

SMOKE VENTILATION SYSTEMS VENTS VPVO



2016

WELCOME TO THE VENTS WORLD!



VENTS company was founded in the nineties of the XXth century.

Dynamic development of the enterprise and ongoing study of the consumer demand enabled rapid international leadership of the company in the ventilation industry.

VENTS is a powerful research and development enterprise with 2500 professionals working as a single team to ensure a full production cycle from idea to end product. The production base of the company is located at more than 60 000 m² area. It includes 16 workshops equipped under the latest international standards and each of them is comparable to a separate plant.

Modern equipment, active implementation of advanced technologies and highly automated production are the characteristic features of VENTS company.

The company undergoes rapid dynamic development; fundamental researches and effective designs in climatic equipment industry are in the focus of the company's business strategy.

The joint cooperation of the corporate design department, test laboratories and production workshops let us introduce high quality products to the market.

Special attention is paid to the manufacturing of the goods during all manufacturing stages including monitoring of the technological conditions. Technical characteristics of supplied raw materials are thoroughly checked. Quality control system which meets international standard requirements ISO 9001:2000 was implemented at the enterprise.

Environmental protection is one of the basic components of the corporate development. The technological process at the enterprise is arranged in such a way as to exclude any negative impact to the environment. To solve the global energy saving problem we develop a special climatic equipment that provides comfortable conditions for people and reduces the energy demand significantly.

Perfect quality, competitive prices, high production potential, technical capabilities and the wide product range stimulate long-term partnership and product promotion all over the world.

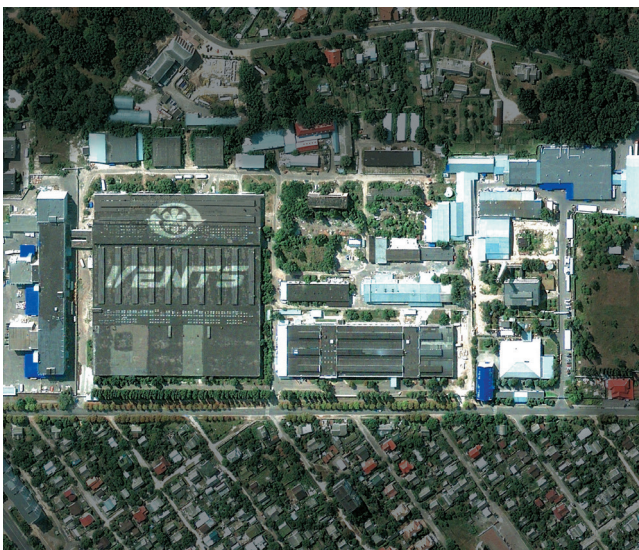
The VENTS ventilation products are exported to more than 90 countries and are sold through the distribution network of 120 companies worldwide. Share of the VENTS products globally is above 10%.

VENTS is a member of high-rank international organizations, the leading HVAC experts.

Since 2008 VENTS has been a fully-featured member of HARDI Association (Heating, Air-conditioning and Refrigeration Distributors International, USA).

Since 2010 VENTS has been a participant of AMCA Association (the Air Movement and Control Association (AMCA) International, Inc.). In 2011 VENTS successfully passed tests for compliance with AMCA standards and the VENTS products were certified for the USA market.

In 2011 VENTS joined HVI (Home Ventilation Institute, USA) Association.





VENTS VPVO series



Medium pressure axial fans with air capacity up to 41,000 m³/h

■ Purpose

The fans are used for air pressurisation in smoke extraction ventilation systems (up to 55 °C). Creating a positive air pressure differential in stairway enclosures, airlock vestibules and lift shafts helps prevent spreading of smoke and protect the people using evacuation routes from fire hazards. The fans are intended for general ventilation in systems with high air flow rate. The units are suitable for industrial, public, residential, administrative and other spaces.

■ Design

The metal casing with rolled flanges helps achieve outstanding rigidity and minimum clearances between the casing and the blades. There is an inspection hatch in the casing for easy maintenance. All the casing components are powder coated for improved protection against the environmental effects.

■ Motor

The fans are equipped with three-phase (400 V/50 Hz) single-speed 2 or 4 pole electric motors.

■ Impeller

Depending on the size and the required air capacity the fans are equipped with impellers with 6, 8, 10 or 12 blades angled from 25° to 50° with 5° stepping to ensure precise matching of fans with the operating point. The specially designed impeller blades ensure high efficiency of the fan while keeping noise well under control. The impellers are dynamically balanced. Low weight and low moment of the impeller inertia help reduce the fan start-up time.

The fan blades can be made of the following materials:

- PPG - fiberglass reinforced polypropylene;
- PAG - fiberglass reinforced polyamide;
- AL - aluminium.

Please confirm the blade material while placing your order.

■ Installation

The fans can be mounted on any flat surface or directly into a ventilation duct. The units are suitable for both horizontal and vertical configurations. In-duct installation requires flanges to attach the fan to the ductwork. To attach the fan to the floor, a wall or the ceiling use the O-VPVO carriers (not included as standard, should be purchased separately). The units are suitable for installation on rooftops to provide direct supply of outdoor air to the stairway areas.

■ Designation key

VPVO - axial pressurisation fan

Standard size: 400; 450; 500; 560; 630

Number of motor poles: 2,4

Motor phases: E - single-phase; D - three-phase

Motor power [kW] (0,18; 0,25; 0,37; 0,55; 0,75; 1,1; 1,5; 2,2; 3,0; 4,0; 5,5; 7,5; 9,2; 11; 15; 17,5)

Number of impeller blades [items] (6; 8; 10; 12)

Blade setting angle [°] (25; 30; 35; 40; 45; 50)

Blade material:

PPG - fiberglass reinforced polypropylene

PAG - fiberglass reinforced polyamide

AL - aluminium

Climatic category:

U - moderate climate

HL - cold climate

UHL - moderate and cold climate

T - tropical climate

M - maritime moderately cold climate

O - general climatic modification (except maritime climate)

OM - general maritime climatic modification

V - universal climatic modification

Placement category:

1 - outdoors

2 - under a shed or indoors with the same conditions as outdoors except solar radiation and precipitation

3 - in closed rooms without artificial climate control

4 - in closed rooms with artificial climate control (ventilation, heating)

5 - in rooms with high levels of humidity, without artificial climate control

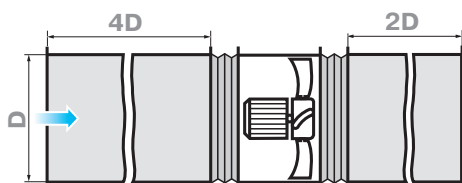
Terminal box: K

Motor Impeller Modification
VPVO - 400 - 4 D / 0,18 - 6 / 40 / AL - U - 1 - K

AXIAL FAN APPLICATION DETAILS

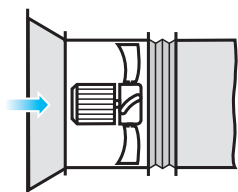
Fan installation into an air duct system:

To ensure a uniform air flow the fan should be preceded by a straight duct section with a cross-section area equal to half of that of the fan. The length of the duct section should be $3 \div 4 D$ (where D is the inner diameter of the fan). The length of the straight duct section downstream of the fan should be $1.5 \div 2 D$. Reduction of the recommended duct length values results in a drop of the fan pressure and performance. To reduce noise and vibration use the VVGF flexible joints.



Fan installation with no upstream ducting:

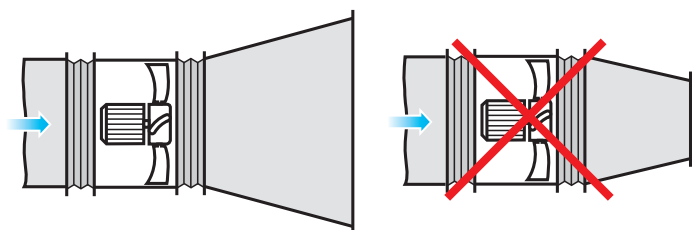
Axial fans without upstream ducting must be equipped with the VK-VPVO inlet cone to improve the air flow parameters.



Fan installation with no downstream ducting:

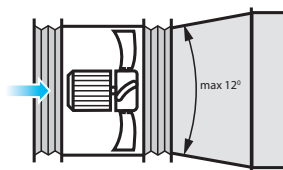
If the axial fan is the terminal device of the ventilation system (i.e. there is no downstream ducting) the unit must be equipped with a diffuser to reduce the air flow velocity and the fan dynamic pressure. Reduction of the air discharge velocity results in a significant reduction of shock losses which are proportional to the square of velocity decrement.

The fan should not be equipped with a downstream contractor.



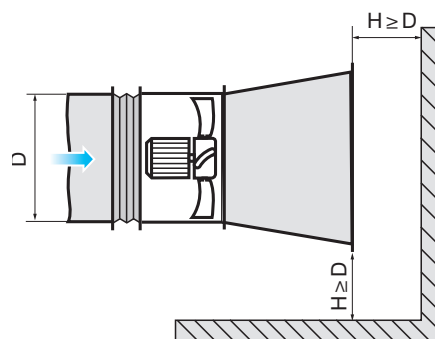
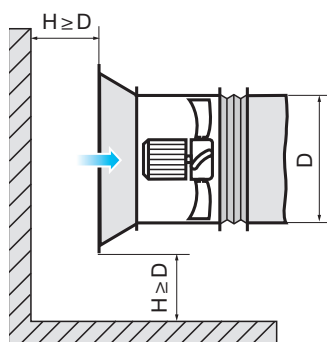
Changing diameter installation:

When changing from a smaller diameter to a larger one use a connector diffuser with the maximum opening angle of 12° .



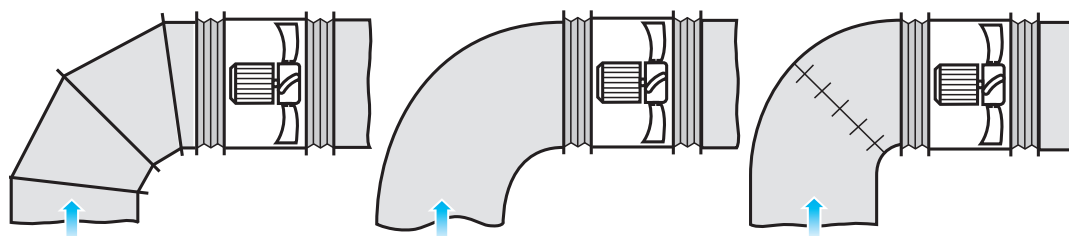
Obstructed space installation:

To ensure normal operation of the fan in an obstructed space make sure to provide for a sufficient distance between the inlet and outlet flanges and the floor, walls, bulky equipment and obstacles.



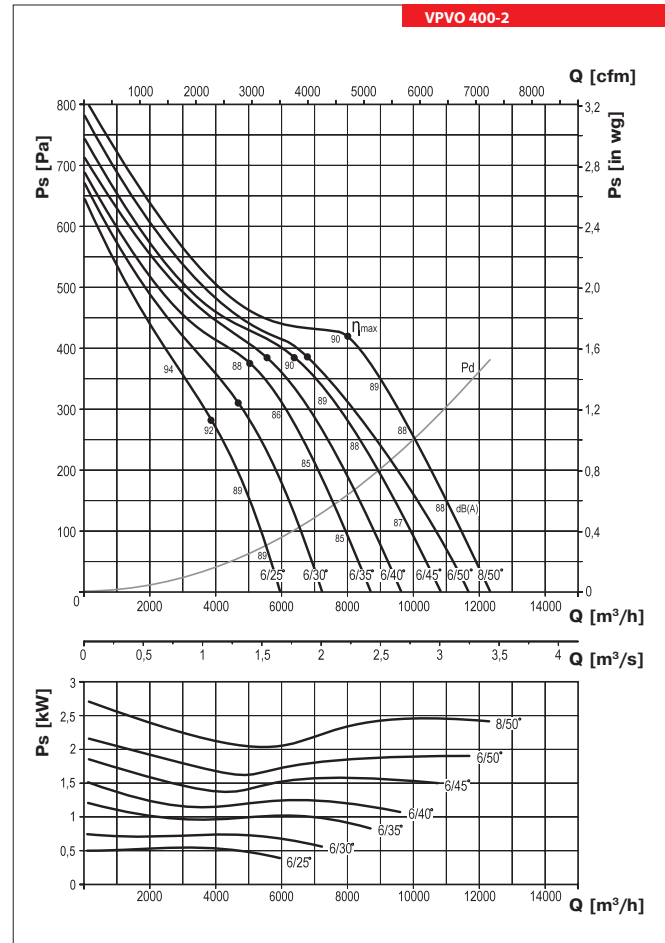
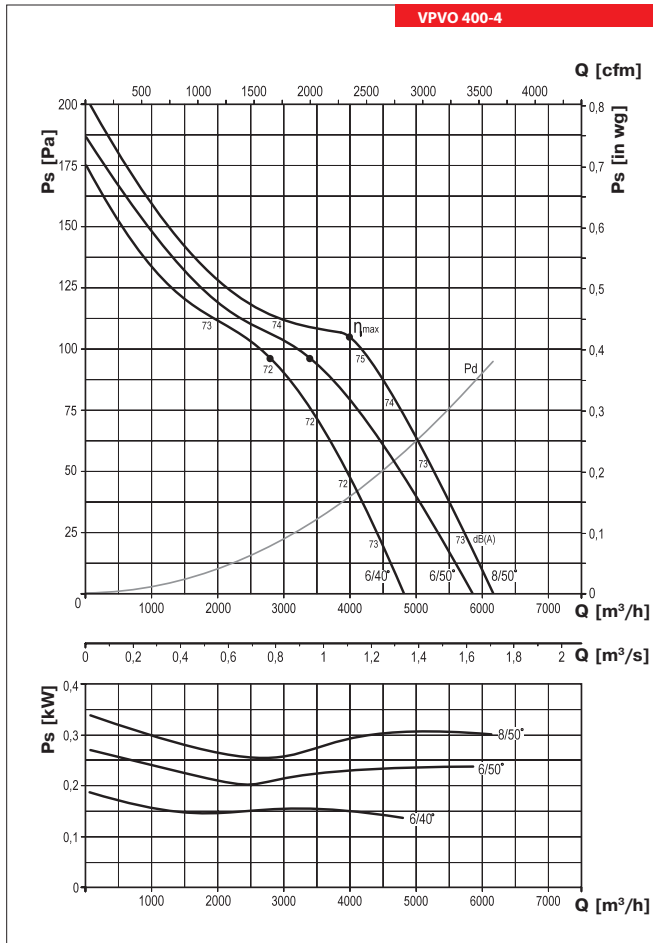
Installation near bends:

To install the fan directly downstream of a bend (elbow) use a curved section with a large bending radius or an array of internal guide vanes.





Aerodynamic characteristics

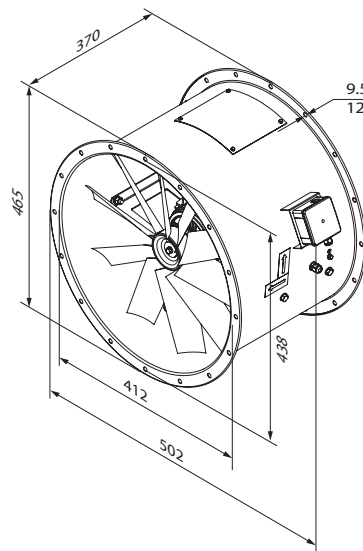
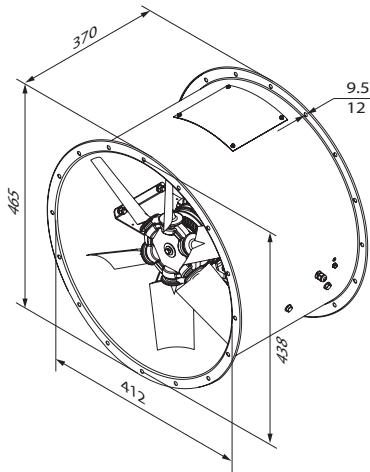


Technical data:

Standard size	Number of poles	Fan model	Voltage [V] / 50 Hz	Installed motor power Ny [kW]	Current [A]	Rotation speed [min ⁻¹]	Max. transported air temperature [°C]		Motor IP code	Weight [kg]
							Impeller type			
							PPG	PAG / AL		
400	4	VPVO-400-4D/0.18-6/40/	3~ 400	0,18	0,71	1400	-10 +40	-40 +40	IP54	18,3
		VPVO-400-4D/0.25-6/50/	3~ 400	0,25	0,96	1400	-10 +40	-40 +40	IP54	18,8
		VPVO-400-4D/0.37-8/50/	3~ 400	0,37	1,17	1400	-10 +40	-40 +40	IP54	20,2
	2	VPVO-400-2D/0.55-6/25/	3~ 400	0,55	1,49	2800	-10 +40	-40 +40	IP54	20,1
		VPVO-400-2D/0.75-6/30/	3~ 400	0,75	1,86	2800	-10 +40	-40 +40	IP54	23,1
		VPVO-400-2D/1.1-6/35/	3~ 400	1,1	2,64	2800	-10 +40	-40 +40	IP54	24,2
		VPVO-400-2D/1.5-6/40/	3~ 400	1,5	3,46	2800	-10 +40	-40 +40	IP54	26,0
		VPVO-400-2D/1.5-6/45/	3~ 400	1,5	3,46	2800	-10 +40	-40 +40	IP54	26,3
		VPVO-400-2D/2.2-6/50/	3~ 400	2,2	4,85	2800	-10 +40	-40 +40	IP54	29,0
		VPVO-400-2D/3-8/50/	3~ 400	3,0	6,34	2800	-10 +40	-40 +40	IP54	36,3

VPVO 400

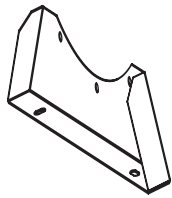
■ Overall dimensions [mm]



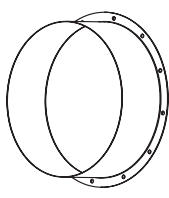
VPVO (basic variant)

VPVO with a terminal box

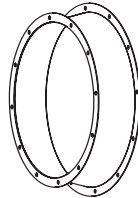
■ Accessories:



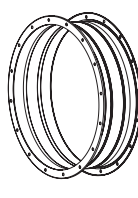
O-VPVO 400 carrier



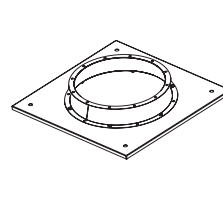
F-VPVO 400 flange



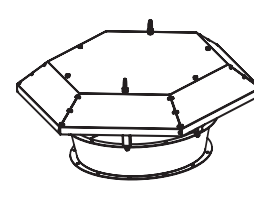
VK-VPVO 400 inlet cone



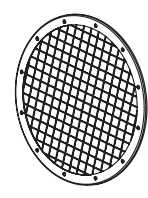
VVGF 400 flexible joint



PK-VPVO 400 roof adapter



Z-VPVO 400 hood



SZ-VPVO 400 protective mesh

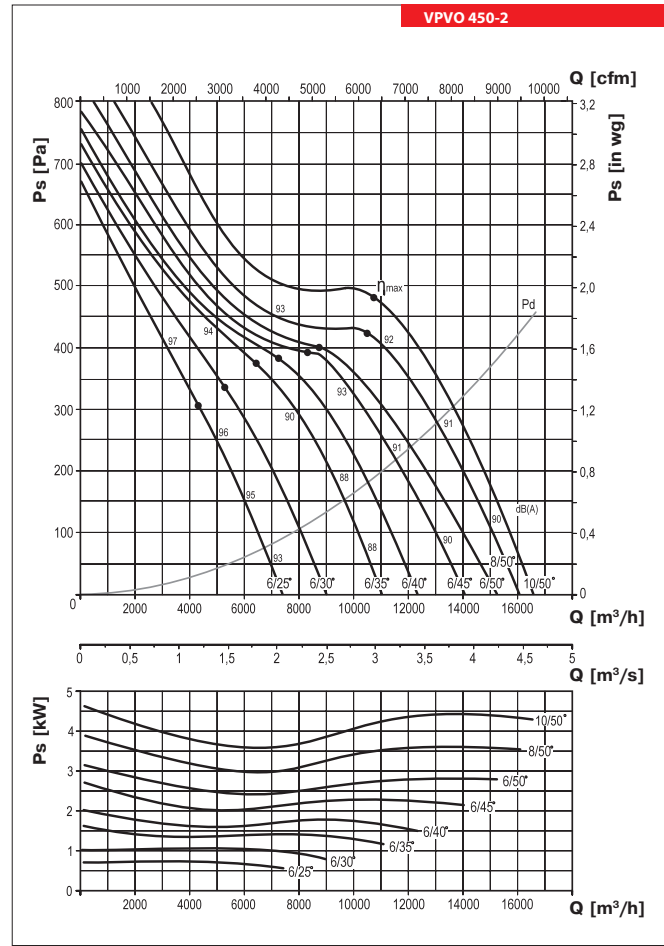
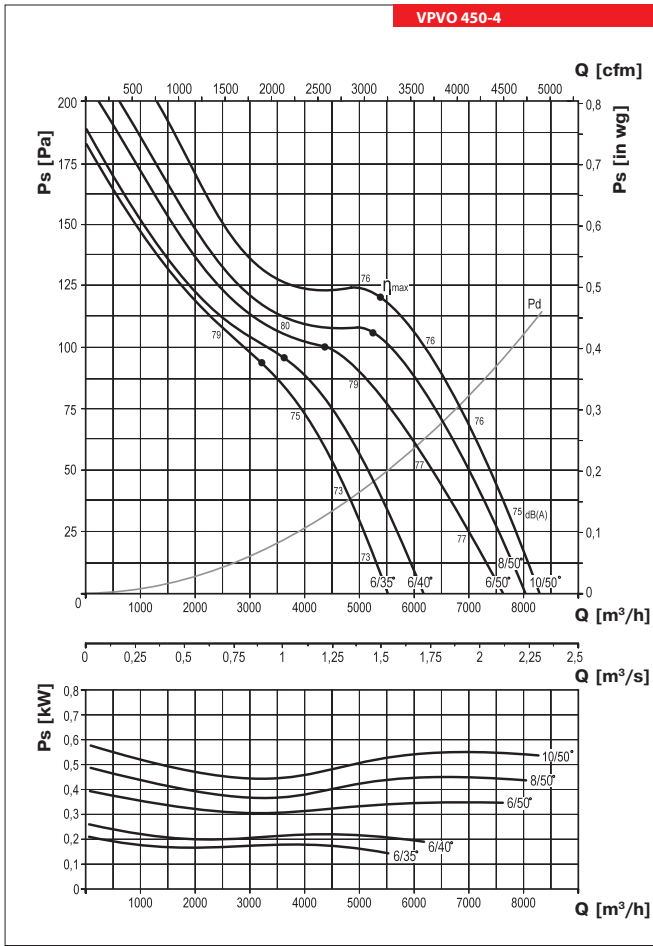
■ Characteristics at maximum efficiency:

MP	Motor rated power [kW]	EC	Efficiency category	m ³ /h	Air flow rate
η, [%]	Overall efficiency (η) [%]	N	Efficiency grade	Pa	Static pressure
MC	Measurement category	VSD	Built-in variable frequency drive	min ⁻¹	Rotation speed
		kW	Power	SR	Specific ratio

Standard size	Number of poles	Fan model	Characteristics at maximum efficiency							Performance			
			MP	η, [%]	MC	EC	N	VSD	kW	m ³ /h	Pa	min ⁻¹	SR
400	4	VPVO-400-4D/0.18-6/40/	0,18	49,6	A	static.	61,1	N/A	0,153	2790	96	1420	1
		VPVO-400-4D/0.25-6/50/	0,25	41,1	A	static.	51,5	N/A	0,225	3400	96	1430	1
		VPVO-400-4D/0.37-8/50/	0,37	41,1	A	static.	50,8	N/A	0,295	4000	107	1425	1
	2	VPVO-400-2D/0.55-6/25/	0,55	58,0	A	static.	66,0	N/A	0,542	3880	286	2830	1
		VPVO-400-2D/0.75-6/30/	0,75	55,5	A	static.	62,6	N/A	0,742	4700	309	2825	1
		VPVO-400-2D/1.1-6/35/	1,1	52,8	A	static.	59,1	N/A	1,013	5060	373	2850	1
		VPVO-400-2D/1.5-6/40/	1,5	49,7	A	static.	55,5	N/A	1,225	5580	385	2840	1
		VPVO-400-2D/1.5-6/45/	1,5	45,0	A	static.	50,2	N/A	1,526	6290	385	2830	1
		VPVO-400-2D/2.2-6/50/	2,2	41,4	A	static.	46,1	N/A	1,801	6800	387	2865	1
		VPVO-400-2D/3-8/50/	3,0	40,3	A	static.	44,3	N/A	2,367	8010	420	2850	1



Aerodynamic characteristics

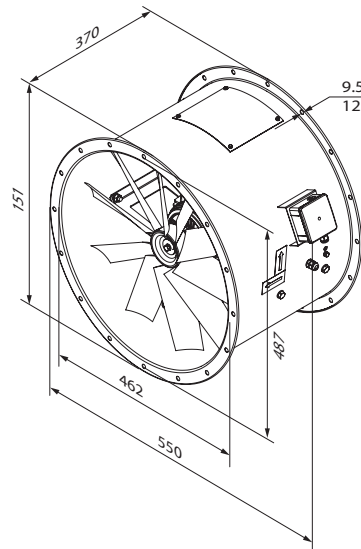
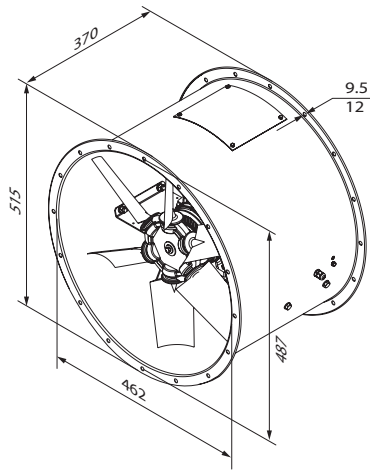


Technical data:

Standard size	Number of poles	Fan model	Voltage [V] / 50 Hz	Installed motor power Ny [kW]	Current [A]	Rotation speed [min ⁻¹]	Max. transported air temperature [°C]		Motor IP code	Weight [kg]
							Impeller type			
							PPG	PAG / AL		
450	4	VPVO-450-4D/0.18-6/35/	3~ 400	0,18	0,71	1400	-10 +40	-40 +40	IP54	21,3
		VPVO-450-4D/0.25-6/40/	3~ 400	0,25	0,96	1400	-10 +40	-40 +40	IP54	21,8
		VPVO-450-4D/0.37-6/50/	3~ 400	0,37	1,17	1400	-10 +40	-40 +40	IP54	23,2
		VPVO-450-4D/0.55-8/50/	3~ 400	0,55	1,69	1400	-10 +40	-40 +40	IP54	26,0
		VPVO-450-4D/0.75-10/50/	3~ 400	0,75	2,03	1400	-10 +40	-40 +40	IP54	27,0
	2	VPVO-450-2D/0.75-6/25/	3~ 400	0,75	1,93	2800	-10 +40	-40 +40	IP54	24,0
		VPVO-450-2D/0.75-6/30/	3~ 400	0,75	1,86	2800	-10 +40	-40 +40	IP54	26,1
		VPVO-450-2D/1.1-6/35/	3~ 400	1,1	2,64	2800	-10 +40	-40 +40	IP54	27,2
		VPVO-450-2D/1.5-6/40/	3~ 400	1,5	3,46	2800	-10 +40	-40 +40	IP54	29,0
		VPVO-450-2D/2.2-6/45/	3~ 400	2,2	4,85	2800	-10 +40	-40 +40	IP54	32,0
		VPVO-450-2D/3-6/50/	3~ 400	3,0	6,34	2800	-10 +40	-40 +40	IP54	39,3
		VPVO-450-2D/4-8/50/	3~ 400	4,0	8,30	2800	-10 +40	-40 +40	IP54	43,7
		VPVO-450-2D/5.5-10/50/	3~ 400	5,5	11,08	2800	-10 +40	-40 +40	IP54	55,5

VPVO 450

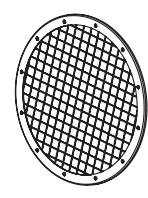
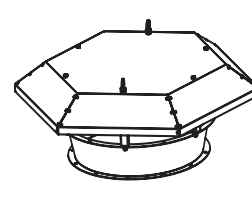
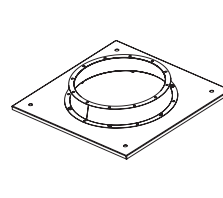
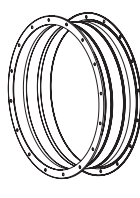
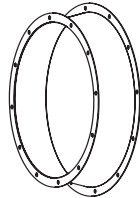
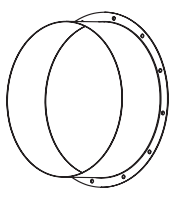
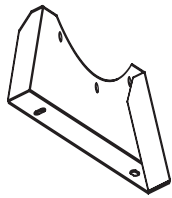
■ Overall dimensions [mm]



VPVO (basic variant)

VPVO with a terminal box

■ Accessories:



O-VPVO 450 carrier

F-VPVO 450 flange

VK-VPVO 450 inlet cone

VVGf 450 f lexible joint

PK-VPVO 450 roof adapter

Z-VPVO 450 hood

SZ-VPVO 450 protective mesh

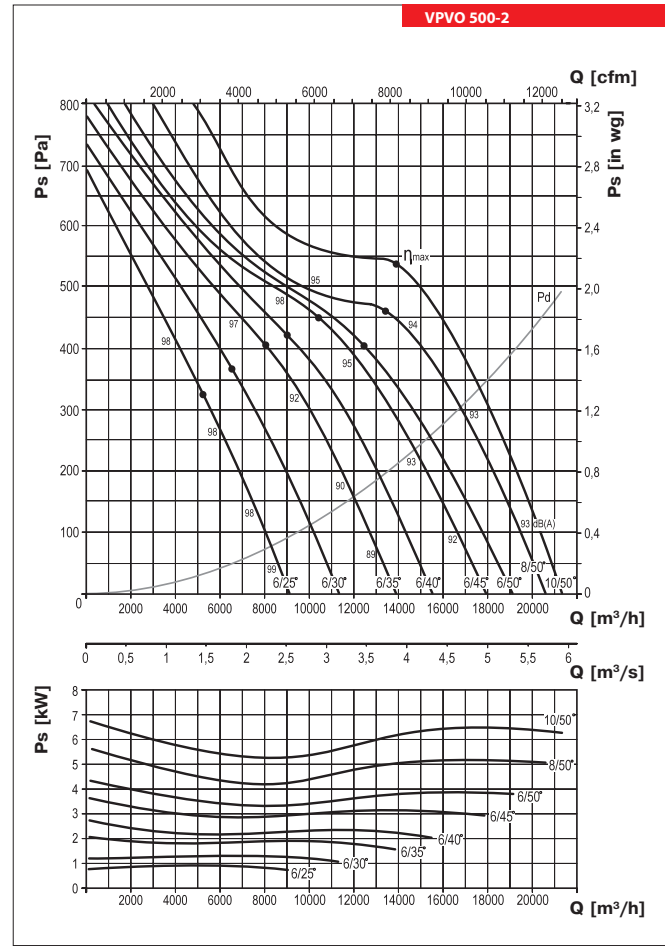
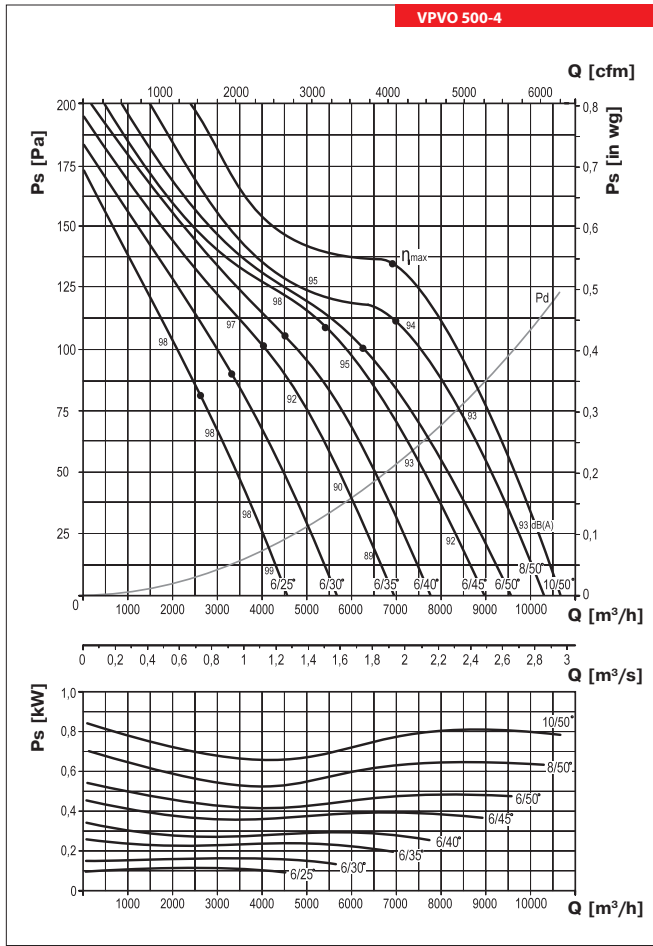
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η, [%]	Overall efficiency (η) [%]	N	Efficiency grade	Pa	Static pressure
MC	Measurement category	VSD	Built-in variable frequency drive	min ⁻¹	Rotation speed
		kW	Power	SR	Specific ratio

Standard size	Number of poles	Fan model	Characteristics at maximum efficiency							Air flow rate			
			MP	η, [%]	MC	EC	N	VSD	kW	m ³ /h	Pa	min ⁻¹	SR
450	4	VPVO-450-4D/0.18-6/35/	0,18	48,4	A	static.	59,5	N/A	0,175	3210	93	1425	1
		VPVO-450-4D/0.25-6/40/	0,25	45,3	A	static.	55,9	N/A	0,215	3580	96	1445	1
		VPVO-450-4D/0.37-6/50/	0,37	39,4	A	static.	48,8	N/A	0,322	4430	101	1450	1
		VPVO-450-4D/0.55-8/50/	0,55	37,1	A	static.	45,7	N/A	0,436	5240	109	1425	1
		VPVO-450-4D/0.75-10/50/	0,75	35,3	A	static.	43,4	N/A	0,528	5390	122	1440	1
	2	VPVO-450-2D/0.75-6/25/	0,75	51,8	A	static.	59,0	N/A	0,72	4300	306	2825	1
		VPVO-450-2D/0.75-6/30/	0,75	51,3	A	static.	57,7	N/A	0,986	5220	342	2840	1
		VPVO-450-2D/1.1-6/35/	1,1	48,4	A	static.	53,8	N/A	1,407	6420	374	2830	1
		VPVO-450-2D/1.5-6/40/	1,5	46,1	A	static.	50,9	N/A	1,72	7170	390	2850	1
		VPVO-450-2D/2.2-6/45/	2,2	41,7	A	static.	45,9	N/A	2,201	8160	397	2825	1
		VPVO-450-2D/3-6/50/	3,0	38,9	A	static.	42,7	N/A	2,581	8860	400	2840	1
		VPVO-450-2D/4-8/50/	4,0	36,2	A	static.	39,1	N/A	3,495	10500	425	2850	1
		VPVO-450-2D/5.5-10/50/	5,5	35,2	A	static.	37,6	N/A	4,2	10800	487	2845	1



Aerodynamic characteristics

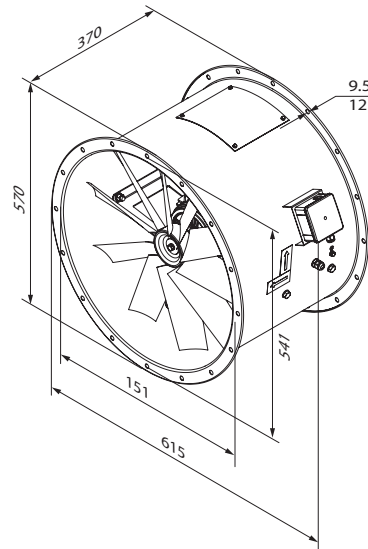
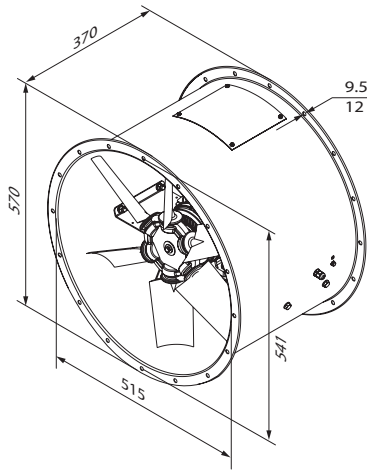


Technical data:

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							Impeller type			
							PPG	PAG / AL		
500	4	VPVO-500-4D/0.18-6/25/	3~ 400	0,18	0,71	1400	-10 +40	-40 +40	IP54	25,3
		VPVO-500-4D/0.18-6/30/	3~ 400	0,18	0,71	1400	-10 +40	-40 +40	IP54	25,6
		VPVO-500-4D/0.25-6/35/	3~ 400	0,25	0,96	1400	-10 +40	-40 +40	IP54	25,8
		VPVO-500-4D/0.37-6/40/	3~ 400	0,37	1,17	1400	-10 +40	-40 +40	IP54	27,2
		VPVO-500-4D/0.55-6/45/	3~ 400	0,55	1,69	1400	-10 +40	-40 +40	IP54	28,3
		VPVO-500-4D/0.55-6/50/	3~ 400	0,55	1,69	1400	-10 +40	-40 +40	IP54	28,7
		VPVO-500-4D/0.75-8/50/	3~ 400	0,75	2,03	1400	-10 +40	-40 +40	IP54	31,0
		VPVO-500-4D/1.1-10/50/	3~ 400	1,1	2,81	1400	-10 +40	-40 +40	IP54	33,3
	2	VPVO-500-2D/1.1-6/25/	3~ 400	1,1	0,71	2800	-10 +40	-40 +40	IP54	31,2
		VPVO-500-2D/1.5-6/30/	3~ 400	1,5	0,71	2800	-10 +40	-40 +40	IP54	32,7
		VPVO-500-2D/2.2-6/35/	3~ 400	2,2	0,96	2800	-10 +40	-40 +40	IP54	36,0
		VPVO-500-2D/3-6/40/	3~ 400	3,0	1,17	2800	-10 +40	-40 +40	IP54	39,5
		VPVO-500-2D/3-6/45/	3~ 400	3,0	1,69	2800	-10 +40	-40 +40	IP54	39,9
		VPVO-500-2D/4-6/50/	3~ 400	4,0	1,69	2800	-10 +40	-40 +40	IP54	46,2
		VPVO-500-2D/5.5-8/50/	3~ 400	5,5	2,03	2800	-10 +40	-40 +40	IP54	51,2
		VPVO-500-2D/7.5-10/50/	3~ 400	7,5	2,81	2800	-10 +40	-40 +40	IP54	63,2

VPVO 500

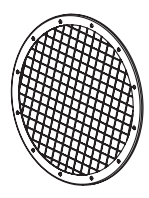
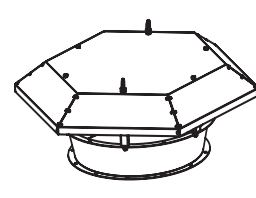
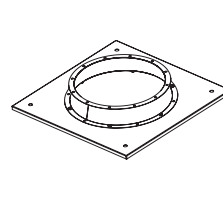
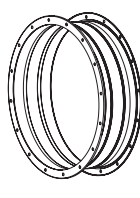
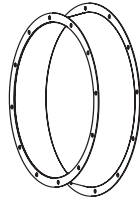
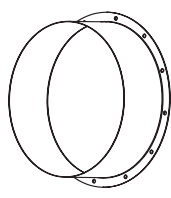
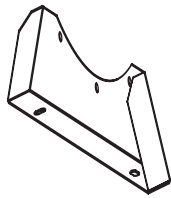
Overall dimensions [mm]



VPVO (basic variant)

VPVO with a terminal box

Accessories:



O-VPVO 500 carrier

F-VPVO 500 flange

VK-VPVO 500 inlet cone

VVGf 500 flexible joint

PK-VPVO 500 roof adapter

Z-VPVO 500 hood

SZ-VPVO 500 protective mesh

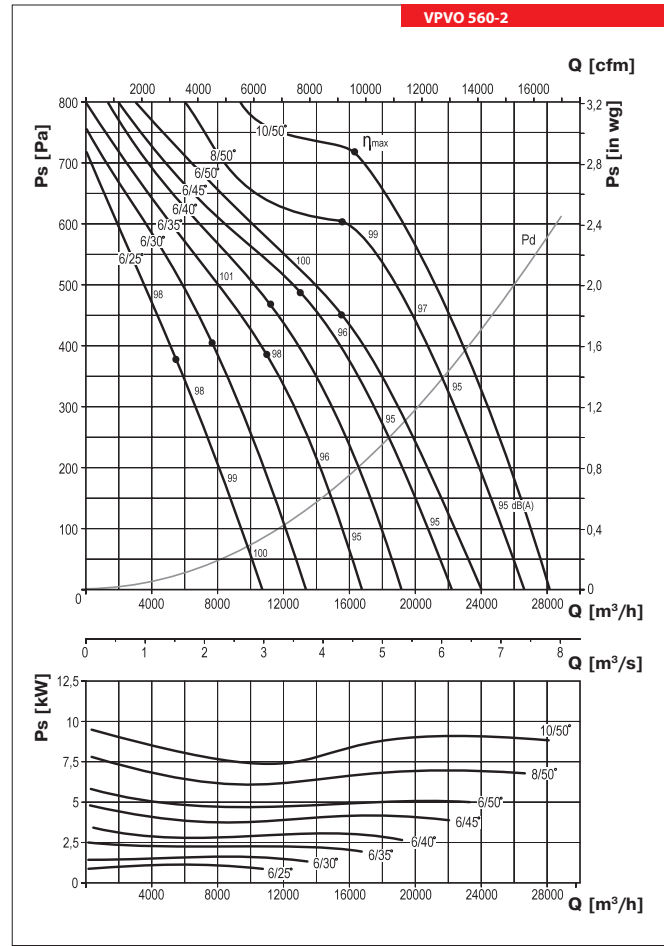
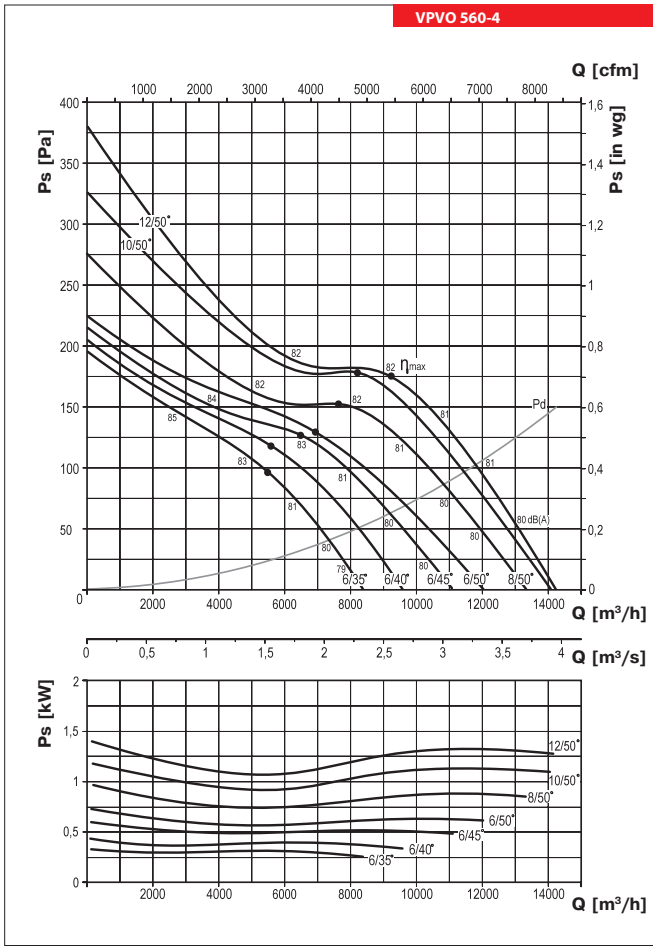
Characteristics at maximum efficiency:

MP	Motor rated power [kW]	EC	Efficiency category	m ³ /h	Air flow rate
η, [%]	Overall efficiency (η) [%]	N	Efficiency grade	Pa	Static pressure
MC	Measurement category	VSD	Built-in variable frequency drive	min ⁻¹	Rotation speed
		kW	Power	SR	Specific ratio

Standard size	Number of poles	Fan model	MP	η, [%]	MC	EC	N	VSD	kW	m ³ /h	Pa	min ⁻¹	SR
500	4	VPVO-500-4D/0.18-6/25/	0,18	52,3	A	static.	64,5	N/A	0,116	2640	81	1445	1
		VPVO-500-4D/0.18-6/30/	0,18	51,2	A	static.	62,5	N/A	0,167	3280	92	1450	1
		VPVO-500-4D/0.25-6/35/	0,25	49,2	A	static.	59,4	N/A	0,237	4030	102	1425	1
		VPVO-500-4D/0.37-6/40/	0,37	46,9	A	static.	56,7	N/A	0,288	4500	106	1440	1
		VPVO-500-4D/0.55-6/45/	0,55	43,7	A	static.	52,7	N/A	0,378	5200	112	1420	1
		VPVO-500-4D/0.55-6/50/	0,55	38,5	A	static.	46,9	N/A	0,463	6220	101	1430	1
		VPVO-500-4D/0.75-8/50/	0,75	35,7	A	static.	43,3	N/A	0,627	6690	118	1425	1
		VPVO-500-4D/1.1-10/50/	1,1	34,7	A	static.	41,7	N/A	0,770	6930	136	1450	1
	2	VPVO-500-2D/1.1-6/25/	1,1	52,6	A	static.	59,2	N/A	0,928	5270	327	2850	1
		VPVO-500-2D/1.5-6/30/	1,5	51,3	A	static.	56,8	N/A	1,336	6570	368	2825	1
		VPVO-500-2D/2.2-6/35/	2,2	48,8	A	static.	53,4	N/A	1,903	8050	407	2840	1
		VPVO-500-2D/3-6/40/	3,0	46,8	A	static.	50,8	N/A	2,311	8990	424	2850	1
		VPVO-500-2D/3-6/45/	3,0	43,8	A	static.	47,1	N/A	3,029	10400	450	2845	1
		VPVO-500-2D/4-6/50/	4,0	38,5	A	static.	41,2	N/A	3,709	12400	406	2840	1
		VPVO-500-2D/5.5-8/50/	5,5	35,5	A	static.	37,4	N/A	5,023	13400	470	2830	1
		VPVO-500-2D/7.5-10/50/	7,5	34,8	A	static.	36,1	N/A	6,2	13900	544	2850	1



Aerodynamic characteristics

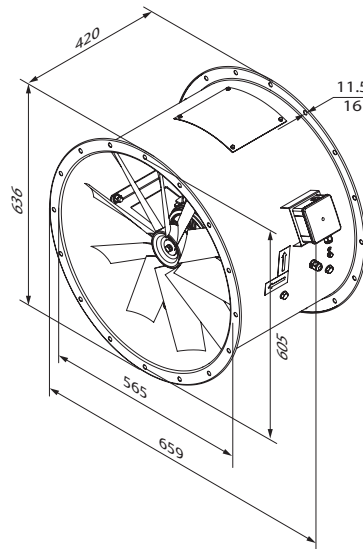
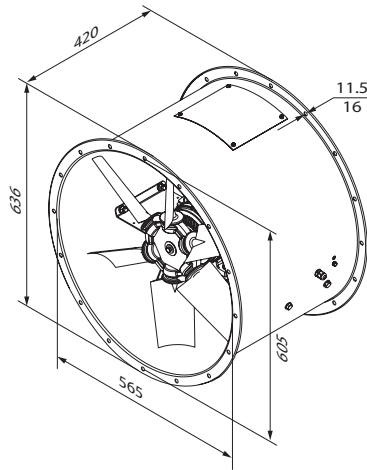


Technical data:

Standard size	Number of poles	Fan model	Voltage [V] / 50 Hz	Installed motor power Ny [kW]	Current [A]	Rotation speed [min ⁻¹]	Max. transported air temperature [°C]		Motor IP code	Weight [kg]
							Impeller type			
							PPG	PAG / AL		
560	4	VPVO-560-4D/0.37-6/35/	3~ 400	0,37	1,17	1400	-10 +40	-40 +40	IP54	30,2
		VPVO-560-4D/0.37-6/40/	3~ 400	0,37	1,17	1400	-10 +40	-40 +40	IP54	30,7
		VPVO-560-4D/0.55-6/45/	3~ 400	0,55	1,69	1400	-10 +40	-40 +40	IP54	31,3
		VPVO-560-4D/0.75-6/50/	3~ 400	0,75	2,03	1400	-10 +40	-40 +40	IP54	34,0
		VPVO-560-4D/1.1-8/50/	3~ 400	1,1	2,81	1400	-10 +40	-40 +40	IP54	36,3
		VPVO-560-4D/1.1-10/50/	3~ 400	1,1	2,81	1400	-10 +40	-40 +40	IP54	36,9
		VPVO-560-4D/1.5-12/50/	3~ 400	1,5	3,63	1400	-10 +40	-40 +40	IP54	38,6
	2	VPVO-560-2D/1.5-6/25/	3~ 400	1,5	3,50	2800	-10 +40	-40 +40	IP54	35,7
		VPVO-560-2D/2.2-6/30/	3~ 400	2,2	4,85	2800	-10 +40	-40 +40	IP54	39,0
		VPVO-560-2D/3-6/35/	3~ 400	3,0	6,42	2800	-10 +40	-40 +40	IP54	42,5
		VPVO-560-2D/3-6/40/	3~ 400	3,0	6,42	2800	-10 +40	-40 +40	IP54	43,2
		VPVO-560-2D/4-6/45/	3~ 400	4,0	8,30	2800	-10 +40	-40 +40	IP54	49,2
		VPVO-560-2D/5.5-6/50/	3~ 400	5,5	11,08	2800	-10 +40	-40 +40	IP54	54,2
		VPVO-560-2D/7.5-8/50/	3~ 400	7,5	14,88	2800	-10 +40	-40 +40	IP54	66,2
		VPVO-560-2D/11-10/50/	3~ 400	11,0	21,01	2800	-10 +40	-40 +40	IP54	99,0

VPVO 560

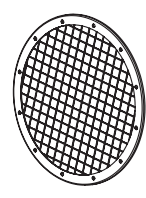
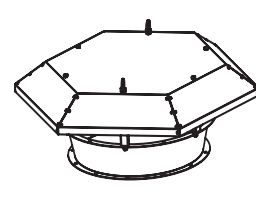
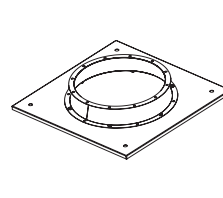
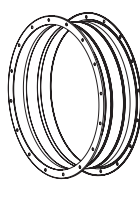
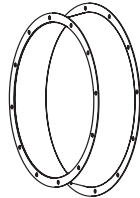
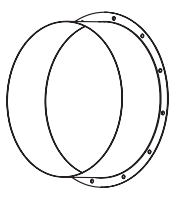
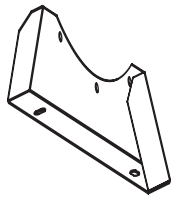
■ Overall dimensions [mm]



VPVO (basic variant)

VPVO with a terminal box

■ Accessories:



O-VPVO 560 carrier

F-VPVO 560 flange

VK-VPVO 560 inlet cone

VVGf 560 flexible joint

PK-VPVO 560 roof adapter

Z-VPVO 560 hood

SZ-VPVO 560 protective mesh

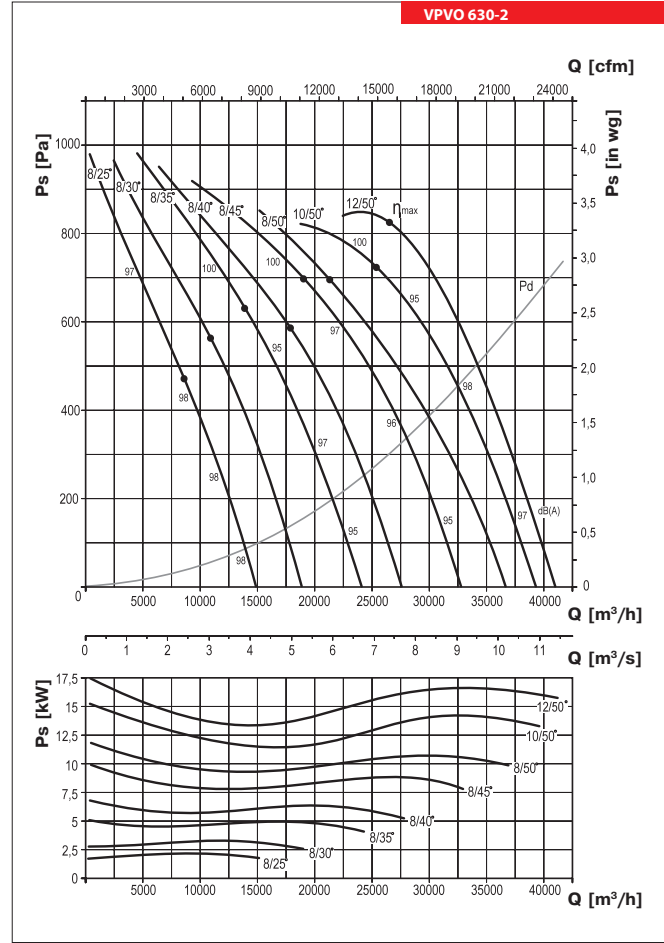
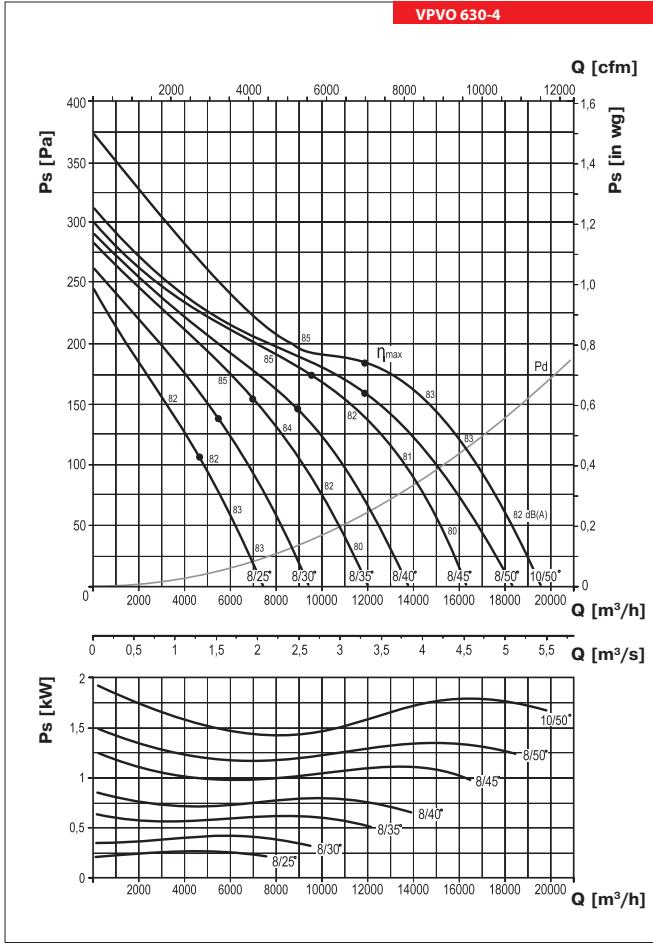
■ Characteristics at maximum efficiency:

MP	Motor rated power [kW]	EC	Efficiency category	m ³ /h	Air flow rate
η, [%]	Overall efficiency (η) [%]	N	Efficiency grade	Pa	Static pressure
MC	Measurement category	VSD	Built-in variable frequency drive	min ⁻¹	Rotation speed
		kW	Power	SR	Specific ratio

Standard size	Number of poles	Fan model	MP	η, [%]	MC	EC	N	VSD	kW	m ³ /h	Pa	min ⁻¹	SR
560	4	VPVO-560-4D/0.37-6/35/	0,37	50,1	A	static.	59,7	N/A	0,303	5460	98	1420	1
		VPVO-560-4D/0.37-6/40/	0,37	48,9	A	static.	57,9	N/A	0,38	5560	118	1430	1
		VPVO-560-4D/0.55-6/45/	0,55	47,3	A	static.	55,6	N/A	0,494	6440	128	1425	1
		VPVO-560-4D/0.75-6/50/	0,75	42,8	A	static.	50,6	N/A	0,595	6970	129	1450	1
		VPVO-560-4D/1.1-8/50/	1,1	41,1	A	static.	48,0	N/A	0,81	7730	152	1425	1
		VPVO-560-4D/1.1-10/50/	1,1	39,2	A	static.	45,4	N/A	1,066	8150	181	1440	1
		VPVO-560-4D/1.5-12/50/	1,5	36,1	A	static.	41,8	N/A	1,279	9210	177	1430	1
	2	VPVO-560-2D/1.5-6/25/	1,5	54,7	A	static.	60,8	N/A	1,089	5460	385	2840	1
		VPVO-560-2D/2.2-6/30/	2,2	53,9	A	static.	58,9	N/A	1,648	7780	403	2830	1
		VPVO-560-2D/3-6/35/	3,0	50,0	A	static.	53,9	N/A	2,429	10900	393	2850	1
		VPVO-560-2D/3-6/40/	3,0	48,7	A	static.	52,0	N/A	3,043	11100	471	2825	1
		VPVO-560-2D/4-6/45/	4,0	45,8	A	static.	48,3	N/A	3,954	12900	495	2840	1
		VPVO-560-2D/5.5-6/50/	5,5	40,7	A	static.	42,7	N/A	0,491	15600	453	2850	1
		VPVO-560-2D/7.5-8/50/	7,5	40,7	A	static.	41,9	N/A	6,546	15500	607	2845	1
VPVO-560-2D/11-10/50/	11,0	39,2	A	static.	39,6	N/A	8,5	16300	723	2865	1		



Aerodynamic characteristics

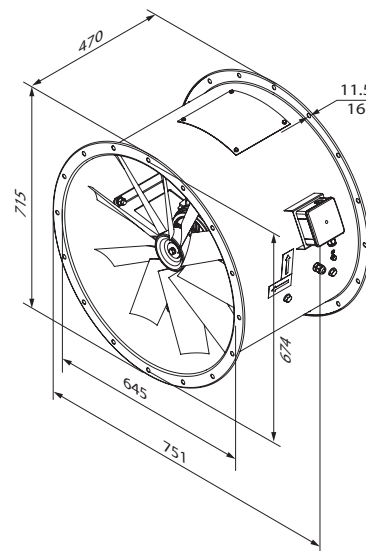
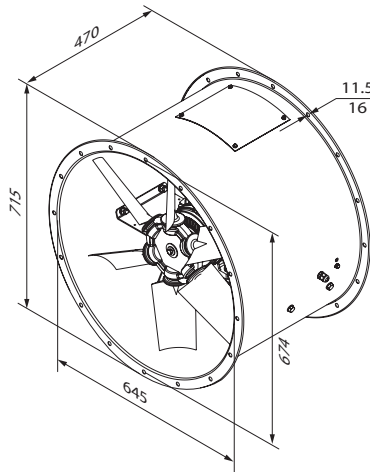


Technical data:

Standard size	Number of poles	Fan model	Voltage [V] / 50 Hz	Installed motor power Ny [kW]	Current [A]	Rotation speed [min ⁻¹]	Max. transported air temperature [°C]		Motor IP code	Weight [kg]
							Impeller type			
							PPG	PAG / AL		
630	4	VPVO-630-4D/0.25-8/25/	3~ 400	0,25	0,96	1400	-10 +40	-40 +40	IP54	36,8
		VPVO-630-4D/0.55-8/30/	3~ 400	0,55	1,69	1400	-10 +40	-40 +40	IP54	39,3
		VPVO-630-4D/0.75-8/35/	3~ 400	0,75	2,03	1400	-10 +40	-40 +40	IP54	42,0
		VPVO-630-4D/0.75-8/40/	3~ 400	0,75	2,03	1400	-10 +40	-40 +40	IP54	42,0
		VPVO-630-4D/1.1-8/45/	3~ 400	1,1	2,81	1400	-10 +40	-40 +40	IP54	44,3
		VPVO-630-4D/1.5-8/50/	3~ 400	1,5	3,63	1400	-10 +40	-40 +40	IP54	46,6
		VPVO-630-4D/2.2-10/50/	3~ 400	2,2	5,16	1400	-10 +40	-40 +40	IP54	50,3
	2	VPVO-630-2D/2.2-8/25/	3~ 400	2,2	4,85	2800	-10 +40	-40 +40	IP54	47,0
		VPVO-630-2D/3-8/30/	3~ 400	3,0	6,42	2800	-10 +40	-40 +40	IP54	50,5
		VPVO-630-2D/5.5-8/35/	3~ 400	5,5	11,08	2800	-10 +40	-40 +40	IP54	62,2
		VPVO-630-2D/7.5-8/40/	3~ 400	7,5	14,88	2800	-10 +40	-40 +40	IP54	74,2
		VPVO-630-2D/9.2-8/45/	3~ 400	9,2	17,85	2800	-10 +40	-40 +40	IP54	83,4
		VPVO-630-2D/11-8/50/	3~ 400	11,0	21,01	2800	-10 +40	-40 +40	IP54	107,0
		VPVO-630-2D/15-10/50/	3~ 400	15,0	28,01	2800	-10 +40	-40 +40	IP54	120,0
VPVO-630-2D/18.5-12/50/	3~ 400	18,5	34,32	2800	-10 +40	-40 +40	IP54	131,0		

VPVO 630

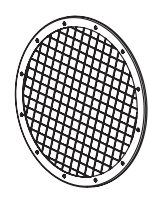
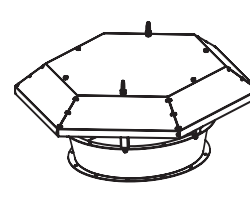
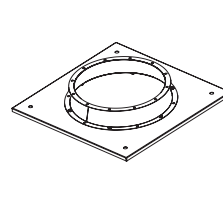
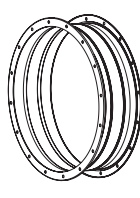
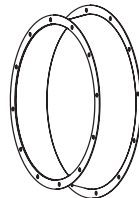
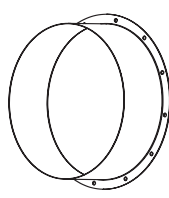
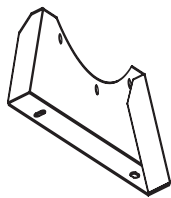
■ Overall dimensions [mm]



VPVO (basic variant)

VPVO with a terminal box

■ Accessories:



O-VPVO 630 carrier

F-VPVO 630 flange

VK-VPVO 630 inlet cone

VVGf 630 flexible joint

PK-VPVO 630 roof adapter

Z-VPVO 630 hood

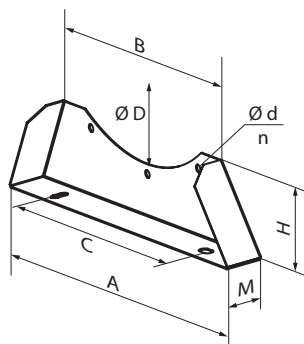
SZ-VPVO 630 protective mesh

■ Characteristics at maximum efficiency:

MP	Motor rated power [kW]	EC	Efficiency category	m ³ /h	Air flow rate
η _v [%]	Overall efficiency (η) [%]	N	Efficiency grade	Pa	Static pressure
MC	Measurement category	VSD	Built-in variable frequency drive	min ⁻¹	Rotation speed
		kW	Power	SR	Specific ratio

Standard size	Number of poles	Fan model	MP	η _v [%]	MC	EC	N	VSD	kW	m ³ /h	Pa	min ⁻¹	SR
630	4	VPVO-630-4D/0.25-8/25/	0,25	52,8	A	static.	62,7	N/A	0,272	4330	117	1420	1
		VPVO-630-4D/0.55-8/30/	0,55	53,1	A	static.	61,9	N/A	0,41	5490	140	1430	1
		VPVO-630-4D/0.75-8/35/	0,75	51,6	A	static.	59,2	N/A	0,616	8700	117	1425	1
		VPVO-630-4D/0.75-8/40/	0,75	47,5	A	static.	54,5	N/A	0,783	8990	146	1450	1
		VPVO-630-4D/1.1-8/45/	1,1	45,4	A	static.	51,6	N/A	1,035	9520	174	1420	1
		VPVO-630-4D/1.5-8/50/	1,5	40,2	A	static.	45,7	N/A	1,35	11900	161	1430	1
	2	VPVO-630-4D/2.2-10/50/	2,2	39,6	A	static.	44,6	N/A	1,629	12800	178	1425	1
		VPVO-630-2D/2.2-8/25/	2,2	52,7	A	static.	56,9	N/A	2,178	8660	468	2850	1
		VPVO-630-2D/3-8/30/	3,0	53,0	A	static.	56,1	N/A	3,286	11000	559	2845	1
		VPVO-630-2D/5.5-8/35/	5,5	51,5	A	static.	53,5	N/A	4,875	14000	633	2865	1
		VPVO-630-2D/7.5-8/40/	7,5	47,6	A	static.	48,9	N/A	6,266	18000	585	2845	1
		VPVO-630-2D/9.2-8/45/	9,2	45,3	A	static.	45,9	N/A	8,28	19000	697	2840	1
		VPVO-630-2D/11-8/50/	11,0	42,7	A	static.	42,8	N/A	9,834	21300	696	2830	1
		VPVO-630-2D/15-10/50/	15,0	39,4	A	static.	38,7	N/A	13,03	25500	711	2815	1
		VPVO-630-2D/18.5-12/50/	18,5	39,7	A	static.	38,4	N/A	16,0	26700	839	2810	1

O-VPVO
carrier



■ **Purpose**

Used for mounting the fans to the floor, walls or ceiling.

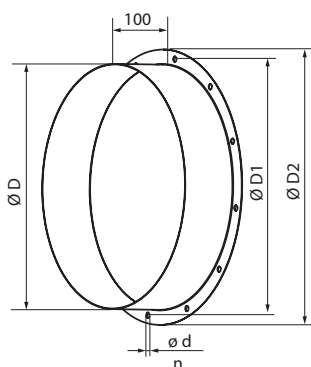
■ **Design**

The carrier consists of two brackets. The unit is made of steel with a polymer coating.

■ **Overall dimensions**

Model	Dimensions [mm]								Weight [kg]
	A	B	D	H	C	M	Ød	n	
O-VPVO 400	446	318	438	100	295	44	9,1	3	0,7
O-VPVO 450	546	374	487	115	355	44	9,1	3	0.9
O-VPVO 500	568	376	541	116	375	45	9,1	3	1,29
O-VPVO 560	568	390	605	113	355	45	10,2	3	1,32
O-VPVO 630	808	578	674	174	515	45	11,5	5	2,13

F-VPVO
flange



■ **Purpose**

Enables attaching round ducts of appropriate size to the fan.

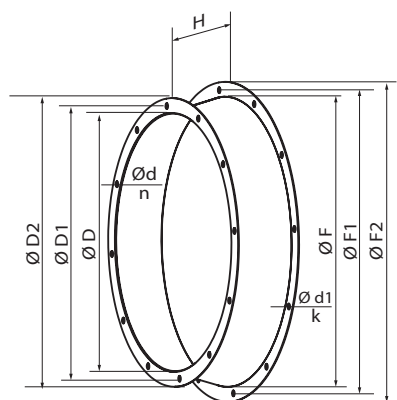
■ **Design**

The unit is made of steel with a polymer coating.

■ **Overall dimensions**

Model	Dimensions [mm]					Weight [kg]
	D	D1	D2	Ød	n	
F-VPVO 400	400	438	465	9,5	12	1,3
F-VPVO 450	450	487	515	9,5	12	1,4
F-VPVO 500	500	541	570	9,5	12	1,6
F-VPVO 560	560	605	636	11,5	16	1,98
F-VPVO 630	630	674	715	11,5	16	2,1

VK-VPVO
inlet cone



■ **Purpose**

The inlet cone should be installed upstream of the fan to improve the air flow parameters. However, it becomes a must in the absence of ducting attached to the fan inlet. The inlet cone helps reduce the fan dynamic pressure and increase the static component of the total fan pressure. The unit can be used in combination with the SZ-VPVO protective mesh which must be one size larger than the unit.

■ **Design**

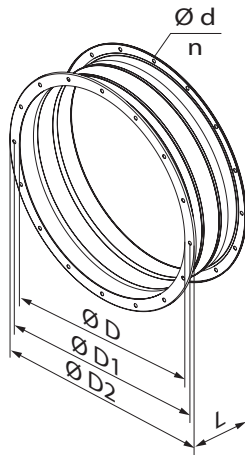
The unit has two flanges and is made of steel with a polymer coating.

■ **Overall dimensions**

Model	Dimensions [mm]											Weight [kg]
	D	D1	D2	Ød	n	F	F1	F2	H	Ød1	k	
VK-VPVO 400	412	438	465	9,5	12	462	487	512	98	9,5	12	2,1
VK-VPVO 450	462	487	515	9,5	12	515	541	567	108	9,5	12	2,5
VK-VPVO 500	515	541	570	9,5	12	565	605	633	118	11,5	16	3,1
VK-VPVO 560	565	605	636	11,5	16	645	674	712	133	11,5	16	3,9
VK-VPVO 630	645	674	715	11,5	16	710	770	810	148	13	16	5,1

VPVO FAN ACCESSORIES

VVGF
flexible joint



Purpose

Flexible joints cancel out any potential vibrations transmitted by the fans or air handling units to the air ducting as well as partially compensate for the air duct assembly deformations caused by temperature variation.

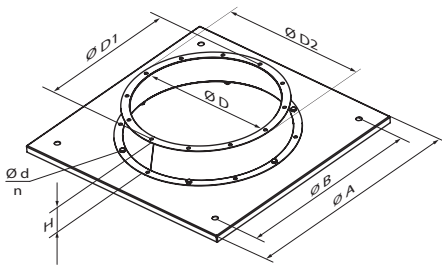
Design

The flexible joints are formed by two flanges joined with vibration-cancelling material and are made of zinc-plated sheets and PVC tape reinforced with polyamide fabric. The joints are not intended to withstand any significant mechanical loads and, therefore, may not be used as load-bearing structures.

Overall dimensions

Model	Dimensions [mm]						Weight [kg]
	D	D1	D2	L	Ød	n	
VVGF 400	412	438	465	160	9,5	12	2,57
VVGF 450	462	487	515	160	9,5	12	2,88
VVGF 500	515	541	570	160	9,5	12	3,81
VVGF 560	565	605	636	160	11,5	16	4,53
VVGF 630	645	674	715	160	11,5	16	5,13

PK-VPVO
roof adapter



Purpose

The unit is used for mounting VPVO on rooftops.

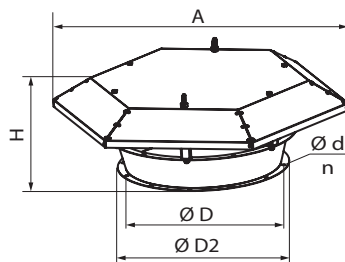
Design

The unit is made of steel with a polymer coating.

Overall dimensions

Model	Dimensions [mm]								Weight [kg]
	D	D1	D2	A	B	H	Ød	n	
PK-VPVO 400	412	438	465	701	580	118	9,5	12	6,51
PK-VPVO 450	462	487	515	701	580	128	9,5	12	6,43
PK-VPVO 500	515	541	570	769	640	138	9,5	12	9,43
PK-VPVO 560	565	605	636	921	750	153	11,5	16	13,3
PK-VPVO 630	645	674	715	921	750	168	11,5	16	13,5

Z-VPVO
hood



Purpose

Ensures trouble-free operation of VPVO fans on rooftops.

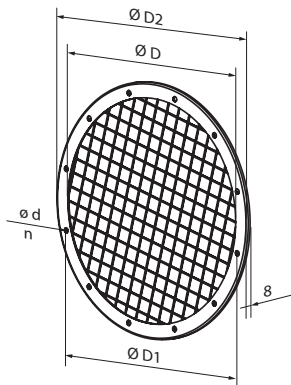
Design

The unit is made of steel with a polymer coating.

Overall dimensions

Model	Dimensions [mm]							Weight [kg]
	D	D1	D2	A	H	Ød	n	
Z-VPVO 400	412	438	465	843	245	9,5	12	7,7
Z-VPVO 450	462	487	515	892	270	9,5	12	8,61
Z-VPVO 500	515	541	570	885	303	9,5	12	9,72
Z-VPVO 560	565	605	636	966	329	11,5	16	11,48
Z-VPVO 630	645	674	715	1182	359	11,5	16	16,55

SZ-VPVO
protective mesh



■ **Purpose**
Protects the fans against foreign objects.

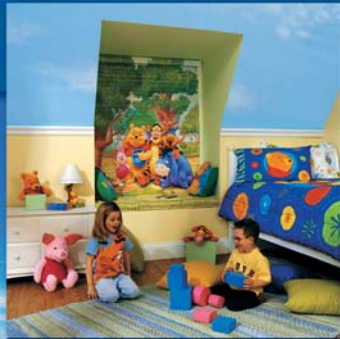
■ **Design**
Protective mesh with 25x25 mm cells.

■ **Overall dimensions**

Model	Dimensions [mm]					Weight [kg]
	D	D1	D2	Ød	n	
SZ-VPVO 400	412	438	465	9,5	12	0,8
SZ-VPVO 450	462	487	515	9,5	12	0,9
SZ-VPVO 500	515	541	570	9,5	12	1,1
SZ-VPVO 560	565	605	636	11,5	16	1,5
SZ-VPVO 630	645	674	715	11,5	16	1,7

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