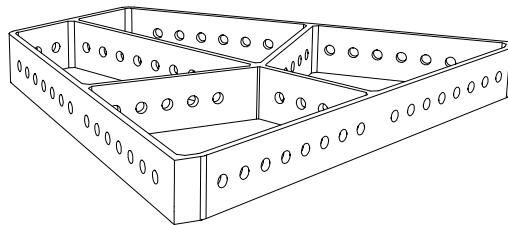


MCT24

Assembly Instructions



Introduction

Thank you for choosing a high-quality product “MADE IN GERMANY” from the brand TWAUDIÖ.

The main-cradle-frame MCT24 is an accessory for the T24(N) loudspeaker.

It is characterized by a subtle look, a remarkable size to weight ratio and ease of use.

If you lend your product to another party, inform that party of the safety-related operating procedures and hand over this assembly guide. If you require additional copies of this manual, you can obtain them free of charge from TWAUDIÖ or download them from www.twaudio.de

Instructions in this user manual

Strictly adhere to the instructions contained in this operating manual that are marked as follows:



This symbol in combination with the signal word “Warning” identifies a potentially hazardous situation. Failure to comply with this safety instruction can lead to serious injury or even death.



This symbol in combination with the signal word “Caution” identifies a potentially hazardous situation. Failure to comply with this safety instruction can lead to light or moderate injury.



This symbol in combination with the signal word “Note” identifies a potentially hazardous situation. Failure to comply with this safety instruction can lead to product damage.



This symbol in combination with the signal word “Tip” identifies additional information or notes that will simplify working with TWAUDIÖ products on the basis of practical experience.

Notes on the products

**Read manual
before use!**

Before using the device, carefully read the assembly instructions and keep it with the MCT24 main-cradle-frame.

General information

Assembly instructions: OM-MCT24
Version 2.0 en, 09/2022
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All information contained in this operating manual was correct to the best of our knowledge at the time of printing.

Quality warranties or assurance of suitability for a certain type of use based on the technical specifications, dimensions and weights are not granted by TWAMBO.

TWAMBO also shall not assume liability for any secondary damage (property damage and/or personal injury) nor for the failure to comply with this operating manual!

TWAMBO reserves the right to update this document based on recent developments.

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1. Safety | Intended use

Please adhere to the following safety instructions to avoid risks when using accessories.

The MCT24 main-cradle-frame was developed for use in professional sound systems. The main-cradle-frame may only be used by trained and qualified personnel.

Note the operating modes described in this assembly instructions. Other uses are not permissible.

Damage caused by improper use is not covered by TWAMBO.



Before every operation, check the scope of delivery of the MCT24 main-cradle-frame for its completeness and ensure that all parts are in perfect condition.

The scope of delivery includes specified components. Only use the recommended and certified components.



The MCT24 main-cradle-frame may only used with the T24(N) loudspeaker.

This rigging manual describes how to use the MCT24 main-cradle-frame correctly. Any other use shall be deemed improper and may result in damage or even injury.

Modifications or alterations to individual parts of the MCT24 main-cradle-frame are not permitted! Danger to life!



The MCT24 main-cradle-frame is designed both for indoor and outdoor use.



The MCT24 main-cradle-frame may only be used by trained and qualified personnel. Personnel must check the MCT24 main-cradle-frame for suitability before each use.



The MCT24 main-cradle-frame must be taken out of operation immediately as soon as visible damage to the parts can be seen.



Please keep all elements of the MCT24 main-cradle-frame away from children! The small parts can easily be swallowed and lead to suffocation!



When working with heavy loads exceeding 20 kg (44 lbs.), use suitable aids (dollies, hoisting slings, etc.). Multiple persons may be required depending on the situation.



The payload of the MCT24 main-cradle-frame is designed for not more than 12x T24(N) loudspeaker. The following additional components are required for this: CBT24 cradle bar for flying, BAT24 adapter, BBT24 bracket and BLT24 Boxlink connecting cables on both sides of the T24(N) loudspeaker. Do not exceed this payload.



The payload of the MCT24 main-cradle-frame is designed for not more than nine T24(N) loudspeakers when using two MCT24 main-cradle-frames bolted together as a T24(N) system cluster. The following additional components are required for this: CBT24 cradle bar for flying, BAT24 adapter, BBT24 bracket and BLT24 Boxlink connecting cables on both sides of the T24(N) loudspeaker. Do not exceed this payload.



Check the Double Stud connections each time you install the MCT24 main-cradle-frame. They must be firmly engaged and secured with a safety locking splint. If this is no longer possible, the Double Stud connections with the safety locking splints must be replaced.



Before mounting the MCT24 main-cradle-frame check that e.g. ceilings are capable to carrying the payload of the components.



Make sure that no water pipes, electrical lines or any other lines are behind the intended place of mounting.



Only use wall plugs and screws which are suitable for the intended mounting and structural fabric. All screws must be set and tightened properly. Ensure that the fixing holes have the correct depth and diameter. Always use all fixing holes.



When moving (assembling, dismantling, maintaining) the MCT24 main-cradle-frame with T24(N) loudspeaker, ensure sufficient space to prevent collisions with other objects.



Do not squeeze or twist the electrical cables of the T24(N) loudspeaker during the installation of the MCT24 main-cradle-frame! The respective national electrotechnical rules and regulations are applicable.

2. Overview

2.1 Components

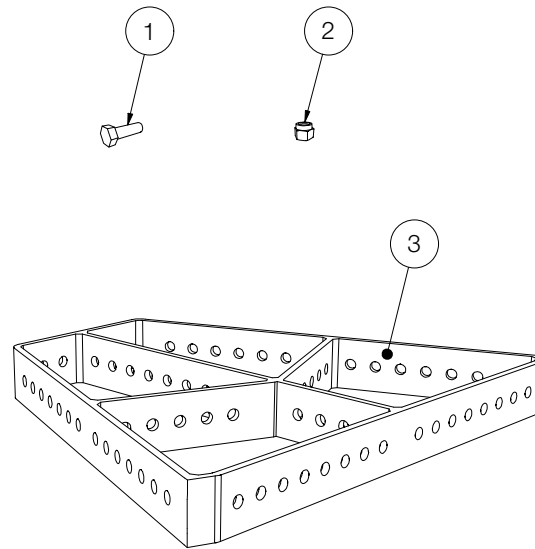


Figure 2.1 - Overview

- | | | |
|----|--|----------|
| 1. | Hexagon screw M12 x 40..... | 2 pieces |
| 2. | Hexagon nut with clamping part M12 | 2 pieces |
| 3. | Main-cradle-frame | 1 piece |

3. Technical data

3.1 Data sheet

<p>Standard variant:</p> <p>Maximum load capacity:</p> <p>in combination with: 2x CBT24 cradle bar for flying 2x BAT24 adapter, 4x BBT24 bracket and 4x BLT24 Boxlink-connecting cables on both sides of the T24(N) loudspeakers</p>	<p>4x T24(N)</p>
<p>Maximum variant:</p> <p>Maximum load capacity:</p> <p>in combination with: 2x CBT24 cradle bar for flying 2x BAT24 adapter, 12x BBT24 bracket and 20x BLT24 Boxlink-connecting cables on both sides of the T24(N) loudspeakers</p>	<p>12x T24(N)</p>
<p>Standard variant with 2x MCT24</p> <p>Maximum load capacity:</p> <p>in combination with: 3x CBT24 cradle bar for flying 3x BAT24 adapter, 6x BBT24 bracket and 6x BLT24 Boxlink-connecting cables on both sides of the T24(N) loudspeakers</p>	<p>6x T24(N)</p>
<p>Maximum variant with 2x MCT24</p> <p>Maximum load capacity:</p> <p>in combination with: 3x CBT24 cradle bar for flying 3x BAT24 adapter, 9x BBT24 bracket and 12x BLT24 Boxlink-connecting cables on both sides of the T24(N) loudspeakers</p>	<p>9x T24(N)</p>
<p>Dimensions (h x w x d)</p>	<p>60 x 582 x 473 mm [2.36 x 22.91 x 18.62 in]</p>
<p>Weight</p>	<p>9,2 kg [20.28 lbs]</p>
<p>Surface</p>	<p>Powder-coated</p>

4. Commissioning

4.1 Setup

The MCT24 main-cradle-frame is designed for hanging operation. TWAUDIÖ provides a wide range of accessories to securely attach the main-cradle-frame.



Please note that setting up the MCT24 main-cradle-frame always requires two persons!



TWAUDIÖ recommends using only the accessories specified by TWAUDIÖ for securing and mounting loudspeakers.

4.2 Wind load



Before setting up the system outdoors, consider unexpected wind conditions at the operation site!

Disassemble your system immediately when wind speeds exceed 8 bft (34 to 40 kn / 62 to 74 kph / 38.5 to 46 mph) and secure the system components!

Make sure that there are no persons in the immediate vicinity of the system structure!



Make sure that the system structures are not operated over the audience at wind speeds in excess of 6 bft (22 to 27 kn / 39 to 49 kph / 24.2 to 30.45 mph) and that there are no persons in the immediate vicinity of the system structure!

4.3 General safety instructions for setting up the following rigging variants:



Use shackles that are designed according to the payload for each system setup.



Attach the ASK sling chain to four other pin points on the MCT24 main-cradle-frame for each system setup. Use a sling chain or chain hoist to hang the ASK sling chain with the system setup.



For the secondary safety component, the respective national electrotechnical regulations apply.



Attach this secondary safety component by using one furthermore shackle, chain sling or chain hoist on another pin point.



Any influences on your system setup, such as leaning against objects (or people) and flying objects around, be refrained from!

4.4 Mounting ASK44 sling chain at one MCT24 main-cradle-frame



Note that for the MCT24 main-cradle-frame you cannot determine the number of T24(N) loudspeakers which matching your application as well as the appropriate pin points using the EASE Focus simulation software!



Make sure that the MCT24 main-cradle-frame is held in the horizontal position with the ASK44 sling chain in every application with your system setup!

Determine always the pin points you require before setting up the system!



Then attach the ASK44 sling chain with the shackles to four another pin points on the MCT24 main-cradle-frame, as shown for example in Figure 4.4.

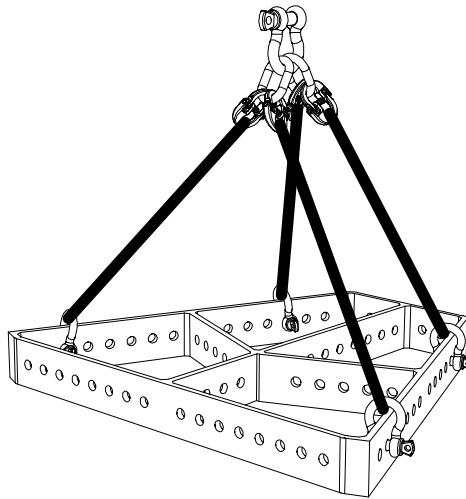


Figure 4.4 - Mounting ASK44 sling chain at one MCT24 main-cradle-frame

4.5 Mounting sequence with one MCT24 main-cradle-frame

Be sure to follow the assembly sequence below to mount the T24(N) loudspeakers to the MCT24 main-cradle-frame via the CBT24 cradle bar for flying:



1. Attach the shackle of the CBT24 cradle bar for flying to another pin point with another shackle designed according to the total weight.
2. Before mounting the BAT24 adapter, observe its assembly and safety instructions!
3. Before mounting the BBT24 bracket, observe its assembly and safety instructions!
4. Now connect the BBT24 bracket with the BAT24 adapter via the upper quick-locking pin of the BBT24 bracket!

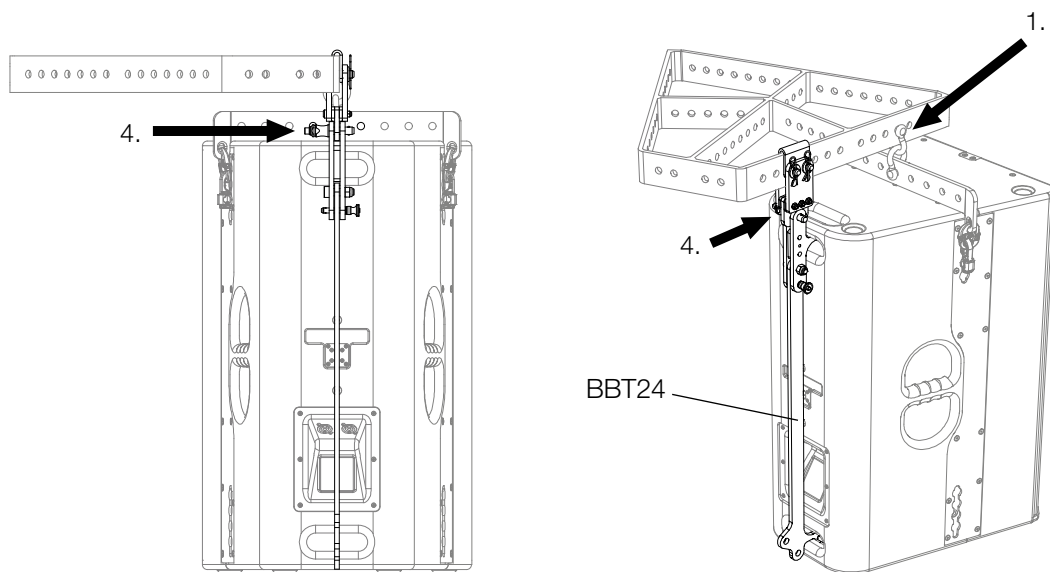


Figure 4.5 - Mounting T24(N) to MCT24 with CBT24 and BAT24
 Grafic shown without ASK44 sling chain.



Check that all quick-locking pins are always completely inserted!



Check that all Double Studs are engaged and that they have been secured with safety locking splints!

4.6 Standard and maximal variant with one MCT24 main-cradle-frame



The standard variant has established itself in which four T24(N) loudspeakers are used with two CBT24 cradle bar for flying, four BBT24 brackets, two BAT24 adapter and four BLT24 Boxlink connector cables. (See figure 4.6)

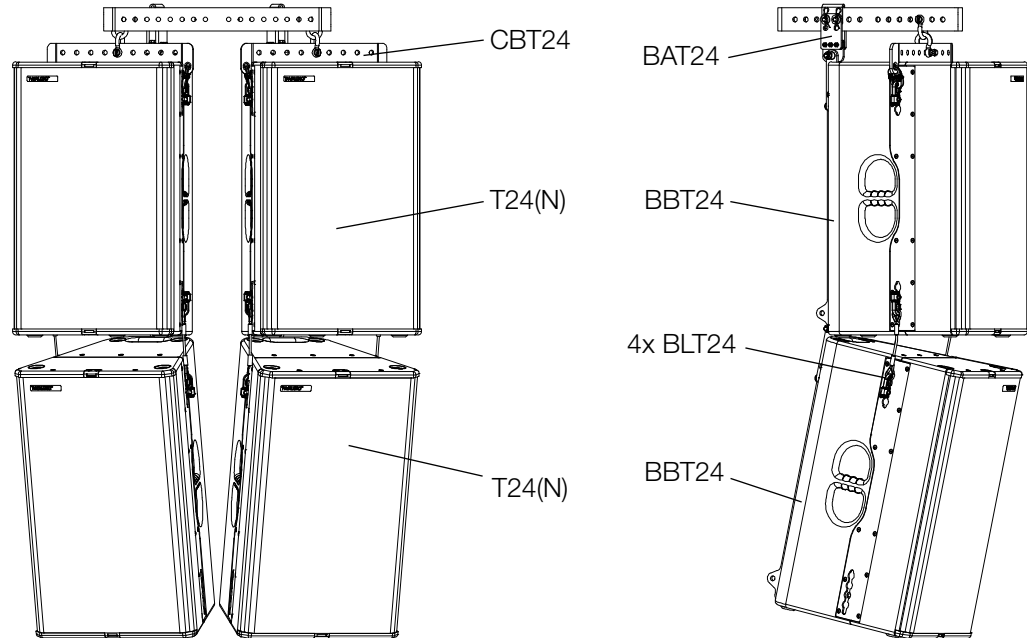


Figure 4.6 - Standard variant

Graphic shown without ASK44 sling chain.



Connect a maximum of 12x T24(N) loudspeakers to each other using the BBT24 brackets (12 pieces) and the BLT24 Boxlink connector cables (20 pieces). The BLT24 Boxlink connector cables on both sides of the T24(N) loudspeakers.

4.7 Mounting of two MCT24 main-cradle-frame

For applications where the T24(N) system cluster needs to be extended laterally, two MCT24 main-cradle-frames can be bolted together at the side beams.



Before screwing the two MCT24 main-cradle-frames together, always note the pin points that match your application. Also note that your system setup is held in the horizontal position with the ASK44 sling chain!

Determine always the pin points you require before setting up the system!
Only then screw the two MCT24 main-cradle-frames together!



Screw the two MCT24 main-cradle-frames to the side beams as shown for example in figure 4.7. For this purpose, use the hexagon screws and nuts included in the scope of delivery.

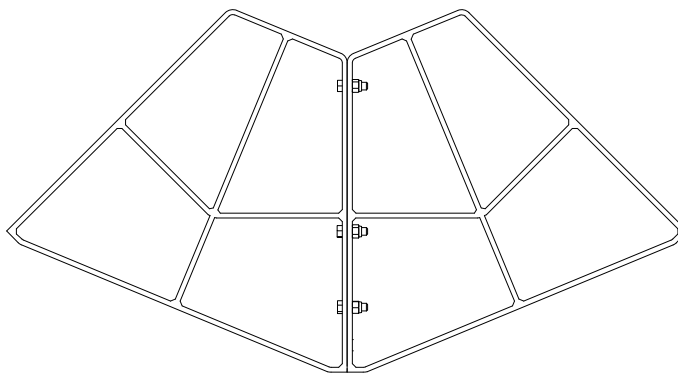


Figure 4.7 - Bolting two MCT24 main-cradle-frames together

4.8 Mounting ASK44 sling chain on two MCT24 main-cradle-frames



Note that for the MCT24 main-cradle-frame you cannot determine the number of T24(N) loudspeakers which matching your application as well as the appropriate pin points using the EASE Focus simulation software!



Make sure that the two MCT24 main-cradle-frames are held in the horizontal position with the ASK44 sling chain in every application with your system setup!

Determine always the pin points you require before setting up the system!



Then attach the ASK44 sling chain with the shackles to four another pin points on the center supports of the two MCT24 main-cradle-frames, as shown for example in figure 4.8.

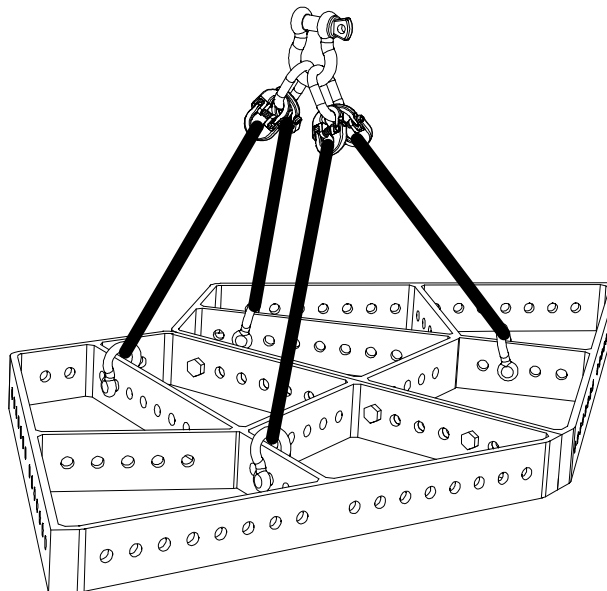


Figure 4.8 - Mounting ASK44 sling chain at two MCT24 main-cradle-frames

4.9 Mounting BAT24 adapter to two MCT24 main-cradle-frames

For applications where the T24(N) system cluster has been extended laterally, three CBT24 system setups, each with two T24(N) loudspeakers, can now be attached to the two MCT24 main-cradle-frames.



Attach the three BAT24 adapters to two pin points on each of the side beams of the two MCT24 main-cradle-frames, as shown for example in figure 4.9.

Use the two lower holes of the BAT24 adapter for this purpose!



Note that the distance plate of the middle BAT24 adapter is not used! (see assembly instructions BAT24 - page 7 - chapter 2.1 - pos.1)

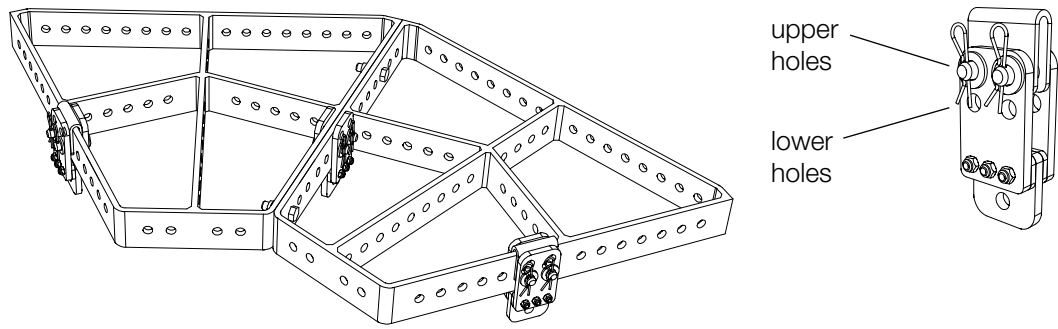


Figure 4.9 - Mounting of three BAT24 at two MCT24
Grafic shown without ASK44 sling chain.



Be sure to follow the mounting sequence of chapter 4.5 on page 12 to mount the T24(N) loudspeakers to the MCT24 main-cradle-frame via the CBT24 cradle bar for flying.



Check that all quick-locking pins are always completely inserted!



Check that all Double Studs are engaged and that they have been secured with safety locking splints!

4.10 Standard and Maximum variant with two MCT24 main-cradle-frames



The standard variant has established itself in which six T24(N) loudspeakers are used with three CBT24 cradle bar for flying, six BBT24 brackets, three BAT24 adapter and six BLT24 Boxlink connector cables. (See figure 4.10)

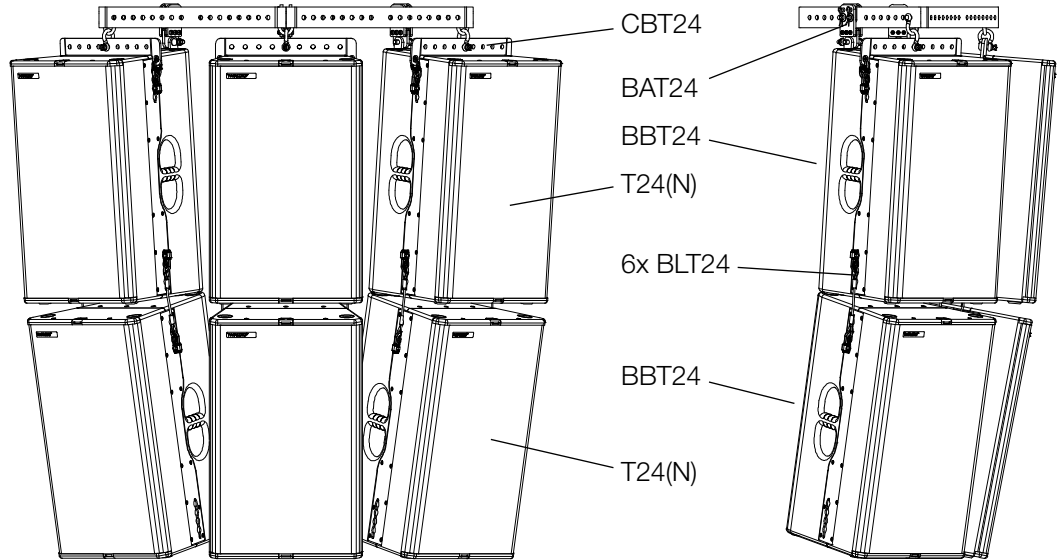


Figure 4.10 - Standard variant
 Grafic shown without ASK44 sling chain.



Connect a maximum of nine T24(N) loudspeakers to each other using the BBT24 brackets (9 pieces) and the BLT24 Boxlink connector cables (12 pieces). The BLT24 Boxlink connector cables on both sides of the T24(N) loudspeakers.

5. Transport and storage



Ensure that the surface of the Main-cradle-frame is not damaged during transport and storage. Moisture may penetrate where steel surfaces are exposed by scratches and result in corrosion.

This is why the product should be transported in a safe, careful, dry and largely dust-free manner.

The following accessory parts for the Main-cradle-frame are available from TWAUDIÖ:

- Shackle SK10
- Hexagon screw M12 x 40
- Hexagon nut with clamping part M12

The original packaging is unsuitable as permanent storage and transport packaging.

6. CE Conformity Declaration

Copy and translation of the original CE Conformity Declaration:



We hereby declare that the below-referenced components by virtue of their design and construction, and in the configuration placed on the market by us, satisfy the safety and health requirements of the applicable EC directives. This declaration becomes invalid in case of modifications that have not been approved by us.

Diese Erklärung betrifft folgende Komponenten

- MCT24

as well as all model variants based on these, provided that they correspond to the original factory models and have not been technically modified in any way.

Applicable directives:

- 2001/95/EG

Applicable national standards and technical specifications:

- DIN EN 18800
- DIN EN ISO 12100
- DGUV Vorschrift 17 und 18

Berlin, Germany, January 1st, 2021



Bernhard Wüstner

7. Disposal

If you have any question regarding the disposal of used devices, please contact us under the following telephone number:

+49 (0) 71 41 - 48 89 89 0

In countries outside of the European Union, comply with local regulations.

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