YTM/YHP/YMPS series

Three-phase Asynchronous Motor Used Specially for Coal Grinding Machine of Power Station

1. General Description

The power degree, electric property, mounting size and tolerance of the three-phase asynchronous motor for YTM,YHP and YMPS series coal-grinders are in accordance with the National standard GB755《The rate and property of the rotating electric motor》. The International Electric committee standard IEC34-1 《The rate and property of the rotating electric motor》and the machinery Trade standard JB/T7128-93《The specification of the YTM,YHP,YMPS series three-phase asynchronous electric motor used for coal grinder》.

The YTM series electric motor is matched specially with the tubular shape coal grinder; YHP series is matched with bowl shape coal grinder and the YMPS series is matched specially with MPS bowl shape coal grinder.

The protection degree of motor's case is IP54; the cooling mode is IC611 (air-air cooling).we can provide IC81w cooling mode (air-water cooling) in accordance with the request of customer; the mounting mode is IMB3, the rated voltage are 6kV or 3kV and 380V; the rated frequency is 50Hz; the work system is continuous (S1).

2. Structure description

The motor adopts the internationally popular box structure; the frame and the end cover are all welded by steel plates, which have good rigidity and light weight. After removing the protective cover (or cooler), you can observe and touch the inside of the motor to facilitate the installation and maintenance of the motor.

The stator adopts an external press-fit structure. The stator winding adopts Class F insulation material and anti-corona material. The winding end is fixed by special lashing process, which is firm and reliable. The whole stator is treated with vacuum pressure impregnated Class F solventless paint (VPI). Thus, the motor has excellent and reliable insulation properties and moisture and impact resistance.

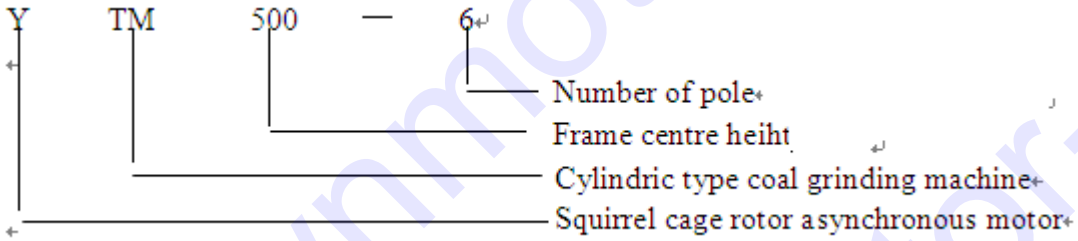
This series squirrel cage rotor low power specification motor adopts cast aluminum rotor, no copper strip rotor broken strip phenomenon, reliable operation; high power specification motor adopts copper strip rotor, squirrel cage copper strip rotor adopts advanced and reliable welding rod technology, and through slot Internal fastening treatment.

Bearings are available in both rolling and friction bearings, depending on motor power and speed. Motors with rolling bearing structure have non-stop refueling and oil draining devices, and are equipped with special refueling tools.

The main terminal box is sealed and has a degree of protection of IP54. It is usually mounted on the right side of the motor (from the shaft end) and can be mounted on the left side according to user needs.

The cable entry hole can be switched upwards, downwards, left and right and there is a separate ground terminal in the box.

3. The implication of the symbol



4. Details

- Frame sizes: 400-800
- Voltage: 380V, 3kV, 6kV
- Insulation class: F
- Degree of protection: IP54
- Rotor: Squirrel cage
- Enclosure：IC611 / IC81W

Rated output: 160-1800kW
Frequency: 50Hz
Number of poles: 6, 8,10
Duty cycle: S1
Bearing: Rolling bearing or sleeve bearing

Features: High efficiency, energy saving, low vibration, small size, light weight, reliable performance and easy installation and maintenance. The stator winding is F grade insulation at the winding's end part being firm banded. The whole stator has been treated with VPI technology to make stator with a robust body and good electric and moisture

proof. The frame adopts the welded box structure of all steel plates and the structure design of the hoisting type frame has good rigidity.

Applications: Ideal for coal mill.

YTM series technical data (6kV)

Model	Rated Output kW	Stator current A	RPM	Eff. (%)	Power Factor Cos Φ	BDT FLT Tm Tn	LRT FLT Tst Tn	LRA FLA Ist In	Inertia movement		WGT (kg)
									Motor J m kg.m^2	Load J kg.m^2	
YTM500-6	710	87.6	1000	94.0	0.83	2.0	1.5	7.0	53	598	4790
YTM560-6	800	98.2	1000	94.5	0.83	2.0	1.5	7.0	76	644	6700
YTM560-6	900	110.3	1000	94.6	0.83	2.0	1.5	7.0	84	735	7200
YTM560-6	1000	122.5	1000	94.7	0.83	2.0	1.5	7.0	90	805	8000
YTM630-6	1000	120.8	1000	94.8	0.84	2.0	1.5	7.0	134	835	8500
YTM630-6	1120	135.2	1000	94.9	0.84	2.0	1.5	7.0	147	886	9000
YTM400-8	160	22.6	750	92.0	0.74	2.0	1.5	7.0	11	315	2840
YTM400-8	200	28.2	750	92.2	0.74	2.0	1.5	7.0	14	388	2990
YTM450-8	280	38.0	750	93.0	0.76	2.0	1.5	7.0	20	528	3670
YTM450-8	315	42.8	750	93.2	0.76	2.0	1.5	7.0	22	588	3790
YTM500-8	400	53.5	750	93.4	0.77	2.0	1.5	7.0	46	730	4400
YTM500-8	500	66.8	750	93.6	0.77	2.0	1.5	7.0	54	894	4730
YTM560-8	560	72.4	750	94.2.	0.79	2.0	1.5	7.0	86	988	6500
YTM710-10	1250	162.7	600	94.8	0.78	2.0	1.5	7.0	322	3490	12500
YTM710-10	1400	182.0	600	94.9	0.78	2.0	1.5	7.0	360	3850	13200
YTM800-10	1600	208.0	600	94.9	0.78	2.0	1.5	7.0	470	4320	17000
YTM800-10	1800	233.8	600	95.0	0.78	2.0	1.5	7.0	525	4780	18000

YTM series technical data (380/660V)

Model	Rated Output kW	Stator current A	RPM	Eff. (%)	Power Factor Cos Φ	BDT FLT Tm Tn	LRT FLT Tst Tn	LRA FLA Ist In	Inertia movement		WGT (kg)
									Motor J m kg.m^2	Load J (kg.m^2	
YTM400-8	160	327/188	750	93.0	0.80	2.0	1.8	6.5	10.5	70	2630
YTM400-8	200	408/235	750	93.0	0.80	2.0	1.8	6.5	11.3	90	2720
YTM450-8	280	565/305	750	93.0	0.81	2.0	1.8	6.5	18.0	125	4370
YTM450-8	315	635/366	750	93.0	0.81	2.0	1.8	6.5	19.5	135	4510

Note: The load moment of inertia is the data after it has been converted to the motor shaft.

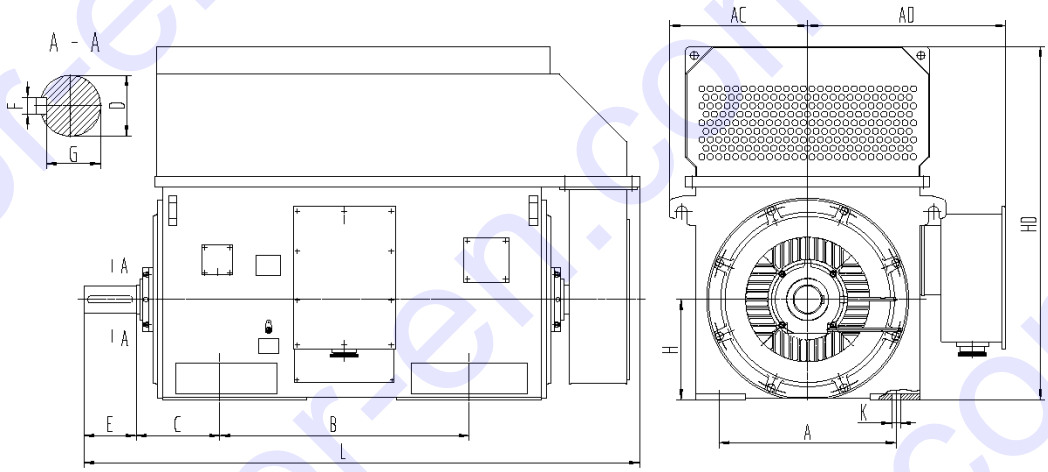
YMPS series technical data (6kV)

Model	Rated Output kW	Stator current A	RPM	Eff. (%)	Power Factor Cos Φ	BDT FLT Tm / Tn	LRT FLT Tst / Tn	LRA FLA Ist / In	Inertia movement		WGT (kg)
									Motor J m kg.m^2	Load J kg.m^2	
YMPS400-6	200	29.2	1000	91.4	0.72	2.0	2.8	7.5	11.0	160	2730
YMPS450-6	250	35.9	1000	91.7	0.73	2.0	2.8	7.5	14.0	190	3280
YMPS450-6	280	39.6	1000	91.9	0.74	2.0	2.8	7.5	15.0	210	3380
YMPS450-6	355	49.4	1000	92.2	0.75	2.0	2.8	7.5	26.0	250	3960
YMPS500-6	400	54.2	1000	92.3	0.77	2.0	2.8	7.5	30.0	290	4230
YMPS500-6	450	60.1	1000	92.4	0.78	2.0	2.8	7.5	32.0	320	4410
YMPS500-6	560	74.6	1000	92.6	0.78	2.0	2.8	7.5	80.0	400	6700
YMPS560-6	630	82.7	1000	92.8	0.79	2.0	2.8	7.5	87.0	500	7200
YMPS560-6	800	103.2	1000	93.2	0.80	2.0	2.8	7.5	94.0	580	7700
YMPS560-6	900	115.9	1000	93.4	0.80	2.0	2.8	7.5	100.0	650	8200
YMPS630-6	1000	128.5	1000	93.6	0.80	2.0	2.8	7.5	130.0	720	9000

YHP series technical data (6kV)

Model	Rated Output kW	Stator current A	RPM	Eff. (%)	Power Factor Cos Φ	BDT FLT Tm / Tn	LRT FLT Tst / Tn	LRA FLA Ist / In	Inertia movement		WGT (kg)
									Motor J m kg.m^2	Load J (kg.m^2	
YHP450-6	280	39.6	1000	92.0	0.74	2.0	2.4	7.5	14	210	3450
YHP450-6	315	44.5	1000	92.1	0.74	2.0	2.4	7.5	16	230	3580
YHP450-6	355	49.3	1000	92.3	0.75	2.0	2.4	7.5	26	250	4100
YHP500-6	400	54.1	1000	92.4	0.77	2.0	2.4	7.5	28	290	4350
YHP500-6	450	60.0	1000	92.5	0.78	2.0	2.4	7.5	30	320	4650
YHP560-10	400	60.4	1000	91.0	0.70	2.0	2.4	7.5	88	500	6400
YHP560-10	450	67.8	1000	91.2	0.70	2.0	2.4	7.5	100	550	7000

H400~800 YTM/YHP/YMPS series asynchronous motor overall and mounting dimensions drawing



Frame	Mounting dimension and tolerance mm																Overall dimension mm			
	A		B		C		D		E		F		G		H		K					
	basic	deviation	basic	deviation	basic	deviation	basic	deviation	basic	deviation	basic	deviation	basic	deviation	basic	deviation	basic	deviation	AC	AD	HD	L
400	710	±1.75	1000	±1.75	335	±4.0	110	+0.035 +0.013	210	±0.57	28	0 −0.052	100	0 −0..2	400	0 −1.0	35	+0.62 0	555	810	1450	2300
450	800		1120		355		130		250		32		119		450		35		595	850	1500	2600
500	900	±2.10	1250	±2.10	530		140	+0.040 +0.015	250		36	0 −0.062	128	0 −0..3	500		42		660	920	1950	2900
560	1000		1400		560		160		300	±0.65	40		147		560		42		800	1210	2150	3200
630	1120		1600		600		180		300		45		165		630		48		860	1260	2350	3500
710	1400		1800		530		200		350		45		185		710		56		1000	1450	2700	3500
800	1600		2000		530		220		350		50		203		800		56		1100	1500	3000	3900

Note: All data is as of Sep.2013, and subject to change without notice.