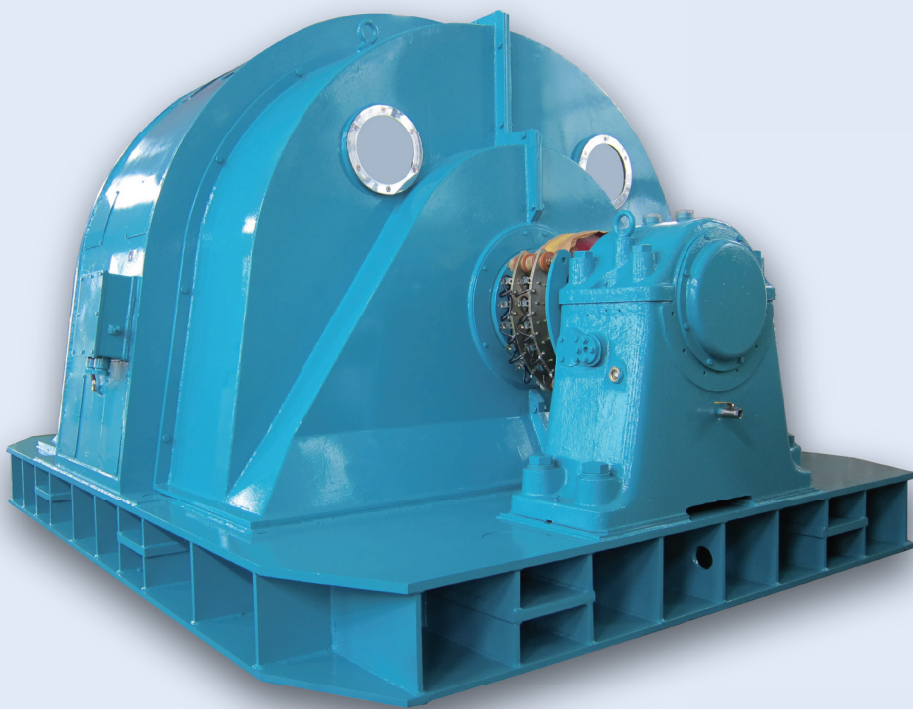


TDG系列大功率 同步电动机

TDG Series High-power
Synchronous Motor



TDG系列大功率同步电动机

一、概述:

TDG系列大功率同步电动机是与钢厂烧结风机配套的专用系列产品,可用于驱动诸如高炉风机、空气透平压缩机等转动惯量巨大的其他机械负载。

电机转速为1000r/min。产品具有结构合理、效率高、失步转矩大、可驱动大惯量机械负载且振动小、安装维护方便等显著特点。

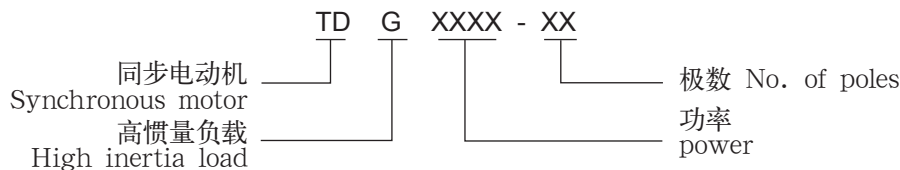
电机的技术要求,除在产品的专用技术条件规定外,其余均符合国家标准GB755《旋转电机定额和性能》及国际电工委员会IEC标准

电机各部分机械尺寸、公差符合国家标准GB1800-1804和国际标准委员会ISO标准。

电机冷却方法为IC91W或IC81W,即电机带空——水冷却器,其安装型式为IM7311或IM1001,外壳防护等级为IP44。

电机转子为凸极形式,极靴为整体钢结构,极靴与极身用高强度合金钢螺栓连接,确保接触良好并能承受高速运行时产生的机械应力。

二、型号说明 Demonstration of the type:



三、电动机的起动:

异步起动: 采用该起动方式时,必须为降压起动。起动时,应确保电机的端子电压在0.6~0.7倍额定电压之间。电动机必须选配专用的励磁装置,确保该装置投励时的励磁电流强励倍数至少为额定电流的1.8倍。

变频起动: 当电机功率大于7000kW时,建议采用变频起动方式,并选配相应的专用数字式励磁装置。当负载惯量

1. General Description

TDG series high-power synchronous motor is the special products matched with steel plants sintering fan, can be used to power huge moment of inertia of the mechanical load, such as blast furnace blower and air turbine compressor.

Motor speed is 1000r/min. Products with a reasonable structure, high efficiency, loss of torque, driving large inertia mechanical load and vibration of small, convenient installation and maintenance, and other notable features.

Technical requirements of the electric motor, without specific technical agreement, the rest are in line with the national standard GB755 of the fixed and rotating machinery performance and standards of the International Electrotechnical Commission IEC.

Electrical parts mechanical dimensions, tolerances are in accordance with standard GB1800-1804 and international standards committees ISO standards.

Motor cooling methods for IC91W or IC81W, motor with air-water cooler, the installation type is IM7311 or IM1001, enclosure protection class IP44.

Motor rotor for salient form, pole for the whole steel structure, high strength alloy steel bolt for pole and polar to ensure good contact and can withstand mechanical stress generated during high-speed runs.

3. Starting the Motor:

Asynchronous starting: when the starting mode is used, it must be voltage-reduced starting. When starting, make sure that the motor Terminal voltage between 0.6~0.7 times the rated voltage. Motor must match dedicated to the excitation devices, ensure the equipment investment and shunt excitation current strongly excited when at least 1.8 times the rated current of a multiple times.

Frequency-converted starting: when electric power is greater than 7000kW, the recommended frequency-converted starting and matching the corresponding private digital excitation devices. When

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不能满足电机异步起动的技术要求时,则必须采用变频启动方式,并选配相应的专用数字式励磁装置。

电机采用变频启动方式时启动时间不得大于150秒。

四、订货注意事项:

- 1.其他特殊要求。需另订技术协议后方可签订订货合同。
- 2.随着技术的进步和有关国内外标准的修改,样本内尺寸及技术参数有所变动,恕不另行通知,订货后请向本公司索取正式外形图。

the load inertia is unable to meet the technical requirements of the electric motor asynchronous starting, you must use frequency-converted starting and matching the corresponding private digital excitation devices.

When motor adopts frequency-converted starting method, motor starting time must not be greater than 150 seconds.

4. Ordering Note:

1. Other special requirements Technology should make another agreement signed orders contracts.
2. Modifications as technology advances and related domestic and international standards, sample sizes and specifications subject to change without prior notice, please obtain after ordering a formal outline.

五、TDG系列大功率同步电动机技术数据 (6千伏)

Technical data of TDG series high-power synchronous motor (6kV)

功率 kW	电流 A	效率 %	堵转电流 额定电流 $\frac{I_{st}}{I_n}$	失步转矩 额定转矩 $\frac{T_m}{T_n}$	堵转转矩 额定转矩 $\frac{M_{st}}{M_n}$	标称牵入转矩 额定转矩 $\frac{T_p}{T_n}$	负载转动惯量 (Jext)kg.m ²	励磁电压 V	励磁电流 A	安装尺寸编号 IM
2000	222	96.2	6.5	2.01	1.85	1.4	4250	56	252	7311.01
2750	304	96.7	5.5	1.78	1.6	1.16	6500	59	276	7311.02
3300	364	96.9	5.84	1.75	1.71	1.24	9700	66	268	1001.02
3500	386	97	6.46	1.81	1.89	1.37	10500	69	262	7311.05
3600	397	97	6.28	1.79	1.84	1.33	10300	69	267	7311.05
4000	440	96.5	6.18	1.92	1.66	1.27	10500	78	258	7311.07
4200	462	96.5	5.88	1.87	1.58	1.21	11250	80	266	7311.07
4300	474	96.5	5.74	1.85	1.54	1.18	12500	81	269	7311.07
4600	506	96.5	5.37	1.79	1.44	1.11	14200	84	280	7311.07
5000	549	97.3	6.7	1.96	1.74	1.39	13500	91	268	7311.08
5300	582	97.3	6.33	1.91	1.64	1.31	13500	94	277	7311.08
6600	725	97.4	5.58	1.71	1.54	1.21	16250	109	344	7311.09
6900	758	97.3	5.34	1.68	1.47	1.16	17000	113	356	7311.09
7400	812	97.45	5.80	1.70	1.61	1.26	17000	120	344	7311.11
7800	855	97.5	5.51	1.66	1.52	1.2	/	124	357	7311.11

TDG系列大功率同步电动机

六、TDG系列大功率同步电动机技术数据 (10千伏)

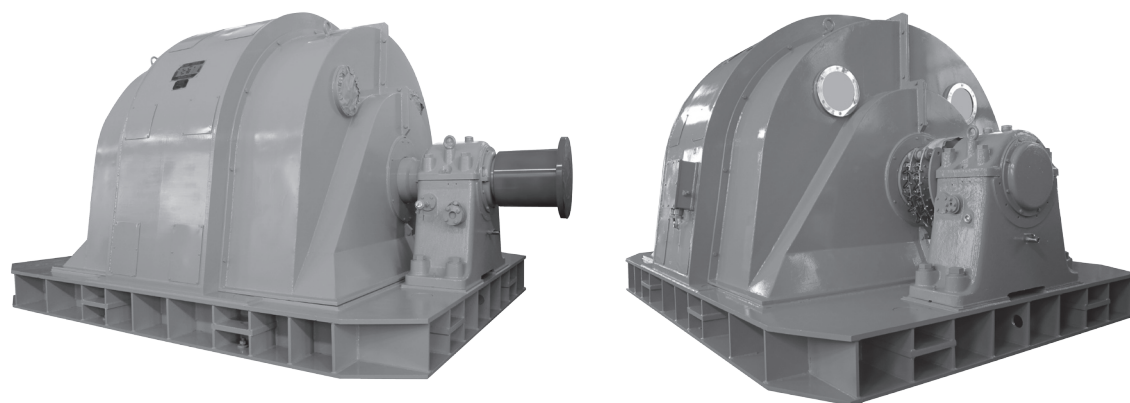
Technical data of TDG series high-power synchronous motor (10kV)

功率 kW	电流 A	效率 %	堵转电流 额定电流 $\frac{I_{st}}{I_n}$	失步转矩 额定转矩 $\frac{T_m}{T_n}$	堵转转矩 额定转矩 $\frac{M_{st}}{M_n}$	标称牵入转矩 额定转矩 $\frac{T_p}{T_n}$	负载转动惯量 (J_{ext})kg.m ²	励磁电压 V	励磁电流 A	安装尺寸编号 IM
2300	153	96.2	6.6	1.95	1.87	1.41	7530	59	246	1001.01
2800	186	96.5	5.9	1.83	1.7	1.25	8670	59	259	7311.03
3000	200	96.6	6.2	1.83	1.77	1.32	9500	61	251	7311.04/1001.02
3200	213	96.5	5.84	1.79	1.66	1.24	10000	64	262	1001.03
3400	225	96.7	6.36	1.82	1.82	1.35	9700	67	259	1001.03
3500	232	96.7	6.18	1.8	1.77	1.31	10500	68	264	1001.03
3600	239	96.7	6	1.78	1.72	1.27	10000	70	268	1001.03
3500	232	96.8	5.75	1.89	1.54	1.18	11500	72	240	7311.06
3700	245	96.8	5.43	1.83	1.45	1.12	11500	75	247	7311.06
3800	252	96.8	5.29	1.81	1.42	1.09	11500	76	251	7311.06
3900	258	96.8	5.15	1.79	1.38	1.06	10000	77	255	7311.06
4000	265	96.8	5.03	1.77	1.34	1.03	10000	78	258	7311.06
4200	278	96.9	6.16	1.96	1.61	1.27	12300	82	271	7311.06
4300	284	96.5	6.02	1.93	1.57	1.24	12500	83	274	7311.06
4400	291	96.5	5.88	1.91	1.53	1.21	11500	84	278	7311.06
4500	298	96.5	5.75	1.89	1.5	1.19	10500	86	285	7311.06
4600	304	96.5	5.63	1.87	1.47	1.16	12430	86	285	7311.06
4700	311	96.5	5.51	1.85	1.43	1.14	13000	87	289	7311.06
4800	318	96.9	6.22	1.9	1.64	1.33	12500	97	320	7311.08
4900	324	96.9	6.1	1.88	1.6	1.31	13900	98	324	7311.08
5000	331	97.1	5.98	1.86	1.57	1.24	13125	92	270	7311.08
5200	343	96.9	5.75	1.82	1.51	1.22	14400	114	366	7311.08
5300	351	96.8	5.64	1.81	1.49	1.2	14000	116	370	7311.08
5400	357	96.9	5.54	1.79	1.46	1.18	14400	117	374	7311.08
5500	364	96.9	5.44	1.78	1.43	1.16	15500	118	379	7311.08
5600	370	97.2	5.36	1.77	1.4	1.11	13750	98	290	1001.04
5600	371	96.9	5.34	1.76	1.41	1.14	14250	119	383	7311.08
5700	377	96.9	5.25	1.75	1.38	1.12	14000	121	387	7311.08
5800	383	97.1	5.89	1.83	1.55	1.22	15000	110	364	7311.08
5900	390	97.1	5.79	1.82	1.52	1.24	15700	111	368	7311.08
6000	396	97.2	5.7	1.81	1.5	1.22	15300	112	372	7311.08
6100	403	97.2	5.6	1.79	1.47	1.2	15300	114	376	7311.08

TDG Series High-power Synchronous Motor

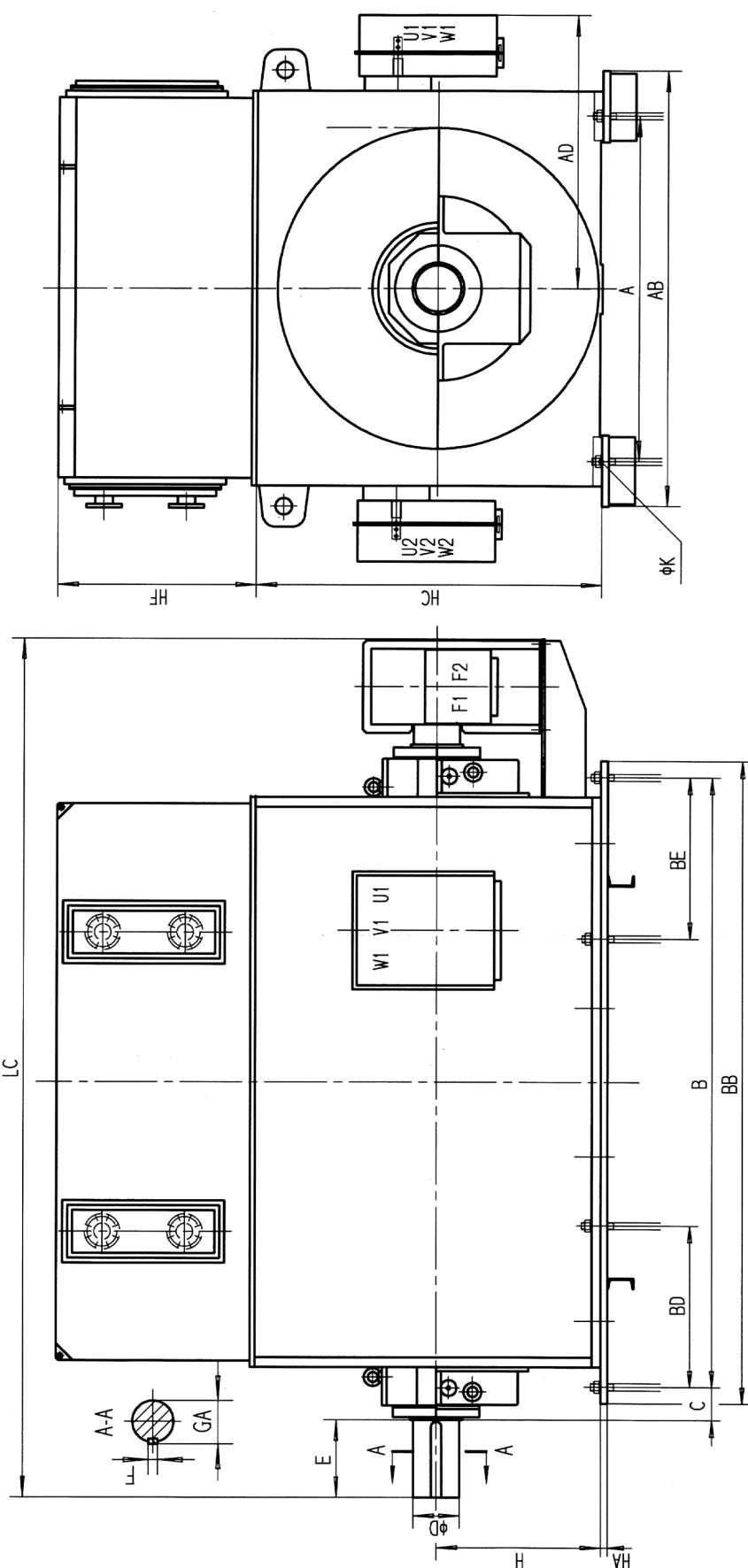
续表 (Continuous)

功率 kW	电流 A	效率 %	堵转电流 额定电流 $\frac{I_{st}}{I_n}$	失步转矩 额定转矩 $\frac{T_m}{T_n}$	堵转转矩 额定转矩 $\frac{M_{st}}{M_n}$	标称牵入转矩 额定转矩 $\frac{T_p}{T_n}$	负载转动惯量 (Jext)kg.m ²	励磁电压 V	励磁电流 A	安装尺寸编号 IM
6200	409	97.2	6.12	1.79	1.67	1.33	16500	107	339	7311.09
6300	415	97.3	6.03	1.78	1.65	1.31	16850	109	342	7311.09
6400	422	97.3	5.93	1.77	1.62	1.29	17000	110	346	7311.09
6500	429	97.3	5.84	1.76	1.6	1.27	15000	111	349	7311.09
6600	435	97.3	5.75	1.75	1.57	1.25	16000	112	353	7311.09
6700	442	97.3	5.67	1.74	1.55	1.23	15000	113	356	7311.09
6800	448	97.3	5.58	1.73	1.52	1.21	15000	114	360	7311.09
6900	455	97.2	5.5	1.72	1.5	1.19	17000	115	364	7311.09
7000	461	97.3	5.42	1.71	1.48	1.18	17750	116	367	7311.10
7100	468	97.2	5.34	1.71	1.46	1.16	16000	118	371	7311.10
7400	487	97.4	6.3	1.78	1.71	1.38	16500	125	359	7311.11
7500	494	97.4	6.21	1.77	1.69	1.36	17000	126	362	7311.11
7800	514	97.4	5.98	1.74	1.63	1.3	14500	129	372	7311.11
9000	592	97.5	5.72	1.67	1.5	1.23	14500/26250	111	406	7311.12
9400	618	97.5	5.47	1.64	1.44	1.18	26800	101	460	7311.12



TDG系列大功率同步电动机

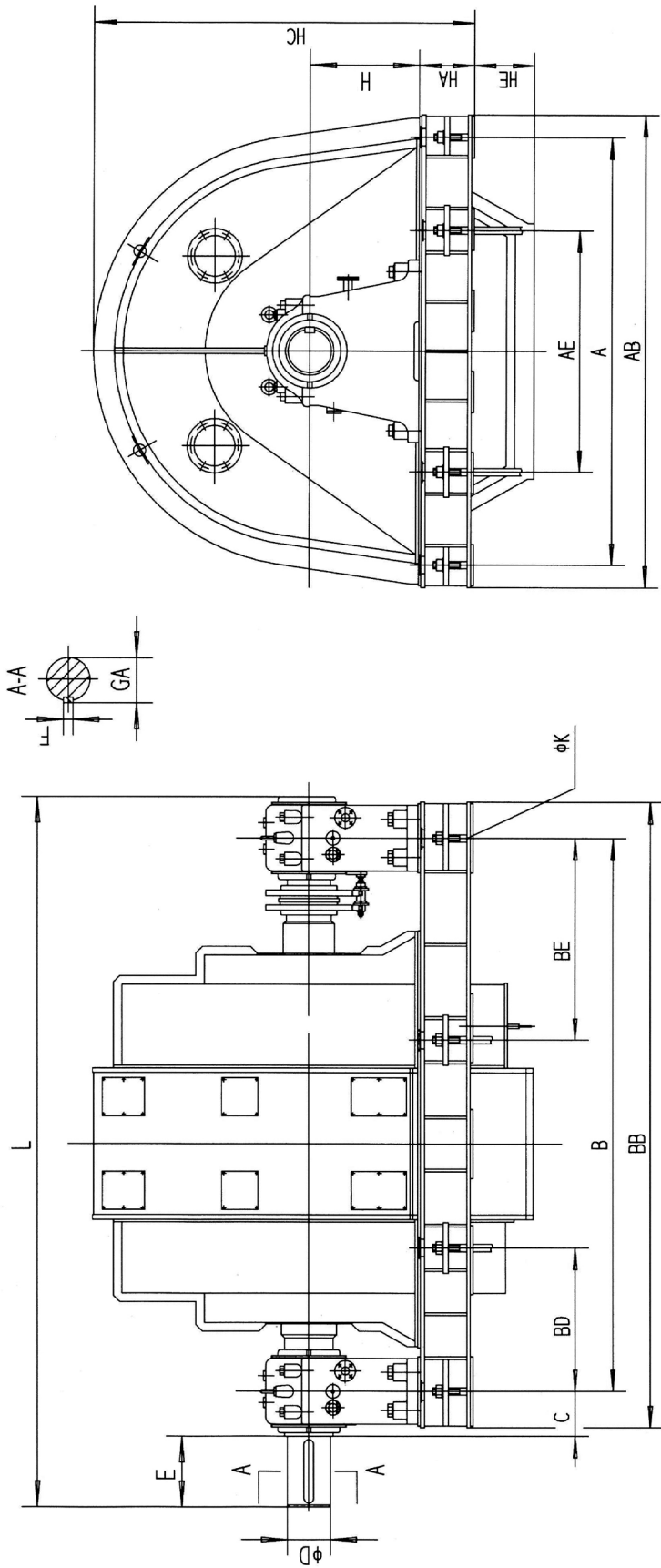
七、TDG系列大功率同步电动机外形图及IM1001安装尺寸表 Outline Diagram and Dimensions of TDG series high-power synchronous motor (2000-9400kW) 6P



安装尺寸编号 IM	A	AB	AD	B	BB	BD	BE	C	D	E	F	GA	H	HA	HC	HF	K	LC
1001.01	1800	2200	1460	2420	2620	990	990	200	200	350	45	210	900	65	1900	810	8-48	3440
1001.02	1800	2200	1460	2550	2750	1025	1025	200	200	350	45	210	900	65	1900	1110	8-48	3570
1001.03	1800	2200	1460	2650	2850	1040	1040	200	200	350	50	231	900	65	1900	860	8-48	3670
1001.04	2300	2600	1710	2700	2900	1350	1350	250	250	410	56	262	1120	60	2250	910	6-48	4200

TDG Series High-power Synchronous Motor

八、TDG系列大功率同步电动机外形图及IM7311安装尺寸表 Outline Diagram and Dimensions of TDG series high-power synchronous motor (2000-9400kW) 6P



安装尺寸编号 IM	A	AB	AE	B	BB	BD	BE	C	D	E	F	GA	H	HA	HC	HE	K	L
7311.01	2080	2340	-	2240	2600	-	-	220	200	350	45	210	630	280	1910	140	4-42	3020
7311.02	2100	2340	-	2540	2900	-	-	230	200	350	45	210	630	300	1930	120	4-42	3330
7311.03	100	2340	-	2720	3080	-	-	220	200	350	45	210	630	280	1910	140	4-56	3500
7311.04	2100	2340	-	2730	3090	-	-	220	200	350	45	210	630	280	1910	140	4-56	3510
7311.05	2100	2340	-	2950	3310	-	-	230	220	350	50	231	630	300	1930	120	4-42	3740
7311.06	2500	2740	1400	3060	3480	810	1150	260	250	410	56	262	630	320	2200	350	8-48	3970
7311.07	2500	2740	1400	3060	3480	810	1150	260	220	350	50	231	630	320	2200	350	8-48	3910
7311.08	2500	2740	1400	3200	3620	830	1170	260	250	410	56	262	630	320	2200	350	8-48	4110
7311.09	2500	2740	1400	3340	3760	850	1190	260	250	410	56	262	630	320	2200	350	8-48	4250
7311.10	2500	2740	1400	3340	3760	850	1190	260	260	410	63	272	630	320	2200	350	8-48	4250
7311.11	2500	2740	1400	3520	3975	990	1230	300	280	470	63	292	630	320	2200	350	8-48	4530
7311.12	2600	2840	1400	3700	4155	1050	1250	300	300	380	2 × 70	328	630	320	2250	400	8-56	4620

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