



**Dräger X-dock 5300**  
**Dräger X-dock 6300/6600**

Technical Manual





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# 1 For your safety

## 1.1 General safety notes

- Before using this product, carefully read the Instructions for Use.
- Strictly follow the Instructions for Use. The user must fully understand and strictly observe the instructions. Use the product only for the purposes specified in the Intended use section of this document.
- Do not dispose of the Instructions for Use. Ensure that they are retained and appropriately used by the product user.
- Only trained and competent users are permitted to use this product.
- Comply with all local and national rules and regulations associated with this product.
- Only trained and competent personnel are permitted to inspect, repair and service the product. Dräger recommend a Dräger service contract for all maintenance activities and that all repairs are carried out by Dräger.
- Only trained and competent personnel are permitted to inspect, repair and service the product as detailed in these Instructions for Use.
- Use only genuine Dräger spare parts and accessories, or the proper functioning of the product may be impaired.
- Do not use a faulty or incomplete product. Do not modify the product.
- Notify Dräger in the event of any component fault or failure.

## 1.2 Definitions of alert icons

The following alert icons are used in this document to provide and highlight areas of the associated text that require a greater awareness by the user. A definition of the meaning of each icon is as follows:



### **WARNING**

Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



### **CAUTION**

Indicates a potentially hazardous situation which, if not avoided, could result in physical injury, or damage to the product or environment. It may also be used to alert against unsafe practices.



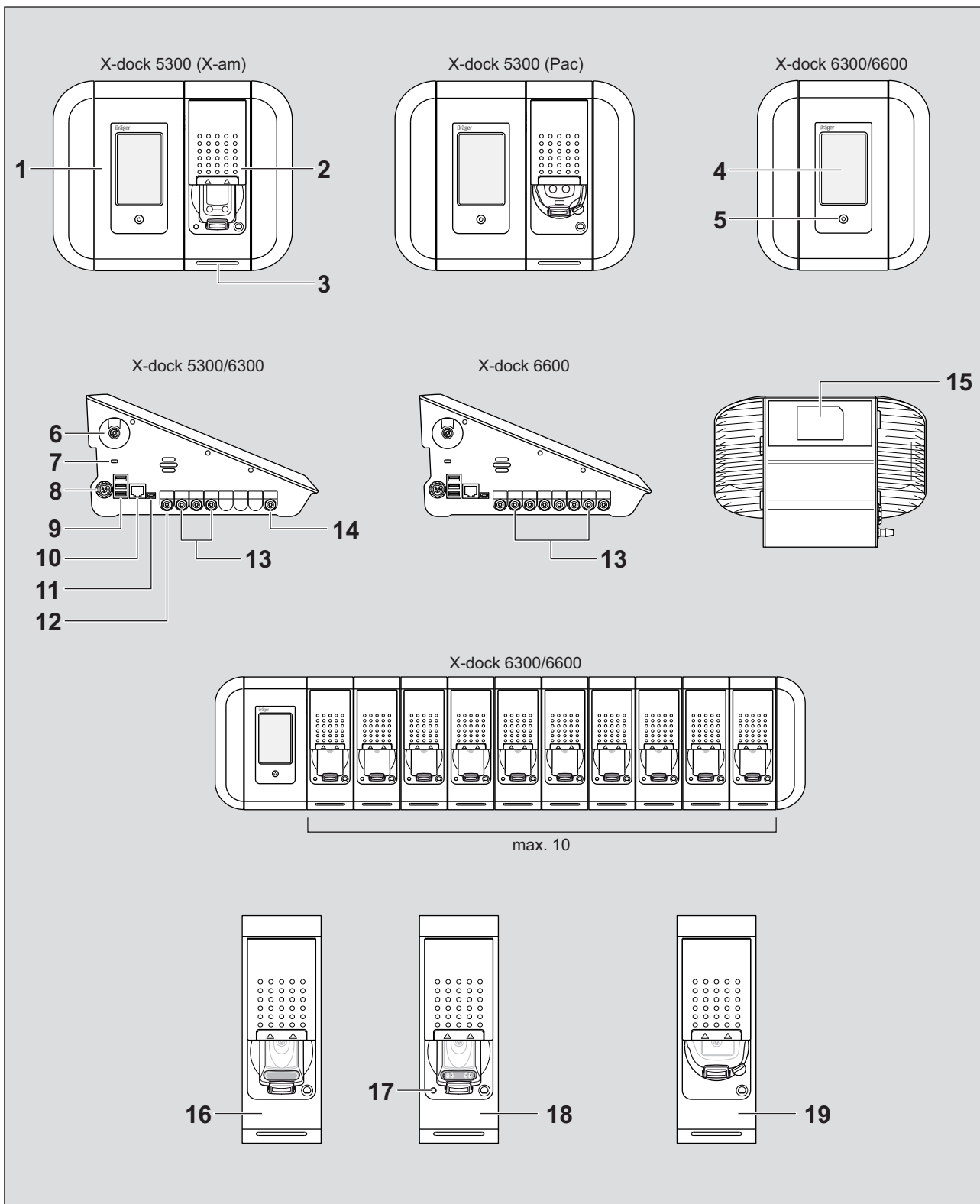
### **NOTICE**

Indicates additional information on how to use the product.

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## 2 Description

### 2.1 Product overview



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- 1 Master
- 2 Module
- 3 Status LED
- 4 Touchscreen display
- 5 Function key
- 6 Fresh air inlet with filter
- 7 Antitheft slot
- 8 Power supply
- 9 USB ports
- 10 Ethernet port
- 11 Mini USB port
- 12 Exhaust
- 13 Gas inlets
- 14 Compressed air inlet
- 15 Type plate
- 16 X-am 125 module
- 17 Charge status LED
- 18 X-am 125+ module (with charging function)
- 19 Pac module

## 2.2 Feature description

### 2.2.1 Master

The master assumes control of the sequencing of the maintenance station for functional testing, calibration and adjustment, as well as functions for user management, instrument management, printing of standard reports and standard certificates (using PostScript printers only), and also the user interface.

### 2.2.2 Modules

The instrument-specific interfaces such as, e.g., IR communication, gas exposure unit and charging contact are integrated into the modules. In addition, the modules contain sensors for detecting the visual, audible and vibration alarms on the instruments.

## 2.3 Intended use

The Dräger X-dock 5300/6300/6600 is a maintenance station of modular construction. The X-dock can be used to perform automated calibrations, adjustments and bump tests on portable gas monitors in parallel and independently from one another. A system consists of one master for 3 (X-dock 5300/6300) or 6 (X-dock 6600) test gases. The X-dock 5300 consists of a master station with one module and cannot be expanded. Up to 10 modules can be connected to the X-dock 6300 and 6600 master. The modules automatically detect when an instrument has been inserted and control the gas supply so that an appropriate supply to the instrument is ensured at all times.

The following gas measuring devices can be used with the X-dock and its modules:

<b>X-dock 5300/6300/6600</b>	
<b>with Pac module:</b>	<b>with X-am 125 (+) module:</b>
Dräger Pac 3500	Dräger X-am 1700
Dräger Pac 5500	Dräger X-am 2000
Dräger Pac 7000	Dräger X-am 5000
	Dräger X-am 5600

## 2.4 GPL (General Public Licence)

Some of the device software includes open-source software, which has been published under GPL, LGPL or another open-source licence. They include GPL GPLv2, LGPL, MIT, PostgreSQL, Apache, Apache 2, zlib. The source texts of the software can be obtained from Dräger on a CD under material number 83 21 874 for at least three years after purchase of the software. The licence terms and conditions of the software are included on CD.

## 3 Installation



### NOTICE

Ensure adequate space for the entire assembly.

The master and all modules must have the same firmware version. If this is not the case, a firmware update needs to be carried out (see chapter 9.2 on page 21).

1. If applicable, install modules on the master station in accordance with the assembly instructions (X-dock 6300/6600 only).
  - o A maximum of 10 modules can be installed on one master station.
  - o The available modules can be combined in any way desired.
2. If applicable, install wall mount or cylinder holder in accordance with the assembly instructions.
3. Remove the sleeves from the intended gas inlets and from the gas outlet.



### NOTICE

If the sleeve is not removed from the gas outlet, the station will be unable to conduct the self-test without errors.

4. Fit the gas feed hoses to the gas inlets on the master and connect them to the regulator valve on the test gas cylinder.



### NOTICE

Dräger recommends not exceeding a hose length of 10 m for the gas feed hoses.

5. If required, connect an exhaust hose (max. 10 m long) to the exhaust outlet.
6. Ensure a supply of compressed air or fresh air:
  - o Connect the compressed air hose to the compressed air port (outlet pressure of pressure regulator valve 0.5 bar, flow rate >3 l/min).

**OR**

  - o If required, connect the fresh air hose to the fresh air filter.
7. Connect the power pack.
  - o Station with up to 3 modules: Power pack 24 V / 1.33 A
  - o Station with 4 to 10 modules: Power pack 24 V / 6.25 A

The entire system is supplied with power via the master.

**NOTICE**

Dräger recommends the use of Dräger gas cylinders and Dräger pressure regulator valves (see order list). Alternatively there is the option of using a suitable pressure regulator valve with 0.5 bar outlet pressure and >3 l/min flow rate.

Dräger recommends connecting an exhaust hose (max. 10 m long) to the exhaust outlet to discharge the test gas into the open air.


## 4 Basics

### 4.1 Switching the station on or off


**NOTICE**

If no action has occurred for 10 minutes, the station switches automatically to standby mode.

To switch the station on:

- Press and hold the  key on the master for approx. 1 second.  
The following information is displayed during the switch-on process:
  - Software version number



To switch the station off:

- Press and hold the  key on the master for approx. 3 seconds.  
The station switches off.

Standby mode:


- Standby mode is activated after approx. 10 minutes with no activity on the station (input via touchscreen or opening/closing of a module cover).
- When the station switches over to standby mode, any user logged in will be logged off automatically. The user will need to log back in again when switching back to operating mode.
- The touchscreen is switched off in standby mode.
- The charging function of X-am 125+ modules with charging function is not affected by standby mode. The charging process is not interrupted.
- To switch to operating mode:
  - Tap the function key or
  - touch the touchscreen or
  - open or close a module flap.

### 4.2 Initial setup of station

1. Switch on the station, see chapter 4.1 on page 7.
2. Log in with the preconfigured "admin" user (User name: admin, password: 123456), see chapter 4.5 on page 8.
3. Configure the test gas inlet, see chapter 4.7 on page 9.
4. Change language if necessary:
  - a. Select  > **System configuration > Language**.
  - b. Selected the required language.
  - c. Confirm selection with **OK**.
5. Set date and time where necessary:
  - a. Select  > **Sync. clock > Date & time**.
  - b. Make the desired settings.
  - c. Confirm settings with **OK**.
6. If required, change standard tests (see chapter 4.8 on page 11).
7. If required, set up network (see chapter 6.4.3 on page 17).

### 4.3 Touchscreen display

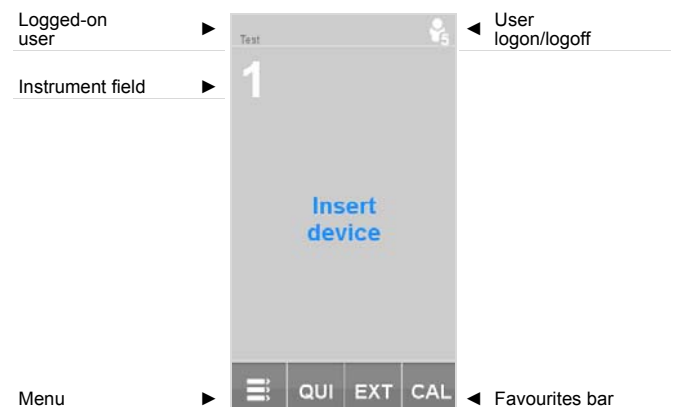
The buttons on the touchscreen display change dynamically depending on the task being executed. To execute an action, select the corresponding icon on the display.

Press the  key on the master at any time to access the start screen.

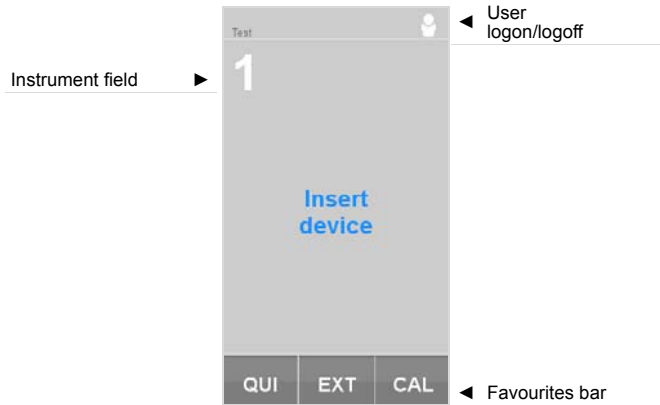
### 4.4 Start and test screens

The keys on the start and test screen change dynamically depending on the log-in status, single-mode status and the number of modules in use.

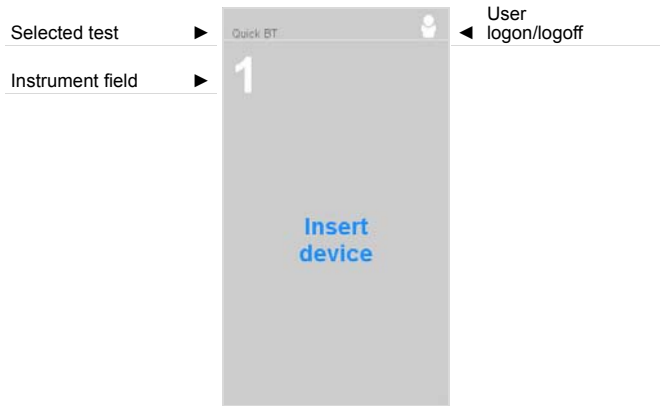
#### Start screen: User logged in (single mode deactivated)








**Start screen: User not logged in (single mode deactivated)**



**Start screen: single mode activated**



**4.4.1 Symbols**

	Menu	Select this button to access the menu (see chapter 6 on page 16).
	Confirm	Select this button to confirm an input or function.
	Cancel	Select this button to cancel an input or function.
	Back	Select this button to access the previous screen.
	Log user in or out	Select this button to log users in or out. The number in the symbol indicates the permission level (see chapter 7 on page 19).

**4.5 Logging users in or out**



**NOTICE**

A User-ID is required to log in. This must be created beforehand by the Administrator (see chapter 4.6 on page 8).

A user with administrator rights is created by default:




**User name: admin**  
**Password: 123456**





**NOTICE**

Dräger recommends changing the admin password after initial start-up.

To log in a user:

1. Select .
  - a. Select .
  - b. Select the desired user name from the list.
 or
  - a. Select **Select user**.
  - b. Enter desired user name.
2. Enter the password and confirm with .

To log out the current user:


1. Select .  
Information about the current user will be displayed.
2. Select .  
The current user will be logged out.

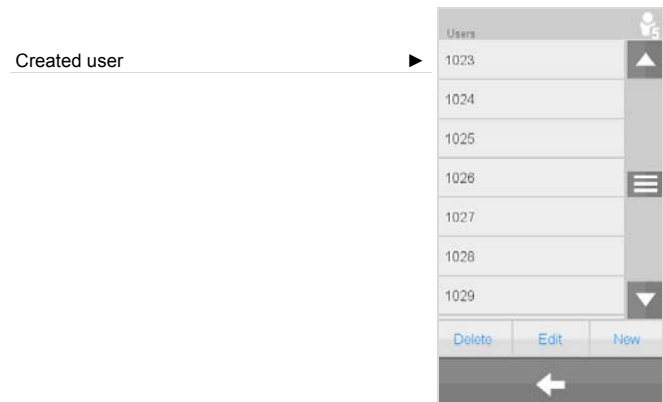


**NOTICE**

When entering the user name, 3 already saved user names will automatically be suggested and displayed. For quick selection, please select the desired user name.

**4.6 Managing user profiles**

- Select  > **Data management** > **Users**.  
The user overview will be displayed.





To create a new user profile:

1. Select > **Data management** > **Users** > **New**.  
The input form will be displayed.

Enter last name	▶	Family Name
Enter first name	▶	First Name
Enter User ID	▶	User ID
Enter permission level and password	▶	User ID Password
Enter company name	▶	Company Name
Enter location	▶	Location
Enter comments	▶	Comment

Gas configuration

- 1 H2S CO CO2 CH4 O2 ▶
- 2 N2 ▶
- 3 valves not defined ▶
- 4 valves not defined ▶
- 5 valves not defined ▶
- 6 valves not defined ▶
- Settings ▶

Select the gas inlet ▶

2. Select desired test gas inlet.  
The configuration menu will appear.

2. The following information must be created:
  - User name
  - User ID
  - Permission level (see chapter 7 on page 19)
  - Password
3. The following information can optionally be given:
  - Company name
  - Location
  - Comments
4. Save the new user profile with **OK**.

Select Test gas inlet ▶	Station gas configuration	
Enter part no. ▶	Valve 2	◀ Enter batch no.
Enter Expiry date ▶	Part No: Let No:	
	Good Until:	
	H2S	◀ Create Test gas component
Select Test gas ▶	H2S	◀ Delete configuration
Enter concentration ▶	Concentration:	◀ Select unit
Further options ▶	Further options ▶	



**NOTICE**

User profiles can only be created by the administrator or by users with authorisation level 5.

To edit an existing user profile:

1. Select > **Data management** > **Users**.  
The user profiles will be displayed.
2. Select the user profile.
3. Select **Edit**.
4. Edit the desired settings.
5. Confirm the new settings with **OK**.

**4.7 Configuring the test gas inlet**



**WARNING**

The test gas concentrations entered must be identical to the specifications on the test gas cylinder used. Incorrect details will result in faulty measurement results.

To configure a test gas inlet:

1. Select > **Station gas configuration**.  
An overview of the test gas connections is displayed.

When using a Dräger test gas cylinder:



**NOTICE**

Upon entering the part no. of a Dräger gas cylinder, a gas cylinder level indicator is displayed automatically, unless this function was deactivated before (see chapter 4.7.2 on page 10).

1. Enter the part no. of the Dräger test gas cylinder.  
All the necessary details for the configuration will be filled in automatically. The batch number and the expiry date can be entered manually in addition.






**NOTICE**

The values entered automatically must be matched with those indicated on the test gas cylinder. If these values are not identical, the value indicated on the gas cylinder is to be considered and a manual correction of the values must be made.

2. If necessary select **Further options** and to reset the gas cylinder level indicator.
3. If required, configure other test gas inlets in the same way.


When using a test gas cylinder from another manufacturer:


1. Create or delete test gas component.
  - o Create a new test gas component with .
  - o Delete the current test gas component with .

**NOTICE**  
 Deleting all test gas components deletes all information of the test gas inlet.

2. Select test gas.
3. Enter the test gas concentration.
4. Select test gas units.
5. If required, create additional test gas components.
6. The following information can optionally be given:
  - o Part no. of the test gas cylinder
  - o Batch number of test gas cylinder
  - o Expiry date of the test gas cylinder
7. If required, enter **Further options**.

**4.7.1 Further options**

**NOTICE**  
 It is necessary to specify the volume, volume type, pressure and unit to use the gas manager.



Configured test gas components

Enter volume

Enter pressure

Status


Test gas pressure

Volume type

Enter unit for pressure




State of test gas pressure/ Gas cylinder level indicator

1. Enter volume of test gas cylinder.
2. Set type of volume:
  - Comp.** = cylinder volume
  - Relax.** = gas volume (cylinder volume x pressure)
3. If required, refresh test gas pressure.
4. If necessary, activate **Hose > 2 m** if the length of the test gas hose exceeds 2 m.





**NOTICE**  
 Dräger recommends not exceeding a hose length of 10 m for the gas feed hoses.

5. If required, configure other test gas inlets in the same way.

**Status of test gas pressure:**

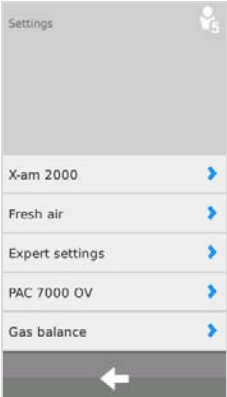
Display	Gas pressure	Meaning
	<0.4 bar	Test gas pressure too low.
	0,4 - 0,6 bar	Test gas pressure correct.
	>0.6 bar	Test gas pressure too high.

**Gas cylinder level indicator:**

Display	Gas cylinder level
	61 - 100 %
	30 - 60 %
	< 30 %
	Gas cylinder level indicator deactivated

**4.7.2 Settings**

1. Select  > **Station gas configuration > Settings**.



Select test gas for X-am 2000

Fresh air inlet setting

Expert settings

Select test gas for PAC 7000 OV

Gas cylinder level indicator

The OV sensor of the PAC 7000 OV allows to choose between two different test gases that are also used for calibration and testing. These test gases are carbon monoxide (CO) and ethylene oxide (EO).

For the X-am 2000, it is possible to choose between three different test gases that are also used for calibration and testing. The three options are methane (CH<sub>4</sub>), propane (C<sub>3</sub>H<sub>8</sub>) and pentane (C<sub>5</sub>H<sub>12</sub>). The sensor is calibrated with different sensitivity levels depending on the gas selected. More information on this can be found in the relevant sensor data sheets.



**NOTICE**

The corresponding gas must be connected to one of the gas inlets and set in the gas configuration.

There is also the option of setting an "increased sensitivity" option for propane and pentane. This option artificially increases the sensitivity to calibrate the sensors so that these have approximately a nonane sensitivity level (in other words, a sensitivity level as if they were calibrated for nonane). More information on the subject of cross-sensitivity calibration can be found in the relevant sensor data sheets.

To select the test gas for X-am 2000:

1. Select **X-am 2000**.
2. Select the required test gas from the list. The following selection is available:
  - Methane - CH<sub>4</sub> (default setting)
  - Propane - C<sub>3</sub>H<sub>8</sub>
  - Pentane - PENT
 For propane and pentane, the "Increased sensitivity" (vapour sensitivity) option can also be activated.
3. Confirm selection with **OK**.

To set the fresh air input:

1. Select **Fresh air**.
2. Select pump (fresh air inlet; default setting) or compressed air inlet.
3. Confirm selection with **OK**.

The following settings can be made in **Expert settings**:

- Ignore maximum concentration for quick bump test
- Set test behaviour for missing test gases

To ignore the max. allowable concentration for the quick bump test recommended by Dräger:

1. Select **Ignore max. conc. for BTQ**.
2. Activate checkbox (default setting: deactivated).
3. Confirm selection with **OK**.

If this function is activated, higher test gas concentrations can be used for the fast bump test than those recommended by Dräger.



**WARNING**

Only trained and experienced personnel are permitted to activate this function, because an incorrectly selected test gas concentration may result in a positive test result even though the instrument alarmed too late.

To set the test behaviour with missing test gases:

1. Select **Missing gas**.
2. Activate checkbox (default setting: activated).
3. Confirm selection with **OK**.

This function can be used to set whether or not a test or calibration is carried out when a required test gas is not connected.



**WARNING**

If this function is deactivated, the corresponding channel is not tested or calibrated.

To select the test gas for PAC 7000 OV:

1. Select **Pac 7000 OV**.
2. Select the required test gas from the list. The following selection is available:
  - Ethylene oxide - EO (default setting)
  - Carbon monoxide - CO
3. Confirm selection with **OK**.

To set the gas cylinder level indicator:



**NOTICE**

The gas cylinder level indicator is only available for cylinders that are configured via a Dräger part no.

1. Select **Gas level monitoring**.
2. Activate or deactivate the **Gas level monitoring on** check box.
3. Confirm selection with **OK**.

To reset the gas cylinder level indicator for a new test gas cylinder:

1. Connect a new test gas cylinder to a test gas connection.
2. Select **Station gas configuration**.
3. Select desired gas inlet. Select **Further options** and select to reset the gas cylinder level indicator.

**4.8 Managing tests**

- Select **Define test**. The test overview will be displayed.

Select test mode		Configure test mode
Select test 1		Edit test 1
Select test 2		Edit test 2
Select test 3		Edit test 3

**4.8.1 Selecting the test mode**

The following test modes are available. The test modes define the behaviour of the system when the user is logged off. The Test scheduler and Log-in mode test modes are configurable.

Mode	Description
Favorites mode	The Favorites mode displays the predefined tests. These can be selected via the favourites bar.
Single mode	In Single mode, a predefined test is started by closing the module flap. Several tests can be started and performed in parallel.
Test scheduler	The Test scheduler mode enables the user to configure the time and weekday when a predefined test should be performed. To configure the Test scheduler mode, select . Manual tests can only be started when the user is logged in.
Log-in mode	Only logged-in users (level 2-5) can perform tests in Log-in mode. The configuration enables you to define whether a user should be automatically logged off after the completion of a test. To configure the Log-in mode, select .

To select the test mode:

1. Select .
2. Select the desired test mode.
3. If necessary, select the of the test mode to be edited (only possible with the **Test scheduler** and **Log-in mode** test modes).
4. If necessary, edit tests (see chapter 4.8.2 on page 12).
5. Save the settings with **OK**.

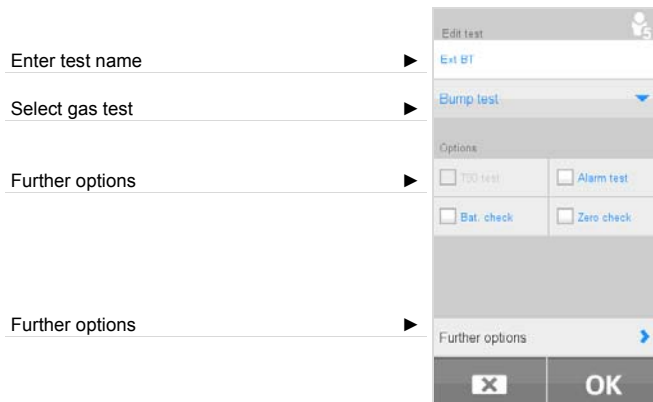
#### 4.8.2 Creating or editing a test

**NOTICE**  
A maximum of 3 favourites may be created.

The first 3 characters of the test name are displayed in the list of favourites.

To create or edit a test:

1. Select icon for the test to be edited. The editing window will be displayed.



2. Enter desired test name.

3. Select desired gas test. The following gas tests are available:

-	No gas test, only the activated options are run.
<b>Quick bump test</b>	Test for exceeding A1 concentration.
<b>Extended bump test</b>	Test for reaching cylinder concentration within a tolerance range.
<b>Calibration</b>	Zero point and span calibration

4. If required, select **Options**. The following options are available:

<b>Response time test</b> (only for calibration)	The response times of the sensors are tested.
<b>Bat. check</b>	The battery voltage is measured and displayed.
<b>Alarm test</b>	All the alarm functions of the gas monitor are checked (noise, light, vibration).
<b>Zero check</b>	The zero point is checked.

**NOTICE**

When the alarm functions are being tested, the ambient noise must not be too loud as otherwise the station will not be able to check the horn function.


5. If required, select **Further options**:

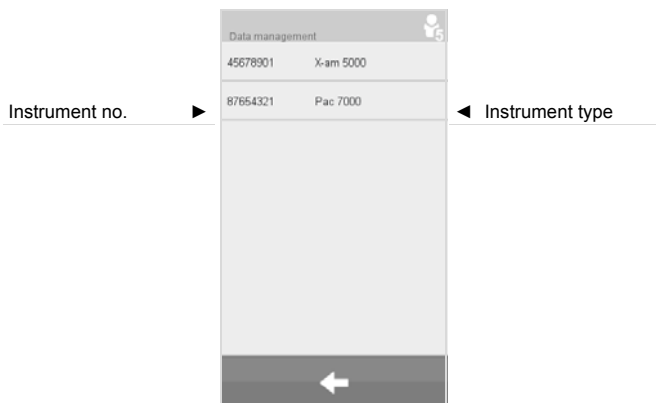
<b>Sync. clock</b>	The time on the gas monitor is synchronised with the station. If this option is selected, <b>Reset DL</b> and <b>Reset TWA</b> are automatically also activated to ensure that the DL (data logger) is unique.
<b>Download DL</b>	Download data memory and events memory data from the gas monitor to the station.
<b>Reset DL</b>	The data in the data and events memories are cleared.
<b>Reset TWA</b>	The TWA <sup>1</sup> time is reset.
<b>Turn off</b>	The gas monitor is switched off automatically after the test.
<b>Autom. repair</b>	Perform automatic repair (e. g. calibrate after a faulty bump test).
<b>Fresh air</b>	The system is purged with fresh air after every test.
<b>Generate</b>	Create certificate (stored in the station as a PDF file).
<b>Print</b>	Print out the certificate on a connected USB printer.

1 Average shift values (time-weighted average) are generally limited to eight hours exposure per day per workplace for 5 days a week during a work lifetime.

6. Save settings with **OK**.

## 4.9 Managing instrument profiles

- Select  > **Data management** > **Devices**.  
The instrument overview is displayed.



To create an instrument profile:

- A new instrument profile will be created automatically as soon as a gas instrument that is not yet stored in the station is placed in a module.

## 5 Use



### WARNING

A defective pressure reducer on the gas cylinder can lead to increased pressure in the station. The gas hoses may loosen as a result and gas may escape.

Health hazard! Test gas must not be inhaled. Observe the hazard warnings in the relevant Safety Data Sheets. Provide venting into a fume cupboard or outside the building.



### NOTICE

To prevent loss of test gas, Dräger recommends closing the test gas cylinders when the station is left unattended for long periods.

Adjustment may not be possible due to instrument and channel errors.

### 5.1 Conducting a visual inspection

A visual inspection of the gas measurement systems should be conducted every time before being inserted into the station.

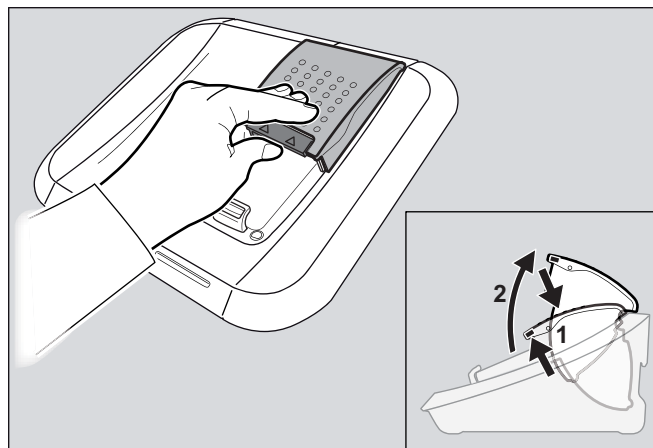
1. Check that the housing, external filters and the nameplates are intact.
2. Check the battery contacts and sensor inputs for dirt.



### NOTICE

Devices that have not passed the visual inspection must not be inserted into the station. Otherwise the test cannot be fully evaluated correctly.

### 5.2 Inserting or removing the gas measuring device into or from a module



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To insert the instrument in the module:

1. If necessary, push the lock up slightly and open the module cover upwards.
  2. Place the instrument in the corresponding module.
  3. Close the module cover.  
The instrument will be detected automatically.
- X-am-125+ module with charging function only:
    - After the instrument is inserted, the charging status is displayed for approx. 5 seconds via the charging status LED.
    - The charging function starts automatically approx. 15 minutes after the last test.

To remove the instrument from the module:

1. Push the lock up slightly and open the module cover upwards.
2. Remove the instrument.

### 5.3 X-am 125+ module with charging function (optional)



### WARNING

Risk of explosion! Do not charge underground or in explosion hazard areas. The X-am 125+ modules with charging function are constructed in compliance with regulations for fire-damp weather and explosion protection.

- It is only possible to charge the instrument batteries using the X-am 125+ module with charging function.
- The charging time is approx. 4 hours for a completely empty battery.
- A new NiMH supply unit reaches its full capacity after 3 full charge/discharge cycles. Never store the device for extended periods (max. 2 months) without a power supply as the internal buffer battery will run down automatically once the temperature is back in charging range.

**If an error occurs:**

- Remove from the module and re-insert.
- If this does not correct the error, have the module repaired.

**CAUTION**

A short-circuit in the charging contacts in the modules, e. g. due to metal objects falling into the device, will not damage the station but should be avoided due to a potential risk of overheating and error displays on the module.

**Overview of charge status LEDs**

Colour	Status	Meaning
green	on continuously	Charge status 100 %
green	flashing	Battery charging.
red	flashing	Charging error

**5.4 Station self-test**

A self-test is carried out:

- When the station is started up.
- When the last successful self-test was more than 24 hours ago and a test is being carried out.

The station is tested for leaks, pump function, and the software version of the individual modules and the master.

**5.5 Conducting a test****WARNING**

When using methane, propane or butane in the range >100 %LEL, an exhaust hose (max. 10 m long) must be connected to the exhaust outlet to ensure the extraction of excess explosive gas.

**NOTICE**

Single mode is activated by default.

Several tests can be started and executed in parallel in the Single mode.

A failure of a LED, horn or vibration test results in a negative evaluation of the overall test, and thus in the locking of the respective gas measurement system.

A test of the sensor reserve is only performed with sensors that support this function. The results are displayed under test details and give information about the state of the sensor.

The following tests are preconfigured:

Test 1: <b>QT</b>	Fast bump test including alarm testing
Test 2: <b>EXT</b>	Extended bump test incl. zero-point check and alarm testing.
Test 3: <b>CAL</b>	Calibration, alarm test, fresh air flushing and certificate.

1. If necessary, open the test gas cylinders.
2. If necessary, switch on the X-dock.
3. Perform a visual inspection of the gas measurement systems (see chapter 5.1 on page 13).
4. Insert the instruments into the modules (see chapter 5.2 on page 13).

If Single mode is activated:

- The preset test is started automatically by closing the module cover.  
The Status LED flashes blue.  
The individual test phases are displayed.

If Favorites mode is activated:

- Select required test from favourites bar.  
The test will be started automatically.  
The Status LED flashes blue.  
The individual test phases are displayed.

If Test scheduler mode is activated:

- If necessary, log user out on the station (see chapter 4.5 on page 8).
- The preset test is performed according to the configured time schedule.

If Log-in mode is activated:

- Log user in on the station (see chapter 4.5 on page 8).
- Select the desired test from the favourites bar.  
The test will start automatically.  
The status LED flashes blue.  
The individual test phases are displayed.

**Test passed:**

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- Confirmation is shown on the display.
- The Status LED flashes green.
- If required, select the desired instrument field for additional information.
- Remove the instrument from the module.



**Test passed, with restrictions:**

01133286.eps

The status means that partial tests of the favourite could not be performed because of special settings.

- Confirmation is shown on the display.
- The Status LED flashes yellow.
- If required, select the desired instrument field for additional information.
- Remove the instrument from the module.

**Test not passed:**

01133286.eps

- An error message is shown on the display.
- The Status LED flashes red.
- If required, select the desired instrument field for additional information.
- Identify and rectify the error.
- Repeat the test if necessary.

**Overview of status LEDs**

Colour	Status	Meaning
blue	flashing	Process in progress
green	flashing	Test passed
yellow	flashing	Test passed, with restrictions
red	flashing	Test failed/cancelled

**5.6 After use**

1. If required, remove instruments from modules.
2. Close the test gas cylinders.

**NOTICE**

To keep energy consumption low, Dräger recommends switching off the equipment after use according to the Instructions for Use.

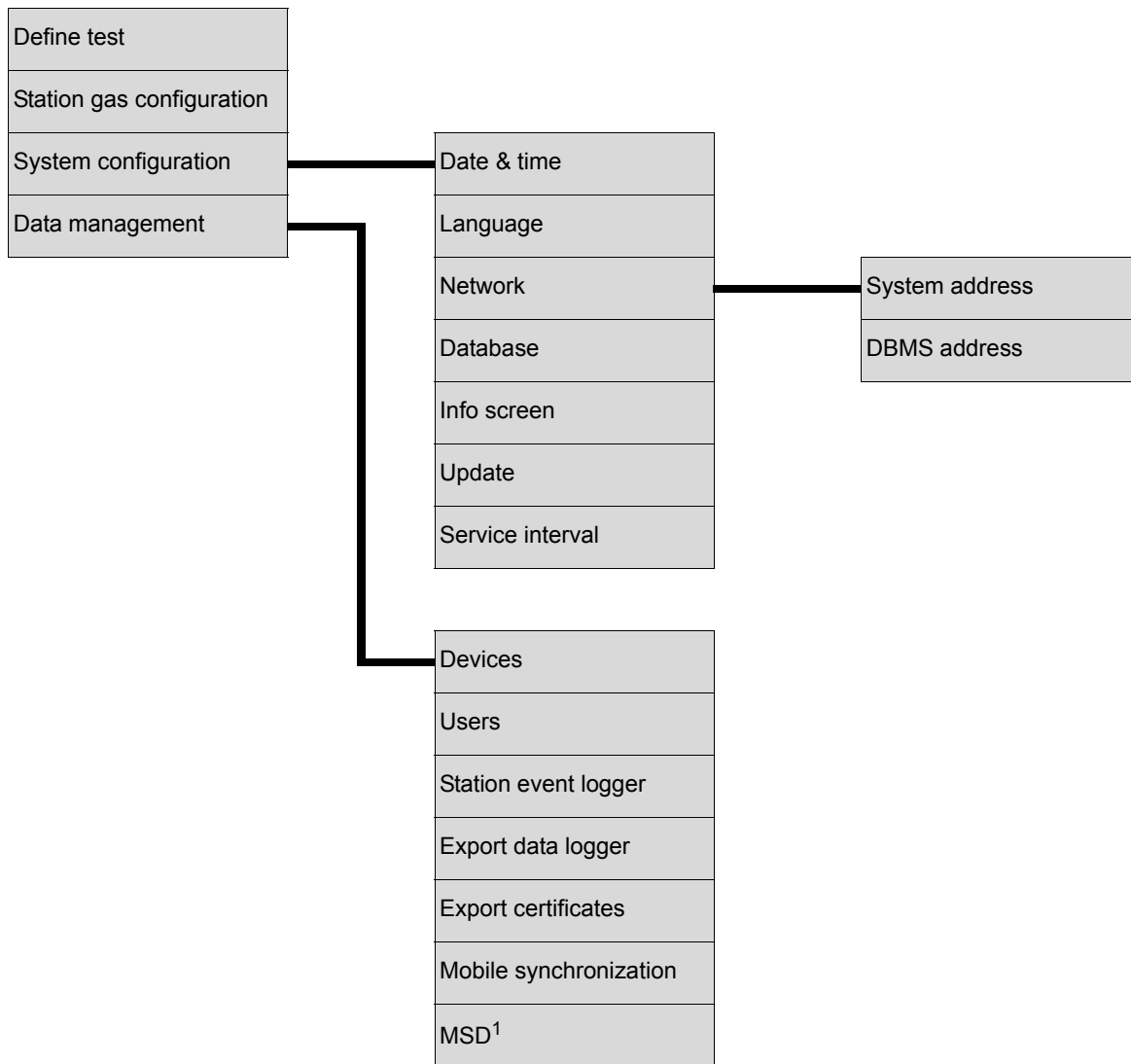
## 6 Menu

### 6.1 Menu overview



**NOTICE**

The menu is only available for users with permission levels 5.




1 Mass storage device




## 6.2 Managing tests

In this menu, the existing tests can be edited, new tests can be created and the standard test can be defined.

- Select  > **Define test**.  
The test overview will be displayed.  
For more information see chapter 4.8 on page 11.

## 6.3 Station gas configuration

The individual gas connections can be configured in this menu.

- Select  > **Station gas configuration**.  
An overview of the test gas connections is displayed.  
For more information see chapter 4.7 on page 9.

## 6.4 System configuration

### 6.4.1 Setting Date & time




#### NOTICE

If the station is connected to a server, only place and format can be changed. The station synchronises time and date automatically.


The following settings can be made in this menu:

- Time zone
- Date format
- Date
- Time
- Location

To set the date and time:

1. Select  > **System configuration > Date & time**.
2. Make the desired settings.
3. Confirm settings with **OK**.

### 6.4.2 Setting the language

1. Select  > **System configuration > Language**.
2. Selected the required language.
3. Confirm selection with **OK**.


### 6.4.3 Network



#### NOTICE

If the IP or DBMS address is changed, the station must be re-started to make the change active.


To set **System address**:

1. Select  > **System configuration > Network > System address**.
2. Select dynamic or static IP address.
3. Where necessary, enter the IP of the system address.
4. Where necessary, enter the Subnet Mask (default: 255.255.255.0).

To set the central database address:

1. Select  > **System configuration > Network > DBMS address**.
2. Enter the server IP #.

### 6.4.4 Cleaning the database


1. Select  > **System configuration > Database > Clean up**.
2. Select **Start clean up**.
3. Confirm deletion of the database entries with **OK**.  
The progress of the deletion is displayed.



#### NOTICE

Database entries, data loggers and certificates are deleted.


### 6.4.5 Displaying info screen

1. Select  > **System configuration > Info screen**.  
The following information is displayed:
  - Application version
  - Hardware version
  - Kernel version
  - MAC address
  - IP address

### 6.4.6 Performing an update

To perform a firmware update, see chapter 9.2 on page 21.

### 6.4.7 Service interval

1. Select  > **System configuration > Service interval**.
  - This function displays how many days have passed since the last service was performed. If the service interval has been exceeded, an additional check box to deactivate the self check note for 365 days is displayed.

## 6.5 Data management




#### NOTICE

All entries are stored in UTC time (Universal Time Coordinated).


### 6.5.1 Managing instruments

The individual instrument profiles can be displayed in this menu.

- Select  > **Data management > Devices**.  
The instrument profiles will be displayed.  
For more information see chapter 4.9 on page 13.

### 6.5.2 Managing user profiles


User profiles can be created, edited or deleted in this menu.

- Select  > **Data management > Users**.  
The user profiles will be displayed.  
For more information see chapter 4.6 on page 8.

### 6.5.3 Exporting Station event logger

The saved data of the event memory can be saved to a connected USB storage device with this function.


To copy data from the event memory to a USB data storage device:

1. Connect the USB data storage device to the USB port on the station.  
The USB icon will appear in the status bar.
2. Select  > **Data management > Station event logger**.  
The event memory is displayed.
3. Select the required files from the list.
4. Confirm selection with **OK**.  
The selected files are copied onto the USB data storage device.

### 6.5.4 Exporting data memory

The saved data of the data memory can be saved to a connected USB storage device with this function.


To copy data from the data memory to a USB data storage device:

1. Connect the USB data storage device to the USB port on the station.  
The USB icon will appear in the status bar.
2. Select  > **Data management > Export data logger**.  
The data memory is displayed.
3. Select the required files from the list.
4. Confirm selection with **OK**.  
The selected files are copied onto the USB data storage device.

### 6.5.5 Exporting certificates


This function can be used to save the stored certificates to a connected USB storage device.

To copy certificates to a USB data storage device:

1. Connect the USB data storage device to the USB port on the station.  
The USB icon will appear in the status bar.
2. Select  > **Data management > Export certificates**.  
The event memory is displayed.
3. Select the required certificates from the list.
4. Confirm selection with **OK**.  
The selected certificates are copied onto the USB data storage device.

### 6.5.6 Mobile synchronization

This function can be used to copy the local database, reports, certificates and device data loggers to a connected USB storage device or the internal MSD area. This is useful if the data cannot be exchanged via the network connection. The data can then be imported into the X-dock Manager (see X-dock Manager Online Help).

1. If necessary, connect the USB storage device to the USB port on the station.
2. Select  > **Data management > Mobile synchronization**.  
The available target locations are displayed.
3. Select desired target location.

4. Confirm the selection with **OK**.  
The data is copied to the target location.



#### NOTICE

Dräger recommends cleaning the local data after successfully importing the data into the database (see chapter 6.4.4 on page 17).


Dräger recommends exporting the local data on a regular basis to keep the amount of data to be exported, and thus copied, small.

The export via the MSD area is faster than via a USB storage device.

### 6.5.7 Activating or deactivating MSD mode

This function allows the station to be used as a USB mass storage device and the data saved in the station can be copied to a connected PC.

To activate MSD mode:

1. connect PC with USB mini B cable to the X-dock.
2. Select  > **Data management > MSD mode**.
3. Activate MSD mode.
4. Confirm setting with **OK**.  
The station is now visible on the PC as a drive.



#### NOTICE

No other actions can be performed with the station while MSD mode is active.

To deactivate MSD mode:

- Cancel MSD mode with **X**.  
The station is ready for operation again.

## 7 Permission level

The availability of functions, tests or menu items depends on the privileges for the particular permission level.

Function	Permission level				
	1	2	3	4	5
Perform preset tests in logged-out status	X	X	X	X	X
Perform preset tests in logged-in status		X	X	X	X
Change password					X
Define test					X
Export data memory (station)					X
Set Station gas configuration					X
Show devices					X
Define extended options					X
Manage users					X
Set date and time					X
Perform SW update (station)					X
Set Language					X
Set network configuration					X
Database operations					X

## 8 Troubleshooting

Faults	Cause	Remedy
Station does not start.	Power supply not connected.	Check connections to mains supply, power pack and station.
	Power pack defective.	Replace power pack.
		Check that the station can be started by pressing the function key.
Gas monitor not detected.	Module dirty.	Clean module.
	Instrument dirty.	Clean instrument.
	Module defective.	Contact DrägerService.
	SW version of gas monitor out of date.	Update gas monitor SW.
Measuring chamber leaky.	Instrument and/or module dirty.	Clean instrument and/or module.
	Seal worn.	Replace seal (see chapter 9.3 on Page 22)
No communication with PC.	Ethernet cable not connected correctly.	Check cabling.
	Ethernet cable defective.	Replace Ethernet cable.
	IP address incorrectly configured.	Reconfigure IP address.
	Firewall is blocking data traffic.	Configure the firewall correctly.
Gas monitors do not pass the gas tests (test gas not reaching the instrument).	Hose connections incorrect.	Check hose connections.
	Station gas configuration not correct.	Check Station gas configuration.
	Test gas cylinder empty or closed.	Check test gas cylinder.
	Pressure regulator valve incorrectly set.	Check setting of pressure regulator valve.
Test gas pressure is too low.	Pressure regulator valve incorrectly set.	Check setting of pressure regulator valve.
	Hose connections incorrect.	
	Test gas cylinder empty or closed.	
Test gas pressure is too high.	Pressure regulator valve incorrectly set.	Check setting of pressure regulator valve.
Alarm element test not carried out.	External light sources are interfering with the alarm element test.	Check whether or not external light sources are creating interference, reposition light sources or station as necessary.
The system does not recognize the connected USB storage device.	The formatting of USB storage devices varies, depending on the manufacturer. This applies to the file system (e.g. FAT32 or NTFS) as well as the partitioning.	Dräger recommends using FAT32 and a partitioning that contains partitioning tables (USB-ZIP or USB-HDD).
Touchscreen does not respond or has limited response.	Touchscreen no longer correctly calibrated.	Recalibrate touchscreen, see chapter 9.5 on page 22.
<b>Module not found or Wrong (incompatible) SW version</b> error message (although everything is connected correctly).	This error can occur if a master is connected to modules with different software versions.	In this case, a firmware update has to be performed via the master, even if the most current firmware is already installed on the master.
	If the modules are not connected correctly, the electrical connection may be faulty.	Check whether all connections are correctly connected and screwed tight.
<b>Module X does not support firmware version</b> error message.	The firmware version of the affected gas monitor is not compatible with X-dock.	Perform an update with the CC Vision PC software.

## 9 Maintenance

### 9.1 Maintenance intervals



#### NOTICE

The maintenance intervals must be established in each individual case and shortened if necessary, depending on safety considerations, process conditions, and the technical requirements of the equipment. Dräger recommend a Dräger service contract for all maintenance activities and that all repairs are carried out by Dräger.

#### 9.1.1 Before every start-up

The following work must be carried out before every start-up of the equipment:

- Check the hoses for dirt, brittleness and damage and replace if necessary.
- Check the hoses are secure, to prevent escapes of gas.
- Check that all cable connections are secure.
- Visual inspection of the modules and sensor seals. If very dirty or if there are visible defects, the sensor seal must be replaced.

#### 9.1.2 Annually

Inspection of the entire X-dock station by competent personnel.

### 9.2 Performing a firmware update



#### CAUTION

The station power supply must not be disconnected during the installation process. The station may be damaged if this is not observed.



#### NOTICE

The station does not support any USB data storage device with an NTFS file system.


1. Download the firmware update from the internet:
  - a. Go to [www.draeger.com](http://www.draeger.com).
  - b. Go to the X-dock product page and unzip the firmware update to the root directory of an empty USB data storage device.

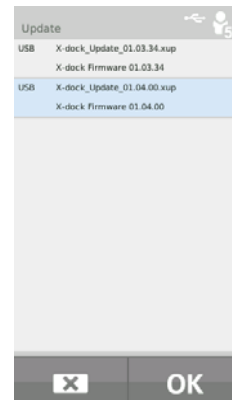


#### CAUTION

There must not be any older firmware files on the USB data storage device.

2. Connect the USB data storage device with firmware update to the USB port on the station.  
The USB icon will appear in the status bar.

3. Select  > **System configuration > Update**. A list of all firmware updates available on the USB storage device will be displayed.



4. Select the desired firmware update from the list. The selected firmware update is marked in blue.

5. Start the firmware update with **OK**. The progress of the installation is displayed:



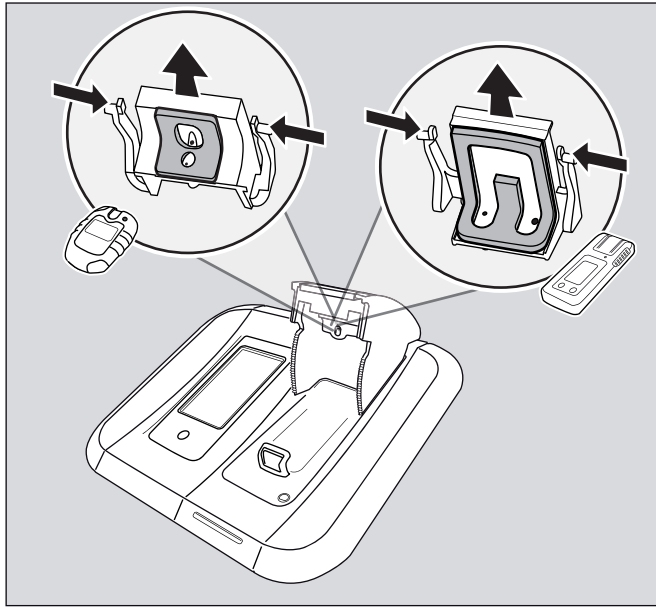
6. Following successful transfer to the station, the start is re-started automatically and the firmware update is installed immediately afterwards. During the installation process, the status LEDs on the modules will be white.
7. After the installation is complete, the station changes to operating mode. The station is ready for operation.

### 9.3 Changing the sealing insert



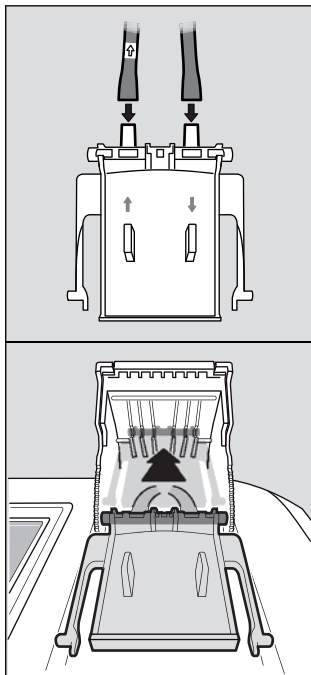
**NOTICE**

The sealing inserts must be changed at regular intervals (e. g. at each inspection) or sooner as required.



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1. Open the module cover.
2. Squeeze the two external locking lugs in and withdraw the sealing insert downwards.
3. Release the hoses from the sealing insert.
4. Replace the sealing insert.
5. Fit the hoses to the new sealing insert (note the arrows on the sealing insert and the hose).
6. Squeeze the external locking lugs in and insert the sealing insert into the module cover until the locking lugs engage.
7. Check that the sealing insert is fitted correctly in the module cover.



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### 9.4 Changing the fresh air filter



**NOTICE**

With regular use and depending on the conditions of use, the fresh air filter should be changed typically every 2 months.

1. Unscrew the old fresh air filter.
2. Screw in the new fresh air filter.

### 9.5 Calibrate touchscreen

1. While starting the system, press and hold the function key until the calibration display appears.
2. Press the five consecutively displayed position markers as they appear.

### 9.6 Cleaning



**CAUTION**

Abrasive cleaning implements (brushes, etc.), cleaning agents and cleaning solvents can destroy the fresh air filter.

The device does not need any special care.

- If very dirty, the equipment can be carefully wiped down with a damp cloth.
- Carefully dry the device using a cloth.

## 10 Disposal

Dispose of the product in accordance with the applicable rules and regulations.



**Disposing of electric and electronic equipment:**

In accordance with EU Directive 2002/96/EC this product must not be disposed of as household waste. This is indicated by the adjacent icon. You can return this product to Dräger free of charge. For information please contact the national marketing organisations and Dräger.

## 11 Technical data

### Dimensions (H x W x D):

Master	approx. 3.54 x 5.70 x 9.84 inches (120 x 130 x 250 mm)
Module	approx. 3.54 x 5.70 x 9.84 inches (90 x 145 x 250 mm)

### Weight:

Master	approx. 2.57 pounds (30.86 ounces; 1500 g)
Module	approx. 2.57 pounds (30.86 ounces; 960 g)

### Ambient conditions:

During operation	32 °F to +104 °F (0 °C to +40 °C)
During storage	-20-4 °F to +122 °F (-20 °C to +50 °C)
	700 to 1300 hPa
	max. 95% relative humidity

### Gas connections:

	1x fresh air connection
	1x compressed air inlet
	1x exhaust outlet
X-dock 5300/6300	3x gas inlets
X-dock 6600	6x gas inlets

### Inlet pressure:

for the measured gas	0,5 bar ±20 %
for compressed air	0,5 bar ±20 %

### Power supply:

11 V - 28 V DC, 6.25 A

### Connections:

3x USB 2.0 standard A connection, (host, cable <3 m)  
1x USB 2.0 mini B connection, (device, cable <3 m)  
1x Ethernet port RJ45  
Data transmission rate 10/100 Mbit

### Serial no. (year of manufacture):

The year of construction is given by the 3rd letter in the factory number located on the nameplate: B=2010, C=2011, D=2012, E=2013, F=2014, G=2015, H=2016, etc.  
Example: Serial number ARFH-0054, the 3rd letter is F, so the year of construction is 2014.

### CE mark:

Electromagnetic compatibility (Directive 2004/108/EC)

## 12 Order list

Name and description	Order No.
Dräger X-dock 5300 X-am 125	83 21 880
Dräger X-dock 5300 Pac	83 21 881
Dräger X-dock 6300 Master	83 21 900
Dräger X-dock 6600 Master	83 21 901
Dräger X-dock Module X-am 125	83 21 890
Dräger X-dock Module X-am 125+ (with charging function)	83 21 891
Dräger X-dock Module Pac	83 21 892
Dräger X-dock Module X-am 125, AA version	83 24 260
Dräger X-dock Module X-am 125+, AA version (with charging function)	83 24 261
Dräger X-dock Module Pac, AA version	83 24 262
Single wall mount	83 21 922
Comfort wall mount	83 21 910
Cylinder holder (table-top version)	83 21 918
Cylinder holder for top-hat rail	83 21 928
Power pack 24 V / 1.33 A (up to 3 modules)	83 21 849
Power pack 24 V / 6.25 A (up to 10 modules)	83 21 850
X-dock car adapter	83 21 855
Pressure regulator valve 0.5 bar	83 24 250
Pump filter set (includes filter and hose connector)	83 19 364
Fluoroelastomer hose	12 03 150
Sealing insert (X-am)	83 21 986
Sealing insert (Pac)	83 21 987
X-dock Master display protector film	83 21 804
Stickers for module numbering	83 21 839
Barcode label, exterior (22 x 8 mm, 500 labels)	AG02551
Barcode scanner	83 18 792
Dräger X-dock Manager Basic	83 21 860
Dräger X-dock Manager Professional	83 21 870
Dräger X-dock Manager Licence (1x, both versions)	83 21 857
Dräger X-dock Manager Licence (5x, both versions)	83 21 858



### NOTICE

Dräger recommends the use of Dräger test gas cylinders.

## 13 Glossary

<b>Abbreviation</b>	<b>Description</b>
ALARM	Alarm element test
BTQ	Quick bump test
BTX	Extended bump test
CAL	Calibration
DB	Database
DBMS	Database Management System
DL	Data logger
FAV	Favourite
HORN	Horn
LED	Light-emitting diode
LEL	Lower Explosive Limit
MSD	Mass Storage Device
MST	Master
SPAN	Span calibration
SW	Software
T90	Response time test
TWA	Time-weighted average
UNDEF	Unknown
UNK	Unknown info
VIB	Vibration
ZCHECK	Zero-point check
ZERO	Zero-point calibration









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