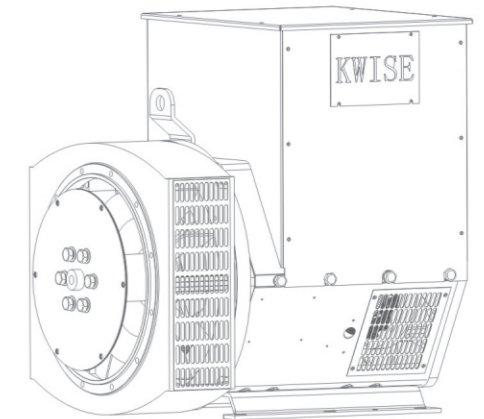


Aims to build Kwise
brand into a world renowned Chinese
national generator brand

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KWISE



**CASIC ADDSINO
FUJIAN KWISE GENERATOR CO.,LTD**

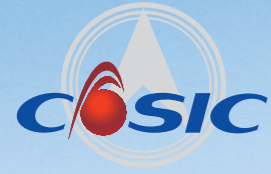
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KWWISE



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Group Profile

About CASIC

China Aerospace Science & Industry Corporation (CASIC) is the backbone of China's national defense science and technology industry. Established in 1956 as the Fifth Academy of the Ministry of Defense, CASIC has a history of growth with the names of the Ministry of the Seventh Machinery Industry, Ministry of Aerospace Industry, Ministry of Aviation and Aerospace Industry, China Aerospace Corporation, and China Aerospace Machinery and Electronics Corporation. Now CASIC has five academies, two scientific research and production bases, six publicly-listed companies (ADD SINO CO., LTD is one of the six) and over 570 enterprises and institutes, with more than 135,000 employees.

The products cover complete anti-aircraft missile weapon systems, flying missile weapon systems, solid launch vehicles and space technology products. The developed defense products involve various fields such as land, sea, air, sky, and electromagnetic. Some professional technologies of missile weapons and equipment have reached the international advanced level. It has made outstanding contributions to the construction of many major national projects such as manned spaceflight and lunar exploration projects.





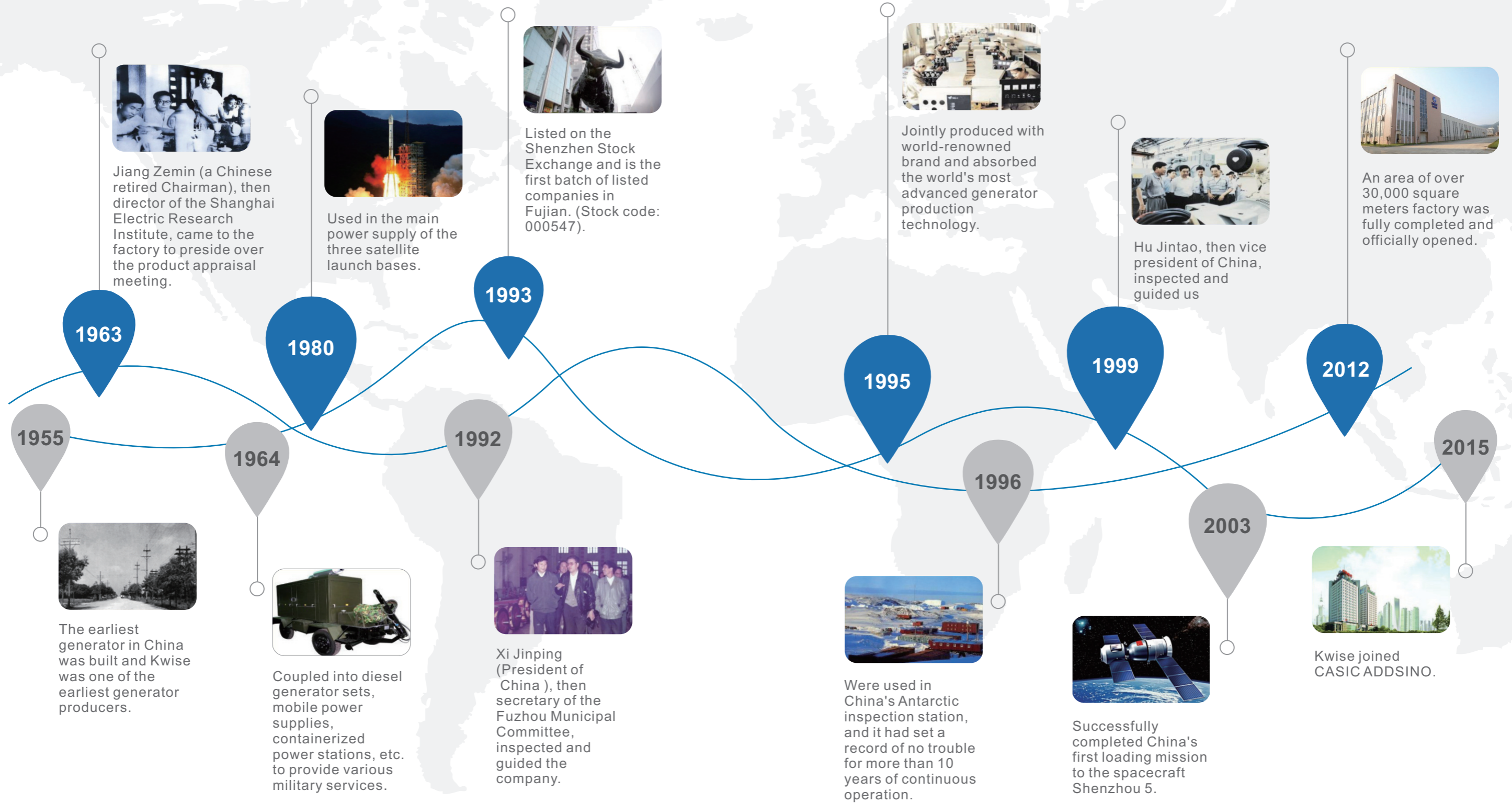
Company Profile

FUJIAN KWISE GENERATOR CO.,LTD

Fujian Kwise Generator Co., Ltd. is wholly-owned by CASIC ADDSINO. It is a specialized generator manufacturer integrating R&D, production, sales and service. The company began to produce professional generators in 1955. From Fuzhou General Machinery Factory, Fuzhou Power Generation Equipment Factory, Fujian Fufa Co., Ltd., to Fujian Kwise Generator Co., Ltd., we have a history of more than 60 years of generator producing, which is one of the earliest generators manufacturer in China.

Since 1964, our products have been provided into a large number of power generating equipments such as diesel generator sets, mobile power station, and containerized power stations to all military. Also has been selected as the main power supply of China's three satellite launch bases, the Antarctic Zhongshan Station and the Shenzhou spacecraft series due to its superior performance. Kwise has more than 30,000 square meters of factory buildings and advanced manufacturing equipment.







Stator core lamination and auto-welding



Stator CNC winding



Stator coil inserting



Stator test



Rotor core lamination



Rotor core welding



Rotor CNC winding



Rotor test



Exciter CNC winding



Exciter rotor coil inserting



Exciter stator coil inserting



Exciter test



- 1.VPI
- 3. Press-fit
- 5. Assemble
- 7. Color-spray

- 2. Anti-moist,anti-salty,anti-rust treatment
- 4. Dynamic balance test
- 6. Factory test
- 8. Completed

1. Rating definition

Introduction

This catalogue is a summary of ratings for the range at the most common voltages. For other special voltages, please consult Kwise.

Continuous rating S1/40°C IEC 60034-1 definition:

Running at constant load limited to the insulation class; permissible overload 1h every 12 hours.

Stand-by rating 40°C:

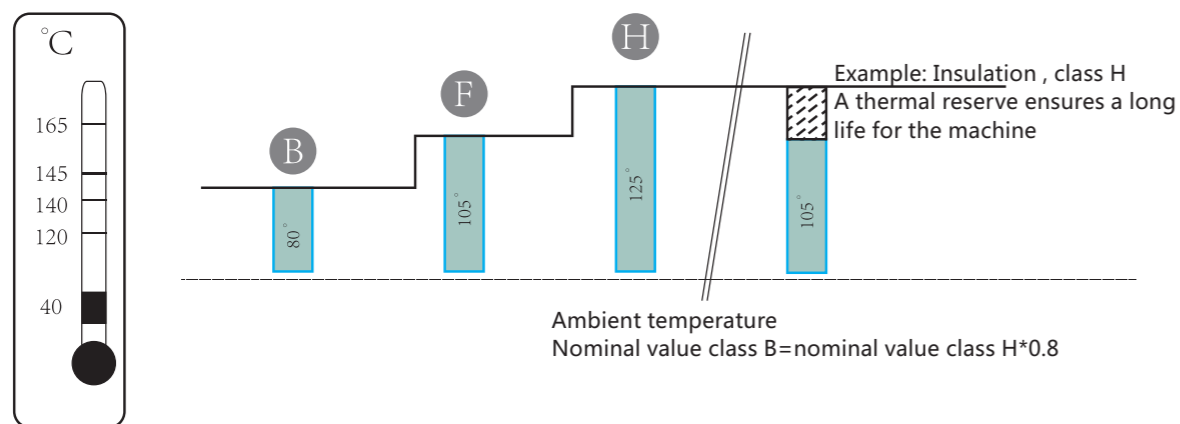
Running at constant load without overload, for a limited duration of maximum 500hour/year, with a permissible increase of the temperature rise above class H.

Stand-by rating 27°C:

Same conditions than stand-by duty 40 °c but with a lower ambient temperature(27 °c) that allows to increase the rating and the temperature rise for the same level of temperature.

Such as: S1/40°C=100kW, Standby/40°C=105kW, Standby/27°C=110kW.

2. Insulation class and temperature rise



3. Derating

Correction power = rated power × correction factor

Ambient temperature						
Altitude	25°C	40°C	45°C	50°C	55°C	60°C
0-1000M	1.02	1.00	0.95	0.92	0.89	0.86
1001-1500M	0.99	0.98	0.92	0.89	0.86	0.83
1501-2000M	0.96	0.92	0.89	0.86	0.84	0.81
2001-2500M	0.93	0.89	0.86	0.84	0.81	0.78
2501-3000M	0.89	0.85	0.82	0.80	0.77	0.75
3001-3500M	0.86	0.81	0.79	0.77	0.74	0.72
3501-4000M	0.83	0.77	0.76	0.74	0.71	0.69

Power factor					
Lagging power factor	1.0	0.9	0.8	0.7	0.6
Factor	1.0	1.0	1.0	0.92	0.85

External A.V.R if $\geq 56^\circ\text{C}$

4. Windings

Kwise proposes various 2/3 pitch windings for rating optimisation according to the required voltage and frequency.



- Standard winding: B31; B32
- Optional winding: T38; T44; T50 / T52; T55 / T60; T66 / T69
- Single-phase winding: D51; D61 (dedicated single-phase windings)

5. General features

5.1 Compliance with internationally recognized standards

The 4 Pole Alternators are in compliance to the main domestic and international standards and regulations: GB755, BS5000, IEC 60034, VDE0530, CSAC22.2 100, NEMA MG-1.22. Alternators' manufacturing, design and mark are carried out in the environment of ISO9001.

5.2 Electrical features

Voltage regulators:

Kwise 4 Pole Alternators are fitted with reliable and performant AVR, adapted to excitation systems, powered by transistors and fulfilling perfect regulation. Available excitation systems depending on alternator frames, are indicated in rating tables.

Excitation systems:

Short circuit capacity:

Kwise propose two choices of excitation systems, to meet different customer requirements:

- A) Self-Excitation system, without short-circuit capacity
- B) PMG, with a short-circuit capacity of 3 times of the nominal current for 10 seconds.

Alternators	164	184	224	274	314	354	404	454
SHUNT (3 Phase to 1 Phase)	SX460	SX460	SX460	SX460	SX440	—	—	—
SHUNT (1 Phase)	SX460F	SX460F	SX460F	—	—	—	—	—
SHUNT (3 phase 12 wires)	SX460	SX460	SX460	SX460	SX440	SX440*	—	—
SHUNT (3 phase 6 wires)	KR440*	KR440*	KR440*	KR440*	KR440*	KR440	—	—
PMG (3 phase 12 wires)	—	—	MX341	MX341	MX341	MX341*	MX341*	MX341*
PMG (3 phase 6 wires)	—	—	MX341B	MX341B	MX341B	MX341B	MX341B	MX341B

*Optional

Note: AVR for parallel: SX440, KR440, AS440, MX341B, MX341, MX321.



Transient features: Transient voltage dip for 60% rated current at 0.4 power factor is less than 15% . Recovery time for a 15% transient voltage dip is less than 1.5s .

Parallel operation: All 4 pole alternators can operate in parallel with other alternators or with the mains, when they are equipped with the appropriate devices(AVR, current transformer...)

Overload acceptance: 4 pole alternators can be overloaded according to NEMA.

Single-phase operation: 4 pole alternators from 164 up to 314 can be reconnected for single phase use. The single phase rating is given in the various alternator data sheets. Alternators from 164 up to 224 can be supplied with a dedicated single phase winding(D51/D61).

Waveform: Total harmonic distortion(THD),at no load or linear load is less than 5% according to IEC. TIF/Telephone influence factor according to NEMA is less than 50.

Frequency: 4 pole alternators may operate either 50Hz or 60Hz. The standard winding (B31, B32) is suitable both for 50Hz and 60Hz. For dedicated windings, please refer to relevant table or consultation.

Power factor: 4 pole alternators are designed to operate between 0.8 and 1.0 power factor. A derating is necessary below 0.8 power factor(see derating table)..

5.3 Mechanical features

Forms: 4 pole alternators can be provided in single bearing or double bearing configurations according to customer's requirements, as well as Engine adaptors and coupling discs which are fit for the major engines.

Balancing: All the rotors are dynamically balanced according to ISO1940. Double bearing rotors are balanced with a half key.

Insulation and protection: 4 pole alternators are class H insulated. The standard winding protection can accept up to 95% relative humidity and is suitable in the cabins. Specific added coatings can be proposed for harsh environments.

Enclosure: Standard enclosure is IP23.

Direction of rotation: 4 pole alternators from 164 up to 354 can operate in both directions; 404,454 are only available for clockwise running. (according to the driving end).

Terminal box and connectors: 4 pole alternators have a large terminal box which allows easy access for connection of AVR or reconnection. Current transformers or other optional modules can be fitted within the box.

Bearings: Sealed for life bearings up to all kwise 4 pole alternator.

Overspeed: The maximum overspeed is 2250 RPM for the 4 pole alternator(1.25 times the 60Hz rated speed).

Mechanical structure: Steel frame. Aluminium, cast iron or steel housing and flanges depending on models.

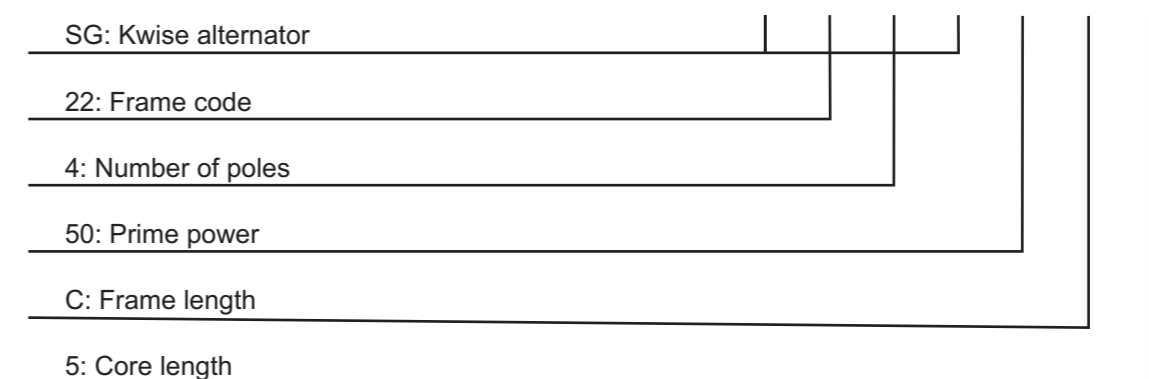
6. Accessories and options

- PMG(from SG224)
- Engine adaptors for double bearing alternators
- Three-proofing lacquer (special protection process for winding in harsh environments)
- Air inlet filters(5% derating)
- Air outlet filters or deflectors(5% derating)
- Specific painting (according to customer requirements)
- Thermal protections for bearings
- Thermal protections for stator windings
- Anti condensation heaters
- Remote voltage potentiometers
- Current transformers for paralleling with other alternators
- Emergency kit (AVR + rotating rectifier + varistor)

7. Product description

The machine name is defined according to various criteria(see below).

For example: S224G50C5





SG series specifications

Model	Leads	3Phases/50Hz/400V/PF=0.8				3Phases/60Hz/480V/PF=0.8				Inertia (kgm ²)	Efficiency 100% Load η (%)	Weight (kg) (1-BRG)
		Cont. 40°C		Standby.40°C		Cont. 40°C		Standby.40°C				
		KW	KVA	KW	KVA	KW	KVA	KW	KVA			
S164G65B1	12	6.5	8.1	7.2	9	7.8	9.8	8.4	10.5	0.097	78.8	78
S164G88B2	12	8.8	11	9.7	12.1	10.6	13.2	11.4	14.3	0.108	79.9	84
S164G108B3	12	10.8	13.5	11.9	14.9	13	16.2	14.2	17.7	0.123	80.8	93
S164G128C4	12	12.8	16	14.1	17.6	15.4	19.2	16.8	21	0.134	81.6	101
S164G14C5	12	14	17.5	15.4	19.3	16.8	21	18.5	23.1	0.142	82.3	105
S184G16C6	12	16	20	17.6	22	19.2	24	21.1	26.4	0.147	83.2	112
S184G18D7	12	18	22.5	19.8	24.8	21.6	27	24	30	0.165	83.9	119
S184G20D8	12	20	25	22	27.5	24	30	26.4	33	0.182	84.6	132
S184G22D9	12	22	27.5	24.2	30.3	26.4	33	29.8	37.2	0.201	85.5	139
S184G25D10	12	25	31.3	27.5	34.4	30	37.5	33.6	42	0.231	86	152
S184G28E11	12	28	35	30.8	38.5	33.6	42	37.2	46.5	0.263	86.6	165
S184G30E12	12	30	37.5	33	41.3	36	45	39.6	49.5	0.284	87	176
S184G32E13	12	32	40	35.2	44	38.4	48	42.4	52.8	0.290	87.2	183
S224G32B1	12	32	40	35	44	38.4	48	42.2	52.8	0.374	87.4	216
S224G34B2	12	34	43	37	46	40.8	51	44.9	56.1	0.419	88.1	222
S224G40B3	12	40	50	44	55	48	60	52.8	66	0.443	88.9	239
S224G45B4	12	45	56	50	62	54	67.6	59.4	74.4	0.525	89.1	250
S224G50C5	12	50	63	55	69	60	75	66	82.5	0.547	89.5	273
S224G54C6	12	54	68	59	74	64.8	81	71.3	89.1	0.592	89.6	287
S224G58C7	12	58	73	64	80	69.6	87	76.5	95.7	0.637	90.7	298
S224G64D8	12	64	80	70	88	76.8	96	84.5	105.6	0.704	90.8	321
S224G68D9	12	68	85	75	94	81.6	102	89.8	112.2	0.749	90.9	335
S224G75D10	12	75	93.8	82.5	103.2	90	112.5	99	123.8	0.792	90.9	341
S274G80B1	12	80	100	88	110	96	120	106	132	1.080	91.1	362
S274G90B2	12	90	113	99	124	108	135	119	149	1.256	91.6	384
S274G100B3	12	100	125	110	138	120	150	132	165	1.311	92	397
S274G112C4	12	112	140	123	154	134	168	147	185	1.393	92.4	443
S274G120C5	12	120	150	132	165	144	180	158	198	1.512	92.7	465
S274G128C6	12	128	160	141	176	154	192	169	211	1.633	93.1	491
S274G140C7	12	140	175	154	193	168	210	185	231	1.856	93.2	513

Model	Leads	3Phases/50Hz/400V/PF=0.8				3Phases/60Hz/480V/PF=0.8				Inertia (kgm ²)	Efficiency 100% Load η (%)	Weight (kg) (1-BRG)
		Cont. 40°C		Standby.40°C		Cont. 40°C		Standby.40°C				
		KW	KVA	KW	KVA	KW	KVA	KW	KVA			
S274G150D8	12	150	188	165	206	180	225	198	248	1.919	93.3	543
S274G160D9	12	160	200	176	220	192	240	211	264	2.032	93.6	578
S274G180E10	12	180	225	198	248	216	270	238	297	2.493	93.9	621
S274G200E11	12	200	250	216	270	240	300	264	330	2.513	94.1	665
S314G200D1	12	200	250	220	275	240	300	264	330	3.731	94.1	721
S314G220D2	12	220	275	242	303	264	330	290	363	4.047	94.2	757
S314G240D3	12	240	300	264	330	288	360	305	381	4.281	94.3	799
S314G250D4	12	250	313	275	344	300	375	330	413	4.606	94.4	817
S314G260D5	12	260	325	286	358	312	390	343	429	4.865	94.5	871
S314G280D6	12	280	350	308	385	336	420	370	462	5.245	94.6	913
S314G300E7	12	300	375	330	413	360	450	396	495	5.701	94.7	943
S314G320E8	12	320	400	352	440	384	480	422	528	6.217	94.8	1033
S314G360E9	12	360	450	396	495	432	540	475	594	6.629	94.9	1069
S354G360D1	6	360	450	396	495	432	540	475	594	7.237	94.9	1122
S354G400D2	6	400	500	440	550	480	600	528	660	8.407	95.1	1203
S354G430D3	6	430	538	473	591	516	646	568	711	8.744	95.2	1276
S354G450D4	6	450	563	495	619	540	676	594	744	8.996	95.3	1316
S354G480D5	6	480	600	528	660	576	720	634	792	9.432	95.6	1365
S354G500D6	6	500	625	550	688	600	750	660	825	9.826	95.7	1389
S354G520E7	6	520	650	572	715	624	780	686	858	10.219	95.8	1452
S354G540E8	6	540	675	594	743	648	810	713	891	10.535	95.9	1501
S354G560E9	6	560	700	616	770	672	840	739	924	11.006	96	1525
S354G600E10	6	600	750	660	825	720	900	792	990	11.495	96.1	1574
S404G600D1	6	600	750	660	825	700	875	770	963	17.621	96.1	1791
S404G640D2	6	640	800	704	880	740	925	814	1018	18.535	96.2	1887
S404G728D3	6	728	910	801	1001	850	1063	935	1169	19.631	96.3	1859
S404G800D4	6	800	1000	880	1100	930	1163	1023	1279	21.642	96.4	2031
S404G900D5	6	900	1125	990	1238	1050	1313	1155	1444	25.114	96.5	2283
S404G1000E6	6	1000	1250	1100	1375	1160	1450	1276	1595	30.743	96.6	2575
S404G1100E7	6	1100	1375	1210	1513	1276	1595	1404	1755	32.207	96.7	2635
S404G1200E8	6	1200	1500	1320	1650	1400	1750	1540	1925	33.654	96.7	2695
S454G1120B1	6	1120	1400	1232	1540	1260	1575	1386	1733	37.434	96	2750
S454G1250B2	6	1250	1563	1375	1719	1400	1750	1540	1925	41.972	96.1	3100
S454G1350C3	6	1350	1688	1485	1856	1520	1900	1672	2090	45.434	96.2	3310
S454G1520C4	6	1520	1900	1672	2090	1700	2125	1870	2338	51.013	96.2	3550
S454G1650D5	6	1650	2063	1815	2269	1830	2288	2013	2517	55.287	96.3	3840
S454G1800D6	6	1800	2250	1980	2475	2000	2500	2200	2750	60.264	96.3	4050
S454G1900E7	6	1900	2375	2090	2613	2130	2662	2343	2928	62.650	96.4	4750
S454G2000E8	6	2000	2500	2200	2750	2240	2800	2464	3080	65.040	96.4	5015

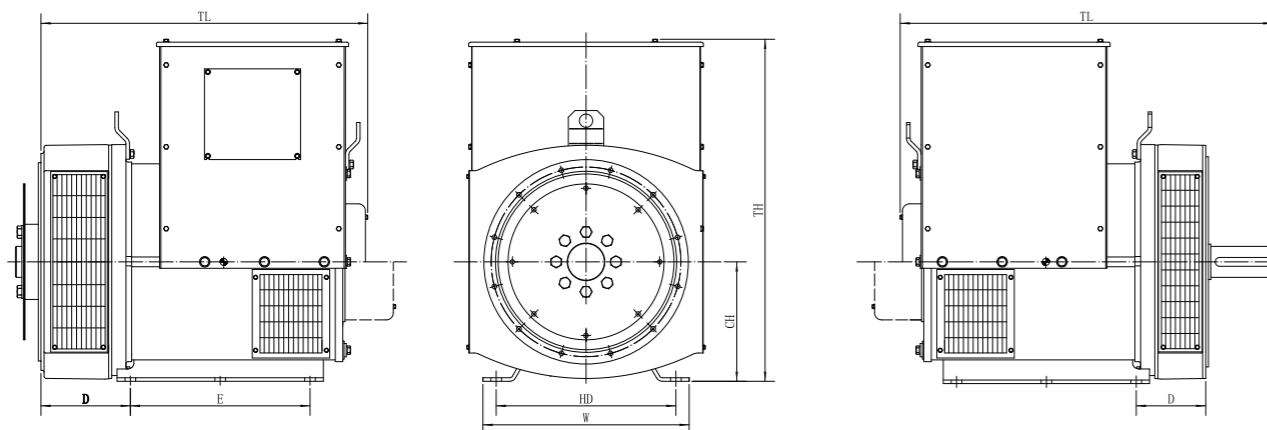


LA series specifications

Model	Leads	3Phases/50Hz/400V/PF=0.8				3Phases/60Hz/480V/PF=0.8				Inertia (kgm ²)	Efficiency 100% Load η (%)	Weight (kg) (1-BRG)
		Cont. 40°C		Standby.40°C		Cont. 40°C		Standby.40°C				
		KW	KVA	KW	KVA	KW	KVA	KW	KVA			
L164A65B1	12	6.5	8.1	7.2	9	7.8	9.8	8.4	10.5	0.097	78.8	82
L164A88B2	12	8.8	11	9.7	12.1	10.6	13.2	11.4	14.3	0.108	79.9	88
L164A108B3	12	10.8	13.5	11.9	14.9	13	16.2	14.2	17.7	0.123	80.8	95
L164A128C4	12	12.8	16	14.1	17.6	15.4	19.2	16.8	21	0.134	81.6	104
L164A14C5	12	14	17.5	15.4	19.3	16.8	21	18.5	23.1	0.142	82.3	108
L164A16C6	12	16	20	17.6	22	19.2	24	21.1	26.4	0.147	83.2	116
L184A18D7	12	18	22.5	19.8	24.8	21.6	27	24	30	0.165	83.9	128
L184A20D8	12	20	25	22	27.5	24	30	26.4	33	0.182	84.6	137
L184A22D9	12	22	27.5	24.2	30.3	26.4	33	29.8	37.2	0.201	85.5	142
L184A25D10	12	25	31.3	27.5	34.4	30	37.5	33.6	42	0.231	86	157
L184A28E11	12	28	35	30.8	38.5	33.6	42	37.2	46.5	0.263	86.6	171
L184A30E12	12	30	37.5	33	41.3	36	45	39.6	49.5	0.284	87	179
L184A32E13	12	32	40	35.2	44	38.4	48	42.4	52.8	0.290	87.2	184
L224A32B1	12	32	40	35	44	38.4	48	42.2	52.8	0.374	87.4	222
L224A34B2	12	34	43	37	46	40.8	51	44.9	56.1	0.419	88.1	223
L224A40B3	12	40	50	44	55	48	60	52.8	66	0.443	88.9	236
L224A45B4	12	45	56	50	62	54	67.6	59.4	74.4	0.525	89.1	247
L224A50C5	12	50	63	55	69	60	75	66	82.5	0.547	89.5	270
L224A54C6	12	54	68	59	74	64.8	81	71.3	89.1	0.592	89.6	282
L224A58C7	12	58	73	64	80	69.6	87	76.5	95.7	0.637	90.7	292
L224A64D8	12	64	80	70	88	76.8	96	84.5	105.6	0.704	90.8	315
L224A68D9	12	68	85	75	94	81.6	102	89.8	112.2	0.749	90.9	328
L224A75D10	12	75	93.8	82.5	103.2	90	112.5	99	123.8	0.792	90.9	340
L274A80B1	12	80	100	88	110	96	120	106	132	1.080	91.1	370
L274A90B2	12	90	113	99	124	108	135	119	149	1.256	91.6	392
L274A100B3	12	100	125	110	138	120	150	132	165	1.311	92	404
L274A112C4	12	112	140	123	154	134	168	147	185	1.393	92.4	450
L274A120C5	12	120	150	132	165	144	180	158	198	1.512	92.7	469
L274A128C6	12	128	160	141	176	154	192	169	211	1.633	93.1	493
L274A140C7	12	140	175	154	193	168	210	185	231	1.856	93.2	517

Model	Leads	3Phases/50Hz/400V/PF=0.8				3Phases/60Hz/480V/PF=0.8				Inertia (kgm ²)	Efficiency 100% Load η (%)	Weight (kg) (1-BRG)
		Cont. 40°C		Standby.40°C		Cont. 40°C		Standby.40°C				
		KW	KVA	KW	KVA	KW	KVA	KW	KVA			
L274A150D8	12	150	188	165	206	180	225	198	248	1.919	93.3	545
L274A160D9	12	160	200	176	220	192	240	211	264	2.032	93.6	581
L274A180E10	12	180	225	198	248	216	270	238	297	2.493	93.9	616
L274A200E11	12	200	250	216	270	240	300	264	330	2.513	94.1	659
L314A200D1	12	200	250	220	275	240	300	264	330	3.731	94.1	698
L314A220D2	12	220	275	242	303	264	330	290	363	4.047	94.2	764
L314A240D3	12	240	300	264	330	288	360	305	381	4.281	94.3	807
L314A250D4	12	250	313	275	344	300	375	330	413	4.606	94.4	826
L314A260D5	12	260	325	286	358	312	390	343	429	4.865	94.5	870
L314A280D6	12	280	350	308	385	336	420	370	462	5.245	94.6	928
L314A300E7	12	300	375	330	413	360	450	396	495	5.701	94.7	969
L314A320E8	12	320	400	352	440	384	480	422	528	6.217	94.8	1067
L314A360E9	12	360	450	396	495	432	540	475	594	6.629	94.9	1165
L354A360D1	6	360	450	396	495	432	540	475	594	7.237	94.9	1168
L354A400D2	6	400	500	440	550	480	600	528	660	8.407	95.1	1240
L354A430D3	6	430	538	473	591	516	646	568	711	8.744	95.2	1314
L354A450D4	6	450	563	495	619	540	676	594	744	8.996	95.3	1363
L354A480D5	6	480	600	528	660	576	720	634	792	9.432	95.6	1413
L354A500D6	6	500	625	550	688	600	750	660	825	9.826	95.7	1436
L354A520E7	6	520	650	572	715	624	780	686	858	10.219	95.8	1512
L354A540E8	6	540	675	594	743	648	810	713	891	10.535	95.9	1556
L354A560E9	6	560	700	616	770	672	840	739	924	11.006	96	1586
L354A600E10	6	600	750	660	825	720	900	792	990	11.495	96.1	1618
L404A600D1	6	600	750	660	825	700	875	770	963	17.621	96.1	1857
L404A640D2	6	640	800	704	880	740	925	814	1018	18.535	96.2	1891
L404A728D3	6	728	910	801	1001	850	1063	935	1169	19.631	96.3	1961
L404A800D4	6	800	1000	880	1100	930	1163	1023	1279	21.642	96.4	2097
L404A900D5	6	900	1125	990	1238	1050	1313	1155	1444	25.114	96.5	2303
L404A1000E6	6	1000	1250	1100	1375	1160	1450	1276	1595	30.743	96.6	2612
L404A1100E7	6	1100	1375	1210	1513	1276	1595	1404	1755	32.207	96.7	2667
L404A1200E8	6	1200	1500	1320	1650	1400	1750	1540	1925	33.654	96.7	2719

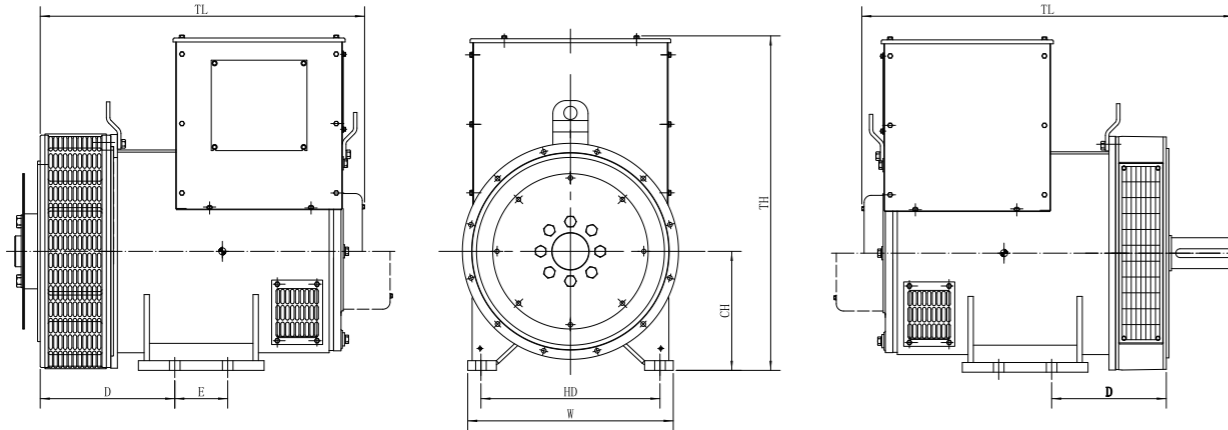
SG series Dimensions



Model	Single Bearing			Single and Double Bearing Configuration					Double Bearing	
	SAE	TL	D	TH	CH	W	HD	E	TL	D
S164G65B1	#4/7.5	397	133	414	160	292	254	140	517	163
S164G88B2										
S164G108B3										
S164G128C4	#4/7.5	442	133	414	160	292	254	140	562	163
S164G14C5					180					
S184G16C6	#4/7.5	522	133	434	180	319	279	210	642	163
S184G18D7										
S184G20D8										
S184G22D9	#3/11.5	594	145	424	180	319	279	210	702	163
S184G25D10										
S184G28E11	#3/11.5	647	177	690	225	406	356	311	729	137
S184G30E12										
S184G32E13										
S224G32B1	#3/11.5	737	177	690	225	406	356	311	819	137
S224G34B2										
S224G40B3	#3/11.5	782	177	690	225	406	356	311	864	137
S224G45B4										
S224G50C5	#00/21	2055	365	1280	450	870	750	800	2247	295
S224G54C6										
S224G58C7	#00/21	2055	365	1280	450	870	750	800	2247	295
S224G64D8										
S224G68D9	#00/21	2055	365	1280	450	870	750	800	2247	295
S224G75D10										

Model	Single Bearing			Single and Double Bearing Configuration					Double Bearing	
	SAE	TL	D	TH	CH	W	HD	E	TL	D
S274G80B1	#3/11.5	736	202	774	270	466	406	406	842	157
S274G90B2										
S274G100B3										
S274G112C4	#3/11.5	851	202	774	270	466	406	406	957	157
S274G120C5										
S274G128C6										
S274G140C7	#2/11.5	901	202	774	270	466	406	406	1007	157
S274G150D8										
S274G160D9	#1/14	1001.3	216.3	774	270	466	406	406	1092	157
S274G180E10										
S274G200E11	#1/14	1101	232	852	315	578	508	457	1255	202
S314G200D1										
S314G220D2										
S314G240D3										
S314G250D4										
S314G260D5										
S314G280D6										
S314G300E7	#1/14	1191	232	852	315	578	508	457	1345	202
S314G320E8										
S314G360E9										
S354G360D1	#1/14	1266	297	971	355	670	610	500	1393	240
S354G400D2										
S354G430D3										
S354G450D4										
S354G480D5										
S354G500D6	#0/18	1341	297	971	355	670	610	500	1468	240
S354G520E7										
S354G540E8										
S354G560E9	#0/18	1578	350	1148	400	786	686	560	1718	265
S354G600E10										
S404G600D1										
S404G640D2										
S404G728D3										
S404G800D4	#00/21	1679	350	1148	400	786	686	560	1904	265
S404G900D5										
S404G1000E6										
S404G1100E7	#0/18	1705	365	1280	450	870	750	630	1857	295
S404G1200E8										
S454G1120B1	#0/18	1855	365	1280	450	870	750	630	2007	295
S454G1250B2										
S454G1350C3	#00/21	1940	365	1280	450	870	750	800	2132	295
S454G1520C4										
S454G1650D5	#00/21	2055	365	1280	450	870	750	800	2247	295
S454G1800D6										
S454G1900E7	#00/21	2055	365	1280	450	870	750	800	2247	295
S454G2000E8										

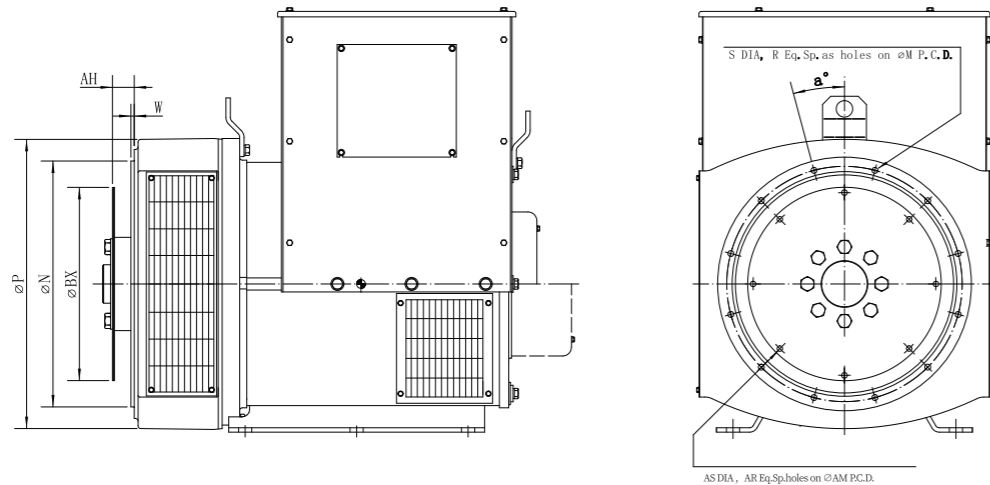
LA series Dimensions



Model	Single Bearing			Single and Double Bearing Configuration					Double Bearing	
	SAE	TL	D	TH	CH	W	HD	E	TL	D
L164A65B1	#4/7.5	404	178	414	160	292	254	/	519	208
L164A88B2										
L164A108B3										
L164A128C4	#4/7.5	443	178	414	160	292	254	/	563	208
L164A14C5										
L164A16C6										
L184A18D7	#4/7.5	523	238	434	180	319	279	/	643	268
L184A20D8										
L184A22D9										
L184A25D10	#3/11.5	595	276	434	180	319	279	/	703	294
L184A28E11										
L184A30E12										
L184A32E13	#3/11.5	647	332.5	648	225	410	356	/	729	293
L224A32B1										
L224A34B2										
L224A40B3	#3/11.5	737	332.5	648	225	410	356	/	819	293
L224A45B4										
L224A50C5										
L224A54C6	#3/11.5	782	332.5	648	225	410	356	/	864	293
L224A58C7										
L224A64D8										
L224A68D9	#3/11.5	782	332.5	648	225	410	356	/	864	293
L224A75D10										

Model	Single Bearing			Single and Double Bearing Configuration					Double Bearing	
	SAE	TL	D	TH	CH	W	HD	E	TL	D
L274A80B1	#3/11.5	736	365	759	270	466	406	/	842	319.5
L274A90B2										
L274A100B3										
L274A112C4	#3/11.5	851	405	759	270	466	406	/	957	359.5
L274A120C5										
L274A128C6										
L274A140C7	#2/11.5	901	405	759	270	466	406	/	1007	359.5
L274A150D8										
L274A160D9										
L274A180E10	#1/14	1001	429.8	759	270	466	406	/	1093	370.3
L274A200E11										
L314A200D1	#1/14	1101	232	852	315	578	508	457	1255	202
L314A220D2										
L314A240D3										
L314A250D4										
L314A260D5										
L314A280D6										
L314A300E7	#1/14	1191	232	852	315	578	508	457	1345	202
L314A320E8										
L314A360E9										
L354A360D1	#1/14	1266	297	971	355	670	610	500	1393	240
L354A400D2										
L354A430D3										
L354A450D4										
L354A480D5										
L354A500D6										
L354A520E7	#0/18	1341	297	971	355	670	610	500	1468	240
L354A540E8										
L354A560E9										
L354A600E10	#0/18	1578	350	1148	400	786	686	560	1718	265
L404A600D1										
L404A640D2										
L404A728D3										
L404A800D4										
L404A900D5										
L404A1000E6	#00/21	1679	350	1148	400	786	686	560	1904	265
L404A1100E7										
L404A1200E8										

SAE Dimensions

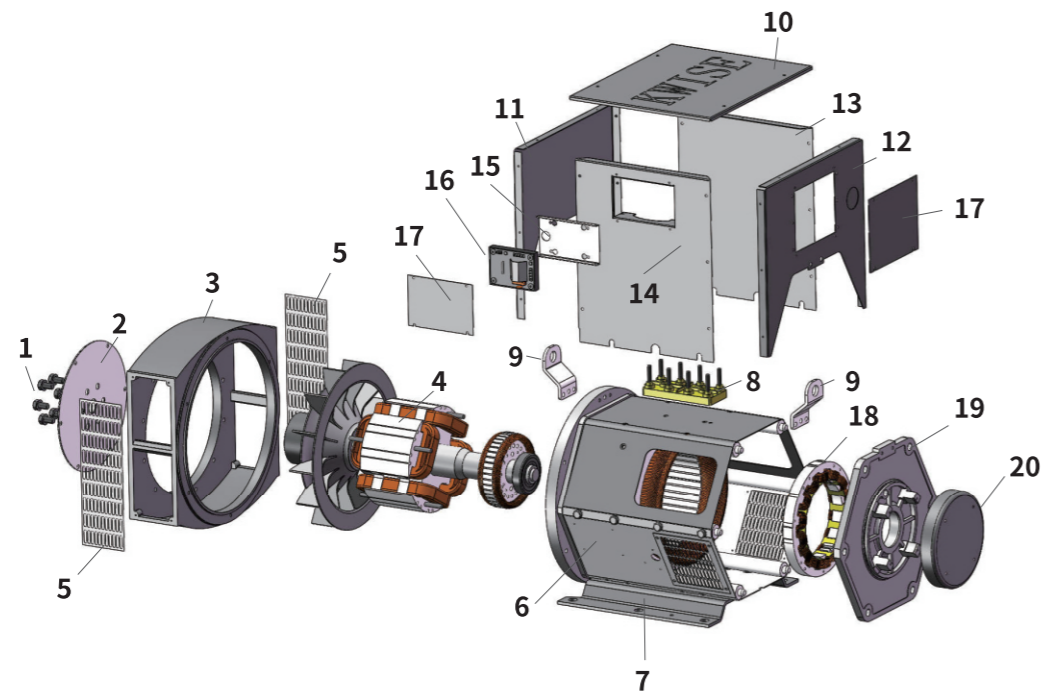


SAE	Coupling			
	ΦBX	AR-ΦAS	ΦAM	AH
#6.5	215.9	6-Φ9	200.025	30.2
#7.5	241.3	8-Φ9	222.25	30.2
#8	263.525	6-Φ11	244.475	62
#10	314.325	8-Φ11	295.3	53.8
#11.5	352.425	8-Φ11	333.38	39.6
#14	466.725	8-Φ14	438.15	25.4
#18	571.5	6-Φ17	542.925	15.7
#21	673.1	12-Φ17	641.35	0
#24	733.3	12-Φ21	692	0

SAE	Adaptor					
	ΦP	ΦN	W	R-ΦS	ΦM	a
#5	356	314.325	5	8-Φ12	333.375	22.5°
#4	402	361.95	5	12-Φ12	381	15°
#3	451,617	409.575	5	12-Φ12	428.625	15°
#2	490,530,617	447.675	5	12-Φ12	466.725	15°
#1	533,580,617,700	511.175	6	12-Φ12	530.225	15°
#1/2	680,700,810	584.2	6	12-Φ14	619.125	15°
#0	711,810,940	647.7	6	16-Φ14	679.45	11.25°
#00	882,940	787.4	6	16-Φ14	850.9	11.25°

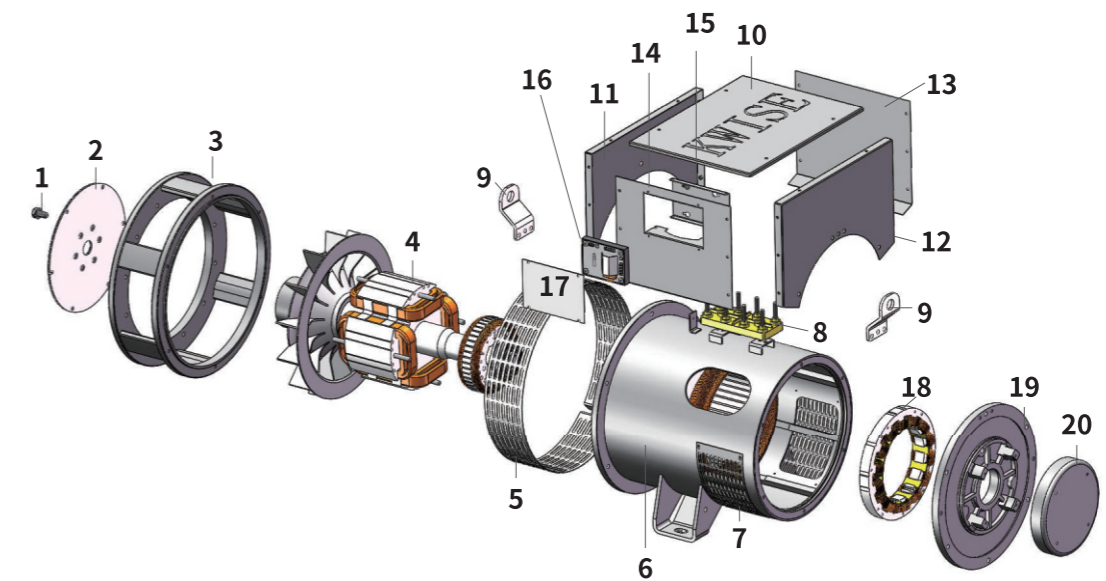
Coupling	Standard Construction Type									
	#6.5	#7.5	#8	#10	#11.5	#14	#18	#21	#24	
Adaptor	215.9	241.3	263.525	314.325	352.425	466.725	571.5	673.1	733.3	
#5	314.325	164/184	164/184							
#4	361.95	164/184	164/184/224	164/184/224	164/184/224					
#3	409.575			164/184/224	164/184/224/274	184/224/274				
#2	447.675				184/224/274	184/224/274				
#1	511.175					224/274/314	224/274/314/354			
#1/2	584.2						314/354			
#0	647.7						314/354	314/354/404/454		
#00	787.4							354/404/454	354/404/454	404/454
AH	30.2	30.2	62	53.8	39.6	25.4	15.7	0	0	

SG series part manual



Serial number	Name of parts	Serial number	Name of parts
1	Bolt	11	DE Terminal panel
2	Drive-end discs	12	NDE Terminal panel
3	Drive-end adaptor	13	Left Side panel
4	Rotor	14	Right Side panel
5	Drive-end screen	15	AVR mounting panel
6	Stator	16	AVR
7	Foot	17	AVR lid
8	Main terminal panel	18	Exciter stator
9	Hangers	19	Non drive-end bracket
10	Terminal box lid	20	Non drive-end cover

LA series part manual



Serial number	Name of parts	Serial number	Name of parts
1	Bolt	11	DE Terminal panel
2	Drive-end discs	12	NDE Terminal panel
3	Drive-end adaptor	13	Left Side panel
4	Rotor	14	Right Side panel
5	Drive-end screen	15	AVR mounting panel
6	Stator	16	AVR
7	No drive-end screen	17	AVR lid
8	Main terminal panel	18	Excitation stator
9	Hangers	19	Non drive-end bracket
10	Terminal box lid	20	Non drive-end cover



High voltage generator CHG-4

General Data

Insulation class	H	Cooling method	Fan self-cooling (IC01)
Exciter method	Brushless Exciter	Altitude	≤1000m
Voltage Regulator	Digital	Ambient temperature	≤40°C
Protection grade	IP23	Winding temperature measurement	PT100
Wiring method	Three-phase three-wires star connection	Bearing temperature measurement	PT100
Overspeed capability	maximum 2250RPM	THD	≤3.5%
Operation	Continuous Operation (S1)	TIF	<50

Power (50Hz)

Model	10500V-50HZ-1500RPM		6300V-50HZ-1500RPM		3300V-50HZ-1500RPM	
	H/125K/40°C		H/125K/40°C		H/125K/40°C	
	KW	KVA	KW	KVA	KW	KVA
CHG-300-4	300	375	300	375	300	375
CHG-360-4	360	450	360	450	360	450
CHG-400-4	400	500	400	500	400	500
CHG-450-4	450	562.5	450	562.5	450	562.5
CHG-500-4	500	625	500	625	500	625
CHG-560-4	560	700	560	700	560	700
CHG-600-4	600	750	600	750	600	750
CHG-640-4	640	800	640	800	640	800
CHG-720-4	720	900	720	900	720	900
CHG-800-4	800	1000	800	1000	800	1000
CHG-900-4	900	1125	900	1125	900	1125
CHG-1000-4	1000	1250	1000	1250	1000	1250
CHG-1100-4	1100	1375	1100	1375	1100	1375
CHG-1200-4	1200	1500	1200	1500	1200	1500
CHG-1300-4	1300	1625	1300	1625	1300	1625
CHG-1400-4	1400	1750	1400	1750	1400	1750
CHG-1500-4	1500	1875	1500	1875	1500	1875
CHG-1600-4	1600	2000	1600	2000	1600	2000
CHG-1700-4	1700	2125	1700	2125	1700	2125
CHG-1800-4	1800	2250	1800	2250	1800	2250
CHG-2000-4	2000	2500	2000	2500	2000	2500
CHG-2200-4	2200	2750	2200	2750	2200	2750
CHG-2400-4	2400	3000	2400	3000	2400	3000
CHG-2500-4	2500	3125	2500	3125	2500	3125
CHG-2600-4	2600	3250	2600	3250	2600	3250
CHG-2800-4	2800	3500	2800	3500	2800	3500
CHG-3000-4	3000	3750	3000	3750	3000	3750

Model	10500V-50HZ-1500RPM		6300V-50HZ-1500RPM		3300V-50HZ-1500RPM	
	H/125K/40°C		H/125K/40°C		H/125K/40°C	
	KW	KVA	KW	KVA	KW	KVA
CHG-3200-4	3200	4000	3200	4000	3200	4000
CHG-3400-4	3400	4250	3400	4250	3400	4250
CHG-3600-4	3600	4500	3600	4500	3600	4500
CHG-3800-4	3800	4750	3800	4750	3800	4750
CHG-4000-4	4000	5000	4000	5000	4000	5000

Power (60Hz)

Model	13800V-60HZ-1800RPM		6600V-60HZ-1800RPM		4160V-60HZ-1800RPM	
	H/125K/40°C		H/125K/40°C		H/125K/40°C	
	KW	KVA	KW	KVA	KW	KVA
CHG-360-4	360	450	360	450	360	450
CHG-400-4	400	500	400	500	400	500
CHG-450-4	450	562.5	450	562.5	450	562.5
CHG-500-4	500	625	500	625	500	625
CHG-560-4	560	700	560	700	560	700
CHG-600-4	600	750	600	750	600	750
CHG-640-4	640	800	640	800	640	800
CHG-720-4	720	900	720	900	720	900
CHG-800-4	800	1000	800	1000	800	1000
CHG-900-4	900	1125	900	1125	900	1125
CHG-1000-4	1000	1250	1000	1250	1000	1250
CHG-1100-4	1100	1375	1100	1375	1100	1375
CHG-1200-4	1200	1500	1200	1500	1200	1500
CHG-1300-4	1300	1625	1300	1625	1300	1625
CHG-1400-4	1400	1750	1400	1750	1400	1750
CHG-1500-4	1500	1875	1500	1875	1500	1875
CHG-1600-4	1600	2000	1600	2000	1600	2000
CHG-1700-4	1700	2125	1700	2125	1700	2125
CHG-1800-4	1800	2250	1800	2250	1800	2250
CHG-2000-4	2000	2500	2000	2500	2000	2500
CHG-2200-4	2200	2750	2200	2750	2200	2750
CHG-2400-4	2400	3000	2400	3000	2400	3000
CHG-2500-4	2500	3125	2500	3125	2500	3125
CHG-2600-4	2600	3250	2600	3250	2600	3250
CHG-2800-4	2800	3500	2800	3500	2800	3500
CHG-3000-4	3000	3750	3000	3750	3000	3750
CHG-3200-4	3200	4000	3200	4000	3200	4000
CHG-3400-4	3400	4250	3400	4250	3400	4250
CHG-3600-4	3600	4500	3600	4500	3600	4500
CHG-3800-4	3800	4750	3800	4750	3800	4750
CHG-4000-4	4000	5000	4000	5000	4000	5000
CHG-4200-4	4200	5250	4200	5250	4200	5250
CHG-4400-4	4400	5500	4400	5500	4400	5500
CHG-4600-4	4600	5750	4600	5750	4600	5750
CHG-4800-4	4800	6000	4800	6000	4800	6000



High voltage generator SHG-4

General Data

Insulation class	H	Cooling method	Fan self-cooling (IC01)
Excitation method	Brushless excitation	Altitude	≤1000m
Voltage Regulator	Digital	Ambient temperature	≤40°C
Protection grade	IP23	Winding temperature measurement	PT100
Wiring method	Three-phase three-wire star connection	Bearing temperature measurement	PT100
Overspeed capability	maximum 2250RPM	THD	≤3.5%
Working system	Continuous working system (S1)	TIF	<50

Power (50Hz)

Model	10500V-50HZ-1500RPM		6300V-50HZ-1500RPM		3300V-50HZ-1500RPM	
	H /125K/40°C		H /125K/40°C		H /125K/40°C	
	KW	KVA	KW	KVA	KW	KVA
SHG-300-4	300	375	300	375	300	375
SHG-360-4	360	450	360	450	360	450
SHG-400-4	400	500	400	500	400	500
SHG-450-4	450	562.5	450	562.5	450	562.5
SHG-500-4	500	625	500	625	500	625
SHG-560-4	560	700	560	700	560	700
SHG-600-4	600	750	600	750	600	750
SHG-640-4	640	800	640	800	640	800
SHG-720-4	720	900	720	900	720	900
SHG-800-4	800	1000	800	1000	800	1000
SHG-900-4	900	1125	900	1125	900	1125
SHG-1000-4	1000	1250	1000	1250	1000	1250
SHG-1100-4	1100	1375	1100	1375	1100	1375
SHG-1200-4	1200	1500	1200	1500	1200	1500
SHG-1300-4	1300	1625	1300	1625	1300	1625
SHG-1400-4	1400	1750	1400	1750	1400	1750
SHG-1500-4	1500	1875	1500	1875	1500	1875
SHG-1600-4	1600	2000	1600	2000	1600	2000
SHG-1700-4	1700	2125	1700	2125	1700	2125
SHG-1800-4	1800	2250	1800	2250	1800	2250
SHG-2000-4	2000	2500	2000	2500	2000	2500
SHG-2200-4	2200	2750	2200	2750	2200	2750
SHG-2400-4	2400	3000	2400	3000	2400	3000
SHG-2500-4	2500	3125	2500	3125	2500	3125
SHG-2600-4	2600	3250	2600	3250	2600	3250
SHG-2800-4	2800	3500	2800	3500	2800	3500
SHG-3000-4	3000	3750	3000	3750	3000	3750

Model	10500V-50HZ-1500RPM		6300V-50HZ-1500RPM		3300V-50HZ-1500RPM	
	H /125K/40°C		H /125K/40°C		H /125K/40°C	
	KW	KVA	KW	KVA	KW	KVA
SHG-3200-4	3200	4000	3200	4000	3200	4000
SHG-3400-4	3400	4250	3400	4250	3400	4250
SHG-3600-4	3600	4500	3600	4500	3600	4500
SHG-3800-4	3800	4750	3800	4750	3800	4750
SHG-4000-4	4000	5000	4000	5000	4000	5000

Power (60Hz)

Model	13800V-60HZ-1800RPM		6600V-60HZ-1800RPM		4160V-60HZ-1800RPM	
	H /125K/40°C		H /125K/40°C		H /125K/40°C	
	KW	KVA	KW	KVA	KW	KVA
SHG-360-4	360	450	360	450	360	450
SHG-400-4	400	500	400	500	400	500
SHG-450-4	450	562.5	450	562.5	450	562.5
SHG-500-4	500	625	500	625	500	625
SHG-560-4	560	700	560	700	560	700
SHG-600-4	600	750	600	750	600	750
SHG-640-4	640	800	640	800	640	800
SHG-720-4	720	900	720	900	720	900
SHG-800-4	800	1000	800	1000	800	1000
SHG-900-4	900	1125	900	1125	900	1125
SHG-1000-4	1000	1250	1000	1250	1000	1250
SHG-1100-4	1100	1375	1100	1375	1100	1375
SHG-1200-4	1200	1500	1200	1500	1200	1500
SHG-1300-4	1300	1625	1300	1625	1300	1625
SHG-1400-4	1400	1750	1400	1750	1400	1750
SHG-1500-4	1500	1875	1500	1875	1500	1875
SHG-1600-4	1600	2000	1600	2000	1600	2000
SHG-1700-4	1700	2125	1700	2125	1700	2125
SHG-1800-4	1800	2250	1800	2250	1800	2250
SHG-2000-4	2000	2500	2000	2500	2000	2500
SHG-2200-4	2200	2750	2200	2750	2200	2750
SHG-2400-4	2400	3000	2400	3000	2400	3000
SHG-2500-4	2500	3125	2500	3125	2500	3125
SHG-2600-4	2600	3250	2600	3250	2600	3250
SHG-2800-4	2800	3500	2800	3500	2800	3500
SHG-3000-4	3000	3750	3000	3750	3000	3750
SHG-3200-4	3200	4000	3200	4000	3200	4000
SHG-3400-4	3400	4250	3400	4250	3400	4250
SHG-3600-4	3600	4500	3600	4500	3600	4500
SHG-3800-4	3800	4750	3800	4750	3800	4750
SHG-4000-4	4000	5000	4000	5000	4000	5000
SHG-4200-4	4200	5250	4200	5250	4200	5250
SHG-4400-4	4400	5500	4400	5500	4400	5500
SHG-4600-4	4600	5750	4600	5750	4600	5750
SHG-4800-4	4800	6000	4800	6000	4800	6000

D164A series 5.0kW-10.0kW

Applications and standard

D164A series products are DC generators, suitable for telecommunications and lighting towers (LED). The generators comply with IEC60034, NEMA MG1-32, ISO8525, CSA C22.2-100, VDE 0530, GB755 standards.

Electrical characteristics

Class H insulation
 DC output voltage 48V
 DC voltage ripple <1%
 It can provide three different speed signals for the engine.

Mechanical properties

IP23 protection grade
 Available in single bearing and double bearing configurations
 Sealed for life bearings
 High strength driving discs

General data

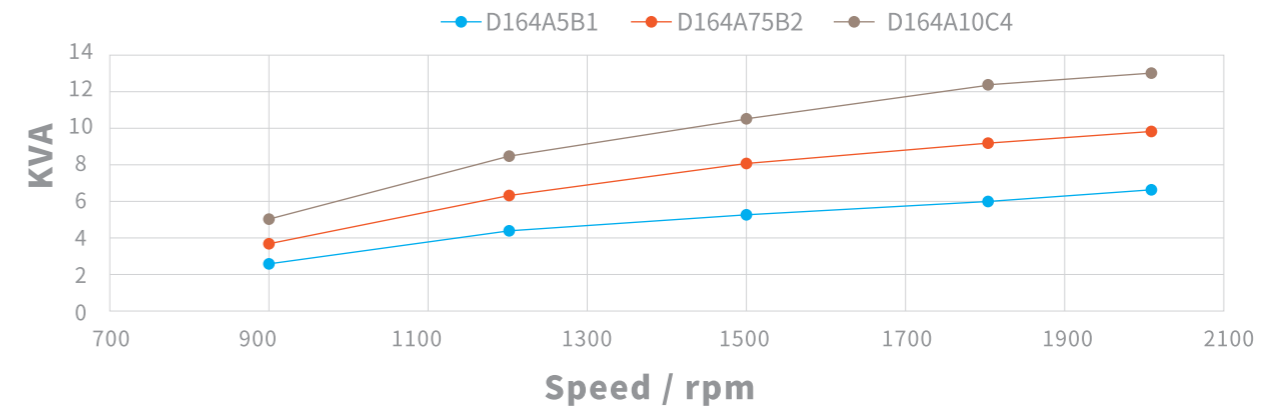
Insulation class	H	Speeding	2500rpm	DC voltage ripple	<1%
Altitude	≤1000m	Leading wires	2	AVR	SX460D
Protection level	IP23			The output voltage	48V DC

Rated value

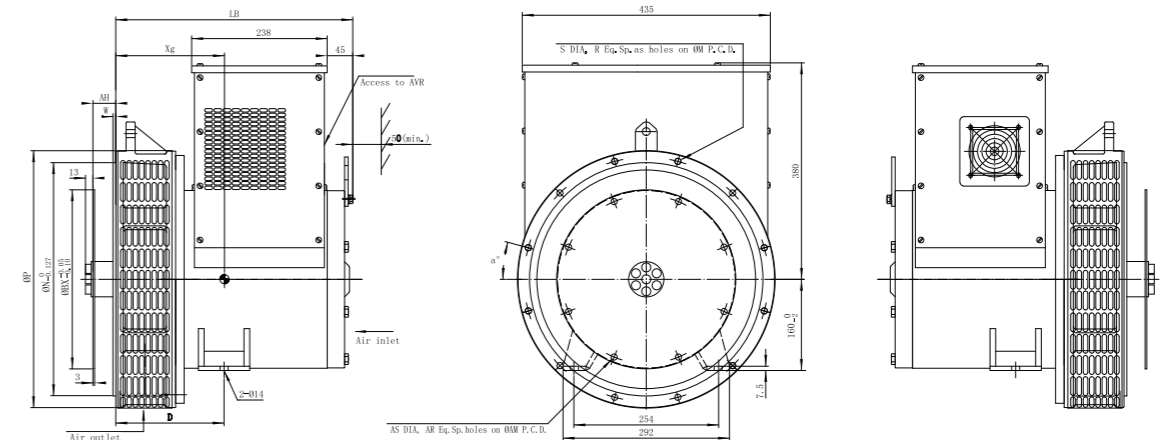
DC voltage		48V				Effectiveness
Rated speed		1200	1500	1800	2000	
D164A5B1	KVA	4.4	5.3	6.2	6.5	75.9%
	KW	4.2	5.0	5.9	6.2	
D164A75B2	KVA	6.5	7.9	9.3	9.8	78.3%
	KW	6.2	7.5	8.8	9.3	
D164A10C4	KVA	8.7	10.5	12.4	13	79.9%
	KW	8.3	10.0	11.8	12.4	

4 Poles

Rated speed VS. power



Outline drawing



Size(mm)	SAE 3	SAE 4/5	*Xg	Weight	Packing
Model	LB	LB	mm	kg	L x W x H(mm)
D164A5B1	411	404	152	90	570*525*687
D164A75B2	411	404	162	95	570*525*687
D164A10C4	455	443	186	104	614*525*687

Adaptor Kit(mm)							
S.A.E	P	N	M	R-øS	W	D	a°
#3	451	409.575	428.625	12-ø11	5	190	15
#4	402	361.95	381	12-ø11	5	178	15
#5	356	314.325	333.375	8-ø11	5	178	22.5

Coupling kits (mm)				
S.A.E	BX	AM	AR-øAS	AH
#6.5	215.9	200.025	6-ø9	30.2
#7.5	241.3	222.25	8-ø9	30.2
#8	263.525	244.475	6-ø11	62
#10	314.325	295.275	8-ø11	53.8
#11.5	352.425	333.375	8-ø11	39.6

D184A series 12.0kW-25.0kW

Applications and standard

D184A series products are DC generators, suitable for telecommunications and lighting towers (LED). The generators comply with IEC60034, NEMA MG1-32, ISO8525, CSA C22.2-100, VDE 0530, GB755 standards.

Electrical characteristics

Class H insulation
 DC output voltage 48V
 DC voltage ripple <1%
 It can provide three different speed signals for the engine.

Mechanical properties

IP23 protection grade
 Available in single bearing and double bearing configurations
 Sealed for life bearings
 High strength driving discs

General data

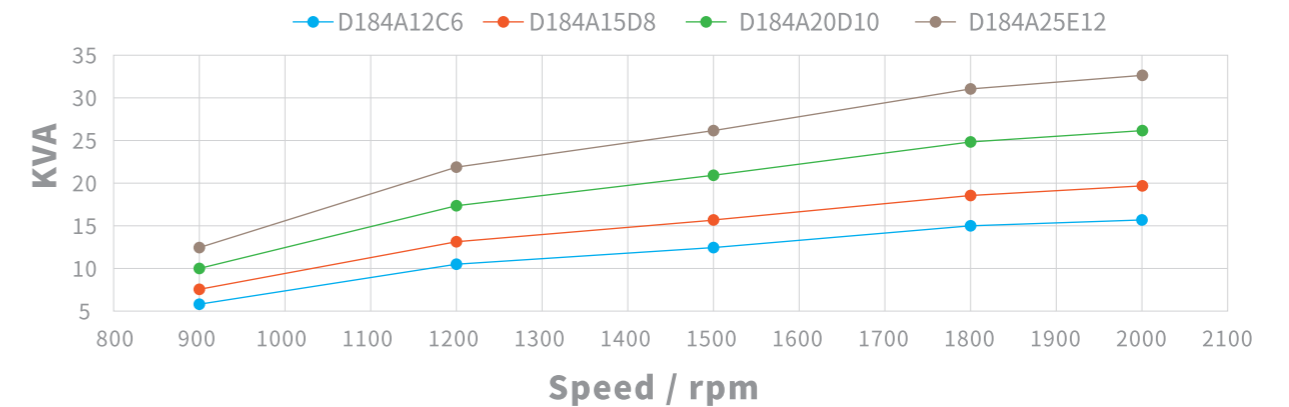
Insulation class	H	Speeding	2500rpm	DC voltage ripple	<1%
Altitude	≤1000m	Leading wires	2	AVR	SX460D
Protection level	IP23			The output voltage	48V DC

Rated value

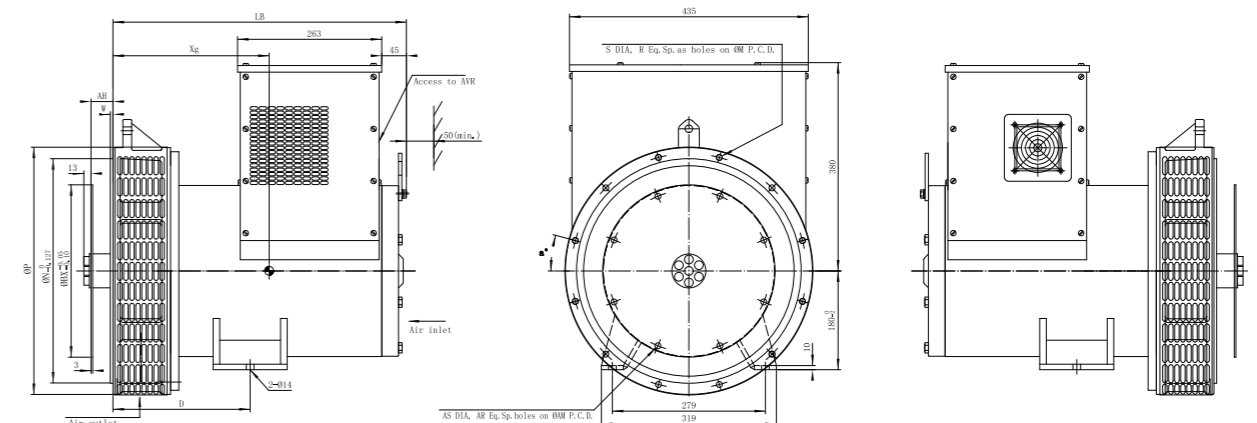
DC voltage		48V				Effectiveness
Rated speed		1200	1500	1800	2000	
D184A12C6	KVA	10.5	12.6	14.9	18.4	81.1%
	KW	10.0	12	14.2	17.6	
D184A15D8	KVA	13.1	15.8	18.6	23.0	82.0%
	KW	12.5	15	17.7	21.9	
D184A20D10	KVA	17.4	21.0	24.8	30.7	82.5%
	KW	16.6	20	23.6	29.3	
D184A25E12	KVA	21.8	26.3	31.0	38.4	82.8%
	KW	20.8	25	29.5	36.6	

4 Poles

Rated speed VS. power



Outline drawing



Size(mm)	SAE 3		SAE 4/5		*Xg	Weight	Packing
Model	LB	D	LB	D	mm	kg	L x W x H(mm)
D184A12C6	455	190	443	178	186	121	614*525*697
D184A15D8	535	250	523	238	232	138	694*525*697
D184A20D10	535	250	523	238	262	162	694*525*697
D184A25E12	595	276	583	264	276	204	754*525*697

Adaptor Kit(mm)						
S.A.E	P	N	M	R-øS	W	a°
#3	451	409.575	428.625	12-ø11	5	15
#4	402	361.95	381	12-ø11	5	15
#5	356	314.325	333.375	8-ø11	5	22.5

Coupling kits (mm)				
S.A.E	BX	AM	AR-øAS	AH
#6.5	215.9	200.025	6-ø9	30.2
#7.5	241.3	222.25	8-ø9	30.2
#8	263.525	244.475	6-ø11	62
#10	314.325	295.275	8-ø11	53.8
#11.5	352.425	333.375	8-ø11	39.6



Shenzhou series manned spacecraft guarantee power supply



Three satellite launch centers



Power Engineering



HK PCG Digital



Military vehicle power supply



Military shelter power station



Russian Zijin Mining



Fujian Expressway



Cuban Ministry of Defense



Korean Air Force



Overseas export



Luoyuan Bay Binhai New Town



Antarctic Zhongshan Station



Zhengxi High Speed Rail



Century Jinyuan Hotel



Ramada Wuyishan