

KPB 系列无蜗壳风机

KPB Series Plenum Backward Fan

2015

Bulletin 2015-E

江苏德沃风机有限公司

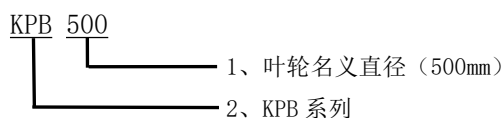
JIANGSU DEWOW FANS CO.,LTD.

Plenum Backward Fan

叶轮直径最大至 1400mm
Wheel diameter up to 1400mm
风量最大至 120000CMH
Airflow to 120000m³/h
静压至 2800Pa
Static pressure to 2800Pa



型号说明



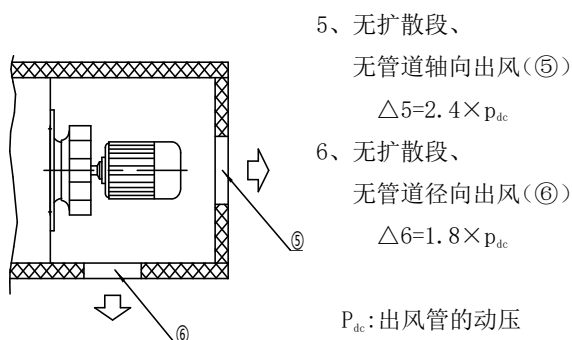
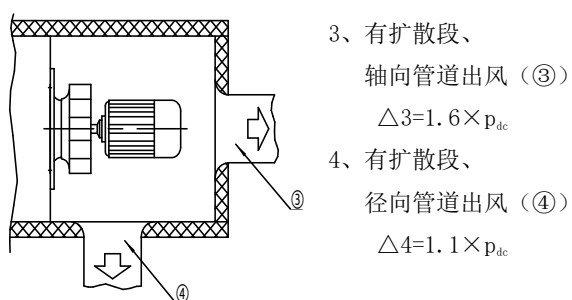
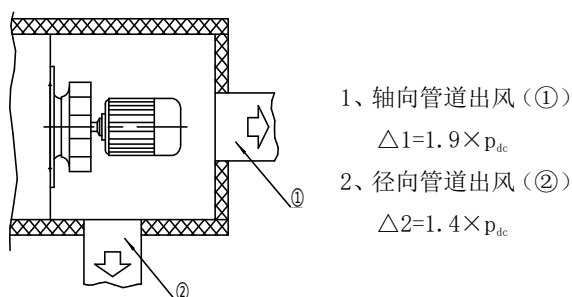
特点及用途

- 1、叶轮具有高效率，低噪声，大流量，高压力等特点。
- 2、KPB 系列风机采用变频电机。
- 3、无风机蜗壳，调整安装及维护方便。

选型标准

无蜗壳风机与管道连接时，必须考虑箱体内的静压损失，选型时必须增加静压值。

静压损失的计算见下图：



Explanation of ventilator model

- 1、Nominal diameter of the fan wheel (500mm)
- 2、KPB series

Features and application

1. The impeller has the characteristics of high efficiency, low noise, high flow, high pressure, etc.
2. The Variable frequency motor are used in the KPB series.
3. The KPB series is not fitted within a conventional fan housing, the adjustment and installation are convenient.

Selection criteria

The loss associated with the duct take off from the plenum must be added to the static pressure required by the fan.

There losses, as literature indicates, are:

1. For axial ducted discharge (①)

$$\Delta 1 = 1.9 \times p_{dc}$$

2. For radial ducted discharge (②)

$$\Delta 2 = 1.4 \times p_{dc}$$

3. With diffusion device,
for axial ducted discharge (③)

$$\Delta 3 = 1.6 \times p_{dc}$$

4. With diffusion device,
for radial ducted discharge (④)

$$\Delta 4 = 1.1 \times p_{dc}$$

5. Without diffusion device,
With no ducted discharge, axial flow (⑤)

$$\Delta 5 = 2.4 \times p_{dc}$$

6. Without diffusion device,
With no ducted discharge, radial flow (⑥)

$$\Delta 6 = 1.8 \times p_{dc}$$

P_{dc} : dynamic pressure in the discharge duct

例子:

出风管轴向位置 $1\text{m} \times 1\text{m}$ (面积 $A=1\text{m}^2$)

空气密度: $\rho=1.2 \text{ kg/m}^3$

要求的风量: $Q=36000 \text{ m}^3/\text{h}=10 \text{ m}^3/\text{s}$

要求的静压: $\Delta p_f=1000 \text{ Pa}$

$$P_{dc}=0.5 \times \rho \times (Q/A)^2=0.5 \times 1.2 \times (10/1)^2=60 \text{ Pa}$$

$$\Delta l=1.9 \times p_{dc}=1.9 \times 60=114 \text{ Pa}$$

KPB 风机选择必须按以下数据进行:

$$\Delta p_{stat}=\Delta p_f+\Delta l=1000+114=1114 \text{ Pa}$$

$$Q=36000 \text{ m}^3/\text{h}$$

Example:

$1 \times 1\text{m}$ discharge duct($A=1\text{m}^2$) axial position(①)

Air density: $\rho=1.2 \text{ kg/m}^3$

Required air flow volume: $Q=36000 \text{ m}^3/\text{h}=10 \text{ m}^3/\text{s}$

Pressione statica richiesta: $\Delta p_f=1000 \text{ Pa}$

$$P_{dc}=0.5 \times \rho \times (Q/A)^2=0.5 \times 1.2 \times (10/1)^2=60 \text{ Pa}$$

$$\Delta l=1.9 \times p_{dc}=1.9 \times 60=114 \text{ Pa}$$

KPB selection has to be done with the following data:

$$\Delta p_{stat}=\Delta p_f+\Delta l=1000+114=1114 \text{ Pa}$$

$$Q=36000 \text{ m}^3/\text{h}$$

最小距离

A、B、C 和半径 R 是建议正确安装无壳风机的最小距离。

$$A \geq 0.4D$$

$$B \geq 0.4D$$

$$C \geq D$$

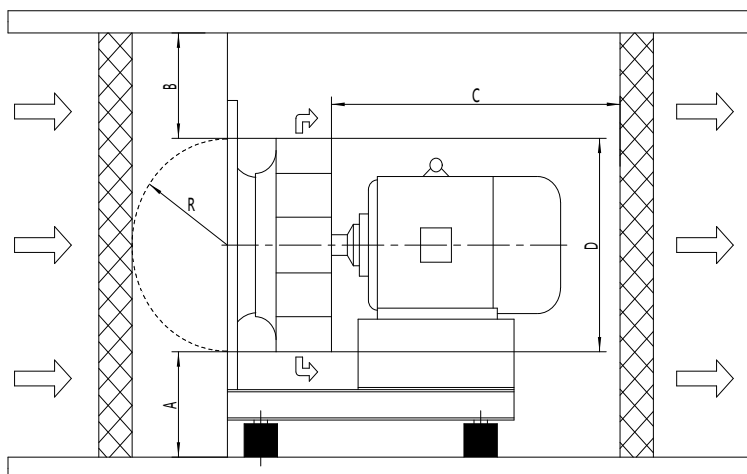
$$R \geq 0.5D$$

D = 叶轮名义直径 (mm)

D = Nominal diameter of the fan wheel (mm)

Minimum distances

The following minimum distances, A, B, C and R are recommended for a correct plug fan installation.



使用说明

1. 使用前应检查电动机引线是否完好。
2. 接地螺栓进行可靠接地。
3. 安装前对风机各部件检查, 查看各部件间是否有干涉现象。
4. 风机应在额定电压 $\pm 5\%$ 范围内运行。
5. 风机运转时不得超过铭牌额定电流。
6. 风机运转的方向为蜗壳上箭头所指方向。
7. 用户订货时需注明风机型号、风量、全压、安装方向和电机型号等。
8. 特殊定制, 请定单标明。

Tips for operation

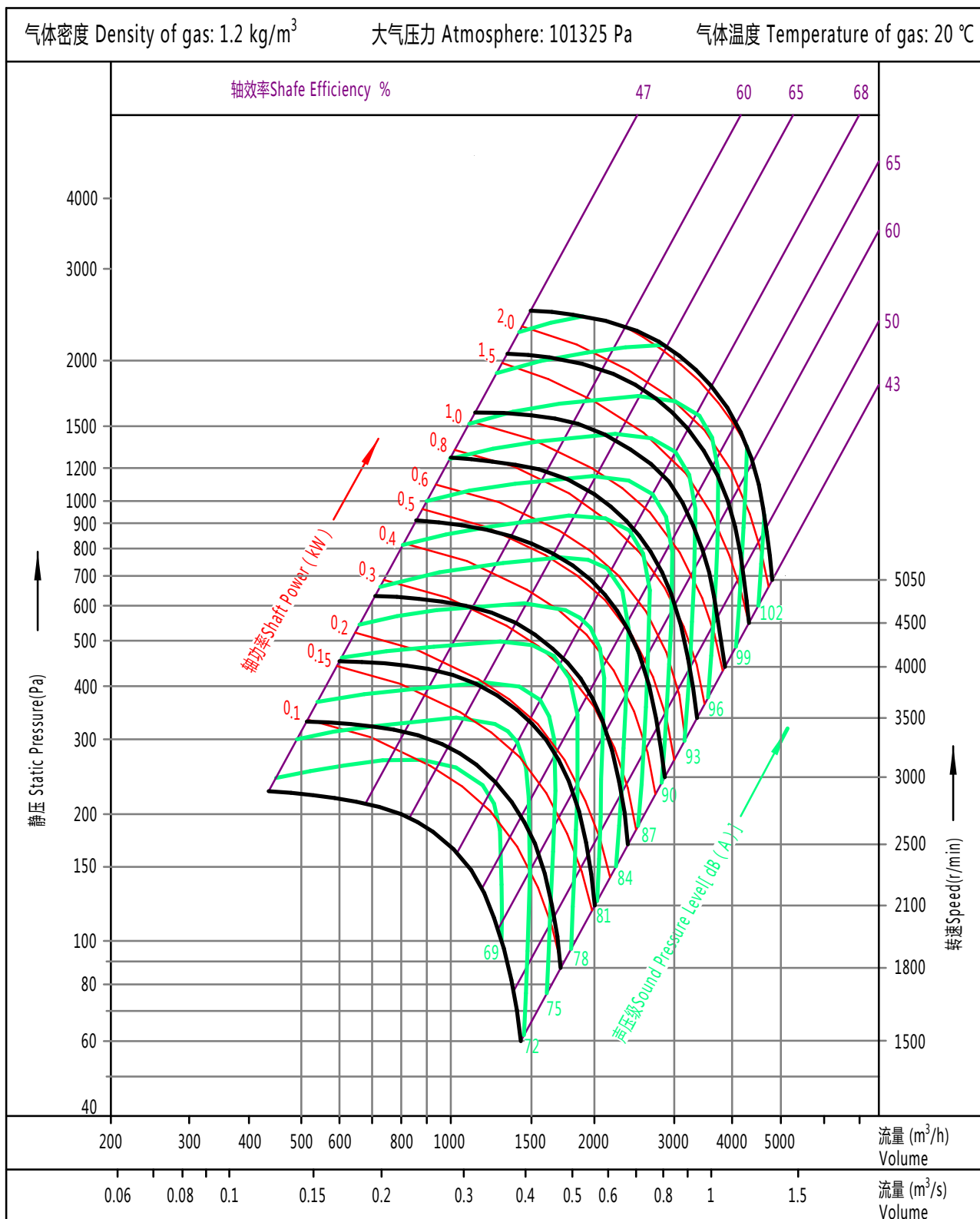
1. Before used, please check the wires.
2. Please tried link the earthing device at the earth stud.
3. The fan assembly must be on site inspected before installation to assure there is no any interference between moving parts.
4. The fan should be running at the rated voltage, and the change of voltage should less than $\pm 5\%$.
5. Don't operate the fans with it is running current exceeding the rated current shown in the nameplate.
6. The direction of fan rotation is indicated by the arrow mark on the casing.
7. Fan model, air volume, total pressure, installation direction and motor model must be specified on Purchasing Order.
8. Special custom , please order.

产 品 目 录

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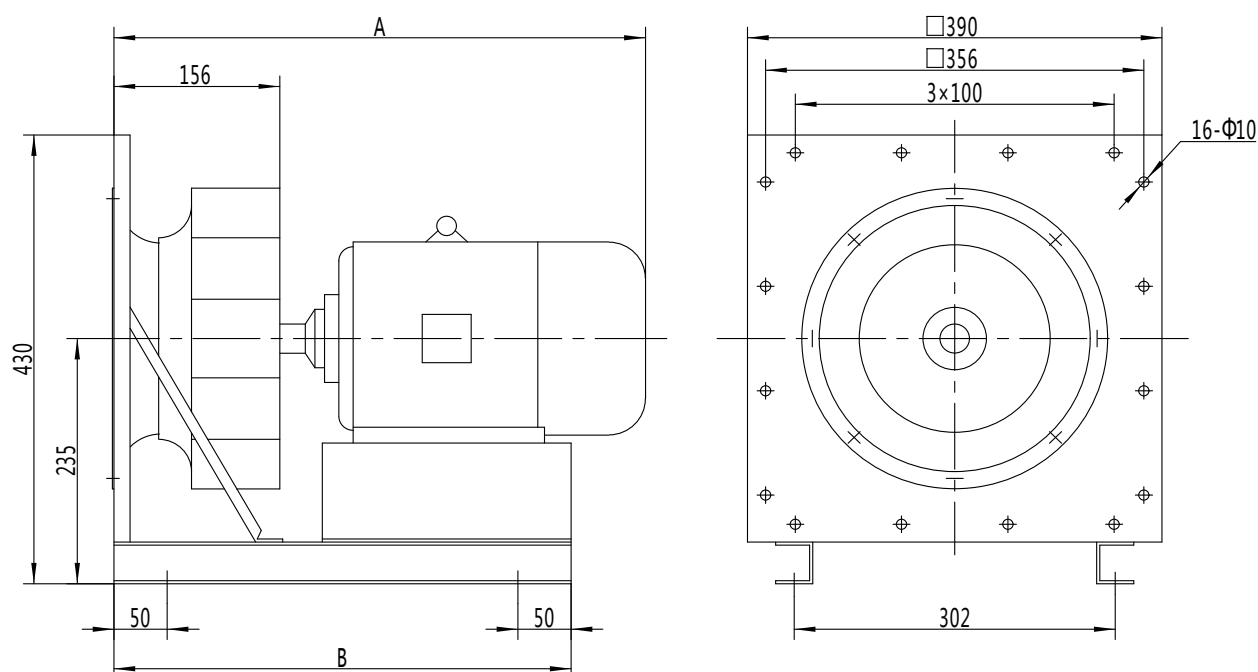
KPB280

性能曲线图 Performance Curve



KPB280

外形及安装尺寸 Overall and Dimension

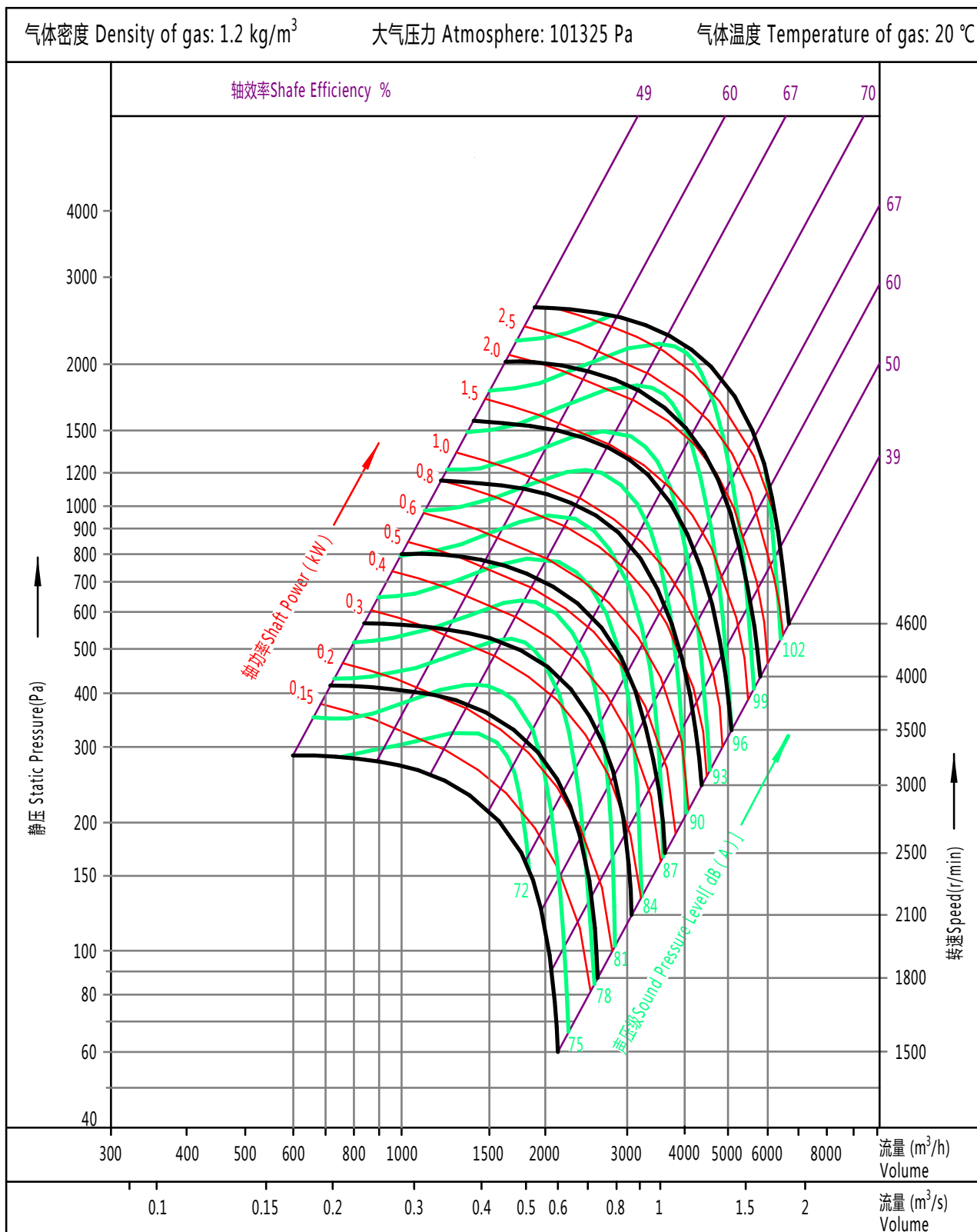


技术参数表 Technology Parameter Table

序号 No.	电机型号 Motor Model	功率 Power (kW)	额定转速 Rated Speed (r/min)	最大转速 Max. Speed (r/min)	最大频率 Max. Frequency (Hz)	重量 Weight (Kg)	外形尺寸 Overall dimension	
							A	B
1	YVP 71M-2	0.55	2800	2980	53	21	397	357
2	YVP 80M-2	0.75	2855	3300	58	23	421	377
3	YVP 80M-2	1.1	2845	3700	65	25		
4	YVP 90S-2	1.5	2860	4100	72	28	469	408
5	YVP 90L-2	2.2	2880	4600	80	31		
6	YVP 100L-2	3.0	2890	5050	88	37	500	430

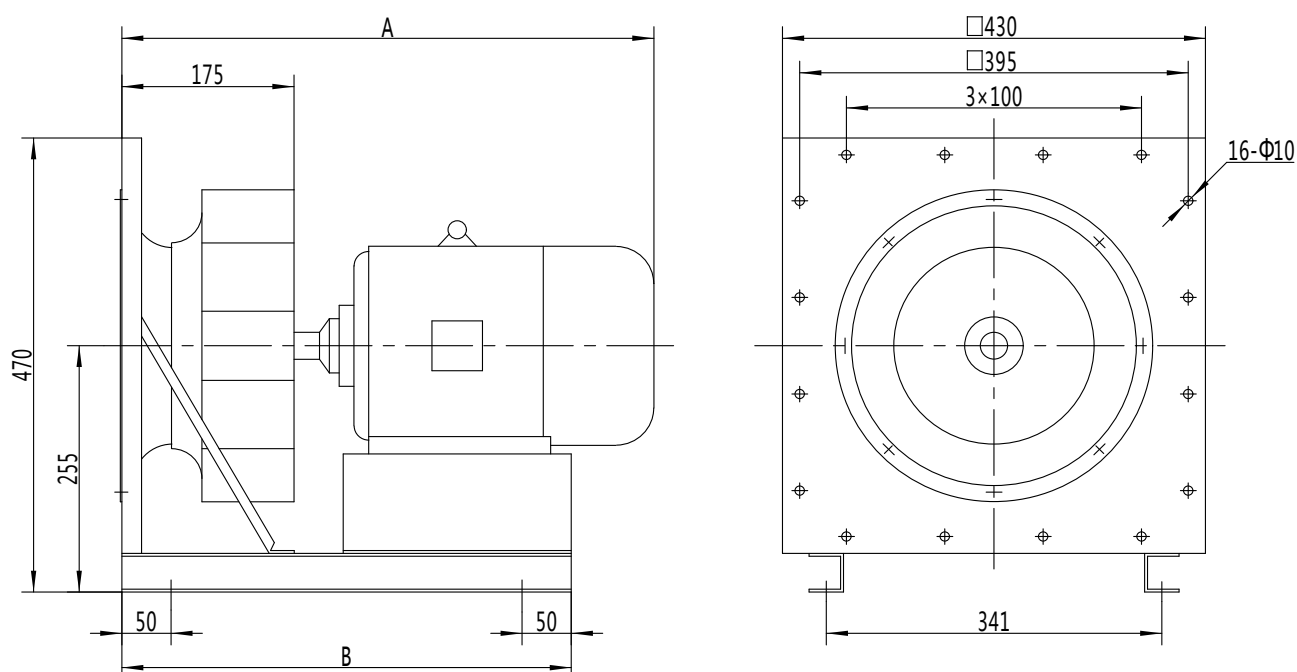
KPB315

性能曲线图 Performance Curve



KPB315

外形及安装尺寸 Overall and Dimension

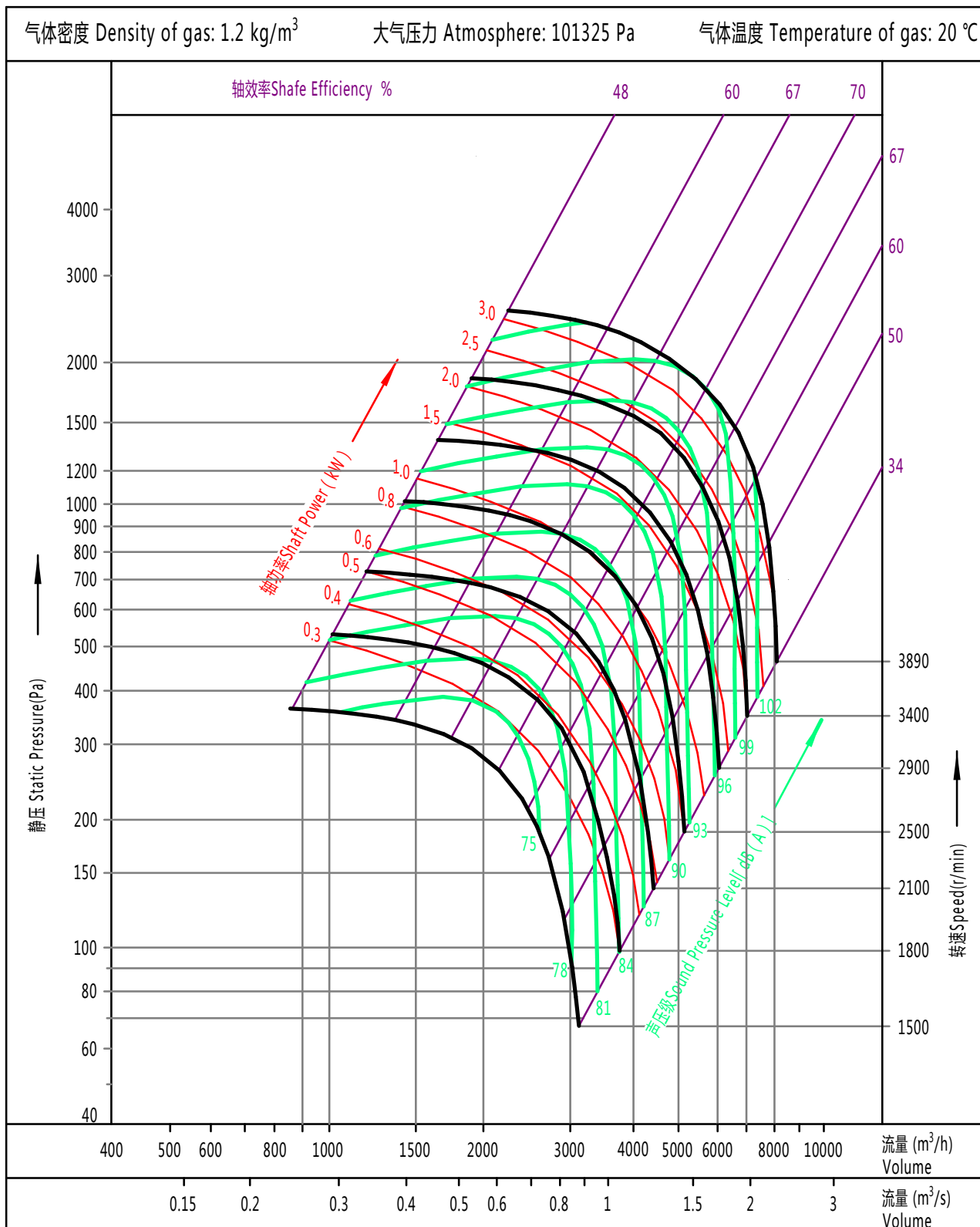


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							A	B
1	YVP 80M-4	0.55	1395	2380	85	24	441	397
2	YVP 80M-2	1.1	2845	3050	54	26		
3	YVP 90S-2	1.5	2860	3400	59	30	489	428
4	YVP 90L-2	2.2	2880	3830	67	33		
5	YVP 100L-2	3.0	2890	4200	73	39	520	450
6	YVP 112M-2	4.0	2905	4600	79	46	541	457

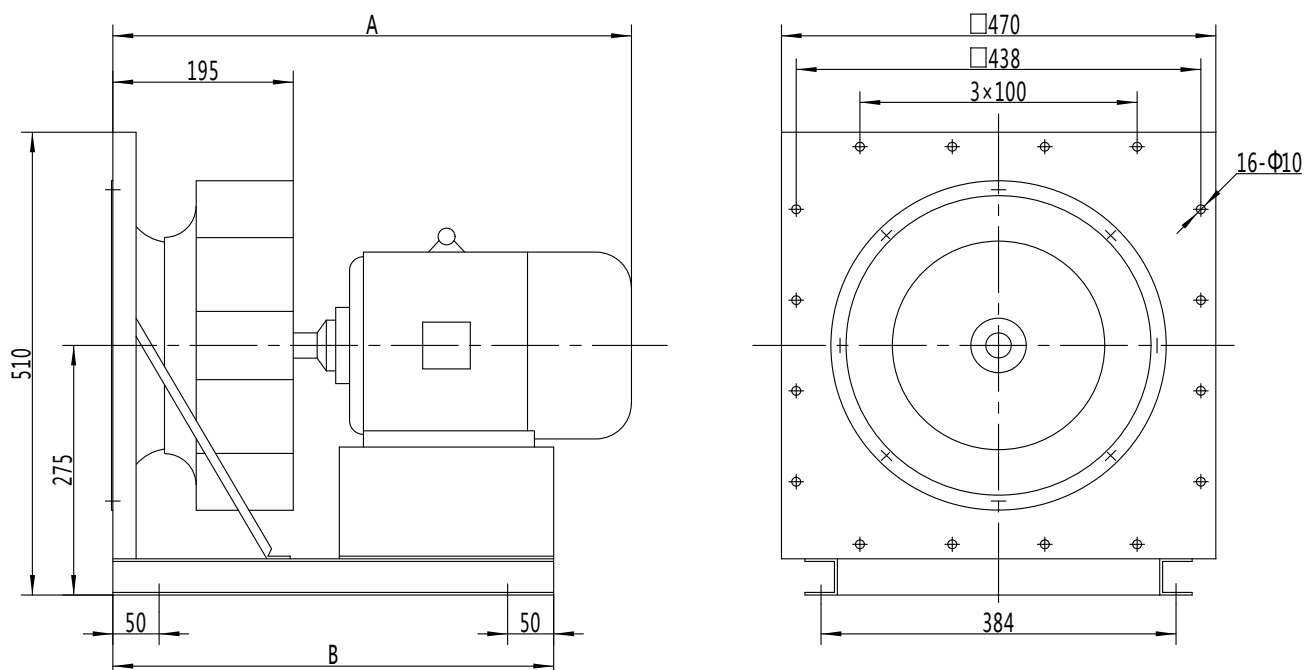
KPB355

性能曲线图 Performance Curve



KPB355

外形及安装尺寸 Overall and Dimension

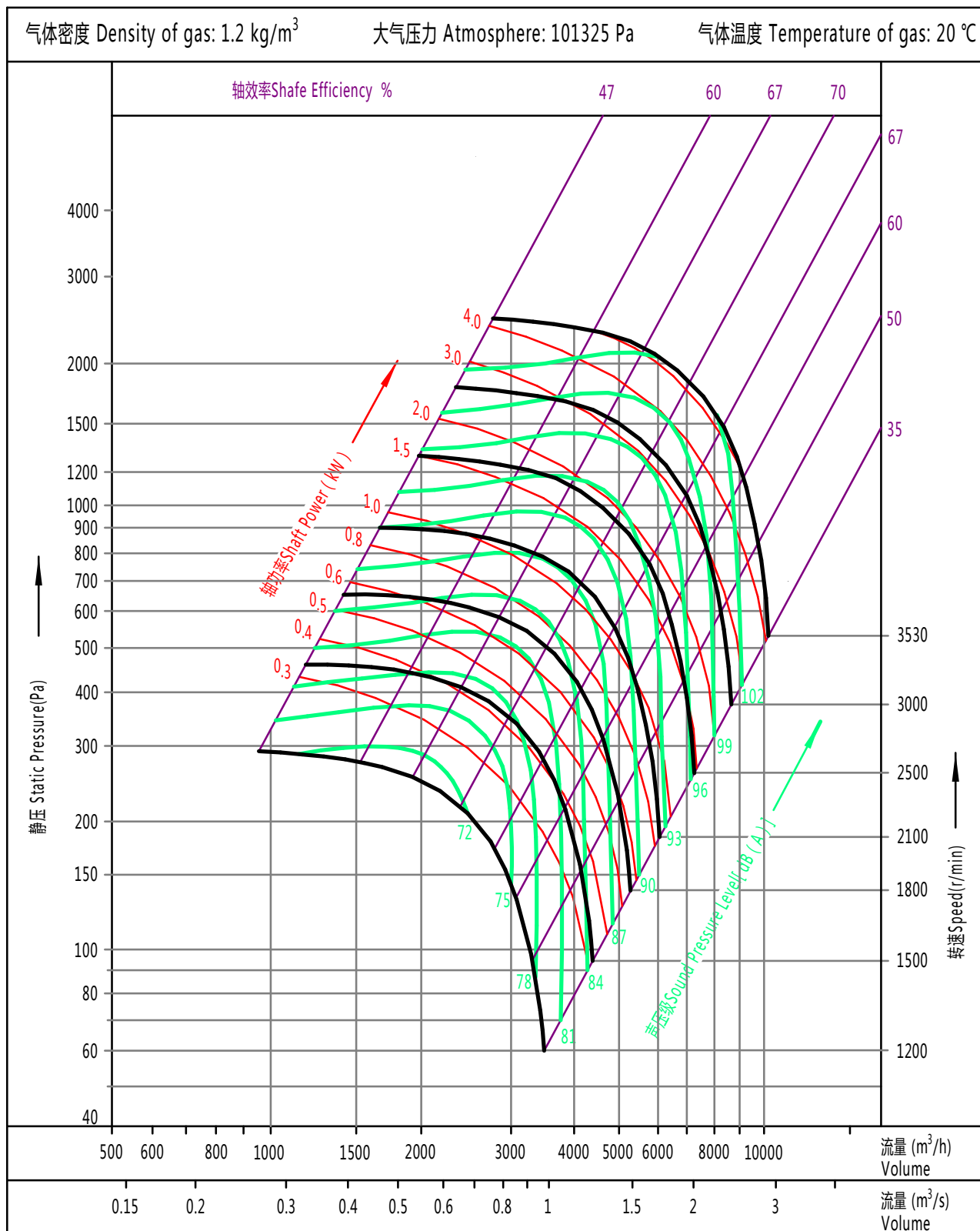


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							A	B
1	YVP 80M-4	0.75	1395	2180	78	28	461	417
2	YVP 90S-4	1.1	1415	2500	88	31	509	448
3	YVP 90L-2	2.2	2880	3180	55	35		
4	YVP 100L-2	3.0	2890	3530	61	41	540	470
5	YVP 112M-2	4.0	2905	3890	67	48	561	477

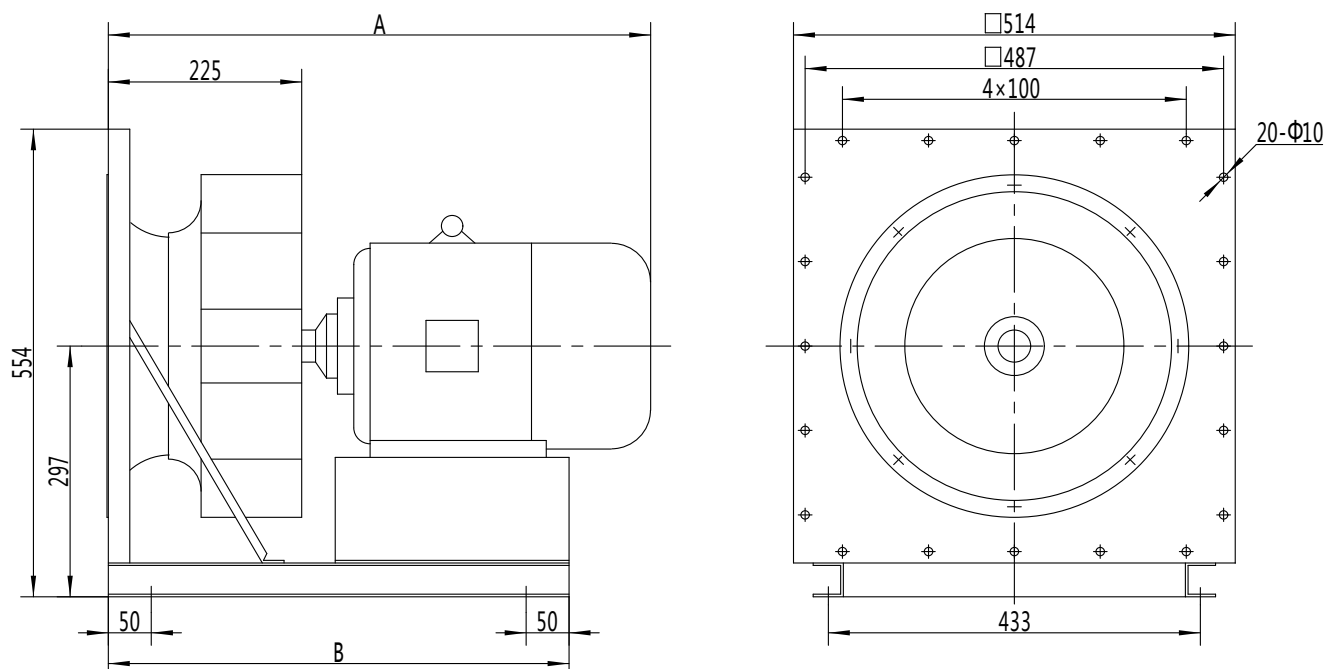
KPB400

性能曲线图 Performance Curve



KPB400

外形及安装尺寸 Overall and Dimension

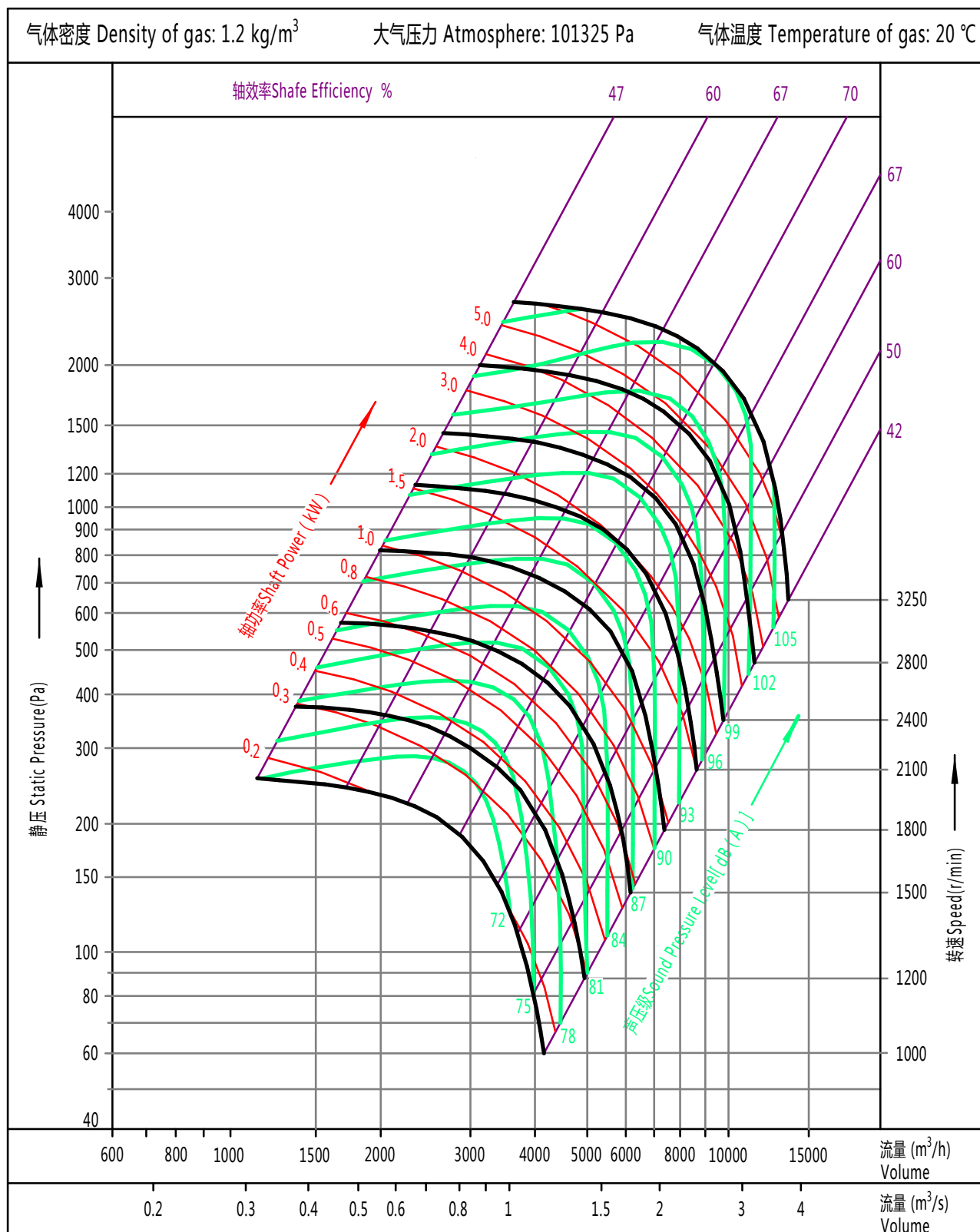


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							A	B
1	YVP 80M-4	0.75	1395	1810	65	31	491	447
2	YVP 90S-4	1.1	1415	2050	72	35	539	478
3	YVP 90L-4	1.5	1420	2250	79	38		
4	YVP 100L-4	2.2	1420	2480	87	45	570	500
5	YVP 100L-2	3.0	2890	2900	50	45		
6	YVP 112M-2	4.0	2905	3200	55	52	591	507
7	YVP 132S-2	5.5	2925	3530	60	64	631	536

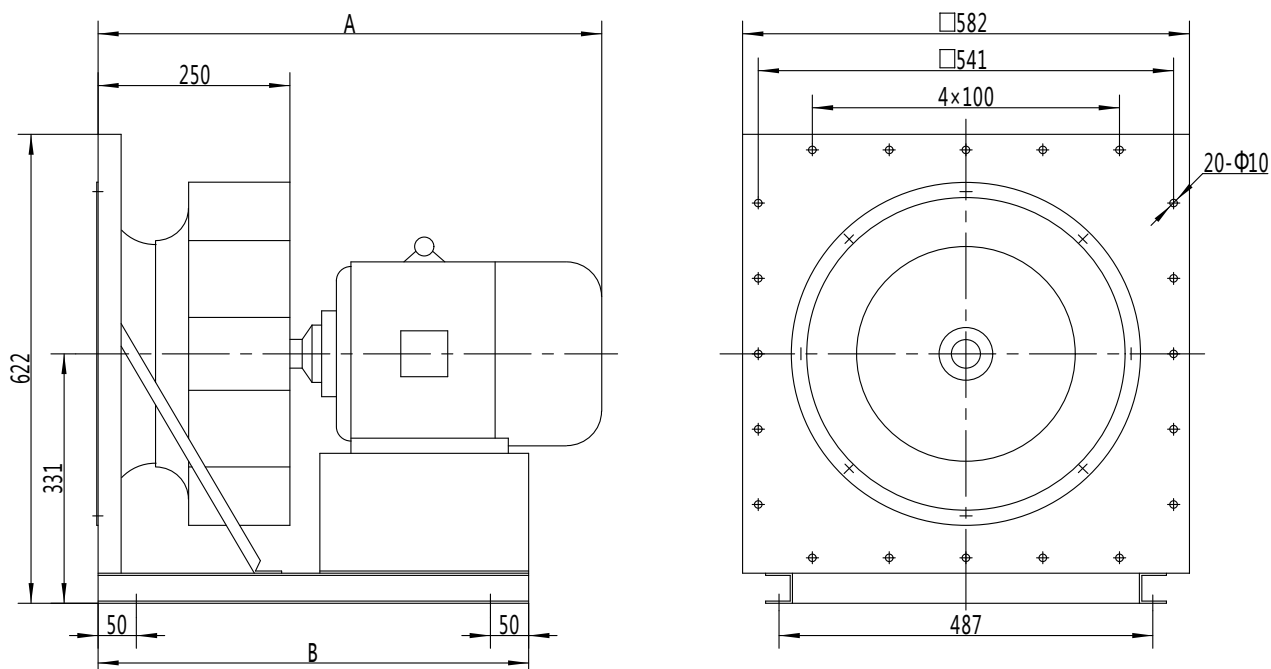
KPB450

性能曲线图 Performance Curve



KPB450

外形及安装尺寸 Overall and Dimension

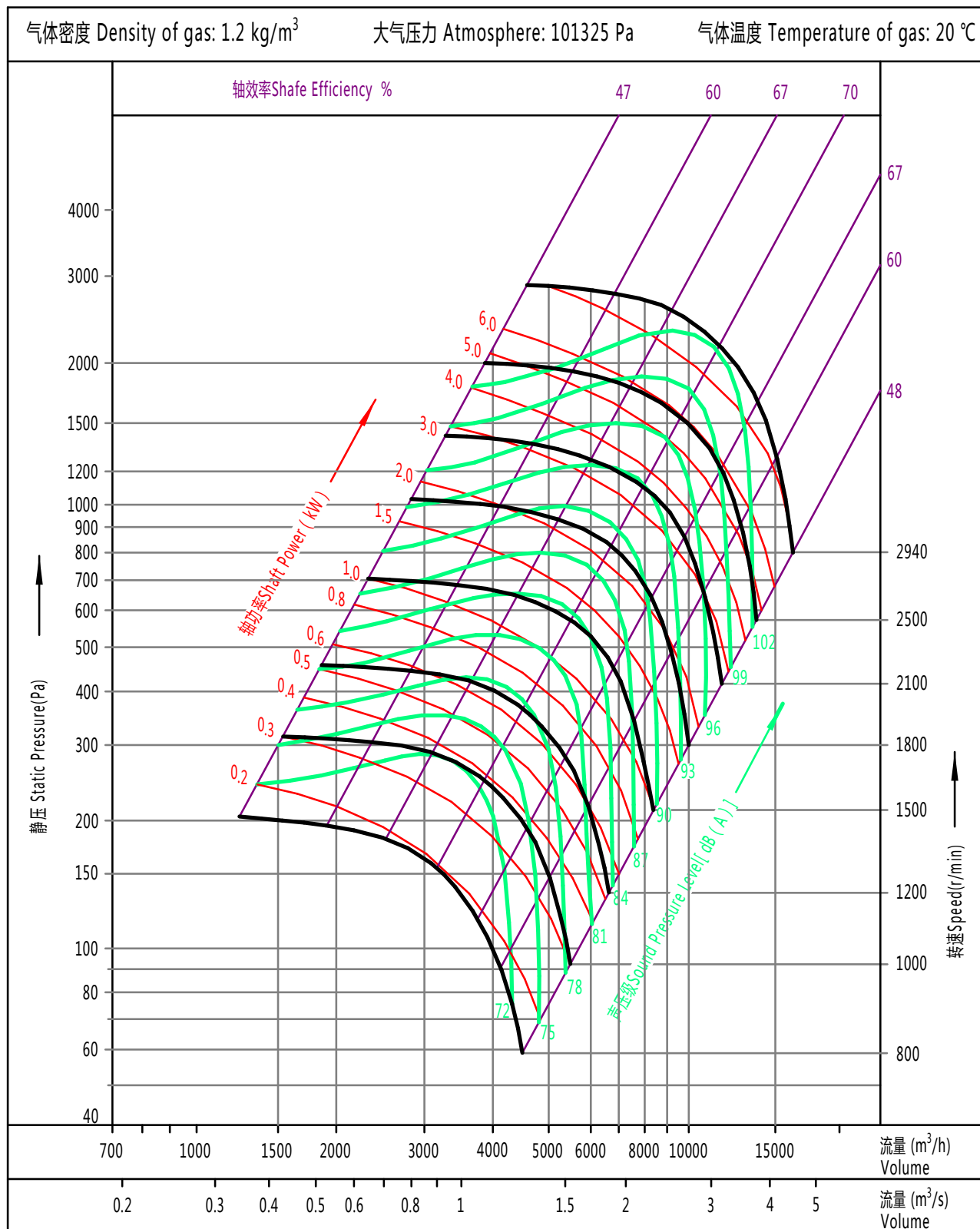


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							A	B
1	YVP 90S-4	1.1	1415	1700	60	40	564	503
2	YVP 90L-4	1.5	1420	1900	67	44		
3	YVP 100L-4	2.2	1420	2130	75	50	595	525
4	YVP 100L-4	3.0	1420	2350	83	54		
5	YVP 132S-2	5.5	2925	2950	50	70	656	561
6	YVP 132S-2	7.5	2930	3250	55	78		

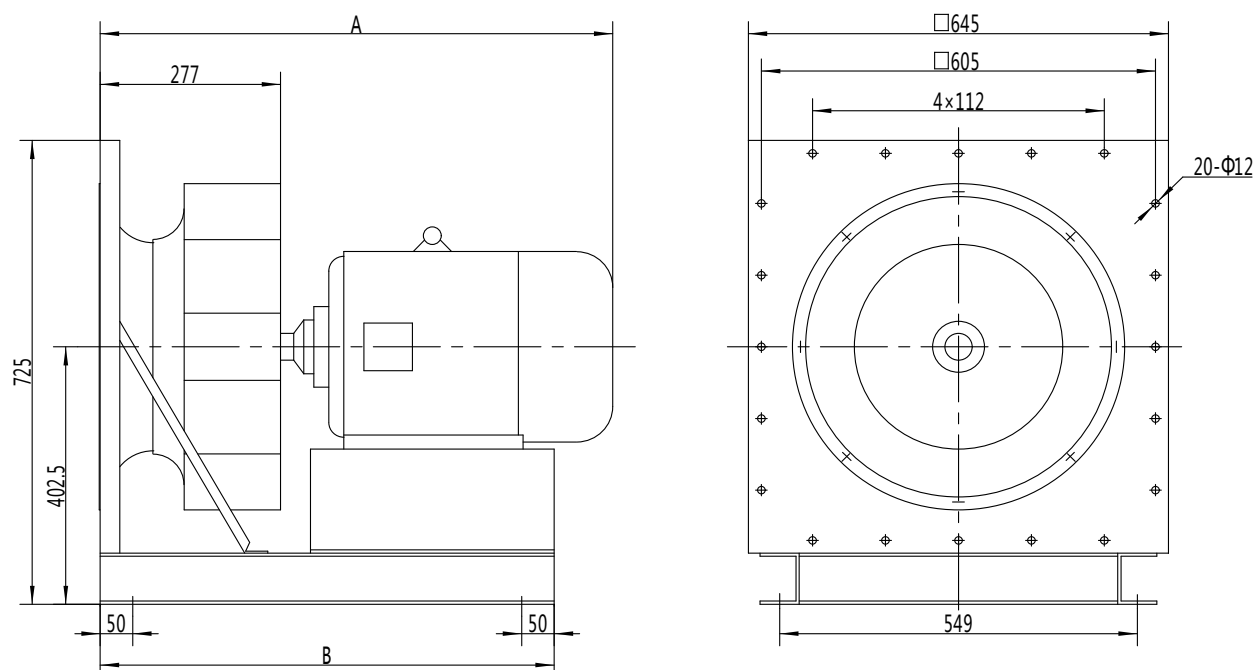
KPB500

性能曲线图 Performance Curve



KPB500

外形及安装尺寸 Overall and Dimension

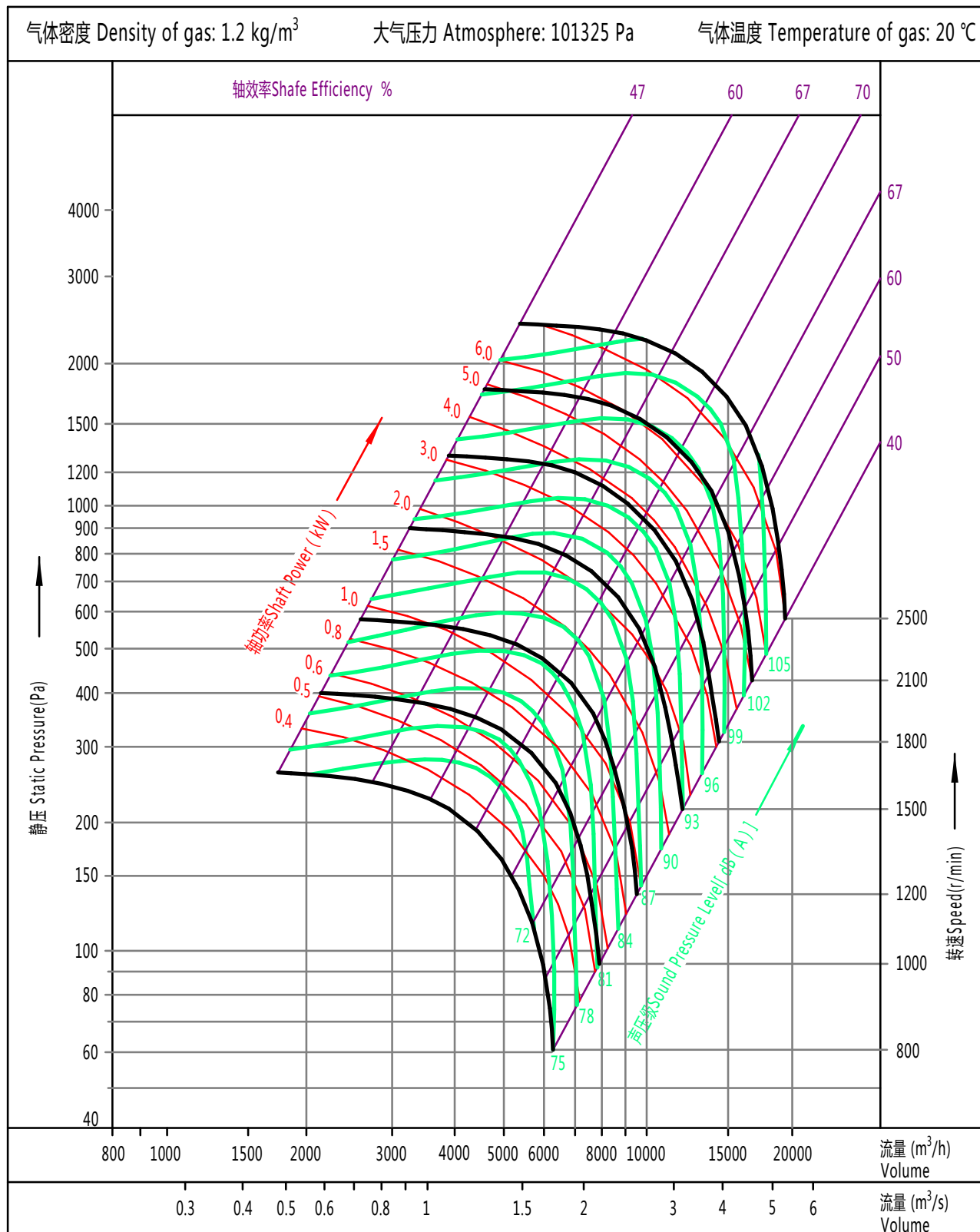


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							A	B
1	YVP 90L-4	1.5	1420	1580	56	54	591	530
2	YVP 100L-4	2.2	1420	1780	63	61	622	552
3	YVP 100L-4	3.0	1420	1960	69	64		
4	YVP 112M-4	4.0	1440	2150	75	70	643	559
5	YVP 132S-4	5.5	1455	2380	82	83	683	598
6	YVP 132M-4	7.5	1455	2600	89	89		
7	YVP 160M-2	11.0	2940	2940	50	115	787	697

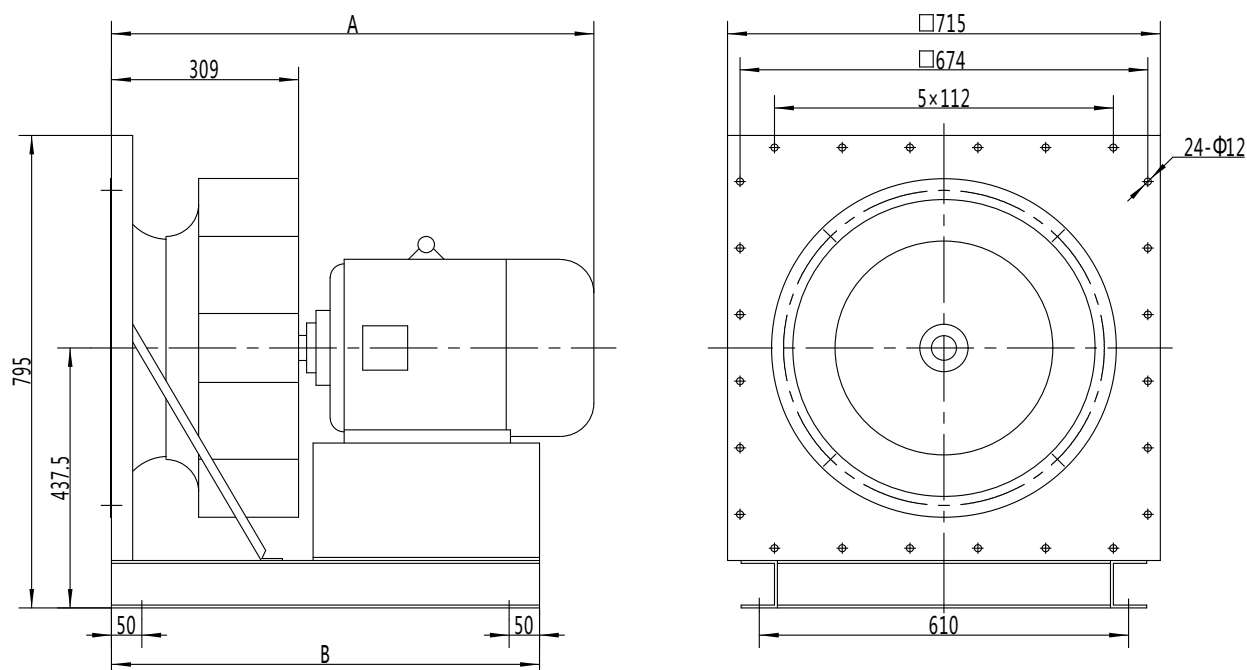
KPB560

性能曲线图 Performance Curve



KPB560

外形及安装尺寸 Overall and Dimension

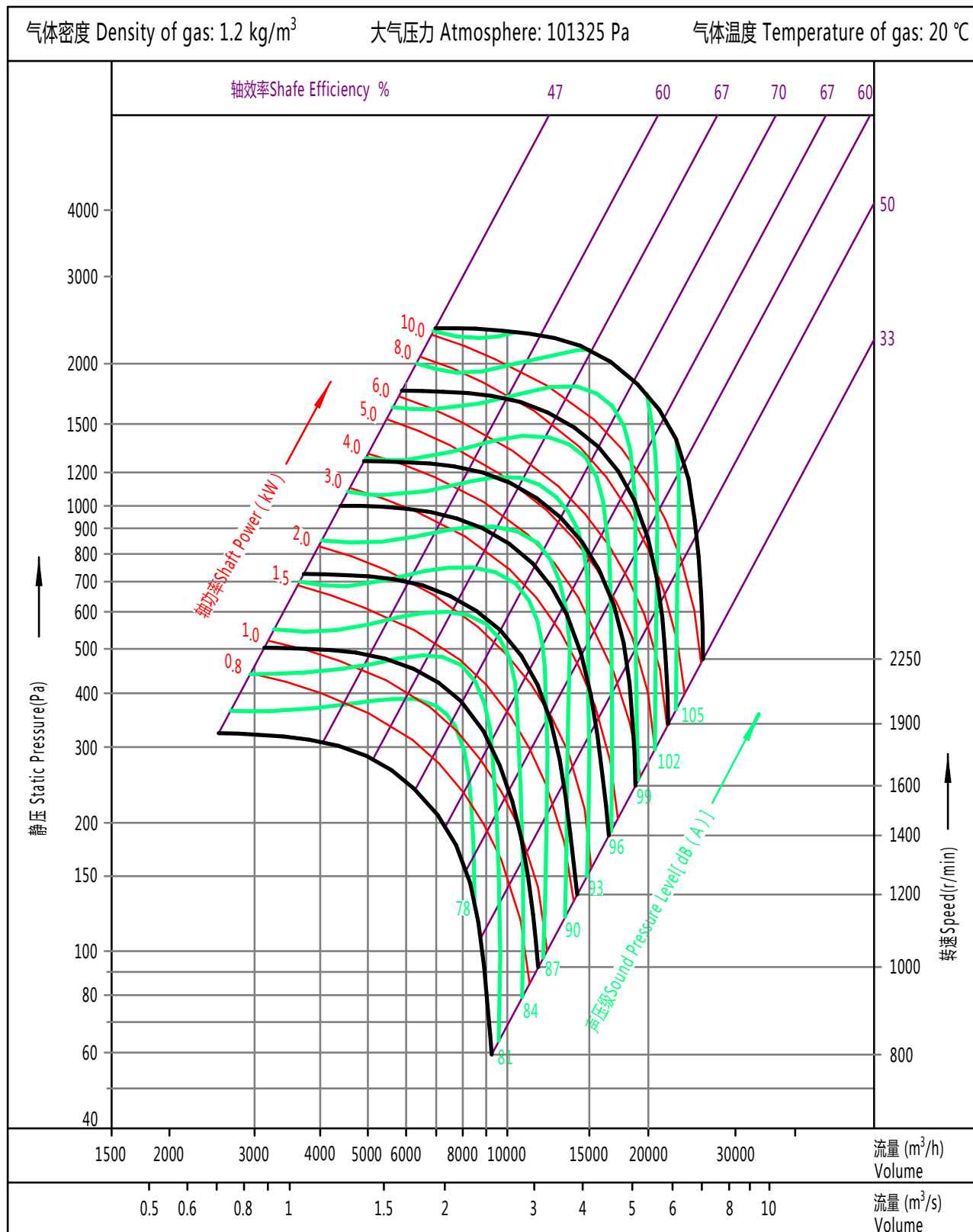


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							A	B
1	YVP 100L-6	1.5	925	1280	69	75	632	562
2	YVP 100L-4	2.2	1420	1460	51	73		
3	YVP 100L-4	3.0	1420	1630	57	76		
4	YVP 112M-4	4.0	1440	1780	62	82	653	569
5	YVP 132S-4	5.5	1455	1980	68	97	693	608
6	YVP 132M-4	7.5	1455	2200	76	103		
7	YVP 160M-4	11.0	1460	2450	84	127	797	707

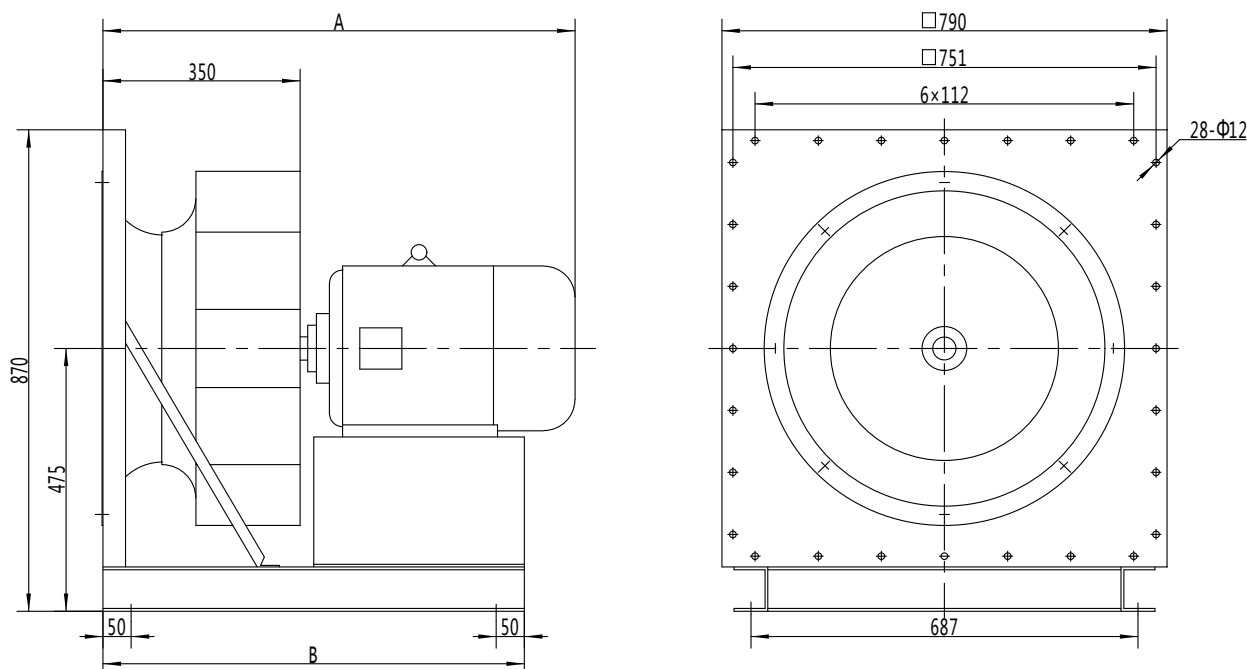
KPB630

性能曲线图 Performance Curve



KPB630

外形及安装尺寸 Overall and Dimension

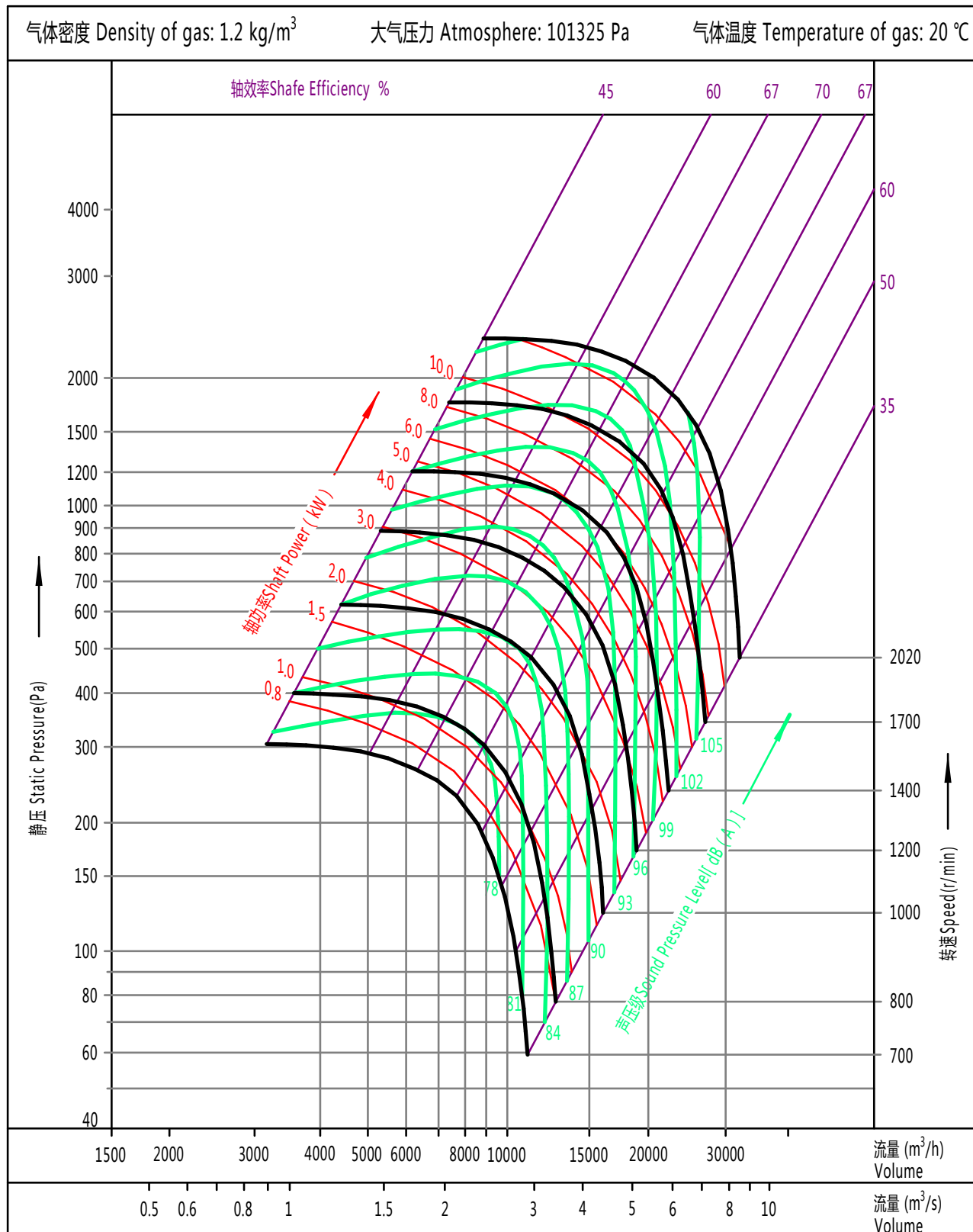


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							A	B
1	YVP 112M-6	2.2	940	1190	63	89	694	615
2	YVP 112M-4	4.0	1440	1460	51	93		
3	YVP 132S-6	3.0	950	1310	69	104	734	649
4	YVP 132S-4	5.5	1455	1630	56	106		
5	YVP 132M-4	7.5	1455	1800	62	112		
6	YVP 160M-4	11.0	1460	2030	69	141	838	748
7	YVP 160L-4	15.0	1460	2250	77	166		

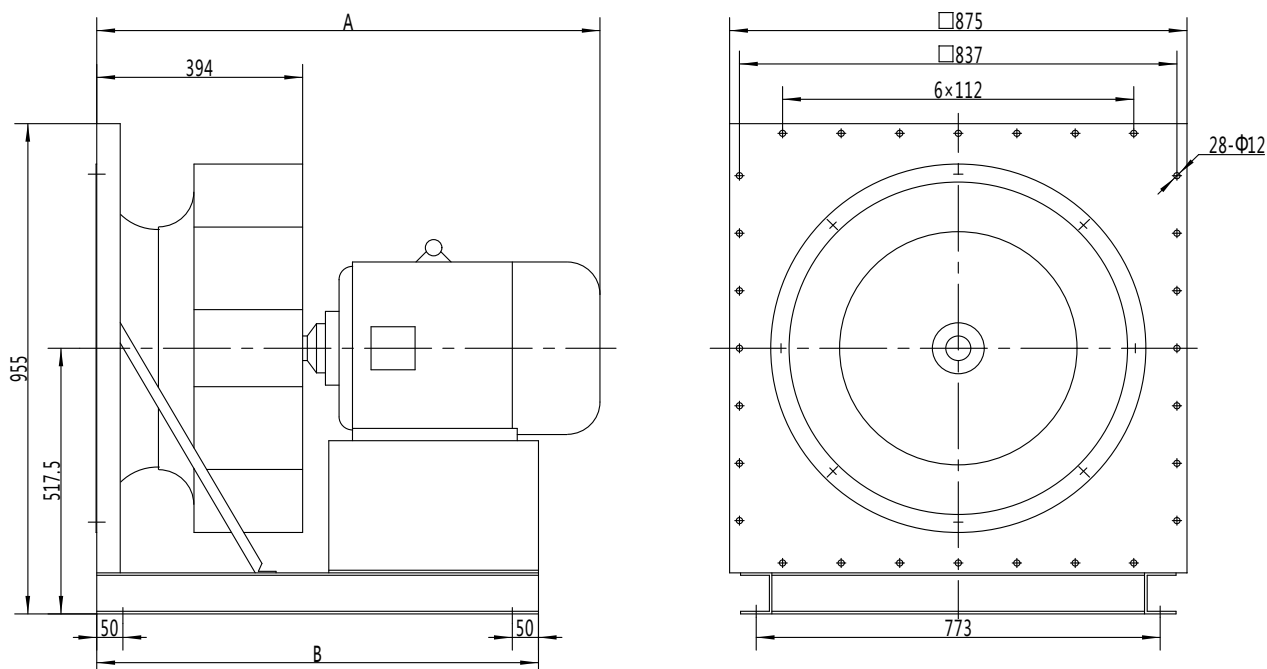
KPB710

性能曲线图 Performance Curve



KPB710

外形及安装尺寸 Overall and Dimension

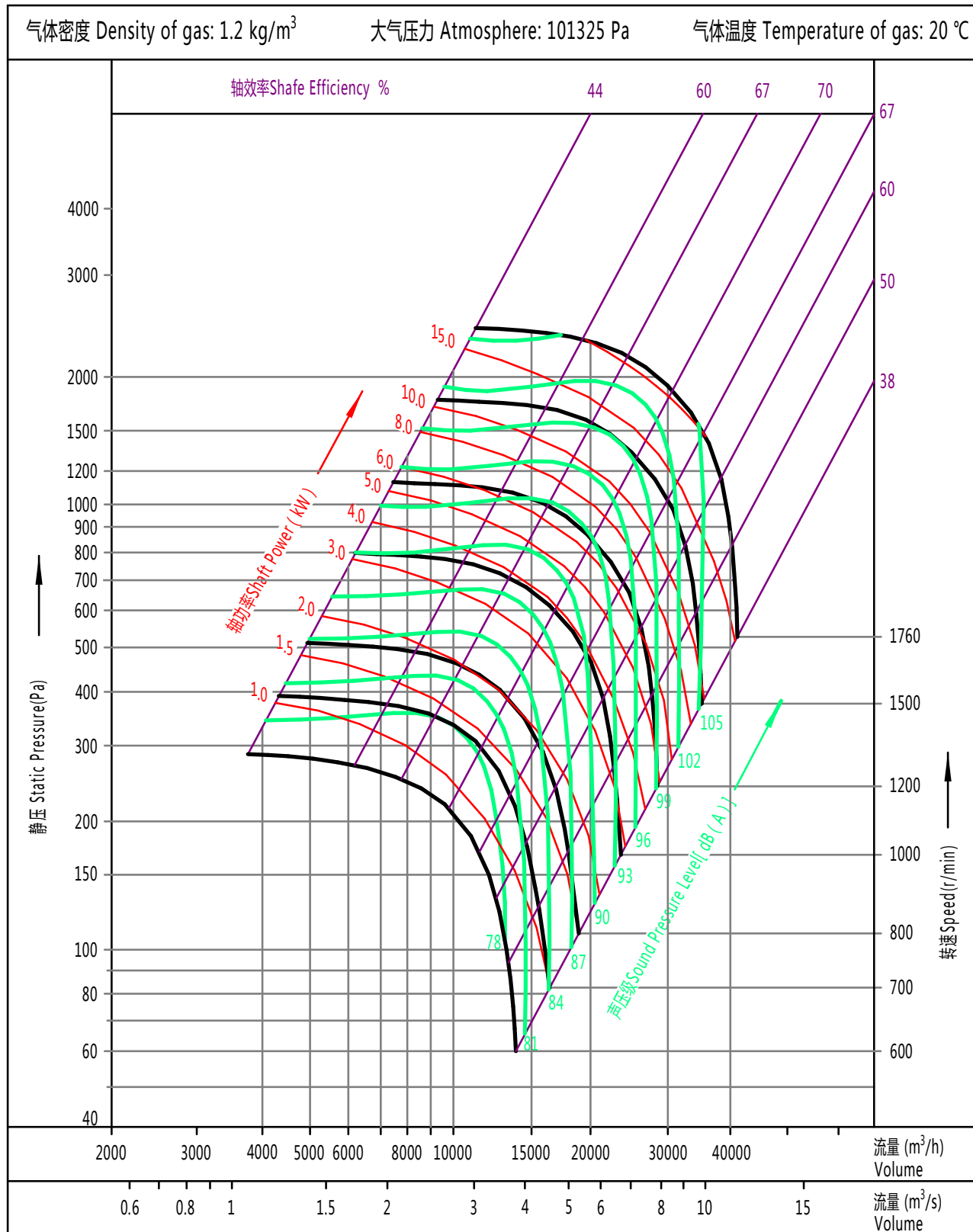


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							A	B
1	YVP 132S-6	3.0	950	1110	58	127	777	692
2	YVP 132M-6	4.0	950	1220	64	132		
3	YVP 132M-6	5.5	950	1350	71	140		
4	YVP 132M-4	7.5	1455	1510	52	135		
5	YVP 160M-4	11.0	1460	1710	59	165	881	791
6	YVP 160L-4	15.0	1460	1880	64	190		
7	YVP 180M-4	18.5	1465	2020	69	241	963	845

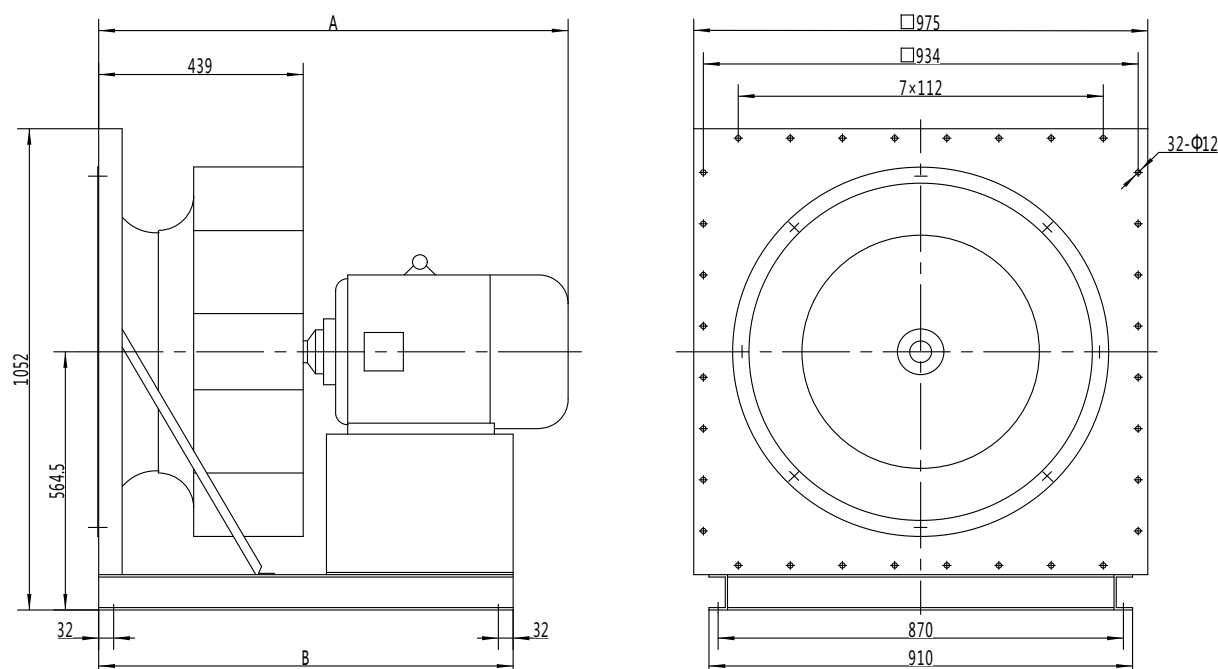
KPB800

性能曲线图 Performance Curve



KPB800

外形及安装尺寸 Overall and Dimension

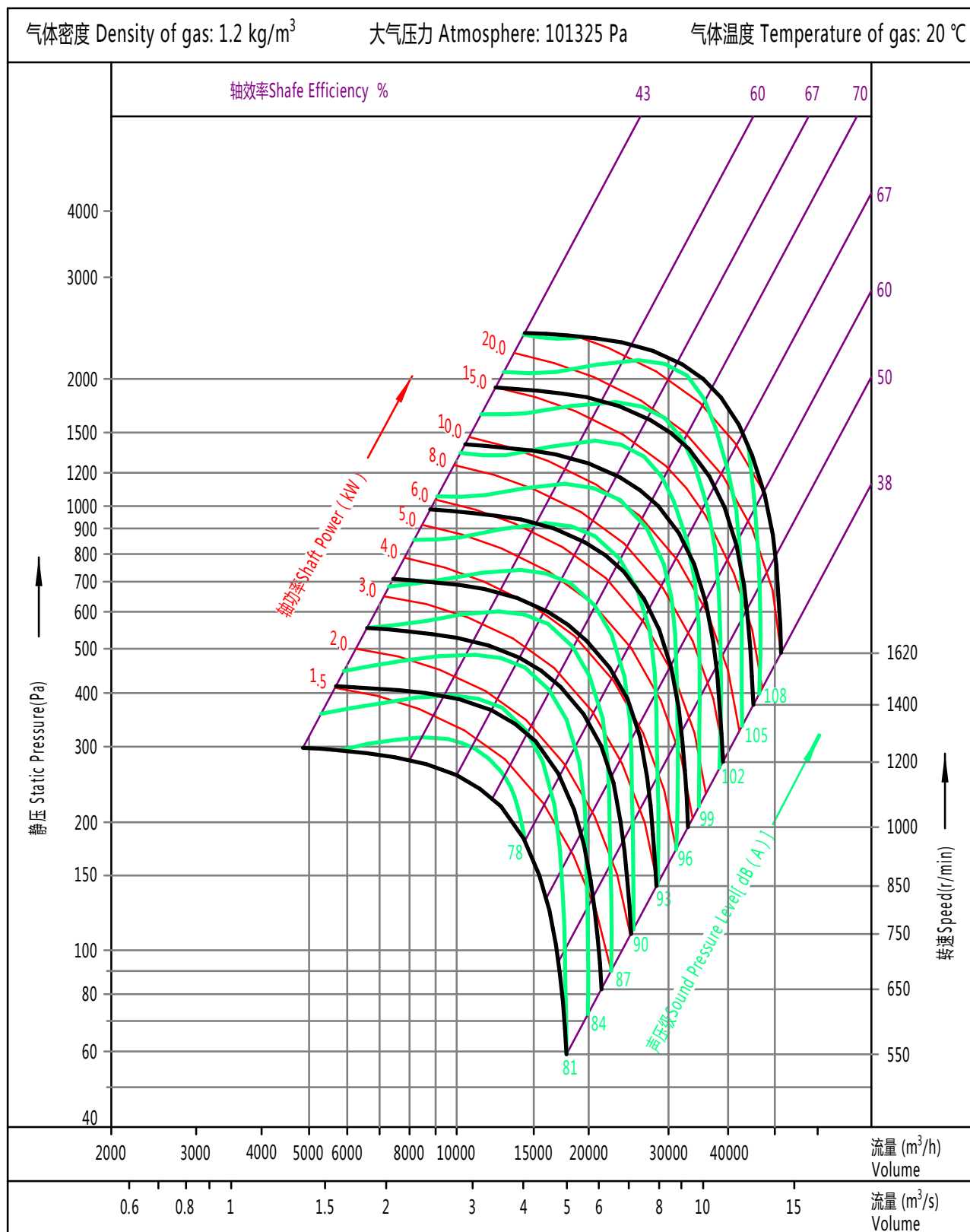


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							A	B
1	YVP 132M-6	4.0	950	1000	52	170	822	752
2	YVP 132M-6	5.5	950	1110	58	178		
3	YVP 160M-6	7.5	960	1230	64	206	926	836
4	YVP 160L-6	11.0	960	1380	72	232		
5	YVP 160L-4	15.0	1460	1550	53	223		
6	YVP 180M-4	18.5	1465	1650	56	274	1008	890
7	YVP 180L-4	22.0	1465	1760	60	289		

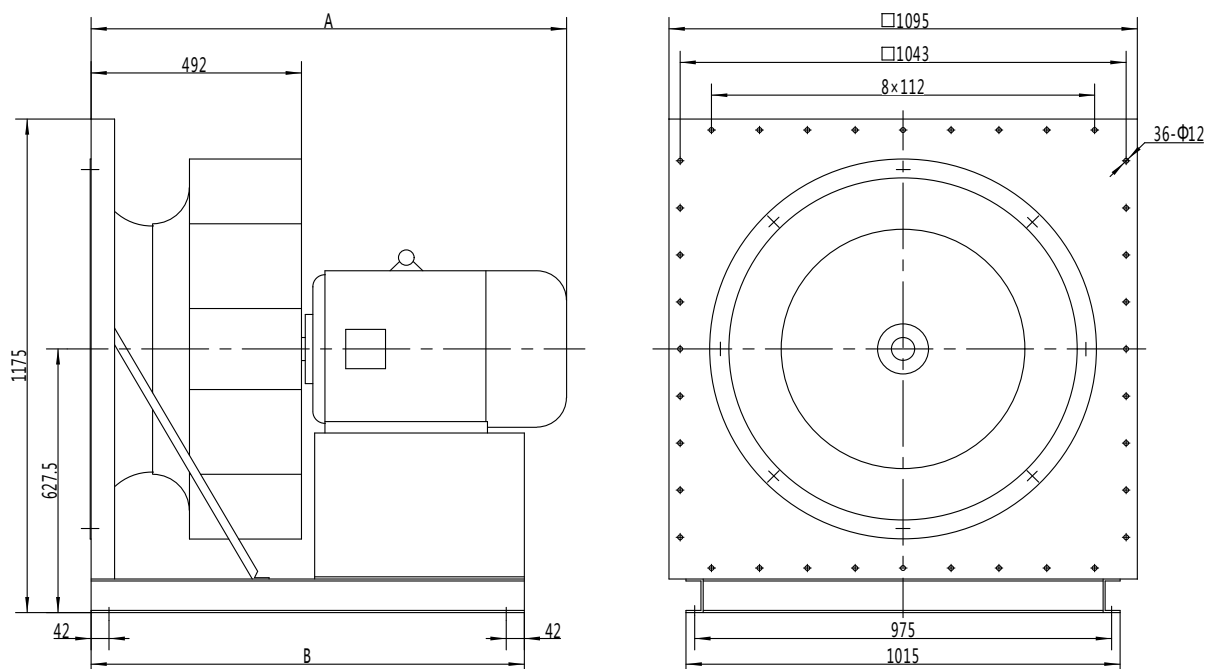
KPB900

性能曲线图 Performance Curve



KPB900

外形及安装尺寸 Overall and Dimension

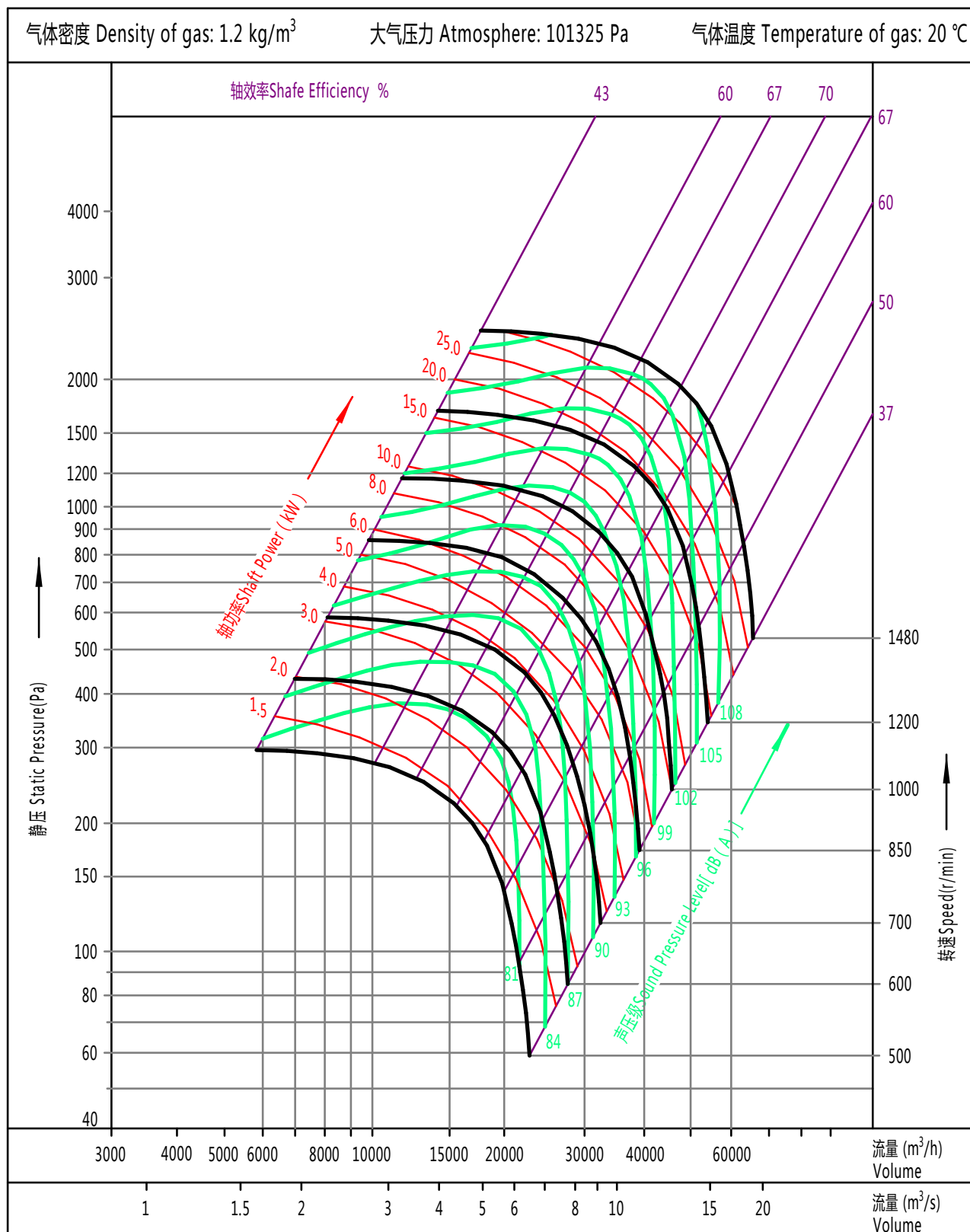


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序号 No.	电机型号 Motor Model	功率 Power (kW)	额定转速 Rated Speed (r/min)	最大转速 Max. Speed (r/min)	最大频率 Max. Frequency (Hz)	重量 Weight (Kg)	外形尺寸 Overall dimension	
							A	B
1	YVP 160M-8	4.0	715	830	58	228	980	890
2	YVP 160M-8	5.5	710	930	65	237		
3	YVP 160M-6	7.5	960	1030	54	243		
4	YVP 160L-6	11.0	960	1160	60	269		
5	YVP 180L-6	15.0	970	1280	66	322	1062	944
6	YVP 180L-4	22.0	1465	1465	50	327		
7	YVP 200L-6	18.5	975	1380	71	371	1112	1013
8	YVP 200L-4	30.0	1465	1620	55	386		

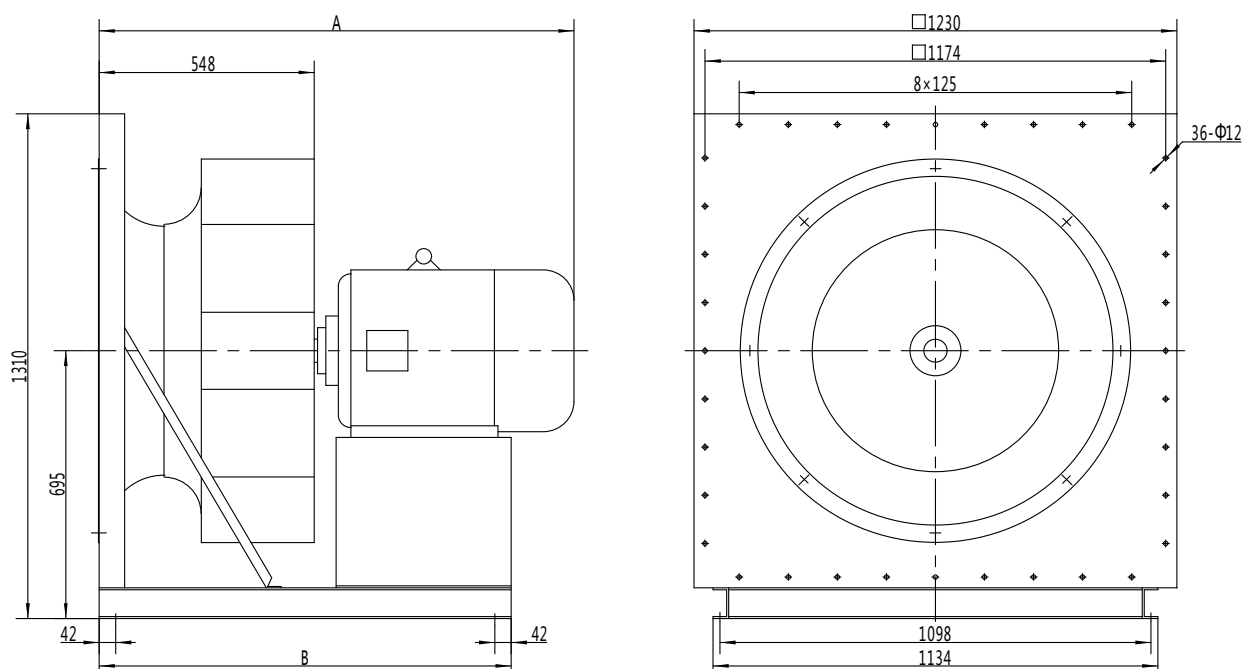
KPB1000

性能曲线图 Performance Curve



KPB1000

外形及安装尺寸 Overall and Dimension

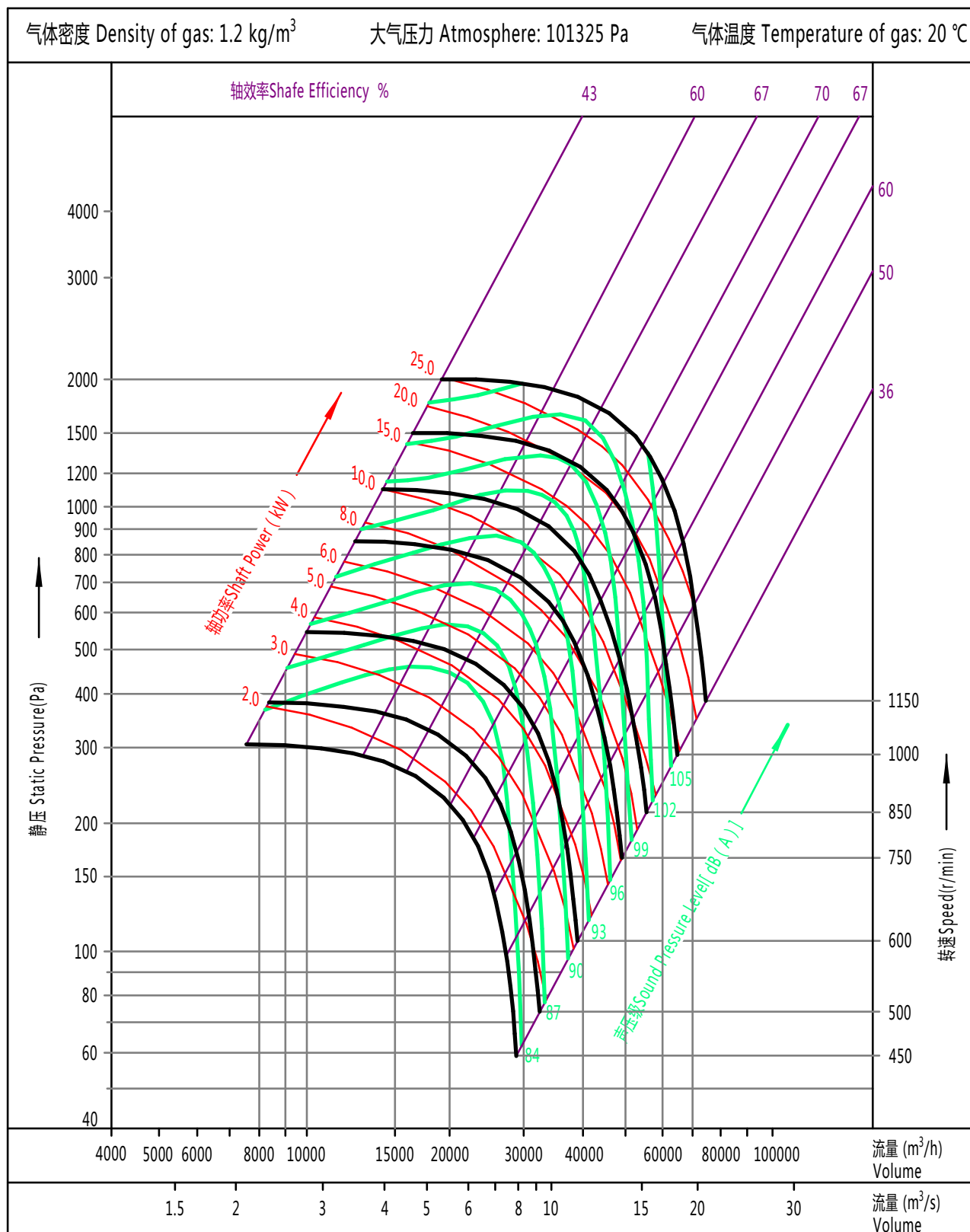


技术参数表 Technology Parameter Table

序号 No.	电机型号 Motor Model	功率 Power (kW)	额定转速 Rated Speed (r/min)	最大转速 Max. Speed (r/min)	最大频率 Max. Frequency (Hz)	重量 Weight (Kg)	外形尺寸 Overall dimension	
							A	B
1	YVP 160M-8	5.5	710	780	55	274	1038	952
2	YVP 160L-8	7.5	715	860	60	295		
3	YVP 160L-6	11.0	960	980	51	306		
4	YVP 180L-6	15.0	970	1080	56	354	1120	990
5	YVP 200L-6	18.5	975	1170	60	400	1170	1028
6	YVP 200L-6	22.0	975	1250	64	410		
7	YVP 225M-6	30.0	978	1360	69	485	1210	1050
8	YVP 225S-4	37.0	1475	1480	50	480		

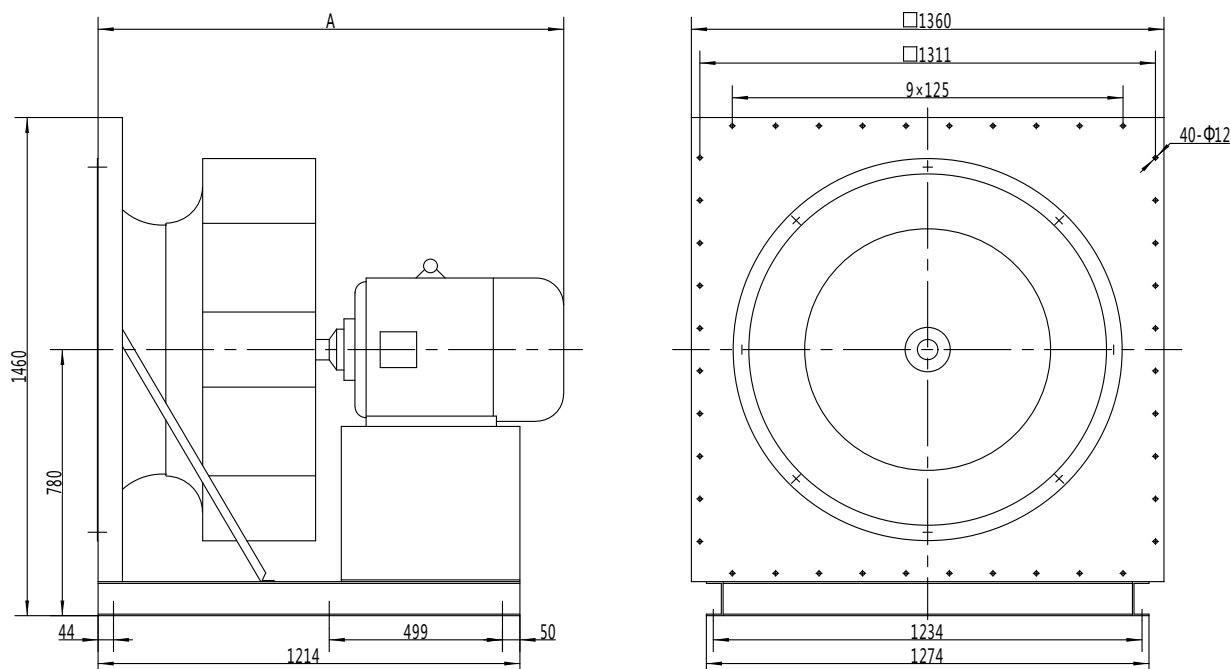
KPB1120

性能曲线图 Performance Curve



KPB1120

外形及安装尺寸 Overall and Dimension

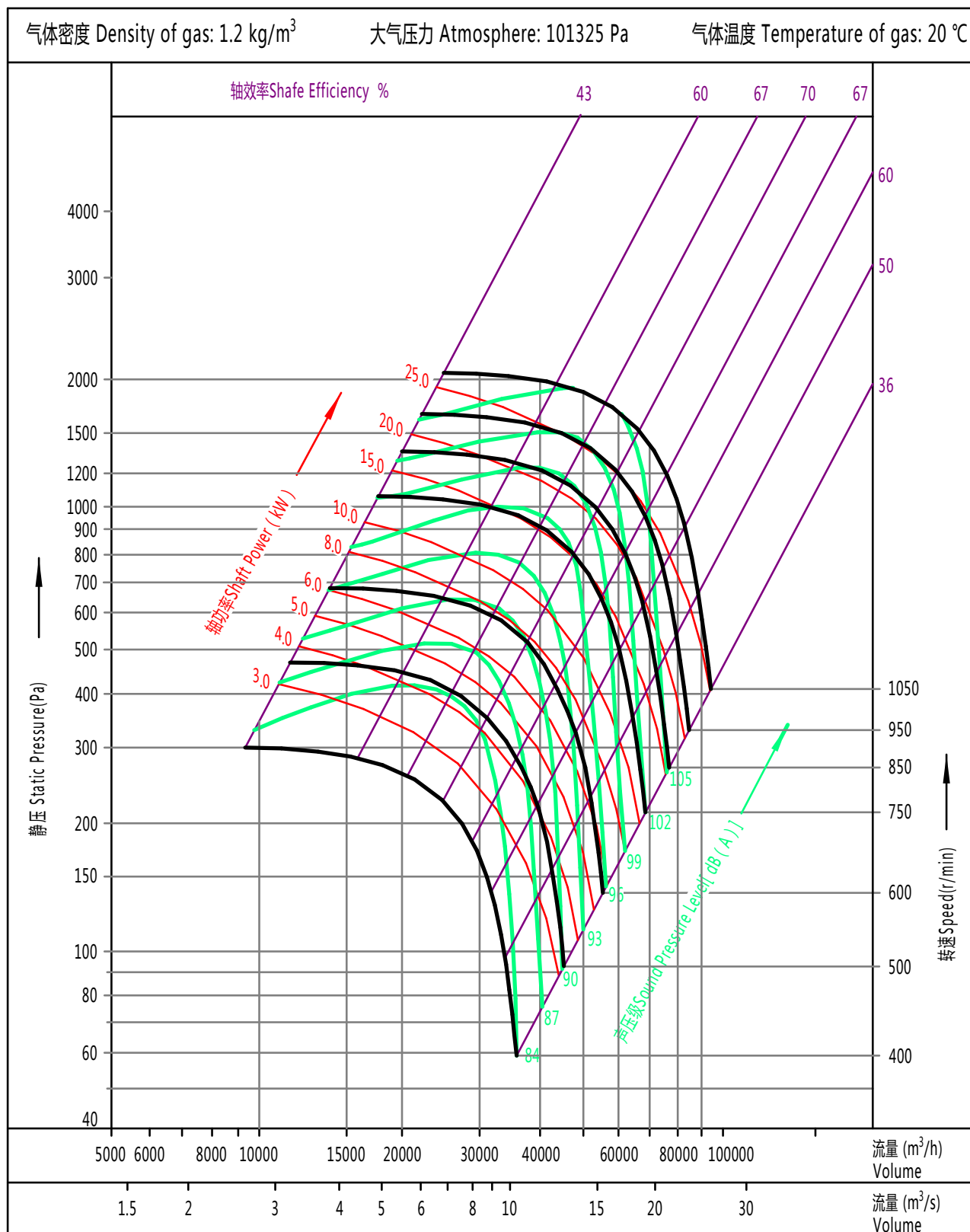


技术参数表 Technology Parameter Table

序号 No.	电机型号 Motor Model	功率 Power (kW)	额定转速 Rated Speed (r/min)	最大转速 Max. Speed (r/min)	最大频率 Max. Frequency (Hz)	重量 Weight (Kg)	外形尺寸 Overall dimension
							A
1	YVP 180L-8	11.0	725	810	56	415	1250
2	YVP 200L-8	15.0	725	900	62	474	1310
3	YVP 200L-6	22.0	975	1020	52	469	
4	YVP 225S-8	18.5	725	960	66	583	1340
5	YVP 225M-6	30.0	978	1130	58	588	

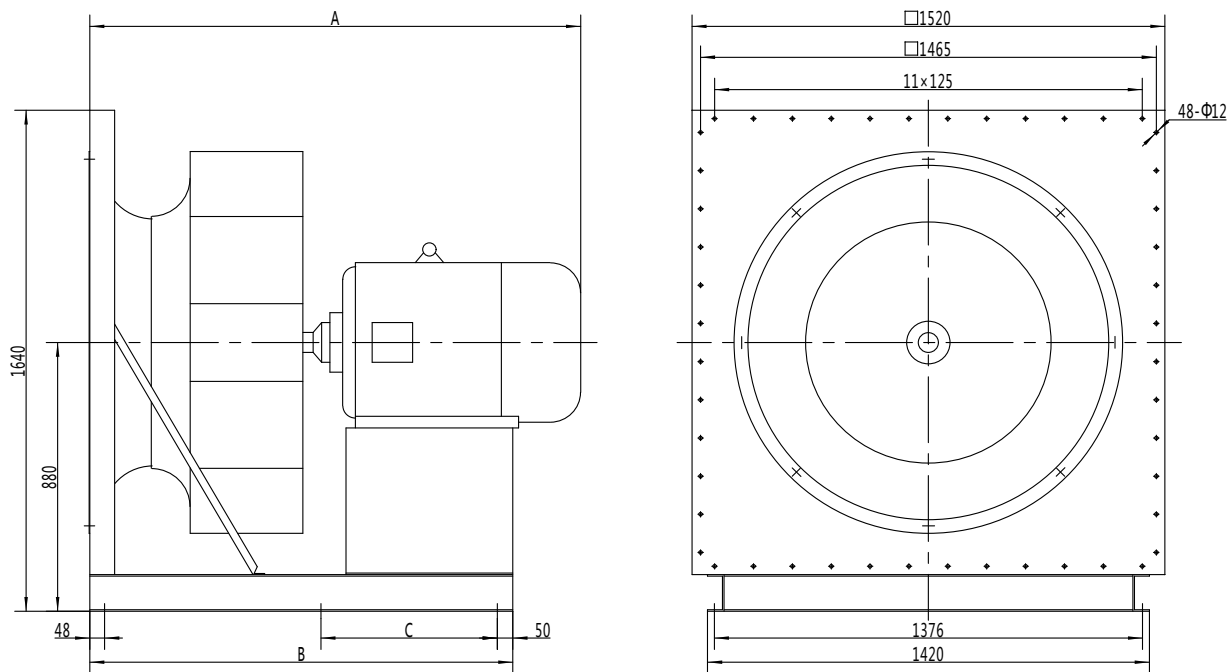
KPB1250

性能曲线图 Performance Curve



KPB1250

外形及安装尺寸 Overall and Dimension

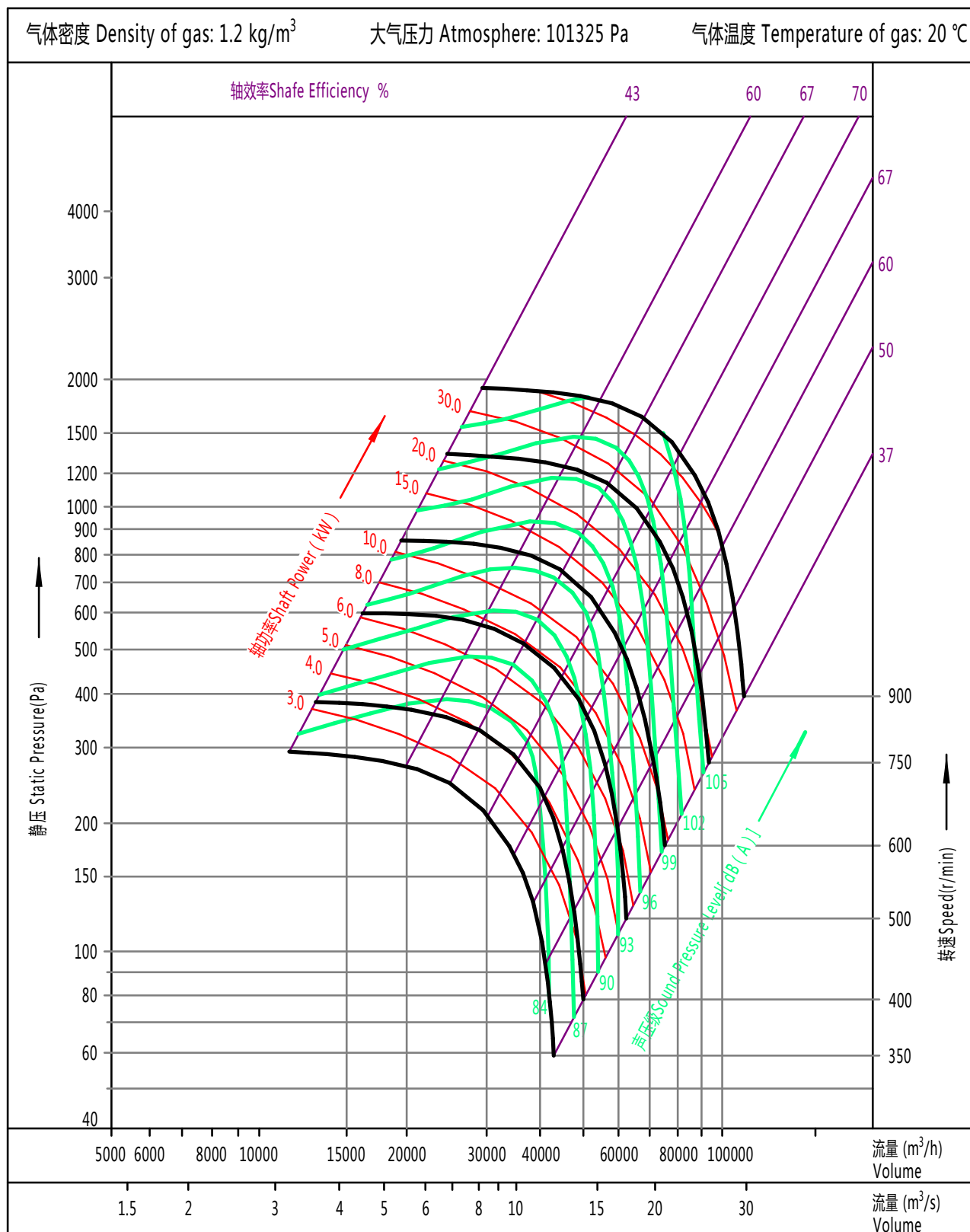


技术参数表 Technology Parameter Table

序号 No.	电机型号 Motor Model	功率 Power (kW)	额定转速 Rated Speed (r/min)	最大转速 Max. Speed (r/min)	最大频率 Max. Frequency (Hz)	重量 Weight (Kg)	外形尺寸 Overall dimension		
							A	B	C
1	YVP 200L-8	15.0	725	750	52	603	1380	1299	506
2	YVP 225S-8	18.5	725	800	55	721	1408	1299	506
3	YVP 225M-8	22.0	725	850	58	746			
4	YVP 250M-8	30.0	730	940	64	856	1503	1299	506
5	YVP 250M-6	37.0	980	1010	51	831			
6	YVP 280S-6	45.0	982	1050	53	965	1578	1360	567

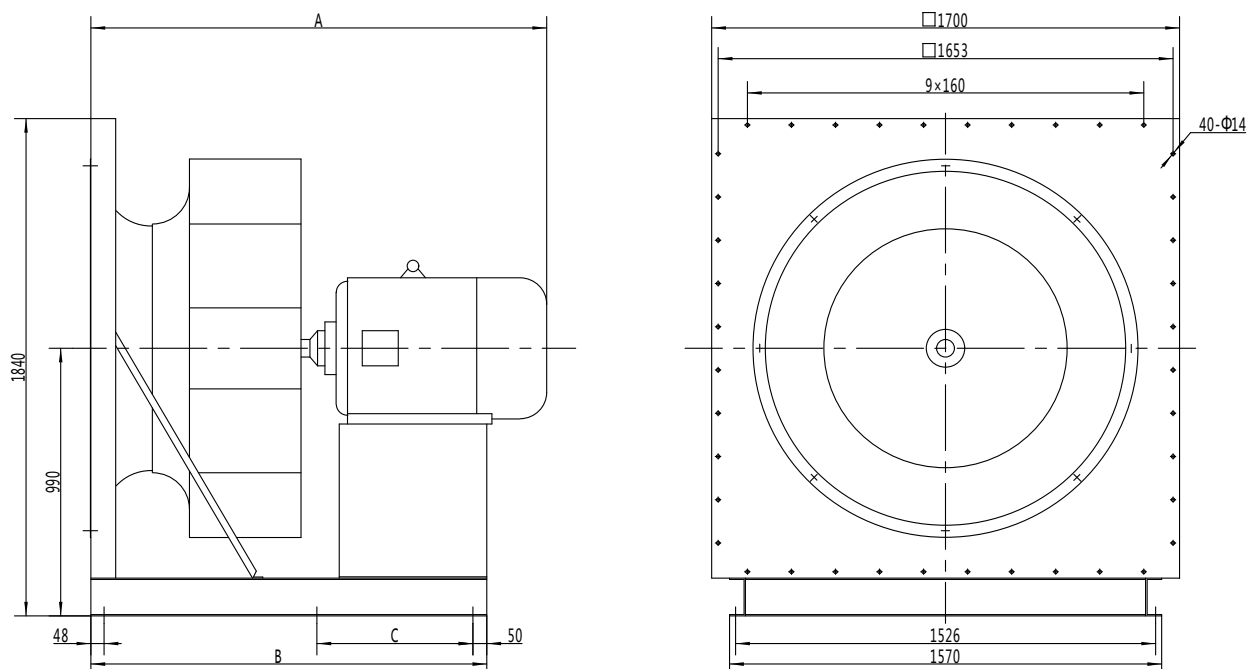
KPB1400

性能曲线图 Performance Curve



KPB1400

外形及安装尺寸 Overall and Dimension



技术参数表 Technology Parameter Table

序号 No.	电机型号 Motor Model	功率 Power (kW)	额定转速 Rated Speed (r/min)	最大转速 Max. Speed (r/min)	最大频率 Max. Frequency (Hz)	重量 Weight (Kg)	外形尺寸 Overall dimension		
							A	B	C
1	YVP 250M-8	30.0	730	780	53	947	1581	1377	506
2	YVP 280S-8	37.0	732	830	57	1065	1656	1438	567
3	YVP 280M-8	45.0	732	890	60	1115			