

Deutsche Akkreditierungsstelle GmbH

Entrusted according to Section 8 subsection 1 AkkStelleG in connection with Section 1 subsection 1 AkkStelleGBV

Signatory to the Multilateral Agreements of EA, ILAC and IAF for Mutual Recognition

Accreditation



The Deutsche Akkreditierungsstelle GmbH attests that the testing laboratory

Deutsche Gesetzliche Unfallversicherung e.V.(DGUV) Glinkastraße 40, 10117 Berlin

At the location:

Institut für Arbeitsschutz der Deutschen Gesetzlichen Unfallversicherung (IFA) Prüf- und Zertifizierungsstelle im DGUV Test Alte Heerstraße 111, 53757 Sankt Augustin

is competent under the terms of DIN EN ISO/IEC 17025:2005 to carry out tests in the following fields:

Machinery
Personal Protective Equipment

for the test methods listed in the Annex to this document

The accreditation certificate shall only apply in connection with the notice of accreditation of 2017-12-21 with the accreditation number D-PL-17009-34 and is valid until 2022-12-20. It comprises the cover sheet, the reverse side of the cover sheet and the following annex with a total of 22 pages.

Registration number of the certificate: D-PL-17009-34-00

Frankfurt am Main, 2017-12-21

Dipl.-Ing. (FH) Ralf Egner Head of Division

Translation issued: 2018-09-13

ead of Division



Deutsche Akkreditierungsstelle GmbH

Annex to the Accreditation Certificate D-PL-17009-34-00 according to DIN EN ISO/IEC 17025:2005

Period of validity: 2017-12-21 to 2022-12-22 Date of issue: 2017-12-21

Holder of certificate:

Deutsche Gesetzliche Unfallversicherung e.V.(DGUV) Glinkastraße 40, 10117 Berlin

At the location:

Institut für Arbeitsschutz der Deutschen Gesetzlichen Unfallversicherung (IFA) Prüf- und Zertifizierungsstelle im DGUV Test Alte Heerstraße 111, 53757 Sankt Augustin

Tests in the fields:

Machinery
Personal protective equipment

The testing laboratory is permitted, without being required to inform and obtain prior approval from DAkkS, to use standards or equivalent testing methods listed here with different issue dates.

The testing laboratory maintains a current list of all standards/equivalent procedures within the flexible scope of accreditation.

internal method/ procedure (specify deviatio		Title of the standard or internal procedure (specify deviations from/ modifications of standard procedures)	Testing area/ restrictions
Personal prot	ective equipment		
Respiratory p	rotective devices		
	DIN 58620 : 2007-	Gas filter(s) and combined filter(s) for	
	02	protection against carbon monoxide-	
		Requirements, testing, marking	



Subject area	Standard / internal method/ version	Title of the standard or internal procedure (specify deviations from/modifications of standard procedures)	Testing area/ restrictions
	DIN 58621 : 2010- 08	Respiratory protective devices—Reactor filters for protection against radioactive Methyliodide and radioactive particles-Requirements, testing, marking	
	DIN 58647-7 : 1997-12	Respiratory protective devices for self-rescue– Part 7: Filtering devices for self-rescue; requirements, testing, marking	
	DIN EN 136: 1998- 04	Respiratory protective devices— Full face masks Requirements, testing, marking	
	DIN EN 140 : 1998- 12	Respiratory protective devices- Half masks and quarter-masks- Requirements, testing, marking	
	DIN EN 142 : 2002- 08	Respiratory protective devices- Mouthpiece assemblies- Requirements, testing, marking	
	DIN EN 143 : 2007- 02	Respiratory protective devices- Particle filters- Requirements, testing, marking	
	DIN EN 149 : 2009- 08	Respiratory protective devices- Filtering half masks to protect against particles- Requirements, testing, marking	
	DIN EN 405 : 2009- 08	Respiratory protective devices- Valved filtering half masks to protect against gases or gases and particles- Requirements, testing, marking	
	DIN EN 1827 : 2009-11	Respiratory protective devices- Half masks without inhalation valves and with separable filters to protect against gases or gases and particles or particles only- Requirements, testing, marking	



<u> </u>	<u> </u>		
	DIN EN 12083 : 1998-06	Respiratory protective devices- Filters with breathing (Non-mask mounted filters)-Particle filters, gas filters, and combined filters- Requirements, testing, marking	
	DIN EN 12941 : 2009-02	Respiratory protective devices- Powered filtering devices incorporating a helmet or a hood- Requirements, testing, marking	
1	DIN EN 12942 : 2009-02	Respiratory protective devices- Power assisted filtering devices incorporating full face masks, half masks or quarter masks- Requirements, testing, marking	
	DIN EN 14387 : 2008-05	Respiratory protective devices- Gas filter(s) and combined filter(s)- Requirements, testing, marking	
	DIN EN 14594 : 2005-07	Respiratory protective devices- Continuous flow compressed air line breathing apparatus-Requirements, testing, marking	
Hearing prote	ection devices		
	DIN EN 352-1: 2003-04	Hearing protectors- Safety requirements and testing – Part 1: Ear-muffs	
	DIN EN 352-2 : 2003-04	Hearing protectors- Safety requirements and testing – Part 2: Ear-plugs	
	DIN EN 352-3 : 2003-04	Hearing protectors- Safety requirements and testing – Part 3: Ear-muffs attached to an industrial safety helmet	
	DIN EN 352-4 : 2006-01	Hearing protectors- Safety requirements and testing— Part 4: Level-dependent ear-muffs	
	DIN EN 352-5 : 2006-03	Hearing protectors- Safety requirements and testing- Part 5: Active noise reduction earmuffs	
	DIN EN 352-6 : 2003-04	Hearing protectors - Safety requirements and testing – Part 6: Ear-muffs with electrical audio input	
	DIN EN 352-7 : 2003-04	Hearing protectors - Safety requirements and testing – Part 7: Level-dependent ear-plugs	



DIN EN 352-8 : 2008-07	Hearing protectors - Safety requirements and testing – Part 8: Entertainment audio ear-muffs	
Protective equipment against falls		
Anchors, belts, sub-systems, connect	tors, lanyards	
DIN EN 353-1 : 2002-09	Personal protective equipment against falls from a height – Part 1: Guided type fall arresters including a rigid anchor line; German version of EN 353-1:2002	
DIN EN 353-2 : 2002-09	Personal protective equipment against falls from a height – Part 2: Guided type fall arresters including a flexible anchor line; German version of EN 353-2:2002	
DIN EN 354 : 2010- 11	Personal fall protection equipment - Lanyards; German version of EN 354:2010	
DIN EN 355 : 2002- 09	Personal protective equipment against falls from a height - Energy absorbers; German version of EN 355:2002	
DIN EN 360 : 2002- 09	Personal protective equipment against falls from a height - Retractable type fall arresters; German version of EN 360 : 2002	
DIN EN 361 : 2002- 09	Personal protective equipment against falls from a height - Full body harnesses; German version of EN 361:2002	
DIN EN 362 : 2008- 09	Personal protective equipment against falls from a height - Connectors; German version of EN 362:2004	
DIN EN 363 : 2008- 05	Personal fall protection equipment - Personal fall protection systems; German version of EN 363:2008	
DIN EN 364 : 1993- 02	Personal protective equipment against falls from a height; test methods; German version of EN 364:1992	

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	DIN EN 364 : 1994-	Corrigon dum to DIN FN 364.1003 03. Correspon	
	08	Corrigendum to DIN EN 364:1993-02; German version of EN 364:1992/AC:1993	
	DIN EN 365 : 2004-	Personal protective equipment against falls	
	12	from a height - General requirements for	
		instructions for use, maintenance, periodic	
		examination, repair, marking and packaging;	
		German version of EN 365:2004	
10	DIN EN 365 :	Personal protective equipment against falls	
	2004/AC:2006	from a height - General requirements for	
		instructions for use, maintenance, periodic	
		examination, repair, marking and packaging;	
		German version of EN 365:2004, Corrigendum	
		to DIN EN 365: 2004-12;	
		German version of EN 365: 2004 / AC: 2006	
	DIN EN 795 : 1996-	Protection against falls from a height - Anchor	
	08	devices - Requirements and testing; German	
		version of EN 795:1996	
	DIN EN 795 / A1 :	Protection against falls from a height - Anchor	
	2001-01	devices - Requirements and testing;	
		Amendment A1; German version of EN	
		795:1996/A1:2000	
	DIN EN 813 : 2008-	Personal fall protection equipment - Sit	
	11	harnesses; German version of EN 813:2008	
	DIN 14920 : 1999-	Lines for fire-brigades - Requirements, test	
	02	methods, maintenance	
	DIN 14927 : 2005-	Belt for positioning for firemen with 2-thorn-	
	09	buckle and karabiner with multifunctional eye-	
		Requirements, testing	
	DIN EN 358 : 2000-	Personal protective equipment for work	
	02	positioning and prevention of falls from a	
		height - Belts for work positioning and	
		restraint and work positioning lanyards;	
		German version of EN 358:1999	
	DIN EN 12841 :	Personal fall protection equipment - Rope	
	2006-11	access systems - Rope adjustment devices;	
		German version of EN 12841:2006	
	DIN 34300 : 2001-	Rescue equipment - Rescue hooks with safety	
	04	eyelet holes	

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	DIN EN 1496 :	Personal fall protection equipment - Rescue	
	2007-01	lifting devices; German version of EN 1496:2006	
	DIN EN 1497 :	Personal fall protection equipment - Rescue	
	2007-10	harnesses; German version of EN 1497:2007	
	DIN EN 1498 :	Personal fall protection equipment - Rescue	
	2007-01	loops; German version EN of 1498:2006	
	DIN EN 341 : 2011-	Personal fall protection equipment -	
	09	Descender devices for rescue; German version	
		of EN 341:2011	
Heat, fire, co	old and mechanical risks		
	DIN EN 420 : 2010- 03	Protective gloves - General requirements and test methods	
	DIN EN 388 : 2003- 12	Protective gloves against mechanical risks	
	DIN EN 407 : 2004- 11	Protective gloves against thermal risks	
	DIN EN 659 : 2008- 06	Protective gloves for firefighters	
	DIN EN 12477 : 2005-09	Protective gloves for welders	
	DIN EN 511 : 2006-07	Protective gloves against cold	Except sections 5.2, 5.4, 5.5, 5.6
Against cher	nical and biological risks	and radioactive contamination	
	DIN EN 374-1 :	Protective gloves against chemicals and micro-	
	2003	organisms – Part 1: Terminology and	
		performance requirements; German version	
		of EN 374-1:2003	
	DIN EN 374-2 :	Protective gloves against chemicals and micro-	
	2003	organisms – Part 2: Determination of	
		resistance to penetration; German version of	
		EN 374-2:2003	
	DIN EN 374-3 :	Protective gloves against chemicals and micro-	
	2003	organisms – Part 3: Determination of	
		resistance to permeation by chemicals	



	DIN EN 374-3 : 2003	Protective gloves against chemicals and micro-	
	2003	organisms – Part 3: Determination of resistance to permeation by chemicals	
		resistance to permeation by chemicals	
	Berichtigung 1:	German version EN 374-3:2003, Corrigendum	
	2006	to DIN EN 374-3:2003-12; German version of	
		EN 374-3:2003/AC:2006	
	prEN 374-4 : 2010	Protective gloves against chemicals and micro-	
		organisms – Part 4: Determination of	
	DIN EN 420 : 2009	resistance to degradation by chemicals Protective gloves - General requirements and	
	DIN EN 420 : 2009	test methods; German version EN of	
		420:2003+A1:2009	
	DIN EN 388 : 2017	Protective gloves against mechanical risks;	
		German version of EN 388:2003	
	DIN EN 421 : 2010	Protective gloves against ionizing radiation	Only radioactive
		and radioactive contamination	contamination:
			Sections 4.2.1,
			4.2.2, 4.4, 4.5, 4.6
Vibration			
	DIN EN ISO 10819:	Mechanical vibration and shock - Hand-arm	
	1996	vibration - Method for the measurement and	
		evaluation of the vibration transmissibility of	
		gloves at the palm of the hand	
Head prote	ction against		
Heat and me	echanical risks		
	DIN EN 397 :	05) Industrial safety helmets	
	2013-04	·	
	DIN EN 812 :	03) Industry	
	2012		
Protective of	clothing		
Heat and me	echanical risks		

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	DIN EN ISO 13688: 2013-12	Protective clothing - General requirements	Except Section 4.2e
	DIN EN 343 : 2010-05	Protective clothing - Protection against rain	Except Section 4.3
	DIN EN 469 : 2007-02	Protective clothing for firefighters - Performance requirements for protective clothing for firefighting	Except Section 6.12
	DIN EN ISO 20471.: 2013-09	High-visibility warning clothing for professional use - Test methods and requirements	
	DIN EN 1150 : 1999-02	Visibility clothing for non professional use	Except Section 7.4.5.3
	DIN EN 13356 : 2001-12	Visibility accessories for non-professional use	Except Sections 5.3, 5.4.3
	DIN 58124 : 2010-09	Satchels	Section 5.6 only
	DIN EN 1486 : 2008-04	Protective clothing for fire-fighters - Test methods and requirements for reflective clothing for specialised fire-fighting	Except Sections 4.3.2 and 7.3
	DIN EN ISO 11611: 2015-11	Protective clothing for use in welding and allied processes	Except Section 6.3
	DIN EN ISO 11612: 2015-11	Protective clothing - Clothing to protect against heat and flame	Except Section 6.5.3
	DIN EN ISO 14116: 2015-11	Protective clothing - Protection against heat and flame - Limited flame spread materials, material assemblies and clothing	
	DIN EN 15614; 2007-09	Protective clothing for fire-fighters – Laboratory test methods and performance requirements for protective clothing for wildland fire-fighting	Except Section 8.2
Protective cloth	ing against chemical ı	risks	
	DIN EN 14605 : 2009	Protective clothing against liquid chemicals - Performance requirements for clothing with liquid-tight (Type 3) or spray-tight (Type 4) connections, including items providing protection to parts of the body only (Types PB [3] and PB [4])	

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DIN EN 13034 :	Protective clothing against liquid chemicals -	
2009	Performance requirements for chemical	
	protective clothing offering limited protective	
	performance against liquid chemicals (Type 6	
	and Type PB [6] equipment)	
DIN EN ISO 13982-	Protective clothing for use against solid	
1: 2011(ISO 13982-	Particles – Part 1: Performance	
1:2004 + Amd	requirements for chemical protective clothing	
1:2010); German	providing protection to the full body against	
Version	airborne solid particulates (type 5 clothing)	
EN ISO 13982-	(ISO 13981: 2004) + Amd. 1:2010); Deutsche	I
1:2004 + A1:2010	Fassung EN ISO 13982-1:2004 + A1:2010	
DIN EN ISO 13982-	Protective clothing for use against solid	
2:2005-03	particles - Part 2: Test method for the	
(ISO 13982-	determination of inward leckage of aerosols of	
2:2004); Deutsche	small particles through protective clothing	
Fassung EN ISO		
13982-2:2004		
DIN EN 14325 :	Protective clothing against chemicals - Test	Except Sections
2016	methods and performance classification of	4.6, 4.8, 4.14, 4.15
	chemical protective clothing materials, seams,	
	joins and assemblages	
DIN EN 374-3 :	Protective gloves against chemicals and micro-	
2003	organisms – Part 3: Determination of	
	resistance to permeation by chemicals	
DIN EN ISO 6529 :	Protective clothing - Protection against	Only method A
2003 (ISO 6529 :	chemicals - Determination of resistance of	using a
2001)	protective clothing materials to permeation by	standardized
	liquids and gases (ISO 6529:2001)	permeation rate of
EN 100 (550)		1.0 μg / (cm ² x min)
prEN ISO 6529 :	Protective clothing - Protection against	
2011	chemicals - Determination of resistance of	
	protective clothing materials to permeation by	
	liquids and gases (ISO/DIS 6529:2011)	



(ISO 65	30:2005); chemic n version EN materia	tive clothing - Protection against liquid cals - Test method for resistance of als to penetration by liquids (ISO 005)	
	r version EN chemic 2015 particle for ven (Type 1	cive clothing against liquid and gaseous cals, including liquid aerosols and solid es - Part 1: Performance requirements tilated and non-ventilated 'gas-tight' 1) and 'non-gas-tight' (Type 2) chemical tive suits; German version EN 943-	
2016 German	particle particle Part 1: 2016+AC compre clothin	tive clothing against solid airborne es including radioactive contamination - Requirements and test methods for essed air line ventilated protective g, protecting the body and the tory tract	
2002	contam n version EN method 2002 clothin	tive clothing against radioactive nination - Part 2: Requirements and test ds for non-ventilated protective g against particulate radioactive nination	
4 : 2016 17431-4 2008+A German ISO 174	5; (ISO providi 4: 4: Dete md.1:2016) by a sp n version EN	rive clothing - Test methods for clothing ng protection against chemicals - Part ermination of resistance to penetration ray of liquid (spray test)	
3 : 2008 17491-3 German	3; (ISO providi 3: 2008); 3: Dete	rive clothing - Test methods for clothing ng protection against chemicals - Part ermination of resistance to penetration tof liquid (jet test) (ISO 17491-3:	



Foot and le	g protection		
	DIN EN ISO 20344; 2013-02	Personal protective equipment - Test methods for footwear	Except Section 5.6, 5.7,5.11, 5.13, 5.15.2, 5.16, 5.17, 6.5 bis 6.8, 6.10, 6. 13, 7.2, 7.3, 8.5
X	DIN EN ISO 20345: 2012-04	Personal protective equipment - Safety footwear	Except the above tests DIN EN ISO 20344
	DIN EN ISO 20346; 2014-09	Personal protective equipment - Protective footwear	Except the above tests DIN EN ISO 20344
	DIN EN ISO 20347: 2012-05	Personal protective equipment - Occupational footwear	Except the above tests DIN EN ISO 20344
	DIN EN 14404 2010-05	Personal protective equipment - Knee protectors for work in the kneeling position	
Products in	accordance with Anne	ex IV of the Machinery Directive 2006/42/EC	
Personal de	etection equipment an	d logic units for safety functions	
Proximity sw	vitches for safety function	ns	
	GS-ET-14 : 2011-06	Supplemental requirements for the testing and certification of proximity switches with safety functions	Excluding Section 4.6 (EMC)
	DIN EN 60947-5-3: 2005-11	Low-voltage switchgear and controlgear – Part 5-3: Control circuit devices and switching elements - Requirements for proximity devices with defined behaviour under fault conditions (PDF)	Excluding Sections 7.2.1.6 (switching frequency) and 8.6 (EMC)



Guard locking	devices		
	GS-ET-19 : 2011-02	Principles of testing interlocking devices with solenoid guard-locking	Excluding Section 5.23 (EMC)
	DIN EN ISO 14119: 2011-09	Safety of machinery - Interlocking devices associated with guards - sections 5.2.3, 7.2e - Principles for design and selection	
Enabling devi	ces/release devices		
	GS-ET-22 : 2009-11	Principles of testing Electromechanical enabling switches and enabling devices with and without start-up controllers	Excluding Sections 7.1.7 (PAHs) and 11 (EMC)
Safety relays			
	GS-ET-20 : 2016-10	Supplementary requirements for the testing and certification of safety relays	Excluding Section 4.15 (EMC)
Drive controls	5		
	DIN EN 61800-5-1 : 2008-04	Adjustable speed electrical power drive Systems – Part 5-1: Safety requirements - Electrical, thermal and energy	Excluding sections 5.2.2.2 (short-circuit testing of PCBs), 5.2.3.3 (partial discharge test), 5.2.3.6 (short-circuit current test), 5.2.5.1 (high-current ignition test), 5.2.5.4 (flammability test)
	DIN EN 61800-5-2 : 2008- 04	Adjustable speed electrical power drive Systems – Part 5-2: Safety requirements - Functional	

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Key systems			
Protective eq	GS-ET-31: 2010-02 uipment for personal de	Principles of testing and certification for interlocking devices with key transfer systems	Excluding Sections 5.5.2 (switch disconnectors), 5.15 (EMC), 5.22 (PAHs)
	DIN IEC 61496-1 : 2012	Safety of machinery - Electro-sensitive protective equipment – Part 1: General requirements and tests, except section 5.4.3.2.x EMC (x for sections on burst, surge, HF, etc.)	
	DIN CLC/TS 61496- 2:2008-02	Part 2: Particular requirements for equipment using active opto-electronic protective devices (AOPDs)	Except 5.2.14 Optical radiation safety DIN EN 60825-1, DIN EN 62471
	DIN CLC/TS 61496- 3:2009-08	Safety of machinery - Electro-sensitive protective equipment – Part 3: Particular requirements for Active Opto-electronic Protective Devices responsive to Diffuse Reflection (AOPDDR)	Except 5.2.13 Optical radiation safety: DIN EN 60825-1
	DIN IEC 61496-4-2 : 2010-12	Safety of machinery - Electro-sensitive protective equipment – Part 4-2: Particular requirements for equipment using vision based protective devices (VBPD) - additional requirements when using reference pattern techniques	
	IEC 61496-4-3 : 2011 (IEC/TC44/648/DC) : 2011	Safety of machinery - Electro-sensitive protective equipment - Part 4-3: Particular requirements for equipment using vision based protective devices (VBPD) - Additional requirements when using stereo vision techniques (VBPDST)	



	DIN EN ISO 13856-	Safety of machinery - Pressure-sensitive	Except Section
	1:2011-08	protective devices – Part 1: General principles	7.13.4 (EMC)
		for the design and testing of pressure-	, ,
		sensitive mats and pressure-sensitive floors	
	DIN EN ISO 13856-	Safety of machinery - Pressure-sensitive	Except Section
	2:2011-11	protective devices – Part 2: General principles	7.11.4 (EMC)
	2.2011 11	for the design and testing of pressure-	7.11.4 (LIVIC)
		= -	
Y	DIN EN ISO13856-3	sensitive edges and pressure-sensitive bars	Fyend Coetien
	: 2012-03	Safety of machinery - Pressure-sensitive	Except Section
	: 2012-03	protective devices - Part 3: General principles	7.1.11.5 (EMC)
		for the design and testing of pressure-	
		sensitive bumpers, plates, wires and similar	
		devices	
	IFA Test	Test recommendations for non-contact	
	Recommendation /	protective devices in RDID technology (ESPE-	
	Design 2007	RFID)	
	IFA Test	December of deticate for the testing of other conic	
		Recommendations for the testing of ultrasonic	
	Recommendation /	sensors for personal protection applications	
	310248, as of 2001		
Valve blocks s	serving as logic units for	safety functions	
	GS-BIA-M07 : 2004	Principles for the testing and certification of	Except Section 4.6
	00 517 (11107) 2001	pneumatic / electro-pneumatic valves / valve	(EMC)
		combinations for safety-related parts of	Livie
		control systems	
	DIN EN ISO 13849-	Safety of machinery - Safety-related parts of	
	1:2008-12	control systems - Part 1: General principles for	
	1.2008-12	design	
	DIN EN ISO 13849-	Safety of machinery - Safety-related parts of	
	2:2008-09	control systems – Part 2: Validation	
Two-hand cor		control systems — Fart 2. Validation	
TWO Hama cor	itioi de vices		
	DIN EN 574 : 2008-	Safety of machinery - Two-hand control	
	12	devices - Functional aspects - Principles for	
		design	
Programmab	le electronic systems - f	unctional safety (PLCs)	
	DIN EN 61131-6 :	Programmable Controllers - Part 6: Functional	
	2011-10	_	
		Safety	
	(IEC65B/797/CDV:2		
	011)		

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technology) for the monitoring of	tional safety and safety modules/devices (logic un of safety-related machine process variables and for n rrun/delay, speed, position, distance, laser radiation,	nonitoring of possible
DIN EN ISO 1384 1 : 2016-06	19- Safety of machinery - Safety-related parts of control systems – Part 1: General principles for design	
DIN EN ISO 1384 2:2013-02	49- Safety of machinery - Safety-related parts of control systems – Part 2: Validation	
DIN EN 62061 : 2005-10	Safety of machinery - Functional safety of safety-related electrical, electronic and programmable electronic control systems	
DIN EN ISO 6150 1 : 2011-02		
DIN EN ISO 6150 2 : 2011-02	Partial Period P	
DIN EN ISO 6150 3 : 2011-02		
Security-related units in commun	nication systems and networks	
DIN EN 61784-3 2012-01	: Industrial communication networks – Profiles – Part 3: Functional safety fieldbuses	
GS-ET-07 / date issue 2010-03	of Principles of testing and certification of wireless control equipment for machinery safety requirements	Except section 4.1.18 (EMC), directive 1999/5/ECG (R&TTE)



	Control systems, equipment, safety components and other components (electric, electronic, hydraulic pneumatic, mechanical)			
Electro-me	chanical safety componen	nts		
	DIN EN 60947-5-1 : 2010-04 GS-ET-15 / as of	Low-voltage switchgear and controlgear — Part 5-1: Control circuit devices and switching elements - Electromechanical control circuit devices (only attachment K) Supplementary requirements for the testing		
	2016-10	and certification of positively opening position switches		
	DIN EN 60947-5-5 : 2015-12	Low-voltage switchgear and controlgear – Part 5-5: Control circuit devices and switching elements - Electrical emergency stop device with mechanical latching function		
	DIN EN 60947-5-8 : 2007-08	Low-voltage switchgear and controlgear – Part 5-8: Control circuit devices and switching elements - Three-position enabling switches		
Control sys	DIN EN ISO 13850:2016-05 stems (electric, electronic,	Safety of machinery - Emergency stop function - Principles for design hydraulic, pneumatic)		
	DIN EN ISO 13849- 1 : 2016-06	Safety of machinery - Safety-related parts of control systems – Part 1: General principles for design		
	DIN EN ISO 13849- 2:2013-02	Safety of machinery - Safety-related parts of control systems – Part 2: Validation		
	DIN EN 62061 : 2005-10	Safety of machinery - Functional safety of safety-related electrical, electronic and programmable electronic control systems		
	DIN EN ISO 61508- 1 : 2011-02	Functional safety of electrical/electronic/programmable electronic safety-related systems - Part 1: General requirements, except section 6 FSM as well as all requirements and tests covered by Directive 2006/42/EC		
	DIN EN ISO 61508- 2 : 2011-02	Functional safety of electrical/electronic/programmable electronic safety-related systems - Part 2: Requirements for electrical/electronic/programmable electronic safety-related systems		

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		Ti-	
	DIN EN ISO 61508-	Functional safety of	
	3 : 2011-02	electrical/electronic/programmable electronic	
		safety-related systems - Part 3: Software	
		requirements	
	DIN EN ISO 10218-	Robots and robotic devices - Safety	
	1:2012-01	requirements for industrial robots - Part 1:	
	1.2012 01	Robots	
	ISO 15998 :	Earth-moving machinery - Machine control	
	2008-04	systems (MCS) using electronic components -	
		Performance criteria and tests for functional	
		safety	
Hydraulic (components and equipmen	nt	
	GS-BIA-M13 /	Principles for the testing and certification of	Except section. 4.6
	Stand 2012-08	hydraulic/electrohydraulic valves/valve	EMC
	0.00.00	combinations for safety-related parts of	LIVIC
		controls	
	DIN EN ISO 4413 :	Hydraulic fluid power - General rules and	
	DIN EN 130 4413		
	2011.04	and a few community and a second and a second a few alternations and a few attentions and a few attentions are a second a few attentions and a few attentions are a few attentions are a few attentions and a few attentions are a few attentions are a few attentions and a few attentions are a few attentions are a few attentions and a few attentions are a few attentions are a few attentions and a few attentions are a few attention	
	2011-04	safety requirements for systems and their	
		components	
Pneumatic	2011-04 c components and equipme	components	
Pneumatic	components and equipme	components	Except section 4.6
Pneumatic	GS-BIA-M07 / date	components ent Principles for the testing and certification of	1 '
Pneumatic	components and equipme	Principles for the testing and certification of pneumatic/electropneumatic valves/valve	Except section 4.6 (EMC)
Pneumatic	GS-BIA-M07 / date	Principles for the testing and certification of pneumatic/electropneumatic valves/valve combinations for safety-related parts of	· '
Pneumatic	GS-BIA-M07 / date of issue 2012	Principles for the testing and certification of pneumatic/electropneumatic valves/valve combinations for safety-related parts of controls	1
Pneumatic	GS-BIA-M07 / date of issue 2012 DIN EN ISO 4414 :	Principles for the testing and certification of pneumatic/electropneumatic valves/valve combinations for safety-related parts of controls Pneumatic fluid power - General rules and	1
Pneumatic	GS-BIA-M07 / date of issue 2012	Principles for the testing and certification of pneumatic/electropneumatic valves/valve combinations for safety-related parts of controls Pneumatic fluid power - General rules and safety requirements for systems and their	· '
	GS-BIA-M07 / date of issue 2012 DIN EN ISO 4414 : 2011-04	Principles for the testing and certification of pneumatic/electropneumatic valves/valve combinations for safety-related parts of controls Pneumatic fluid power - General rules and	Except section 4.6 (EMC)
	GS-BIA-M07 / date of issue 2012 DIN EN ISO 4414 :	Principles for the testing and certification of pneumatic/electropneumatic valves/valve combinations for safety-related parts of controls Pneumatic fluid power - General rules and safety requirements for systems and their	1
	GS-BIA-M07 / date of issue 2012 DIN EN ISO 4414 : 2011-04	Principles for the testing and certification of pneumatic/electropneumatic valves/valve combinations for safety-related parts of controls Pneumatic fluid power - General rules and safety requirements for systems and their	1
	GS-BIA-M07 / date of issue 2012 DIN EN ISO 4414: 2011-04	Principles for the testing and certification of pneumatic/electropneumatic valves/valve combinations for safety-related parts of controls Pneumatic fluid power - General rules and safety requirements for systems and their components	1
	GS-BIA-M07 / date of issue 2012 DIN EN ISO 4414 : 2011-04 GS-MFS-I/2-49 :	Principles for the testing and certification of pneumatic/electropneumatic valves/valve combinations for safety-related parts of controls Pneumatic fluid power - General rules and safety requirements for systems and their components Principles for the testing and certification of	1 '
	GS-BIA-M07 / date of issue 2012 DIN EN ISO 4414: 2011-04 GS-MFS-I/2-49: 2010-07	Principles for the testing and certification of pneumatic/electropneumatic valves/valve combinations for safety-related parts of controls Pneumatic fluid power - General rules and safety requirements for systems and their components Principles for the testing and certification of emergency brakes with holding brake function for linear movements	1 '
	GS-BIA-M07 / date of issue 2012 DIN EN ISO 4414: 2011-04 GS-MFS-I/2-49: 2010-07 GS-BIA-M08 / date	Principles for the testing and certification of pneumatic/electropneumatic valves/valve combinations for safety-related parts of controls Pneumatic fluid power - General rules and safety requirements for systems and their components Principles for the testing and certification of emergency brakes with holding brake function for linear movements Principles for the testing and certification of	1 '
	GS-BIA-M07 / date of issue 2012 DIN EN ISO 4414: 2011-04 GS-MFS-I/2-49: 2010-07	Principles for the testing and certification of pneumatic/electropneumatic valves/valve combinations for safety-related parts of controls Pneumatic fluid power - General rules and safety requirements for systems and their components Principles for the testing and certification of emergency brakes with holding brake function for linear movements Principles for the testing and certification of pneumatic brakes/holding equipment for	1 '
	GS-BIA-M07 / date of issue 2012 DIN EN ISO 4414: 2011-04 GS-MFS-I/2-49: 2010-07 GS-BIA-M08 / date of issue 2012-08	Principles for the testing and certification of pneumatic/electropneumatic valves/valve combinations for safety-related parts of controls Pneumatic fluid power - General rules and safety requirements for systems and their components Principles for the testing and certification of emergency brakes with holding brake function for linear movements Principles for the testing and certification of pneumatic brakes/holding equipment for linear drives	(EMC)
	GS-BIA-M07 / date of issue 2012 DIN EN ISO 4414: 2011-04 GS-MFS-I/2-49: 2010-07 GS-BIA-M08 / date	Principles for the testing and certification of pneumatic/electropneumatic valves/valve combinations for safety-related parts of controls Pneumatic fluid power - General rules and safety requirements for systems and their components Principles for the testing and certification of emergency brakes with holding brake function for linear movements Principles for the testing and certification of pneumatic brakes/holding equipment for	1 '

Period of validity: 2017-12-21 to 2022-12-22



	DIN EN 60529 :	Degrees of protection provided by enclosures	
	2014-09	(IP code) without IPxl und 1Px2	
	DIN EN	Environmental testing - Part 2-6: Tests - Test	
	60068-2-6 :	Fc: Vibration (sinusoidal)	
	2008-10		
	DIN EN	Environmental testing - Part 2-27: Tests - Test	
	60068-2-27 : 2010-	Ea and guidance: Shock (only semisinusoidal)	
	02	, ,	
	DIN EN 60068-2-	Environmental testing - Part 2-64: Tests – Test	
	64 : 2009-04	Fh: Vibration, broadband random and	
		guidance	
1echanic	al safety components/Sepa	rate protective equipment safeguards	
	DIN EN 953:	Safety of machinery - Guards - General	
	2009-07	requirements for the design and construction	
		of fixed and movable guards	
	DIN EN ISO 23125:	Machine tools - Safety - Turning machines -	
	2011-01	Amendment 1	
	DIN EN 12417:	Machine tools - Safety - Machining centres	
	2009-07	,	
	DIN EN 13128 :	Safety of machine tools - Milling machines	
	2009-09	(including boring machines)	
Vhole-bo	dy vibration		
	DIN EN 14253 :	Mechanical vibration - Measurement and	
	2003	calculation of occupational exposure to	
		whole-body vibration with reference to health	
		- Practical guidance; German version of EN	
		14253:2003+A1:2007	
	VDI 2057 Blatt 3 :	Human exposure to mechanical vibration -	
	2012	Whole-body vibration at workplaces in	
		buildings	
	DIN EN 1032 :	Mechanical vibration - Testing of mobile	
	2003+A1:2008	machinery in order to determine the vibration	
		emission value (parts governing whole-body	
		vibration), German version of EN 1032: 2003 +	
		AI: 2008	
		7 = 3 3 3	1

Period of validity: 2017-12-21 to 2022-12-22



Hand-arm-vibration				
	DIN EN ISO 5349-1 : 2001	Mechanical vibration - Measurement and evaluation of human exposure to hand-transmitted vibration - Part 1: General requirements (ISO 5349-1:2001)		
	DIN EN ISO 20643 2008	Mechanical vibration - Hand-held and hand- guided machinery - Principles for evaluation of vibration emission (ISO 20643:2005)		
	DIN EN ISO 20643/A1 2010-07	Mechanical vibration - Hand-held and hand- guided machinery - Principles for evaluation of vibration emission		
	DIN EN 1032 : 2008	Mechanical vibration - Testing of mobile machinery in order to determine the vibration emission value	(Parts concerning hand arm vibration)	
	DIN EN 60745-1 und VDE 0740-1 : 2010-01	Hand-held motor-operated electric tools - Safety - Part 1: General requirements (IEC 60745-1:2006, modified); German version of EN 60745-1:20098	(Only partial vibrations)	
	DIN EN ISO 22867: 2008	Forestry machinery - Vibration test code for portable hand-held machines with internal combustion engine - Vibration at the handles (ISO 22867:2004 including Cor 1:2006); German version of EN ISO 22867:2008		
	DIN EN ISO 13753: 2008	Mechanical vibration and shock - Hand-arm vibration - Method for measuring the vibration transmissibility of resilient materials when loaded by the hand-arm system (ISO 13753:1998); German version of EN ISO 13753:2008 + correction 1 (2009)		



Other tests for products				
Loaders				
	DIN EN 1757-3 : 2003-07	Safety of industrial trucks - Pedestrian propelled manual and semi-manual trucks - Part 3: Platform trucks		
3691	DIN EN ISO 3651-5 : 2010-09	Industrial trucks - Safety requirements and verification - Part 5: Pedestrian-propelled trucks		
	GS – Prüfgrundsatz EK5/AK5 06-01.3 : 2011	Manually guided single-axle industrial trucks		
	GS – Prüfgrundsatz EK5/AK5 06-02.2 : 2011	Manually guided multi-axle industrial trucks		
	GS – Prüfgrundsatz EK5/AK5 11-01.0 : 2011	Transport trucks for sports equipment		
Anti-vibra	ation seats for commerci	al use		
	DIN EN 30326 DIN EN 30326-1/A1 DIN EN 30326-1/A2 1994	Mechanical vibration - Laboratory method for evaluating vehicle seat vibration - Part 1: Basic requirements (ISO 10326-1: 1992); German version of EN 30326-1: 1994 and correction 11		
Mechanic	al safety components			
=	DIN EN 953 : 2009- 07	Safety of machinery - Guards - General requirements for the design and construction of fixed and movable guards		
	DIN EN ISO 23125: 2011-01	Machine tools - Safety - Turning machines - Amendment 1		
	DIN EN 12417 : 2009-07	Machine tools - Safety - Machining centres		
	DIN EN 13128 : 2009-09	Safety of machine tools - Milling machines (including boring machines)		



Welding fum	ne equipment		
	DIN EN ISO 15012-	Health and safety in welding and allied	
	1: 2005-03	processes - Requirements, testing and	
		marking of equipment for air filtration - Part 1:	
		Testing of the separation efficiency for	
		welding fume	
Vacuum clea	ners for industrial and c	commercial use and dust extractors	
	DIN EN 60335-2-	Household and similar electrical appliances -	
	69: 2010-01	Safety - Part 2-69: Particular requirements for	
		wet and dry vacuum cleaners, including power	
		brush, for commercial use - principles of dust	
		tests (filtration and explosion protection) are	
		found in Annexes AA and CC of DIN EN 60335-	
		2-69	
Other produ	ucts		
·			
·	ducts		
		Safety requirements for bonded abrasive	
	DIN EN 12413 : 2011-05	Safety requirements for bonded abrasive products	
	DIN EN 12413 :	Safety requirements for bonded abrasive products Safety requirements for superabrasive	
	DIN EN 12413 : 2011-05 DIN EN 13236 :	Safety requirements for bonded abrasive products Safety requirements for superabrasive products employing diamond or boron nitride	
	DIN EN 12413 : 2011-05 DIN EN 13236 : 2011-02	Safety requirements for bonded abrasive products Safety requirements for superabrasive	
	DIN EN 12413 : 2011-05 DIN EN 13236 : 2011-02 DIN EN 13743 :	Safety requirements for bonded abrasive products Safety requirements for superabrasive products employing diamond or boron nitride Safety requirements for coated abrasive products	
	DIN EN 12413 : 2011-05 DIN EN 13236 : 2011-02 DIN EN 13743 : 2009-07	Safety requirements for bonded abrasive products Safety requirements for superabrasive products employing diamond or boron nitride Safety requirements for coated abrasive	
·	DIN EN 12413 : 2011-05 DIN EN 13236 : 2011-02 DIN EN 13743 : 2009-07 DIN EN 847-1 :	Safety requirements for bonded abrasive products Safety requirements for superabrasive products employing diamond or boron nitride Safety requirements for coated abrasive products Tools for woodworking - Safety requirements - Part 1: Milling tools, circular saw blades	
·	DIN EN 12413 : 2011-05 DIN EN 13236 : 2011-02 DIN EN 13743 : 2009-07 DIN EN 847-1 : 2007-11	Safety requirements for bonded abrasive products Safety requirements for superabrasive products employing diamond or boron nitride Safety requirements for coated abrasive products Tools for woodworking - Safety requirements -	
Other produ	DIN EN 12413 : 2011-05 DIN EN 13236 : 2011-02 DIN EN 13743 : 2009-07 DIN EN 847-1 : 2007-11 DIN EN 1083-2 : 1997-02	Safety requirements for bonded abrasive products Safety requirements for superabrasive products employing diamond or boron nitride Safety requirements for coated abrasive products Tools for woodworking - Safety requirements - Part 1: Milling tools, circular saw blades Power driven brushes - Part 2: Safety	
Abrasive prod	DIN EN 12413 : 2011-05 DIN EN 13236 : 2011-02 DIN EN 13743 : 2009-07 DIN EN 847-1 : 2007-11 DIN EN 1083-2 : 1997-02 or coverings	Safety requirements for bonded abrasive products Safety requirements for superabrasive products employing diamond or boron nitride Safety requirements for coated abrasive products Tools for woodworking - Safety requirements - Part 1: Milling tools, circular saw blades Power driven brushes - Part 2: Safety requirements	
Abrasive prod	DIN EN 12413 : 2011-05 DIN EN 13236 : 2011-02 DIN EN 13743 : 2009-07 DIN EN 847-1 : 2007-11 DIN EN 1083-2 : 1997-02 or coverings DIN 51130 : 2010-	Safety requirements for bonded abrasive products Safety requirements for superabrasive products employing diamond or boron nitride Safety requirements for coated abrasive products Tools for woodworking - Safety requirements - Part 1: Milling tools, circular saw blades Power driven brushes - Part 2: Safety requirements Testing of floor coverings - Determination of	
Abrasive prod	DIN EN 12413 : 2011-05 DIN EN 13236 : 2011-02 DIN EN 13743 : 2009-07 DIN EN 847-1 : 2007-11 DIN EN 1083-2 : 1997-02 or coverings	Safety requirements for bonded abrasive products Safety requirements for superabrasive products employing diamond or boron nitride Safety requirements for coated abrasive products Tools for woodworking - Safety requirements - Part 1: Milling tools, circular saw blades Power driven brushes - Part 2: Safety requirements	



	DIN 51131 : 2008-	Testing of floor coverings - Determination of	
	08	the anti-slip property - Method for	
¥		measurement of the sliding friction coefficient	
	DIN 51097 : 1992-	Testing of floor coverings; determination of	
	11	the anti-slip properties; wet-loaded barefoot	
		areas; walking method; ramp test	
	BGR 181:	Floors in working premises and working areas	
×	2003-10	presenting a risk of slipping	
	BGI/GUV-I 8687:	Assessment of the risk of slipping under plant	
	2011-01	conditions	

Abbreviations used:

GS test principles, KBS internal procedure