

Printer
Model Series: YKT
Type Series: TYKT-01-A



Operating instructions (Translation of the original operating instructions)
Version 2 (2026-07) - en_GB

Read the instructions prior to performing any task!

Supplemental directives

Read this document carefully and completely before using the device and observe the safety precautions contained therein. The manufacturer is not liable for damage resulting from disregarding the instructions or improper use.

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1 Introduction

1.1 Validity

This document is an integral part of the product. It is valid for the product versions listed below.

You can recognise which product version your product is on the type plate. The following illustration is an example. The real type plate may differ from the illustration. The model number is shown in <Model> and the type item no. is shown in <Type>.

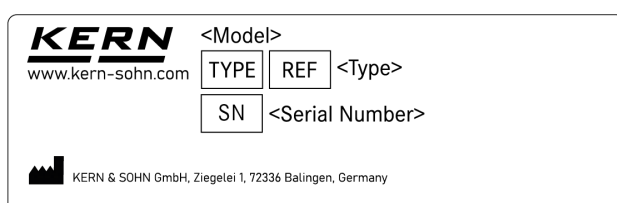


Fig. 1: Example of the type plate (real type plate may be different)

Model	Item no. / Type
YKT-01	TYKT-01-A

1.2 Document purpose

This document provides the user with descriptions for the safe and efficient use of the product. The document must be carefully read and understood by all users before the product is used.

1.3 Other versions of the document

The original version of this document was created in German. We reserve the right to make subsequent changes to the product documentation. The current version and other language versions of the document can be found on our website.

You can find more interesting information about our products in the download area:

- Technical data sheets
- Product brochures and catalogues
- Information on the KCP protocol and software

1.4 Presentation conventions

References in the text

Element	Meaning
Example: [TARE]	Labelling of keys
Example: <SEtUP>	Text displayed on devices or in software
*	Asterisk * indicates default settings

Instructions

Instructions are presented as step-by-step guidance.

1. This is step 1.
2. This is step 2.
 - ➔ This is the result of step 2.

Other representations



Here you will find additional information or tips.

2 General safety instructions

Read this document thoroughly and carefully before using the device and observe all safety precautions contained herein to avoid bodily injury and damage to property. Keep this document in a place that is always easily accessible so that it is quickly available when needed.

2.1 Meaning of the warnings

Warnings warn you of possible safety risks during certain activities. Read the warnings in full and follow the instructions. Failure to do so may result in injury, damage to property, environmental damage, malfunctions or incorrect results.

Meaning of the signal words

Signal word	Meaning
DANGER	This combination of symbol and signal word indicates an immediate dangerous situation that will result in death or serious injury if it is not avoided.
WARNING	This combination of symbol and signal word indicates a possible dangerous situation that can result in death or serious injury if it is not avoided.
CAUTION	This combination of symbol and signal word indicates a possible dangerous situation that can result in minor injury if it is not avoided.

Signal word	Meaning
NOTICE	This combination of symbol and signal word indicates a possible dangerous situation that can result in material and environmental damage if it is not avoided.
ENVIRONMENT	This combination of symbol and signal word indicates a possible dangerous situation that can result in material and environmental damage if it is not avoided.

Meaning of the warning signs

Warning signs	Type of danger
	Warning – danger zone.
	Warning – high-voltage.

2.2 Safe handling of packaging material

Always keep packaging material away from children and animals to avoid the danger of suffocation.

2.3 Safe handling of electrical devices

Safe handling of power supply units and power supplies

Improper handling of mains-powered devices or the use of damaged or unsuitable power supply units or mains cables can lead to life-threatening injuries. Therefore, please observe the following instructions:

- If the electrical equipment is defective (e.g. damage to the power supply unit or mains cable, deformation, smoke, etc.), the device must not be used. If you notice any damage, disconnect the device from the power supply immediately and contact your dealer or the technical service of KERN & SOHN.
- Only connect the device to a properly installed and undamaged power supply. The information on the device (type plate) and the mains voltage at the place of use must be identical.
- To prevent short circuits, ensure that no moisture (e.g. steam or liquids) is present near the electrical equipment at the place of use.
- Observe the IP rating of the device.
- Only use original power supply units and connecting cables. If you need a replacement, please contact your dealer or the technical service of KERN & SOHN.
- Any work on the electrical equipment of the device may only be carried out by the technical service of KERN & SOHN.
- The mains cable must not be pinched or kinked and must be laid in such a way that it does not pose a tripping hazard.
- In case of an emergency, it must be possible to disconnect the device from the power supply without any problems.

2.4 Intended use

Our printers are designed for use with our scales. They are intended to print out the values determined by the scales.

For information on compatible scales, please visit our website.

2.5 Improper use

- Any modification to the design of the device will invalidate the warranty and may lead to incorrect results and safety-related defects. Such modifications are therefore prohibited.
➔ *Chapter 11.1 'Warranty' on page 49*
- The device may only be used in accordance with the specifications described in this document.

2.6 Obligations of the operating company

It is the responsibility of the operating company to comply with the specifications described in this document as well as with legal and official regulations at the place of use. Any failure to comply with the safety precautions and instructions described in this document is considered improper use. KERN & SOHN is not liable for any damage resulting from improper use.

2.7 Required user qualifications

The device may only be operated and serviced by trained personnel.

2.8 Requirements for the environment of use

In addition to the environmental information in the technical data, observe the following requirements for the environment of use:

- The device must not be operated in environments where there is a risk of corrosion.
- The device must be protected from excessive humidity, steam, spray and dust.
- The device must be protected from excessive moisture caused by condensation. Condensation can occur if the device is moved from a cold environment to a much warmer environment. If such a change of environment cannot be avoided, allow the device to acclimatise for approx. 2 hours before starting it up.
- Observe the IP rating of the device when selecting the place of use. Information on the IP code can be found in the technical data.
- The device must not be used in environments with aggressive chemicals, gases or liquids.
- The device must not be used in potentially explosive atmospheres or environments where explosives are present.
- The device must not be used in environments subject to severe impacts or vibrations.
- The device must not be exposed to extreme heat or strong temperature fluctuations (e.g. by placing the device next to a heater or in direct sunlight).
- Protect the device from direct draughts.
- Select a location with a stable power supply.
- When choosing the place of use for the device, consider the surrounding environment. Electromagnetic fields and electrostatic charges may cause damage.

2.9 Working safely

- The printhead and adjacent components may be hot during and after printing. Allow the printer to cool down sufficiently before touching them.
- Do not reach into the printer while printing is in progress.

3 Description of the device

3.1 General product description

This product is a printer. It is suitable for printing data obtained using a KERN scale.



You can find information on compatible KERN scales online on the product page for your printer.

3.2 Overview of the device



- 1 Paper compartment cover
- 2 Paper cutter
- 3 Display
- 4 Keys



- 5 On/Off switch



- 6 RS232 port
- 7 USB port
- 8 Mains adapter connection

Key	Designation	Function in standby mode	Function in operating mode
	[CLOCK]	■ Short keystroke: Print current date and time ■ Long keystroke: Open clock settings	

Key	Designation	Function in standby mode	Function in operating mode
	[N/CN]	■ Short keystroke: Enable/disable numbering function ■ Long keystroke: Reset numbering to "000"	
	[FEED]	■ Loading paper	■ Back
	[F]	■ Enable/disable automatic taring	■ Opens the functions of the current operating mode
	[INPUT]	■ Input mode	■ Edit custom entries (e.g. sample name, batch/lot number)
	[PRINT]	■ Short keystroke: Print current value ■ Long keystroke: Open the menu	■ Enter characters
	[OK]	■ Short keystroke: Select operating mode ■ Long keystroke: Log in or log out	
	[↑]	■ Select previous item	
	[↓]	■ Select next item	
	[←]	■ Select left item	
	[→]	■ Select right item	

4 Unpacking, checking and transporting the device

4.1 Unpacking and checking the device



WARNING

Danger of suffocation due to packaging material

Unattended packaging material can become a suffocation hazard for children or animals.

- Do not leave packaging material unattended, especially if children or animals are around.



- *Save the original packaging and its components for transport, storage or a possible return.*
- *Contact your dealer if you notice any missing parts or damage. Information on warranty and goods return can be found in ➔ Chapter 11.1 'Warranty' on page 49.*

1. Check the packaging for visible external damage that may have occurred during shipment.
2. Unpack all parts of the delivery (➔ Chapter 4.2 'Scope of delivery' on page 14) and remove the packaging materials.
3. Check that all parts of the delivery are complete and undamaged.
 - ➡ You can now transport the device to the place of use. ➔ Chapter 4.3 'Transporting the device' on page 14

4.2 Scope of delivery

- Printer
- Ribbon (already inserted)
- Paper roll
- Power supply unit
- Power plug adapter set
- Operating instructions

4.3 Transporting the device



NOTICE

Damage due to improper transport

Incorrect transport can damage the device.

- Remove all loose components from the device before transporting it.
- Use the original packaging to transport the device over long distances.

5 Assembly, installation and commissioning

5.1 Installing the device

Checking the ribbon cartridge

The ribbon is already fitted. However, it may have come loose during transport. You should therefore check that the ribbon is correctly positioned before commissioning the device.

1. ➤ Open the printer's paper compartment cover.
2. ➤ If the ribbon is loose: Press it down flat on both sides to tension it.

Installing the ribbon (if not already fitted)

1. ➤ Turn the printer so that the front side is facing you.
2. ➤ Open the printer's paper compartment cover.
3. ➤ Place the ribbon cartridge onto the toothed rack on the left side of the printing mechanism.
4. ➤ Slightly lift the right side of the ribbon cartridge.
5. ➤ If the left side of the ribbon cartridge is not yet fully seated, press the edge or the knob on the ribbon cartridge and slowly turn the spool in the direction of the arrow shown on the ribbon cartridge until the left side clicks into place.
6. ➤ Press the right side down until it also clicks into place.
7. ➤ Check that the ribbon cartridge is correctly positioned and not tilted.
8. ➤ If the ribbon has slipped out of position or is outside the cartridge: Turn the knob until the ribbon is correctly positioned inside the cartridge again.

9. ➤ If necessary, press the ribbon tensioning button to tighten the ribbon so that the paper can be fed smoothly along the ribbon.

10. ➤ Refit the cover.

➔ The installation is complete.



- *The ribbon must be positioned in front of the paper (between the printhead and the paper). If the ribbon is behind the paper, printing is not possible.*
- *Recommendation: Insert the ribbon cartridge first, then the printer paper.*
- *If the ribbon is wrinkled, carefully pull it outward and rotate the gear wheel to tension the ribbon.*

Replacing the ribbon (if the print quality is faint or blurred)



Use only original ribbon cartridges. Ribbon cartridges from other manufacturers may cause the mechanism to jam and reduce its service life. Any damage resulting from this will invalidate the warranty.

1. ➤ Open the paper compartment cover.
2. ➤ Remove the ribbon cartridge: Press the end marked "Push" on the right-hand side and pull out the ribbon cartridge.
3. ➤ Dispose of the used ribbon cartridge in accordance with local regulations.

4. ➤ Insert the new ribbon cartridge. ➔ *'Installing the ribbon (if not already fitted)' on page 15*
5. ➤ Check that the ribbon is correctly tensioned and properly seated.
6. ➤ Refit the cover.
 - ➔ The replacement is complete.

Preparing the paper

If there is any remaining paper in the printer, it can be removed by pressing **[FEED]** if the piece is short enough.



1. ➤ Remove the paper compartment cover.



2. ➤ Insert the paper roll spindle into the centre of the paper roll.

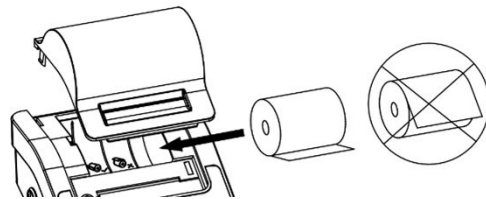


CAUTION

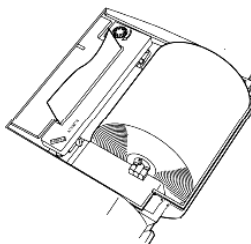
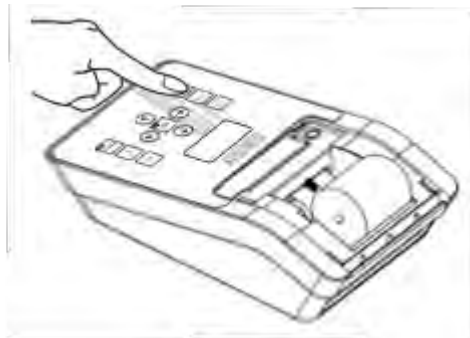
Risk of cuts from the paper cutter

There is a risk of injury from the paper cutter when inserting or removing the paper roll.

- Take care not to injure yourself on the paper cutter.



3. ➤ Place the paper roll into the paper compartment in the correct position. The free end of the paper must be at the bottom and point forwards towards the paper feed slot.



4. ➤ Feed the end of the paper through the paper feed slot while holding down **[FEED]** until the end emerges from the paper cutter.

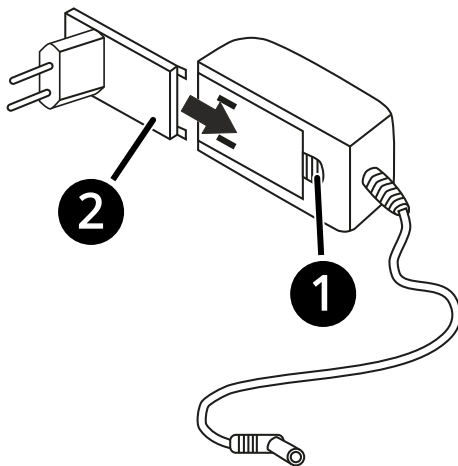
5. ➤ Cut off any excess paper using the paper cutter.

➔ Paper preparation is complete.

5.2 Mains operation

Fitting the power plug adapter

A power plug adapter set is included with the device so that it can be used flexibly in different locations with different power plug standards. The installation of the mains plug adapter is described below.



1. ➤ Press the release tab 1.
2. ➤ Slide the power plug adapter 2 into the power supply unit using the guide until it clicks into place.
 - ➔ The power supply unit is now ready for use.
 - ➔ To remove the power plug adapter, press the release tab and proceed in reverse order.

Connecting the power supply to the mains



WARNING

Serious injuries due to damaged power supply units

Damaged power supply units can lead to short circuits, fires and serious injuries.

- Before each use, check the power supply unit and mains cable for visible damage. Do not use the power supply unit if it is damaged.



WARNING

Injuries due to incorrect handling of power supply units

Incorrect handling of power supply units can lead to short circuits, fires and serious injuries.

- Observe the safety precautions for handling power supply units.
➔ *'Safe handling of power supply units and power supplies' on page 9*
- Avoid moisture at the mains connection, power supply unit and socket.
- Only connect the device to a properly installed socket.
- Make sure that the power supply unit cable is never kinked or pinched.
- Ensure that the power supply unit is accessible at all times.
- Ensure that the mains cable does not pose a tripping hazard.
- Only connect the power supply unit to the mains if the information on the device (sticker) and the mains voltage at the place of use are identical.

1. ▶ Plug the mains cable connection into the mains connection of the device (for the mains connection, see ➔ *Chapter 3.2 'Overview of the device' on page 12*).
2. ▶ Insert the power plug into the socket.
 - ➡ The device can now be put into operation.

5.3 Connecting the scale

1. ▶ Switch off the scale and the printer and disconnect them from the mains voltage.
2. ▶ Connect the printer to the scale.
3. ▶ Connect the power supply to the printer and plug it into the mains.

6 Configuration software

TX Editor Software



*Software is required to configure the printer.
You can download the software online.*

With the help of the software, you can:

- import customised headers and footers
- import sample names and codes
- import user lists for user management

Connecting the printer to a PC

1. Switch off the printer.
2. Connect the printer to the PC using a USB A/M to USB B/M cable. (cable not included in the scope of delivery)
3. Press and hold **[OK]** while switching on the On/Off switch.
4. Release **[OK]** after 2 seconds.
 - ➔ The printer connects to the PC. (printer will not start up)
5. Start TX Editor.
 - ➔ Once the connection has been successfully established, the buttons will become active.

6.1 Setting the print layout

The format of the report can be adapted. An example of a report format that complies with the GLP specification is shown below:

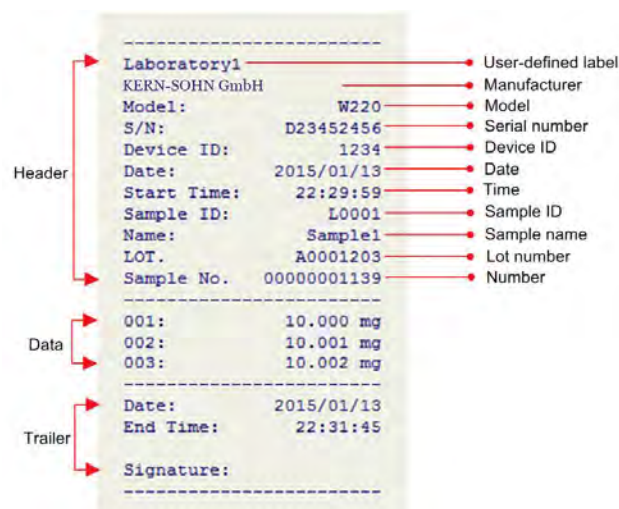


Fig. 2: Report Style Settings 1

The header, data and footer formats of the report, as well as the output items and the contents of the output options, can be customised.

1. Press and hold **[MENU]**.

```

MAIN MENU
1. Printout
2. Normal set
3. Interface set
  
```

- ➔ The menu opens.

Note: If an administrator password has been set, you must enter the correct password before accessing the menu.

2. Select <1. Printout> and press the **[OK]** key to confirm.

```

1. Header
2. Trailer
3. Others
  
```

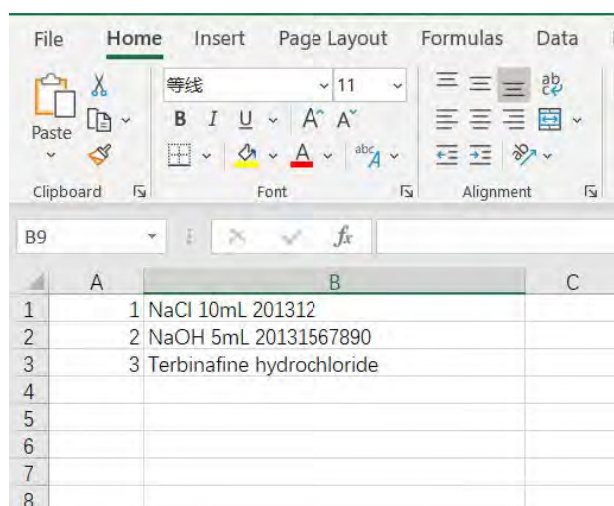
- ➔ A list of options is displayed.
- ➔ Headers, footers and other output options can be set separately.

6.2 Code entry method

The code entry method allows a large amount of data to be sent quickly and easily to the printer. If a name is to be printed later, only the corresponding code needs to be entered.

For this purpose, an Excel spreadsheet containing the codes and their associated names must be created. The spreadsheet is then imported into the printer using the configuration software.

1. Prepare the spreadsheet



1. Create an Excel spreadsheet containing codes and names.

If the most significant digit of the code contains a 0, such as 001, the column containing the code must be formatted as text rather than as a numerical field; otherwise, Excel will automatically remove the leading zero, resulting in incorrect coding.

2. Save the spreadsheet in "CSV" format. To check that the table is in the correct format, you can open it in Notepad.

```
1,NaCl 10mL 201312
2,NaOH 5mL 20131567890
3,Terbinafine hydrochloride
```

- ➔ The code and name are separated by a comma. You can use Notepad to edit the table and change the file extension to CSV.

2. Import the spreadsheet

Note: If a new spreadsheet is imported, the original version will be overwritten.

- ➔ Use the configuration software to send the prepared spreadsheet to the printer.

3. Use the code entry method

1. Press **[F]**.

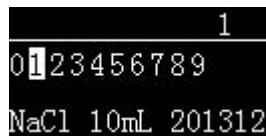
```
1.Sample Name 5.Code in data
2.Sample Code 6.LOT. in data
3.Sample LOT.
4.Name in data
```

- ➔ Options are displayed.

2. Select an option and confirm by pressing **[OK]**.

<2. Sample Code>	Enter the code, and the sample name corresponding to that code will appear in the header.
<5. Code in data>	Enter the code, and the name associated with that code will appear above the weighing data.

- ➔ The code entry window opens.



The screenshot shows a device screen with a numeric keypad at the top and a list item at the bottom. The keypad has digits 0-9 and a cursor on '0'. The list item is 'NaCl 10mL 201312'.

3. ➤ Enter the code. The corresponding name will be displayed at the bottom of the screen.
4. ➤ Press **[OK]**.
 - ➡ The name appears in the output.

7 Settings on the device

7.1 Opening and using the menu

Open the menu

- ▶ Press and hold **[PRINT]**.
- ➔ The menu opens.

Using the menu

Key	Description
[↑]	Select previous item
[↓]	Select next item
[←]	Select left item
[→]	Select right item
[OK]	Confirm selection
[ESC]	Exit menu / Cancel input

Enter characters

Key	Description
[PRINT]	Enter characters
[↑]	Move selection up
[↓]	Move selection down
[←]	Move selection left
[→]	Move selection right
[OK]	Confirm and exit input mode
[ESC]	Cancel and exit input mode

Enter numbers

Key	Description
[↑]	Increase the number
[↓]	Reduce the number
[←]	Select the number on the left
[→]	Select the number on the right
[OK]	Confirm and exit input mode
[ESC]	Cancel and exit input mode

7.2 Menu overview

Main menu levels

Menu	Description
<Printout>	Output settings
<Normal set>	General settings
<Interface set>	Interface settings

7.2.1 <Printout> (output settings)

Menu	Description
<Header>	Set the header
<Trailer>	Set the footer
<Others>	Further settings

<Header>

Setting	Default setting	Options	Description
<Print date & time at starts>	x	x/✓	Prints the time and date immediately after power-on
<Print label at starts>	x	x/✓	-
<Print label in report header>	x	x/✓	Print a custom label
<Print MFGR in report header>	✓	x/✓	Print manufacturer information
<Manufacturer>		Up to 16 characters	Enter manufacturer information
<Print model in report header>	✓	x/✓	Print model
<Device Model>		Up to 16 characters	Enter model
<Print SN in REP. header>	✓	x/✓	Print serial number

Settings on the device

Setting	Default setting	Options	Description
<Device SN>		Up to 16 characters	Enter serial number
<Print ID in REP. header>	x	x / ✓	Print custom ID
<Device ID>		Up to 16 characters	Enter custom ID
<Print date in report header>	✓	x / ✓	Print date
<Print time in report header>	✓	x / ✓	Print time
<Print number in report header>	x	x / ✓	Print number
<Print Delimiter in report>	✓	x / ✓	Enable / disable the dividing line between the header and the data

<Trailer>

Setting	Default setting	Options	Description
<Print date in report trailer>	x	x / ✓	Print print date
<Print time in report trailer>	✓	x / ✓	Print print time
<Print signature>	<At Trailer> (footer)	■ <No Printing> ■ <At Header> ■ <At Trailer> (footer) ■ <Header&Trailer> (header and footer)	Configure the position of the signature
<Enable electronic signature>	x	x / ✓	➡ <i>'Enable electronic signature' on page 32</i>
<Prn user-defined in REP. trailer>	x	x / ✓	Print a custom label (the label must be imported using the software)

Setting	Default setting	Options	Description
<Print time at weighing mode>	x	x / ✓	Print time in weighing mode
<Line feed at trailer>	3	0-40	Set the number of lines before the footer

<Others>

Setting	Default setting	Options	Description
<Batch Auto INCR>	x	x / ✓	Print batch ID
<Printout Language>	<English>	■ <English> ■ <Chinese>	Set the printout language
<Characters/Line>	<0>	<0-40>	Set the maximum number of characters per line (0 = automatic)
<Printout Invalid Data>	x	x / ✓	■ x: Print valid data only ■ ✓: Print all data received (other data output by the scale may appear in the report)
<Weighing Data Time Format>	<None>	■ <None> ■ <hh:mm> ■ <hh:mm:ss>	Set the time format to be printed with the data (only applies to multiple weighing, statistics, totalling and averaging mode)

Settings on the device

Setting	Default setting	Options	Description
<Weighing Data Decimal digits>	<8>	<0-8>	Set the number of decimal places for the weighing values ■ 8 = number of decimal places determined by the scale ■ 0-7 = number of decimal places defined by the user

7.2.2 <Normal set>

Menu	Default setting	Options	Description
<Language>	<English>	■ <English> ■ <Chinese>	Select language
<Key press beep>	✓	×/✓	Turn keypress sound on / off
<Screen save time>	10 minutes	0-120 minutes	Set the delay for screen saver activation. If set to 0, the screen saver is disabled.
<Screen brighten>	85	0-250	Screen brightness settings
<Password>		6 characters	Password setting
<Require login>	×	×/✓	Set whether a login is required to use the printer
<Time Synchroniz.>	<None>	<None>	Disable
		<Balance first>	Use the time configured on the scale instead of the printer time.

Menu	Default setting	Options	Description
		<Printer low>	In weighing mode, the scale's output time is replaced by the printer time.
		<Printer high>	In all modes, the scale time is replaced by the printer time.
<Hold run mode>	✓	×/✓	×/✓: Once a mode has ended, the printer automatically returns to direct mode. ✓: Keep current mode
<Printout Font>	<24/Line>	<24/Line>	24 characters are displayed on a single line, large font
		<40/Line>	40 characters are displayed on a single line, small font (The printer must be restarted if the settings are changed)
<Enable Fast Feed>	×	×	Disable mechanical paper feed (print speed is reduced by 30%)
		✓	Enable fast mechanical paper feed (this slightly reduces the mechanism's service life)

Settings on the device

Menu	Default setting	Options	Description
<RunMode Config>	11111111111111	Each bit can be set individually to 0 or 1	Each bit corresponds to a setting (0 = disabled, 1 = enabled) The parameters assigned to the respective bits are listed below (starting with the first bit on the left and ending with the last bit on the right)
			<DIRECT>
			<WEIGHING>
			<MULTI WEIGHING>
			<Tare, Gross, Net>
			<Multi T, G, N>
			<Statistic>
			<SUM>
			<Mean>
			<Formulation>
			<Pipette Calibrate>
			<Loss Weight>
			<Accumulate>
			<Moisture>

7.2.3 <Interface set>



The communication parameters of the scale and the printer must match. Incorrect settings will prevent the printer from working properly.

Menu	Default setting	Options	Description
<Baud>		300, 600, 1200, 2400, 4800, 14400, 9600, 19200, 38400, 57600, 115200	Baud rate
<Data bits>	<8Bits>	■ <7Bits> ■ <8Bits>	Number of data bits
<Parity>	<None>	■ <None> ■ <ODD> ■ <EVEN>	Parity
<Stop bits>	<1Stop>	■ <1Stop> ■ <2Stop>	Number of stop bits
<Handshake>	<None>	■ <None> ■ <DTR/CTS> ■ <Xon/Xoff> ■ <nDTR/CTS>	Data handshake protocol
<Terminate char>	<CR+LF>	■ <CR+LF> ■ <CR> ■ <LF> ■ <WIN> ■ <EXT> ■ <None>	End of data
<Data output mode>	<Output once>	<Output once>	Outputs data once when the data output key on the scale is pressed
		<Continuous>	Continuous output (if supported by the scale)

Menu	Default setting	Options	Description
<Disable Command>	x	x	Normal operating mode
		✓	Connect instruments other than a scale, e.g. a pH meter.
<PRN command char>		Up to 16 hexadecimal characters	➔ Chapter 7.4.3 'Custom print command' on page 36
<TARE command>		Up to 16 hexadecimal characters	➔ Chapter 7.4.4 'Custom tare command' on page 36
<Character set>	<ASCII>	■ <ASCII> ■ <GB2312>	Select character set
<Data Filter>			➔ Chapter 7.4.5 'Data filtering' on page 36
<Data Matching>			➔ Chapter 7.4.6 'Data matching' on page 37
<Date Exclude>			➔ Chapter 7.4.7 'Data exclusion' on page 38
<Enable Demo Mode>	x	x / ✓	Disable / enable demo mode. The printer can simulate weighing data. For normal use, this function must be disabled.
<Factory default>			Restore factory settings

7.3 Advanced settings

7.3.1 Setting the date and time

1. Press and hold **[DATE]**.

➔ The menu opens.

2. Select <Set Date & Time>.

➔ Edit mode is activated.

➔ The currently editable value is displayed with reverse highlighting.

3. Change the value using **[↑]** and **[↓]**.

Move the input cursor position using **[←]** or **[→]**.

4. ➤ Press **[OK]** to confirm the setting.
 - The next adjustable value is displayed with reverse highlighting.
5. ➤ Once the setting has been completed, press **[FEED]** to return.

7.3.2 User Rights Management

The printer supports two user roles: **Administrator** and **User**.

The Administrator has the highest level of access and can change all settings (including date and time). Only one Administrator can be defined. Users are only allowed to print and cannot modify any settings. The printer supports up to 150 users.

If no Administrator has been defined, the printer can be used without restrictions. If no user rights have been assigned, the printer can still be used; however, the Administrator password is required to access all settings.

7.3.2.1 Setting the administrator password

To prevent unauthorised changes to the time and other important settings, a 6-digit password can be set.

1. ➤ Press and hold **[MENU]**.
 - The menu opens.
2. ➤ If a password has already been set, you must enter it first.
3. ➤ Select **<Normal set>**.
4. ➤ Select **<Password>**.
 - If a password has already been set, you must enter it first. To do so, press any key and then enter the password.
 - The prompt for entering a new password is displayed.

5. ➤ Press any key and enter the new password.
 - Once you have entered your password, a prompt for password confirmation is displayed.
6. ➤ Enter your password again and confirm it.
 - The passwords must match. Once confirmed, password protection is enabled.
 - If the passwords do not match, the setting will be cancelled.

7.3.2.2 Enabling user login

A login password can be set up for each user. This password must be entered when starting the printer. The user name and signature position can then be printed in the footer.

Create and import a user list

1. ➤ Create an Excel spreadsheet containing the password and username for each entry.

The following rules apply:

 - The password must be 6 characters long
 - The password and name must be separated by a comma (e.g. 123456,user)
2. ➤ The table must be imported using the software. To do so, click on 'Import User List' and select the CSV file.

If an administrator password has been set, it must be entered first.

Enable user login on the printer

Once the user list has been imported, user management must be configured on the printer.

1. Press and hold **[MENU]**.
 - ➡ The menu opens.
If a password has already been set, you must enter it first.
2. Select <Normal set>.
3. Select <Require login> and confirm by pressing **[OK]**.
 - ➡ Menu options appear.
4. Select <✓> and confirm.
 - ➡ The next time the printer is started, the user will be prompted to log in.

Once user login has been enabled, printer operation is restricted. Exceptions are:

- Feed paper using **[FEED]**
- Enter the login password using **[OK]**
- Open the menu using **[MENU]** (administrator password required)

User logout



Note: Once the process is complete, the user must log out manually to prevent unauthorised access by other users.

Exception: The printer's screen saver is activated. This automatically logs the user out.

1. Press and hold **[OK]**.
 - ➡ A password prompt appears.
2. Press **[OK]** again.
 - ➡ The user is being logged out.
 - ➡ The login screen appears.

Enable electronic signature

1. Press and hold **[MENU]** to open the setup menu.
 - ➡ The menu opens.
If a password has already been set, you must enter it first.
2. Select <Printout>.
3. Select <Trailer>.
4. Select <Enable electronic signature>.
 - ➡ Menu options appear.
5. Select <✓> and confirm.
 - ➡ The electronic signature is activated.

7.3.3 Automatic print interval

This function allows the printer to record data at specific intervals and for a specified number of repetitions. This is useful when changes in a weight value need to be monitored continuously. The function can be used in any mode.

To configure the settings, the printer must be in operating mode.

1. Press and hold **[DATE]**.
 - ➡ The settings menu opens.
2. Select <Set Timing Print>.
3. Set the desired print interval in <Auto print time>.
4. Set the desired number of repetitions in <Timing Print iteration>. Note: If the printer is to print continuously, set this to '0'.
5. Then press **[FEED]** to return to the menu.

6. Select <Start Timing PRN>.

- ➡ Interval printing is starting.
- ➡ The bottom part of the display shows the number of repetitions remaining and the countdown to the next printout.

To stop automatic printing, open the menu as described above and select <Stop Timing PRM>.

```

Model:      NR120
S/W:        D23452456
Date:       2020/04/11
Start:      21:41:43
Sample:     NaCl
Lot No.:    B201203456
-----
001 H2O     10.014 mg
002 Cl      10.015 mg
003 NaOH    10.016 mg
-----
End:        21:42:18
Signature:

```

7.3.4 Automatic taring

This function enables the printer to perform taring on the scale after it has received valid weight data.

To configure the settings, the printer must be in operating mode.

- ➡ Press and hold **[F]**.
 - ➡ Automatic taring is enabled or disabled. The status is indicated by the <O/T> symbol in the upper right corner of the display (function active when the symbol is displayed).



Automatic taring requires the scale to support two-way communication and to accept the commands sent by the printer. In addition, the printer must be configured to use the correct tare command. ➡ Chapter 7.4.3 'Custom print command' on page 36

7.3.5 Print sample name / lot number

The sample name (max. 40 characters) and the lot number (max. 24 characters) can be printed in the following locations:

- in the header
- before the weighing data
- in both locations

1. Press **[INPUT]**.

- ➡ Options are displayed.

2. Select the desired option and confirm by pressing **[OK]**.

<Sample Name>	Print sample name in header
<Sample Code>	Entry via numeric code (see code entry method)
<Sample LOT.>	Print lot number in header
<Code in data>	Print sample names once before the weighing data by using a code
<LOT. in data>	Print lot number before weighing data

- ➡ Edit mode is activated.

3. Make an entry.

Notes

- Blank entry = no printout
- A blank space allows you to fill it in manually later
- Header printing stops automatically after a single print job

Settings on the device

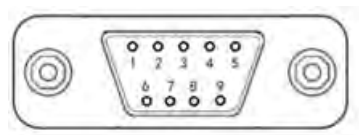
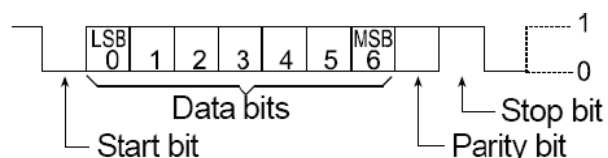
- Press and hold **[INPUT]** to enable or disable the print function permanently
- Information preceding weighing data is printed only once and must be re-entered before each weighing operation if necessary

7.4 Communication

7.4.1 Interface description

- 9-pin D-Sub, male
- Asynchronous, bidirectional, half-duplex
- Baud rate: 300, 600, 1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200
- Parity: None, Odd, Even
- Data bits: 7-bit, 8-bit
- Stop bits: 1 stop, 2 stop
- Handshake: None, DTR/CTS, nDTR/CTS, Xon/Xoff

The following data frame format applies when using 7 data bits, 1 stop bit and 1 parity bit:



Pin No.	Signal	Direction	Description
1	NC		No connection
2	RXD	Input	Receiving data
3	TXD	Output	Sending data

Pin No.	Signal	Direction	Description
4	DTR	Output	Data terminal ready (internally connected to pin 7)
5	SG		Signal ground
6	DSR	Input	Data set ready
7	RTS	Output	Request to send (internally connected to pin 4)
8	CTS	Input	Clear to send
9	NC		No connection

Note

- Control character XON: 0x11 (hexadecimal format)
- Control character XOFF: 0x13 (hexadecimal format)

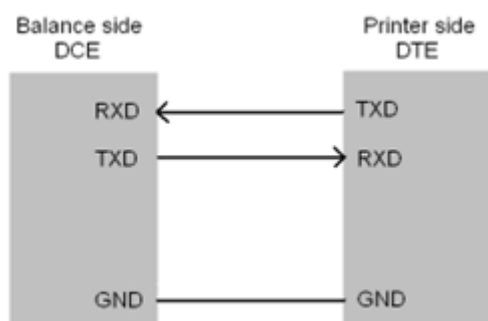
Handshake

- NONE: The printer and the scale can communicate at any time without flow control
- XON/XOFF: When the device receives the control character XOFF, it stops sending data to another device until it receives the control character XON.

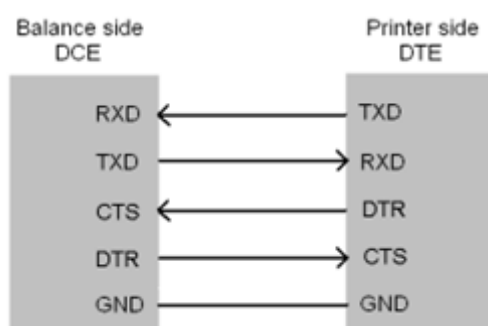
- DTR/CTS: When the device is ready to receive data, the DTR pin outputs a logic low level (positive RS232 level) to notify another device; otherwise, if the device is unable to receive data, the DTR pin outputs a logic high level (negative RS232 level).
- nDTR/CTS: Similar to DTR / CTS, but with inverted logic.

Connection method

Handshake = None, XON/XOFF:



Handshake = DTR/CTS, nDTR/CTS:



7.4.2 Automatic Detection of Communication Parameters (<Auto Set>)

The communication parameters of the scale and the printer must match. Incorrect settings will prevent the printer from working properly. The printer provides a function that automatically detects the scale's parameters and sends them to the printer.

The printer must be connected to the scale before performing the following steps.

1. ➔ Switch off the printer using the power switch on the side.
2. ➔ Press and hold **[PRINT]** on the printer while switching the printer back on using the power switch.

```
-----Auto-Set-----
Please send data to printer, the printer will output the results immediately, if the printer does not respond, it means that the printer does not receive data.
-----
```

➔ The printer prints a message.

3. ➔ Release the key.
4. ➔ Press the Print key on the scale.
 - ➔ If the connection has been successful, the scale's print parameters are sent to the printer and a report is printed.
5. ➔ If the printed information is correct, press **[OK]** to confirm the settings and save them to the printer.
 - ➔ The printer returns to operating mode.



- If nothing is printed, check the connection between the printer and the scale.
- Replace the data cable if it is damaged.
- Do not connect or disconnect the data cable while printer and scale are switched on. The cable must only be connected or disconnected when both devices are switched off. Failure to do so may result in incorrect results.
- If multiple results are found, use the arrow keys to select the required entry.

7.4.3 Custom print command

When **[PRINT]** is pressed on the printer, the printer sends a command to the scale to request data. The command is specified in HEX format.

Example

Assume the following command is used:

P	CR	LF
---	----	----

The corresponding HEX code is:

50	0D	0A
----	----	----

Configure in the menu under **<3. Interface set>** → **<PRN command char>**.

7.4.4 Custom tare command

If the **<Auto Tare>** function is enabled or the printer is in **<Tare, Gross, Net>** mode, the printer must send a tare command to the scale. This parameter is used to set the specific content of the command. The command is specified in HEX format.

Example

Assume the following command is used:

T	CR	LF
---	----	----

The corresponding HEX code is:

54	0D	0A
----	----	----

Configure in the menu under **<3. Interface set>** → **<TARE command>**.

7.4.5 Data filtering

Rules

The printer only processes weighing data (exception: **<DIRECT MODE>**). The printer identifies weighing data according to the following rules:

- The character string at the far right is recognised as a single unit. Only one unit is permitted. Example:
N + 100.000 kg
100.000kg
- The following data is invalid because it contains two character strings: kg and S:
N +100.000 kg S
- The unit must not exceed 6 characters in length.
- Digits must be located to the left of the unit.
- The text to the left of the value must not be directly connected to a character string. It must contain at least one space:
Tara 100.000 kg
Tara: 100.000 kg
Tara 100.000 kg

Configuring the filter

This parameter is used to filter specific content from the data transmitted by the scale.

Assume the scale outputs the following data:

+ 100,00 kg S

This data does not comply with the first rule, so the printer does not recognise it as weighing data. As a result, it will not work in modes other than direct mode. To ensure that the printer recognises it as weighing data, it is necessary to filter out this character string.

To do this, you can set a filter for 'S': **<3. Interface set>** → **<Data Filter>** →: S



Multiple character strings can be filtered. When entering them in the settings, separate the strings with commas.

Example: S,Net

Printout without further processing



- *This setting must be configured carefully. Otherwise, the printer may no longer operate correctly.*
- *Pay attention to uppercase and lowercase letters.*
- *The filter function is disabled in direct mode (<Direct Mode>).*
- *<Tare, Gross, Net> and <Multi T, G, N> share the same settings and operate in the same way as described above.*

If you wish to print the filtered data without further processing, such as adding statistical calculations, configure the printer as follows: <1. Printout> → <3. Others> → <Printout Invalid Data>: ✓

7.4.6 Data matching

When the scale outputs multiple weighing values simultaneously in modes other than direct mode, but you only wish to print a specific value or a particular subset of the data, you can use this parameter to match the desired weighing data.

Example

The scale outputs the following data:

- + 100,00 kg N
- + 50,00 kg T
- + 150,00 kg G

If you want to process only the data containing the identifier 'N', you can set this parameter to 'N', as shown below:

```
Data Matching
N
```

As the identifier 'N' appears after the unit, it violates the first rule for identification of weighing data. The printer does not accept this data as weighing data; therefore, in this example, the character string 'N' must be filtered out, as shown below:

```
Data Filter
N
```

The printer always performs data matching before data filtering. This sequence allows data to be matched before filtering is applied. To match multiple strings, you can separate them with commas. For example, if you wish to process data containing both 'N' and 'Gross' as weighing data, use the following settings:

```
Data Matching
N, Gross
```

Note:

- Please use this function with care. Incorrect settings may cause the printer to operate improperly.
- When configuring this parameter, please pay attention to uppercase and lowercase letters.

- The data filter function is not available in direct mode.
- The 'Tare, Gross, Net' mode and the 'Multi T, G, N' mode share the same settings and operate in the same way as described here, but the settings apply only to these two modes.

7.4.7 Data exclusion

If the scale outputs multiple lines of weighing data in modes other than direct mode, but certain lines of data should not be printed, you can use this parameter to exclude weighing data that contains a specific string. This function is the exact opposite of the parameter used in data matching: as with data matching, you can enter multiple strings separated by commas. For further information, see ➔ [Chapter 7.4.6 'Data matching' on page 37](#)

Data Exclusion

Note:

- The 'Tare, Gross, Net' mode and the 'Multi T, G, N' mode share the same settings and operate in the same way as described here, but the settings apply only to these two modes.

8 Operation

8.1 Selecting a function

1. ➤ Press **[MODE]**.
 - ➡ Functions are displayed.
2. ➤ Use **[↑]** / **[↓]** to select the desired mode and press **[MODE]** to confirm.
 - ➡ The device returns to operating mode.
 - ➡ The active mode is displayed.

8.2 Record printout

- Press the **[PRINT]** key on the printer or on the scale.
 - ➡ The printout is generated. Note:
Depending on the output settings, you may need to wait after pressing the key until the data has stabilised.

8.3 Functions

8.3.1 Direct mode (<DIRECT>)

In this mode, the weighing data is printed directly.

This mode is typically used in the following scenarios:

- Printing the scale's adjustment record. The adjustment record must not contain any modifications. In other modes, the printer automatically adds or filters information.
- When the format of the report is to be determined by the scale.
- When problems occur with other modes. Direct Mode can be used to monitor the data, making troubleshooting and problem analysis easier.

Header and footer settings

In <DIRECT> mode, pressing **[F]** briefly opens the following menu:

<1. Print header>		Print the header once manually
<2. Print trailer>		Print the footer once manually
<3. Auto Header>	<Disable>	Disable automatic headers and footers. Data received from the scale will be printed as is.
	<Delay>	When the printer receives data from the scale, it automatically adds a header. If no further data is received within the configured delay time, a footer is automatically added. The process is then repeated. This function is only suitable if the scale outputs data continuously. Setting 1. When the time value is displayed, press [OK]. ➡ The number is highlighted (inverted). 2. Use [↑] or [↓] to change the time. 3. Press [OK] to confirm the setting. 4. Press [FEED] to exit the menu.
	<Header: Auto>	The header is printed automatically before the weighing data. Footer printing is started manually by pressing [OK] .

8.3.2 Weighing mode (<WEIGHING>)

In this mode, you only need to press the Print key on the scale once to generate a weighing report that complies with GLP requirements.

The header is added before the weighing data, and the footer is added after the weighing data, as shown in the illustration below:

```

-----
KERN&SOHN GmbH
Model:      CP221
S/N:       D23452456
Date:      2017/03/29
Time:      00:26:52
-----
          N +   10.001 mg

Signature:
-----

```

8.3.3 Multiple weighing mode (<MULTI WEIGHING>)

This mode differs from weighing mode in that it can output multiple weighing results within a single report. The report is structured as follows:

```

-----
KERN&SOHN GmbH
Model:      CP221
S/N:       D23452456
Date:      2017/03/29
Start:     00:32:43
-----
001      N +   10.002 mg
002      N +   10.003 mg
003      N +   10.004 mg
-----
End:      00:32:47

Signature:
-----

```

8.3.4 Tare, Gross, Net (<Tare, Gross, Net>)

In this mode, the printer can print tare, gross and net weights, as shown below:

```

-----
KERN&SOHN GmbH
Model:      CP221
S/N:       D23452456
Date:      2017/03/29
Time:      00:50:31
-----
Tare:      10.011 mg
Gross:     10.012 mg
Net:       0.001 mg
-----
End:      00:50:33

Signature:
-----

```

Change the order of the values

1. Press **[F]**.
 - ➡ A list of available options is displayed.
2. Use **[↑]** / **[↓]** to select the desired option and press **[MODE]** to confirm.

Mode	Description
<TARE→Gross, Net>	The first value output is the tare weight. The second value is the gross weight. The net weight is calculated automatically by the printer. Note: Once the tare weight has been output, do not tare the scale again, as this will result in an incorrect printout.
<TARE→Net, Gross>	The first value output is the tare weight. Once the tare weight has been placed on the scale, the printer automatically sends a tare command to the scale, and the scale is tared automatically. The second value is the net weight. The gross weight is calculated automatically by the printer. Note: Automatic taring may not be available if the scale does not support this function. In this case, the scale must be tared manually.
<Gross→Tare, Net>	The first value is the gross weight. The second value is the tare weight. The net weight is calculated automatically by the printer. This mode is typically used to weigh a filled container and then determine the tare weight after it has been emptied.

Mode	Description
<Keywords>	In this mode, the order of the values can be configured using the keywords 'Tare' (tare weight), 'Gross' (gross weight) and 'Net' (net weight). The following rules apply: ■ Commas as separators ■ The keyword must not exceed 16 characters in length (including commas) ■ Each keyword may be used only once ■ The order of the keywords must correspond to the sequence of data transmitted by the scale. The printer checks the data for plausibility using the following formula: Gross = Tare + Net. If the data is not plausible, it is rejected and no output is generated. ■ All data must be calculated within 2 seconds.
<Preset Tare>	In this mode, the tare weight is entered manually. The first value output is the gross weight. The net weight is calculated automatically. Once the tare weight has been entered, the value is shown on the display.

8.3.5 Multi-Tare, Gross, Net (<Multi T, G, N>)

In this mode, multiple tare, gross and net values can be printed within a single report. Totalisation of the values is also possible, and the minimum and maximum values can be calculated.

```

Model:      HR120
S/N:        D23452456
Date:       2020/02/23
Time:       20:38:16
Sample:     jjj345
Lot No.     20190107
-----
No.  T (mg)  G (mg)  N (mg)
1    10.000  10.001  0.001
2    10.002  10.003  0.001
3    10.004  10.005  0.001
Sum. 30.006  30.009  0.003
Min  10.000  10.001  0.001
Max  10.004  10.005  0.001
-----
End:                20:38:20

Signature:
-----

```



As the tare, gross and net values are printed on the same line, gaps may occur in the printout. In this case, it is recommended to change the font setting from 20 characters per line to 40 characters per line.

8.3.6 Statistics mode (<Statistic>)

In this mode, statistical calculations can be performed on up to 999 data records. The following statistical values can be output: average, standard deviation, relative standard

deviation, total, minimum, maximum and difference. The user can select which statistical values are required. Calculations are performed using 64-bit double-precision floating-point arithmetic, ensuring accurate results without visible rounding errors. The report is structured as follows:

```

-----
KERN&SOHN GmbH
Model:      CP221
S/N:       D23452456
Date:      2017/03/29
Start:     01:36:18
-----<STAT>-----
001      N + 10.021 mg
002      N + 10.022 mg
003      N + 10.023 mg
-----<RESULT>-----
n          3
x̄          10.020 mg
s          0.001000 mg
srel       0.009978 %
total      30.066 mg
min        10.021 mg
max        10.023 mg
Diff       0.002 mg
-----
End:       01:36:21

Signature:
-----

```

Statistical data output

1. Place a sample on the scale and, once a stable value has been reached, press the PRINT key on the scale.
 - ➡ The printer prints the weight and adds the value to the statistical calculation.
2. Repeat step 1 until all samples have been weighed. Then press **[MODE]**.
 - ➡ The statistics are printed.

Symbol	Designation	Description
n	Number of weight values	
$\bar{x}$	Average value	= total / n
s	Standard deviation	$= \sqrt{(\sum (x_i - \bar{x})^2 / (n-1))}$ x_i = each individual weight value

Symbol	Designation	Description
srel	Relative standard deviation	$= (s / \bar{x}) * 100\%$
total	Total	
min	Minimum value	
max	Maximum value	
Diff	Difference between maximum and minimum	max - min
AD	Average deviation	$= (\sum x_i - \bar{x}) / n$ x_i = each individual weight value
RAD	Relative average deviation	$= (AD / \bar{x}) * 100\%$
Min DR	Minimum deviation	$= (min - \bar{x}) / \bar{x} * 100\%$
Max DR	Maximum deviation	$= (max - \bar{x}) / \bar{x} * 100\%$

Settings

Setting	Default setting	Options
Difference between each weighting value and the average value, expressed as a percentage	x	x / ✓
Number of weight values	✓	
Average value	✓	
Standard deviation	✓	
Relative standard deviation	✓	
Average deviation	x	
Relative average deviation	x	
Total	✓	
Minimum value	✓	
Minimum deviation	x	
Maximum value	✓	
Maximum deviation	x	
Difference between maximum and minimum	✓	
Maximum number of statistical values	999	2–999

8.3.7 Totalisation (<SUM>)

Calculate the sum of multiple samples (up to 999). In this mode, only the total is output, using the same format and operating procedure as in statistics mode.

8.3.8 Average value mode (<Mean>)

Calculate the average of multiple samples (up to 999). In this mode, only the average value is output, using the same format and operating procedure as in statistics mode.

8.3.9 Formulation mode (<Formulation>)

When printing a report containing multiple components, the net weight of each individual component is printed, along with the total net weight of the formulation. An example printout is shown in the illustration below:

```
-----  
Model:      HR120  
S/N:        D23452456  
Date:       2020/04/06  
Start:      20:08:07  
-----<FORMULATION>-----  
COMP001     10.002 mg  
COMP002     10.003 mg  
COMP003     10.004 mg  
Net:        30.009 mg  
-----  
End:        20:08:10  
  
Signature:  _____  
-----
```

1. Press **[MODE]** and select <Formulation> mode.
2. Weigh the first component and press the Print key.
 - ➡ The weight of the component is printed.
3. Once all the ingredients have been weighed, press **[MODE]**.
 - ➡ The total weight is printed and the mode ends.

8.3.10 Subtraction (<Loss Weight>)

In this mode, the second value is subtracted from the first value, and the resulting difference is output. This mode is suitable, for ex., for removing powdery samples.

```
-----  
KERN&SOHN GmbH  
Model:      CP221  
S/N:        D23452456  
Date:       2020/05/10  
Start:      19:58:57  
Sample:     NaCl  
Lot No.     B201200345  
-----<LOSS WEIGHT>-----  
Sample:     49.90 mg  
Lost:       40.90 mg  
Final:      9.00 mg  
-----  
End:        19:59:03  
  
Signature:  _____  
-----
```

9 Care, maintenance and servicing

9.1 Cleaning

9.1.1 Safety during cleaning



DANGER

Electric shock due to live parts

Contact with live parts can lead to electric shock and burns.

- Installation, cleaning, maintenance and servicing work may only be carried out by qualified personnel.
- Disconnect live parts from the power supply or unplug the power plug from the mains.
- Only carry out installation, cleaning, servicing and maintenance work on devices that are switched off and disconnected from the power supply, unless otherwise specified in the relevant instructions.
- Follow the instructions in this document.



CAUTION

Burn hazard due to hot components

The printhead may be very hot after printing.

- After printing, allow the printhead to cool down before cleaning it.



NOTICE

Material damage due to incorrect cleaning

Unsuitable cleaning agents can cause damage to the device.

- Do not use harsh cleaning agents (e.g. solvents, thinners, acids, alcohol, or petrol).
- Do not use metal brushes or cleaning sponges made of steel wool.
- Do not touch the printhead using hard objects.

9.1.2 Recommended cleaning

Cleaning the housing

- 1.** ➤ Switch off the device.
- 2.** ➤ Disconnect the device from the power supply.
- 3.** ➤ Clean the device with a dry, soft cloth.

10 Decommissioning and storage

10.1 Taking the device out of operation

1. ➤ Switch off the device.
2. ➤ Disconnect the device from the power supply:
 - Disconnect the power supply from the mains and unplug it from the device.
3. ➤ Remove all loose / moving parts from the device.
4. ➤ Disconnect the interface cable.
5. ➤ Pack the device and all accompanying parts neatly in the original packaging.
 - ➡ The device can now be stored.



NOTICE

Improper storage may damage the paper

- Avoid direct sunlight or bright indoor lighting when storing printed paper.
- Do not allow the paper to come into contact with alcohol, solvents, or similar substances (e.g. adhesives).
- Do not store printed paper in PVC sleeves.
- Do not store printed paper at ambient temperatures above 25 °C.

10.2 Storing the device



NOTICE

Damage caused by incorrect storage

Improper storage can damage the device.

- Take the device out of operation according to the instructions in this document ➡ [Chapter 10.1 'Taking the device out of operation' on page 48](#).
- Store the device in the original packaging.
- Do not store the device outdoors.
- Observe the environmental conditions in the technical data.

11 Warranty and goods return

11.1 Warranty

The warranty claim only applies to defects that were already present at the time of purchase. Damages or defects caused by improper use, incorrect handling or normal wear and tear are excluded from the warranty.

11.2 Goods return



- *A return is not possible if you have used the device improperly and it has been damaged as a result.*
- *The original packaging, including all associated parts, must be used for returns.*
- *In cases of returns, the complete scope of delivery must be sent back.*

Procedure for returns

- 1.** ➤ Check that all parts of the delivery are present.
- 2.** ➤ Remove all loose / moving parts and connected cables from the device.
- 3.** ➤ Reapply any protective film that may be present.
- 4.** ➤ Pack all parts of the delivery in the original packaging and secure them so that they cannot slip and are protected from damage.

12 Disposal



ENVIRONMENT

Damage to people and the environment due to improper disposal

Non-degradable materials (e.g. plastics or metals) can be released into the environment and cause damage if disposed of improperly.

Materials that are not recycled are a waste of resources and lead to increased environmental pollution.

Electrical devices may contain substances that are not biodegradable and are harmful to the environment and human health.

- Dispose of the device via appropriate recycling measures or recycling centres in accordance with the applicable national or regional law of the place of use.

Disposal of electronic devices



The crossed-out wheellie bin symbol indicates that waste from electronic equipment must not be disposed of with household waste. Disposal must be arranged by the operator in accordance with the applicable national or regional law of the place of use.

If this device contains confidential data, it is the responsibility of the operator to delete this data before disposal.

13 Troubleshooting

13.1 Troubleshooting table

Fault description	Cause	Remedy
The printer does not switch on	Power supply unit not connected or not compatible	Connect the power supply unit correctly; use the model recommended by the manufacturer
No LEDs are lit on the control panel (applies only to devices with LEDs)	Power supply interrupted	Check that the power plug is connected
No paper is dispensed	Paper loaded incorrectly	Load the paper correctly and close the paper compartment
Paper does not feed	Foreign object in the paper feed	Carefully remove any foreign object
	Paper loaded incorrectly	Load the paper correctly and close the paper compartment
Paper is ejected without printing	Ribbon used up	Fit a new ribbon
No printout	Interface not connected	Check the interface connection
Printing stops during printing	Printhead overheated	Wait for the printer to cool down
Poor print quality	Unsuitable paper	Use paper recommended by the manufacturer
	Ribbon used up	Fit a new ribbon
Mirror-image printout	Ribbon loaded incorrectly	Load the ribbon correctly
Uneven print quality	Wrinkled ribbon	Remove the ribbon, smooth it out and reinsert it
Paper jam	Foreign object in the paper feed	Carefully remove any foreign object
	Paper cutter blocked	Check the paper cutter
Continuous printing	Incorrect output parameters	Check output parameters

14 Product specification

14.1 Technical data

Model		YKT-01
Item no. / Type		TYKT-01-A
Printer type		Dot matrix printer
Paper roll width		57 mm
Print speed		1.7 lines per second
Character repertoire		ASCII
Interface		RS232
Ambient temperature		5–45 °C
Relative humidity (non-condensing)		10–80 %
Input Printer	Voltage	12 V
	Current	1,5 A / 2 A
Input Power supply unit	Voltage	100–240 V AC
Dimensions		226 x 128 x 85,5 mm
Net weight		760 g

14.2 Declaration of Conformity

The current EC/EU Declaration of Conformity can be found online.