

Cable drum rack with motor drive

KTG NE Mot



Translation of the original instructions

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1 ABOUT THIS MANUAL

1.1 Using this manual

These instructions contain all necessary information needed to operate the described product.

- ▶ Read the entire instructions before operating the product for the first time.
- ▶ Consider these instructions part of the product and store them at an easily accessible location.
- ▶ If these instructions are lost, please contact BAUR GmbH or your nearest BAUR representative (<http://www.baur.eu/baur-worldwide>).

1.2 Validity of these instructions

These operating instructions apply for:

Product name:	Cable drum rack with motor drive
Type:	KTG NE Mot




These are a translation of the original instructions.

1.3 Applicable documents

These instructions apply in conjunction with the user manual for the cable test van and applicable user manuals

1.4 Structure of safety instructions

The safety instructions in these instructions are presented as follows:

Danger symbol 	 SIGNAL WORD
	Type of danger and its source Possible consequences of violation. ▶ Measure to prevent the danger.

If a dangerous situation could arise at a specific step, the safety instruction is displayed immediately before this dangerous step and is shown as follows:




 **SIGNAL WORD**

Type of danger and its source. Possible consequences of violation.



1. Measure to prevent the danger.

Danger levels


Signal words in the safety instructions specify the danger levels.

 DANGER	Will lead to severe injuries or death.
 WARNING	May lead to severe injuries or death.
 CAUTION	May lead to light to moderate injuries.
NOTICE	May lead to material damage.

Danger symbols

	General danger
	Risk of electric shock

1.5 View settings

Symbol	Meaning
▶	You are prompted for an action.
1. 2. ...	Perform the actions in this sequence.
a. b. ...	If an operation consists of several operating steps, these are specified with "a, b, c". Perform the operating steps in this sequence.
1 2 ...	Numbering in the legend
▪	List
	Indicates further information on the topic in the corresponding user manuals.

1.6 Note on the graphics used

The graphics used are intended to illustrate the procedure and may differ slightly from the actual state.

2 FOR YOUR SAFETY

All BAUR devices and systems are manufactured according to the state of the art and are safe to operate. The individual parts and the finished devices are subject to continuous testing by our qualified personnel as part of our quality assurance system. Each device is tested before delivery.

However, the operational safety and reliability in practice can be achieved only when all necessary measures have been taken. The responsible body¹ and the operator² of the cable test van with inbuilt KTG NE Mot cable drum rack are responsible for planning these measures and monitoring their implementation.

Make sure that the responsible body and persons working with the cable drum rack have carefully read and understood these operating instructions and the user manuals for all integrated devices before beginning their work.

The responsible body and operator of the cable drum rack are responsible for any injuries or damage resulting from non-compliance with these instructions.

2.1 Intended use

The cable drum rack with motor drive KTG NE Mot is used to unwind the 3-phase HV connection cable manually and wind it up using a motor, and is permanently installed in the HV area of the cable test van.

The cable drum rack with motor drive is designed for use in the cable test van only. It is not suitable for use outside the cable test van.

- ▶ Use the cable drum rack only with the supplied cable or with a cable of same specification.

If the cable drum rack is not used in accordance with this stipulation, safe operation cannot be guaranteed. The operator or user is liable for any damage to persons and property resulting from incorrect operation.

Intended use also includes

- Compliance with all instructions in this document,
- Compliance with the technical data given in the instructions,
- Compliance with the inspection and maintenance instructions.

¹ Responsible body is the person or group that is responsible for the safe operation of the device and its maintenance (EN 61010-1, 3.5.12).

² Operator is the person who uses the device for its intended purpose (according to the definition of user in compliance with EN 61010-1, 3.5.11).

2.2 Instructions for the operator

The cable drum rack with motor drive may be operated only by qualified, authorised electrical engineers. An electrical engineer is a person who, owing to his professional education (electrical engineering), knowledge, experience and familiarity with the applicable standards and regulations, can assess the tasks assigned to him and detect possible dangers.

In addition, the operator must have:

- Knowledge of the technical equipment and operation of the cable drum rack,
- Knowledge of the cable types.

2.3 Avoiding dangers, taking safety measures

- ▶ When operating the cable drum rack, observe the following rules and guidelines:
 - Safety instructions in the user manual for the cable test van
 - Accident prevention and environmental protection regulations applicable for your country
 - Safety instructions and regulations of the country where KTG NE Mot is being used (according to the latest version)
 - If necessary, national and international standards and guidelines in accordance with the latest applicable version
 - Local safety and accident prevention regulations
 - Employers' liability insurance association regulations (if any)



2.3.1 Operation of the cable drum rack only in a technically safe condition

Safety, function and availability depend on the proper condition of the cable drum rack. Upgrades, modifications or alterations to the product are essentially prohibited.

- ▶ Operate the cable drum rack only in a technically perfect condition.
- ▶ In the event of damage and malfunction, immediately stop the cable drum rack, mark it accordingly and have the faults rectified by appropriately qualified and authorised personnel.
- ▶ Comply with the inspection and maintenance conditions.
- ▶ Use only accessories and original spare parts recommended by BAUR. The use of spare parts, accessories and special fittings that are not tested and approved by BAUR could adversely affect the safety, function and characteristics of the product.
- ▶ Never take the cable drum rack apart. It does not contain any components that could be serviced or repaired by the operator.



2.3.2 Dangers when working with electric voltage

The cable drum rack itself does not produce any dangerous voltage. However, during tests and measurements with the cable test van, dangerous - at times very high - voltage is generated that is fed to the test object via an HV connection cable. Operating personnel need to pay special attention and must be very careful while working with electric voltage.

	 DANGER
	<p>High electrical voltage on the test object and adjacent live plant parts</p> <p>Danger to life or risk of injury due to electric shock when unwinding or winding up the HV connection cables.</p> <ul style="list-style-type: none"> ▶ Before commencing work, the operator must assess the risks for the specific working conditions. Protective measures are based on the risk assessment and must be followed at the workplace. ▶ Comply with the safety instructions for working with electrical systems as per the applicable standards in your country. ▶ Before winding up the connection cables on the cable drum rack, discharge, earth and short-circuit the test object at both the connection point and at the far end. ▶ You may touch the plant parts that were under voltage only if they are visibly earthed and short-circuited.

2.3.3 Dangers when working with motorised cable drum racks

The cable drum rack with motor drive is installed in the HV area of the cable test van. The chain drive of the cable drum rack is covered with a chain guard. This guarantees protection against contact during normal operation of the cable drum rack. There is only danger of shearing or crushing when you remove the chain guard device.

	 WARNING
	<p>Chain drive exposed when chain guard dismantled</p> <p>Danger of being cut and crushed.</p> <ul style="list-style-type: none"> ▶ To dismantle the chain guard device and other similar tasks, contact your BAUR representative.

When used for its intended use, the cable drum rack including chain drive is maintenance-free.

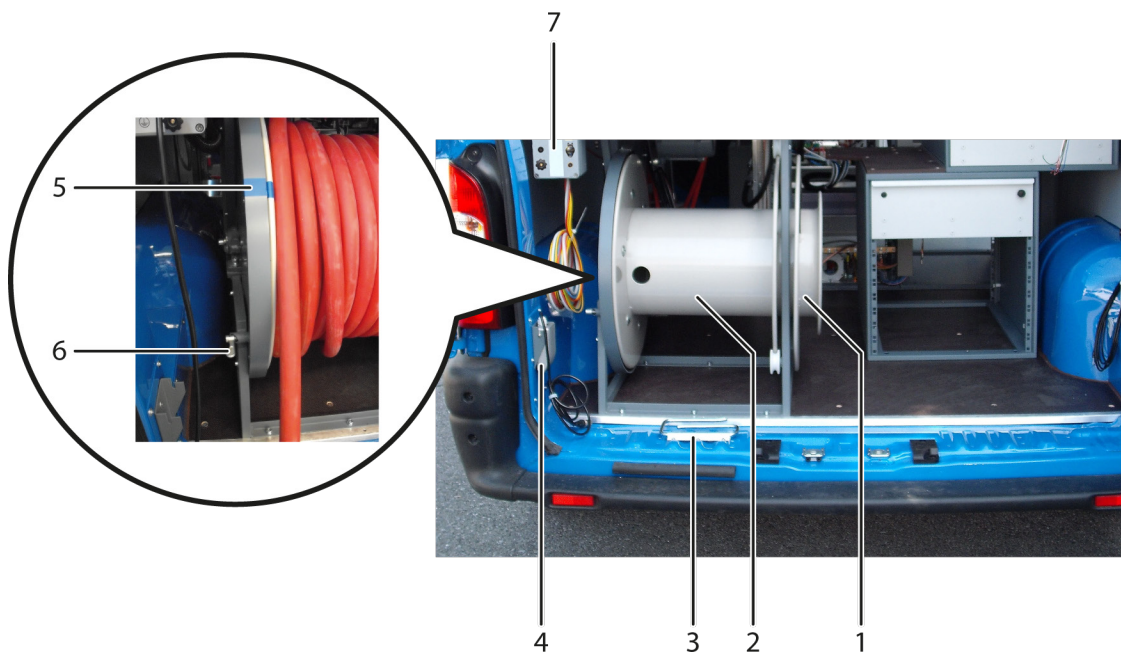
- ▶ If you are carrying out maintenance tasks on instruction and with support from BAUR After Sales, before dismantling the chain guard, disconnect the cable drum rack from the power supply:
 - a. Release the $I > 20 A$ safety cut-out on the connection box of the cable drum rack manually.
 - b. To prevent unintentional restart, remove the $T 1 AH$ fuse (foot switch fuse) from the cable drum rack connection box.

3 PRODUCT INFORMATION

3.1 Full illustration

The cable drum rack is permanently installed in the HV area of the cable test van and is used to store, unwind and wind up the 3-phase HV connection cable.

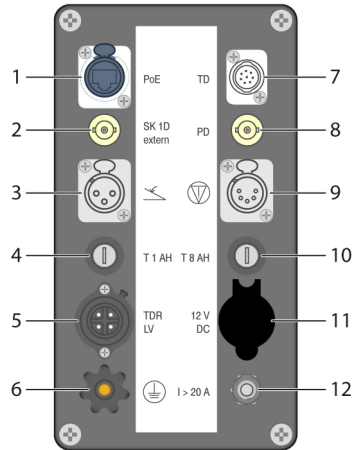
- ▶ Use the cable drum rack only with the supplied cable or with a cable of same specification.



No.	Element	Function
1	Holders	Are used to fasten the plugs of the HV connection cable (L1, L2, L3) and the operational earthing
2	Cable drum	Is used to store the HV connection cable
3	Cable guide clamp	Is used for proper guiding of the connection cables
4	Holder for the foot switch	Is used to store the foot switch
5	Marking	Is used to align the cable drum in such a way that the uncoiling brake can be fixed
6	Uncoiling brake for cable drum	Is used to fix the cable drum and to prevent unintentional unwinding of the connection cable
7	Connection box	Is used for various ports Further information: <i>Connection box on the cable drum rack</i> (on page 11)

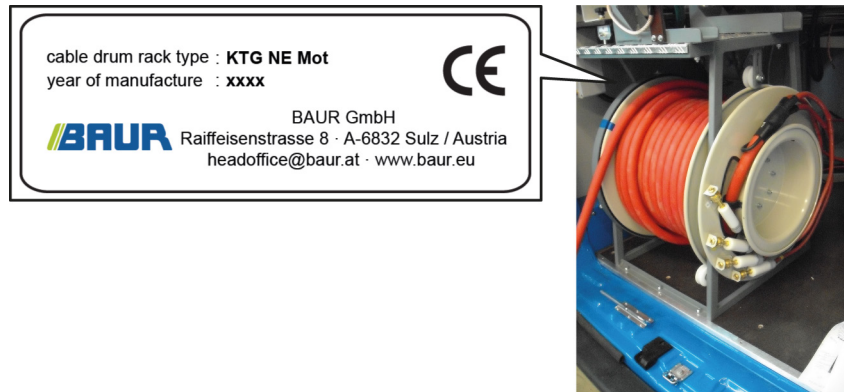
3.2 Connection box on the cable drum rack

The number of ports depends on the system configuration.



No.	Element	Function
1	PoE port	Is used to connect the PoE cable during the dissipation factor or PD testing using the PD-TaD 60 (option)
2	Port for SK 1D extern	Is not used
3	TDR LV port	Is used to connect a TDR connection cable
4	T 1 AH fuse	Is used to protect the foot switch
5	T 8 AH fuse	Is used to protect the external DC 12 V power supply
6	Protective earthing connection	Is used to connect the protective earthing of external devices (if necessary)
7	TD port	Is used to connect the TD cable during the dissipation factor measurement using the PD-TaD 60 (option)
8	PD port	Is used to connect a BNC cable during the PD testing using the PHG 70 / PHG 80 with PD measurement function (Option)
9	Port for the external emergency off unit	Is used to connect an external emergency off unit If no external emergency off unit is being used, this port is bridged with a bypass plug.
10	Port for the foot switch	Is used to connect the foot switch
11	12 V DC port	Is used for power supply with 12 V (e.g. for a rotating beacon)
12	Safety cut-out I > 20 A	Is used to secure the motors of the cable drum rack

3.3 Rating plate



Element	Description
cable drum rack type	Type designation
year of manufacture	Year of manufacture

3.4 Description of work place

The cable drum rack is installed in the HV area of the cable test van. To unwind and wind up the cables, the operator must open the rear doors of the cable test van. To operate the cable drum rack, the operator stands in front of the cable drum rack by the open rear doors. The location of the cable test van is determined by the place at which the testing and measurement tasks are to take place.

4 TECHNICAL DATA

Motor drive

Nominal voltage	12 V
-----------------	------

Rated output	32 W
--------------	------

Nominal current	7.5 A
-----------------	-------

Maximum current	35 A
-----------------	------

Rated speed	40 min ⁻¹
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Dimensions (W x H x D)

Cable drum rack with cable drum	Approx. 580 x 800 x 580 mm
---------------------------------	----------------------------

5 OPERATION

- ▶ Follow the information below:
 - The safety instructions in the chapter *For your safety* (on page 7)
 - Local safety and accident prevention regulations
 - Safety instructions and regulations according to the state-of-the-art
 - Applicable standards in your country
 - Employers' liability insurance association regulations (if any)



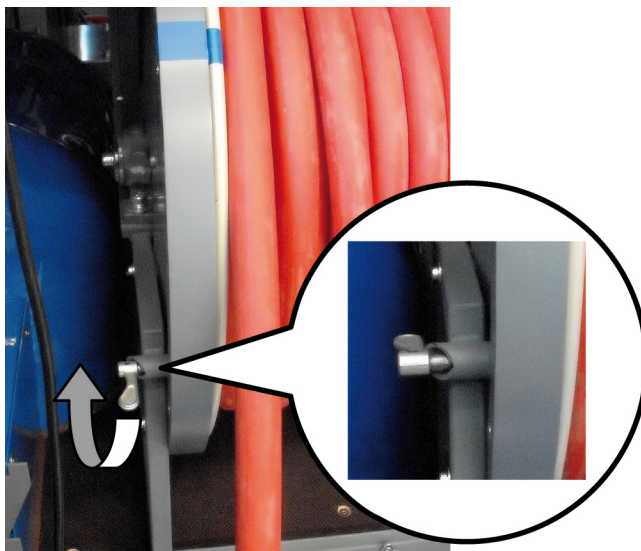
- ▶ Follow the instructions in the user manual for the cable test van and the vehicle.
-

5.1 Checks to be carried out prior to every use

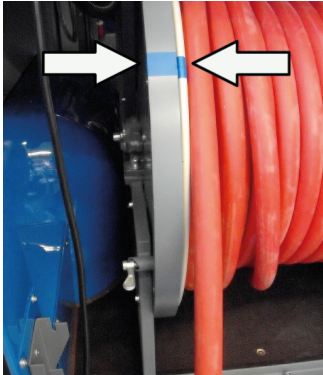
1. Operate the cable drum rack only in a technically perfect condition.
2. Check the components and mounting of the cable drum rack for damage.
3. Check electrical connections and connection cables for damage.
Use only undamaged connection cables.
4. Make sure that your work place is on an even and slip-proof ground and free of obstacles (tripping hazard).

5.2 Unwinding the connection cable from the cable drum

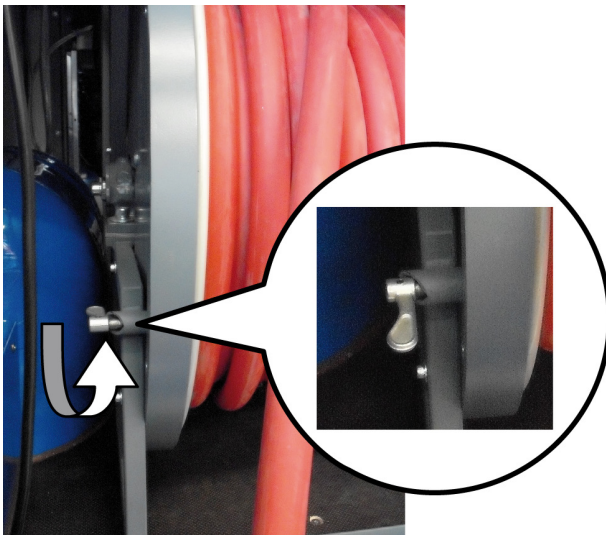
1. Make sure that the phases of the HV connection cable are not connected anywhere. Otherwise you will not be able to unwind the phases.
2. Release the uncoiling brake on the cable drum: To do this, turn the brake lever backwards clockwise.



- Unwind the phases of the HV connection cable to the desired length.
Guide the phases through the cable guide clamp. This arranges the phases in such a way that on closing the rear doors of the cable test van, they go into the cable outlet and do not get jammed.
- Make sure that the markings on the cable drum are at the same height. Otherwise you will not be able to affix the uncoiling brake.



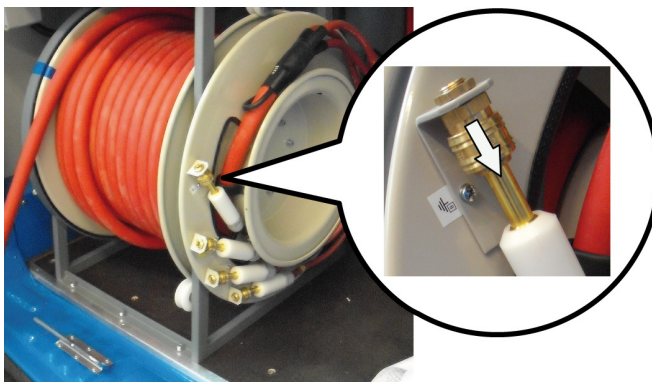
- Attach the uncoiling brake to the cable drum: To do this, turn the brake lever forwards anti-clockwise.



This prevents the cable from unwinding unintentionally.

5.2.1 Withdrawing the plug for the HV connection cable from the holder

- To withdraw the plug of the HV connection cable, press the relevant shank downwards (see figure).



5.3 Winding up the connection cable on the cable drum using the motor

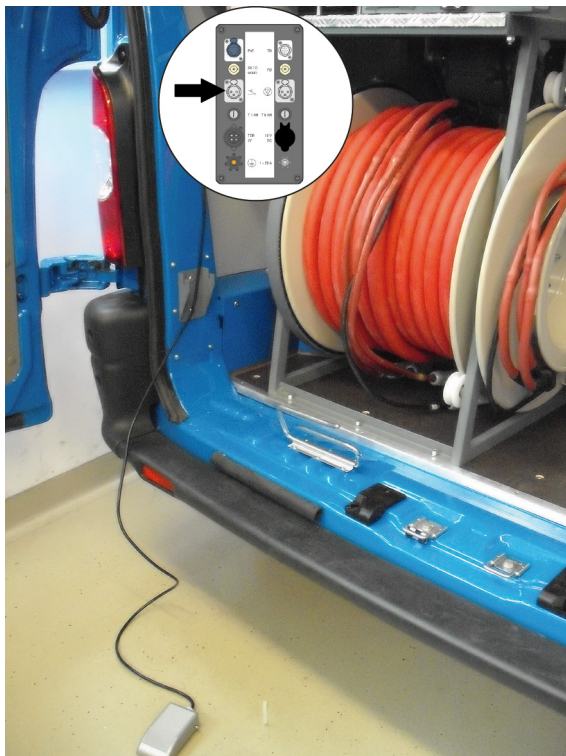
	⚠ DANGER
Dangerous voltage on the test object and adjacent live plant parts	
Danger to life from electric shock or risk of injury when winding up the HV connection cables.	
Once the testing and measurement tasks have been completed with the cable test van, there may still be a dangerous voltage on the test object and other live plant parts.	
<ul style="list-style-type: none">▶ Discharge, earth and short-circuit test object and all live parts before winding up the HV connection cables.▶ You may touch the plant parts that were under voltage only if they are visibly earthed and short-circuited.	

Prerequisite

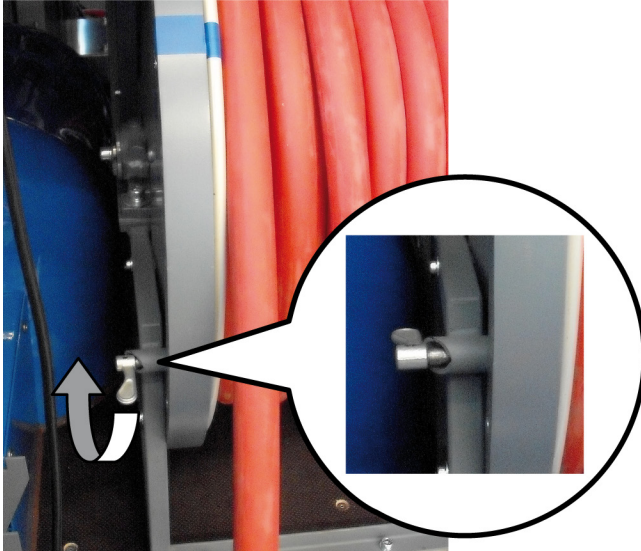
The connection cable is voltage-free.

Procedure

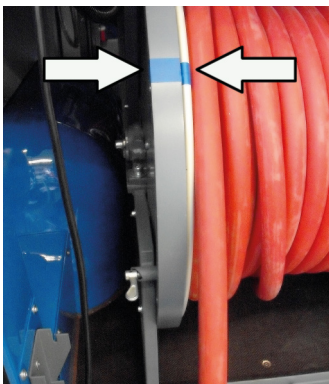
1. Disconnect the phases of the HV connection cable and lay them straight without loops. Make sure that the phases cannot drag over sharp objects.
2. Check the HV connection cable for cracks, damage and any dirt.
3. If the HV connection cable is dirty, clean it with a lint-free cloth.
4. Connect the foot switch to the connection box.



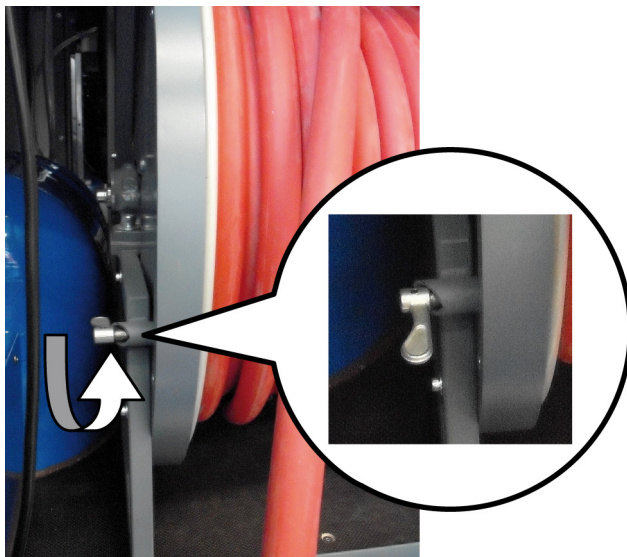
5. Place the foot switch on the floor in front of the cable test van so that you can operate the foot switch comfortably and without obstacles.
6. Remove the phases of the HV connection cable from the cable guide clamp.
7. Release the uncoiling brake on the cable drum: To do this, turn the brake lever backwards clockwise.



8. Press the foot switch.
You can stop the winding up of the connection cable at any time by releasing the foot switch.
9. So that the connection cable is distributed evenly on the cable drum, guide the cable with your hand while winding it up.
10. After the connection cable is wound up, release the foot switch.
The power supply of the motor drive is disconnected. The motor drive is taken out of operation.
11. Make sure that the markings on the cable drum are at the same height. Otherwise you will not be able to affix the uncoiling brake.



12. Attach the uncoiling brake to the cable drum: To do this, turn the brake lever forwards anti-clockwise.





This prevents the cable from unwinding unintentionally.

13. Place the plugs of the HV connection cable in their holders on the cable drum.

5.4 Manually winding up the connection cable on the cable drum

If required, the connection cable may also be wound up on the cable drum manually.

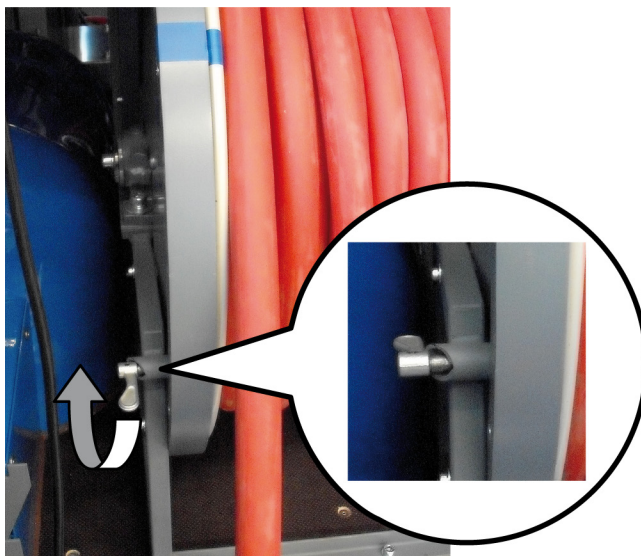
	 DANGER
<p>Dangerous voltage on the test object and adjacent live plant parts</p> <p>Danger to life from electric shock or risk of injury when winding up the HV connection cables.</p> <p>Once the testing and measurement tasks have been completed with the cable test van, there may still be a dangerous voltage on the test object and other live plant parts.</p> <ul style="list-style-type: none"> ▶ Discharge, earth and short-circuit test object and all live parts before winding up the HV connection cables. ▶ You may touch the plant parts that were under voltage only if they are visibly earthed and short-circuited. 	

Prerequisite

The connection cable is voltage-free.

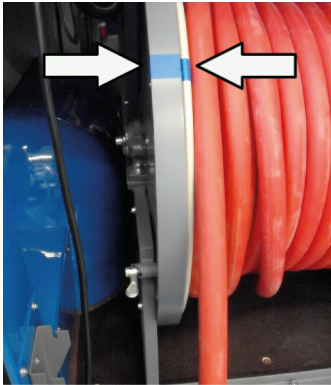
Procedure

1. Disconnect the phases of the HV connection cable and lay them straight without loops. Make sure that the phases cannot drag over sharp objects.
2. Check the HV connection cable for cracks, damage and any dirt.
3. If the HV connection cable is dirty, clean it with a lint-free cloth.
4. Remove the phases of the HV connection cable from the cable guide clamp.
5. Release the uncoiling brake on the cable drum: To do this, turn the brake lever backwards clockwise.

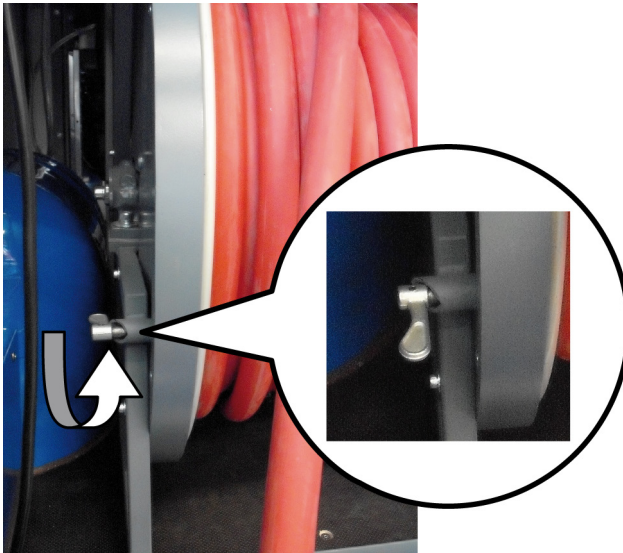


6. Wind up the connection cable manually.
7. Ensure that the connection cable is distributed evenly on the cable drum.

8. Make sure that the markings on the cable drum are at the same height. Otherwise you will not be able to affix the uncoiling brake.



9. Once the connection cable has been wound up, attach the uncoiling brake to the cable drum: To do this, turn the brake lever forwards anti-clockwise.





This prevents the cable from unwinding unintentionally.

10. Place the plugs of the HV connection cable in their holders on the cable drum.

6 MAINTENANCE

6.1 Safety instructions for maintenance work

The cable drum rack with motor drive is installed in the HV area of the cable test van. The chain drive of the cable drum rack is covered with a chain guard. This guarantees protection against contact during normal operation of the cable drum rack. There is only danger of shearing or crushing when you remove the chain guard device.

	 WARNING
	Chain drive exposed when chain guard dismantled Danger of being cut and crushed. <ul style="list-style-type: none">▶ To dismantle the chain guard device and other similar tasks, contact your BAUR representative.

When used for its intended use, the cable drum rack including chain drive is maintenance-free.

- ▶ If you are carrying out maintenance tasks on instruction and with support from BAUR After Sales, before dismantling the chain guard, disconnect the cable drum rack from the power supply:
 - Release the $I > 20 A$ safety cut-out on the connection box of the cable drum rack manually.
 - To prevent unintentional restart, remove the $T 1 AH$ fuse (foot switch fuse) from the cable drum rack connection box.

6.2 Replacing fuses on the connection box of the cable drum rack

Prerequisites



Flat-blade screwdriver 1.2 x 6.5 mm

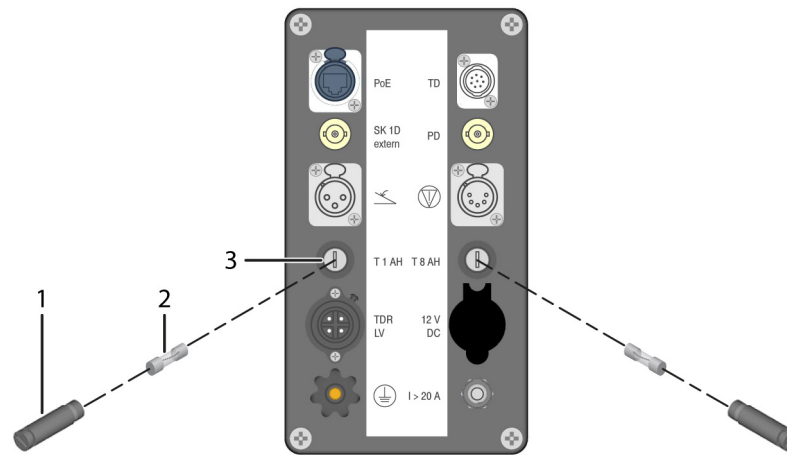


Fuses:

T 1 AH (1 A time lag)

T 8 AH (8 A time lag)


Procedure



- 1 Fuse cartridge
- 2 Fuse
- 3 Groove

1. Unscrew the fuse cartridge (1) from the groove (3).
2. Replace the fuse (2).
3. Screw the fuse cartridge (1) back into the groove (3).

6.3 Checking and cleaning the connection cables and accessories

	! WARNING
	<p>Dangerous voltage in system components and adjoining live plant parts</p> <p>Danger to life, risk of injury due to electric shock.</p> <ul style="list-style-type: none"> ▶ You may touch the live plant parts and connection fittings that were under voltage only after they have been discharged and earthed. ▶ Cover the live plant parts properly.

NOTICE

Damage to cable due to aggressive cleaning agents

- ▶ Do not use any abrasive, corrosive cleaning agents or strong solvents.
- ▶ Ensure material compatibility.
- ▶ Do not clean the connection cables with acetone or thinner.



- Mild cleaning agents or petroleum ether
- Lint-free cleaning cloth

Checking and cleaning after each use

1. Each time after using the system, clean the connection cables and wind them up onto the cable drum.
2. Check the connection cables for damage.
Cracks, breaks or other damage in the connection cable can damage the cable.
3. If dirty, clean the connection accessories with a lint-free cloth.
Dirty or corroded contacts can affect the measurement and are often the cause for device damage.

Regular inspection

- ▶ Every four weeks, check the condition of all connection cables on the cable drums. To do this, unwind the connection cables and examine them for cracks, damage and any dirt.
- ▶ Regularly check all connection accessories for damage and dirt.

7 FAULTS

Fault	Possible causes / corrective measures
<p>The connection cable is not wound up. The motor runs when you press the foot switch.</p>	<p>The uncoiling brake of the cable drum is pulled.</p> <ul style="list-style-type: none"> ▶ Release the uncoiling brake on the cable drum.
<p>The connection cable is not wound up. The motor runs when you press the foot switch.</p>	<p>The foot switch (1) is not connected.</p> <ul style="list-style-type: none"> ▶ Connect the foot switch to the connection box of the cable drum rack.
	<p>The safety cut-out $I > 20 A$ (2) on the connection box of the cable drum rack has been triggered (safety cut-out has jumped out).</p> <ul style="list-style-type: none"> ▶ Push in the safety cut-out again.
	<p>The fuse $T 1 AH$ (3) on the connection box of the cable drum rack is faulty.</p> <ul style="list-style-type: none"> ▶ Remove the fuse and check if it is defective. ▶ Exchange the faulty fuse.

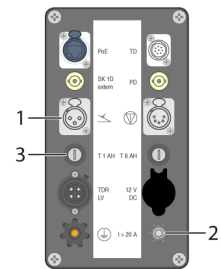


Figure: Connection box of cable drum rack

8 WARRANTY AND MANUFACTURER CONTACT DETAILS

Warranty

For warranty claims, please contact BAUR GmbH or your local BAUR representative (<http://www.baur.eu/baur-worldwide>). Warranty is cancelled in case of misuse. Wear parts are excluded from the warranty.

After Sales

For questions contact BAUR GmbH or your BAUR representative (<http://www.baur.eu/baur-worldwide>).



BAUR GmbH

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6832 Sulz / Austria
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9 DECLARATION OF CONFORMITY

EC Declaration of Conformity in accordance with EC Machinery Directive 2006/42/EC, Annex II, 1A

We,



BAUR GmbH
Raiffeisenstraße 8
6832 Sulz / Austria
headoffice@baur.at
www.baur.eu

declare, under our sole responsibility, that the BAUR product

Cable drum rack with motor drive

KTG NE Mot

to which this declaration refers conforms to the following standards or standard documents:

- Machinery Directive 2006/42/EC
The product does not come under the machines listed in Annex IV and therefore was not subjected to external review.
- EN ISO 13857:2008
- EN 1037:1995 + A1:2008

Person responsible for the technical documents: Roland Ellensohn, Director - Design, BAUR GmbH – Address, see above.

Signed: Torsten Berth, Technical Director
 Dr. Eberhard Paulus, Director QM/QS

Sulz, 20/11/2015

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