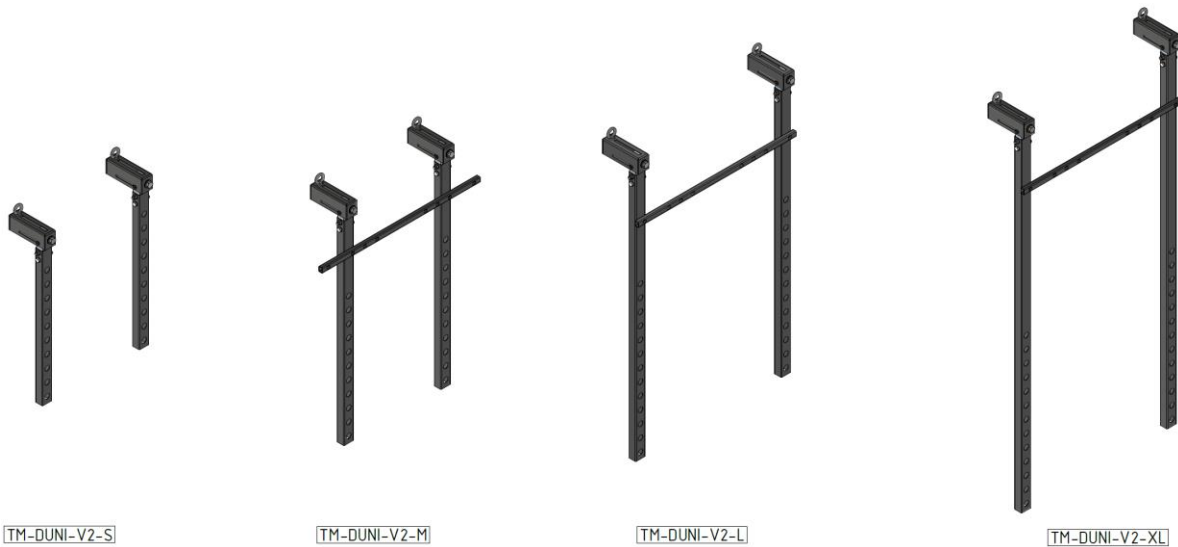


# TM-DUNI-V2-S / -M / -L / -XL

## Universal Truss Mount for Professional Displays



Manual Version 1.0

Date	Revision No.	Author	Checked	Approved	Description
15.03.2023	1.0	TSN	VIU	GHL	First version

### Contact

Tel.: +49 2204 9485 30

E-Mail: [info@exactsolutions.de](mailto:info@exactsolutions.de)

Web: [www.exactsolutions.de](http://www.exactsolutions.de)

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## 1. Preamble

The TM-DUNI-V2 Series has been developed and manufactured with the highest care and attention. However, improper handling can cause a risk for safety and / or damage. Read these instructions carefully before handling and installing the product so that you can safely enjoy your device. In the following pages, you will find all the needed information for a safe and fast installation.

After the installation is done properly, you can enjoy all the features of your new product.

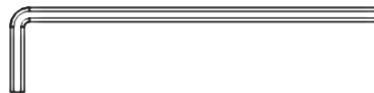
**Model number:**     **TM-DUNI-V2-S**  
                          **TM-DUNI-V2-M**  
                          **TM-DUNI-V2-L**  
                          **TM-DUNI-V2-XL**

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### 1.1 Tools required:



*Figure 1 Hex key 6 mm (Allen key)*



*Figure 2 Hex key 5mm (Allen key)*



*Figure 3 19 mm screw wrench*



*Figure 4 Universal torque key*

## 2. Safety instructions



These installation instructions must always be handed over to the person who is carrying out the installation.

Read these instructions carefully before installing the system.

### 2.1 Warnings



The TM-DUNI-V2 series is intended for use by fully qualified, trained and competent persons to provide safe and secure transportation, installation and adjustment of displays.



Warning: Handling only by instructed, qualified and authorised persons with a minimum age 18 years and of sound mind.



For indoor usage only

Only use the TM-DUNI-V2 series with display in a closed environment (conference rooms, theatres, convention halls, etc.) where there is no wind, moisture, excessive heat etc.



Make sure that only suitable displays are installed with TM-DUNI-V2 series. Do not try to use it with other displays because serious accidents can occur!



Do not remove or replace any parts of the TM-DUNI-V2 series on your own. Contact the manufacturer or service partner in case of damage or loss. Removing or replacing parts by non-certified companies or people might result in serious accidents and death.

### Definition of qualified persons:

#### Trained/Qualified person

A person can be considered as trained/qualified when it has been thoroughly informed and/or trained about the assigned task and the possible dangers that can occur in case of improper behaviour and / or not precisely observing the installation instructions.

#### Qualified/Specialised person

A person can be considered qualified or specialised when, based on specialised training, knowledge and experience, it can assess the work assigned and recognise possible dangers.

**Only use the TM-DUNI-V2 series and its components for its intended use.**

- If this product is used for something else than its intended use, serious accidents and death may result. See chapter 5.1 Intended use

**Installation work should only be carried out by a qualified technician.**

- If this product is not installed correctly, serious accidents and death may result.

**Do not use the TM-DUNI-V2 series outdoors.**

- This product is made only for indoor usage. If the product is mounted outdoor, there are many influences like wind or rain that can influence the stability of the whole system.
- This can cause property damage, serious accidents and death.

**A visual inspection must be done prior to every installation, in which the system is involved. The inspection must be performed by a qualified person.**

- All parts of the truss mount must be inspected in detail prior to any usage.
- Only if the product and all its components are in a flawless condition, it is safe to use the system.
- For further details, see chapter 9. System maintenance and inspection (Re-examination).
- Using a display truss mount which has damages, missing parts or the like can cause serious accidents and death.

**Only use displays that are suitable to be used with TM-DUNI-V2 series truss mount. When mounting the display to the truss mount, use all screws and washers that are specified by the display manufacturer. Make sure to tighten the screws safely, with the provided torque information by the display manufacturer.**

- It is mandatory to use all screws and safety washers that the manufacturer defines to mount the display. Use only the ones that are clearly specified.
- For a safe installation the screws must be tightened with the provided torque. The torque needs to be specified by the display manufacturer.
- Using the wrong screws or washers is highly dangerous. Tightening the screw with a too low torque can cause the screw to loosen itself. Tightening the screw with a too high torque might cause structural damage to the screw or the thread inside the display. Not using the safety washers enables the screw to loosen itself.

- Ignoring these instructions can cause the parts or the whole system to fall down and this can cause death, serious injuries or product damage.

**Do not install the TM-DUNI-V2 series while people are present under the mounting zone during the installation process.**

- When installing the truss mount and the display, make sure no one is in the area underneath the installation zone. Otherwise, this will be a risk for all people underneath, that could cause serious injuries and death.

**Make sure that the structure from which you hang the TM-DUNI-V2 series truss mount and the display is capable of carrying the overall weight. This overall weight must include the display, the TM-DUNI-V2 series truss mount plus the weight of all additional equipment as well as other potential systems. Do not hang the TM-DUNI-V2 series truss mount from unstable or inappropriate structures.**

- Prior to any installation, you must do a visual inspection to make sure that the system is in a good condition. For more information, please refer to chapter “9. System maintenance and inspection (Re-examination)”.
- If the truss mount is hung on an unstable structure, the entire system can fall down and injuries may occur.
- Ignoring this might cause significant damage to the product and serious accidents or death may result.

**Make sure to use only approved and recommended equipment to mount the TM-DUNI-V2 series to a supporting structure.**

- Typically, this equipment would be shackles, steel wires etc.
- Do not mount equipment that is not allowed to be used and not approved. Otherwise, using insufficient equipment may lead to serious injuries, death and property damage.

**Make sure to not exceed maximum weight loads.**

- Do not overload the TM-DUNI-V2 series truss mount or any additional mounting equipment and make sure the overall weight is within working specifications.
- Overloading the accessories and other equipment can cause serious accidents and death.

# Manual TM-DUNI-V2-S / -M / -L / -XL

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## Always ensure an even adjustment.

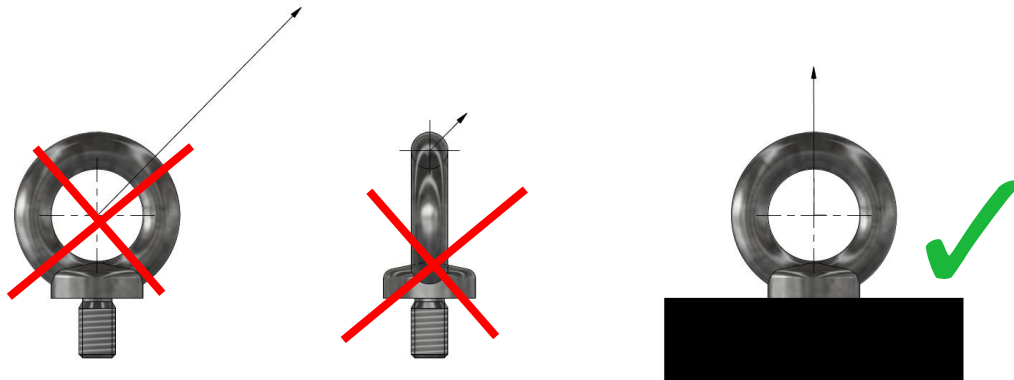
- Ensure equal adjustment of the mounting heads so that the system is evenly loaded. Unevenly loaded systems can cause accidents.

## When using the adjustment features of the TM-DUNI-V2 series truss mount, never apply significant force.

- When using the adjustment features for tilting correction, never apply force. All adjustments shall work smoothly and do not require significant force.
- If significant force is necessary, the cause may be a faulty part or that, the end of the adjustment range has been reached.
- Ignoring this, might cause significant damage to the product and serious accidents may result.

## The eye bolt on top of the mounting head should never be used under shear tension.

- The eye bolt is only allowed to be used when the force is applied straight upwards.
- Ignoring this, might cause significant damage to the product and serious accidents may result.



## Service work shall only be done by qualified personnel that is authorized by the manufacturer. Furthermore, only original spare parts shall be used.

- Unauthorized personnel shall never do service work on the products, as service work requires special training and knowledge.
- Spare parts must always be original ones, provided by the manufacturer.
- Not observing these rules on service work ends with immediate effect the responsibility of the manufacturer and, where applicable, warranty is irrecoverably lost. The product is no longer safe to use. This may cause serious accidents or death and property damage.



## 2.2 Caution

**Before installing the display to TM-DUNI-V2 series truss mount, please read the display's user manual.**

- The TM-DUNI-V2 series truss mount with the mounted display must be installed only in an environment that is recommended by the display manufacturer.
- If this product is not installed correctly, serious accidents may result.

**Minimum two persons are required to install TM-DUNI-V2 series.**

- With regard to the overall weight of all necessary installation devices, make sure to handle those with at least two people.

**Periodic inspections are mandatory.**

- Depending on local laws and regulations owners / users must do periodic inspections of the truss mount and all components. In case of German regulations this must be done and documented once a year by a qualified and authorised person. Furthermore, for German DGUV V17/V18 is mandatory to revalidate the safety, every four years. This must be done and documented by an expert, that is authorized by the German Social Accident Insurance (DGUV).

**Use suitable transport boxes / flight cases to protect the system during transport. Handle with care.**

- When transporting the truss mount, make sure you are using a flight case or something similar that protects against impacts during transport.

**Use only gentle cleaning agents to avoid damage.**

- Cleaning may be done with a soft cloth and a little bit of warm, slightly soapy water.
- Do not use any oil, acid etc. on the truss mount or its components. This may damage the system.

**Incorrect disposal is a risk to humans and nature.**

- Disposal must be done in accordance with local laws and regulations. Contact the manufacturer in case of any questions.

## 2.3 Risk Situations

**Risk of injury due to the possibility of falling objects during the assembly or disassembly of the TM-DUNI-V2 series truss mount.**

- Protection objective: avoid injury from falling parts.
- Wear appropriate safety shoes, gloves and helmet.
- Make sure the area under the truss mount is clear during installation.

**Risk of hitting the head with the TM-DUNI-V2 series truss mount during the hanging set up process.**

- Protection objective: avoid injury from hitting the head.
- Wear a helmet.

**Incorrect installation may lead to certain parts of the TM-DUNI-V2 series truss mount or the entire TM-DUNI-V2 series truss mount to fall down.**

- Protection objective: prevent personal injury and property damage.
- Double check the TM-DUNI-V2 series truss mount and its installation.

**Insufficient load capacity of the supporting structure may lead to certain parts of the TM-DUNI-V2 series truss mount or the entire TM-DUNI-V2 series truss mount to fall down.**

- Protection objective: prevent personal injury and property damage.
- Provide adequate dimensioning of the supporting structure. The supporting structure must be able to support the combined weight of all the equipment attached to, or hung from it.
- Ensure correct installation of the supporting structure.

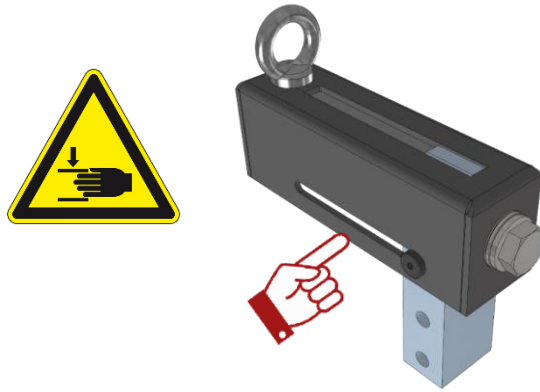
**Usage of unsafe ladders/steps/scaffolding may lead to serious personal injuries.**

- Protection objective: prevent personal injury by using only safe ladders/steps/scaffolding.
- Use only appropriate and safe equipment.
- Always follow the documentation of the manufacturer of the provided ladders/steps/scaffolding.
- Use personal safety equipment if necessary.

**The fingers or the hand of the user can be caught in the adjustment mechanism of the mounting head when the operator adjusts the tilting of the display.**

- Protection objective: prevent personal injury by using safety gloves.

- When the adjustment of the image is made, the user must always keep his hands away from moving parts (see picture below).



## 3. Scope of delivery



Note: Please check the delivery for completeness and possible damage immediately after you receive the shipment. Please contact your vendor in case of missing or damaged parts.

	<p>TM-DUNI-V2                  - Depending on your choice it can be size S, M, L or XL                  - Used for mounting the display</p> <p>One TM-DUNI-V2-S \-M \-L \-XL system consists of two identical components that are required for installing the display</p>
	<ol style="list-style-type: none"> <li>1) 8 x S6 Schnorr washers Steel 8.8</li> <li>2) 8 x S8 Schnorr washers Steel 8.8</li> </ol>
	<ol style="list-style-type: none"> <li>3) 1 x E21_RL-005 Horizontal Pipe*.</li> <li>4) 2 x M6x16 DIN912 Steel 8.8 Screws</li> <li>5) 2 x A6,4 DIN 125 Steel Washer Form A</li> </ol> <p><i>*only for the XL, L and M sizes. The TM-DUNI-V2-S is excluded.</i></p>
	<ol style="list-style-type: none"> <li>6) User manual</li> </ol>

## 4. Overview of model numbers

Model number	Description
TM-DUNI-V2-S	Universal Truss Mount for Professional Displays Size S
TM-DUNI-V2-M	Universal Truss Mount for Professional Displays Size M
TM-DUNI-V2-L	Universal Truss Mount for Professional Displays Size L
TM-DUNI-V2-XL	Universal Truss Mount for Professional Displays Size XL

## 5. Description of the product

### 5.1 Intended use

The TM-DUNI-V2 series is a mechanical solution designed and intended for mounting a professional display in a trussing system or something similar. It offers possibilities to adjust the tilting angle of the display so that the display hangs vertically straight down.

The TM-DUNI-V2 series is intended for use by fully qualified, trained and competent persons to provide safe and secure transportation, installation and adjustment of professional displays. The TM-DUNI-V2, as well as the compatible displays, are made only for indoor usage.

### 5.2 Specifications

Parameter	Value
Sizes [mm]	See drawings
Weight [kg] <b>TM-DUNI-V2 only</b>	TM-DUNI-V2-S 5,3 TM-DUNI-V2-M 7,0 TM-DUNI-V2-L 8,0 TM-DUNI-V2-XL 9,0
Maximum Display weight	95 kg
Operating temperature [°C]	0 - 45
Operating rel. humidity [%rH]	10 - 75
Operation area	Indoor, in closed rooms

## 5.3 System overview

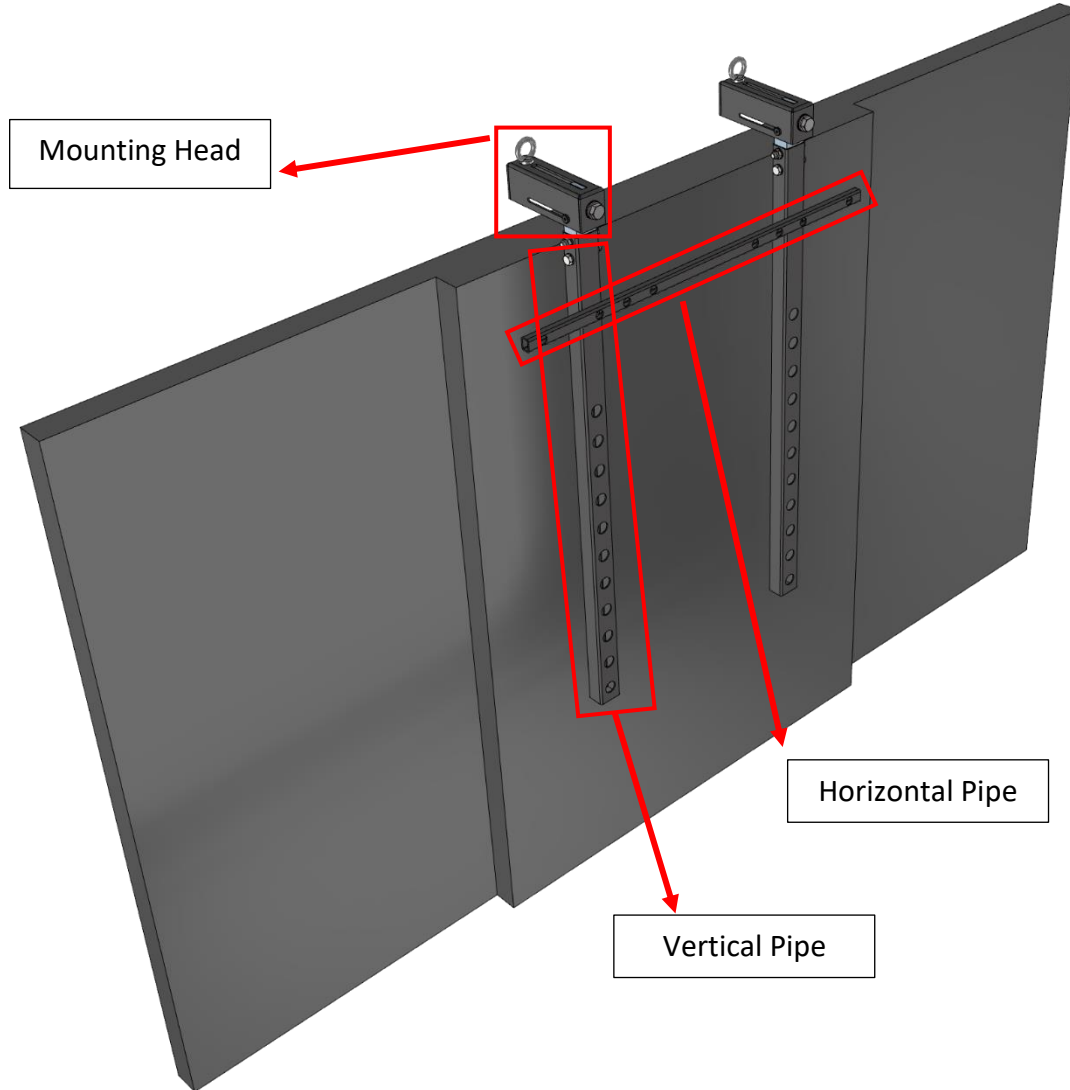
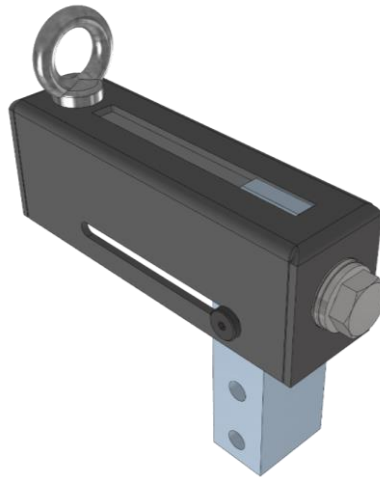


Figure 5 System overview

### Mounting Head

The Mounting Head is the same on all four sizes of TM-DUNI-V2. It is permanently fixed to the Vertical Pipe. It has an eye bolt on its top side which is used to hang the system. On the back side of the Mounting Head is a 19mm hexagonal screw head. By turning this left or right the mounting head moves forward and backward. By this user can adjust the tilting angle of the display, as it is mandatory for the display to hang vertically straight down. One TM-DUNI-V2 includes two Mounting Heads permanently fixed to Vertical Pipes.



*Figure 6 Mounting Head backside*

## Vertical Pipe

The Vertical Pipe is different in its lengths depending on the four sizes of TM-DUNI-V2. The Vertical Pipe connects to the corresponding mounting threads of the display. One TM-DUNI-V2 includes two Vertical Pipes permanently fixed to the Mounting Head.

## Horizontal Pipe

The Horizontal pipe connects the two Vertical Pipes of one TM-DUNI-V2 to make the system more stable. It is not necessary for TM-DUNI-V2-S.

## 6. Display compatibility framework

TM-DUNI-V2 display truss mount can be understood as a universal product but it must be used within a framework. In this chapter this framework will be defined.

### Display diagonal size and outer dimensions

The diagonal size of a display is defined in inch. Depending on the display manufacturer, model, etc the actual dimensions of, for example a 32" display, differ. Or in other words, not every 32" display has the same outer dimensions.

### VESA mounting

Compatible displays need a VESA mounting pattern on the back side. It is assumed that this pattern is centred on the back of the display.

### VESA mounting thread diameter

The only thread diameters in the display that TM-DUNI-V2 supports are M6 and M8.

### Display weight

The maximum display weight is 95 kg.

### Distance of mounting head to top of display

The maximum allowed distance of the mounting head to the display top boarder is 15 cm.



Figure 7 Maximum distance Mounting Head to top of display



# Manual TM-DUNI-V2-S / -M / -L / -XL

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Table 1 lists standard displays based on their diagonal size and provides exemplary outer dimensions of such displays. Furthermore, it lists a common VESA pattern per diagonal size. Based on those specifications the table provides one possible TM-DUNI-V2 size for portrait and landscape.

Table 1 Compatible display dimensions

Display	Display outer dimensions in [mm]			VESA	Suitable TM-DUNI-V2	
	Diagonal Size	Width	Height		Depth	Portrait
32"	727	426	67	200 x 200	S	S
43"	969	561	68	300 x 300	M	S
49"	1104	637	62	300 x 300	M	S
55"	1240	713	62	300 x 300	M	S
65"	1459	837	63	400 x 400	L	M
75"	1683	962	84	600 x 400	L	M
86"	1928	1100	84	600 x 400	L	M
98"	2194	1249	93	600 x 400	XL	L



Note: It is assumed that the VESA mounting pattern is centred on the back side of the display.



Note: Table 1 is an overview of possible compatible displays.

# Manual TM-DUNI-V2-S / -M / -L / -XL

Table 2 lists the minimum and the maximum distance between the display top mounting hole and the top of the display. This is in particularly very helpful also when the display has the VESA mounting pattern not centred on the back side of the display. The variable “a” is the vertical distance of the VESA pattern. This changes on unsymmetric VESA patterns depending on the orientation (portrait or landscape).

Table 2 Minimum distance between the display top mounting hole and the top of the display

TM-DUNI-V2	a (mm)	b min. (mm)	b max. (mm)
S	200	85	335
	300	85	235
	400	85	135
M	200	285	585
	300	285	485
	400	285	385
L	300	405	705
	400	405	605
	600	405	405
XL	300	715	1015
	400	715	915
	600	715	715

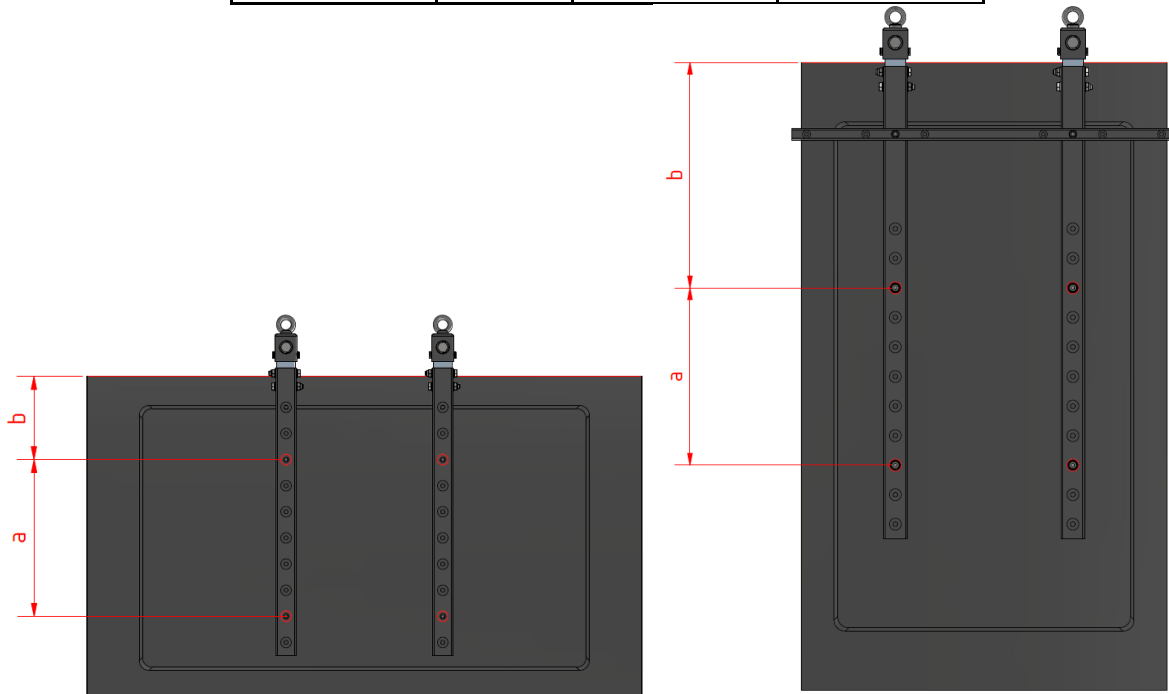


Figure 8 Displays compatibility corresponding to different VESAs (Landscape and Portrait)

## 7. Mounting the TM-DUNI-V2 to the display

### 7.1 Choosing the correct screws

TM-DUNI-V2 does not include screws to mount the system to a display. Please consult the display data sheet or contact the display manufacturer to find out how many screws one need and what diameter and length they must have. Furthermore the display manufacturer hast to define the needed torque to securley fasten the screws.



When choosing the mounting screws, don't forget to add to the total length of the screw, the 2 mm material thicknes of the Vertical Pipe. For example, if in the display data sheet is suggested to use a screw that is 12 mm long, you have to use a screw that is 14 mm long.

Suported diameter by TM-DUNI-V2 are M6 and M8.

We recommend screws in the standard DIN 912. Make sure to use galvanised steel screws with a strength of at least 8.8. If there are any questions please contact the TM-DUNI-V2 system vendor.

It is necessary to use Schnorr safety washer to secure the screws. TM-DUNI-V2 includes six pieces of 6 mm and six pieces of 8 mm Schnorr safety washers.

Summary:

- Recommended screw standard DIN 912, steel galvanised, strength 8.8
- Suported diameter M6 and M8
- Contact manufacturer regarding screw diameter, length, amount of screws and needed torque to securely fasten the screw.
- Don't forget to add the 2 mm to the screw length.
- Schnorr safety washer are mandatory to be used

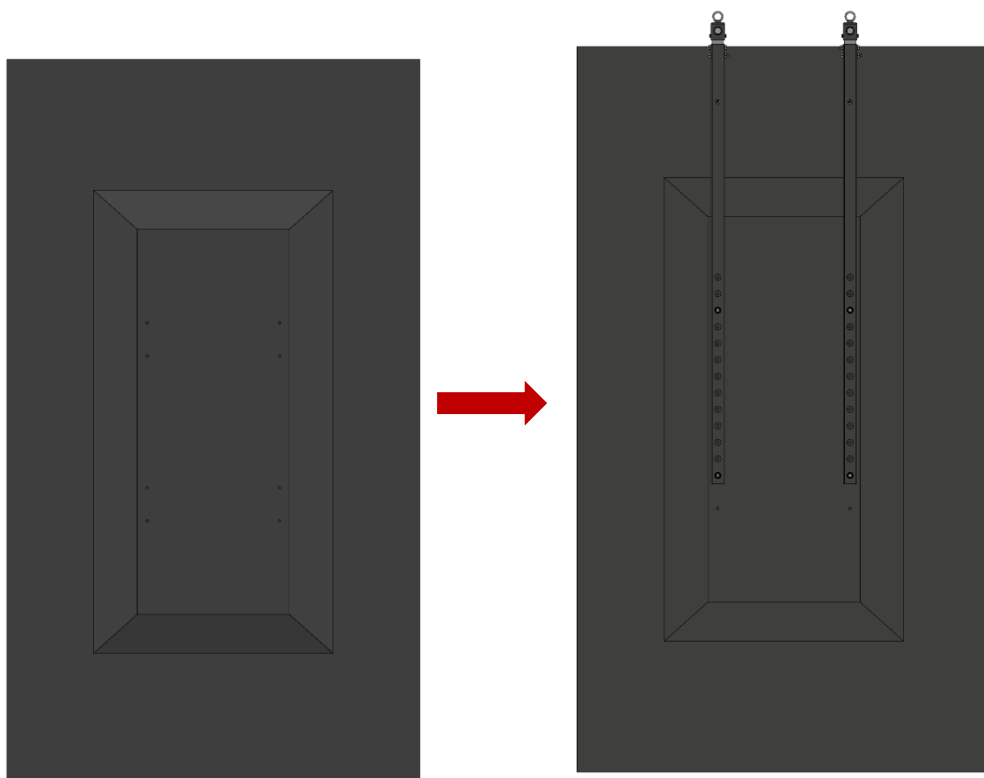
## 7.2 Mounting in portrait mode orientation



Make sure that only suitable displays are mounted with TM-DUNI-V2! It is only allowed to use professional displays with the needed strength and stability.



Make sure that the surface on which one places the display to prepare the installation has the outer dimensions at least equals with the outer dimensions of the display, otherwise the integrity and the functions of the display can be serious damaged!



*Figure 9 Placing the TM-DUNI-V2 to the back of the display.*

**Step 1:** Please place the display on a flat suitable surface that can support a total weight of the display plus the weight of the TM-DUNI-V2 system.

**Step 2:** Place the TM-DUNI-V2 system over the display so that it is aligned with the screw hole positions.



At some displays, it might be the case that the displays handles are position on the same axis with the mounting points. If this situation occurs, please first unscrew the handles and only after that attach the TM-DUNI-V2 to the display. Do not try to screw the TM-DUNI-V2 on the display if the handle is on TM-DUNI-V2 way, because the system will not be attached properly to the display and serious accidents can occur!

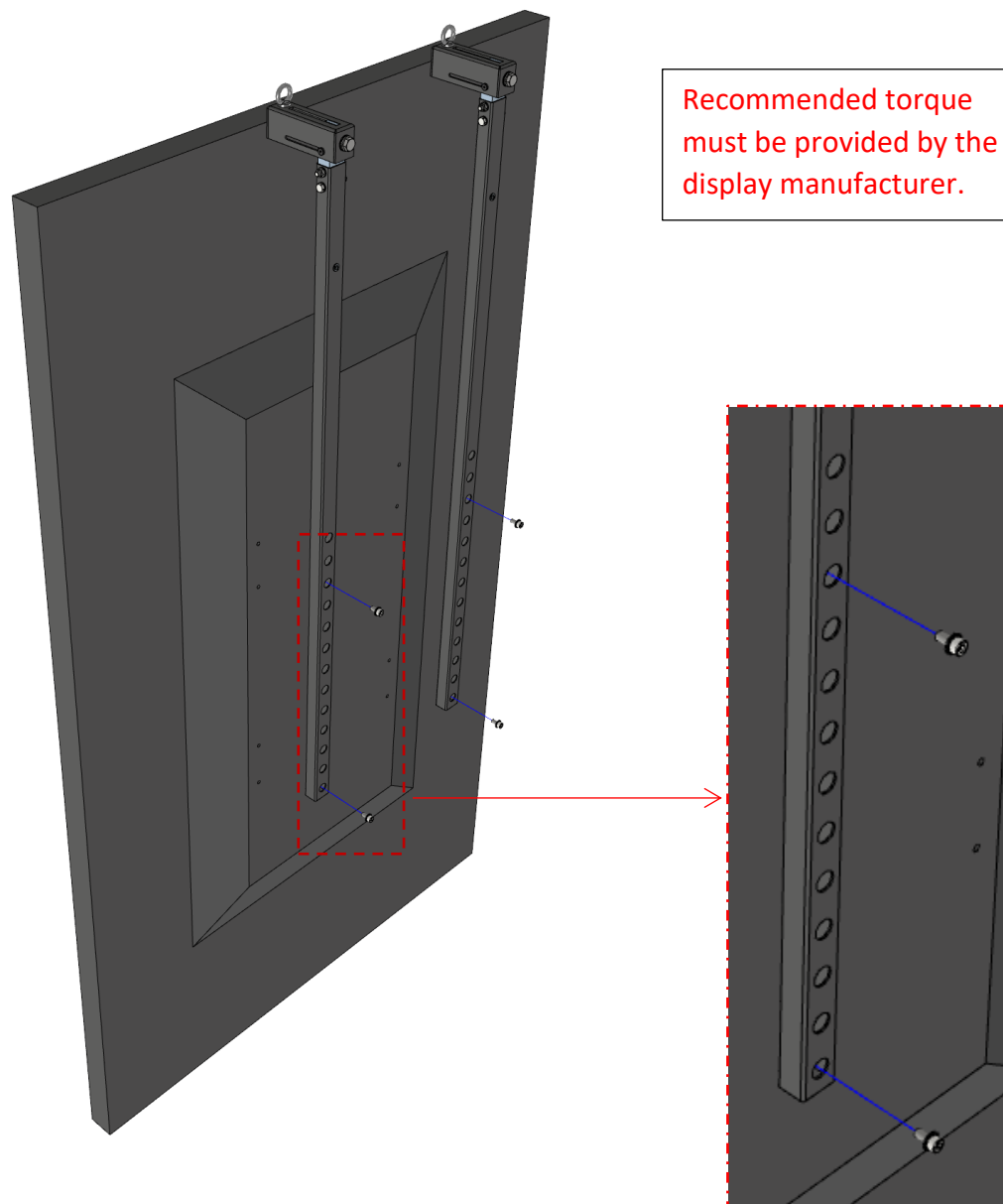


Figure 10 Fixing the TM-DUNI-V2 to the display.

**Step 3:** Secure the TM-DUNI-V2 system with the desired display by using the correct screws with the corresponding Schnorr washers. See also chapter 7.1 Choosing the correct screws.

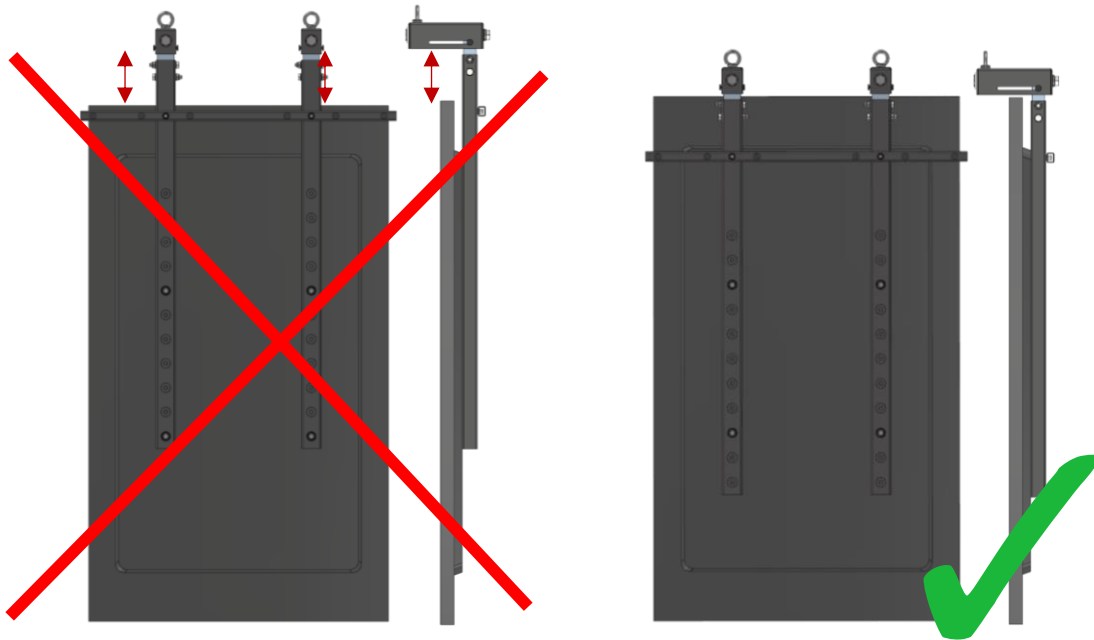


Figure 11 Positioning of the TM-DUNI-V2. Left side wrong, right side correct.



The TM-DUNI-V2 must be positioned on the display so that the Mounting Heads are as close as possible to the top boarder of the display. Figure 11 illustrates on the left side the incorrect positioning as the Mounting Head is too far away from the top boarder of the display. On the right side of Figure 11 the correct installation is illustrated as the Mounting Head is in the closest possible position to the top boarder of the display.

See also chapter 6. Display compatibility framework -> [Distance of mounting head to top of display](#)



Please make sure to use the correct screws. See also chapter 7.1 Choosing the correct screws.



It is mandatory to use all screw holes that are named as necessary for mounting by the display manufacturer. If TM-DUNI-V2 is not capable of covering theses necessary mounting holes, do not use the TM-DUNI-V2 with such a display.



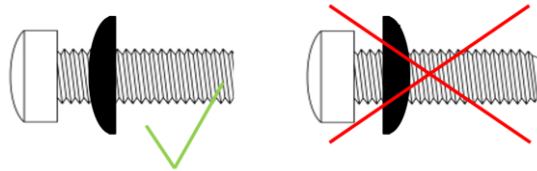
Do not forget to use Schnorr Washers with the correct diameter for each screw as they are preventing the screws to loosen themselves!



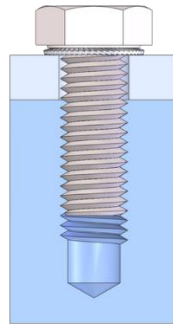
Make sure you tighten all the screws with the correct torque provided by the display manufacturer.



The orientation of the Schnorr safety washers is important and it is mandatory to install them in the correct orientation. See Figure 12 and Figure 13.



*Figure 12 Orientation of Schnorr safetywasher*



*Figure 13 Schnorr safety washer correct orientation (Picture by Schnorr)*



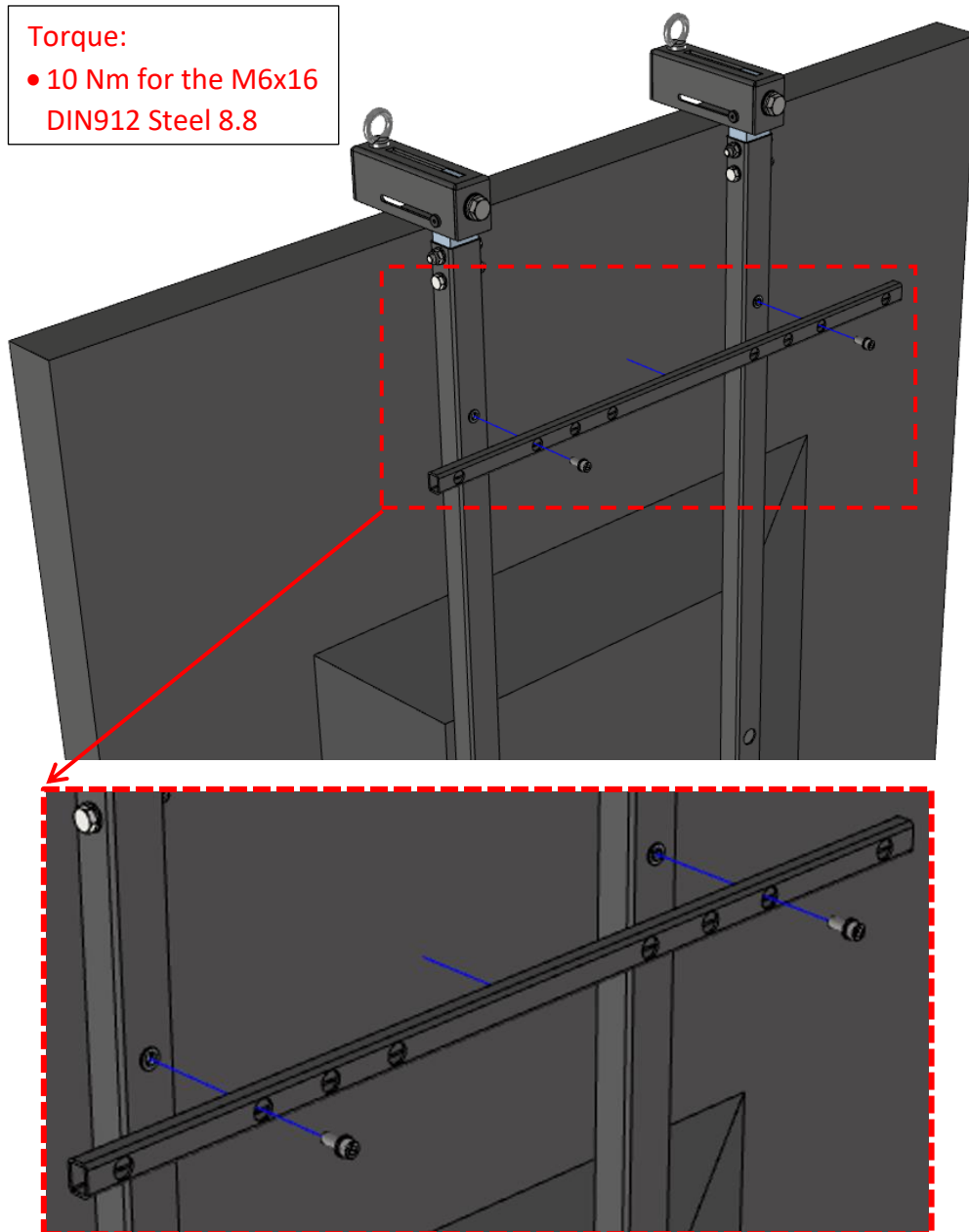


Figure 14 Fastening the Horizontal Pipe

**Step 4:** Using the two M6x16 DIN912 Steel 8.8 Screws together with the A6,4 DIN 125 Steel Washer Form A fasten the E21\_RL-005 connection pipe on the TM-DUNI-V2 system. This will make the system more stable and safer.



Note: The TM-DUNI-V2-S does not require the E21\_RL-005 connection pipe.

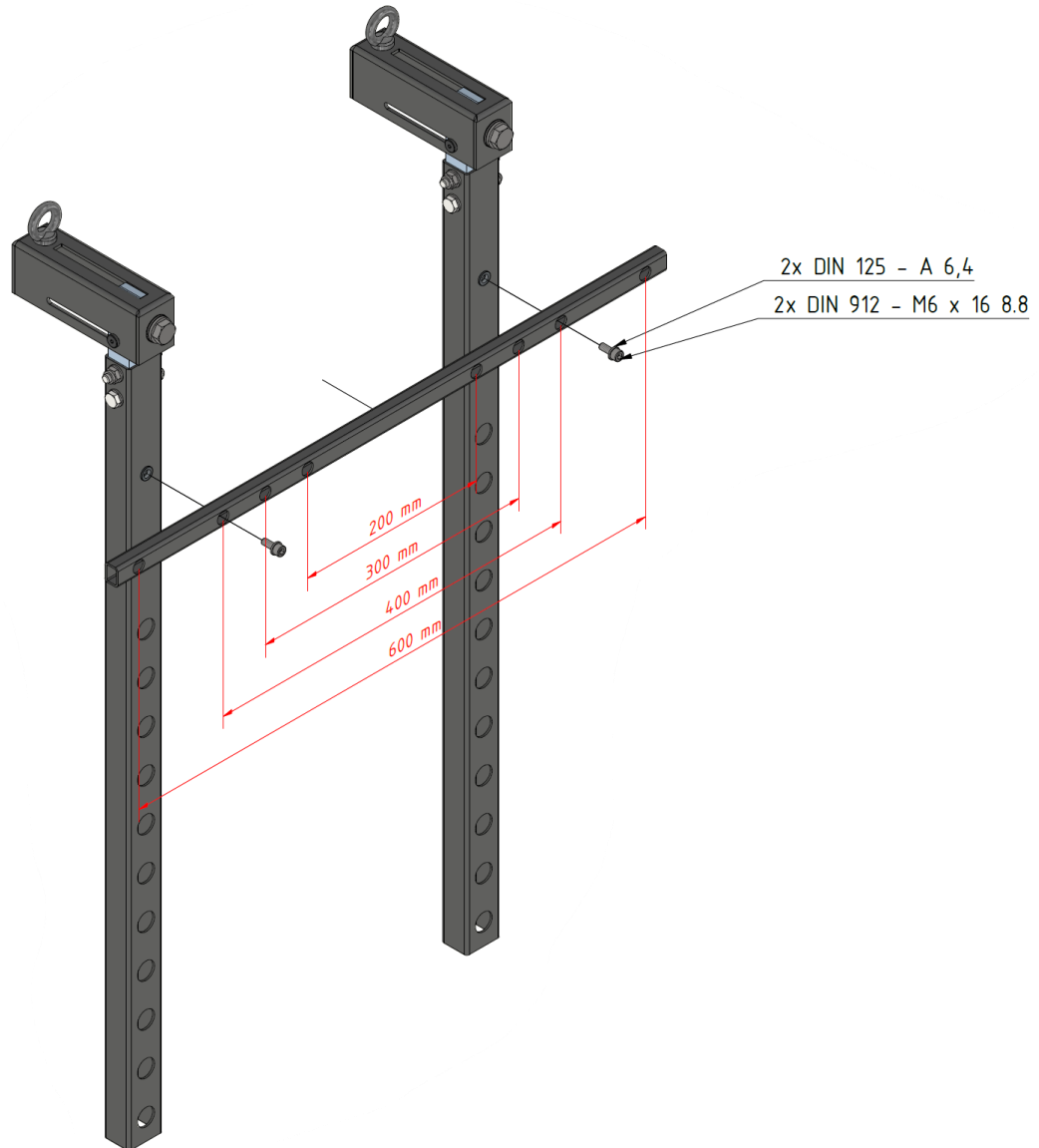
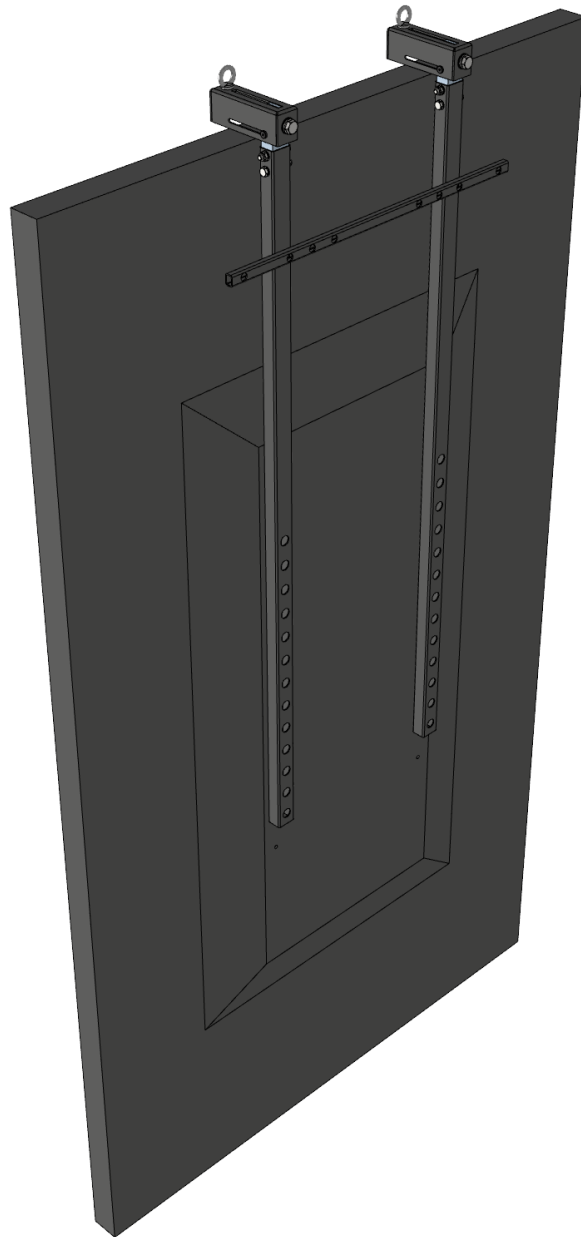


Figure 15 Horizontal Pipe



Note: The E21\_RL-005 connection pipe has assembly holes for different VESA dimensions: 200 / 300 / 400 and 600. See Figure 15.



*Figure 16 TM-DUNI-V2 -XL in portrait with a 98" Display*

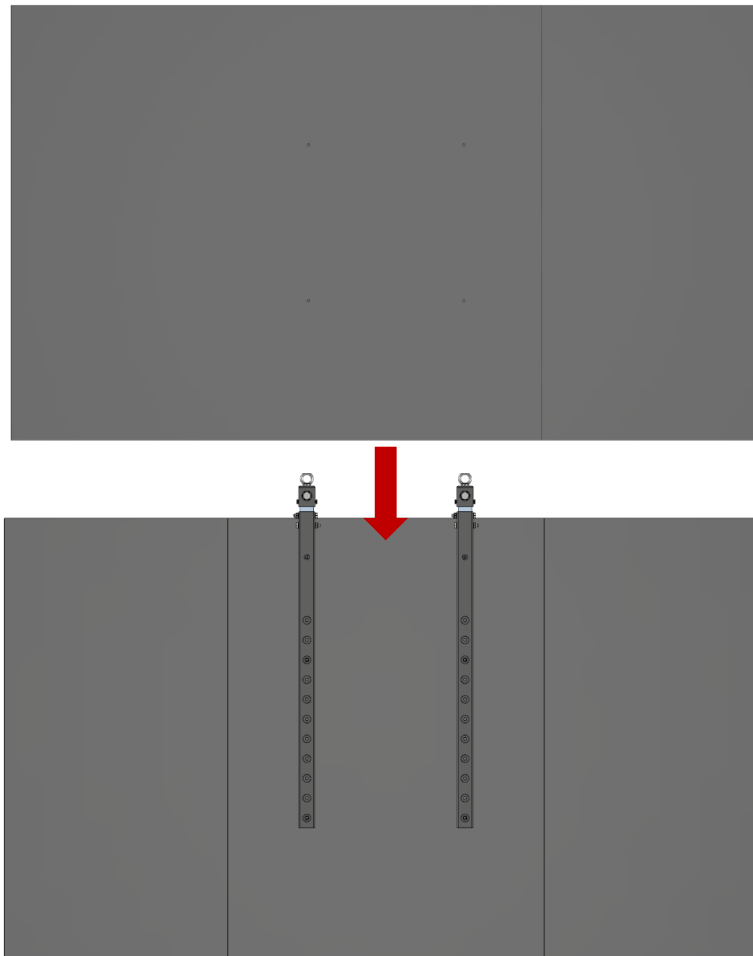
## 7.3 In landscape mode orientation



Make sure that only suitable displays are mounted with TM-DUNI-V2! It is only allowed to use professional displays with the needed strength and stability.



Make sure that the surface on which one places the display to prepare the installation has the outer dimensions at least equals with the outer dimensions of the display, otherwise the integrity and the functions of the display can be serious damaged!



*Figure 17 Placing the TM-DUNI-V2 to the back of the display (Landscape)*

**Step 1:** Please place the display on a flat suitable surface that can support a total weight of the display plus the weight of the TM-DUNI-V2 system.

**Step 2:** Place the TM-DUNI-V2 system over the display so that it is aligned with the screw hole positions.



At some displays, it might be the case that the displays handles are position on the same axis with the mounting points. If this situation occurs, please first unscrew the handles and only after that attach the TM-DUNI-V2 to the display. Do not try to screw the TM-DUNI-V2 on the display if the handle is on TM-DUNI-V2 way, because the system will not be attached properly to the display and serious accidents can occur!

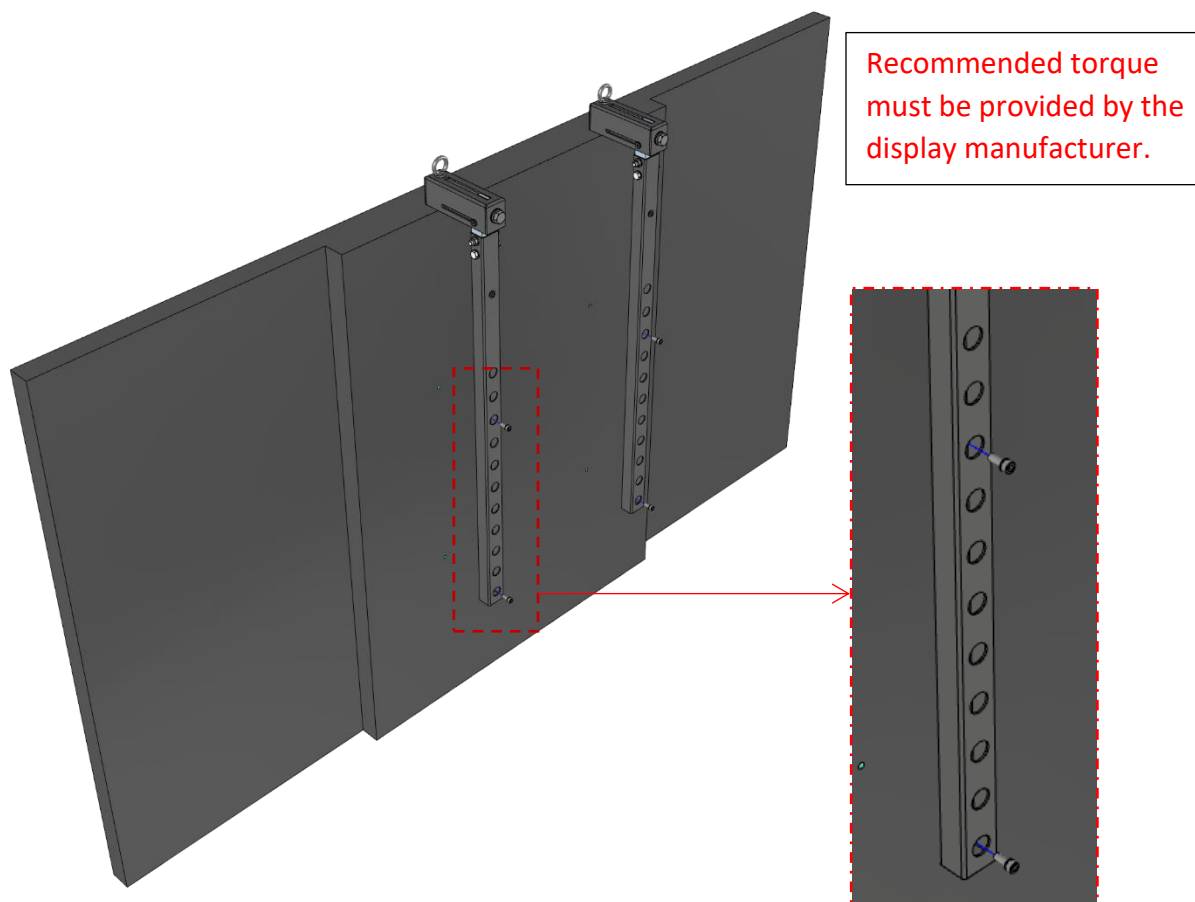


Figure 18 Fixing the TM-DUNI-V2 to the display

**Step 3:** Secure the TM-DUNI-V2 system with the desired display by using the correct screws with the corresponding Schnorr washers. See also chapter 7.1 Choosing the correct screws.

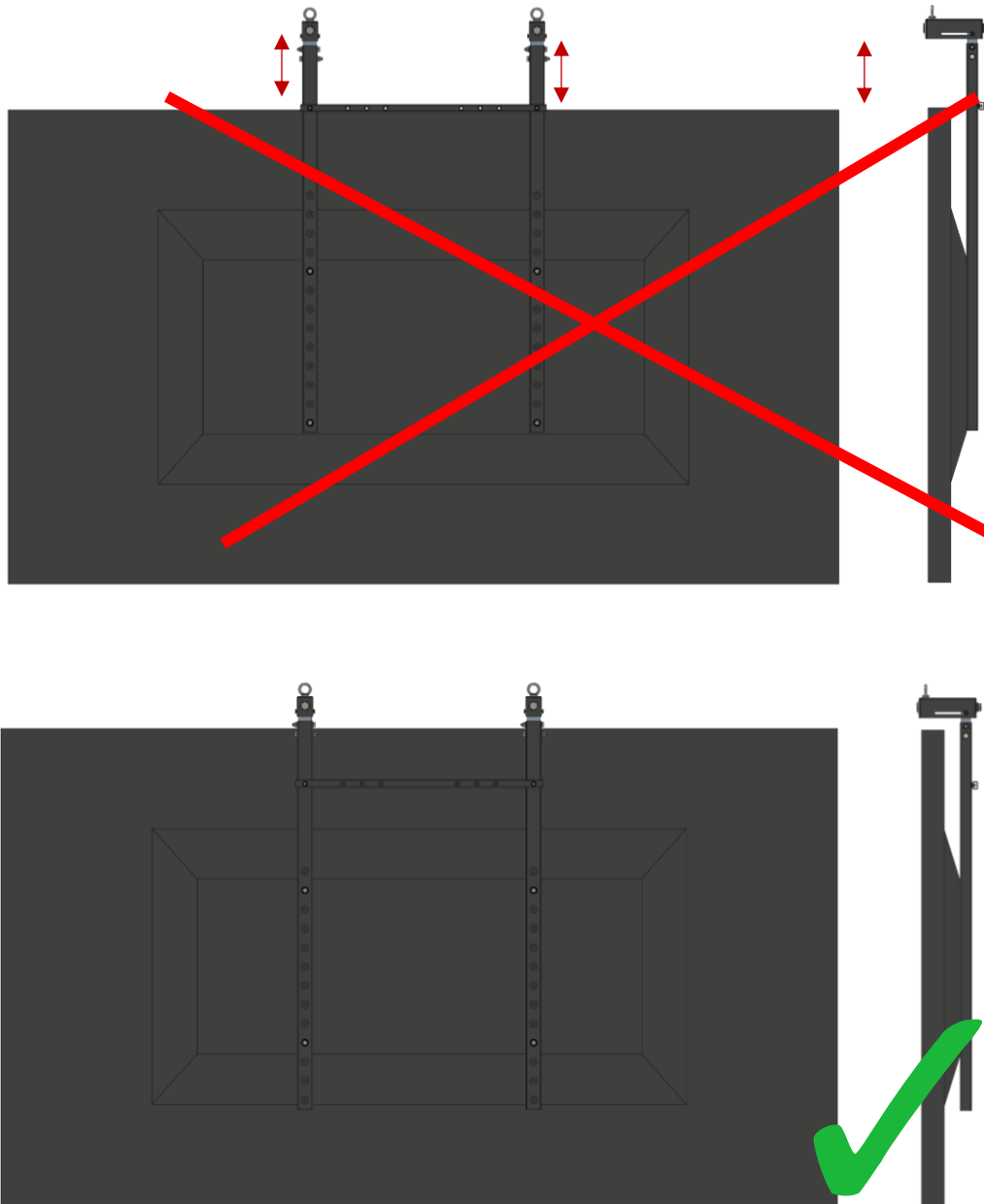


Figure 19 Positioning of the TM-DUNI-V2. Top side wrong, bottom side correct.



The TM-DUNI-V2 must be positioned on the display so that the Mounting Heads are as close as possible to the top boarder of the display. Figure 19 illustrates on the left side the incorrect positioning as the Mounting Head is too far away from the top boarder of the display. On the right side of Figure 19 the correct installation is illustrated as the Mounting Head is in the closest possible position to the boarder of the display.

See also chapter 6. Display compatibility framework -> Distance of mounting head to top of display



Please make sure to use the correct screws. See also chapter 7.1 Choosing the correct screws.



It is mandatory to use all screw holes that are named as necessary for mounting by the display manufacturer. If TM-DUNI-V2 is not capable of covering these necessary mounting holes, do not use the TM-DUNI-V2 with such a display.



Do not forget to use Schnorr Washers with the correct diameter for each screw as they are preventing the screws to loosen themselves!



Make sure you tighten all the screws with the correct torque provided by the display manufacturer.



The orientation of the Schnorr safety washers is important and it is mandatory to install them in the correct orientation. See Figure 12 and Figure 13.

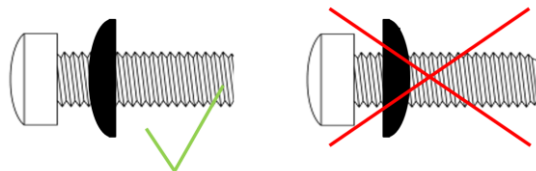


Figure 20 Orientation of Schnorr safetywasher

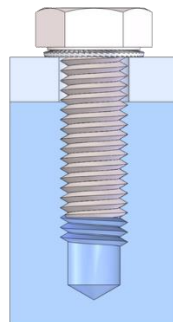


Figure 21 Schnorr safety washer correct orientation (Picture by Schnorr)



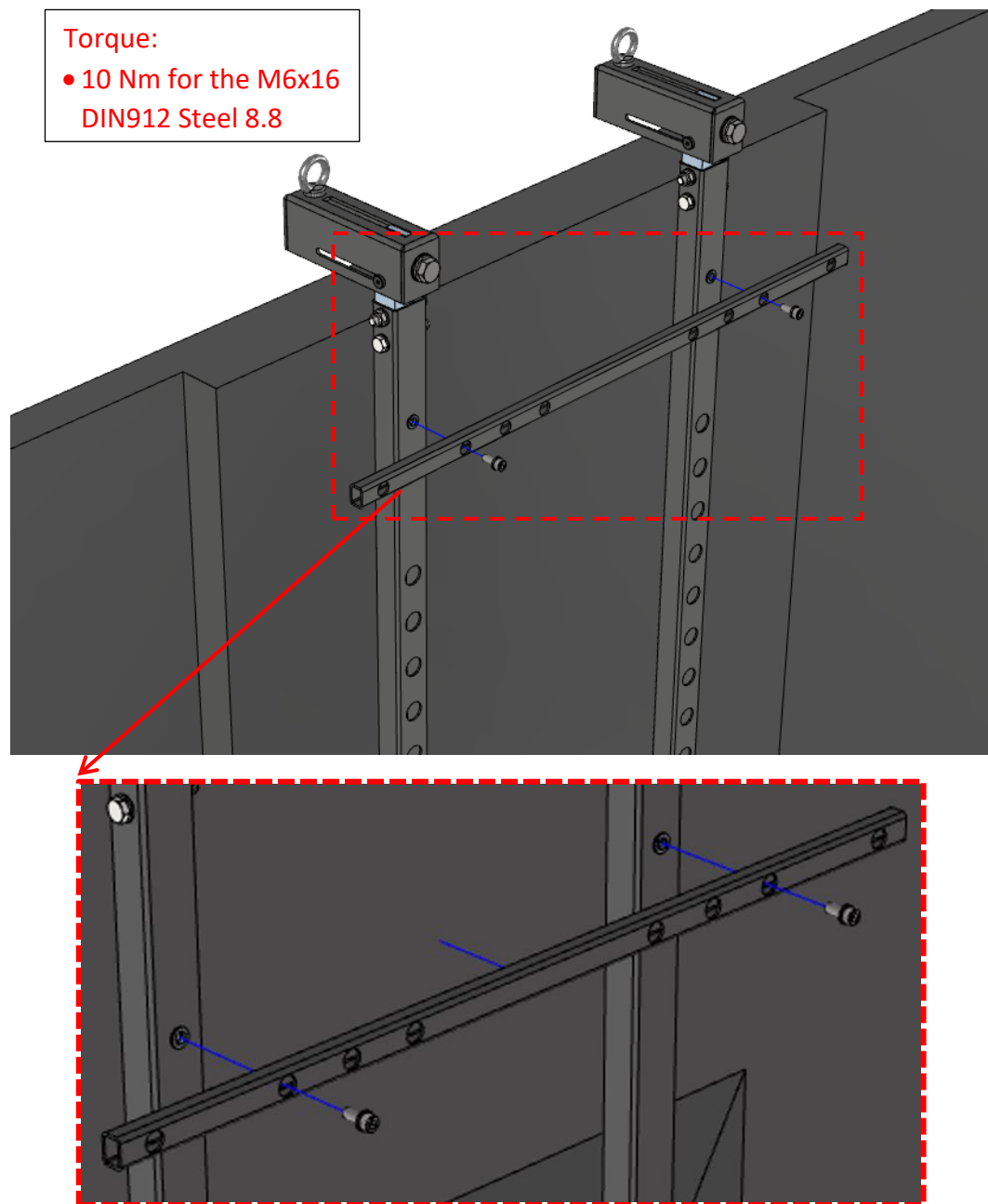


Figure 22 Fastening the Horizontal Pipe

**Step 4:** Using the two M6x16 DIN912 Steel 8.8 Screws together with the A6,4 DIN 125 Steel Washer Form A fasten the E21\_RL-005 connection pipe on the TM-DUNI-V2 system. This will make the system more stable and safer.



Note: The TM-DUNI-V2-S does not required the E21\_RL-005 connection pipe.

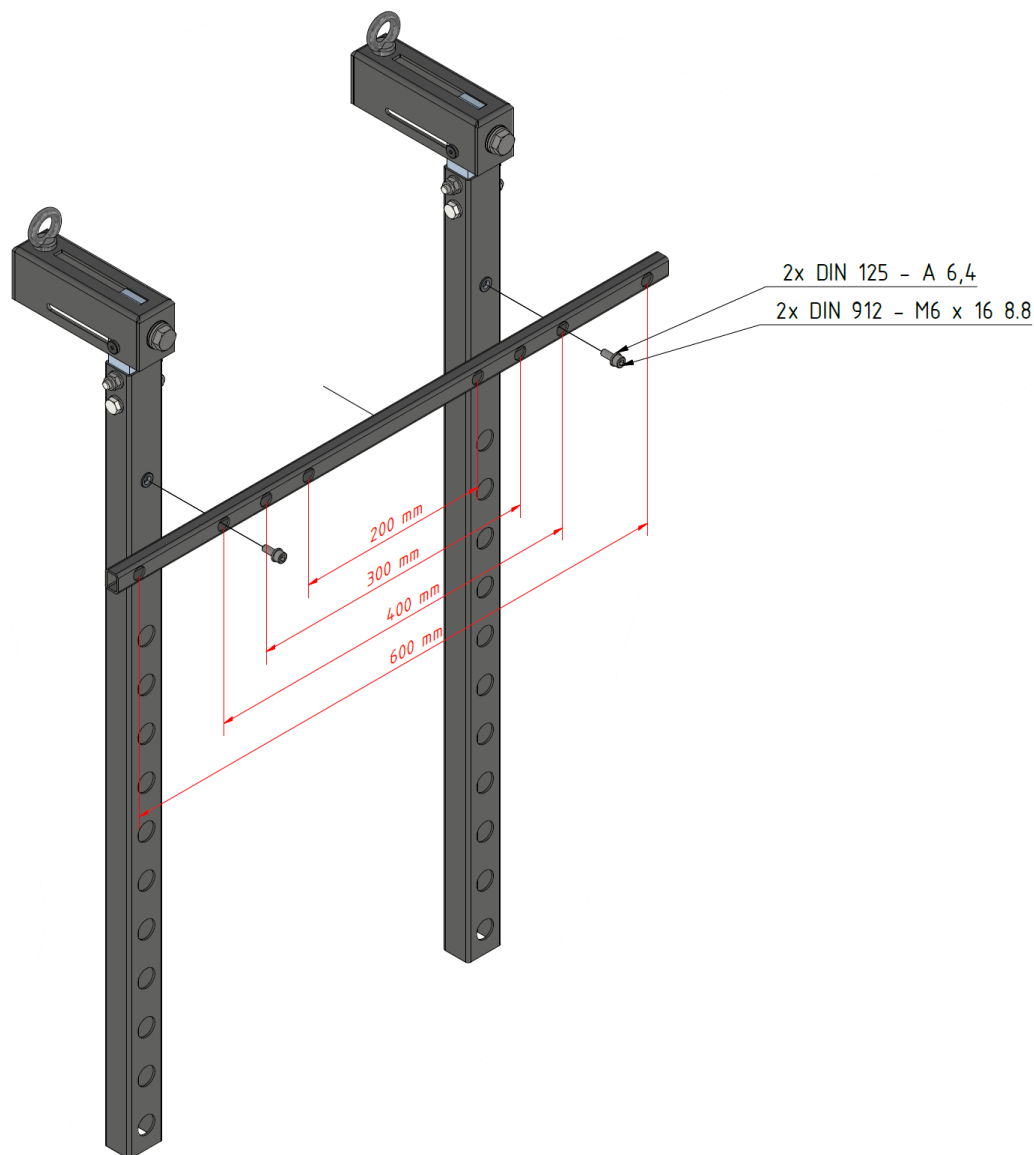
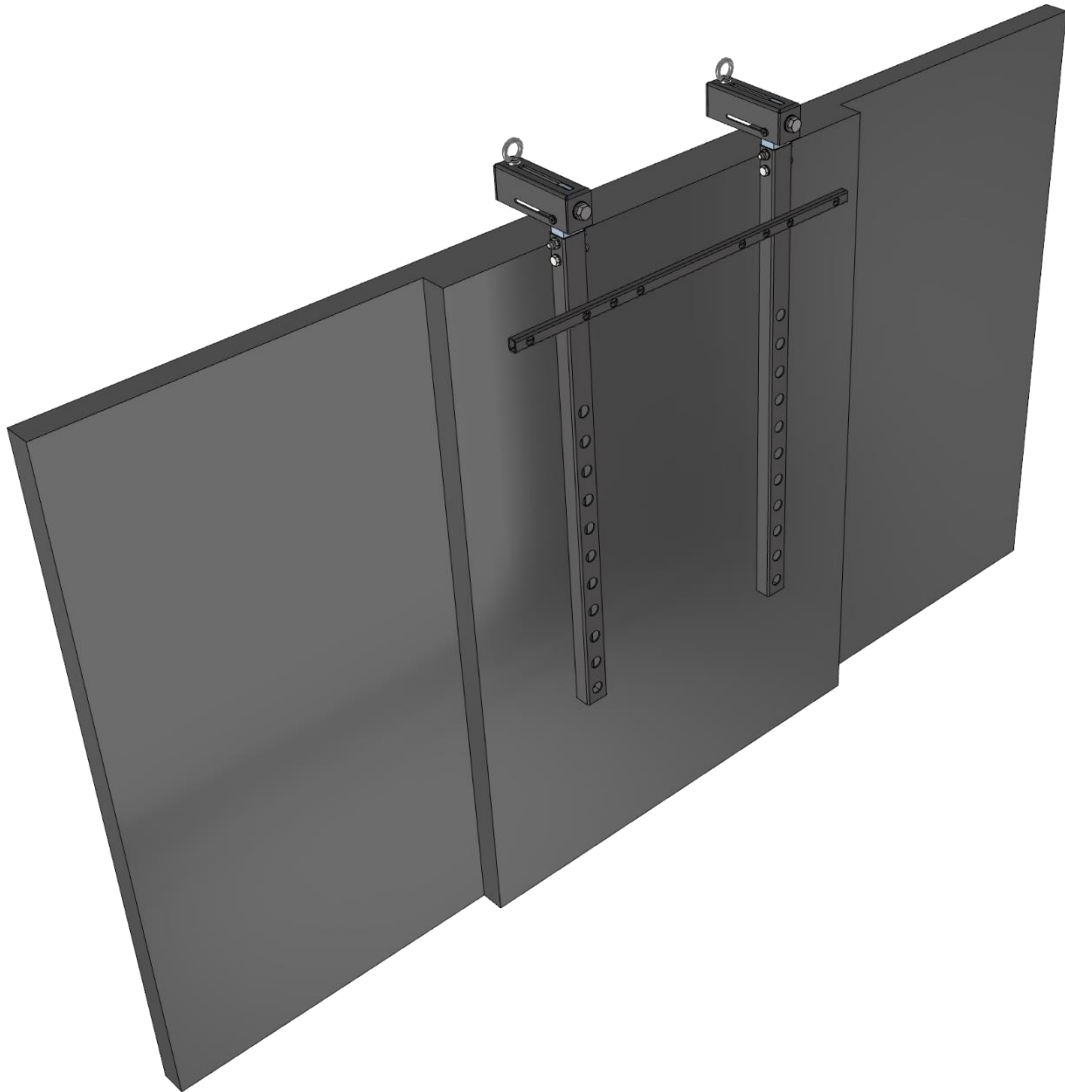


Figure 23 Connection pipe



Note: The E21\_RL-005 connection pipe has assembly holes for different VESA dimensions: 200 / 300 / 400 and 600.



*Figure 24 TM-DUNI-V2 -M in Landscape with a 84" Display*

## 7.4 Exemplary mounting the TM-DUNI-V2 to a trussing system



The eye bolt on top of the mounting head should never be used under shear tension. The eye bolt is only allowed to be used when the force is applied straight upwards

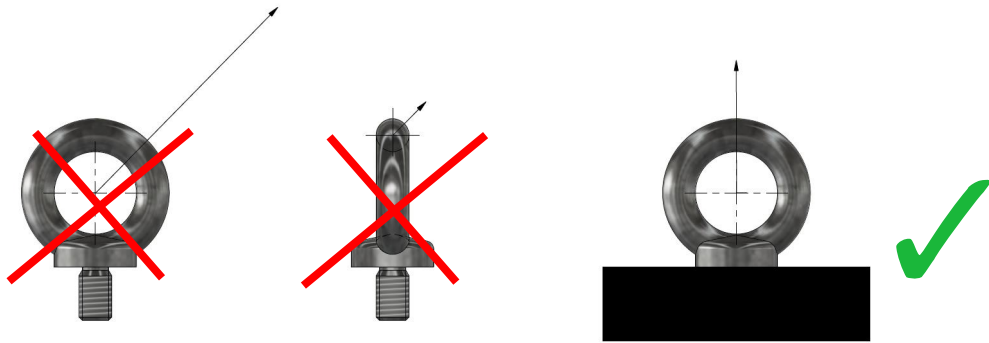


Figure 25 shows a schematic exemplary way how the system can be hung to a truss. In this case it uses shackles and steel wires (for illustration purpose in green colour).

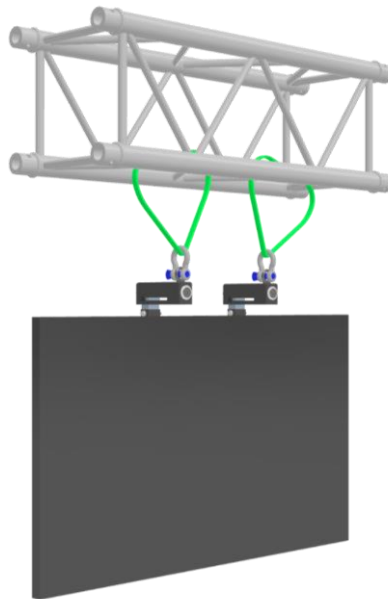


Figure 25 Hanging with shackle and steel wire



Make sure to use only approved and recommended equipment to mount the TM-DUNI-V2 series to a supporting structure.



Do not overload the TM-DUNI-V2 series truss mount or any additional mounting equipment and make sure the overall weight is within working specifications.



Ensure equal adjustment of the mounting heads so that the system is evenly loaded. Unevenly loaded systems can cause accidents.

## 8. Z-Axis adjustment to correct the tilting of the whole construction

If needed, when the display is installed, one can adjust the entire system on the Z axis to correct tilting of the whole construction.



The display together with the TM-DUNI-V2 system must always be on a straight orientation downwards! Figure 26 shows on the left side the incorrect installation as the display is tilted. On the right side the display is hanging straight and correct.

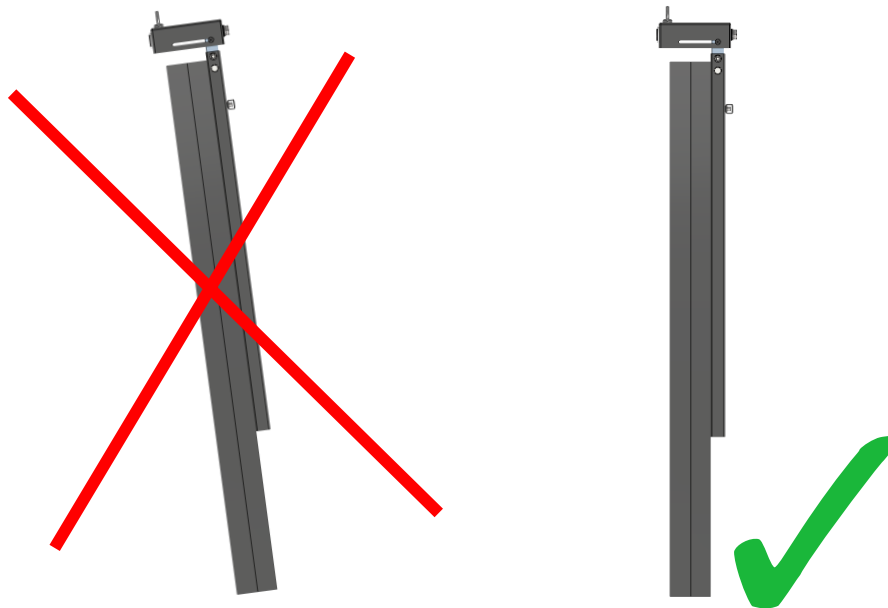


Figure 26 Correct orientation (left side wrong, right side correct)



The fingers or the hand of the user can be caught in the adjustment mechanism of the mounting head when the operator adjusts the tilting of the display.

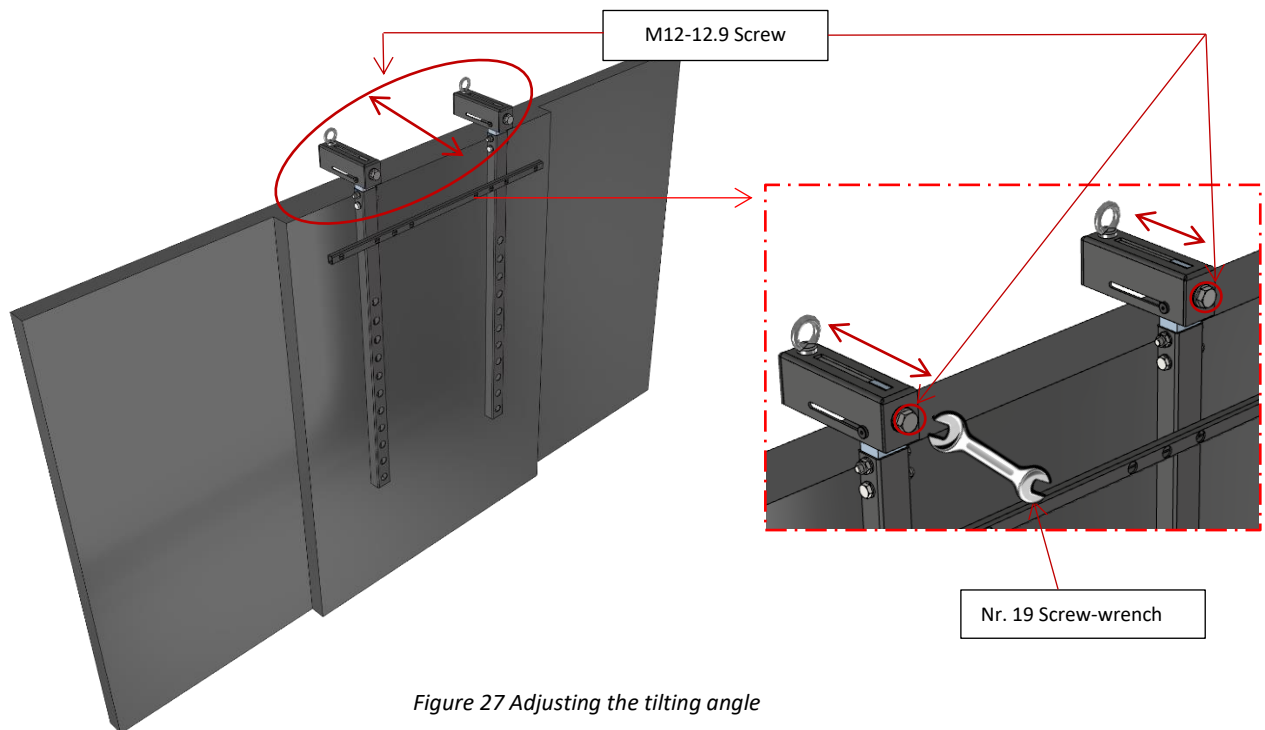


Figure 27 Adjusting the tilting angle

**Step 1:** With the help of a Nr 19. Screw-wrench please turn the M12-12.9 screw to the left or to the right until the desire position is reached.

The M8 eye bolt DIN580 can be moved on a total distance of 78,5 mm. Make sure when the construction is suspended, that the M8 eye bolt DIN580 is on a straight position!



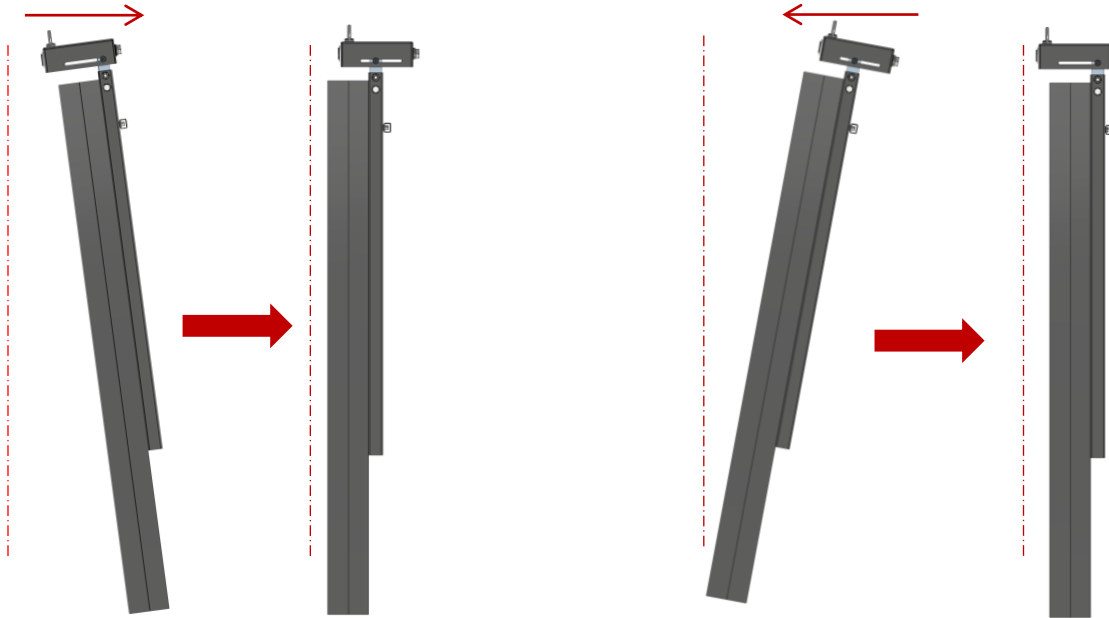
If the adjustment range is not enough to hang the display straight down, it is not allowed to use TM-DUNI-V2 with such a display



Insufficient load capacity of the supporting structure may lead to certain parts of the system consisting of TM-DUNI-V2 and display or the entire system to fall down.



**Do not** try to setup the product in another position than that presented, because accidents can occur!



If the above situation is present, the M12-12.9 screw must be turned to the left until the straight position is reached.

If the above situation is present, the M12-12.9 screw must be turned to the right until the straight position is reached.

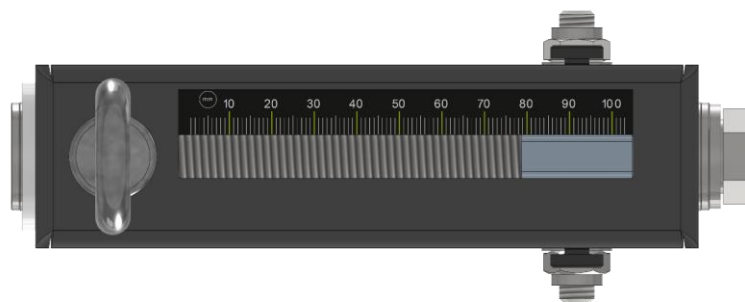


Figure 28 Mounting head with scale

There is a scale on the top for easier pre-adjustment of the mounting heads. Set both brackets to the same values before hanging the display to avoid asymmetry. Use the front or back edge of the support block (silver) as a guide.

## 9. System maintenance and inspection (Re-examination)



The TM-DUNI-V2-XL system does not require special maintenance, but a visual inspection must be done prior to every installation in which the system is involved.



**Periodic inspections are mandatory.** Depending on local laws and regulations owners / users must do periodic inspections of the TM-DUNI-V2 series truss mount and all components. In case of German regulations this must be done and documented once a year by a qualified and authorised person. Furthermore, for German DGUV V17/V18 it is mandatory to revalidate the safety every four years. This must be done and documented by an expert that is authorized by the German Social Accident Insurance (DGUV).



Note: The necessary inspection can also be done by the manufacturer.



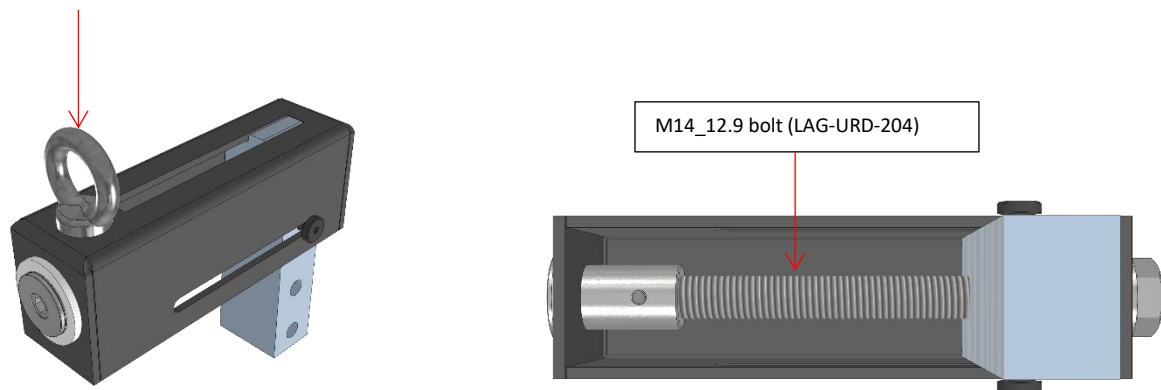
If any parts are broken or missing stop using the product, please contact the seller so he can provide the spare parts.



Do not exchange broken or malfunctioning parts with ones that are not accredited by the manufacturer.

- Please make a visual inspection to be sure that all the screws are in the right place, and none are missing.
- Make sure that the screws, the wing nuts, M12-12.9 screw, the M8 eye bolt DIN580 and all the components are not bended, damaged, or broken.
- Please control, with corresponding tool, that all the screws are properly tightened.
- If any parts are broken or missing, please contact the vendor so he can provide the spare parts.





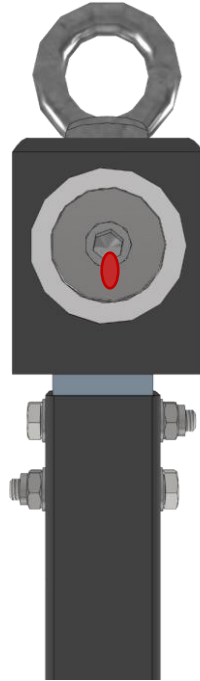
In this process the M8 eye bolt DIN 580 and the M12-12.9 screw must be inspected in detail:

M8 eye bolt DIN580: please observe if on the surface of the eye bolt any evidence of cracks, deformations or corrosion are noticeable.

M12-12.9 screw: exactly like in the eye bolt case, no evidence of cracks, deformations or corrosion should be noticeable on the surface of the bolt.

In addition, a visual inspection and tests must be performed to any connection (joint) to ensure that everything works properly.

## 9.1 Sealed nuts with red coloured wax and other screw connections



Do not try to manipulate these screws, because the adjustment mechanism can be blocked and accidents can occur!



If one notices that the sealing wax is broken or the screw is moved stop using the product, please contact the manufacturer!

## 10. Disposal of components

### 10.1 Metal parts and packaging

All metal parts and packaging can be recycled.

### 10.2 Disposal of entire devices

You have the possibility to send old devices back to us. Please note that you have to take over the transportation costs for this. Please send the devices to:

EXACT solutions GmbH

Lustheide 85

51427 Bergisch Gladbach

GERMANY

## 11. Declaration of Conformity



### EC - Declaration of Conformity

We hereby confirm that the following described lifting accessory in its conception, construction and form put by us in circulation is in full accordance with all relevant health and safety requirements and complies with the following EC-directive:

**2006 / 42 / EG (EG-Machinery Directive)**

This declaration is no longer valid if the lifting accessory is modified without our written consent.

**Manufacturer:**

**EXACT solutions GmbH**  
Lustheide 85  
D-51427 Bergisch Gladbach  
Tel.: +49 2204 9485 30

**Description of the lifting accessory:**

- Function: Universal hanging system for Displays.
- Type/model: **TM-DUNI-V2-S, TM-DUNI-V2-M, TM-DUNI-V2-L, TM-DUNI-V2-XL**
- Serial number: **TM-DUNI-V2-S.xxx, TM-DUNI-V2-M.xxx, TM-DUNI-V2-L.xxx, TM-DUNI-V2-XL.xxx**
- Year of construction: 2023

**The applied harmonized EN - standards include:**

- **DIN EN ISO 1200:2010** Safety of machinery – General principles for design – Risk assessment and risk reduction

**Further applied standards and regulations include:**

- **DIN EN 1993 -1** **DE:** Eurocode 3: Bemessung und Konstruktion von Stahlbauten (12/2010)  
**EN:** Eurocode 3: Design of steel structures (12/2010)
- **DIN EN 1999 -1** **DE:** Eurocode 9: Bemessung und Konstruktion von Aluminiumtragwerken (05/2010)  
**EN:** Eurocode 9: Design of aluminum structures (05/2010)
- **DGUV V17/18** **DE:** UVV Veranstaltungs- und Produktionsstätten für szenische Darstellung, Stand Januar 2011 (bisher: BGV C1)  
**EN:** Accident Prevention Regulation for Staging and Production Facilities for the Entertainment Industry (formerly BGV C1)
- **DGUV 315-390** **DE:** Grundsätze für die Prüfung maschinentechnischer Einrichtungen in Bühnen und Studios (bisher: BGG/GUV-G 912)  
**EN:** Fundamentals for testing in stages and studios of the mechanical equipment (formerly BGG/GUV-G 912)
- **BGI 810-3** **DE:** Lasten über Personen. Sicherheit bei Produktionen und Veranstaltungen von Fernsehen, Hörfunk, Film, Theater, Messen, Veranstaltungen  
**EN:** Safety at Productions and Events – Loads Suspended above Persons
- **DIN EN IEC 62368-1** **DE:** Einrichtungen für Audio/Video-, Informations- und Kommunikationstechnik  
**EN:** Audio/video, information and communication technology equipment

Bergisch Gladbach, 22<sup>nd</sup> of March 2023

Signature:

(Gregor Hellenthal, Managing Director, EXACT solutions GmbH)



## Imprint

EXACT solutions GmbH

Lustheide 85

51427 Bergisch Gladbach

GERMANY

Tel.: +49 2204 9485 30

E-Mail: [info@exactsolutions.de](mailto:info@exactsolutions.de)

Web: [www.exactsolutions.de](http://www.exactsolutions.de)