



Yuncheng Anjie Fan Electric Co., Ltd.

运城安捷风机电气有限公司

安捷矿用防爆通风机

Anjie mine explosion-proof fan

COMPANY PROFILE

公司简介

运城安捷风机电气有限公司座落于武圣关公故里，地处晋、陕、豫三省交界的黄河金三角地带，是专业研制矿用风机和隧道通风的专业生产厂家，是我国矿山、铁路基建领域通风系统专业化研制企业。

公司拥有通风专业工程师及技术人员 20 余名，为提高产品竞争力，公司依托有雄厚科研力量的沈阳风机研究所、合肥风机研究所、西安流体机械研究所等科研单位并建立了长期合作关系，共同致力于通风技术的设计、科研开发、设备制造，使得产品质量达到国内同行业先进水平，尤其在隧道风机、射流风机等产品上具有低噪高效、外形美观、安装使用方便和维护简便，而且品种规格齐全、参数涵盖面广、实用性强等特点，深受国内外广大用户的青睐，享有高度信誉。

运城安捷风机电气有限公司是一个与您目标一致，同样追求速度、追求效率、追求卓越的合作伙伴。高质量的产品，降低了您的经营成本；全过程的服务，消除了您使用中的烦恼。面向未来，运城安捷风机电气有限公司将与您相伴而行，服务至诚。

Yuncheng Anjie Fan Electric Co., Ltd. is located in the hometown of Guan Gong, Wusheng, and is located in the golden triangle of the Yellow River at the junction of Shanxi, Shaanxi and Henan provinces. It is a professional manufacturer specializing in the development of mining fans and tunnel ventilation. Specialized research and development enterprise of ventilation system. The company has more than 20 professional ventilation engineers and technicians. In order to improve the competitiveness of products, the company relies on scientific research units such as Shenyang Fan Research Institute, Hefei Fan Research Institute, Xi'an Fluid Machinery Research Institute and other scientific research units with strong scientific research strength and has established long-term cooperative relations. Committed to the design, scientific research and development, and equipment manufacturing of ventilation technology, the product quality has reached the advanced level in the same industry in China, especially in tunnel fans, jet fans and other products with low noise and high efficiency, beautiful appearance, convenient installation and use, and easy maintenance. Complete varieties and specifications, wide coverage of parameters, strong practicability and other characteristics, are favored by the majority of users at home and abroad, and enjoy a high reputation. Yuncheng Anjie Fan Electric Co., Ltd. is a partner who has the same goals as you, and also pursues speed, efficiency and excellence. High-quality products reduce your operating costs; the whole process of service eliminates your troubles in use. Facing the future, Yuncheng Anjie Fan Electric Co., Ltd. will accompany you and provide sincere service.

公司愿景

ENTREPRENEURSHIP

成为具有国际竞争力的通风系统解决方案提供商。公司恪守关注客户、成就员工、做优企业的宗旨。聚焦能源矿业装备、交通装备两大领域。做精智能矿山、铁路隧道、水电工程、通风系统及控制系统领域，让领先的通风技术及通风系统更多的惠及社会，做备受业界和社会尊敬的企业。

Become an internationally competitive ventilation system solution provider.

The company abides by the tenet of paying attention to customers, achieving employees, and being an excellent enterprise. Focus on the two major fields of energy mining equipment and transportation equipment. To be a well-respected enterprise in the industry and society by doing fine and intelligent mines, railway tunnels, hydropower projects, ventilation systems and control systems, allowing leading ventilation technology and ventilation systems to benefit the society more.



企业理念

COMPANY QUALIFICATION

认真做好每一件事情，满足用户每一个需求。

运营理念

Operational Philosophy

- 研发理念：求新求是、先进可靠
- 生产理念：精心精益、安全快捷
- 营销理念：至诚至微、合作共赢
- 质量理念：专心专注、恪守标准
- 管理理念：严谨严细、科学高效
- 人才理念：公平公正、选贤任能

经营范围

Business Scope



- 1 各种通风机设计、研发与制造
- 2 各种隧道通风机、矿用通风机设计、生产制造及销售
- 3 各种通用设备及电气设备的研发制造与维修
- 4 工业自动化控制系统装置制造、矿用智能通风机的研发及制造
- 5 电机及其控制系统研发制造与维修
- 6 工业机器人安装、维修

生产设备

PRODUCTION FACILITIES



数控折弯机：用于尺寸不同的板材折弯



数控立式加工中心：用于精加工叶片，各种叶片模具。



风机性能检测室

技术人员正在对风机进行现场测试



地铁风机综合测试系统



加工导流帽及集流器



数控切割机：下料实现数控切割



用于精加工轮毂



大型立车：加工大型轮毂



矿用防爆通风机特点

本公司生产的 FBCZ、FBCDZ、FBD 等系列通风机在结构上和各项性能上具有以下特点：

1. 各系列通风机均采用电动机与叶轮直联的最简单传动结构。
2. 采用机翼扭曲形叶片，气动效率高，单机系列通风机和对旋系列通风机装置的静压效率高达 80% 以上，高效区宽广，节能效果显著。
3. 煤矿用通风机选用隔爆型电动机，并置电动机于通风机的隔流腔内，保证了风流与风机流道中含瓦斯的气流相互隔绝，同时起到了散热导流的作用，其风流通管使电动机周围与大气相通，既增加了电动机的安全性能，又使电动机的热量直接散发到空气中，增加了通风机运行的安全性。
4. 在煤矿用通风机叶轮回转部分的筒体上，增加了抑制火花能量的铜环装置，防止叶片在高速运行中变形与筒壁产生火花，引起事故，使通风机运行更加安全牢靠。
5. 性能多样、规格齐全，有与各类煤矿及非煤矿山的通风网络相匹配的风机供选用，保证长期高效运行。
6. 通风机可以反转反风，反风量可达正风量的 60% 以上，从而可省去传统的排风风峒出口的“S”型风道、反风道及风机房。对场地面积小，有地表塌陷、山体滑坡危险的地方尤为适合。
7. 风机主体采用钢板、型钢组焊结构，叶片为中空钢板焊接结构，叶片及整体强度高。
8. 噪音低。各系列通风机的噪音均可达到国内标准的要求，并且还根据用户的要求，制作消音器并在扩散器和扩散塔内增加隔音及消音装置，进一步降低噪音。

The FBCZ, FBCDZ and FBD series fans manufactured by the Company have the following characteristics in the aspects of structure and various performances:

1 The fans of various series all use the simplest transmission device of direct connection between motor and impeller.

2 Wing twisted blades are used, which have high aerodynamic efficiency. The static pressure efficiency of single-stage series fan and counter-rotating series fan devices is as high as above 80%, thus the high efficiency area is wide and energy saving effect is obvious.

produced with cylinder wall, and then accident is caused, and make the operation of fans be safer and more reliable.

3 Fans for mines select explosion-proof motors and put motors in isolating chambers of fans to ensure the isolation between wind current and air flow containing gas in fan flow channel and meanwhile, play heat dissipation and diversion function. The wind current pipe makes the surrounding area of motor is connected with atmosphere, which both increases the safety performance of motor and directly dissipate the heat of motor to air and improve the safety of fan operation.

4 In the cylinders of rotating parts of impellers of fans for mines, copper ring devices for inhibiting spark energy are added to prevent deformation from being occurred during high speed running of impellers and spark from being

5 There are various performances and complete specifications in the Company. The fans matching with ventilation networks of various coal mines and non-coal mines are available for selection, and long-term high efficient operation could be guaranteed.

6 Fans could reverse the air flow and the reversal air flow could reach more than 60% of direct air flow. Thus the "S" type air channel, reversal air channel and fan room of traditional air cave outlet could be saved. The fans are especially suitable for places with small site area, surface subsidence and landslide dangers.

7 The main parts of fans use steel plate and section steel installation and welding structure. Blades are in hollow steel plate welding structure, thus strength of blades and overall strength is high.

8 Low noise. Noise of various series of fans could reach requirement of Chinese standards. Besides, in accordance with the requirements of users, mufflers are made and sound arresters and silencers are added in diffusers and diffusion towers to lower the noise in a further way.

FBC(D)Z 系列矿用防爆抽出式 (对旋) 轴流通风机

FBC(D)Z SERIES EXPLOSION-PROOF DRAW-OUT (COUNTER-ROTATING) AXIAL-FLOW FANS FOR MINES

1. 概述

Overview

该系列通风机为 (对旋式) 防爆主要通风机, 通风机的叶轮采用安装角可调的三维扭曲叶片, 风量大、风压高, 且风量风压可以调节, 以满足大、中型煤矿的通风要求。

风机采用 A、B、C、D、E 五种型式, 电机采用 4 极 (1450r/min)、6 极 (980r/min)、8 极 (740r/min)、10 极 (580r/min)、12 极 (490r/min) 五种转速。

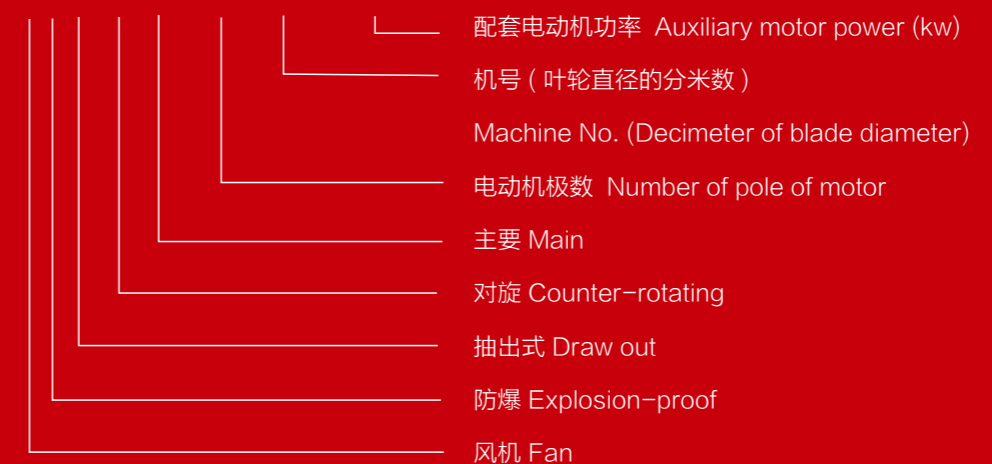
This series of fans are (counter-rotating) explosion-proof main fans. The blades of fans use three-dimensional twisted blades with adjustable incidence angles respectively. The air volume is large, air pressure is high and air volume and air pressure are adjustable. applicable to the ventilation of large and medium coal mines.

This series of fans adopt three kinds of hub ratios, including A、B、C、D、E, and motors adopt five kinds of rotating speeds, including 4 poles (1480 r/min), 6 poles (980 r/min), 8 poles (740 r/min), 10 poles (580 r/min) and 12 poles (490 r/min).

2. 风机型号标示解释

Explanation of markings of fan type

FBC(D)Z - a - No x / (2) x N



3. FBCDZ 系列煤矿地面用防爆抽出式对旋轴流通风机性能参数 (B 型叶片)

Technical performance parameter table of FBCDZ series explosion-proof draw-out counter-rotating axial flow fans for mines (B type)

系列	配用电机型号	配用电机最大功率 (KW)	风量 (m ³ /s)	风压 (Pa)
FBCDZ No 16	315S-6	2×75	27.9-62.8	2667-409
FBCDZ No 17	315L1-6	2×110	33.5-75.3	3010-462
FBCDZ No 18	355S-6	2×160	39.8-89.4	3375-518
	315M-8	2×75	30-67.5	1924-295
FBCDZ No 19	355M1-6	2×185	46.8-105.2	3760-576
	315L1-8	2×90	35.3-79.4	2140-330
FBCDZ No 20	355L1-6	2×220	54.5-122.7	4170-640
	315L2-8	2×110	41.2-92.6	2380-360
FBCDZ No 21	450S3-6	2×315	57-142.6	4800-680
	355S-8	2×132	47-107	2620-400
FBCDZ No 22	560S1-6	2×400	66-163.8	5260-790
	355M-8	2×160	55-123	2880-440
FBCDZ No 23	355L2-8	2×200	62-141	3140-480
FBCDZ No 24	450S3-8	2×250	71-160	3420-524
	355M2-10	2×132	55-125.4	2100-320
FBCDZ No 25	450M2-8	2×315	80-181	3710-560
	355L1-10	2×160	63-142	2280-350
FBCDZ No 26	560M1-8	2×400	90-204	4015-615
	355L2-10	2×185	70-160	2470-370
FBCDZ No 27	560M2-8	2×450	101-228	4330-660
	450M1-10	2×220	79-179	2660-408
FBCDZ No 28	630M1-8	2×560	112-254	4660-710
	450M2-10	2×250	88-199	2860-439
FBCDZ No 29	710S1-8	2×710	108-282	5240-750
	560M1-10	2×315	98-221	3070-470
FBCDZ No 30	710S2-8	2×800	100-310	5080-800
	630S1-10	2×400	108-245	3280-500
FBCDZ No 31	630S2-10	2×450	120-270	3510-530
FBCDZ No 32	630M2-10	2×560	132-297	3740-570
FBCDZ No 33	710S2-10	2×630	144-326	3970-600
FBCDZ No 34	710M1-10	2×710	158-357	4220-640
FBCDZ No 35	710M2-10	2×800	172-389	4470-680
FBCDZ No 36	800S1-10	2×1000	188-423	4730-720
FBCDZ No 37	800S1-12	2×710	172-388	3560-540
FBCDZ No 38	800S2-12	2×800	186-420	3760-570
FBCDZ No 40	800M2-12	2×1000	217-490	4170-630

4. FBCDZ 系列煤矿地面用防爆抽出式对旋轴流通风机性能参数 (C 型叶片)

Technical performance parameter table of FBCDZ series explosion-proof draw-out counter-rotating axial flow fans for mines (C type)

系列	配用电机型号	配用电机最大功率 (KW)	风量 (m ³ /s)	风压 (Pa)
FBCDZ No 12	225M-6	2×30	8-28	2010-710
FBCDZ No 13	250M-6	2×37	11-35	2320-830
FBCDZ No 14	280M-6	2×55	13-44	2690-960
FBCDZ No 15	315S-6	2×75	16-54	3090-1110
FBCDZ No 16	315L1-6	2×110	20-65	3512-1263
FBCDZ No 17	315L2-6	2×132	24-78	3965-1426
FBCDZ No 18	355M1-6	2×185	29-93	4445-1578
	315M-8	2×75	22-71	2530-915
FBCDZ No 19	355L2-6	2×250	34-112	4950-1790
	315L2-8	2×110	26-84	2820-1020
FBCDZ No 20	450S3-6	2×315	40-128	5490-1980
	355S-8	2×132	30-98	3130-1130
FBCDZ No 21	450M2-6	2×400	46-150	6150-2110
	355L1-8	2×185	35-115	3450-1240
FBCDZ No 22	560M1-6	2×500	53-170	6650-2390
	450S2-8	2×220	40-128	3790-1360
FBCDZ No 23	355M1-10	2×110	30-100	2330-830
	450M1-8	2×280	46-148	4140-1490
FBCDZ No 24	355M2-10	2×132	36-116	2540-915
	450M2-8	2×315	50-168	4530-1620
FBCDZ No 25	355L1-10	2×160	40-130	2760-990
	560M1-8	2×400	58-190	4890-1760
FBCDZ No 26	355L2-10	2×185	46-148	3000-1080
	630S1-8	2×500	66-212	5390-1900
FBCDZ No 27	560S1-10	2×250	52-168	3250-1170
	630M2-8	2×630	74-240	5700-2060
FBCDZ No 28	560S2-10	2×280	58-185	3560-1260
	710S1-8	2×710	82-265	6240-2200
FBCDZ No 29	560M2-10	2×355	64-208	3770-1350
	560S2-12	2×200	54-175	2720-960
FBCDZ No 29	710M1-8	2×900	91-295	6580-2360
	630S2-10	2×400	71-230	4040-1450
	560S1-12	2×250	60-195	2890-1030

FBCDZ № 30	710M2-8	2×1000	100-325	7040-2530
	630M2-10	2×500	79-256	4330-1550
	630S1-12	2×280	67-215	3090-1110
FBCDZ № 31	800S2-8	2×1250	110-360	7510-2700
	630M2-10	2×560	87-280	4620-1660
	630M1-12	2×355	74-238	3290-1180
FBCDZ № 32	800M1-8	2×1400	122-394	8010-2880
	710M-10	2×710	96-310	4920-1760
	630M2-12	2×400	81-260	3510-1260
FBCDZ № 33	800M2-8	2×1600	134-430	8520-3060
	710M2-10	2×800	105-338	5230-1880
	710S1-12	2×450	89-286	3740-1340
FBCDZ № 34	900S1-8	2×1800	146-475	9040-3250
	800S1-10	2×900	110-370	5560-1990
	710M1-12	2×560	96-315	3960-1420
FBCDZ № 35	800S2-10	2×1000	125-405	5890-2110
	710M2-12	2×630	106-340	4200-1510
FBCDZ № 36	800M2-10	2×1250	136-440	6230-2240
	800S1-12	2×710	115-370	4450-1590
FBCDZ № 37	900S1-10	2×1400	148-480	6570-2360
	800S2-12	2×800	125-405	4690-1690
FBCDZ № 38	900S2-10	2×1600	160-520	6940-2490
	800M2-12	2×1000	136-438	4960-1780
FBCDZ № 39	900M1-10	2×1800	173-560	7310-2620
	900S1-12	2×1120	146-476	5220-1870
FBCDZ № 40	900M2-10	2×2000	187-605	7690-2760
	900S2-12	2×1250	158-510	5490-1970

5. FBCDZ 系列煤矿地面用防爆抽出式对旋轴流通风机性能参数 (D 型叶片)

Technical performance parameter table of FBCDZ series explosion-proof draw-out counter-rotating axial flow fans for mines (D type)

系列	配用电机型号	配用电机最大功率 (KW)	风量 (m ³ /s)	风压 (Pa)
FBCDZ № 16	315L1-6	2×110	18.5-54	3260-880
FBCDZ № 17	355S-6	2×160	22.2-64.8	3680-1000
FBCDZ № 18	355M1-6	2×185	26-77	4130-1120
	315L1-8	2×90	19.9-58	2350-640
FBCDZ № 19	355L2-6	2×250	31-90	4600-1250
	315L2-8	2×110	23-68	2620-715
FBCDZ № 20	450S3-6	2×315	36-105	5090-1380
	355S-8	2×132	27-79	2900-790
FBCDZ № 21	400M2-8	2×185	31-92	3200-870
FBCDZ № 22	450S2-8	2×220	36-106	3520-960
FBCDZ № 23	450M1-8	2×280	41-121	3840-1040
FBCDZ № 24	560S2-8	2×355	47-138	4180-1140
	450S1-10	2×160	36-108	2570-700
FBCDZ № 25	560M2-8	2×450	53-156	4540-1230
	450S3-10	2×200	41-122	2790-760
FBCDZ № 26	630S1-8	2×500	59-175	4910-1330
	450M2-10	2×250	47-137	3010-820
FBCDZ № 27	630M1-8	2×630	67-196	5300-1440
	560M1-10	2×315	52-154	3250-880
FBCDZ № 28	630M2-8	2×710	74-219	5700-1550
	560M2-10	2×355	58-171	3500-950
FBCDZ № 29	630S2-10	2×450	65-191	3750-1020
FBCDZ № 30	630M1-10	2×500	72-210	4010-1100
FBCDZ № 31	710S1-10	2×630	79-233	4290-1170
FBCDZ № 32	710S2-10	2×710	87-256	4570-1240
FBCDZ № 33	710M1-10	2×800	96-280	4860-1320
	800M1-12	2×500	81-237	3470-940
FBCDZ № 34	710M2-10	2×900	105-307	5160-1410
	800M2-12	2×560	88-259	3680-1000
FBCDZ № 35	800M2-10	2×1120	114-335	5470-1490
	800L-12	2×630	96-283	3900-1060
FBCDZ № 36	900S2-10	2×1220	124-364	5790-1580
	900S2-12	2×800	105-308	4130-1130
FBCDZ № 37	900M1-12	2×900	114-334	4360-1180
FBCDZ № 38	900M2-12	2×1000	123-362	4600-1250
FBCDZ № 39	900L1-12	2×1120	134-391	4850-1320
FBCDZ № 40	900L2-12	2×1200	144-422	5100-1380



6. FBCDZ 系列煤矿地面用防爆抽出式对旋轴流通风机性能参数 (E 型叶片)

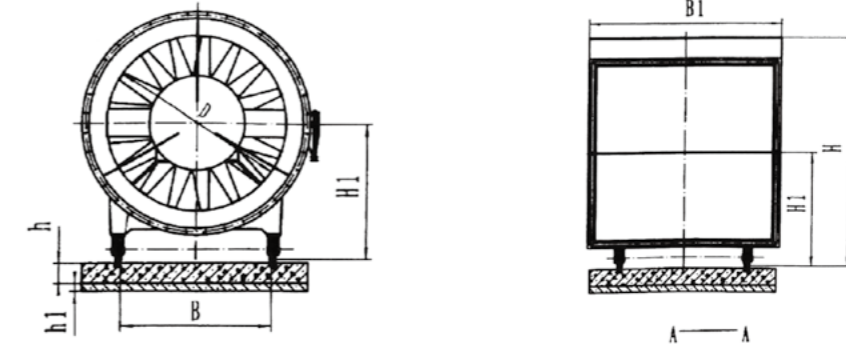
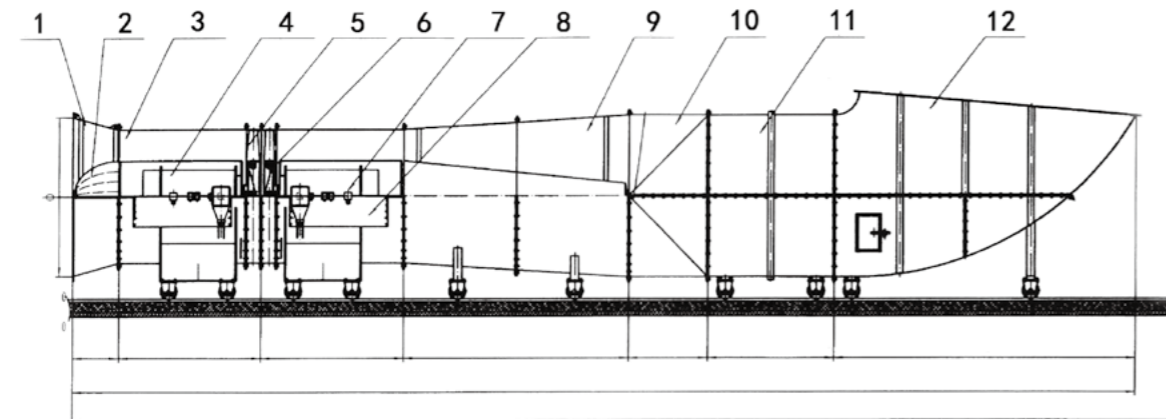
Technical performance parameter table of FBCDZ series explosion-proof draw-out counter-rotating axial flow fans for mines (E type)

系列	配用电机型号	配用电机最大功率 (KW)	风量 (m ³ /s)	风压 (Pa)
FBCDZ No 16	315L1-6	2×110	20-52	4220-1180
FBCDZ No 17	315L2-6	2×132	24-62	4770-1330
FBCDZ No 18	355M1-6	2×185	28-74	5340-1500
	315M-8	2×75	21-56	3050-850
FBCDZ No 19	355L2-6	2×250	33-87	5960-1670
	315L2-8	2×110	25-65	3390-950
FBCDZ No 20	450S3-6	2×315	39-101	6600-1850
	355S-8	2×132	29-76	3760-1050
FBCDZ No 21	355M-8	2×160	34-88	4150-1160
FBCDZ No 22	450S2-8	2×220	39-101	4550-1270
FBCDZ No 23	450M1-8	2×280	45-116	4980-1390
FBCDZ No 24	450M2-8	2×315	51-132	5420-1520

7. FBCDZ 系列矿用防爆抽出式对旋轴流通风机外形结构示意图

Schematic diagram of outline structure of FBCDZ series explosion-proof draw-out counter-rotating axial flow fans for mines

- | | |
|------------------------------|-----------------------------------|
| 1. 集流器 Current collector | 2. 导流体 Diversion device |
| 3. 一级主机 Primary main machine | 4. 一级电机 Primary motor |
| 5. 一级叶轮 Primary blade | 6. 二级叶轮 Secondary blade |
| 7. 二级电机 Secondary motor | 8. 二级主机 Secondary main machine |
| 9. 扩散器 Diffuser | 10. 变接头 Changeable diameter joint |
| 11. 消声器 Muffler | 12. 扩散塔 Diffusion tower |



8. FBCDZ 系列矿用防爆抽出式对旋轴流通风机外形尺寸表 (仅供参考)

Outline dimension table of FBCDZ series explosion-proof draw-out counter-rotating axial flow fans for mines (only for reference)

型号 Type	外形尺寸 Outline dimension															
	φ	D	L0	L	L1	L2	L3	L4	L5	L6	B	B1	H	H1	h	h1
No 12	1452	1200	10000	8540	420	970	1800	720	1260	2400	1020	1672	1886	1010	200	100
No 13	1573	1300	10000	9245	455	1100	1950	780	1260	2600	1110	1793	2017	1070	200	100
No 14	1694	1400	12000	9980	490	1150	2100	840	1500	2800	1190	1914	2147	1130	200	100
No 15	1815	1500	13000	10907	525	1260	2250	900	1500	3075	1280	2035	2278	1190	200	100
No 16	1936	1600	13000	11152	560	1260	2400	960	1500	3212	1360	2156	2438	1280	200	100
No 17	2057	1700	14000	11455	595	1600	2550	1020	2000	3400	1450	2277	2569	1430	250	120
No 18	2178	1800	14000	11540	630	1730	2700	1080	2000	3690	1530	2398	2709	1400	250	120
No 19	2299	1900	15000	12330	665	1780	2850	1140	2000	3895	1620	2519	2830	1460	250	120
No 20	2420	2000	15000	13100	700	2100	3000	1200	2000	4100	1700	2640	3120	1520	250	120
No 21	2541	2100	17000	14595	735	2200	3570	1260	2000	4830	1790	2761	3268	1590	250	120
No 22	2662	2200	18000	15590	770	2200	3740	1320	2500	5060	1870	2922	3427	1670	250	120
No 23	2783	2300	18000	16085	805	2200	3910	1380	2500	5290	1960	3043	3886	1850	300	140
No 24	2904	2400	20000	17080	840	2700	4080	1440	2500	5520	2040	3164	3824	1910	300	140
No 25	3025	2500	20000	17650	875	2775	4250	1500	2500	5750	2130	3285	3963	1970	300	140
No 26	3146	2600	24000	20970	910	2800	4420	1560	2500	5980	2210	3406	4104	2030	300	140
No 27	3267	2700	24000	21665	945	2900	4590	1620	2500	6210	2300	3527	4240	2090	300	140
No 28	3388	2800	26000	22030	980	2950	4760	1680	2500	6440	2380	3648	4378	2150	300	140
No 29	3509	2900	26000	22755	1015	2950	4930	1740	2500	6670	2470	3809	4537	2230	350	160
No 30	3630	3000	28000	23750	1050	2950	6000	1800	2500	6900	2550	3930	4675	2290	350	160

No 31	3751	3100	28000	24575	1085	3000	6200	1860	2500	7130	2640	4051	4814	2350	350	160
No 32	3872	3200	30000	25500	1120	3100	6400	1920	2500	7360	2720	4172	4952	2410	350	160
No 33	3993	3300	30000	26125	1155	3150	6600	1980	2500	7590	2810	4293	5091	2470	350	160
No 34	4114	3400	32000	26940	1190	3180	6800	2040	2500	7820	2890	4414	5229	2530	350	160
No 35	4235	3500	34000	27875	1225	3500	7000	2100	2500	8050	2980	4535	5368	2590	400	200
No 36	4356	3600	34000	28600	1360	3600	7200	2160	2500	8280	3060	4656	5386	2650	400	200
No 37	4477	3700	36000	29225	1395	3650	7400	2220	2500	8510	3150	4777	5645	2710	400	200
No 38	4598	3800	36000	29850	1330	3700	7600	2280	2500	8740	3230	4898	5783	2770	400	200
No 39	4719	3900	36000	30975	1365	3750	7800	2340	3000	8970	3320	5180	6002	2880	450	250
No 40	4840	4000	36000	31270	1400	3750	8000	2400	3000	9200	3400	5300	6240	2900	450	250
No 41	4961	4100	38000	32125	1435	3800	8200	2460	3000	9430	3490	5420	6428	3100	450	250
No 42	5082	4200	38000	32650	1470	3800	8400	2520	3000	9660	3570	5550	6631	3220	450	250
No 43	5203	4300	40000	33275	1505	3850	8600	2580	3000	9890	3600	5680	6834	3340	500	300
No 44	5324	4400	40000	34240	1540	3850	9240	2640	3000	10120	3740	5840	7052	3460	500	300
No 45	5445	4500	42000	34875	1575	3900	9450	2700	3000	10350	3830	5980	7260	3580	500	300
No 46	5566	4600	44000	36410	1610	3900	9660	2760	4000	10580	3910	6100	7458	3700	500	300

部件介绍

INTRODUCTION OF PARTS

1. 扩散器

Diffuser

各系列矿用节能通风机作为主要通风机和机站风机时，应配带钢板制作的专用扩散器。地面主要通风机所配带扩散器可将部分动压转化为静压，降低出口动压损失，提高静压效率，以达到节能的目的。金属矿安装于井下的风机应配带扩散器，既可降低局阻系数，又可降低扩散器出口的动压值，从而可大幅度降低风机装置的局部阻力，节省通风电耗。

各系列通风机均有专用配套的扩散器。扩散器的法兰与风机出口法兰用螺栓连接。

In serving as major fans and fans of machine stations, all series of energy-saving fans for mining use shall be equipped with the dedicated diffuser made of steel plates. The diffusers of major ground fans can transform partial dynamic pressure into static pressure so as to reduce the loss of outlet dynamic pressure, improve the efficiency of static pressure, and realize the purpose of saving energy. The fans installed underground for metal mines shall be equipped with diffusers, which can not only reduce partial resistance coefficient, but also lower the outlet dynamic pressure value, and thus substantially reducing the partial resistance of fans, and cutting down power consumption for ventilation.

All series of fans are equipped with dedicated diffusers, flanges of which are connected with outlet flanges of fans with bolts.

2. 消音器

Muffler

本公司生产的各系列通风机的比 A 声级均符合煤炭行业标准的规定，但它作为主要通风机安装于地面时，若其产生的噪音不能达到环境噪音标准，会影响周围居民的工作与休息。因此，当安装主通风机的地点距居民区较近时，应当在主要通风机扩散器后安装消音器，并在扩散塔内加设消音结构，把主通风机噪音降到环境噪音标准以下。

我公司还为各类局部通风机配置了消音器，以减少局部通风机噪音对井下工人的干扰，保证安全生产和工人的身体健康。

Various series of A-weighted sound level fans manufactured by the Company conform to the stipulation of coal industry standard. However, when it is used as the main fan installed on ground, in case the noise produced by it cannot reach environmental noise standard, it will affect the work and rest of surrounding residents. Thus, in case the place installing main fan is near to residential area, a muffler shall be installed behind the diffuser of main fan, and noise reduction device shall be added in diffusion tower to reduce the noise of main fan blow environmental noise standard.

The Company also provides mufflers for various local fans to reduce the interference of noise of local fans on workers under the shaft and ensure the safety production and physical health of workers.

3. 扩散塔

Diffusion tower

在扩散器后还有一过风断面逐渐扩大向上弯曲的排风弯道，该弯道称为扩散塔，它的作用一方面减少通风机的动压损失，提高通风机的有效静压；另一方面是将乏风排至上空，保护周围环境，还可以降低噪声，以免干扰居民的睡眠与休息。本公司生产的钢板式扩散塔，把苏式 90° 的扩散塔改为 45° 或流线型扩散塔，大大降低了扩散塔的局部阻力，节能效果十分明显。

Behind the diffuser, there is also an air exhaust bending channel with air passing cross section gradually expanding and bending upwards. This bending channel is called diffusion tower. On the one hand, its function is to reduce the dynamic pressure loss of fans and improve the effective static pressure of fans; on the other hand, it could discharge ventilation air methane to the sky, protect surrounding environment and lower noise to avoid the interference on sleeping and resting of residents. The steel plate diffusion tower manufactured by the Company changes Soviet-style 90° diffusion tower to 45° or streamline diffusion tower, which greatly reduces partial resistance of diffusion tower and has an obvious energy saving effect.

4. 自开自闭式风门（蝶阀）

Self-opening and self-closing air door (butterfly valve)

煤矿排风井所用主要通风机应有两台，一台工作，一台备用，所以每台主要通风机都必须配备一个风门。两台通风机并联工作时，为了安全顺利地开启每台风机，故需配备各自的风门。本公司设计制作的风门，安装在排风井风峒与风机主机之间。开启风机后，靠风机风压把门吸开；停机后，靠门的自重自然关闭。另一台风机工作产生的负压紧紧把门吸住，减少漏风。此门在金属矿山已被多家采用，它比煤矿现有的其它风门，不仅节省吊放设备、结构简单，而且管理方便、造价低。

Main fans needed by coal mine ventilation shaft are two, one for working and the other one for standby. Thus, each main fan must be provided with an air door. When two fans work in parallel, in order to successfully open each fan, each fan shall be provided with an air door. The air doors designed and made by the Company will be installed between ventilation shaft cave and fan main machine. After fan is started, door will be opened by the air pressure of fan; after fan is stopped, door will be closed by its own weight. The negative pressure produced by working of the other fan will tightly draw the door and reduce air leak. This kind of door has been used by many metal mines. Comparing with other existing air doors of coal mine, it does not only save hoisting equipment and has a simple structure, but also convenient to be managed and the cost is low.

主要配套产品

MAIN AUXILIARY PRODUCTS

1. 风机专用启动柜的选择

Selection of special start cabinets of fans

◆根据电网电压与主扇要求选择额定工作电压和容量。

◆根据供电系统情况合理选择风机电控和启动方式:

(1) 若电网容量允许, 可以选择直接启动;

(2) 电网容量较小时则选用降压或软启动方式和变频启动方式;

(3) 6KV 和 10KV 风机电控一般选用直接启动方式;

(4) 风机要求调速的则选用带变频装置的风机电控。

◆双回路供电建议选用成套电控装置。

(1) 380V、660V 主扇电控: 固定式选用 GGD 成套装置; 抽屉式选用 GCS 或 MNS 成套装置。一般配置为进线、联络和启动柜, 共 7 台;

(2) 6KV、10KV 主扇电控: 固定式选用 XGN 型成套装置, 一般配置为进线、联络和启动柜, 共 7 台; 移出式选用 KYN 型成套装置, 一般配置为进线、联络、换相、互感器和启动柜, 共 11 台;

另外, 所用电源柜和电容柜用户可根据各自情况选择增加。

2. 微机在线监测预警系统

Microcomputer online monitoring and early warning system

风机在运行中, 微机就能够准确地反映和记录风机的运行曲线、风压、风量、风速、轴承和定子温度及电流、电压、振动等参数, 并能记录存档和故障报警, 且能随时从微机中调出三个月来的风机运行情况。这是一项先进的高科技技术。

◆ Select rated working voltage and capacity in accordance with power grid voltage and main fan requirements.

◆ Reasonably select electric control and starting means of fans in accordance with power supply system condition :

(1) In case power grid capacity allows, direct starting could be selected;

(2) In case power grid capacity is relatively small, pressure reduction or soft starting means and variable frequency starting means could be selected;

(3) Generally, electric control of 6KV and 10KV fan selects direct starting method;

(4) Where fan requires speed regulation, electrical control with frequency converter shall be selected.

◆ For double circuit power supply, it is suggested to select complete set of electrical control device.

(1) Electrical control of 380V and 660V main fans: fixed type shall select GGD complete equipment; draw out type shall select GCK or MNS complete equipment. General configuration is incoming line, contact and starting cabinet, 7 sets in total.

(2) Electric control of 6KV and 10KV main fans: Fixed type shall select XGN type complete equipment, whose general configuration is incoming line, contact and starting cabinet, 7 sets in total; run-out type shall select KYN28 type complete equipment, whose general configuration is incoming line, contact, phase changing, mutual inductor and starting cabinet, 11 sets in total.

Besides, users could select to add power cabinet and capacitor box in accordance with their own condition.

During operation process of fans, microcomputer could accurately reflect and record the parameters such as operation curves, air pressures, air volumes, air speeds, bearings, stator temperatures, electric currents, voltages and vibrations of fans, and could record, archive and make fault alarm. Besides, the fan operation condition of the last three months could be searched from microcomputer. It is a kind of advanced high technology.

售后服务承诺:

POST-SALE SERVICE PLEDGE

1. 公司遵循用户至上的服务理念, 竭诚为用户提供服务;

The company adheres to the service concept of putting users first and wholeheartedly provides services for users;

2. 公司负责包括从设备及其配件的制造到整套 / 套设备的交付使用。在设备安装和交付使用期间, 将派专业技术人员到用户所在地进行指导。

The company is responsible for the manufacturing of equipment and accessories and the delivery of the whole set of equipment. During the installation and delivery of the equipment, professional and technical personnel will be sent to the user's site for guidance.

3. 设备使用期间, 凡发生质量问题或需要技术支持, 我公司将及时地提供买方提出的技术服务要求。在质量保证期内, 如发生质量问题, 买方发出通知后, 我公司提供维修服务, 免费修理或更换不合格的零部件, 以保证设备的正常运行。超过质量保证期的仅收取成本费。质保期内, 由于用户操作、使用不当造成的硬件损坏, 公司负责维修, 只收取材料费;

During the use of the equipment, in case of quality problems or technical support, our company will timely provide technical service requirements proposed by the buyer. During the warranty period, in case of quality problems, after the buyer issues a notice, our company will provide maintenance services to repair or replace unqualified parts for free to ensure the normal operation of the equipment. Exceed quality assure period only charge the

material cost. During the warranty period, if the hardware is damaged due to user's improper operation or use, the company will be responsible for maintenance and only charge the material fee.

4. 质量保证期的计算 (三包期): 设备从买卖双方签署验收合格之日起 12 个月。

Calculation of quality guarantee period: 12 months from the date of acceptance of the equipment signed by both parties.

5. 凡用户需要我公司提供服务, 接到用户电话后, 1000km 之内, 服务人员 24 小时赶到现场; 1000km 之外, 24 小时之内派出服务人员。问题不解决, 达不到用户要求, 服务人员不能撤离工作现场。如需返厂修理, 保证在商定时间内交付使用。

The service personnel will arrive at the site within 24 hours within 1000km after receiving the call from users who need our services; 1000km away, dispatch service personnel within 24 hours. If the problem is not solved and cannot meet the user's requirements, the service personnel cannot leave the work site. If it needs to be returned to the factory for repair, it shall be guaranteed to be delivered for use within the agreed time.

6. 公司实行用户回访制度, 每三个月对用户回访一次。

The company implements the system of user return visit, which is conducted every three months.

