

# Technical Information TI-F40 DGUV Test Certificate for Locking Units KFHS and KFHSR

## 1 Information about the DGUV Test certificate

### Approval as restraint device in hydraulic presses

#### Requirements of the technical standards

The European standard **ISO 16092-1** in connection with **ISO 16092-3** (Machine tools - Safety - presses, parts 1 and 2) 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. It can be manually operated."

(translation of German DIN EN ISO 16092-3, paragraph 5.3.6.1)

### Certificate

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

Certificate number:	HSM 19 011
Valid for:	Locking Units, KFHS and KFHSR series

### Validity

The DGUV Test Certificate is only valid for a specific period of time.

## 2 DGUV Test Certificate



Certificate  
 No. **HSM 19011**  
 Date Oct. 23, 2019

### DGUV Test Certificate

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

Product description: **Locking unit**

Type: KFHS and KFHSR

Testing principle: GS-HSM-02 "Mechanische Hochhalteeinrichtungen" (mechanical restraint devices), 04-2018

Related test report: No. 2019-002b, date October 23, 2019

Further information Intended use:  
 Installation in

- mechanical presses according to DIN EN 692
- hydraulic presses according to ISO 16092-1 in connection with ISO 16092-3
- hydraulic folding presses according to DIN EN 12622
- injection-molding machinery with vertical closing movement according to DIN EN 201
- presses according to DIN EN 289 (for clamping from the rest position)

Remarks: see appendix.

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 provisions 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 are valid until: **June 25, 2024**  
 The Rules of Procedure for Testing and Certification contain additional information about validity, extension of validity as well as further conditions.

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 (Dipl.-Ing. Carsten Diekel)  
 Head of the Testing and Certification Institute

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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Back side of DGUV Test Certificate HSM 19011

**DGUV Test Mark**



PZ609MA  
04.17

**APPENDIX**

to test certificate no. HSM 19011, dated October 23, 2019



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

Product description: **Locking unit**  
 KFHS and KFHSR types

**Remarks:**

- The manufacturer of the machine must select and install the locking unit device according to the operator instructions and according to the requirements of DIN EN 692, ISO 16092-1 in connection with 16092-3, DIN EN 12622, DIN EN 201, or DIN EN 289.
- The manufacturer of the machine must provide an automated testing device which corresponds to the applicable product standard. If the product standard provides no relevant information, the testing device must correspond to the specifications of the company SITEMA. A bad signal at the automated testing device must lead to a restricted operation of the machine equipped with the locking unit.
- The manufacturer of the machine must extend the methods of DIN EN ISO 13849 to the locking unit.
- If an additional manual intervention is possible and if the locking unit has an emergency stop feature, the machine manufacturer must determine the stopping time of the machine in case of a malfunction (emergency stop is triggered, stopping with the locking unit only). This stopping time must be the basis for determining the safety distance of the operator safety system.
- If the locking unit is installed in machines with components which have been treated with separating agents, for dimensioning or determining the holding force, the friction coefficient must be used which corresponds to the surfaces/rods treated with separating agents. If this is not possible, an equivalent measure has to be taken (e. g. filling the locking unit with oil).
- The machine manufacturer must ensure that the pivot valve outflow of the locking unit is not under pressure.
- The machine manufacturer must take measures which prevent the unlocking of the locking unit before the load is taken over.

Düsseldorf, October 23, 2019

(Dipl.-Ing. Diekel)  
**Head of the Testing and Certification Institute**