DAkkS
Deutsche
Akkreditierungsstelle

Accreditation

The Deutsche Akkreditierungsstelle attests with this **Accreditation Certificate** that the testing laboratory

SIGMA KARLSRUHE GmbH
Ingenieurleistungen für das Bauen Prüfinstitut für Baukonstruktionen
Daimlerstraße 21, 76316 Malsch

meets the requirements of DIN EN ISO/IEC 17025:2018 for the conformity assessment activities specified in the following partial accreditation certificates. This includes additional existing legal and normative requirements for the testing laboratory, including those in relevant sectoral schemes, provided that these are explicitly confirmed in the annexes to the partial accreditation certificates listed below.

D-PL-18750-01-01
D-PL-18750-01-02

The management system requirements of DIN EN ISO/IEC 17025 are written in the language relevant to the operations of testing laboratories and they conform to the principles of DIN EN ISO 9001.

This accreditation was issued in accordance with Art. 5 Para. 1 Sentence 2 of Regulation (EC) 765/2008, after an accreditation procedure was carried out in compliance with the minimum requirements of DIN EN ISO/IEC 17011 and on the basis of a review and decision of the appointed accreditation committees.

This accreditation certificate consists of this cover sheet, the reverse side of the cover sheet and the following annex. It only applies in connection with the partial accreditation certificates listed above and the notices referred to there.

Registration number of the certificate: **D-PL-18750-01-00**

Berlin, 16.08.2024 Dipl.-Ing. Evelyn Körner
Head of Technical Unit

Translation issued: 16.08.2024 Dipl.-Ing. Evelyn Körner
Head of Technical Unit

The certificate together with the annex reflects the status as indicated by the date of issue. The current status of any given scope of accreditation can be found in the directory of accredited bodies maintained by Deutsche Akkreditierungsstelle GmbH (www.dakks.de).

See notes overleaf

Deutsche Akkreditierungsstelle GmbH

Office Berlin
Spittelmarkt 10
10117 Berlin

Office Frankfurt am Main
Europa-Allee 52
60327 Frankfurt am Main

Office Braunschweig
Bundesallee 100
38116 Braunschweig

The Deutsche Akkreditierungsstelle GmbH (DAkkS) is the entrusted national accreditation body of the Federal Republic of Germany according to § 8 section 1 AkkStelleG in conjunction with § 1 section 1 AkkStelleGBV. DAkkS is designated as the national accreditation authority by Germany according to Art. 4 Para. 4 of Regulation (EC) 765/2008 and clause 4.7 of DIN EN ISO/IEC 17000.

Pursuant to Art. 11 section 2 of Regulation (EC) 765/2008, the accreditation certificate shall be recognised as equivalent by the national authorities within the scope of this Regulation as well as by the WTO member states that have committed themselves in bilateral or multilateral mutual agreements to recognise the certificates of accreditation bodies that are members of ILAC or IAF as equivalent.

DAkkS is a signatory to the multilateral agreements for mutual recognition of the European co-operation for Accreditation (EA), International Accreditation Forum (IAF) and International Laboratory Accreditation Co-operation (ILAC).

The up-to-date state of membership can be retrieved from the following websites:
EA: www.european-accreditation.org
ILAC: www.ilac.org
IAF: www.iaf.nu

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Annex to the Accreditation Certificate D-PL-18750-01-00 according to DIN EN ISO/IEC 17025:2018

Valid from: **12.08.2019**

Date of issue: 16.08.2024

Holder of accreditation certificate:

SIGMA KARLSRUHE GmbH
Ingenieurleistungen für das Bauen Prüfinstitut für Baukonstruktionen
Daimlerstraße 21, 76316 Malsch

The testing laboratory meets the requirements of DIN EN ISO/IEC 17025:2018 to carry out the conformity assessment activities listed in this annex. The testing laboratory meets additional legal and normative requirements, if applicable, including those in relevant sectoral schemes, provided that these are explicitly confirmed in the annexes to the partial accreditation certificates listed below.

D- PL-18750-01-01

D- PL-18750-01-02

The management system requirements of DIN EN ISO/IEC 17025 are written in the language relevant to the operations of testing laboratories and they conform to the principles of DIN EN ISO 9001.

This certificate annex is only valid together with the written accreditation certificate and reflects the status as indicated by the date of issue. The current status of any given scope of accreditation can be found in the directory of accredited bodies maintained by Deutsche Akkreditierungsstelle GmbH at https://www.dakks.de.

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Accreditation

The Deutsche Akkreditierungsstelle attests with this **Partial Accreditation Certificate** that the testing laboratory

SIGMA KARLSRUHE GmbH
Ingenieurleistungen für das Bauen - Prüfinstitut für Baukonstruktionen
Daimlerstraße 21, 76316 Malsch

meets the requirements according to DIN EN ISO/IEC 17025:2018 for the conformity assessment activities listed in the annex to this certificate. This includes additional existing legal and normative requirements for the testing laboratory, including those in relevant sectoral schemes, provided they are explicitly confirmed in the annex to this certificate.

The management system requirements of DIN EN ISO/IEC 17025 are written in the language relevant to the operations of testing laboratories and they conform to the principles of DIN EN ISO 9001.

This accreditation was issued in accordance with Art. 5 Para. 1 Sentence 2 of Regulation (EC) 765/2008, after an accreditation procedure was carried out in compliance with the minimum requirements of DIN EN ISO/IEC 17011 and on the basis of a review and decision of the appointed accreditation committees.

This partial accreditation certificate only applies in connection with the notice of 12.08.2019 with accreditation number D-PL-18750-01.
It consists of this cover sheet, the reverse side of the cover sheet and the following annex with a total of 3 pages.

Registration number of the partial accreditation certificate: **D-PL-18750-01-01**
It is a part of the accreditation certificate: D-PL-18750-01-00.

Berlin, 16.08.2024 Dipl.-Ing. Evelyn Körner
Head of Technical Unit

Translation issued: 16.08.2024 Dipl.-Ing. Evelyn Körner
Head of Technical Unit

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This document is a translation. The definitive version is the original German accreditation certificate.

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Pursuant to Art. 11 section 2 of Regulation (EC) 765/2008, the accreditation certificate shall be recognised as equivalent by the national authorities within the scope of this Regulation as well as by the WTO member states that have committed themselves in bilateral or multilateral mutual agreements to recognise the certificates of accreditation bodies that are members of ILAC or IAF as equivalent.

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Annex to the Partial Accreditation Certificate D-PL-18750-01-01 according to DIN EN ISO/IEC 17025:2018

Valid from: **12.08.2019**

Date of issue: 16.08.2024

This annex is a part of the accreditation certificate D-PL-18750-01-00.

Holder of partial accreditation certificate:

SIGMA KARLSRUHE GmbH
Ingenieurleistungen für das Bauen Prüfinstitut für Baukonstruktionen
Daimlerstraße 21, 76316 Malsch

with the location

SIGMA KARLSRUHE GmbH
Ingenieurleistungen für das Bauen Prüfinstitut für Baukonstruktionen
Daimlerstraße 21, 76316 Malsch

The testing laboratory meets the requirements of DIN EN ISO/IEC 17025:2018 to carry out the conformity assessment activities listed in this annex. The testing laboratory meets additional legal and normative requirements, if applicable, including those in relevant sectoral schemes, provided that these are explicitly confirmed below.

The management system requirements of DIN EN ISO/IEC 17025 are written in the language relevant to the operations of testing laboratories and they conform to the principles of DIN EN ISO 9001.

Tests in the fields:

Mechanical testing of load bearing capacity and of deformation behaviour of scaffold systems and scaffold structural elements of service and working scaffolds and falsework as well as formwork and racking systems

This certificate annex is only valid together with the written accreditation certificate and reflects the status as indicated by the date of issue. The current status of any given scope of accreditation can be found in the directory of accredited bodies maintained by Deutsche Akkreditierungsstelle GmbH at https://www.dakks.de.

Within the given testing field the testing laboratory is permitted, without being required to inform and obtain prior approval from DAkkS, the free choice of standard or equivalent testing methods
The listed testing methods are exemplary.
The laboratory maintains a current list of all test methods in the flexible scope of accreditation.

Mechanical testing of load bearing capacity and of deformation behaviour of scaffold systems and scaffold structural elements of service and working scaffolds and falsework as well as formwork and racking systems

Type of testing	Test parameter	Measurement range	Measurement uncertainty	Characteristic test methods
Tensile Compressive Deformation	Tensile force, Compressive force	1.0 kN - 10.0 kN 5.0 kN - 50.0 kN 20.0 kN - 200.0 kN 100.0 kN - 1000.0 kN	1.0 % 1.0 % 1.0 % 1.0 %	see below
	deformation	0.2 mm - 10 mm 0.2 mm - 50 mm 0.2 mm - 100 mm 5.0 mm - 600 mm	0.5 % 1.0 % 1.0 % 1.0 %	
	Inclination difference	0.001 rad - 0.25 rad	0.5 %	

Characteristic test methods

EN 74-1 2005	Couplers, spigot pins and baseplates for use in falsework and scaffolds - Part 1: Couplers for tubes - Requirements and test procedures
EN 74-2 2008	Couplers, spigot pins and baseplates for use in falsework and scaffolds - Part 2: Special couplers - Requirements and test procedures
EN 74-3 2007	Couplers, spigot pins and baseplates for use in falsework and scaffolds - Part 3: Plain base plates and spigot pins - Requirements and test procedures
EN 1065 1998	Adjustable telescopic steel props - Product specifications, design and assessment by calculation and tests
EN 12810-2 2003	Façade scaffolds made of prefabricated components - Part 2: Particular methods of structural design
EN 12811-3	Temporary works equipment - Part 3: Load testing

2002	
EN 12813 2004	Temporary works equipment - Load bearing towers of prefabricated components - Particular methods of structural design
EN 15512 2009	Steel static storage systems - Adjustable pallet racking systems - Principles for structural design
EN 16031 2012	Adjustable telescopic aluminum props - Product specifications, design and assessment by calculation and tests
DIN 4425 2017-04	Light adjustable base plates for scaffolds; structural requirements, assessment of load-bearing capacity and inspection
DIN 18216 2017-11	Formwork ties; requirements, testing, use
DIBt 67193.03 2003-06	Test programme for fastenings of bracket type scaffolds *Prüfprogramm für Verankerungen von Konsolengerüsten*
Schriften des DIBt Reihe B, Heft 5 2008-04	Approval for service and working scaffolds - requirements, structural analysis, load testing and proof of conformity *Zulassungsgrundsätze für Arbeits- und Schutzgerüste - Anforderungen, Berechnungsannahmen, Versuche und Übereinstimmungsnachweis*
FEM 10.2.06 2012	The design of Hand loaded low rise steel static shelving - Design by experimental methods
FEM 10.2.07 2011	The design of Drive-in and drive-through racking
FEM 10.2.09 2008	The design of Cantilever racking

Abbreviations used:

DIN	Deutsches Institut für Normung e. V. - German institute for standardization
EN	Europäische Norm – European Standard
ISO	International Organisation for Standardisation
FEM	Fédération Européenne de la Manutention
DIBt	Deutsches Institut für Bautechnik

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SIGMA KARLSRUHE GmbH
Ingenieurleistungen für das Bauen Prüfinstitut für Baukonstruktionen
Daimlerstraße 21, 76316 Malsch

meets the requirements according to DIN EN ISO/IEC 17025:2018 for the conformity assessment activities listed in the annex to this certificate. This includes additional existing legal and normative requirements for the testing laboratory, including those in relevant sectoral schemes, provided they are explicitly confirmed in the annex to this certificate.

The management system requirements of DIN EN ISO/IEC 17025 are written in the language relevant to the operations of testing laboratories and they conform to the principles of DIN EN ISO 9001.

This accreditation was issued in accordance with Art. 5 Para. 1 Sentence 2 of Regulation (EC) 765/2008, after an accreditation procedure was carried out in compliance with the minimum requirements of DIN EN ISO/IEC 17011 and on the basis of a review and decision of the appointed accreditation committees.

This partial accreditation certificate only applies in connection with the notice of 12.08.2019 with accreditation number D-PL-18750-01.
It consists of this cover sheet, the reverse side of the cover sheet and the following annex with a total of 2 pages.

Registration number of the partial accreditation certificate: **D-PL-18750-01-02**
It is a part of the accreditation certificate: D-PL-18750-01-00.

Berlin, 16.08.2024 Dr.-Ing. Tobias Poeste
Head of Technical Unit

Translation issued:
16.08.2024 Dr.-Ing. Tobias Poeste
Head of Technical Unit

The certificate together with the annex reflects the status as indicated by the date of issue. The current status of any given scope of accreditation can be found in the directory of accredited bodies maintained by Deutsche Akkreditierungsstelle GmbH (www.dakks.de).

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Pursuant to Art. 11 section 2 of Regulation (EC) 765/2008, the accreditation certificate shall be recognised as equivalent by the national authorities within the scope of this Regulation as well as by the WTO member states that have committed themselves in bilateral or multilateral mutual agreements to recognise the certificates of accreditation bodies that are members of ILAC or IAF as equivalent.

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Annex to the Partial Accreditation Certificate D-PL-18750-01-02 according to DIN EN ISO/IEC 17025:2018

Valid from: **12.08.2019**

Date of issue: 16.08.2024

This annex is a part of the accreditation certificate D-PL-18750-01-00.

Holder of partial accreditation certificate:

SIGMA KARLSRUHE GmbH
Ingenieurleistungen für das Bauen Prüfinstitut für Baukonstruktionen
Daimlerstraße 21, 76316 Malsch

with the location

SIGMA KARLSRUHE GmbH
Ingenieurleistungen für das Bauen Prüfinstitut für Baukonstruktionen
Daimlerstraße 21, 76316 Malsch

The testing laboratory meets the requirements of DIN EN ISO/IEC 17025:2018 to carry out the conformity assessment activities listed in this annex. The testing laboratory meets additional legal and normative requirements, if applicable, including those in relevant sectoral schemes, provided that these are explicitly confirmed below.

The management system requirements of DIN EN ISO/IEC 17025 are written in the language relevant to the operations of testing laboratories and they conform to the principles of DIN EN ISO 9001.

Hardness tests and tensile testing on metallic materials

This certificate annex is only valid together with the written accreditation certificate and reflects the status as indicated by the date of issue. The current status of any given scope of accreditation can be found in the directory of accredited bodies maintained by Deutsche Akkreditierungsstelle GmbH at https://www.dakks.de.

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 testing methods within the flexible scope of accreditation.

1 Hardness tests

DIN EN ISO 6506-1 2015-02	Metallic materials - Brinell hardness test - Part 1: Test method
DIN EN ISO 6507-1 2018-07	Metallic materials - Vickers hardness test - Part 1: Test method

2 Tensile testing

DIN EN ISO 6892-1 2020-06	Metallic materials - Tensile testing - Part 1: Method of test at room temperature

Abbreviations used:

DIN	Deutsches Institut für Normung e.V. – German institute for standardization
EN	Europäische Norm – European Standard
IEC	International Electrotechnical Commission
ISO	International Organization for Standardisation