

## LKZD SERIES FORWARD-CURVED BLADE SINGLE-INLET SHAFT-DRIVEN CENTRIFUGAL FAN



LKZD series forward-curved blade single-inlet shaft-driven centrifugal fan is characterized by that the motor is located at the non air inlet side of the fan, the motor shaft is directly connected with the fan impeller, the motor does not contact with the conveying medium, the structure is simple and reliable, especially suitable for conveying clean gas, dangerous gas or other special gas.

The **fluid model** of this series of fans has been optimized by **CFD** advanced technology, which not only increases the output pressure, but also reduces the noise and improves the efficiency. It has the characteristics of energy saving and low noise. It is especially suitable for **supporting various air conditioning, refrigeration, purification, fresh air units** and other products, and has been widely used in schools, hospitals, factories, mines, cold chain and other fields.

The fan of this series has different directions of 0 °, 90 °, 180 ° and the motor can be vertically and horizontally installed. It can also be customized to other directions according to the needs of users. The installation form is flexible and convenient.

### LKZD series of fans has the following remarkable advantages:

1. The motor is not in contact with the conveying medium, and only the air inlet, impeller and volute are used as the over current components, which are easy to meet the special requirements of cleaning, anti-corrosion, explosion-proof, etc;

2. The forward multi wing impeller with high pressure, low noise, high efficiency and low noise is adopted;
3. The **direction of the air outlet and the installation position of the motor** can be specially customized, and the installation form is flexible and convenient;
4. Our **self-developed matching motors** have better reliability and service life than ordinary motors after with optimization of power;

### Model Definition

Example: LKW 250 M 2- 4 C3 X

**Model Number consists of seven parts.**

#### Part 1: Model Code;

No. 1 L: centrifugal fan;

No.2 K: air ventilation;

No. 3 P: belt driven; W: external rotor motor drive; Z: shaft drive;

No. 4 None: single-case, double inlet; D: single-case, single-inlet; S: double-case, double-inlet; W: single-inlet without case; G: duct fan; H: back curved blade;

#### Part 2: wheel diameter code, unit is mm;

#### Part 3: case width code, up to 2 bits;

SS: tiny width; S: small width; M: medium width; L: large width;

#### Part 4: designing sequence codes in numbers;

#### Part 5: motor pole, EC means brushless DC motor;

code	2	4	6	4/6
meaning to	2-pole motor	4-pole motor	6-pole motor	4/6-pole double-speed motor
code	6/8	4/6/8	EC	
meaning to	6/8-pole double-speed	4/6/8-pole three-speed motor	BLDC motor	

#### Part 6: specific code for single-phase motor

code	none	C	C2	C3
meaning to	non-single-phase motor	single-phase single-speed motor	single-phase two-speed motor	single-phase three-speed motor

#### Part 7: motor installation types

code	meaning to
none	b3 motor; belt-drive rear installation or shaft-drive horizontal installation
l	b5 motor, shaft-drive vertical installation
x	b3 motor, belt-drive down installation
d	b3 motor, belt-drive top installation
e	b3 motor, belt-drive side installation

Such as LKZD250M – 4 is forward-curved blade single-inlet shaft-driven centrifugal fan, blade diameter 250mm with medium width, motor poles 4.

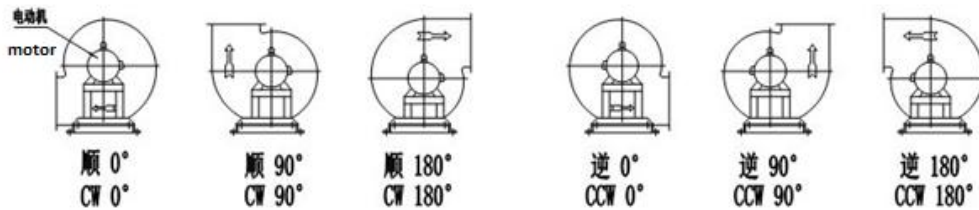
### Installation Method

1) The **rotating direction** of centrifugal fan is divided into CW and CCW according to the rotating direction of impeller. To LKZD Centrifugal Fans: facing the motor, the clockwise direction of impeller rotation is called CW, and the counter-clockwise direction of impeller rotation is called CCW.

2) Air outlet angle: the angle between the air outlet and the installation surface.

Vertically installed motor of LKZD series has no motor mounting base, therefore, it only has the characteristics of rotation direction and no outlet angle;

Horizontally installed motor of LKZD series has three main types according to the **outlet angle**: 0°, 90°, 180°. It can also be customized to other directions according to the needs of users.



### Technical Parameters

Fan frame size	Rated performance			Volume Range (m <sup>3</sup> /h)	Voltage (V)	freq. (Hz)	Power (kW)	Current (A)	Weight (kg)
	Volume (m <sup>3</sup> /h)	Pressure (Pa)	Noise [dB(A)]						
LKZD200S-4	700	300	60	500~700	380	50	0.55	1.5	25
LKZD200M-4	900	300	61	600~800	380	50	0.55	1.5	26
LKZD200L-4	1100	300	62	750~1000	380	50	0.55	1.5	27
LKZD200S-6	500	150	57	400~600	380	50	0.37	1.24	25
LKZD200M-6	700	150	58	550~700	380	50	0.37	1.24	26
LKZD200L-6	900	150	59	650~900	380	50	0.37	1.24	27
LKZD225S-4	800	320	63	650~900	380	50	0.55	1.5	27
LKZD225M-4	1000	320	64	850~1100	380	50	0.55	1.5	28
LKZD225L-4	1200	320	65	1000~1300	380	50	0.55	1.5	29
LKZD225S2-4	800	360	63	650~900	380	50	0.55	1.5	27
LKZD225M2-4	1000	360	64	850~1100	380	50	0.55	1.5	28
LKZD225L2-4	1200	360	65	1000~1300	380	50	0.55	1.5	29
LKZD225S-6	600	160	61	500~700	380	50	0.37	1.24	27
LKZD225M-6	800	160	62	650~900	380	50	0.37	1.24	28
LKZD225L-6	1000	160	63	850~1100	380	50	0.37	1.24	29
LKZD250S-4	1000	420	64	850~1100	380	50	0.55	1.5	32
LKZD250M-4	1300	420	65	1100~1400	380	50	0.55	1.5	33
LKZD250L-4	1600	420	66	1350~1800	380	50	0.55	1.5	34
LKZD250S-6	750	210	62	600~800	380	50	0.37	1.24	32
LKZD250M-6	900	210	63	750~1000	380	50	0.37	1.24	33
LKZD250L-6	1100	210	64	900~1200	380	50	0.37	1.24	34

LKZD250S2-4	1000	420	65	850~1100	380	50	0.55	1.5	32
LKZD250M2-4	1500	420	66	1250~1700	380	50	0.55	1.5	33
LKZD250L2-4	1800	420	67	1500~2000	380	50	0.55	1.5	34
LKZD250S2-6	750	210	63	600~800	380	50	0.37	1.24	32
LKZD250M2-6	1000	210	64	850~1100	380	50	0.37	1.24	33
LKZD250L2-6	1250	210	65	1050~1400	380	50	0.37	1.24	34
LKZD250S3-4	1000	500	66	850~1100	380	50	0.55	1.5	32
LKZD250M3-4	1500	500	67	1250~1700	380	50	0.55	1.5	33
LKZD250L3-4	1800	500	68	1500~2000	380	50	0.55	1.5	34
LKZD250S3-6	750	240	64	600~800	380	50	0.37	1.24	32
LKZD250M3-6	1000	240	65	850~1100	380	50	0.37	1.24	33
LKZD250L3-6	1250	240	66	1050~1400	380	50	0.37	1.24	34
LKZD280S-4	2000	500	68	1700~2200	380	50	0.55	1.5	33
LKZD280M-4	2500	500	69	2100~2800	380	50	0.75	2	36
LKZD280L-4	3000	500	70	2550~3300	380	50	1.1	2.7	39
LKZD280S-6	1500	320	65	1250~1700	380	50	0.37	1.24	33
LKZD280M-6	2000	320	66	1700~2200	380	50	0.37	1.24	34
LKZD280L-6	2500	320	67	2100~2800	380	50	0.55	1.7	37
LKZD300S-4	2200	550	71	1850~2400	380	50	0.55	1.5	37
LKZD300M-4	2500	550	72	2100~2800	380	50	0.75	2	40
LKZD300L-4	3000	550	73	2550~3300	380	50	1.1	2.7	43
LKZD300S-6	1500	380	66	1250~1700	380	50	0.55	1.7	38
LKZD300M-6	2000	380	67	1700~2200	380	50	0.55	1.7	40
LKZD300L-6	2500	380	68	2100~2800	380	50	0.55	1.7	42
LKZD315S-4	2500	600	73	2100~2800	380	50	L1	2.7	40
LKZD315M-4	3000	600	74	2550~3300	380	50	L1	2.7	44
LKZD315L-4	3500	600	75	2950~3900	380	50	1.5	3.7	51
LKZD315S-6	1500	450	67	1250~1700	380	50	0.75	2.2	39
LKZD315M-6	2000	450	68	1700~2200	380	50	0.75	2.2	43
LKZD315L-6	2500	450	69	2100~2800	380	50	0.75	2.2	47
LKZD355S-4	3000	800	76	2550~3300	380	50	1.1	2.7	50
LKZD355M-4	4000	800	77	3400~4400	380	50	1.5	3.7	65
LKZD355L-4	5000	800	78	4250~5500	380	50	2.2	5	70
LKZD355S-6	2000	500	69	1700~2200	380	50	0.75	2.2	48
LKZD355M-6	3000	500	70	2550~3300	380	50	0.75	2.2	55
LKZD355L-6	4000	500	71	3400~4400	380	50	1.1	3.2	67
LKZD400S-4	3500	1100	77	2950~3900	380	50	2.2	5	62
LKZD400M-4	4500	1100	78	3800~5000	380	50	3	6.8	68
LKZD400L-4	5500	1100	79	4650~6100	380	50	4	8.8	78
LKZD400S-6	2500	600	73	2100~2800	380	50	1.1	3.2	56

LKZD400M-6	3000	600	74	2550~3300	380	50	1.5	4	67
LKZD400L-6	4000	600	75	3400~4400	380	50	2.2	5.6	84
LKZD450S-4	6000	1400	81	5100~6600	380	50	4	8.8	80
LKZD450M-4	7200	1400	82	6100~7900	380	50	5.5	11.6	92
LKZD450L-4	8000	1400	83	6800~8800	380	50	5.5	11.6	99
LKZD450S-6	4500	800	77	3800~5000	380	50	1.5	4	71
LKZD450M-6	5500	800	78	4650~6100	380	50	2.2	5.6	92
LKZD450L-6	6500	800	79	5500~7200	380	50	3.0	7.2	124
LKZD500S-6	7000	1000	80	5950~7700	380	50	4.0	9.4	108
LKZD500M-6	8000	1000	81	6800~8800	380	50	4.0	9.4	128
LKZD500L-6	9000	1000	82	7650~9900	380	50	5.5	12.6	177

### Work Environment

- 1) Altitude not more than 1000 meters;
- 2) The ambient temperature is not lower than - 25 °C, not higher than 40 °C;
- 3) The relative humidity of the environment shall not exceed 90%;
- 4) The conveying gas does not contain acid, alkaline and corrosive medium, and the dust content is not more than 150mg / m<sup>3</sup>.

When the working environment does not meet the above requirements, it needs to be explained when ordering. We can customize the product according to the specific site conditions.

### Performance Range

Flow: 400~9900 m<sup>3</sup>/h

Total pressure: 150~1000 pa

Beyond this range, please choose other series of our fan products, or contact our technical department for customization.

### Matters Needing Attention

#### **1. Before use, please check carefully:**

- (1) Whether the motor lead wires are intact;
- (2) Whether the connecting bolts are loose;
- (3) Whether there is serious deformation of fan volute, impeller, fan shaft and other components;
- (4) Rotate the fan impeller by hand, the hand induction rotation is stable, without obvious stuck phenomenon.

#### **2. Installation**

- (1) The fan chassis must be installed horizontally, and it is strictly prohibited to install vertically or obliquely;
- (2) The grounding bolt of the fan shall be connected reliably;
- (3) The fan shall be equipped with phase loss and overload protection devices;

#### **3. Start up and Operation**

- (1) Before starting the fan, check the working power supply, which must be within  $\pm 5\%$  of the rated voltage and  $\pm 1\%$  of the rated frequency;
- (2) The rotation direction of the fan impeller shall be the same as that of the turning mark;



- (3) The operating current of the fan shall not exceed the defined current, otherwise the motor will be damaged or burnt;
- (4) When the fan is running, it is strictly prohibited to extend the body or foreign matters to the inside of the fan, and it is strictly prohibited to approach the belt and pulley to avoid danger.