

**Operating Manual**

**HOTSPOT Test Device**

ADICOS HTL-2 - Operating manual  
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– Translation –

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## **Abstract**

The Advanced Discovery System (ADICOS®) is used for early detection of fires in industrial environments. It is comprised of various, separate detector units. By parameterizing and arranging the detectors appropriately, the system fulfills a predefined detection goal. The ADICOS system ensures reliable early detection of embers and smoldering fires even in adverse environments.

The detectors of the HOTSPOT product series are equipped with thermal imaging sensors. They use infrared measurement technology and intelligent signal analysis to detect all types of smoldering fires and open fires, even in the incipient stage. The fast response speed of 100 milliseconds enables the monitoring of conveyor belts or other conveyor systems, e.g. on moving embers.

In combination with the battery baton of the test system solo™ from the company No Climb Products Ltd. (detectortesters.com), the ADICOS HTL-2 serves as a test device for all ADICOS detectors of the type HOTSPOT.

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## 1 About this manual

### 1.1 Objective

This manual describes the operation of the GSME test device ADICOS HTL-2. It is intended to be used only by properly qualified personnel (→ Chap. 2, Safety Instructions).

### 1.2 Explanation of Symbols

This manual follows a certain structure to make it easy to work with and understand. The following designations are used throughout.

#### Operational objectives

Operational objectives specify the result to be achieved by following the subsequent instructions. Operational objectives are shown in **bold print**.

#### Instructions

Instructions are the steps to be taken in order to achieve the previously stated operational objective.

Instructions appear like this

- ▶ Indicates a single instruction
  
- 1 First of a series of instructions
- 2 Second of a series of instructions
- 3 etc.

#### Intermediate states

When it is possible to describe intermediate states or events resulting from the instruction steps (e.g. screens, internal function steps, etc.), they are shown like this:

- ▷ Intermediate state

#### Warnings

The following types of notes are used through this manual:

**DANGER!**

This combination of symbol and signal word indicates an immediately dangerous situation which could lead to death or severe injuries if it is not avoided.



**WARNING!**

This combination of symbol and signal word indicates a possibly dangerous situation which could lead to death or severe injuries if it is not avoided.



**CAUTION!**

This combination of symbol and signal word indicates a possibly dangerous situation which could lead to minor injuries if it is not avoided.



**NOTICE!**

This combination of symbol and signal word indicates a possibly dangerous situation which could lead to property damage if it is not avoided.



**Tips and recommendations**

This type of note provides information that is directly relevant for the further operation of the device.

### 1.3 Abbreviations

The following abbreviations are used through this manual:

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<b>Abbr.</b>	<b>Meaning</b>
ADICOS	Advanced Discovery System
solo™	Testing system of the company No Climb Products Ltd. for fire detectors
HTL	HOTSPOT test device

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### 1.4 Storing the instruction manual

Store this manual near the device, in a place where it can easily be accessed when needed for reference

## 2 Safety Instructions

To safely operate ADICOS HTL-2, you absolutely must read, understand, and follow these instructions and the safety information they contain in their entirety.



### **WARNING!**

#### **Fire and explosion hazard due to hot plate!**

The ADICOS HTL-2 uses a hotplate that can cause fires on contact with foreign bodies or explosions in explosion hazardous zones.

- **Read the entire manual and follow the instructions!**



### **Explosion protection**

When using ADICOS detectors in potentially explosive atmospheres, follow the specifications of the ATEX operating directive.

### 2.1 Intended use

In combination with the battery baton of the test system solo™ from the company No Climb Products Ltd. (detectortesters.com), the ADICOS HTL-2 is used to check the functioning of infrared detectors of the type ADICOS HOTSPOT. In that context, the operating parameters addressed in Chapter 11 on technical information must be complied with. Any use deviating from that requires previous consultation with the manufacturer.

Compliance with this instruction manual and observance of all applicable country-specific regulations is part of proper use.

### 2.2 Standards and regulations

When ADICOS detectors are tested, the safety and accident prevention measures valid for each specific case of application must be observed.

The following standards and guidelines in their current versions are of critical importance for dealing with fire detection systems:

<b>Regulation</b>	<b>Description</b>
VDE 0800	Telecommunications - general terms, requirements and tests for the safety of equipment and devices
VDE 0833	Fire alarm systems
VDE 0845	Protection of telecommunications systems against the effects of lightning, static charging and surges from high voltage systems - measures against surges
VdS 2095	Automatic fire detection systems, planning, and installation
DIN 14675	Fire detection systems - construction and operation

## 2.3 Personnel Qualification

All work performed on ADICOS systems must be performed only by qualified staff. Qualified staff is considered to be persons who can perform tests on special fire detection systems and recognize possible dangers owing to their specialist training, knowledge, and experience and their knowledge of relevant provisions.



### Tests of ADICOS detectors

Tests of ADICOS detectors only by may be performed only by authorized and properly trained personnel.

- **An approval for hot work is absolutely necessary!**

## 2.4 Modification



### WARNING!

#### Property damage by any form of unauthorized modification!

Any form of unauthorized modification or extension can cause property damage.

- **Modifications of the HTL-3 is expressly prohibited.**

## 2.5 Accessories and Spare Parts



### HINWEIS!

#### Property damage due to use of improper components

The use of parts other than the manufacturer's original spare parts and original accessories may result in property damage due to short circuits.

- **Only use original spare parts and original accessories!**

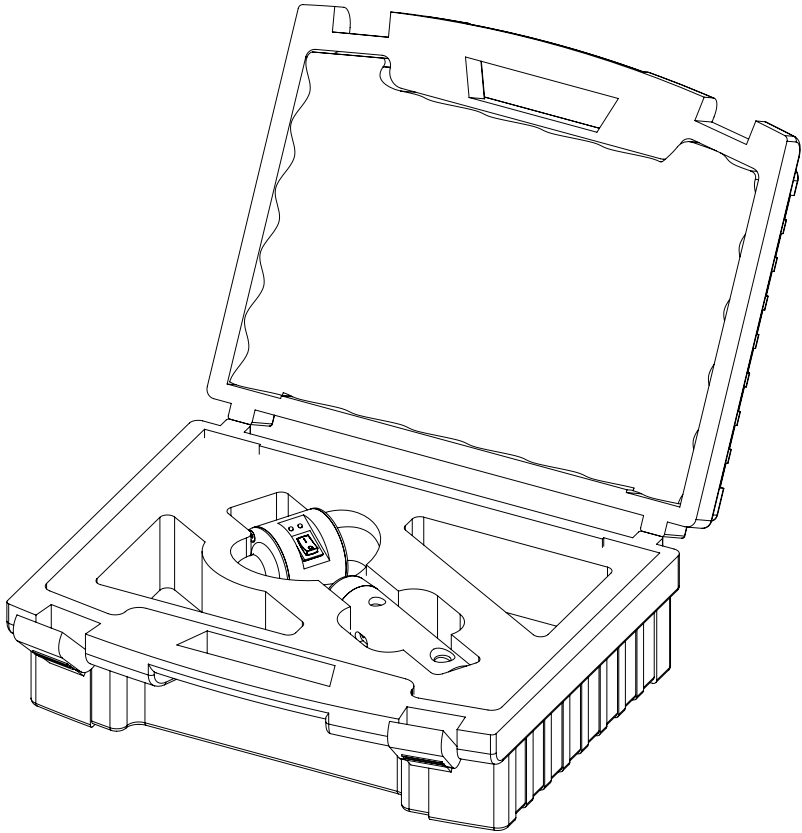
The following accessories are available for the HTL-2.

Art. no.	Description
<b>430-2402-105</b>	battery baton of the test system solo™*
<b>430-2402-106</b>	battery fast charger of the test system solo™*
<b>430-2403-105</b>	telescope extension pole of the test system solo™*

\*Manufacturer: No Climb Products Ltd.



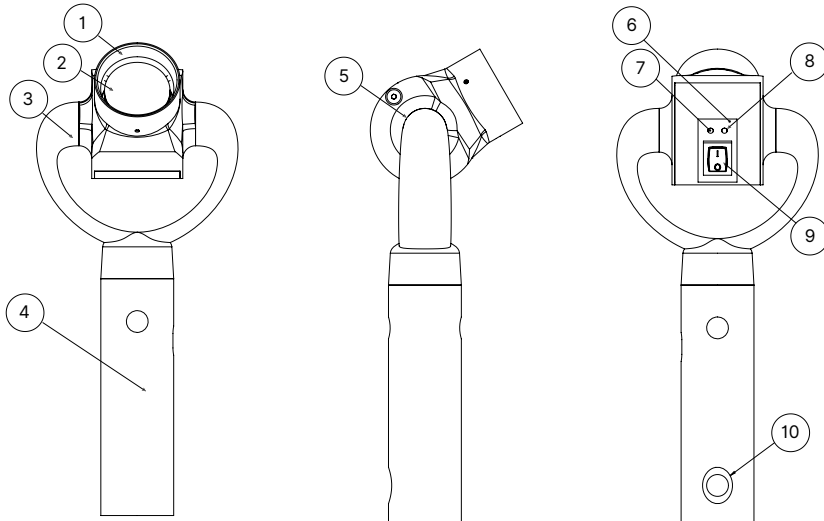
### 3 Scope of Delivery



Number	Description
1	Transport case
1	HTL-2 test device

## 4 Construction and Function

### 4.1 Overview

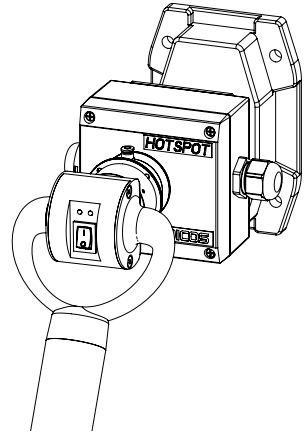


No.	Description
①	HTL test tube
②	HTL hot plate
③	HTL holder
④	HTL connection element for the battery baton of the test system solo™
⑤	Swivel joint
⑥	HTL control panel
⑦	Operating LED (green)
⑧	Heating LED (red)
⑨	ON/OFF switch
⑩	Stop hole for the battery baton of the test system solo™

## 4.2 Function

The ADICOS HTL-2, in combination with the solo™ battery pole from No Climb Products Ltd., enables convenient in-situ tests and functional verification of ADICOS HOTSPOT type infrared detectors in industrial plants.

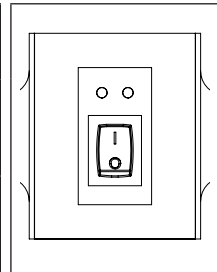
For this purpose, its heating plate is set to 95 ... 105 °C and is pressed against the optics of the HOTSPOT detector to be tested, thus homogeneously exciting the entire field of view of the detector sensor.



## 4.3 Display and Control Elements

### HTL control panel

Operating switch	The operating switch is located in the control panel of the HTL-2 and can be used to turn the device on and off.
Operating LED	The operating LED is located to the left above the operating switch in the control panel. It shines green when the HTL-2 is operated and blinks when the battery is low.
Heating LED	The heating LED is located to the right above the operating switch in the control panel. It shines red when the heating function of the HTL-2 is active.



## 5 Preparation for Operation

### 5.1 Removing Dirt



**WARNING!**

**Fire hazard due to deposits**

Deposits in the test tube of the ADICOS HTL-2 (e.g. carbon dust) can ignite during operation.

- **Clean the device before each use!**

### 5.2 Charging the Battery Baton



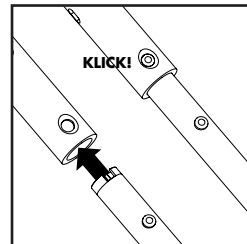
**Check battery status**

Before mounting the battery baton of the test system solo™, check the charging status of the batteries located inside.

- **If needed, charge the batteries according to the manufacturer's instructions!**

### 5.3 Mounting the Battery Baton

- 1 Insert the battery baton of the test system solo™ into the HTL connection element from below with the connection socket first until it reaches the locking knob
- 2 Press down the locking knob and slide in the baton until it makes contact
- 3 Twist the battery baton, exerting pressure, until it snaps into place with an audible click



### 5.4 Mounting the Telescope Pole

- 1 Insert the battery pole into the telescope extension pole of the test system solo™ until it reaches the locking knob
- 2 Place the poles in such a way that the free locking button of the battery baton and the corresponding locking hole of the telescopic pole are aligned with each other
- 3 Press down the locking button and push in the pole until it clicks into place with an audible click

## 6 Commissioning



### WARNING!

#### Risk of fire due to active hot plate

The ADICOS HTL-2 uses a hot surface and can cause fires and explosions if used improperly.

- **Operate the device only if you have a permit for hot work!**
- **Do not operate the device in areas where there is danger of explosion!**
- **Do not leave an activated device unsupervised!**



### WARNING!

#### Burns due to active hot plate

Der ADICOS HTL-2 uses a hot surface that can cause severe burns if it comes into contact with the skin.

- **Do not touch the hot plate!**
- **Do not operate the device in the carrying case!**



### WARNING!

#### Fire hazard due to deposits

Deposits in the test tube of the ADICOS HTL-2 (e.g. carbon dust) can ignite during operation.

- **Clean the device before each use!**



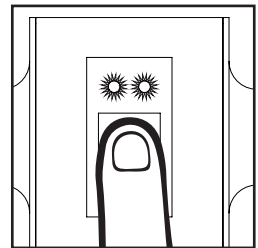
### Check battery status

Before mounting the battery baton of the test system solo™, check the charging status of the batteries located inside.

- **If needed, charge the batteries according to the manufacturer's instructions!**

### Turning on the HTL-2

- 1 Actuate the operating switch (position I)
  - ▷ The operating LED shines green
  - ▷ The heating LED shines red
  - ▷ The HTL hot plate is being heated
- 2 Wait until the heating LED turn off. Depending on the temperature and the charging state of the battery baton of the test system solo™, this can take up to 10 minutes.
  - ▷ The HTL-2 is ready for use.



## 7 Detector Test



**WARNING!**

**Risk of injury due to falling deposits**

Deposits on the ADICOS detectors can drop when touched during testing and cause injury.

- **Wear appropriate protective clothing**

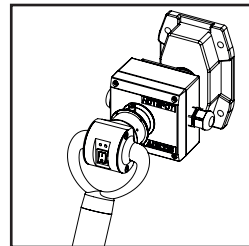
### 7.1 Preparing for the Detector Test

- 1 Use ADICOS software to call up the detectors to be tested
- 2 Open the thermal image of the detector
- 3 Select the tab "Max.-Werte T"
- 4 In "Zusatz-F." in the lower-left section, select "Max T" in the window
- 5 Press the button "Max Löschen"



### 7.2 Testing HOTSPOT detectors

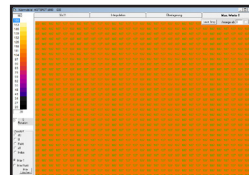
- ▶ Press the heated HTL-2 with the test tube directly against the sensor of the detector to be tested and hold it there for several seconds.
- ▶ Turn off HTL-2 after testing.  
Use the operating switch to do so (position O)



### 7.3 Evaluating the Detector Test

Depending on the parameterization of the detector, the test is successful if an alarm is triggered and if the "Max T" thermal image, which displays the highest temperature of every pixel, uniformly displays the temperature of the HTL hot plate after the test. To do this...

- 1 Use the ADICOS software to call up the detector to be tested
- 2 Open the thermal image of the detector
- 3 Select the tab "Max.-Werte T"
- 4 In "Zusatz-F." in the lower-left section, select "Max T" in the window
- 5 Configure an appropriate color spread



## 8 Malfunctions

Description of malfunction	Possible cause	Solution
Operating LED and heating LED do not light up	Batteries are empty	Charge the solo™ battery baton (→ Chapter 5.2)
Operating LED and heating LED do not light up	Battery baton improperly inserted	Remove the solo™ battery baton and connect it again (→ Chapter 5.3)
Operating LED and heating LED blink	Low battery power	Charge the solo™ battery baton (→ Chapter 5.2)
Heating LED does not switch off	Low battery power	Charge the solo™ battery baton (→ Chapter 5.2)

## 9 Maintenance

### 9.1 Cleaning



#### **CAUTION!**

#### **Risk of injury from swirling particles**

When cleaning the ADICOS HTL-2 with compressed air, dirt particles can be whirled up and cause injuries to the eyes and respiratory tract:

- **Wear appropriate protective work clothing!**

#### **Cleaning the HTL test tube**

- 1 Clean the test tube with compressed air if it gets polluted
- 2 Clean the hot plate with a moist towel  
**Do not use any aggressive cleaning agents!**

#### **Cleaning the HTL case**

- ▶ Clean the outer surfaces of the HTL-2 with a moist towel as needed  
**Do not use any aggressive cleaning agents!**

#### **Maintaining the HTL swivel joints**

- 1 If it becomes difficult to rotate the HTL-2 swivel joints, clean the axis with compressed air
- 2 Grease the swivel joints with penetrating oil (e.g. WD-40)

## 9.2 Storage

Store the device in its transport case when it is not in use.



**NOTE!**

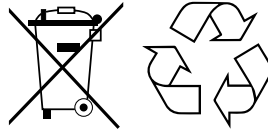
**Property damage due to improper use!**

An ADICOS HTL-2 that has not cooled down may cause property damage in the case due to the hot heating plate.

- **Do not place the device in the case until it has cooled down!**

## 10 Disposal

After the end of its utilization time, return the device to the manufacturer, who guarantees environmentally friendly disposal of all components.





## 11 Technical data

<b>General</b>		
Model		HTL-2
Article No.		410-2402-008
Measurements	mm	265 x 110 x 60 (L x W x H)
Weight	kg	0.2
Degree of protection		IP40
<b>Electrical properties</b>		
Power consumption	A	1.0 ... 1.2
Max. operating time (with completely charged solo™ battery baton)	h	3.5
<b>Environmental conditions</b>		
Temperature range	°C	0 ... 40
Relative humidity	%	< 95 (non-condensing)



## 11.1 ID Plate

<b>ADICOS</b> Advanced Discovery System					
MODEL	HTL-2	SERIAL	5441622	YR	2017
ART-NR	410-2402-008	TEMP	0°C ≤ T <sub>a</sub> ≤ 40°C	IP	40
Plate	95 ... 105 °C	V <sub>DC</sub> / VA	7,2 / 8	I <sub>o</sub>	-
 <b>ONLY USE WITH:</b> <b>SOLO 760 / No Climb Products Ltd.</b>					
GTE Industrieelektronik GmbH   D-41747 Viersen					

Model	Device model	SERIAL	Serial number (variable)	YR	Year of production (variable)
ART-Nr	Article number (variable)	TEMP	Ambient temperature	IP	Degree of protection
COM-Nr	Communication number (variable)	V <sub>DC</sub> /VA	Voltage range / maximum power consumption (heating incl.)	I <sub>o</sub>	Internal fusing (Short-circuit current)
CE marking		Note			





