

Technical Information TI-B40

Safety Brakes

KSP and KSE

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1 Granting the DGUV Test Certificate

After thorough examination, the test and certification body DGUV Test has issued a DGUV Test Certificate for the Safety Brakes KSP and KSE (mechanical part) from SITEMA. The DGUV thereby confirms that the Safety Brakes conform to the applicable rules and regulations of the Machinery Directive 2006/42/EC. You will find the DGUV Test Certificates for the KSP and KSE series on the following pages. The certificate entitles SITEMA to attach the DGUV Test mark to the products which correspond to the tested product type.

Test certificate number:	HM 220177	HM 240107
Valid for:	Safety Brakes KSP series	Safety Brakes KSE series
Valid until:	November 01, 2027	October 01, 2029

Validity

The DGUV Test Certificate is only valid for a specific period. A follow-up certificate will be issued if the product still fulfills the requirements.

The first certificate was issued in the year 2013.

DGUV Test Certificate

You will find the DGUV Test Certificates for the Safety Brakes KSP and KSE series on the following pages.

2 DGUV Test Certificate for KSP series

Certificate
no. **HM 220177**
of Nov. 02, 2022



DGUV Test Certificate

Name and address of the certificate holder: (customer) SITEMA GmbH & Co. KG
G.-Braun-Straße 13
76187 Karlsruhe - Germany

Product denomination: **Safety Brake**

Type: KSP series

Testing principle: GS-HM-21:2022-03 presses and forging machines

Related test report: No. 2022-0122-01, dated Oct. 26, 2022

Further information: Intended use:
Installation in:
- presses according to DIN EN 289;
- mechanical "Group 1" presses according to DIN EN ISO 16092-1/-2;
- hydraulic presses according to DIN EN ISO 16092-1/-3;
- injection moulding machines according to DIN EN ISO 20430
for holding a load from standstill.

Remarks:
see appendix

Follow-up certificate to HSM 12017 from Nov. 14, 2017.

The tested model conforms to the requirements stated in § 3, section 1 of the Equipment and Product Safety Act. Therefore, the tested model also conforms to the applicable rules and regulations of the EC Machinery Directive 2006/42/EG. The certificate holder is authorized to attach the DGUV Test mark shown on the back side of this document to products conforming with the tested model.

This certificate and the right to attach the DGUV Test mark is valid until: **Nov. 1, 2027**
The Rules of Procedure for Testing and Certification contain additional information about validity, extension of validity as well as further conditions.

Jan Stegmann
Dipl.-Ing. Jan Stegmann
Head of Certification



PZB09MA
04.17

Deutsche Gesetzliche Unfallversicherung (DGUV) e.V.
Spitzenverband der gewerblichen
Berufsgenossenschaften und der
Unfallversicherungsträger der öffentlichen Hand
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Reverse side of DGUV Test Certificate HM 220177

DGUV Test mark



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Appendix

for certificate no. HM 220177, date November 02, 2022



Name and address of the certificate holder:

SITEMA GmbH & Co. KG
G.-Braun-Straße 13
76187 Karlsruhe - Germany

Product denomination:

Safety Brake KSP Series

The intended use includes the following:

- to select and install the Safety Brake according to the instructions of the company SITEMA and the requirements of the applicable product standards (DIN EN 289, DIN EN ISO 16092-1/-2, DIN EN ISO 16092-1/-3, DIN EN ISO 20430),
- to observe the operating manual,
- to carry out safety tests of the Safety Brake in regular intervals and to observe all test instructions provided by the company SITEMA,
- the machine manufacturer may only use the Safety Brake for holding a load from standstill (during normal operation),
- if EN ISO 13849-1 with PL d (PL - performance level) or PL e is targeted, the safety feature "holding the load (from standstill)" corresponds to the requirements of categories 2 or 3 (PL d) or category 4 (PL e), respectively.
- if the product standard does not specify performance tests, the machine manufacturer installs automated testing measures as result of the risk analysis or the machine manufacturer describes tests carried out by the machine operator with testing intervals in the operating instructions of the machine;
- if the product standard does not specify performance tests for the machine, a single Safety Lock is tested ($E: \geq 1 \text{ s}$) with a load of at least 1.5 times the load to be held; and redundant Safety Locks are tested each with at least ($E: \geq 1 \text{ s}$) 1.1 times of the load usually held by all Safety Locks.
- that the machine manufacturer considers the decline in performance which may occur if lubricants are applied on frictional surfaces in comparison with the calculated design and performance by SITEMA,
- that the machine manufacturer takes measures which prevent the unlocking of the Safety Brake before the load is taken over,
- that the machine manufacturer ensures that the pivot valve outflow of the Safety Brake is not under pressure.

The Safety Lock can be considered a "reliable component" for holding a load from standstill and can therefore be used in control units of category 1 (PLc) according to DIN EN ISO 13849-1.

For the safety function "holding a load" (mechanical, from standstill) for a single-use Safety Brake, as a maximum the PL d of DIN EN ISO 13849-1 can be reached; in a redundant installation as a maximum the PL d or PL e of the DIN EN ISO 13849-1 can be reached (the PL is determined for the specific application).

This certificate does not cover the following:

- Installation in machines not mentioned above, especially installation in mechanical servo presses of "group 2" according to DIN EN ISO 16092-1/-2;
- braking performance/braking function (emergency stop function);
- non-safety-related properties,


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for certificate no. HM 220177, date November 02, 2022



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- proximity switches and other accessories.
- The risk assessment of the manufacturer was not checked.

Mainz, Nov. 2, 2022


Jan Stegmann
Head of
Certification



3 DGUV Test Certificate for KSE series

Certificate
No. **HM 240107**,
October 02, 2024



DGUV Test Certificate

Name and address of the certificate holder: (customer)
SITEMA GmbH & Co. KG
G.-Braun-Straße 13
76187 Karlsruhe

Product description: **Fully electric Safety Brake (mechanical part)**

Type: KSE series

Testing principle: GS-HM-21 'Presses and forging machines', 2023-12

Related test report: No. 2022-0085-01, dated September 12, 2024

Further information: Intended use:
Installation in
- Presses according to DIN EN 289
- Mechanical "series 1" presses according to DIN EN ISO 16092-1/-2
- Hydraulic presses according to DIN EN ISO 16092-1/-3
- Injection-molding machinery according to DIN EN ISO 20430
for holding a load from standstill

Remarks: see Appendix.

The tested model conforms to the requirements stated in Section 3 (1) of the German Product Safety Act (ProdSG). Therefore, the tested model also conforms to the applicable rules and regulations of the **Machinery** Directive 2006/42/EC. The certificate holder is authorized to attach the DGUV Test mark shown on the reverse side of this document to products conforming with the tested model.

This certificate and the right to attach the DGUV Test mark is valid until: **October 01, 2029**
The Rules of Procedure for Testing and Certification contain additional information about validity, extension of validity as well as further conditions.



Reverse side of DGUV Test Certificate HM 240107

DGUV Test mark



PZB09MA
04.17

APPENDIX

for DGUV test certificate no. HM 240107, dated October 02, 2024



Name and address of the certificate holder: SITEMA GmbH & Co. KG
G.-Braun-Straße 13, 76187 Karlsruhe

Product description: Fully electric Safety Brake (mechanical part) KSE series

The intended use includes the following:

- select and install the Safety Brake according to the instructions of the company SITEMA and the requirements of DIN EN 289 | DIN EN ISO 16092-1/-2 | DIN EN ISO 16092-1/-3 | DIN EN ISO 20430
- observe the operating manual
- carry out safety tests at regular intervals in accordance with country-specific guidelines and instructions provided by the manufacturer
- the machinery manufacturer may only use the Safety Brake KSE for holding a load from standstill (during normal operation)
- if EN ISO 13849-1 with PL d or PL e is targeted, the Safety Brake KSE safety function "holding the load (from standstill)" corresponds to the requirements of categories 2 or 3 (PL d) or category 4 (PL e), respectively
- if the product standard does not specify performance tests, the machinery manufacturer takes automated testing measures for the machine fitted with the Safety Brake KSE as a result of its risk assessment, or the machinery manufacturer describes tests carried out by the machine operator with testing intervals in the operating manual for the machine
- if the product standard does not specify performance tests for the relevant machine, single-use Safety Brakes KSE are loaded with at least 1.5 times the load to be restrained ($E: \geq 1$ s long) and redundant Safety Brakes KSE are each loaded with at least 1.1 times the load normally restrained by all Safety Brakes KSE together ($E: \geq 1$ s long) if at all possible
- the machinery manufacturer considers the decline in performance which may occur if lubricants are applied on frictional surfaces in comparison with the design and performance by SITEMA.

The Safety Brake KSE can be regarded as a "proven safety component" for holding a load from standstill and can therefore be used in category 1 (PL c) control systems according to DIN EN ISO 13849-1.

For the safety function "holding a load from standstill" for a single-use Safety Brake KSE, as a maximum the PL d of DIN EN ISO 13849-1 can be reached; in a redundant application, as a maximum the PL e of DIN EN ISO 13849-1 can be reached (the performance level (PL) is determined for the specific application).

APPENDIX

for DGUV test certificate no. HM 240107, dated October 02, 2024




This certificate does not cover any safety aspects with regard to

- installation in machines not mentioned above, especially installation in mechanical "series 2" servo presses according to DIN EN ISO 16092-1/-2
- use of an emergency stop function
- solenoid and solenoid controller (SiBox) of the Safety Brake KSE
- proximity switches and other accessories
- fire and explosion protection

or any warranted non-safety-related properties. The risk assessment of the manufacturer was not checked.

Mainz, October 02, 2024


Jan Stegmann
Head of
Certification

