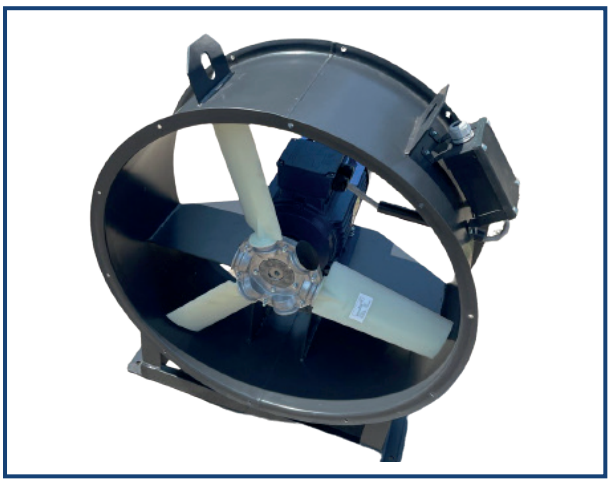
Energy-efficient axial fans VO

Axial air pressure fans **VO** are intended for use in smoke ventilation systems to supply outside air to stairwells and elevator areas, creating excess pressure and preventing smoke from entering these areas. for outside air supply.



Technical characteristics of the axial fan of the energy-efficient VO:

- air performance from 2,000 m3/h up to 100,000 m3/hour;
- total pressure from 100 Pa to 1,400 Pa;
- used as air pressure fans in smoke extraction systems;
- one-way air supply;
- number of blades – from 3 to 12;
- low and medium pressure;
- one-piece molded plastic/aluminum blades with adjustable tilt angle;
- air flow from the blades to the electric motor;
- horizontal and vertical execution.

Order example

Energy-efficient axial fan for air support, 500mm diameter, with mounting supports, 4kW electric motor and 3000 rpm, general industrial version.

VO - 5 - 01 - O - 4/3000

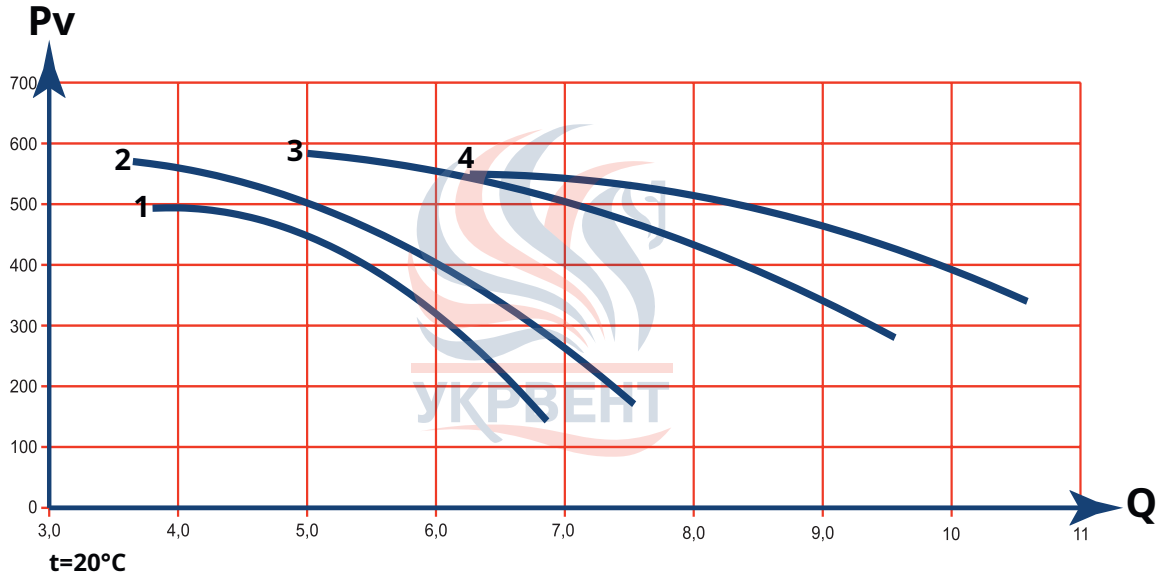
Fan type: **VO**
Fan number: **4; 4.5; 5; 5.6; 6.3; 7.1; 8; 9; 10; 11.2; 12.5;**
Implementation: **00**- without mounting supports; **01**- with mounting supports; **02**- roof, complete with mounting cup, check valve and umbrella;
Appointment: **O**- general industrial; **VZI**- explosion-proof; **K**- corrosion-resistant (specify the brand of stainless steel);
Electric motor parameters, Ny/n: **Ny**- power, kW; **n**- synchronous speed, rpm (750; 1000; 1500; 3000);

WARNING!

The fans are equipped with a three-phase electric motor as standard, in case If necessary, it is possible to install a single-phase electric motor.

VO-4

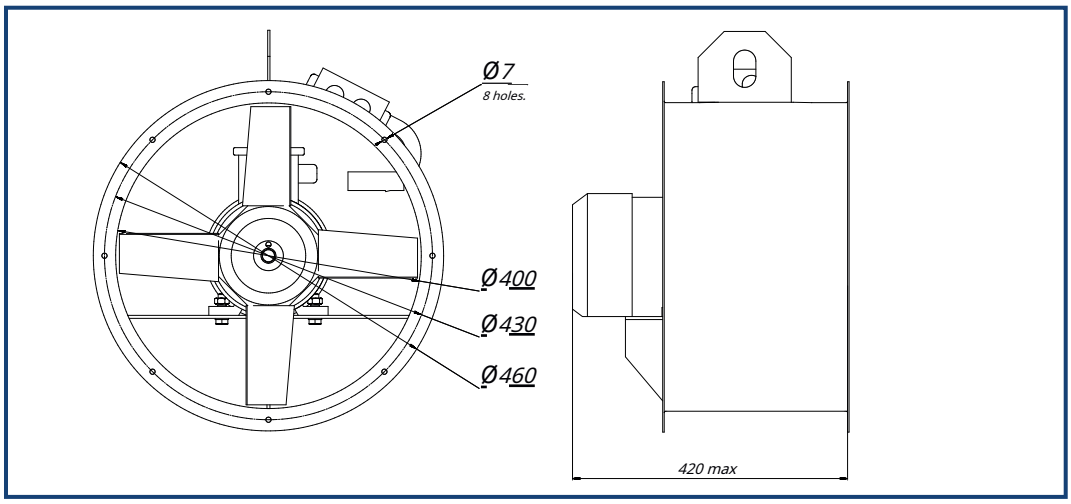
Aerodynamic characteristics



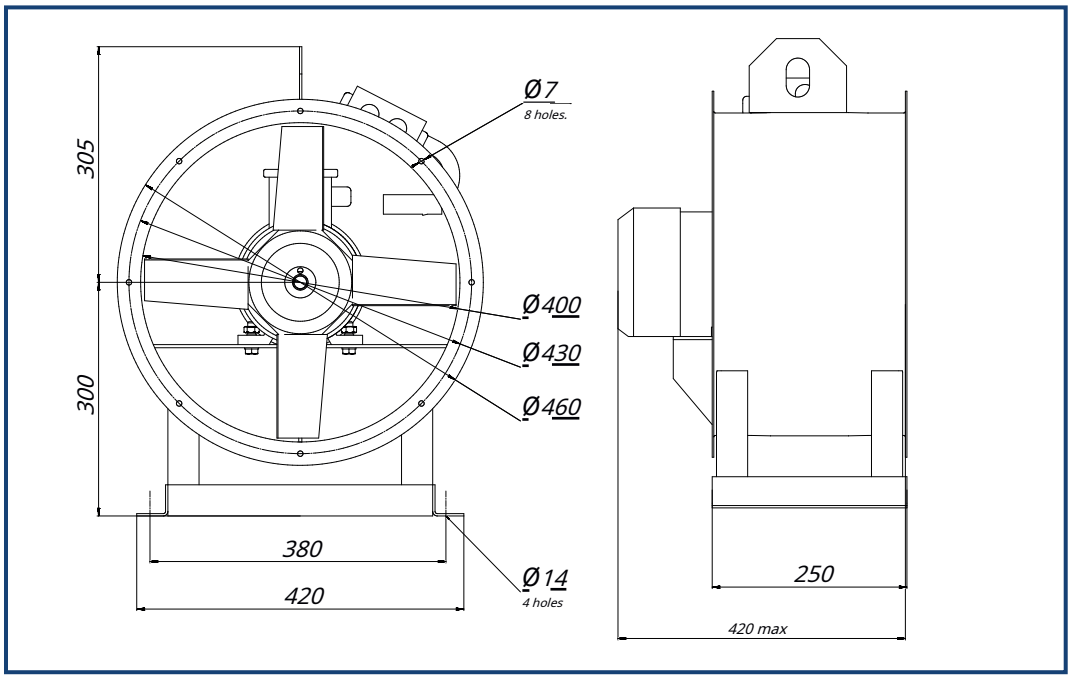
Curve №	Power, kW,	Frequency of rotation of the impeller , rpm.	Rated current, A	Weight of ducted fan, max kg	Weight of the roof fan, max kg
1	*1.1*	*2760*	*2.65*	*33.4*	*57.4*
2	*1.5*	*2790*	*3.48*	*36.5*	*60.5*
3	*2.2*	*2810*	*4.97*	*40.5*	*64.5*
4	*3*	*2820*	*6.54*	*49.5*	*73.5*

Overall and connection dimensions

VO-4-00

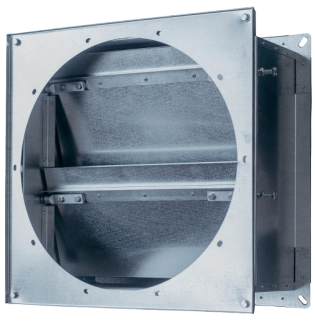


VO-4-01



Additional equipment

Flexible insert VK-400

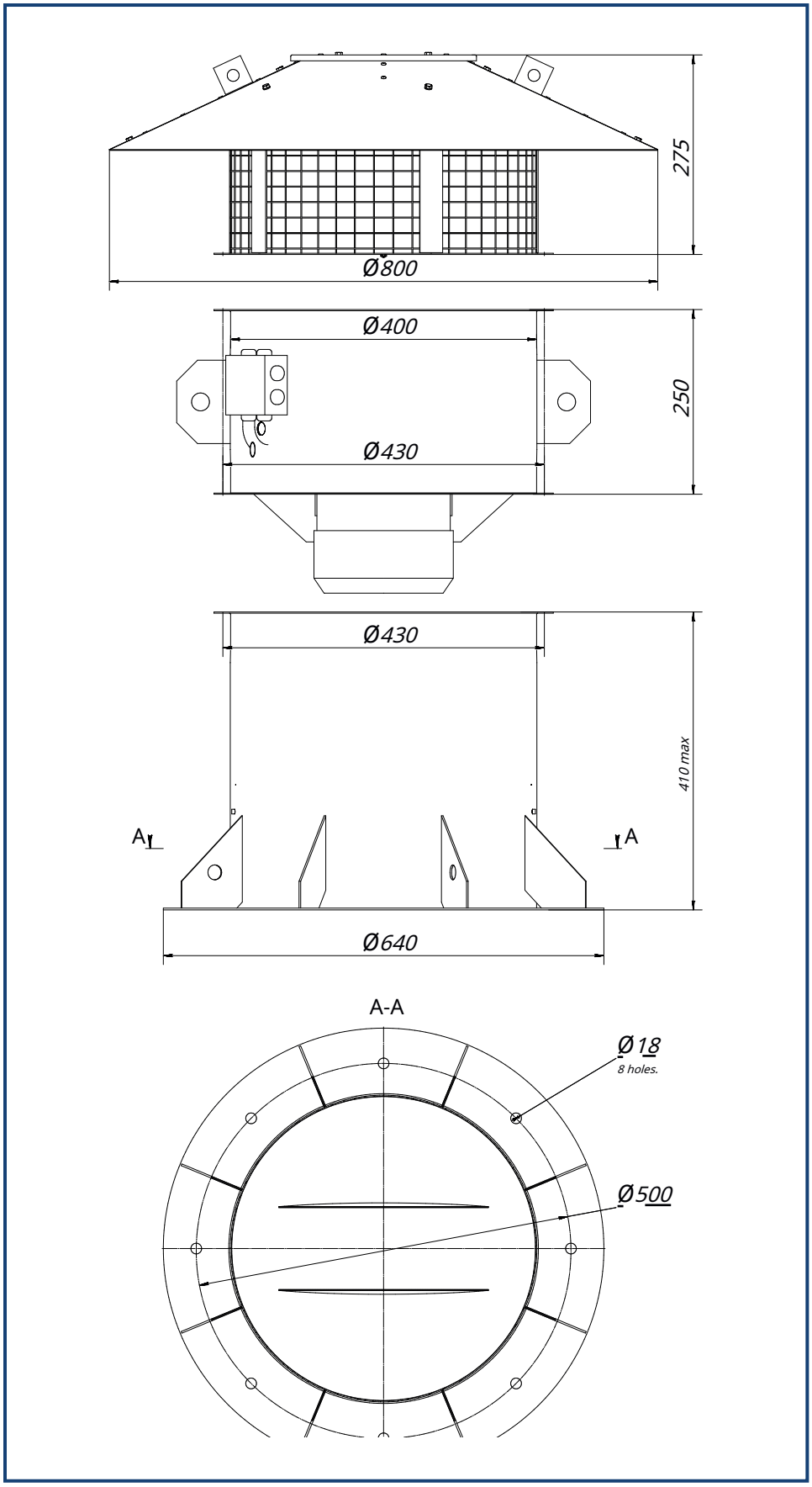


Petal valve KOL-400x400-Ø400

Protective net SAP-400

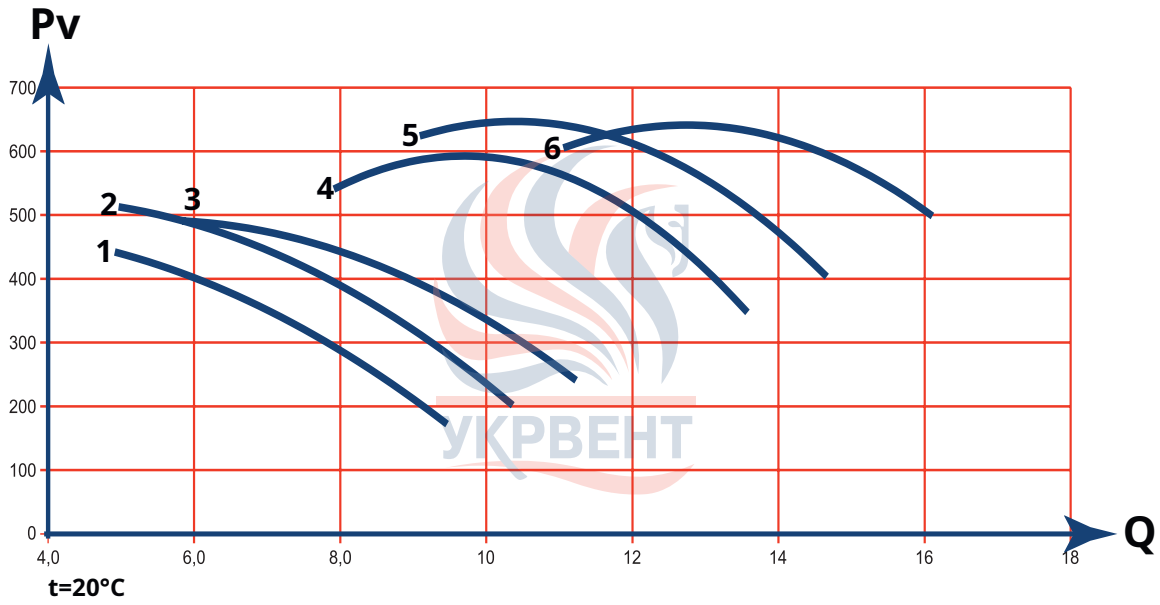
Overall and connection dimensions

VO-4-02



VO-4.5

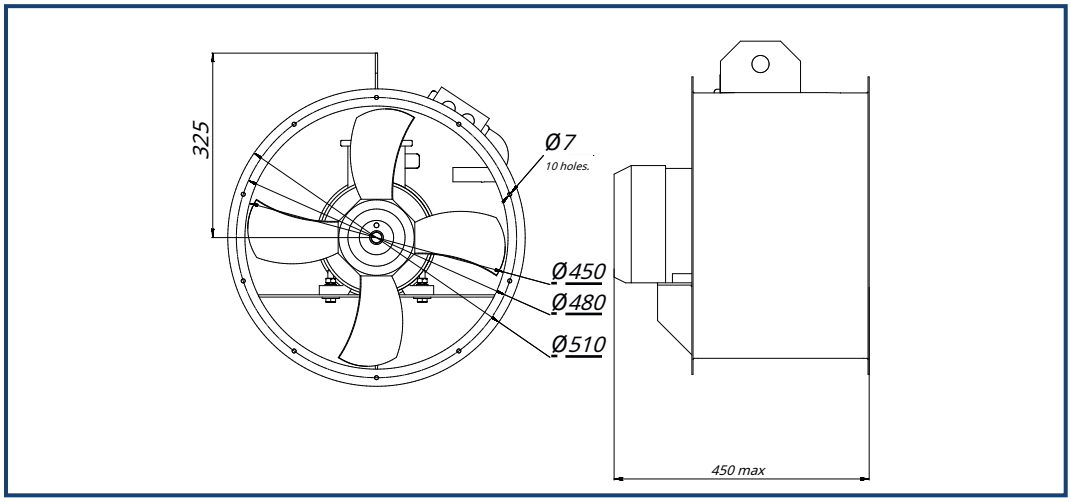
Aerodynamic characteristics



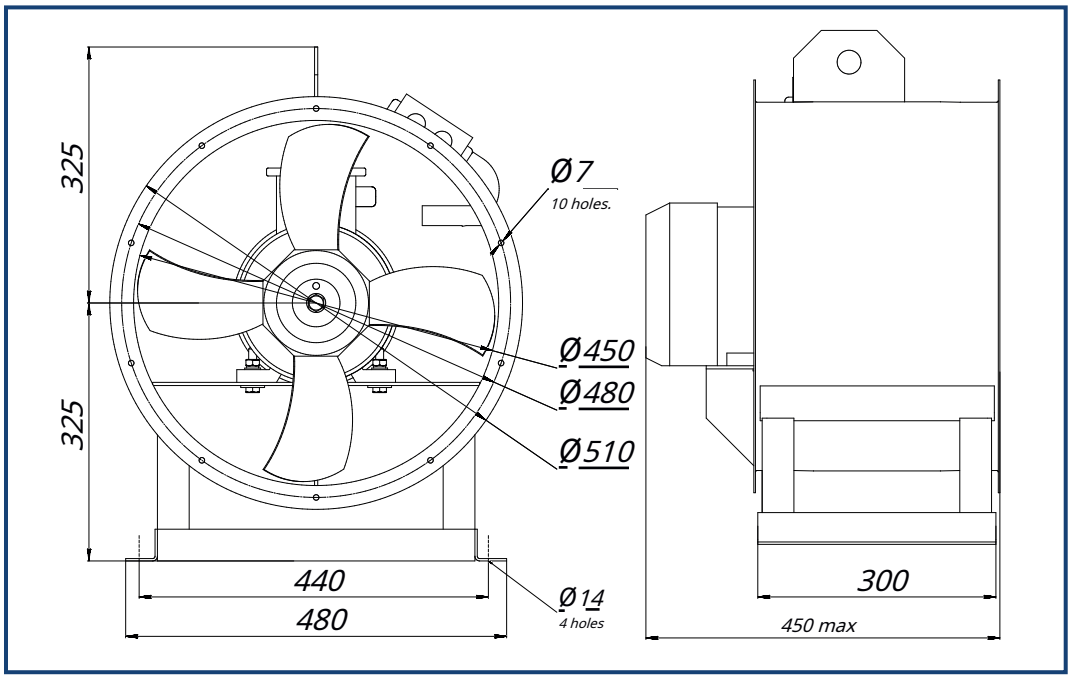
Curve №	Power, kW,	Frequency of rotation of the impeller , rpm.	Rated current, A	Weight of ducted fan, max kg	Weight of the roof fan, max kg
1	*1.1*	*2760*	*2.65*	*38.4*	*66.4*
2	*1.5*	*2790*	*3.48*	*41.5*	*69.5*
3	*2.2*	*2810*	*4.97*	*45.5*	*73.5*
4	*3*	*2820*	*6.54*	*47*	*75*
5	*4*	*2840*	*8.41*	*56*	*84*
6	*5.5*	*2850*	*11.2*	*60*	*88*

Overall and connection dimensions

VO-4.5-00

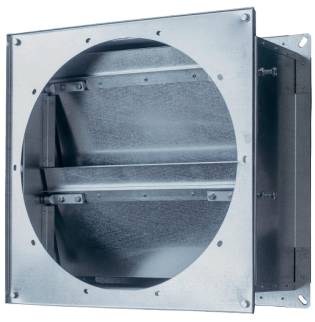


VO-4.5-01



Additional equipment

Flexible insert VK-450

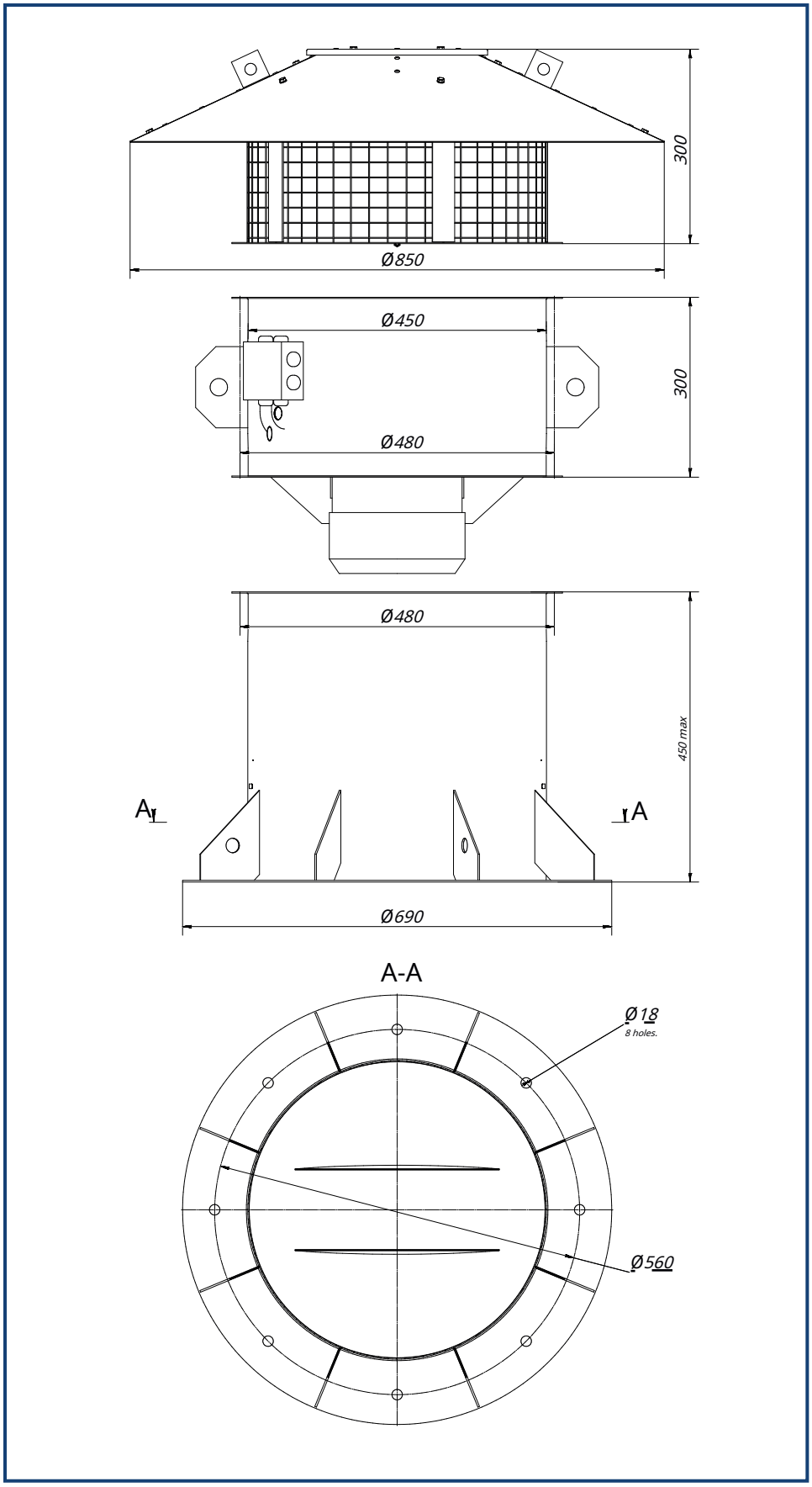


Petal valve KOL-450x450-Ø450

Protective net SAP-450

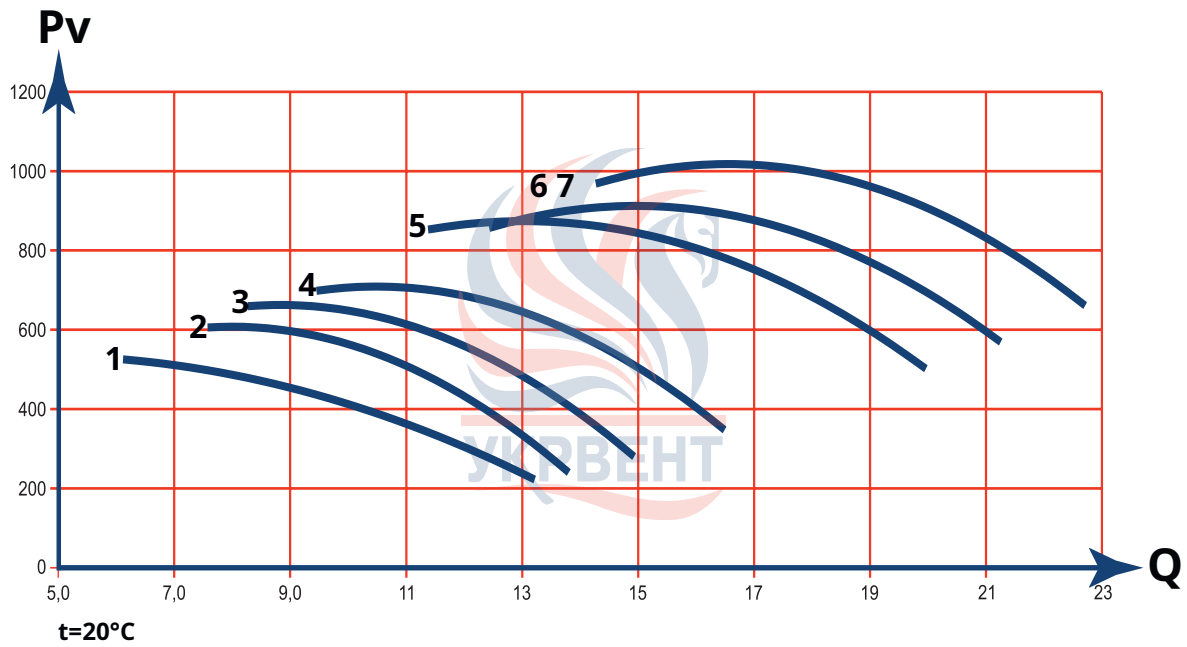
Overall and connection dimensions

VO-4.5-02



VO-5

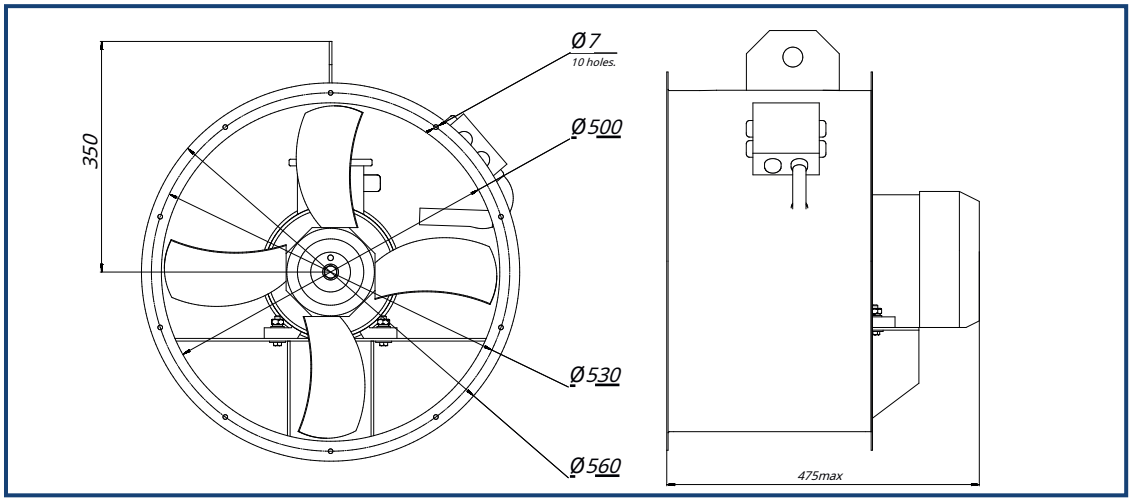
Aerodynamic characteristics



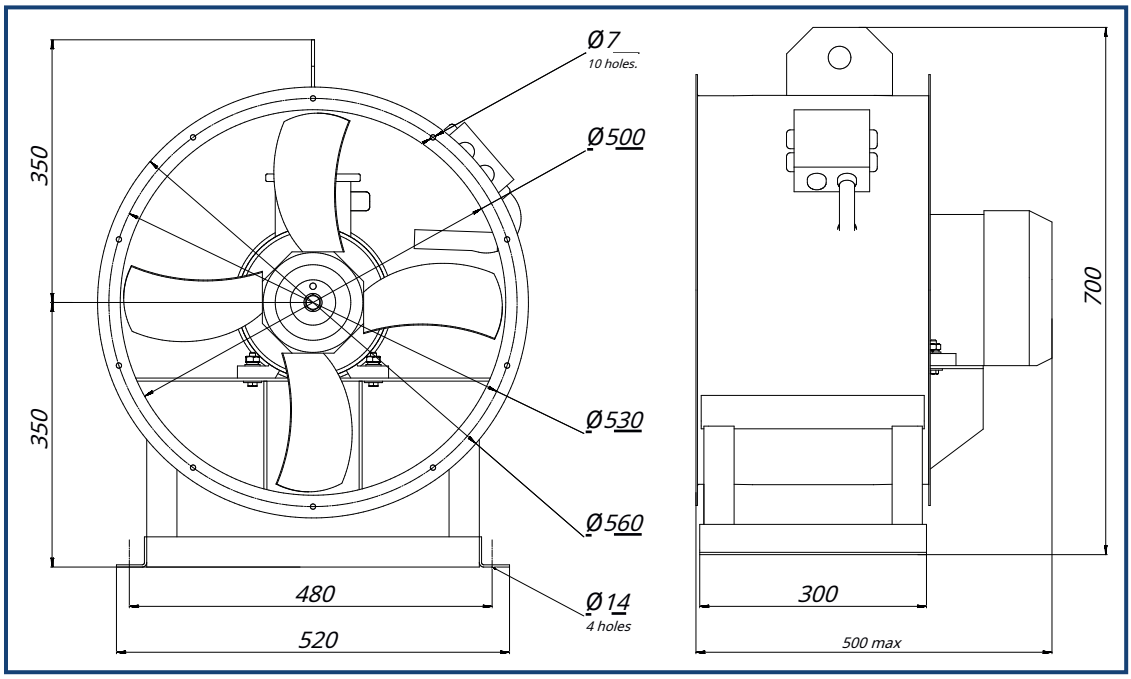
Curve №	Power, kW,	Frequency of rotation of the impeller , rpm.	Rated current, A	Weight of ducted fan, max kg	Weight of the roof fan, max kg
1	*1.1*	*2760*	*2.65*	*41.4*	*76.4*
2	*1.5*	*2790*	*3.48*	*44.5*	*79.5*
3	*2.2*	*2810*	*4.97*	*48.5*	*83.5*
4	*3*	*2820*	*6.54*	*50*	*85*
5	*4*	*2840*	*8.41*	*59*	*94*
6	*5.5*	*2850*	*11.2*	*63*	*98*
7	*7.5*	*2860*	*15.1*	*72*	*107*

Overall and connection dimensions

VO-5-00

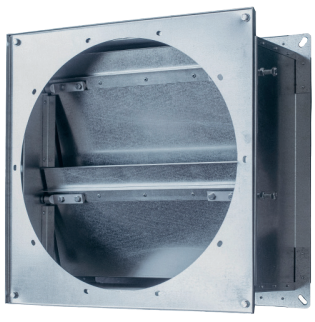


VO-5-01



Additional equipment

Flexible insert VK-500

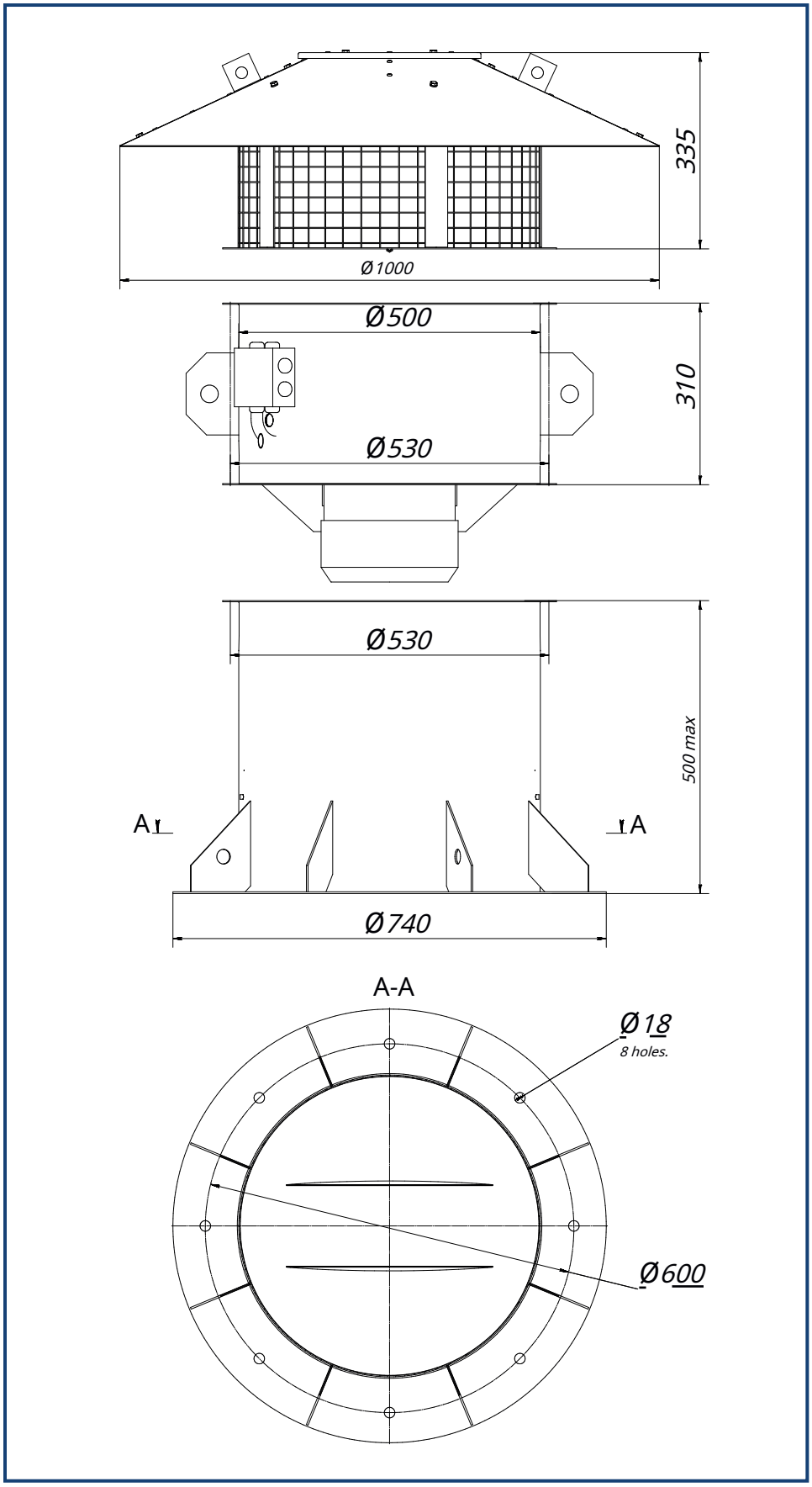


Petal valve KOL-500x500-Ø500

Protective net SAP-500

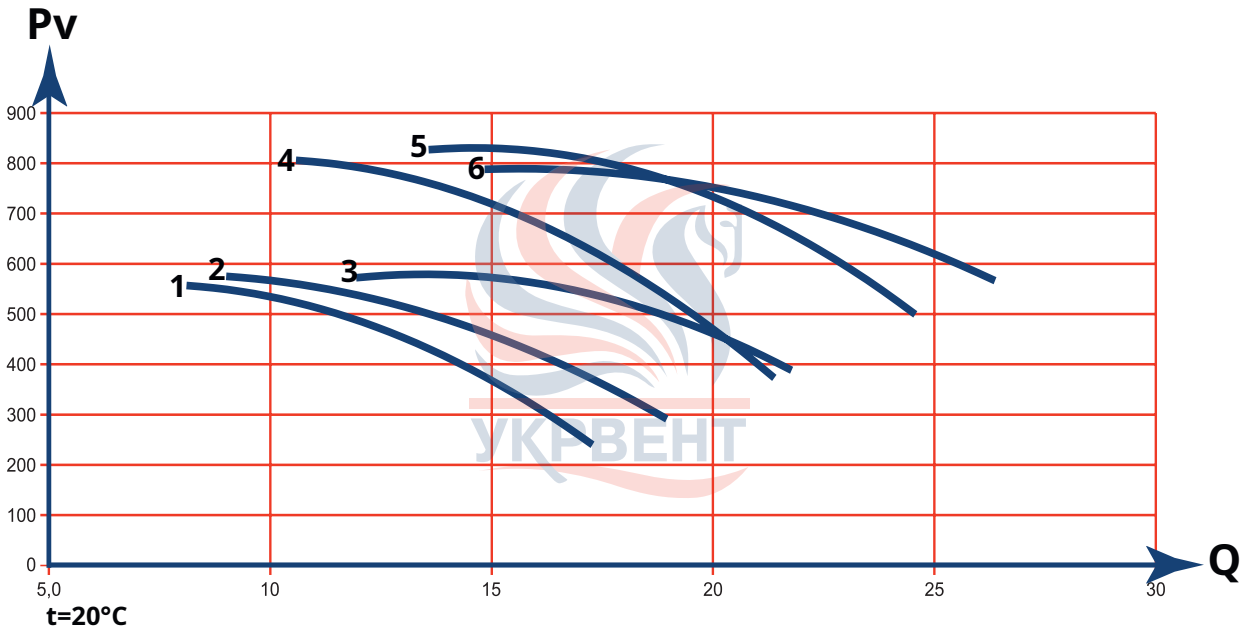
Overall and connection dimensions

VO-5-02



VO-5.6

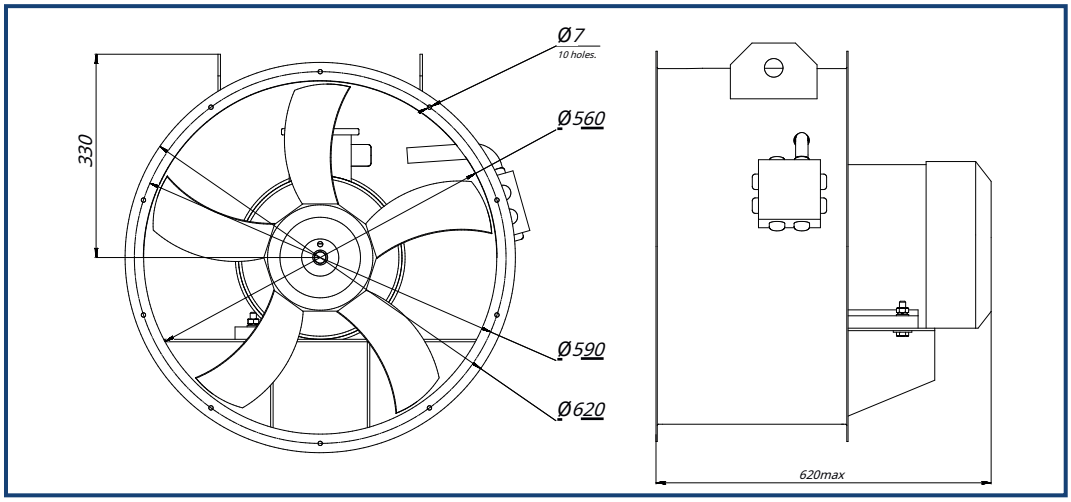
Aerodynamic characteristics



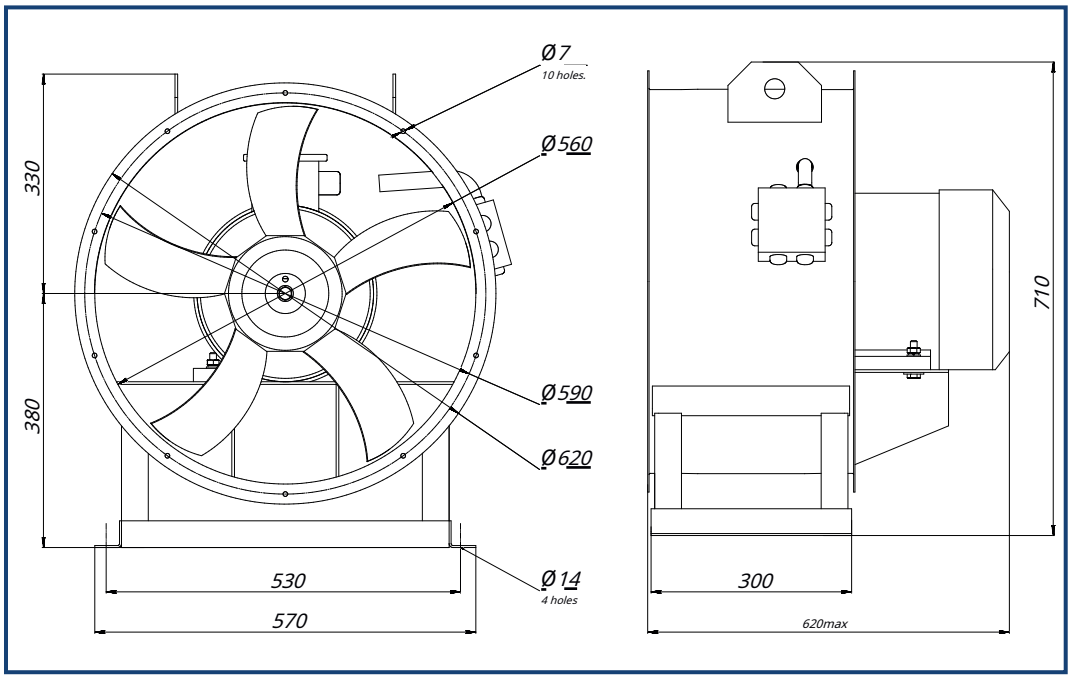
Curve №	Power, kW,	Frequency of rotation of the impeller , rpm.	Rated current, A	Weight of ducted fan, max kg	Weight of the roof fan, max kg
1	*1.5*	*2790*	*3.48*	*51.5*	*89.5*
2	*2.2*	*2810*	*4.97*	*54.5*	*92.5*
3	*3*	*2820*	*6.54*	*56*	*94*
4	*4*	*2840*	*8.41*	*65*	*103*
5	*5.5*	*2850*	*11.2*	*69*	*107*
6	*7.5*	*2860*	*15.1*	*88*	*126*

Overall and connection dimensions

VO-5,6-00

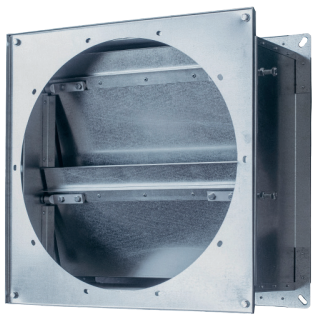


VO-5,6-01



Additional equipment

Flexible insert VK-560

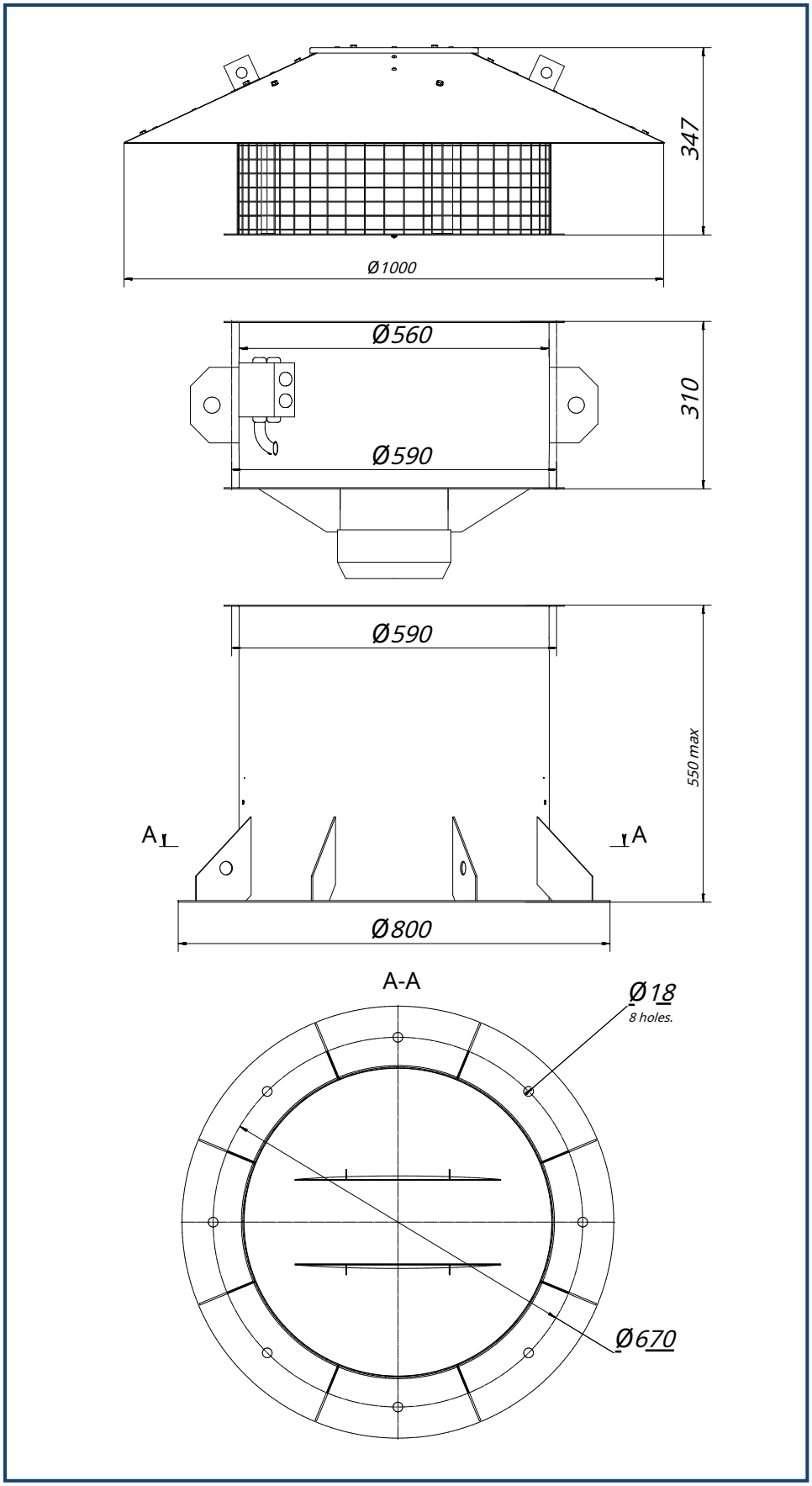


Petal valve KOL-560x560-Ø560

Protective net SAP-560

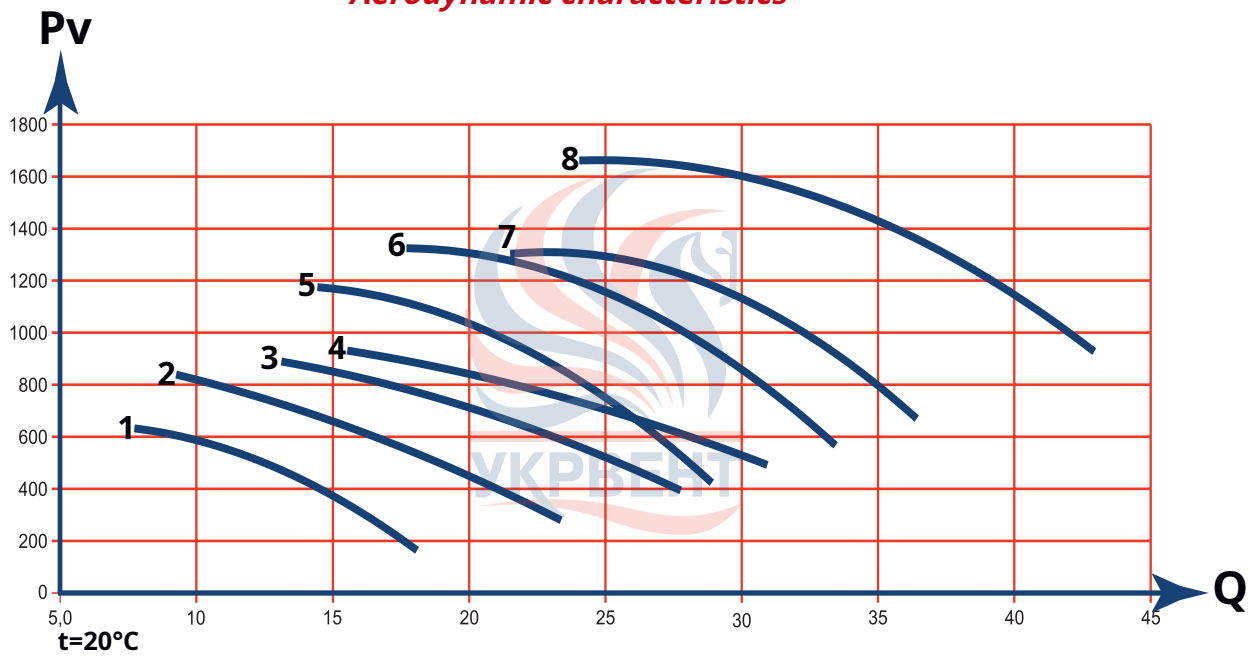
Overall and connection dimensions

VO-5,6-02



VO-6.3

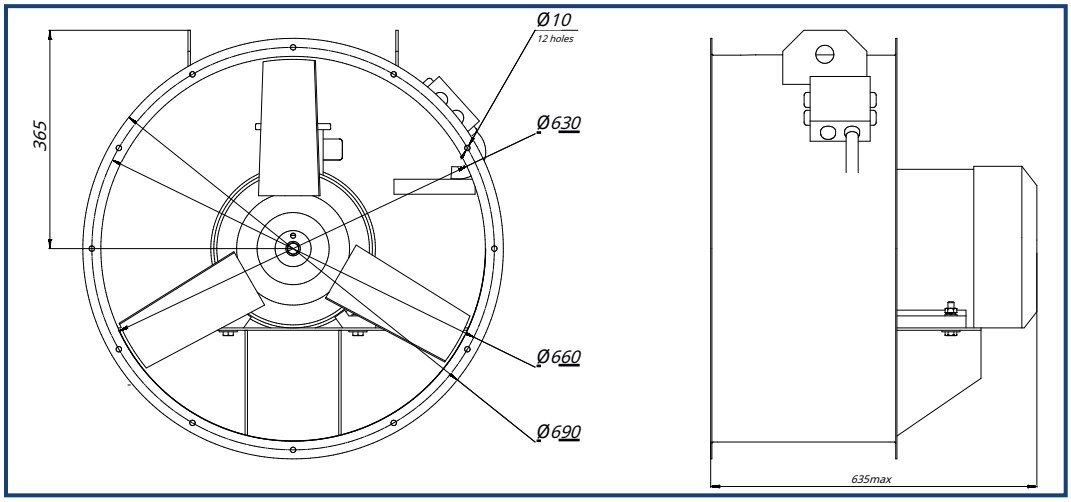
Aerodynamic characteristics



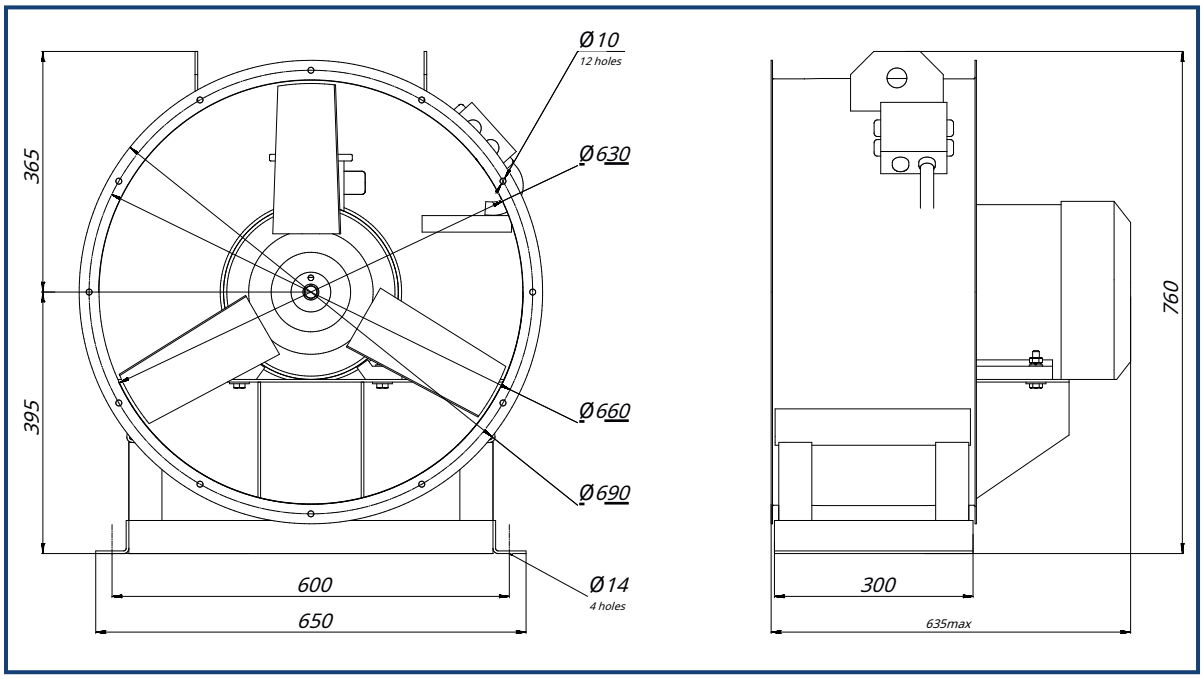
Curve №	Power, kW,	Frequency of rotation of the impeller , rpm.	Rated current, A	Weight of ducted fan, max kg	Weight of the roof fan, max kg
1	*2.2*	*2810*	*4.97*	*65.5*	*110.5*
2	*3*	*2820*	*6.54*	*67*	*112*
3	*4*	*2840*	*8.41*	*76*	*121*
4	*5.5*	*2850*	*11.2*	*80*	*125*
5	*7.5*	*2860*	*15.1*	*99*	*144*
6	*11*	*2880*	*21.3*	*136*	*181*
7	*15*	*2910*	*28.8*	*166*	*211*
8	*18.5*	*2920*	*34.7*	*186*	*231*

Overall and connection dimensions

VO-6.3-00

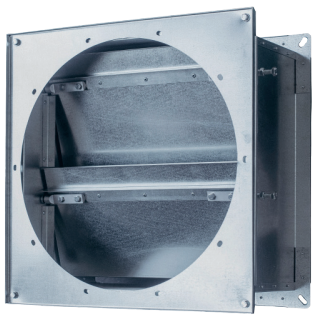


VO-6.3-01



Additional equipment

Flexible insert VK-630

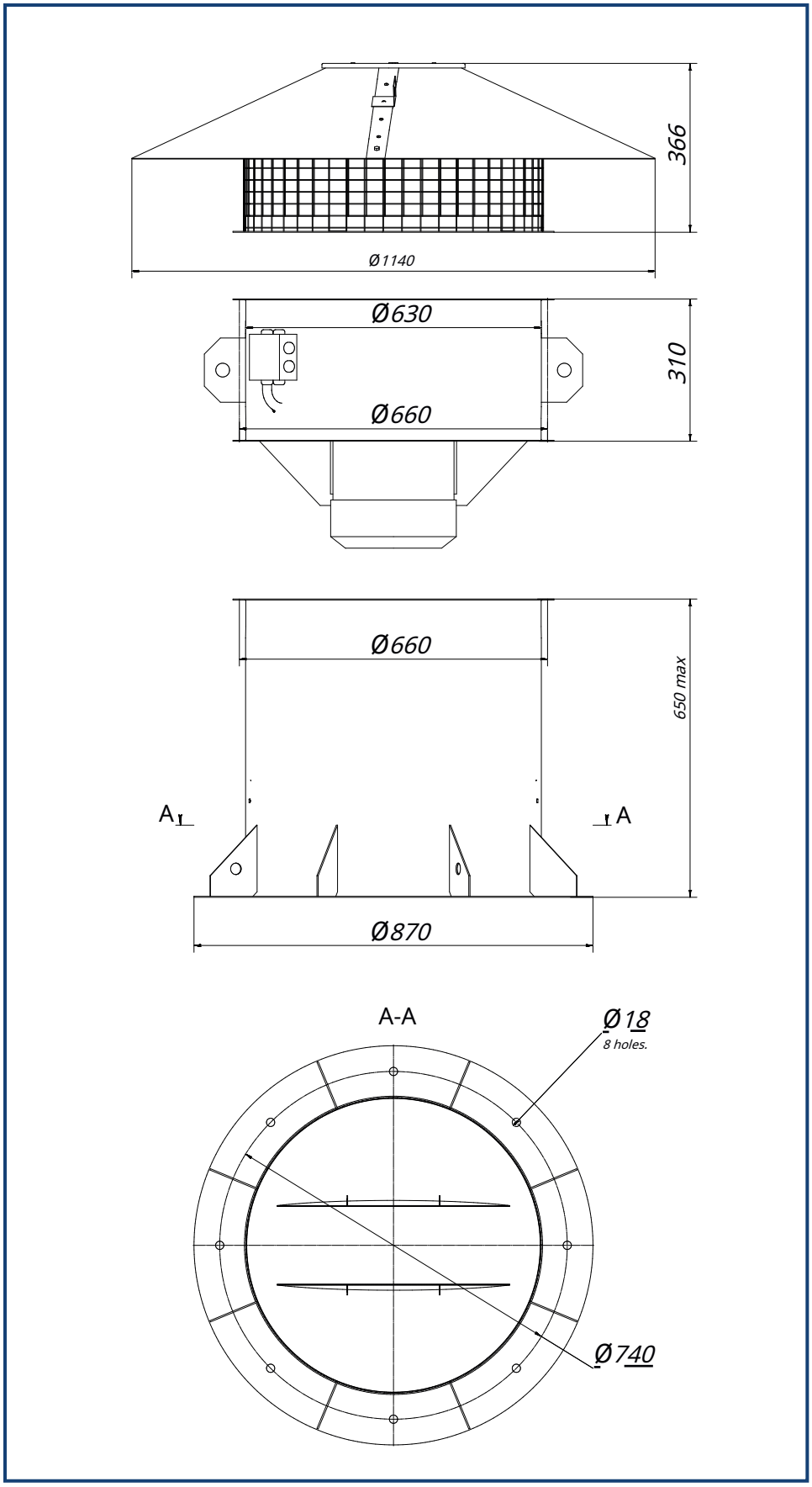


Petal valve KOL-630x630-Ø630

Protective net SAP-630

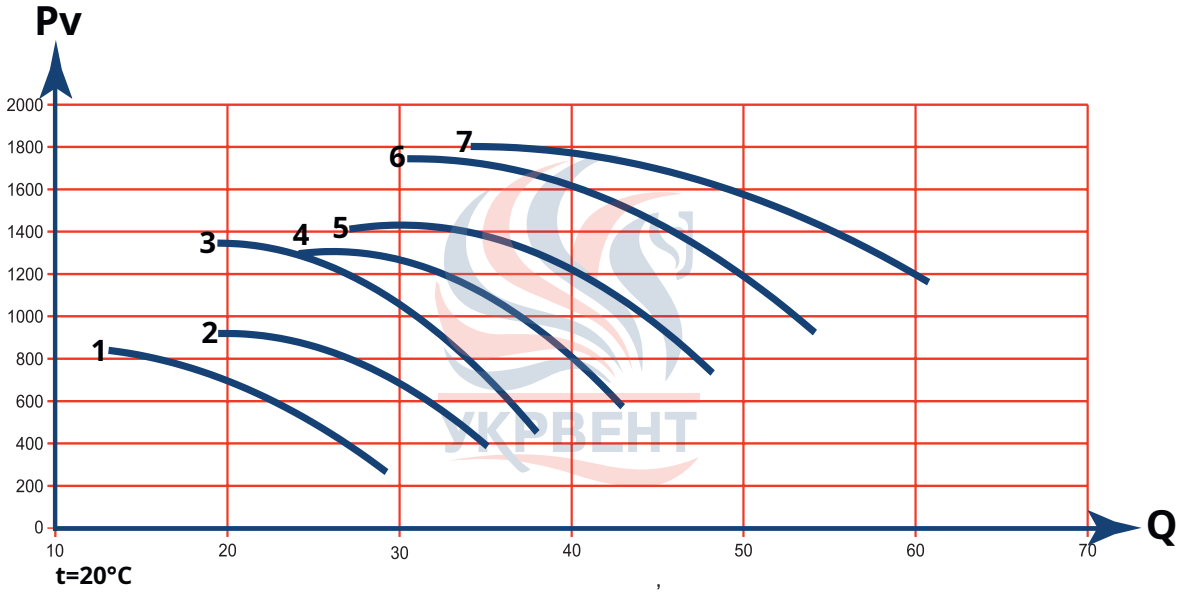
Overall and connection dimensions

VO-6.3-02



VO-7.1

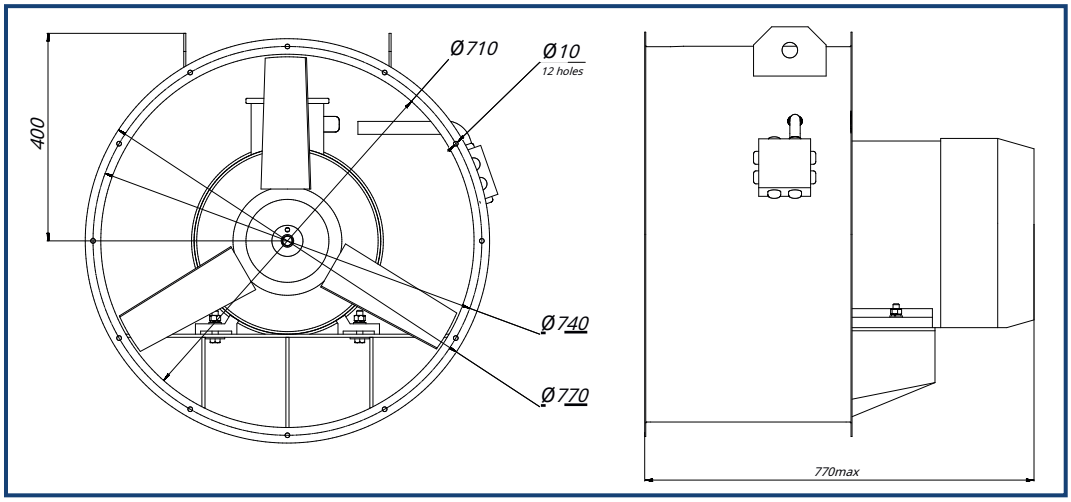
Aerodynamic characteristics



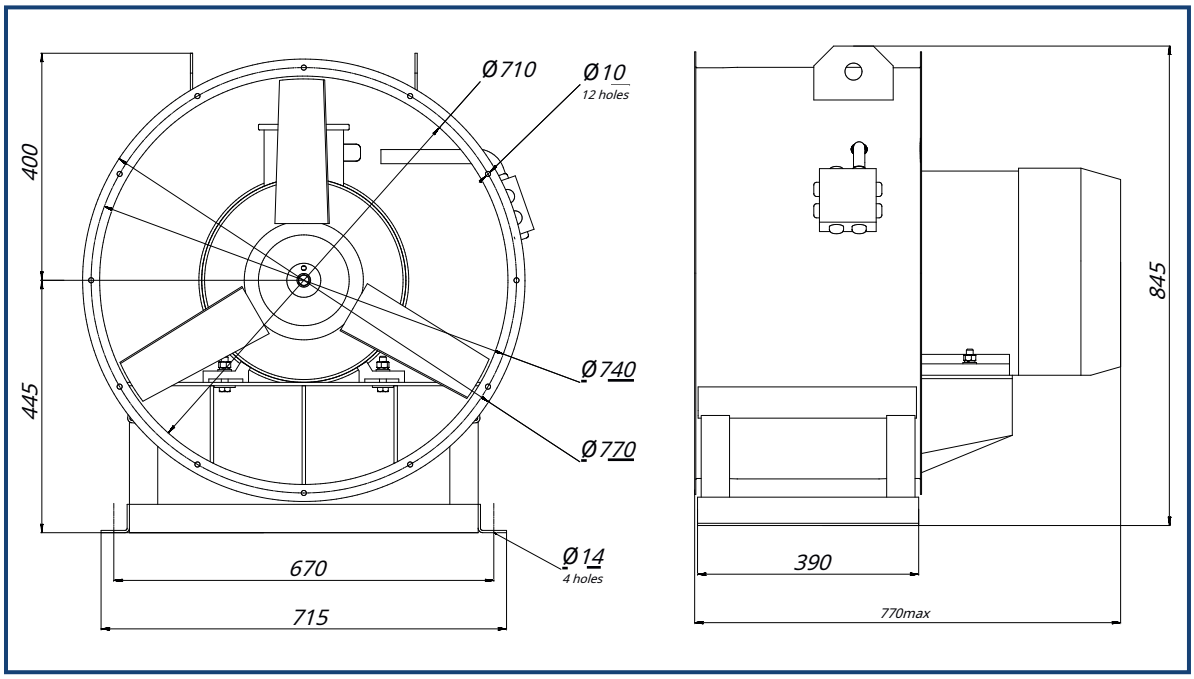
Curve №	Power, kW,	Frequency of rotation of the impeller , rpm.	Rated current, A	Weight of ducted fan, max kg	Weight of the roof fan, max kg
1	*5.5*	*2850*	*11.2*	*98*	*158*
2	*7.5*	*2860*	*15.1*	*117*	*177*
3	*11*	*2880*	*21.3*	*154*	*214*
4	*15*	*2910*	*28.8*	*184*	*244*
5	*18.5*	*2920*	*34.7*	*204*	*264*
6	*22*	*2920*	*41*	*254*	*316*
7	*30*	*2920*	*55.4*	*275*	*335*

Overall and connection dimensions

VO-7.1-00

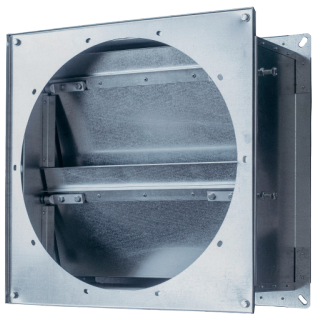


VO-7.1-01



Additional equipment

Flexible insert VK-710

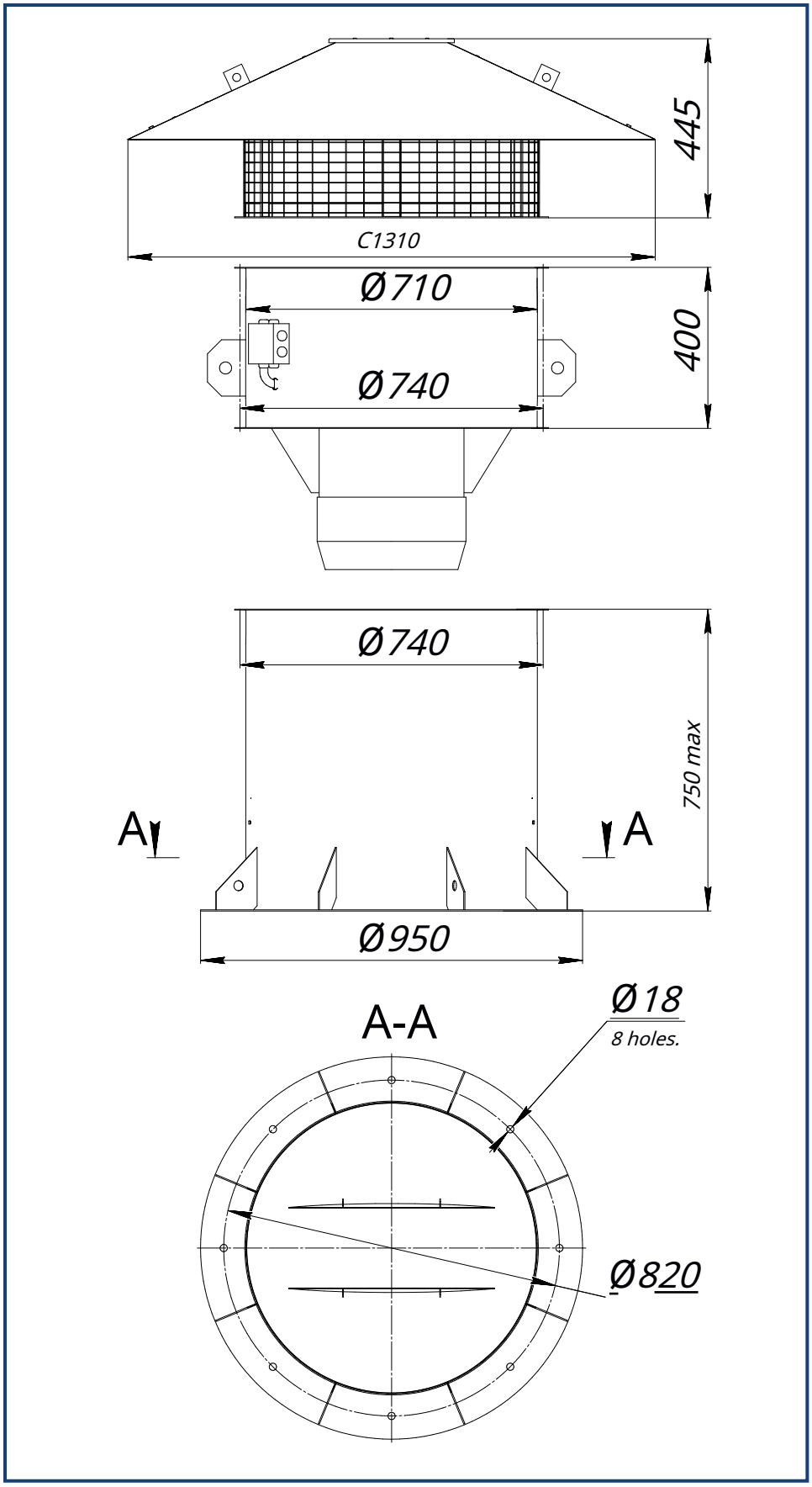


Petal valve KOL-710x710-Ø710

Protective net SAP-710

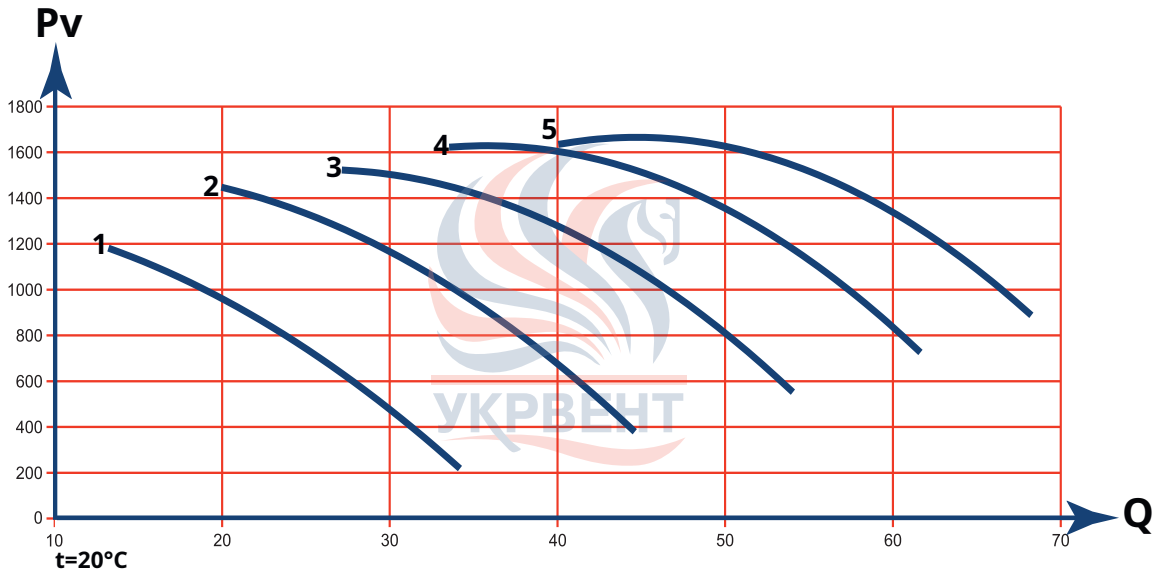
Overall and connection dimensions

VO-7.1-02



VO-8

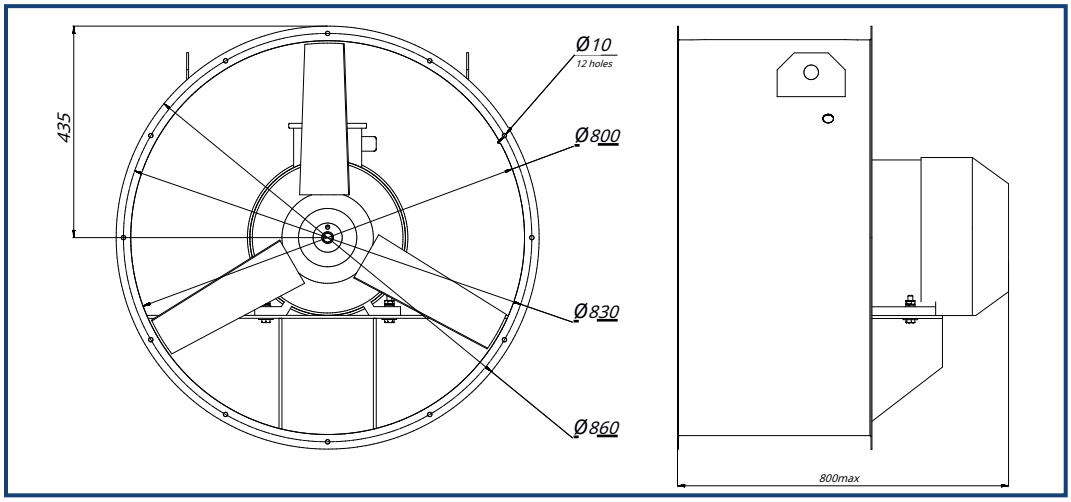
Aerodynamic characteristics



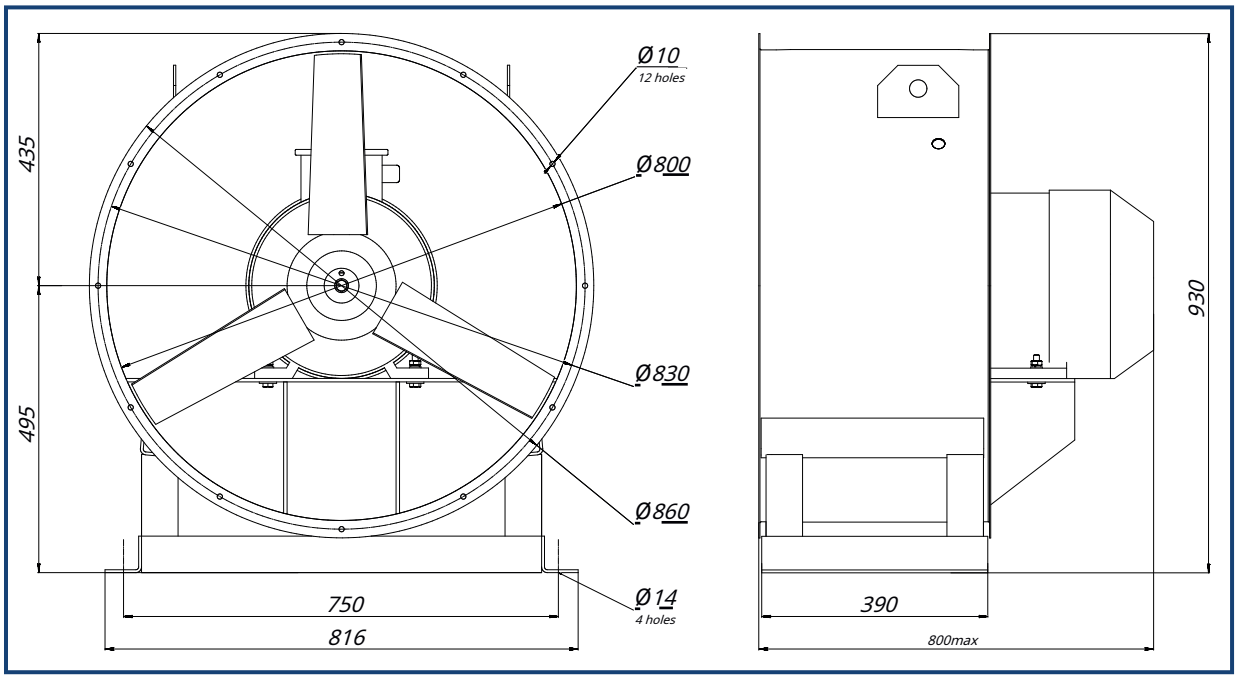
Curve №	Power, kW,	Frequency of rotation of the impeller , rpm.	Rated current, A	Weight of ducted fan, max kg	Weight of the roof fan, max kg
1	*7.5*	*2860*	*15.1*	*121*	*183*
2	*11*	*2880*	*21.3*	*158*	*220*
3	*15*	*2910*	*28.8*	*188*	*250*
4	*22*	*2920*	*41*	*249*	*311*
5	*30*	*2920*	*55.4*	*268*	*330*

Overall and connection dimensions

VO-8-00

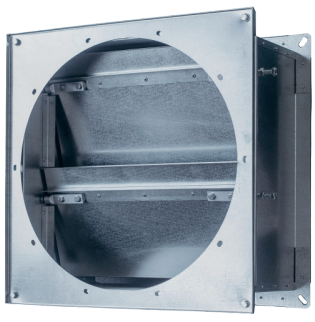


VO-8-01



Additional equipment

Flexible insert VK-800

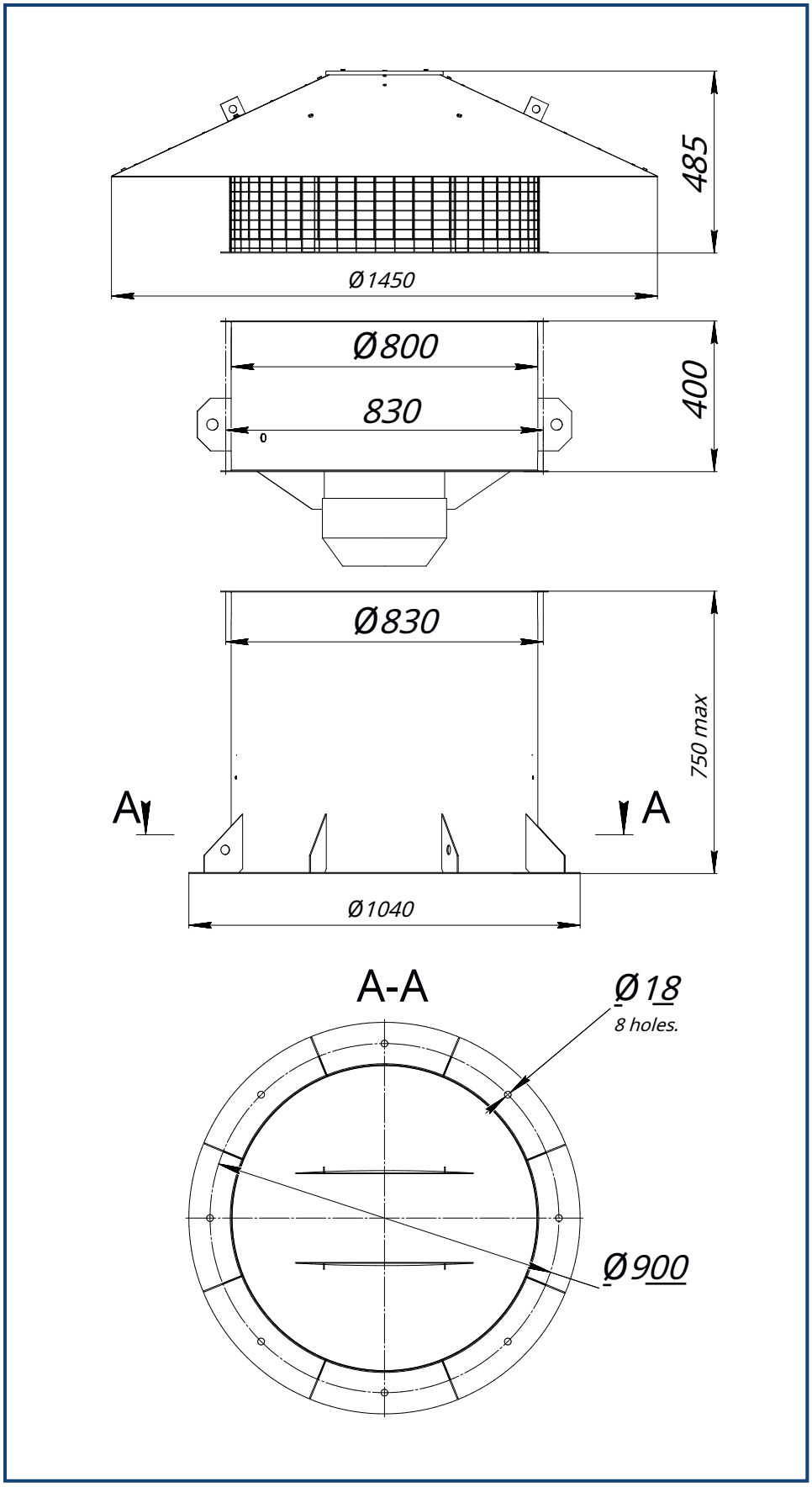


Petal valve KOL-800x800-Ø800

Protective net SAP-800

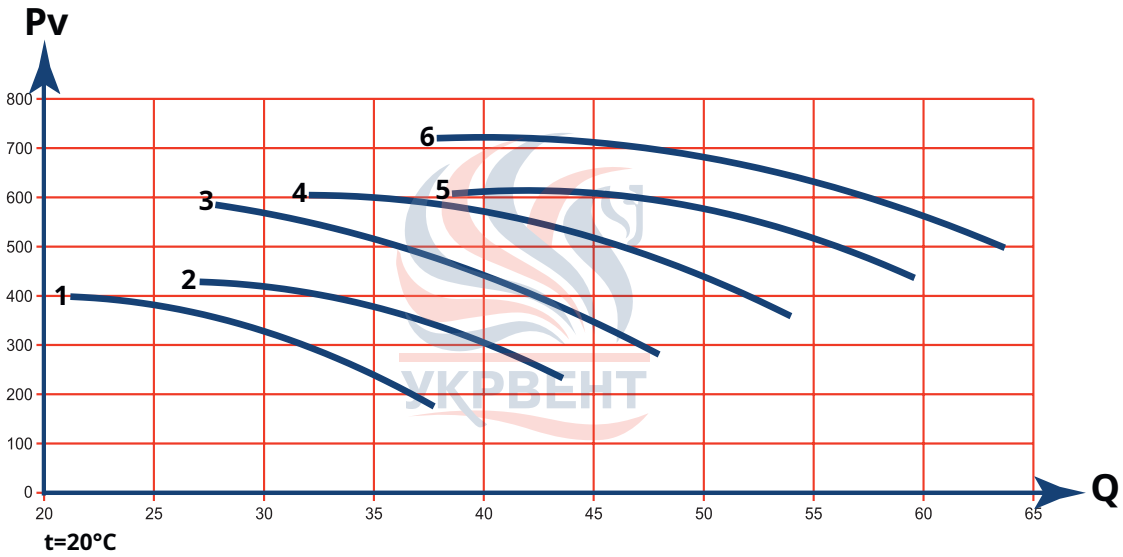
Overall and connection dimensions

VO-8-02



VO-9

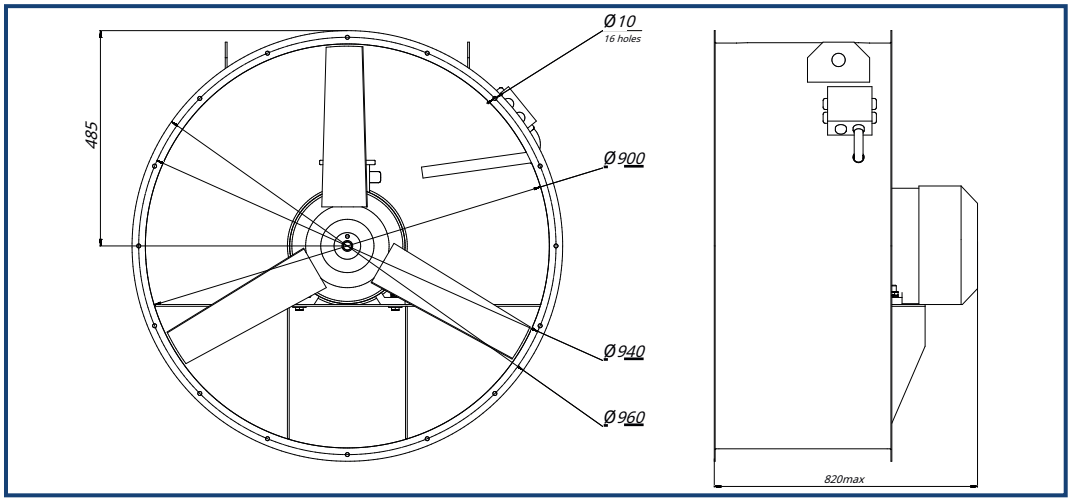
Aerodynamic characteristics



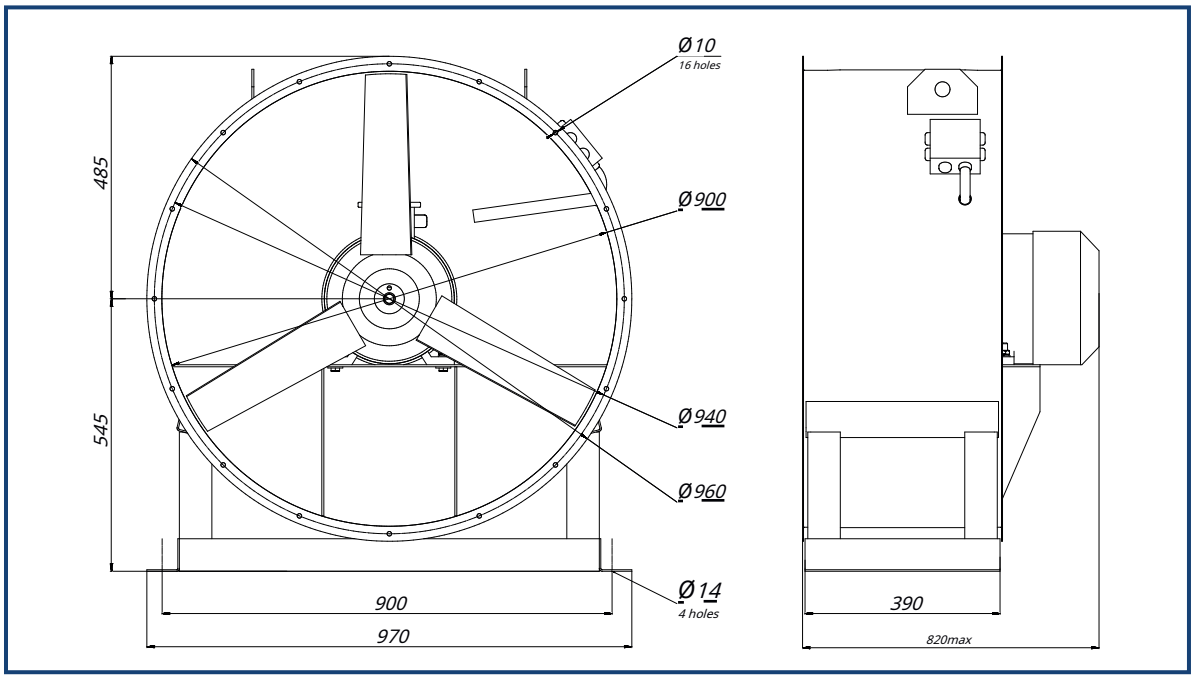
Curve №	Power, kW,	Frequency of rotation of the impeller , rpm.	Rated current, A	Weight of ducted fan, max kg	Weight of the roof fan, max kg
1	*4*	*1410*	*9.38*	*123*	*195*
2	*5.5*	*1440*	*12.1*	*141*	*213*
3	*7.5*	*1440*	*15.8*	*166*	*238*
4	*11*	*1440*	*22.9*	*177*	*249*
5	*15*	*1450*	*30.1*	*217*	*289*
6	*18.5*	*1450*	*36.1*	*229*	*301*

Overall and connection dimensions

VO-9-00

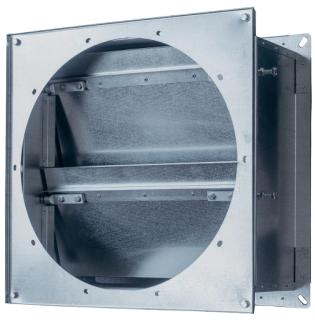


VO-9-01



Additional equipment

Flexible insert VK-900

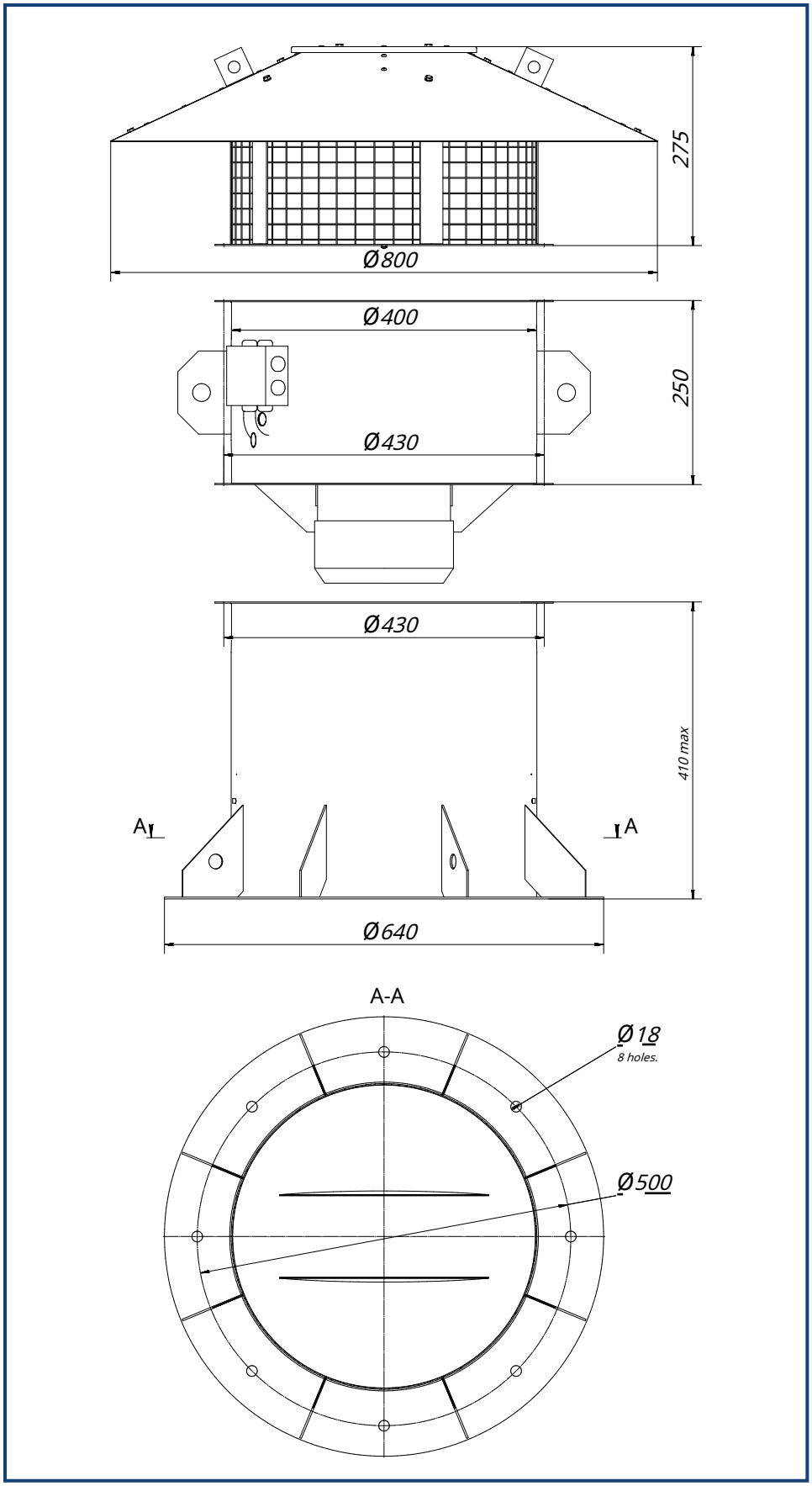


Petal valve QTY-900x900-Ø900

Protective net SAP-900

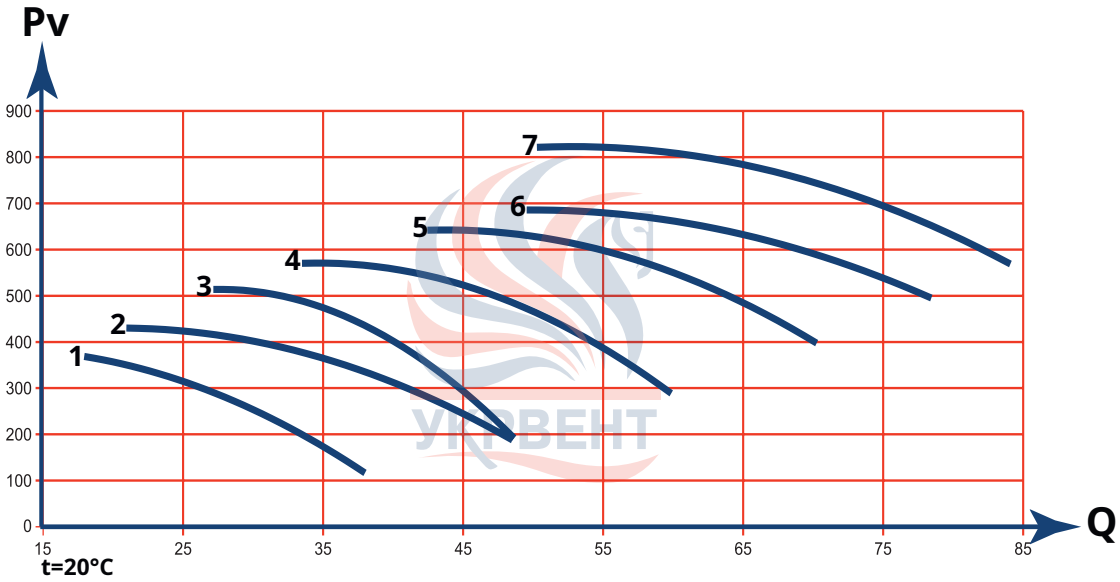
Overall and connection dimensions

VO-9-02



VO-10

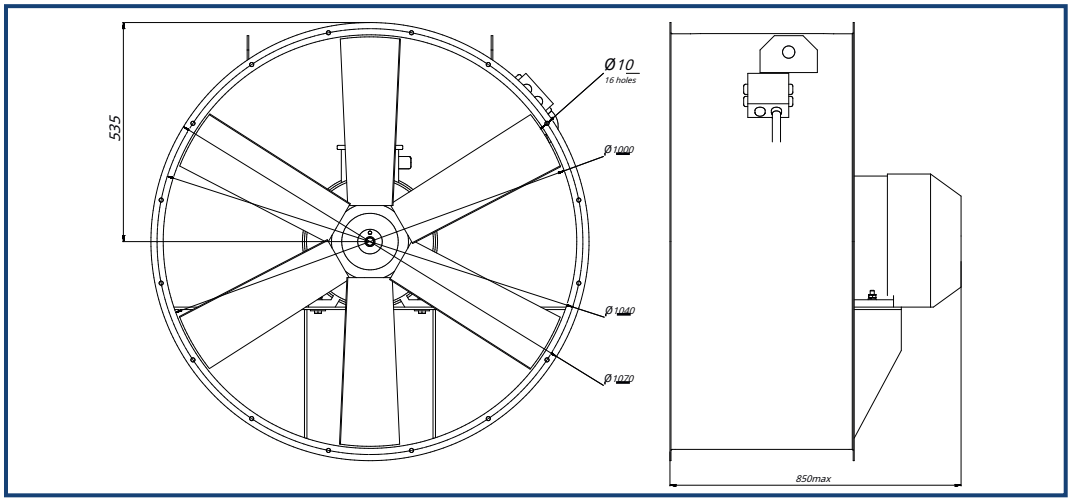
Aerodynamic characteristics



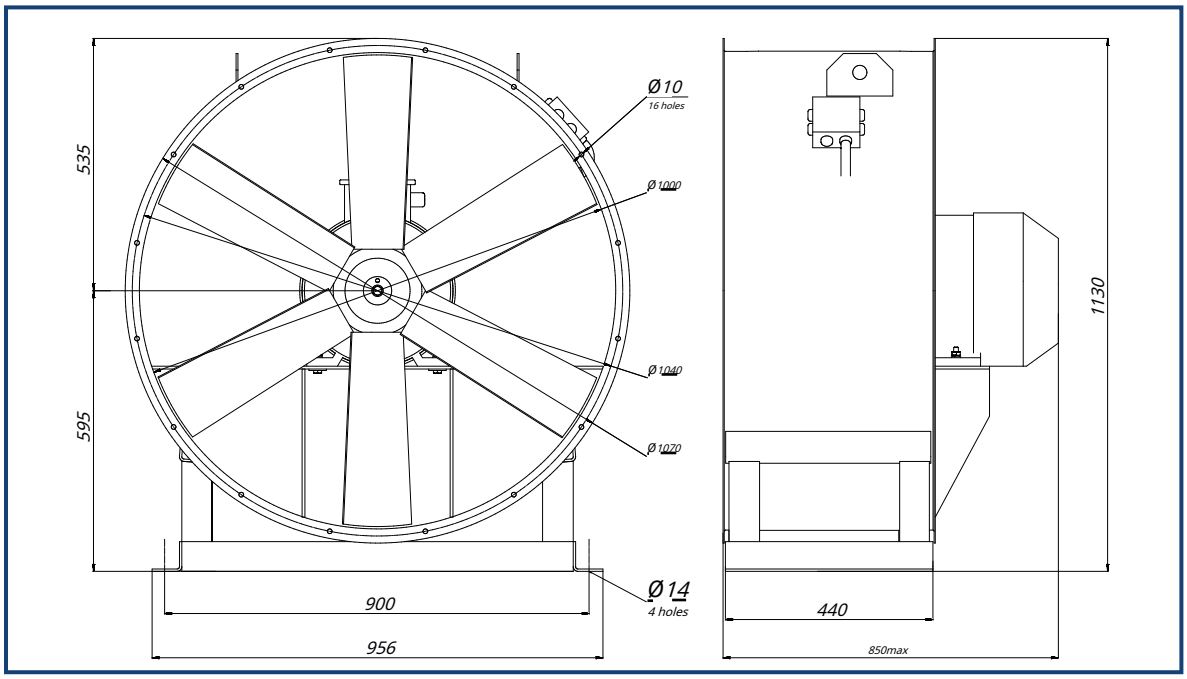
Curve №	Power, kW,	Frequency of rotation of the impeller , rpm.	Rated current, A	Weight of ducted fan, max kg	Weight of the roof fan, max kg
1	*4*	*1410*	*9.38*	*140*	*247*
2	*5.5*	*1440*	*12.1*	*158*	*265*
3	*7.5*	*1440*	*15.8*	*183*	*290*
4	*11*	*1440*	*22.9*	*194*	*301*
5	*15*	*1450*	*30.1*	*241*	*348*
6	*18.5*	*1450*	*36.1*	*245*	*352*
7	*22*	*1450*	*43.2*	*280*	*387*

Overall and connection dimensions

VO-10-00

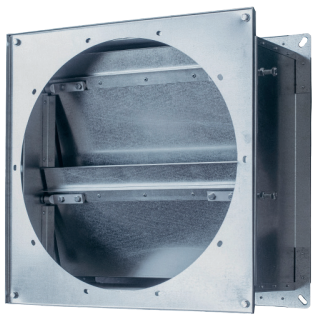


VO-10-01



Additional equipment

Flexible insert VK-1000

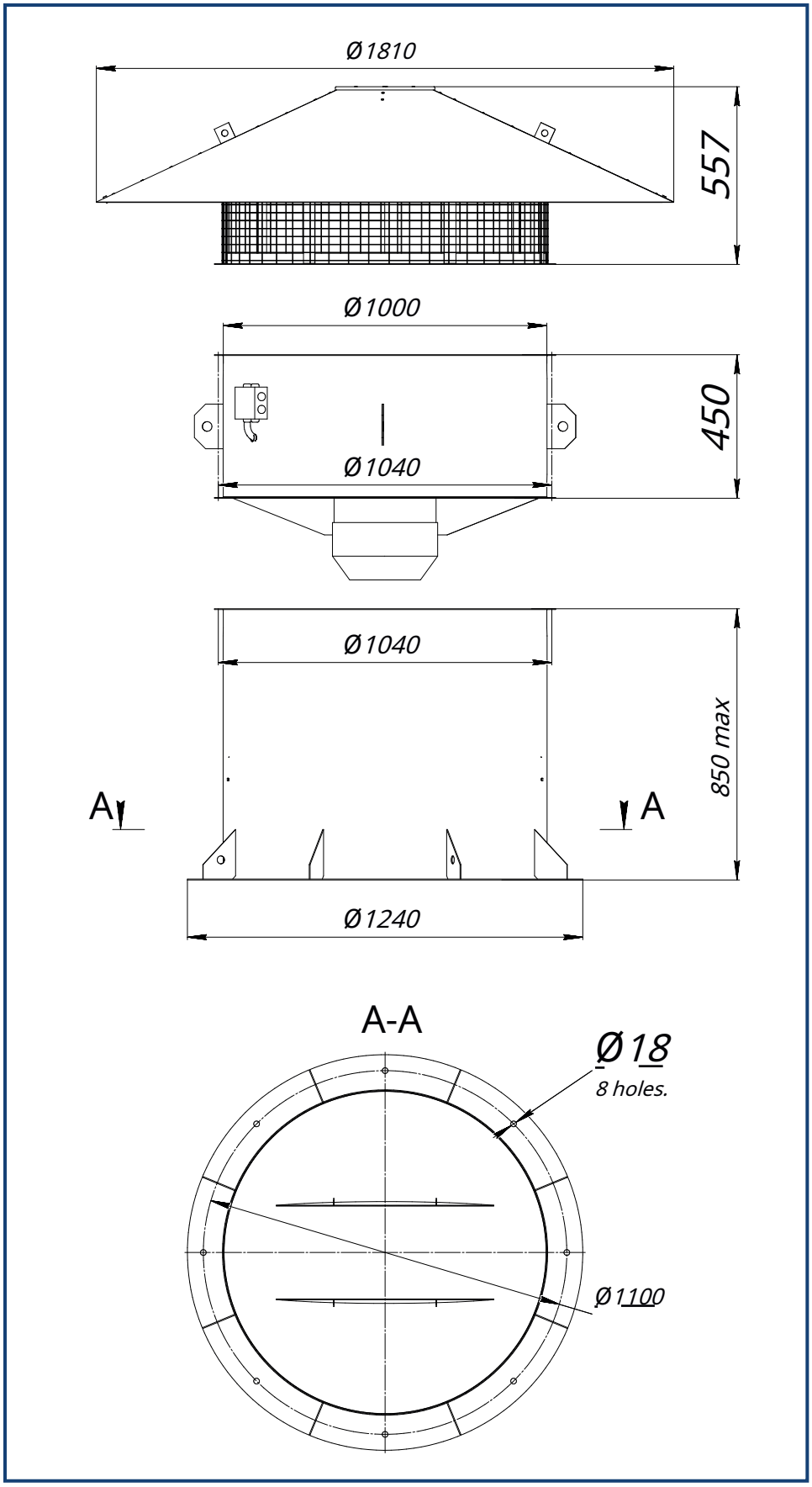


Petal valve KOL-1000x1000-Ø1000

Protective net SAP-1000

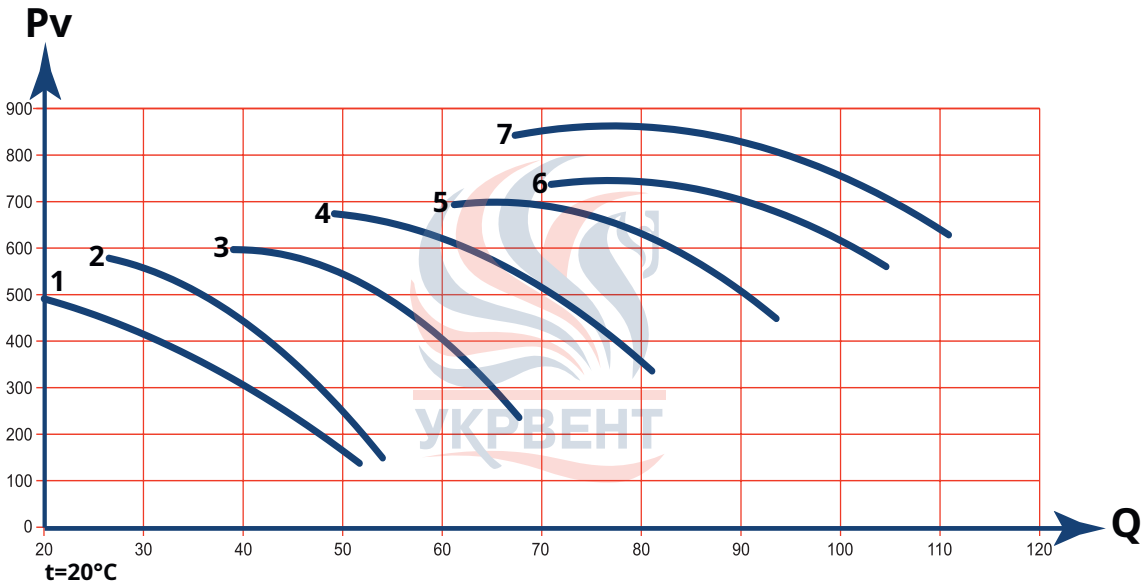
Overall and connection dimensions

VO-10-02



VO-11.2

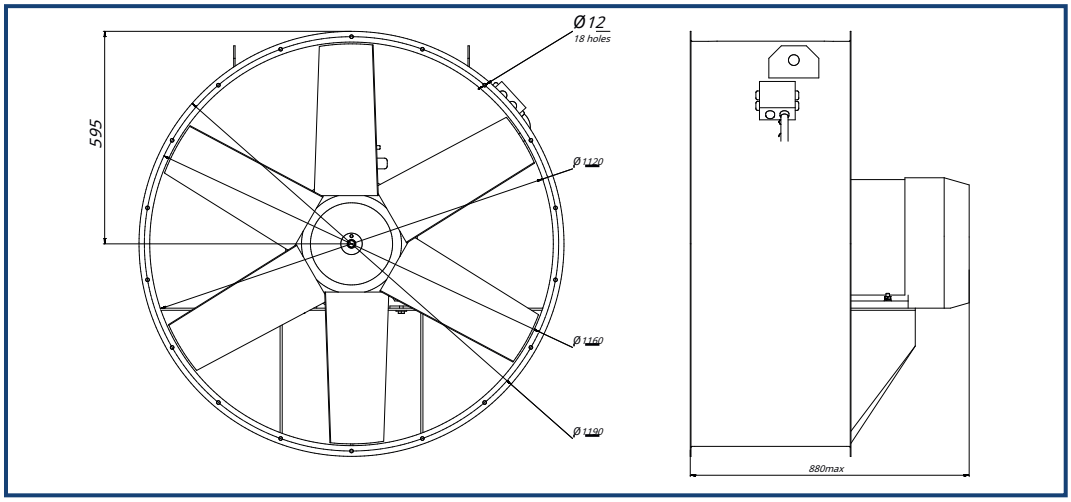
Aerodynamic characteristics



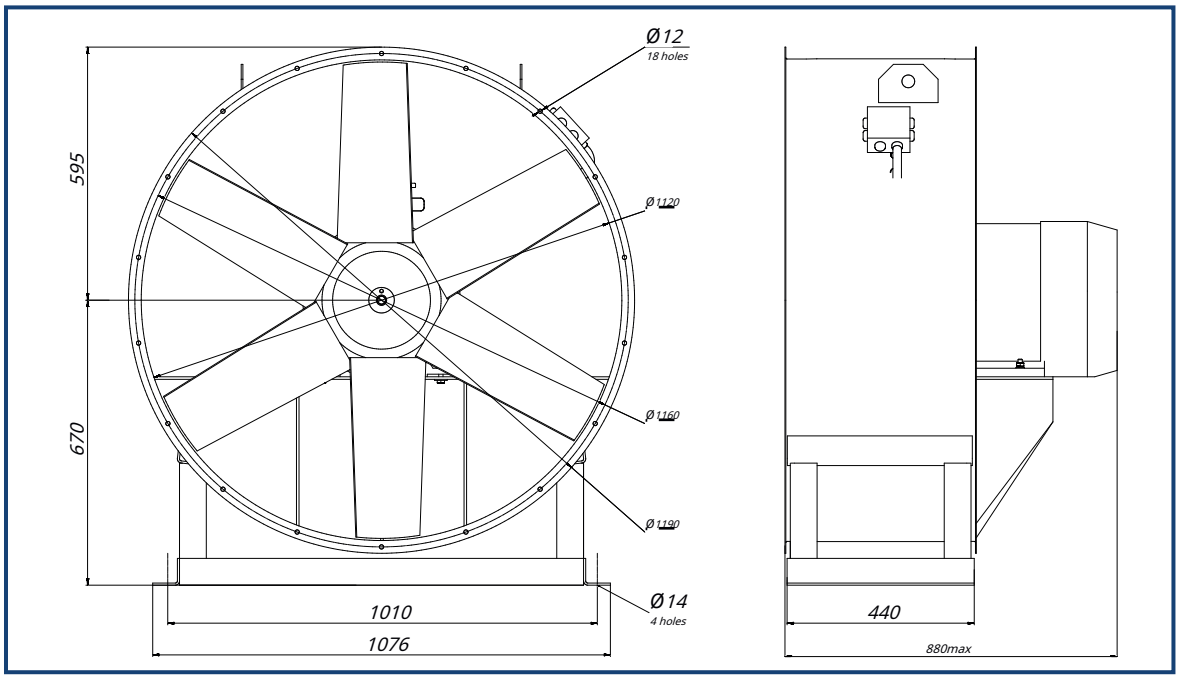
Curve №	Power, kW,	Frequency of rotation of the impeller , rpm.	Rated current, A	Weight of ducted fan, max kg	Weight of the roof fan, max kg
1	*7.5*	*1440*	*15.8*	*212*	*356*
2	*11*	*1440*	*22.9*	*232*	*376*
3	*15*	*1450*	*30.1*	*272*	*416*
4	*18.5*	*1450*	*36.1*	*276*	*420*
5	*22*	*1450*	*43.2*	*311*	*455*
6	*30*	*1450*	*57.9*	*324*	*468*
7	*37*	*1450*	*69.9*	*402*	*540*

Overall and connection dimensions

VO-11.2-00

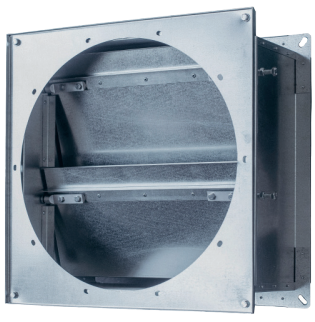


VO-11,2-01



Additional equipment

Flexible insert VK-1120

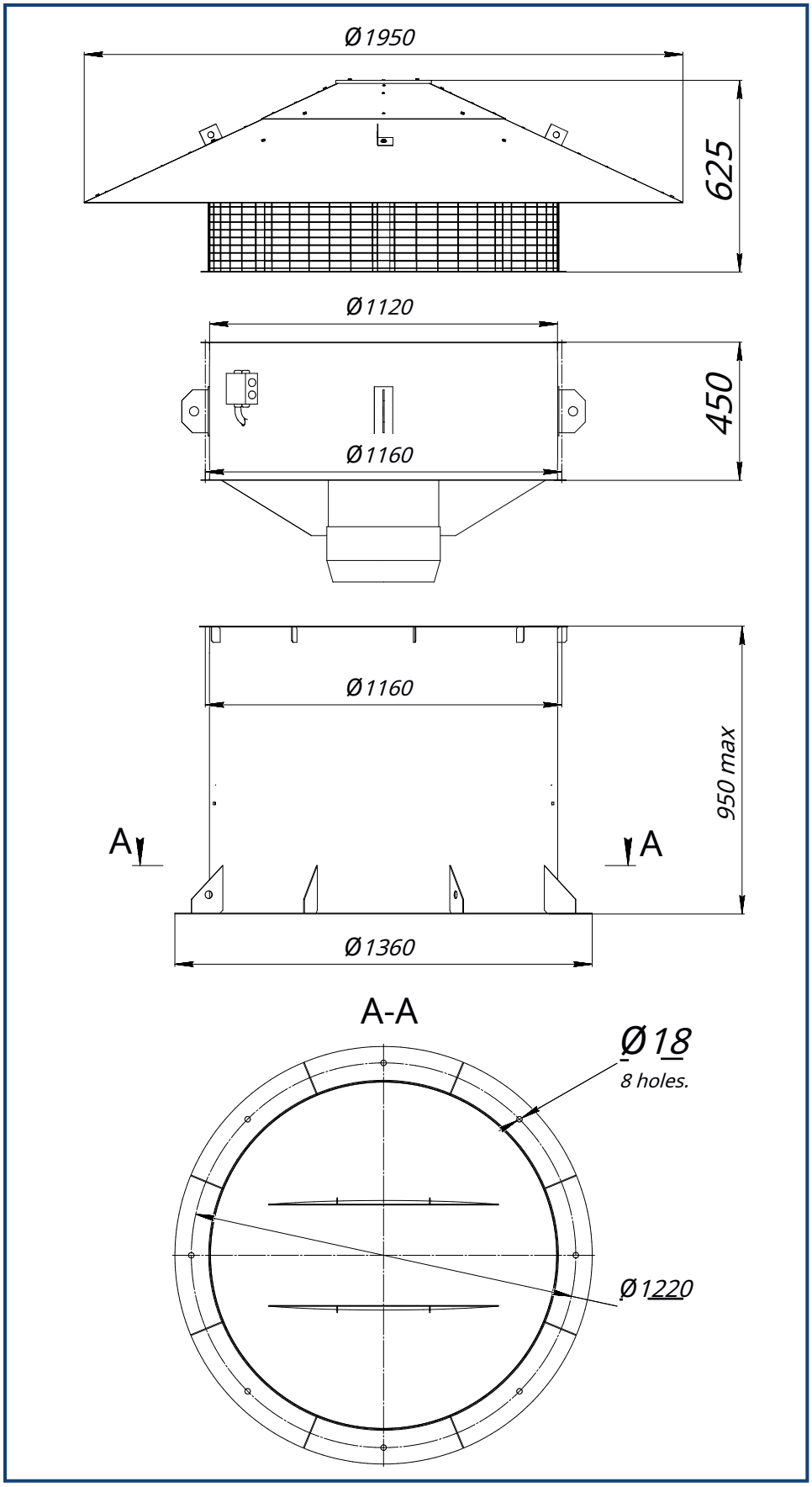


Petal valve KOL-1120x1120-Ø1120

Protective net SAP-1120

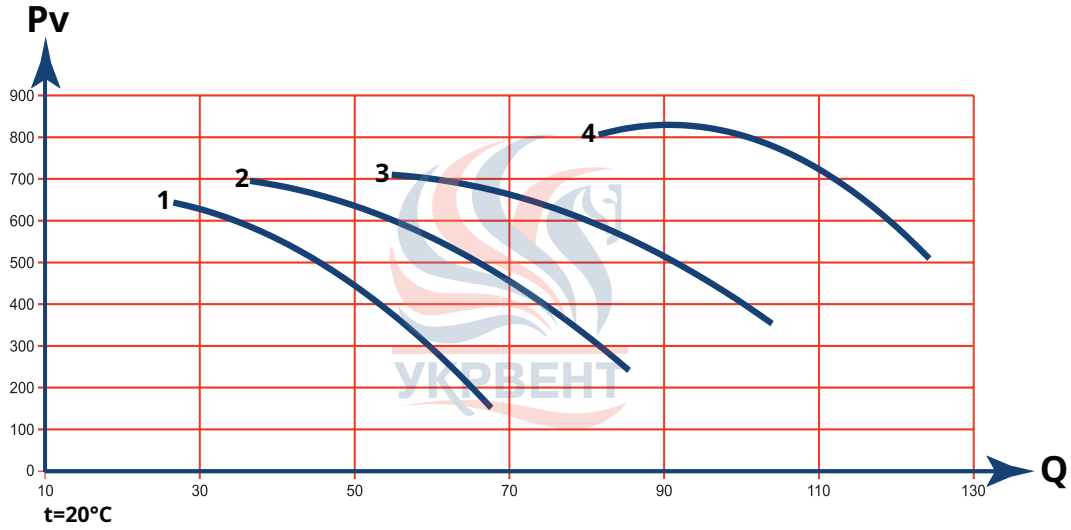
Overall and connection dimensions

VO-11,2-02



VO-12.5

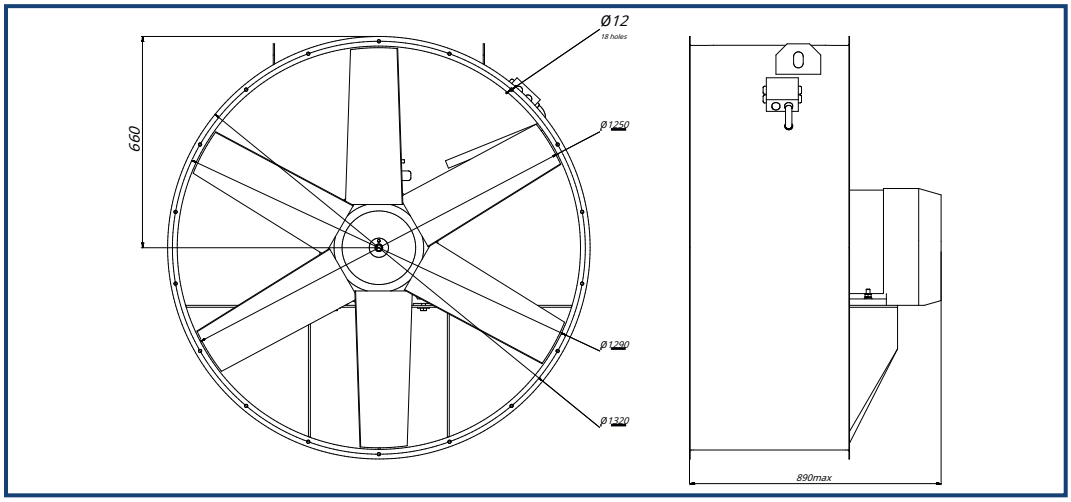
Aerodynamic characteristics



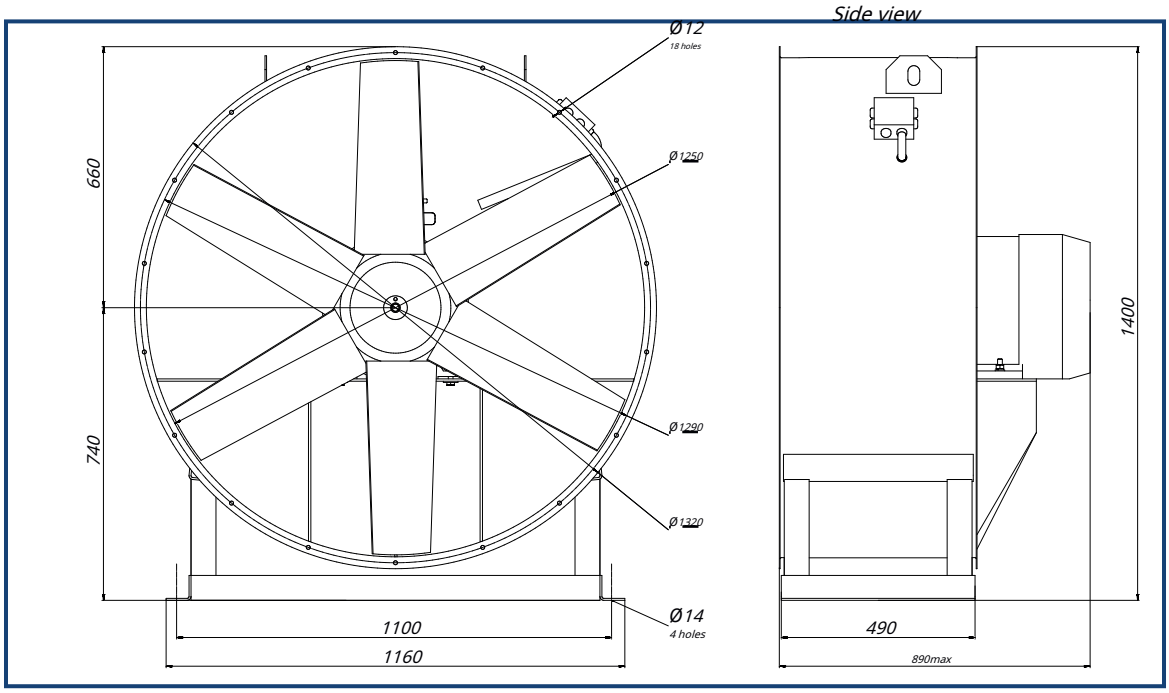
Curve №	Power, kW,	Frequency of rotation of the impeller , rpm.	Rated current, A	Weight of ducted fan, max kg	Weight of the roof fan, max kg
1	*18.5*	*1450*	*36.1*	*317*	*484*
2	*22*	*1450*	*43.2*	*341*	*508*
3	*30*	*1450*	*57.9*	*365*	*532*
4	*37*	*1450*	*69.9*	*443*	*610*

Overall and connection dimensions

VO-12.5-00

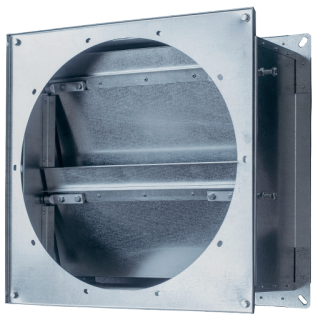


VO-12.5-01



Additional equipment

Flexible insert VK-1250

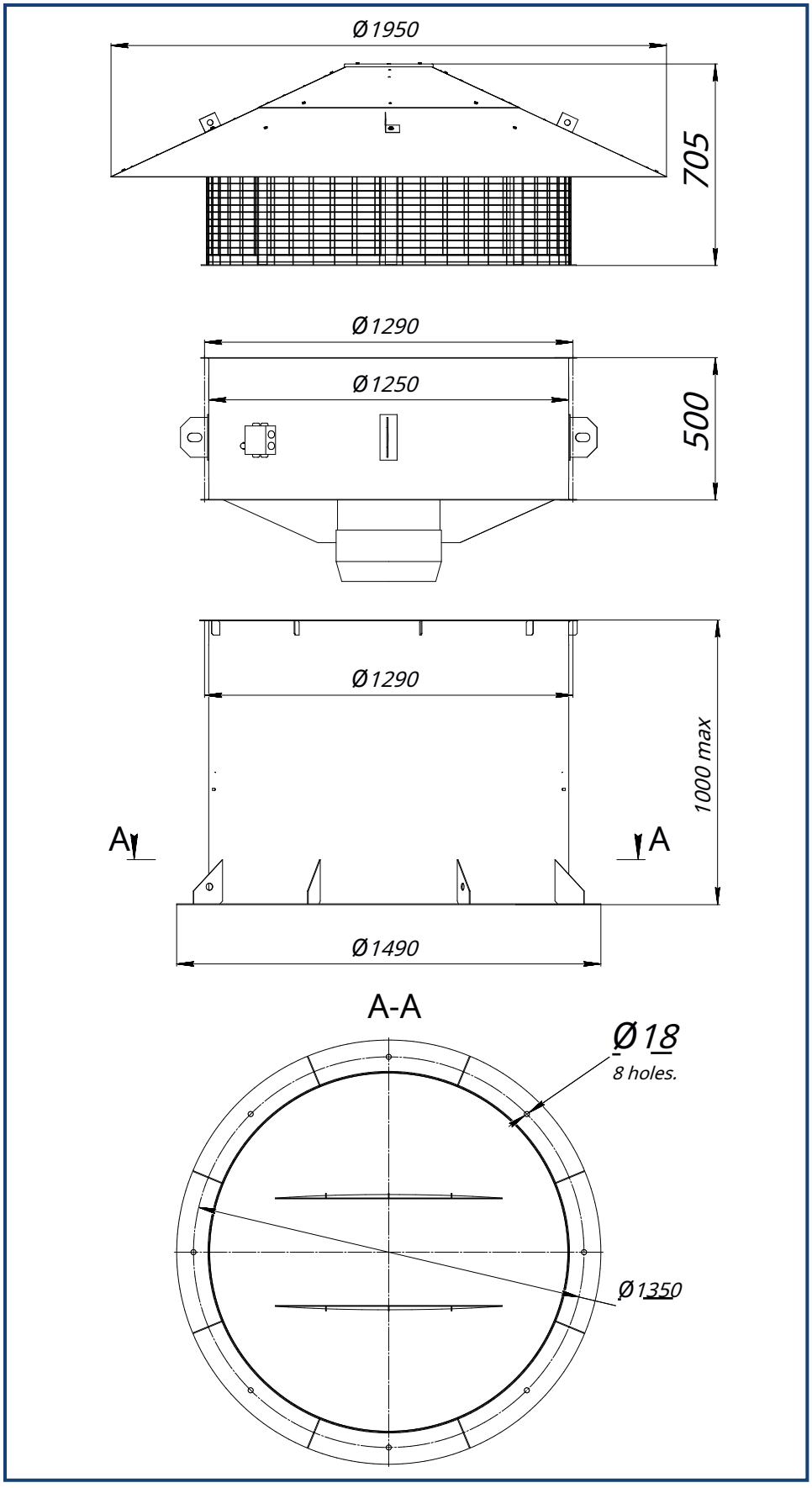


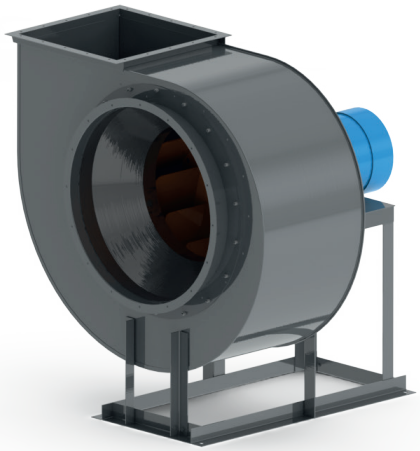
Petal valve KOL-1250x1250-Ø1250

Protective net SAP-1250

Overall and connection dimensions

VO-12.5-02





low pressure radial **VR-80-70**intended ventilation, air heating and other sanitary-technical purposes and serve for air and other gas mixtures in conditions of frost at an ambient temperature of minus 40°C, which do not contain sticky substances, abrasive
materials with a dust content (content of x impurities) of not more than 100 mg/m$_{with}$The temperature of wind flows should not exceed 80°C. The properties of air masses and other gas carbon steel, from which the main parts are made,

fan **VR-80-70** should not and aggressiveness of the air.

Technical characteristics of BP-80-70:
* used in stationary exhaust or supply ventilation systems;
* air capacity from 400 m$_{with}$/h up to 84000 m$_{with}$/hour;
* static pressure from 150 Pa to 3100 Pa;
* one-sided suction;
* number of blades - 12 units;
* low pressure;
* spiral rotating housing;
* direction of rotation - right and left.

Fans are designed to operate in moderate (U) climate conditions of the 1st location category of GOST 15150. Ambient temperature from -40°C to +40°C.

The average vibration velocity of external vibration sources at the fan installation locations is slightly more than 2 mm/s.
The aerodynamic characteristics of the fans are presented in graphs, where:
Q is the air capacity m$_3$/hour 10$_3$;
Psv - static pressure at p = 1$_0$.2 kg/m$_{with}$and$_0$ t = 20°C air;
Fan pressure **Psv** and power consumption by the electric motor **N**, at a different density **p** of the transported medium or other air temperature**t**can be calculated according to the following formulas:

$$Psv_p = (p / p_0) * Psv_0 \qquad Np = (p / p_0) * N \qquad Nt = Psv_t = [293 / (273 + t)] * Psv_0, \qquad [293 / (273 + t)] * N_0$$

Marking

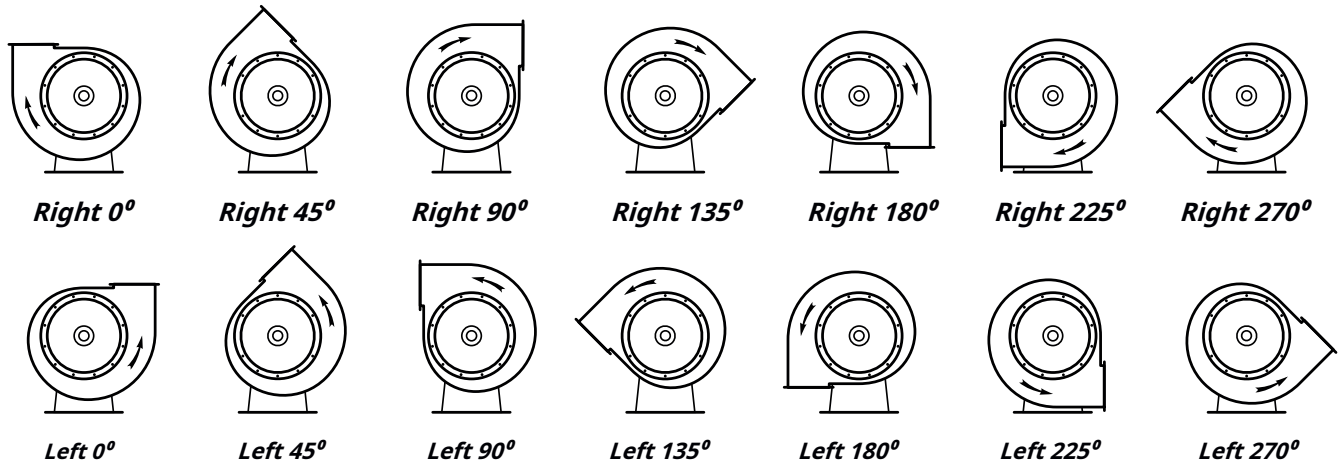
Example:

Radial fan VR-80-70; number 6.3; general industrial version; temperature moving airup to 80°C; housing position right 0°; electric motor with installed power Ny=4 kW, rotation speed n=1500 rpm.

VR-80-70 - 6.3 - O - 80° - Pr.0° - 4/1500

Fan type:**VR-80-70**
Fan number:**2.5; 3.15; 3.55; 4; 4.5; 5; 5.6; 6.3; 7.1; 8; 9; 10; 11.2; 12.5;**
Appointment: **O**- general industrial; **DU**- smoke extraction; **G**- heat-resistant; **K**- corrosion-resistant (specify the brand of stainless steel); **VZI**- explosion-proof;
Temperature of the transported air, °C:**80** (O)**; 200** (G)**; 400** (DU)**; 600** (DU)**;**
Fan housing position: **Left/Right -0°; 45°; 90°; 135°; 180°; 270°; 315°;**
Electric motor parameters, Ny/n: **Ny**- power, kW; **n**- synchronous speed, rpm (750; 1000; 1500; 3000;

Fan housing position options

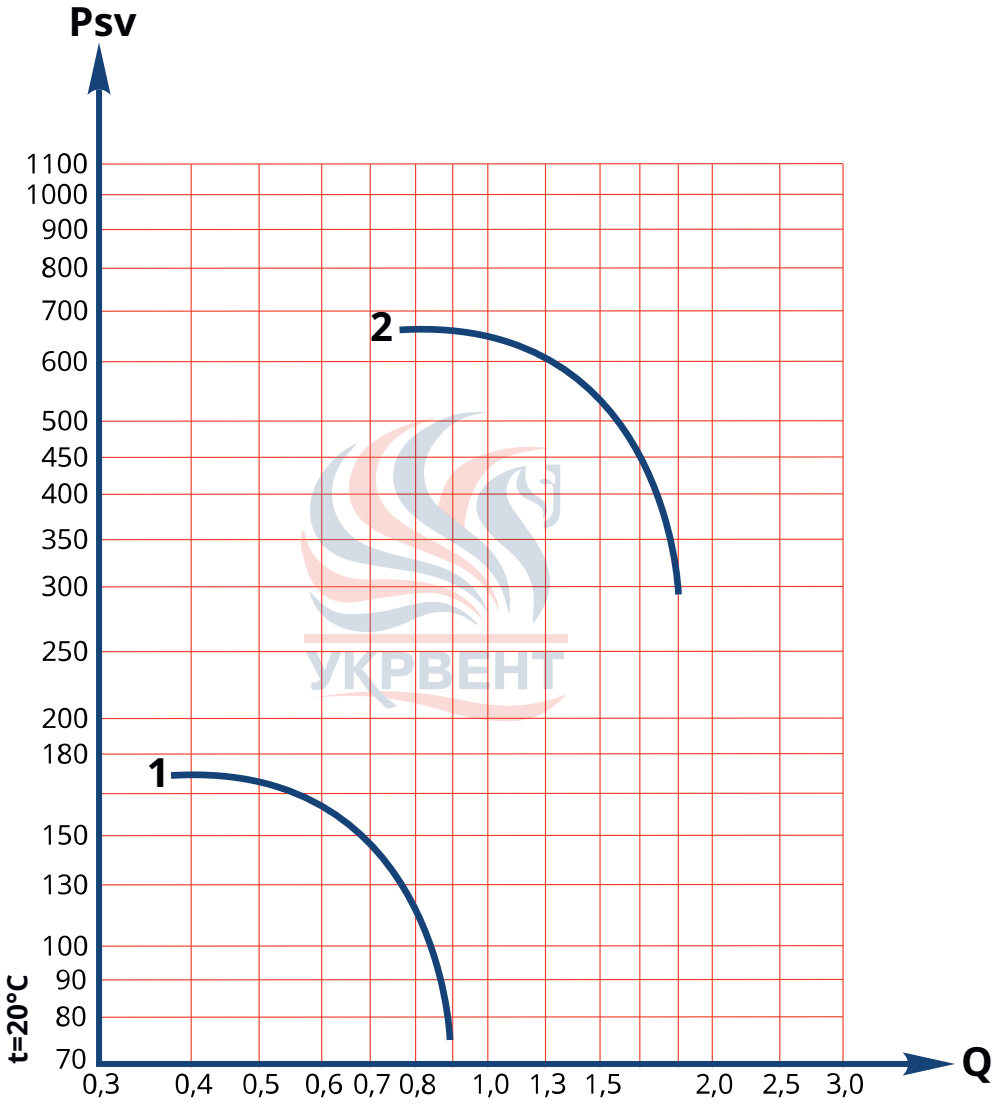


WARNING!

The fans are equipped with a three-phase electric motor as standard, in case If necessary, it is possible to install a single-phase electric motor.

VR-80-70-2.5

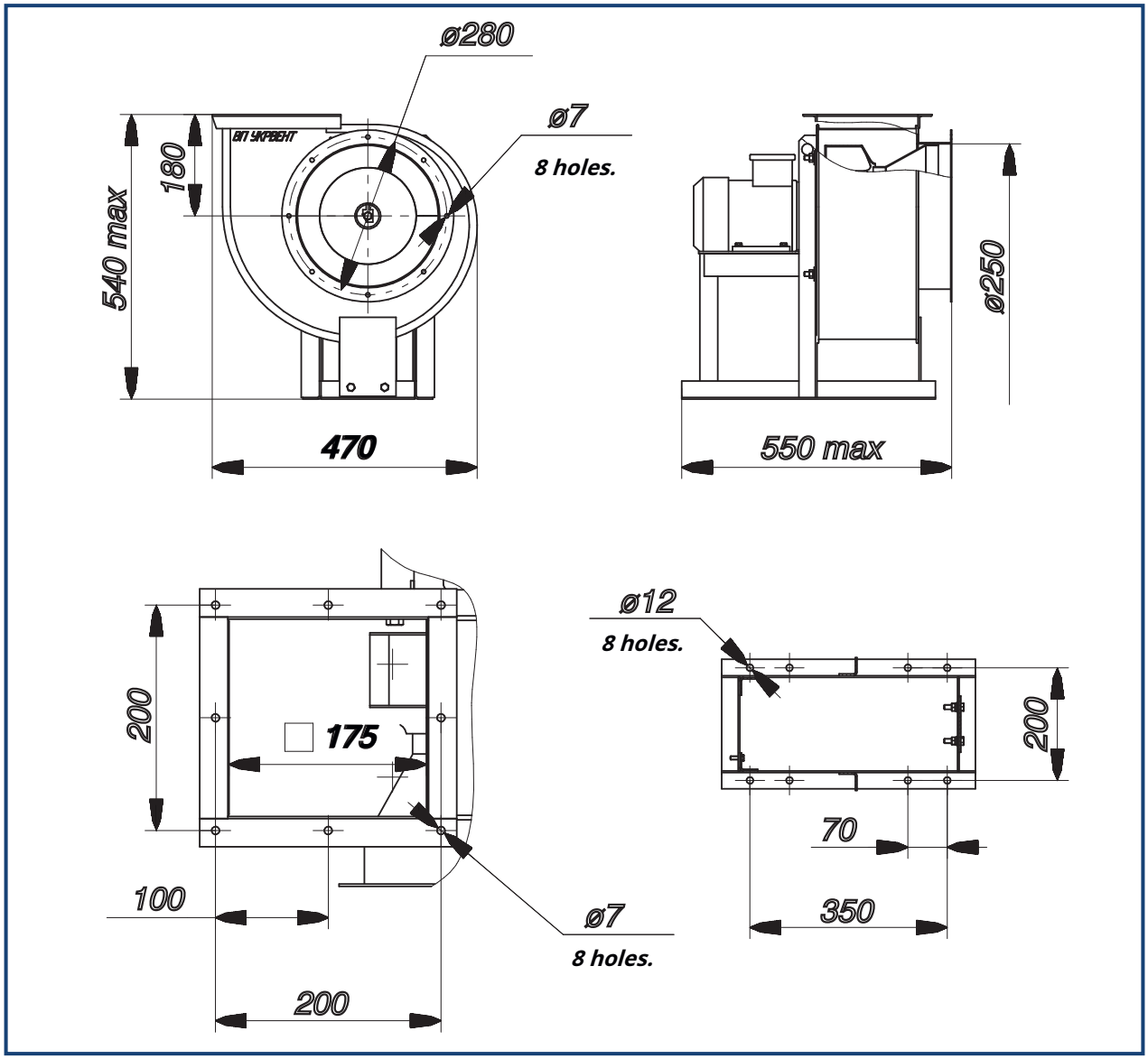
Aerodynamic characteristics



Curve №	Power, kW	Frequency of rotation of the impeller , rpm	Rated current, A	Weight of fan, max kg	Acoustics, dB,
1	***0.25***	***1320***	***0.82***	***28***	***70***
2	***0.55***	***2770***	***1.4***	***28***	***85***

VR-80-70-2.5

Overall and connection dimensions of the fan VR-80-70-2.5



Additional equipment

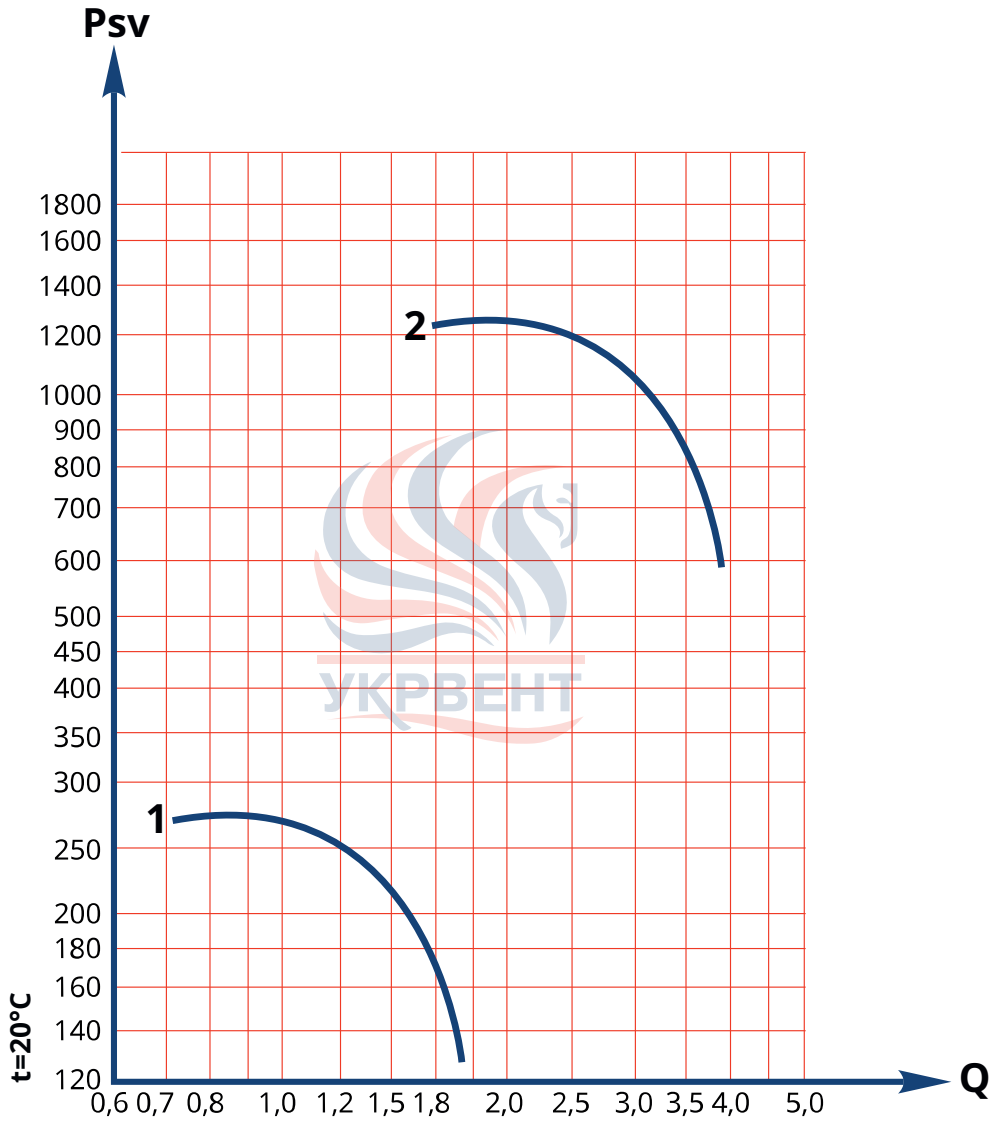
Flexible insert
VK-250

Frequency converter
UVE-810

Vibration isolator RV-30

VR-80-70-3.15

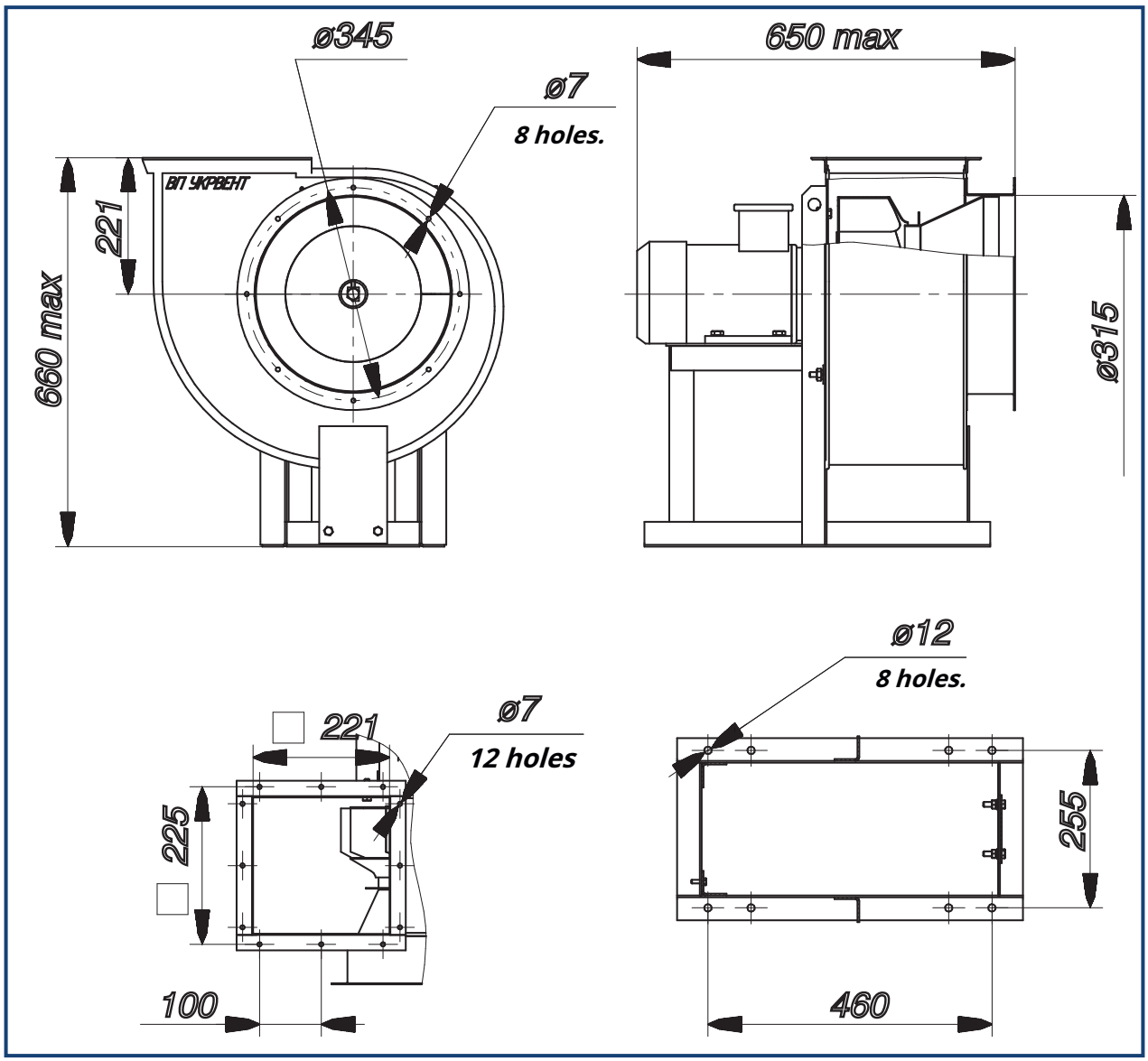
Aerodynamic characteristics



Curve №	Power, kW	Frequency of rotation of the impeller , rpm	Rated current, A	Weight of fan, max kg	Acoustics, dB,
1	*0.37*	*1325*	*1.22*	*41*	*71*
2	*1.5*	*2790*	*3.48*	*46*	*87*

VR-80-70-3.15

Overall and connection dimensions of the fan VR-80-70-3.15



Additional equipment

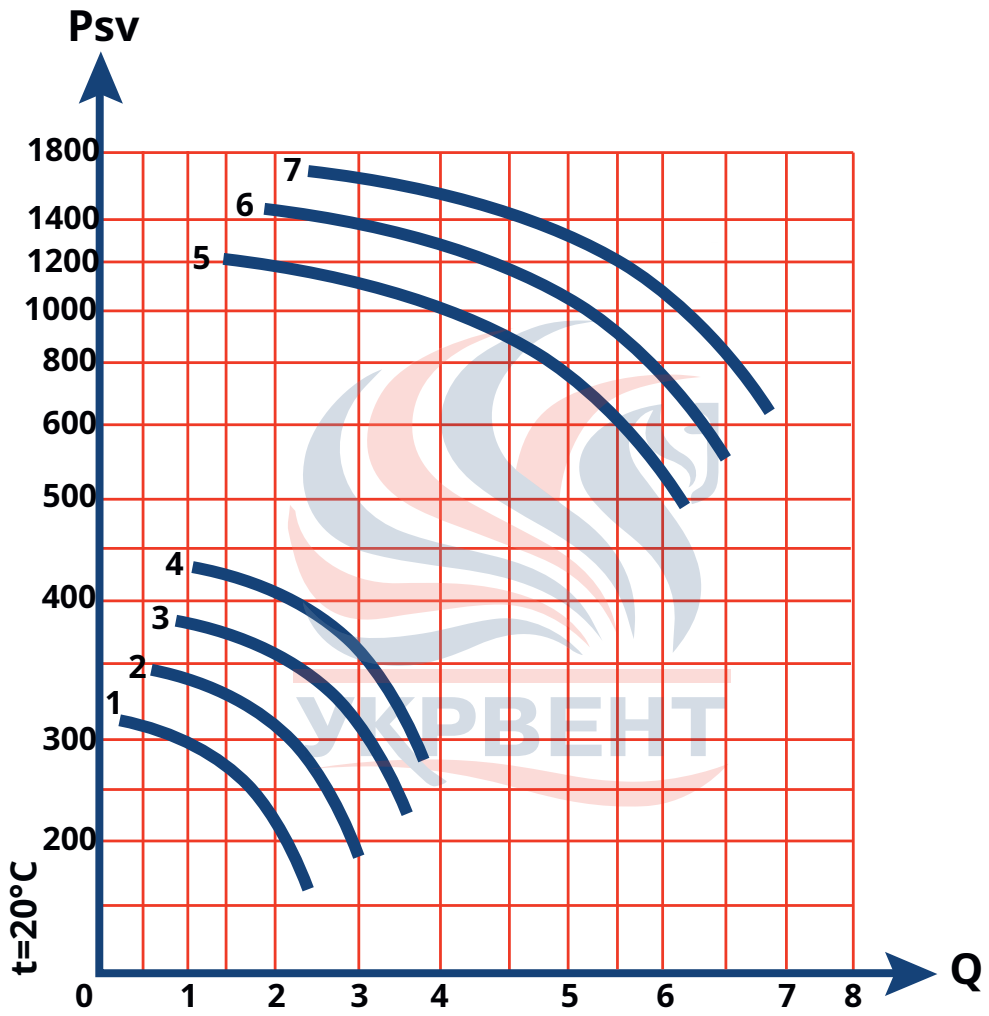
Flexible insert
VK-315

Frequency converter
UVE-810

Vibration isolator RV-30

VR-80-70-3.55

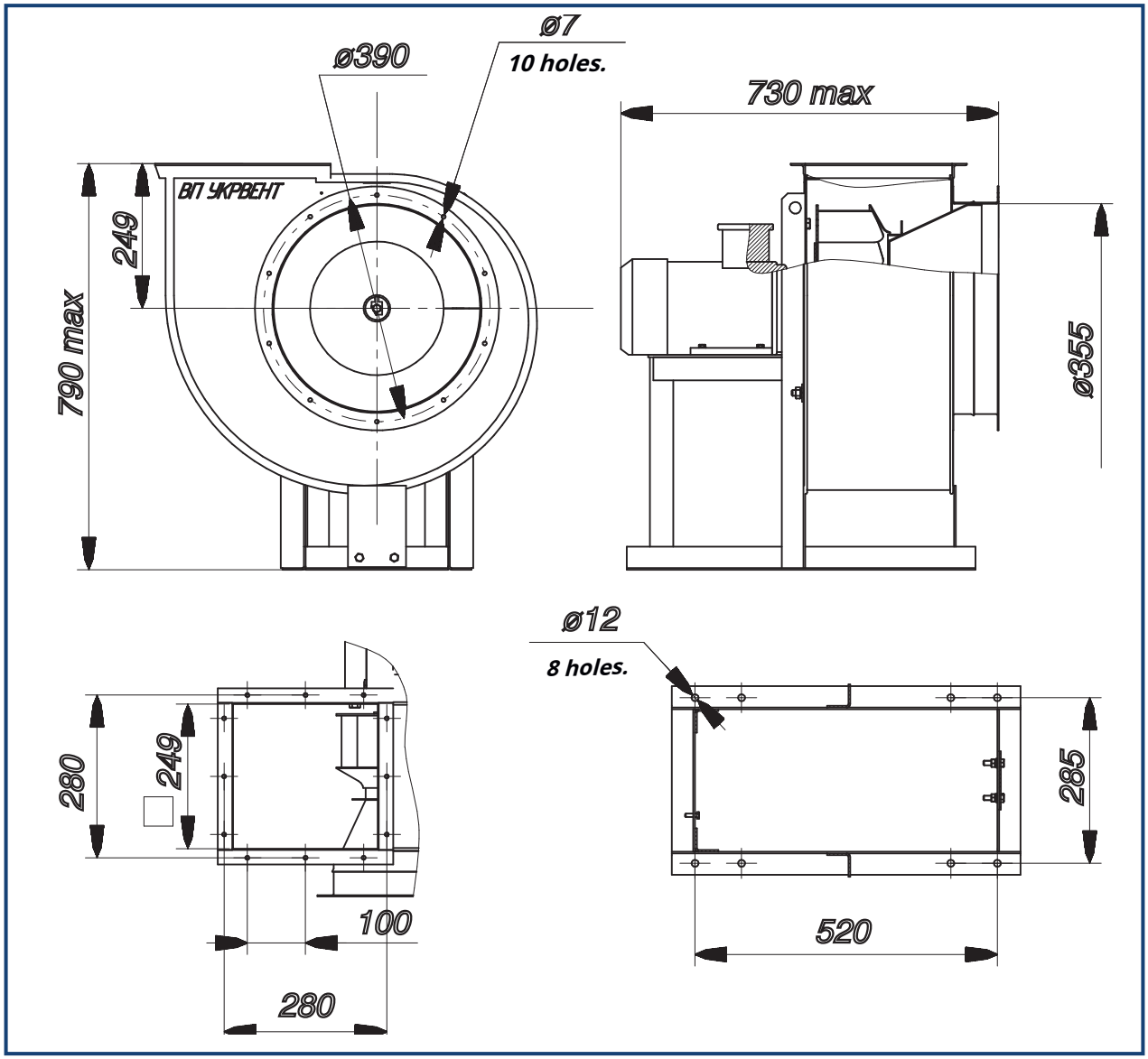
Aerodynamic characteristics



Curve №	Power, kW	Frequency of rotation of the impeller , rpm	Rated current, A	Weight of fan, max kg	Acoustics, dB,
1	*0.25*	*1320*	*0.82*	*52*	*71*
2	*0.37*	*1325*	*1.12*	*53*	*72*
3	*0.55*	*1350*	*1.57*	*54*	*72*
4	*0.75*	*1360*	*2.05*	*56*	*73*
5	*1.5*	*2840*	*3.46*	*64*	*88*
6	*2.2*	*2840*	*4.85*	*68*	*88*
7	*3*	*2845*	*6.34*	*71*	*90*

VR-80-70-3.55

Overall and connection dimensions of the fan VR-80-70-3.55



Additional equipment

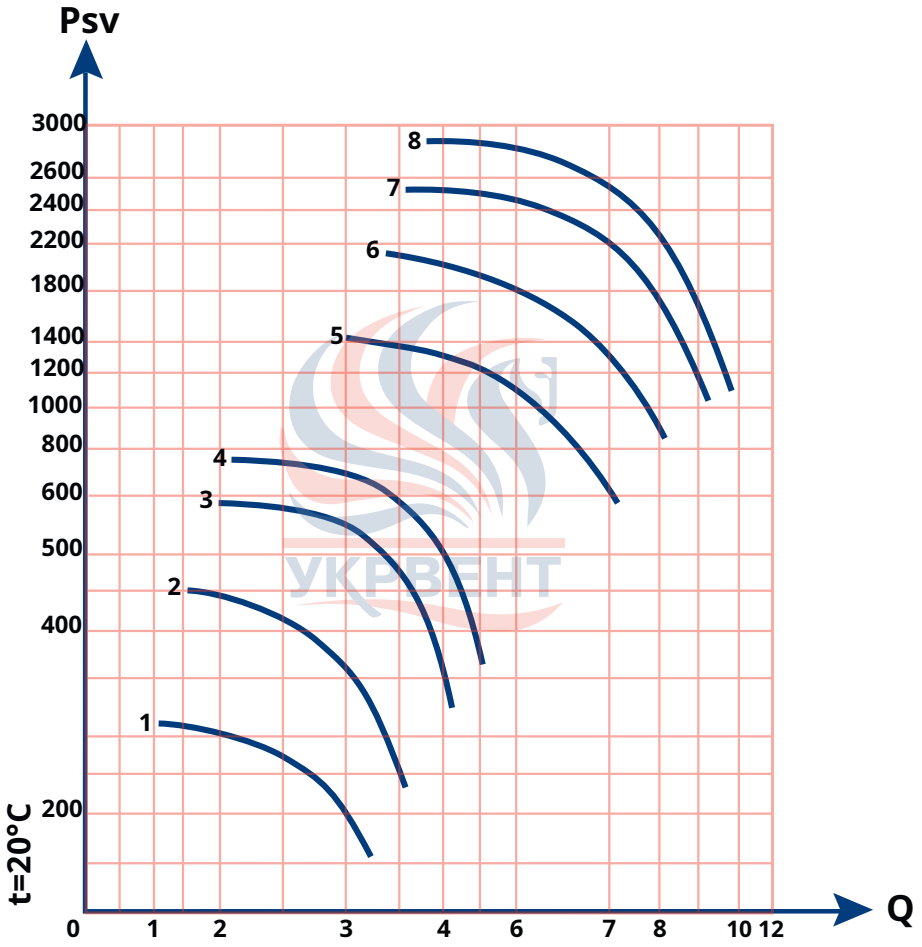
Flexible insert
VK-355

Frequency converter
UVE-810

Vibration isolator RV-30

VR-80-70-4

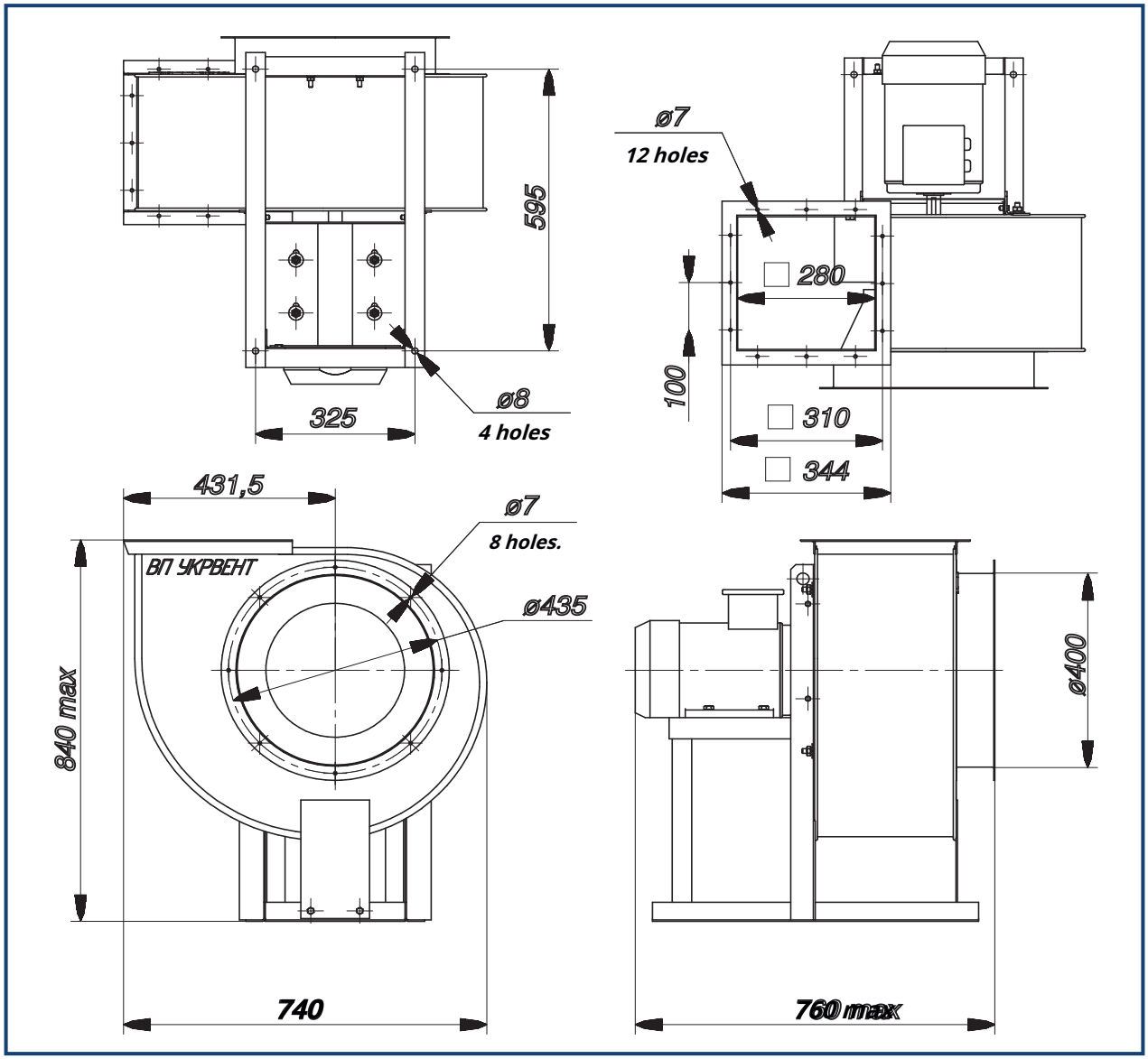
Aerodynamic characteristics



Curve №	Power, kW	Frequency of rotation of the impeller , rpm	Rated current, A	Weight of fan, max kg	Acoustics, dB,
1	*0.37*	*1325*	*1.2*	*65*	*83*
2	*0.55*	*1350*	*1.8*	*66*	*87*
3	*0.75*	*1360*	*2.2*	*67*	*89*
4	*1.1*	*1375*	*3*	*71*	*92*
5	*3*	*2845*	*6.5*	*76*	*100*
6	*4*	*2870*	*8.4*	*85*	*103*
7	*5.5*	*2870*	*11*	*89*	*105*
8	*7.5*	*2880*	*15.2*	*108*	*108*

VR-80-70-4

Overall and connection dimensions of the VR-80-70-4 fan



Additional equipment

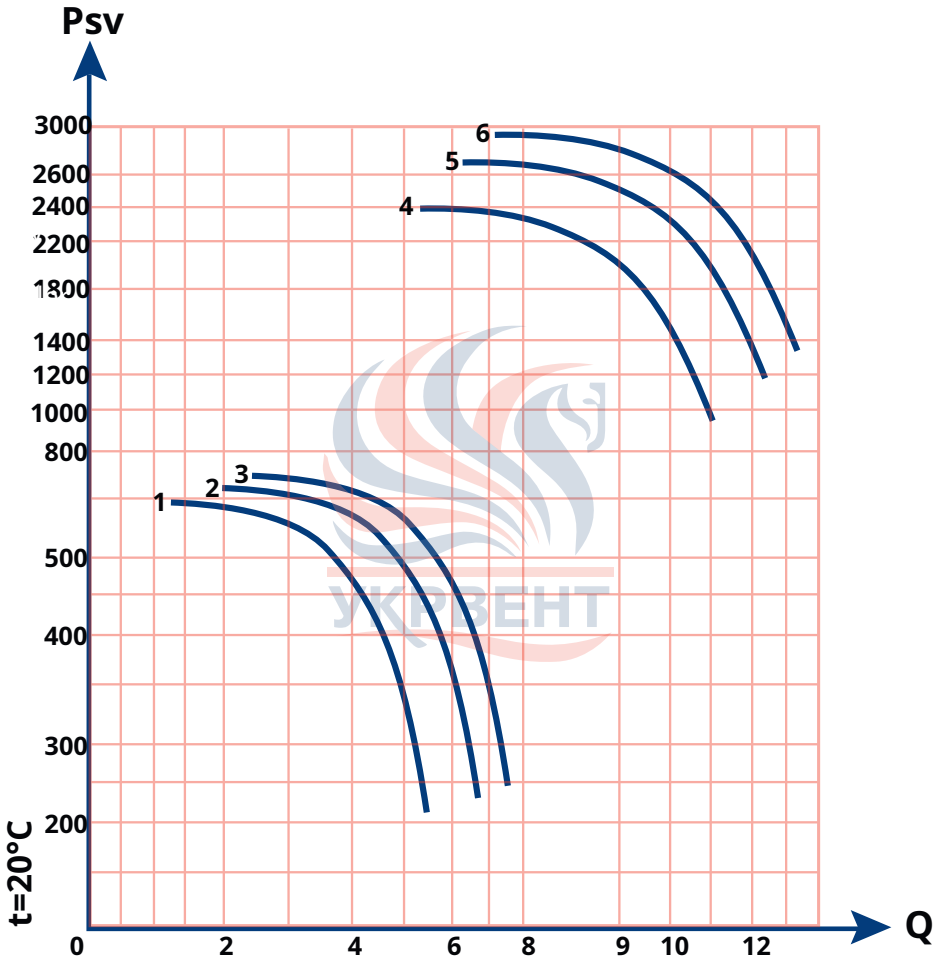
Flexible insert
VK-400

Frequency converter
UVE-810

Vibration isolator RV-30

VR-80-70-4.5

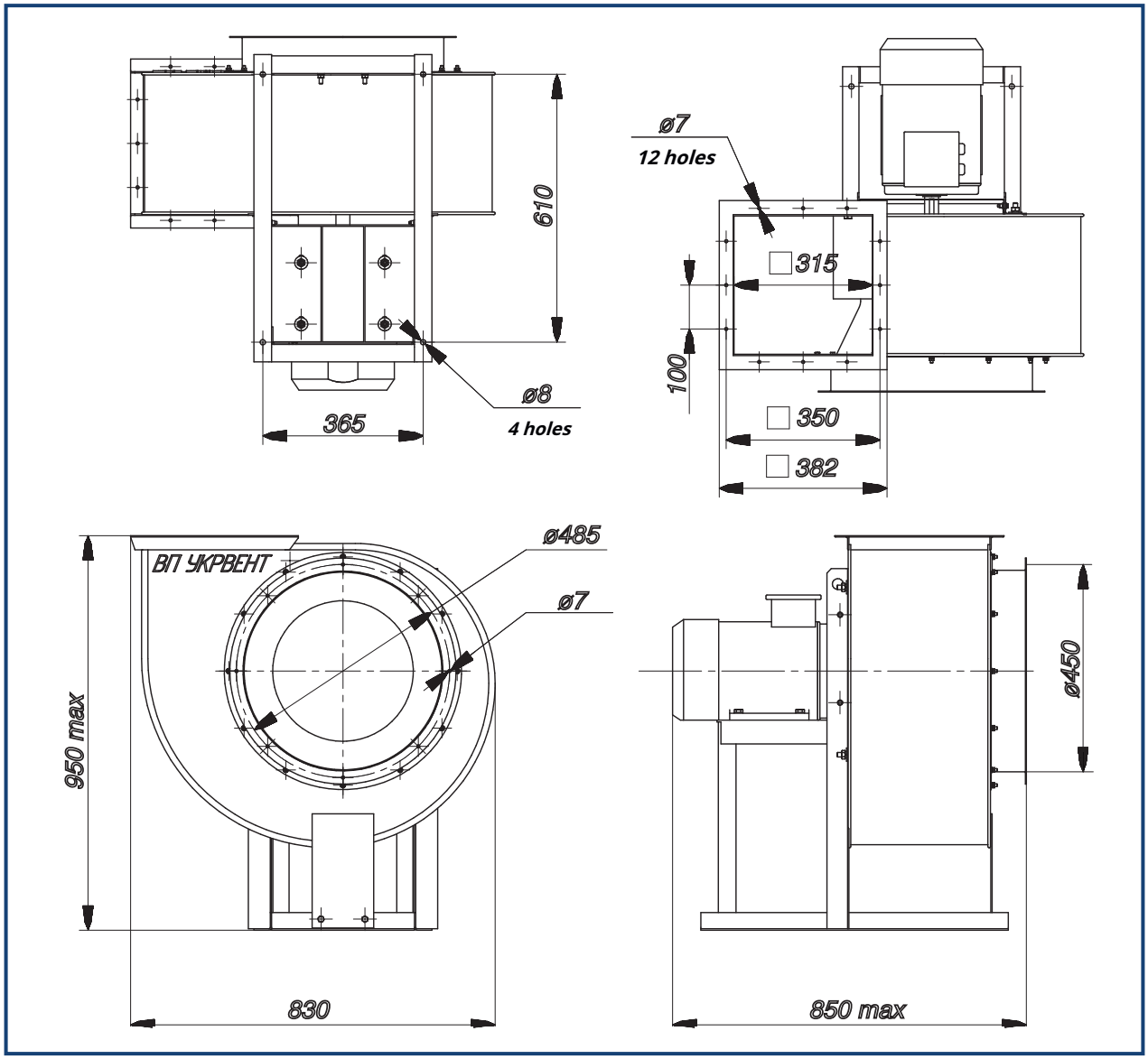
Aerodynamic characteristics



Curve №	Power, kW	Frequency of rotation of the impeller , rpm	Rated current, A	Weight of fan, max kg	Acoustics, dB,
1	*0.75*	*1360*	*2.2*	*80*	*93*
2	*1.1*	*1375*	*3*	*84*	*95*
3	*1.5*	*1390*	*4*	*88*	*99*
4	*5.5*	*2870*	*11*	*102*	*103*
5	*7.5*	*2880*	*15.2*	*121*	*104*
6	*11*	*2900*	*21.8*	*158*	*108*

VR-80-70-4.5

Overall and connection dimensions of the fan VR-80-70-4.5



Additional equipment

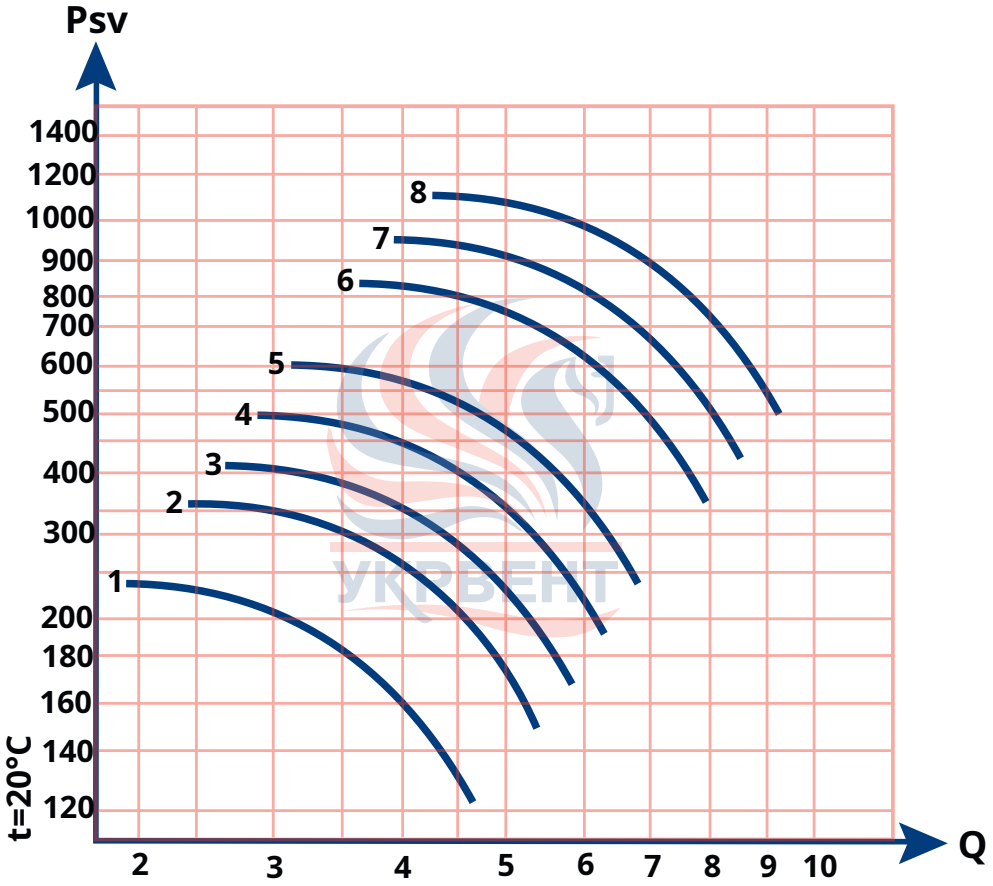
Flexible insert
VK-450

Frequency converter
UVE-810

Vibration isolator RV-30

VR-80-70-5

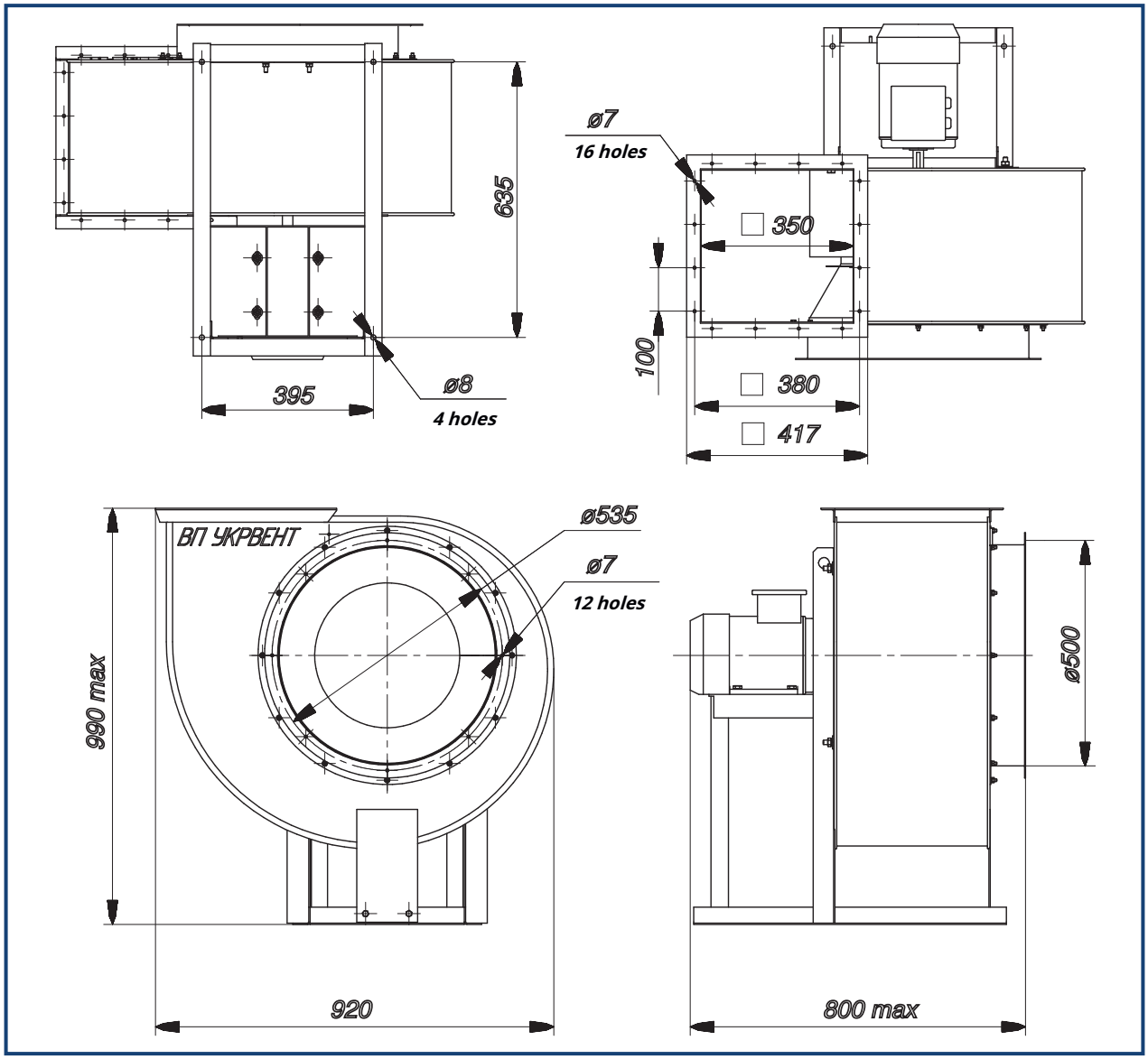
Aerodynamic characteristics



Curve №	Power, kW	Frequency of rotation of the impeller , rpm	Rated current, A	Weight of fan, max kg	Acoustics, dB,
1	0.37	895	1.4	90	93
2	0.55	895	1.9	90	95
3	0.75	910	2.3	94	97
4	1.1	910	3.2	98	99
5	1.1	1375	3	94	103
6	1.5	1390	4	98	104
7	2.2	1400	5.3	103	106
8	3	1420	7.2	112	108

VR-80-70-5

Overall and connection dimensions of the fan VR-80-70-5



Additional equipment

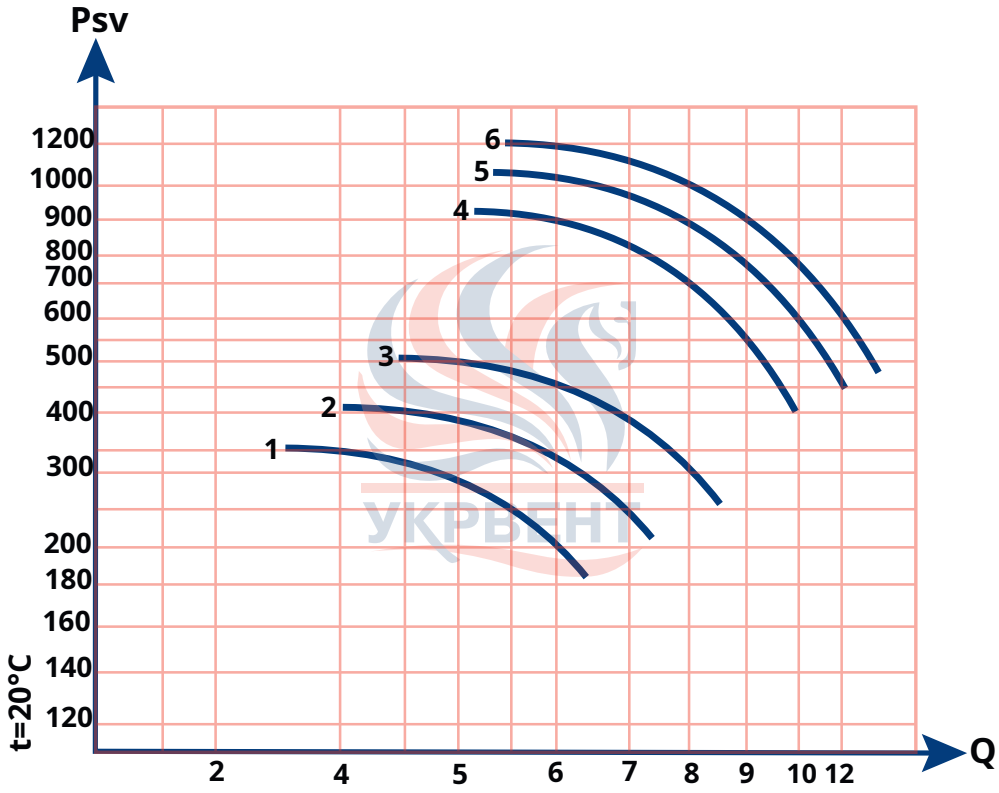
Flexible insert
VK-500

Frequency converter
UVE-810

Vibration isolator RV-30

VR-80-70-5,6

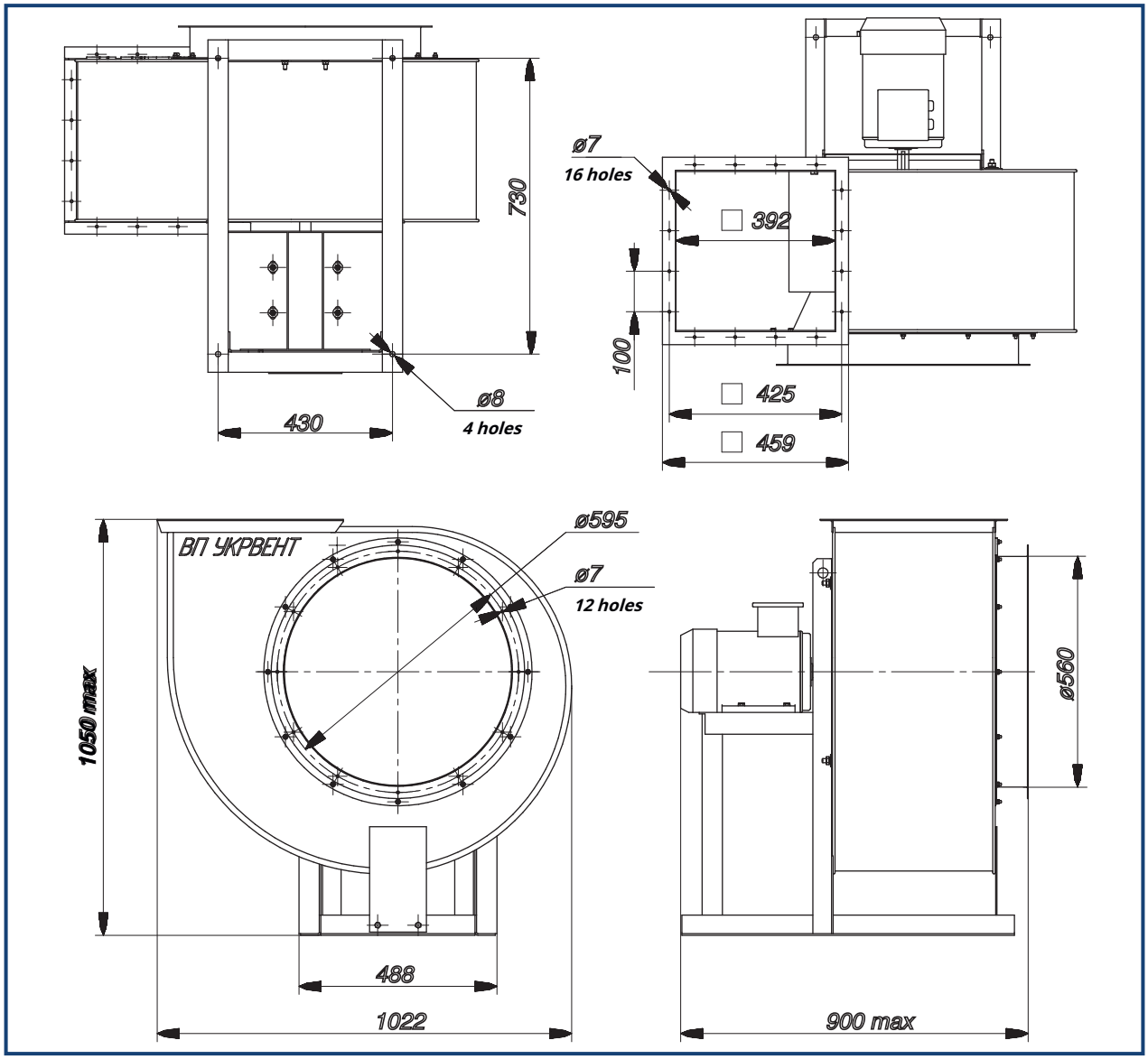
Aerodynamic characteristics



Curve №	Power, kW	Frequency of rotation of the impeller , rpm	Rated current, A	Weight of fan, max kg	Acoustics, dB,
1	*0.75*	*910*	*2.3*	*119*	*86*
2	*1.1*	*910*	*3.2*	*123*	*89*
3	*1.5*	*920*	*4.2*	*128*	*94*
4	*2.2*	*1400*	*5.3*	*128*	*101*
5	*3*	*1420*	*7.2*	*137*	*103*
6	*4*	*1420*	*9.3*	*140*	*107*

VR-80-70-5.6

Overall and connection dimensions of the fan VR-80-70-5.6



Additional equipment

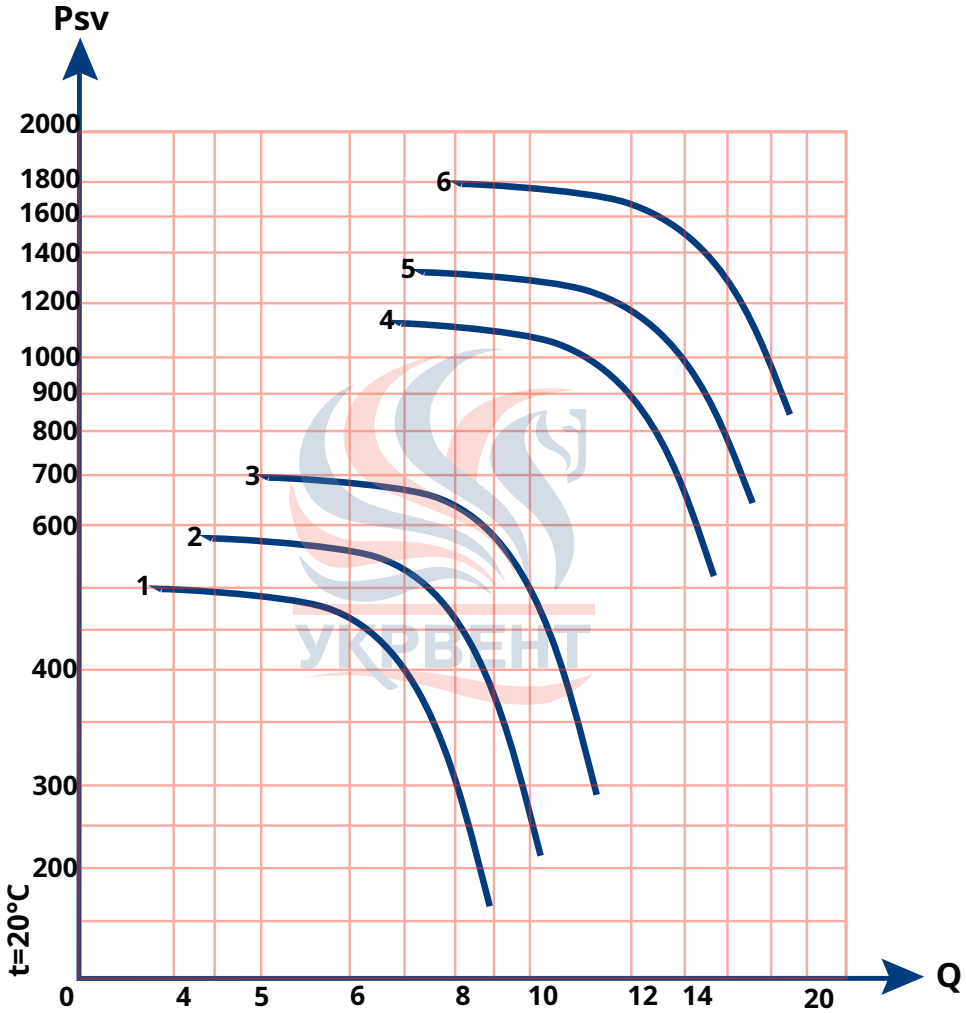
Flexible insert
VK-560

Frequency converter
UVE-810

Vibration isolator RV-30

VR-80-70-6.3

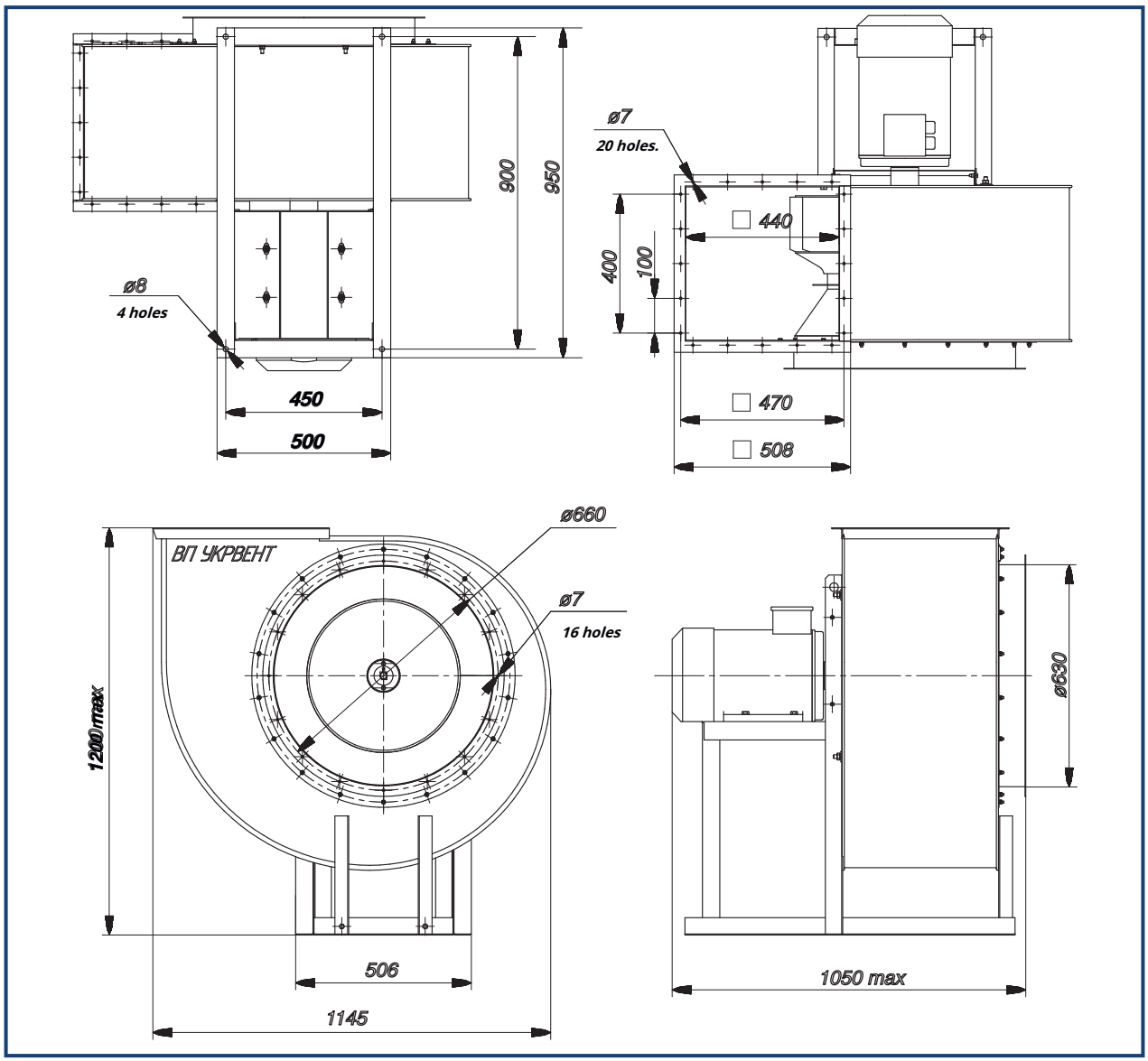
Aerodynamic characteristics



Curve №	Power, kW	Frequency of rotation of the impeller , rpm	Rated current, A	Weight of fan, max kg	Acoustics, dB,
1	1.1	910	3.18	135	87
2	1.5	920	4.2	140	92
3	2.2	930	5.9	153	96
4	4	1420	9.3	152	103
5	5.5	1430	12.3	170	105
6	7.5	1440	16.1	195	107

VR-80-70-6.3

Overall and connection dimensions of the fan VR-80-70-6.3



Additional equipment

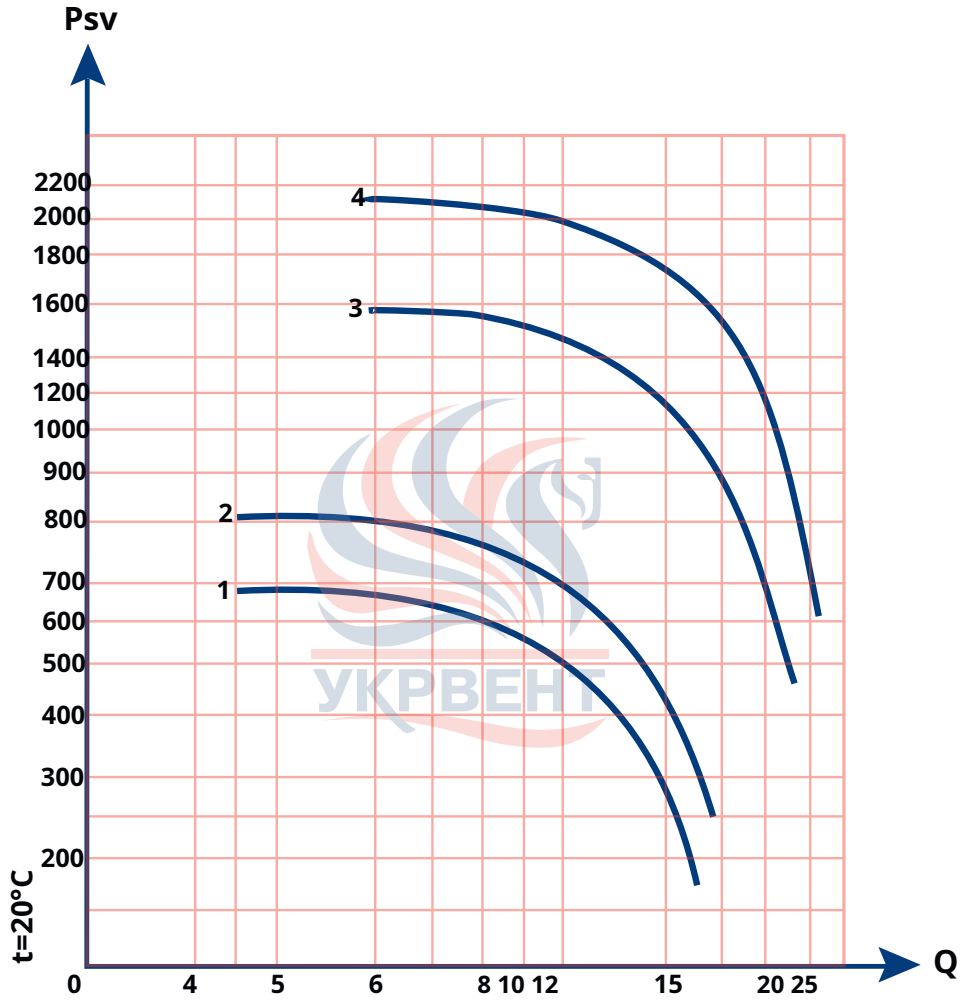
Flexible insert
VK-630

Frequency converter
UVE-810

Vibration isolator RV-40

VR-80-70-7.1

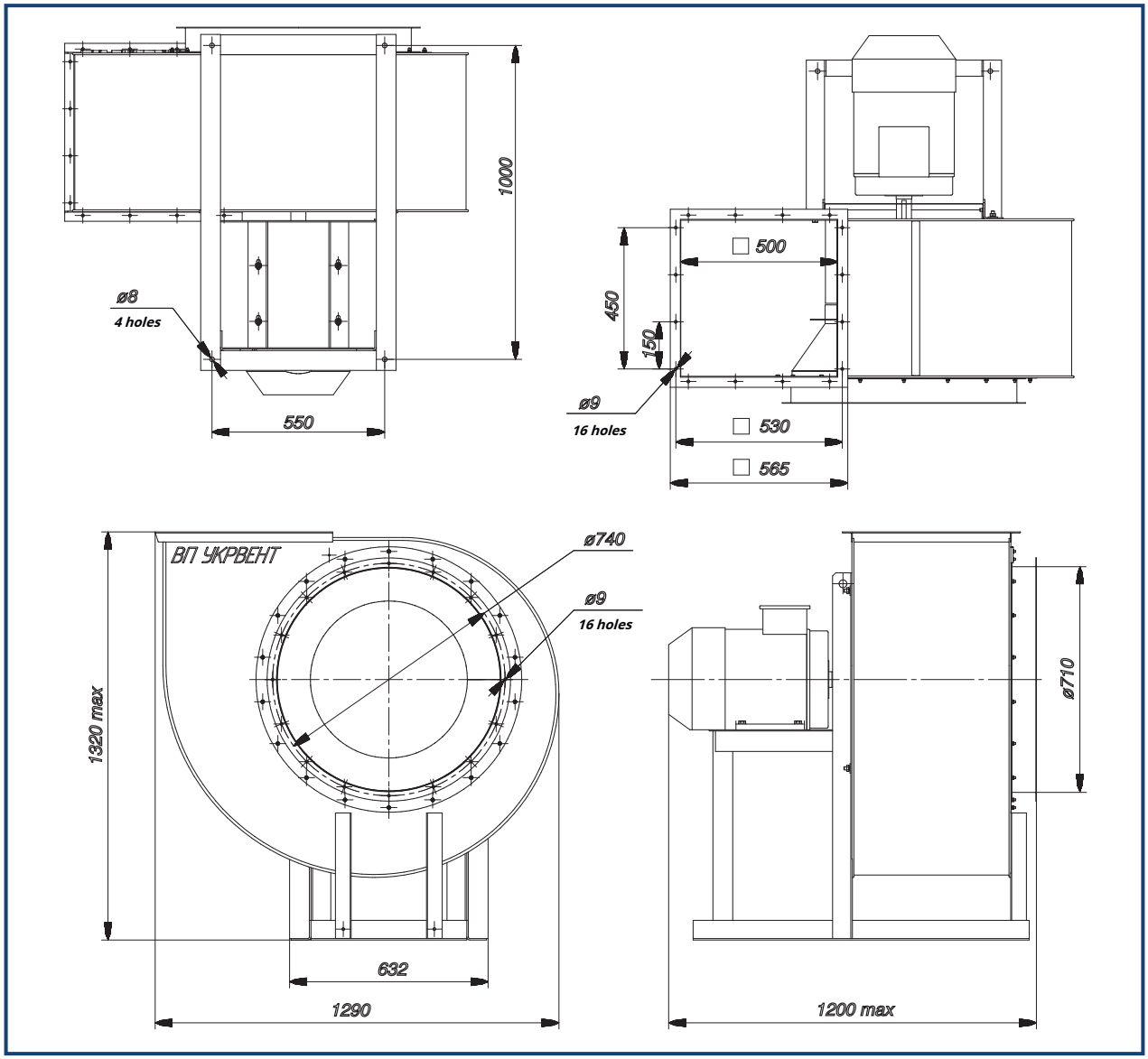
Aerodynamic characteristics



Curve №	Power, kW	Frequency of rotation of the impeller , rpm	Rated current, A	Weight of fan, max kg	Acoustics, dB,
1	2.2	930	5.9	216	94
2	3	935	7.9	229	99
3	7.5	1440	16.1	258	105
4	11	1450	23.1	269	109

VR-80-70-7.1

Overall and connection dimensions of the fan VR-80-70-7.1



Additional equipment

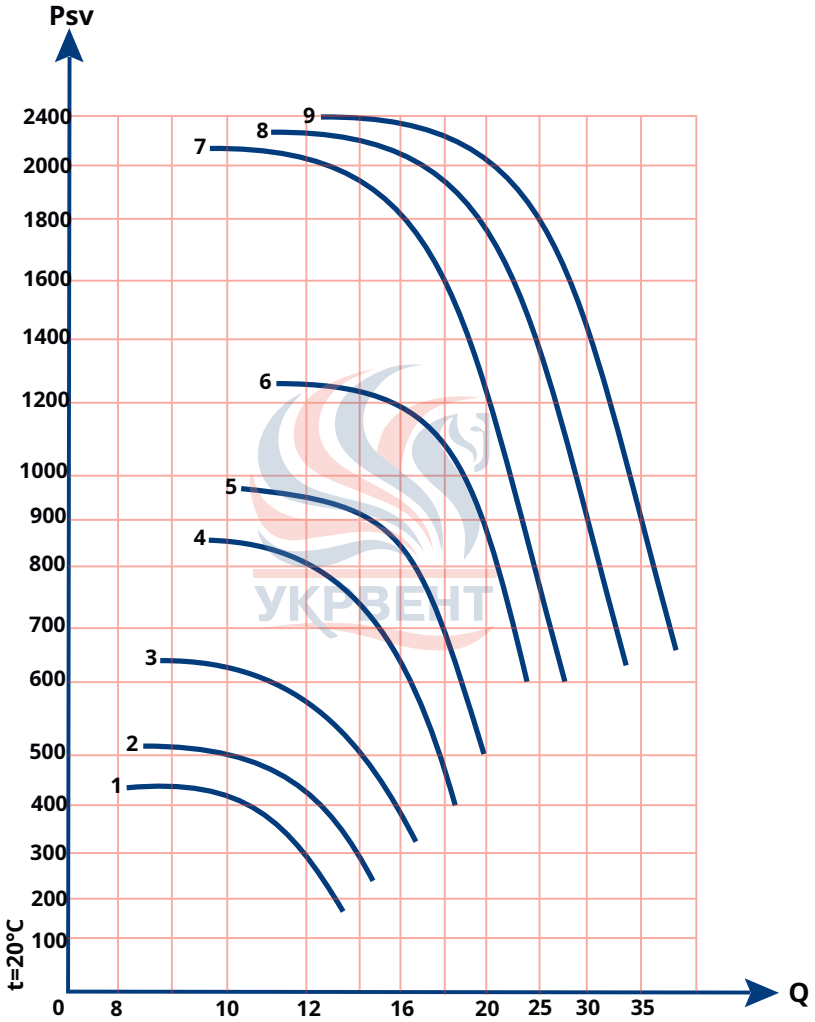
Flexible insert
VK-710

Frequency converter
UVE-810

Vibration isolator RV-40

VR-80-70-8

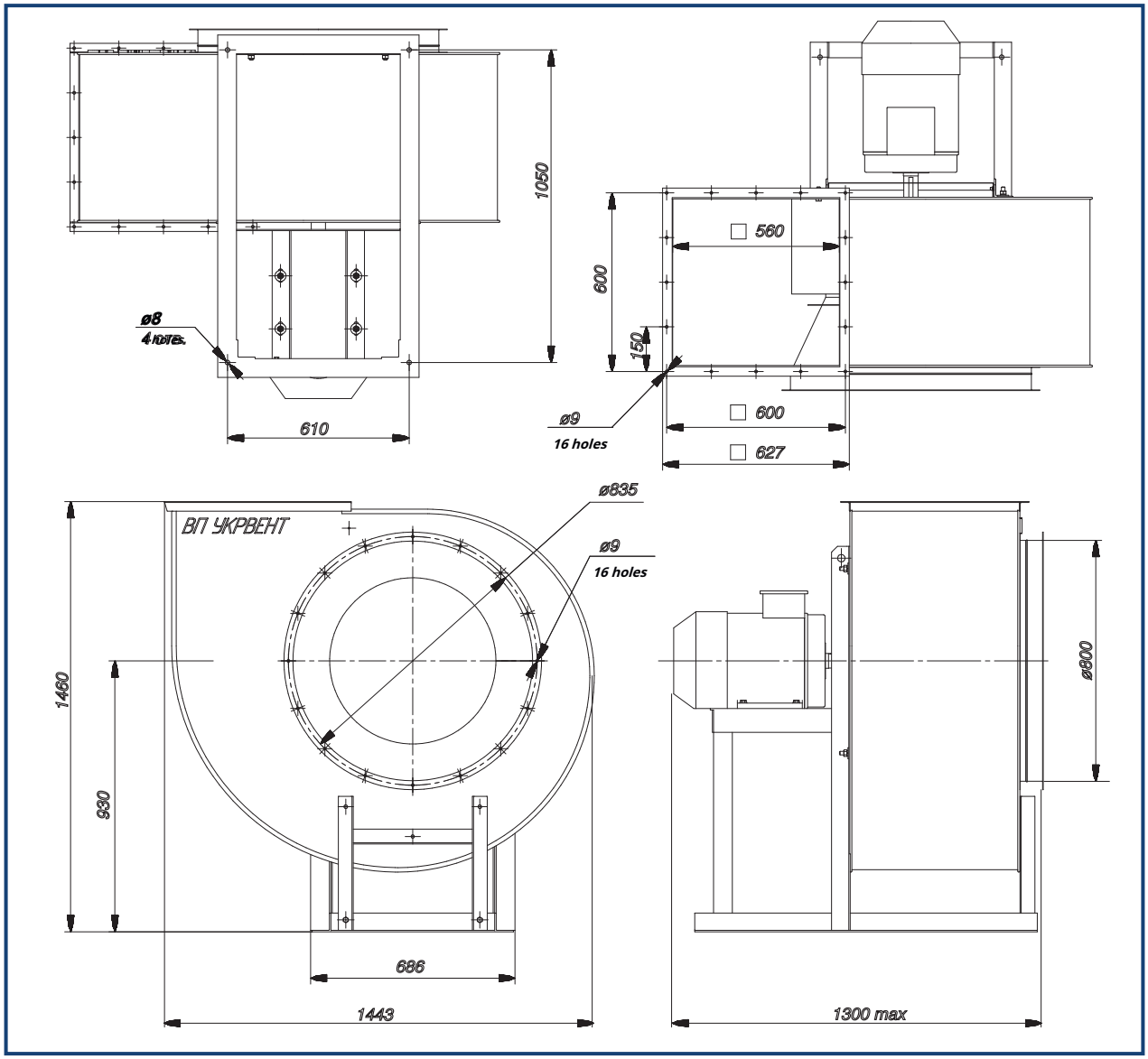
Aerodynamic characteristics



Curve №	Power, kW	Frequency of rotation of the impeller , rpm	Rated current, A	Weight of fan, max kg	Acoustics, dB,
1	1.5	690	4.5	293	92
2	2.2	700	6.4	290	93
3	3	700	8.6	297	95
4	4	935	10.3	296	95
5	5.5	955	13.4	315	97
6	7.5	960	17.2	389	99
7	11	1450	23.1	335	104
8	15	1455	30.8	382	106
9	18.5	1455	37.8	386	109

VR-80-70-8

Overall dimensions and connection dimensions of the VR-80-70-8 fan



Additional equipment

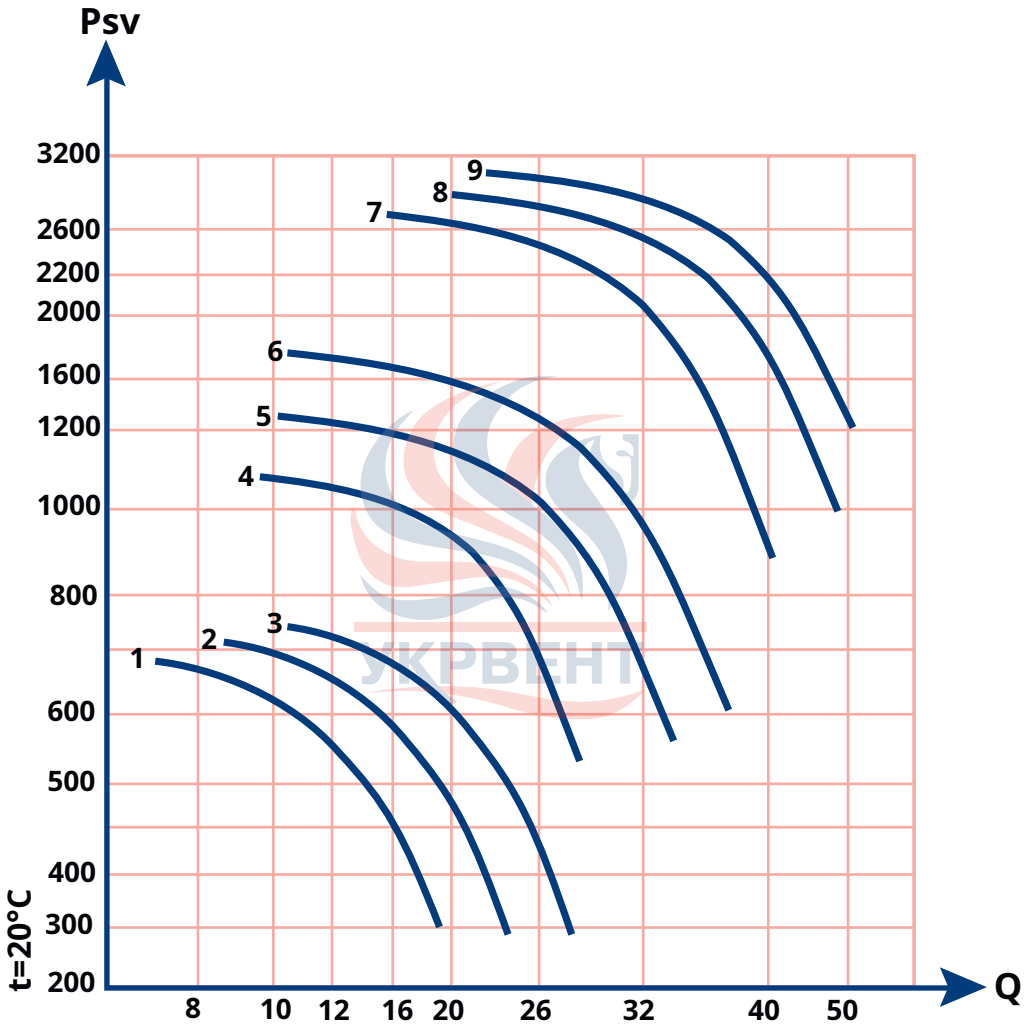
Flexible insert
VK-800

Frequency converter
UVE-810

Vibration isolator RV-40

VR-80-70-9

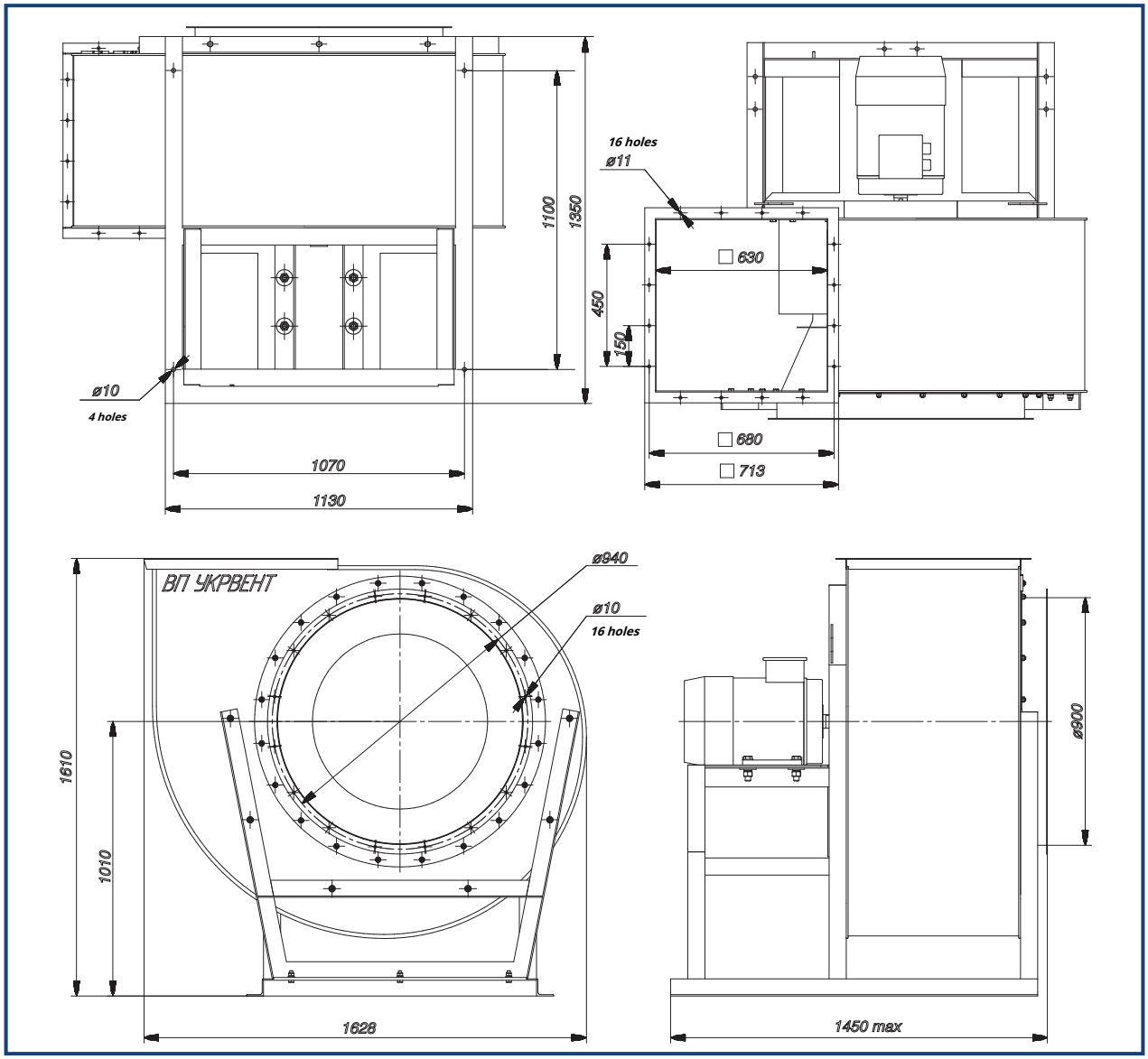
Aerodynamic characteristics



Curve №	Power, kW	Frequency of rotation of the impeller , rpm	Rated current, A	Weight of fan, max kg	Acoustics, dB,
1	*3*	*700*	*8.6*	*391*	*97*
2	*4*	*715*	*10.8*	*430*	*99*
3	*5.5*	*715*	*14.7*	*434*	*101*
4	*7.5*	*960*	*17.2*	*483*	*103*
5	*11*	*965*	*24.6*	*479*	*104*
6	*15*	*965*	*33*	*493*	*105*
7	*22*	*1465*	*44.4*	*515*	*109*
8	*30*	*1465*	*59.6*	*528*	*110*
9	*37*	*1470*	*73.1*	*585*	*113*

VR-80-70-9

Overall dimensions and connection dimensions of the VR-80-70-9 fan



Additional equipment

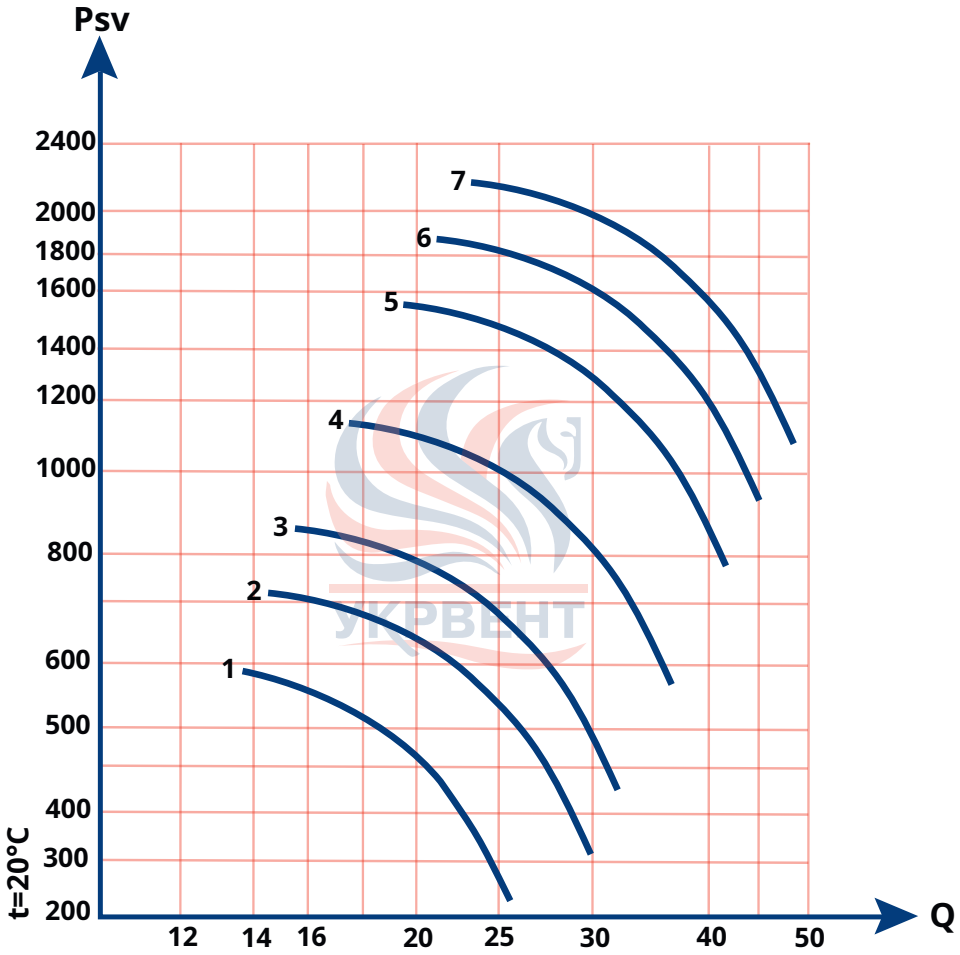
Flexible insert
VK-900

Frequency converter
UVE-810

Vibration isolator RV-50

VR-80-70-10

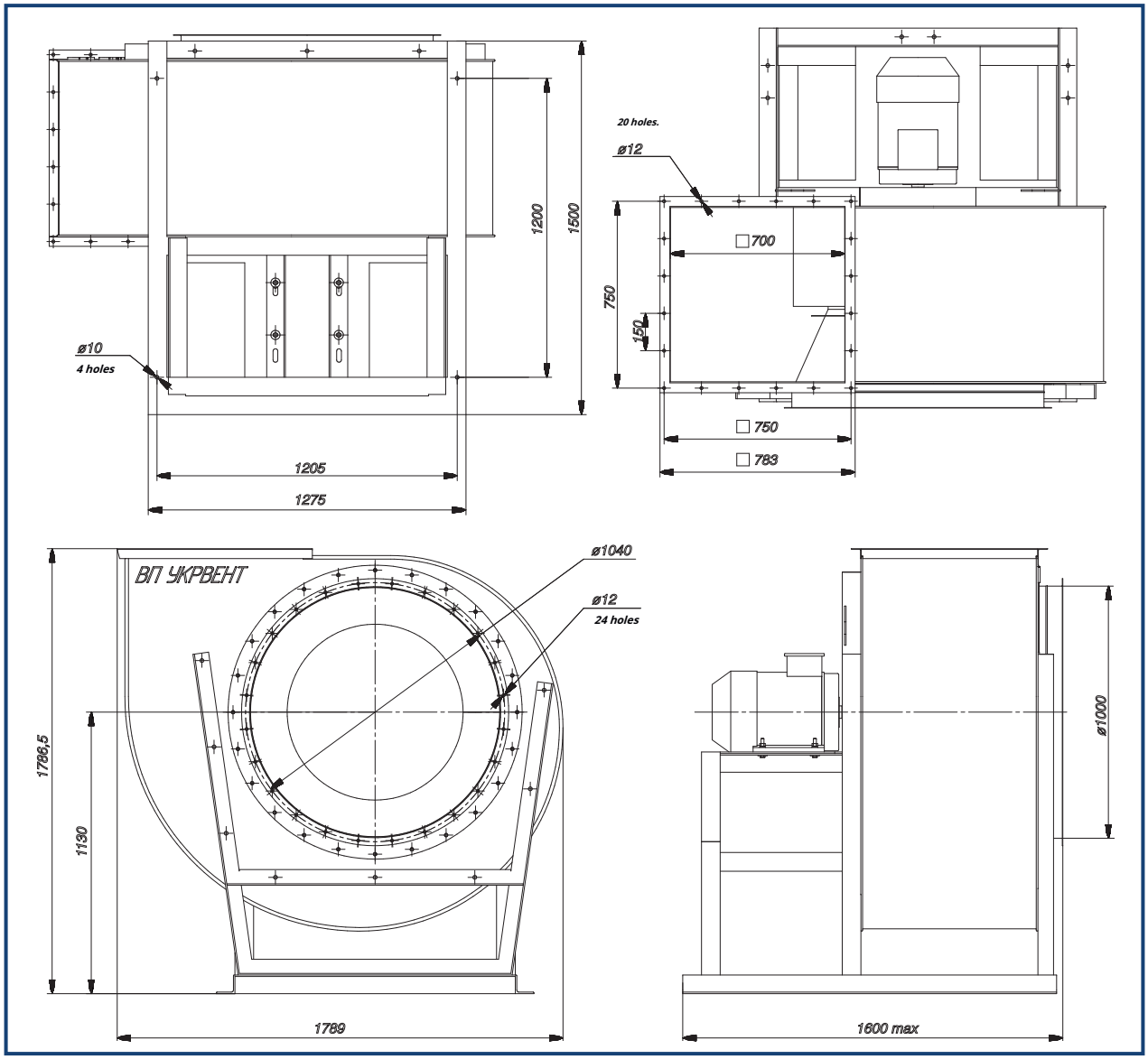
Aerodynamic characteristics



Curve №	Power, kW	Frequency of rotation of the impeller , rpm	Rated current, A	Weight of fan, max kg	Acoustics, dB,
1	*4*	*715*	*10.8*	*522*	*100*
2	*5.5*	*715*	*14.7*	*516*	*101*
3	*7.5*	*720*	*19.2*	*578*	*103*
4	*11*	*720*	*27.3*	*585*	*104*
5	*15*	*965*	*33*	*585*	*103*
6	*18.5*	*970*	*39*	*630*	*105*
7	*22*	*975*	*45.2*	*663*	*106*

VR-80-70-10

Overall and connection dimensions of the fan VR-80-70-10



Additional equipment

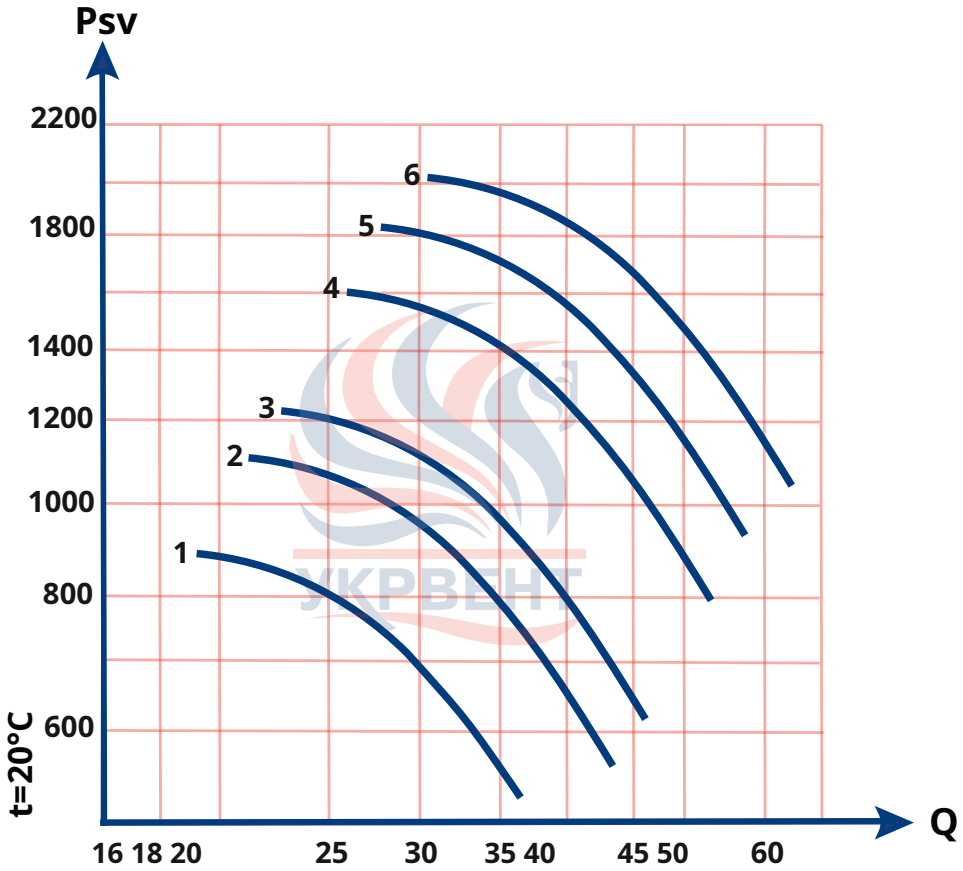
Flexible insert
VK-1000

Frequency converter
UVE-810

Vibration isolator RV-50

VR-80-70-11.2

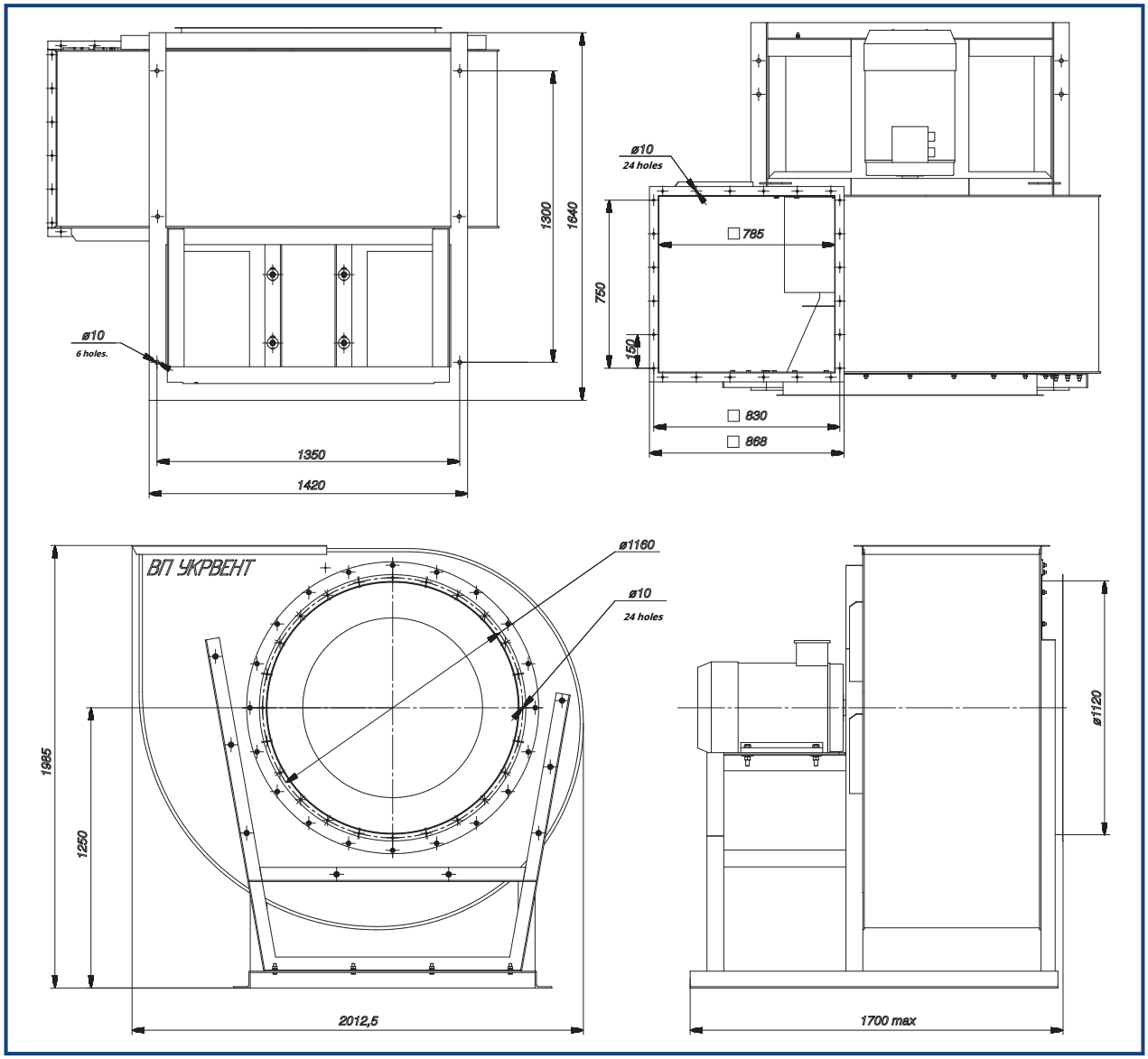
Aerodynamic characteristics



Curve №	Power, kW	Frequency of rotation of the impeller , rpm	Rated current, A	Weight of fan, max kg	Acoustics, dB,
1	*7.5*	*720*	*19.2*	*689*	*103*
2	*11*	*720*	*27.3*	*696*	*104*
3	*15*	*725*	*34.5*	*751*	*105*
4	*18.5*	*970*	*39*	*741*	*106*
5	*22*	*975*	*45.2*	*774*	*108*
6	*30*	*975*	*61.8*	*791*	*108*

VR-80-70-11.2

Overall and connection dimensions of the fan VR-80-70-11.2



Additional equipment

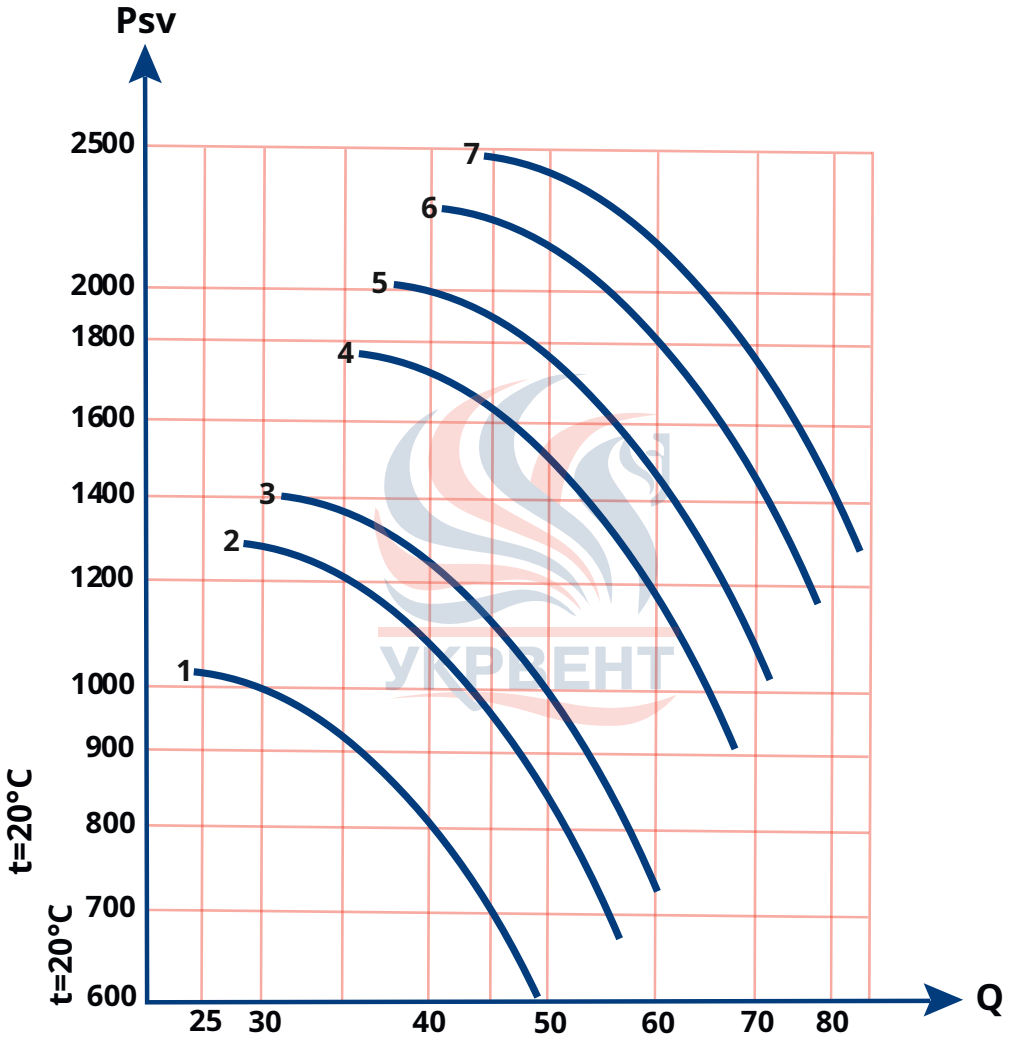
Flexible insert
VK-1120

Frequency converter
UVE-810

Vibration isolator RV-50

VR-80-70-12.5

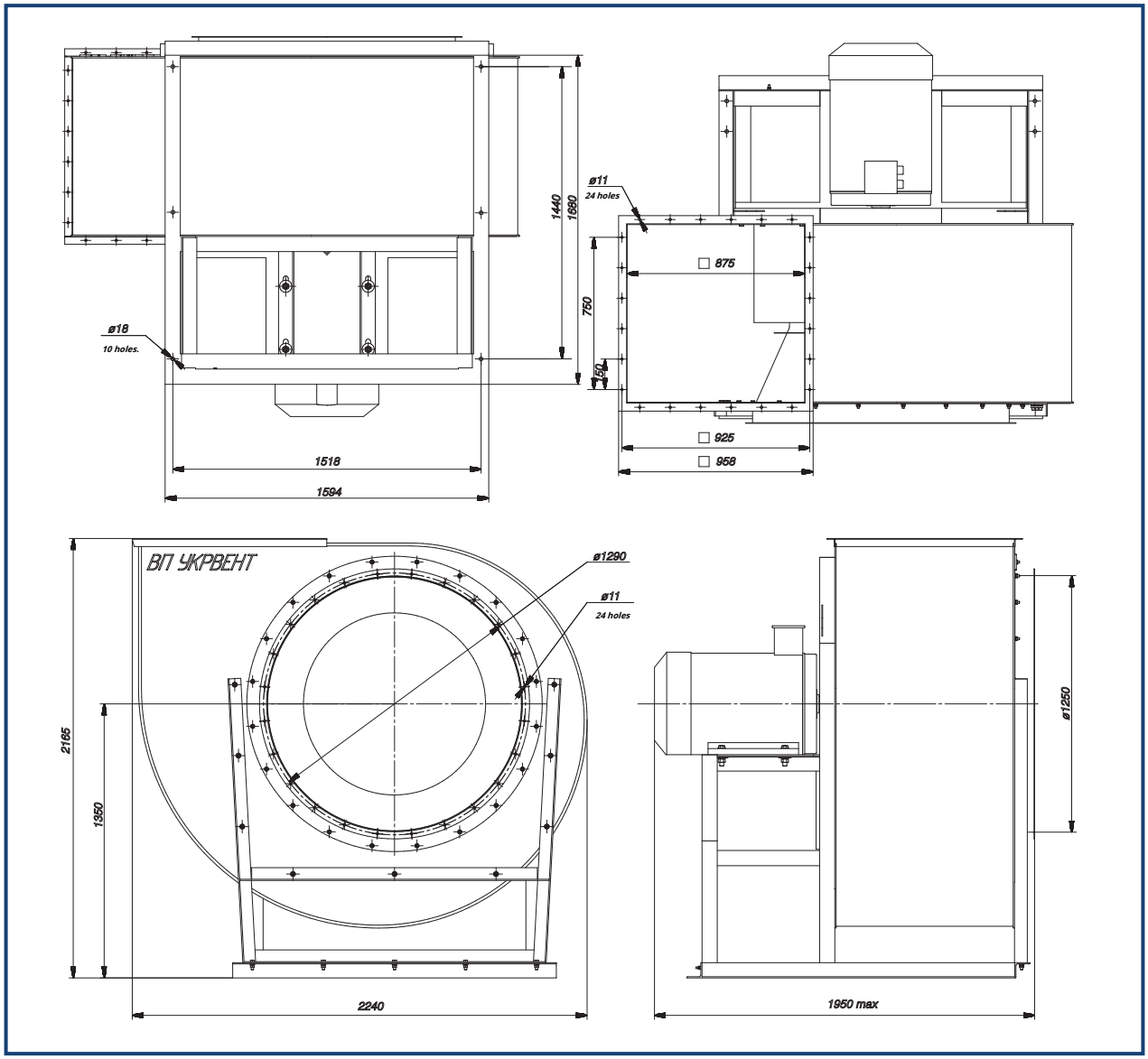
Aerodynamic characteristics



Curve №	Power, kW	Frequency of rotation of the impeller , rpm	Rated current, A	Weight of fan, max kg	Acoustics, dB,
1	*15*	*725*	*34.5*	*855*	*101*
2	*18.5*	*730*	*41.6*	*895*	*102*
3	*22*	*730*	*49.4*	*905*	*104*
4	*30*	*735*	*65.3*	*1005*	*106*
5	*37*	*980*	*73.5*	*1005*	*106*
6	*45*	*985*	*90.1*	*1110*	*107*
7	*55*	*985*	*110*	*1165*	*107*

BP-80-70-12.5

Overall and connection dimensions of the fan VR-80-70-12.5

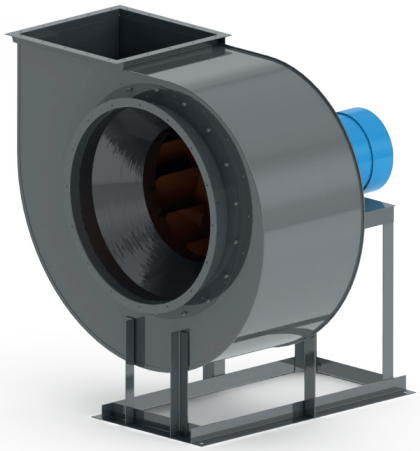


Additional equipment

Flexible insert
VK-1250

Frequency converter
UVE-810

Vibration isolator RV-50



medium pressure radial **VR-280-46** For ventilation systems, air heating and other and sanitary-technical purposes and are used for air and other gas mixtures in conditions of low ambient temperature from minus 40°C, which do not contain sticky substances, abrasive materials with dustiness (content of impurities) not more than 100 mg/m$_{with}$ The temperature of wind flows should not exceed 80°C. The properties of air masses and other gas carbon steel, from which the main parts are made,

fan **VR-280-46**should not and aggressiveness of the air.

Technical characteristics of VR-280-46:
* used in stationary exhaust or supply ventilation systems;
* air capacity from 250 m$_{with}$/h up to 75000 m$_{with}$/hour;
* static pressure from 150 Pa to 2700 Pa;
* one-sided suction;
* number of blades - 32 units;
* average pressure;
* spiral rotating housing;
* direction of rotation - right and left.

Fans are designed to operate in moderate (U) climate conditions of the 1st location category of GOST 15150. Ambient temperature from -40°C to +40°C.

The average vibration velocity of external vibration sources at the fan installation locations is slightly more than 2 mm/s.
The aerodynamic characteristics of the fans are presented in graphs, where:
Q is the air capacity m$_3$/hour 10$_3$;
Psv - static pressure at p = 1$_0$.2 kg/m$_{with}$and t = 20°C air;
Fan pressure **Psv** and power consumption by the electric motor **N**, at a different density **p** of the transported medium or other air temperature**t**can be calculated according to the following formulas:

$$Psv_p = (p / p_0) * Psv_0 \qquad Np = (p / p_0) * N \qquad Nt = Psv_t = [293 / (273 + t)] * Psv_0, \qquad [293 / (273 + t)] * N_0$$

Marking

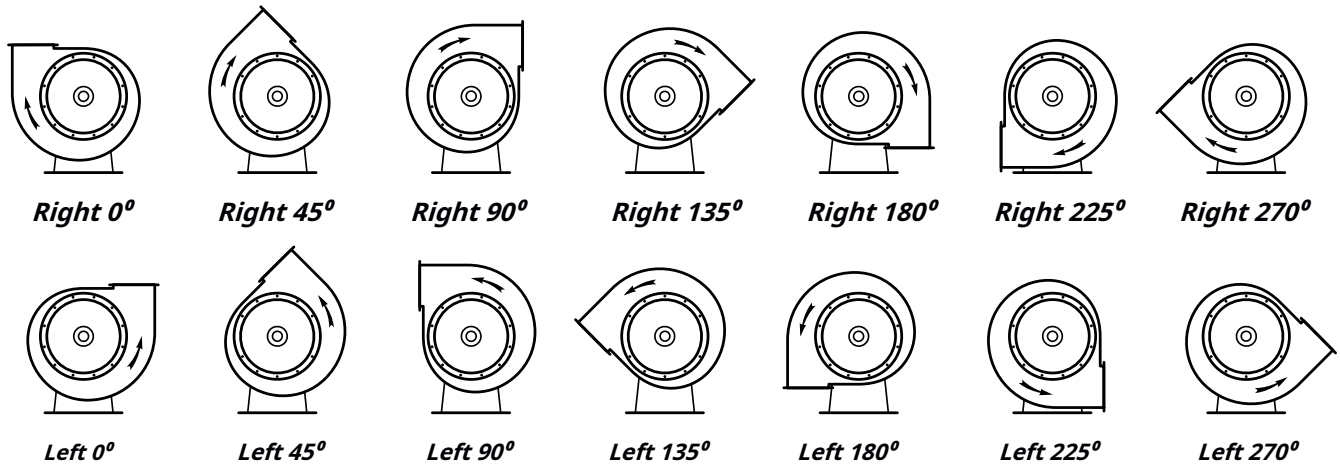
Example:

Radial fan VR-280-46; number 4; general industrial version; temperature moving airup to 80°C; housing position right 0°; electric motor with installed power Ny=3 kW, rotation speed n=1500 rpm.

VR-280-46 - 4 - O - 80° - Right.0° - 4/1500

Fan type:**VR-280-46**
Fan number: **2.5; 3.15; 4; 5; 6.3; 8; 10;**
Appointment: **O**- general industrial; **G**- heat-resistant;**K**- corrosion-resistant (specify the brand of stainless steel);**VZI**- explosion-proof;
Temperature of the transported air, °C:**80** (O)**; 200** (G)**;**
Fan housing position:**Left/Right -0°; 45°; 90°; 135°; 180°; 270°; 315°;**
Electric motor parameters, Ny/n: **Ny**- power, kW; **n**- synchronous speed, rpm (750; 1000; 1500; 3000);

Fan housing position options

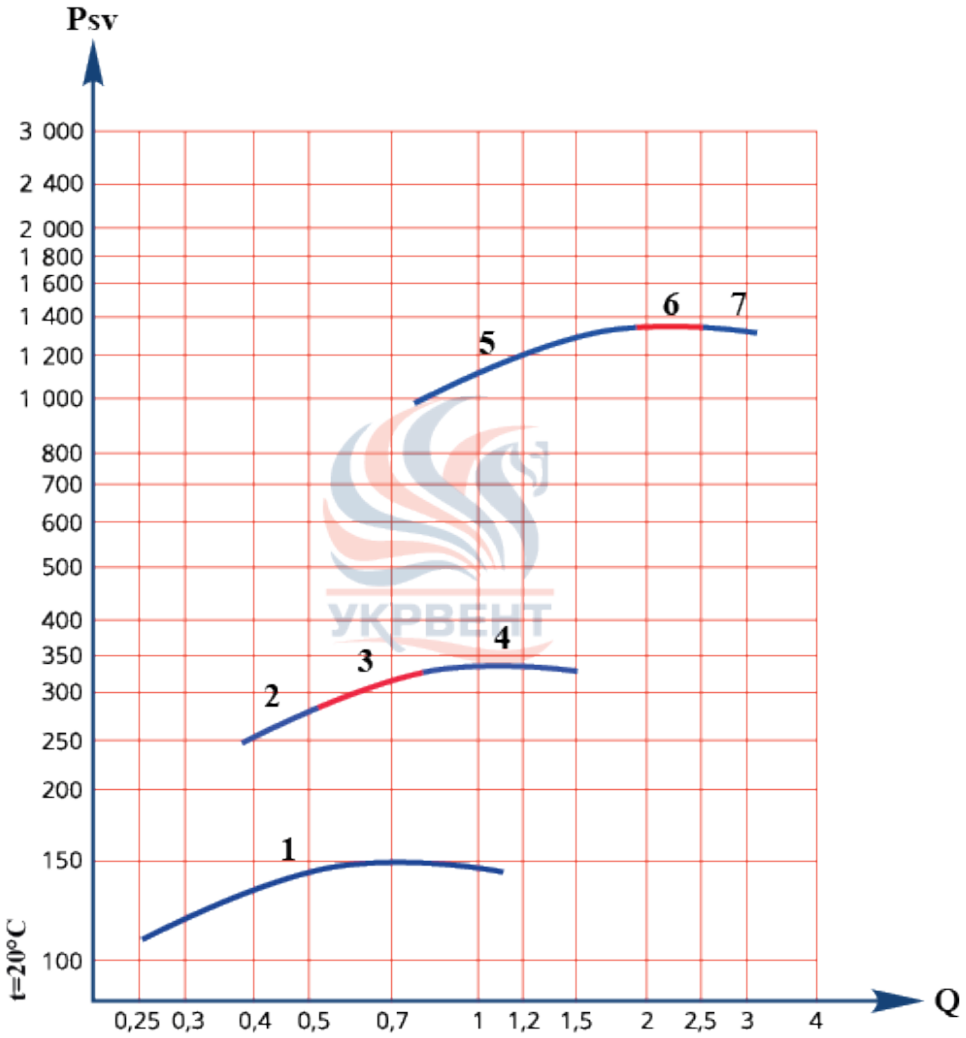


WARNING!

The fans are equipped with a three-phase electric motor as standard, in case If necessary, it is possible to install a single-phase electric motor.

VR-280-46-2.5

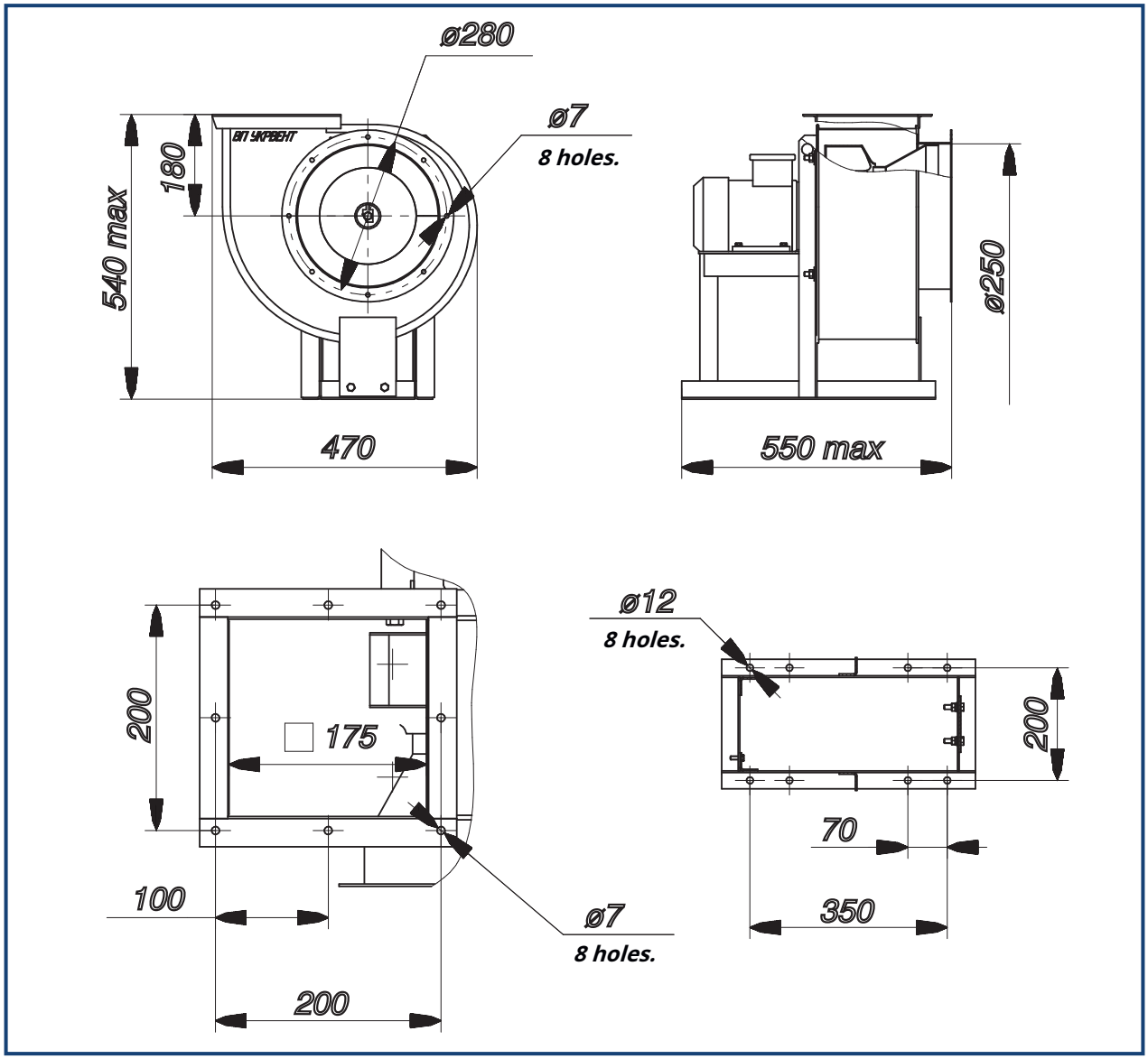
Aerodynamic characteristics



Curve №	Power, kW	Frequency of rotation of the impeller , rpm	Rated current, A	Weight of fan, max kg	Acoustics, dB,
1	0,12	930	0,53	25	75
2	0,12	1325	0,53	26	80
3	0,18	1325	0,73	27	80
4	0,37	1325	1,12	28	804
5	1,1	2840	2,6	36	103
6	1,5	2850	3,16	38	103
7	2,2	2855	4,85	40	103

ВР-280-46-2.5

Overall and connection dimensions of the fan VR-280-46-2.5



Additional equipment

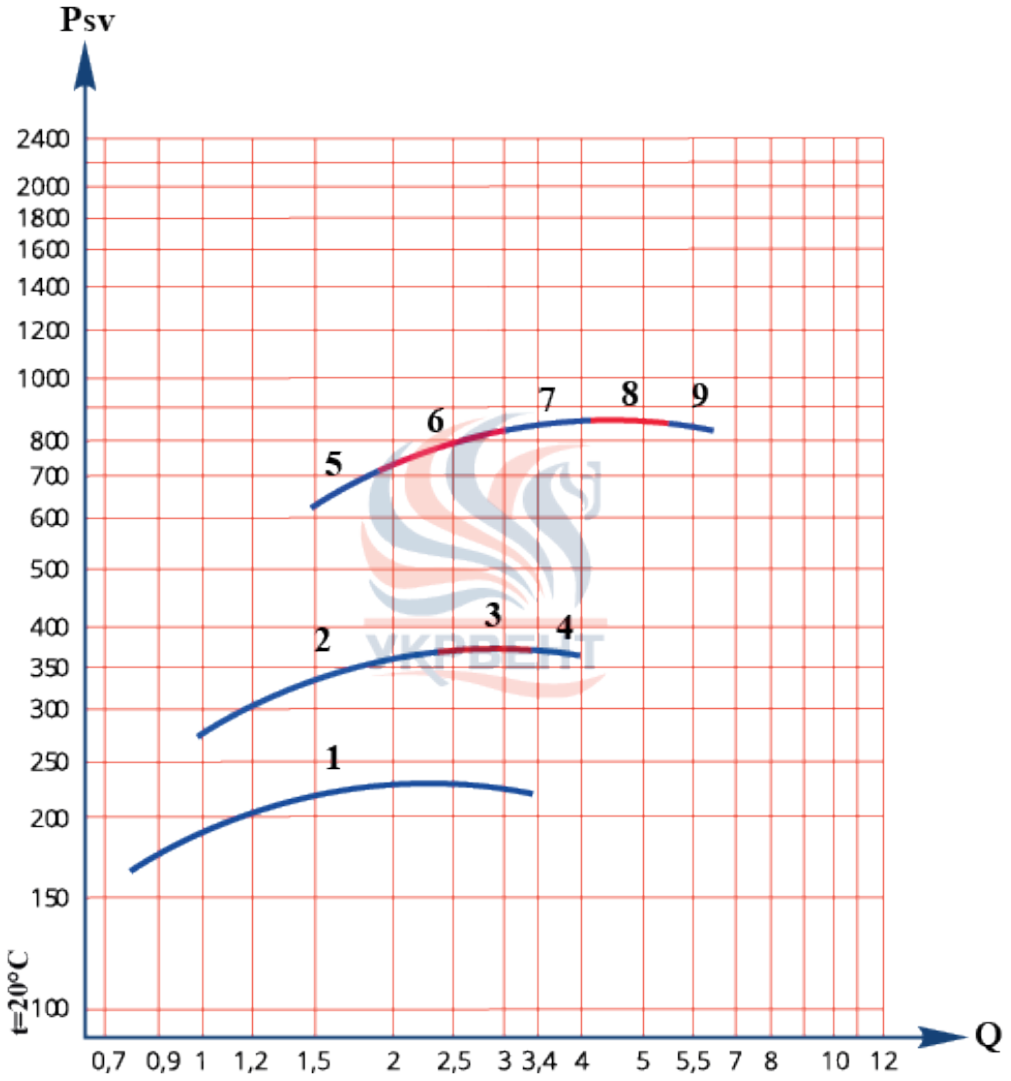
Flexible insert
VK-250

Frequency converter
UVE-810

Vibration isolator RV-30

VR-280-46-3,15

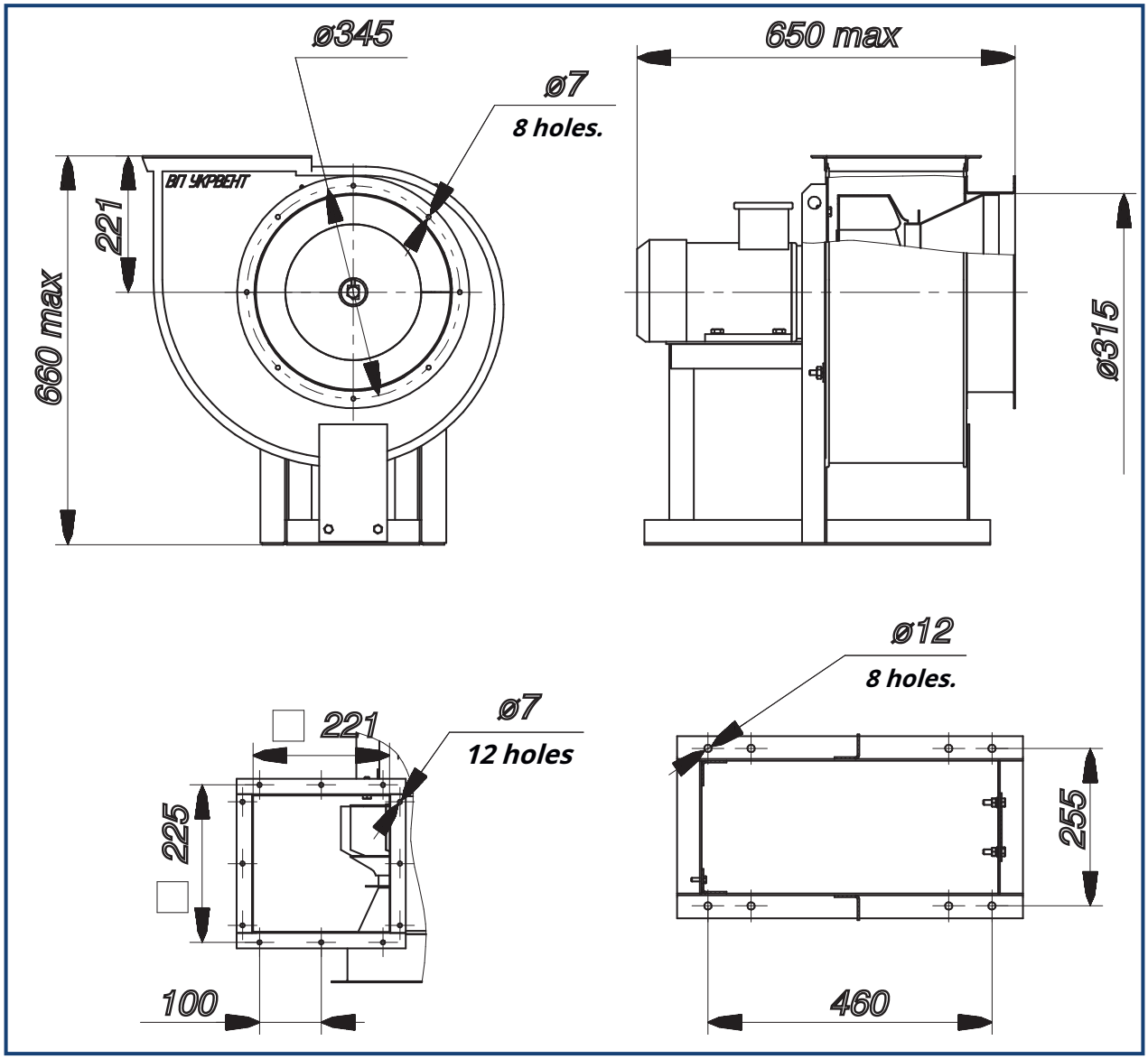
Aerodynamic characteristics



Curve №	Power, kW	Frequency of rotation of the impeller , rpm	Rated current, A	Weight of fan, max kg	Acoustics, dB,
1	0,37	675	1,49	48,9	80
2	0,37	880	1,3	38,9	84
3	0,55	880	1,8	39,7	84
4	0,75	905	2,3	46,5	84
5	0,75	1390	2,05	38,5	86
6	1,1	1390	2,85	42,5	86
7	1,5	1400	3,75	46	86
8	2,2	1410	5,1	51,5	86
9	3	1410	6,8	58,5	86

VR-280-46-3,15

Overall and connection dimensions of the fan VR-280-46-3.15



Additional equipment

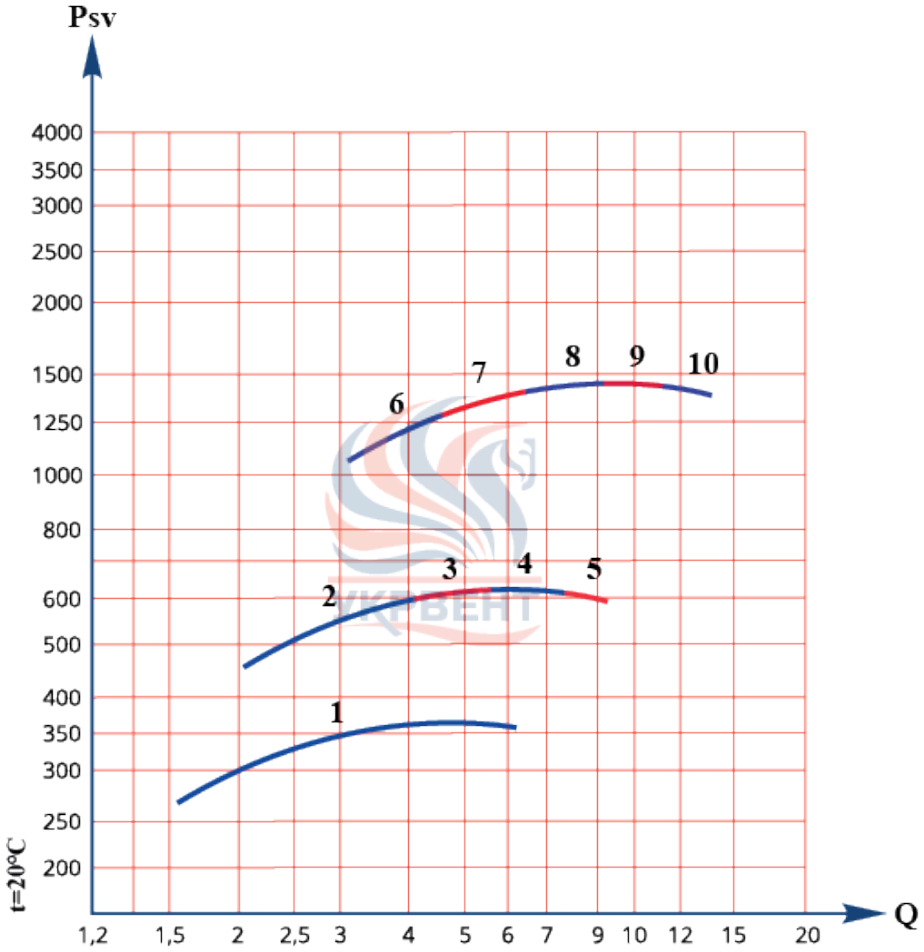
Flexible insert
VK-315

Frequency converter
UVE-810

Vibration isolator RV-30

VR-280-46-4

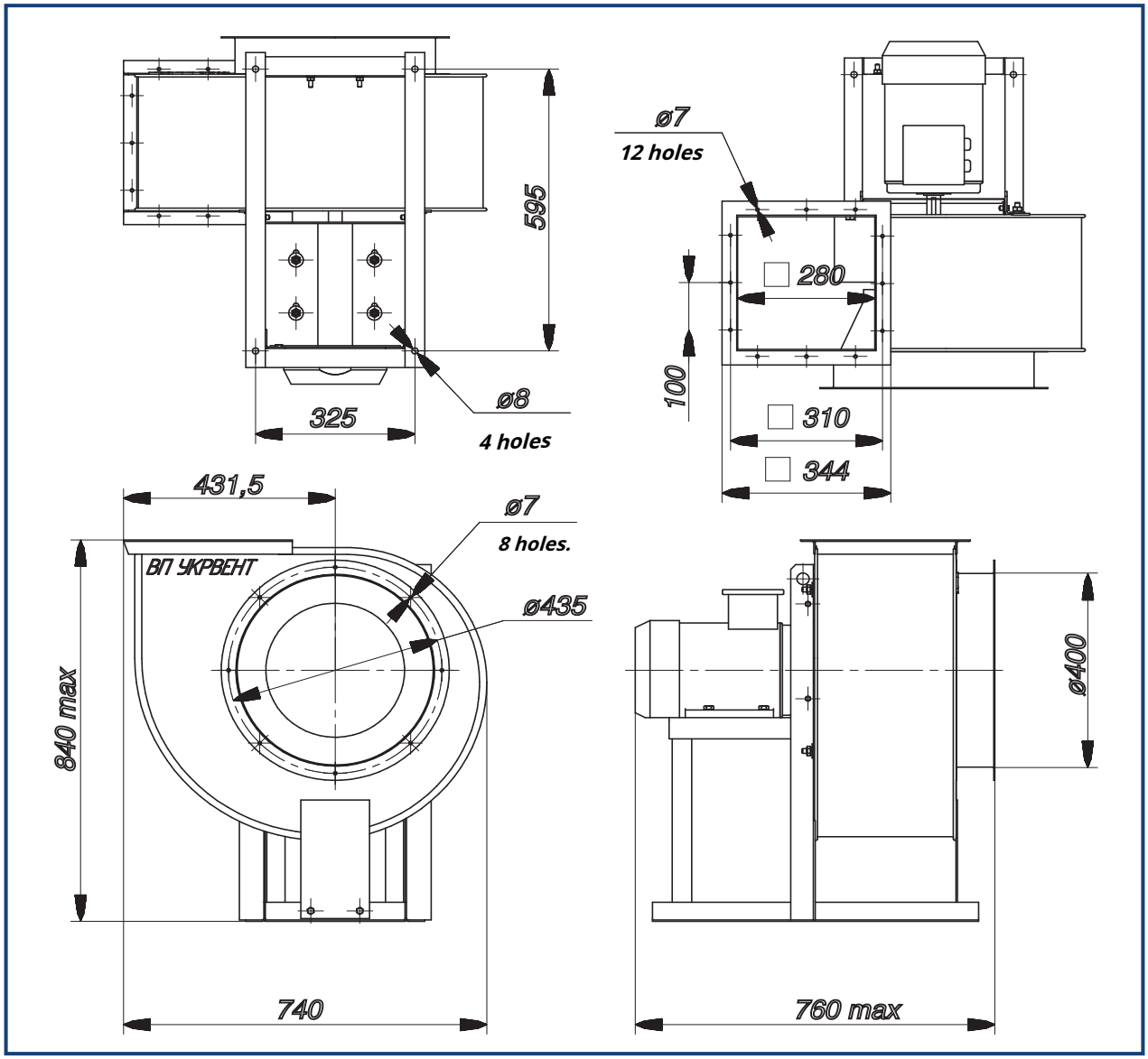
Aerodynamic characteristics



Curve №	Power, kW	Frequency of rotation of the impeller , rpm	Rated current, A	Weight of fan, max kg	Acoustics, dB,
1	*1,1*	*680*	*3,36*	*68*	***85***
2	*1,1*	*905*	*3,2*	*60,4*	***93***
3	*1,5*	*920*	*4*	*65,4*	***93***
4	*2,2*	*935*	*5,6*	*74,4*	***93***
5	*3*	*960*	*7,4*	*79,4*	***93***
6	*3*	*1410*	*6,8*	*71,9*	***101***
7	*4*	*1435*	*8,8*	*73,9*	***101***
8	***5.5***	***1440***	***11.7***	***83.9***	***101***
9	***7.5***	***1450***	***15.6***	***104.4***	***101***
10	***11***	***1460***	***22.5***	***117.9***	***101***

VR-280-46-4

Overall and connection dimensions of the fan VR-280-46-4



Additional equipment

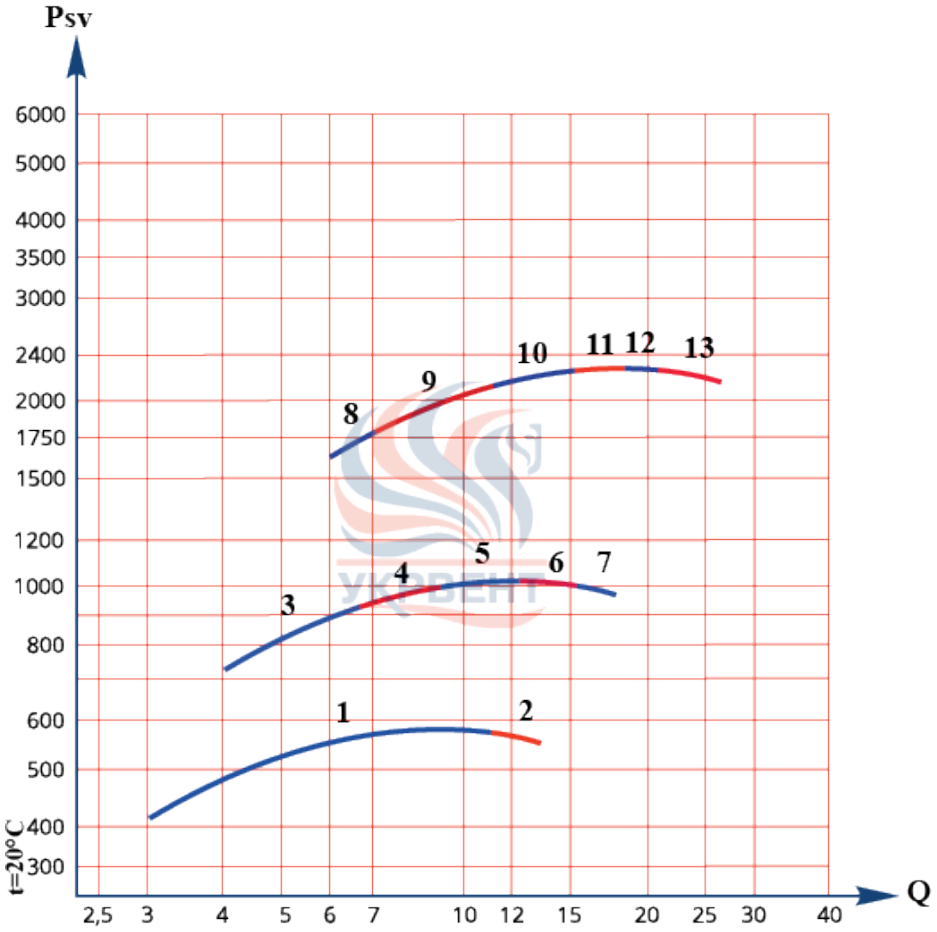
Flexible insert
VK-400

Frequency converter
UVE-810

Vibration isolator RV-30

VR-280-46-5

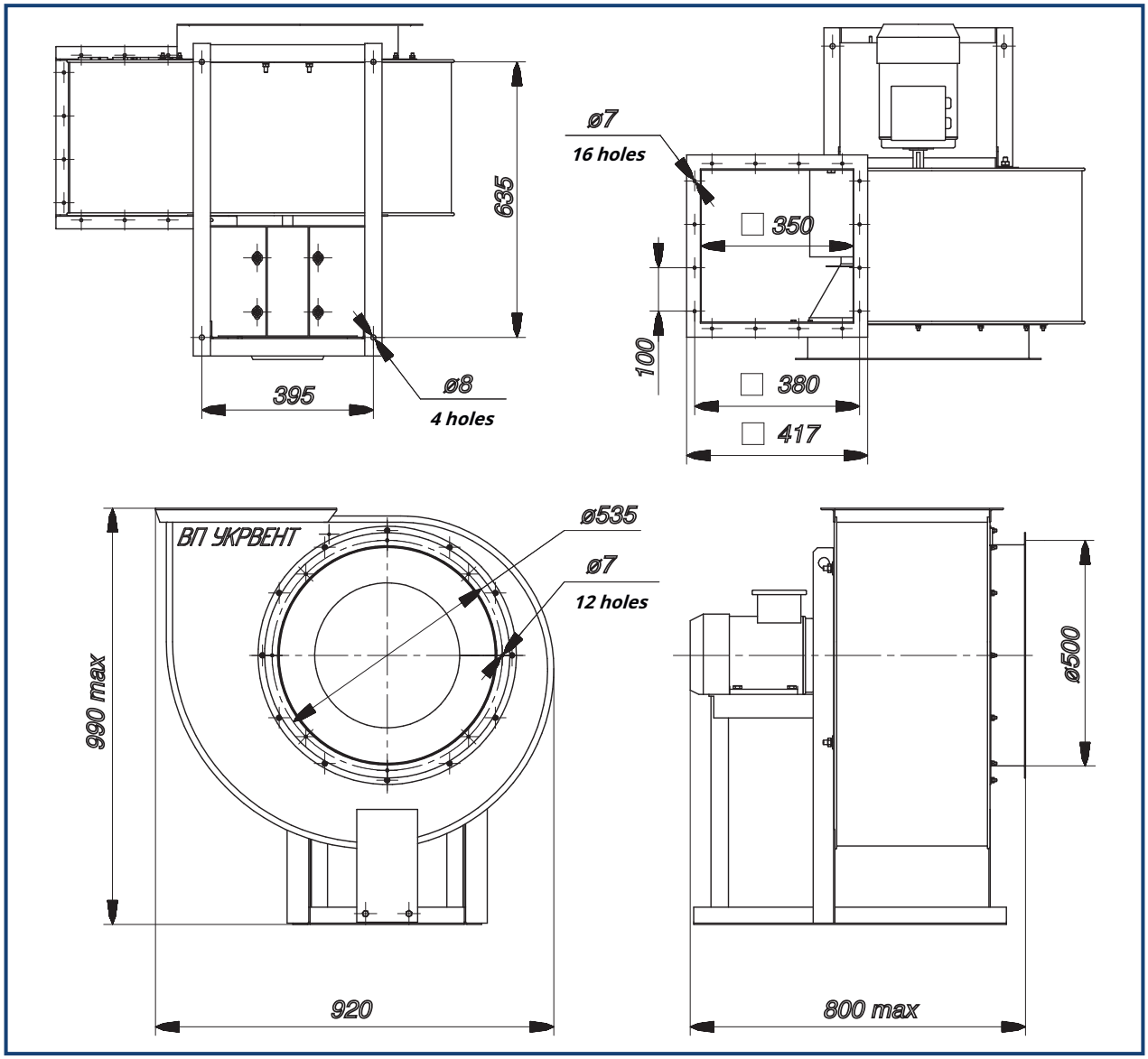
Aerodynamic characteristics



Curve №	Power, kW	Frequency of rotation of the impeller , rpm	Rated current, A	Weight of fan, max kg	Acoustics, dB,
1	3	700	8.6	137.5	90
2	4	715	10.8	167	90
3	3	935	7.9	135	97
4	4	935	10.3	136	97
5	5.5	955	13.4	155	97
6	7.5	960	17.2	229	97
7	11	965	24.6	235	97
8	7.5	1450	15.6	150.5	109
9	11	1450	23.1	170.5	109
10	15	1455	30.8	222	109
11	18.5	1455	37.8	226	109
12	22	1465	44.4	261	109
13	30	1465	59.6	274	109

VR-280-46-5

Overall and connection dimensions of the fan VR-280-46-5



Additional equipment

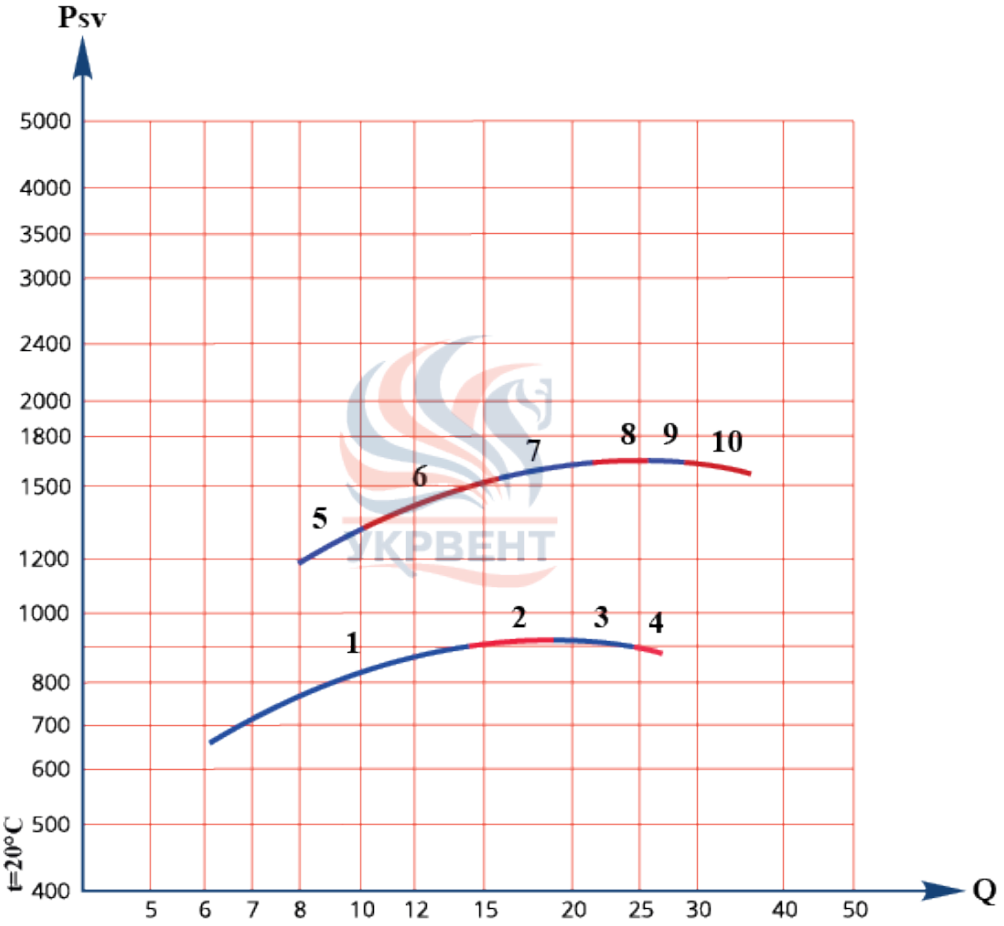
Flexible insert
VK-500

Frequency converter
UVE-810

Vibration isolator RV-30

VR-280-46-6.3

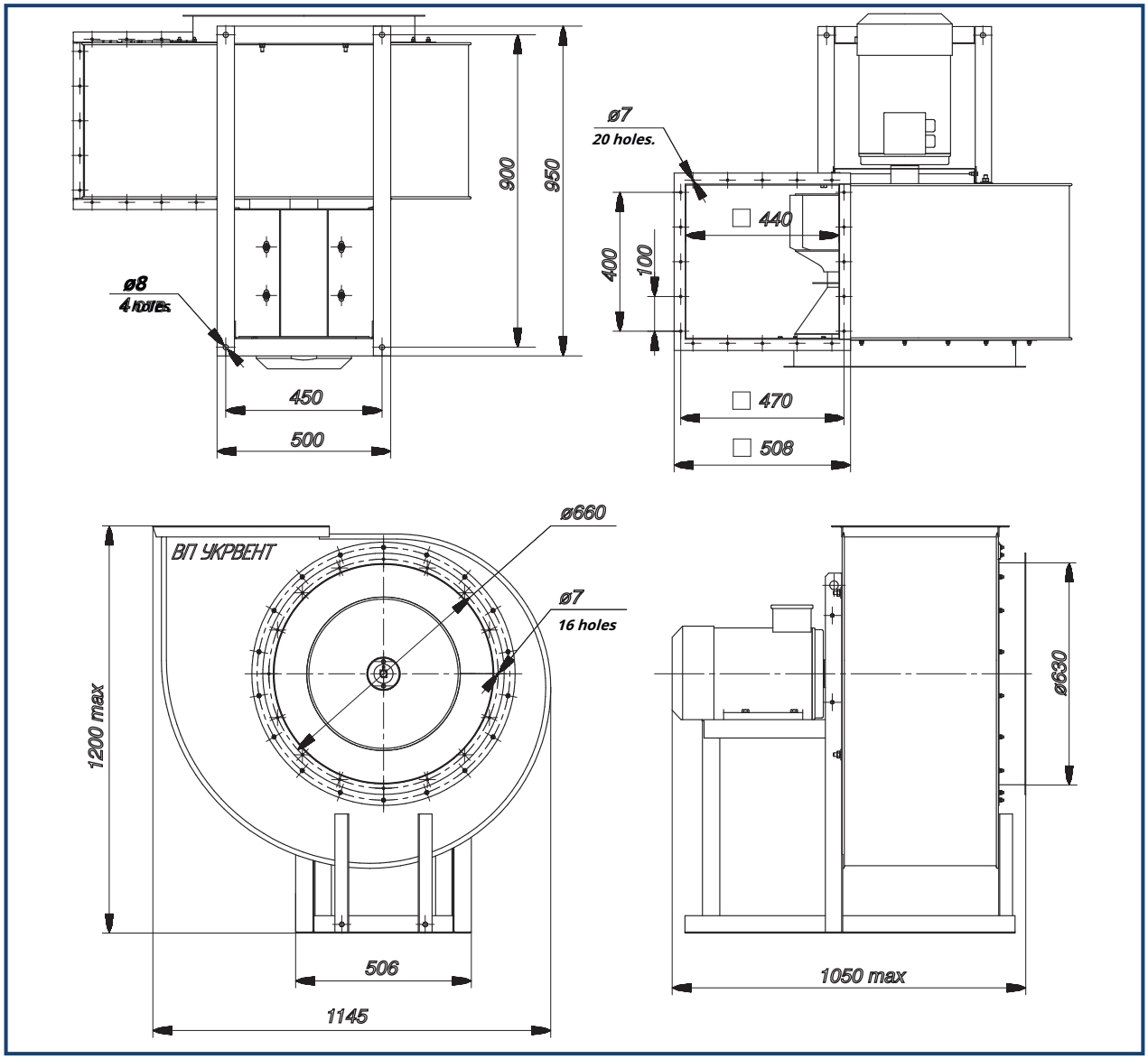
Aerodynamic characteristics



Curve №	Power, kW	Frequency of rotation of the impeller , rpm	Rated current, A	Weight of fan, max kg	Acoustics, dB,
1	5.5	715	14.7	224	93
2	7.5	720	19.2	276	93
3	11	720	27.3	283	93
4	15	730	34.1	308	93
5	7.5	965	17.2	242	99
6	11	965	24.6	269	99
7	15	965	33	283	99
8	18.5	970	39	328	99
9	22	975	45.2	361	99
10	30	975	61.8	378	99

VR-280-46-6.3

Overall and connection dimensions of the fan VR-280-46-6.3



Additional equipment

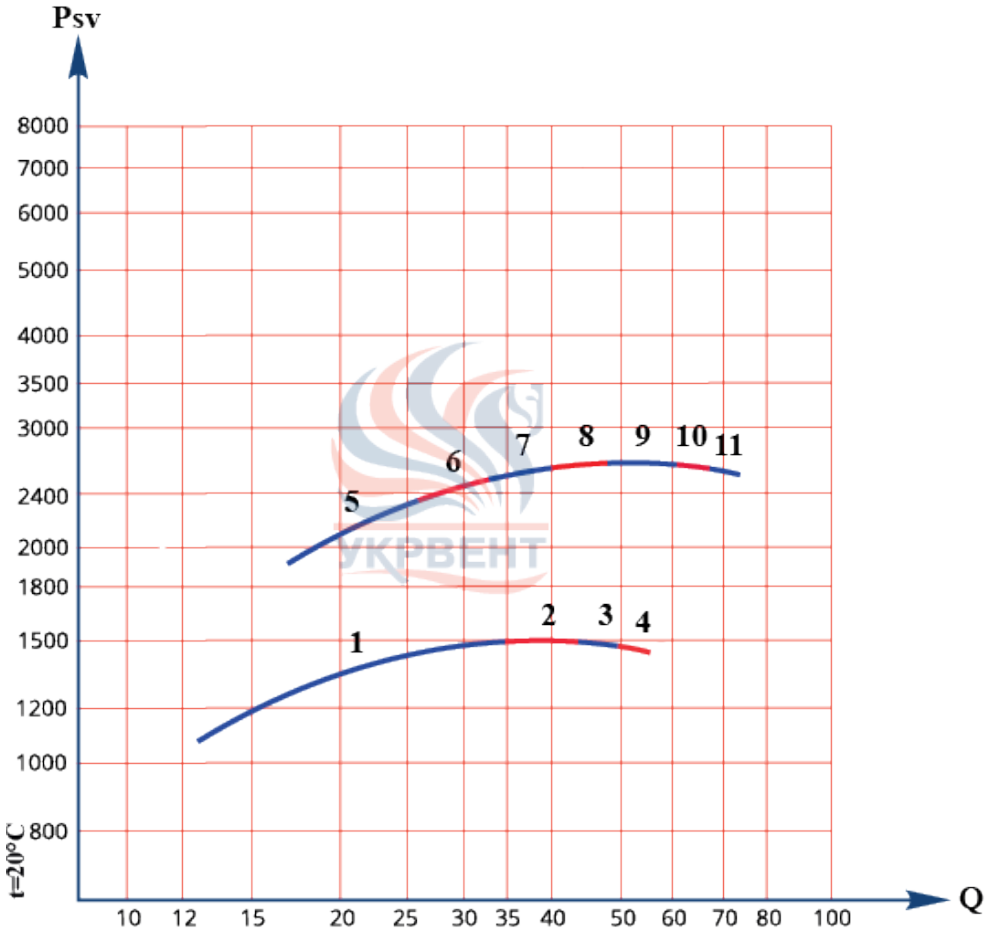
Flexible insert
VK-630

Frequency converter
UVE-810

Vibration isolator RV-40

VR-280-46-8

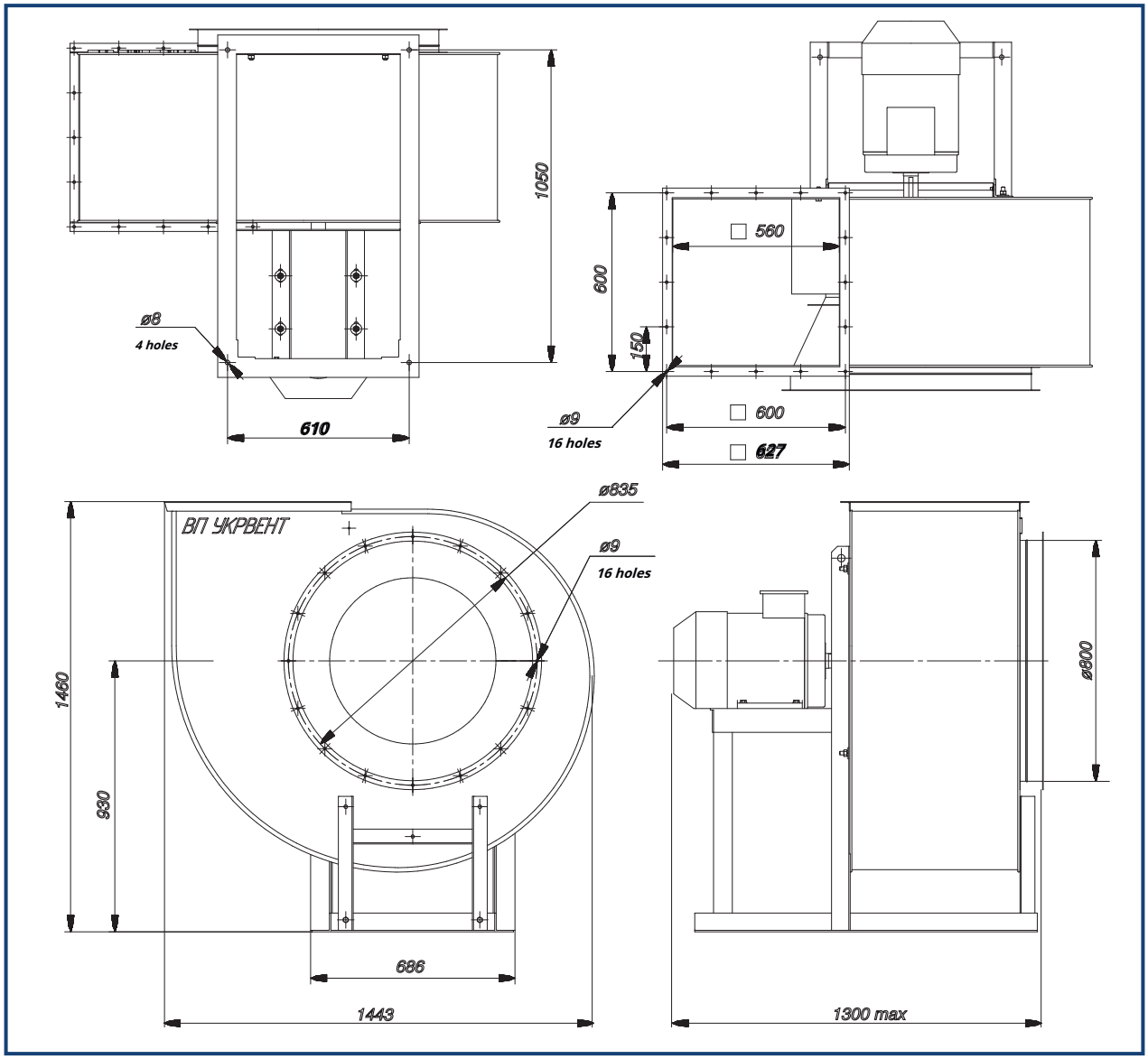
Aerodynamic characteristics



Curve №	Power, kW	Frequency of rotation of the impeller , rpm	Rated current, A	Weight of fan, max kg	Acoustics, dB,
1	*22*	*730*	*49.4*	*544*	*105*
2	*30*	*735*	*65.3*	*644*	*105*
3	*37*	*740*	*78*	*753*	*105*
4	*45*	*740*	*94*	*792*	*105*
5	*30*	*975*	*61.8*	*534*	*112*
6	*37*	*980*	*73.5*	*644*	*112*
7	*45*	*985*	*90.1*	*749*	*112*
8	*55*	*985*	*110*	*804*	*112*
9	*75*	*985*	*150*	*1084*	*112*
10	*90*	*985*	*169*	*1166*	*112*
11	*110*	*985*	*207*	*1445*	*112*

VR-280-46-8

Overall dimensions and connection dimensions of the fan VR-280-46-8



Additional equipment

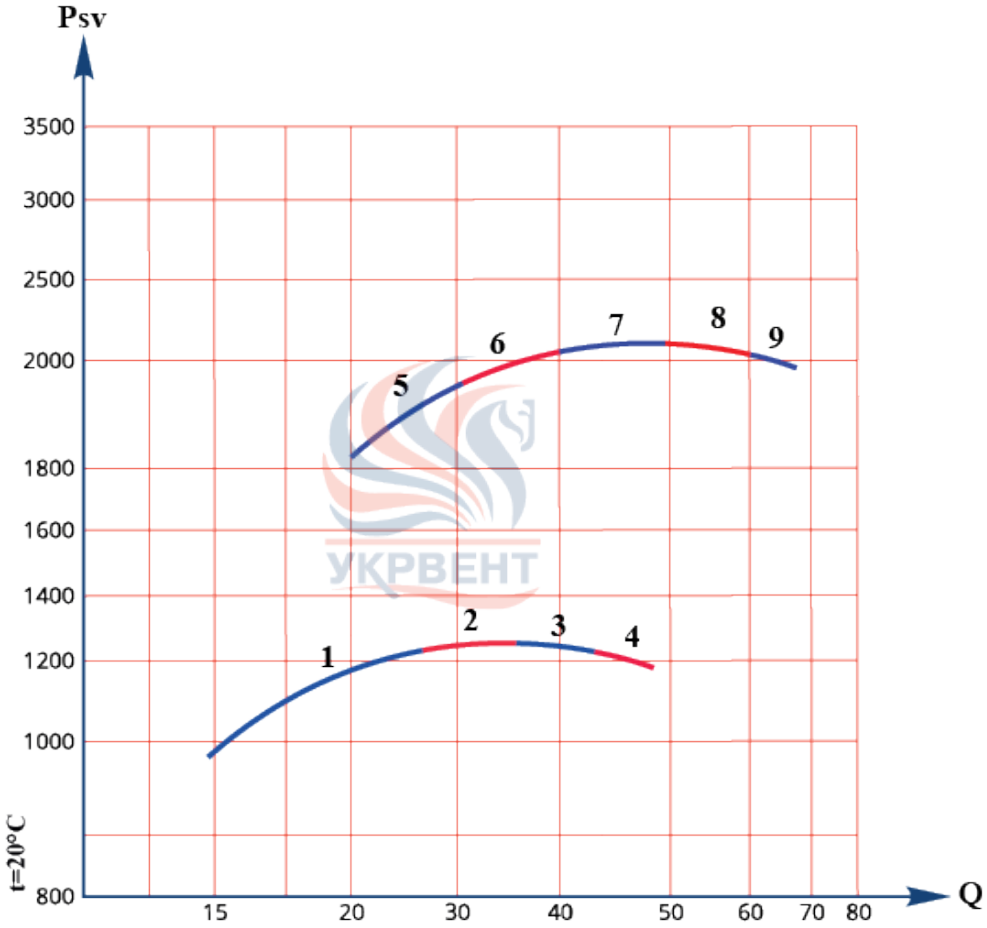
Flexible insert
VK-800

Frequency converter
UVE-810

Vibration isolator RV-40

VR-280-46-10

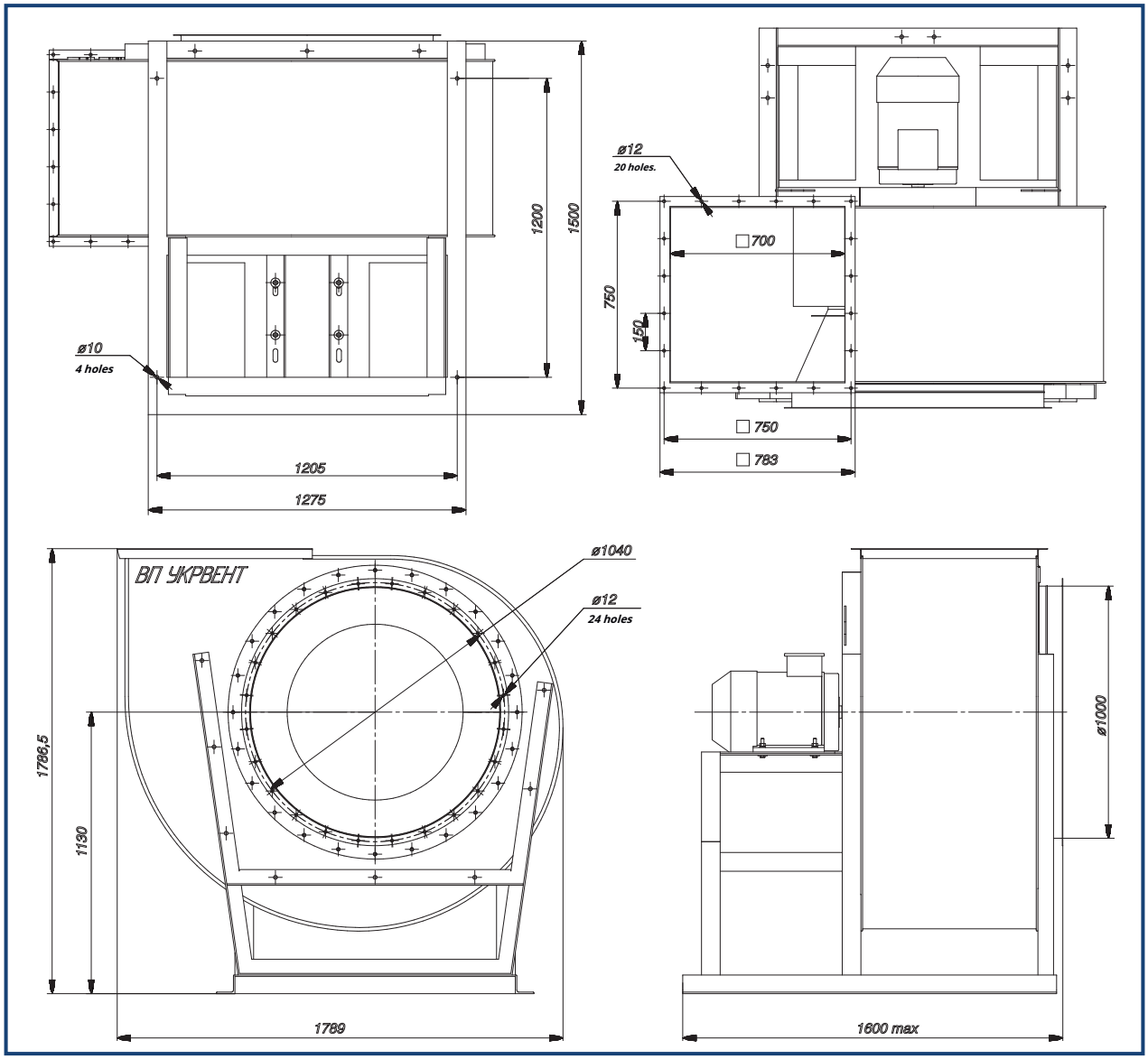
Aerodynamic characteristics



Curve №	Power, kW	Frequency of rotation of the impeller , rpm	Rated current, A	Weight of fan, max kg	Acoustics, dB,
1	*18.5*	*730*	*41.1*	*660*	*108*
2	*22*	*730*	*48.9*	*675*	*108*
3	*30*	*735*	*63*	*810*	*108*
4	*37*	*740*	*78*	*919*	*108*
5	*37*	*980*	*71*	*810*	*114*
6	*45*	*980*	*86*	*915*	*114*
7	*55*	*980*	*104*	*970*	*114*
8	*75*	*985*	*142*	*1140*	*115*
9	*90*	*985*	*169*	*1250*	*115*

VR-280-46-10

Overall and connection dimensions of the fan VR-280-46-10



Additional equipment

Flexible insert
VK-1000

Frequency converter
UVE-810

Vibration isolator RV-50