

Series  
**VKDV**



Roof-mounted centrifugal fan for smoke extraction with vertical air discharge

■ **Application**

Smoke exhaust fans are used in emergency exhaust ventilation systems for forced extraction of smoke and heated gases and simultaneous transfer of heat away and beyond the limits of the serviced spaces in case of fire. Such units are used in production, public, residential, administrative and other spaces.

■ **Operation**

The fans are capable of handling smoke and air mixtures with temperatures up to +600 °C for 120 minutes. The fans can operate in conjunction with a frequency converter (hereinafter referred to as FC) or directly when connected to power supply. The relevant characteristics for these modes are listed in the tables below.

Series  
**VKDH**



Roof-mounted centrifugal fan for smoke extraction with horizontal air discharge

The fan can be used for general exhaust ventilation at a rotational speed reduced by at least 25 % of the rated speed of the electric motor. The fan can be designed for moderate (U) or tropical (T) climate conditions.

■ **Design**

The fans are made of heat resistant steel with polymer coating providing weathering resistance. There are two types of roof-mounted smoke exhaust fans: with horizontal air discharge (VKDH) and vertical air discharge (VKDV). The models with vertical air discharge are equipped with a backdraft damper. The fan has a protective grille to prevent accidental contact and penetration of foreign objects. The impeller with backward curved blades are painted with powder coating.

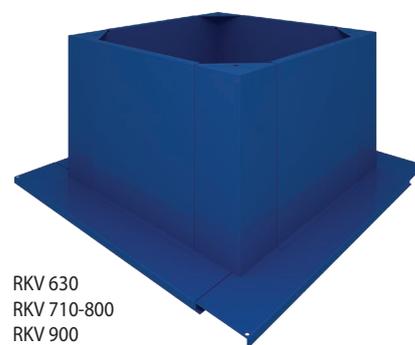
■ **Motor**

The fans are equipped with three-phase electric motors rated for 400 V. The motor is located in the compartment offset from the transported air stream. Motor ingress protection rating is IP54.

■ **Installation**

The roof fans are installed on the RKV mounting frame (simplified version) or RKVI mounting frame (heat-insulated version). The RKV and RKVI mounting frames are designed for mounting the fan on the roof without a slope. Make sure that the location provides for sufficient space as required for the fan maintenance.

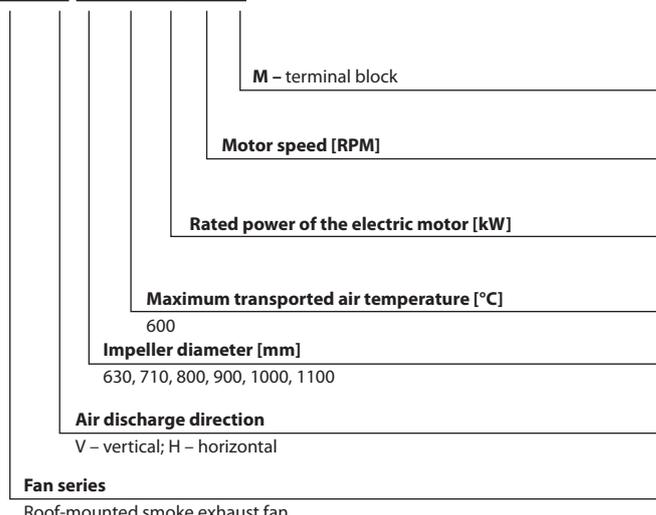
**RKV mounting frame**



RKV 630  
RKV 710-800  
RKV 900  
RKV 1000-1100

Designation key: \_\_\_\_\_

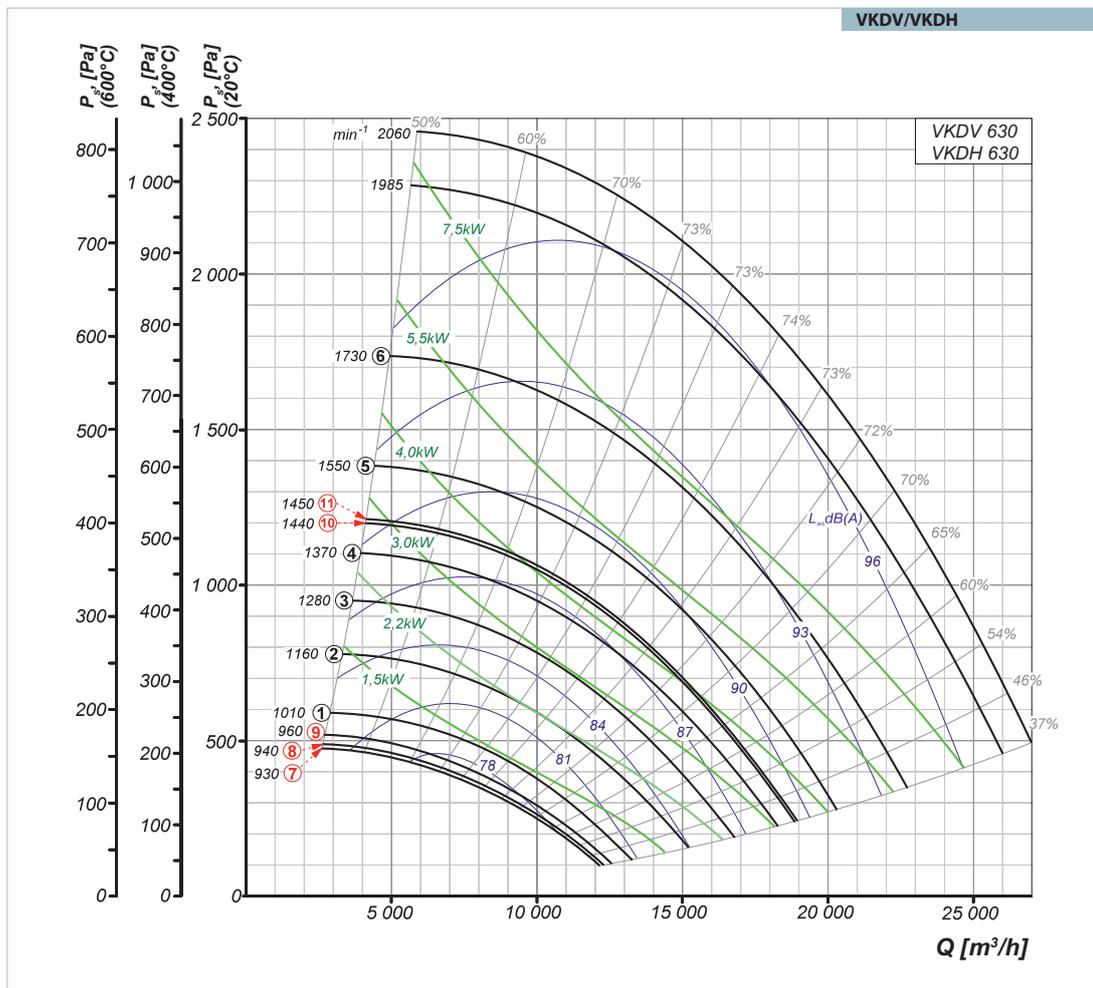
**VENTS VKDX X-X-X/X-X**



**Technical data:**

	VKDV(H) 630-600-1.5/930	VKDV(H) 630-600-2.2/940	VKDV(H) 630-600-3.0/960
Voltage [V]	3~400	3~400	3~400
Rated frequency [Hz]	50	50	50
Rated power Ny [kW]	1.5	2.2	3.0
Current [A]	3.7	5.6	7.4
Rated RPM [min <sup>-1</sup> ]	930	940	960
Maximum RPM when operating from FC [min <sup>-1</sup> ]	1010	1160	1280
Maximum frequency when operating from FC [Hz]	54	62	67
Curve number at the diagram when operating from FC	①	②	③
Curve number at the diagram when operating from supply network	⑦	⑧	⑨

	VKDV(H) 630-600-4.0/1440	VKDV(H) 630-600-5.5/1450	VKDV(H) 630-600-7.5/1440
Voltage [V]	3~400	3~400	3~400
Rated frequency [Hz]	50	50	50
Rated power Ny [kW]	4.0	5.5	7.5
Current [A]	8.8	11.3	15.5
Rated RPM [min <sup>-1</sup> ]	1440	1450	1440
Maximum RPM when operating from FC [min <sup>-1</sup> ]	1370	1550	1730
Maximum frequency when operating from FC [Hz]	48	53	60
Curve number at the diagram when operating from FC	④	⑤	⑥
Curve number at the diagram when operating from supply network	-	⑪	⑩

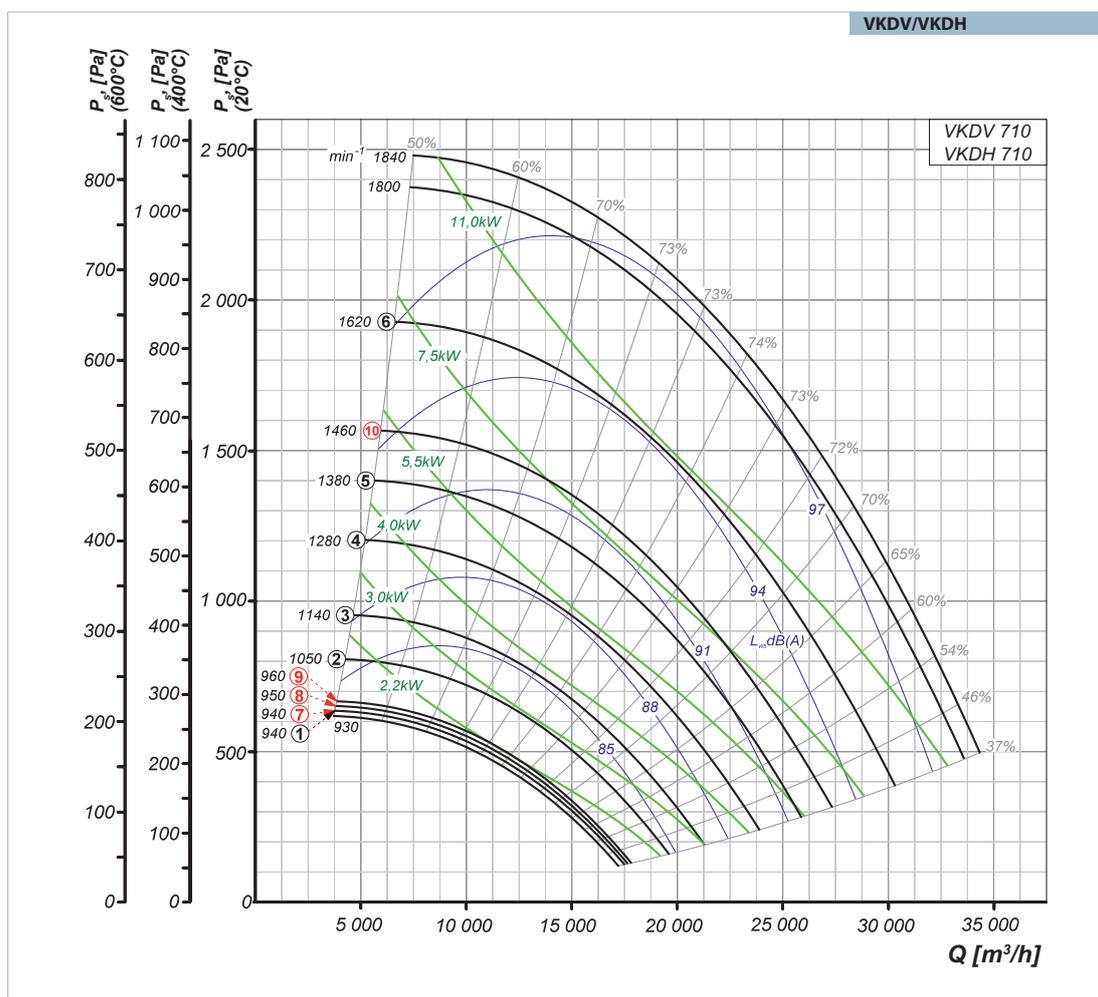


## ROOF-MOUNTED SMOKE REMOVAL FANS

### Technical data:

	VKDV(H) 710-600-2.2/940	VKDV(H) 710-600-3/960	VKDV(H) 710-600-4/950
Voltage [V]	3~400	3~400	3~400
Rated frequency [Hz]	50	50	50
Rated power Ny [kW]	2.2	3.0	4.0
Current [A]	5.3	7.4	8.4
Rated RPM [min <sup>-1</sup> ]	940	960	950
Maximum RPM when operating from FC [min <sup>-1</sup> ]	940	1050	1140
Maximum frequency when operating from FC [Hz]	50	55	60
Curve number at the diagram when operating from FC	①	②	③
Curve number at the diagram when operating from supply network	⑦	⑨	⑧

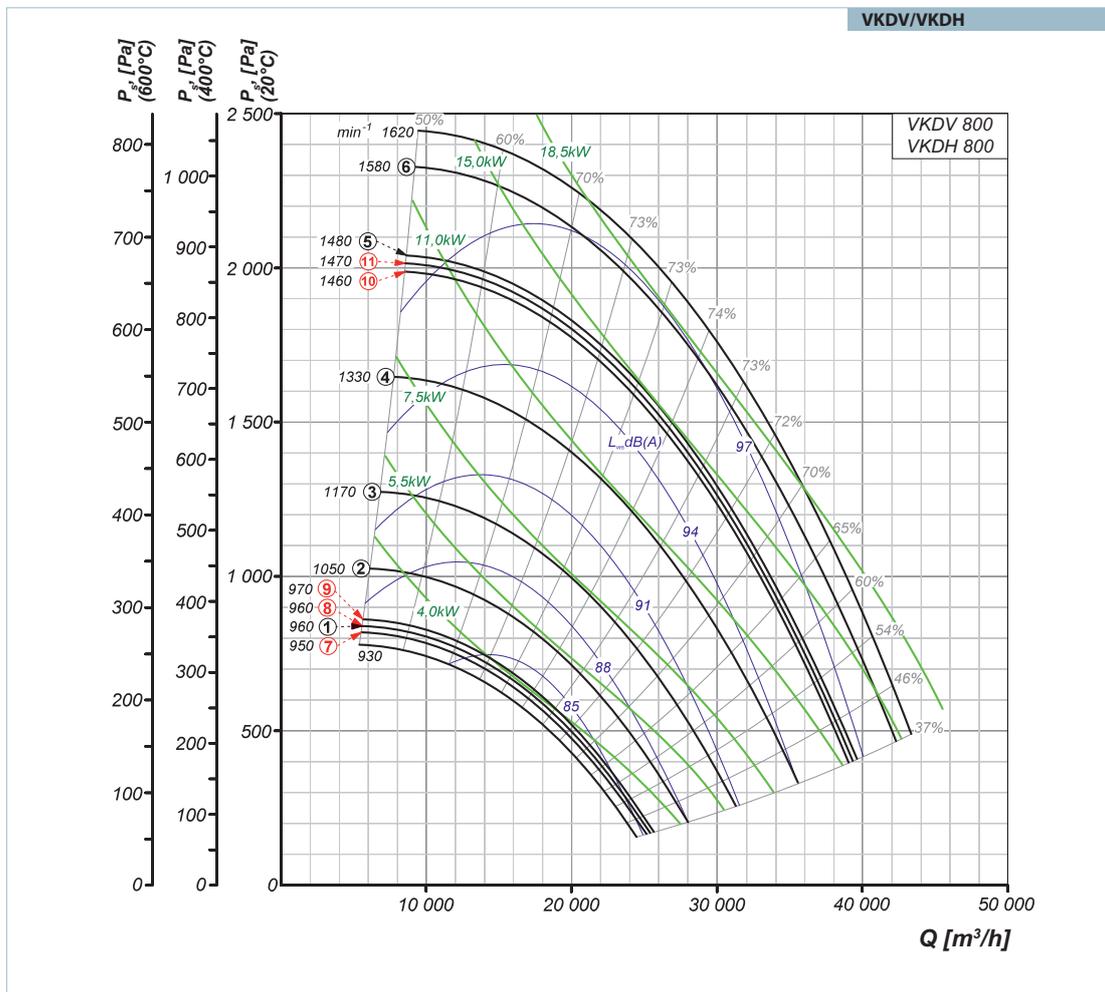
	VKDV(H) 710-600-5.5/960	VKDV(H) 710-600-7.5/1455	VKDV(H) 710-600-11/1460
Voltage [V]	3~400	3~400	3~400
Rated frequency [Hz]	50	50	50
Rated power Ny [kW]	5.5	7.5	11.0
Current [A]	11.2	15.1	21.2
Rated RPM [min <sup>-1</sup> ]	960	1455	1460
Maximum RPM when operating from FC [min <sup>-1</sup> ]	1280	1380	1620
Maximum frequency when operating from FC [Hz]	67	47	55
Curve number at the diagram when operating from FC	④	⑤	⑥
Curve number at the diagram when operating from supply network	⑨	-	⑩



**Technical data:**

	VKDV(H) 800-600-4/960	VKDV(H) 800-600-5.5/950	VKDV(H) 800-600-7.5/970
Voltage [V]	3~400	3~400	3~400
Rated frequency [Hz]	50	50	50
Rated power Ny [kW]	4.0	5.5	7.5
Current [A]	9.2	12.3	15.7
Rated RPM [min <sup>-1</sup> ]	960	950	970
Maximum RPM when operating from FC [min <sup>-1</sup> ]	960	1050	1170
Maximum frequency when operating from FC [Hz]	50	55	60
Curve number at the diagram when operating from FC	①	②	③
Curve number at the diagram when operating from supply network	⑧	⑦	⑨

	VKDV(H) 800-600-11/960	VKDV(H) 800-600-15/1460	VKDV(H) 800-600-18.5/1470
Voltage [V]	3~400	3~400	3~400
Rated frequency [Hz]	50	50	50
Rated power Ny [kW]	11.0	15.0	18.5
Current [A]	21.2	29.5	36.4
Rated RPM [min <sup>-1</sup> ]	960	1460	1470
Maximum RPM when operating from FC [min <sup>-1</sup> ]	1330	1480	1580
Maximum frequency when operating from FC [Hz]	69	51	54
Curve number at the diagram when operating from FC	④	⑤	⑥
Curve number at the diagram when operating from supply network	⑧	⑩	⑪



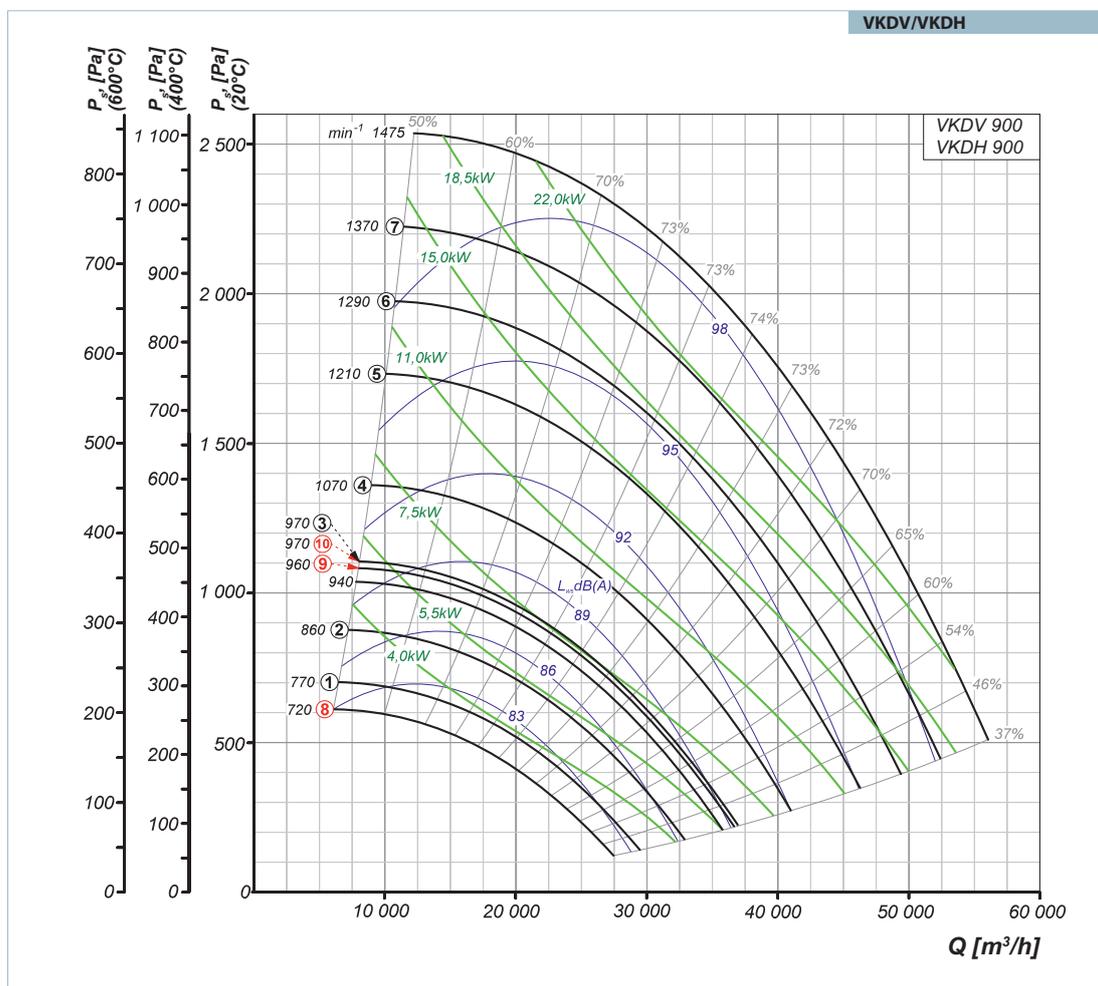
## ROOF-MOUNTED SMOKE REMOVAL FANS

### Technical data:

	VKDV(H) 900-600-4/720	VKDV(H) 900-600-5.5/960	VKDV(H) 900-600-7.5/970	VKDV(H) 900-600-11/970
Voltage [V]	3~400	3~400	3~400	3~400
Rated frequency [Hz]	50	50	50	50
Rated power Ny [kW]	4.0	5.5	7.5	11.0
Current [A]	10.0	12.3	15.7	23.0
Rated RPM [min <sup>-1</sup> ]	720	960	970	970
Maximum RPM when operating from FC [min <sup>-1</sup> ]	770	860	970	1070
Maximum frequency when operating from FC [Hz]	53	45	50	55
Curve number at the diagram when operating from FC	①	②	③	④
Curve number at the diagram when operating from supply network	⑧	—	⑩	⑩

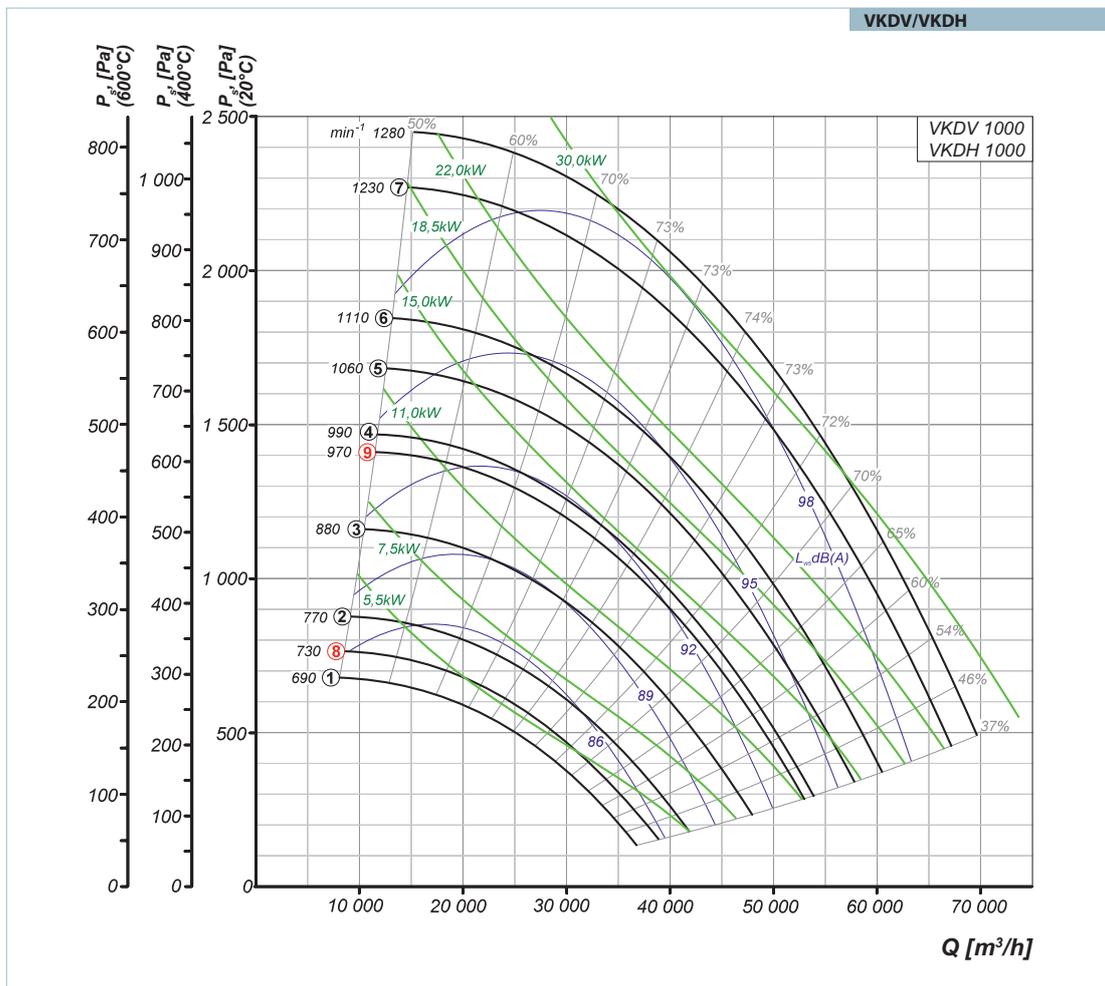
	VKDV(H) 900-600-15/960	VKDV(H) 900-600-18.5/960	VKDV(H) 900-600-22/960
Voltage [V]	3~400	3~400	3~400
Rated frequency [Hz]	50	50	50
Rated power Ny [kW]	15.0	18.5	22.0
Current [A]	31.0	36.4	44.0
Rated RPM [min <sup>-1</sup> ]	960	960	960
Maximum RPM when operating from FC [min <sup>-1</sup> ]	1210	1290	1370
Maximum frequency when operating from FC [Hz]	63	67	71
Curve number at the diagram when operating from FC	⑤	⑥	⑦
Curve number at the diagram when operating from supply network	⑨	⑨	⑨



**Technical data:**

	VKDV(H) 1000-600-5.5/720	VKDV(H) 1000-600-7.5/730	VKDV(H) 1000-600-11/970	VKDV(H) 1000-600-15/970
Voltage [V]	3~400	3~400	3~400	3~400
Rated frequency [Hz]	50	50	50	50
Rated power Ny [kW]	5.5	7.5	11.0	15.0
Current [A]	13.6	18.0	23.0	31.0
Rated RPM [min <sup>-1</sup> ]	720	730	970	970
Maximum RPM when operating from FC [min <sup>-1</sup> ]	690	770	880	990
Maximum frequency when operating from FC [Hz]	48	53	45	51
Curve number at the diagram when operating from FC	①	②	③	④
Curve number at the diagram when operating from supply network	—	⑧	—	⑨

	VKDV(H) 1000-600-18.5/970	VKDV(H) 1000-600-22/970	VKDV(H) 1000-600-30/970
Voltage [V]	3~400	3~400	3~400
Rated frequency [Hz]	50	50	50
Rated power Ny [kW]	18.5	22.0	30.0
Current [A]	36.5	44.6	59.6
Rated RPM [min <sup>-1</sup> ]	970	970	970
Maximum RPM when operating from FC [min <sup>-1</sup> ]	1060	1110	1230
Maximum frequency when operating from FC [Hz]	55	57	63
Curve number at the diagram when operating from FC	⑤	⑥	⑦
Curve number at the diagram when operating from supply network	⑨	⑨	⑨



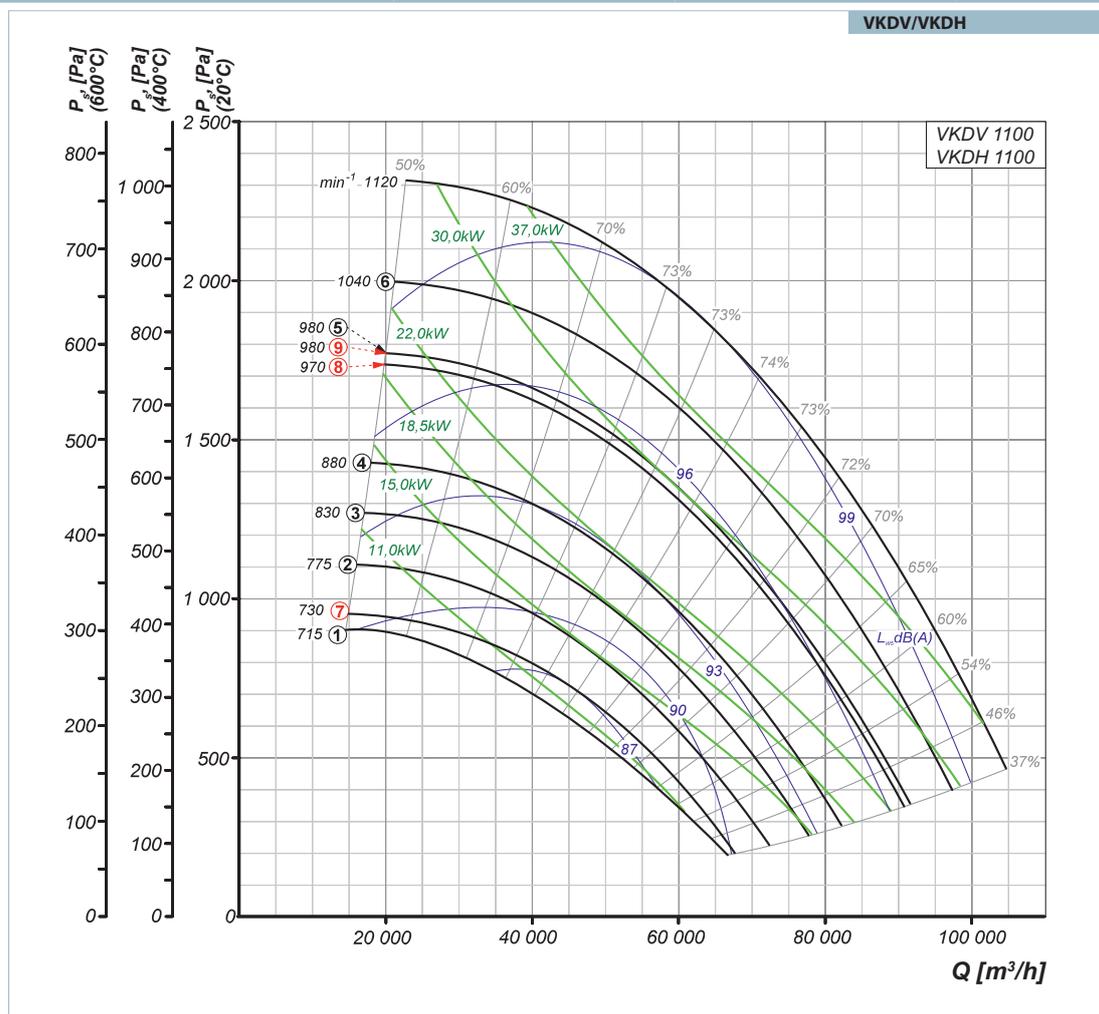
## ROOF-MOUNTED SMOKE REMOVAL FANS

### Technical data:

	VKDV(H) 1100-600-11/730	VKDV(H) 1100-600-15/730	VKDV(H) 1100-600-18.5/970
Voltage [V]	3~400	3~400	3~400
Rated frequency [Hz]	50	50	50
Rated power Ny [kW]	11.0	15.0	18.5
Current [A]	25.1	32.3	36.5
Rated RPM [min <sup>-1</sup> ]	730	730	970
Maximum RPM when operating from FC [min <sup>-1</sup> ]	715	775	830
Maximum frequency when operating from FC [Hz]	49	53	43
Curve number at the diagram when operating from FC	①	②	③
Curve number at the diagram when operating from supply network	—	⑦	—

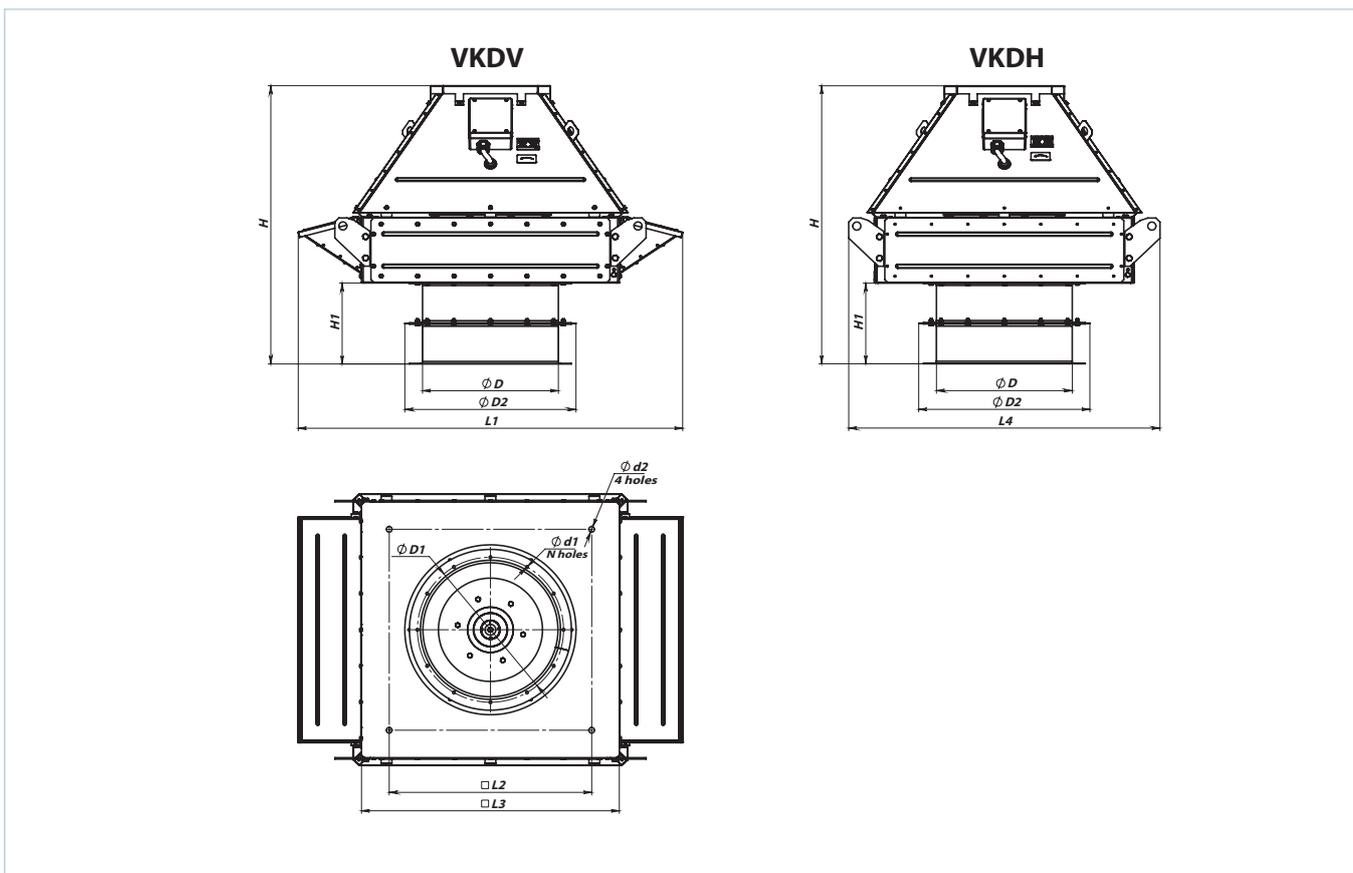
  

	VKDV(H) 1100-600-22/970	VKDV(H) 1100-600-30/970	VKDV(H) 1100-600-37/980
Voltage [V]	3~400	3~400	3~400
Rated frequency [Hz]	50	50	50
Rated power Ny [kW]	22.0	30.0	37.0
Current [A]	44.6	59.6	70.0
Rated RPM [min <sup>-1</sup> ]	970	970	980
Maximum RPM when operating from FC [min <sup>-1</sup> ]	880	980	1040
Maximum frequency when operating from FC [Hz]	45	51	53
Curve number at the diagram when operating from FC	④	⑤	⑥
Curve number at the diagram when operating from supply network	—	⑧	⑨



## Overall dimensions:

Name	H	H1	L1	L2	L3	L4	ØD	ØD1	ØD2	Ød1	Ød2	n	Weight [kg]	RKV, RKVI mounting frame compatibility
VKDV(H) 630-600-1.5/930	1038	302	1424	750	955	1153	503	541	634	10	21	12	200	RKV(I) 630
VKDV(H) 630-600-2.2/940		210												
VKDV(H) 630-600-3/960	1043	307												
VKDV(H) 630-600-4/1440	1038	302												
VKDV(H) 630-600-5.5/1450	1043	307												
VKDV(H) 630-600-7.5/1440	1134												230	
VKDV(H) 710-600-2.2/940	1181	317	1508	840	1040	1238	633	674	730	12	21	16	242	RKV(I) 710-800
VKDV(H) 710-600-3/960	1186	322											252	
VKDV(H) 710-600-4/950													253	
VKDV(H) 710-600-5.5/960													280	
VKDV(H) 710-600-7.5/1455													281	
VKDV(H) 710-600-11/1460													292	
VKDV(H) 800-600-4/960			1239	345	1543	840	1040	1238	633	674	784	12	21	16
VKDV(H) 800-600-5.5/950	305													
VKDV(H) 800-600-7.5/970	312													
VKDV(H) 800-600-11/960	1335	355	390											
VKDV(H) 800-600-15/1460			390											
VKDV(H) 800-600-18.5/1470			395											
VKDV(H) 900-600-4/720	1379	363	1871	1050	1200	1398	713	751	874	12	21	16	376	RKV(I) 900
VKDV(H) 900-600-5.5/960	1398												376	
VKDV(H) 900-600-7.5/970		380												
VKDV(H) 900-600-11/970		372											418	
VKDV(H) 900-600-15/960	433													
VKDV(H) 900-600-18.5/960	1491	482												
VKDV(H) 900-600-22/960	1565	566												
VKDV(H) 1000-600-5.5/720	1365	398	2111	1240	1430	1628	803	837	974	12	23	24	467	RKV(I) 1000-1100
VKDV(H) 1000-600-7.5/730	1573	403											588	
VKDV(H) 1000-600-11/970													590	
VKDV(H) 1000-600-15/970													595	
VKDV(H) 1000-600-18.5/970													639	
VKDV(H) 1000-600-22/970													670	
VKDV(H) 1000-600-30/970			690											
VKDV(H) 1100-600-11/730	1721	441	2236	1240	1430	1628	903	934	1075	12	23	24	720	RKV(I) 1000-1100
VKDV(H) 1100-600-15/730													775	
VKDV(H) 1100-600-18.5/970													763	
VKDV(H) 1100-600-22/970													794	
VKDV(H) 1100-600-30/970													812	
VKDV(H) 1100-600-37/980													1773	



RKV, RKVI mounting frame overall dimensions:

Model	Dimensions [mm]					RKV weight [kg]	RKVI weight [kg]
	A	B	C	H	M		
RKV(I) 630	1212	912	750	600	M18	65.9	85.45
RKV(I) 710, 800	1262	962	840	600		68.5	89.04
RKV(I) 900	1512	1212	1050	650		85.7	113
RKV(I) 1000, 1100	1712	1412	1240	730	M20	103.7	140.59

