

# Technical Information TI-A40 DGUV Test Certificate for Safety Catchers

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### 1 Approval as mechanical restraint device according to DGUV

The European standard **ISO 16092-1** in connection with **ISO 16092-3** (Machine tools - Safety - presses, parts 1 and 3) requests certain safety measures to prevent injuries caused by unintentional lowering of the slide due to its own weight (force exceeding 150 Newton).

**A distinction is made between the following operating states:**

- production
- maintenance or repair

In both cases **mechanical restraint devices** are accepted solutions.

**For maintenance or repair, a mechanical restraint device is the only accepted solution:**

*"Where there is a risk of injury (force higher than 150 Newton) from a gravity fall of the slide/ram, during repair works or any necessary intervention between the parts of the tools (which is not the normal manual feeding), a mechanical restraint device, e.g. a chock, a safety block or a ram block, shall be installed in the press."* (translation of German DIN EN ISO 16092-1, paragraph 5.3.6)

**For larger presses, the following additional requirement applies:**

*"On presses with an opening stroke length of more than 500 mm and a depth of table of more than 800 mm, a mechanical restraint device shall be permanently fixed and integrated with the press."* (translation of German DIN EN ISO 16092-3, paragraph 5.3.6.1)

SITEMA Safety Catchers are **mechanical restraint devices** which are permanently installed into a press.

### 1.1 Certificate number

After a thorough examination, the test and certification body DGUV (German Social Accident Insurance) issued the following DGUV Test Certificate. With the certificate, the DGUV confirms that the SITEMA Safety Catchers are restraint devices to this effect:

Certificate number:	HSM 240085
Valid for:	Safety Catchers of the KR, KR/T, KRP, KRP/T, K, K/T and K/TA series

### Validity of the Certificate

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

The first certificate was issued in the year 1984.

### Advantages of a SITEMA Safety Catcher in comparison to a top dead center lock

SITEMA Safety Catcher	Top dead center lock T.D.C. = top dead center
Emergency braking possible	Only for clamping at standstill
Overload protection	No overload protection
Continuous clamping in any position	Locking only at the top dead point
Safety factor included	Safety factor to be considered
Easy installation into all machines	Complicated
Automatic clamping in case of power failure, safe against operating errors and accidental release	Not fail safe
DGUV-approved	Own certification needed
Standard solution with absolute functional safety, reliable and proven for over 45 years	Own design necessary for each type of press, i.e. additional costs

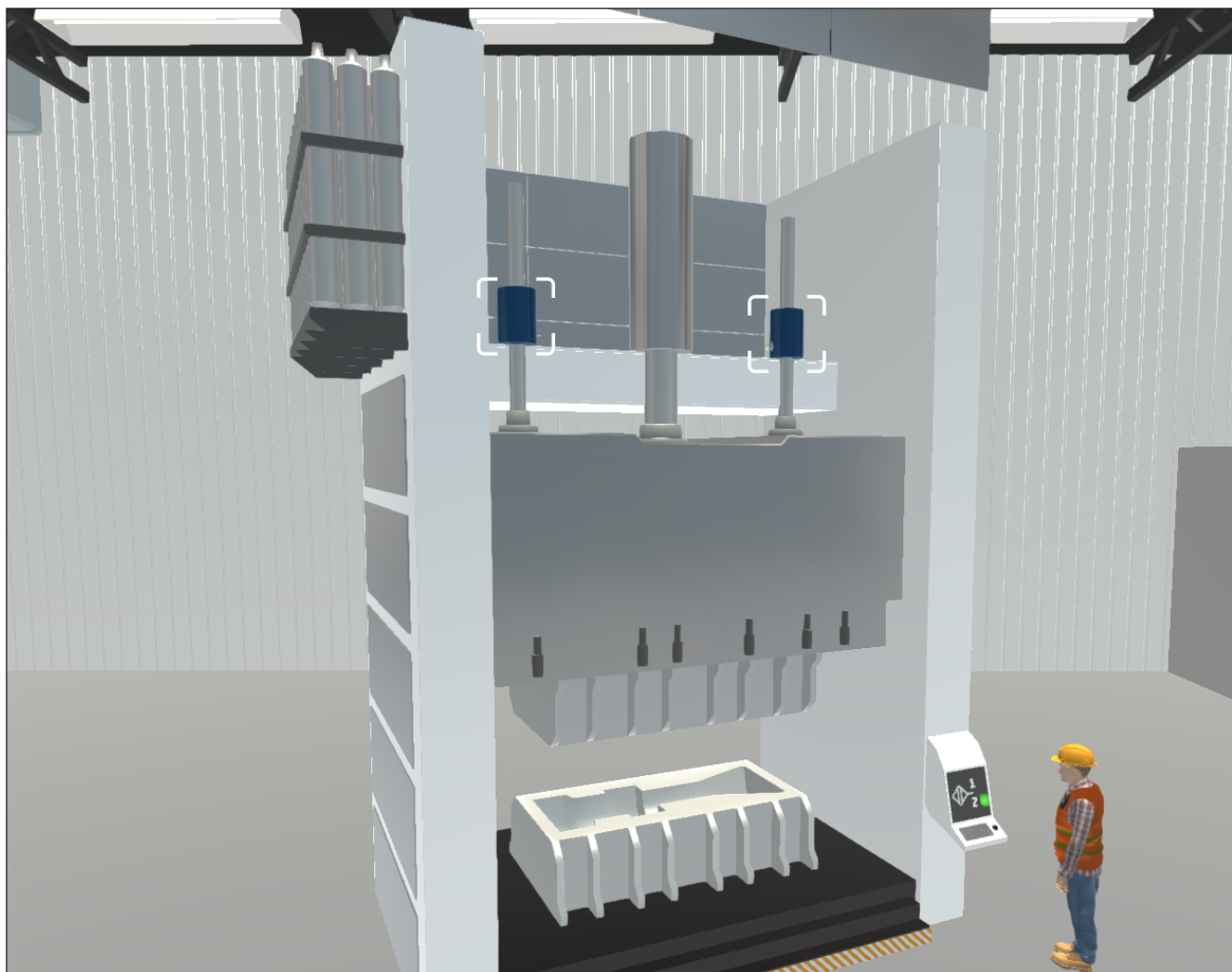


Fig. 1: Application example of a forming press with 2 Safety Catchers

### 3 DGUV Test Certificate

Certificate  
 No. **HM 240085**,  
 date July 10, 2024



## DGUV Test Certificate

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

Product description: **Restraint Device**

Type: KR, KR/T, KRP, KRP/T, K, K/T and K/TA

Testing principle: GS-HM-21:2023-12 presses and forging machines

Related test report: No. 2024-0007-01, dated June 27, 2024

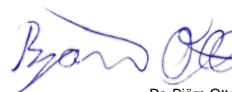
Further information: Intended use:  
 Installation in:  
 - Presses according to DIN EN 289;  
 - Mechanical "series 1" presses according to DIN EN ISO 16092-1/-2;  
 - Hydraulic presses according to DIN EN ISO 16092-1/-3;  
 - Injection-molding machinery according to DIN EN ISO 20430  
 for holding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


Remarks: see appendix.

Follow-up certificate to certificate no. HSM 19010 dated June 26, 2019

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: **July 9, 2029**  
 The Rules of Procedure for Testing and Certification contain additional information about validity, extension of validity as well as further conditions.

  
 Dr. Björn Otte  
 Head of the Testing and Certification Institute



PZB09MA  
 04.17  
 Deutsche Gesetzliche Unfallversicherung (DGUV) e. V.  
 Spitzenverband der gewerblichen Berufsgenossenschaften  
 und der Unfallversicherungsträger der öffentlichen Hand  
 Vereinsregister-Nr. VR 751 B, Amtsgericht Charlottenburg

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Reverse side of DGUV Test Certificate HM 240085

**DGUV Test mark**

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**APPENDIX**

for DGUV test certificate no. HM 240085, dated July 10, 2024



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

Product description: Restraint Device  
 KR, KR/T, KRP, KRP/T, K, K/T and K/TA

The intended use includes the following:

- select and install 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);
- observe the operating manual;
- carry out safety tests on the Restraint Device at regular intervals and take into account all test instructions of the company SITEMA;
- the machinery manufacturer uses the Restraint Device for holding a load from standstill (during normal operation);
- if EN ISO 13849-1 with PL d or PL e is targeted, the Restraint Device 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 Restraint Device 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 Restraint Devices are loaded with at least 1.5 times the load to be restrained (E: ≥ 1 s long) and redundant Restraint Devices are each loaded with at least 1.1 times the load normally restrained by all Restraint Devices together (E: ≥ 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 calculated design and performance by SITEMA;
- the machinery manufacturer takes measures which prevent the unlocking of the Restraint Device before the load is taken over;
- the machinery manufacturer ensures that the pivot valve outflow of the Restraint Device is depressurized.

The Restraint Device can be regarded as a “proven 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” (mechanical, from standstill) for a single-use Restraint Device as a maximum the PL d of DIN EN ISO 13849-1 can be reached; in a redundant application 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).

**APPENDIX**

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This certificate does not cover the following:

- Installation in machines not mentioned above, especially installation in mechanical "series 2" servo presses according to DIN EN ISO 16092-1/-2;
- braking performance/braking function (emergency stop function);
- non-safety-related properties;
- proximity switches and other accessories.

The risk assessment of the manufacturer was not checked.

Mainz, July 10, 2024

A handwritten signature in blue ink, appearing to read 'Björn Otte', written over a circular stamp.



Dr. Björn Otte  
Head of the Testing and Certification Institute