

LKWG SERIES DUCT FAN WITH EXTERNAL ROTOR MOTOR



LKWG series duct fan with external rotor motor adopts square inlet and outlet flange. Its shape is similar to a section of air duct. It can be directly installed in the ventilation duct without ground installation foundation. It is very convenient to install, operate and maintain.

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 hotels, schools, hospitals, factories, refrigerators, cinemas, buildings and other fields.

LKWG series of fans has the following remarkable advantages:

1. Duct shape is adopted, which is compact in structure, small in size, light in weight and easy to install;
2. The forward multi wing impeller with high pressure, low noise, high efficiency and low noise is adopted;
3. 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 LKWG250M - 4 is duct fan with external rotor motor, blade diameter 250mm with medium width, motor poles 4.

Technical Parameters

Fan frame size	Rated performance			Volume Range (m ³ /h)	Voltage (V)	freq. (Hz)	Power (kW)	Current (A)	Weight (kg)
	Volume (m ³ /h)	Pressure (Pa)	Noise [dB(A)]						
LKWG225S-4	800	320	62	650~900	380	50	0.15	0.44	16
LKWG225M-4	1000	320	63	850~1100	380	50	0.18	0.53	17
LKWG225L-4	1200	320	64	1000~1300	380	50	0.22	0.60	18
LKWG225S-6	600	160	60	500~700	380	50	0.06	0.25	16
LKWG225M-6	800	160	61	650~900	380	50	0.08	0.32	17
LKWG225L-6	1000	160	62	850~1100	380	50	0.10	0.37	18
LKWG250S-4	1000	350	63	850~1100	380	50	0.18	0.53	20
LKWG250M-4	1300	350	64	1100~1400	380	50	0.26	0.70	23
LKWG250L-4	1600	350	65	1350~1800	380	50	0.32	1.0	26
LKWG250S-6	750	170	61	600~800	380	50	0.08	0.32	19
LKWG250M-6	900	170	62	750~1000	380	50	0.12	0.42	22
LKWG250L-6	1100	170	63	900~1200	380	50	0.16	0.59	25

LKWG250S2-4	1000	420	64	850~1100	380	50	0.22	0.6	20
LKWG250M2-4	1500	420	65	1250~1700	380	50	0.32	1.0	23
LKWG250L2-4	1800	420	66	1500~2000	380	50	0.45	1.2	26
LKWG250S2-6	750	210	62	600~800	380	50	0.12	0.42	19
LKWG250M2-6	1000	210	63	850~1100	380	50	0.16	0.59	22
LKWG250L2-6	1250	210	64	1050~1400	380	50	0.18	0.64	25
LKWG250S3-4	1000	500	65	850~1100	380	50	0.22	0.6	20
LKWG250M3-4	1500	500	66	1250~1700	380	50	0.32	1.0	23
LKWG250L3-4	1800	500	67	1500~2000	380	50	0.45	1.2	26
LKWG250S3-6	750	240	63	600~800	380	50	0.12	0.42	19
LKWG250M3-6	1000	240	64	850~1100	380	50	0.16	0.59	22
LKWG250L3-6	1250	240	65	1050~1400	380	50	0.18	0.64	25
LKWG280S-4	2000	500	68	1700~2200	380	50	0.55	1.46	25
LKWG280M-4	2500	500	69	2100~2800	380	50	0.65	1.7	28
LKWG280L-4	3000	500	70	2550~3300	380	50	0.75	1.8	31
LKWG280S-6	1500	320	64	1250~1700	380	50	0.3	0.95	24
LKWG280M-6	2000	320	65	1700~2200	380	50	0.36	1.1	27
LKWG280L-6	2500	320	66	2100~2800	380	50	0.42	1.23	30
LKWG300S-4	2200	550	70	1850~2400	380	50	0.65	1.7	30
LKWG300M-4	2500	550	71	2100~2800	380	50	0.75	1.8	35
LKWG300L-4	3000	550	72	2550~3300	380	50	0.90	2.0	44
LKWG300S-6	1500	380	65	1250~1700	380	50	0.36	1.1	27
LKWG300M-6	2000	380	66	1700~2200	380	50	0.50	1.36	32
LKWG300L-6	2500	380	67	2100~2800	380	50	0.55	1.47	40
LKWG315S-4	2500	580	74	2100~2800	380	50	0.90	2.1	34
LKWG315M-4	3000	580	75	2550~3300	380	50	1.10	2.5	41
LKWG315L-4	3500	580	76	2950~3900	380	50	1.20	2.6	54
LKWG315S-6	1500	420	67	1250~1700	380	50	0.42	1.23	32
LKWG315M-6	2000	420	68	1700~2200	380	50	0.55	1.47	39
LKWG315L-6	2500	420	69	2100~2800	380	50	0.70	1.83	52
LKWG355S-4	3000	800	76	2550~3300	380	50	1.2	2.6	42
LKWG355M-4	4000	800	77	3400~4400	380	50	1.5	3.3	52
LKWG355L-4	5000	800	78	4250~5500	380	50	2.2	4.6	62
LKWG355S-6	2000	500	68	1700~2200	380	50	0.55	1.47	38
LKWG355M-6	3000	500	69	2550~3300	380	50	0.75	2.0	48
LKWG355L-6	4000	500	70	3400~4400	380	50	1.1	2.8	58
LKWG400S-4	3500	900	77	2950~3900	380	50	1.65	3.5	70
LKWG400M-4	4500	900	78	3800~5000	380	50	2.2	4.7	90
LKWG400L-4	5500	900	79	4650~6100	380	50	2.5	5.2	100
LKWG400S-6	2500	600	73	2100~2800	380	50	0.9	2.2	55

LKWG400M-6	3000	600	74	2550~3300	380	50	L 1	2.6	70
LKWG400L-6	4000	600	75	3400~4400	380	50	1.3	3.0	80
LKWG450S-6	3500	800	73	2950~3900	380	50	1.5	3.5	75
LKWG450M-6	4500	800	74	3800~5000	380	50	2.0	4.5	90
LKWG450L-6	5500	800	75	4650~6100	380	50	2.2	5.0	100

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 / m³.

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: 500~6100 m³/h

Total pressure:160~900 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 is 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 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;
- (5) Before starting the single-phase fan, close the air valve of the outlet channel, otherwise it may be difficult to start;