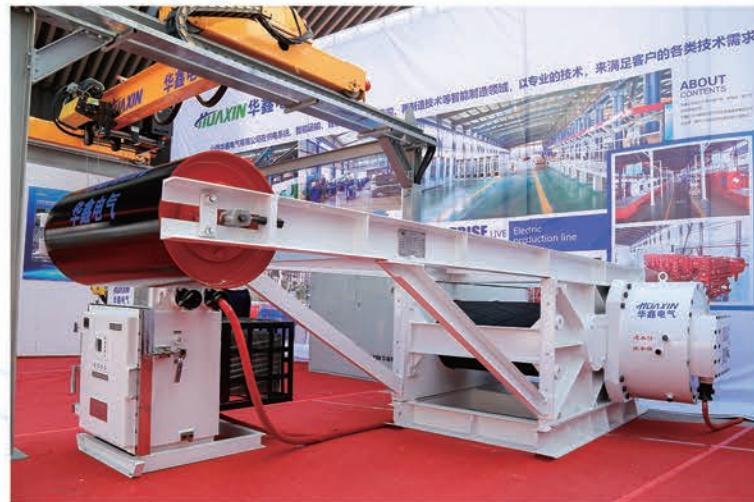


Specification and model	Speed regulation range r/min	Number of poles	IP code	Explosion proof sign	Insulation class	Cooling mode	Duty type	Total weight kg
TBVF-55/24YC(660/1140)	0~90	24	IP55	EXDIMb	H	IC46W	S1	1320
TBVF-75/24YC(660/1140)	0~90	24	IP55	EXDIMb	H	IC46W	S1	1950
TBVF-90/32YC(660/1140)	0~90	32	IP55	EXDIMb	H	IC46W	S1	2100
TBVF-110/32YC(660/1140)	0~90	32	IP55	EXDIMb	H	IC46W	S1	2400
TBVF-132/32YC(660/1140)	0~90	32	IP55	EXDIMb	H	IC46W	S1	2700
TBVF-160/32YC(660/1140)	0~90	32	IP55	EXDIMb	H	IC46W	S1	3400
TBVF-200/32YC(660/1140)	0~90	32	IP55	EXDIMb	H	IC46W	S1	3600
TBVF-220/32YC(660/1140)	0~90	32	IP55	EXDIMb	H	IC46W	S1	3800
TBVF-250/32YC(660/1140)	0~90	32	IP55	EXDIMb	H	IC46W	S1	4100
TBVF-315/32YC(660/1140)	0~90	32	IP55	EXDIMb	H	IC46W	S1	6140
TBVF-355/40YC(660/1140)	0~75	40	IP55	EXDIMb	H	IC46W	S1	6300
TBVF-400/40YC(660/1140)	0~75	40	IP55	EXDIMb	H	IC46W	S1	6900
TBVF-450/40YC(660/1140)	0~75	40	IP55	EXDIMb	H	IC46W	S1	7400
TBVF-500/60YC(660/1140)	0~75	60	IP55	EXDIMb	H	IC46W	S1	8000
TBVF-560/60YC(660/1140)	0~75	60	IP55	EXDIMb	H	IC46W	S1	8900
TBVF-630/60YC(660/1140)	0~75	60	IP55	EXDIMb	H	IC46W	S1	9900
TBVF-710/60YC(1140)	0~80	60	IP55	EXDIMb	H	IC46W	S1	11000
TBVF-800/60YC(1140)	0~80	60	IP55	EXDIMb	H	IC46W	S1	12000
TBVF-900/60YC(1140)	0~80	60	IP55	EXDIMb	H	IC46W	S1	13000
TBVF-1000/60YC(1140)	0~80	60	IP55	EXDIMb	H	IC46W	S1	14000
TBVF-710/80YC(1140)	0~80	60	IP55	EXDIMb	H	IC46W	S1	11000
TBVF-800/80YC(1140)	0~80	60	IP55	EXDIMb	H	IC46W	S1	12000
TBVF-900/80YC(1140)	0~80	60	IP55	EXDIMb	H	IC46W	S1	13000
TBVF-1000/80YC(1140)	0~80	60	IP55	EXDIMb	H	IC46W	S1	14000

Application Field

The permanent magnet synchronous motor is equipped with frequency converter to form a frequency conversion intelligent direct drive system, which is suitable for belt conveyor, crusher, ball mill, automated warehouse, etc. It can be used as a power input mechanism in coal mine, mine, wharf, warehouse, food and other industries.



TBVF Series Explosion-proof Permanent Magnet Synchronous Variable Frequency Motor for Mining



Product Overview

The explosion-proof permanent magnet synchronous variable frequency motor for mining is a new type of overhead passenger device drive system product independently developed and produced by Huaxin, which takes the permanent magnet variable frequency technology as the core technology. Compared with the traditional drive system device, the permanent magnet direct drive system has many advantages, such as low speed, energy saving, low noise, large torque, high transmission efficiency, stable operation, compact structure, small occupied space and so on, It is also suitable for working under various harsh working conditions. It is an ideal driving device for overhead passenger equipment at present.

Performance Characteristics

a. Improve the transmission efficiency and reduce the waste of electric energy

The transmission efficiency of the traditional drive system is less than 70%, and the energy consumption of Y-series asynchronous motor is only international IE1 level (equivalent to national level 3 energy consumption). The transmission efficiency of the permanent magnet system is about 93%, the energy consumption of the permanent magnet synchronous motor reaches international IE4 level (higher than the national first-class energy consumption standard), and the comprehensive energy-saving rate is more than 20% higher than that of the traditional drive system.

b. Realize soft start and maintenance free

The system uses the frequency converter to control the start, which can realize the slow and uniform start of the system transmission, avoid the impact on the power grid due to the instantaneous large current when motor starts and the mechanical impact on the transmission system due to the instantaneous sharp increase of torque, so as to reduce the power grid fault and mechanical fault of the system. Compared with the traditional driving mode, the dynamic safety factor of the system is higher under the same conditions. It effectively improves the overall operational safety of overhead passenger devices in coal mines.

Maintenance free: the permanent magnet synchronous motor adopts the mounting mode of directly connecting to the transmission roller removing the mechanical transmission equipment in the middle, which greatly reduces the probability of failure, thus greatly reduces the maintenance cost and basically maintenance free.

c. Large starting torque

The permanent magnet synchronous motor of the system can constantly output the starting torque of more than 2.2 times of the rated load torque, while the starting torque of the asynchronous motor used in the traditional drive system under the same power condition is 55% of the rated load, which can not meet the normal starting of the system. On the other hand, if the system need to be started with a traditional motor, the capacity of induction motor needs to be increased to meet the starting torque, After the system operates normally, the motor is like a big horse to a small cart. The permanent magnet synchronous motor can avoid above situation.

d. Low noise and high power density

Technical Parameters

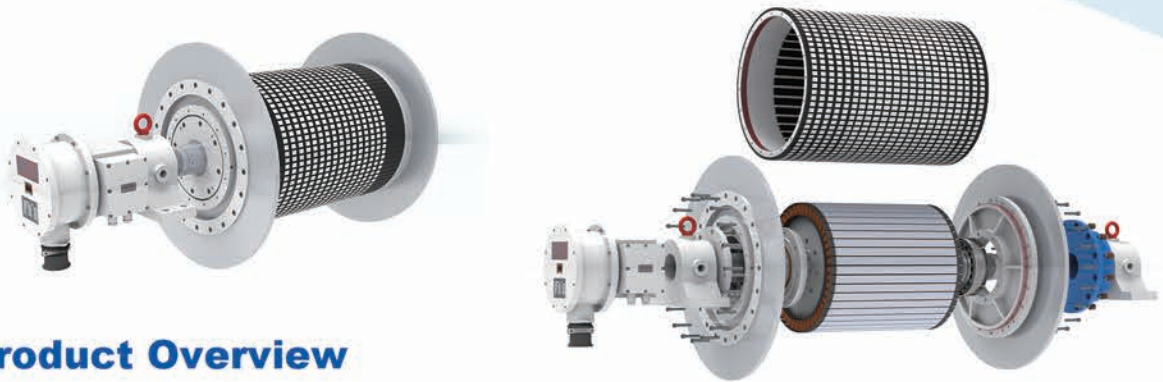
Specification and model	Rated power kW	Rated voltage V	Rated current A	Rated torque N.m	Rated speed r/min	Efficiency %	Power factor
TBVF-22/66YC(660/1140)	22	660/1140	27/16	11672	18	96	0.96
TBVF-30/66YC(660/1140)	30	660/1140	38/22	15917	18	96	0.96
TBVF-37/66YC(660/1140)	37	660/1140	43/26	19630	18	96	0.96
TBVF-45/66YC(660/1140)	45	660/1140	52/30	23876	18	96	0.96
TBVF-22/24(32/40)YC(380/660)	22	380/660	22/12.5	2334	90	96	0.96
TBVF-30/24(32/40)YC(380/660)	30	380/660	30/17	3183	90	96	0.96
TBVF-37/24(32/40)YC(380/660)	37	380/660	37/21	3926	90	96	0.96
TBVF-45/24(32/40)YC(380/660)	45	380/660	44.5/25.5	4775	90	96	0.96
TBVF-55/24(32/40)YC(380/660)	55	380/660	55/31	5836	90	96	0.96
TBVF-75/32(40/60)YC(380/660)	75	380/660	74/42	7958	90	96	0.96
TBVF-90/32(40/60)YC(380/660)	90	380/660	89.5/51	9550	90	96	0.96
TBVF-110/32(40/60)YC(380/660)	110	380/660	109/62.5	11672	90	96	0.96
TBVF-132/32(40/60)YC(380/660)	132	380/660	131/75	14007	90	96	0.96
TBVF-160/32(40/60)YC(380/660)	160	380/660	160/91	16978	90	96	0.96
TBVF-185/32(40/60)YC(380/660)	185	380/660	185/105	19631	90	96	0.96
TBVF-200/32(40/60)YC(380/660)	200	380/660	199/113	21222	90	96	0.96
TBVF-250/32(40/60)YC(380/660)	250	380/660	248/142	26528	90	96	0.96

Specification and model	Speed regulation range r/min	Number of poles	IP code	Explosion proof sign	Insulation class	Cooling mode	Duty type	Total weight kg
TBVF-22/66YC(660/1140)	0~18	66	IP55	EXDIMb	H	IC46W	S1	2400
TBVF-30/66YC(660/1140)	0~18	66	IP55	EXDIMb	H	IC46W	S1	3100
TBVF-37/66YC(660/1140)	0~18	66	IP55	EXDIMb	H	IC46W	S1	3600
TBVF-45/66YC(660/1140)	0~18	66	IP55	EXDIMb	H	IC46W	S1	4100
TBVF-22/24(32/40)YC(380/660)	0~90	24/32/40	IP55	EXDIMb	H	IC46W	S1	900
TBVF-30/24(32/40)YC(380/660)	0~90	24/32/40	IP55	EXDIMb	H	IC46W	S1	1000
TBVF-37/24(32/40)YC(380/660)	0~90	24/32/40	IP55	EXDIMb	H	IC46W	S1	1100
TBVF-45/24(32/40)YC(380/660)	0~90	24/32/40	IP55	EXDIMb	H	IC46W	S1	1200
TBVF-55/24(32/40)YC(380/660)	0~90	24/32/40	IP55	EXDIMb	H	IC46W	S1	1300
TBVF-75/32(40/60)YC(380/660)	0~90	32/40/60	IP55	EXDIMb	H	IC46W	S1	1900
TBVF-90/32(40/60)YC(380/660)	0~90	32/40/60	IP55	EXDIMb	H	IC46W	S1	2100
TBVF-110/32(40/60)YC(380/660)	0~90	32/40/60	IP55	EXDIMb	H	IC46W	S1	2400
TBVF-132/32(40/60)YC(380/660)	0~90	32/40/60	IP55	EXDIMb	H	IC46W	S1	2700
TBVF-160/32(40/60)YC(380/660)	0~90	32/40/60	IP55	EXDIMb	H	IC46W	S1	3400
TBVF-185/32(40/60)YC(380/660)	0~90	32/40/60	IP55	EXDIMb	H	IC46W	S1	3500
TBVF-200/32(40/60)YC(380/660)	0~90	32/40/60	IP55	EXDIMb	H	IC46W	S1	3600
TBVF-250/32(40/60)YC(380/660)	0~90	32/40/60	IP55	EXDIMb	H	IC46W	S1	4100

Application Field

The TBVF series explosion-proof permanent magnet synchronous variable frequency motor for mining is mainly suitable for overhead passenger devices and belt conveyors in coal mines, and can be used in explosion-proof areas or non explosion-proof areas on the ground. This series of permanent magnet synchronous motors has the advantages of simple structure, small size, high efficiency, and high power factor.

STYB Series Explosion-proof Three-phase Permanent Magnet Synchronous Electric Drum for Mining



Product Overview

The intelligent direct drive three-phase permanent magnet synchronous electric drum breaks through the conventional idea and uses the external rotor permanent magnet direct drive technology to place the permanent magnet synchronous motor inside the drum to realize electromechanical integration; The permanent magnet synchronous electric drum directly drives the belt, reduces the intermediate transmission stage, improves the reliability and efficiency of the system, and reduces the failure rate. Creatively abandoned the mechanical devices such as reducer, hydraulic coupling and coupling, so that the direct drive of conveyor becomes a reality.

Performance Characteristics

- a. Modularization:** the module design of stator is adopted to form a more pole and fewer slot motor, which is conducive to frequency conversion control, simplifies the winding process, has no insulation problem between phases, and reduces insulation faults.
- b. High performance:** double overload capacity, short starting time, large starting torque, excellent control characteristics, low speed, low noise, constant torque control, very suitable for low speed and large load operation conditions.
- c. Small volume:** the motor and drum are integrated, the structure is more compact, the occupied floor area is very small, the installation is convenient, and the roadway space is greatly saved.
- d. Low cost:** high efficiency, high power factor, removal of intermediate transmission parts such as reducer and coupling, no transmission loss and high economic benefit.
- e. Safer:** no gear wear, no oil pool leakage, high reliability.
- f. Easy maintenance:** the maintenance is simple and the maintenance amount is very low. The service life of ceramic coating is 3-4 times that of traditional coating, reducing the frequency of replacing coating.



Permanent magnet motor drive structure

Permanent magnet electric drum drive structure