

WDVS

Series of types of roof fans with the low operating noise level



INTENDED USE

Roof fans with vertical air outflow are intended for removing the air from the production warehouses, storage warehouses, retail pavilions, shops, offices etc.

Removed foul air can be polluted with the vapors and corrosive gases and the dust pollution within the limits permitted by the environment protection regulations.

UNIT DESCRIPTION

Series of types of the roof fans contains 7 sizes.

The roof fan consists of:

- highly efficient plastic centrifugal rotor with motor placed inside of the rotor
- base made from galvanized steel sheet
- shield made of aluminium sheet

The fans are fitted for mounting on PU roof bases or PUT damping roof bases.

WORKING CONDITIONS

Fans are supplied with the following motors:

- **single phase** for the size: 35; 45; 50 with the possibility of connecting to 5-speed revolutions governor
- **three phase two gear** for the size 31; 35; 40; 45; 50 and 56
- **three phase single gear** for the size 63

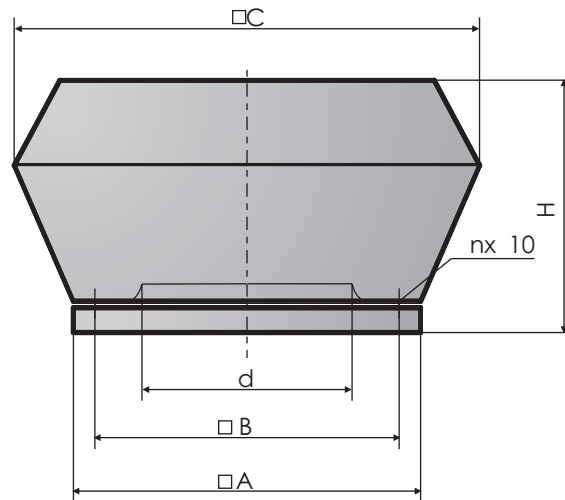
Permissible temperature of removed air is 50°C.

DESIGNATIONS

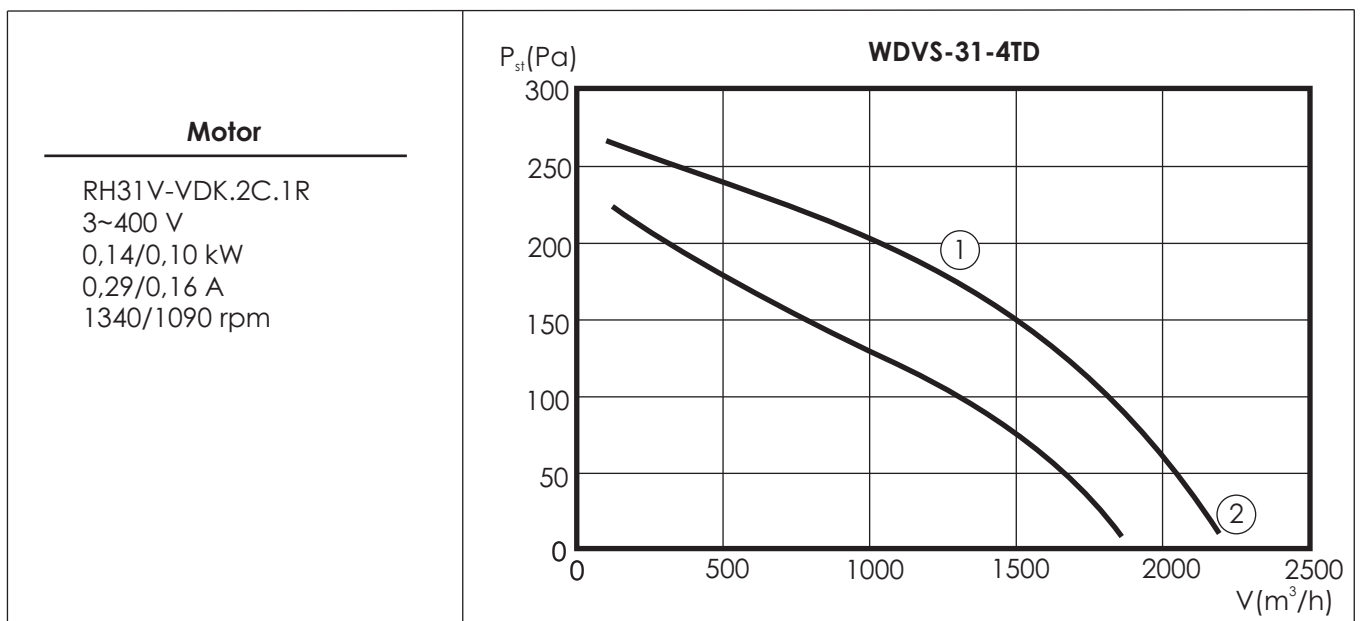
Roof fan	WDVS - 35 - J
Size	31; 35; 40; 45; 50; 56; 63
Motor type	single phase (J); three phase (T) three phase two gear (TD)

TECHNICAL DATA

Basic dimensions



Fan size	d [mm]	A [mm]	B [mm]	C [mm]	H [mm]	Weight [kg]
WDVS-31	203	552	480	715	386	18
WDVS-35	228	552	480	735	423	21,5
WDVS-40	257	632	560	835	464	26
WDVS-45	297	632	560	852	501	31
WDVS-50	323	782	710	1032	563	49,5
WDVS-56	361	782	710	1060	620	55,5
WDVS-63	407	872	800	1182	687	81,5

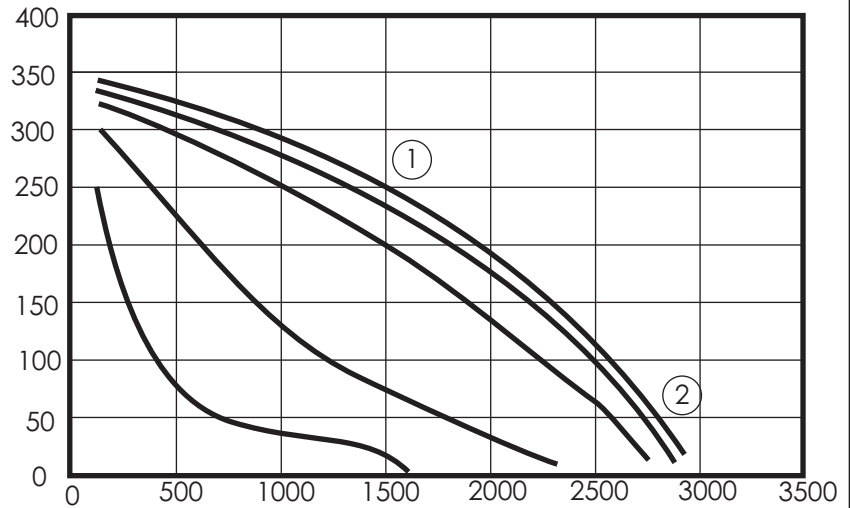


P_{st} –static negative pressure in the fan inlet

Motor

RH35V-4EK.4C.1R
 1~230 V
 0,27 kW
 1,3 A
 1390÷650 rpm
 5-step revolutions
 governor

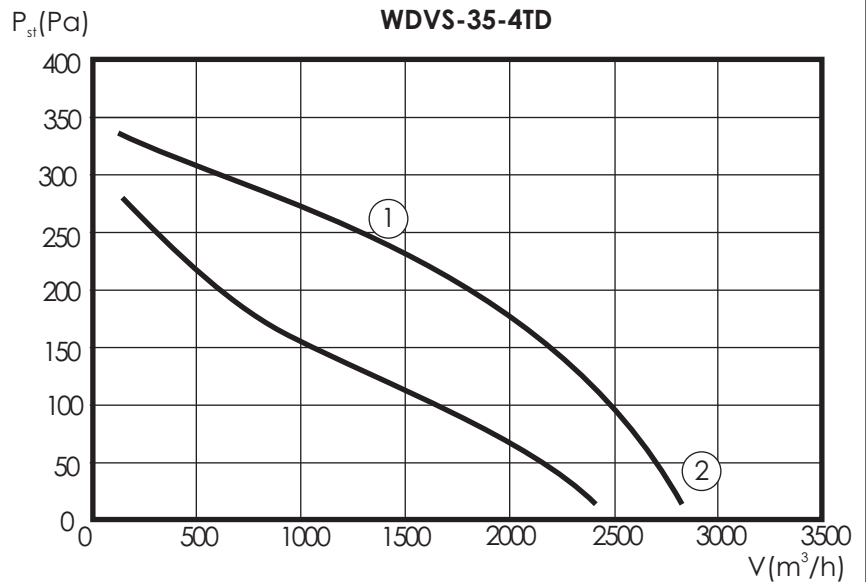
WDVS-35-4J-R.5 biegi



Motor

RH35V-VDK.4A.1R
 3~400 V
 0,24/0,16 kW
 0,47/0,27 A
 1340/1060 rpm

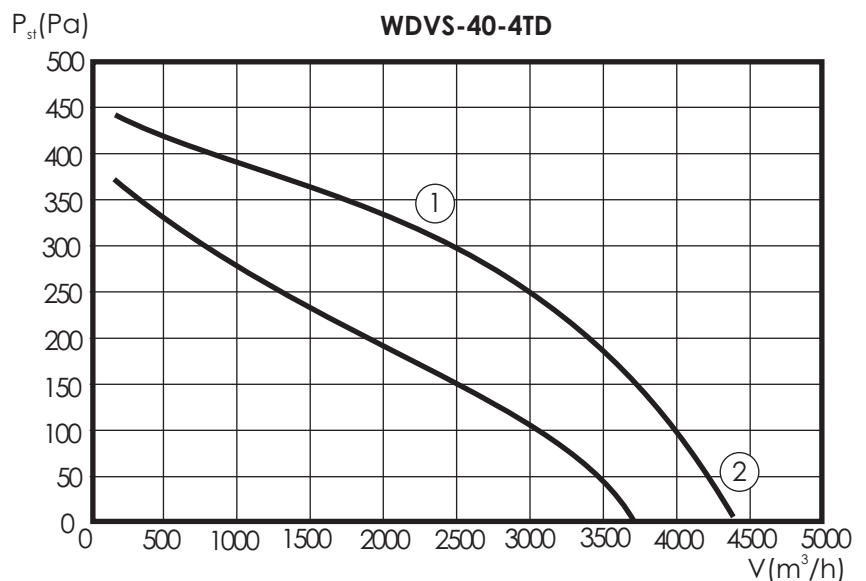
WDVS-35-4TD



Motor

RH40V-VDK.4C.1R
 3~400 V
 0,44/0,31 kW
 0,77/0,50 A
 1320/1010 rpm

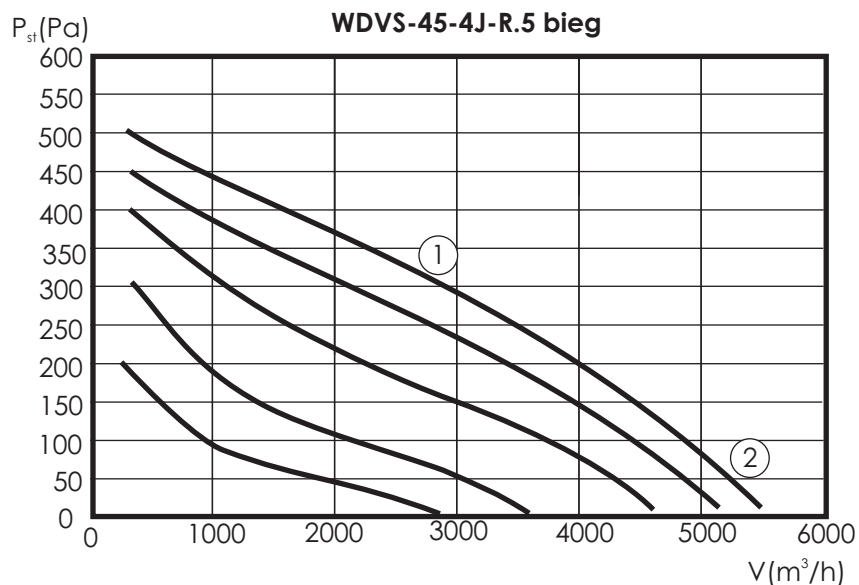
WDVS-40-4TD



P_{st} –static negative pressure in the fan inlet

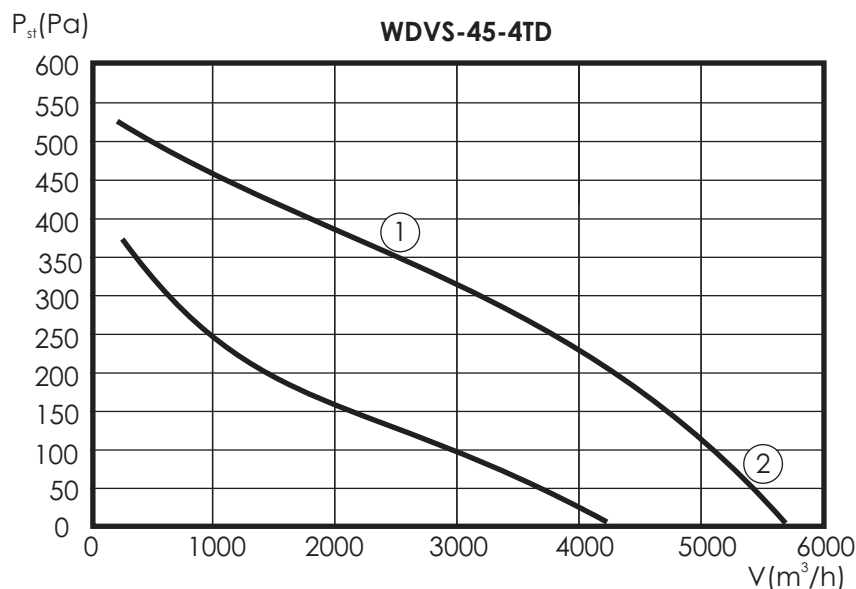
Motor

RH45V-4EK.4I.1R
 1~230 V
 0,62 kW
 2,8 A
 1230÷610 rpm
 5-step revolutions
 governor



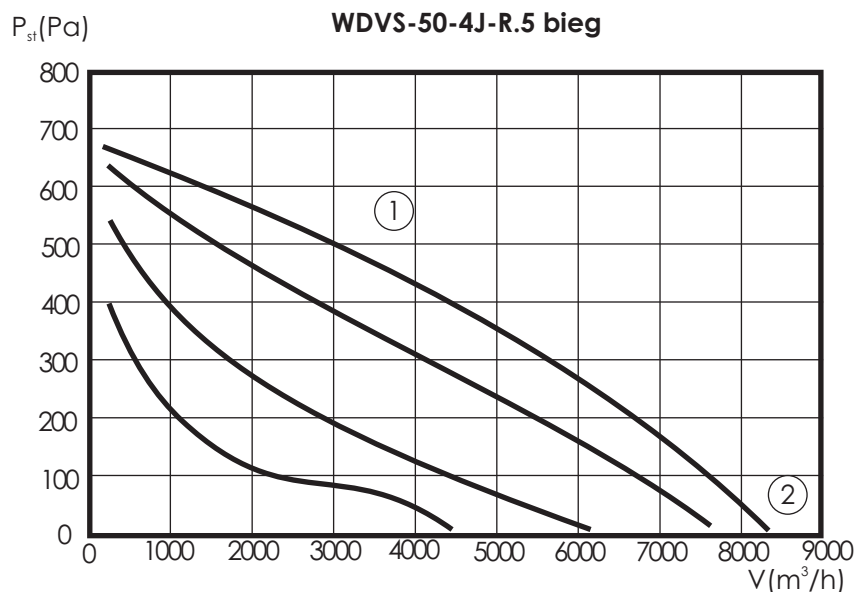
Motor

RH45V-VDK.4F.1R
 3~400 V
 0,65/0,36 kW
 1,3/0,67 A
 1250/890 rpm



Motor

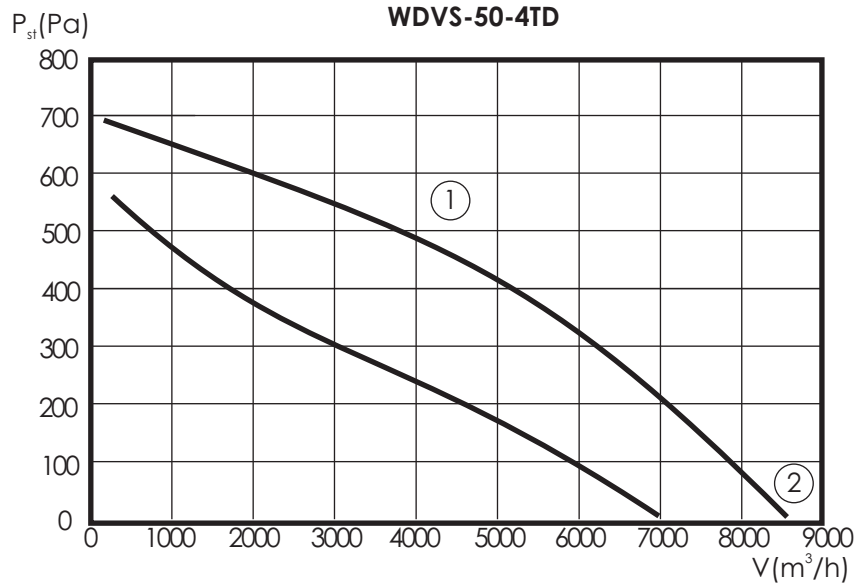
RH50V-4EK.6K.1R
 1~230 V
 1,3 kW
 5,8 A
 1340÷660 rpm
 5-step revolutions
 governor



P_{st} – static negative pressure in the fan inlet

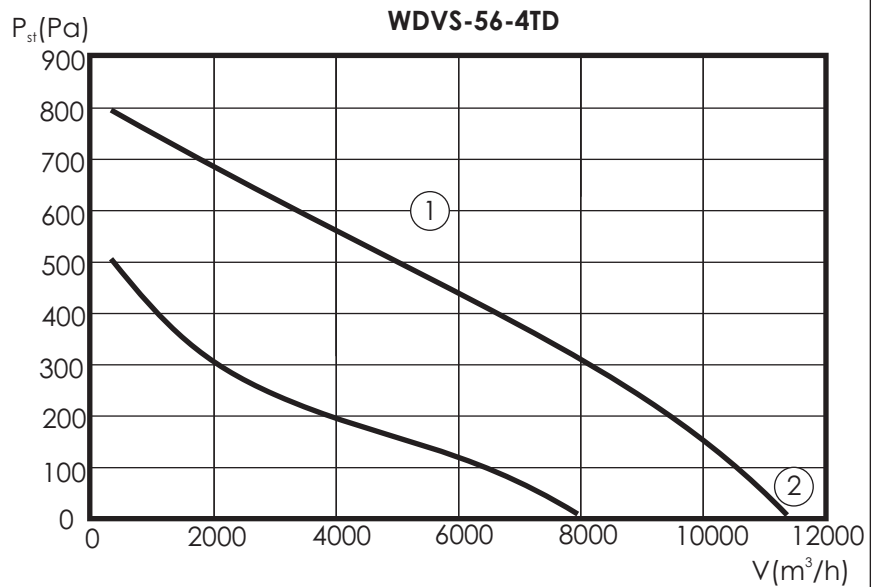
Motor

RH50V-VDK.6F.1R
 3~400 V
 1,2/0,83 kW
 2,2/1,4 A
 1330/1040 rpm



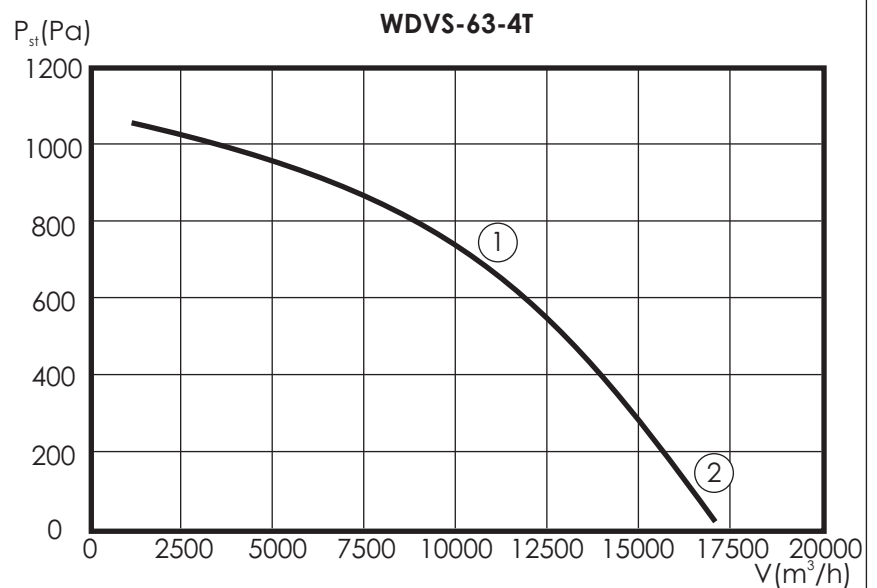
Motor

RH56V-VDK.6K.1R
 3~400 V
 1,7/0,82 kW
 3,3/1,6 A
 1180/800 rpm



Motor

RH63V-4DK.7Q.1R
 3~400 V
 3,9 kW
 6,6 A
 1360rpm



P_{st} –static negative pressure in the fan inlet

Operating noise level

Fan size	Operating noise level [dB(A)] of fans with single phase and three phase motors							
	at the air outlet side*				at the air inlet side**			
	at that the point ①		at the point ②		at that the point ①		at the point ②	
	at 1m dist.	at 5m dist.	at 1m dist.	at 5m dist.	at 1m dist.	at 5m dist.	at 1m dist.	at 5m dist.
WDVS-31	53	41	61	49	54	48	62	57
WDVS-35	57	45	65	53	56	53	66	61
WDVS-40	59	47	67	55	60	55	68	63
WDVS-45	62	50	69	57	63	58	70	65
WDVS-50	67	55	74	62	68	63	75	70
WDVS-56	68	56	75	63	69	64	76	71
WDVS-63	75	63	82	70	76	71	83	78

* Noise level in dB(A) - acoustic pressure level at the air outlet side in the free field with taking into consideration the directional coefficient $Q=2$ and the distance from the fan which are presented in the table.

**Noise level in dB(A) - acoustic pressure level at the air inlet side with taking into consideration the absorption ability of the compartment $A=100m^2$, directional coefficient $Q=2$ and the distance from the air inlet presented in the table.

Presented in the table noise levels concern the fans with the PU universal bases – 30 cm high “without dampers”. Fans with the PTU universal damping bases have the acoustic pressure levels at the air inlet side about **12[dBA]** lower from those mentioned above.

ADDITIONAL INFORMATION

With the WDVS roof fans we can supply the following additional equipment:

- universal bases
- and additional elements

Fan size	Roof base size		Additional elements			
			Assembly plate	Throttle	Inlet diffuser	Elastic spout
WDVS-31	PU-4	PUT-4	PM-4	SWD-4	DW-4	KE-4
WDVS-35	PU-4	PUT-4	PM-4	SWD-4	DW-4	KE-4
WDVS-40	PU-5	PUT-5	PM-5	SWD-5	DW-5	KE-5
WDVS-45	PU-5	PUT-5	PM-5	SWD-5	DW-5	KE-5
WDVS-50	PU-7	PUT-7	PM-7	SWD-7	DW-7	KE-7
WDVS-56	PU-7	PUT-7	PM-7	SWD-7	DW-7	KE-7
WDVS-63	PU-8	PUT-8	PM-8	SWD-8	DW-8	KE-8

Elements necessary for assembling the WDVS fans

- **PU** universal bases
- or **PUT** universal damping bases

Additional elements supplied for the WDVS

- PM assembly plates;
- SWD self-closing throttle or single-planed throttle operated manually or by the use of servo-motor
- DW inlet diffusers;
- KE elastic spouts.

Technical data of additional fans equipment are presented in the catalogue sheet of universal bases in this catalogue.

AUTOMATICS

Description of operation and fans automatics components selection are presented in the section: VENTILATORS CONTROL AND AUTOMATICS in this catalogue