GESTRA

Diagnostic App

GESTRA
TRAP*test*
VKP portal

Version 1.0.

Contents

Contents

Foreword

Web app for analysing and documenting steam trap tests with the GESTRA TRAP*test* VKP portal system. Using the web app, you can create companies and test objects. These test objects can then be edited, copied, replaced and deleted. The test results for the test objects are stored along with their history.

The following symbols are used in these instructions for use.

Symbol	Meaning
	NOTE These tips contain additional information, e.g. about cost-efficient use of the equipment.
	ATTENTION These comments contain important information on the correct use of the equipment.

Compatibility

Data collector: VKPN 42 (Ex)

Data: TRAP*test* VKP portal, version 1.0, import of *.VKP and *.XLS (97-2003) files

Setting up the TRAP*test* VKP portal web application

To use the TRAP*test* VKP portal web app, you will need the primary user login details.

➢ Connect the data collector to the internet.

➢ In your chosen browser, enter the URL: https://gestra.vkp-portal.de

➢ Log in to your user account.

Note

We have sent your primary user login details to you separately. These consist of your e-mail address and an individual password. You must reset the password the first time you log in. If you do not yet have your login details, please get in touch with our Technical Support:

GPM_TechSupport@de.gestra.com

Before working with the web app, please enter the following settings in the data collector:

➢ Set your desired language.

→ Tools/Languages menu

➢ Select metric or imperial units.

→ Tools/Settings menu

Attention

Switching units does not affect existing data; temperature and pressure are not converted.

User management

User accounts must be set up, changed, deleted or disabled via the primary user login. Any user wishing to work with the web app or to transfer data with the data collector must have a valid e-mail address and functioning internet access.

Proceed as follows to create further users:

➢ Open the user list.

➢ Create a new user account.

➢ Enter an e-mail address.

➢ Assign a password.

Note

The user must change this password the first time they log in. The user login details are needed later on to authorise the data transfer in the VKP 42 portal app.

➢ Confirm your entries and complete the process.

The user is now registered and can access the web app with their login details.

Note

The primary user login details are set up by GESTRA and sent to the customer. New users can only be set up via the primary user login.

Resetting the password

To reset the password, open the login screen and click on "Forgot password".

➢ Enter your e-mail address and confirm it.

You will be sent an e-mail containing a link which you can then click on to reset the password.

If you do not receive this e-mail, check that you have entered your e-mail address correctly or contact Technical Support.

➢ Click on the link in the e-mail.

➢ Enter the e-mail address that you used to log into the web app and enter a new password.

➢ Confirm the new password and confirm the process.

➢ With the new password, log in via the login screen.

Setting units in the web app

➢ Before working with the web app, set your required units and make other optional settings as necessary.
→ Tools/Settings menu

Attention

To avoid errors, make sure the same unit settings are selected in the **web app** and in the VKP 42 portal app.

Setting units in the VKP 42 portal app

➢ To launch the VKP 42 portal app, tap the relevant icon on the display of the data collector.
At the top right, you will see a button for opening submenus.
➢ Tap the button to open the submenus.
➢ To change the units, tap "Units: SI/IMP".
➢ Set the unit you require.

Setting the language of the data collector (VKPN)

➢ Select the desired language.
→ Tools/Settings/Language
If your chosen language is not available in the VKP 42 portal app,
English will be used.

Data collector (VKPN) settings for transferring data

Transferring data to the web app wirelessly/via the mobile phone network

To transfer data using the data collector, both the data collector and the device on which the web app is open will need a functioning internet connection.

If this is the case, you can start synchronisation via the "Data transfer" button.

Transferring data to the Com box via Bluetooth

If you are asked to enter a password for a Bluetooth connection, enter "1234".
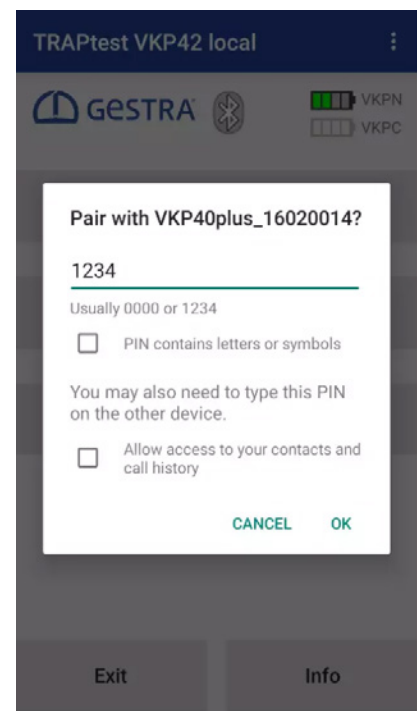
Overview of tests

There are two options for checking test objects (steam traps):

- Normal check: prepared in the web app and organised using detailed test objects in a company

    During the test, you can add to, replace and change test objects and create new ones using the VKP 42 portal app.

- Quick check: no preparation required in the web app

Normal check

Create company, create test objects	Data transfer	Check, add, replace, change test objects	Data transfer	Analysis
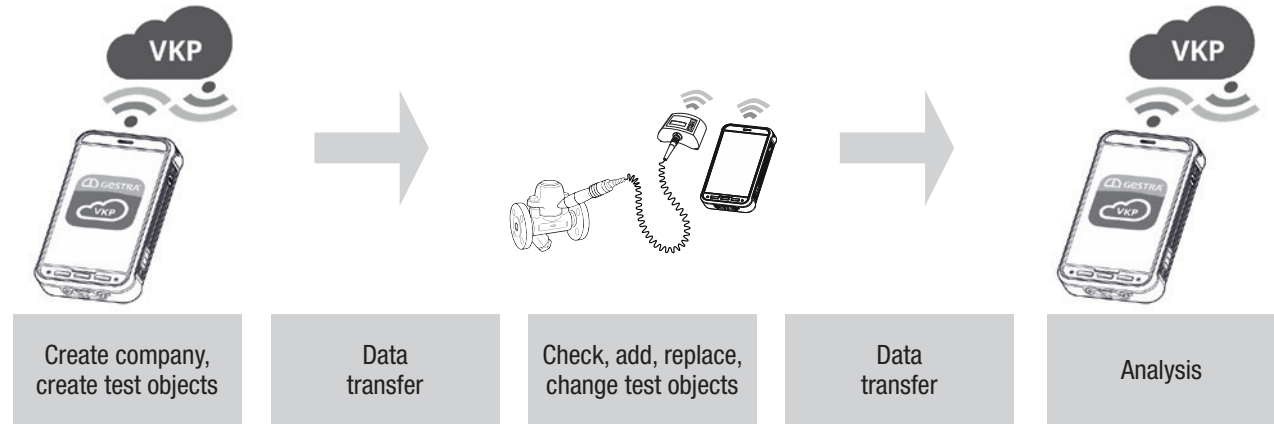
Note

To perform a normal check of test objects (steam traps), we recommend first creating a company in the TRAP*test* VKP app.

Quick check

"VKPN Import"

Enter test parameters, run check	Data import (takes place automatically with the next data transfer)	Allocation to company, analysis (optional)
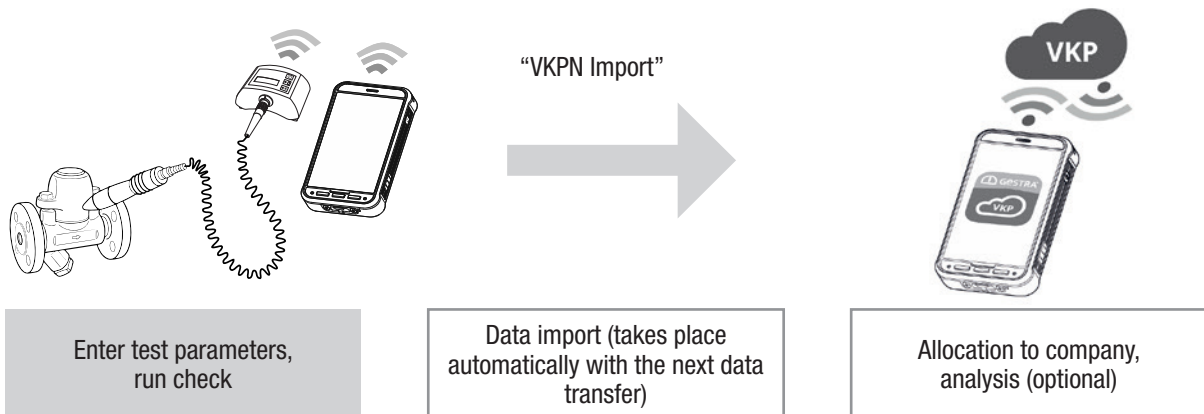
Note

With the quick check, a test object (steam trap) can be tested immediately. The test results can be transferred to the web app and the data further processed.

Companies - Layout

The "Companies" menu contains all the details on test objects, test personnel, results and analyses.

General hierarchical layout

The following comprehensively describes the address of a test object:

Company	Plant	Plant section	Place of installation
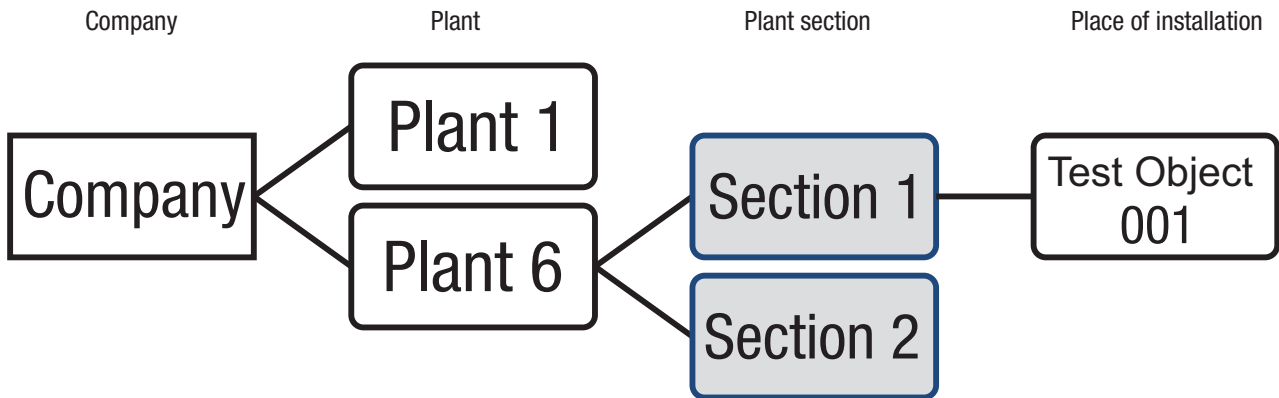
Resulting spatial layout of "z Sample" company

Example of ideal route during the test, thanks to intelligent numbering.

Tabular layout of "z Sample" company

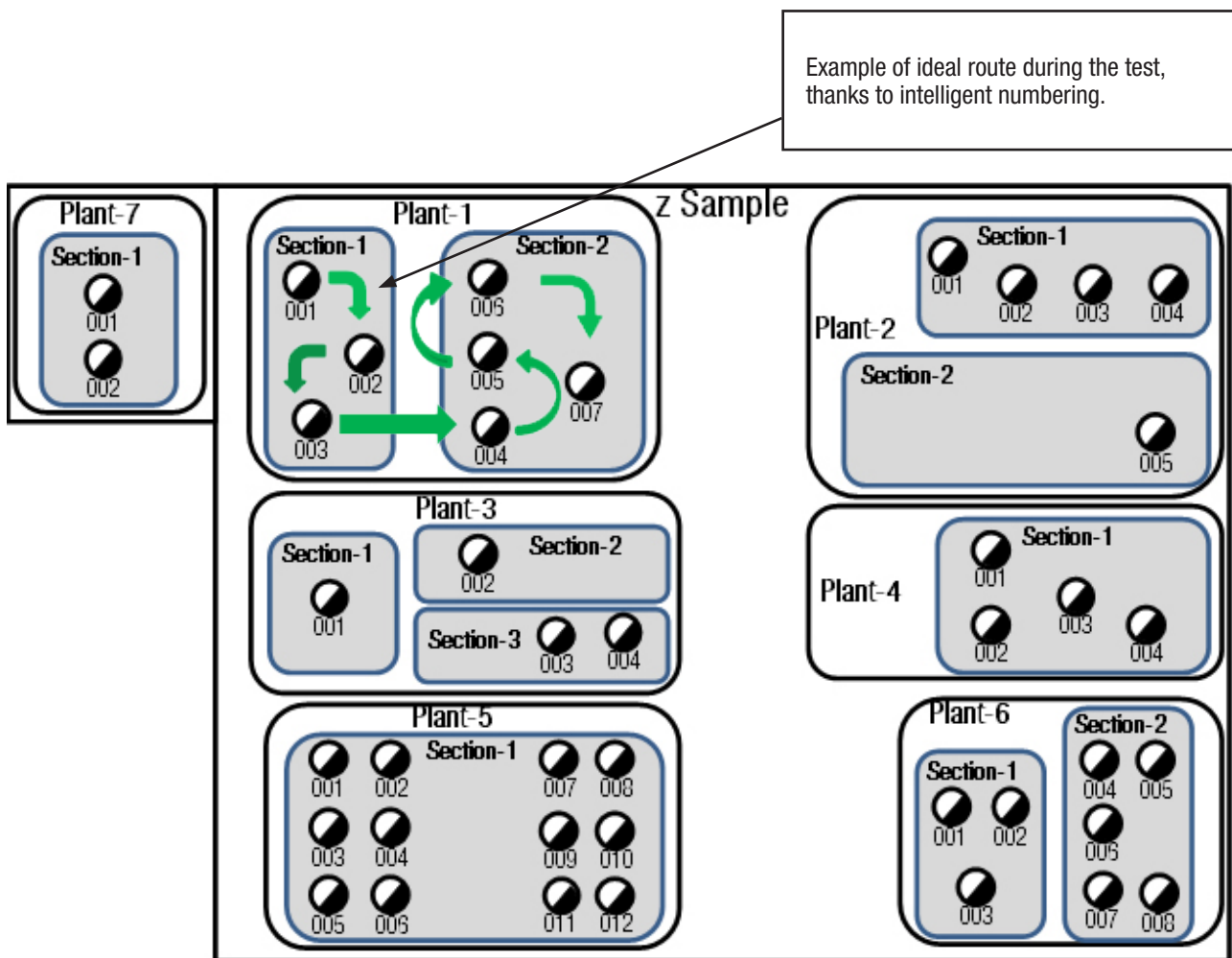| Company	Plant	Plant section	Place of installation
z Sample	Plant-1	Section-1	001
z Sample	Plant-1	Section-1	002
z Sample	Plant-1	Section-1	003
z Sample	Plant-1	Section-2	004
z Sample	Plant-1	Section-2	005
z Sample	Plant-1	Section-2	006
z Sample	Plant-1	Section-2	007
z Sample	Plant-2	Section-1	001
z Sample	Plant-2	Section-1	002
z Sample	Plant-2	Section-1	003
z Sample	Plant-2	Section-1	004
z Sample	Plant-2	Section-2	005
z Sample	Plant-3	Section-1	001
z Sample	Plant-3	Section-2	002
z Sample	Plant-3	Section-3	003
z Sample	Plant-3	Section-3	004
z Sample	Plant-4	Section-1	001
z Sample	Plant-4	Section-1	002
z Sample	Plant-4	Section-1	003
z Sample	Plant-4	Section-1	004
z Sample	Plant-5	Section-1	001
z Sample	Plant-5	Section-1	002
z Sample	Plant-5	Section-1	003
z Sample	Plant-5	Section-1	004
z Sample	Plant-5	Section-1	005
z Sample	Plant-5	Section-1	006
z Sample	Plant-5	Section-1	007
z Sample	Plant-5	Section-1	008
z Sample	Plant-5	Section-1	009
z Sample	Plant-5	Section-1	010
z Sample	Plant-5	Section-1	011
z Sample	Plant-5	Section-1	012
z Sample	Plant-6	Section-1	001
z Sample	Plant-6	Section-1	002
z Sample	Plant-6	Section-1	003
z Sample	Plant-6	Section-2	004
z Sample	Plant-6	Section-2	005
z Sample	Plant-6	Section-2	006
z Sample	Plant-6	Section-2	007
z Sample	Plant-6	Section-2	008
z Sample	Plant-7	Section-1	001
z Sample	Plant-7	Section-1	002

Overview of the TRAP*test* VKP portal web app
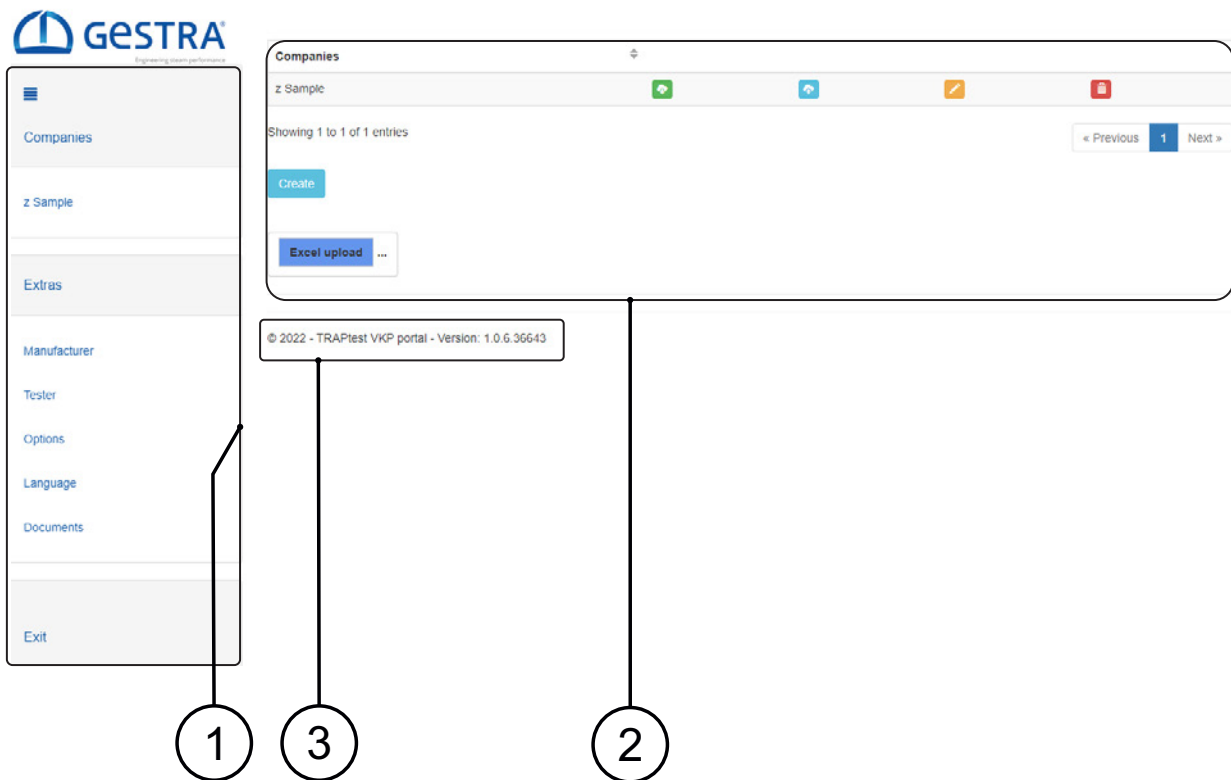
No.	Designation or meaning
1	Dropdown menu
2	Work area
3	Product information

Icon	Designation or meaning
	Download
	Upload
	Delete
	Test results
	Edit
	Save
	Select objects
	Selected for testing
	Uploaded in VKP 42 portal app

Overview of all companies - Data processing

→ Companies menu
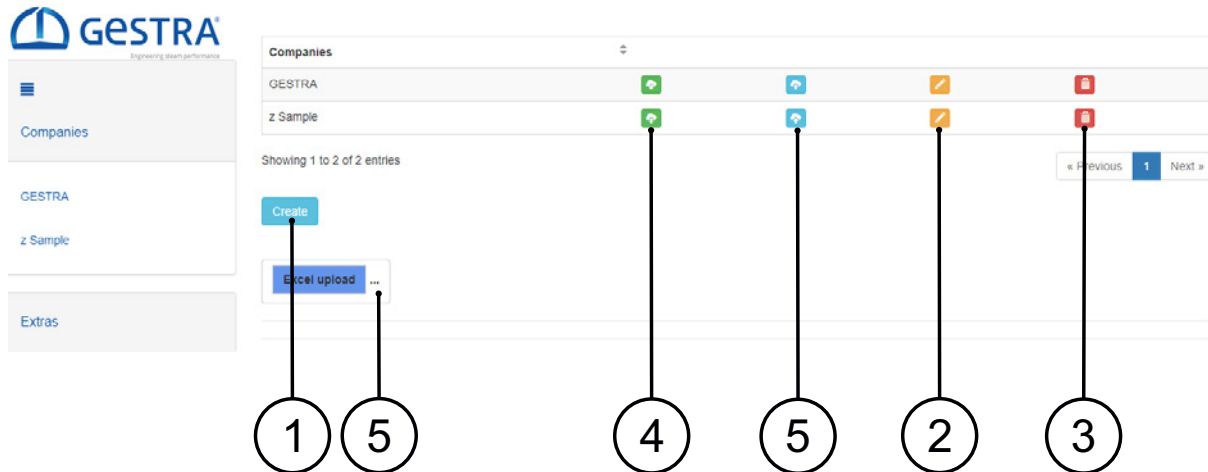
No.	Designation or meaning
1	Create company
2	Rename company
3	Delete company
4	Back up test objects with Excel® download
5	Import test objects with Excel® upload

Creating companies

➢ To create a new company, click on the "Create" button.
➢ Enter the name.
➢ Confirm your entry.

Renaming companies

➢ To rename an existing company, click on the ✎ icon.
➢ Enter the new name.
➢ Confirm your entry.

Deleting a company

➢ To delete a company, click on the 🗑 icon.
➢ Confirm your entry.

Backing up test objects with Excel® download

Save the most important data, test objects and most recent test result as an Excel® file.
➢ To create a backup file, click on the ⬇ icon.
An Excel® file with the name of the company is saved in Downloads.

Importing test objects with Excel® upload

Import the most important data and test objects into an existing company. The Excel® file must have the same format as the Excel® file from the Excel® download. New test objects are added, existing test objects are not imported.
➢ To import test objects, click on the "Excel® upload" button.
➢ Select the Excel® file and confirm your entry.
The selected Excel® file is shown after the "Excel® upload" button.
➢ Click on the ⬆ icon of the company you require.
The test objects are now displayed in that company's submenu.

Creating an Excel® file for the Excel® upload

Note

To ensure you use an Excel® file with the correct format:

Either change an existing file or create the new company with a test object, then run Excel® download and change the content in this file.

Note the following for the columns:

A-F must be present

Attention

G, H contain formulas, do **not overwrite** them!

The content of these cells is updated either straight away or when the file is saved, depending on the settings in Excel® Options/Formulas/Calculation options.

I, J are not imported

K is optional. If a pressure is entered here, the operating temperature of the test object can be included in the results during the test. If these cells remain empty, only a cold/not cold test is performed during the test.

L-Q are optional

R, S are not imported

Note

20,000 test objects (rows) are permitted

Importing and backing up the entire database

To import an entire database or to back up the current database, please contact our Technical Support.

Company (e.g. z.Sample) - Data processing

→ Companies / Chosen company (e.g. z Sample)

Adjusting the view, setting filters

No.	Designation or meaning
1	Available filters
2	Column header with filter for ascending and descending order
3	Number of test objects shown in a view
4	Change the view, show more test objects

Note

The order of a company's test objects in the web app determines the sequence of tests during data transfer to the VPK 42 portal app.

Available filters

➢ Using the filter feature, sort the test objects in the desired order (by plant and plant section, for example).

Column header with filter for ascending and descending order

When you click on the column header, the test objects are sorted in ascending or descending order.

➢ Via the column header, sort the test objects in the desired order (by place of installation, for example).

Number of test objects shown in the view

➢ Set the number of test objects you wish to be displayed.

Changing the view, showing more test objects

If you wish the list to contain more test objects, you can change the view using the buttons.

Note

When you change the view, test object marking is deleted. Set the status before you change the view (see "Selecting for testing" section).

Icon, button

→ Companies / Chosen company (e.g. z Sample)

				Plant	Plant section	Place of installation	Type designation	Manufacturer	Working Principle	DN	Test date	Test result	Steam loss
				Plant-4	Section-1	017	BK 36A-7	Gestra	Bimetal	20	06.07.2017	DEMO: OK	
				Plant-2	Section-1	010	UNA 45	Gestra	Ball float	15	06.07.2017	DEMO: Check	
				Plant-2	Section-2	012	DK 57-H	Gestra	Thermodynamic (disc)	20	06.07.2017		
				Plant-6	Section-1	037	45.613 (Cona M)	ARI (AWH)	Membrane (capsule)	25	06.07.2017	DEMO: Defective	4,5 kg/h
				Plant-5	Section-1	030	MK 45-2	Gestra	Membrane (capsule)	25			

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No.	Designation or meaning
1	Create test object
2	Edit test objects - Detailed view
3	Mark test object
4	Mark entire column
5	Status display - Data transfer
6	Select for testing
7	Cancel selection
8	View test results of a test object
9	Report
10	Calculate loss of steam
11	View test results

Creating test objects

You can create new test objects here (see "Test objects" section).

Editing test objects – Detailed view

Here, you can view details of test objects, and edit, copy and replace test objects (see "Test objects" section).

Marking test objects

Mark the test objects that you wish to transfer to the VKP 42 portal app for a normal check.

➢ Check the boxes to select the test objects you wish to test.

When a test object is selected, it has a check with a grey background.

Note

To mark test objects for testing, you must prepare them using the filter and the column header sorting feature. Change the view (see "Selecting for testing" section).

Marking an entire column

➢ To mark the entire view, check the box in the column header.

All test objects in the view have a check with a grey background.

Status display

The status of data transfer between the web app and the VKP 42 portal app is shown in the "Status display" column.

| Green | Will be sent with the next data transfer. |
| Yellow | In the VKP 42 portal app for processing |

Selecting for testing

➢ Mark the test objects you wish to test.

➢ Click on "Select for testing". The status of the selected test objects turns green.

The test objects are ready for data exchange with the VKP 42 portal app.

Cancelling your selection

➢ Mark the test objects that you no longer wish to transfer.

➢ Click on "Cancel selection". The status of the selected test objects is deleted.

Viewing test results of a test object

View all test results.

Report

Various reports are shown.

Calculating the loss of steam

Calculate the loss of steam, the cost and CO_2 emissions of faulty test objects.

➢ Mark the faulty test objects.

➢ Click on the "Calculate" button.

➢ Enter the fuel costs and annual operating hours and click on the "Calculate" button.

You can document the calculation using the "Report" button.

Viewing test results

Display the test curves of the filtered view.

Managing test objects in the web app

A test object (steam trap) must be clearly described using the following data: Plant / Plant section / Place of installation / Type designation / Location / Function type / Manufacturer.

→ Companies / Chosen company (e.g. z Sample)/Create menu
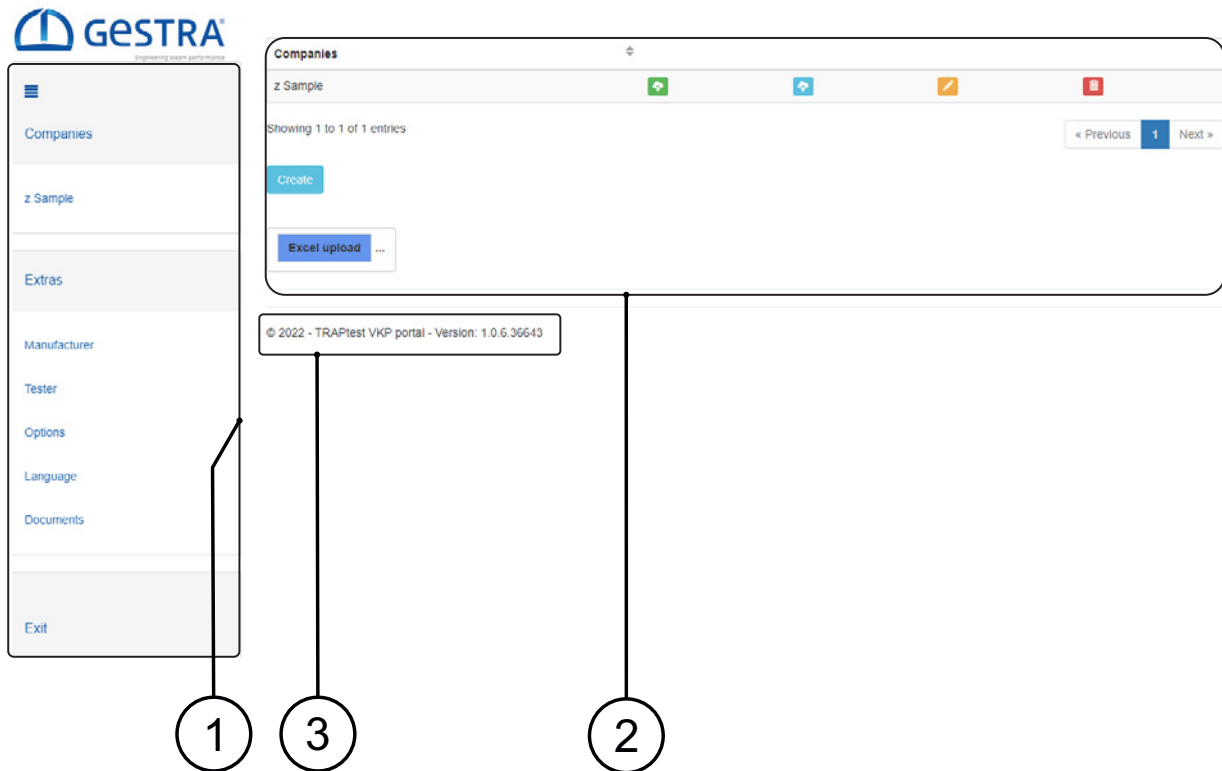
Attention

This designation may be used only once in a company.

Entering a value for upstream pressure is recommended. Then, the operating temperature of the test object is included in the results during the test. This gives the test clear added value. If this field remains empty, only a cold/hot test is performed during the test.

Attention

If the entered pressure and actual pressure differ significantly, this can lead to incorrect results.

All other fields are optional and are used for a detailed description.

Ta is the most recently measured temperature of the test object.

Creating a test object

➢ In the desired company, click on "Create" to create a new test object.
➢ Enter the equipment type in the "Type designation" field.

Note

Use the dropdown menu or enter the first letters of the equipment type to make your selection faster.

➢ If the equipment type is not available in the dropdown menu, select a similar equipment type.
➢ Click on the "+" symbol to additionally enter a plant or plant section or a new equipment type, if yours is not included in "Type designation" in the dropdown menu. Confirm your entries.
➢ For a new equipment type, you also need to select the function type and manufacturer.
➢ Specify the place of installation.
➢ Add further details about the test object.
➢ Click on the "Save" button to save the data.

Editing test objects

You can edit test objects in the "Create" menu in "Change test objects - Detailed view".

→ Companies / Chosen company (e.g. z Sample)

➢ Click on the [icon] icon in the row containing the test object.

➢ In the detailed view, click on the required button, "Copy", "Replace" or "Change".

➢ Save your entry.

Copying a test object

Copy an existing test object and save it with a new place of installation.

Replacing a test object

Replace the steam trap model in an existing test object. The defined place of installation stays the same. The test result of the existing test object is deleted.

Changing a test object

In an existing test object, you can change all the information except for the type designation. The relevant test result remains in place.

Deleting a test object

You can delete a test object in "Change test objects - Detailed view" in the "Create" menu.

→ Companies / Chosen company (e.g. z Sample)

➢ Click on the [icon] icon in the row containing the test object that you wish to delete.

➢ In the detailed view, click on the "Delete" button.

➢ Confirm your entry.

The test object is deleted from the view.

Adding new steam trap models

Add new equipment types to the list of type designations.

➢ Create new steam trap models using the "Create" button.

→ Companies / Chosen company (e.g. z Sample)/Create menu

Attention

To make sure that new designations are not created unnecessarily, please always search for the desired model first in the "Type designation" field.

➢ In the "Type designation" field, select a similar equipment type from the dropdown menu or select the blank field.

Note

When the dropdown menu is open, you can enter the type designation. The system suggests equipment types from the list.

➢ Click on "+" and enter the details and the new steam trap model.

➢ Confirm your entry.

Note

The plant and plant section fields do not have to be filled in. If nothing is available to select in the plant and plant section fields, you can also enter new information via the additional window. All entries in the additional field are stored as new information.

➢ Select the function type and the manufacturer.

➢ Specify the place of installation, e.g. with a consecutive number.

➢ Enter further details about the test object.

➢ Save your entries with the "Save" button.

Note

In order to save a test object, the fields Plant, Plant section, Place of installation, Location, Function type and Type designation must be filled in, as a minimum.

Using Excel®

➢ Generate an Excel® file (see the "Importing test objects with Excel® upload" section).

➢ Open the Excel® file.

➢ Add the manufacturer to the "Manufacturer" worksheet and sort the column again.

➢ In the "SteamTraps" worksheet, add the type designation in column A. Click on the appropriate cell in column B. A dropdown menu appears, and here you can select the manufacturer. Click on the appropriate cell in column C. A dropdown menu appears, and here you can select the function type. Sort the worksheet again if necessary.

In the "VKP-Testobjects" worksheet, the dropdown menu in column F contains the new steam trap model.

➢ Create the new test objects in the "VKP-Testobjects" worksheet.

➢ Import the Excel® file to the web app.

Transferring data between the web app and the VKP 42 portal app

The tests are performed with the VKP 42 portal app. For this, the data needs to be exchanged between the web app and the VKP 42 portal app. The Status column in the web app contains the test objects that are ready for data transfer. When data transfer is launched on the VKP 42 portal app, test objects are exported and imported.

➢ Connect the data collector to the internet

➢ In your chosen browser, enter the URL: https://gestra.vkp-portal.de

➢ Log in to your user account.

➢ In the VKP 42 portal app, click on the "Data transfer" button.

➢ Enter your login details.

The VKP 42 portal app is synchronised with the web app. The display shows the status during the process. When data transfer is complete, this is also shown on the screen.

If the "Data transfer" button on the data collector is not yet enabled:

■ Enable or set up a wireless or mobile data connection on the data collector, to establish an internet connection. Preparations for data exchange are now complete.

Note

When the data collector is connected to the internet, data can be exchanged between the VKP 42 portal app and the web app.

Exporting test objects - Web app-> VKP 42 portal app

Test objects with a green icon in the status column are transferred to the VKP 42 portal app. After data has been transferred, the icon turns yellow. This is also possible if you are not logged into the web app.

Note

The order of a company's test objects in the web app determines the sequence of tests during data transfer to the VPK 42 portal app.

Importing test objects - Web app <- VKP 42 portal app

Only test objects that have been tested are transferred from the VKP 42 portal app to the web app.

These also include test objects created in the VKP 42 portal app and saved test objects from the quick check. Test objects that have not been tested are not transferred.

Deleting test objects from the VKP 42 portal app

Test objects are deleted automatically as soon as ones that have been tested are imported to the web app. Test objects that have not been tested remain in the VKP 42 portal app until these test objects have been tested and the results saved.

Performing steam trap tests with the VKP 42 portal app

Tests are performed with the VKP 42 portal app. Prepared test objects can be handled via the "Testing" feature. Alternatively, you can test additional test objects using a quick check.

Performing a normal check

To perform a normal check of test objects (steam traps), you must first create a company in the web app. You need to create all the necessary test objects in this company. The test can cover one or more test objects. During the test, you can add to, replace and change a test object using the VKP 42 portal app.

➢ Click on the "Testing" button.
➢ Select the test object you require and start the test.

Note

Only test results that are not yet available are saved. If a test object is tested twice in one day, the second test result is stored in the test object history. If the test object is tested via another data collector and then uploaded via data exchange, this test object may possibly be duplicated in the list. These two test objects can be differentiated by their test date or time.
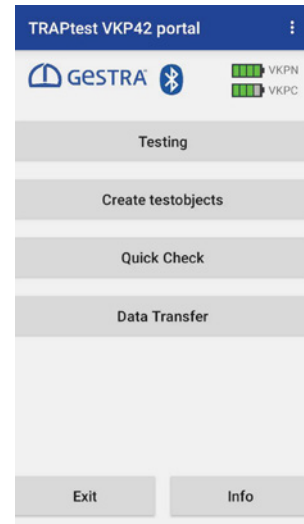
Creating test objects in the VKP 42 portal app

➢ Click on the "Create test object" button.
➢ Select the desired company or enter a new one.

Note

An easy way to select a company is by opening a listbox using the green button on the right. This contains companies already available in the web app, which are imported via "Data transfer" when synchronisation takes place for the first time.

➢ Select the details of the place of installation via "Plant, Plant section, Place of installation and Location" or enter the information.
➢ Enter the steam trap model in the "Type designation" field and select the "Function type".
➢ Enter further details about the test object.
➢ Save your entries.

Note

In order to save a test object, the fields Company, Plant, Plant section, Place of installation, Location, Function type and Type designation must be filled in, as a minimum.

Quick check

A rapid test of a test object. You do not need to set up test objects beforehand, and so you do not need to create a company, either. Finished tests are saved in "VKPN Import" companies and assigned a unique code. These companies are saved following data transfer to the web app, and subsequently deleted from the VKP 42 portal app.

Attention

If no quick checks are saved in the VKP 42 portal app, a new VKPN Import company is always created. Then, a new unique code is assigned to the VKPN Import company, so that the different companies can be differentiated from one another. It is possible for some test objects to have the same numbers in different companies.

Note

If you wish to use these test results in a company later on, compile all the necessary data on the test objects. You can find forms for compiling this data as follows:

→ Tools/Documents menu.

➢ Click on the "Quick checks" button.

➢ Select the test object (location, function type, service pressure) you require and start the test.

The test object is then saved in a VKPN Import company with a unique code. You can view the data in the "Test" menu.

Note

After every data transfer, new companies are created during quick checks. Currently, these companies cannot be grouped in the web app. For this reason, we recommend that you create new test objects directly in the VKP 42 portal app via the "Create test object" function, or make a note of the company's end number.

The next time data is transferred to the web app, the existing quick checks are imported and the companies created in the VKP 42 portal app are deleted. You can view the quick checks in the web app under the appropriate companies.

Additional data

During a test, additional data (such as GPS coordinates, QR code, NFC tag or additional test) can be added in the VKP 42 portal app. This is possible in both a normal check and a quick check.

➢ Click on the "Additional data" button.

Special company "VKPN Import"

These companies are created when a quick check is saved, whereupon they are assigned a unique code. VKPN Import companies are only uploaded to the web app after a data transfer. This causes the company to be deleted on the VKP 42 portal app.

All test objects in a VKPN Import company are numbered chronologically and provided with a time stamp, so that each test object is uniquely identifiable.

Note

If you use the quick check quite frequently, new companies will be created with each new data transfer. Currently, these companies cannot be grouped in the web app. For this reason, we recommend that you create new test objects directly in the VKP 42 portal app via the "Create test object" function, or make a note of the company's end number.

Special company "z Sample"

This company already exists in the web app. It provides a sample data structure and designation in a company.

Tools

Manufacturer

Create, change or delete manufacturers of test objects.

Attention

You can delete all manufacturers that have already been used.

Create: ➢ To create a new manufacturer, click on the "Create" button.
➢ Enter the name.
➢ Confirm your entry.

Change: ➢ Change the manufacturer by double-clicking on the manufacturer in question, and confirm the corrected entry via the 💾 icon.

Delete: ➢ Delete a manufacturer by clicking on this manufacturer and clicking the 🗑 icon.

Test personnel

Create, change or delete test personnel.

Attention

You can delete all test personnel that have already been used.

Create: ➢ To create new test personnel, click on the "Create" button.
➢ Enter the name.
➢ Confirm your entry.

Change: ➢ Change test personnel by double-clicking on the test personnel in question, and confirm the corrected entry via the 💾 icon.

Delete: ➢ Delete test personnel by clicking on the test personnel and clicking the 🗑 icon.

Settings

Currency
■ Here, you can select or add any currency you wish.

Units
■ Switching units.

Attention

Values are not converted.

Report options
■ You can choose from various report layouts.

Language

➢ Select the language you require by double-clicking it in the language list.

The language you selected is now shown at the top of the list.

Note

If terms are not available in your chosen language, they are shown in English in the app.

Documents

Helpful documents

Information on the version number

The version number can be seen in the product information.

Evaluation logic table

Bimetallic, membrane (capsule), inverted bucket

Noise/temperature ratio	Not available ≤ 40°C		Not available ≥ 40°C		Available ≤ 40°C		Available 40°C ≤ T_a ≤ 0.4 × T_S		Available 0.4 × T_S ≤ T_a	
			Saturated steam temperature T_S							
0 ≤ m ≤ LV	Cold		OK		Cold		BC		OK	
LV ≤ m ≤ MAX, below TV	FN: Yes	FN: No	–		FN: Yes	FN: No	FN: Yes	FN: No	–	
LV ≤ m ≤ MAX, below TV	Cold	Check	OK		Cold	Check	BC	Check	OK	
LV ≤ m ≤ MAX	FN: Yes	FN: No	FN: Yes	FN: No	FN: Yes	FN: No	FN: Yes	FN: No	FN: Yes	FN: No
LV ≤ m ≤ MAX — Steam tracer / Steam line / Heat exchanger	Cold	Check	FN	Not OK / Check	Cold	Check	BC	Check	FN	Not OK / Check

Ball float

Noise/temperature ratio	Not available ≤ 40°C		Not available ≥ 40°C		Available ≤ 40°C		Available 40°C ≤ T_a ≤ 0.4 × T_S		Available 0.4 × T_S ≤ T_a	
			Saturated steam temperature T_S							
0 ≤ m ≤ LV	Cold		OK		Cold		BC		OK	
LV ≤ m ≤ MAX, below TV	Cold		OK		Cold		BC		OK	
LV ≤ m ≤ MAX	–		FN: Yes	FN: No	–		–		FN: Yes	FN: No
LV ≤ m ≤ MAX — Steam tracer / Steam line / Heat exchanger	Cold		FN	Not OK / Check	Cold		BC		FN	Not OK / Check

Thermodynamic

Strokes, noise/temperature ratio	Not available ≤ 40°C	Not available ≥ 40°C	Available ≤ 40°C	Available 40°C ≤ T_a ≤ 0.4 × T_S	Available 0.4 × T_S ≤ T_a	Available 0.9 × T_S ≤ T_a
			Saturated steam temperature T_S			
f = 0, m ≤ TV	Cold	OK	Cold	BC	OK	OK
f ≤ LFO	Cold	OK	Cold	OK	OK	OK
f ≥ LFO	Cold	Not OK	Cold	Not OK	Not OK	Not OK
f = 0, m ≥ TV (FN: Yes)	Cold	FN	Cold	BC	FN	Not OK
f = 0, m ≥ TV (FN: No)	Cold	Not OK	Cold	BC	Not OK	Not OK

Evaluation logic table

Abbreviations

Abbreviation	Meaning
TV	Threshold value. Value below which the steam trap is closed and is tight to steam.
LV	Mean noise limit value
m	Mean noise
LFO	Limit frequency of operations per minute
f	Strokes, opening/closing cycles
T_a	Temperature measured at test object
T_s	Saturated steam temperature (calculated from service pressure)

Test results and recommended action

Test result	Meaning	Cause	Recommended action
OK	In order The steam trap shows no loss of steam. No banking-up of condensate was detected.	–	None.
Not OK	Loss of steam The steam trap shows a loss of steam. With the GESTRA TRAP*test* app, you can calculate the amount of steam loss and CO_2 emissions.	Steam trap does not close fully, regulator is worn.	Repair or replace the equipment.
		Dirt, rust, deposits or particles are preventing full closure that is tight to steam.	Clean, repair or replace the equipment.
BC	Banking-up of condensate The measured temperature is much lower than the target temperature. This is probably due to unwanted banking-up of condensate.	Differential pressure at the equipment is too low or even negative. If the upstream pressure (steam side) is lower than the back pressure (condensate side) and no non-return valve is used, condensate can flow back through the steam trap into the steam system.	Increase the upstream pressure, discharge the condensate into a condensate line at low pressure. Use a non-return valve downstream from the steam trap, if operating conditions involve intervals with negative differential pressure.
		Damaged or worn regulator.	Repair or replace the equipment.
		Dirt or deposits are adversely affecting the equipment.	Clean the equipment and dirt trap or replace the equipment.
		Condensate temperature is much lower than the saturated steam temperature (extreme supercooling of condensate).	None.
Cold	Cold The measured surface temperature of the equipment is below 40°C.	Process/equipment is not in operation.	None.
		Equipment is shut off.	Open the stop valves and check that the equipment's condensate line is in good order.
		Differential pressure at the equipment is too low or even negative. If the upstream pressure (steam side) is lower than the back pressure (condensate side) and no non-return valve is used, condensate can flow back through the steam trap into the steam system.	Increase the upstream pressure, discharge the condensate into a condensate line at low pressure. Use a non-return valve downstream from the steam trap, if operating conditions involve intervals with negative differential pressure.
		Damaged or worn regulator.	Repair or replace the equipment.
		Dirt or deposits are adversely affecting the equipment.	Clean the equipment and dirt trap or replace the equipment.
		Low condensate temperature due to the type of drainage process, e.g. draining a gas pipe (compressed air, N2, fuel gas) with a UNA Simplex ball float steam trap.	None.

Test results and recommended action

Test result	Meaning	Cause	Recommended action
FN	Foreign noise The test result is adversely affected by foreign noise. The condition of the steam trap cannot be clearly assessed.	The ultrasonic signal is distorted by other components, e.g. turbines, pumps, valves, steam traps.	Use an additional, suitable test procedure to assess equipment status, determine the temperature profile and pressure on the steam side. Practice preventive maintenance at reasonable intervals.
		Condensate flowrate or differential pressure is too high, test curve is far above limit value or even at the max. limit of the ultrasonic scale (seen as a flat line without any variations of signal).	
Check (for the "Heat exchanger" location only)	Check required The equipment test produced a high ultrasonic signal.	A high ultrasonic signal was measured, which was very probably not caused by loss of steam. A high ultrasonic reading in the test is provoked by a very high condensate flowrate or very high differential pressure.	If the steam trap is discharging a large volume of condensate or is working with high differential pressure (>20 bar/300 psi), no action is required. Use an additional, suitable test procedure to assess equipment status, determine the temperature profile and pressure on the steam and condensate sides. Practice preventive maintenance at reasonable intervals.
Comment	Comment on the test object Comments are indicated by a preceding "_" e.g.: _Test object removed _Gasket not OK.	A comment was added for the test object during the test. With some comments, an additional test is possible. The test curve is used solely for documentation, not for showing the results.	Take action in response to any comments.

Troubleshooting

Error identification

The following options are available for analysing and eliminating the causes of errors.

■ **Error messages:**

These contain information on errors. This information, or a screenshot, can be used for debugging.

■ **Data transfer between web app and data collector:**

➢ Check your data collector's internet connection.

Troubleshooting table

Logging off and logging in again can usually help with problems, e.g. if settings or the language have been changed.

Error	Cause	Action
After the Excel® upload, the message: "… xx objects of yy objects imported" appears	Status message on the import of test objects. This message is shown every time an Excel® upload takes place	Remarks: Test objects that are already present are not imported again. Test objects with a different core designation are recognised as new and added to the company. Changes to optional test object data are therefore not included in an import.
No data is transferred between the VKP 42 portal app and the web app.	The data collector is not connected to the internet.	Enable WiFi on the data collector or set it up via Tools/Settings/WiFi Settings.
	The data collector does not have a serial number for the primary user or user.	In the user list in the web app, check whether a serial number has been entered. Create the device or send the serial number and the name of the primary user to GESTRA Technical Support. They will enter the device for you.
	The test objects have different definitions in the VKP 42 portal app and in the web app.	Make sure that the test objects on the data collector and in the web app identical definitions. It could be that a test object was changed on the data collector, and this has not yet been synchronised with the web app.
	Data transfer to the web app is not possible due to a time access problem.	Attempt data transfer again.

For Your Notes

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