

Power plant

Marine

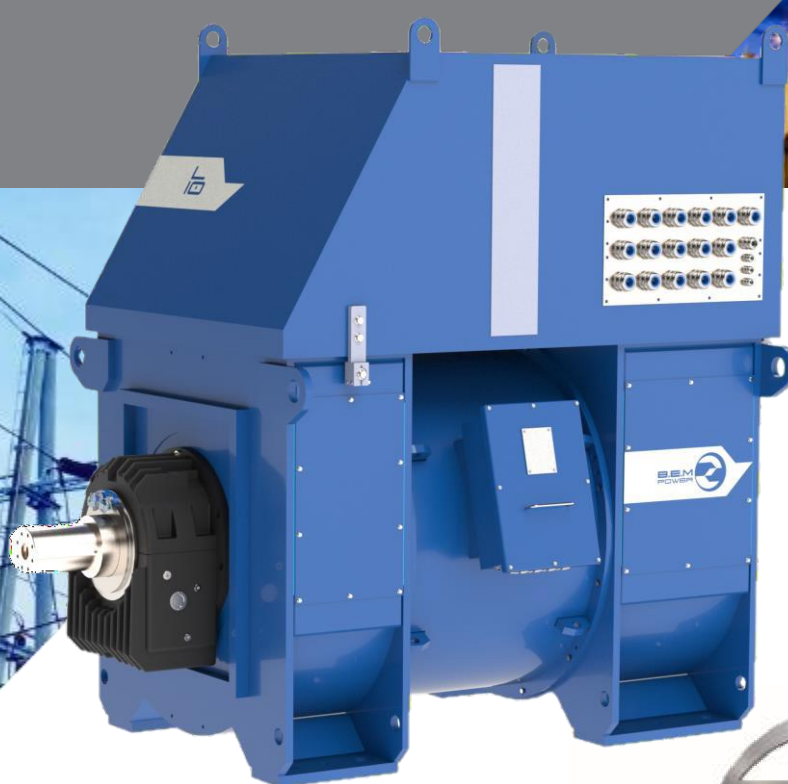
Stand-by

UPS

Ratings book

Marine applications

Motors & alternators - as individual as you.



B.E.M.

Bayerische Elektrische Maschinen GmbH



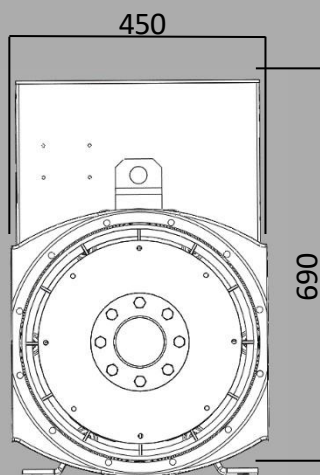
L02



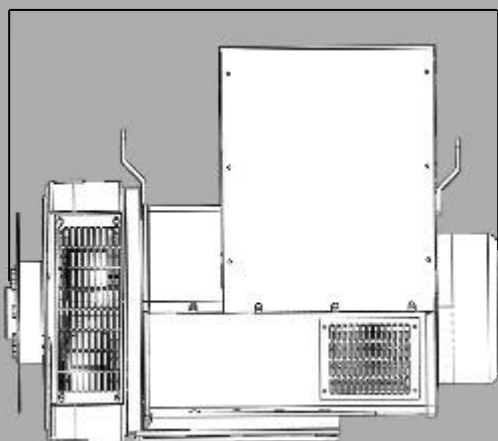
Specifications	
Voltage Range [V]	400 - 480
Poles	4
Coil and insulation	Wire wound
AVR	Analogue
Voltage sensing	2-Phase
Bearing Arrangement	Single
SAE Adaptors	4, 3, 2, 1
Terminals	12
Material Insulation Class	H
Excitation Power Supply	Self excited
Protection	IP23
Temperature monitoring	Winding RTDs
Connection with other machines	Paralleling capability

DIMENSIONS

Drawings represent standard design
All dimensions in millimetres (mm)



660min - 860max



Optional Features	
Excitation system	PMG
Output configurations	1 Phase Reconnection
Current transformers	3 pcs
Bearing arrangement	Single bearing
Environment protection	Anti-condensation Heater

Designed for	
Stand-by	●
Marine	●
Telecommunications	●
Construction	●
Critical Protection & UPS	●
Combined Heat & Power	●
Continuous Power	●

Prime Mover	
Diesel Engine	●
Gas Engine	●

31 - 92 kVA

Low Voltage

Model	Core length	Power at $\cos \varphi=0.8$ [kVA/kW]			Voltage [kV]	Frequency [Hz]	Rotating speed [rpm]
		Temperature rise/ Running Mode at 50 °C					
		110 K/Continuous	90 K/Continuous	70 K/Continuous			
L02-4-Pole	A2	38/30.4	35/28	31/24.8	0,4	50	1500
	B2	44/35.2	40/32	37.5/30	0,4	50	1500
	C1	52.3/41.8	47.5/38	42/33.6	0,4	50	1500
	D2	63.3/50.6	57.5/46	50/40	0,4	50	1500
	F1	71.5/57.2	65/52	60/48	0,4	50	1500
	A2	46.5/37.2	43.1/34.5	37.5/30	0,48	60	1800
	B2	56.3/45	51.3/41	46.3/37	0,48	60	1800
	C1	66/52.8	58.8/47	52.5/42	0,48	60	1800
	D2	80/64	71.9/57.5	62.5/50	0,48	60	1800
	F1	92/73.6	81.3/65	75/60	0,48	60	1800

1) All products are designed for 50Hz and 60Hz.

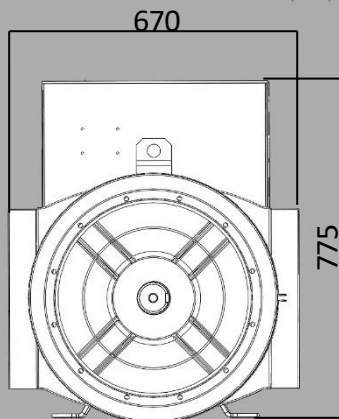


L03

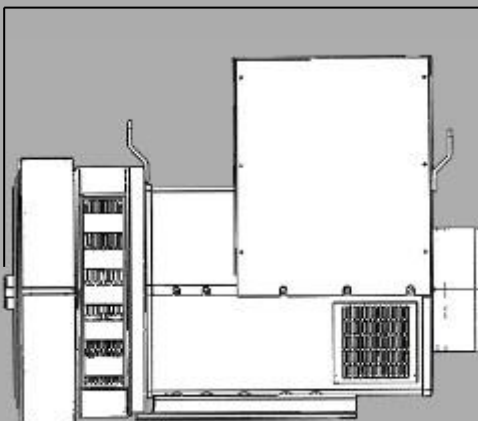


DIMENSIONS

Drawings represent standard design
All dimensions in millimetres (mm)



750min - 1020max



Specifications

Voltage Range [V]	400 - 480
Poles	4
Coil and insulation	Wire wound
AVR	Analogue
Voltage sensing	2-Phase
Bearing Arrangement	Single
SAE Adaptors	3, 2, 1
Terminals	12
Material Insulation Class	H
Excitation Power Supply	Self excited
Protection	IP23
Temperature monitoring	Winding RTDs
Connection with other machines	Paralleling capability

Optional Features

Excitation system	PMG
Ingress Protection	IP23
Current transformers	3 pcs
Bearing arrangement	Single/Double bearing
Environment protection	Anti-condensation Heater

Designed for

Stand-by	•
Marine	•
Telecommunications	•
Construction	•
Critical Protection & UPS	•
Combined Heat & Power	•
Continuous Power	•

Prime Mover

Diesel Engine	•
Gas Engine	•

67 - 285 kVA

Low Voltage

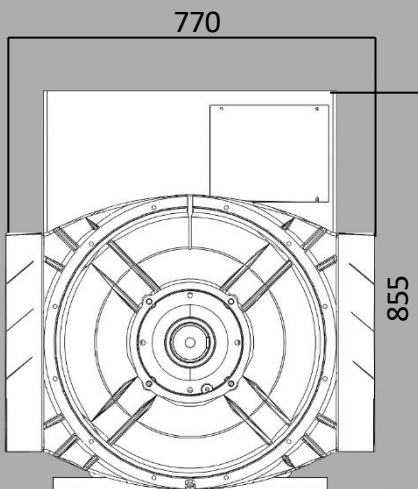
Model	Core length	Power at $\cos \varphi=0.8$ [kVA/kW]			Voltage [kV]	Frequency [Hz]	Rotating speed [rpm]
		Temperature rise/ Running Mode at 50 °C					
		110 K/Continuous	90 K/Continuous	70 K/Continuous			
L03-4-Pole	B2	81.5/65.2	77.5/62	67.5/54	0,4	50	1500
	C2	97/77.6	87.5/70	81.3/65	0,4	50	1500
	D1	120/96	112.5/90	100/80	0,4	50	1500
	E2	140/112	135/108	112.5/90	0,4	50	1500
	F1	159/127.2	149/119.2	128.6/102.8	0,4	50	1500
	F2	175/140	170/136	143.8/115	0,4	50	1500
	G2	205/164	174/139.2	169/135.2	0,4	50	1500
	B2	108.8/87	97.5/78	80/64	0,48	60	1800
	C2	125/100	112.5/90	92.5/74	0,48	60	1800
	D1	144/115.2	137.5/110	118.8/95	0,48	60	1800
	E2	168.8/135	163/130.4	143.8/115	0,48	60	1800
	F1	205.7/164.5	189/151.2	162/129.6	0,48	60	1800
	F2	225/180	218.8/175	200/160	0,48	60	1800
	G2	285/228	265/212	230/184	0,48	60	1800

1) All products are designed for 50Hz and 60Hz.

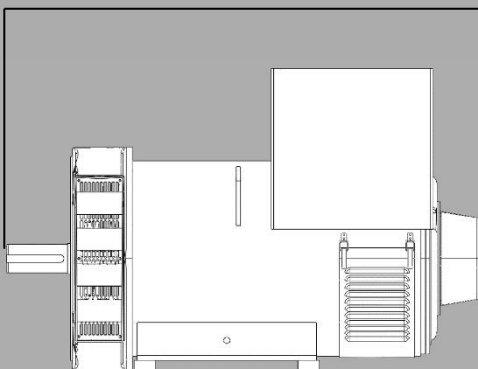


DIMENSIONS

Drawings represent standard design
All dimensions in millimetres (mm)



1100min - 1415max



L04



Specifications	
Voltage Range [V]	400 - 690
Poles	4
Coil and insulation	Wire Wound
AVR	Analogue/ Digital
Voltage sensing	3-Phase
Bearing Arrangement	Single/Double
SAE Adaptors	3, 2, 1, 1/2, 0
Terminals	6
Material Insulation Class	H
Excitation Power Supply	Auxiliary Winding / PMG
Protection	IP23
Temperature monitoring	Winding RTDs
Connection with other machines	Paralleling capability

Optional Features	
Bearing Arrangement	Sleeve/Antifriction Bearing
Ingress Protection	IP23 Air Filters / IP44 Air Filters
Shaft Currents Protection	Rotor Earthing Brush / Insulated bearings
Environment protection	Anti-condensation Heaters

Designed for	
Power Plant	●
Grid Code Compatible	●
Marine Propulsion	●
Oil & Gas	●
Combined Heat & Power	●
Continuous Power & Standby	●

Prime Mover	
Diesel Engine	●
Gas Engine	●
Gas Turbine	●
Steam Turbine	●

185 - 425 kVA

Low Voltage

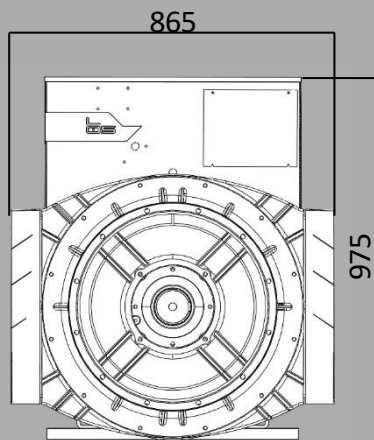
Model	Core length	Power at $\cos \varphi=0.8$ [kVA/kW]			Voltage [kV]	Frequency [Hz]	Rotating speed [rpm]
		Temperature rise/ Running Mode at 50 °C					
		110 K/Continuous	90 K/Continuous	70 K/Continuous			
L04-4-Pole	E1	215/172	210/168	185/148	0,4	50	1500
	F1	240/192	230/184	200/160	0,4	50	1500
	G1	295/236	275/220	240/192	0,4	50	1500
	H1	340/272	310/248	275/220	0,4	50	1500
	E1	270/216	255/204	225/180	0,48	60	1800
	F1	330/264	295/236	260/208	0,48	60	1800
	G1	370/296	345/276	305/244	0,48	60	1800
	H1	425/340	395/316	345/276	0,48	60	1800

1) All products are designed for 50Hz and 60Hz.



DIMENSIONS

Drawings represent standard design
All dimensions in millimetres (mm)



1265min - 1540max



L05



Specifications

Voltage Range [V]	400 - 690
Poles	4
Coil and insulation	Wire Wound
AVR	Analogue /Digital
Voltage sensing	3-Phase
Bearing Arrangement	Single/Double
SAE Adaptors	1, 1/2, 0, 00
Terminals	6
Material Insulation Class	H
Excitation Power Supply	PMG
Protection	IP23
Temperature monitoring	Winding RTDs
Connection with other machines	Paralleling capability

Optional Features

Bearing Arrangement	Sleeve/Antifriction Bearing
Ingress Protection	IP23 Air Filters / IP44 Air Filters
Shaft Currents Protection	Rotor Earthing Brush / Insulated bearings
Environment protection	Anti-condensation Heaters

Designed for

Power Plant	•
Grid Code Compatible	•
Marine Propulsion	•
Oil & Gas	•
Combined Heat & Power	•
Continuous Power & Standby	•

Prime Mover

Diesel Engine	•
Gas Engine	•

325 - 725 kVA

Low Voltage

Model	Core length	Power at $\cos \varphi=0.8$ [kVA/kW]			Voltage [kV]	Frequency [Hz]	Rotating speed [rpm]
		Temperature rise/ Running Mode at 50 °C					
		110 K/Continuous	90 K/Continuous	70 K/Continuous			
L05-4-Pole	F2	390/312	370/296	325/260	0,4	50	1500
	G1	435/348	415/332	365/292	0,4	50	1500
	H1	530/424	490/392	430/344	0,4	50	1500
	H2	585/468	525/420	460/368	0,4	50	1500
	F2	520/416	481/384.8	420/336	0,48	60	1800
	G1	570/456	531/424.8	465/372	0,48	60	1800
	H1	650/520	606/484.8	530/424	0,48	60	1800
	H2	725/580	663/530.4	582/465.6	0,48	60	1800

1) All products are designed for 50Hz and 60Hz.

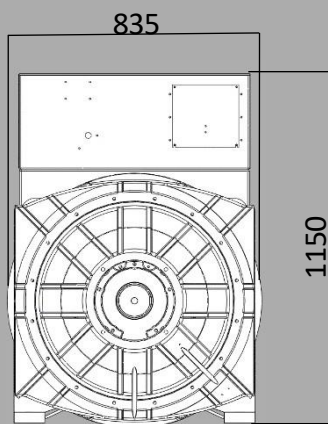


L06

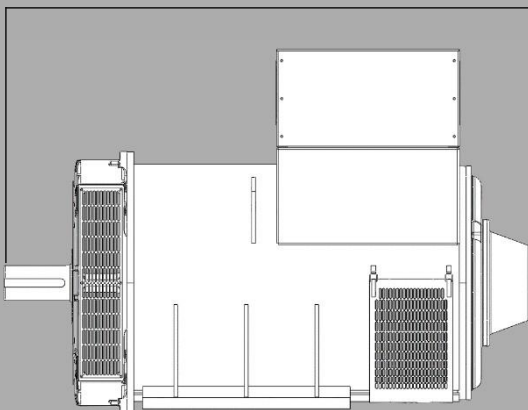


DIMENSIONS

Drawings represent standard design
All dimensions in millimetres (mm)



1550min - 1780max



Specifications	
Voltage Range [V]	400 - 690
Poles	4 and 6
Coil and insulation	Wire Wound
AVR	Digital
Voltage sensing	3-Phase
Bearing Arrangement	Single/Double
SAE Adaptors	1, 1/2, 0, 00
Terminals	6
Material Insulation Class	H
Excitation Power Supply	PMG
Protection	IP23
Temperature monitoring	Winding RTDs
Connection with other machines	Paralleling capability
Optional Features	
Bearing Arrangement	Sleeve/ Antifriction Bearing
Ingress Protection	IP23 Air Filters / IP44 Air Filters
Shaft Currents Protection	Rotor Earthing Brush/ Insulated bearings
Environment protection	Anti-condensation Heaters
Designed for	
Power Plant	●
Grid Code Compatible	●
Marine Propulsion	●
Oil & Gas	●
Combined Heat & Power	●
Continuous Power & Standby	●
Prime Mover	
Diesel Engine	●
Gas Engine	●
Gas Turbine	●
Steam Turbine	●

220 - 1275kVA

Low Voltage

Model	Core length	Power at $\cos \varphi=0.8$ [kVA/kW]			Voltage [kV]	Frequency [Hz]	Rotating speed [rpm]
		Temperature rise/ Running Mode at 50 °C					
		110 K/Continuous	90 K/Continuous	70 K/Continuous			
L06-4-Pole	G1	650/520	610/488	550/440	0,4	50	1500
	G2	785/628	720/576	656/524.8	0,4	50	1500
	H2	850/680	830/664	750/600	0,4	50	1500
	I1	950/760	920/736	800/640	0,4	50	1500
	G1	875/700	819/655.2	712/569.6	0,48	60	1800
	G2	994/795.2	925/740	800/640	0,48	60	1800
	H2	1150/920	1063/850.4	925/740	0,48	60	1800
	I1	1275/1020	1181/944.8	1010/808	0,48	60	1800
	G1	680/544	630/504	530/424	0,69	50	1500
	G2	765/612	700/560	638/510.4	0,69	50	1500
	H2	830/664	810/648	735/588	0,69	50	1500
	I1	900/720	850/680	740/592	0,69	50	1500
L06-6-pole	G1	250/200	250/200	220/176	0,4	50	1000
	G2	330/264	330/264	290/232	0,4	50	1000
	H2	400/320	400/320	350/280	0,4	50	1000
	I1	505/404	505/404	440/352	0,4	50	1000
	G1	313/250	313/250	270/216	0,48	60	1200
	G2	415/332	413/330	350/280	0,48	60	1200
	H2	500/400	500/400	430/344	0,48	60	1200
	I1	625/500	625/500	535/428	0,48	60	1200
	G1	N/A	313/250	270/216	0,60	60	1200
	G2	N/A	413/330.4	350/280	0,60	60	1200
	H2	N/A	500/400	430/344	0,60	60	1200
	I1	N/A	625/500	535/428	0,60	60	1200

1) All products are designed for 50Hz and 60Hz.

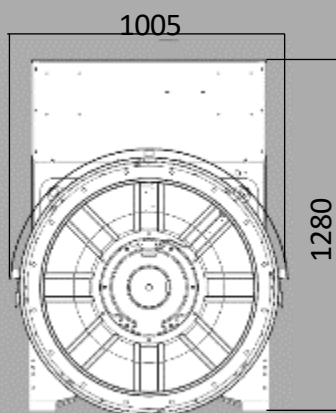


L07

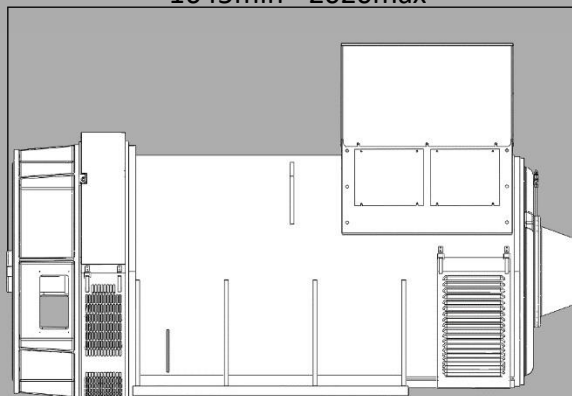


DIMENSIONS

*Drawings represent standard design
All dimensions in millimetres (mm)*



1645min - 2020max



Specifications	
Voltage Range [V]	400 - 690
Poles	4 and 6
Coil and insulation	Wire Wound
AVR	Digital
Voltage sensing	3-Phase
Bearing Arrangement	Single/Double
SAE Adaptors	0, 00
Terminals	6
Material Insulation Class	H
Excitation Power Supply	PMG
Protection	IP23
Temperature monitoring	Winding RTDs
Connection with other machines	Paralleling capability
Optional Features	
Bearing Arrangement	Sleeve/ Antifriction Bearing
Ingress Protection	IP23 Air Filters / IP44 Air Filters / IP44 Water-cooler
Shaft Currents Protection	Rotor Earthing Brush/ Insulated bearings Anti-condensation
Designed for	
Power Plant	●
Grid Code Compatible	●
Marine Propulsion	●
Oil & Gas	●
Combined Heat & Power	●
Continuous Power & Standby	●
Prime Mover	
Diesel Engine	●
Gas Engine	●
Gas Turbine	●
Steam Turbine	●

Low Voltage
480 - 2245kVA



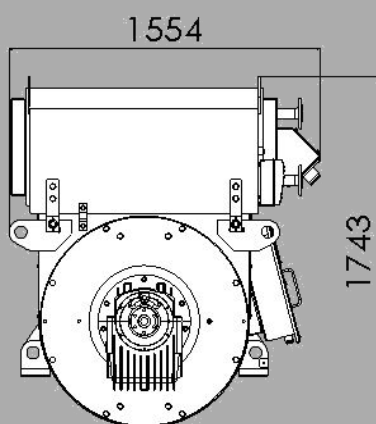
Model	Core length	Power at $\cos \varphi=0.8$ [kVA/kW]			Voltage [kV]	Frequency [Hz]	Rotating speed [rpm]
		Temperature rise/ Running Mode at 50 °C					
		110 K/Continuous	90 K/Continuous	70 K/Continuous			
L07-4-Pole	G2	N/A	1005/804	1005/804	0,4	50	1500
	H2	N/A	1240/992	1115/892	0,4	50	1500
	I1	N/A	1320/1056	1190/952	0,4	50	1500
	J1	N/A	1435/1148	1370/1096	0,4	50	1500
	J2	N/A	1580/1264	1495/1196	0,4	50	1500
	K1	N/A	1795/1436	1585/1268	0,4	50	1500
	G2	N/A	1280/1024	1215/972	0,48	60	1800
	H2	N/A	1540/1232	1360/1088	0,48	60	1800
	I1	N/A	1645/1316	1450/1160	0,48	60	1800
	J1	N/A	1875/1500	1655/1324	0,48	60	1800
	J2	N/A	2120/1696	1870/1496	0,48	60	1800
	K1	N/A	2245/1796	1980/1584	0,48	60	1800
	G2	N/A	1140/912	1005/804	0,69	50	1500
	H2	N/A	1230/984	1090/872	0,69	50	1500
	I1	N/A	1345/1076	1190/952	0,69	50	1500
	J1	N/A	1440/1152	1275/1020	0,69	50	1500
	J2	N/A	1690/1352	1495/1196	0,69	50	1500
	K1	N/A	1750/1400	1545/1236	0,69	50	1500
L07-6-pole	G2	525/420	500/400	480/384	0,4	50	1000
	I1	655/524	655/524	630/504	0,4	50	1000
	J2	900/720	850/680	800/640	0,4	50	1000
	G2	750/600	750/600	650/520	0,48	60	1200
	I1	975/780	975/780	845/676	0,48	60	1200
	J2	1240/992	1200/960	1040/832	0,48	60	1200
	G2	750/600	750/600	650/520	0,60	60	1200
	I1	975/780	975/780	845/676	0,60	60	1200
	J2	1200/960	1200/960	1040/832	0,60	60	1200

1) All products are designed for 50Hz and 60Hz.

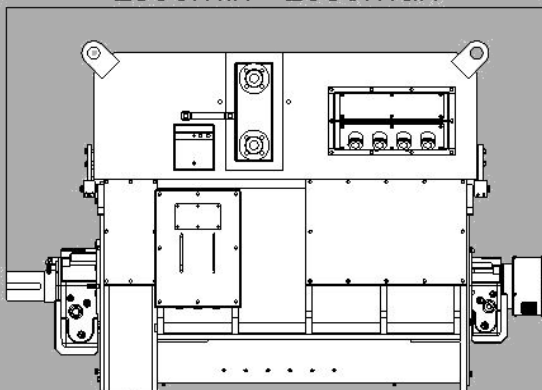


DIMENSIONS

Drawings represent standard design
All dimensions in millimetres (mm)



2500min - 2850max



L08



Specifications	
Voltage Range [V]	400 - 690
Poles	4, 6, 8, 10
Coil and insulation	Bar Wound
AVR	Digital
Voltage sensing	3-Phase
Bearing Arrangement	Single/Double
SAE Adaptors	1, 0, 00
Terminals	6
Material Insulation Class	H
Excitation Power Supply	Auxiliary Winding / PMG
Protection	IP23
Temperature monitoring	Winding RTDs
Connection with other machines	Paralleling capability

Optional Features	
Bearing Arrangement	Sleeve/Antifriction Bearing
Ingress Protection	IP23 Air Filters
Ingress Protection	IP44 / 54 / 55
Cooling Options	Totally enclosed CACA / CACW
Environment protection	Anti-condensation Heaters

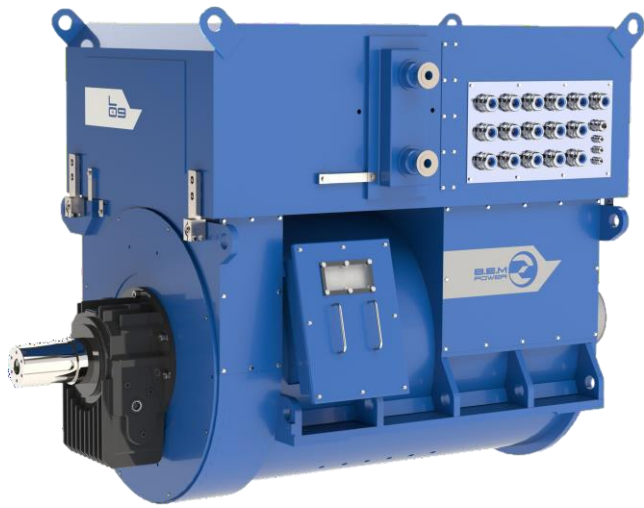
Designed for	
Power Plant	●
Grid Code Compatible	●
Marine Propulsion	●
Oil & Gas	●
Combined Heat & Power	●
Continuous Power & Standby	●

Prime Mover	
Diesel Engine	●
Gas Engine	●
Gas Turbine	●
Steam Turbine	●

Low Voltage
700 - 3230kVA

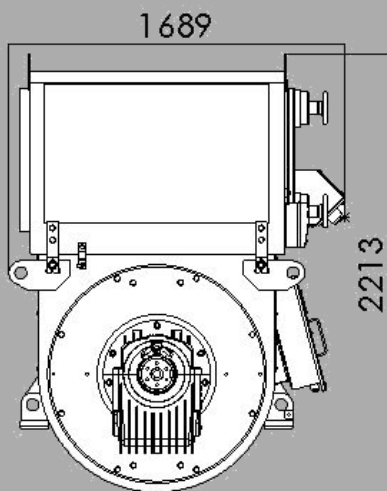
Model	Core length	Power at $\cos \varphi=0.8$ [kVA/kW]			Voltage [kV]	Frequency [Hz]	Rotating speed [rpm]
		Temperature rise/ Running Mode at 45 °C					
		125 K/Continuous	105 K/Continuous	80 K/Continuous			
L08-4-Pole	I2	1957/1566	1781/1350	1648/1318	0,4	50	1500
	L1	2698/2158	2455/1965	2272/1818	0,4	50	1500
	I2	2347/1877	2138/1710	1976/1580	0,48	60	1800
	L1	3230/2584	2945/2356	2720/2176	0,48	60	1800
	I1	1919/1535	1746/1397	1616/1293	0,69	50/60	1500/1800
	L1	2840/2272	2585/2068	2392/1914	0,69	50/60	1500/1800
L08-6-pole	H2	1425/1140	1297/1037	1200/960	0,4	50	1000
	K1	1805/1444	1644/1321	1520/1220	0,4	50	1000
	H2	1710/1368	1556/1245	1440/1152	0,48	60	1200
	K1	2176/1741	1981/1584	1833/1467	0,48	60	1200
	H2	1178/942	1072/858	992/794	0,69	50/60	1000/1200
	K1	1815/1452	1651/1321	1528/1222	0,69	50/60	1000/1200
L08-8-pole	H1	855/684	778/622	720/576	0,4	50	750
	J2	1283/1026	1168/934	1080/864	0,4	50	750
	H1	1178/943	1073/859	993/792	0,48	60	900
	J2	1691/1353	1539/1231	1424/1139	0,48	60	900
	H1	855/684	778/622	720/576	0,69	50/60	750/900
	K2	1359/1087	1236/989	1144/915	0,69	50/60	750/900
L08-10-pole	H1	637/509	580/464	536/429	0,4	50	600
	J2	1055/844	960/768	888/710	0,4	50	600
	H1	760/608	692/553	640/512	0,48	60	720
	K2	1264/1011	1150/920	1064/851	0,48	60	720
	H1	684/547	622/498	576/461	0,69	50/60	600/720
	K2	1055/844	960/768	888/710	0,69	50/60	600/720

1) All products are designed for 50Hz and 60Hz.

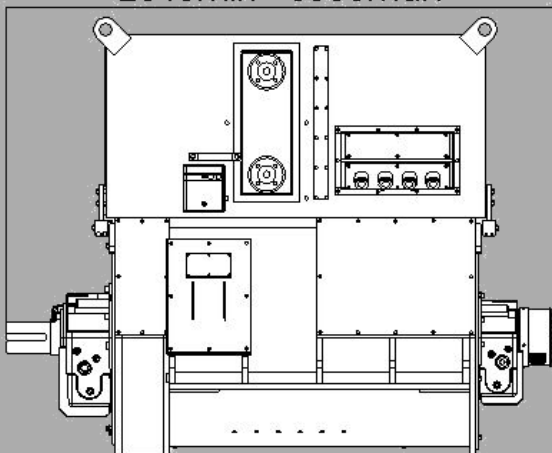


DIMENSIONS

*Drawings represent standard design
All dimensions in millimetres (mm)*



2540min - 3000max



L09



Specifications	
Voltage Range [V]	400 - 690
Poles	4, 6, 8, 10
Coil and insulation	Bar Wound
AVR	Digital
Voltage sensing	3-Phase
Bearing Arrangement	Single/Double
SAE Adaptors	1, 0, 00
Terminals	6
Material Insulation Class	H
Excitation Power Supply	Auxiliary Winding / PMG
Protection	IP23
Temperature monitoring	Winding RTDs
Connection with other machines	Paralleling capability
Optional Features	
Bearing Arrangement	Sleeve/Antifriction Bearing
Ingress Protection	IP23 Air Filters
Ingress Protection	IP44 / 54 / 55
Cooling Options	Totally enclosed CACA / CACW
Environment protection	Anti-condensation Heaters
Designed for	
Power Plant	●
Grid Code Compatible	●
Marine Propulsion	●
Oil & Gas	●
Combined Heat & Power	●
Continuous Power & Standby	●
Prime Mover	
Diesel Engine	●
Gas Engine	●
Gas Turbine	●
Steam Turbine	●

Low Voltage
1300-4465kVA

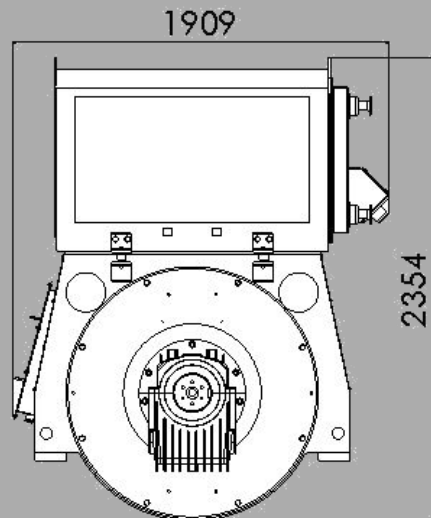
Model	Core length	Power at $\cos \varphi=0.8$ [kVA/kW]			Voltage [kV]	Frequency [Hz]	Rotating speed [rpm]
		Temperature rise/ Running Mode at 45°C					
		125 K/Continuous	105 K/Continuous	80 K/Continuous			
L09-4-Pole	K1	3278/2622	3240/2386	2760/2208	0,4	50	1500
	K1	3933/3146	3579/2863	3312/2650	0,48	60	1800
	K1	3335/2668	3034/2427	2808/2246	0,69	50/60	1500/1800
	M1	4465/3572	4063/3251	3760/3008	0,69	50/60	1500/1800
L09-6-pole	H2	2128/1702	1936/1549	1792/1434	0,4	50	1000
	K2	2898/2318	2637/2109	2318/1854	0,4	50	1000
	H2	2554/2043	2324/1859	2043/1634	0,48	60	1200
	K2	3477/2782	3164/2531	2928/2342	0,48	60	1200
	I1	1948/1558	1773/1417	1640/1312	0,69	50/60	1000/1200
	L1	3040/2432	2766/2214	2560/2048	0,69	50/60	1000/1200
	L1	1568/1254	1427/1141	1320/1056	0,4	50	750
L09-8-pole	L1	2404/1923	2187/1750	1923/1538	0,4	50	750
	I1	1976/1581	1798/1438	1664/1331	0,48	60	900
	L1	3031/2424	2758/2206	2552/2042	0,48	60	900
	J1	1834/1467	1668/1335	1544/1235	0,69	50/60	750/900
	L2	2404/1923	2187/1842	2024/1619	0,69	50/60	750/900
	H2	1159/927	1055/844	976/781	0,4	50	600
	L1	1739/1391	1582/1265	1464/1171	0,4	50	600
L09-10-pole	H2	1391/1112	1265/1013	1171/937	0,48	60	720
	L1	2086/1669	1898/1519	1757/1405	0,48	60	720
	H2	1159/927	1054/844	927/742	0,69	50/60	600/720
	L2	1900/1520	1729/1383	1520/1216	0,69	50/60	600/720

1) All products are designed for 50Hz and 60Hz.

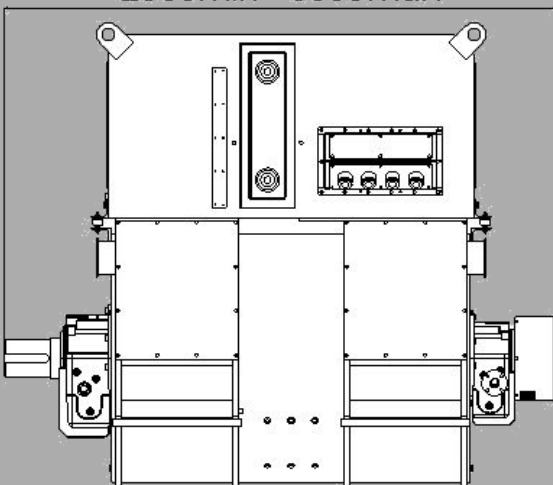


DIMENSIONS

Drawings represent standard design
All dimensions in millimetres (mm)



2800min - 3350max



L10



Specifications	
Voltage Range [V]	400 - 690
Poles	4, 6, 8, 10
Coil and insulation	Bar Wound
AVR	Digital
Voltage sensing	3-Phase
Bearing Arrangement	Single/Double
SAE Adaptors	1, 0, 00
Terminals	6
Material Insulation Class	H
Excitation Power Supply	Auxiliary Winding / PMG
Protection	IP23
Temperature monitoring	Winding RTDs
Connection with other machines	Paralleling capability
Optional Features	
Bearing Arrangement	Sleeve/Antifriction Bearing
Ingress Protection	IP23 Air Filters
Ingress Protection	IP44 / 54 / 55
Cooling Options	Totally enclosed CACA / CACW
Environment protection	Anti-condensation Heaters
Designed for	
Power Plant	•
Grid Code Compatible	•
Marine Propulsion	•
Oil & Gas	•
Combined Heat & Power	•
Continuous Power & Standby	•
Prime Mover	
Diesel Engine	•
Gas Engine	•
Gas Turbine	•
Steam Turbine	•

2100-4750kVA

Low Voltage

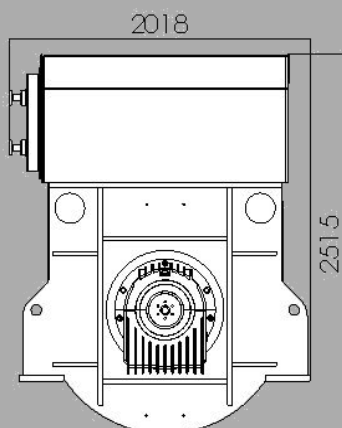
Model	Core length	Power at $\cos \phi=0.8$ [kVA/kW]			Voltage [kV]	Frequency [Hz]	Rotating speed [rpm]
		Temperature rise/ Running Mode at 45 °C					
		125 K/Continuous	105 K/Continuous	80 K/Continuous			
L10-4-Pole	K1	3800/3040	3534/2827	3280/2624	0,4	50	1500
	K1	4560/3648	4241/2365	3936/3149	0,48	60	1800
L10-6-pole	J1	3230/2584	2909/2404	2788/2230	0,4	50	1000
	M2	4703/3762	4374/3499	4059/3247	0,4	50	1000
	J1	3876/3101	3604/2884	3346/2676	0,48	60	1200
	M2	5643/4514	5248/4198	4871/3897	0,48	60	1200
	J2	3325/2660	3092/2474	2870/2296	0,69	50/60	1000/1200
	N1	4750/3800	4418/3534	4100/3280	0,69	50/60	1000/1200
	J2	2755/2204	2562/2050	2378/1902	0,4	50	750
L10-8-pole	M2	3829/3062	3561/2848	3305/2644	0,4	50	750
	J2	3306/2645	3074/2460	2854/2283	0,48	60	900
	M2	4594/3676	4272/3418	3966/3172	0,48	60	900
	K2	2565/2052	2385/1909	2214/1771	0,69	50/60	750/900
	N1	1909/2888	3357/2686	3116/2493	0,69	50/60	750/900
	K1	2043/1634	1900/1520	1763/1410	0,4	50	600
	N2	2964/2371	2757/2205	2558/2047	0,4	50	600
L10-10-pole	K1	2451/1961	2279/1824	2116/1692	0,48	60	720
	N2	3557/2845	3308/2647	3070/2456	0,48	60	720
	J2	1976/1581	1837/1471	1706/1364	0,69	50/60	600/720
	O1	3088/2470	2872/2297	2665/2132	0,69	50/60	600/720

1) All products are designed for 50Hz and 60Hz.

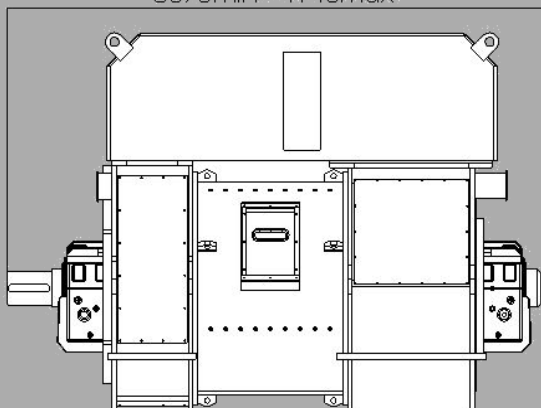


DIMENSIONS

*Drawings represent standard design
All dimensions in millimetres (mm)*



3595min - 4145max



L11



Specifications	
Voltage Range [V]	400 - 690
Poles	8, 10
Coil and insulation	Bar Wound
AVR	Digital
Voltage sensing	3-Phase
Bearing Arrangement	Single/Double
SAE Adaptors	1, 0, 00
Terminals	6
Material Insulation Class	H
Excitation Power Supply	Auxiliary Winding / PMG
Protection	IP23
Temperature monitoring	Winding RTDs
Connection with other machines	Paralleling capability

Optional Features	
Bearing Arrangement	Sleeve/Antifriction Bearing
Ingress Protection	IP23 Air Filters
Ingress Protection	IP44 / 54 / 55
Cooling Options	Totally enclosed CACA / CACW
Environment protection	Anti-condensation Heaters

Designed for	
Power Plant	•
Grid Code Compatible	•
Marine Propulsion	•
Oil & Gas	•
Combined Heat & Power	•
Continuous Power & Standby	•

Prime Mover	
Diesel Engine	•
Gas Engine	•
Gas Turbine	•
Steam Turbine	•

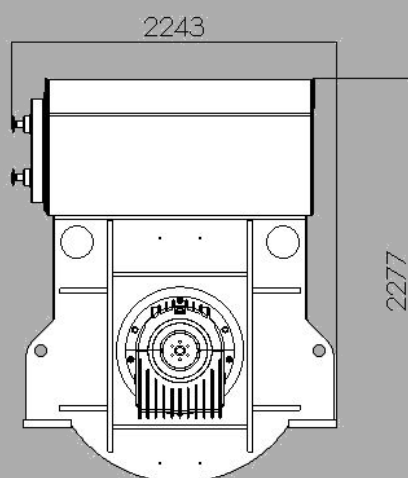
2500-9000kVA

Low Voltage

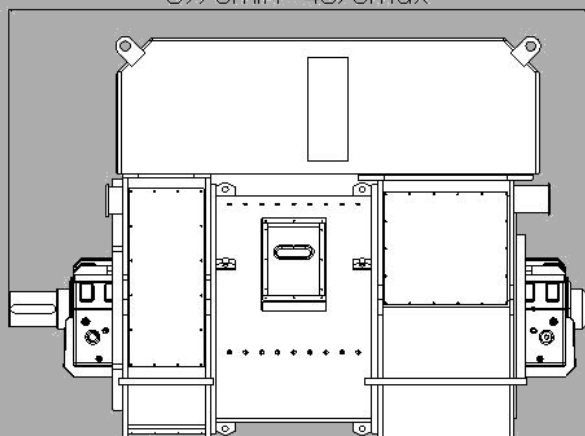


DIMENSIONS

Drawings represent standard design
All dimensions in millimetres (mm)



3976min - 4376max



L12



Specifications	
Voltage Range [V]	400 - 690
Poles	8, 10
Coil and insulation	Bar Wound
AVR	Digital
Voltage sensing	3-Phase
Bearing Arrangement	Single/Double
SAE Adaptors	1, 0, 00
Terminals	6
Material Insulation Class	H
Excitation Power Supply	Auxiliary Winding / PMG
Protection	IP23
Temperature monitoring	Winding RTDs
Connection with other machines	Paralleling capability
Optional Features	
Bearing Arrangement	Sleeve/Antifriction Bearing
Ingress Protection	IP23 Air Filters
Ingress Protection	IP44 / 54 / 55
Cooling Options	Totally enclosed CACA / CACW
Environment protection	Anti-condensation Heaters
Designed for	
Power Plant	•
Grid Code Compatible	•
Marine Propulsion	•
Oil & Gas	•
Combined Heat & Power	•
Continuous Power & Standby	•
Prime Mover	
Diesel Engine	•
Gas Engine	•
Gas Turbine	•
Steam Turbine	•

5000-9000kVA

Low Voltage



Alternator selection: Rated load vs Type load (de-rating factors)

To select the right alternator, the following conditions should be taken into consideration:

(1) Environment conditions

- Derating and uprating for allowable temperature rise compared to allowable temperature rise acc. IEC 60034 or other classification
- Derating regarding altitude above sea level
- Derating due to air inlet filters
- Derating due to non-standard rated voltages
- Derating due to extended voltage zone

(2) Divergent operation modes

- Derating for power factor range 0.7 to 1.0
- Derating due to converter load
- Uprating for Stand by mode
- Unbalanced load
- Voltage rise due to load switch off
- Wide voltage range
- Wide frequency range
- Stator pitch requirements

**For divergent operation de-rating factors, please contact applications engineering.*



Alternator selection: Rated load vs Type load (de-rating factors)

➤ Ambient temperature

- If the ambient (alternator air inlet temperature) exceeds 40 °C then the alternator output rating must be reduced using the following tables.

Utilisation	Class H	Class F	Class B
Temperature °C	Multiplying Factor	Multiplying Factor	Multiplying Factor
45	0.968	0.963	0.955
50	0.935	0.925	0.910
55	0.903	0.888	0.865
60	0.870	0.850	0.820

**For ambient temperatures above 60 °C please consult applications engineering.*

➤ Altitude

- All ratings are based on altitude up to 1000 meters above sea level. If the altitude exceeds 1000m then the alternator output ratings must be de-rated using the following table.

Altitude above sea level in meters	Multiplying Factor
1500	0.95
2000	0.9
2500	0.85
3000	0.8

**For ambient temperatures above 60 °C please consult applications engineering.*



Application Guidance Notes Marine Societies

	Temp.rise H Ambient temperature	Temp.rise F Ambient temperature	short-circuit	transient voltage drop	overload	
LR Lloyd's Register Marine and Shipping	110°/45°	95°/45°	300% 2 sec	15% 06 Pn P.F.=0,4 1,5 sec recover	150% 15 sec	differential protection above 1500 kVA propulsion generator: PT100 in Winding Shaft generator : PT100 o bearings
ABS American Bureau of Shipping	115°/50°	95°/50°	300% 2 sec	not specified	150% 2 min	propulsion generator PT100 in winding Shaft generator PT100 on bearings
BV Bureau Veritas >100 kVA	120°/45°	100°/45°	300% 2 sec P>50kW	15% 06Pn P.F.=0,4	150% 15 sec	differential protection above 1500 kVA propulsion generator PT100 in winding Shaft generator PT100 on bearings
DNV det Norske Veritas	120°/45°	100°/45°	300% 1 sec	15% P.Max P.F.=0,4	150% P.F.=0,6 2 min	differential protection above 1500 kVA propulsion generator PT100 in winding Coupling bore tolerance must be N7
RINA Registro Italiano Navale	120°/45°	100°/45°	300% 2 sec	15% 06 Pn P.F.=0,4	150% 15 sec	differential protection above 1500 Kva propulsion generator PT100 in winding Shaft generator PT100 on bearings
RS Russian Maritime register of shipping	120°/45°	95°/45°	not specified	15% 06 Pn P.F.=0,4	150% 2 min Un- 10% P.F.=0,6	differential protection above 1000kVA propulsion generator PT100 in winding Shaft generator PT100 on bearings

Rev.3 dtd. 07.10.2022