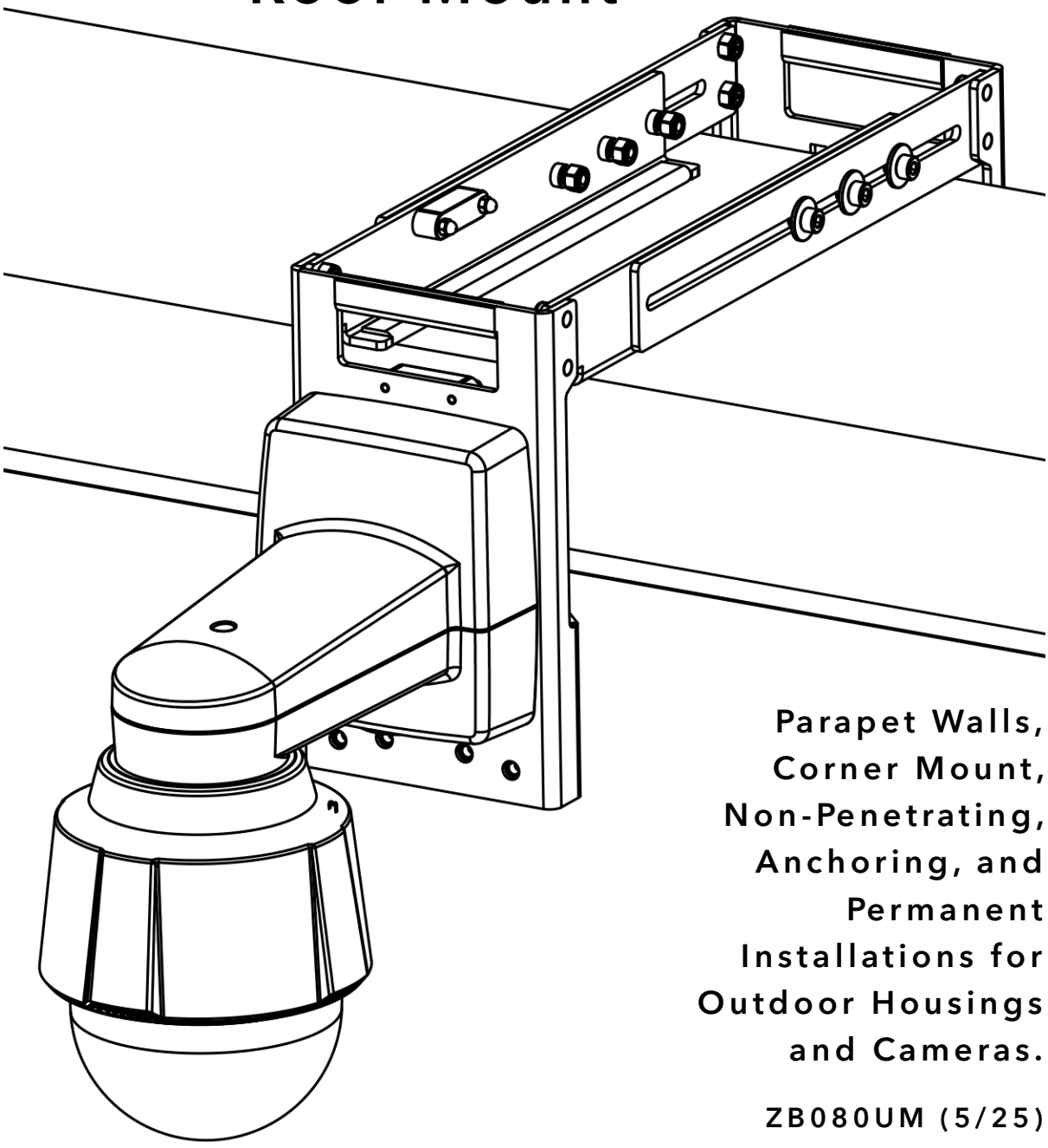
dotworkz®

USER MANUAL

Z-Bracket Universal Roof Mount



Parapet Walls, Corner Mount, Non-Penetrating, Anchoring, and Permanent Installations for Outdoor Housings and Cameras.

ZB080UM (5/25)

Contents

List of illustrations

Read this first

Before using this product, carefully read the entire manual and retain it for future reference. Failure to follow these instructions may result in equipment damage, property damage, or serious injury.

- This mount is designed for use by qualified personnel with knowledge of safe installation practices and proper use of mounting systems in rooftop environments.
- Always follow all applicable local building codes, safety regulations, and OSHA standards when installing or adjusting the mount.
- Use appropriate personal protective equipment (PPE) at all times during installation.
- This mount is intended for static applications. It is not designed for dynamic or mobile use.
- Ensure the mounting surface is structurally sound, level, and free of debris before installation.
- Periodic inspection and maintenance of the mount is advised to ensure long-term stability and safety.

> **Notice:** Installation conditions may vary across different environments, which may affect how the system should be configured. The product is shipped disassembled, and certain components included in the kit will need to be assembled, adjusted, or interchanged to suit the mounting scenario. Familiarity with the product's features and assembly procedures, through a thorough review of this manual, is essential to ensure correct installation, optimal function, and long-term reliability.

Product support

If you have questions about installation, assembly, or compatibility, all documentation and support material can be found online at dotworkz.com/z-bracket. This webpage is regularly updated with the latest resources and guidance to support safe and effective use of your mount.

For inquiries that require further assistance, the support portal also includes direct contact options, including web forms for technical questions and service requests.

Safety Instructions

1. Ensure you understand the assembly steps and mounting procedures before proceeding.
2. The product is shipped disassembled; follow the provided instructions to assemble it properly before installation.
3. Always use the designated front and back handles when lifting or positioning the mount to maintain full control.
4. If the equipment is too heavy or difficult to maneuver safely, seek assistance from a second person.
5. When handling the mount, keep a firm grip and be mindful of sudden movements to avoid loss of control.
6. Never leave the system partially installed or unsecured—always complete the installation or safely disassemble it before stepping away.
7. If installed at elevated heights, use proper fall protection and ensure a stable work area.
8. Keep work areas clear of obstacles and distractions to prevent accidents during installation.
9. Be cautious of pinch points when handling sliding components or tightening fasteners.
10. If using power tools, follow the manufacturer's safety guidelines and ensure secure footing before drilling or fastening hardware.
11. For permanent installations, ensure the mounting surface is structurally sound and properly prepared before securing the unit.
12. Before finalizing the installation, verify that all fasteners are tightened, and the mount is stable and level.
13. Route cables securely to prevent strain, tangling, and/or exposure to damage.
14. Conduct a final inspection after installations, ensuring all components are properly positioned, secured, and free of obstructions.

Warranty information

Dotworkz offers a one-year limited warranty from the date of fulfillment for all products unless otherwise stated.

- **Warranty Details:** If the product or any part proves defective in material or workmanship, Dotworkz will repair or replace the defective part at its discretion. The warranty for the repaired or replaced part is limited to the original unexpired term of the warranty. The buyer is responsible for all shipping costs associated with the return of the product.
- **Conditions & Exceptions:** The warranty will be void if the product is damaged due to misuse, abuse, alteration, improper repairs, or other conditions such as incorrect power connections, physical damage, chemical exposure, moisture, or circuit modifications.
- **Buyer's Responsibility:** In case of a defect, please refer to the Return Policy & Procedures. The buyer assumes the cost of labor and repairs unless otherwise covered by the warranty. Dotworkz does not provide any other expressed or implied warranties regarding the product, and it is sold "as-is."
- **Shipping Terms: (US Only)** The buyer is responsible for shipping the item back to Dotworkz for quality inspection. If the issue is covered by Warranty, Dotworkz will be responsible for shipping the repaired or replacement back to the buyer.

Dotworkz warrants housing, cables, and mounts against defects in materials or workmanship for one year from the original purchase date. This warranty excludes cosmetic blemishes, oxidation, scratches, or damage to protective lenses. Our warranty does not cover damage caused by natural disasters, including but not limited to floods, earthquakes, hurricanes, or lightning strikes.

- **Exclusions:** The warranty does not cover damage caused by unreasonable use, misuse, theft, vandalism, chemical exposure, or improper maintenance. Mounting products underwater will void the warranty. Additionally, this warranty does not cover data loss, or any consequential damage.
- **Return Procedure:** If a product fails to meet warranty specifications, it shall be returned with a shipping cost to be paid to Dotworkz. Warranty repairs or replacements are exclusively performed by Dotworkz.

For further information or to request warranty services, please contact sales@dotworkz.com for customer support.

Procedures for the Warranty Process:

1. If you need a Warranty, please contact Dotworkz Customer Service immediately, call (866) 575-4689 for assistance.
2. E-mail the Sales team at sales@dotworkz.com
   a. Begin the subject line with 'Warranty Request'.
   b. Include the issue you are having with the item purchased.
   c. Include photos of the item, especially one showing the serial number (if available), to help expedite the process.
   d. Also include the Sales Order or Purchase Order as proof of purchase.

Liability statement

The liability of Dotworkz, if any, and the purchaser's sole and exclusive remedy for any claim, regardless of legal theory—whether in contract, tort, or otherwise—shall be limited to the actual purchase price of the product in question. Under no circumstances shall Dotworkz be liable for any special, indirect, incidental, or consequential damages, including but not limited to loss of profits, revenue, data, or business opportunities, or any other financial loss arising from the use or inability to use the product.

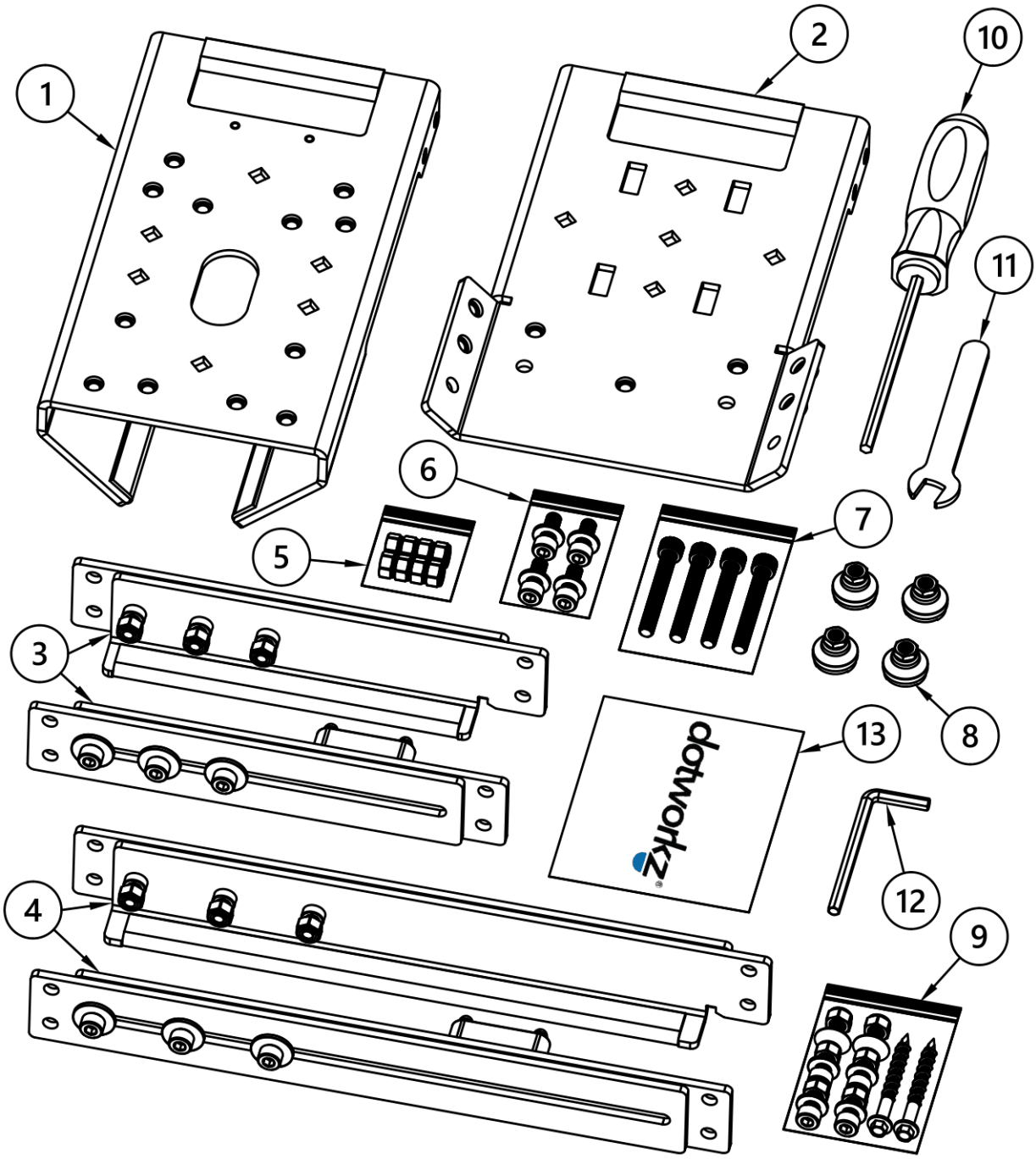
Dotworkz makes no warranties, express or implied, beyond those explicitly stated in the product warranty. This includes but is not limited to implied warranties of merchantability or fitness for a particular purpose. The purchaser assumes all responsibility for determining whether the product is suitable for their intended use and installation conditions.

The purchaser is solely responsible for the proper installation, maintenance, and use of the product. Dotworkz shall not be liable for any damage, injury, or loss resulting from improper installation, unauthorized modifications, misuse, or failure to follow the provided instructions. Furthermore, Dotworkz is not responsible for damages to third-party property or individuals arising from the use of this product.

Package contents

- Z-Bracket universal roof mount
  - Front plate
  - Back plate
  - Small arms set
  - Large arms set
  - Swivel mounts
  - Arms set locknuts
- Camera/housing mounting hardware
  - (4) M8 Screws
  - (4) Flat washers
- Complimentary installation tools
  - 6mm Hex screwdriver
  - 6mm Hex L-Key
  - 13mm Open-end wrench
- Additional hardware pack
  - (4) M8 Screws
  - (4) Flat washers
  - (2) M8 Carriage bolts
  - (6) M8 Locknuts
  - (2) 5/16" Concrete screws
- Printed material
  - Quick guide

Product overview



1	Front plate	6	Camera/housing mounting hardware	10	Hex screwdriver
2	Back plate			11	Open-end wrench
3	Small arms set	7	Swivel mount screws	12	Hex L-Key
4	Large arms set	8	Swivel mounts	13	Quick guide
5	Arms set locknuts	9	Additional Hardware		

Figure 1. Package contents – components and tools included

Product description

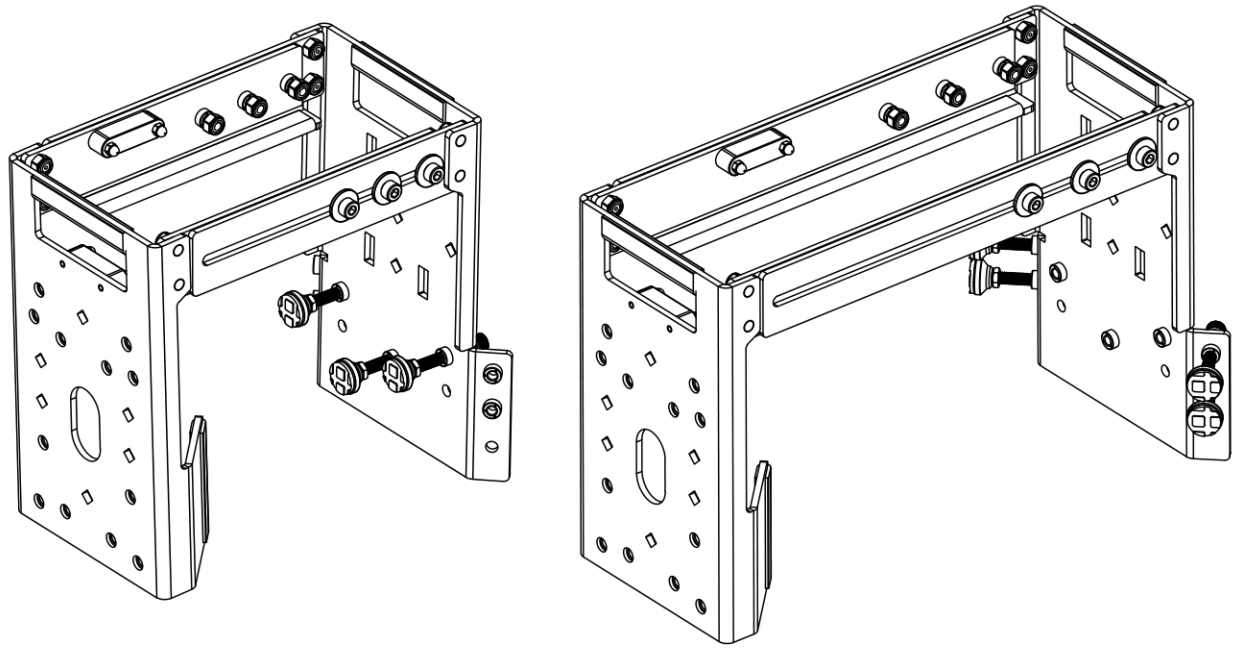


Figure 2. Fully assembled Z-Bracket – small version for straight wall (left), large version for corner (right)

The Z-Bracket is an adjustable, versatile, non-penetrating solution designed to provide a stable, elevated mounting surface on rooftop walls, (commonly known as parapet walls), as well as other accessible vertical structures. Its primary purpose is to simplify the installation of outdoor surveillance equipment, such as cameras and camera housings, without requiring exterior access via lifts or ladders. However, its flat bolting surface also supports a wide variety of compatible equipment.

The mount is designed to sit securely on top of a wall, distributing its weight and clamping pressure evenly. It can be deployed across a single wall or at the intersection of two adjacent walls, making it suitable for both straight and corner configurations. Its adjustable span allows it to accommodate a wide range of wall thicknesses, ensuring compatibility with varied architectural conditions.

Because the unit is installed from the rooftop side, it improves safety and access during setup, while also enabling easier cable routing into buildings. This makes it particularly well-suited for situations where wall surfaces are high, difficult to reach, or part of rented properties where structural modifications are not allowed.

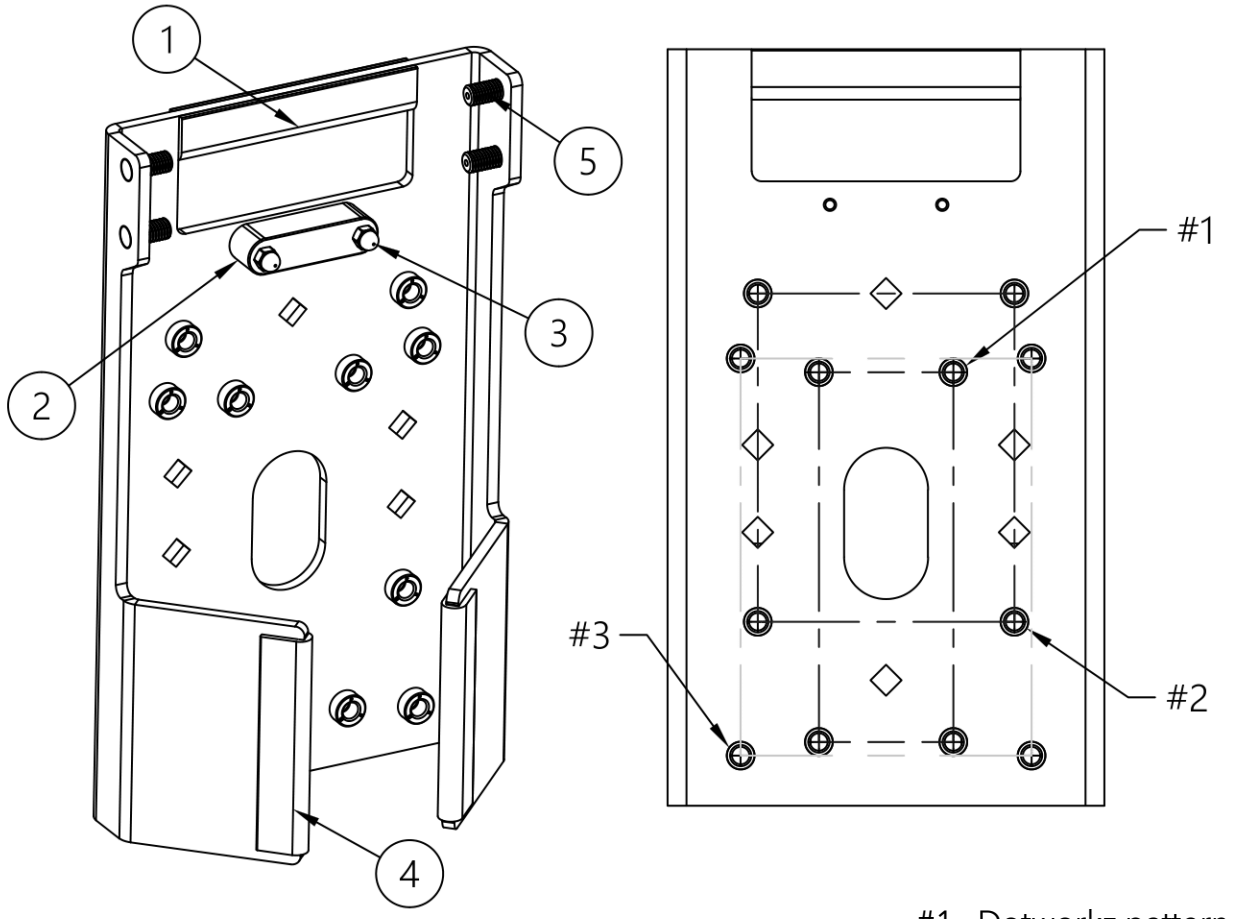
The Z-Bracket is engineered to function as a non-permanent, pressure-based system, avoiding the need for drilling or surface penetration. This means the unit can be relocated or adjusted post-installation, which is especially valuable when camera angles need to be revised or unexpected obstructions appear in the line of sight. The rubberized contact surfaces protect the wall finishes and accommodate common parapet wall flashings, preventing surface damage and minimizing installation impact, especially on concrete or finished surfaces.

To enhance alignment on uneven or distorted surfaces, the mount includes integrated tubular levels and uses the flexibility of its rubber components to conform to non-uniform finishes. This ensures a secure and level installation, even in challenging conditions.

For clients seeking additional safety measures, the mount includes an option for minimal anchoring using a single concrete screw. This hybrid approach maintains the low-impact nature of the system while offering added stability. If a fully permanent installation is preferred, the mount can be securely fastened to the wall using standard concrete anchors—providing a durable, fixed solution without compromising the ease of top-down installation from the roof.

Z-BRACKET

Front plate



						#1	Dotworkz pattern
1	Rubber handle	3	Acorn nuts	5	Threaded	#2	Axis mounts
2	Tubular level	4	Rubber spacers		studs	#3	Axis cabinets

Figure 3. Front plate – labeled components and mounting patterns

The Z-Bracket front plate is the main mounting surface for cameras or housings, providing a secure and adaptable interface for installation. Several hardware elements are incorporated into the plate to ensure proper function and ease of use.

The rubber handle serves as the main grip point when installing the mount. It is not permanently attached but instead held in place by pressure within its slotted position. If it moves out of place, it can simply be repositioned, and if lost, it can be replaced using a 4-inch section of rubber trim from an unused arm set (if available, depending on the required configuration).

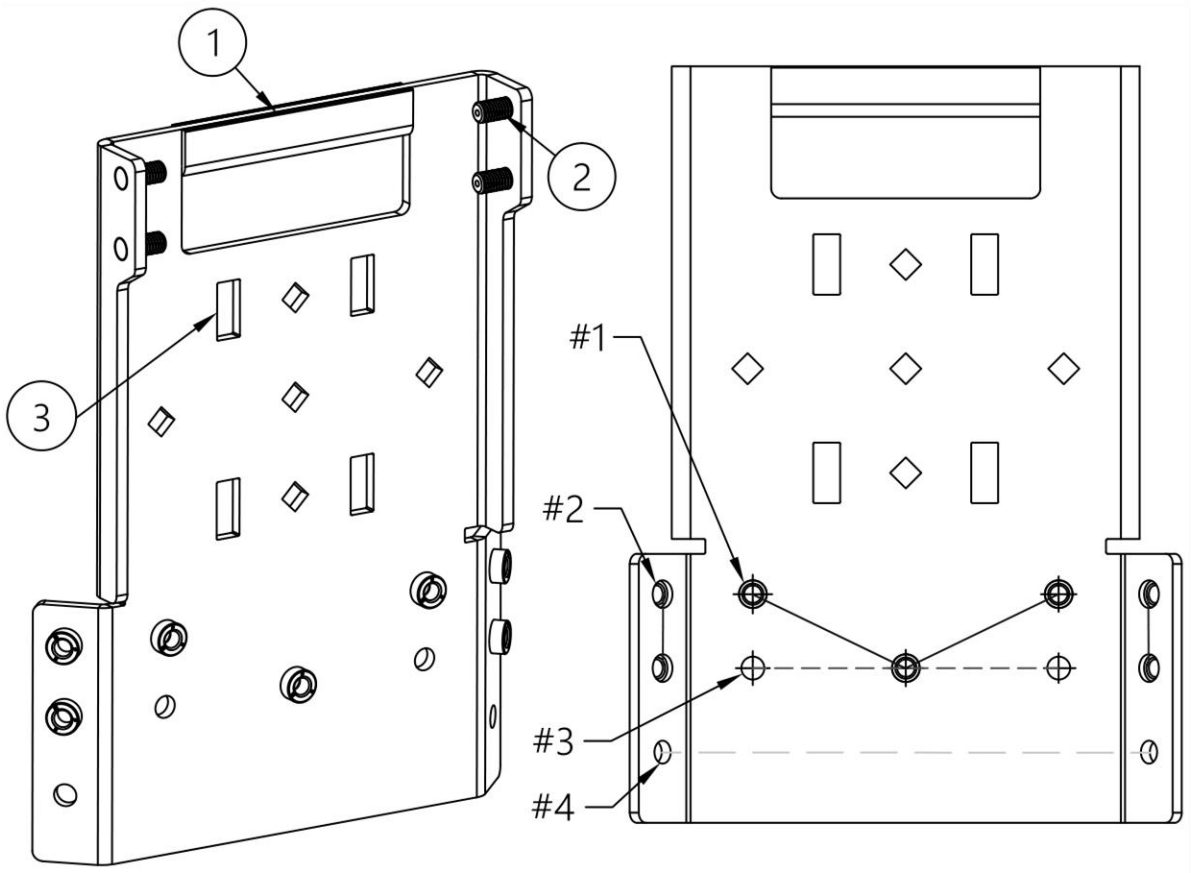
The tubular level is integrated into the plate to assist in achieving proper horizontal alignment, helping to compensate for minor surface imperfections. This level is secured by acorn nuts, which can be removed or tightened using an 8 mm (or 5/16") wrench or socket if needed.

To help accommodate uneven wall surfaces, the plate includes rubber spacers that provide additional stability. These spacers, like the handle, are not permanently affixed and may shift during shipping. Users should verify that the spacers are properly positioned before installation. If a spacer is lost, it can be replaced with a 3.5-inch section of rubber trim from an unused arm set. The threaded studs connect the front plate to the arm sets, providing the fastening points for the locknuts. Before installation, it is recommended to check that the studs are free of debris, as protective shipping materials may leave small particles that could interfere with proper fastening.

The front plate features three distinct mounting patterns, each designed for compatibility with different housings and camera models. These fastening patterns are equipped with M8 PEM nuts to be used with the mounting hardware included. The first, the Dotworkz pattern, is used for securing Dotworkz housings, including the S-Type, STXL, D-Series, and HD12. The second, the Axis mount pattern, is designed for the Axis TQ5001-E and T91D61 mounts, which support a variety of Axis camera series such as P33, P55, P56, Q37, Q60, Q61, M32, and M50, among others. The third, the Axis cabinet pattern, allows for mounting additional Axis equipment and is compatible with most of the cameras supported by the previous pattern while also accommodating series such as P14, Q19, and M11.

In addition to these mounting patterns, the plate includes diamond-shaped cutouts that serve as mounting points for carriage bolts, allowing for the attachment of additional equipment. A center obround cut is also incorporated into the design, providing an option for cable management, though cables can also be routed through the handle opening if needed.

Back plate



#1 Straight install – swivel mount
#2 Corner install – swivel mount
#3 Straight install – concrete screws
#4 Corner install – concrete screws

1 Rubber handle
2 Threaded studs
3 Tube mount

Figure 4. Back plate – labeled components and fastening patterns

The Z-Bracket back plate is responsible for providing the necessary pressure to securely hold the system against the wall. Depending on the chosen installation method, it can be used with swivel feet for a non-penetrating setup or with concrete screws for a permanent installation.

Like the front plate, the back plate also includes a rubber handle, which serves as the primary grip point during installation. All details previously mentioned about the handle apply here as well, including the possibility of repositioning it if it moves and replacing it with a 4-inch section of rubber trim from an unused arm set, depending on the configuration.

The threaded studs are also present on this plate, serving the same function as on the front plate. As with the front studs, it is recommended to check them for debris upon arrival to ensure smooth fastening.

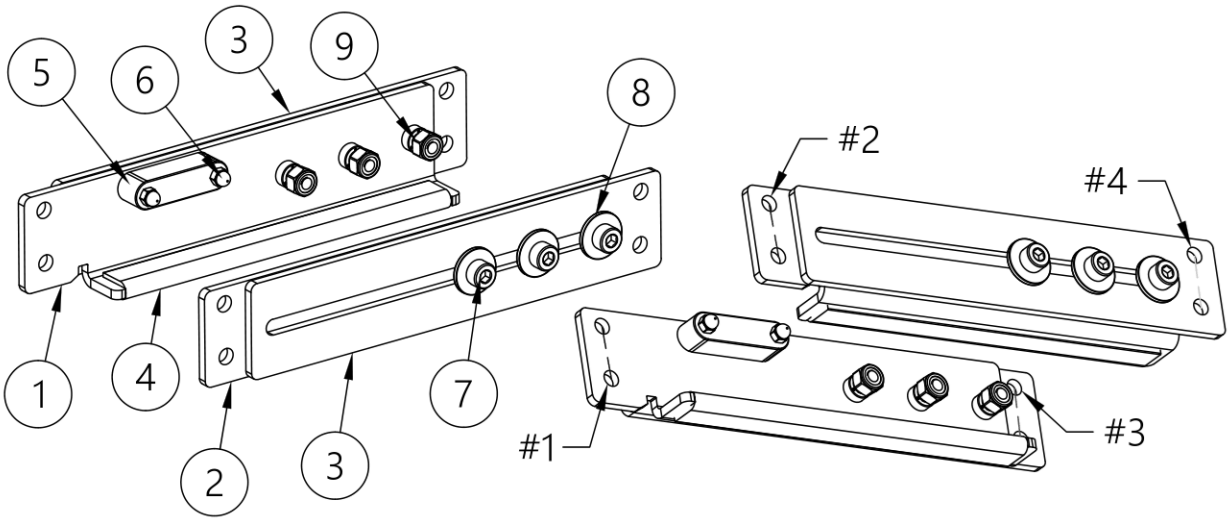
An additional feature of the back plate is the tube mount cutouts, which allow users to secure a steel tube to the plate using hose clamps. This tube can be used to mount additional equipment, such as a Starlink, antennas, receivers, sensors, and other accessories. Note that the tube and hose clamps are not included with the product and must be sourced separately.

The back plate also includes four distinct mounting patterns, each marked in the provided reference drawing. These patterns allow for different installation configurations:

- **Pattern #1:** Straight install for swivel mount – This pattern consists of three M8 PEM nuts, designed to hold a swivel foot assembly, enabling a non-penetrating installation without damaging the wall.
- **Pattern #2:** Corner install for swivel mount – Designed for corner installations, this pattern consists of four M8 PEM nuts, positioned on two wing-like extensions of the back plate to secure the mount at a wall intersection using the swivel foot system.
- **Pattern #3:** Straight install for concrete screws – This setup consists of two through-holes, sized for 5/16" concrete screws, allowing for a permanent installation by fastening directly into the wall.
- **Pattern #4:** Corner install for concrete screws – Similar to pattern #3, this configuration consists of two through-holes for 5/16" concrete screws, specifically positioned for corner installations.

Additionally, the back plate includes diamond-shaped cutouts, similar to those on the front plate, which allow for the use of carriage bolts to mount additional equipment to the back of the Z-Bracket if needed. These diamond cutouts can also be used to hold concrete screws if the standard bottom mounting holes are obstructed or if additional fasteners are desired for increased stability during permanent installations.

Sliding arms set



#1	Front plate – left side	#3	Back plate – left side
#2	Front plate – right side	#4	Back plate – right side

1	Front arm (left)	4	Rubber support	7	Sliders screws
2	Front arm (right)	5	Tubular level	8	Flat washers
3	Back arms	6	Acorn nuts	9	Locknuts

Figure 5. Sliding arms set – labeled components and hole pattern functions

The sliding arm set is responsible for the adjustable span of the mount, allowing it to accommodate walls of varying thicknesses. Due to this function, the Z-Bracket package includes multiple versions of this component, specifically a small arm set and a large arm set. Both sets are identical in design and consist of the same elements and hardware, with the only difference being their total length—the large arm set extends further than the small arm set.

Each arm set arrives pre-assembled for the user, requiring only the installation of the chosen set (depending on the required configuration) into the front and back plates.

The first element of the arm set is the left front arm, which, like its counterpart, can be identified by its bent section. Only the front arms feature this bent section, as it serves to hold the rubber supports and optionally, concrete screws for permanent installations. The left front arm is distinct in that it also houses the tubular level, which aids in alignment. This arm follows pattern #1, corresponding to the left side of the front plate.

The second element is the right front arm, which is similar to the left front arm, featuring a bent section but without the tubular level. This arm follows pattern #2, aligning with the right side of the front plate.

The third element is the back arms. Each front arm has a back arm attached, and both back arms are identical. The left-side back arm follows pattern #3, aligning with the left side of the back plate, while the right-side back arm follows pattern #4, aligning with the right side of the back plate.

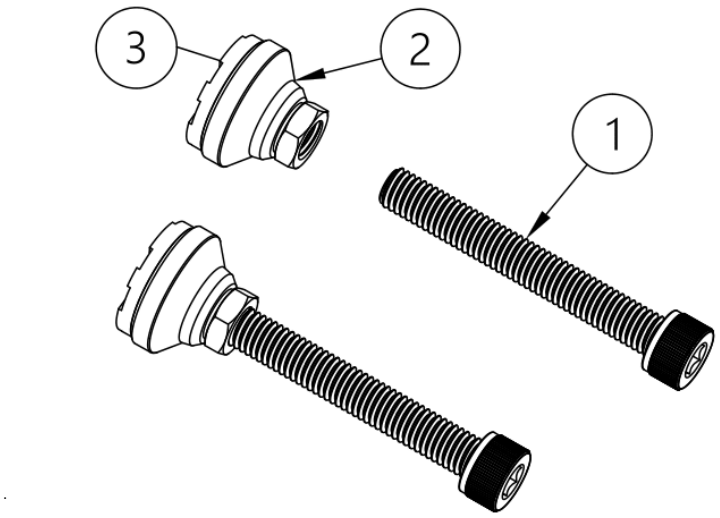
The fourth element is the rubber supports, which are installed in each front arm. These supports help to compensate for slight imperfections on the wall surface and protect the surface finish of both the mount and the wall. The fifth element is the tubular level, which functions similarly to the one found on the front plate but is positioned to assist in adjusting the vertical tilt of the mount. The sixth element consists of the acorn nuts, which secure the tubular level. Like before, they can be loosened or tightened using an 8 mm (or 5/16") wrench or socket.

The seventh element is the slider screws, which hold the back arms together. When slightly loosened, these screws enable the sliding motion, allowing users to adjust the span of the mount. Once the desired span is set, they can be tightened to lock the position. The screws feature a knurled socket head, allowing for easy hand-tightening during initial adjustments. The eighth element is the oversized flat washers, which help to distribute pressure evenly from the screws across a wider area of the arms, preventing localized stress points. The ninth element is the locknuts, which serve as a safety feature by preventing the slider screws from coming loose accidentally. These locknuts allow for proper adjustment range while ensuring the arms remain securely fastened.

Additionally, the small and large arm sets can be combined using the additional hardware pack to extend the mount’s reach, if required by the wall thickness. The arms are secured to the front and back plates using the arm set locknuts, which are included separately in a small bag within the Z-Bracket package. These locknuts fasten to the plates’ threaded studs, aligning with the fastening patterns of the arms.

The full process for combining and installing the arm sets will be detailed in the assembly section.

Swivel mounts



1 M8 screw
2 Swivel leveling mount
3 Rubber pad

Figure 6. Swivel mounts – exploded view with labeled elements

The swivel mounts are installed on the back plate and are responsible for providing the pressure needed to hold the mount against the wall in the non-penetrating installation. They can be installed in two different locations on the back plate, depending on the type of installation required.

The first element is the M8 screw, which allows the mount to move in and out of the plate to adjust the pressure and reach the wall, even if there is flashing installed. The second element is the swivel leveling mount, which provides a rotation range that helps the mount adapt to angled walls that are not perfectly straight or corner intersections that are not exact right angles. The third element is the rubber pad, which is installed onto the swivel mount to compensate for minor imperfections on the wall and minimize damage to the surface.

All elements in the swivel mounts are made of stainless steel to prevent corrosion in long-term installations. The installation process for these elements will be explained further in the assembly section.

> **Note:** In some cases, residual powder coating may remain on the PEM nuts for the structural components, making it difficult to start the screw threads for the swivel mounts. Do not force the screw—apply steady, controlled pressure. Once the screw breaks through the coating, threading will become smoother.

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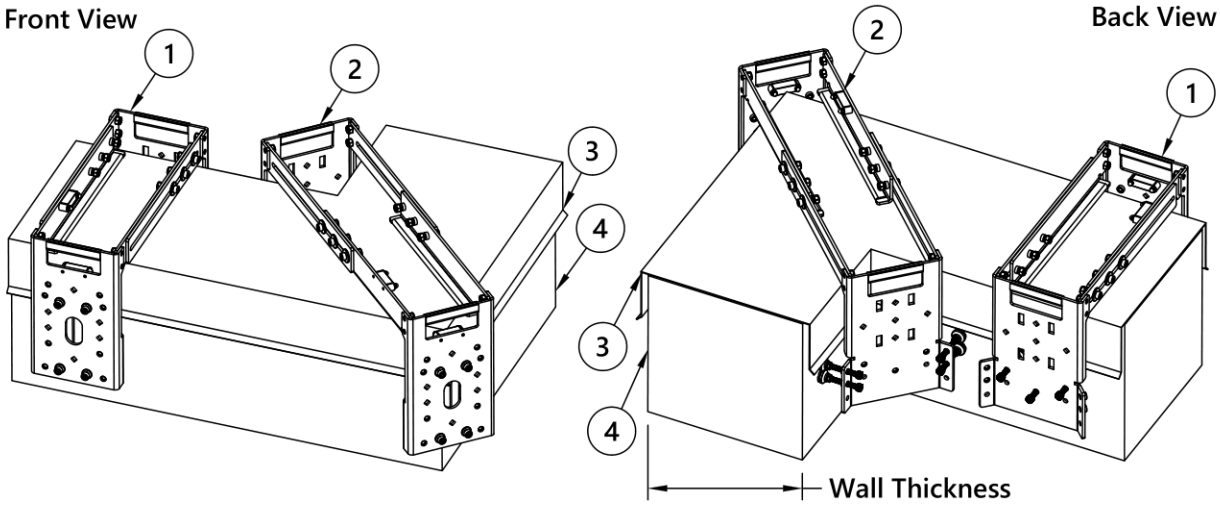
Understanding your installation requirements



1	Z-Bracket - straight installation	3	Flashing
2	Z-Bracket - corner installation	4	Wall

Figure 7. Z-Bracket wall installation in straight and corner mode

Before beginning assembly, it is essential to determine the specific installation scenario based on your project's objectives, the equipment to be mounted, and any site limitations or hardware constraints.

The first step is to identify the installation type that best suits your application. The Z-Bracket can be configured in either a straight (in-line) or corner orientation. The appropriate configuration will depend on factors such as your desired camera angle or field of view, the type or size of housing being used, and the structural layout of the wall.

Once the installation type has been selected, you must accurately measure the thickness of the wall at the mounting location. This measurement is critical to ensure proper span adjustment and secure fitment.

With both the installation type and wall thickness determined, refer to the configuration table, shown in the next page, to identify the correct assembly setup for your application. This will help ensure that your Z-Bracket has the proper components installed to serve your specific installation environment.

	Wall Thickness (Inches)		
Straight	**5.5″ → 11″** Configuration 1	**11″ → 20.5″** Configuration 2	**20.5″ → 34.5″** Configuration 3
Corner	**2″ → 6″** Configuration 4	**5.5″ → 13″** Configuration 5	**12.5″ → 24″** Configuration 6

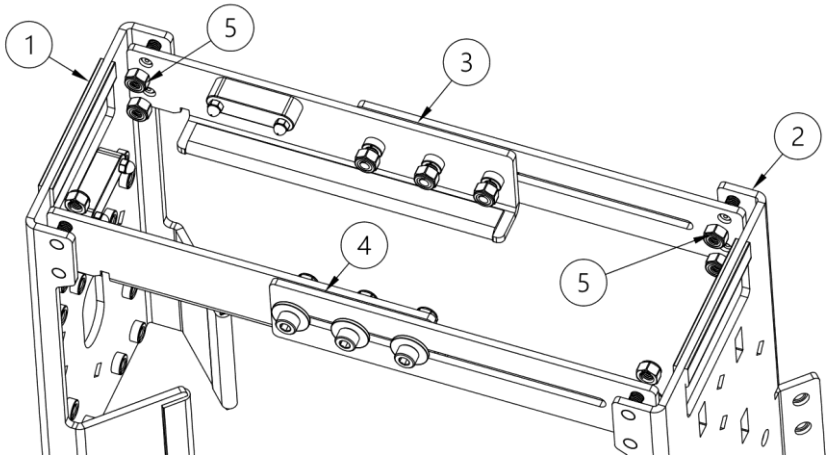
In straight installations (configurations 1–3), the back plate is mounted flush against a flat wall. For non-penetrating installations, three swivel mounts are installed on the flat surface of the back plate, providing the necessary pressure to secure the mount without damaging the wall. For permanent installations, two concrete screws are used instead, fastening the mount directly into the wall. The appropriate sliding arms set is determined by the required range. Configuration 1, the small range, requires the small arm set, while configuration 2, the large range, uses the large arm set. In cases where an extra-large range is needed, configuration 3 combines both the small and large arm sets to achieve the extended span.

For corner installations (configurations 4–6), the back plate is positioned at the intersection of two walls, utilizing its wing-like structures for mounting. In a non-penetrating installation, four swivel mounts are used—two on each angled surface—to apply the necessary pressure and keep the mount secure. If a permanent installation is preferred, two concrete screws are installed, one on each angled surface, to fasten the bracket to the wall. Similar to the straight installation, the appropriate arm set depends on the required range.

In summary, the user must first determine the required span and installation type to select the appropriate sliding arms set. If a permanent installation is chosen, only the concrete screws are needed, and the swivel mounts are omitted. For non-penetrating installations, the correct number of swivel mounts must be pre-installed in their designated positions depending on whether the mount is attached to a flat wall or a corner.

> **Note:** For permanent installations using concrete screws, pre-drill the wall using a 1/4" masonry drill bit to a minimum depth of 3 1/4". A pilot hole is recommended to ensure proper alignment and to prevent damage to the wall surface during drilling.

Sliding arms set installation

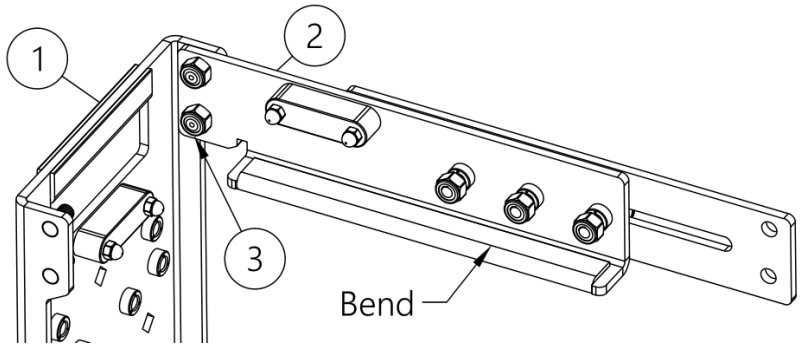


1 Front plate
2 Back plate
3 Arms set (left)
4 Arms set (right)
5 Arms set locknuts

Figure 8. Sliding arms set installation – exploded view

1. Before starting the installation, ensure that all parts are clean and ready for assembly. Check all threaded studs on both the front plate and back plate to make sure they are free of debris. This will help prevent any installation issues and ensure a secure fit.

2. Identify the left-side sliding arm set, which features the tubular level. Loosen the screws just enough to slightly extend the arm. This will facilitate installation by preventing obstructions from the locknuts. If space allows, extending the sliding arms fully can provide more room for comfortable installation. Once slightly extended, retighten the screws to prevent the arms from sliding unexpectedly during the next steps. *Only one pair of screws (one per side) needs to be tightened at this point to hold the arms in place and prevent accidental opening.



Front plate
Front arm (left)
Locknuts

Figure 9. Close-up view of first sliding arm installation

> **Note:** Colored stickers and arrows have been added to assist with orientation and to help match each arm to its correct position on the front and back plates.

3. Place the front plate on a flat surface, standing upright. Take the left sliding arm set and align it with the front plate. The front arm of the set (the one with the tubular level and a bent section) should be positioned with the bend facing downward and inward toward the bracket's interior.

4. Secure the arm by fastening the M8 locknuts (from the arms set locknuts bag) onto the threaded studs using the included 13mm wrench (or a 1/2" socket and ratchet if preferred). Tighten the locknuts but avoid over-tightening at this stage as slight adjustments may be necessary. *For easier tightening, if using an open-end wrench, fasten the bottom locknut first before placing the top one to avoid obstruction. A ratchet or ratcheting wrench is recommended for convenience.

5. Align the back arm of the set with the threaded studs on the back plate and secure it using the M8 locknuts and wrench, again tightening them just enough to hold everything in place without fully securing them.

6. Loosen the screws on the second sliding arm set to allow it to slide freely. Move the arms to an almost closed position. Lower the set from the top center of the Z-Bracket, ensuring that the bend is facing inward and downward.

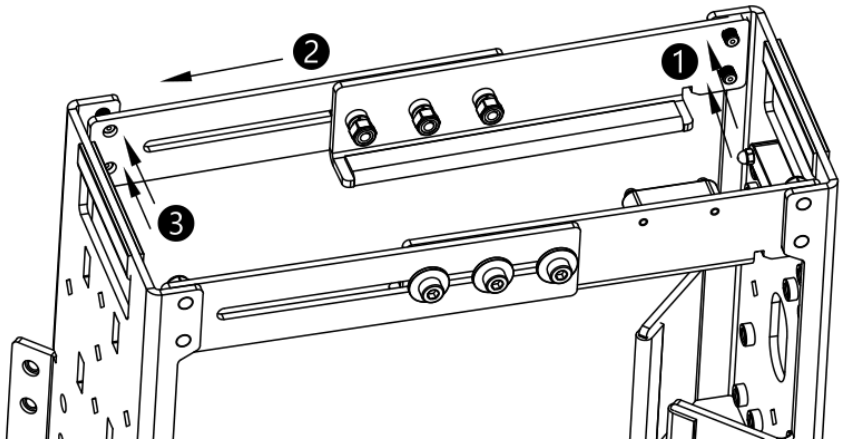


Figure 10. Tilting technique sequence for sliding arm installation

7. To install the arms onto the threaded studs, tilt the assembly slightly and move one of the two arms into its designated position first. Then, slide the arms open until the second arm aligns with its respective threaded studs. Once positioned, push both arms fully into place and secure them using the M8 locknuts.

8. Once both sliding arm sets are in place, make any necessary minor adjustments for proper alignment. When satisfied with the positioning, fully tighten all locknuts to ensure rigidity. *As an optional step for straight wall installations, when using the small arm set, the arms can be installed at a slight 2-degree inward angle. This allows the mount to straighten under pressure once installed. However, this step is not mandatory, and the mount will still function properly without this adjustment.

9. To prevent the sliding arms from shifting during later assembly steps, partially close the mount and tighten at least one screw per side. This helps maintain stability without fully locking the arms in place.

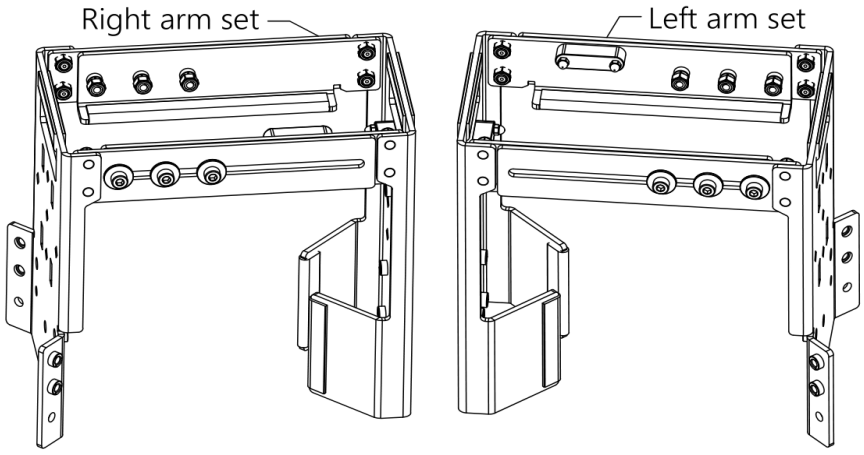
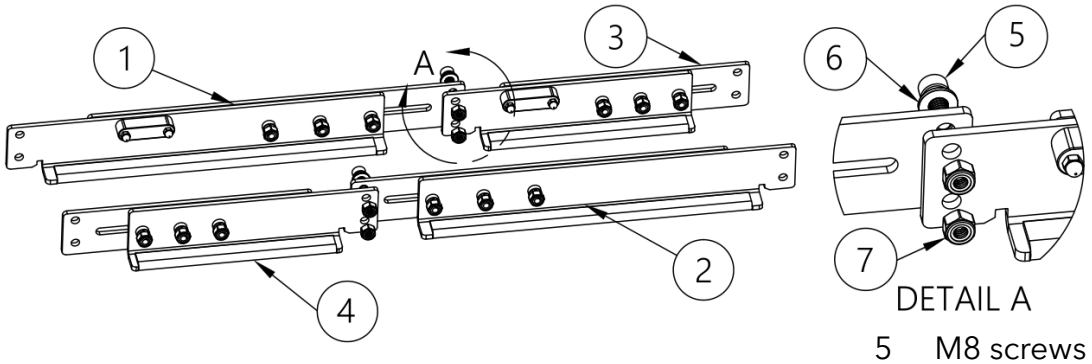


Figure 11. Fully assembled sliding arms and closed bracket position

Extra-large configuration assembly instructions

1. Before beginning assembly, loosen the screws on both arm sets to allow them to open slightly. This will reduce obstruction between the arms during installation. Once opened, retighten one screw per set to prevent them from sliding open unexpectedly.

2. Match the small and large arm sets according to their correct sides. The left-side arm sets have the tubular level, while the right-side arm sets do not. Take the left-side arm sets and position them correctly: The large arm should be on the left side, and the small arm should be on the right. The front arm of the small set should be placed on top of the back arm of the large set.



1	Large arms set (left)	3	Small arms set (left)	5	M8 screws
2	Large arms set (right)	4	Small arms set (right)	6	Flat washers
				7	Locknuts

Figure 12. Exploded view of extra-large configuration assembly

3. To secure them together, take the M8 screws, flat washers, and locknuts from the additional hardware pack, as these will be used for fastening. While maintaining the correct alignment, insert an M8 screw with a flat washer from the outside of the arms (opposite to the bend) through the aligned holes. Hand-tighten the locknut, then use a wrench on the locknut and the screwdriver on the screw to fully tighten the connection, making sure not to overtighten.

4. Repeat the same process for the right-side arms. The large arm should be on the right, and the small arm should be on the left. The front arm of the small set should again sit on top of the back arm of the large set. Insert an M8 screw with a flat washer from the outside of the arms (opposite to the bend). Hand-tighten the locknut, then complete tightening with the wrench and screwdriver, ensuring it is secure but not overtightened.

5. With both arm sets properly fastened; you can now proceed with the sliding arm set installation as described in the previous section. After all components are in place, check for proper alignment and adjust if necessary.

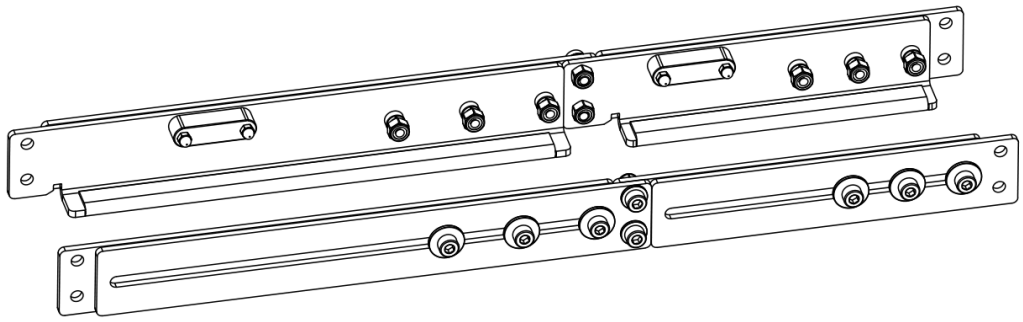


Figure 13. Fully assembled extra-large sliding arms configuration

Installing the swivel mounts

If your installation is permanent, you can skip this section, as the swivel mounts are not required. Instead, you will secure the system using only the concrete screws during the final steps of the wall installation process.

For all other installations, determine the number of swivel mounts needed and their placement based on your specific requirements. If you are unsure about the exact positioning, refer to the components breakdown section for the back plate, where Figure 4 provides a visual reference for the swivel mount installation locations.

1. Once the number and placement are confirmed, begin the installation process by removing the swivel mounts from their packaging along with the swivel mount screws.
2. Take each screw and insert it into its designated mounting hole on the back plate, threading it from the external surface (outside of the z-bracket) so that a small portion of the thread becomes visible on the inside. *Do not force screws over paint, refer to swivel mounts section's note.

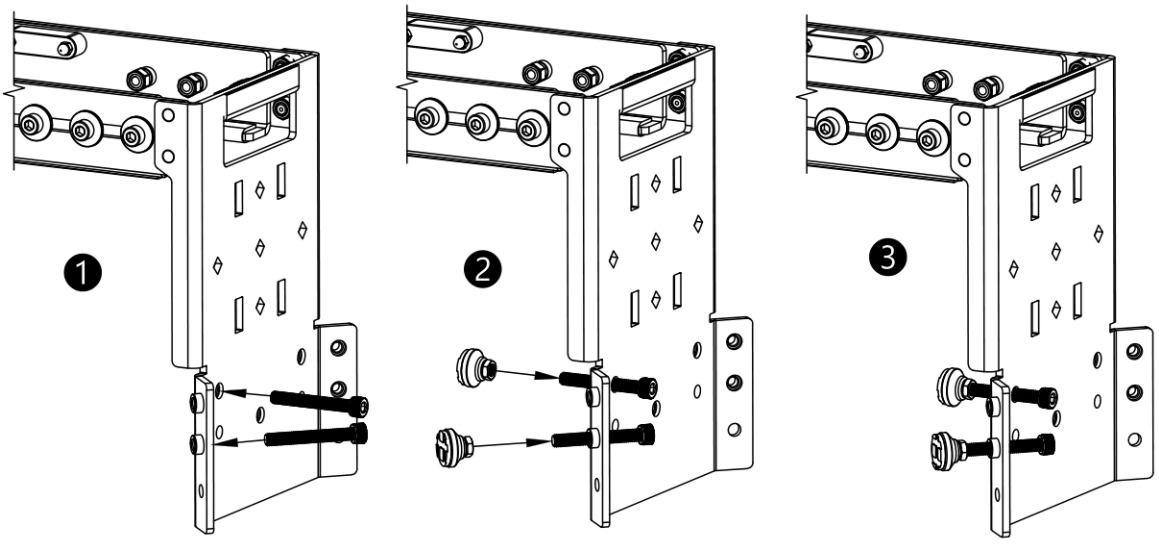


Figure 14. Installing the swivel feet: example of screw placement, attachment, and final assembly for both straight and corner configurations

3. With the screws partially installed, position each swivel mount onto its respective screw. Hold the mount in place by hand and continue tightening the screw into the mount. Repeat this process for all required mounts.

4. Once all the mounts are loosely positioned, secure them firmly by using the wrench to hold the mount steady while fully tightening the screw with the screwdriver. For additional torque, an L-key can be used in place of the screwdriver. *If you plan to reuse the mount in a different setup, don't overtighten the swivel mounts—this can wear out the threads and make future installs harder.

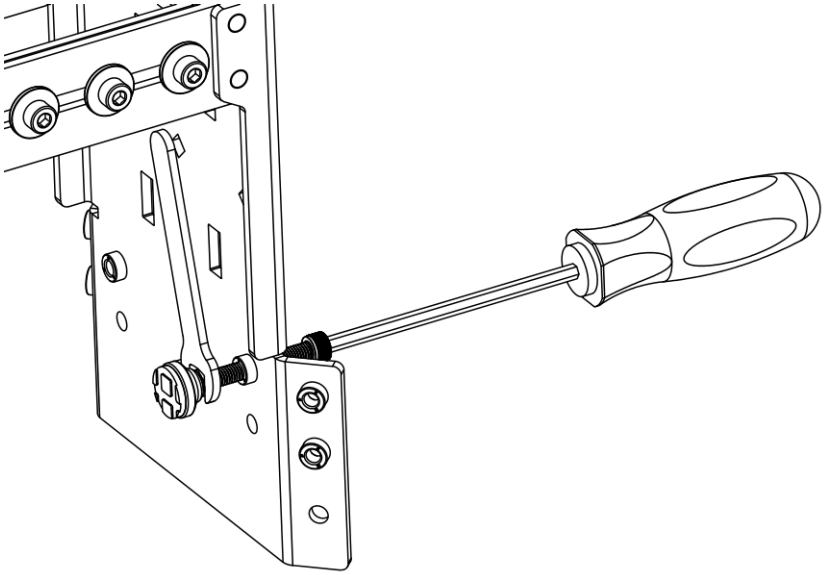


Figure 15. Tightening the screw while stabilizing the mount with a wrench

5. With the mounts rigidly installed, complete the process by backing out each swivel mount until it contacts the PEM nuts on the back plate. This is the recommended position for the mounts before proceeding to the wall installation.

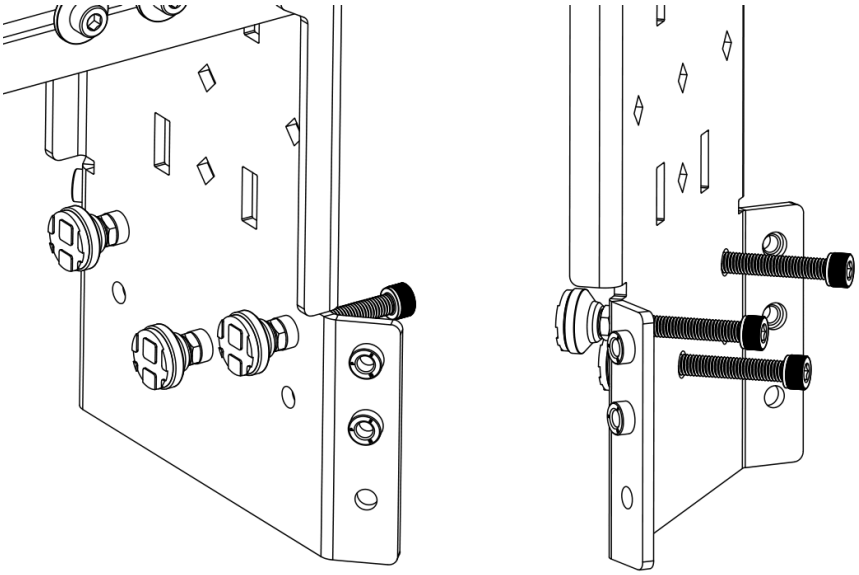


Figure 16. Screws fully backed out for wall mounting

Camera and/or housing installation

For best results, it is recommended to install the camera or housing in an indoor, stable, and clean environment to protect delicate optical surfaces. However, if the roof installation site has sufficient space, the installation can also be performed onsite. The choice depends on accessibility: if reaching the roof is complicated, or if the fully assembled mount creates obstructions that increase the risk of damage to delicate surfaces, an onsite installation may be preferable. The installation method that minimizes risk to the equipment should always be prioritized.

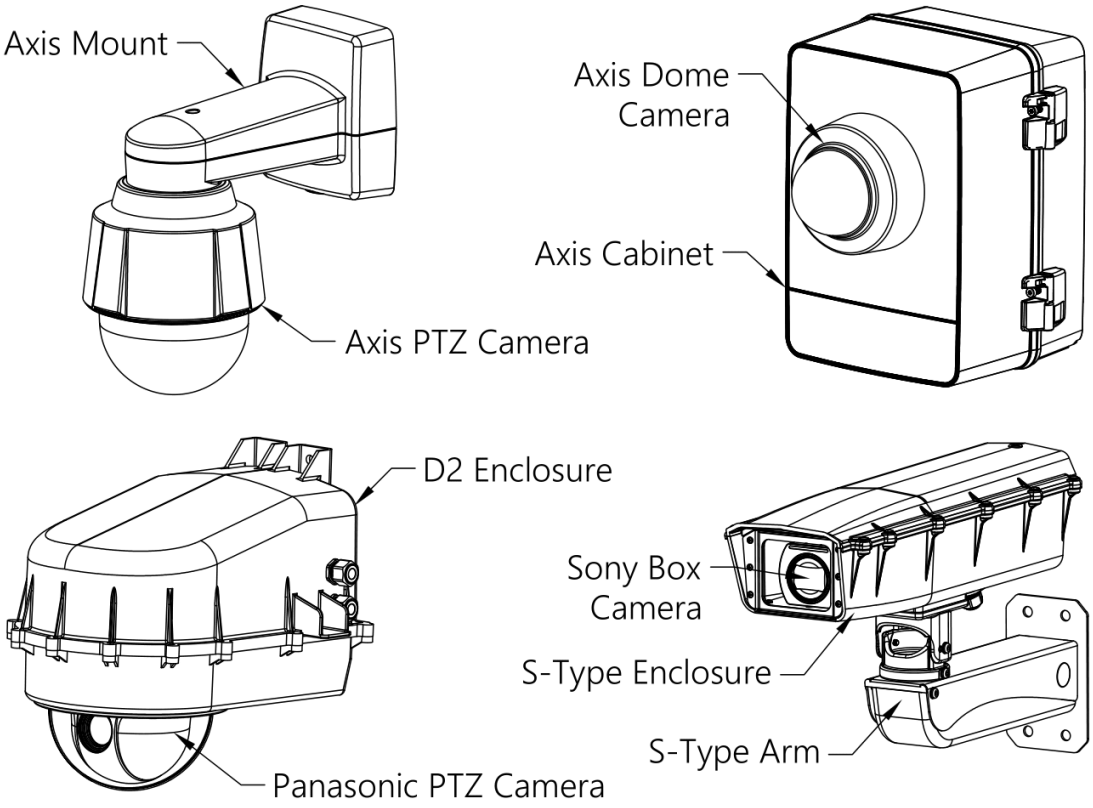


Figure 17. Various compatible camera and housing setups fully assembled

Regardless of whether a camera or housing is being installed, it is recommended to fully assemble the equipment before securing it to the Z-Bracket. If installing an outdoor camera, it should be mounted to its designated mounting arm and/or cabinet beforehand. If installing a housing, the camera should be placed inside the enclosure and secured before attaching the housing to a Z-Bracket unit, as shown above. *Follow all safety guidelines while installing cameras to the designated mounting equipment.

1. The first step is to identify the required hole pattern on the front plate that matches the specific installation. This information can be found in the components breakdown section for the front plate, where Figure 3 illustrates all available mounting patterns. The mounting structure must align with the correct hole pattern, ensuring that all delicate surfaces remain protected from potential contact with installed components.

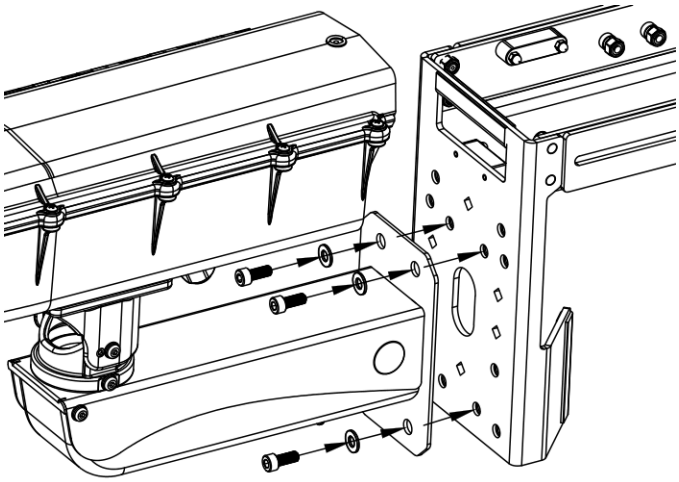


Figure 18. Proper hardware alignment with matching hole patterns

2. The required mounting hardware is provided in a separate bag and can be fastened using the included hex screwdriver. Verify that all structures are rigidly secured and properly tightened. If installation is performed indoors, confirm that the sliding arms are securely fastened to prevent accidental opening during transportation to the roof. *Do not force screws over paint, refer to swivel mounts section's note.

3. Once the fully assembled unit is on the roof, proceed with connecting all required cables for the camera and making any necessary setup adjustments. If desired, this is also a good time to organize and secure cable management, so the unit is prepared for its final deployment configuration.

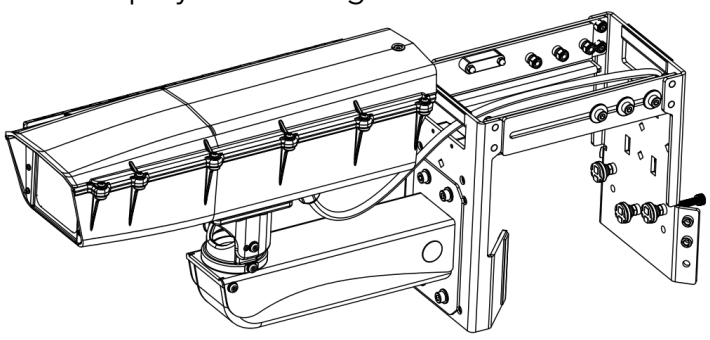


Figure 19. Completed setup with Z-Bracket, housing, and cable routing

Wall installation

1. To begin, adjust the mount's width to comfortably fit the wall by loosening the screws on the sliding arms and sliding open the mount. Once the desired width is achieved, retighten the screws to secure the mount.

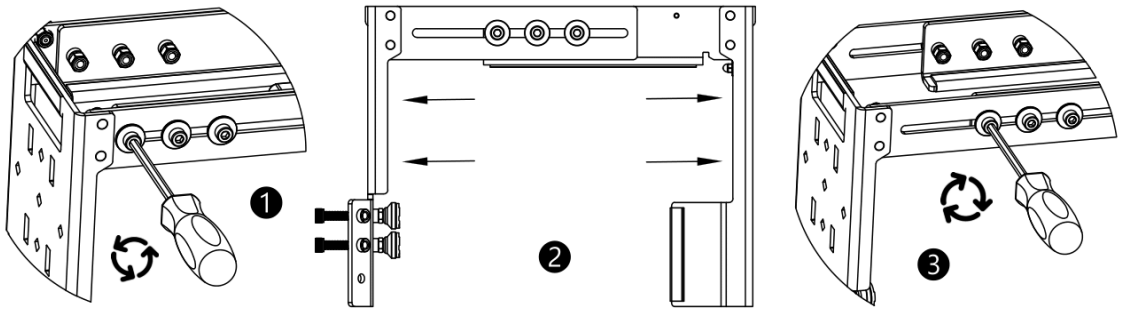


Figure 20. Steps to loosen, open, and lock the sliding arms for wall fitment

2. With your dominant hand grip the front handle, while your non-dominant hand holds the back handle. Carefully lift the mount from its resting surface and position it on top of the wall, allowing the bent sections of the front arms to rest securely.

> **Note:** If the mount assembly is too heavy a second person can assist by holding both handles and performing the installation maneuver together.

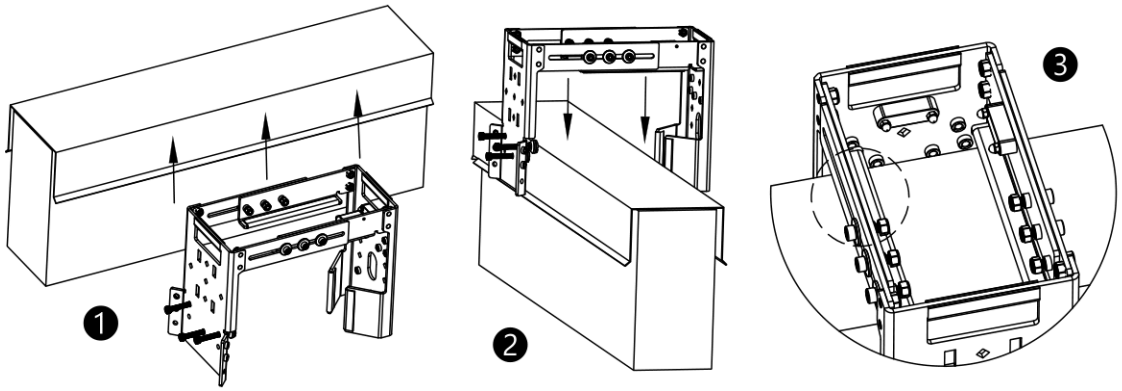


Figure 21. Lifting and placing the mount on the wall

3. Once the mount is resting on the wall, adjust it so that the front spacers make proper contact with the exterior wall surface. Pull the mount toward the user to eliminate any gaps between the wall and the front plate. For corner installations, the mount can be slightly tilted to ensure proper alignment of the corner spacers.

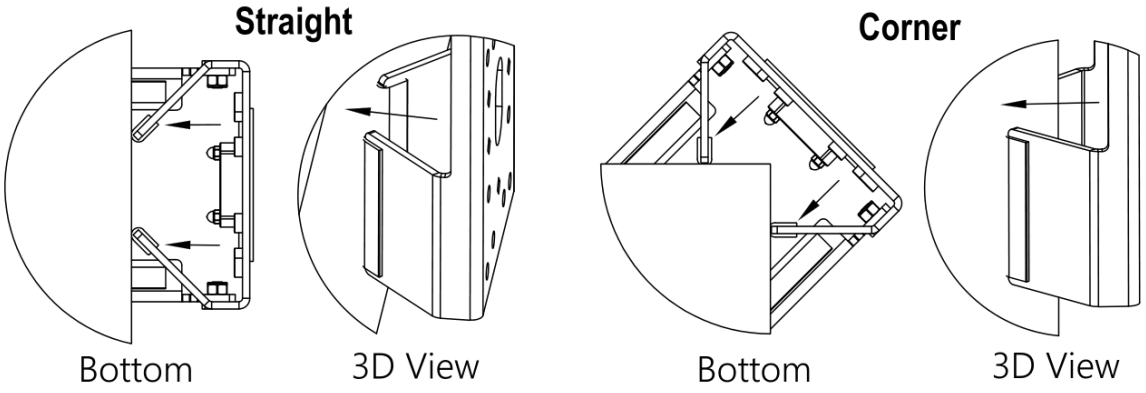


Figure 22. Spacer contact and pull direction for both installs

> **Notice**: If the installation is permanent, the wall must be pre-drilled for concrete screws. The Z-Bracket can be used as a template to mark the hole locations. *It is not recommended to drill over the Z-Bracket, as improper handling may damage the unit or deform the mounting holes.
>
> If the wall has a flashing, the swivel mounts should be adjusted forward beforehand to avoid damage.

4. Loosen the screws on the sliding arms to allow the z-bracket to close. Always keep one hand on the front handle to prevent unexpected sliding. Close the mount as much as possible by pushing the back plate forward, ensuring that the swivel mounts make firm contact with the wall surface, while the front section remains in place. Once positioned correctly, retighten all screws on the sliding arms to rigidly secure the mount.

> **Note:** In permanent installations, the mount can be closed fully until the bent section of the back plate contacts the wall.

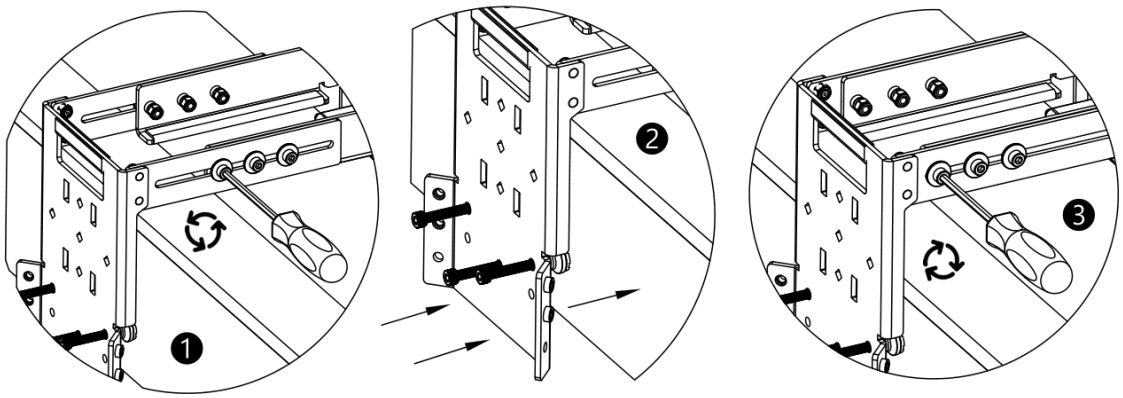


Figure 23. Closing the mount and securing the sliding arms

5. Now, fasten the swivel mounts, which should already be in their most outward position. For optimal grip, align the rubber surface of the swivel mounts parallel to the wall before tightening. Begin by driving the screws into the plate until they lightly contact the wall—do not fully tighten them yet, as leveling adjustments may still be needed.

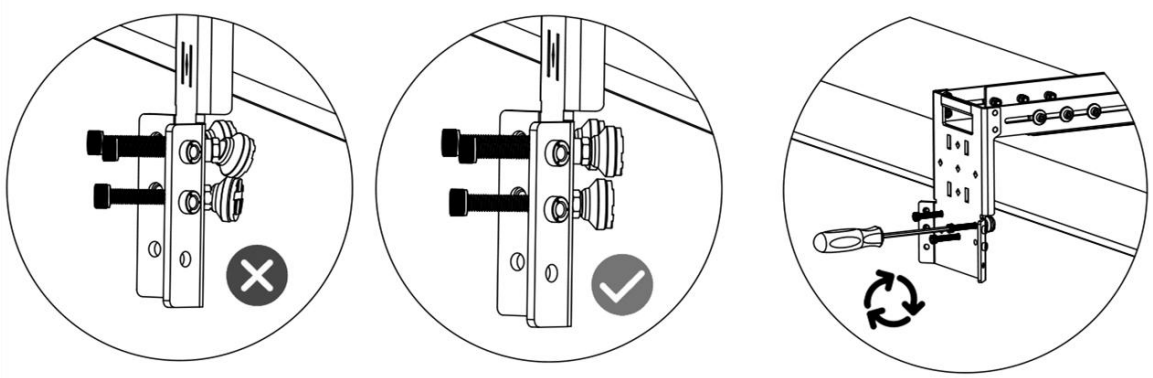


Figure 24. Correct swivel mount alignment and initial fastening

6. At this stage, check the camera/housing leveling with the tubular levels on the Z-Bracket. If adjustments are necessary, tilt the mount accordingly and then further tighten the swivel mounts to lock in the correct position.

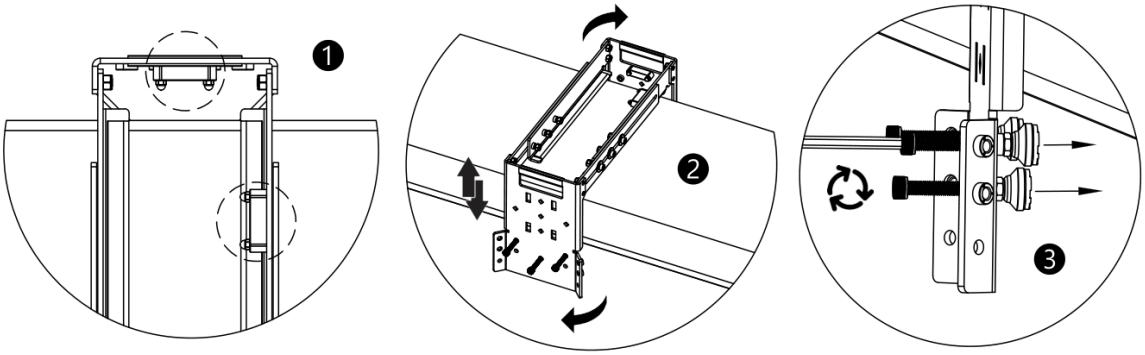


Figure 25. Final leveling check and position locking

7. Once leveled, fully fasten the swivel mounts to secure the installation. The screws do not need to be overtightened—they are long enough to accommodate flashings and thin walls, they should only be tightened until the mount feels stable. The correct fastening method is outlined in the next page:

- Drive in both upper swivel mount screws evenly, alternating between sides (e.g., a few turns on one side, then the same on the other).

- Check the stability by gently pulling up on the back handle—a moderate pull should confirm whether the mount is secure.

- Once satisfied, drive in the bottom swivel screw(s) until they slightly pressure the wall. These balance the mount but do not need to hold the main pressure, which is primarily supported by the upper swivel mounts. *Do not drive them until they match the top screws, this will cause the top screws to become disengaged.

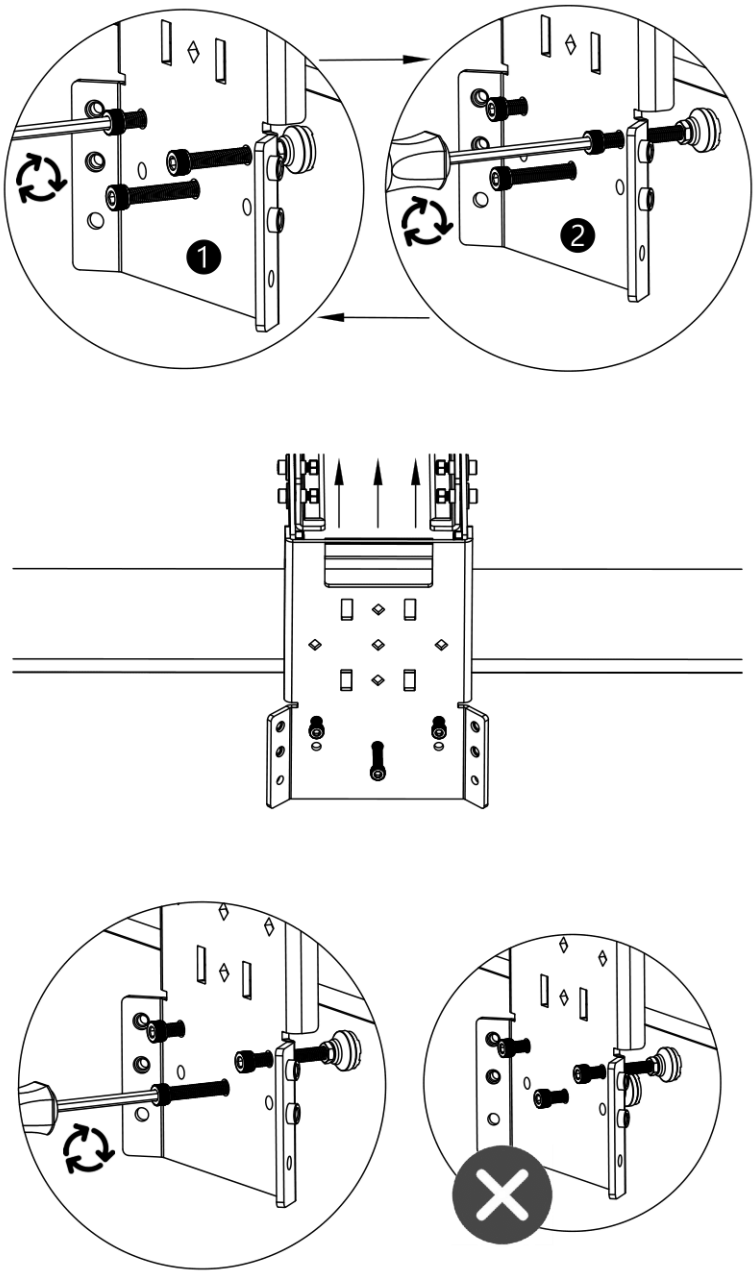


Figure 26. Final fastening sequence for swivel mounts

> **Note:** For permanent installations, after pre-drilling the wall, insert and tighten the concrete screws until the mount is secured. Additional mounting holes are also available on the front arms if extra fasteners are desired to increase stability.

8. To complete the installation, tidy up the setup and perform any final cable management as needed.

Uninstalling the Z-Bracket

1. Begin by clearing up any obstructions from the installation area. If possible, disconnect power and/or data connections to the camera or housing to avoid strain or damage during handling.
2. Fully loosen the bottom swivel mount screw(s) first. This shifts all remaining pressure to the upper swivel mounts and allows for a controlled removal.

> **Important:** Do not loosen the sliding arm screws before unfastening the swivel mounts. Doing so may cause the mount to slide open suddenly. If the unit is not firmly held, it could tip over the wall, potentially causing serious injury or equipment damage.

3. Begin loosening the top swivel mount screws, alternating between sides (e.g., a few turns on one, then the other) to relieve pressure evenly and avoid shifting until they become completely disengaged.

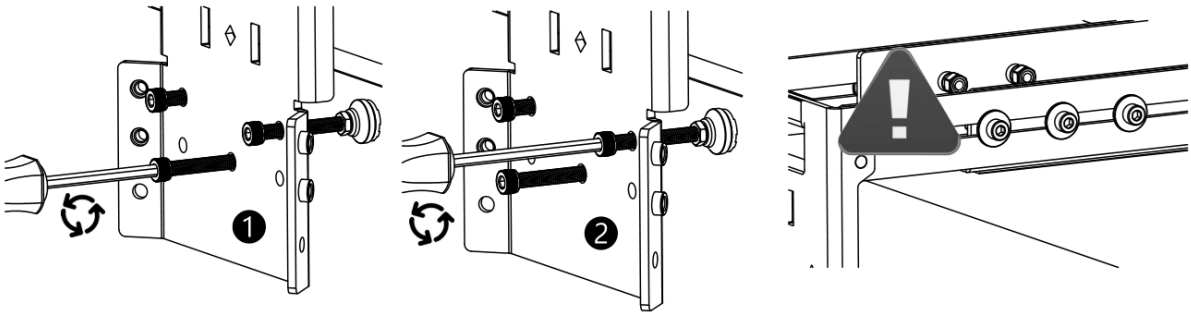


Figure 27. Unfastening swivel mount screws in order, keep arms tight

> **Note:** In permanent installations, a power driver or appropriate bit may be necessary to unfasten the mount. Take care not to strip or over-torque the screws and consider having a second person stabilize the mount during removal.

4. With one hand on the front handle, loosen the screws on the sliding arms. Carefully open the mount by pushing the back plate away from the wall until there's ample clearance.

5. To prevent the mount from sliding open or shifting while handling, retighten at least one pair of sliding arm screws with the mount fully open.

6. Carefully lift the mount off the wall, using both handles. If the unit is too heavy, ask for assistance. Gently set the mount on the ground, avoiding any contact with optical surfaces or vulnerable parts.

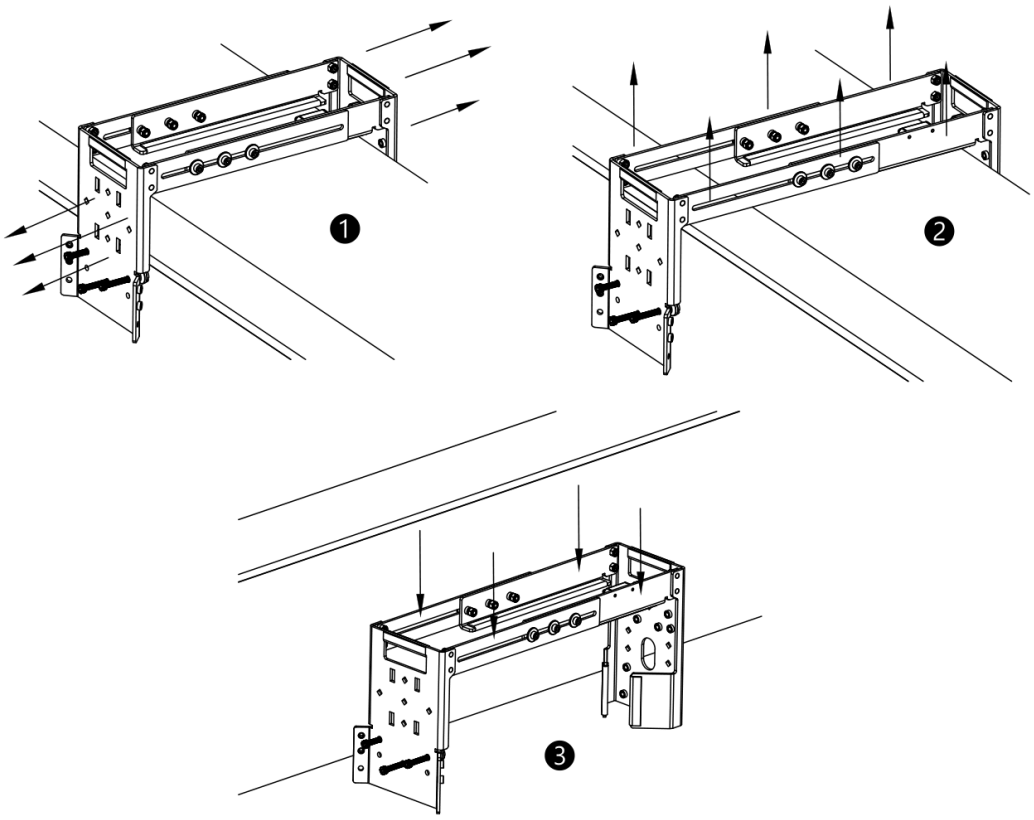


Figure 28. Open bracket, remove from the wall, and rest safely

7. Once on a safe surface, disconnect any remaining cables. The mount assembly can now be taken indoors for storage, relocation, or further disassembly.

> **Note: Preparing the mount for shipping**
> For safer shipping and to avoid damage to PEM nuts, we recommend removing the swivel mounts entirely. The rest of the Z-Bracket assembly can remain assembled since it's structurally robust and can handle typical transport.

Extreme weather precautions

In the event of natural hazards such as earthquakes, tornadoes, hurricanes, heavy storms, or tsunamis, it is essential to inspect the mount once conditions are safe. Sudden or sustained forces may shift or compromise mounting hardware.

After any such event:

- Visually inspect the entire mount assembly.
- Verify that all swivel mount screws are still properly fastened.
- If needed, re-tighten the swivel mounts slightly to restore a stable grip.

Important: Never attempt to access or adjust the unit during dangerous conditions.

Fall hazards

This mount is designed to hold valuable equipment at elevated positions. Improper installation, neglect, or rough handling can lead to system failure or personal injury.

To reduce fall risk:

- Always follow the full installation and uninstallation procedures, especially when loosening or removing hardware.
- Avoid leaving the system unattended in public areas where tampering may occur.
- When performing camera adjustments, maintenance, or cable checks, remove the unit from the wall rather than working on it while mounted.
- Never unfasten the sliding arm before the swivel mounts are loosened; this may cause the unit to swing open uncontrollably.

Maintenance

To ensure long-term reliability, inspect the system at least every 6 months, or more often in extreme environments.

We recommend:

- Checking all fasteners, especially swivel mounts, to confirm they are still properly engaged and secure.
- Verifying that the camera or housing remains level using the built-in tubular levels.
- Confirming that no cables are pinched or exposed to sharp edges.

If the system has been exposed to vibration (e.g., from wind or machinery), periodic retightening may be needed.

Z-BRACKET

Dimensions

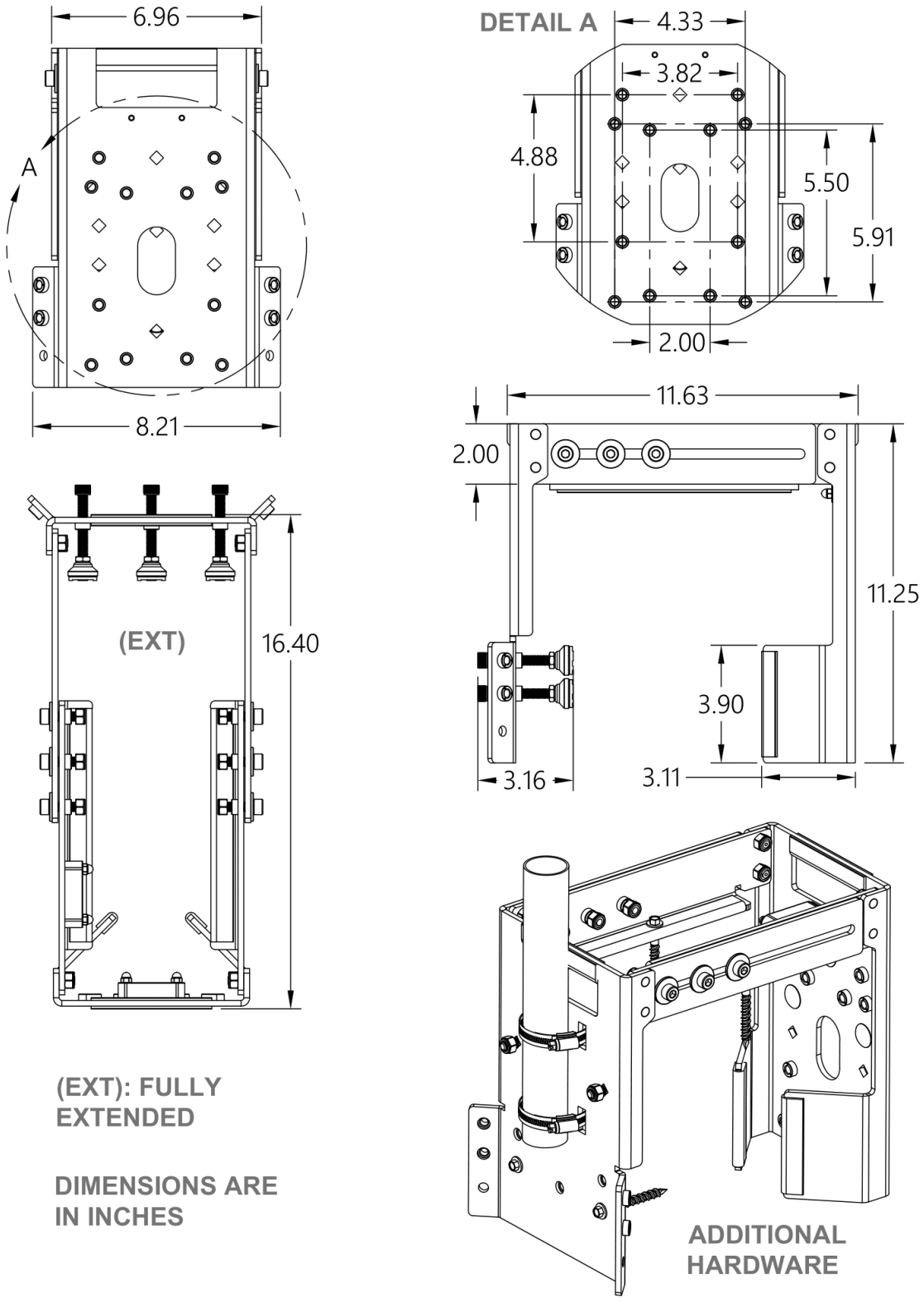


Figure 29. Product dimensions (small assembly)

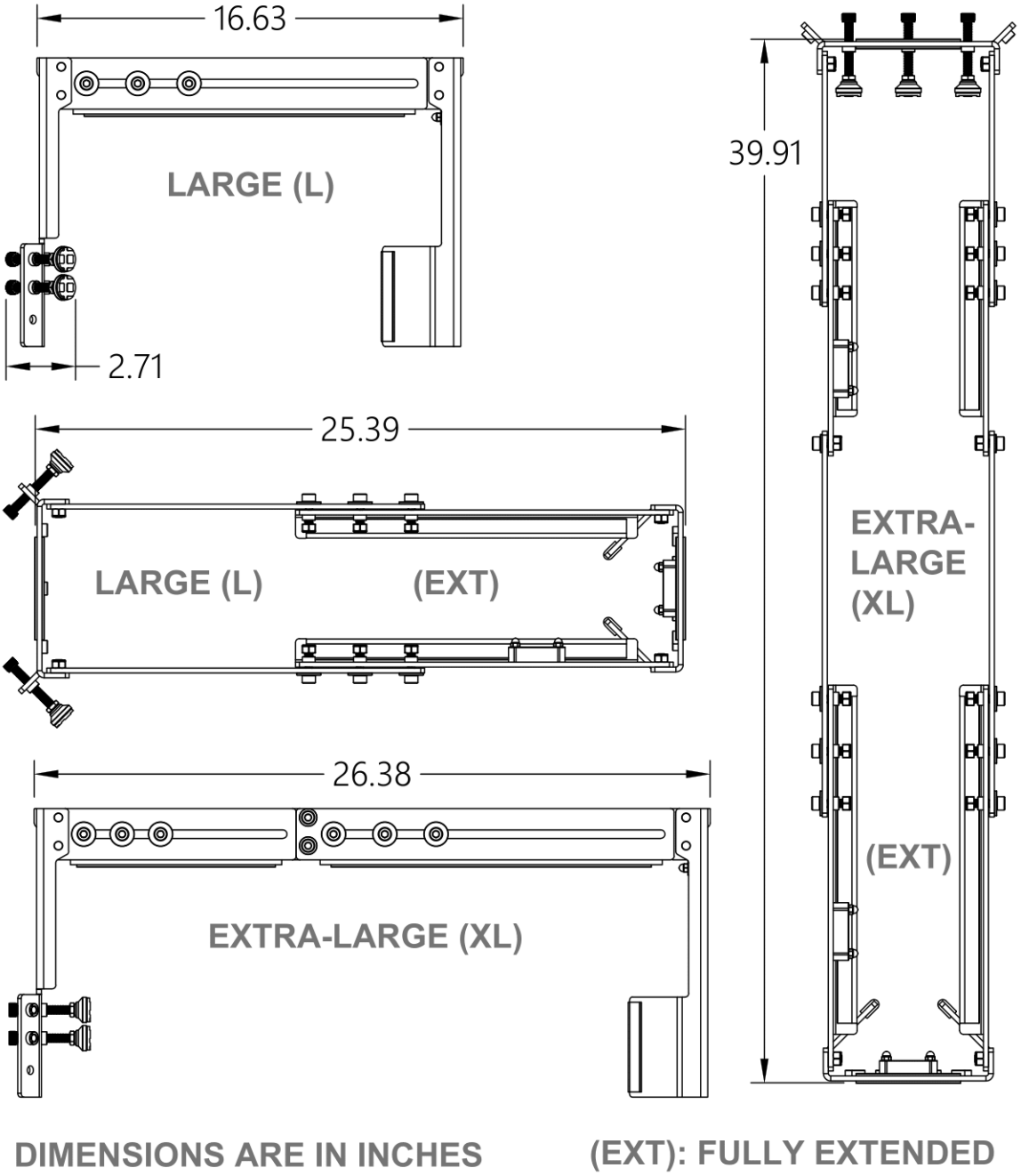


Figure 30. Product dimensions (large and extra-large assemblies)

dotworkz®

Dotworkz, Inc. 9340 Stevens Rd,
Santee, CA 92071 United States
USA Tel (866) 575-4689
sales@dotworkz.com

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For more
Z-Bracket
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