

Accredited test laboratory for qualification tests (PLQ) of IABG mbH

The official accreditation certificate **D-PL-12001-01-00** issued by DAkkS is dated **07-Feb-2020**.

A current overview of all accredited test methods, including those test methods added under the flexible accreditation, is published at www.iabg.de.

Test methods added as part of the **flexible accreditation** (* denoting flexible approach according to DAkkS category III) are highlighted using **GREEN** background colour.

Approved test methods under accreditation according to DIN EN ISO/IEC 17025:

Section	Test method / Issue	Title of test method	Type of test / limitation
Electromagnetic compatibility (EMC)			
Standards: Civil aviation			
EMC*	RTCA DO-160A 25-Jan-1980	Environmental Conditions and Test Procedures of Airborne Equipment <ul style="list-style-type: none"> ▪ Section 15: Magnetic Effect ▪ Section 16: Power Input ▪ Section 17: Voltage Spike ▪ Section 18: Audio Frequency Conducted Susceptibility – Power Inputs ▪ Section 19: Induced Signal Susceptibility ▪ Section 20: Radio Frequency Susceptibility (Radiated and Conducted) ▪ Section 21: Emission of Radio Frequency Energy 	none
EMC*	RTCA DO-160B 20-Jul-1984	Environmental Conditions and Test Procedures of Airborne Equipment <ul style="list-style-type: none"> ▪ Section 15: Magnetic Effect ▪ Section 16: Power Input ▪ Section 17: Voltage Spike ▪ Section 18: Audio Frequency Conducted Susceptibility – Power Inputs ▪ Section 19: Induced Signal Susceptibility ▪ Section 20: Radio Frequency Susceptibility (Radiated and Conducted) ▪ Section 21: Emission of Radio Frequency Energy ▪ Section 22: Lightning Induced Transient Susceptibility 	none

Section	Test method / Issue	Title of test method	Type of test / limitation
EMC*	RTCA DO-160C 04-Dec-1989	Environmental Conditions and Test Procedures of Airborne Equipment <ul style="list-style-type: none"> ▪ Section 15: Magnetic Effect ▪ Section 16: Power Input ▪ Section 17: Voltage Spike ▪ Section 18: Audio Frequency Conducted Susceptibility – Power Inputs ▪ Section 19: Induced Signal Susceptibility ▪ Section 20: Radio Frequency Susceptibility (Radiated and Conducted) ▪ Section 21: Emission of Radio Frequency Energy ▪ Section 22: Lightning Induced Transient Susceptibility ▪ Section 25: Electrostatic Discharge (ESD) 	none
EMC*	RTCA DO-160D Change 1, 14-Dec-2000 Change 2, 12-Jun-2001 Change 3, 02-Dec-2002	Environmental Conditions and Test Procedures of Airborne Equipment <ul style="list-style-type: none"> ▪ Section 15: Magnetic Effect ▪ Section 16: Power Input ▪ Section 17: Voltage Spike ▪ Section 18: Audio Frequency Conducted Susceptibility – Power Inputs ▪ Section 19: Induced Signal Susceptibility ▪ Section 20: Radio Frequency Susceptibility (Radiated and Conducted) ▪ Section 21: Emission of Radio Frequency Energy ▪ Section 22: Lightning Induced Transient Susceptibility ▪ Section 25: Electrostatic Discharge (ESD) 	none
EMC*	RTCA DO-160E 09-Dec-2004	Environmental Conditions and Test Procedures of Airborne Equipment <ul style="list-style-type: none"> ▪ Section 15: Magnetic Effect ▪ Section 16: Power Input ▪ Section 17: Voltage Spike ▪ Section 18: Audio Frequency Conducted Susceptibility – Power Inputs ▪ Section 19: Induced Signal Susceptibility ▪ Section 20: Radio Frequency Susceptibility (Radiated and Conducted) ▪ Section 21: Emission of Radio Frequency Energy ▪ Section 22: Lightning Induced Transient Susceptibility ▪ Section 25: Electrostatic Discharge (ESD) 	none, apart from <ul style="list-style-type: none"> ▪ Chapter 20.5 RS without CAT L (PM)

Section	Test method / Issue	Title of test method	Type of test / limitation
EMC*	RTCA DO-160F 06-Dec-2007	Environmental Conditions and Test Procedures of Airborne Equipment <ul style="list-style-type: none"> ▪ Section 15: Magnetic Effect ▪ Section 16: Power Input ▪ Section 17: Voltage Spike ▪ Section 18: Audio Frequency Conducted Susceptibility – Power Inputs ▪ Section 19: Induced Signal Susceptibility ▪ Section 20: Radio Frequency Susceptibility (Radiated and Conducted) ▪ Section 21: Emission of Radio Frequency Energy ▪ Section 22: Lightning Induced Transient Susceptibility ▪ Section 25: Electrostatic Discharge (ESD) 	none, apart from <ul style="list-style-type: none"> ▪ Chapter 20.5 RS without CAT L (PM)
EMC*	RTCA DO-160G 08-Dec-2010	Environmental Conditions and Test Procedures of Airborne Equipment <ul style="list-style-type: none"> ▪ Section 15: Magnetic Effect ▪ Section 16: Power Input ▪ Section 17: Voltage Spike ▪ Section 18: Audio Frequency Conducted Susceptibility – Power Inputs ▪ Section 19: Induced Signal Susceptibility ▪ Section 20: Radio Frequency Susceptibility (Radiated and Conducted) ▪ Section 21: Emission of Radio Frequency Energy ▪ Section 22: Lightning Induced Transient Susceptibility ▪ Section 25: Electrostatic Discharge (ESD) 	none, apart from <ul style="list-style-type: none"> ▪ Chapter 20.5 RS without CAT L (PM)
EMC	ABD0100.1.2D Dec-2000	Airbus Equipment-Design-General Requirements for Suppliers: - Environmental Conditions and Test Requirements Associated to Qualification, Section 3: Electromagnetic Environment Requirements	none
EMC	ABD0100.1.2E Sep-2002	Airbus Equipment-Design-General Requirements for Suppliers: - Environmental Conditions and Test Requirements Associated to Qualification, Section 3: Electromagnetic Environment Requirements	none
EMC	ABD0100.1.2F Oct-2007	Airbus Equipment-Design-General Requirements for Suppliers: - Environmental Conditions and Test Requirements Associated to Qualification, Section 3: Electromagnetic Environment Requirements	none
EMC	ABD0100.1.2G Dec-2008	Airbus Equipment-Design-General Requirements for Suppliers: - Environmental Conditions and Test Requirements Associated to Qualification, Section 3: Electromagnetic Environment Requirements	none

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EMC	SPX 902 A0002 E01 Revision: E 29-Jun-2006	Environmental Requirements for Equipment Installed on Eurocopter Helicopter <ul style="list-style-type: none"> ▪ Chapter 6: Electromagnetic Environment ▪ Chapter 7: Lightning Effects ▪ Chapter 8: Electrostatic Discharge (ESD) 	<ul style="list-style-type: none"> ▪ w/o VFR severe RS ▪ w/o 7.2 ▪ none
EMC	D6-16050-4 Revision: D 24-Jul-2002	Electromagnetic Interference Control Requirements	none
EMC	D6-16050-5 Revision: C 06-Sep-2006	Electromagnetic Interference Control Requirements for Composite Airplanes	none
EMC	IATA Dangerous Goods Regulations (DGR), Edition 55 01-Jan-2014	Packing instruction 953 Magnetized material on passenger aircraft and cargo aircraft only	none
EMC*	DIN EN 2282 Mai 1992	Eigenschaften der elektrischen Stromversorgung von Luftfahrzeugen	none
EMC	ABD0100.1.8C Jan-2001	Airbus Directives (ABD) and Procedures Module: 0100.1.8 Electrical and Installation Requirements	none
EMC	ABD0100.1.8D Aug-2002	Airbus Equipment-Design-General Requirements for Suppliers: - Electrical and Installation Requirements	none
EMC	ABD0100.1.8E Apr-2005	Airbus Equipment-Design-General Requirements for Suppliers: - Electrical and Installation Requirements	none
EMC	ABD0100.1.8.1B Sep-2007	Airbus – A350 Equipment-Design-General Requirements for Suppliers: Electrical and Installation Requirements Electrical Characteristics of A350 AC and DC Equipment	none
EMC	ABD0100.1.8.1C Jul-2008	Airbus – A350 Equipment-Design-General Requirements for Suppliers: Electrical and Installation Requirements Electrical Characteristics of A350 AC and DC Equipment	none
EMC	D6-37851 Revision C 19-Feb-1998	Electric Power Characteristics for items of equipment installed on the 737-300, -700 Airplanes	none
EMC	D200Z001 Revision F 11-Dec-1990	General Electrical Requirements for Electrical and Electronic Equipment - 777	none
EMC	787B3-0147 Revision C 06 October 2006	787 Electrical Power Quality and Design Requirements Document	none

Section	Test method / Issue	Title of test method	Type of test / limitation
Standards, military: Air force / Army / Navy			
EMC*	MIL-STD-461A 01-Aug-1968 Notice 3, 01-May-1970 Notice 4, 09-Feb-1971	Military Standard - Electromagnetic Interference Characteristics Requirements for Equipment	none
EMC*	MIL-STD-461B 01-Apr-1980	Military Standard - Electromagnetic Emission and Susceptibility Requirements for the Control of Electromagnetic Interference	none
EMC*	MIL-STD-461C 04-Aug-1986	Military Standard - Electromagnetic Emission and Susceptibility Requirements for the Control of Electromagnetic Interference	none
EMC*	MIL-STD-461D 11-Jan-1993	Military Standard – Requirements for the Control of Electromagnetic Interference Emission and Susceptibility	w/o RS105
EMC*	MIL-STD-461E 20-Aug-1999	Department of Defense Interface Standard – Requirements for the Control of Electromagnetic Interference Characteristics of Subsystems and Equipment	w/o RS105
EMC*	MIL-STD-461F 10-Dec-2007	Department of Defense Interface Standard – Requirements for the Control of Electromagnetic Interference Characteristics of Subsystems and Equipment	w/o RS105
EMC*	MIL-STD-461G 11-Dec-2015	Department of Defense Interface Standard – Requirements for the Control of Electromagnetic Interference Characteristics of Subsystems and Equipment	w/o RS105
EMC*	MIL-STD-462 Notice 1, 31-Jul-1967 Notice 2, 01-Aug-1968 Notice 3, 09-Feb-1971 Notice 4, 01-Apr-1980 Notice 5, 04-Aug-1986 Notice 6, 30-Aug-1999	Military Standard - Electromagnetic Interference Characteristics, Measurement of Electromagnetic Interference Characteristics	none
EMC*	MIL-STD-462D 11-Jan-1993	Military Standard - Measurement of Electromagnetic Interference Characteristics	none
EMC	SP-P-90 010 Issue 1 21-Nov-1995	Tornado EMC Specification for Equipment	none
EMC	SPE-J-000-E-1000 Issue: 1 Feb-1991	Electromagnetic Compatibility Specification for Equipment	w/o LEMP-EFA1 LEMP-EFA2
EMC	SPE-J-000-E-1006 Issue: 2 Oct-1996	Electromagnetic Compatibility Specification for Aerospace Ground Equipment	none

Section	Test method / Issue	Title of test method	Type of test / limitation
EMC	D6-16050-6 Revision: A 18-Apr-201	Electromagnetic Interference Control Requirements 767-2C	none
EMC*	DEF-STAN-59-411 Part 3 Issue: 1, 23-Jan-2007 Amdt 1, 31-Jan-2008	Ministry of Defense Electromagnetic Compatibility Part 3 – Test Methods and Limits for Equipment und Sub Systems	w/o DCS04, DCS08
EMC*	VG 95373: Teil 10 Nov-1987	Elektromagnetische Verträglichkeit Elektromagnetische Verträglichkeit von Geräten Messverfahren für Störströme	none
EMC*	VG 95373-10 Nov-2008	Elektromagnetische Verträglichkeit (EMC) Elektromagnetische Verträglichkeit von Geräten Teil 10: Prüfverfahren für leitungsgeführte Störströme;	none
EMC*	VG 95373: Teil 11 Nov-1993	Elektromagnetische Verträglichkeit Elektromagnetische Verträglichkeit von Geräten Messverfahren für Störspannungen	none
EMC*	VG 95373: Teil 12 Aug-1989	Elektromagnetische Verträglichkeit Elektromagnetische Verträglichkeit von Geräten Messverfahren für Störfeldstärken	none
EMC*	VG 95373-12 Nov-2008	Elektromagnetische Verträglichkeit (EMC) Elektromagnetische Verträglichkeit von Geräten Teil 12: Prüfverfahren für Störfeldstärken	none
EMC*	VG 95373: Teil 13 Sep-1993	Elektromagnetische Verträglichkeit Elektromagnetische Verträglichkeit von Geräten Messverfahren für Störfestigkeit gegen Felder	none
EMC*	VG 95373-13 Nov-2008	Elektromagnetische Verträglichkeit (EMC) Elektromagnetische Verträglichkeit von Geräten Teil 13: Prüfverfahren für Störfestigkeit gegen Felder	none
EMC*	VG 95373: Teil 14 Jul-1998	Elektromagnetische Verträglichkeit Elektromagnetische Verträglichkeit von Geräten Messverfahren für Störfestigkeit gegen leitungsgeführte Störsignale	none
EMC*	VG 95373-14 Nov-2008	Elektromagnetische Verträglichkeit (EMC) Elektromagnetische Verträglichkeit von Geräten Teil 14: Prüfverfahren für Störfestigkeit gegen leitungsgeführte Störsignale	none
EMC*	VG 95373: Teil 15 Feb-1997	Elektromagnetische Verträglichkeit Elektromagnetische Verträglichkeit von Geräten Messverfahren für Kopplungen und Schirmung	none
EMC*	VG 95373: Teil 15 Jul-2004	Elektromagnetische Verträglichkeit Elektromagnetische Verträglichkeit von Geräten Teil 15: Messverfahren für Kopplungen und Schirmungen	none

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EMC*	VG 95370: Teil 10 Jan-2003	Elektromagnetische Verträglichkeit Elektromagnetische Verträglichkeit von und in Systemen Teil 10: Messverfahren für Störströme	none
EMC*	VG 95370: Teil 11 Feb-2003	Elektromagnetische Verträglichkeit Elektromagnetische Verträglichkeit von und in Systemen Teil 11: Messverfahren für Störspannungen	none
EMC*	VG 95370: Teil 12 Jan-2003	Elektromagnetische Verträglichkeit Elektromagnetische Verträglichkeit von und in Systemen Teil 12: Messverfahren für Störfeldstärken	none
EMC*	AECTP 500 Edition 2 Jan-2006	Electrical / Electromagnetic Environmental Tests	w/o NRS03
EMC*	MIL-STD-704A 09-Aug-1966 Notice 2: 05-May-1970 Notice 3: 11-Apr-1973	Military Standard – Electric Power, Aircraft Characteristics	none
EMC*	MIL-STD-704E	Military Standard – Aircraft Electric Power Characteristics	none
EMC*	MIL-STD-704F 12-Mar-2004	Department of Defense Interface Standard – Aircraft Electric Power Characteristics	none
EMC*	MIL-HDBK-704-8 09-Apr-2004	Department of Defense Handbook - Guidance for Test Procedures for Demonstration of Utilization Equipment Compliance to Aircraft Electrical Power Characteristics 28 VDC (Part 8 of 8 Parts)	none
EMC*	MIL-STD-1275A 17-Sep-1976 Notice 1: 08-Feb-1980 Notice 2: 23-Apr-1981	Military Standard – Characteristics of 28 Volt DC Electrical Systems in Military Vehicles	none
EMC*	MIL-STD-1275B 20-Nov-1997	Department of Defense Interface Standard – Characteristics of 28 Volt DC Electrical Systems in Military Vehicles	none
EMC*	MIL-STD-1275C 23-Jun-2006	Department of Defense Interface Standard – Characteristics of 28 Volt DC Electrical Systems in Military Vehicles	none
EMC*	MIL-STD-1275D 29-Aug-2006	Department of Defense Interface Standard – Characteristics of 28 Volt DC Electrical Systems in Military Vehicles	none
EMC*	MIL-STD-1275E 22-Mar-2013	Department of Defense Interface Standard – Characteristics of 28 Volt DC Electrical Systems in Military Vehicles	none
EMC*	MIL-STD-1399 (Navy) 13-Oct-1987	Department of Defense Interface Standard – Characteristics of 28 Volt DC Electrical Systems in Military Vehicles	none

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EMC*	STANAG 1008 Edition 8 21-Feb-1994	STANAG 1008 NAV (Edition 8) – Characteristics of Shipboard Electrical Power Systems in Warships of the North Atlantic Treaty Navies	none
EMC	AMD-24 Issue: B 17-Dec-2003	A400M Directive Electrical Characteristics of aircraft AC and DC Systems	none
EMC	AMD-24 Issue: C 22-Mar-2005	A400M Directive Electrical Characteristics of aircraft AC and DC Systems	none
Standards: Space			
EMC	ECSS-E-ST-20-07C 31-Jul-2008	European Cooperation for Space Standardization Space Engineering – Electromagnetic Compatibility	none
EMC	ECSS-E-ST-20-07C_Rev.1 07-Feb-2012	European Cooperation for Space Standardization Space Engineering – Electromagnetic Compatibility	none
EMC	ECSS-E-ST-20-07C, Rev.2 03-Jan-2022	European Cooperation for Space Standardization – Space engineering – Electromagnetic compatibility	none
General Standards			
EMC*	DIN EN 55024:2011-09; VDE 0878-24:2011-09	Einrichtungen der Informationstechnik - Störfestigkeitseigenschaften - Grenzwerte und Prüfverfahren (CISPR 24:2010); Deutsche Fassung EN 55024:2010	none
EMC*	DIN EN IEC 61000-3-2; VDE 0838-2:2015-03	Elektromagnetische Verträglichkeit (EMC) - Teil 3-2: Grenzwerte - Grenzwerte für Oberschwingungsströme (Geräte-Eingangsstrom <= 16 A je Leiter) (IEC 61000-3-2:2014); Deutsche Fassung EN 61000-3-2:2014	none
EMC*	DIN EN IEC 61000-3-3; VDE 0838-3:2014-03	Elektromagnetische Verträglichkeit (EMC) - Teil 3-3: Grenzwerte - Begrenzung von Spannungsänderungen, Spannungsschwankungen und Flicker in öffentlichen Niederspannungs-Versorgungsnetzen für Geräte mit einem Bemessungsstrom <= 16 A je Leiter, die keiner Sonderanschlussbedingung unterliegen (IEC 61000-3-3:2013); Deutsche Fassung EN 61000-3-3:2013	none
EMC*	DIN EN IEC 61000-3-11; VDE 0838-11:2001-04	Elektromagnetische Verträglichkeit (EMC) - Teil 3-11: Grenzwerte; Begrenzung von Spannungsänderungen, Spannungsschwankungen und Flicker in öffentlichen Niederspannungs-Versorgungsnetzen; Geräte und Einrichtungen mit einem Bemessungsstrom <= 75 A, die einer Sonderanschlussbedingung unterliegen (IEC 61000-3-11:2000); Deutsche Fassung EN 61000-3-11:2000	none

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EMC*	DIN EN IEC 61000-3-12; VDE 0838-12:2012-06	Elektromagnetische Verträglichkeit (EMC) - Teil 3-12: Grenzwerte - Grenzwerte für Oberschwingungsströme, verursacht von Geräten und Einrichtungen mit einem Eingangsstrom > 16A und ≤ 75A je Leiter, die zum Anschluss an öffentliche Niederspannungsnetze vorgesehen sind (IEC 61000-3-12:2011); Deutsche Fassung EN 61000-3-12:2011	none
EMC*	DIN EN IEC 61000-4-2; VDE 0847-4-2:2009-12	Elektromagnetische Verträglichkeit (EMC) - Teil 4-2: Prüf- und Messverfahren - Prüfung der Störfestigkeit gegen die Entladung statischer Elektrizität (IEC 61000-4-2:2008); Deutsche Fassung EN 61000-4-2:2009	none
EMC*	DIN EN IEC 61000-4-3; VDE 0847-4-3:2011-04	Elektromagnetische Verträglichkeit (EMC) - Teil 4-3: Prüf- und Messverfahren - Prüfung der Störfestigkeit gegen hochfrequente elektromagnetische Felder (IEC 61000-4-3:2006 + A1:2007 + A2:2010); Deutsche Fassung EN 61000-4-3:2006 + A1:2008 + A2:2010	none
EMC*	DIN EN IEC 61000-4-4; VDE 0847-4-4:2013-04	Elektromagnetische Verträglichkeit (EMC) - Teil 4-4: Prüf- und Messverfahren - Prüfung der Störfestigkeit gegen schnelle transiente elektrische Störgrößen/Burst (IEC 61000-4-4:2012); Deutsche Fassung EN 61000-4-4:2012	none
EMC*	DIN EN IEC 61000-4-5; VDE 0847-4-5:2015-03	Elektromagnetische Verträglichkeit (EMC) - Teil 4-5: Prüf- und Messverfahren - Prüfung der Störfestigkeit gegen Stoßspannungen (IEC 61000-4-5:2014); Deutsche Fassung EN 61000-4-5:2014	none
EMC*	DIN EN IEC 61000-4-6; VDE 0847-4-6:2014-08	Elektromagnetische Verträglichkeit (EMC) - Teil 4-6: Prüf- und Messverfahren - Störfestigkeit gegen leitungsgeführte Störgrößen, induziert durch hochfrequente Felder (IEC 61000-4-6:2013); Deutsche Fassung EN 61000-4-6:2014	w/o EM coupling route
EMC*	DIN EN IEC 61000-4-8; VDE 0847-4-8:2010-11	Elektromagnetische Verträglichkeit (EMC) - Teil 4-8: Prüf- und Messverfahren - Prüfung der Störfestigkeit gegen Magnetfelder mit energietechnischen Frequenzen (IEC 61000-4-8:2009); Deutsche Fassung EN 61000-4-8:2010	none
EMC*	DIN EN IEC 61000-4-11; 2005-02 VDE 0847-4-11:2005-02	Elektromagnetische Verträglichkeit (EMC) - Teil 4-11: Prüf- und Messverfahren - Prüfungen der Störfestigkeit gegen Spannungseinbrüche, Kurzzeitunterbrechungen und Spannungsschwankungen (IEC 61000-4-11:2004); Deutsche Fassung EN 61000-4-11:2004	none

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EMC*	DIN EN IEC 61000-6-1 (VDE 0839-6-1):10-2007	Elektromagnetische Verträglichkeit (EMC) - Teil 6-1: Fachgrundnormen - Störfestigkeit für Wohnbereich, Geschäfts- und Gewerbebereiche sowie Kleinbetriebe (IEC 61000-6-1:2005); Deutsche Fassung EN 61000-6-1:2007	none
EMC*	DIN EN IEC 61000-6-2 (VDE 0839-6-2):03-2006	Elektromagnetische Verträglichkeit (EMC) Teil 6-2: Fachgrundnormen - Störfestigkeit für Industriebereiche (IEC 61000-6-2:2005); Deutsche Fassung EN 61000-6-2:2005	none
Vibration and Shock (VUS)			
Environmental tests*	DIN EN IEC 60068-2-1 2008-01	Environmental testing – Part 2-1; Test A: Cold	method Ab only; in combination with vibration and shock only
Environmental tests*	DIN EN IEC 60068-2-2 2008-05	Environmental testing – Part 2-2; Test B: Dry heat	method Bb only; in combination with vibration and shock only
Environmental tests*	DIN EN IEC 60068-2-6 2008-10	Environmental testing – Part 2-6; Test Fc: Vibration sinusoidal	none
Environmental tests*	DIN EN IEC 60068-2-7 1995-03	Environmental testing – Part 2-7; Test Ga and guidance: Acceleration, steady state	none
Environmental tests*	DIN EN IEC 60068-2-14 2010-04	Environmental testing – Part 2-14; Test N: Change of temperature	method Nb only; in combination with vibration and shock only
Environmental tests*	DIN EN IEC 60068-2-14 2023-07	Environmental testing – Part 2-14; Test N: Change of temperature	method Nb only; in combination with vibration and shock only
Environmental tests*	DIN EN IEC 60068-2-27 2010-02	Environmental testing – Part 2-27; Test Ea and guidance: Shock	none
Environmental tests*	DIN EN IEC 60068-2-31 2009-04	Environmental testing – Part 2-31; Test Ec: Rough handling shocks, primarily for equipment-type specimens	none
Environmental tests*	DIN EN IEC 60068-2-53 2011-02	Environmental testing – Part 2-53; Combined climatic (temperature/humidity) and dynamic (vibration/shock) tests	w/o humidity
Environmental tests*	DIN EN IEC 60068-2-64 2009-04	Environmental testing – Part 2-64; Test Fh: Vibration, broadband random and guidance	none
Environmental tests*	DIN EN IEC 60068-2-64 2020-09	Environmental testing – Part 2-64; Test Fh: Vibration, broadband random and guidance	none

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Environmental tests*	DIN EN IEC 60068-2-80 2006-05	Environmental testing – Part 2-80; Test Fi: Vibration - Mixed mode	none
Environmental tests*	DIN EN IEC 60068-2-81 2004-07	Environmental testing – Part 2-81; Test Ei: Shock - Shock response spectrum synthesis	none
Standards: Rail			
Environmental tests*	DIN EN IEC 61373 1999-11	Railway applications – Rolling stock equipment - Shock and vibration tests	vibration from 3 Hz and 4 Hz, resp.
Environmental tests*	DIN EN IEC 61373 2011-04	Railway applications – Rolling stock equipment - Shock and vibration tests	vibration from 3 Hz and 4 Hz, resp.
Standards: Motor vehicles			
Environmental tests*	ISO 16750-3 2012-12	Road vehicles – Environmental conditions and test- ing for electrical and electronic equipment Part 3: Mechanical loads	w/o 4.4 scratch and 4.5 gravel
Standards: Civil shipping			
Environmental tests*	GL 2012	Germanischer Lloyd – Rules and guidelines for type testing ▪ Chapter 9: Vibrations	vibration from 3 Hz and 4 Hz, resp.
Environmental tests*	ABS 2014	Rules for Building and Classing Steel Vessels ▪ Tab. 1; No. 5 Vibration	vibration from 3 Hz and 4 Hz, resp.
Environmental tests*	ABS Part 4 Jul-2022	Rules for building and classing – Marine vessels Part 4: Vessel systems and machinery ▪ Chapter 9, Section 9, Table 1: 5. Vibration	vibration from 3 Hz and 4 Hz, resp.
Standards: Civil aviation			
Environmental tests*	RTCA/DO-160D 07-1997	Environmental Conditions and Test Procedures for Airborne Equipment ▪ Section 7 - Operational Shocks and Crash Safety ▪ Section 8 - Vibration	none
Environmental tests*	RTCA/DO-160E 12-2004	Environmental Conditions and Test Procedures for Airborne Equipment ▪ Section 7 - Operational Shocks and Crash Safety ▪ Section 8 - Vibration	none
Environmental tests*	RTCA/DO-160F 12-2007	Environmental Conditions and Test Procedures for Airborne Equipment ▪ Section 7 - Operational Shocks and Crash Safety ▪ Section 8 - Vibration	none
Environmental tests*	RTCA/DO-160G 12-2010	Environmental Conditions and Test Procedures for Airborne Equipment ▪ Section 7 - Operational Shocks and Crash Safety ▪ Section 8 - Vibration	none
Environmental tests	ABD0100.1.2 Issue E 09-2002	Airbus – Environmental Conditions and Test Re- quirements Associated to Qualification ▪ Chapter 1.5 Shocks ▪ Chapter 1.6 Vibration	w/o acoustic noise

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Environmental tests	ABD0100.1.2 Issue F 10-2007	Airbus – Environmental Conditions and Test Requirements Associated to Qualification <ul style="list-style-type: none"> ▪ Chapter 1.5 Shocks ▪ Chapter 1.6 Vibration 	w/o acoustic noise
Environmental tests	ABD0100.1.2 Issue G 12-2008	Airbus – Environmental Conditions and Test Requirements Associated to Qualification <ul style="list-style-type: none"> ▪ Chapter 1.5 Shocks ▪ Chapter 1.6 Vibration 	w/o acoustic noise
Environmental tests	SPX 902 A 0002 E01 Issue E 06/1999	Environmental Requirements for Equipment installed on Eurocopter Helicopter <ul style="list-style-type: none"> ▪ Chapter 5 	none
Environmental tests*	ISO 2669 04/1995	Aerospace – Environmental tests for aircraft equipment: Steady-state acceleration	none
Standards: Military			
Environmental tests*	MIL-STD-810E 07/1989	Military Standard – Environmental Test Methods and Engineering Guidelines <ul style="list-style-type: none"> ▪ Method 513.4: Acceleration ▪ Method 514.4: Vibration ▪ Method 516.4: Shock ▪ Method 519.4: Gunfire 	<ul style="list-style-type: none"> ▪ none ▪ w/o loose cargo and large assembly vibration; vibration from 3 Hz and 4 Hz, resp. ▪ w/o pendulum impact ▪ none
Environmental tests*	MIL-STD-810F 01/2000	Department of Defense Test Method Standard – Environmental Engineering Considerations and Laboratory Tests <ul style="list-style-type: none"> ▪ Method 513.5: Acceleration ▪ Method 514.5: Vibration ▪ Method 516.5: Shock ▪ Method 517: Pyroshock ▪ Method 519.5: Gunfire 	<ul style="list-style-type: none"> ▪ none ▪ w/o loose cargo and large assembly vibration; vibration from 3 Hz and 4 Hz, resp. ▪ w/o pendulum impact ▪ none ▪ none

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Environmental tests*	MIL-STD-810G 10/2008	Department of Defense Test Method Standard – Environmental Engineering Considerations and Laboratory Tests <ul style="list-style-type: none"> ▪ Method 513.6: Acceleration ▪ Method 514.6: Vibration ▪ Method 516.6: Shock ▪ Method 517.1: Pyroshock ▪ Method 519.6: Gunfire ▪ Method 528: Mechanical Vibrations of Shipboard Equipment 	<ul style="list-style-type: none"> ▪ none ▪ w/o loose cargo and large assembly vibration; vibration from 3 Hz and 4 Hz, resp. ▪ w/o pendulum impact ▪ none ▪ none ▪ vibration from 3 Hz and 4 Hz, resp.
Environmental tests*	MIL-STD-810G Change 1 04/2014	Department of Defense Test Method Standard – Environmental Engineering Considerations and Laboratory Tests <ul style="list-style-type: none"> ▪ Method 513.7: Acceleration ▪ Method 514.7: Vibration ▪ Method 516.7: Shock ▪ Method 517.2: Pyroshock ▪ Method 519.7: Gunfire ▪ Method 528.1: Mechanical Vibrations of Shipboard Equipment 	<ul style="list-style-type: none"> ▪ centrifuge only ▪ w/o loose cargo and large assembly vibration; vibration from 3 Hz and 4 Hz, resp. ▪ w/o pendulum impact ▪ none ▪ none ▪ vibration from 3 Hz and 4 Hz, resp.
Environmental tests*	MIL-STD-810H 01/2019	Department of Defense Test Method Standard – Environmental Engineering Considerations and Laboratory Tests <ul style="list-style-type: none"> ▪ Method 513.8: Acceleration ▪ Method 514.8: Vibration ▪ Method 516.8: Shock ▪ Method 517.3: Pyroshock ▪ Method 519.8: Gunfire ▪ Method 528.1: Mechanical Vibrations of Shipboard Equipment 	<ul style="list-style-type: none"> ▪ centrifuge only ▪ w/o loose cargo and large assembly vibration; vibration from 3 Hz and 4 Hz, resp. ▪ w/o pendulum impact ▪ none ▪ none ▪ vibration from 3 Hz and 4 Hz, resp.

Section	Test method / Issue	Title of test method	Type of test / limitation
Environmental tests*	MIL-STD-810H Change 1 05/2022	Department of Defense Test Method Standard – Environmental Engineering Considerations and Laboratory Tests <ul style="list-style-type: none"> ▪ Method 513.8: Acceleration ▪ Method 514.8: Vibration ▪ Method 516.8: Shock ▪ Method 517.3: Pyroshock ▪ Method 519.8: Gunfire ▪ Method 528.1: Mechanical Vibrations of Shipboard Equipment 	<ul style="list-style-type: none"> ▪ centrifuge only ▪ w/o loose cargo and large assembly vibration; vibration from 3 Hz and 4 Hz, resp. ▪ w/o pendulum impact ▪ none ▪ none ▪ vibration from 3 Hz and 4 Hz, resp.
Environmental tests*	MIL-STD-167-1A 11/2005	Department of Defense Test Method Standard – Mechanical Vibrations of Shipboard Equipment	vibration from 3 Hz and 4 Hz, resp.
Standards: Space			
Environmental tests	ECSS-E-ST-10-03C 01-June-2012	European Cooperation for Space Standardization – Space engineering – Testing	vibration, shock, and acceleration only
Environmental tests	ECSS-E-ST-10-03C, Rev.1 31-May-2022	European Cooperation for Space Standardization – Space engineering – Testing	vibration, shock, and acceleration only