

YHP series three-phase asynchronous motor dedicated to coal mills in power stations

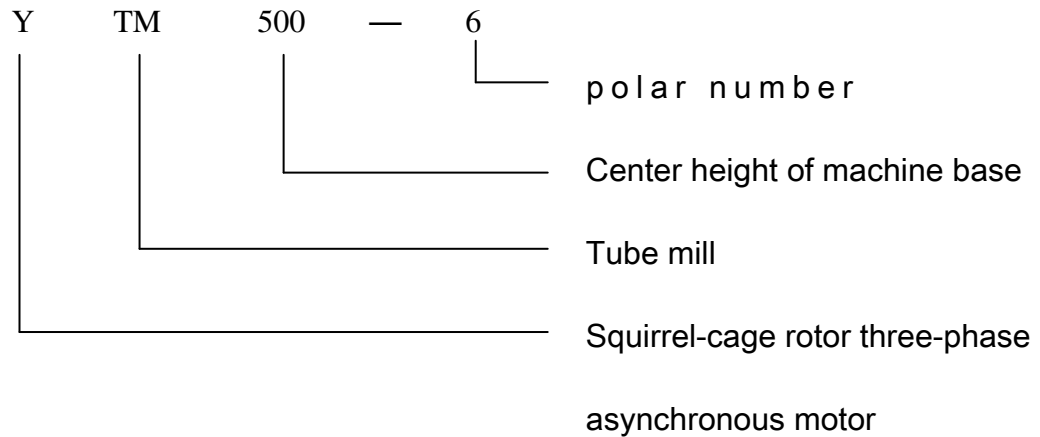
I. Overview

The power levels, electrical performance, installation dimensions, and tolerances of the three-phase asynchronous motors for YTM, YHP, and YMPS series coal mills comply with the national standard GB755 "Rotating Electrical Machines - Rating and Performance", the International Electrotechnical Commission standard IEC34-1 "Rotating Electrical Machines - Rating and Performance", and the machinery industry standard JB/T7128-93 "Technical Conditions for Three-phase Asynchronous Motors for YTM, YHP, and YMPS Series Coal Mills".

The YTM series is a dedicated motor for tubular coal mills; the YHP series is a dedicated motor for bowl-type HP coal mills; and the YMPS series is a dedicated motor for bowl-type MPS coal mills.

The enclosure protection level of the motor is IP54; the cooling method is IC611 (air-to-air cooling), and it can also be provided as IC81W (air-to-water cooling) according to user requirements; the installation type is IMB3; the rated voltage is 6kV or 3kV and 380V; the rated frequency is 50Hz, and the working mode is continuous duty (S1).

II. Model Description



III. Structure Description The motor adopts the internationally popular box-type structure, with the frame and end covers welded from steel plates, providing good rigidity and light weight. After removing the protective cover (or cooler), the interior of the motor can be observed and accessed, facilitating installation and maintenance. The stator adopts an external press-fit structure. The stator winding uses Class F insulation material and anti-corona material, and the winding ends are fixed using a special binding process, which is firm and reliable. The entire stator is treated with vacuum pressure impregnation (VPI) of Class F solvent-free paint. Therefore, the motor has excellent and reliable insulation performance, moisture resistance, and impact resistance. In this series of motors, the squirrel cage rotor for low-power specifications uses cast aluminum rotors, which eliminate the phenomenon of broken copper bars in copper bar rotors, ensuring reliable operation; for high-power specifications, copper bar rotors are used, and the squirrel cage copper bar rotors are processed using advanced and reliable welding techniques and undergo fastening treatment inside the slots.

There are two types of bearings: rolling bearings and sliding bearings, which are determined by the motor power and speed. The paint protection level is IP54. Motors with rolling bearing structures are equipped with non-stop oil filling and draining devices, and are also equipped with dedicated oil filling tools.

The main outlet box is of a sealed structure with a protection level of IP54. It is generally installed on the right side of the motor (when viewed from the shaft end), and can be customized according to user needs

It can also be installed on the left side. The inlet hole of the outlet box can be converted in four directions: up, down, left, and right. There is a separate grounding terminal inside the box.

YHP 系列异步电动机技术数据 (6kV)

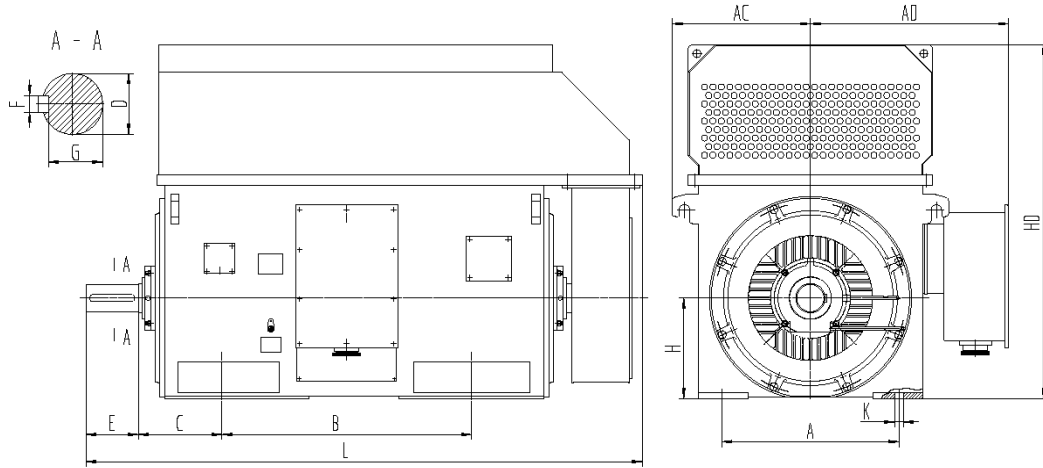
YHP series technical data (6kV)

型号 (Type)	额定 功率 (kW)	定子 电流 (A)	转速 (r/min)	效率 (%)	功率 因数 CosΦ	最大 转矩	堵转 转矩	堵转 电流	转动惯量		重量 (kg)
						额定 转矩 T _m	额定 转矩 T _{st}	额定 电流 I _{st}	电机 J _m (kg.m ²)	负载 J (kg.m)	
						T _n	T _n	I _n			
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

H400~630 YTM、YHP、YMPS 系列异步电动机外形及安装尺寸图

(mm)

H400~630 YTM、YHP、YMPS series asynchronous motor, overall and mounting dimensions drawing.



机座号	安装尺寸及公差																外形尺寸				
	mm																mm				
	A		B		C		D		E		F		G		H		K		AC	AD	HD
基本尺寸	极限偏差	基本尺寸	极限偏差	基本尺寸	极限偏差	基本尺寸	极限偏差	基本尺寸	极限偏差	基本尺寸	极限偏差	基本尺寸	极限偏差	基本尺寸	极限偏差	基本尺寸	极限偏差				
400	710	± 1.75	1000	± 1.75	335	110	^{+0.035} / _{+0.013}	210	± 0.57	28	⁰ / _{-0.052}	100	⁰ / _{-0.2}	400	35	555	810	1450	2300		
450	800		1120					355		130	250		32							119	450
500	900	± 2.10	1250	± 2.10	530	140	250	36	128	500	42	660	920	1950	2900						
560	1000		1400													560	± 4.0	160	300	40	147
630	1120	± 2.10	1600	± 2.10	600	180	^{+0.040} / _{+0.015}	300	± 0.65	⁰ / _{-0.062}	165	⁰ / _{-0.3}	630	48	860	1260	2350	3500			
710	1400		1800					530		200		350							45	185	710
800	1600		2000		530	220	350	50	203	800	56	1100	1500	3000	3900						

备注：技术数据及外形安装尺寸供参考，如有变动将不另行通知。