
Technical Report

V00

Test standard:
ECE R10

Level of amendment:
06 Series of amendments, 03 supplement

Title:
Electromagnetic compatibility

Manufacturer:
Foshan Alpicool Holding Group Co., Ltd.

Type:
CR90X

Subject of testing:
Component

0 General:

- | | | |
|-------|---|---|
| 0.1 | Make
(trade name of manufacturer): | Alpicool,  |
| 0.2 | Type: | CR90X |
| 0.2.1 | Commercial description(s): | DC compressor fridge |
| 0.2.2 | Variant: | D20, DM20, D25, D30, DM30, DA30, DM30-P, CR40, CR40S, CR40X, R40, R40M, CR40X-S, R40M-S, R40S, CR50, R50, CR50X, CR50S, R50M, CR50X-S, R50S, R50M-S, CR65S, CR65X-S, CR65X, R65, CR65, DR80, JC80, R80, CR80, R85S, CR85X-S, R85, CR85X, R90, CR90, R90M, R90S, CR90X-S, CR90S, R90M-S, CR90X, CR130, CR130S, |
| 0.3 | Means of identification of type, if marked on the vehicle / component / technical unit: | refer to information document |
| 0.3.1 | Location of that markings: | refer to information document |
| 0.4 | Category of vehicle: | n.a. |
| 0.5 | Manufacturer's name and address: | Foshan Alpicool Holding Group Co., Ltd.
No.3, ZhenZhu Road, Yang'e,
Lunjiao Street, Shunde District,
Foshan City, Guangdong Province |
| 0.8 | Name(s) and address(es) of assembly plant(s): | refer to information document |
| 0.9 | Name and address of representative: | n.a. |
| | Location of the approval mark: | refer to information document |

1 Appendices

- | | | |
|-----|-----------------------|----------------|
| 1.1 | Test Record | See appendix A |
| 1.2 | List of modifications | See appendix B |

2 **Attachments:**

- | | | |
|-----|---------------------|---------------------------|
| 2.1 | Information folder: | No.: IF_CR90X_R10.06_00 |
| | | Date of issue: 22.11.2025 |
| 2.2 | Test Report: | No.: SZEM250800828301 |
| | | Date of issue: 18.11.2025 |

3 Statement of conformity:

The information folder as mentioned under no. 2.1 and the object described therein are in compliance with the test standard mentioned above.

The test results relate only to the test specimen, as received.

The test specimen was/were selected as worst case from the information folder of the type acc.to SOP M3780, and on this basis, it is/they are representative for the type to be approved.

The tests were carried out in accordance to the relevant requirements of the

☐ EN ISO/IEC 17025

☒ EN ISO/IEC 17020

Test Laboratory

SGS-TÜV Saar GmbH

notified by

KBA Kraftfahrt-Bundesamt, Germany No. KBA-P 00084-10	NSAI National Standards Authority of Ireland No. 101	RDW Rijksdienst voor het Wegverkeer, The Netherlands No. 99050064 00	TRANSPORT STYRELSEN, Sweden No. TT 0015
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Formal review (Conformity Check) by:

Authorized by expert:

Cinney Zhang

Powell Bao



Cinney Zhang

Powell Bao

Shanghai, 12.12.2025

Technical Report
No.: HOM ECN T25/359-00
Type: CR90X

Page
5 of 11

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To assess the conformity, the laboratory refers to the "scope classification" of the Kraftfahrt-Bundesamt (KBA) – Federal Motor Transport Authority (in its valid version at the time of testing) and the specified consideration of the measurement uncertainty for the related test procedure.

In case the measurement uncertainty does not need to be considered according to the scope classification, the laboratory considers the result conform if its measured value is within the specification.

In case the measurement uncertainty does need to be considered according to the scope classification, the laboratory considers the result conform if its value incl. its measurement uncertainty is within the specification.

	<u>Test record</u>	UN-R10.06, supplement 3, ESA
1	<u>Test conditions</u>	
1.1	Test component	
1.1.1	Function description	Once installed, only the front of the fridge is accessible. The fridge is only suitable for cooling, freezing and storing foodstuffs.
1.1.2	Type	CR90X
1.1.3	ESA(s) / Variant(s)	CR50X, CR65, CR90X, CR90
	Software version and checksum (if applicable)	n.a.
	Hardware	n.a.
1.1.4	Tested operating mode(s)	See test report of the enclosure.
1.1.5	Tested rated voltage(s)	☐ 12V ☐ 24V ☒ 12V/24V
1.1.6	The approval object is ...	
	an ESA that is not related to a connection system for charging a REESS	☒ yes ☐ no
	Have the HV voltages and HV currents been taken into account in the tests and measurements?	☐ yes ☐ no ☒ n.a.
	a complete connection system for charging a REESS	☐ yes ☒ no
	Have the HV voltages and HV currents been taken into account in the tests and measurements?	☐ yes ☐ no ☒ n.a.
	a component of a connection system for charging a REESS	☐ yes ☒ no
	Have the HV voltages and HV currents been taken into account in the tests and measurements?	☐ yes ☐ no ☒ n.a.
	a light source or a part of a light source acc. to item 3.2.10 of the Regulation?	☐ yes ☒ no

	Approval number or number of test report	☒ n.a.
1.1.7	Do the devices of the type have immunity related functions?	☐ yes ☒ no
	Reason if necessary:	ESA not safety-related according to item 2.12 of the Regulation.
1.1.8	Do the devices of the type have to be in operation during the engine start phase?	☐ yes ☒ no
1.1.9	Photo documentation of the examinee including existing labels	See test report of the enclosure.
1.1.10	Remarks:	☐ n.a A total of five schemes were tested, including models CR50X, CR65, CR90X, and CR90 (See Table 1 of information document for detailed test model configurations). since according to the declaration from the applicant, the equipment under test (EUT) has multiple matching schemes. Apart from differences in appearance, color, model, and capacity, The detailed information of each matching scheme is shown in Table 2 of information document.
1.2	Test equipment	
	Parameter of the test area:	The equipment, on which the tests were carried out, fulfilled the requirements of the Regulation.

2 Test Results

2.1	Test results in configurations <u>other</u> than „REESS charging mode coupled of the power grid	☒ fulfilled ☐ not fulfilled ☐ n.a.
	Remarks:	☒ n.a.
2.1.1	Measurement of <u>radiated broadband</u> electro-magnetic emissions from electrical/ electronic subassemblies according to item 6.5 of the Regulation:	☒ fulfilled ☐ not fulfilled ☐ n.a.
2.1.1.1	Measurement procedure:	Quasi-peak-detector
2.1.1.2	Measurement setup:	Anechoic chamber
2.1.1.3	Measurement results:	The measured values, expressed in dB μ V/m, are below the reference limits. See test report of the enclosure
2.1.1.4	Photo documentation of the measurement setup (if applicable):	See test report of the enclosure.
2.1.1.5	Remarks:	☒ n.a.
2.1.2	Measurement of <u>radiated narrowband</u> electro-magnetic emissions from electrical/ electronic subassemblies according to item 6.6 of the Regulation:	☒ fulfilled ☐ not fulfilled ☐ n.a.
2.1.2.1	Measurement procedure:	Average-detector
2.1.2.2	Measurement setup:	Anechoic chamber
2.1.2.3	Measurement results:	The measured values, expressed in dB μ V/m, are below the reference limits. See test report of the enclosure.
2.1.2.4	Photo documentation of the measurement setup (if applicable):	See test report of the enclosure.
2.1.2.5	Remarks:	☒ n.a.

2.1.3	Testing for <u>emission of transient conducted disturbances</u> of electrical/electronic subassemblies on 12/24 V supply lines according to item 6.7 of the Regulation:	☒ fulfilled ☐ not fulfilled ☐ n.a.
2.1.3.1	Test results:	The limits are kept. See test report of the enclosure.
2.1.3.2	Photo documentation of the measurement setup (if applicable):	See test report of the enclosure.
2.1.3.3	Remarks:	☒ n.a.
2.1.4	Testing for <u>radiated immunity</u> of electrical/electronic subassemblies to electromagnetic radiation according to item 6.8 of the Regulation:	☐ fulfilled ☐ not fulfilled ☒ n.a.
2.1.4.1	Test procedure:	n.a.
2.1.4.2	Test setup:	n.a.
2.1.4.3	Test results:	n.a.
2.1.4.4	Photo documentation of the measurement setup (if applicable):	n.a.
2.1.4.5	Remarks:	☐ n.a. ESA not safety-related according to item 2.12 of the Regulation.
2.1.5	Testing for <u>immunity to transient disturbances</u> conducted along on 12/24 V supply lines of electrical/electronic subassemblies according to item 6.9 of the Regulation:	☒ fulfilled ☐ not fulfilled ☐ n.a.
2.1.5.1	Test results:	During the test was no unacceptable degradation. See test report of the enclosure.
2.1.5.2	Photo documentation of the measurement setup (if applicable):	See test report of the enclosure.
2.1.5.3	Remarks:	☒ n.a.

2.2 Test results in configurations „REESS charging mode coupled of the power grid

☐	fulfilled
☐	not fulfilled
☒	n.a.

Remarks: ☐ n.a.

Test component not related to REESS

3 **Other Information**

3.1 Date of test: 2025-09-04 to 2025-09-09

3.2 Place of test: SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch
Room 105, Building A, Xinlong Technology Industrial Park, No. 50 Fengtang Road, Xintian Community, Fuyong Street, Bao'an District, Shenzhen, China

4 **Remarks:** ☒ n.a.



Technical Report
No.: HOM ECN T25/359-00
Type: CR90X
Appendix B

Page
11 of 11

List of modifications:

- | | | |
|---|------------------|------|
| 1 | Correction of: | n.a. |
| 2 | Modification of: | n.a. |
| 3 | Addition of: | n.a. |
| 4 | Deletion of: | n.a. |

- End of Technical Report -