBB0104
			7.9 x 6.3 x 33.9	Model size 63	14865BBB0304
			7.9 x 6.3 x 52	Model size 66	14865BBB0604
			7.9 x 6.3 x 65.7	Model size 67	14865BBB0704
	Flexible pipe connection unit	Connection diameter 180 mm	9.8 x 7.9 x 22.4	Model size 61, Number of connecting pieces 2 St.	14865BBB0105
			9.8 x 7.9 x 34.3	Model size 63, Number of connecting pieces 3 St.	14865BBB0305
			9.8 x 7.9 x 52	Model size 66, Number of connecting pieces 4 St.	14865BBB0605
			9.8 x 7.9 x 65.7	Model size 67, Number of connecting pieces 5 St.	14865BBB0705
	Combination air diffuser	for supply air and extract air with plenum box, unit for installation onto the air discharge of the Venkon, powder coated, Colour similar to RAL 9016 traffic white, supplied separately	33.5 x 8.7 x 5.9	Model size 61	14867BBB0107
			45.3 x 8.7 x 5.9	Model size 63	14867BBB0307
			63 x 8.7 x 5.9	Model size 66	14867BBB0607
			76.8 x 8.7 x 5.9	Model size 67	14867BBB0707

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Article	Article	Properties	Dimensions	Suitable for	Article no.
			[in]		
	Combined diffuser with spigot	for supply air and extract air with plenum box and spigot, unit for installation onto the air discharge of the Venkon, powder coated, Colour similar to RAL 9016 traffic white, supplied separately	33.5 x 8.7 x 5.9	Model size 61, Number of connecting pieces 1 St., DN 100	14867BBB0117
			45.3 x 8.7 x 5.9	Model size 63, Number of connecting pieces 1 St., DN 100	14867BBB0317
			63 x 8.7 x 5.9	Model size 66, Number of connecting pieces 1 St., DN 100	14867BBB0617
			76.8 x 8.7 x 5.9	Model size 67, Number of connecting pieces 1 St., DN 100	14867BBB0717
	Internal air grille with adjustable outlet air angle	natural aluminium, with plenum box, unit fitted to Venkon air outlet	7.9 x 2.6 x 24.6	Model size 61	14867BBB0112
			7.9 x 2.6 x 36.4	Model size 63	14867BBB0312
			7.9 x 2.6 x 54.1	Model size 66	14867BBB0612
			7.9 x 2.6 x 67.9	Model size 67	14867BBB0712
	Internal air grille, rigid design	natural aluminium, with plenum box, unit fitted to Venkon air outlet	7.9 x 2.6 x 24.6	Model size 61	14867BBB0102
			7.9 x 2.6 x 36.4	Model size 63	14867BBB0302
			7.9 x 2.6 x 54.1	Model size 66	14867BBB0602
			7.9 x 2.6 x 67.9	Model size 67	14867BBB0702
	Air duct	Non-standard lengths on request	22.4 x 7.9 x 39.4	Model size 61, Length 1000 mm	14865BBB0101
			34.3 x 7.9 x 39.4	Model size 63, Length 1000 mm	14865BBB0301
			52 x 7.9 x 39.4	Model size 66, Length 1000 mm	14865BBB0601
			65.7 x 7.9 x 39.4	Model size 67, Length 1000 mm	14865BBB0701
	Air duct, 90° angled	short bend, as a transition from horizontal to vertical ductwork with ceiling installation	8.7 x 8.7 x 22.4	Model size 61	14865BBB0103
			8.7 x 8.7 x 34.3	Model size 63	14865BBB0303
			8.7 x 8.7 x 52	Model size 66	14865BBB0603
			8.7 x 8.7 x 65.7	Model size 67	14865BBB0703
	Service hatch, perforated metal with frame	Unit for subsequent maintenance in suspended ceilings, suitable for plasterboard or concrete slab ceilings, Circumferential frame: 1 inch, Colour RAL 9016 traffic-white, supplied separately	25.6 x 2 x 37.4	Model size 61	14865BBB0110
			25.6 x 2 x 49.2	Model size 63	14865BBB0310
			25.6 x 2 x 66.9	Model size 66	14865BBB0610
			25.6 x 2 x 80.7	Model size 67	14865BBB0710
	Sound attenuator	Splitter noise attenuator	22.4 x 7.9 x 19.7	Model size 61, Length 19.69 inch	14865BBB0106
			34.3 x 7.9 x 19.7	Model size 63, Length 19.69 inch	14865BBB0306
			52 x 7.9 x 19.7	Model size 66, Length 19.69 inch	14865BBB0606
			65.7 x 7.9 x 19.7	Model size 67, Length 19.69 inch	14865BBB0706
	Transition panel	Venkon sheet steel accessories for the installation of air inlet or air outlet diffusers	7.9 x 0.1 x 22.4	Model size 61	14867BBB0106
			7.9 x 0.1 x 34.3	Model size 63	14867BBB0306
			7.9 x 0.1 x 52	Model size 66	14867BBB0606
			7.9 x 0.1 x 65.7	Model size 67	14867BBB0706

