LKPS SERIES FORWARD-CURVED BLADE DOUBLE-VOLUTE BELT-DRIVEN CENTRIFUGAL FAN

LKPS series double volute forward belt drive centrifugal fan is comprised of connected volute and impeller of **two sets of double inlet centrifugal fans,** with **one motor** used to drive two sets of impellers through belt drive at the same time. The structure greatly reduces the volume of the whole machine and can obtain a large ventilation volume in a small installation space. The proper transmission ratio can make the rated working point of the fan match the required working condition well, improve the overall efficiency of the unit, and achieve the purpose of energy saving and environmental protection.

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, air handling unit and other** products, and has been widely used in hotels, hotels, schools, hospitals, factories, mines and other fields.

LKPS series of fans can be **customized with special matching motors of different voltages and frequencies** according to your needs, which is very convenient for application in different countries, regions and fields.

LKPS series of fans has the following remarkable advantages:

1. The belt drive mode can **select the rated flow and pressure** of the fan at will;
2. The improved designed **forward multi wing impeller** with high pressure, low noise, environmental protection and energy saving is adopted;
3. One motor drives two impellers with compact structure, small size and big outlet air volume;
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

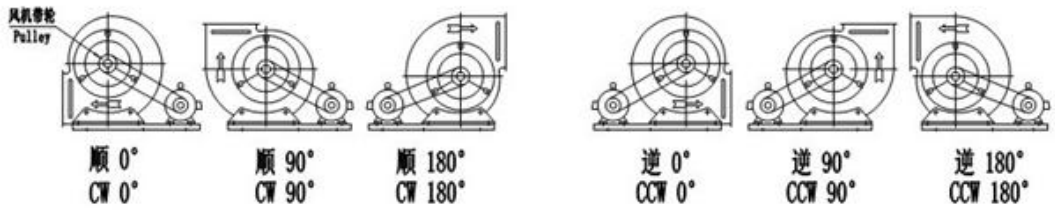
code	meaning to
none	b3 motor; belt-drive rear installation or shaft-drive horizontal installation
l	b5 motor, shaft-drive vertical installation
x	b3 motor, belt-drive down installation
d	b3 motor, belt-drive top installation
e	b3 motor, belt-drive side installation

Such as LKPS250M-4 is double volute forward belt drive centrifugal fan, blade diameter 250mm with medium width, motor poles 4.

Installation Method

1) The installation of LKPS series centrifugal fan has three main types according to the **outlet angle (between fan outlet and mounting surface)**: 0 °, 90 °, 180 °. It can also be customized to other directions according to the needs of users.

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



The default rotation direction of our centrifugal fans is CW. If users want different rotation directions, must point out clearly at the time of ordering.

Technical Parameters

Model No.	Speed (rpm)	Rated performance			Volume Range (m^3/h)	Voltage (V)	freq. (Hz)	Motor Frame	Power (kW)	Current (A)	Weight (kg)
		Volume (m^3/h)	Pressure (Pa)	Noise dB(A)							
LKPS250S-4	1000	3200	240	67	2700～3500	380	50	Y801-4	0. 55	1.5	86
	1100	3600	285	69	3050～4000	380	50	Y801-4	0. 55	1.5	86
	1200	4000	340	71	3400～4400	380	50	Y802-4	0. 75	2	87
	1300	4400	410	73	3700～4800	380	50	Y90S-4	1. 1	2. 7	93
	1400	4800	475	75	4050～5300	380	50	Y90L-4	1.5	3.7	98
LKPS250M-4	1000	4600	240	69	3900～5100	380	50	Y802-4	0. 75	2	90
	1100	5000	285	71	4250～5500	380	50	Y802-4	0. 75	2	90
	1200	5600	340	73	4750～6200	380	50	Y90S-4	1. 1	2.7	96
	1300	6000	410	74	5100～6600	380	50	Y90L-4	1.5	3.7	101
	1400	6600	475	76	5600～7300	380	50	Y100L1-4	2.2	5	108
LKPS280S-4	900	6400	270	70	5400～7000	380	50	Y90S-4	1. 1	2.7	102
	1000	7000	330	72	5950～7700	380	50	Y90L-4	1.5	3.7	107
	1100	7600	475	75	6450～8400	380	50	Y100L1-4	2.2	5	114
	1200	8200	480	76	6950～9000	380	50	Y100L1-4	2.2	5	114
	1300	9200	550	78	7800～10100	380	50	Y100L2-4	3	6.8	115
	1400	10000	640	80	8500～11000	380	50	Y112M-4	4	8.8	124
LKPS280M-4	900	8200	270	73	6950～9000	380	50	Y90L-4		3.7	112
	1000	9200	330	75	7800～10100	380	50	Y100L1-4	2.2	5	119
	1100	10200	475	77	8650 ~11200	380	50	Y100L2-4	3	6.8	120
	1200	11200	480	78	9500 ~12300	380	50	Y112M-4	4	8.8	129
	1300	12200	550	80	10350~13400	380	50	Y112M-4	*4*	8.8	129
	1400	13000	640	82	11050～14300	380	50	Y132S-4	5. 5	11.6	146
LKPS300S-4	900	7600	295	72	6450～8400	380	50	Y90L-4	1.5	3.7	122
	1000	8400	360	75	7100～9200	380	50	Y100L1-4	2.2	5	129
	1100	9200	440	77	7800～10100	380	50	Y100L1-4	2.2	5	129
	1200	10200	520	79	8650～11200	380	50	Y100L2-4	3	6.8	130
	1300	11000	620	81	9350～12100	380	50	Y112M-4	4	8.8	139
	1400	12000	720	82	10200～1320	380	50	Y132S-4	5.5	11.6	156

LKPS300M-4	900	9200	295	75	7800～10100	380	50	Y90L-4	1.5	3.7	127
	1000	10200	360	77	8650~11200	380	50	Y100L1-4	2.2	5	134
	1100	11200	440	79	9500 ～12300	380	50	Y100L2-4	3	6.8	135
	1200	12200	520	80	10350 ～1340	380	50	Y112M-4	4	8.8	144
	1300	13400	620	83	11350~14700	380	50	Y132S-4	5.5	11.6	161
	1400	14400	720	85	12200～1580	380	50	Y132S-4	5.5	11.6	161
LKPS315S-4	800	7200	266	73	6100～7900	380	50	Y90S-4	1. 1	2. 7	129
	900	8000	340	75	6800～8800	380	50	Y90L-4	1.5	3.7	134
	1000	9000	420	77	7650～9900	380	50	Y100L1-4	2.2	5	141
	1100	10000	510	79	8500～11000	380	50	Y100L2-4	3	6.8	142
	1200	11000	610	81	9350～12100	380	50	Y112M-4	4	8.8	151
	1300	12000	710	84	10200～13200	380	50	Y132S-4	5.5	11.6	169
	1400	13000	840	86	11050 ~14300	380	50	Y132S-4	5.5	11.6	169
LKPS315M-4	800	9000	266	73	7650～9900	380	50	Y90L-4	1.5	3.7	139
	900	10000	340	75	8500~11000	380	50	Y100L1-4	2.2	5	146
	1000	11200	420	78	9500～12300	380	50	Y100L2-4	3	6.8	147
	1100	12400	510	80	10500～13600	380	50	Y112M-4	4	8.8	156
	1200	13600	610	82	11550～15000	380	50	Y132S-4	5.5	11.6	173
	1300	15000	710	83	12750～16500	380	50	Y132S-4	5.5	11.6	173
	1400	16400	840	85	13900～18000	380	50	Y132M-4	7.5	15.4	185
LKPS355S-4	800	8400	320	73	7100～9200	380	50	Y100L2-4	3	6.8	159
	900	9200	410	76	7800～10100	380	50	Y112M-4	4	8.8	168
	1000	10000	500	77	8500～11000	380	50	Y132S-4	5.5	11.6	185
	1100	11000	605	80	9350～12100	380	50	Y132M-4	7.5	15.4	197
	1200	12200	710	82	10350～13400	380	50	Y160M-4	11	22.6	237
	1300	13400	830	83	11350～14700	380	50	Y160L-4	15	30	257
	1400	14600	950	85	12400～16100	380	50	Y160L-4	15	30	247
LKPS355M-4	800	13000	320	75	11050~14300	380	50	Y100L2-4	3	6.8	165
	900	14400	410	78	12200～15800	380	50	Y112M-4	4	8.8	174
	1000	16000	500	80	13600～17600	380	50	Y132S-4	5.5	11.6	191
	1100	17600	605	82	14950～19400	380	50	Y132M-4	7.5	15.4	203
	1200	19200	710	84	16300~21100	380	50	Y132M-4	7.5	15.4	203
	1300	21000	830	86	17850～23100	380	50	Y160M-4	11	22.6	245
	1400	23000	950	88	19550～25300	380	50	Y160L-4	15	30	265
LKPS400S-4	700	10000	315	73	8500~ 11000	380	50	Y100L1-4	2.2	5	180
	800	11400	420	76	9650~12500	380	50	Y100L2-4	3	6.8	181
	900	13000	525	78	11050～14300	380	50	Y112M-4	4	8.8	190
	1000	14600	640	81	12400～16100	380	50	Y132S-4	5.5	11.6	207
	1100	16200	760	83	13750～17800	380	50	Y132M-4	7.5	15.4	219
	1200	17800	920	84	15100～19600	380	50	Y160M-4	11	22.6	259
	1300	19400	1100	86	16450～21300	380	50	Y160L-4	15	30	279

LKPS400M-4	700	12000	315	74	10200～13200	380	50	Y100L2-4	3	6.8	188
	800	13600	420	77	11550～15000	380	50	Y112M-4	4	8.8	197
	900	15200	525	80	12900～16700	380	50	Y132S-4	5. 5	11.6	214
	1000	17000	640	82	14450～18700	380	50	Y132M-4	7. 5	15.4	223
	1100	19000	760	84	16150～20900	380	50	Y160M-4	11	22.6	266
	1200	21000	920	86	17850～23100	380	50	Y160L-4	15	30	286
	1300	23000	1100	88	19550～25300	380	50	Y160L-4	15	30	286
LKPS450S-4	600	16000	305	75	13600～17600	380	50	Y100L2-4	3	6.8	208
	700	19000	420	78	16150～20900	380	50	Y132S-4	5.5	11.6	234
	800	22000	540	82	18700～24200	380	50	Y132M-4	7.5	15.4	246
	900	25000	695	84	21250～27500	380	50	Y160M-4	11	22.6	286
	1000	28000	855	87	23800～30800	380	50	Y160L-4	15	30	306
	1100	31000	1045	89	26350～34100	380	50	Y180L-4	22	42.9	354
	1200	34000	1245	90	28900～37400	380	50	Y200L-4	30	56.8	405
LKPS450M-4	600	20000	305	76	17000～22000	380	50	Y112M-4	4	8.8	224
	700	23200	420	80	19700～25500	380	50	Y132S-4	5.5	11.6	241
	800	26400	540	83	22400～29000	380	50	Y160M-4	11	22.6	303
	900	30000	695	85	25500～33000	380	50	Y160L-4	15	30	323
	1000	33600	855	87	28550～37000	380	50	Y180L-4	22	42.9	371
	1100	37200	1045	89	31600～40900	380	50	Y180L-4	22	42.9	371
	1200	41000	1245	91	34850～45100	380	50	Y200L-4	30	56.8	422
LKPS500S-4	600	26000	360	78	22100～28600	380	50	Y132S-4	5.5	11.6	270
	700	30000	495	80	25500～33000	380	50	Y160M-4	11	22.6	322
	800	34000	645	83	28900～37400	380	50	Y160L-4	15	30	342
	900	38000	815	86	32300～41800	380	50	Y180L-4	22	42.9	390
	1000	42000	1000	88	35700～46200	380	50	Y200L-4	30	56.8	445
	1100	46000	1235	90	39100～50600	380	50	Y225S-4	37	70.4	505
	1150	48000	1330	92	40800～52800	380	50	Y225S-4	37	70.4	505
LKPS500M-4	600	30000	360	78	25500～33000	380	50	Y132M-4	7.5	15.4	300
	700	35000	495	81	29750～38500	380	50	Y160M-4	11	22.6	340
	800	40000	645	84	34000～44000	380	50	Y160L-4	15	30	360
	900	45000	815	87	38250～49500	380	50	Y180L-4	22	42.9	410
	1000	50000	1000	89	42500～55000	380	50	Y200L-4	30	56.8	465
	1100	55000	1235	91	46750～60500	380	50	Y225S-4	37	70.4	525
	1150	58000	1330	92	49300～63800	380	50	Y225M-4	45	85.4	570

Work Environment

1) Altitude not more than 1000 meters;

2) The ambient temperature is not lower than - 25 ℃, not higher than 40 ℃;

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: 2700～63800 m3/h

Total pressure: 240～1330 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, pulley and belt are intact;

(2) Whether the connecting bolts, pulley and belt 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;

(4) Be careful when installing. Do not put your hand into the pulley to avoid crushing.

3. Start up and Operation

(1) Before starting the fan, check the working power supply, which must be within ± 5% of the rated voltage and ± 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.