Series
VENTS VS



Inline centrifugal fans with backward curved blades in heat- and sound-insulated casing with the air capacity up to **16 870 m³/h**. Applied for supply and exhaust ventilation systems for various premises with high requirements to noise level. Compatible with round and rectangular air ducts.

Applications
Supply and exhaust ventilation systems for various premises with high noise level requirements. The VS fan design enables to assemble various ventilation configurations due to changeable positions of the removable panels. Such design enables air supply in all directions, both linearly and at the angle 90 °C. The aluzinc casing with high corrosion-resistant properties and heat-insulating material allows outdoor installation of the fan. The fans may be integrated into an assembled supply ventilation system.

Design
The fan casing is made of aluminium frame, fastened with aluminium bends and removable double-skinned aluzinc panels, heat- and sound-insulated with 20 mm non-combustible mineral wool. The connecting pipes that also serve as vibration absorbing connectors are available with round and square sections. The round pipes are fitted with rubber sealing rings. The connecting pipes are not included into the delivery set and are available upon separate order!

Motor
4- or 6-pole asynchronous external rotor motor and centrifugal impeller with backward curved blades. The motors are equipped with overheating protection, which is connected to the external protection device (i.e., the model VS 355-4E has thermal switches with automatic restart). The specially greased ball bearing motor ensures low noise and maintenance-free operation.

Speed control
Smooth or step speed control with a thyristor or autotransformer speed controller. Speed control is adjusted by the supply voltage regulation. Air flow is regulated by the motor speed. Several fans may be connected to one speed controller provided that the total power and operating current do not exceed the rated speed controller parameters.

Mounting
Inline fans are designed for connection to rectangular or round air ducts with a flexible connector of respective cross section. The fan are designed for inline mounting. While connecting the fan to flexible connectors, provide its fixing to a building with supports, suspension or fixing bracket. The fan is suitable for any mounting position, on condition that the pointer on the fan casing matches the air motion direction in the system. While mounting the fan provide enough access for its servicing.



VS fan with VPG flexible anti-vibration connectors



VS fan with KN-VS outer hood



VS fan with VPR-VS protection cowl



VS fan with VVG flexible anti-vibration connectors

Designation key:

Series	Impeller diameter		–	Motor	
				Polarity	Phase
VENTS VS	355; 400; 450; 500; 560; 630; 710	**S** – high-powered motor	–	4, 6	**E** – single phase **D** – three phase

ErP data	
Overall efficiency	η, [%]
Measurement category	MC
Efficiency category	EC
Efficiency grade	N
Variable speed drive	VSD
Power	[kW]
Current	[A]
Air flow	[m³/h]
Static pressure	[Pa]
Speed	[n/min⁻¹]
Specific ratio	SR

Accessories


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Offered options for fans


VPG


VVG


KN-VS


VPR-VS

Technical data:

	VS 355-4E	VS 355-4D	VS 400-4E	VS 400-4D	
Voltage [V/50 Hz]	1~ 230	3~ 400	1~ 230	3~ 400 Δ	3~ 400 Y
Power [W]	245	230	480	515	385
Current [A]	1.12	0.52	2.40	1.41	0.70
Max. air capacity [m³/h] with the air flow: – perpendicularly	2890	2660	3750	3950	3340
– straight forward	2650	2380	3535	3740	3110
RPM [min⁻¹]	1420	1400	1370	1415	1235
Noise level at 3 m [dBA]	54	53	51	51	47
Transported air temperature [°C]	-25 +50	-25 +70	-40 +80	-40 +60	-40 +80
Protection rating	IP X4	IP X4	IP X4	IP X4	

Technical data:

	VS 450-4E	VS 450-4D	VS 500-4E	VS 500-4D	VS 560-4D
Voltage [V/50 Hz]	1~ 230	3~ 400	1~ 230	3~ 400	3~ 400
Power [W]	680	740	1300	1430	2380
Current [A]	3.00	1.50	5.70	3.00	5.00
Max. air capacity [m³/h] with the air flow: – perpendicularly	5630	5700	7330	7940	11340
– straight forward	4930	5080	6680	7200	10490
RPM [min⁻¹]	1250	1350	1320	1375	1365
Noise level at 3 m [dBA]	53	54	55	58	56
Transported air temperature [°C]	-40 +70	-40 +80	-20 +50	-40 +80	-40 +60
Protection rating	IP X4	IP X4	IP X4	IP X4	IP X4

Technical data:

	VS 560-6D	VS 630-4D	VS 630S-4D	VS 630-6D	VS 710-6D
Voltage [V/50 Hz]	3~ 400	3~ 400	3~ 400	3~ 400	3~ 400
Power [W]	780	3310	4250	1310	2000
Current [A]	1.70	6.20	7.55	2.80	3.90
Max. air capacity [m³/h] with the air flow: – perpendicularly	7970	15170	16870	12030	15830
– straight forward	7330	13740	14930	10440	14880
RPM [min⁻¹]	885	1170	1300	880	890
Noise level at 3 m [dBA]	49	67	69	55	59
Transported air temperature [°C]	-40 +55	-40 +35	-40 +60	-40 +60	-20 +40
Protection rating	IP X4	IP X4	IP X4	IP X4	IP X4

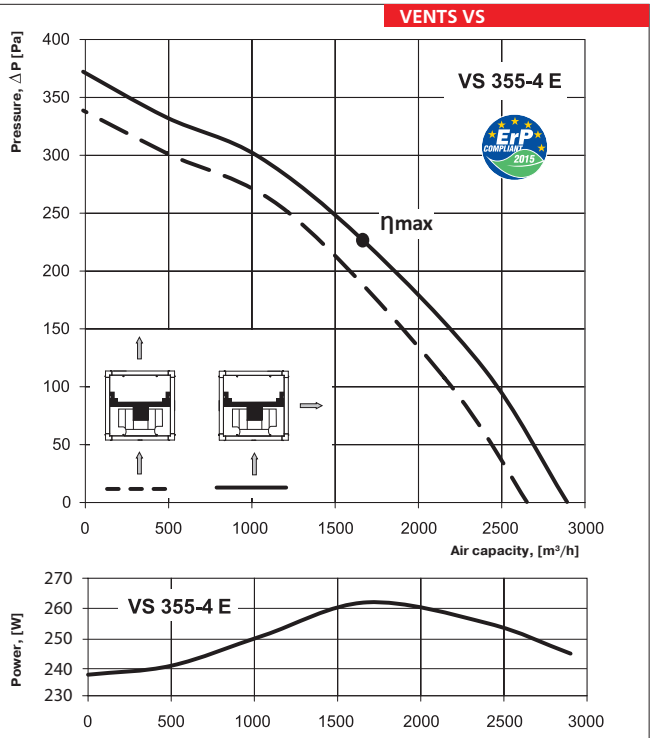


VS fan gym ventilation example



VS fan office ventilation example

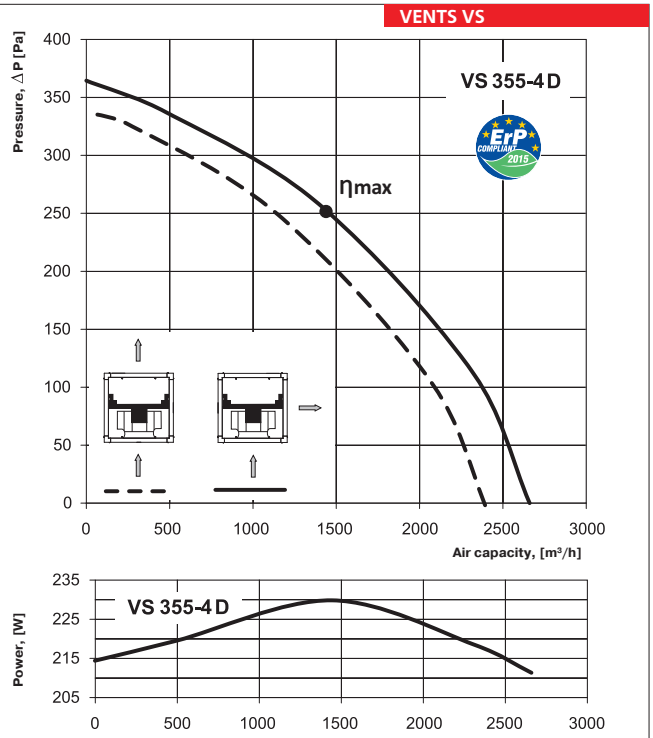
VENTS VS



Sound-power level		Octave-frequency band [Hz]								
	Hz	Gen	63	125	250	500	1000	2000	4000	8000
L_{wA} to inlet	dBA	70	55	58	61	63	62	60	52	47
L_{wA} to outlet	dBA	68	57	59	62	65	63	62	55	47
L_{wA} to environment	dBA	62	51	51	54	58	55	55	48	40

η, [%]	MC	EC	N	VSD	[kW]	[A]	[m³/h]	[Pa]	[RPM]	SR
40.8	A	Static	57.4	No	0.262	1.19	1670	226	1365	1

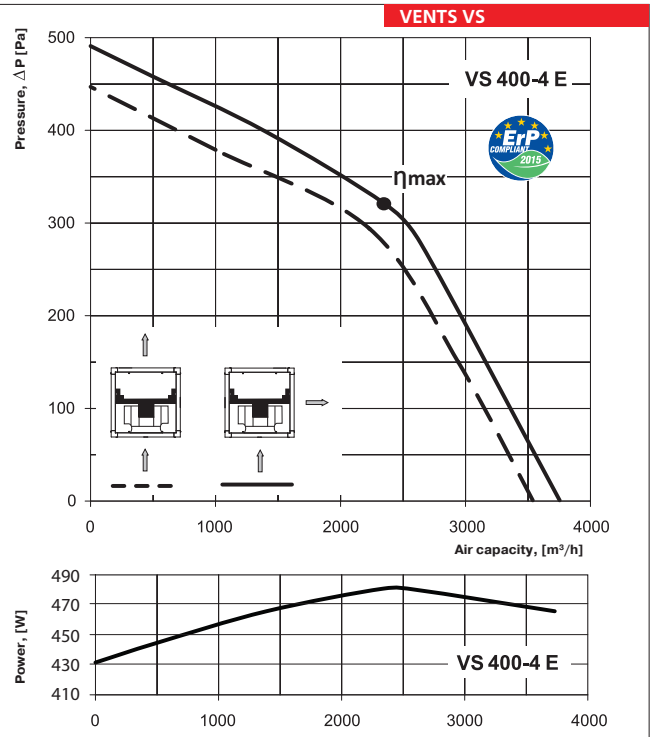
VENTS VS



Sound-power level		Octave-frequency band [Hz]								
	Hz	Gen	63	125	250	500	1000	2000	4000	8000
L_{wA} to inlet	dBA	68	54	57	61	63	62	59	52	46
L_{wA} to outlet	dBA	70	55	61	61	65	66	59	54	47
L_{wA} to environment	dBA	64	49	50	55	59	56	52	49	39

η, [%]	MC	EC	N	VSD	[kW]	[A]	[m³/h]	[Pa]	[RPM]	SR
44.7	A	Static	61.9	No	0.230	0.52	1445	251	1350	1

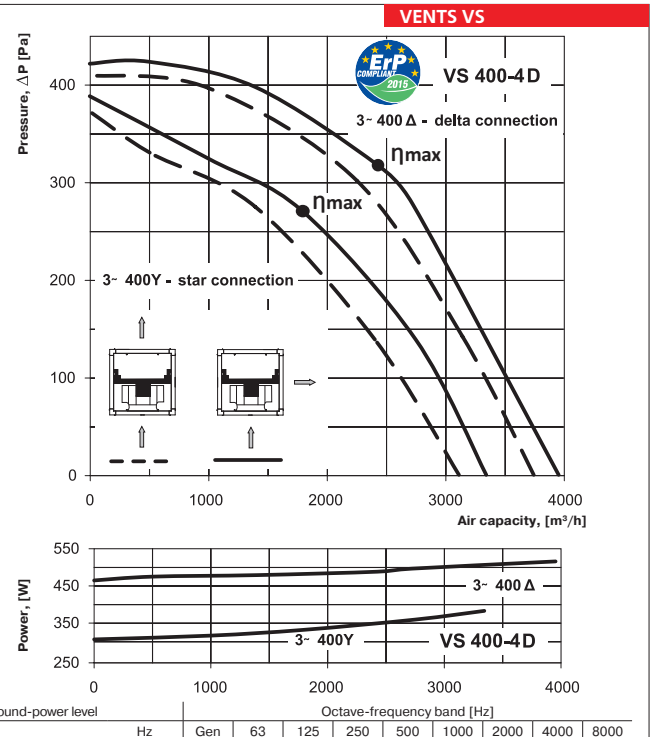
VENTS VS



Sound-power level		Octave-frequency band [Hz]								
	Hz	Gen	63	125	250	500	1000	2000	4000	8000
L_{wA} to inlet	dBA	72	60	62	66	66	64	65	58	51
L_{wA} to outlet	dBA	74	61	63	68	71	68	67	58	53
L_{wA} to environment	dBA	56	43	47	47	52	49	48	42	33

η, [%]	MC	EC	N	VSD	[kW]	[A]	[m³/h]	[Pa]	[RPM]	SR
44.4	A	Static	58.3	No	0.480	2.4	2350	320	1370	1

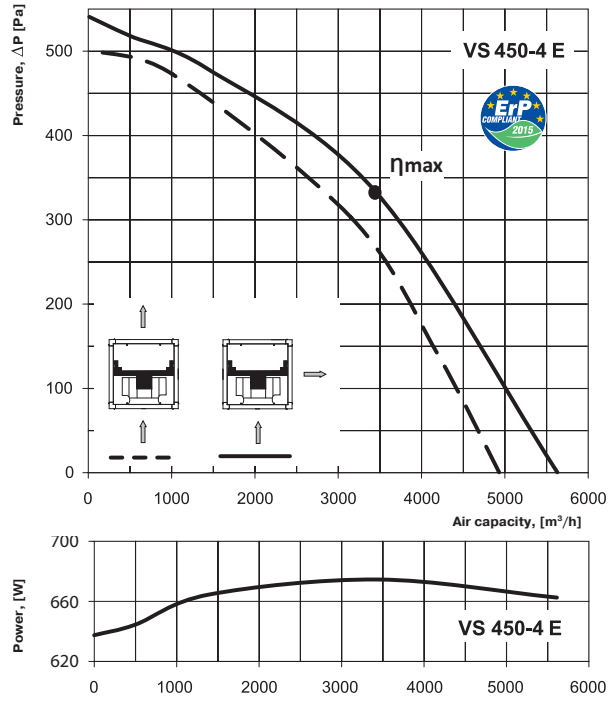
VENTS VS



Sound-power level		Octave-frequency band [Hz]								
	Hz	Gen	63	125	250	500	1000	2000	4000	8000
L_{wA} to inlet	dBA	73	57	63	64	67	68	62	59	52
L_{wA} to outlet	dBA	74	60	63	65	69	66	67	61	51
L_{wA} to environment	dBA	54	43	44	49	50	51	47	42	36

η, [%]	MC	EC	N	VSD	[kW]	[A]	[m³/h]	[Pa]	[RPM]	SR
3~ 400Δ – delta connection										
44.8	A	Static	58.6	No	0.488	1.22	2425	318	1420	1
3~ 400Y – star connection										
41.0	A	Static	56.5	No	0.335	0.56	1789	271	1390	1

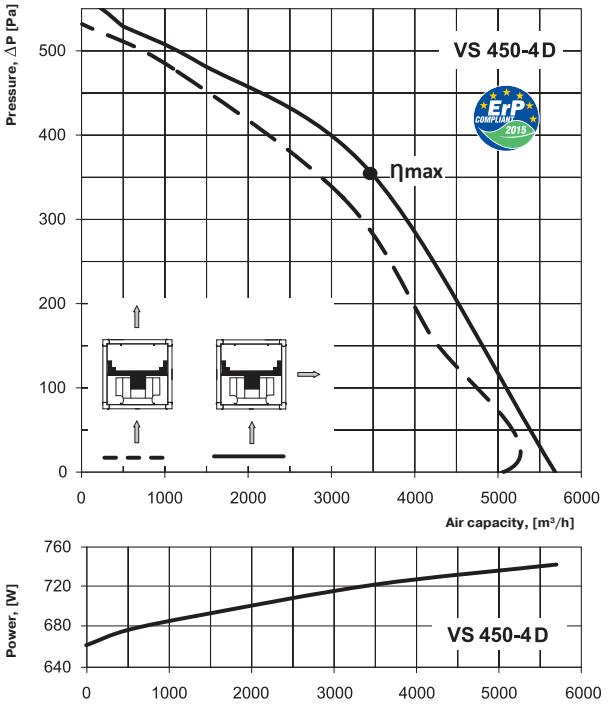
VENTS VS



Sound-power level		Octave-frequency band [Hz]								
	Hz	Gen	63	125	250	500	1000	2000	4000	8000
L_{wA} to inlet	dBA	76	62	64	67	68	69	66	63	53
L_{wA} to outlet	dBA	76	63	66	70	71	69	66	63	57
L_{wA} to environment	dBA	57	44	48	52	56	53	50	47	38

η, [%]	MC	EC	N	VSD	[kW]	[A]	[m³/h]	[Pa]	[RPM]	SR
48.1	A	Static	60.4	No	0.675	3	3450	332	1265	1

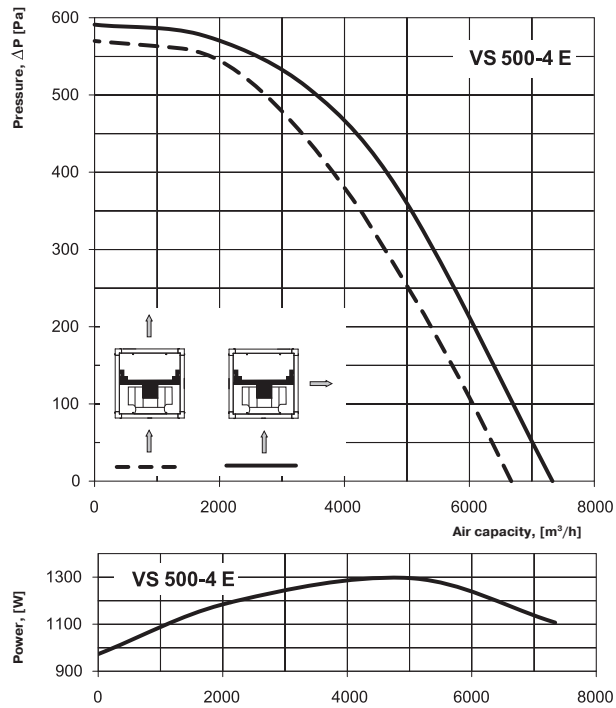
VENTS VS



Sound-power level		Octave-frequency band [Hz]								
	Hz	Gen	63	125	250	500	1000	2000	4000	8000
L_{wA} to inlet	dBA	76	61	65	67	68	68	66	50	55
L_{wA} to outlet	dBA	75	63	67	69	70	72	68	63	54
L_{wA} to environment	dBA	61	46	47	52	52	51	51	44	36

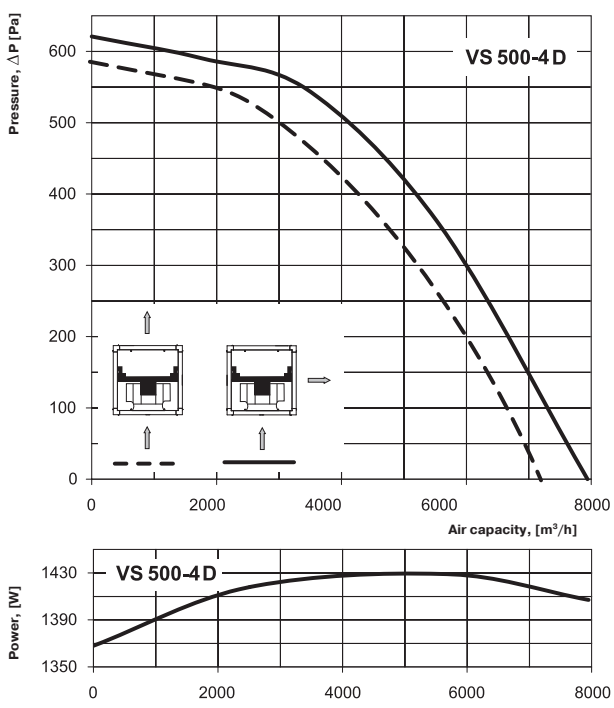
η, [%]	MC	EC	N	VSD	[kW]	[A]	[m³/h]	[Pa]	[RPM]	SR
48.5	A	Static	60.5	No	0.720	1.4	3490	353	1350	1

VENTS VS



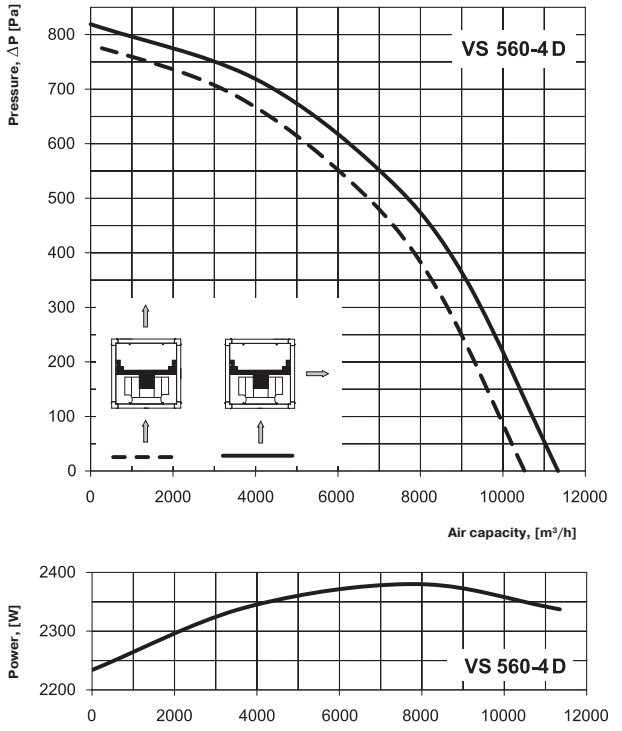
Sound-power level		Octave-frequency band [Hz]								
	Hz	Gen	63	125	250	500	1000	2000	4000	8000
L_{wA} to inlet	dBA	81	65	70	73	74	75	69	65	57
L_{wA} to outlet	dBA	81	68	72	74	76	75	71	69	61
L_{wA} to environment	dBA	65	52	53	56	57	56	55	51	40

VENTS VS



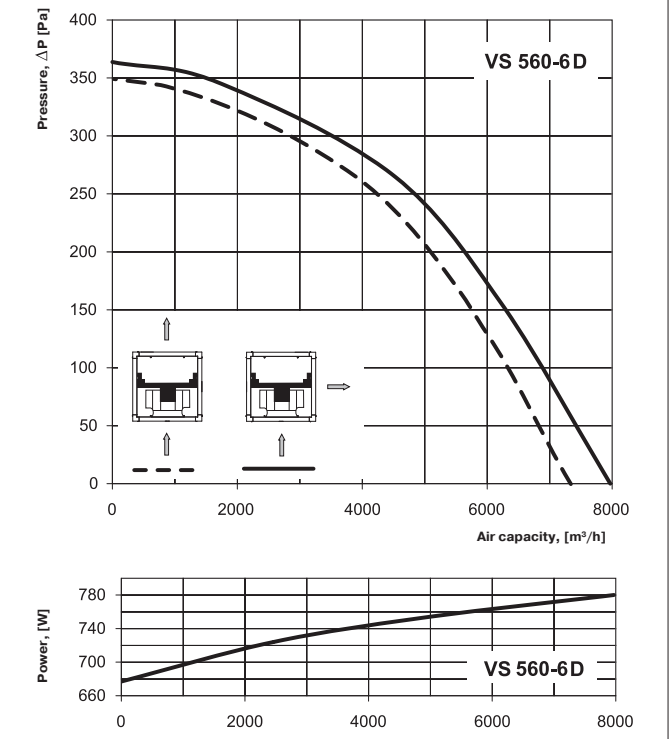
Sound-power level		Octave-frequency band [Hz]								
	Hz	Gen	63	125	250	500	1000	2000	4000	8000
L_{wA} to inlet	dBA	77	66	67	71	71	74	71	65	55
L_{wA} to outlet	dBA	79	69	67	73	76	74	73	68	59
L_{wA} to environment	dBA	61	52	54	54	56	55	54	51	44

VENTS VS



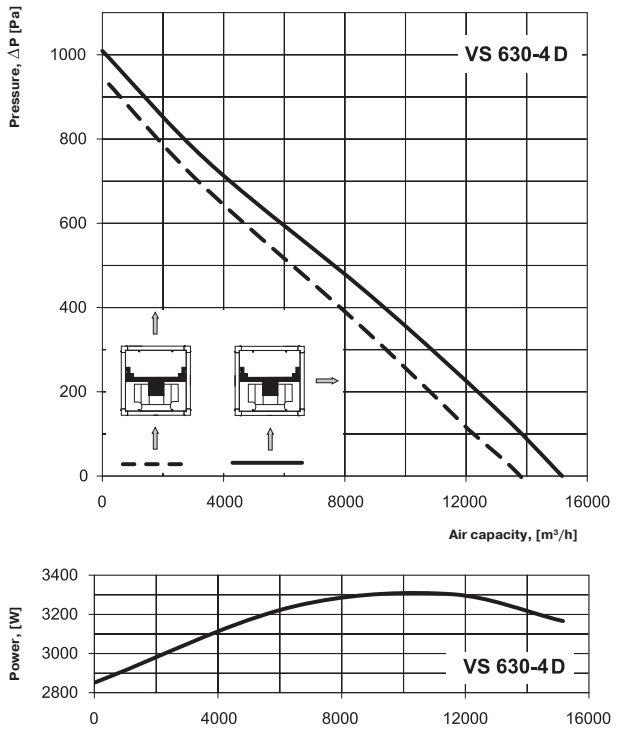
Sound-power level		Octave-frequency band [Hz]								
	Hz	Gen	63	125	250	500	1000	2000	4000	8000
L_{wA} to inlet	dBA	80	66	67	73	75	73	69	67	58
L_{wA} to outlet	dBA	80	67	71	73	77	74	73	65	61
L_{wA} to environment	dBA	63	53	55	59	57	60	53	49	41

VENTS VS



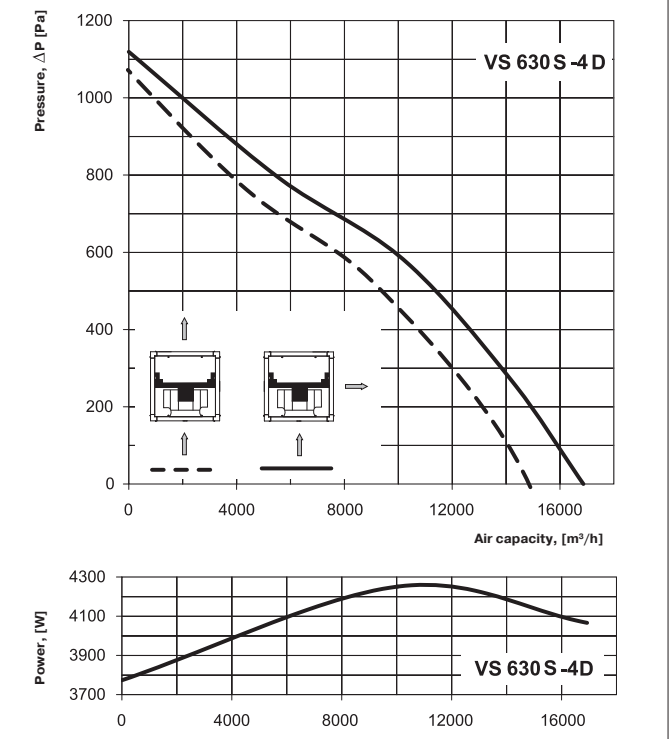
Sound-power level		Octave-frequency band [Hz]								
	Hz	Gen	63	125	250	500	1000	2000	4000	8000
L_{wA} to inlet	dBA	72	59	57	64	67	67	62	56	49
L_{wA} to outlet	dBA	70	58	61	66	68	65	65	60	51
L_{wA} to environment	dBA	56	44	43	48	52	50	46	41	33

VENTS VS



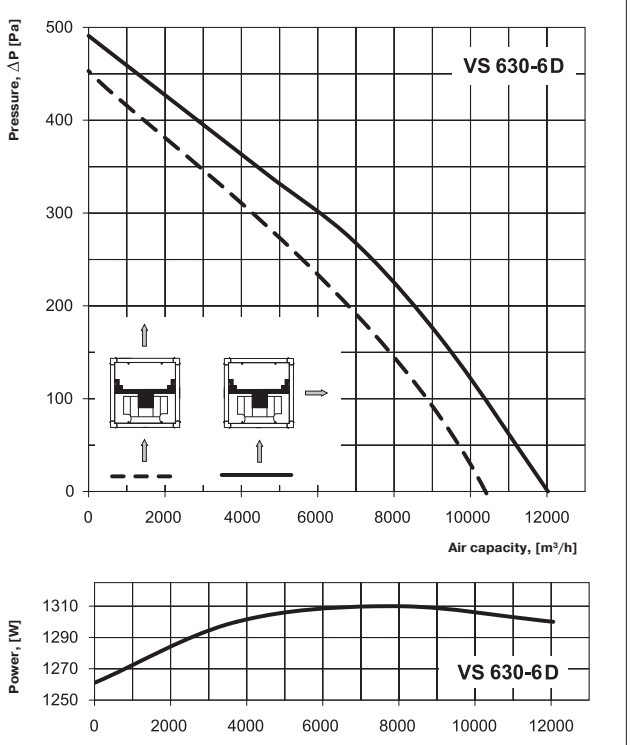
Sound-power level		Octave-frequency band [Hz]								
	Hz	Gen	63	125	250	500	1000	2000	4000	8000
L_{wA} to inlet	dBA	85	76	78	80	80	83	78	75	68
L_{wA} to outlet	dBA	88	76	76	84	86	82	78	77	67
L_{wA} to environment	dBA	76	64	65	67	73	68	69	62	53

VENTS VS



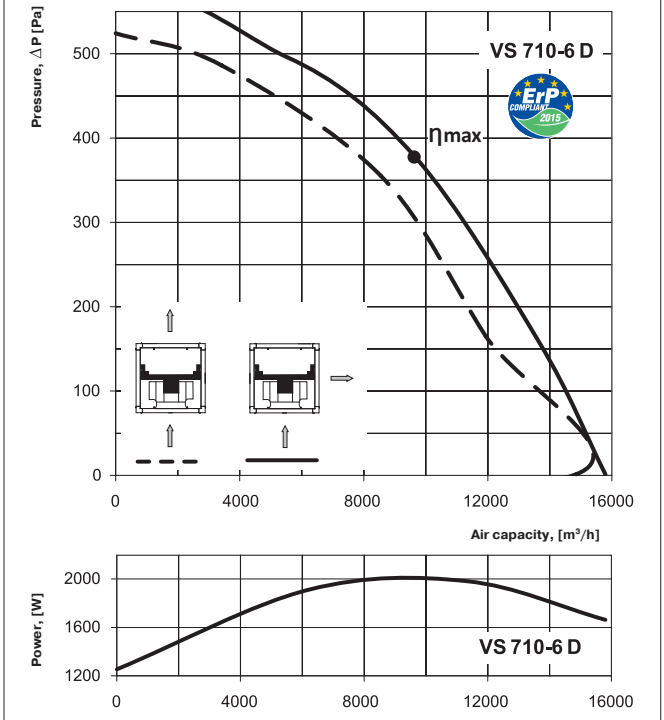
Sound-power level		Octave-frequency band [Hz]								
	Hz	Gen	63	125	250	500	1000	2000	4000	8000
L_{wA} to inlet	dBA	85	76	77	81	83	82	77	72	68
L_{wA} to outlet	dBA	89	77	78	81	85	84	80	73	68
L_{wA} to environment	dBA	78	65	65	70	71	70	69	62	54

VENTS VS



Sound-power level		Octave-frequency band [Hz]								
	Hz	Gen	63	125	250	500	1000	2000	4000	8000
L_{wA} to inlet	dBA	74	61	63	70	70	69	64	60	50
L_{wA} to outlet	dBA	76	65	64	71	73	69	68	60	54
L_{wA} to environment	dBA	61	50	51	53	56	56	52	47	40

VENTS VS



Sound-power level		Octave-frequency band [Hz]								
	Hz	Gen	63	125	250	500	1000	2000	4000	8000
L_{wA} to inlet	dBA	79	64	66	71	74	72	71	67	58
L_{wA} to outlet	dBA	80	67	70	76	74	76	72	67	57
L_{wA} to environment	dBA	68	53	58	61	64	62	56	53	47

η, [%]	MC	EC	N	VSD	[kW]	[A]	[m³/h]	[Pa]	[RPM]	SR
50.6	A	Static	57.9	No	2.040	3.9	9690	376	890	1

Fan and additional equipment overall dimensions:

Type	Dimensions [mm]	Weight [kg]	Options				Dimensions [mm]								
	A		VPG	VVG	KN-VS	VPR-VS	A	A1	B	B1	C	ØD	E	F	G
VS 355-4E	500	25	VPG 500/355	VVG 500x500	KN-VS 315-355	VPR-VS 315-355	490	478	470	458	445	355	458	225	600
VS 355-4D	500	25													
VS 400-4E	670	39	VPG 670/400	VVG 670x670	KN-VS 400-500	VPR-VS 400-500	660	648	640	628	615	400	628	321	770
VS 400-4D	670	39													
VS 450-4E	670	43	VPG 670/450				660	648	640	628	615	450	628	321	770
VS 450-4D	670	43													
VS 500-4E	670	52	VPG 670/500				660	648	640	628	615	500	628	321	770
VS 500-4D	670	56													
VS 560-4D	800	99	VPG 800/560	VVG 800x800	KN-VS 560-630	VPR-VS 560-630	790	778	770	758	745	560	758	421	900
VS 560-6D	800	86													
VS 630-4D	800	102	VPG 800/630				790	778	770	758	745	630	758	421	900
VS 630S-4D	800	100													
VS 630-6D	800	98													
VS 710-6D	1000	136	VPG 1000/710	VVG 1000x1000	KN-VS 710	VPR-VS 710	990	978	970	958	945	710	758	421	900

