

ULS Mirror Manual

Valid for the assembly and installation of:

ULS Mirror Set
ULS Mirror Truss Set
ULS Mirror Floor Set
ULS Mirror
ULS Pole



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Introduction

Thank you for having chosen a ULS unit. If you follow the instructions given in this manual, we are sure you will enjoy this device for a long period of time.

For your own safety, please read this user manual carefully before you initially start-up. Every person involved with the installation, operation and maintenance of this device has to:

- be qualified
- follow the instructions of this manual
- consider this manual to be part of the total product
- keep this manual for the entire service life of the product
- pass this manual on to every further owner or user of the product
- download the latest version of the user manual from our website

In case you have questions about our product or need support during assembly and installation please contact our support!

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Commercial Register: FN400806x

Warranty

DPI represents and warrants:

- that all products will be in a fully working and commercially available condition.
- for twelve (12) months from the date of proof of purchase by a customer, unless otherwise agreed.

Warranty is void if the operator of the ULS violates any safety and/or operation advice in this manual.

Safety & Operation determinations

This device has left our company in absolutely perfect condition. In order to maintain this condition and to ensure a safe operation, it is absolutely necessary for the user to follow the safety instructions and warning notes written in this user manual.

NOTE: Damages caused by the disregard of this user manual are not subject to warranty. The dealer will not accept liability for any resulting defects or problems.

Never look directly into the light source of an attached projector! Keep away children!

There are no user serviceable parts.

The ULS is a projector add-on device for creating decorative effects. This product is only allowed to be operated with the original accessories and add-on parts.

The device is designed for indoor use only.

This device is designed for professional use only.

Do not shake or drop the device. Avoid brute force when installing or operating the device. Take special care of the mirror.

This device is only allowed for an installation via the original mounting brackets or clamps.

Do not mount projectors to this unit that this unit was not designed for.

Make sure that the area below the installation place is blocked when rigging, de-rigging or servicing the fixture.

To prevent any damage to equipment or physical injury the installation should be carried out by at least two persons.

Always fix the fixture with an appropriate safety bond depending on the weight of the whole fixture.

For the use of closed-type riggings such as half-coupler clamps secure the fixture with a safety cable (or other secondary attachments) that is approved for the weight of the fixture, so that the safety cable will hold the fixture if the primary attachment fails.

It is important to select the mounting position of the ULS before starting the assembly.

The fixture can be clamped to a truss or similar rigging structure in any orientation using one or more closed-type rigging clamps such as half-coupler clamps that completely enclose the truss chord. Only use certified equipment.

Operate the device only after having become familiarized with its functions. Do not permit operation by persons not qualified for operating the device.

Never use solvents or aggressive detergents in order to clean the device, especially the mirror. Rather use a soft and damp cloth. Do not scratch or touch the surface of the mirror with any object or by touching with the fingers.

Please use the original packaging if the device is to be transported. Make sure that you pack the device in the original state and that the transport-safety is always mounted.

Please consider that unauthorized modifications on the device are forbidden due to safety reasons!

If this device will be operated in any way different to the one described in this manual, the product may suffer damages and the guarantee becomes void.

The ambient temperature must always be between +5°C and +35°C. Keep away from heaters and air-condition ventilations. The relative humidity must not exceed 80% with an ambient temperature of +35°C. The maximum ambient temperature $T=35^{\circ}\text{C}$ must never be exceeded.

Package contents

Immediately upon receiving a fixture, carefully unpack the carton, check the contents to ensure that all parts are present, and have been received in good condition. Notify the shipper immediately and retain packing material for inspection if any parts appear damaged from shipping or the carton itself shows signs of mishandling.

For details, please see the package information which comes with the specific product.

Save the carton and all packing materials. The ULS Mirror packaging is reusable for transportation and storage of the ULS!

Before starting to assemble the product please check the contents of the package - see package list inside of the package.

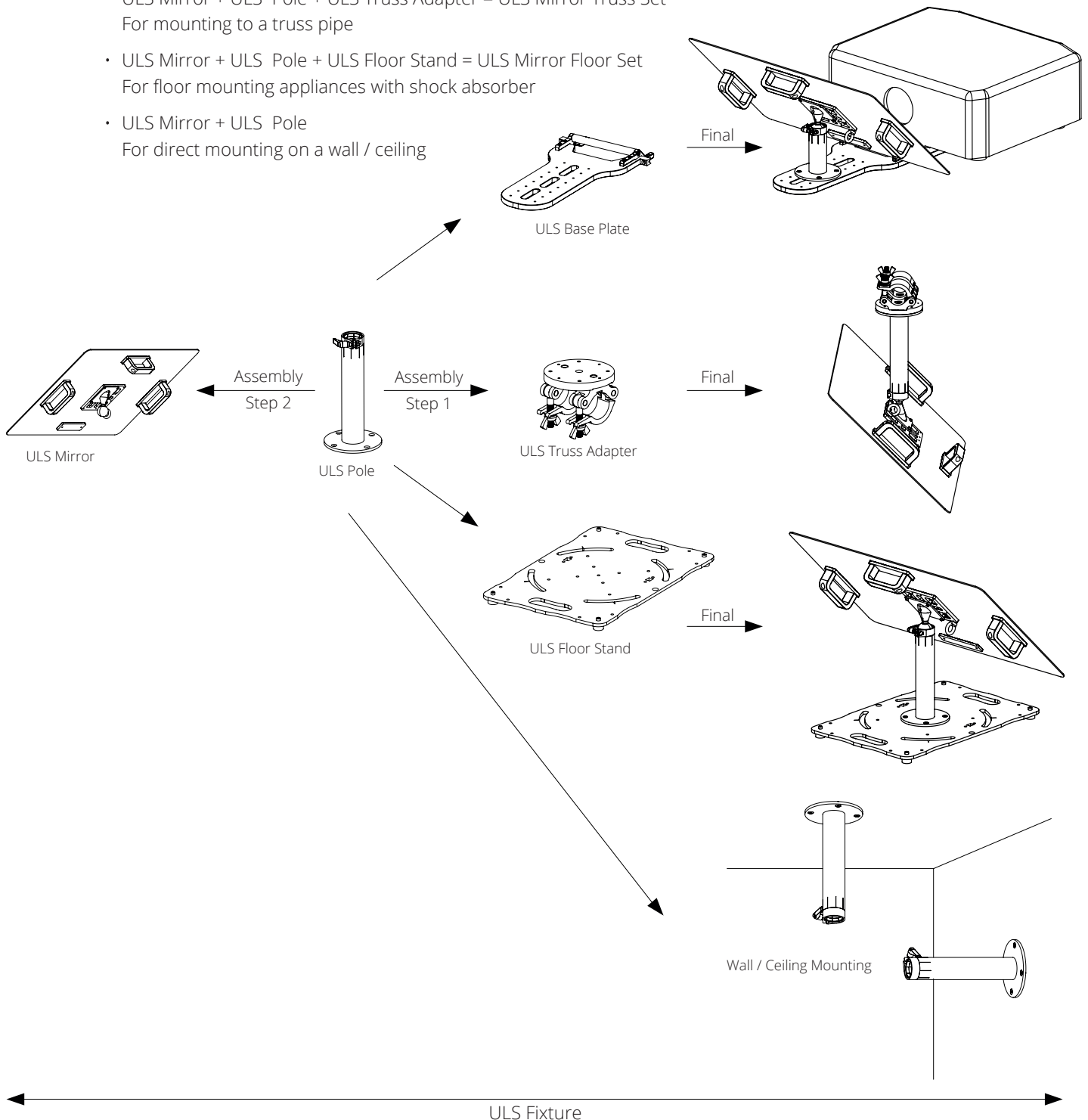
Technical specifications for ULS Mirror and ULS Accessories

- Front surface mirror for optimum reflection ~98% refraction factor
- Removable / Changeable handles
- 360°/90° frictionless mirror movement.
- Landscape and Portrait mounting possible
- One-Hand easy position fixation of the ball head
- Safety
- Various mounting possibilities using optimized adapters:
 - Direct to projector
 - Truss mount
 - Floor stand
 - Wall/Ceiling/...
- Optimized size for T.R. as low as 0.55:1 for 90° redirection. (depending on the projector's chip size)
- Different mirror sizes are available
- Multiple ULS Pole heights available for optimal positioning
- Twist-free ULS Truss mount with dual half-couplers
- Shock absorbing ULS Floor Stand
- Quick-lock ULS Base Plate for easy mounting to projectors with several Projector Base Plates.

Overview of product assembly combinations

The combination of ULS Mirror + ULS Pole + ULS Accessories is called ULS Fixture

- ULS Mirror + ULS Pole + ULS Base Plate = ULS Mirror Set
For mounting directly onto a projector with MHB - Projector Base Plate
- ULS Mirror + ULS Pole + ULS Truss Adapter = ULS Mirror Truss Set
For mounting to a truss pipe
- ULS Mirror + ULS Pole + ULS Floor Stand = ULS Mirror Floor Set
For floor mounting appliances with shock absorber
- ULS Mirror + ULS Pole
For direct mounting on a wall / ceiling



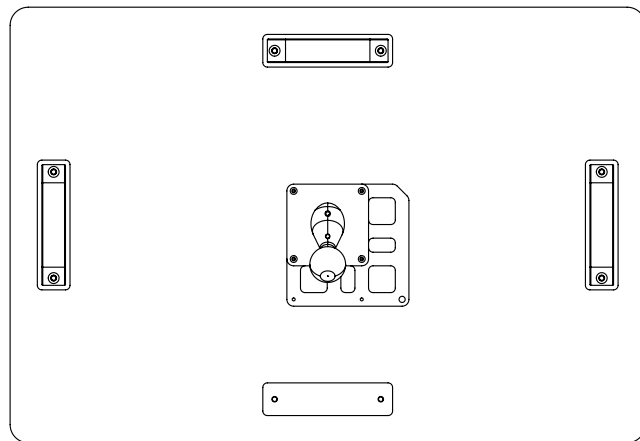
Description of the ULS parts

ULS Mirror

Based on the projector dimensions, optical throw ratio, and required mirror deflection angles, three standard mirror sizes are available. Custom dimensions can be manufactured upon request.

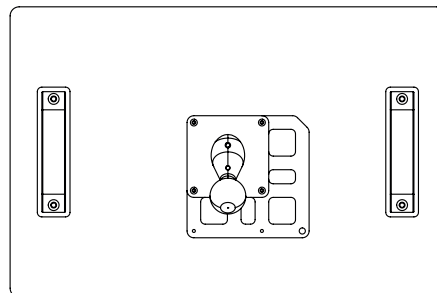
ULS Mirror M700

- Removable / changeable handles.
- Changeable positions of ball head
- Mirror size 700 x 480 mm
- Code: ULS-M700



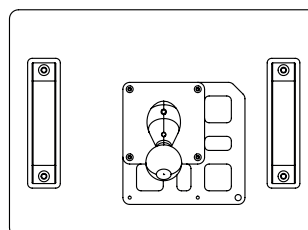
ULS Mirror M480

- Removable handles.
- Changeable positions of ball head
- Mirror size 480 x 340 mm
- Code: ULS-M480



ULS Mirror M340

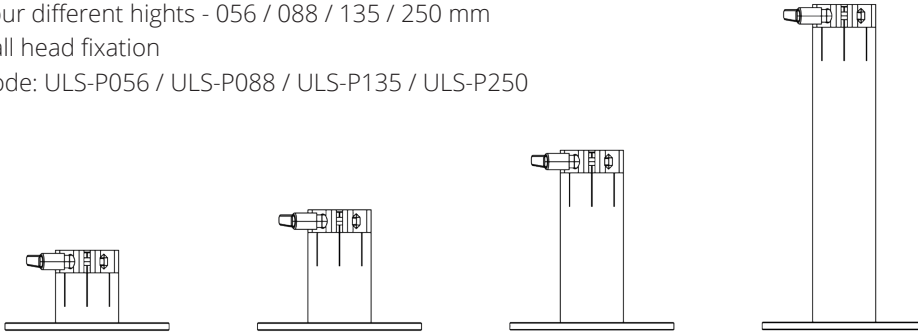
- Removable handles.
- Changeable positions of ball head
- Mirror size 340 x 250 mm
- Code: ULS-M340



ULS Pole

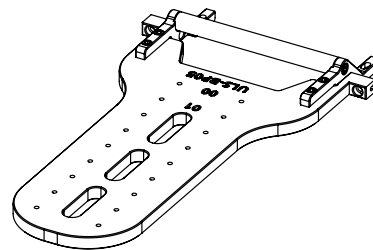
Based on the projector dimensions, optical throw ratio, and required mirror deflection angles, four pole heights are available.

- Four different heights - 056 / 088 / 135 / 250 mm
- Ball head fixation
- Code: ULS-P056 / ULS-P088 / ULS-P135 / ULS-P250



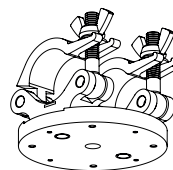
ULS Base Plate

- Multiple mount points for ULS Pole
- Easy lock in to projector MH Base Plate
- Code: ULS-BP02



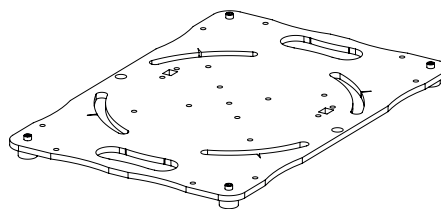
ULS Truss Adapter

- Twist-Free dual half coupler system
- Also for VESA 75 mounting
- Horizontal and vertical mounting
- Code: ULS-TA02



ULS Floor Stand

- Shock resistant floor mounting
- Code: ULS-FS02



Assembly of the ULS Fixture

1. Mounting of the ULS Pole

Warning: The ULS Mirror is always mounted last! Assemble the ULS Pole first to the adapter (where necessary) which fits your installation!

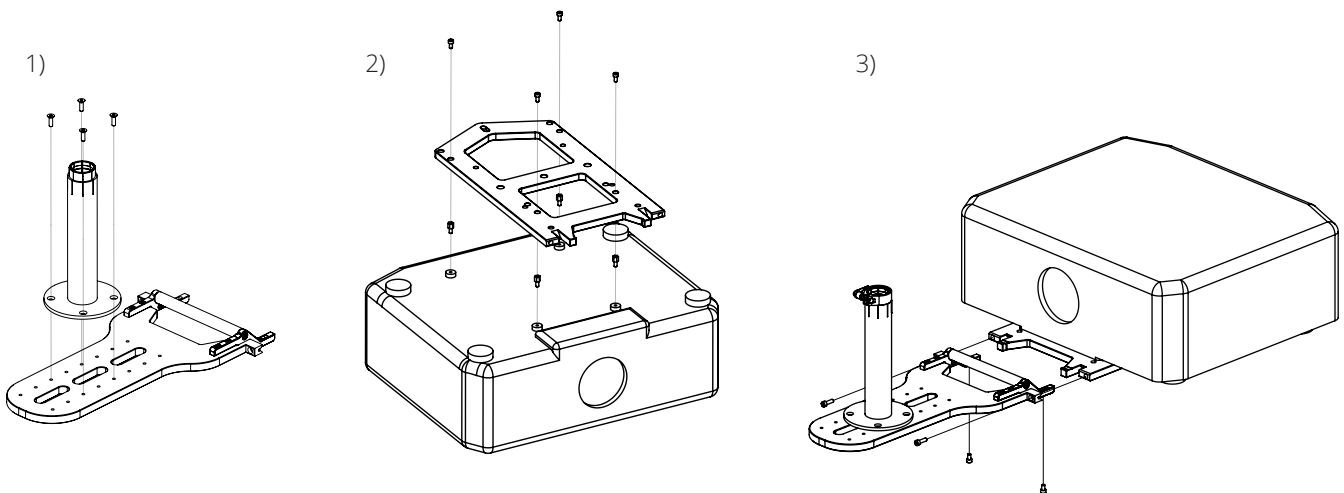
NOTE: This device is only allowed for an installation via the original ULS accessories.

NOTE: The manufacturer cannot be made liable for damages caused by incorrect installations, unauthorized parts or insufficient safety precautions! When mounting accessories please follow the installation instructions carefully.

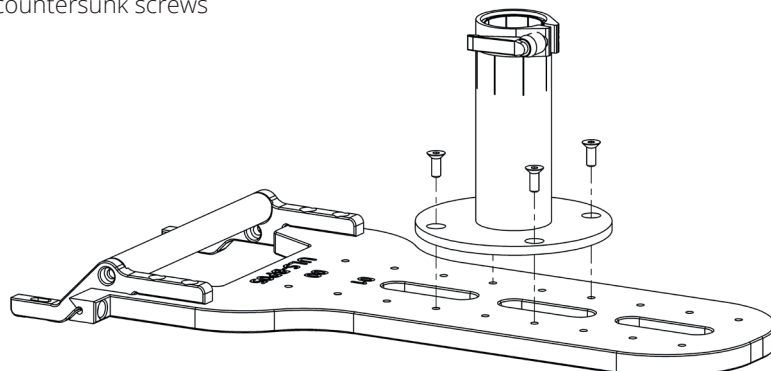
NOTE: When mounting the pole all four screws must be used at any time.

Mounting the ULS Pole to the ULS Base Plate and Projector Base Plate

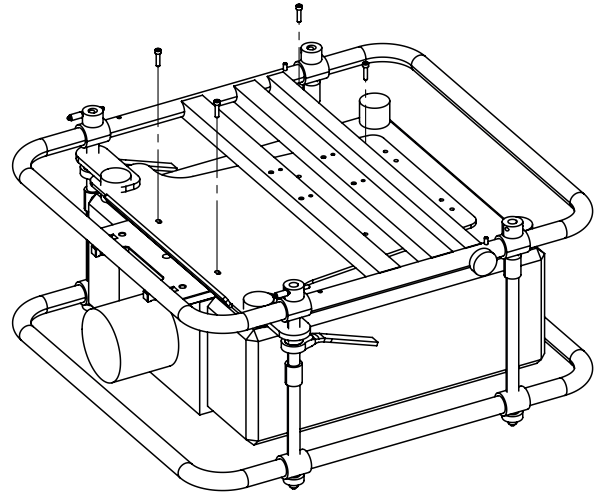
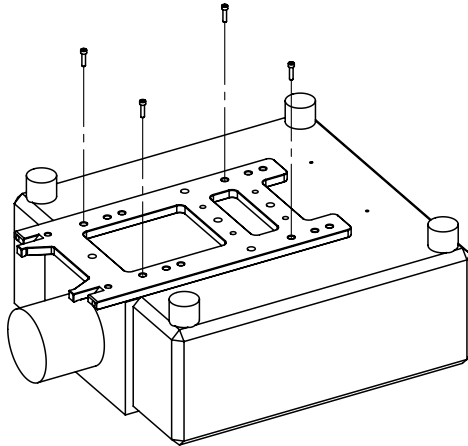
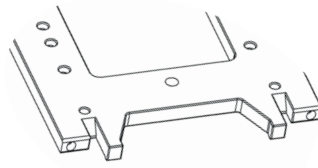
- 1) ULS Pole to ULS Base Plate - 4x M6 x 16 countersunk screws
- 2) MHB - Projector Base Plate to Projector
- 3) ULS Base Plate with Pole to the Projector Base Plate



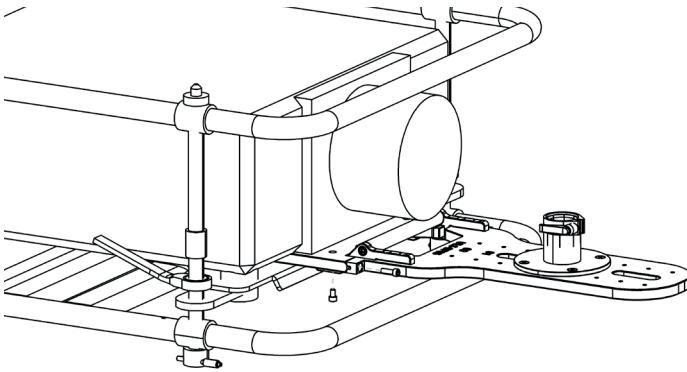
- 1) Mount the ULS Pole onto the ULS Base Plate ULS-BP05 / BP02 using the 4x M6 x 16 countersunk screws



- 2) Place the Projector Base Plate onto the projector.
Ensure that the correct side of the Projector Base Plate is facing upward.
If a projector frame is used, mount the Projector Base Plate to the projector between frame and projector,

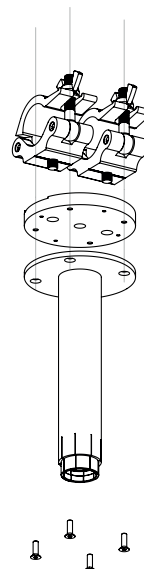
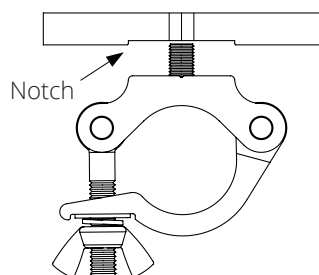


- 3) Mount the ULS Base Plate ULS-BP05 onto the Projector Base Plate by using 2x M6 x 20 and from below 2x M6 x 10 socket screws.



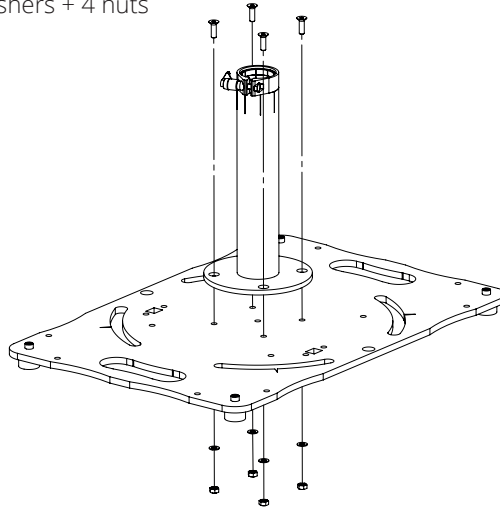
Mounting the ULS Pole to the ULS Truss Adapter

- ULS Pole to ULS Truss Adapter - 4x M6 x 16 countersunk screws
- Mounting of the Half-Couplers or VESA plate!



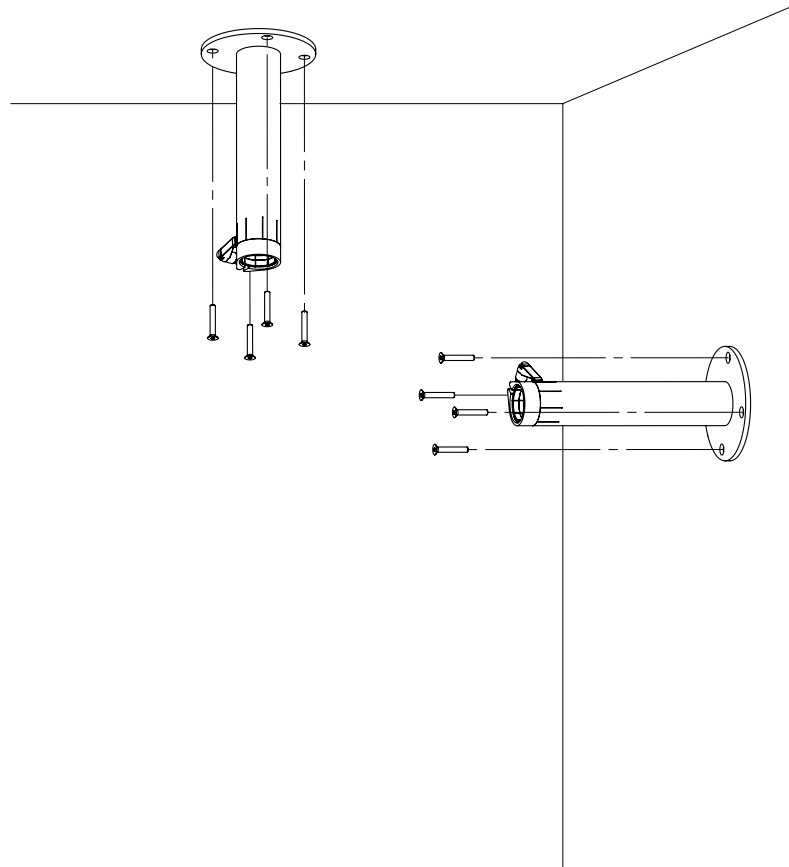
Mounting the ULS Pole to the ULS Floor Stand

- ULS Pole to ULS Floor Stand - 4 screws + 4 washers + 4 nuts



Mounting the ULS Pole to a wall/ceiling

- 4 screws according to the material of the ceiling/wall/...

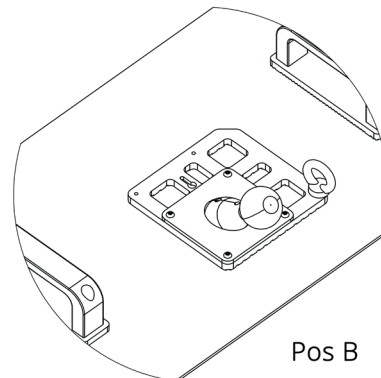
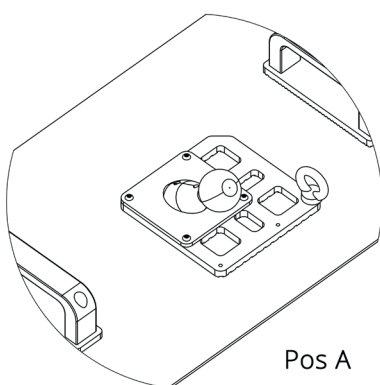
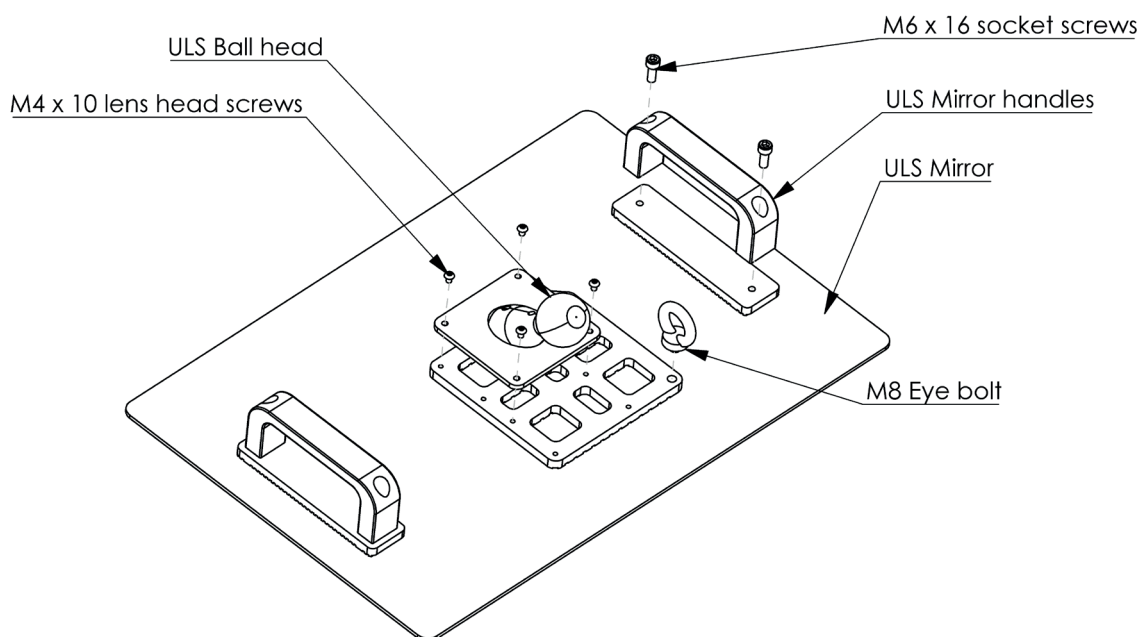


2. Assembly of the ULS Mirror

The figure below shows a ULS-M340 mirror (340 × 250 mm). Several mounting positions are available for attaching the mirror to the ball head. The position shown is Position A, which is the standard and most commonly used configuration. This position is marked with a dedicated symbol on the mounting plate.

Position B raises the mirror by +31 mm compared to Position A. This offset applies universally across all mirror sizes — whether it's the ULS-M340, M480, or M700. A third configuration, Position D, is intended for use in portrait orientation.

An M8 eye bolt is provided for attaching a safety wire. The use of a certified safety wire is mandatory for all overhead installations.

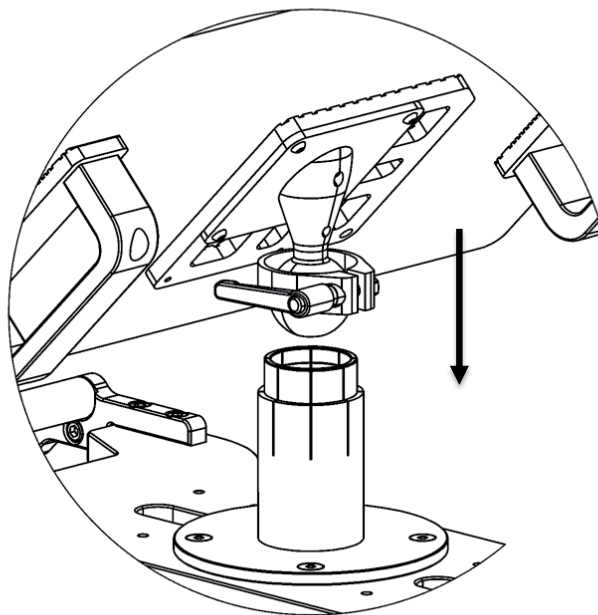
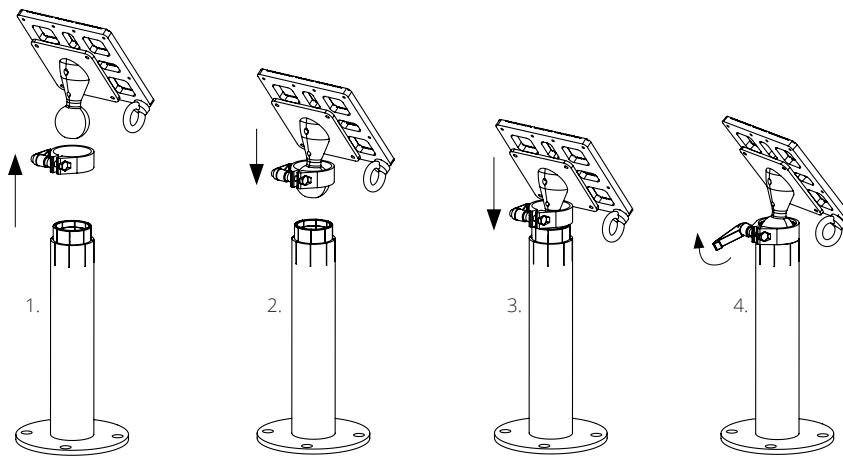


3. ULS Mirror assembly to the ULS Pole

1. Remove the clamp from the ULS Pole and place it on the ball head
2. Push the ball-head into the ball-socket in the ULS Pole
3. Move the clamp over the socket. - NOTE: once the clamp is in position the ball-head can not be pulled out of the socket anymore!
4. Secure the position with the locking lever.

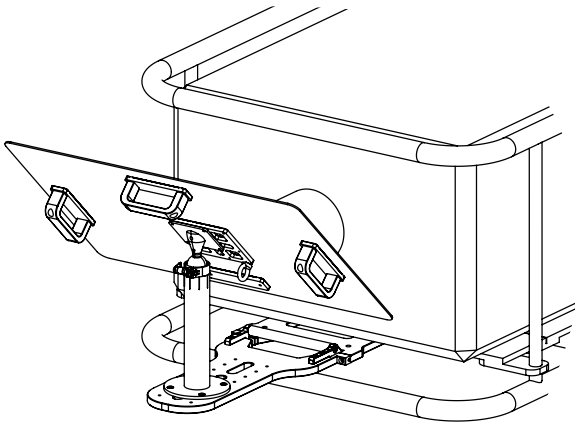
WARNING: Always hold the ULS mirror on its handles when the position is re-adjusted or the locking lever is opened. Always use at least two handles when you operate the mirror.

NOTE: DO NOT touch the mirror directly. Always use the handles.



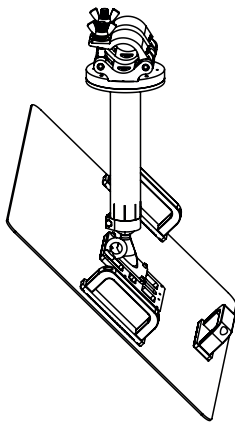
Mount it wherever you want! Choose it, mount it, project it!

The creation and development of the ULS Mirror system is based on the experience from the Mirror Head, considering all different mounting options. Fixing it directly to the projector can easily be done by using the same concept as for the Mirror Head Rental Edition, all the Base Plates designed so far can be used for the ULS Mirror as well. To mount it onto different supports there are several fixture sets with a wide range of application possibilities like mounting onto a mobile floor stand or onto any pipe and truss system. Dynamic Projection Institute has created the ULS Mirror in a way that it can fit anywhere.



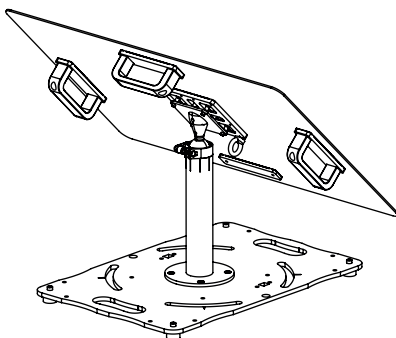
ULS Mirror Set

Using this fixture set allows you to mount the ULS Mirror system directly onto any projector by using the same concept as for the Mirror Head Rental Edition, all the base plates designed so far can be used for the ULS Mirror Set. With this package you will receive a ULS Mirror, ULS Pole and a ULS Base Plate. This set is very practical if you want to use the ULS Mirror directly fixed with the projector either with or without a frame and simply want to have a fixed static position instead of moving images. While you are on the road, this quick, easy and secure mounting is done in less than a minute.



ULS Mirror Truss Set

Using this fixture set allows you to mount the ULS Mirror system directly onto any pipe or truss system. With this package you will receive a ULS Mirror, ULS Pole and a ULS Truss Adapter. This set is perfect if your projector is already mounted on or close to a pipe or truss system, then you can simply fix the ULS Mirror system to the truss pipe or any pipe construction.



ULS Mirror Floor Set

Using this fixture set allows you to place the ULS Mirror system directly onto any flat surface. With this package you will receive a ULS Mirror, ULS Pole and a ULS Floor Stand. This set also includes shock absorbers and is designed for any applications where a projector is placed on the floor or any flat surface.

4. Mounting of the ULS Fixture

The installation must always be secured with a secondary safety attachment, e.g. an appropriate catch net. This secondary safety attachment must be constructed in a way that no part of the installation can fall down if the main attachment fails.

When rigging, de-rigging or servicing the device staying in the area below the installation place, on bridges, under high working places and other endangered areas is forbidden.

The operator has to make sure that safety-related and machine-technical installations are approved by an expert before taking into operation for the first time and after changes before taking into operation another time.

The device should be installed outside areas where persons may walk by or be seated. The device has to be installed out of the reach of people.

If the device shall be lowered from the ceiling or high joists, professional trussing systems have to be used. The device must never be fixed swinging freely in the room.

Devices in hanging installations may cause severe injuries when crashing down! If you have doubts concerning the safety of a possible installation, do NOT install the device! Mount the device to your trussing system using an appropriate clamp. For overhead use, always install an appropriate safety bond.

WARNING: OVERHEAD RIGGING REQUIRES EXTENSIVE EXPERIENCE, including (but not limited to) calculating working load limits, installation material being used, and periodic safety inspection of all installation material and the device. If you lack these qualifications, do not attempt the installation yourself, but instead use a professional structural rigger. Improper installation can result in bodily injury and or damage to property.

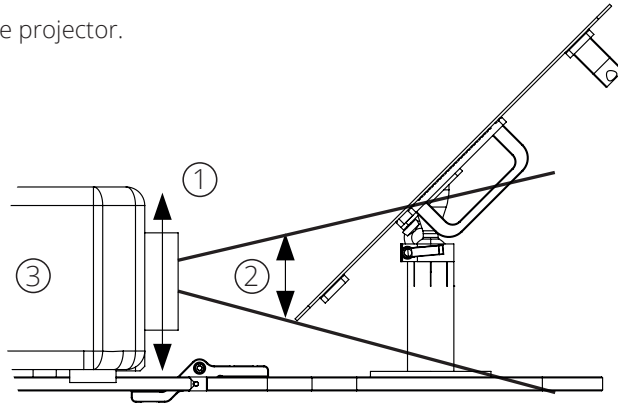
Using the ULS Fixture, Setup and Adjustment

Projector adjustments

WARNING:

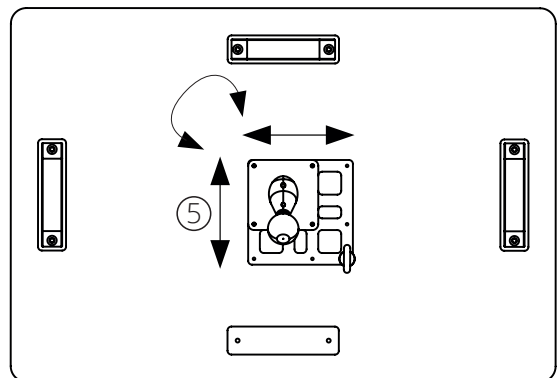
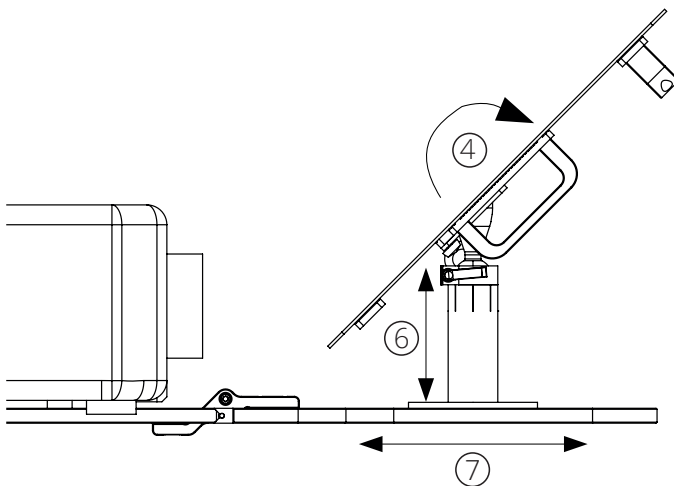
- Never look directly into the light source of an attached projector or the reflected projection on the mirror.
- Wear safety goggles if needed.
- Always follow the safety regulations of the projector.

- Lense shift (1)
- Throw ratio (Zoom) (2)
- Geometry manager (3)



ULS Fixture adjustments

- ULS Mirror angle (4)
- ULS ball-head position / orientation (5)
- ULS Pole height (6)
- Position of the ULS Mirror in respect to the Projector lens: (7)
 - Use various positions on the ULS Base Plate
 - Move closer / further on truss, floor, wall,....



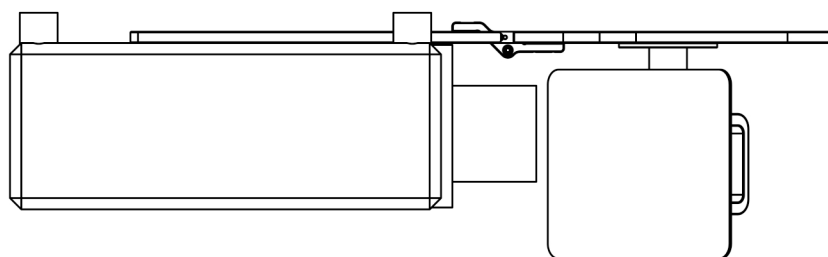
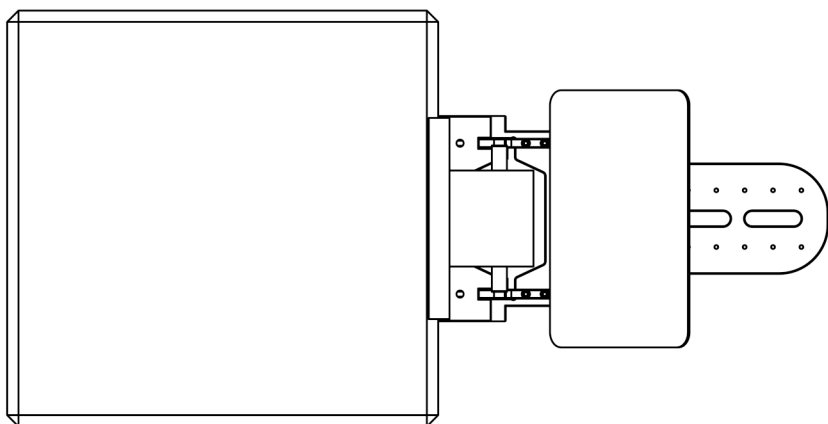
Service and maintenance

NOTE: The ULS Fixture does not contain any serviceable parts.

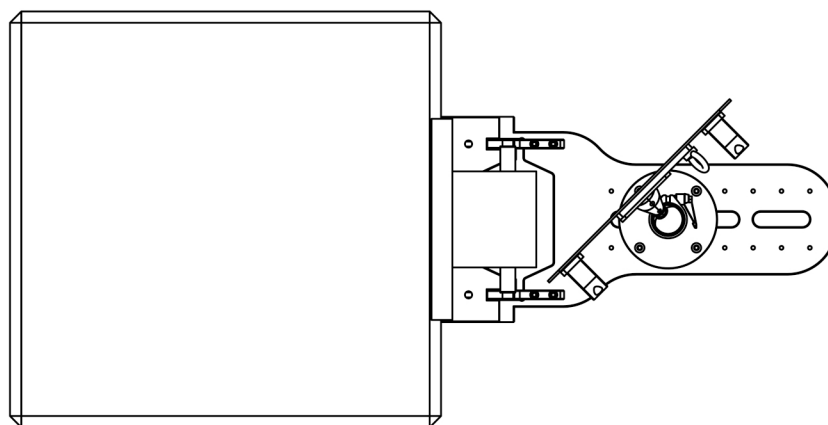
NOTE: Even though the ULS Fixture unit does not contain any parts that must be serviced; e.g. lubed, oiled or replaced – Service inspection is for general safety and to avoid danger to life - keep service serious!


The operator has to make sure that safety-relating and machine-technical installations are inspected by an expert and skilled person on a regular basis; at least once a year.

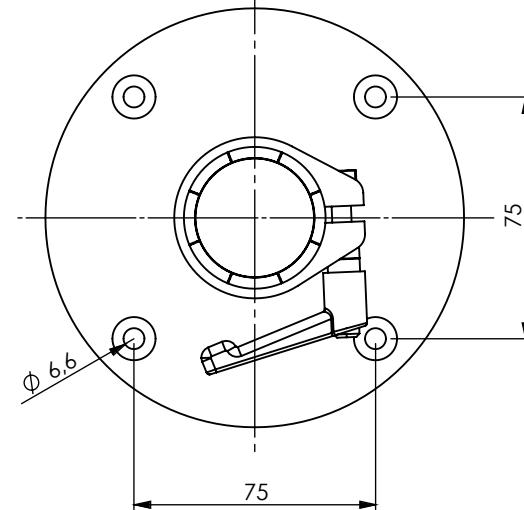
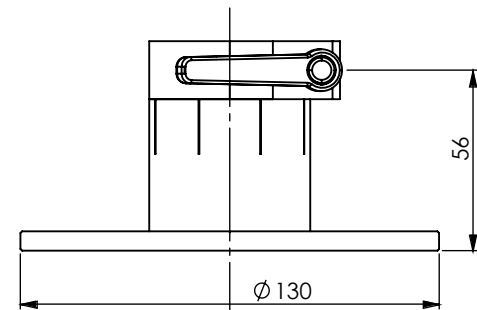
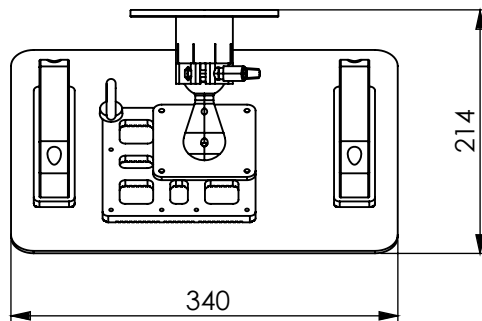
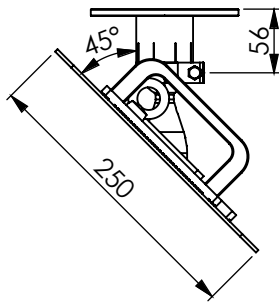
- The following points have to be considered during the inspection:
- All screws used for installing the devices or parts of the device have to be tightly connected and must not be corroded.
- There must not be any deformations on housings, fixations and installation spots (ceiling, suspension, trussing).
- Further instructions depending on the installation spot and usage have to be adhered by a skilled installer and any safety problems have to be removed.



90° Horizontal deflection



WENN NICHT ANDERS DEFINIERT: TOLERANZEN:		ROHTEIL:		ENTGRATEN UND SCHARFE KANTEN BRECHEN		ZEICHNUNG NICHT SKALIEREN		ÄNDERUNG	
DIN ISO 2768-1 m						 DYNAMIC PROJECTION INSTITUTE		Copyright (c) 2014-2024 by Dynamic Projection Institute Herstellungs und Vertriebs GmbH. All Rights Reserved.	
	NAME	SIGNATUR	DATUM			BENENNUNG:			
GEZEICHNET	Stokic		23.01.2023			ULS-MB-3408 / ULS Mirror Set 34/08 Vertical and Horizontal deflection			
GEPRÜFT									
GENEHMIGT									
PRODUKTION									
QUALITÄT						ZEICHNUNGSNR.		A4	
						DPI-ULS-MB-34MS_Horizontal_Vertical_Deflection			
				GEWICHT:		MASSSTAB:1:10		BLATT 1 VON 1	



Pole 056



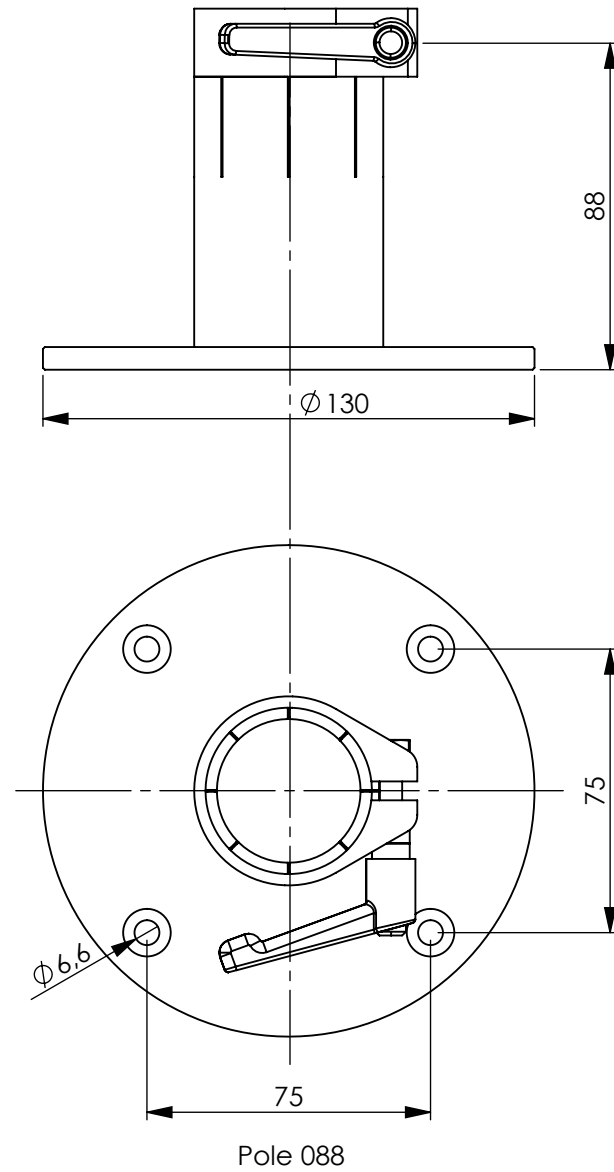
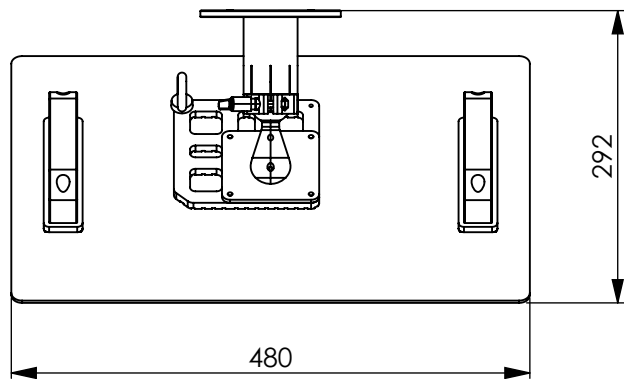
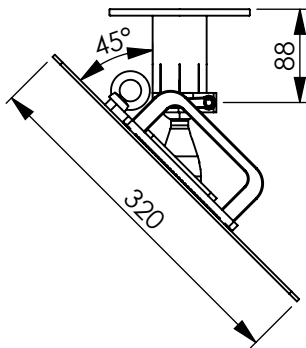
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ULS Mirror M340 with ULS Pole 056

ULS-P056

2022-04-26



Pole 088



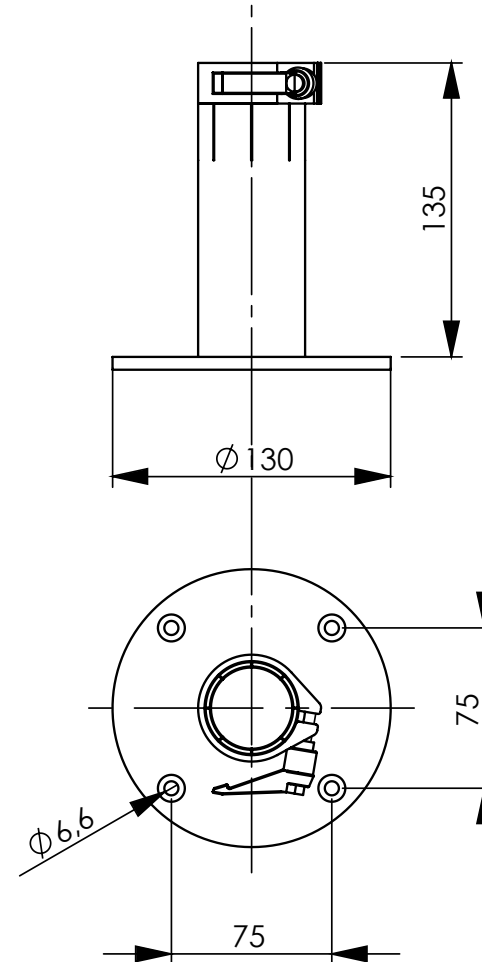
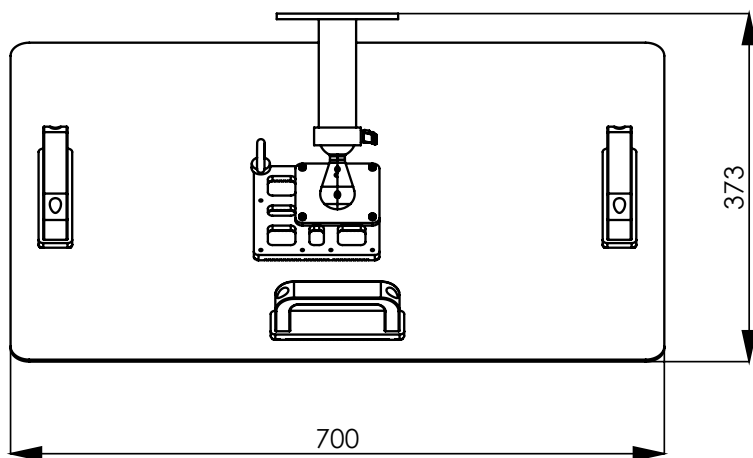
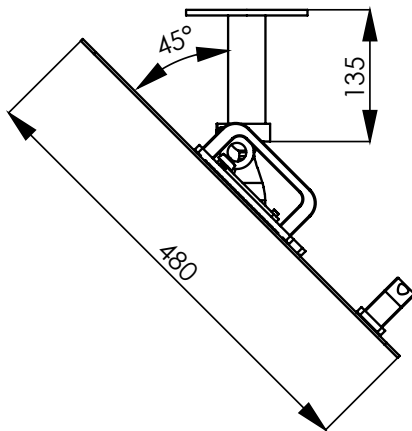
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ULS Mirror M480 with ULS Pole 088

ULS-P088

2025-06-16



Pole 135



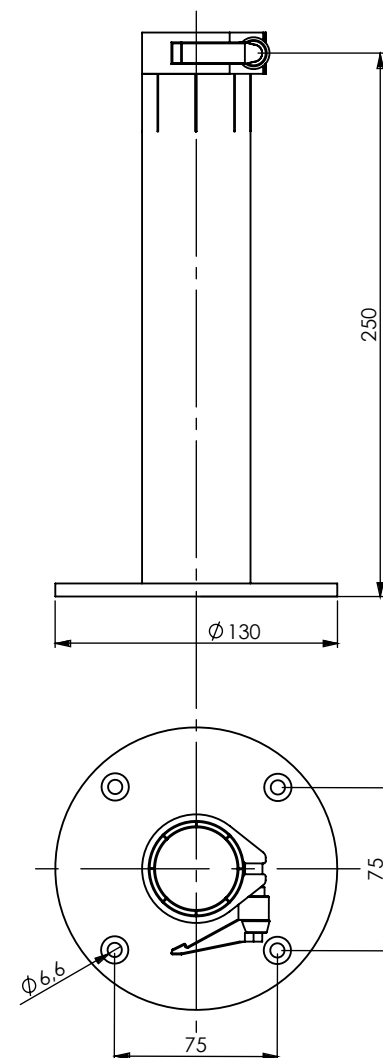
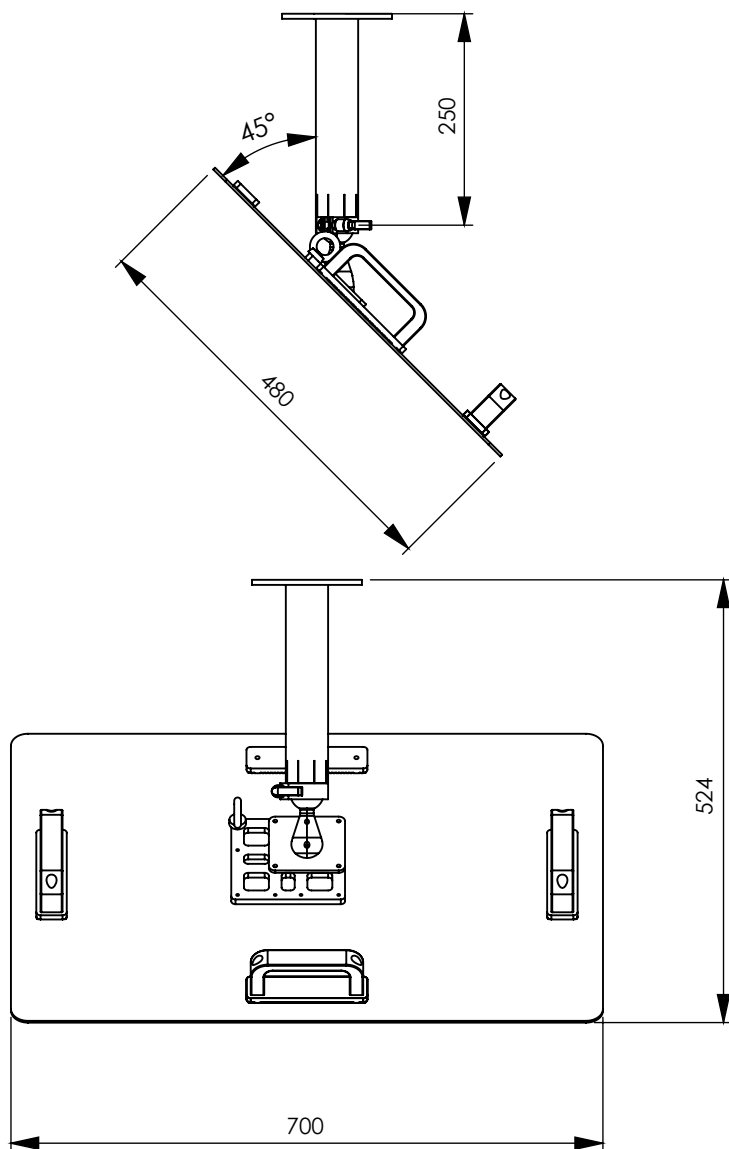
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ULS Mirror M700 with ULS Pole 135

ULS-P135

2022-04-05



Pole 250



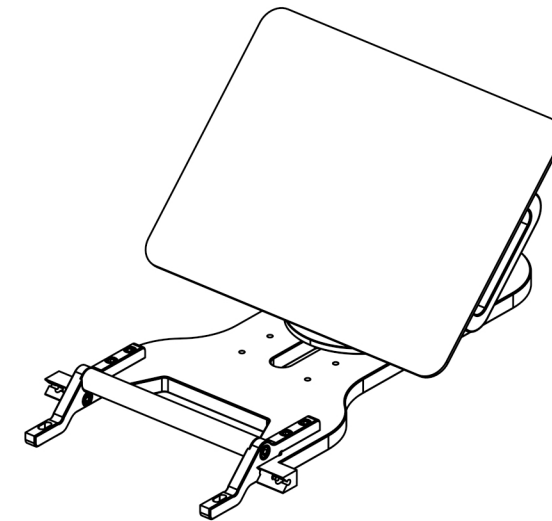
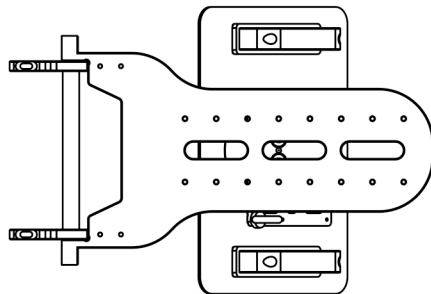
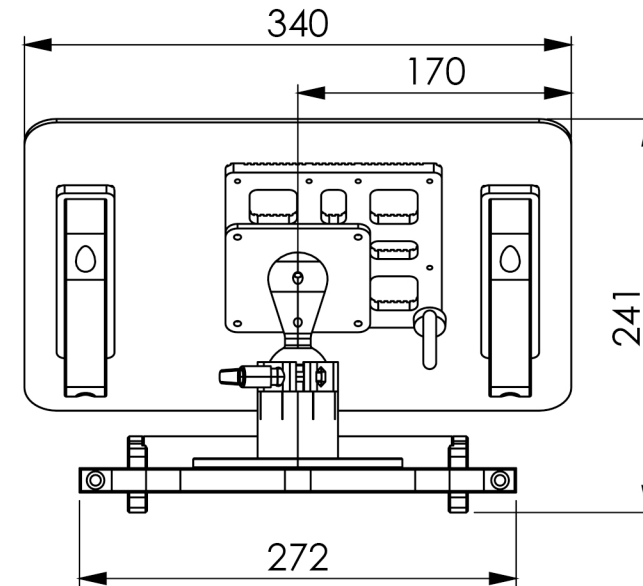
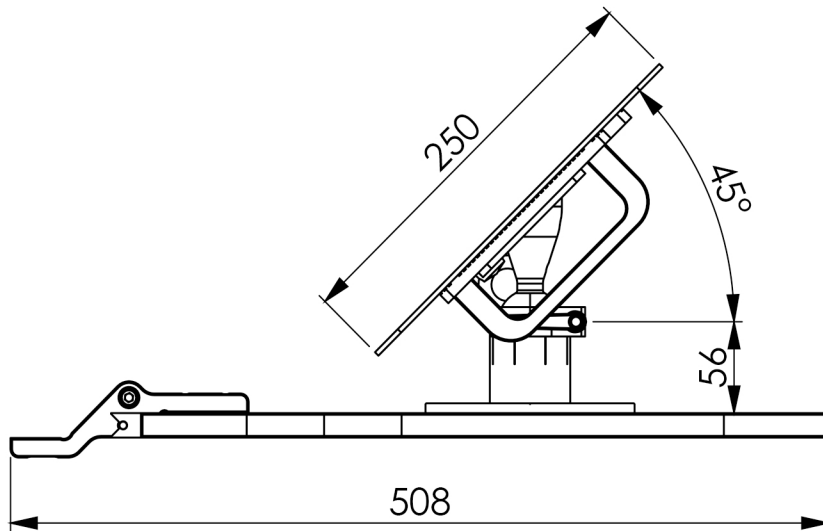
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ULS Mirror M700 with ULS Pole 250

ULS-P250

2022-04-26



Mirror size 340 x 250 mm
Pole hight 056 mm



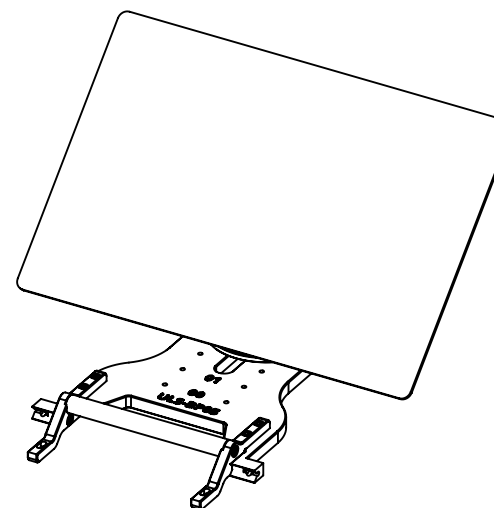
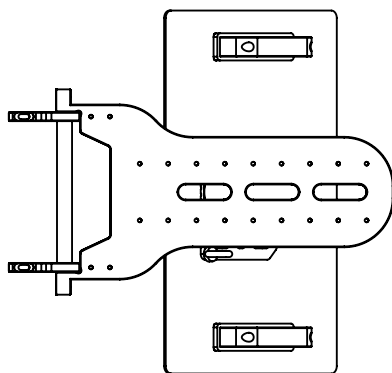
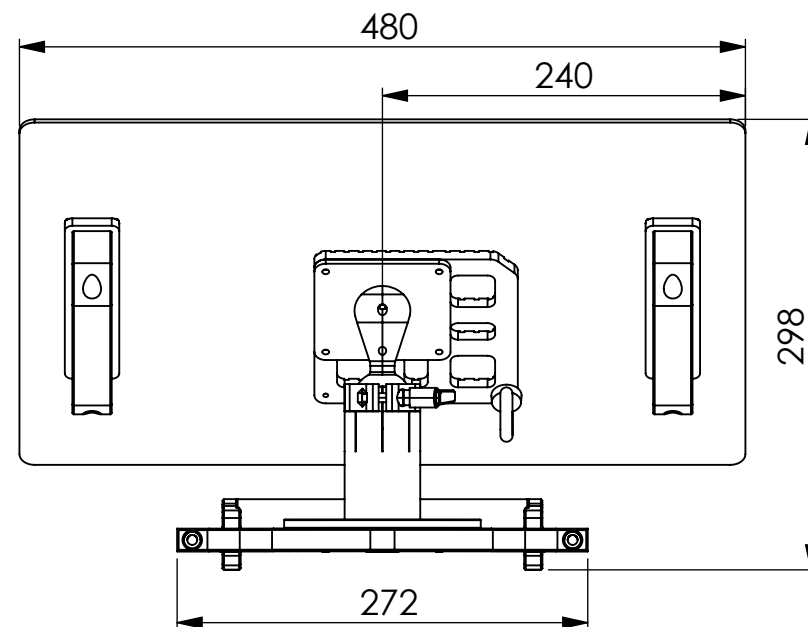
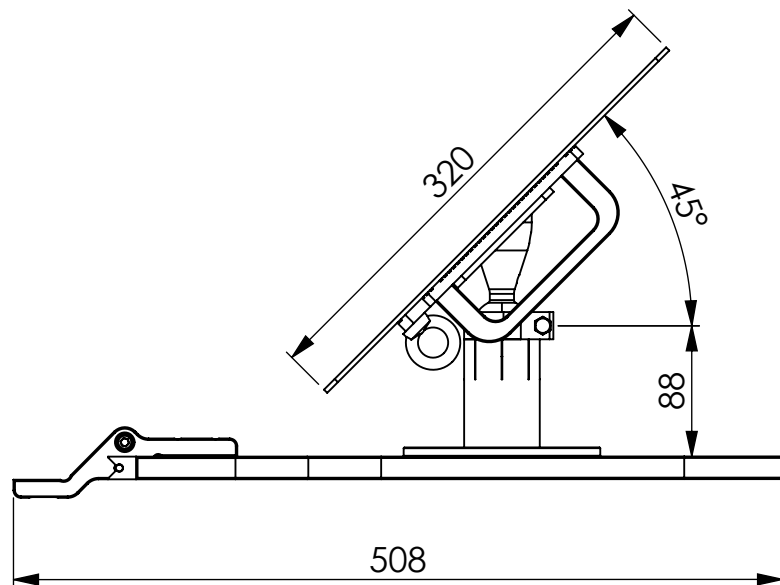
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ULS Mirror Set 34/05

ULS-MB-3405

2025-06-05



Mirror size 480 x 320 mm
Pole height 088 mm



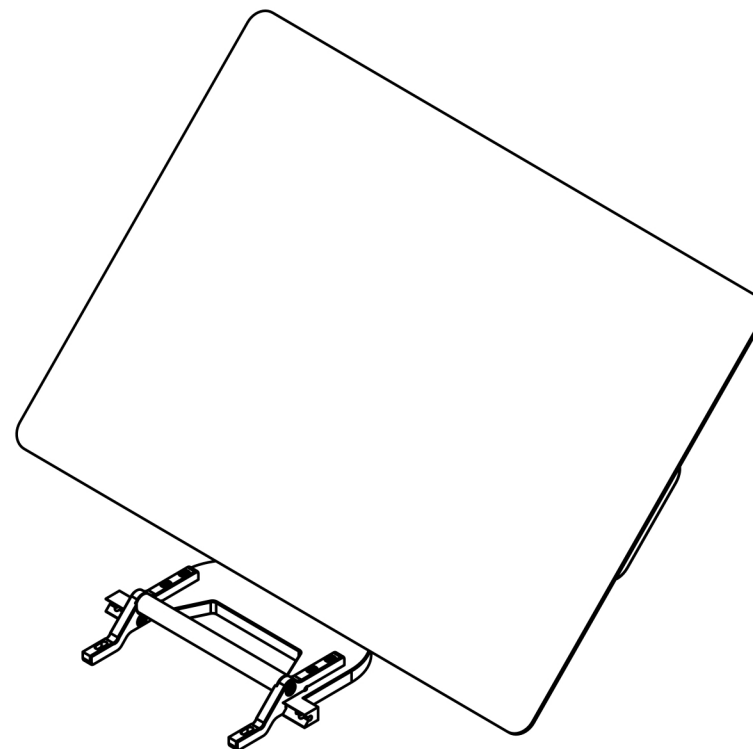
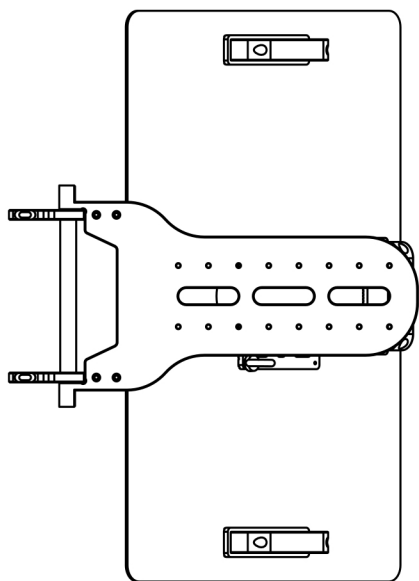
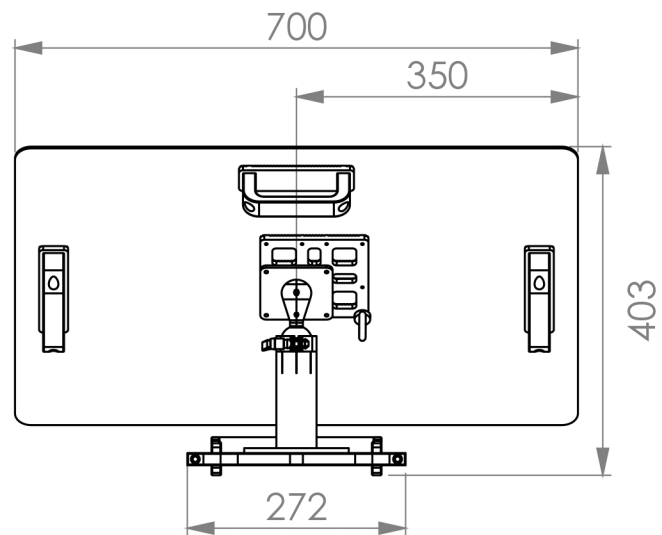
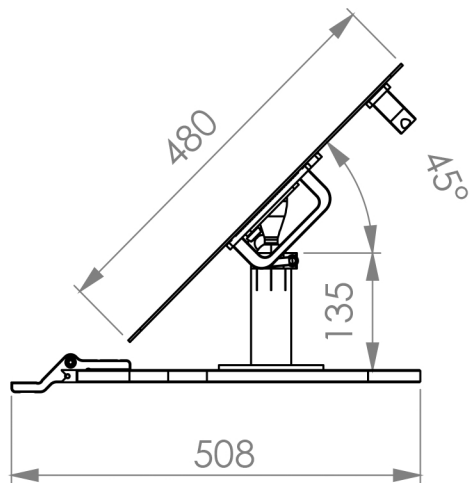
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ULS Mirror Set 48/08

ULS-MB-4808

2025-06-16



Mirror size 700 x 480 mm
Pole height 135 mm
Weight: 7,3 kg



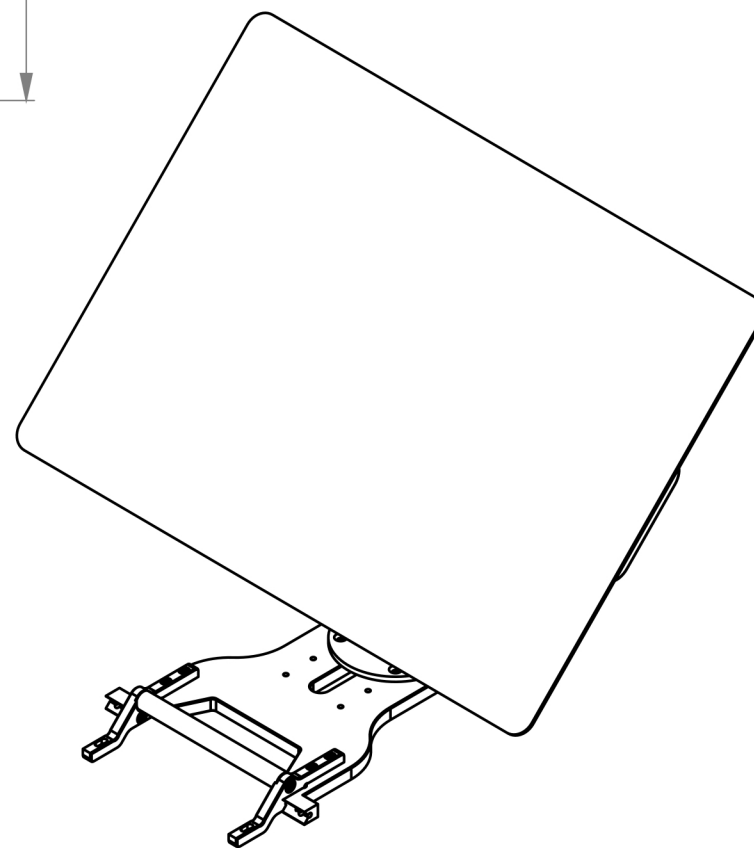
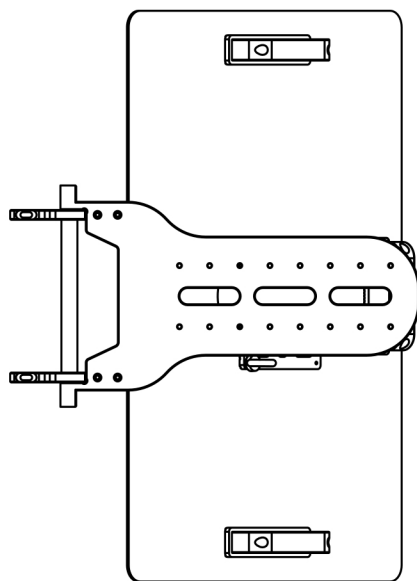
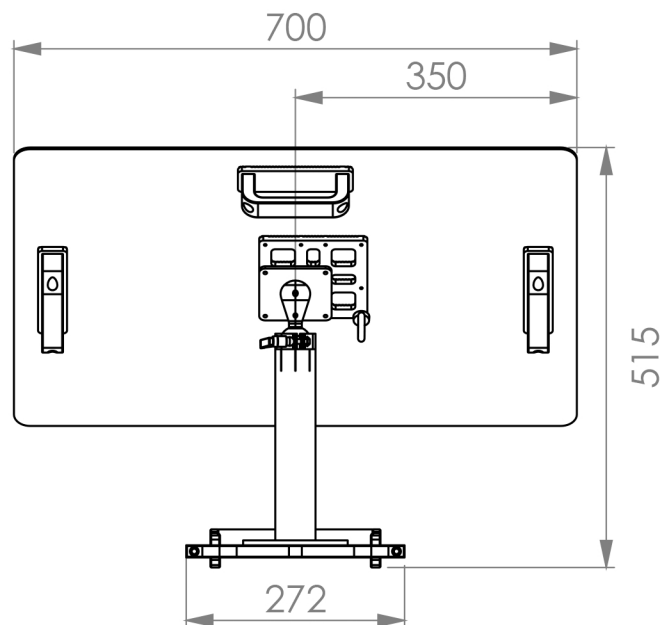
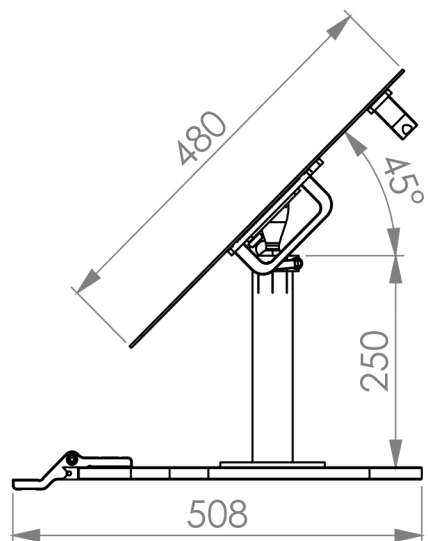
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ULS Mirror Set 70/13

ULS-MB7013

2025-06-05



Mirror size 700 x 480 mm
Pole height 250 mm
Weight: 7,5 kg



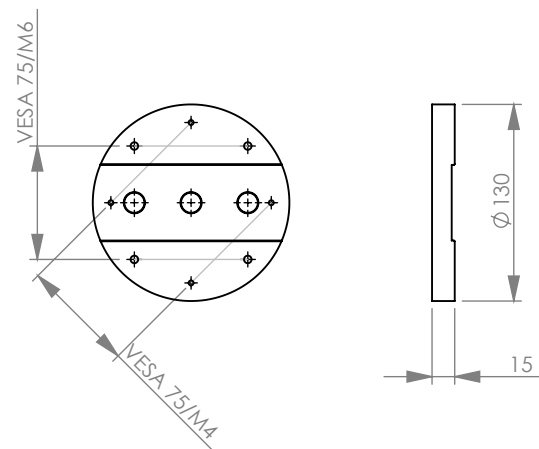
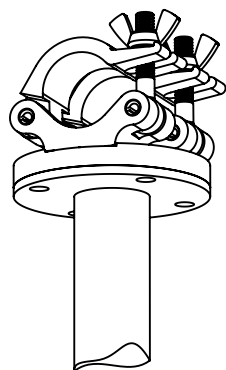
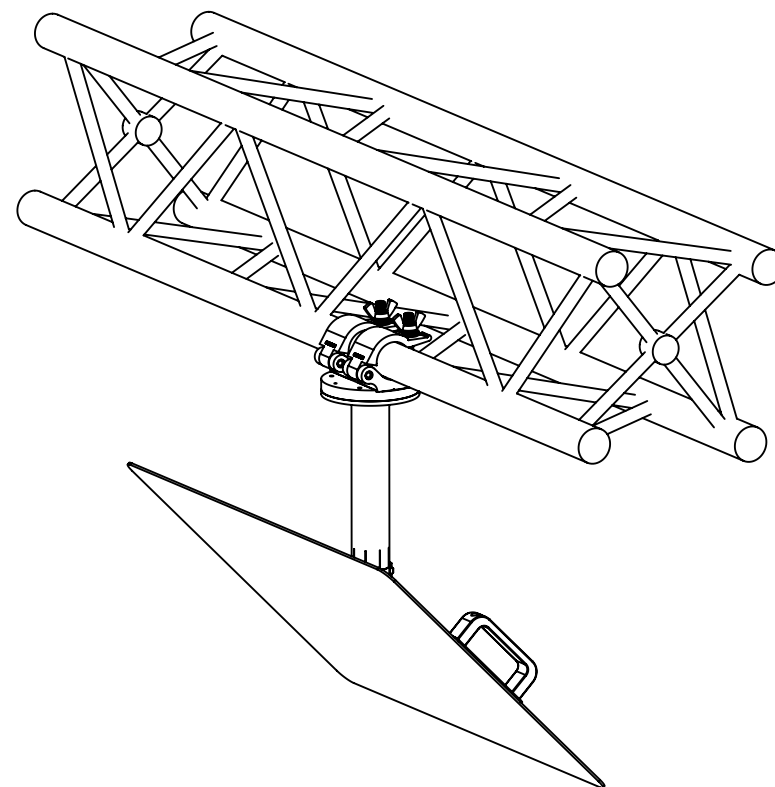
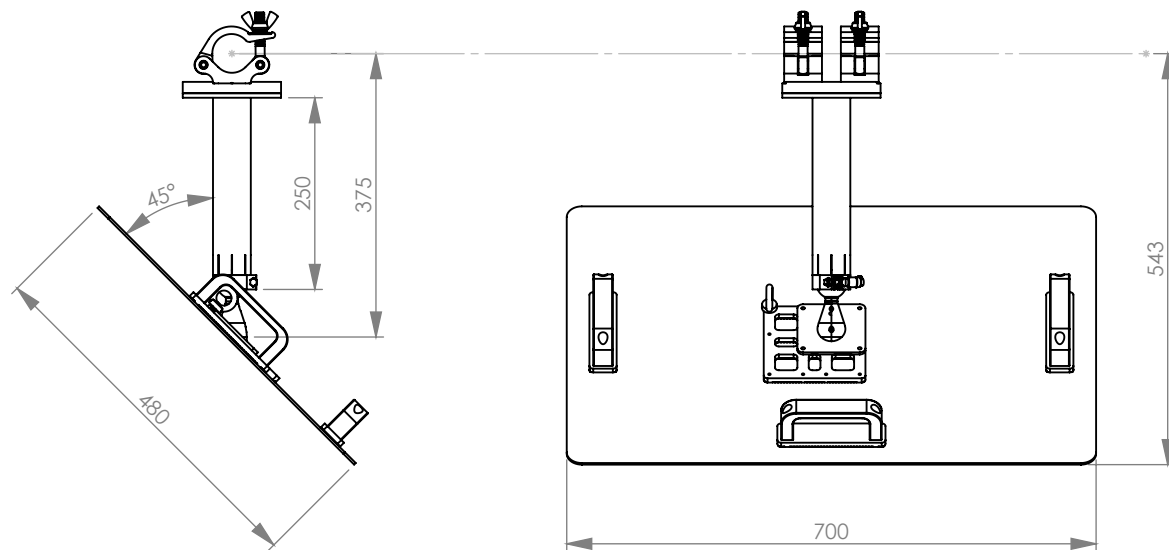
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ULS Mirror Set 70/25

ULS-MB-2705

2025-06-05



Weight: 5,5 kg



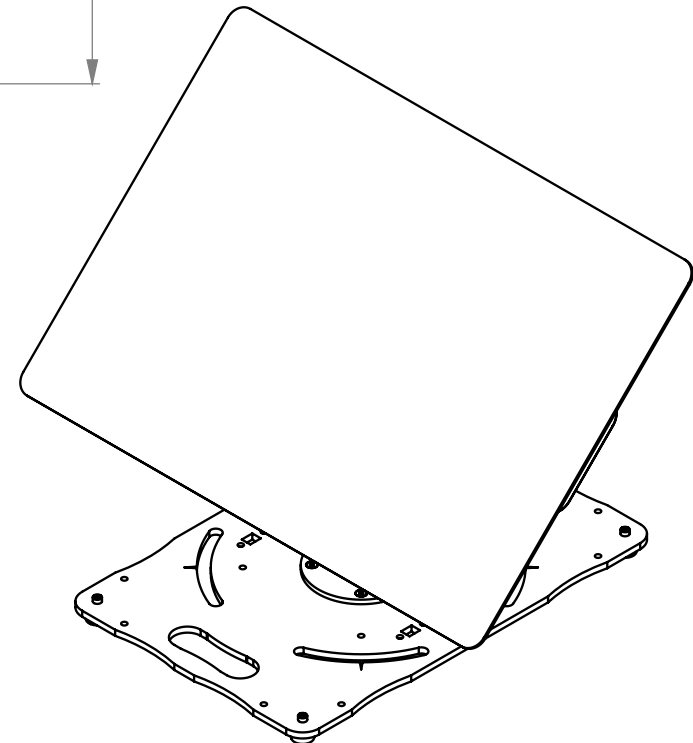
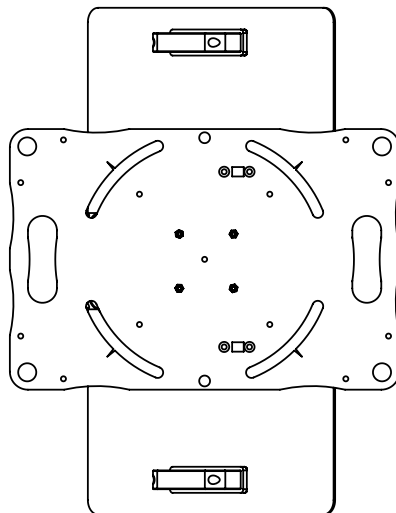
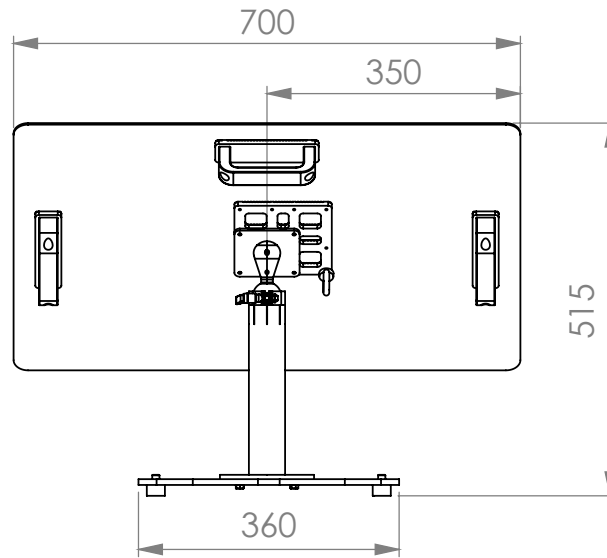
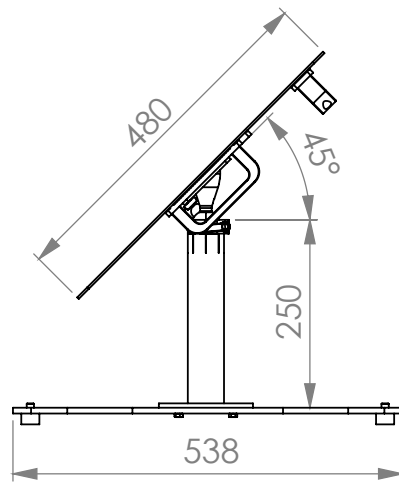
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ULS Mirror Truss Set 70/25

ULS-MT-70L

2021-07-23



Weight: 16,5 kg



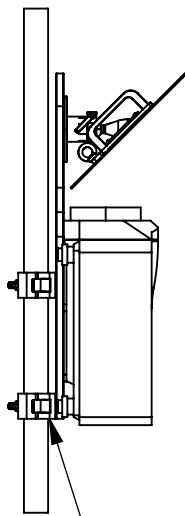
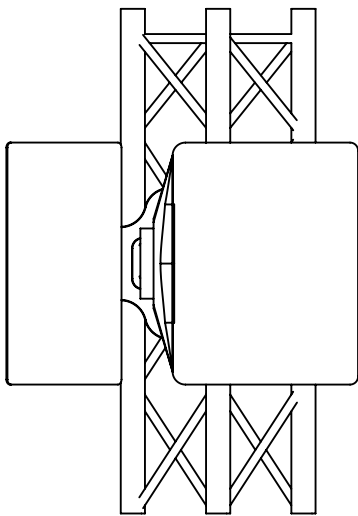
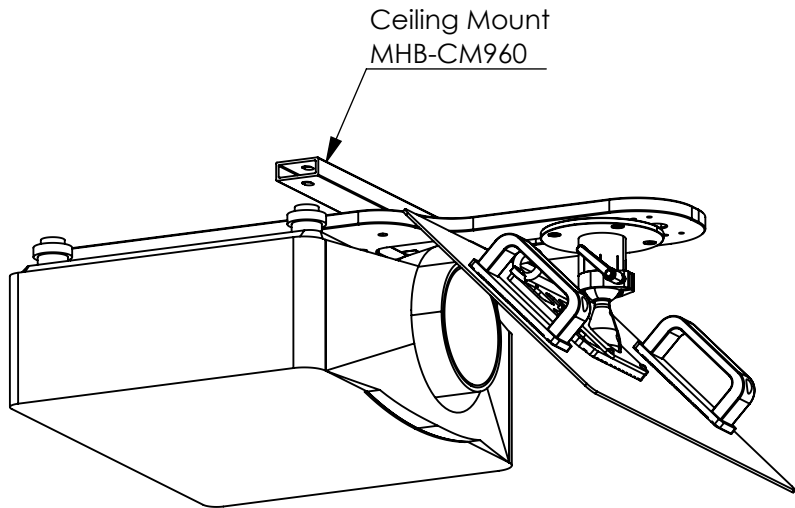
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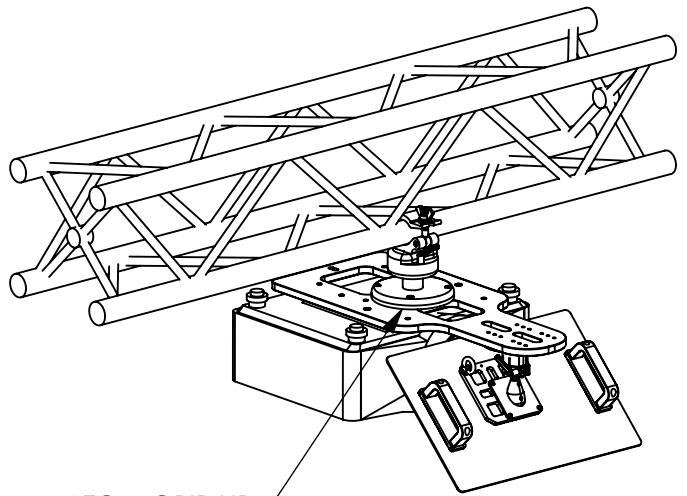
ULS Mirror Floor Set 70/25

ULS-MF-70L


2021-07-23



Half Coupler



ATOM GRIP HD

WENN NICHT ANDERS DEFINIERT: TOLERANZEN: DIN ISO 2768-1 m			Oberflächenbeschaffenheit:			ENTGRATEN UND SCHARFE KANTEN BRECHEN	ZEICHNUNG NICHT SKALIEREN		ÄNDERUNG		
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	NAME	SIGNATUR	DATUM				BENENNUNG: ULS-4805_DWU960 Mounting options				
GEZEICHNET	Stokic		26.06.2024								
GEPRÜFT											
GENEHMIGT											
PRODUKTION											
QUALITÄT				WERKSTOFF:			ZEICHNUNGSNR.				A4
							DPI-ULS-4805_DWU960_Mounting_options				
				GEWICHT:			MASSSTAB:1:15				BLATT 1 VON 1