DNV·GL

Certificate No:
TAE000000J

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Generator

with type designation(s)
ARCB 360, 440, 450, 580, 590, 667, 680, 690, 800, 820, 860, 930, 1400, 1800 Series

Issued to
Leroy Somer - North America
Lexington TN, United States

is found to comply with
DNV GL rules for classification – Ships and offshore units

Application :

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.

Enclosure class	**IP22 or IP23 or IP44**
Insulation class	**H**
Temp. class	**50ºC Ambient**
Voltage class	**Up to 690 V**
Power class	**Up to 2812,5 KVA**
Frequency class	**50 or 60 Hz**
Speed	**1000, 1200, 1500 or 1800 RPM**

This Certificate is valid until **2020-06-30**.

Issued at **Høvik** on **2015-11-17**

for **DNV GL**

DNV GL local station: **Houston**

Approval Engineer: **Ludovico Gullifa**

Marit Laumann
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.
The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

© DNV GL 2014. DNV GL and the Horizon Graphic are trademarks of DNV GL AS.

Product description

ARCB 360 for 3 phase, with 4 pole - brushless A.C. generators

	Frame Size	Insulation	Hz	kVA	kW	Volts	RPM
1	ARCB 365	Class H	50	62.5	50	415	1500
2	ARCB 365	Class H	50	65.6	52.5	200/400	1500
3	ARCB 365	Class H	60	87.5	70	240/480	1800
4	ARCB 368	Class H	50	106.25	85	200/400	1500
5	ARCB 368	Class H	60	137.5	110	240/480	1800
6	ARCB 368	Class H	50	97.5	78	415	1500
ARCB 440 and ARCB 450 for 3 phase, with 4 pole, brushless A.C. generators							
	Frame Size	**Insulation**	**Hz**	**kVA**	**kW**	**Volts**	**RPM**
7	ARCB 445	Class H	50	162.50	130	200/400	1500
8	ARCB 445	Class H	50	156.25	125	415	1500
9	ARCB 445	Class H	60	206.25	165	240/480	1800
10	ARCB 445	Class H	60	225	180	440/480	1800
11	ARCB 446	Class H	50	187.50	150	200/400	1500
12	ARCB 446	Class H	50	181.25	145	415	1500
13	ARCB 446	Class H	60	225.00	180	240/480	1800
14	ARCB 447	Class H	50	206.25	165	200/400	1500
15	ARCB 447	Class H	60	262.50	210	240/480	1800
16	ARCB 448	Class H	50	238.00	190	200/400	1500
17	ARCB 448	Class H	60	288.00	230	240/480	1800
18	ARCB 449	Class H	50	250.00	200	415	1500
19	ARCB 449	Class H	50	250.00	200	200/400	1500
20	ARCB 449	Class H	50	250.00	200	415	1500
21	ARCB 449	Class H	60	312.50	250	240/480	1800
22	ARCB 450	Class H	50	300.00	240	415	1500
23	ARCB 450	Class H	50	331.25	265	380	1500
24	ARCB 450	Class H	50	325.00	260	415	1500
25	ARCB 450	Class H	60	400.00	320	440	1800
26	ARCB 450	Class H	60	400.00	320	660	1800
ARCB 580 and ARCB 590 for 3 phases, 4 or 6 poles brushless A.C. generators							
	Frame Size	**Insulation**	**Hz**	**kVA**	**kW**	**Volts**	**RPM**
27	ARCB 582	Class H	50	300	240	200/400	1500
28	ARCB 582	Class H	60	375	300	240/480	1800
29	ARCB 584	Class H	50	350	280	200/400	1500
30	ARCB 584	Class H	60	437.5	350	240/480	1800
31	ARCB 584	Class H	50	375	300	200/400	1500
32	ARCB 584	Class H	60	450	360	240/480	1800
33	ARCB 587	Class H	50	319	255	200/400	1000
34	ARCB 587	Class H	60	388	310	240/480	1200

35	ARCB 588	Class H	50	437.5	350	200/400	1500
36	ARCB 588	Class H	60	543.75	435	240/480	1800
37	ARCB 589	Class H	50	537.5	430	200/400	1500
38	ARCB 589	Class H	60	675	540	240/480	1800
39	ARCB 592	Class H	50	493,75	395	380/400	1500
40	ARCB 592	Class H	60	606,25	485	440/480	1800
41	ARCB 592	Class H	60	555	444	440/480	1800
42	ARCB 592	Class H	50	437,5	350	415	1500
43	ARCB 594	Class H	60	625	500	440/480	1800
44	ARCB 595	Class H	50	563	450	380/400	1500
45	ARCB 595	Class H	60	731,25	585	440/480	1800
46	ARCB 595	Class H	60	688	550	440/480	1800
47	ARCB 596	Class H	50	625	500	415	1500
48	ARCB 596	Class H	60	812.5	650	600	1800
49	ARCB 596	Class H	60	737,5	590	450	1800
50	ARCB 596	Class H	60	812.5	650	440/480	1800
51	ARCB 596	Class H	50	637,5	510	380/400	1500
52	ARCB 597	Class H	50	662.5	530	380	1500
53	ARCB 597	Class H	50	662.5	530	415	1500
54	ARCB 597	Class H	60	843.75	675	440	1800
55	ARCB 597	Class H	60	688	550	440/480	1800
ACRB 667 for 3-phases, 4 poles brushless A.C. generators :							
	Frame Size	**Insulation**	**Hz**	**kVA**	**kW**	**Volts**	**RPM**
56	ARCB 667	Class H	50	737.5	590	380/400	1000
57	ARCB 667	Class H	60	812.5	650	440/480	1200
ARCB 680 for 3 phases, 4 or 6 poles brushless A.C. generators							
	Frame Size	**Insulation**	**Hz**	**kVA**	**kW**	**Volts**	**RPM**
58	ARCB 681	Class H	50	656.25	525	200/400	1500
59	ARCB 681	Class H	60	850	680	240/480	1800
60	ARCB 683	Class H	50	444	355	200/400	1000
61	ARCB 683	Class H	60	544	435	240/480	1200
62	ARCB 684	Class H	50	500	400	200/400	1000
63	ARCB 684	Class H	60	613	490	240/480	1200
64	ARCB 685	Class H	50	875	700	200/400	1500
65	ARCB 685	Class H	60	1031.25	825	240/480	1800
66	ARCB 686	Class H	50	625	500	200/400	1000
67	ARCB 686	Class H	60	750	600	240/480	1200
68	ARCB 687	Class H	50	688	550	200/400	1000
69	ARCB 687	Class H	60	875	700	240/480	1200
70	ARCB 689	Class H	50	1000	800	200/400	1500
71	ARCB 689	Class H	60	1219	975	240/480	1800

ARCB 690 for 3-phases, 4 poles brushless A.C. generators							
	Frame Size	**Insulation**	**Hz**	**kVA**	**kW**	**Volts**	**RPM**
72	ARCB 690	Class H	50	662.5	530	380/400	1500
73	ARCB 690	Class H	60	800	640	440/480	1800
74	ARCB 690	Class H	50	750	600	380/400	1500
75	ARCB 690	Class H	60	906.25	725	440/480	1800
76	ARCB 691	Class H	50	912.5	730	380/400	1500
77	ARCB 691	Class H	60	1093.75	875	440/480	1800
78	ARCB 691	Class H	50	987.5	790	380/400	1500
79	ARCB 691	Class H	60	1187.5	950	440/480	1800
80	ARCB 692	Class H	50	987.5	790	380/400	1500
81	ARCB 692	Class H	60	1187.5	950	440/480	1800
82	ARCB 692	Class H	50	1037.5	830	380/400	1500
83	ARCB 692	Class H	60	1250	1000	440/480	1800
84	ARCB 693	Class H	50	1012.5	810	380/400	1500
85	ARCB 693	Class H	60	1218.75	975	440/480	1800
85	ARCB 693	Class H	50	1093.75	875	380/400	1500
87	ARCB 693	Class H	60	1312.5	1050	440/480	1800
88	ARCB 693	Class H	50	800	1000	690	1500
89	ARCB 695	Class H	50	1168.75	935	380/400	1500
90	ARCB 695	Class H	60	1406.25	1125	440/480	1800
91	ARCB 695	Class H	50	1275	1020	380/400	1500
92	ARCB 695	Class H	60	1531.25	1225	440/480	1800
93	ARCB 696	Class H	50	1275	1020	380/400	1500
94	ARCB 696	Class H	60	1531.25	1225	440/480	1800
95	ARCB 696	Class H	50	1406.25	1125	380/400	1500
96	ARCB 696	Class H	60	1687.5	1350	440/480	1800
97	ARCB 697	Class H	60	1593.75	1275	440/480	1800
98	ARCB 697	Class H	50	1325	1060	380/400	1500
ARCB 800 for 3 phases, 4 or 6 poles brushless A.C. generators							
	Frame Size	**Insulation**	**Hz**	**kVA**	**kW**	**Volts**	**RPM**
99	ARCB 806	Class H	50	1219	975	200 /400	1500
100	ARCB 806	Class H	60	1469	1175	240 /480	1800
101	ARCB 806	Class H	50	900	720	200 /400	1000
102	ARCB 806	Class H	60	1075	860	240 /480	1200
103	ARCB 807	Class H	50	1437.5	1150	200 /400	1500
104	ARCB 807	Class H	60	1718.8	1375	240 /480	1800
105	ARCB 807	Class H	50	988	790	200 /400	1000
106	ARCB 807	Class H	60	1188	950	240 /480	1200
107	ARCB 808	Class H	50	1656	1325	200 /400	1500
108	ARCB 808	Class H	60	1969	1575	240 /480	1800

109	ARCB 809	Class H	50	1193.75	955	200 /400	1000
110	ARCB 809	Class H	60	1418.8	1135	240 /480	1200
ARCB 820 for 3-phases, 4 poles brushless A.C. generators							
	Frame Size	**Insulation**	**Hz**	**kVA**	**kW**	**Volts**	**RPM**
111	ARCB 822	Class H	50	1250	1000	380/400	1500
112	ARCB 822	Class H	60	1500	1200	440/480	1800
113	ARCB 822	Class H	60	1337.5	1070	690	1800
114	ARCB 822	Class H	50	1412.5	1130	380/400	1500
115	ARCB 822	Class H	60	1700	1360	440/480	1800
116	ARCB 824	Class H	60	1700	1360	690	1800
117	ARCB 824	Class H	50	1637.5	1310	380/400	1500
118	ARCB 824	Class H	60	1968.75	1575	440/480	1800
119	ARCB 824	Class H	60	1700	1360	660	1800
120	ARCB 824	Class H	50	1768.75	1415	380/400	1500
121	ARCB 824	Class H	60	2125	1700	440/480	1800
122	ARCB 825	Class H	50	1818.75	1455	380/400	1500
123	ARCB 825	Class H	60	2187.5	1750	440/480	1800
124	ARCB 825	Class H	50	2056.25	1645	380/400	1500
125	ARCB 825	Class H	60	2468.75	1975	440/480	1800
126	ARCB 825	Class H	60	1875	1500	600	1800
127	ARCB 825	Class H	60	1626	2032,5	690	1800
128	ARCB 826	Class H	50	1975	1600	380/400	1500
129	ARCB 826	Class H	60	2375	1900	440/480	1800
130	ARCB 826	Class H	50	1785.71	1250	600	1500
131	ARCB 826	Class H	50	2187.5	1750	380/400	1500
132	ARCB 826	Class H	60	2625	2100	380/400	1800
133	ARCB 826	Class H	60	2206,25	1765	690	1800
134	ARCB 826	Class H	60	1700	1360	450	1800
135	ARCB 826	Class H	60	2281,25	1825	690	1800
136	ARCB 827	Class H	60	2281.25	1825	690	1800
137	ARCB 827	Class H	50	2081.25	1665	380/400	1500
138	ARCB 827	Class H	60	2500	2000	440/480	1800
139	ARCB 827	Class H	60	2281	1825	660	1800
140	ARCB 827	Class H	60	2281	1825	690	1800
141	ARCB 827	Class H	50	2343.75	1875	380/400	1500
142	ARCB 827	Class H	60	2812.5	2250	440/480	1800
ARCB 860 For 3 phases, 6 poles brushless A.C. generators							
	Frame Size	**Insulation**	**Hz**	**kVA**	**kW**	**Volts**	**RPM**
143	ARCB 867	Class H	60	1471	1030	600	1200
144	ARCB 868	Class H	60	2150	1505	600	1200

ARCB 930 For 3 phases, 4 poles brushless A.C. generators							
145	**Frame Size**	**Insulation**	**Hz**	**kVA**	**kW**	**Volts**	**RPM**
146	ARCB 936	Class H	60	790	632	440/480	1800
147	ARCB 936	Class H	50	646	517	380/400	1500
148	ARCB 936	Class H	50	646	517	415	1500
ARCB 1400 For 3 phases, 4 poles brushless A.C. generators							
	Frame Size	**Insulation**	**Hz**	**kVA**	**kW**	**Volts**	**RPM**
149	1423	Class H	60	913	730	690	1800
150	1467	Class H	60	1312,5	1050	440/480	1800
151	1467	Class H	60	1137,5	910	460	1800
ARCB 1800 For 3 phases, 4 poles brushless A.C. generators							
	Frame Size	**Insulation**	**Hz**	**kVA**	**kW**	**Volts**	**RPM**
152	1842	Class H	60	2125	1700	600	1800
153	1842	Class H	60	2125	1700	440/480	1800

Manufacturer place

1) Leroy Somer-North America,
   669 Natchez Trace Drive, Lexington TN 38351
2) Emerpowersys-Reynosa Mexico.
   Mexico Ave. Industrial Reynosa Lote 6 Reynosa Tamaulipas, 88780 Mexico

Application/Limitation

Approved for installation onboard ships and mobile offshore units in non-hazardous areas.

The generator must be regarded as a component. The voltage regulator is not a part of this type approval. The end user/ system responsible to insure that the generator including the voltage regulator fulfils the DNV Rules Pt.4, Ch.8, Sec.5, B 203.

Type Approval documentation

Tests carried out

Temperature at full load, high voltage, insulation resistance, overspeed, winding resistance, overload and excitation voltage and current, voltage variations during during transient loading and unloading, measuring of open circuit voltage and short circuit characteristics and vibration (self excited).

Marking of product

Manufacturer's name responsible – TAC No. - type designation - serial number - date of manufacture- voltage – frequency - speed - power class (kW / kVA) - winding insulation class - degree of protection- place of assembly.

Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the Type approval is complied with and that no alterations are made to the product design or choice of materials.

The main elements of the periodical assessment are:

- Inspection on factory samples, selected at random from the production line (where practicable)
- Results from Production Sample Tests (PST) and Routines (RT) checked (if not available tests according to PST and RT to be carried out)
- Review of type approval documentation
- Review of possible change in design, materials and performance
- Ensuring traceability between manufacturer's product type marking and Type Approval Certificate.

Periodical assessment to be performed at least every second year.

END OF CERTIFICATE