# HellermannTyton



# Autotool CPK hybrid

**Operating Instructions** 

Translation of the original operating instructions

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### 1 Notes for the user

These Operating Instructions are very important for correct use of the device.

They contain important information and safety instructions that will enable you to utilise the product correctly and economically for its intended use.

The instructions help avoid hazards, reduce repair costs and downtimes, and enhance the dependability and durability of the device.

Non-compliance of any nature whatsoever can lead to accidents with fatal consequences, injury or damage to property.

#### 1.1 Information about the product

Product designation: CPK hybrid

Article number: 106-60000

#### 1.2 Warranty

The warranty is in accordance with statutory requirements. Warranty entitlement applies only in the country in which the device was originally purchased.

Batteries, fuses and light sources are not covered by the warranty.

#### 1.3 Contact data

The manufacturer of the product described in these Operating Instructions is: HellermannTyton GmbH Grosser Moorweg 45 D-25436 Tornesch, Germany Tel. +49 4122 701-0 www.HellermannTyton.de info@HellermannTyton.de

### **1.4 Information about these Operating Instructions**

Last change: 25.02.2022

#### 1.5 Copyright and intellectual property rights

The manufacturer retains the copyright to these Operating Instructions. Under no circumstances may these instructions be reproduced or electronically processed, replicated or disseminated, in whole or in part, without the prior written consent of HellermannTyton GmbH (hereinafter referred to as HellermannTyton). Any breach or infringement of these stipulations will result in liability for damages.

# 1.5.1 Keeping and dissemination of the Operating Instructions

These Operating Instructions must be kept in the immediate vicinity of the workplace and must be available at all times to all operating personnel. The operating company shall inform the operating personnel of the location of these Operating Instructions. The operating company shall obtain replacement from the manufacturer if these instructions are, become or are rendered no longer easily legible.

If the device is acquired by or sold on to a third party the following documents must be handed over to the new owner:

- Operating Instructions
- Documents relating to repair work
- Logs of maintenance work undertaken
- Protect these Operating Instructions from moisture, direct sunlight and extreme heat.

#### **1.6 Target group of these Operating Instructions**

These Operating Instructions must be read and complied with by every person charged with any of the following tasks:

- Installation
- Operation
- Maintenance
- Repair
- Fault rectification

#### 1.7 General information

Subject to technical modifications.

#### 1.8 Conventions adopted in these Operating Instructions

#### **1.8.1 Classification of the precautionary notices**

Precautionary notices in these Operating Instructions draw attention to hazards associated with use of the device and indicate how they can be avoided.

The precautionary notices are subdivided into three groups according to the severity of the potential hazard:

#### A DANGER

Text accompanied by the signal word "DANGER" indicate hazardous situations which, in the event of non-compliance with the appropriate precautions, will cause death or severe injury.

### 

Text accompanied by the signal word "WARNING" indicate hazardous situations which, in the event of non-compliance with the appropriate precautions, can cause death or serious injury.

#### 

Text accompanied by the signal word "CAUTION" indicate hazardous situations which, in the event of non-compliance with the appropriate precautions, can cause slight or serious injury.

#### 1.8.2 Other notational conventions

- Indicates an instruction
- Indicates a list
- $\blacksquare$  Indicates the result of an action

This text highlight is used for names of menus, clickable on-screen buttons, pushbuttons and switches.

This text highlight is used for display messages.

 $\rightarrow$  This text highlight is used for cross-references.

#### NOTE

i

Texts accompanied by the signal word "NOTE" indicate situations which, in the event of non-compliance with the appropriate precautions, can cause damage to the device or the surroundings.

Text accompanied by this symbol contain useful additional information.

#### 2 Safety warnings

#### 2.1 General power tool safety warnings

The safety warnings in this section contain general power tool safety warnings to be set out in the Operating Instructions as required by EN 62841. Consequently, some instructions might not be relevant for the CPK hybrid.

#### 

**Read all safety warnings and all instructions.** *Failure to follow the warning and instructions may result in electric shock, fire and/or serious injury.* 

#### Save all safety warnings and other instructions for future reference. The term "power tool" in the warnings refers to your mains-operated (corded) power

tool or battery-operated (cordless) power tool.

#### 2.1.1 Occupational health and safety

- a) Keep your workplace clean and tidy and well illuminated. Poor lighting or a lack of orderliness at the workplace can lead to accidents.
- b) Do not work with the power tool in surroundings where there is a risk of explosion, where flammable liquids, gases or dust are present. *Power tools create sparks which may ignite the dust or fumes.*
- c) Keep children and other persons well clear while the power tool is in use. *Distractions can cause you to lose control of the power tool.*

#### 2.1.2 Electrical safety

a) The plug of the power tool must match the socket outlet. Do not use a plug that has been modified in any way. Do not use an adapter plug together with a power tool that has a protective earth. Unmodified plugs and matching socket outlets reduce the risk of electric shock.

- b) Avoid body contact with earthed or grounded surfaces, such as those of pipes, radiators, cookers and refrigerators. The risk of electric shock is higher when your body is earthed.
- c) Protect power tools from rain and moisture. Water penetrating into a power tool increases the risk of electric shock.
- d) Never misuse the cable for carrying the power tool or hanging it up, or for pulling the plug out of the socket outlet. *Keep the cable away from heat, oil, sharp edges and moving parts.*
- e) When you work outdoors with a power tool, use only an extension lead that is suitable for outdoor use. Using an extension lead that is suitable for outdoor use reduces the risk of electric shock.
- f) If operation of a power tool in a damp environment is unavoidable, use a portable residual current device (PRCD). Using a PRCD reduces the risk of electric shock.

#### 2.1.3 Safety of persons

- a) Stay alert, attend to the task in hand and use common sense when you work with a power tool. Do not use a power tool when you are tired or while under the influence of drugs, alcohol or medication. A moment of inattention while using a power tool can result in serious injuries.
- b) Wear appropriate personal protective equipment (PPE). Depending on the type of power tool and the way in which it is used, wearing PPE such as a dust mask, non-slip safety shoes, a hard hat and ear defenders reduces the risk of injury.
- c) Prevent accidental starting. Make sure that the power tool is switched off before you connect it to the power source and/or battery pack, and also before picking up or carrying the tool. Touching the switch while carrying the power tool or connecting the power tool to the electricity supply while it is switched on can lead to accidents.
- d) Remove adjusting tools or wrenches before switching the power tool on. A tool or wrench engaged in a part that starts to rotate when the power tool is switched on can cause injuries.
- e) Avoid adopting an awkward posture when working. Maintain a firm footing and keep your balance at all times. This will enable you to control the power tool better if an unexpected situation occurs.
- f) Dress properly. Do not wear loose clothing or jewellery. Keep your hair and clothing well away from moving parts. Loose clothes, jewellery or long hair can be snagged by moving parts.
- g) If it can be fitted, dust extraction and filtration equipment must be connected and used correctly. Using a dust extractor can reduce hazards associated with dust.

 h) Do not permit yourself to be lulled into a false sense of security and do not disregard the safety regulations for working with power tools, even after frequent or repeated use has made you familiar with the power tool. Carelessness can result in series injuries within a fraction of a second.

#### 2.1.4 Use and handling of the power tool

- a) Do not overload the power tool. Use the correct power tool for the task in hand. Using the right power tool for the job will enable you to work better and in greater safety in the stated performance range.
- b) Never use a power tool that has a faulty switch. A power tool that cannot be switched on or off at the switch intended for this purpose is dangerous and must be repaired.
- c) Disconnect the plug from the socket outlet and/or remove the battery pack from the power tool before making adjustments, changing accessory tools or laying the power tool aside. This precaution prevents accidental starting of the power tool.
- d) When not in use, store power tools out of reach of children. Do not permit anyone to work with the power tool who is not familiar with it or has not read and understood these instructions. *Power tools in the hands of inexperienced persons are dangerous.*
- e) Keep power tools and accessory tools in good condition at all times. Check that moving parts are in full working order and do not jam. Check for parts that are broken or damaged to the extent that operation of the power tool is impaired. Have damaged parts repaired before using the power tool. *Many accidents involving power tools are due to poor maintenance.*
- f) Keep cutting tools sharp and clean. Carefully maintained cutting tools with sharp cutting edges are less likely to jam and are easier to control.
- g) Use the power tool, accessory tools, etc. in accordance with these instructions. Take working conditions and the task to be undertaken into account in this respect. Using power tools for other than the intended use can lead to hazardous situations.
- h) Keep handles and gripping surfaces dry, clean and free of oil and grease. *Slippery handles and gripping surfaces do not permit safe operation and control of the power tool in unexpected situations.*

#### 2.1.5 Safety instructions for battery packs

If handled incorrectly, lithium-ion battery packs can explode, catch fire and release toxic gases, and also cause caustic burns or poisonings.

a) Comply with the manufacturer's instructions for use and storage of the battery pack. The manufacturer's instructions are in the enclosed manufacturer's document for the battery pack.

- b) Protect the battery pack from moisture. Do not dip the battery pack into liquids. Contact with liquids can cause damage that in some cases lead only hours or days later to the development of heat or smoke, or ignition or explosion of the battery pack.
- c) Do not expose the battery pack to fire or heat. Fire or temperatures above 130 °C can lead to fire or explosion of the battery pack.
- d) Never place charger and connected battery packs on flammable or conductive surfaces. Never operate in the vicinity of flammable material or gases. Do not leave the battery pack unattended while charging is in progress. Read the instructions for the charger attentively before charging.
- e) Do not use damaged, deformed or altered battery packs. Damaged, deformed or altered battery packs might have changed properties that can lead to fire, explosion, escape of liquids or injuries. If used incorrectly or if the battery packs are faulty, a slightly acidic, flammable fluid may escape. Avoid contact with this fluid. Escaping battery fluid can cause skin irritation and burns.
- f) Keep the battery pack in a dry, dark and frost-free location. This protects the battery pack from premature ageing and discharge.
- **g) Do not open or disassemble battery packs.** *Opening or disassembling the battery pack can alter or disable built-in safety and protective features.*
- h) Charge battery packs only in chargers of the batterypack system approved for these battery packs. *Fire hazard and explosion hazard if any attempt is made to charge battery packs on chargers not recommended for them.*
- i) Follow the instructions for charging and never charge the battery pack outside the temperature range stated in the operating instructions. Incorrect charging or charging outside the permitted temperature range can destroy the battery pack and increase the fire hazard.
- **j)** Short-circuits can cause burns or start fires. To prevent short-circuit, when the battery pack is not installed in the tool keep the contacts of the battery pack covered by installing the protective cap included in the scope of supply or by applying a strip of insulating tape.
- k) Avoid blows and impacts and penetration by objects. Incidents of this nature can lead to leakages, development of heat or smoke, ignition or explosion.
- I) Use only the manufacturer's genuine battery packs. The use of other-make battery packs and other-make chargers can lead to safety risks, such as fire hazard or explosion hazard.
- m) Dispose of faulty or end-of-life battery packs only by handing them in at the appropriate collection points. These are sales outlets for batteries and battery packs, or local-authority collection points for hazardous waste.

#### 2.1.6 Safety instructions for chargers

- a) Use the charger only when you can fully evaluate all the functions and perform them without restriction, or have received appropriate instruction in their performance.
- b) It is not permissible for this device to be used or cleaned by persons of reduced physical, sensory or mental abilities or who lack experience or knowledge, unless they have received instruction in the safe handling of the device from a person legally responsible for their safety. The above-mentioned persons must be under supervision when they use the device. This device does not belong in the hands of children. When not in use, therefore, it must be stored out of reach of children. Otherwise, there is a danger of misuse and injuries.
- c) Charge only the battery packs supplied by the manufacturer. The battery-pack voltage must match the battery charging voltage of the charger. Do not attempt to charge non-rechargeable battery packs. *Otherwise there is a danger of fire and explosion.*
- d) Protect the charger from rain and moisture. *Water penetrating into an electrical device increases the risk of electric shock.*
- e) Keep the charger clean. Danger of electric shock due to dirt.
- f) Always check charger, cable and plug before use. Do not use the charger if you detect damage. Do not attempt to open the charger; have the charger repaired only by a qualified specialist using only the manufacturer's genuine spare parts. Damaged chargers, cables and plugs increase the risk of electric shock.
- g) Do not operate the charger on readily flammable surfaces (e.g. paper, textiles, etc.) or in flammable surroundings. Danger of fire due to the heat generated by the charger in operation.
- h) Do not obstruct the ventilation slots of the charger. Otherwise the charger might overheat and malfunction.
- i) Charge the battery packs only with chargers recommended by the manufacturer. Danger of fire if a charger intended for a certain type of battery pack is used for battery packs of any other type.
- j) Do not recharge a fully charged battery pack.
- k) For indoor use only.
- I) Immediately disconnect the plug from the power outlet if smoke or flame develops in the charger!
- m) Do not attempt to charge faulty battery packs.
- n) In areas where metal dust load is high, do not use an AIR-COOLED charger to charge battery packs.

#### 2.1.7 Service

Have your power tool repaired only by a qualified specialist using only the manufacturer's genuine spare parts. This ensures that the safety of the power tool is maintained.

#### 2.2 Intended use

Use the CPK hybrid only when it is in full working order and safe, always be safety-conscious and aware of the hazards.

The CPK hybrid is suitable for and intended for the following uses:

- Automatic binding of bundles up to a diameter of max.
   80 mm
- Use indoors and, under rainproof roofing, outdoors
- Industrial use

#### 2.3 Misuse

Use other than as stated in the section entitled " $\rightarrow$  "Intended use" on page 8" is misuse. The operator of the CPK hybrid bears sole responsibility for injury and damage resulting from misuse.

The following are specifically prohibited:

- Use with faulty parts
- Use in explosive environments or in the presence of a fire hazard
- Use in high humidity and/or direct sunlight
- Simultaneous use by two or more persons
- Unauthorised alterations and modifications to the CPK hybrid and its accessories without the prior consent of HellermannTyton
- Use of spare parts and accessories not tested and approved beforehand by HellermannTyton
- Operation of the CPK hybrid with the housing open

#### 2.4 Personnel qualification

Underage persons and trainees are permitted to use the device only under the supervision of an experienced specialist and only with the express permission of the operating company.

#### 2.4.1 Specialist personnel for operation

The tasks and authorisations assigned to specialist personnel for extended operation are as follows:

- Operating the CPK hybrid
- Rectification of faults or, as applicable, initiation of measures for the rectification of faults
- Cleaning the CPK hybrid

These individuals have the specialist training or practical experience that will ensure correct handling.

# 2.4.2 Specialist personnel for maintenance and servicing

Always have maintenance and servicing carried out by duly qualified specialist personnel. These individuals have the specialist training that affords sufficient knowledge of the CPK hybrid for them to judge when it is in safe working order.

These individuals are also familiar with the following rules and regulations:

• Applicable national health and safety regulations

- Accident prevention regulations
- Generally accepted rules of engineering practice (e.g. employers' liability insurance association codes, DIN standards, VDE regulations, technical rules of other European Union Member States or other signatories of the Agreement on the European Economic Area).

#### 2.4.3 Qualified electrician

Work on the electrical supply and on parts that are live when the device is in operation should always be carried out by a trained electrician.

#### 2.4.4 Authorised specialist for repair and testing

Only service technicians from HellermannTyton or service technicians certified by HellermannTyton are permitted to carry out repairs and safety checks.

# 2.5 Underlying hazards associated with use of the CPK hybrid

#### 2.5.1 Cleanliness at the workplace

Orderliness, good lighting and cleanliness at the workplace all help to make work easier, minimise hazards and reduce the risk of injury.

Always comply with the following principles of orderliness and cleanliness at the workplace:

- ▶ Put tools away as soon as they are no longer needed.
- Avoid trips (e.g. immediately dispose of waste by placing it in the containers provided for the purpose).
- Immediately remove spillages of grease, oil and other liquids.
- Clean smears off the controls.

#### 2.5.2 Spare parts and accessories

- ► Use only original replacement parts.
- After parts have been replaced, always check that everything is in full working order.
- Use only accessories approved by HellermannTyton. Accessories can affect the way in which the CPK hybrid works.

#### 3 Design and function

#### 3.1 Overview

#### 3.1.1 Scope of supply



- 1 Power cable (separate delivery with power pack)
- 2 Battery pack (separate delivery)
- 3 Charger (separate delivery)
- 4 Tie advancer
- 5 CPK hybrid
- 6 Case
- 7 Safety instructions and short guide for the CPK hybrid
- 8 USB connecting cable A/B (separate delivery with power pack)
- 9 Connecting cable for connecting power pack and CPK hybrid (separate delivery with power pack)

10 power pack CPK (separate delivery)

#### 3.1.2 Serial number



The serial number 1 is inside the CPK hybrid. It is visible when the gate is open and on the display in the status view,  $\rightarrow$  "Status menu" on page 17

#### 3.1.3 Checking scope of supply

Check that nothing is missing and that there are no visible signs of damage in transit or other damage. Have damage confirmed by the freight forwarder and notify HellermannTyton immediately in writing.

#### 3.2 Functional description

#### 3.2.1 CPK hybrid tool



- 1 Actuator service flap left
- 2 Actuator bandoleer cutter
- 3 Enter button to confirm a selection in the navigation menu and increment switch for display settings
- 4 Socket for connection to power pack
- 5 Select and reset button for selecting a menu for display settings
- 6 LED status indicator
- 7 Battery pack/cover for battery pack
- 8 On/off switch for battery pack
- 9 Start trigger
- 10 Box for waste material
- 11 Display with touch-sensitive controls
- 12 Front cap with level sensor, upper and lower jaws
- 13 Catch
- 14 Drum
- 15 Cable tie bandoleer

The CPK hybrid is an electrically powered or battery powered system for bundling electrical wires, for example, and for securing parts of various kinds with T18RA cable ties, 100 mm  $\times$  2.5 mm  $\times$  1 mm (L  $\times$  W  $\times$  H).

Force and quality of the binding can be softwarecontrolled or set by means of the display on the device,  $\rightarrow$  "Operation" on page 13.

The items to be bundled have to be positioned between the jaws and against the front cap. The device then closes the tie as soon as the trigger is pressed. If a fault occurs, messages appear on the display to guide the user through the recommended fault-diagnosis routine,  $\rightarrow$  "Troubleshooting" on page 31.

Process data of various kinds are collected during use. These data can be analysed by PC software and used to document process capability, for example. In addition, the operator is notified if the tension force exceeds the preset,  $\rightarrow$  "HT Data Management" on page 18.

#### 3.2.2 Power pack CPK



1 Main switch

2 LED indicator **Power**: Green: Power pack ON

3 LED indicator Signal: Green: CPK hybrid connected and ready, Red: Error Yellow: Binding cycle active Blue: Navigation in main menu, binding not possible

4 LED indicator Data: Green: PC connected; CPK hybrid connected; USB stick found; USB stick can be removed

Red/blue flashing: Data are being written to USB stick

- 5 USB port for exporting process data to USB memory stick
- 6 Socket for connection to CPK hybrid



- 1 Socket for foot pedal
- 2 USB port for connection to PC (for the HTDM)
- 3 Socket for power supply

In automatic systems, the CPK hybrid can be integrated with the separate power pack with control box (106-00110) via a serial interface.

#### 3.2.3 Battery pack with charger

The CPK hybrid can be operated independently of the mains with a battery pack. The battery pack is sold separately and is charged with the charger that comes with the battery pack.

The connection for the battery pack can be found in the base plate of the handle.

### 4 Transport, disposal and storage

#### 4.1 Transporting the device

► Always use the case that comes with the device to transport the CPK hybrid.

#### 4.2 Disposal

End-of-life (EOL) disposal of the device and individual subassemblies and the disposal of consumables and auxiliaries are subject in part to statutory regulations. Detailed information is available on request from the appropriate authorities (e.g. regional or national water boards or environmental authorities).

- ▶ Dispose of packaging materials.
- Always dispose of packaging materials in accordance with the currently valid materials-disposal and environmental protection regulations.
- Always take materials for disposal to certified collection points.
- Contact the manufacturer if there is any uncertainty regarding disposal.

#### 4.3 Storage

- Store the tool, power pack and battery pack in a cool, dry place.
- Avoid direct sunlight.
- Store the tool, power pack and battery pack with charger in dust-proof packaging.
- Store electrical components (tool, power pack and battery pack with charger) in impact-absorbing packaging and separately from the accessories.
- Observe the corresponding data sheets for storage and packaging of the accessories as well as the battery pack with charger.

#### 5 Installation

#### 5.1 Installing the accessories

 Always proceed in accordance with the instructions supplied with the accessory in question.

#### 5.2 Connecting the power pack

In mains operation, the CPK hybrid is supplied with power from the power pack.



Connect power pack 2 to power-supply outlet 1.



 Use connecting cable 2 to connect the power pack to tool CPK hybrid 3.

#### 5.3 Connecting the battery pack

In mains-independent operation, the CPK hybrid is supplied with power from the battery pack.



- Press in the locking button 1 and slide the cover 2 out towards the front of the CPK hybrid.
- Push in the battery pack in place of the cover 2 until the latch engages.
- ☑ After switching on the CPK hybrid, the display shows the battery charge status,  $\rightarrow$  "Settings in the display menu" on page 14.

### 6 Operation

#### 6.1 Switching on and off in mains operation

#### 6.1.1 Switching on

- The power-supply outlet must be readily accessible so that the power pack and the CPK hybrid can be de-energised if the need arises.
- Keep the main switch OFF when the CPK hybrid is not in use or being replaced.
- Switch the power pack ON at the main switch.
- ☑ The **Signal** and **Power** LEDs on the power pack illuminate in green.
- ☑ The LED status display on the CPK hybrid lights up green.
- ☑ The start menu appears on the display,  $\rightarrow$  "Settings in the display menu" on page 14.
- $\blacksquare$  The CPK hybrid is ready for use.

#### 6.1.2 Switching off

Switch the power pack OFF at the main switch.

#### 6.2 Switching on and off in battery operation

#### 6.2.1 Switching on

- ► With the battery pack connected, press the battery pack on/off button on the handle for approx. 2 seconds.
- ☑ If the CPK hybrid is not operated for more than 10 minutes, it switches to standby mode.
- To restore operational readiness, press the start trigger once.

#### 6.2.2 Switching off

- ▶ Press the battery pack on/off button on the handle.
- $\blacksquare$  The battery pack switches to standby mode.

#### 6.3 Loading cable ties



- ▶ Insert cable tie bandoleer **1** parallel with the drum.
- $\blacksquare$  Make sure that the cable-tie heads **2** are facing up.
- Press the trigger 3.
- If there are no cable ties in the device three blank shots are fired.
- $\blacksquare$  The cable ties are loaded.

#### 6.4 Positioning and binding items for bundling

- Select the Force level and/or Quality parameters,
  - → "Accessing the parameter set" on page 14 or
    → "Selecting a parameter set" on page 21.

The device is suitable for the following bundle geometries:



The distance from front cap **1** to flat **2** must be at least 42 mm. Bundle **3** can be no more than 20 mm in diameter.

#### 

#### Crush hazard when jaws close.

- Do not insert fingers between upper and lower jaws and do not keep your finger on the trigger.
- Always keep the power pack switched OFF when clearing a blockage.



- Centre the bundle 1 in line with front-cap screws 3.
   Space adjacent cable ties at least 10 mm apart.
- Press the trigger 2.
- $\square$  The bundle **1** is secured by the cable tie.

#### 6.4.1 Emptying the waste box

The waste box has to be emptied after a maximum of 120 bindings at a bundle diameter of 3 mm. As the bundle diameter increases, so does the number of bindings until the waste box has to be emptied.



- Pull waste box 1 in the direction indicated by the arrow and empty the box.
- Close the waste box 1.

### 7 Settings in the display menu

After switching on the CPK hybrid, the start screen appears on the display.

The additional device functions (e.g. clock time) are configured on the main menu,  $\rightarrow$  "Settings in the main menu" on page 16.



- 1 Enter button to confirm a selection in the navigation menu and increment switch for display menu settings
- 2 Select and reset button for CPK hybrid settings in the display menu
- 3 LED status indicator Signal: Green: CPK hybrid connected and ready Red: Frror

If the optional battery pack is connected, the charge status indicator is displayed. The functions for setting the bindings with the CPK hybrid can be accessed and configured in the display menu.

These include:

- Parameter set
- Force level
- Binding quality
- Loop diameter
- Cutting mode
- Cut with the tension released
- Standby mode

- Use the Select button 2 to select the desired setting in the display menu.
- Press the Enter button 1.
- Press the Enter button 1 several times to return to the start screen.
- Check the LED status indicator 3, → "Troubleshooting" on page 31.
- A printed short guide is included with the CPK hybrid which schematically explains how to configure the functions.

#### 7.1 Accessing the settings

7.1.1 Accessing the settings by entering the access code



- ▶ Press the Select button 2.
- ☑ The access code settings are displayed,  $\rightarrow$  "Settings menu" on page 17.
- Access to the **Settings** menu is protected by a three-digit access code that can be changed in the HT Data Management software,  $\rightarrow$  "Changing the access code for the CPK hybrid" on page 23.
  - The default access code is 000. When configuring settings in the display menu, the start screen will be displayed after 10 seconds of inactivity.

# 7.1.2 Accessing the settings without entering the access code

#### 7.2 Accessing the parameter set

The preset parameter sets can be accessed or transferred to the CPK hybrid when the HTDM is connected. The parameter sets comprise settings which are gathered into groups. They are managed in the HTDM,  $\rightarrow$  "Parameter set menu" on page 19.

# Changing the parameter sets without entering an access code

- Press the Enter key 1 and the Select key 2 simultaneously and confirm the access code.
- ${\ensuremath{\boxtimes}}$  Two red arrows are shown on the display in place of the navigation options.
- ☑ Use the Enter key 1 (arrow pointing up) and the Select key 2 (arrow pointing down) to switch between the parameter sets.



- Access the settings,  $\rightarrow$  "Accessing the settings" on ► page 14.
- Press the Select button 2.
- The parameter set **3** is indicated with a blue border.
- Press the Enter button 1 until the desired parameter set **3** is displayed.
- $\blacksquare$  The settings of the selected parameter set are displayed.

#### 7.3 Setting the force level

The setting corresponds to the force applied by the CPK hybrid when binding, and it can be set from Level 1 (lowest force) to Level 5 (highest force).



- Press the Select button 2
- The force level **3** is indicated with a blue border.
- Press the Enter button 1 until the desired force level is reached.
- $\blacksquare$  The force level **3** is indicated by the number of red arrows.

#### 7.4 Setting the binding quality

The setting corresponds to the quality of binding and it can be set from Level 1 (lowest quality) to Level 3 (highest quality). The higher the level the longer the cycle time, so the bundle has more time to settle.



Press the Select button 2.

- The binding quality **3** is indicated with a blue border.
- Press the Enter button 1 until the desired binding quality is reached.
- $\blacksquare$  The binding quality **3** is indicated by the number of red stars.
- $\blacksquare$  The binding speed is indicated by the "speedometer" needle" position.

#### Setting the loop diameter 7.5

The actual diameter may deviate from the set value as the gearing and the state of the tool and processing material have an impact on the binding.

Make sure that the binding does not produce a circular loop.



- Press the Select button 2.
- ☑ The loop diameter **3** is indicated with a blue border.
- Press the Enter button 1.
- $\square$  The loop diameter value is activated.
- Press the Select button 2.
- $\square$  The adjustable value is underlined.
- Press the Enter button 1 several times until the desired value is displayed.
- Press the Select button 2.
- $\square$  The selection jumps forward one digit.
- Repeat the setting until the desired values is reached.

#### 7.6 Setting the cutting mode



#### Flush cutting

- ▶ Press the Select button 2.
- $\blacksquare$  The strip section **3** is indicated with a blue border.
- Press the Enter button 1 to activate flush cutting. ►
- $\blacksquare$  No strip section is displayed when flush cutting is activated.

#### **Cut-free binding**

- Press the Enter button 1 to deactivate flush cutting.
- ☑ The projecting cable-tie end is indicated with a blue border.

#### Projecting cable-tie ends

The actual projecting cable-tie end may deviate from the set value as the gearing and the state of the tool and processing material have an impact on the binding.



- Press the Select button 2.
- Press the Enter button 1 to activate the projecting cabletie end value.
- $\square$  The adjustable value **3** is underlined.
- Press the Enter button 1 several times until the desired value is displayed.
- Press the Select button 2.
- $\blacksquare$  The selection jumps forward one digit.
- Repeat the setting until the desired values is reached.

#### 7.7 Setting tension-free cutting



- ▶ Press the Select button 2.
- $\blacksquare$  Tension-free cutting **3** is indicated with a blue border.
- Press the Enter button 1.
- $\ensuremath{\boxdot}$  Tension-free cutting is indicated with a crossed-out tension spring.
- Press the Enter button 1 to deactivate tension-free cutting.
- Press the Select button 2 to finish configuring the settings.

#### 8 Settings in the main menu

After switching on the CPK hybrid at the connected power pack, the start screen appears on the display.



1 Enter button to confirm a selection in the navigation menu and increment switch for display menu settings

The main menu in the CPK hybrid enables the configuration of additional device functions.

The menu covers:

- Languages settings in the display, → "Languages menu" on page 16
- Device status, e.g. counter reading of the bindings or firmware version, → "Status menu" on page 17
- Settings, e.g. date / time, → "Settings menu" on page 17
- Contact, → "Contact menu" on page 18
- Bindings cannot be triggered while you are navigating in the main menu. The **Signal** LED on the power pack shows blue.
- Press the Enter button 1.
- ☑ The Main menu appears on the display.

#### 8.1 Languages menu

You use the **Languages** menu to select the language for the displays.



- ▶ Use the Select button 2 to select the language.
- Press the Enter button 1.
- $\blacksquare$  The display switches to the language you selected.
- $\blacksquare$  The Main menu appears on the display.

#### 8.2 Status menu



The **Status** menu shows you the following status readings:

- Counter reading
- Software version of the CPK hybrid and an index number for the language version
- Software version of the power pack
- Serial number of the tool
- Ambient temperature and humidity
- Date of last service
- Counter reading at last service
- Press the Enter button 1.
- $\blacksquare$  The Main menu appears on the display.

#### 8.3 Settings menu

You use the **Settings** menu to set important parameters of the CPK hybrid.

Access to the Settings menu is protected by a three-digit access code that can be changed in the HT Data Management software, → "Changing the access code for the CPK hybrid" on page 23. The default access code is 000.

- Use the Select button in the Main menu to select the Settings menu.
- ▶ Press the Enter button.
- $\blacksquare$  The prompt for the access code appears on the display.



- Press the Select button 2.
- After reaching the desired number, press the Enter button 1.
- $\square$  The selection  $\uparrow$  jumps forward one digit.
- Repeat the setting until the desired access code is set.
- Press the Enter button 1.

☑ The **Settings** menu appears on the display.



#### 8.3.1 Interruption front sensor

Ē

The **Interruption front sensor** setting enables you to decide how long the level sensor can remain busy without the **Error, front cap** message appearing on the display.

This function is intended for use with the device integrated into an automatic system.



- ▶ Use the Select button 2 to select the level.
- Press the Enter button 1.
- $\blacksquare$  The setting changes to the level you selected.

#### 8.3.2 Check of binding

The **Check of binding** setting enables you to decide whether or not the Error, binding force message appears on the display,  $\rightarrow$  "Display messages" on page 32.

- The binding check can also be set with the HTDM,  $\Rightarrow$  "Satting the binding check" on page 21
- Setting the binding check" on page 21.



- ▶ Use the Select button **2** to select the desired setting.
- ▶ Press the Enter button 1.

 $\blacksquare$  The setting changes to the option you selected.

Setting	Meaning
OFF	The Error, binding force message does not appear on the display.
Error notification	The Error, binding force message appears when applicable but does not require confirmation.
Acknowledgement	The Error, binding force message appears when applicable and requires confirmation. The next binding is not possible until the trigger has been pulled to confirm the message.

#### 8.4 Contact menu

The **Contact** menu shows you the current website of the manufacturer.



### 9 HT Data Management

The HT Data Management software enables you to:

- Update the software for the power pack and CPK hybrid.
- Export production data.
- Change parameters.

#### 9.1 First steps

- ▶ Install the HT Data Management software on a PC.
- Switch on the CPK hybrid,  $\rightarrow$  "Switching on" on page 13.



- For mains operation, connect the PC to the power pack with the USB cable provided 1.
- In mains-independent operation, connect the tool to the PC directly with the optional smart cable, → "Accessories and extras" on page 37.

- ► Launch the HT Data Management software.
- ☑ The HT Data Management start page appears on the screen,  $\rightarrow$  "Binding menu" on page 20.

#### NOTE

When the CPK hybrid is connected, error messages may be displayed in the HTDM while binding if the settings of the CPK hybrid display have been changed.

#### 9.2 Access levels

There are three access levels. Each level permits access to the features available on the lower levels:

- Operator level
- Setup-specialist level
- Service level

#### 9.2.1 Binding menu

Level	Binding information	Binding parameters	Change language	Synchronise with PC time
Operator	Read	No	Yes	Yes
Setup specialist	Read	Yes	Yes	Yes
Service	Yes	Yes	Yes	Yes

#### 9.2.2 Service menu

Level	Change service parameter settings	Change parameter settings	Change access code
Operator	No	No	No
Setup specialist	No	Yes	Yes
Service	Yes	Yes	Yes

#### 9.2.3 Memory menu

Level	Export data	Delete memory
Operator	Yes	No
Setup specialist	Yes	No
Service	Yes	Yes

#### 9.2.4 Update menu

Level	Perform updates	Change access code
Operator	No	No
Setup specialist	Yes	Yes
Service	Yes	Yes

#### 9.2.5 Measurement environment menu

Level	Visibility	
Operator	No	
Setup specialist	Yes	
Service	Yes	

#### 9.2.6 Parameter set menu

Level	Create parameter sets	
Operator	No	
Setup specialist	Yes	
Service	Yes	

#### 9.3 Binding menu

The **Binding** menu appears on the display when you launch the software.

HT Data Management Version V-3.0	/ 16.11.2021 1		– 🗆 X
		Connection to AT2000CPK power pack:	
Hellermen		AT2000-Netz V3.00 / 28.10.2021	USB 🗸
Hellermar	iniyton	Connection to AT2000CPK tool:	4
		AT2000-Tool V3.00 / 28.10.2021	Power-pack clock time
Password 2	Languag 3	Parameter version	
Confirm	•••• English ~	version more languages 9	Synchronise with PC time
Logged	d in as: Supervisor	1	5
6 Binding Service Memory U	Update Measurement environment	Parameter sets	
Binding information		Binding parameters	
Counter reading	7 Time	Tension level Quality	8 Parameter set
289		1 ~ 1 ~	~
Temperature	Humidity		
0 °C	%		
Setpoint, tensioning curr.	Tensioning current, meas. val.		
mA	MA mA		
Cycle duration	Dur. of measurement		
ms	ms		
avg. cycle current	Mode		
mA	4		
Setpoint, diameter			
0 mm		Interruption, front sensor (level 1-5)	
Tension level	Quality	2 ~ 9	□ ∞ continuous bundling
		Check of binding:	■ &1 11
		Off ~ 10	82
		12 Tool stat	

- 1 Version information and date of publication of the software
- 2 Entry box for password for access level
- 3 Language setting
- 4 Connection states and software versions
- 5 Time and date synchronisation
- 6 Menus
- 7 Display binding information
- 8 Select parameter set
- 9 Select interruption front sensor
- 10 Switch binding check on or off
- 11 Consecutive trigger
- 12 Status of the CPK hybrid

#### 9.3.1 Entering a password

- The password consists of four characters and the default setting is 0000.
- Enter the password 2.
- Click on Confirm.
- ☑ What you see in the "Menus" tab **6** depends on your access rights,  $\rightarrow$  "Access levels" on page 18.
- ☑ Certain fields can be greyed, hidden or active, depending on the access level.

#### 9.3.2 Selecting a language

- Select the display language in the Languages dropdown menu.
- ☑ The setting immediately changes to the language you selected.

#### 9.3.3 Synchronising time and date

#### Click on Synchronise with PC time 5.

☑ Clock time and date of the power pack are synchronised with the PC connected to the device.

rechecked if the power pack is subsequently replaced.

Time and date are saved in the power pack and have to be

#### 9.3.4 Displaying binding information

**Binding information 7** shows the process data of the last binding performed with the connected CPK hybrid.

#### 9.3.5 Selecting a parameter set

In the parameter sets, preset values are grouped and transferred to the CPK hybrid,  $\rightarrow$  "Parameter set menu" on page 29

- Select a configured parameter set in the Parameter set 8 field.
- ☑ The changed parameters are transferred to the CPK hybrid.

#### 9.3.6 Setting interruption front sensor

The Interruption, front sensor setting 9 enables you to decide how long the level sensor can remain busy without the Error, front cap message appearing on the display,  $\rightarrow$  "Display messages" on page 32.

- Select the level in the Interruption, front sensor 9 field.
- $\blacksquare$  There are five levels:
- Level 1: 0.0 seconds
- Level 2: 0.3 seconds
- Level 3: 0.5 seconds
- Level 4: 0.7 seconds
- Level 5: 0.9 seconds
- $\blacksquare$  The setting is changed and transferred to the CPK hybrid.

#### 9.3.7 Setting the binding check

The **Check of binding** setting **10** enables you to decide whether or not the **Error**, **binding force** message appears on the display,  $\rightarrow$  "Display messages" on page 32

- ► Set the binding in the Check of binding 10 field, → "Check of binding" on page 17. The following options are available:
- OFF
- Error notification
- Acknowledgement
- $\blacksquare$  The setting is changed and transferred to the CPK hybrid.

#### 9.3.8 Activating consecutive trigger

Consecutive trigger **11** effects continuous binding without repeatedly actuating the start trigger. Bindings will be carried out as long as the start trigger remains pressed.

• Activate the **continuous drive 11**.

#### 9.3.9 Activating links

- Function **&1** concerns the link between the foot pedal and the regular start trigger on the handle. When this function is selected, binding only takes place if there is a simultaneous start trigger (signal) from the foot pedal and from the handle. If one of the two signals does not occur, no binding takes place (even if the handle is triggered).
- Function 62 concerns the link between the Last-Tie sensor (Phoenix socket on the power pack) and the regular start trigger on the handle. When this function is selected, binding only takes place if a signal is sent from the Last-Tie sensor and the handle simultaneously. If one of the two signals does not occur, no binding takes place (even if the handle is triggered).
- Activate the desired link.

#### 9.3.10 Status indicators

The **Tool status 12** field displays the operating status of the CPK hybrid.

	Colour	Status
Connection to the	Green	Connection active
power pack CPK	Red	Error message active
	Grey	No connection / connection interrupted
Connection to	Green	Connection active
CPK hybrid	Red	Error message active
	Grey	No connection / connection interrupted
Status of	Green	Ready
CPK hybrid	Yellow	Busy
	Blue	Main menu on CPK hybrid active Binding not possible
	Red	Error message active
	Grey	No connection / connection interrupted

#### 9.4 Service menu

HT Data Man	agement Ver	rsion V-3.0 / 16.11	.2021		- 🗆 X
				Connection to AT2000CPK power pack:	
				AT2000-Netz V3.00 / 28.10.2021	USB 🗸
Hell	ern	nann	Tyton	Connection to AT2000CPK tool:	
				AT2000-Tool V3.00 / 28.10.2021	Power-pack clock time
	Password		Languages	Parameter version DEF01	14:32:32 07.02.22
Confirm		••••	English $\vee$	version more languages 9	Synchronise with PC time
		Logged in as:	Supervisor		synchronise with FC time
Binding S	Service Me	emory Update	Measurement environment	Parameter sets	
Service	paramete	ers			
Serial nur					
Bendrind	inder	43270			
Counter		1			
		289			
Counter	reading at las				
Data of t	ast service	1000			
Date of R	22.06.2	2018			
Tool code		.010			
	3	000	access parameter	sets	
			4 limited access		
			without PIN		
		_			
5		6			
Fetch	h data from t	ool Se	nd data to tool		

- 1 Serial number and counter reading display
- 2 Information for HellermannTyton service
- 3 Access code of the CPK hybrid
- 4 Refresh the service information and parameters
- 5 Access with and without access code for tool
- 6 Send data to the AT2000 CPK

#### 9.4.1 Updating service information

- Click on Fetch data from tool.
- ☑ The information about the counter reading and service of the CPK hybrid is refreshed.

# 9.4.2 Enabling access with or without the access code for the tool

Access to the parameter set settings for the tool can be gained with or without entering the access code. If an option is not activated, an access code must always be entered on the tool to modify and switch settings.

The changes to the access settings are saved in the log.

- Activate access restricted: It is possible to switch settings on the tool, but not modify them. The access code must be entered.
- Activate switch without access code: It is not necessary to enter the access code on the tool to switch settings, but it is not possible to modify the settings.

#### 9.4.3 Changing the access code for the CPK hybrid

- Enter the new access code at **Tool code**. The access code is a three-digit number and the default setting is 000.
- Click on Send data to tool.
- ☑ The access code is changed and transmitted to the CPK hybrid.

#### 9.5 Memory menu

HT Data Management Version V-3.0 / 16.11	.2021		- 🗆 X
Hellermann	Tyton Languages	Connection to AT2000CPK power pack: AT2000-Netz V3.00 / 28.10.2021 Connection to AT2000CPK tool: AT2000-Tool V3.00 / 28.10.2021 Parameter version	USB V Power-pack clock time
Confirm		version more languages 9 meter sets	Synchronise with PC time
No. of bindings in memory         1/65536         0%         6       From binding         6       From binding         7       Source file         Source file       Image: Convert to .xls	No. 5 0	Imit binding data         export from         07.02.2022         export until         07.02.2022         1%         Init message data         export from         07.02.2022         32         07.02.2022         32	2

- 1 Refresh memory status
- 2 Limit the time period of the binding information
- *3* Limit the time period of the messages
- 4 Select messages
- 5 Select bindings
- 6 Export messages and binding data
- 7 Export created file

#### 9.5.1 Refresh memory of the tool

Updates the number of data records, bindings and messages stored in the tool's memory.

- Click on the **Refresh** button **1**.
- ☑ The current values and the memory usage are displayed in the fields No. of bindings in memory and Messages in memory.

#### 9.5.2 Limit the time period of the bindings

Limits the time period for updating the binding information  $\mathbf{2}$ .



It is advisable to set a filter to restrict the choice if the volume of data involved is large.

- Activate limit binding data 2.
- In the drop-down menus Export from and Export until, select the start and end dates for the export period.
- Click on Export 6.

#### 9.5.3 Limit the time period of the messages

Limits the time period for updating the messages 3.

- It is advisable to set a filter to restrict the choice if the volume of data involved is large.
- Activate Limit message data 3.
- In the drop-down menus Export from and Export until, select the start and end dates for the export period.
- Click on Export 6.

#### 9.5.4 Select bindings

Select the bindings to be exported. The data exported contain the information about the individual bindings.

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It is advisable to set a filter to restrict the choice if the volume of data involved is large.

- In the fields From binding No. 5 and To binding No.
   5, restrict the quantity of bindings for export.
- Click on Export 6.

#### 9.5.5 Select messages

Select the messages to be exported. The data exported contain the errors or messages.



In mains-independent operation, the time and date are not logged.



It is advisable to set a filter to restrict the choice if the volume of data involved is large.

- In the fields From message No. 4 and To message No.
   4, restrict the messages for export.
- Click on Export 6.

# 9.5.6 Read and export the process data on the HTDM



The data are not deleted after they have been exported.

A Data fields have not been initialised message is issued if the process data have not been refreshed.

- ▶ If required, restrict the amount of data for export.
- Click on the **Refresh** button **1**.
- Click on Export 6.
- Define the storage location for the exported \*.CSV data.

- ► In the window opened by the operating system, click on the **Save** button.
- ☑ The bindings and messages are exported from the CPK hybrid and saved as a \*CSV file.
- ☑ The progress bar shows progress of the data transfer in percent (%).
- ☑ When export completes the name of the saved file appears in **File loaded**.

#### 9.5.7 Export data

There are two export formats:

- XLS: The saved \*.XLS file can be opened using a table calculation program.
- HTML: The saved \*-HTML file can be opened using the browser, → "Display exported data in the HTML format" on page 24.
- Click on Source file 7 and select the exported file in the dialogue window of the operating system.
- ► The file appears in **File loaded**.
- Select the export format for the file.

#### 9.5.8 Display exported data in the HTML format

The exported data is displayed in the browser in three categories:

- Start page (information on the model and serial number of the CPK hybrid as well as the counter readings)
- Production data (information on the parameter set, temperature, power, cycle time, etc. for each binding)
- Messages (information on messages and time of occurrence)
- The exported HTML file can be opened with an up-todate browser.
- Click on the category button in order to display the category.
- Click on the pictogram of the country flag in order to switch the data display language to English.

#### 9.6 Update menu



The **Update** menu appears only if the user has logged on with the setup specialist's password.

HT Data Management Version V-3.0 / 16.11.	2021		– 🗆 X
<b>Hellermann</b>	<b>Tyton</b>	Connection to AT2000CPK power pack: <ul> <li>AT2000-Netz V3.00 / 28.10.2021</li> <li>Connection to AT2000CPK tool:</li> <li>AT2000-Tool V3.00 / 28.10.2021</li> <li>Parameter version</li> </ul>	USB V Power-pack clock time
Confirm	English ~	version more languages 9	
Logged in as:		version more languages 5	Synchronise with PC time
Binding Service Memory Update	Measurement environment	Parameter sets	
Firmware update Firmware update Power Pack  Binding parameters update load from file File loaded:	Firmware update Tool	Password for 'Customer' change	2
	0%		
Update additional languages load from file File loaded:	send to tool 4		

- 1 Update firmware
- 2 Change password
- 3 Update binding parameters
- 4 Install other languages

#### 9.6.1 Updating the firmware

The firmware update **1** includes the updates for the CPK hybrid.

The current firmware can be found at the following web address:

www.HellermannTyton.com/autotool-cpk

#### NOTE

When the firmware for the CPK hybrid is updated to Version 1.77 or newer, the existing binding data is deleted from the ring memory.

- Copy the update files \*.hex onto the hard drive.
- Click on Firmware update tool.
- ► Select the appropriate \*.HEX file.

- In the window opened by the operating system, click on the Open button.
- ☑ The **Start upload** button appears on the screen.
- Click on Start upload.
- $\blacksquare$  The new firmware is uploaded.
- ☑ The progress bar shows progress of the data transfer in percent (%).
- ☑ The CPK hybrid display shows the current data transfer.

#### NOTE

Do not interrupt the connection during the data transfer. In the event of an interruption, the CPK hybrid will become unusable and will need to be sent back to the manufacturer.

#### 9.6.2 Changing the password

- The setup specialist's password consists of four characters and the default setting is **0000**. HellermannTyton recommends setting an alphanumeric password that includes at least one special character.
- Click on Change.
- Enter the current password and click on **OK** to confirm.
- Enter the new password and click on **OK** to confirm.
- Re-enter the new password and click on **OK** to confirm.
- $\blacksquare$  The password is changed.

#### 9.6.3 Updating binding parameters

The update for the binding parameter settings **3** has the file ending ".cpkparam".

- Click on Load from file.
- ► Select the file.
- In the window opened by the operating system, click on the Open button.
- ☑ The name of the file appears in **File loaded**.
- Click on Send to tool.
- ☑ The new binding parameters are transmitted to the CPK hybrid.
- ☑ The progress bar shows progress of the data transfer in percent (%).

#### 9.6.4 Installing other languages

The update for languages which do not use Latin characters, e.g. Asian languages, has the file ending ".bin".

- Click on Load from file.
- Select the file.
- In the window opened by the operating system, click on the Open button.
- $\blacksquare$  The name of the file appears in **File loaded**.
- Click on **Send to tool**.
- ☑ The new languages are transmitted to the CPK hybrid.
- ☑ The progress bar shows progress of the data transfer in percent (%).

HT Data Management Version V-3.0 / 16.1			- 🗆 X
Hellermann	<b>Tyton</b> Languages	Connection to AT2000CPK power pack AT2000-Netz V3.00 / 28.10.2021 Connection to AT2000CPK tool: AT2000-Tool V3.00 / 28.10.2021 Parameter version	USB V Power-pack clock time
Confirm ••••	English ~ Supervisor	version more languages 9	Synchronise with PC time
mA mA Tensioning current, meas. Counter m	easurement Tension le	✓ 1 ✓	2 set v
Counter reading Time Temperature	Humidity Setpoint, tensionir	ng curr. Tensioning current, meas. v	Sertion mode 6 Activate measurement mode Insert Position Measure Eject Loop

1 Displaying binding information

- 2 Show binding parameter settings
- 3 Adjust the measured force

9.7

f

Measurement environment menu

The Measurement environment menu appears only if the

- 4 Manage measurement results
- 5 List of measurement results
- 6 Set the measurement mode

#### 9.7.1 Using measurement mode

In measurement mode, the binding information for a binding cycle with a measured force is documented in a log file. This can be used to monitor the CPK hybrid.

In the measurement environment, the force measurement device (106-29010 / 106-29011) and a suitable force gauge can be used to carry out a measurement.

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You can find more detailed information on using the force measurement device in the corresponding manual.



No cycle movement or jaw movement takes place while

- ☐ measurement mode is active. Only the tensioning drive is active, with the current binding parameter settings.
- Select Parameter set 2.
- $\blacksquare$  The corresponding force level and quality are displayed.
- Click on Activate measurement mode 6.
- $\blacksquare$  The measurement mode functions are activated.

- Click on the measurement mode functions to trigger the corresponding action on the CPK hybrid.
- ► Perform one binding.
- $\blacksquare$  The binding information is displayed **1**.
- Enter the calculated value into the field Measured force 3.
- Click on Accept.
- $\blacksquare$  A new line is added to the logfile.
- Repeat the measurement procedure several times.
- Click on Deactivate measurement mode 6 or switch off the tool.

#### 9.7.2 Deleting measurement results

► To delete a line, highlight it and click on **Delete line**.

#### 9.7.3 Saving measurement results

- To save the measurement results in the table, click on Export.
- Define the storage location for the exported \*.CSV data.
- The measurement results can also be converted into the file formats \*.xls or \*.html and displayed,  $\rightarrow$  "Export data" on page 24.

	-	ersion V-3.0 / 16.11							
						n to AT2000CPK p	-		
	llow		Tidon		AT2000-Ne	etz V3.00 / 28.10.2	021 U	SB 🗸	
E	lien		Tyton			n to AT2000CPK to			
					🔵 АТ2000-То	ol V3.00 / 28.10.2	021 Po	wer-pack clock time	
	Password		Languages		Parameter	version			
onfi	rm	••••	English	$\sim$	version mo	re languages 9		Synchronise with	PC time
		Logged in as:	Supervisor						
nding	Service I	Memory Update	Measurement en	vironment	Parameter sets				
					1				
			<b>-</b> · · · ·	0.15					
	Name	Mode	Tension level	Quality	Diameter	extended tail	cutting mo		
1	101	Tension level	1	1			flush cut		- 11
2	201	Tension level	2	1			flush cut		
3	301	Tension level	3	1			flush cut	$\checkmark$	
4	401	Tension level	4	1			flush cut		
5	501	Tension level	5	1			flush cut		
6	102	Tension level	1	2			flush cut		
7	202	Tension level	2	2			flush cut		
8	302	Tension level	3	2			flush cut		7
9	402	Tension level	4	2			flush cut		
10	502	Tension level	5	2			flush cut		
11	103	Tension level	1	3			flush cut		_
1.11			-	-					~ ~

- 1 Overview of the parameter sets
- 2 Data synchronisation with the CPK hybrid
- 3 Send configured parameter sets to the CPK hybrid
- 4 Save parameter sets

9.8

Parameter set menu

5 Load parameter sets

The settings for a binding process (e.g. force level, quality, diameter and projecting cable-tie ends) are grouped in the **Parameter sets** menu and can thus be accessed and managed as a setting.

An activated checkbox **7** indicates that the parameter sets are displayed on the tool

#### 9.8.1 Synchronising parameter sets

#### Click on Fetch data from tool 2.

☑ The parameter sets of the CPK hybrid are loaded and displayed.

- Data changed on the CPK hybrid is indicated with an \*.
- ► Edit the parameter sets, → "Editing parameter sets" on page 30.
- Click on Send data to tool 3.
- $\blacksquare$  The parameter sets are transmitted to the CPK hybrid.

#### 9.8.2 Saving parameter sets

The parameter sets are saved with the file ending "cpkpreset".

- Click on Save to file 4.
- Define the storage location for the files.
- In the window opened by the operating system, click on the Save button.

#### 9.8.3 Loading parameter sets

- Click on Load from file.
- ► Select the file with the file ending "cpkpreset".
- In the window opened by the operating system, click on the **Open** button.
- $\blacksquare$  The parameter sets are displayed in the overview **1**.

#### 9.8.4 Editing parameter sets

 Select the parameter set in the overview and click on Edit 6.

HT Data Management Version V-3.0 / 16.11.	2021		– 🗆 X
Hellermann Password	<b>Tyton</b> Languages	Connection to AT2000CPK power pack: <ul> <li>AT2000-Netz V3.00 / 28.10.2021</li> <li>Connection to AT2000CPK tool:</li> <li>AT2000-Tool V3.00 / 28.10.2021</li> <li>Parameter version</li> <li>version more languages 9</li> </ul>	USB V Power-pack clock time
Logged in as: Binding Service Memory Update	Supervisor Measurement environment	Parameter sets	Synchronise with PC time
Name       1         101       Quality         1       Image: Constraint of the second	Diameter 4	extended tai 5 0,1 mm	0,1mm

 Allocate a three-digit designation, e.g. "016" to the parameter set in the field **Designation** 1.

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- The same designation cannot be allocated twice.
- Select the desired **Tension level** and **Quality**.
- Select the type of binding mode in the drop-down menu
   Mode 2. The following settings are available:
- Force level
- Loop

- Select the type of cutting mode in the drop-down menu
   Cutting mode 3. The following settings are available:
- Cut flush
- Cut with projecting cable-tie end
- No cutting
- For delicate bundles, activate the option Tension-free cutting.

- Activate the option **Long waiting time** as well.
- ☑ The holding time before cutting increases. This gives the binding more time to release tension.
- If only the **Cut with the tension released** option is activated, the hold time is 100 ms, whereas the additional option **Long waiting time** increases the hold time to 200 ms.
- Activate the **Display on tool** option.
- $\blacksquare$  The name of the parameter set is displayed on the tool.
- In mode 2 Loop, use the Diameter 4 slider to set the diameter of the bundle.
- ☑ The set diameter is shown on the display of the CPK hybrid.
- In cutting mode 3 Cut with projecting cable-tie end, use the projecting cable-tie end slider to set the length of the projecting cable ties.
- ☑ The set projecting cable-tie end is shown on the display of the CPK hybrid.
- For cut-free binding, select the cutting mode 3 No cutting.
- Click on Accept 6 to save the settings.
- ☑ The overview of the parameter sets is displayed, → "Parameter set menu" on page 29.
- Synchronise the settings with the CPK hybrid,
   → "Synchronising parameter sets" on page 29.

#### 9.9 Exporting process data from the power pack

#### NOTE

The power pack must be restarted before the transmission, as otherwise the CSV file will be written incorrectly and it will not be possible to convert it.



Bindings cannot be triggered while a data transfer is in progress.



- Switch the power pack off and on again.
- ▶ Disconnect the power pack from the PC.
- ▶ Plug a USB memory stick **2** into the power pack.

- The USB memory stack must be FAT32-formatted.
- ☑ The **Data** LED **1** lights up green as soon as the device recognises the USB memory stick.
- $\blacksquare$  The data are exported to the USB memory stick.
- ☑ The display shows the message that the CPK hybrid should not be switched off.



- During the saving process, the **Data** LED **1** will light up red/blue.
- As soon as the data transfer is complete, the Data LED1 lights up green.
- ► Unplug the USB memory stick **2**.
- ☑ The **Data** LED **1** goes out and the CPK hybrid is ready for use.
- Switch the power pack off and on again.
- Connect the power pack to the PC.

### 10 Troubleshooting

#### 10.1 Important notes

#### 

#### Crush hazard when jaws close.

- Do not insert fingers between upper and lower jaws and do not keep your finger on the trigger.
- Always keep the power pack switched OFF when clearing a blockage.

#### 

# Crush hazard due to moving/rotating parts when service flaps are open.

- Do not insert fingers underneath the drum and do not keep your finger on the trigger.
- Always keep the power pack switched OFF when clearing a blockage.

#### **10.2** Performing a reset

A reset of the CPK hybrid always has to be performed before repair work is undertaken.



Switch on the CPK hybrid.

#### **10.3 Display messages**

- Push the actuator for bandoleer cutter 2 to the left.
- Press the catch 3.
- Open the gate 1.
- Remove cable-tie residues where necessary.
- Press the reset button 4.
- Close the gate 1.

DISPLAY MESSAGE	POSSIBLE CAUSE	SOLUTION
Error, front cap Remove cable-tie residues	<ul> <li>There are residues of cable ties trapped behind the front cap.</li> <li>The level sensor is busy.</li> </ul>	<ul> <li>Clean the front sensor.</li> <li>If applicable, carefully remove the cable-tie residues.</li> </ul>
Error, gate Close gate	<ul> <li>Drum is not in the correct position.</li> <li>The gate is open.</li> </ul>	<ul> <li>Open the gate and turn the drum to the correct position.</li> <li>Close the gate.</li> </ul>

DISPLAY MESSAGE	POSSIBLE CAUSE	SOLUTION
Error, start position 1. Operate bandoleer cutter 2. Open gate	The CPK hybrid is not in the start position.	<ul> <li>Push actuator for bandoleer cutter to the left.</li> <li>Open the gate.</li> <li>Error, start position appears as the next message on the display.</li> </ul>
Error, start position 1. Remove cable-tie residues 2. Press Reset button Control of the start		<ul> <li>If applicable, carefully remove the cable-tie residues.</li> <li>Press the Reset button.</li> <li>Error, start position appears as the next message on the display.</li> </ul>
Error, start position Close gate		<ul> <li>Close the gate.</li> </ul>
Position of tie advancer 1. Operate bandoleer cutter 2. Open gate	<ul> <li>No tie advancer present.</li> <li>The tie advancer is faulty.</li> </ul>	<ul> <li>Push actuator for bandoleer cutter to the left.</li> <li>Open the gate.</li> <li>Position of tie advancer appears as the next message on the display.</li> </ul>
Position of tie advancer 1. Press Reset button 2. Check position of tie advancer Control of the advancer		<ul> <li>If applicable, carefully remove the cable-tie residues.</li> <li>Press the Reset button.</li> <li>Open the roller block, → "Checking tie advancer" on page 38.</li> <li>Check the tie advancer; replace if necessary.</li> <li>✓ Position of tie advancer appears as the next message on the display.</li> </ul>
Position of tie advancer Close gate		Close the gate.

DISPLAY MESSAGE	POSSIBLE CAUSE	SOLUTION
Display with the source of the	<ul> <li>The cable tie bandoleer is pulled in at an angle.</li> <li>Roller lever drum is jammed or is defective.</li> <li>The drum is blocked.</li> <li>The bandoleer cutter does not cut off the cable ties.</li> <li>The cable tie bandoleer is pulled in at an angle.</li> </ul>	<ul> <li>Push actuator for bandoleer cutter to the left.</li> <li>Open the gate.</li> <li>Open the two transparent service flaps at the gate, → "Troubleshooting a cable-tie bandoleer malfunction" on page 35.</li> <li>Error, drum appears as the next message on the display.</li> <li>If applicable, carefully remove the cable-tie residues.</li> <li>Open the roller lever drum and turn the drum to the correct position.</li> <li>Press the Reset button.</li> <li>Error, gate appears as the next message on the display.</li> <li>Close the gate.</li> <li>Load a new cable tie bandoleer, → "Loading cable ties" on page 13.</li> <li>Push actuator for bandoleer cutter to the left.</li> <li>Open the two service flaps at the gate, → "Troubleshooting a cable-tie bandoleer malfunction" on page 35.</li> <li>Error, overload appears as the next message on the display.</li> <li>If applicable, carefully remove the cable-tie residues.</li> </ul>
Overload <ol> <li>Remove cable-tie residues</li> <li>Press Reset button</li> </ol>		<ul> <li>Press the Reset button.</li> <li>Zrror, gate appears as the next message on the display.</li> <li>Close the gate.</li> </ul>
Error, tensioning motor 1. Operate bandoleer cutter 2. Open gate	<ul> <li>Drive is jammed or is defective.</li> </ul>	<ul> <li>Push actuator for bandoleer cutter to the left.</li> <li>Open the gate.</li> <li>If applicable, carefully remove the cable-tie residues.</li> <li>Press the Reset button.</li> <li>Zrror, gate appears as the next message on the display.</li> <li>Close the gate.</li> </ul>
Error, binding force 1. Check binding 2. Confirm with trigger	<ul> <li>The specified binding force is not achieved.</li> <li>The message appears only if error notification is activated, → "Check of binding" on page 17.</li> </ul>	<ul> <li>Check the binding.</li> <li>If applicable, reset the binding force.</li> <li>If applicable, carefully remove the cable-tie residues.</li> <li>Press the trigger as confirmation.</li> </ul>

DISPLAY MESSAGE	POSSIBLE CAUSE	SOLUTION
Time loss 1. Check battery in power pack 2. Press Reset button →	<ul> <li>The back-up battery for the clock in the power pack has discharged.</li> </ul>	<ul> <li>Change the back-up battery, → "Changing the battery of the power pack" on page 36.</li> <li>Press the Reset button.</li> </ul>

#### 10.4 Possible fault

FAULT PATTERN	POSSIBLE CAUSE	SOLUTION
Loops form	Bundle diameter is     unsuitable.	► Use a suitable bundle diameter, → "Positioning and binding items for bundling" on page 13.
	• Tie advancer is not in the correct position.	• Check the position of the tie advancer, $\rightarrow$ "Checking tie advancer" on page 38.
	• Spring in upper jaw is faulty.	• Check upper jaw flap in upper jaw with spring, $\rightarrow$ "Replacing upper jaw" on page 37.
	Lower jaw is blocked.	• Check lower jaw, $\rightarrow$ "Checking front cap and position of cutter" on page 38.
		<ul> <li>Remove blockage.</li> </ul>
Binding not possible. Cable tie shoots straight	Upper jaw is blocked.	• Check upper jaw, $\rightarrow$ "Checking upper jaw" on page 37.
out.		<ul> <li>Remove blockage.</li> </ul>
Cable tie is not cut off flush.	Cutter in front cap is not in correct position.	► Check position of cutter in front cap and remove cable-tie residues, → "Checking front cap and position of cutter" on page 38.

#### 10.4.1 Troubleshooting a cable-tie bandoleer malfunction

- Be sure to check the information on the display,  $\rightarrow$  "Display messages" on page 32.
- Switch the power pack OFF.



- ▶ Push the actuator for bandoleer cutter **2** to the left.
- Press the catch 3.
- Open the gate 1.



- Press the actuator for service flap left 4.
- ► Open the left service flap.
- Open the right service flap.



- ► Turn the drum **5** past the point of indexing resistance and remove the cable-tie residues.
- Close the left and right service flaps.
- Switch the power pack ON.
- ► Close the gate.
- ► Load a new cable tie bandoleer, → "Loading cable ties" on page 13.

#### **10.4.2** Changing the battery of the power pack

#### A DANGER

A hazardous electrical current flows though the body in direct or indirect contact with electrically live parts.

Electric shock, burns or death can result.

- Work on the electrical supply and on parts that are live when the device is in operation should always be carried out by a trained electrician.
- ► Use only OEM fuses of the specified amperage.
- ► Have faulty electrical components replaced immediately.
- Always disconnect the plug from the power-supply outlet before starting maintenance work and troubleshooting.
- Check the electrical equipment of the device at regular intervals. Have defects such as loose connections or scorched wiring repaired immediately.
- Switch the power pack OFF.
- Disconnect the power cord from the power-supply outlet.



- ▶ Remove the cover screws 1.
- Remove housing 2 from the power pack.



• Change back-up battery **3**.

For details of battery type,  $\rightarrow$  "Power pack CPK" on page 42

 Position the housing 2 and affix using the cover screws 1.

#### 10.4.3 Updating the tool firmware

The tool firmware update must be carried out with the smart cable in mains-independent mode,  $\rightarrow$  "Accessories and extras" on page 37.

- Connect the smart cable to the tool and the PC.
- ► The new firmware is loaded onto the PC → "Update menu" on page 25.
- Transfer and install the firmware.

#### 11 Maintenance

#### 11.1 Important notes

Regular servicing is essential in order to ensure that the device remains in safe working order,  $\rightarrow$  "Maintenance schedule" on page 37.

#### 

#### Crush hazard when jaws close.

- Do not insert fingers between upper and lower jaws and do not keep your finger on the trigger.
- Always keep the power pack switched OFF while maintenance is in progress.

#### 

Crush hazard due to moving/rotating parts when service flaps are open.

- Do not insert fingers underneath the drum and do not keep your finger on the trigger.
- Always keep the power pack switched OFF while maintenance is in progress.

#### **11.2** Accessories and extras

Accessories and extras can be ordered directly from your national HellermannTyton representative,  $\rightarrow$  separate spare parts list.

Name	Article number
Power pack CPK	106-00100
Bench mount kit CPK	106-00040
Overhead suspension CPK	106-00050
CPK safety warnings	106-29003
Power cable, 1.8 m	123-90040
Connecting cable, 2 m	123-90052

Name	Article number
Smart cable	123-90142
CPK hybrid Autotool battery pack	106-006020
CPK hybrid Autotool charger	106-006021

#### **11.3 Servicing by manufacturer**

It is advisable to have the CPK hybrid serviced by HellermannTyton once a year or after every approx. 1 million bindings. This will allow the CPK hybrid to be checked and updated to the latest modification status. Service contact addresses for all countries are posted on the website: www.HellermannTyton.com

#### 11.4 Maintenance schedule

WHEN?	WHO?	WHAT AND HOW?
Approx. every 50,000 bindings	Setup specialist	► Check the tie advancer; replace if necessary, → "Checking tie advancer" on page 38.
Approx. every 300,000 bindings	Setup specialist	► Check the front cap; replace if necessary, → "Checking front cap and position of cutter" on page 38.

#### 11.5 Repair

NOTE Always perform a reset before commencing repair work, → "Performing a reset" on page 32.

#### 11.5.1 Checking upper jaw



- Check upper jaw 2 and upper jaw guide 1 for wear and chipping.
- ► If necessary, replace upper jaw, → "Replacing upper jaw" on page 37.

#### 11.5.2 Replacing upper jaw



Remove the screws 1



- Use a screwdriver to pry the upper jaw 2 apart (approx. 3 mm) at the top.
- Work the upper jaw 2 down and to the side past the lower jaw 4.

► Hold the upper jaw flap **3** in place during removal.



- Check spring 5, upper jaw flap 3 and upper jaw guide
   6 for wear and chipping.
- Angle the upper jaw 2 past the lower jaw 4 and seat it in the upper jaw guide 6.
- Hold the spring 5 with the upper jaw flap 3 while inserting. Make sure that the spring 5 is correctly positioned.
- ► Tighten the screws 1.

### 11.5.3 Checking front cap and position of cutter

Switch the power pack OFF.



- Remove the screws 3.
- Loosen the screws 1.

### 

Cut hazard. The cutter is extremely sharp.

- ► Never touch the cutting edge with your fingers.
- Carefully remove front cap 4 with the lower jaw.
- Remove the tail cutter **2**.
- ▶ If necessary, replace tail cutter 2.
- ► Remove cable-tie residues.
- Use compressed air to blow the tension gear and the waste channel clean.
- Insert the tail cutter 2 into the recess with the cutting edge facing in.
- ▶ Insert front cap **5** with the lower jaw.
- ► Tighten the screws 1.
- ▶ Insert the screws **3** and tighten.

#### 11.5.4 Checking tie advancer

► Switch the power pack OFF.



- Push the actuator for bandoleer cutter 2 to the left.
- Press the catch 3.
- Open the gate 1.

#### 11.5.5 Replacing tie advancer



- Remove the screw 4.
- Swing roller block **5** up.



- ▶ Replace the defective tie advancer 6.
- $\blacksquare$  The teeth of the tie advancer face down.



- Push in the tie advancer as far as mark 6.
- A Position of tie advancer message appears if positioning is not correct,  $\rightarrow$  "Display messages" on page 32.
- ► Close the roller block **5**.
- ► Tighten the screw 4.
- ► Close the gate 1.

#### 11.5.6 Replacing the battery pack



- Press in the locking button 1 and slide the discharged battery pack 2 out towards the front of the CPK hybrid.
- Push in the discharged battery pack 2 until the latch engages.

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### 12 Technical data

- 12.1 CPK hybrid tool
- CPK hybrid without battery pack



	Value
Max. power draw	50 W
Input voltage	25.2 V (power pack) 18 V (battery pack)
Size L × W × H	approx. 285 mm × 86 mm × 245 mm
Weight	approx. 1560 g
Bundle thickness	up to max. 20 mm in diameter



## CPK hybrid with battery pack



	Value
Max. power draw	50 W
Input voltage	25.2 V (power pack) 18 V (battery pack)
Size L × W × H	approx. 285 mm × 86 mm × 245 mm
Weight	approx. 1940 g
Bundle thickness	up to max. 20 mm in diameter



#### 12.2 Power pack CPK



	Value
Line voltage	100 V – 230 V
Line frequency	50/60 Hz
Protection class	I
Size L × W × H	approx. 260 mm × 110 mm × 93 mm
Weight	approx. 1300 g
Back-up battery	CR 2032 3V or equivalent

#### 12.3 Battery pack

	Value
Voltage range	18 V
Battery pack capacity	2 Ah
Charging current	3 A
Charging time	40 min.

#### 12.4 Charger

The chargers are only suitable for charging Metabo and CAS (Cordless Alliance System) battery packs.

	Value
Voltage range	12 – 36 V
Battery pack capacity	2 – 8 Ah
Charging current	1.5 – 4 A
Charging time	30 – 250 min.

#### 12.5 Noise and vibration information

Emission sound pressure level $L_{pA}$	65 dB re20 μPa
Uncertainty $K_{pA}$	3 dB
Sound power level L <sub>wa</sub>	76 dB re1pW
Uncertainty K <sub>wa</sub>	3 dB
Aggregate figure for vibration a <sub>h</sub>	0.8 m/s <sup>2</sup>
Uncertainty K	1.5 m/s <sup>2</sup>

The vibration level as stated here is a measured value obtained by the standardised method set out in EN 60745-1:2009; it can be used for the purposes of device comparison.

The figure for vibration stated here is for the power tool in conditions of its intended use and can differ from the actual figure for the power tool in conditions of other use or if not adequately serviced.

Accurately estimating vibration load over a certain work period entails making due allowance for the times during which the device is switched off or running, but not actually in use. This can reduce vibration load over the entire work period by a significant margin.

- Implement additional safety measures to protect the operator from the effects of vibration, for example:
- Servicing of power tools and use tools
- Keeping hands warm
- Workflow organisation

# **13** Declarations of conformity

### 13.1 CPK hybrid Autotool system



### 13.2 Power pack CPK

C declaration o	f conformity
	POWER PACK CPK 106-00100 and 106-00110
Manufacturer: Address (street): Address (postcode/pl Telephone: Telefax: We declare that the produ	HellermannTyton GmbH Grosser Moorweg 45 ace): D-25436 Tornesch, Germany +49 4122/701-1 +49 4122/701-400 ct introduced to the market by us
	Power pack CPK
Product type:	Power supply unit
Machine type:	Power supply unit (direct current)
Serial number:	
is compliant in its design a requirements of the EC di	and construction with the basic safety and health rectives set out below:
Low Voltage Directiv	ve 2014/35/EU
The harmonised standard purpose:	s listed below were applied for this
IEC/EN 60950-1	
Tornesch, 25 January 201	7
HellermannTyton GmbH	
rep.	rep.
M. Burneister	0.4
Martin Burmeister Safety engineer	Olaf Wulff Head of development, application systems
	onds to a manufacturer's declaration in the meaning of the /42/EC, Annex II A. Changes, if made to the above-mentioned of this declaration

### 13.3 Battery pack – CPK hybrid Autotool

	AKKU – Autotool CF 106-006021	PK hybrid		
Product Type: Akk	and health requirement been applied according	9 45 00 fon of the product: 	The following	
Tornesch, 23.11.2021 HellermannTyton GmbH				
ppa. Ma. March State Hagen Spiess Head of Product Development	n	i. V. i.v. Markin Burmeister Martin Burmeister Safety Engineer	Burmeister, Martin 2022.01.13 14:48:49 +01'00'	

#### 13.4 Charger – CPK hybrid Autotool

# **HellermannTyton**

# E C - CONFIRMATION

#### POWER PACK – Autotool CPK hybrid 106-006021

Manufacturer: Street: Postal Code / City: Country:	HellermannTyton GmbH Großer Moorweg 45 25436 Tornesch Germany
Telefon: Fax:	+49 4122/701-1 +49 4122/701-400
/e herewith declare, th	at the design and construction of the product:
Name: POWE	R PACK – Autotool CPK hybrid
Product Type:	Universal Quick Charger
Machine Type:	Universal Quick Charger LiHD / Li-Ion, 12 V – 36 V
Serial Number:	
armonized standards h ow Voltage Directive 2 N 60335-1:2012/AC:201	4/A11:2014/A13:2017/A1:2019/A14:2019/A2:2019
armonized standards h ow Voltage Directive 2 EN 60335-1:2012/AC:201 EN 60335-2-29:2004/A2:2 Electromagnetic Compa EN 55014-1:2017 EN 55014-2:2015 EN 61000-3-2:2014 EN 61000-3-3:2013 RoHS Directive 2011/65/ EN IEC 63000:2018	nave been applied accordingly. 014/35/EU 4/A11:2014/A13:2017/A1:2019/A14:2019/A2:2019 2010 htibility Directive 2014/30/EU
armonized standards h Low Voltage Directive 2 EN 60335-1:2012/AC:201 EN 60335-2:29:2004/A2:2 Electromagnetic Compa EN 55014-1:2017 EN 55014-2:2015 EN 61000-3-2:2014 EN 61000-3-2:2014 EN 61000-3-3:2013 RoHS Directive 2011/65/ EN IEC 63000:2018 Fornesch, 23.11.2021	nave been applied accordingly. 014/35/EU 94/A11:2014/A13:2017/A1:2019/A14:2019/A2:2019 2010 htibility Directive 2014/30/EU
armonized standards h .ow Voltage Directive 2 EN 60335-1:2012/AC:201 EN 60335-2-29:2004/A2:2 Electromagnetic Compa EN 55014-1:2017 EN 55014-2:2015 EN 61000-3-2:2014 EN 61000-3-2:2014 EN 61000-3-3:2013 RoHS Directive 2011/65/ EN IEC 63000:2018 Fornesch, 23.11.2021 ElellermannTyton Gml opa.	nave been applied accordingly. 014/35/EU 4/A11:2014/A13:2017/A1:2019/A14:2019/A2:2019 2010 witibility Directive 2014/30/EU TEU DH i. V.
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narmonized standards h L <b>ow Voltage Directive 2</b> EN 60335-1:2012/AC:201 EN 60335-2-29:2004/A2: <i>:</i>	nave been applied accordingly. 014/35/EU 4/A11:2014/A13:2017/A1:2019/A14:2019/A2:2019 2010 witibility Directive 2014/30/EU TEU DH i. V.

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