

Installation and Operating Manual for Components

# HST<sup>®</sup>-W5 / HST<sup>®</sup>-W10

Key change station  
(Translation of Original Manual)

HST-W5 Ident.-No.: 10360 to 10369

HST-W10 Ident.-No.: 10370 to 10404



HST-W5 / HST-W10, pictured Ident.-No. 10363 and 10372  
The image may differ from the product.

**Read the operating manual before beginning any work!**

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CE

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## 1 Scope

This installation and operating manual is intended for persons who have been authorized to carry out tasks involving the installation or operation of the HST-series.

International, national and, where appropriate, regional regulations are to be observed when handling key transfer systems.

If you have any questions which are not answered in this manual, please get in touch with your regional customer service centre or else make direct contact with

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## 2 Intended use

The Key change station HST-W5 / HST-W10 serves as the release of one or multiple key changes with coding, through the previous actuation of one or multiple locks with the help of one or multiple release keys with a different coding.

The HST-W5 / HST-W10 is used, for example, if in the system more keys are necessary to open the separating safeguard than are free in the initial shut-down. The Key change station acts as a link between the shutdown components of the system and the guard-locking of the separating safeguard.

## 3 Symbol Explanation

Warnings are indicated by symbols. The notices are introduced by signal words to indicate the extent of the hazard.



### Attention!

... indicates a potentially hazardous situation, which may lead to personal injury and damage to property if it is not avoided.



### NOTE!

... highlights useful tips and recommendations as well as information for efficient and fault-free operation.

## 4 Disposal



The device must be properly disposed of in accordance with national laws and regulations.

## **5 Foreseeable misuse**

Never operate the keys with extended lever arms. This can damage the internal components and may render the safety function inoperative.

Do not attempt to unlock the component with objects other than the corresponding keys.

Do not attempt to insert or remove a key by applying excessive force or with the aid of a tool (hammer)

## **6 Identification**

You can find the model designation and serial number on the component's type label for exact identification.

If the component is part of a key transfer system, this information, except for the serial number, can also be found on the key plan.

Note these details (prior to installation, if necessary), so that they can be provided in case of questions or for ordering spare parts.

## **7 Safety-related functioning**

The safety-related function is performed according to the following requirements:

1. No removal of the inserted key change when the release keys have not been inserted and turned.
2. No removal of the release keys if the key changes have not been inserted and turned.

## 8 Defects which cannot occur

Due to the construction, materials, and components used for the component, the faults listed in the table can be excluded:

Potential Defect	Elimination of Defect	Limitations of Use	Reason
Wear, corrosion.	Permissible acc. To tables A.4 and A.5 of DIN EN ISO 13849-2.	See sections 2 <b>Intended use</b> and sections 19 <b>Technical data.</b>	Application of carefully selected materials and manufacturing processes; use of proven springs and special mounting methods.
Non-tightening /Loosening (parts of the component).	Permissible acc. To tables A.4 and A.5 of DIN EN ISO 13849-2.	See section 2 <b>Intended use.</b>	Application of carefully selected materials and manufacturing processes; use of proven springs and special mounting methods.
Weakening of force due to remaining deformation or fracture.	Permissible acc. To table A.5 of DIN EN ISO 13849-2.	See section 14 <b>Operation.</b>	Use of proven spring and special mounting methods.
Fracture, deformation due to excessive load.	Permissible acc. To tables A.4 and A.5 of DIN EN ISO 13849-2.	See section 14 <b>Operation.</b>	Application of carefully selected materials; over dimensioning using safety factor 2 and replication of parts; use of proven springs and special mounting methods.
Stiffness/Getting stuck.	Permissible acc. To tables A.4 and A.5 of DIN EN ISO 13849-2.	See sections 2 <b>Intended use</b> and sections 14 <b>Operation.</b>	Application of carefully selected materials; over dimensioning using safety factor 2 and replication of parts; use of proven springs and special mounting methods.

## 9 Scope of delivery

1 x Key change station HST-W5 / HST-W10 unit with the corresponding number of inserted and interlocked key changes.



### NOTE!

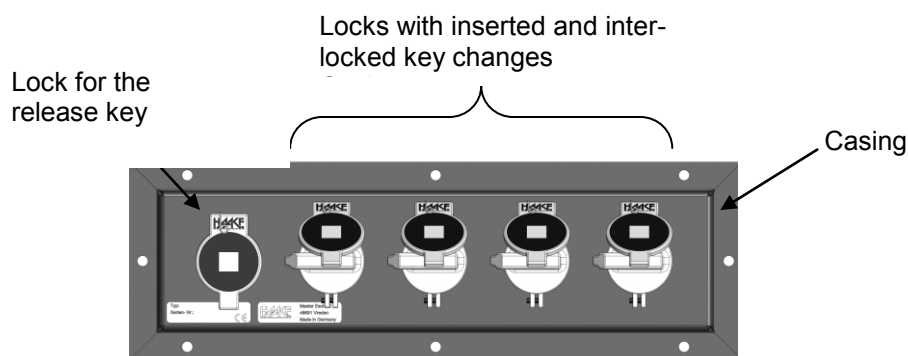
Means of attachment and properly coded keys are **not** included in the scope of the delivery.

## 10 Structure and function

The Key change station HST-W5 / HST-W10 consists of a casing with one or multiple locks for the release keys and one or multiple locks for the key changes. To release the key changes all required release keys are inserted and turned. This unlocks the key changes and they can be removed one after the other.

As long as the first key change is removed, the release keys are secured against removal. Unused lock positions are fitted with blanking plugs (see title page).

**Initial situation without release key (Figure shows HST-W5 Ident-No.: 10363):**



**Situation after the key change:**

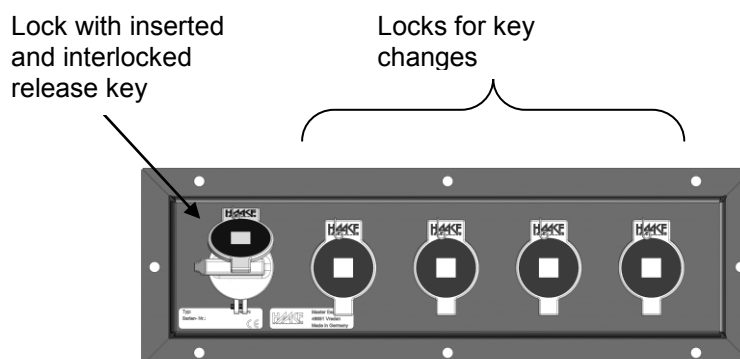


Figure shows HST-W5 Ident.-No.: 10363

## **11 Safety measures**

### **11.1 Organisational measures**

Persons who have been authorised to carry out tasks involving the installation or removal of the component must have read and understood this manual prior to commencing such tasks.

The operator of the plant or machine has an obligation to ensure the installation and de-installation is carried out safely and with no hazards by implementing appropriate safety measures.

### **11.2 Safety of persons**

Personnel responsible for installation or removal tasks have to be suitably skilled or else have to be instructed by suitably skilled persons. On account of their technical training and experience, such skilled persons have sufficient knowledge of the installation or machine. These persons are sufficiently familiar with the applicable domestic work protection and accident prevention regulations of relevance here, that they are able to assess the operational safety of the installation or machine.

It is necessary to implement accident- and fall-prevention measures, whenever tasks are performed or areas are traversed at height.

### **11.3 Operating conditions and limitations of use**

Please note the **intended use** (cf. section 2) and the **technical information** (cf. section 19) described in this manual.

### **11.4 Assembly**

Before beginning installation, ensure that the component is intended and suitable for the particular installation site, based on the information on the type label. Always carry out a function test after installation.

Do not make any alterations to the installation after the function test has been successfully carried out.

### **11.5 Repairs / Alterations**

Do not carry out any repairs to the component. Do not replace or exchange any parts. Send damaged or faulty components to Haake Technik GmbH to be repaired.

Do not make any alterations to the component. Otherwise, this could lead to malfunctions, which can cause serious personal injury and irreparable damage to property.

In the event of non-compliance, the guarantee is invalidated and Haake Technik GmbH does not accept any liability.

## 12 Installation



### Attention!

When installing the component, choose a means of attachment that cannot easily be detached (e.g. riveting or safety screws).

### 12.1 Preparation

Before beginning installation, ensure that the identification number given in this installation and operation manual corresponds to the identification number of the component.

Installing the component requires the following items that are **not** included in the scope of the delivery:

HST-W5 (Ident.-No.: 10360 to 10369):

- 8 M6 screws + “length of relevant installation site” + if necessary M6 screw nuts from A2-70
- Screw locking devices (toothed lock washers, disc springs, shaft washers, or screw adhesive)

HST-W10 (Ident.-No.: 10370 to 10404):

- 10 M6 screws + “length of relevant installation site” + if necessary 10 M6 screw nuts from A2-70
- Screw locking devices (toothed lock washers, disc springs, shaft washers, or screw adhesive)

Clean the work environment by removing dirt, grease and oil.

### 12.1 General approach

Use suitable tools when installing the component. Otherwise, bolts and nuts may become damaged and unusable.

When tightening the screws listed in section 12.1, do not exceed the max. tightening torque.

Use the items listed in section 12.1 to secure the screw connections.

### 12.2 Installation instructions

Make the mounting holes according to the design of the component. The mounting holes should be arranged as shown in the diagrams (cf. section 20: **Dimensions**) and the drilling template.

**No liability is accepted in the event of improper installation!**



## 13 Performance check



### Attention!

The protective effectiveness of the component is to be checked regularly within the scope of and in accordance with the German Ordinance on Industrial Safety and Health (Betriebssicherheitsverordnung).

Once installed, do not loosen any bolts or nuts or remove any pins; otherwise, the effectiveness of the safety-related functions is no longer guaranteed.

Once finished with installation tasks, carry out the following inspections:

- Check all bolted connections for tightness and ensure that the bolts cannot come loose by themselves.
- Check whether the component is stuck.
- Check whether all keys can be inserted and turned easily.
- Check whether the safety-relevant functions (cf. section 7) are ensured.
- Record the results of performance check.

## 14 Operation



### Attention!

Never operate the key with extended lever arms. This may destroy the inner components and disable the safety function.

Do not attempt to unlock the component with objects other than the corresponding keys.

Do not ever attempt to insert or remove a key by applying excessive force or with the aid of a tool (hammer).

### 14.1 Inserting the release key and removal of the key changes

- Insert all required release keys, beginning with the 1<sup>st</sup> free lock and turn it until the stop.
- Turn the first key change and each subsequent key change until the stop and remove them.

### 14.2 Inserting the key changes and removing the release keys

- Insert all required key changes, beginning with the last free lock and turn them until the stop.
- Turn the following release key and each subsequent release keys until the stop and remove them.

### 14.3 Conditions for multiple change stations

- When inserting multiple key change stations, the last key change station key functions as the access key for the next key change station.

## 15 Maintenance



### Attention!

Adapt the frequency of checks to the environmental conditions at the application site.

**No maintenance of the internal parts of the component is required.**

We recommend the following maintenance measures:

- Check the component at regular intervals (at least once a year) for external damage.
- Check the protective dust cover is securely in place and the seal is functioning.

Damaged or faulty devices must be replaced.

## 16 Cleaning

No cleaning is required, as a rule.



### Attention!

In dusty environments (e.g. cement dust, colour dust), only clean the component with compressed air.

**Only use other cleaning methods after prior consultation with the manufacturer.**

## 17 De-installation



### Attention!

**Only uninstall the component when power to the electrical system is switched off.**

Loosen the fastening screws for the key change station.

## 18 Troubleshooting

<b>Fault</b>	<b>Possible cause</b>	<b>Remedy</b>
The key cannot be inserted/ turned.	Wrong key / wrong coding.	Check labelling on the key and on the component.
	Deformed key.	Check key. Contact Haake Technik GmbH in case of deformation.
	Key inserted incorrectly.	Remove the key and if necessary insert it rotated 180°.
	For release keys: the previous release key has not been inserted and turned. For key changes: the previous key change has not been inserted and turned.	Insert the missing key and turn it until the stop.
	Mechanism is stiff.	Clean (cf. section 16) If necessary contact Haake Technik GmbH.
Lock can only be operated with difficulty.		Contact Haake Technik GmbH.
Safety-relevant function (cf. section 7) not fulfilled.	Mechanical fault.	Contact Haake Technik GmbH.
The key cannot be removed.	For release keys: not all key changes are inserted and turned. For key changes: not all release keys are inserted and turned.	Insert the missing key and turn it until the stop.
	For release keys: the previous release key has not been removed. For key changes: the previous key change has not been removed.	Turn and remove the previous key.
Lost key.		Contact Haake Technik GmbH.

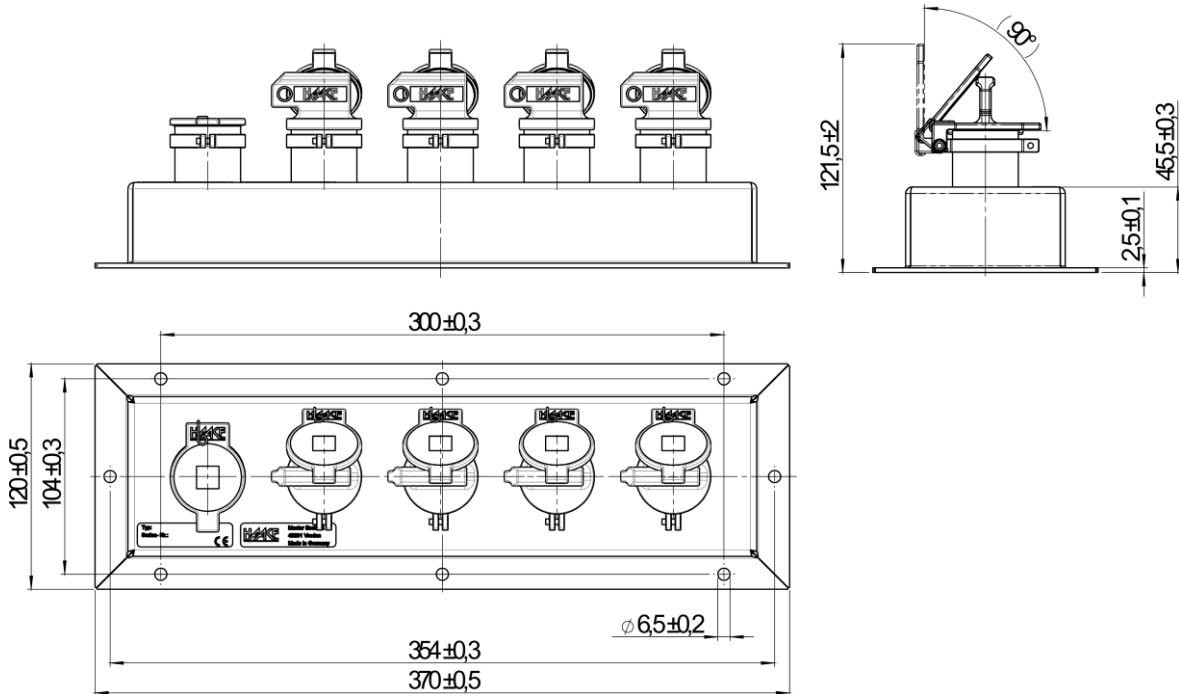
## 19 Technical data

Environment:	Indoor / outdoor
Temperature range:	-25 °C to +80 °C
Humidity:	to 100% (standard climate)
Material:	stainless steel
Ambient atmosphere:	industrial environments
Mounting position:	all positions
Mechanical service life:	280,000 actuations
Service life:	15 years
Mean Time To Failure (MTTF <sub>d</sub> ):	150 years

## 20 Dimensions

Dimensional specifications in mm

**HST-W5 (Ident.-No.: 10360 to 10369):**

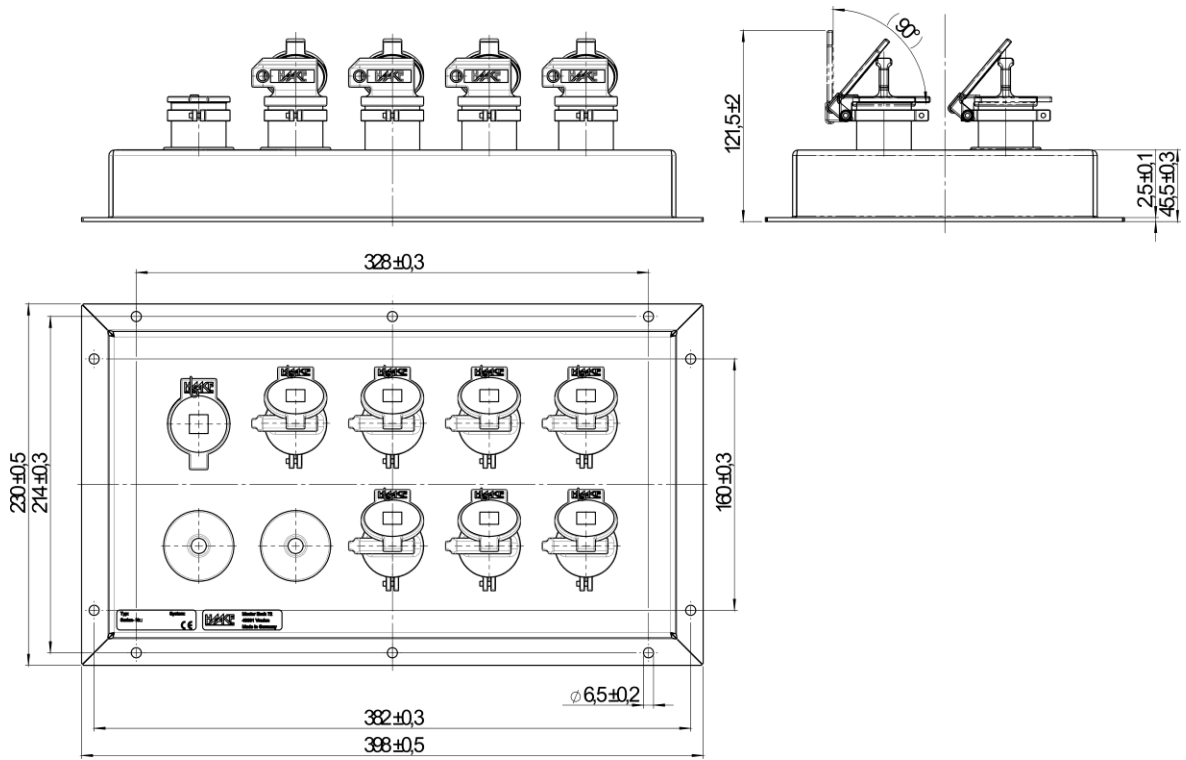


pictured Ident.-No.: 10363

### Allocation entry and exit locks

Ident.-No.	Number of entrance locks	Number of exit locks
10360	1	1
10361	1	2
10362	1	3
10363	1	4
10364	2	1
10365	2	2
10366	2	3
10367	3	1
10368	3	2
10369	4	1

HST-W10 (Ident.-No.: 10370 to 10404):



pictured Ident.-No.: 10372

### Allocation entry and exit locks

<b>Ident-No.</b>	<b>Number of entrance locks</b>	<b>Number of exit locks</b>
10370	1	5
10371	1	6
10372	1	7
10373	1	8
10374	1	9
10375	2	4
10376	2	5
10377	2	6
10378	2	7
10379	2	8
10380	3	3
10381	3	4
10382	3	5
10383	3	6
10384	3	7
10385	4	2
10386	4	3
10387	4	4
10388	4	5
10389	4	6
10390	5	1
10391	5	2
10392	5	3
10393	5	4
10394	5	5
10395	6	1
10396	6	2
10397	6	3
10398	6	4
10399	7	1
10400	7	2
10401	7	3
10402	8	1
10403	8	2
10404	9	1

## 21 EC Declaration of Conformity

### EC Declaration of Conformity in accordance with EC Directive 2006/42/EC Annex II 1. A

The company: **Haake Technik GmbH**  
**Master Esch 72**  
**48691 Vreden**

hereby declares  
that the safety components: **Key change station**

Type: **HST-W5 and HST-W10**

Serial Number: **see information on the product**

in the delivered version is in accordance with the following relevant regulations:

EC Directives: **Directive on machinery 2006/42/EC**

Test Specification: **GS-ET 31**  
**Principles of testing and certification for**  
**Interlocking devices with key transfer systems**

The HST-W5/HST-W10 key change station controls one or more key changes with encoding by prior actuation of one or more locks with the help of one or more differently encoded release keys.

Our quality assurance system ensures that all safety components are manufactured with the same quality.  
Therefore the Declaration of Conformity issued applies for all safety components of the above types produced from serial number 1132744.

Authorized representative to compile the technical documentation is:

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Herr Jens Schoppen  
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Vreden, 07.12.2012

  
André Haake  
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