

PRAHA[®]

LIGHTING



COMMERCIAL & TECHNICAL PROPOSAL



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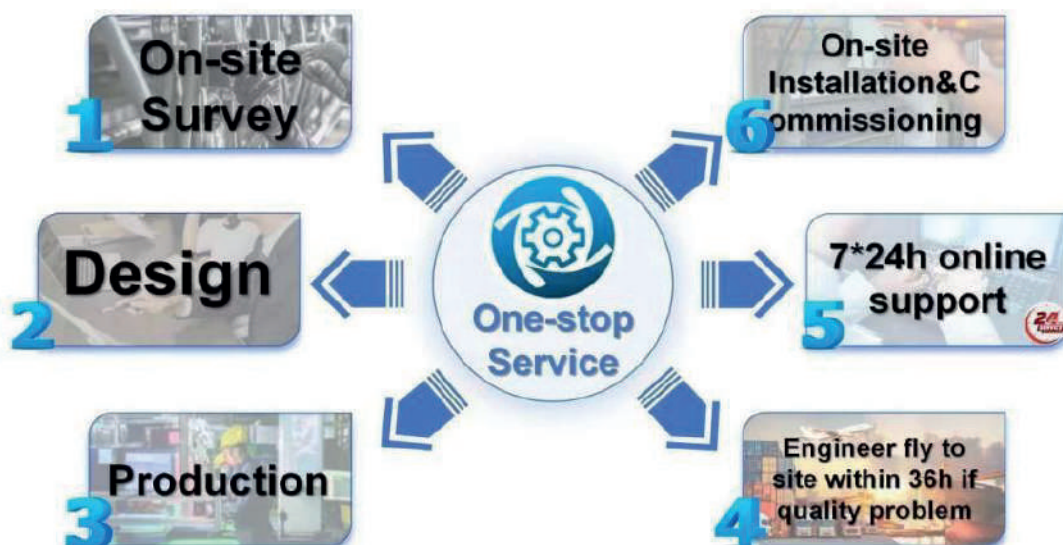
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(1) Service Advantages:

Installation Guidance	<p>We will arrange it if necessary.</p>
After-sales Service	<p>Thanks for choosing PRAHA LIGHTING from many consulting suppliers,we do cherish the opportunity to do long-term business with you.</p> <p>To show our sincerity,we promise:</p> <ol style="list-style-type: none"> 1. You will have at least a contact to get timely services: Sales: ventas@prahalighting.com 2.A video conference between you and PRAHA LIGHTING technical department will be held before fabrication,all technical details will be discussed and analyzed face to face,to avoid any mistake. 3.After conference,sales will share a memo for final confirmation,and arrange production immediately. 4.At every stage of the production process, PRAHA LIGHTING will share photos and videos to show status of production in every 3 days. 5.To ensure the smooth delivery, PRAHA LIGHTING will contact you if there's anything need help during production. Thanks for your support in advance. 6.Each order has a unique numbe

One-stop Service& Worry-free After-sales



Chapter 2 Design Capabilities and Product Performance Demonstration

1. Selection parameters of ventilation system equipment

Technical Specifications:

- Motor: IE1, low voltage
- Supply: Three-phase
- Rated power: 52 kW
- Rated voltage: 460 V
- Frequency: 60 Hz
- Frame design: B8
- Service class: S1 (continuous duty)
- Insulation class: F
- Temperature rise class: B
- Dual nameplate
- Ingress protection: IP55
- Power (junction) box
- Control box
- PT100 bearing temperature sensor
- PTC winding temperature sensor
- Vibration sensor
- Heat resistance: 400 °C for 2 hours

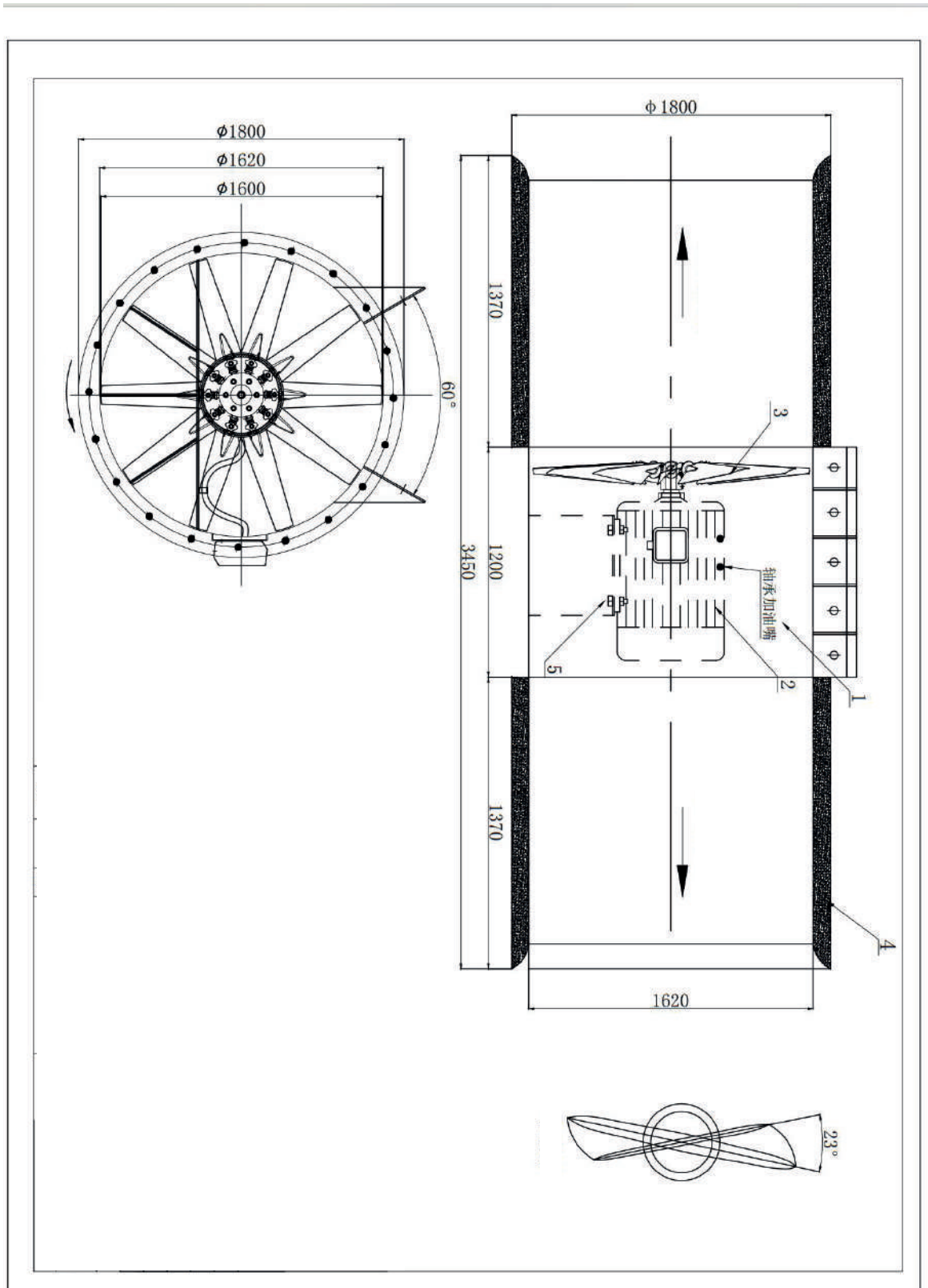
Technical parameters of the fan	
Fan Type	Tunnel jet fan
	SDS(R)-16#
Number of fans	6
(Airflow)	50.4 m ³ /s
(Air Velocity)	32.8 m/s
(Thrust)	1981 N (theoretical), 1892 N (actual thrust)
Rotational speed	980r/min
(Motor)	IE1, low voltage
(Airflow)	50.4 m ³ /s
(Power Supply)	Three-phase
(Rated Power)	52 kW
(Rated Voltage)	460 V
(Frequency)	60 Hz
(Frame Structure)	B8
(Operational Grade)	S1 (continuous duty)
(Insulation Class)	F
(Temperature Rise Class)	B
(Heat Resistance)	400, sustained for 2 hours (heat resistance)
Case thickness/material	3.75mm thick hot-rolled steel plate
Whether to bring a silencer	YES
(Other Equipment or Devices to be Included)	Power (terminal) box
	Control box
	PT100 bearing temperature sensor
	PTC winding temperature sensor

	Vibration sensor
	Dual nameplates

Control cabinet technical parameters

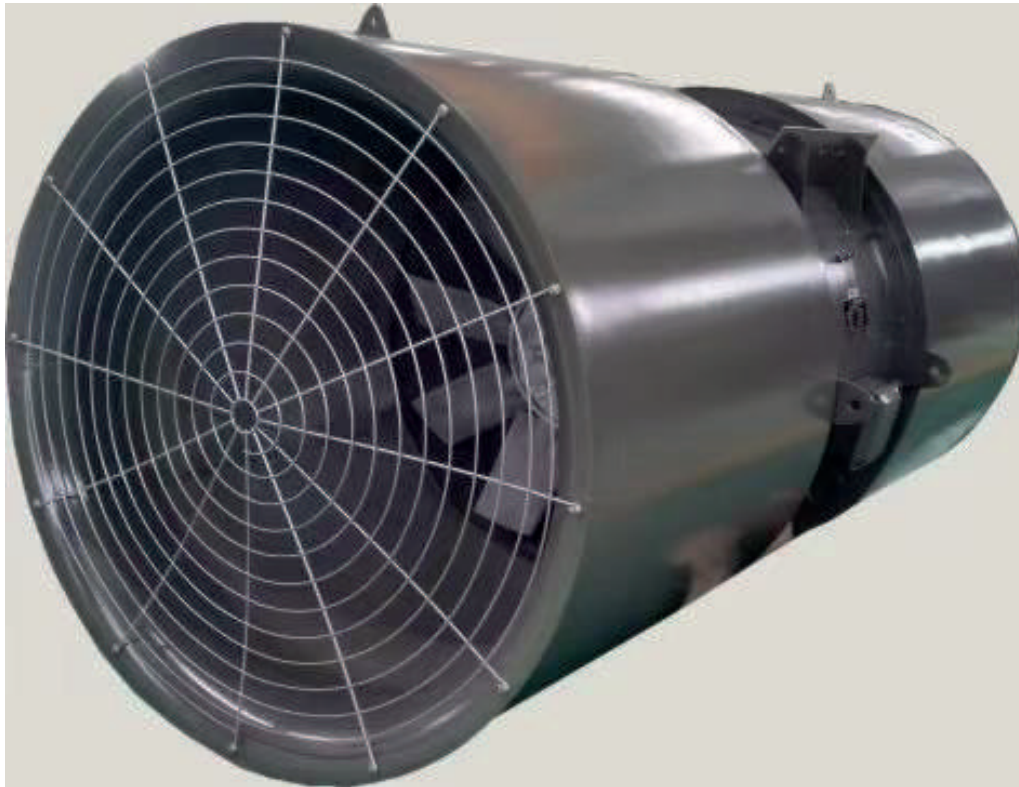
No.	Name	Specification/Model	Unit	Quantity	Manufacturer	Remarks
1	(Housing)	500*400*1200	unit	1	DECENT MCHINERY	Indoor model; panel thickness: 1.5 mm; support fittings: 2 mm
2	(Switching power supply board)	RELY24V	unit	1	DECENT MCHINERY	
3	(Rectifier bridge)	MDS-300-16	unit	1	DECENT MCHINERY	
4	(Power module)	FF300R12KT3G	unit	3	DECENT MCHINERY	
5	(Non-inductive capacitor)	1.0UF/1200V	unit	3	DECENT MCHINERY	
6	(Electrolytic capacitor)	6800UF/400V	unit	4	DECENT MCHINERY	
7	(DC contactor)	200S	unit	1	DECENT MCHINERY	
8	(Cement resistor)	80W50Ω	unit	1	DECENT MCHINERY	
9	(Voltage equalizing resistor)	10W51K	unit	4	DECENT MCHINERY	
10	(Hall sensor)	100A	unit	3	DECENT MCHINERY	
11	(Main terminal block)	38-03-00	unit	2	DECENT MCHINERY	
12	(Temperature resistor / RTD)	95cm	unit	1	DECENT MCHINERY	

13	(Normally open at 40°C)		unit	1	DECENT MCHINERY	
14	(Heat sink)	55KW	unit	1	DECENT MCHINERY	
15	(Copper busbar)	55KW	unit	1	DECENT MCHINERY	
16	(Insulation board)	55KW	unit	1	DECENT MCHINERY	
17	(Voltmeter)	6L2 0-450	unit	1	DECENT MCHINERY	
18	(Ammeter)	6L2 200/5	unit	1	DECENT MCHINERY	
19	(Current transformer / CT)	BH-0.66 200/5	unit	1	DECENT MCHINERY	
20	(knob)	3-position	unit	1	DECENT MCHINERY	
21	(Indicator light)	yellow AC220V	unit	1	DECENT MCHINERY	
22	(Pilot light)	red AC220V	unit	1	DECENT MCHINERY	
23	(Emergency stop / E-stop)		unit	1	DECENT MCHINERY	
24	(Wire)	0.75mm	m	20	DECENT MCHINERY	
25	(Auxiliary materials)		unit	1	DECENT MCHINERY	
26	(Terminal strip)	4503	unit	1	DECENT MCHINERY	
27	(Labor hours)		unit	1	DECENT MCHINERY	
28	(Fan)	15050 AC380V	unit	2	DECENT MCHINERY	



Product photos

1. Tunnel jet fan



3. Control cabinet



ABILITY OF DESIGN

I. On-site calculation & design service supported

- **Airflow and Pressure Requirements:**

Measure the airflow and pressure requirements in different areas of the mine to determine the specifications and model of the fan.

- **Mine Ventilation System Layout:**

Obtain detailed layouts of the mine's ventilation system, including the dimensions and arrangement of air ducts and Mine shafts, to design the fan's installation location and ventilation path appropriately.

- **Environmental Conditions:**

Measure environmental parameters such as temperature, humidity, and air quality inside the mine, as these factors affect the fan's performance and lifespan.

- **Mine Depth and Altitude:**

The depth and altitude of the mine affect air density and pressure, necessitating corresponding adjustments and measurements.

- **Power Supply Conditions:**

Measure the on-site power supply conditions, including voltage, current, and power supply stability, to ensure the fan can operate normally.

- **Noise and Vibration Control:**

Assess the site's noise and vibration control requirements to select suitable fan models and installation methods.

- **Installation Space and Structure:**

Measure the size of the installation space and the structural strength of the fan's installation location to ensure the fan can be installed smoothly and operate safely.

- **Safety and Emergency Requirements:**

Consider the mine's safety and emergency ventilation needs to ensure the fan design can meet ventilation requirements in emergency situations.

- **Existing Equipment in the Mine Ventilation System:**

Understand and measure the performance and arrangement of existing ventilation equipment to ensure compatibility with the newly designed fan system.

Through detailed on-site measurements, the design of the mine fan can be ensured to meet actual needs and operate efficiently and stably in the complex mine environment.



Design Highlights:

- The patented technology of bending and sweeping combination design is applied. Compared with the traditional fan, the technical performance has been greatly improved, the efficiency has been improved by more than 5%, and the energy saving effect has been achieved. The noise has been reduced by 5-10dB. It is known as a new environment-friendly product in the 21st century;

- The motor bearing adopts the patent technology of thin oil automatic oil injection lubrication, which improves the safety and stability of fan product operation and extends the service life;

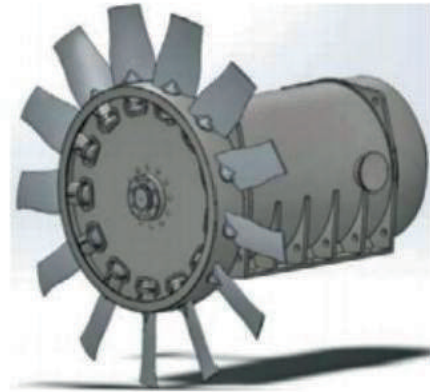


- The anticondensation heating device is designed for the air door and other relevant parts of the product, which can be switched normally under the environmental conditions of minus 30



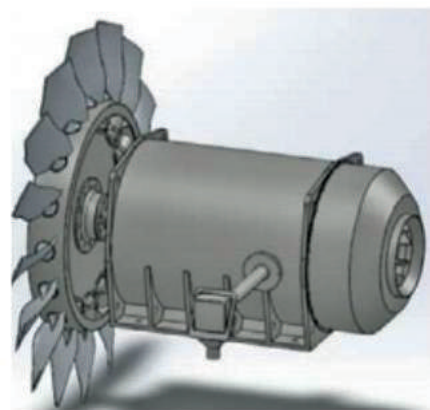
- The fan installation does not need to build a reverse air duct, and the reverse air is direct. Compared with long shaft or centrifugal fan, it can save more than 30% of capital for infrastructure construction;

The connection between fan impeller and motor adopts cone sleeve connection technology, which solves the problem of fan impeller disassembly;



The secondary fan unit adopts the patented electric walking technology, separate the first stage and the second stage during fan maintenance faster and more convenient;

The fan blade angle adjustment adopts the external adjustment technology, it solves the problem of blade angle adjustment of traditional main engine separation, long time and slow operation;

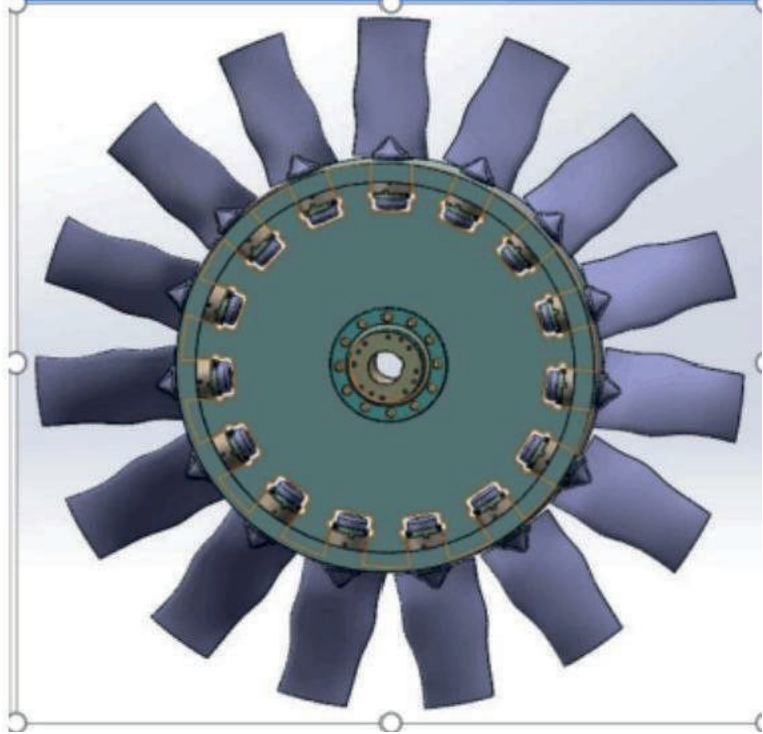


The main fan of the coal mine is switched on without stopping, effectively solve the problem of gas prevention in ventilation system of high gas mine safety problems beyond the limit;

Copperbelt ring is made of explosively formed copper/steel composite explosion-proof copper band ring technology to solve the problem of copper band protection ring falling off, Eliminate potential safety hazards.

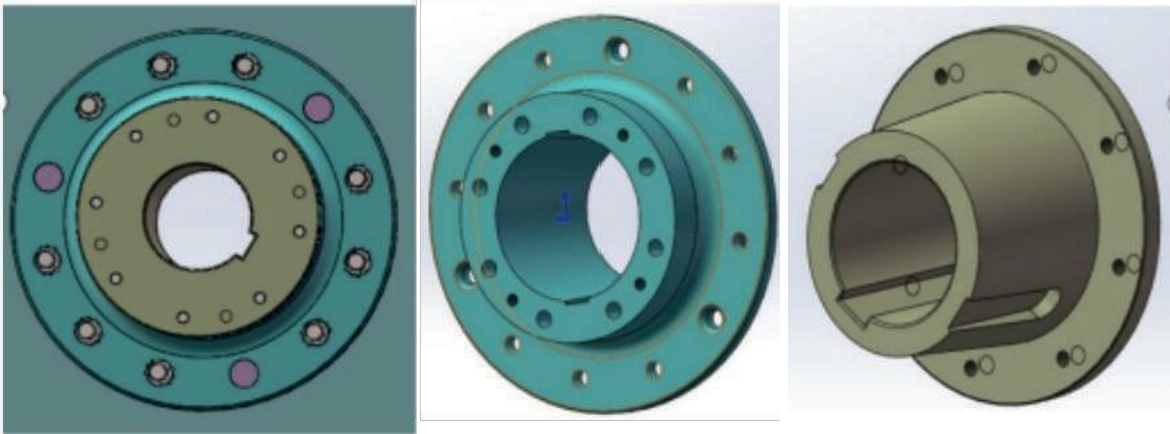


3D drawing of impeller



Impeller and motor connection

The impeller and the motor are directly connected by a conical bushing and a shaft disc. This connection method not only improves the transmission efficiency, but also makes the maintenance and disassembly of the impeller more convenient.



PRODUCTION MANAGEMENT&QUALITY CONTROL

I.Production and processing equipment

VMC vertical machining center

