

WDV



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 10 sizes.

The roof fan consists of:

- highly efficient steel 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** ~2600 rpm for the size: 22; 25; 28 and ~1400 rpm for the sizes 31; 35; 40 i 45;
- **three phase** ~2600 rpm for the size 22; 25; 28 and ~1400 rpm for the sizes 31; 35; 40 i 45; 50; 56 and 63.

Three phase motors for the 35; 40; 45; 50; 56 and 63 fans size are two-speed motors as a standard.

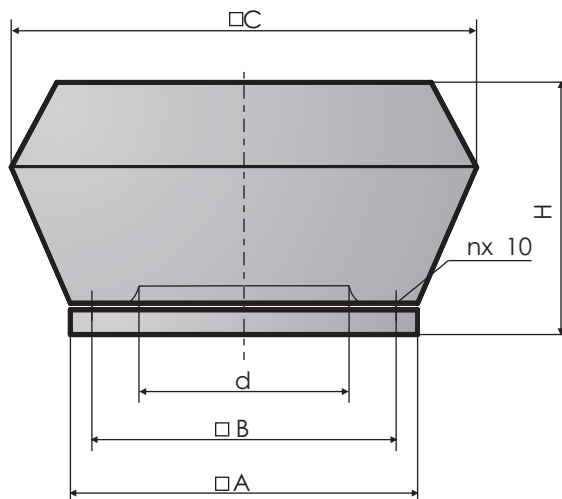
Permissible temperature of removed air is 50°C.

DESIGNATIONS

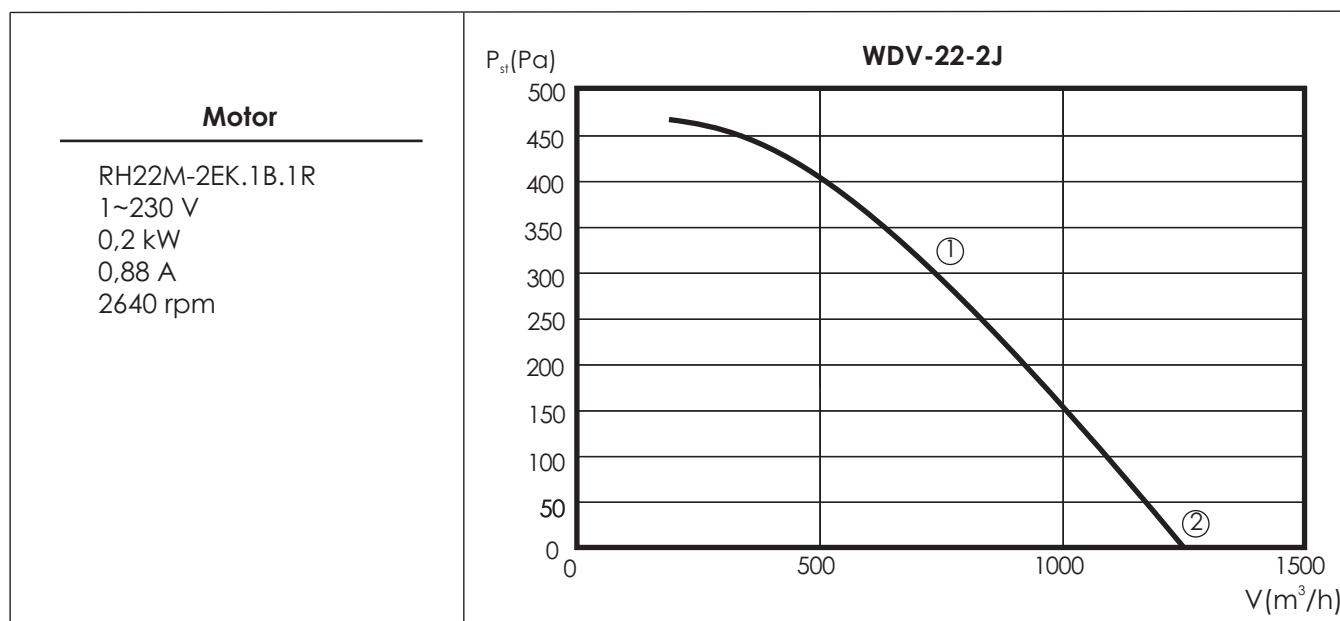
Roof fan	WDV - 22 - T
Size	22; 25; 28; 31; 35; 40; 45, 50; 56; 63
Motor type	single phase (J); three phase (T)

TECHNICAL DATA

Basic dimensions



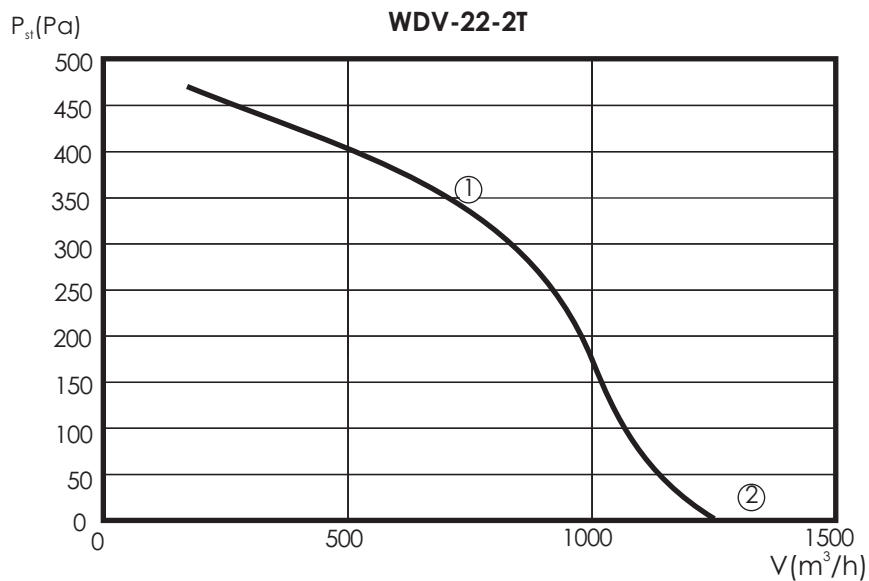
Fan size	d [mm]	A [mm]	B [mm]	C [mm]	H [mm]	Weight [kg]
WDV-22	143	430	330	630	333	10,7
WDV-25	160	490	380	720	375	14
WDV-28	180	490	380	720	375	17
WDV-31	192	575	480	844	432	21
WDV-35	228	575	480	844	432	28
WDV-40	257	680	560	1000	514	32
WDV-45	287	680	560	1000	514	47
WDV-50	323	805	710	1180	600	53
WDV-56	361	805	710	1180	600	61
WDV-63	407	970	800	1400	650	99



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

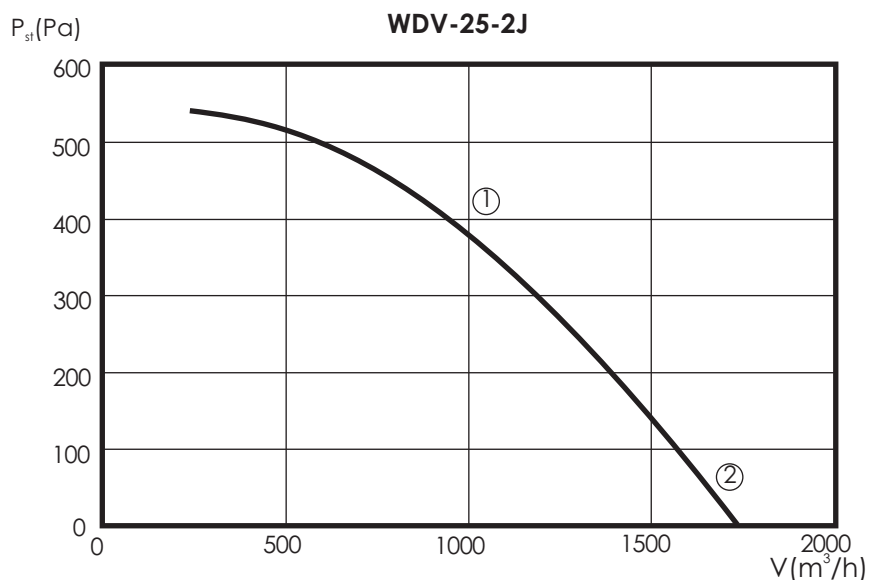
Motor

RH22M-2DK.1B.1R
 3~400 V
 0,19 kW
 0,34 A
 2700 rpm



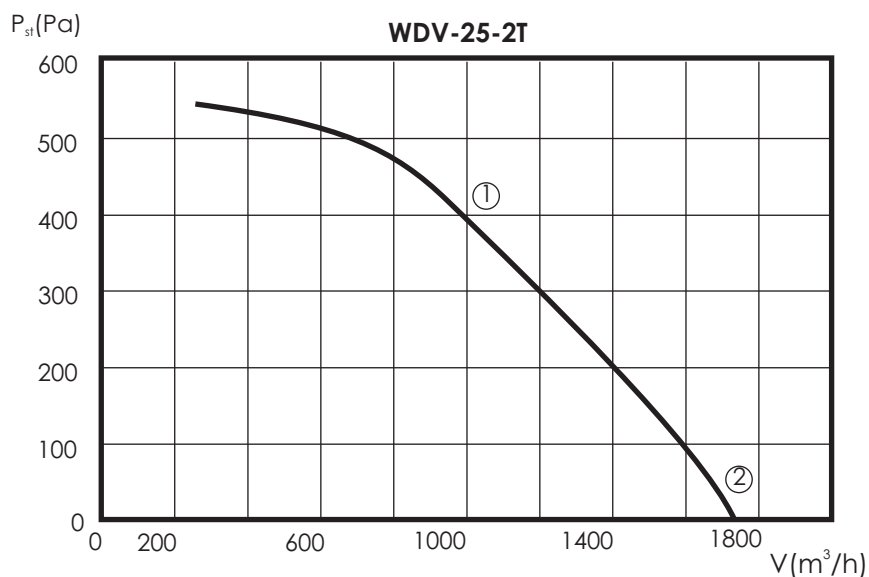
Motor

RH25M-2EK.3B.1R
 1~230 V
 0,29 kW
 1,25 A
 2670 rpm



Motor

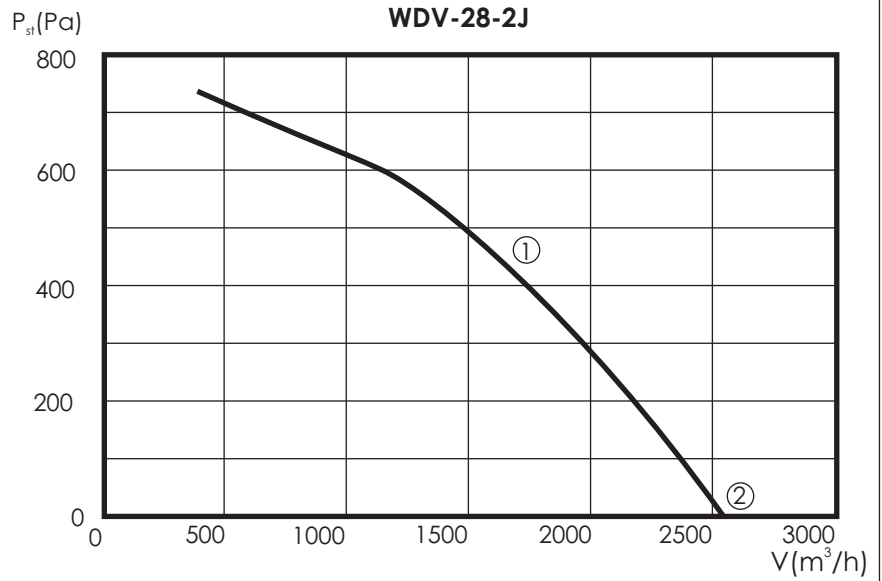
RH25M-2DK.3B.1R
 3~400 V
 0,28 kW
 0,53 A
 2740 rpm



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

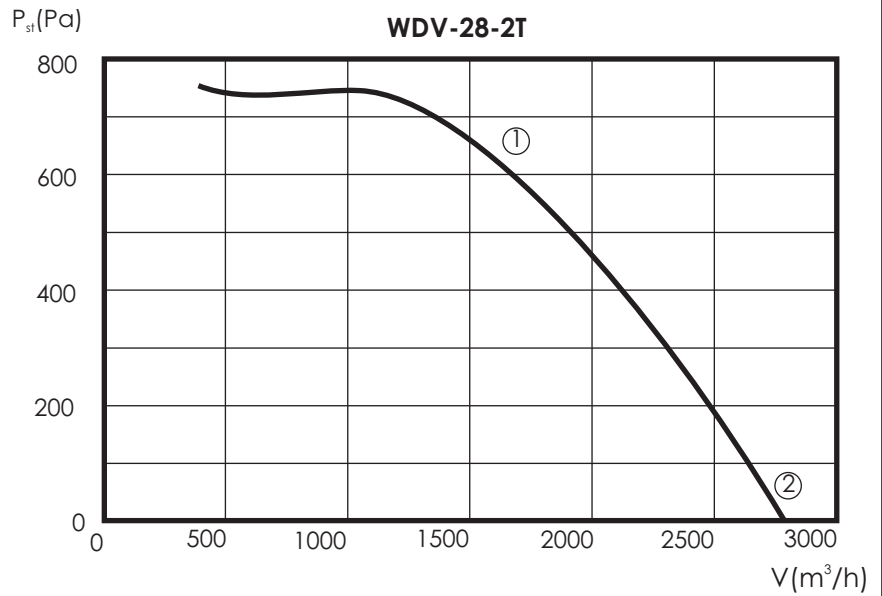
Motor

RH28M-2EK.3F.1R
 1~230 V
 0,54 kW
 2,3 A
 2680 rpm



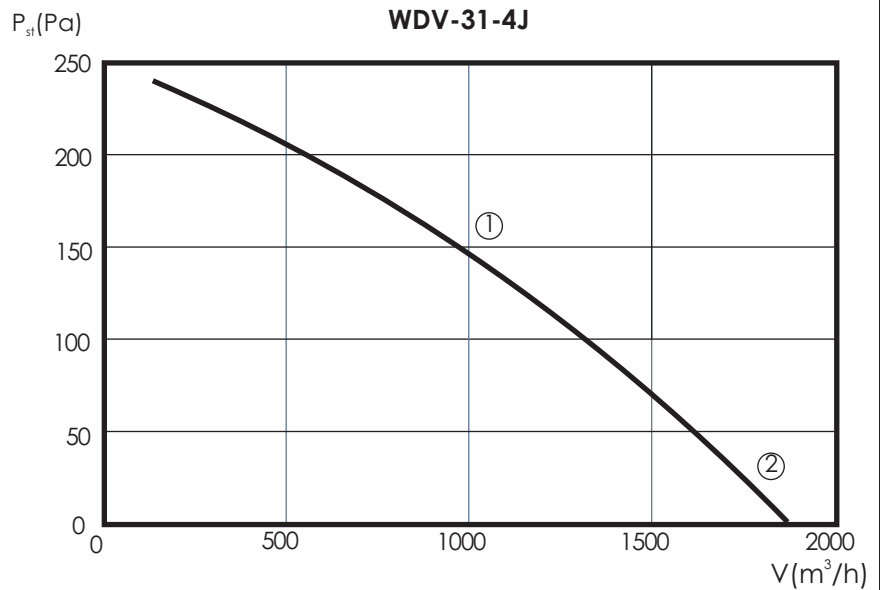
Motor

RH28M-2DK.3B.1R
 3~400 V
 0,57 kW
 1,05 A
 2760 rpm

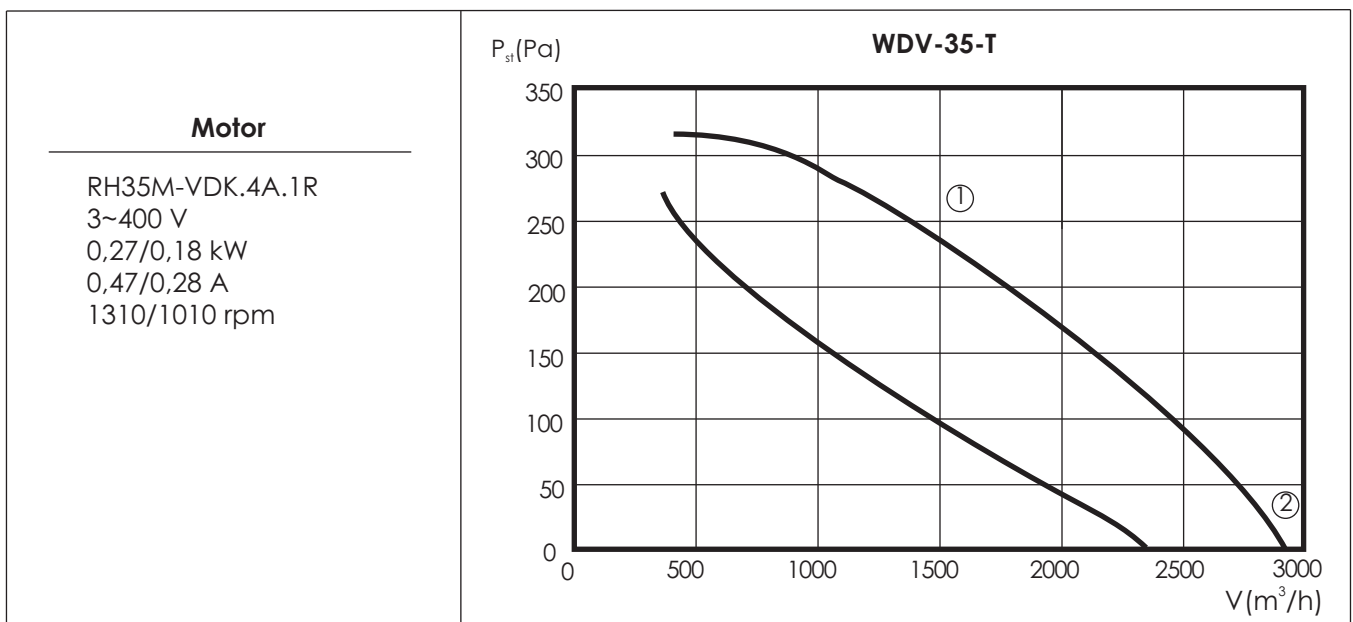
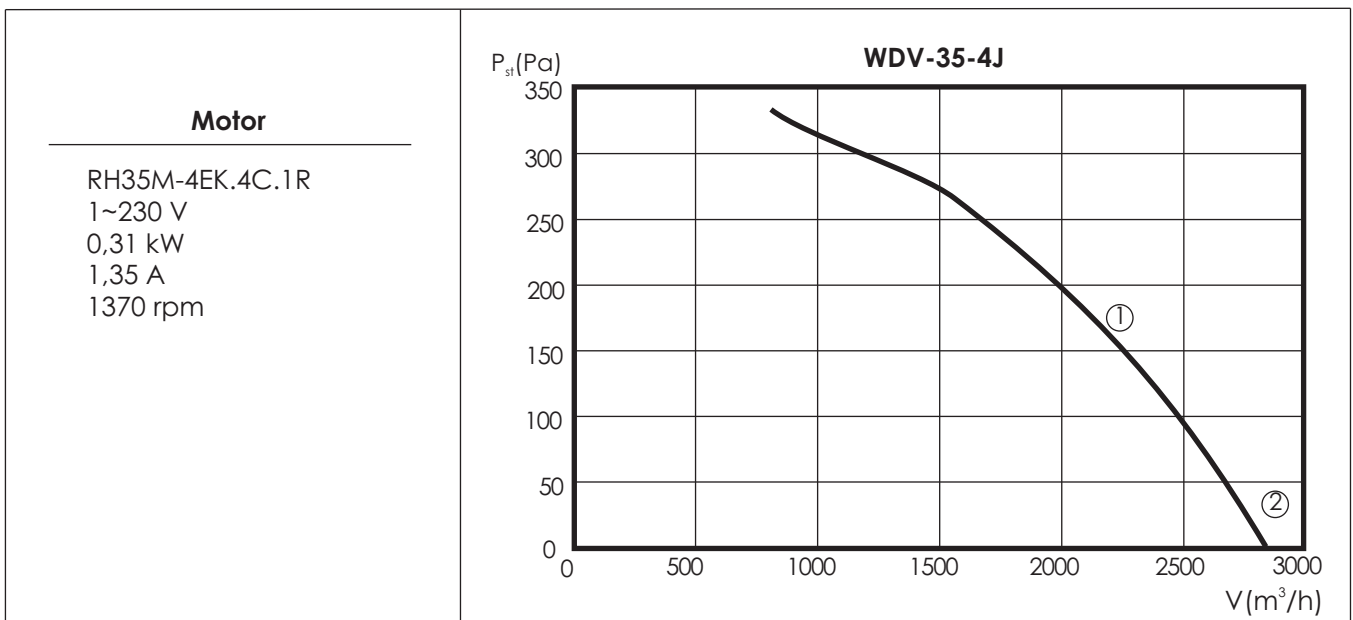
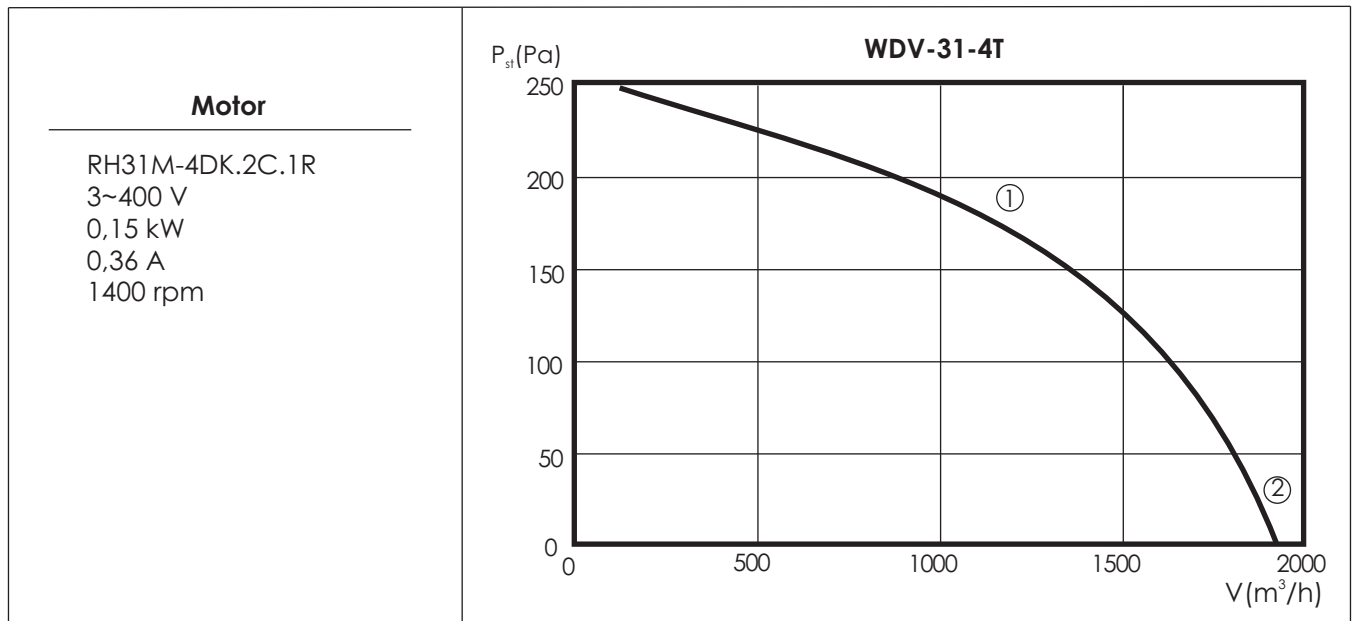


Motor

RH31M-4EK.2C.1R
 1~230 V
 0,17 kW
 0,9 A
 1300 rpm



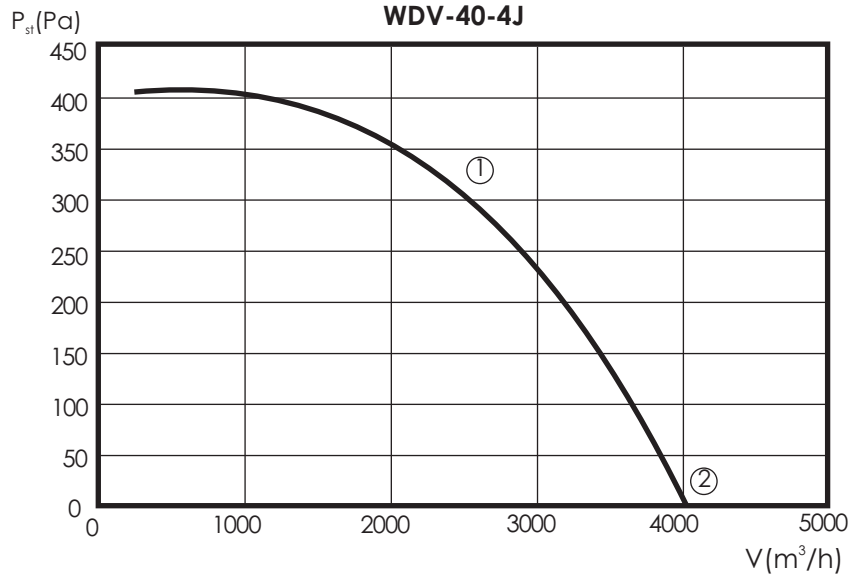
P_{st} –static negative pressure in the fan inlet



Pst –static negative pressure in the fan inlet

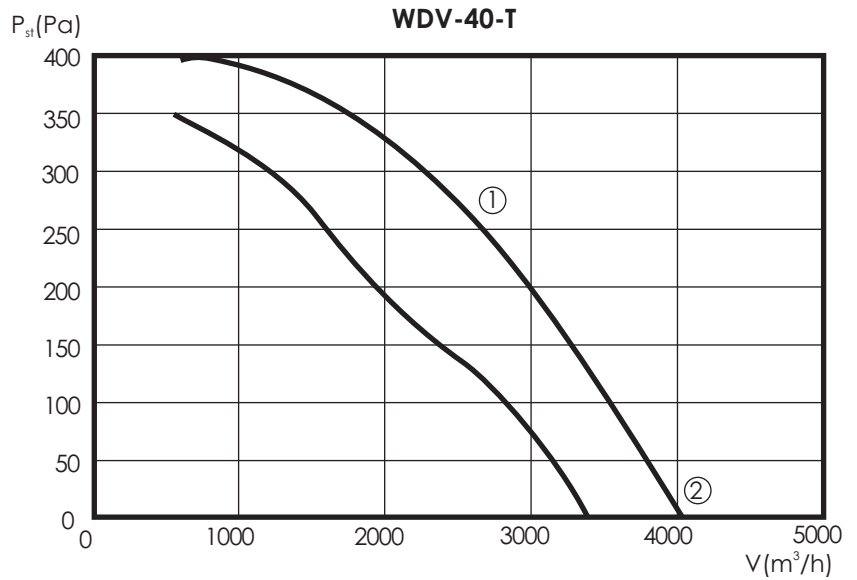
Motor

RH40M-4EK.4F.1R
 1~230 V
 0,52 kW
 2,2 A
 1360 rpm



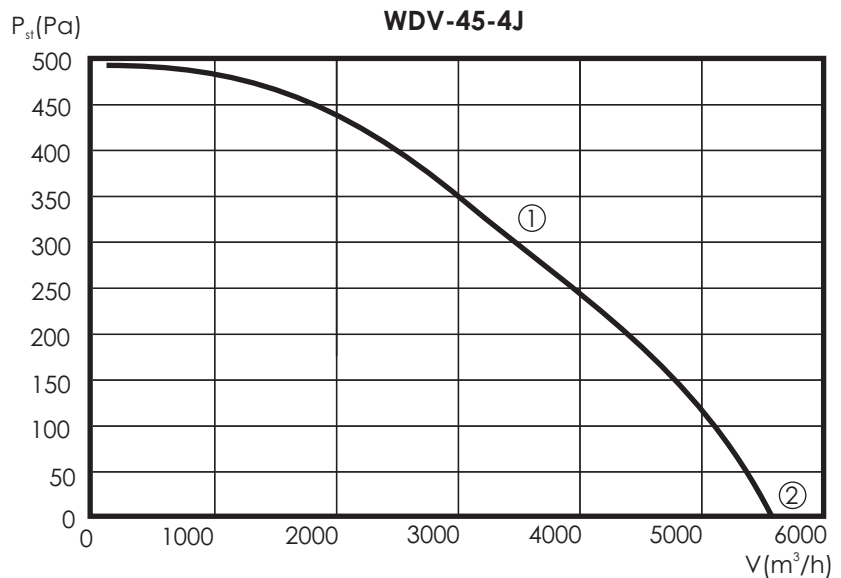
Motor

RH40M-VDK.4C.1R
 3~400 V
 0,46/0,31 kW
 0,85/0,49 A
 1340/1060 rpm



Motor

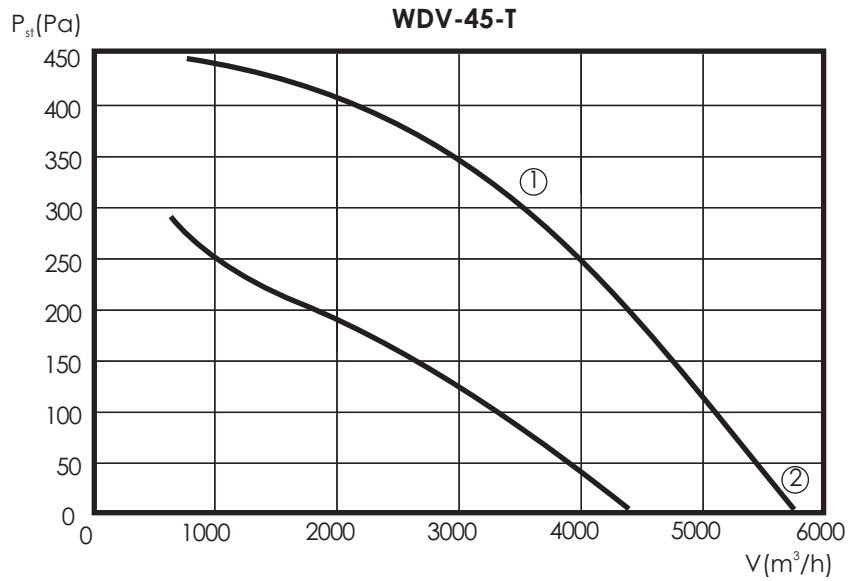
RH45M-4EK.4I.1R
 1~230 V
 0,74 kW
 3,2 A
 1280 rpm



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

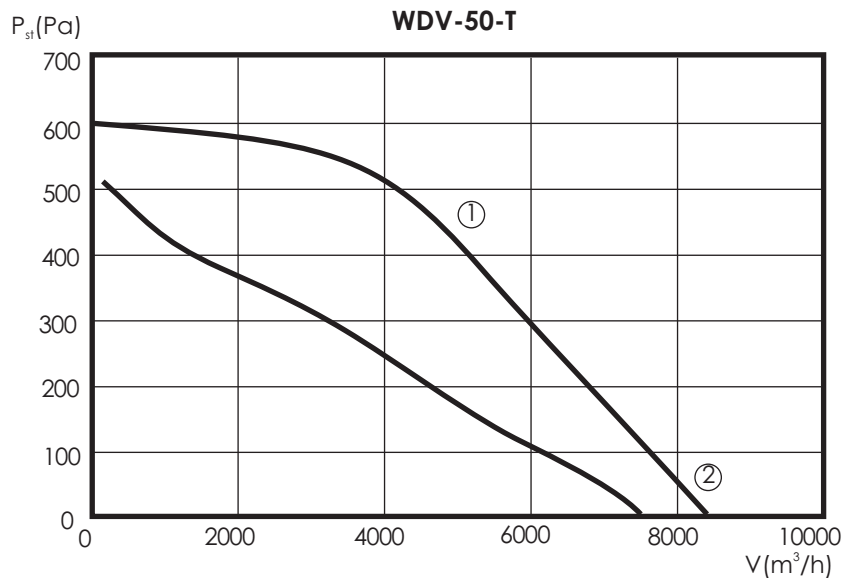
Motor

RH45M-VDK.4F.1R
 3~400 V
 0,69/0,36 kW
 1,3/0,66 A
 1230/670 rpm



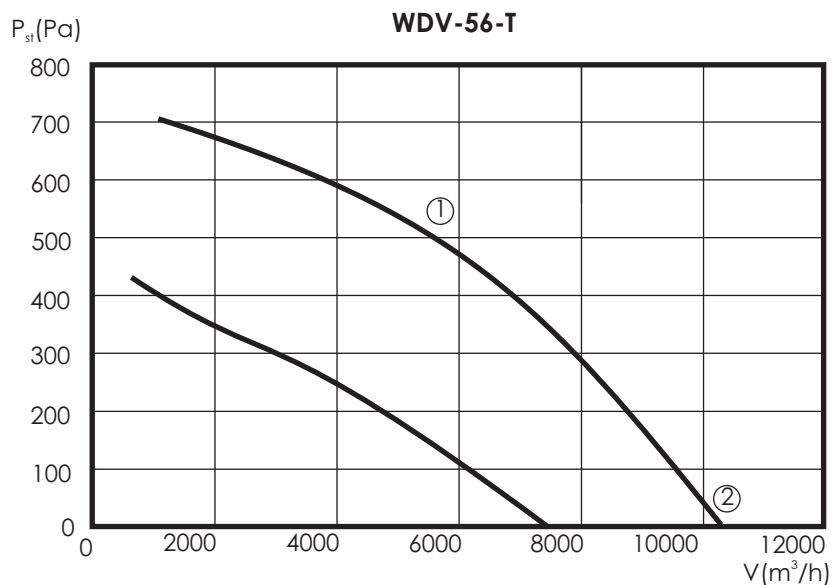
Motor

RH50M-VDK.6F.1R
 3~400 V
 1,2/0,78 kW
 2,2/1,35 A
 1320/1020 rpm

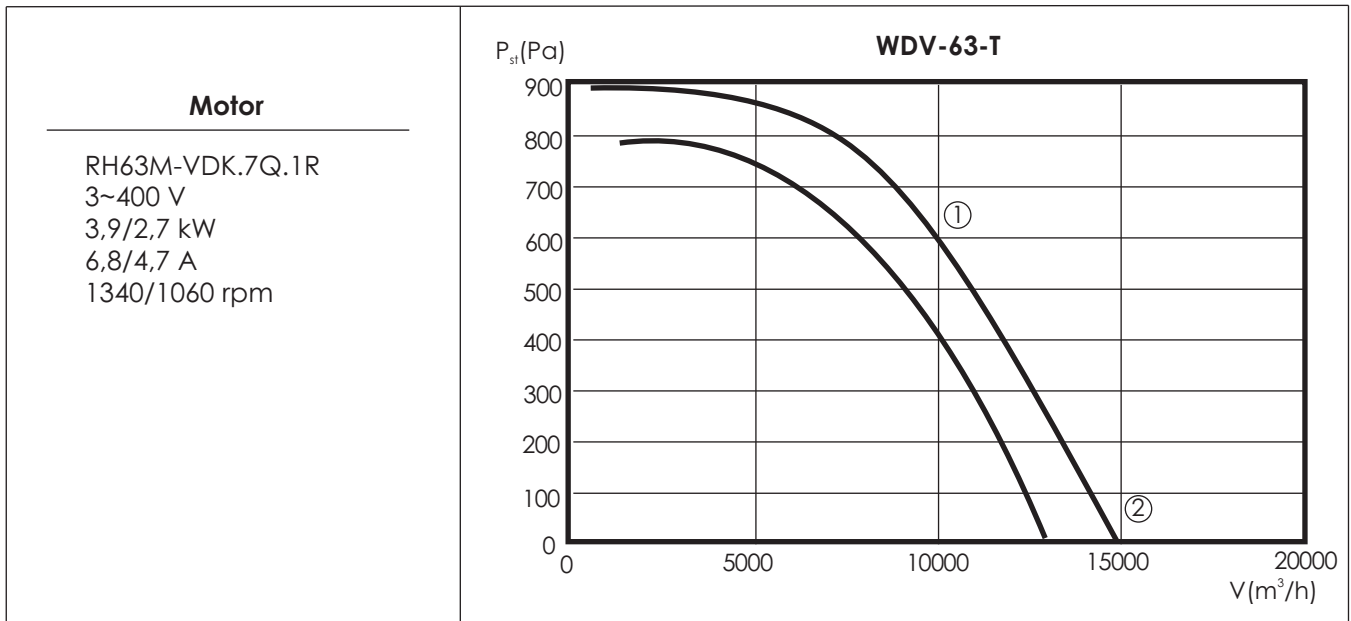


Motor

RH56M-VDK.6K.1R
 3~400 V
 1,8/0,96 kW
 3,4/1,8 A
 1230/860 rpm



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



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

Manufacturer reserves the rights to implement modifications.

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.
WDV-22	67	55	71	59	68	63	72	67
WDV-25	70	58	74	62	71	66	75	70
WDV-28	73	61	78	66	74	69	79	74
WDV-31	62	50	66	54	63	58	67	62
WDV-35	65	53	70	58	66	61	71	66
WDV-40	67	55	73	61	68	63	74	69
WDV-45	70	58	76	64	71	66	77	72
WDV-50	74	62	80	68	75	70	81	76
WDV-56	76	64	82	70	77	72	83	78
WDV-63	80	68	86	74	81	76	87	82

* 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=100m², 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 WDV 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
WDV-22	PU-1	PUT-1	PM-1	SWD-1	DW-1	KE-1
WDV-25	PU-2	PUT-2	PM-2	SWD-2	DW-2	KE-2
WDV-28	PU-2	PUT-2	PM-2	SWD-2	DW-2	KE-2
WDV-31	PU-4	PUT-4	PM-4	SWD-4	DW-4	KE-4
WDV-35	PU-4	PUT-4	PM-4	SWD-4	DW-4	KE-4
WDV-40	PU-5	PUT-5	PM-5	SWD-5	DW-5	KE-5
WDV-45	PU-5	PUT-5	PM-5	SWD-5	DW-5	KE-5
WDV-50	PU-7	PUT-7	PM-7	SWD-7	DW-7	KE-7
WDV-56	PU-7	PUT-7	PM-7	SWD-7	DW-7	KE-7
WDV-63	PU-8	PUT-8	PM-8	SWD-8	DW-8	KE-8

Elements necessary for assembling the WDV fans

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

Additional elements supplied for the WDV

- 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