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Installation manual

E/N SERIES

SECONDARY SURGICAL LAMP (TREATMENT LAMP)

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Introduction Please read this manual carefully before proceeding to correctly install the Product, so as to protect “**the Service Personnel**” and “**the Operator**” from any injury. The manual contains the drawings relating to the installation phases.



This appliance is a Class 1 medical device pursuant to European Directive on medical devices (MDD) 93/42/EEC (Annex IX) as amended and integrated.

Conformity The manufacturer declares that this Product is in compliance with Annex I (Essential requirements) of Directive 93/42/EEC as amended and integrated and certifies such conformity by affixing the CE marking.

Validity of manual This installation manual is valid for the following models:

- Pentaed 81 in ceiling, floor versions;
- Pentaed 63N in ceiling, floor versions;
- Pentaed 105 in ceiling version;
- Pentaed 30E in ceiling, floor and wall versions;
- Pentaed 30N in ceiling, floor and wall versions

Servizio clienti The RIMSA after-sales service is at your disposal for any further details you might require regarding the Product, its packaging, its transport, and its installation and for any requests for technical and electric diagrams.

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Translations The original language of this manual is ITALIAN. For all translations, reference must be made to the original manual language.

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KEY

PRODUCT	THE EM (Electro-Medical) EQUIPMENT to which this manual refers is a SECONDARY SURGICAL LAMP (TREATMENT LAMP) . For ease of description, in this manual this EM EQUIPMENT will be called “Product” .
OPERATOR	Person handling the equipment (e.g., professional health personnel, non-expert person assisting the patient).
RESPONSIBLE ORGANIZATION	Entity accountable for the use and maintenance of an EM equipment or EM system (e.g., a hospital, an individual doctor or a non-expert person). Preparation and training are included in use.
SERVICE PERSONNEL	<p>Individuals or entity accountable to the responsible organization that installs, assembles, maintains or repairs the equipment. In certain circumstances, the safety of such persons depends on their knowledge and training and ability to take appropriate precautions when gaining access to hazardous parts partially. By way of example only, the following professional figures are deemed as SERVICE PERSONNEL:</p> <ul style="list-style-type: none"> ⇒ Construction Engineer, Draughtsman, Building firm duly registered in the professional Register, (for the masonry works) ⇒ Electrical Engineer Electro-technical expert qualified to work as an electrician (for the electrical works) <p>For the installation phase, as regards assembly operations only, a qualified person is deemed whosoever has attended a course organized by RIMSA or, alternatively, whosoever has carefully read the manual.</p>

1 WARNINGS AND SAFETY NOTICES

- WARNING** This manual is an integral part of the Product as indicated by European Directive 93/42/EEC and subsequent amendments and supplements. Read and keep this manual close to the Product.
- WARNING** - The Product is not suitable for use in premises where explosion risks exist.
- The Product is not suitable for use wherever there are inflammable mixes of anaesthetics with air, oxygen or NO₂ (laughing gas).
- WARNING** RIMSA disclaims all liability for any injury to persons or damage to things caused by the Product having been installed by persons who are not “**SERVICE PERSONNEL**”.
- WARNING** The RESPONSIBLE ORGANIZATION is entirely responsible for Product installation activities; no costs or responsibilities relating to the installation and/or commissioning of the Product may therefore be traced back and/or in any case attributed to RIMSA.
- WARNING** The ceiling or wall masonry works for Products to be installed on ceilings or walls, and the electrical works for supplying power to the Product shall be carried out in a workmanlike manner by SERVICE PERSONNEL to ensure these are sturdy and safe.
- WARNING** The electrical system in the premises must conform to IEC:60364-7-710 standard and any national regulations. A master switch must be installed with fuse or thermal magnetic circuit breaker to be able to interrupt power to the Product.



To avoid any risk of electric shocks, the Product must only be connected to mains supplies with earth protection.

2 General information

2.1 Operator qualification

Qualification of personnel in charge of operating on the Product

Installation	SERVICE PERSONNEL
Use	OPERATOR
Cleaning	OPERATOR
Routine maintenance	SERVICE PERSONNEL
Special maintenance	SERVICE PERSONNEL
Scrapping	RESPONSIBLE ORGANIZATION and SERVICE PERSONNEL

2.2 Packaging, transport, storage and characteristics of installation premises

Packaging	Cardboard boxes containing Product. Dispose of these in compliance with national directives applicable for waste disposal
Transport	Product transport is done by land, sea or air according to the following characteristics: Temperature (°C): -15 / +60 Humidity: 10 / 75 % Atmospheric pressure (h/Pa): 500 / 1060
Storage	The packaged Product must be stored (warehoused) in dry premises having the following characteristics: Temperature (°C): -15 / +60 Humidity: 10 / 75 % Atmospheric pressure (h/Pa): 500 / 1060
Place of installation	The premises where the product is started up must have the following characteristics: Temperature (°C): +10 / +40 Humidity: 30 / 75 % Atmospheric pressure (h/Pa): 700 / 1060

2.3 Graphic signs and symbols used in the installation manual

The following safety measures must be put in place during Product installation, use and servicing.

To emphasize their importance, a number of safety precautions are repeated throughout the manual.

Follow the safety precautions before using or repairing the Product.

Carefully abiding by the safety precautions improves the ability to use the Product safely and correctly and helps prevent incorrect maintenance which could be hazardous and cause damage. The safety measures are approximate and not exhaustive; the Operator, the Responsible Organization and the Service Personnel must develop their capacities to upgrade and integrate them.

Indications such as DANGER, WARNING and CAUTION, preceded by

the symbol  indicate the level of “risk” to which the SERVICE PERSONNEL, the RESPONSIBLE ORGANIZATION and the PRODUCT could be exposed.

DANGER

indicates an immediately hazardous situation which could result in death or serious injuries.

WARNING

indicates a potentially hazardous situation that could result in death or serious injuries.

CAUTION

indicates a potentially hazardous situation which could result in moderate or light injuries and Product damage.



The following triangular symbol together with the explanation alongside indicates the type of hazard to be dealt with.

2.4 Graphic symbols used on packaging

List of symbols on packaging boxes:

	Side upwards		Weight of packaging
	Max number of stackable packages		Humidity range to be respected (indicate on the top right the max limit and on bottom left the min limit)
	Fragile		Pressure range to be respected (indicate on the top right the max limit and on bottom left the min limit)
	Repair from rain		Temperature limit range (indicate on the top right the max limit and on bottom left the min limit)
	Not overlap packaging		

2.5 Graphic symbols used on the Product

Below are the symbols to be found on the Product:

	CE mark indicating the Product conforms to directive 93/42EEC and subsequent amendments and supplements
	Date of manufacture (month and year)
	Manufacturer's address
	Fuses used in the device
	Compulsory to read the manual
	Model
	Serial number
	Disposal (waste)

2.6 Warranty and liabilities

Rimsa disclaims all liability as regards unreliable Product operation in the following cases:

- Installation, authorized modifications and repairs have not been performed by SERVICE PERSONNEL
- The Product has not been used for its intended purpose and in conformity with the operating instructions (see operation manual).
- The premises have not been approved for healthcare activities
- The premises are not built in conformity with the law and applicable regulations
- The electrical system in the premises is not in compliance with appropriate requirements

2.7 Structural changes or variations

Arbitrary changes

No arbitrary structural changes or variations to the Product are admitted. Any modifications must have the prior written authorization of RIMS. In case of the Product having been tampered with, the warranty shall be invalidated and the manufacturer disclaims all liability for any injuries or damage caused to the OPERATOR, the RESPONSIBLE ORGANIZATION and the SERVICE PERSONNEL.

3 Instructions on how to prepare the premises mechanically and electrically

3.1 Preparing the premises mechanically (Ceiling and wall Product version)

	WARNING – Safe masonry works
---	-------------------------------------

The masonry works for preparing the ceiling to install the Product must be sturdy and safe and performed in a workmanlike manner according to applicable building regulations.

By way of example only, the professional persons charged with completing the masonry works are: Construction Engineer, Draughtsman, Building firm, duly registered in a professional register.

	DANGER – Wrong wall perforation
---	--

In case of wrong perforation of the Product supporting wall (e.g., the breakage of a reinforced-concrete ceiling/wall iron) always inform the building manager as this could affect the stability of the building.

	WARNING – Ceiling and wall
---	-----------------------------------

The ceiling must be able to withstand a weight of at least 300 kg/m² and have a thickness of at least 250 mm. For the wall version, the wall must be a supporting wall and be made of solid brick. Installation on walls of perforated bricks and plasterboard is only allowed with the fitting of another plate on the opposite side of the wall (sandwich closing).

The Product installation premises must conform to local building standards.

After making sure the premises used for medical purposes are in conformity with the above requirements, proceed to mechanically anchor the ceiling and wall plate, assessing the type of building and making all consequent adaptations.

THE SERVICE PERSONNEL has all technical, civil and legal responsibility relating to correctly and suitably performing Product anchoring and installation operations in a workmanlike manner.

3.2 Correctly wiring up the premises

	DANGER – Safe wiring installations
---	---

The premises used for medical purposes must be safely wired up in a workmanlike manner by SERVICE PERSONNEL to power the Product.

	DANGER – Electrical environment in compliance with the law
---	---

Before installing the Product, the SERVICE PERSONNEL must make sure the following conditions exist:

- The wiring system of the environment (premises) in which

installation is made must be in conformity with regulations for premises used for medical purposes and with applicable national laws and/or regulations.

- The electrical system must have a certificate of conformity issued by whosoever installed it.

The earth system must be certified as required by applicable regulations.

4 Product installation

Before proceeding to install the Product, first of all check the presence of all the packaging and that this is in good condition and has not been damaged during transport.

Claims will only be taken into consideration if the seller or carrier has been immediately notified. All claims must be made in writing. Goods always travel under the responsibility and at the risk of the buyer.

Keep the original packaging in case the Product has to be re-dispatched.

Personnel required:  (Two)

Necessary protection equipment:

Safety eyewear

Gloves

Accident-prevention footwear

Special equipment

- Drill (ceiling and wall version only)
- Set of hexagon spanners
- Screwdriver
- Ladder (ceiling and wall version only)
- Standard manual tools
- Saw with metal blade (ceiling version only)
- Set of drill bits (ceiling and wall version only)

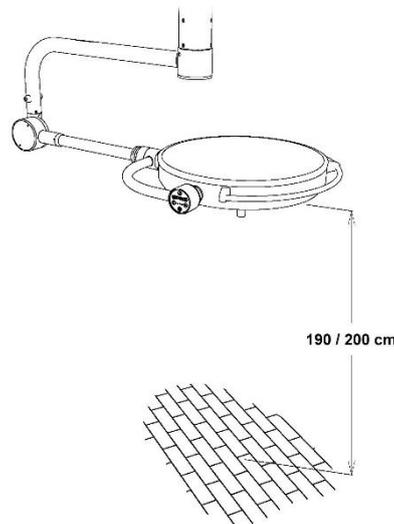
After installation, the Product must be tested by Service Personnel before being used.

4.1 Ceiling and wall drilling instructions

Fastening positions

The Product is supplied complete with coupling, bar (tube) with welded plate in ceiling version. For ceiling installation, the length of the bar varies according to the height of the premises in which the Product is installed.

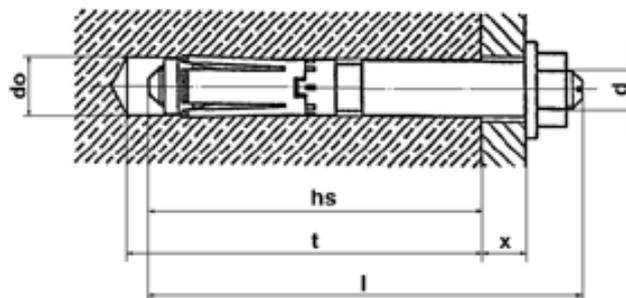
The length of the bar is calculated to install the Product at a finished height off the floor of around 190/200 cm (as per drawing below), unless otherwise requested by the RESPONSIBLE ORGANIZATION.



By way of example only, below is a list of some types of walls:

Reinforced concrete:

Mechanical anchoring: proceed to fasten the ceiling/wall plate using Hilti HSL-3-G M16/25 expanding screw anchors or others with similar characteristics. Carefully follow the instructions provided by the insert manufacturer which, for your information, are provided here:

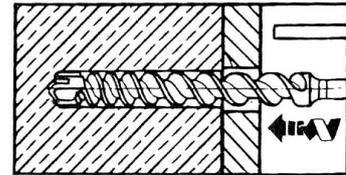


Anchoring tie-rod	do (mm)	t (mm)	hs (mm)	l (mm)	Mt (Nm)	SW (mm)	x (mm)
HSL-3-G M 16/25	24	125	100	163	80	24	25

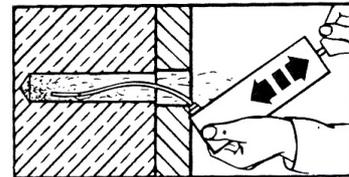
- do Bit nominal diameter
- t Minimum drilling depth
- hs Minimum insertion depth
- l Anchoring tie-rod length
- Mt Closing force couple
- Sw Spanner opening
- x Fastening height

1. Apply the paper template at the Product installation point and mark the fastening hole points with a pencil.

2. Make the holes in the ceiling in accordance with the anchoring tie-rod manufacturer's specifications.



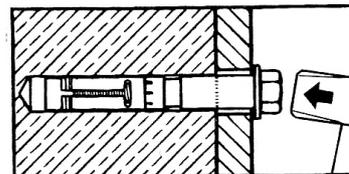
3. Using a pump or a vacuum cleaner, remove the drilling residues and dust from the hole.



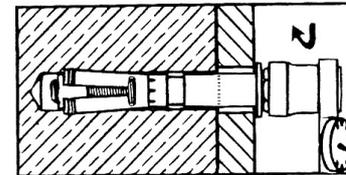
4. Fasten the Bar/Plate to the ceiling/wall and, using a hammer, insert the anchoring tie-rod in the hole.

Important!

Bear in mind the fitting depth



5. Using a torque wrench, tighten the anchorage to the tightening force indicated by the screw anchor manufacturer. The anchorage will immediately bear the weight.



6. Proceed in the same way for the remaining anchors.

7. After one hour, again tighten the tie-rods to the prescribed tightening torque.

Chemical anchoring: proceed to fasten the Bar/Plate using the relative injection chemical anchors mod. Hilti HIT-HY 150 with HAS or others with similar characteristics, carefully following the instructions indicated by the manufacturer.

After fitting the chemical anchors to the ceiling, proceed to fasten the bar with nuts and locknuts. Using a torque wrench, tighten the nut with the tightening torque indicated by the anchor manufacturer.

Concrete and masonry In this case the ceiling must be sandwich closed by means of the ceiling plate and counter plate, being careful to include at least one rafter.

The plate and counter plate must be fastened together using suitable threaded steel bars, blocked at the top and bottom ends by relative washers, nuts and locknuts.

Wall version The Product is supplied complete with wall plate and HAM M6x50 wall plugs.

	CAUTION – Do not install the Product on unsuitable walls
---	---

For the wall version, the wall must be a supporting wall and be made of solid brick. Installation on walls of perforated bricks and plasterboard is only allowed with the fitting of another plate on the opposite side of the wall (sandwich closing).

4.1.1 Installation of ceiling plate, bar, switchboard and cover

	CAUTION – Make sure the Product is stable
---	--

Make sure the Bar (anchor tube) is levelled to ensure the Product is stable.

See drawing 13 Position the template (drawing 12) (2) on the ceiling (1) and fasten it with adhesive tape (3).

Make the holes according to indications in paragraph 4.1

See drawing 38 Fasten the counter plate (2) to the ceiling (1) using nuts and locknuts (3) (4).

Using a spirit level (5), make sure the bar is correctly fastened.



See drawing 127

Make sure the mains power cable (1) can reach the lamp power board without creating interferences with the Bar.

Fit the switchboard (2) on the Bar tube and tighten the two screws (3) and their toothed washers (4). Position the switchboard so the slot (5) of the retention bracket coincides with the hole M6 (6) on the fastening tube. Make sure the switchboard is secure by tightening the screw (7) and its toothed washer (8).

In case the switchboard is to be fastened in another position along the Bar tube, position it where required and secure it by tightening the two screws (3); using a drill bit Ø5 (9), drill a hole in the fastening tube, coinciding with the slot (5) of the retention bracket and thread it M6 using a thread cutter (10). Fasten the switchboard once and for all by tightening the screw (7) and the toothed washer (8) in the hole just made.

Depending on the type of ceiling (with false ceiling or not) first of all position the flat covering (11) or high covering (12). If the covering is in two pieces it can be installed afterwards, but always remember to first of all fit the silicone retention ring (13) on the fastening tube before going ahead with the installation of the Product structure.

4.1.2 Installation of structure to bar

See drawing 155

Align the pivot of the horizontal arm structure (1) with the anchoring tube (2).

Insert the power cables (3) in the pipe and bring them out of the hole for the lateral connection to the source.

Insert the pin into the tube up to combine the 3+3 holes at 120° of the flanges with the 3 +3 holes at 120° of the pipe.

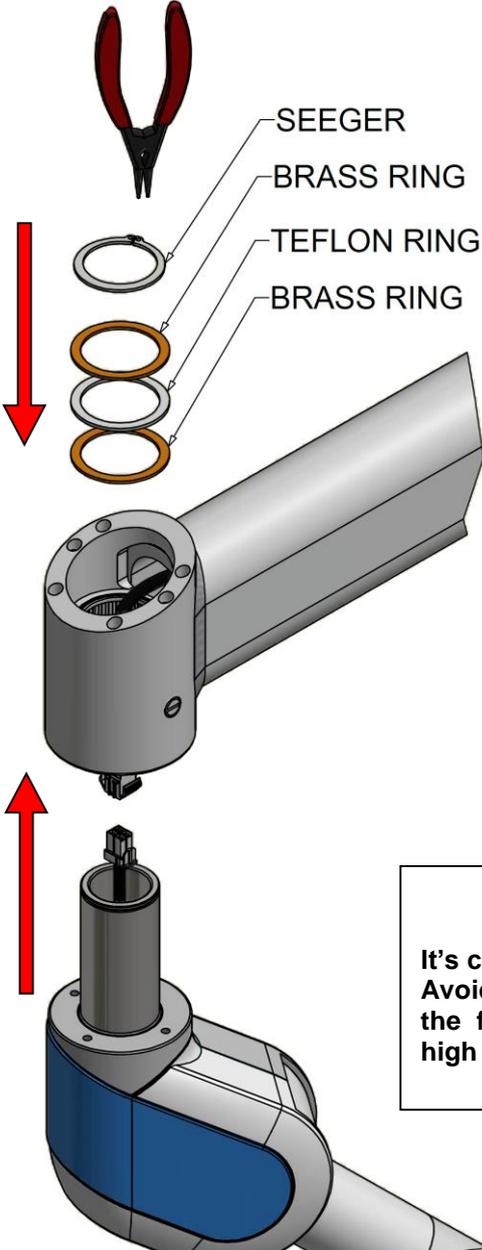
- Point to all 6 screws with hexagonal key N.3
- Screw tightly ONLY two screws in a vertical side with each other (4)
- Then complete the remaining tightening.

This will prevent loosening over time during the continuous rotation of the Product.

4.1.3 Installation of oscillating arm

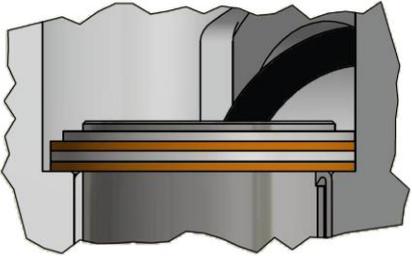
	HAZARD – Risk of serious injury
---	--

POSITION RINGS AND SEEGER ON THE TOP

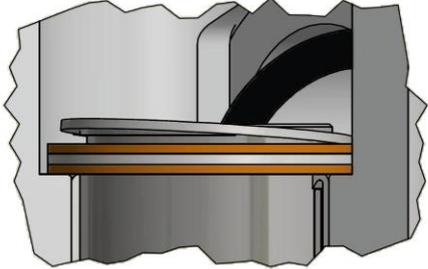


 SEEGER
BRASS RING
TEFLON RING
BRASS RING

OK



NO



**WARNING,
PERSONAL INJURY RISK**

It's compulsory to follow this instruction. Avoid inserting seeger in its seat causes the fall of swing arm and cupola with high risk of personal injury.

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See drawing 156

Insert the oscillating arm pin (2) into the horizontal arm (1).
 Position the teflon washer (3), the brass spacer (4) and the other washer (3) on the oscillating arm pin (2). Fix the pin with seeger (5) and related tool.
 Join together connectors (6) and (7). In case of standard lamp only one connector will be available
 In case of lamp equipped with integrated camera, will be supplied three power connectors, to be connected according to colors, and video signal connectors, to be connected according to letters
 These connectors need to be screwed together.
 Put the wires into the horizontal arm slot (8).
 Close the upper part of horizontal arm using the plastic cover (9) and screws (10).
 Adjust the friction (11) in order to make the arm position stable.

4.1.4 Installation of cupola

See drawing 129

Before positioning the cupola, as indicated in the draw, position the fork lock covering (1) and the hub lock (2) on the swing arm.
 Insert the fork of the Product on the swing arm carefully (3). Now the light head is able to maintain the position without any support.
 Keep attention to place the cupola and the arm in the same position of the drawing: with the fork to the left of the arm and the screw of the friction (4) of the oscillating arm under.
 Push the hub lock (2) on the fork hub (3), and rotate it in order to match the corresponding 6 holes.
 Screw the 6 screws (5) in order to lock the hub and the lock.
 Then positioning the covering (1) on the lock (2) in order to cover the screws.
 Connect the white connectors and fix the covering disc (6), screwing the three screws (7).
 In case of a lamp with CCTV, the power connector and the video signal connectors will have to be connected in accordance with the letters.

4.2 Installation of Product in floor version for lamps Pentaed 30E, 30N

4.2.1 Installation of light stem

See drawing 171

Position the lower stem (2) in the base housing (1) and tighten it with the 4 screws (3).

Insert from the top of the stem (2) the stand cover (4), the closing ring (5) and the stem cover (6) in the indicated order.



CAUTION – Instability and overturning hazard.

Adequately tighten the 4 screws to avoid any risk of instability and possible Product overturning.

See drawing 172

Insert the cables inside the top stem (2) and position it vertically above the lower stem (1). Make the two extremities coincide using the guides (3).

Fasten the two stems by means of the screws (4).

4.2.2 Installation of swinging arm

See drawing 189

Position the swing arm (1) in front of the stem and in correspondence with the pivot (2).

Match the threaded hole of the pivot (3) with the hole located on the hub (4).

Insert the swing arm (1) into the pivot (2) and stop it strengthening the screw (5).

Insert the plastic cover (6) from the lower side, if necessary enlarge it to make the installation easier. Fix the cover inserting the hooks into the hub holes.

Join the connectors, fix the upper cover (7) with the screw (8).

Put the coverage (9) in correspondence with the threaded holes and fix it with the screw (10).

4.2.3 Installation of cupola

See drawing 129

See point 4.1.4 above.

4.3 Installation of Product in wall version

4.3.1 Installation of plate with wall switchboard



Make sure the wall plate is fastened level so the Product is in stable position.

See drawing 66

Position the template sheet (2) (drawing 11) on the wall (1) and fasten it with adhesive tape (3), with the aid of a spirit level (4) to ensure levelling.

Make the holes as indicated in paragraph 3.1

See drawing 67

Fasten the plate (2) to the wall (1) with the aid of a spirit level (3).

4.3.2 Installation of structure to plate

See drawing 174

Insert in the wall box pin (1) a bronze washer (3), the Teflon washer (4) and the other bronze washer (3).

Afterwards, insert the horizontal arm (2) inside the pin, position the bronze washer (3) and fasten by means of the snap ring (5).

Join the power connectors (in the case of the light with CCTV connect the video signal following the indicated letters).

Close the top part of the horizontal arm by means of the plastic cap (6) and the screws (7).

4.3.3 Installation of swinging arm

See drawing 156

See point 4.1.3 above.

4.3.4 Installation of cupola

See drawing 129

See point 4.1.4 above.

4.4 Installation of Product in stand version for Pentaed 81, 63N lamps

4.4.1 Installation of wheeled base

See drawing 133

Take the base (1), turn the arms of wheels (2) into the final position, aligning the holes of base with the holes of arms of wheels. Screw strongly the 8 screws (3) of the arms of wheels with an allen key.

See drawing 175

Remove the lower cover (4) of the base (1) by unscrewing the four screws (5).

Position the lower stem (2) in the housing of the base (1) and fasten by tightening the 4 screws (3).

Insert the stem cover (6) from the top of the stem (2).

Connect the connectors and close the lower cover (4) by means of the screws (5).



Adequately tighten the 4 screws to avoid any risk of instability and possible Product overturning.

4.4.2 Installation of swinging arm

See drawing 172

See the instructions shown on drawing 172 of paragraph 4.2.1 above.

See drawing 189

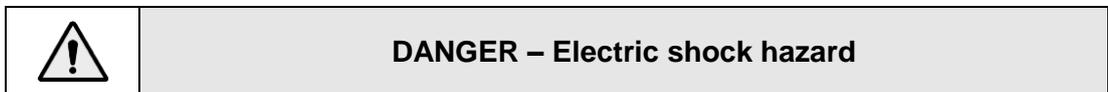
See point 4.2.2 above.

4.4.3 Installation of cupola

See drawing 129

See point 4.1.4 above.

4.5 Electrical connection of Product



Before making the Product power connections, make sure the mains supply line has been interrupted.

The Product supply unit (support plate, supply unit, terminal board) is fastened integral with the plate of the bar, base or wall plate for ceiling, floor or wall versions respectively.

The line power connections (F,N) and those inside the Product (+,-,T), must be made in compliance with the wiring diagram show in the Operation and Maintenance Manual.

Fuses

The electrical protection of the Product is provided by fuses at input (F,N) of the 5x20 type:

FOR MODELS 81/105/63N:

n°2 T2A (main) and n°1 T10A (secondary) for 230Vac

n°2 T4A (main) and n°1 T10A (secondary) for 100Vac

FOR MODELS 30E/30N:

n°2 T1A (main) and n°1 T6.3A (secondary) for 230Vac

n°2 T2A (main) and n°1 T6.3A (secondary) for 100Vac

FOR MODELS 81/105/63N BATTERY:

n°2 T2A (main), n°2 T4A battery input and n°1 T10A (secondary) for 230Vac

n°2 T4A (main), n°2 T4A battery input and n°1 T10A (secondary) for 100Vac

FOR MODELS 30E/30N BATTERY:

n°2 T2A (main) and n°1 T6.3A (secondary) per 230Vac

n°2 T4A (main) and n°1 T6.3A (secondary) per 100Vac

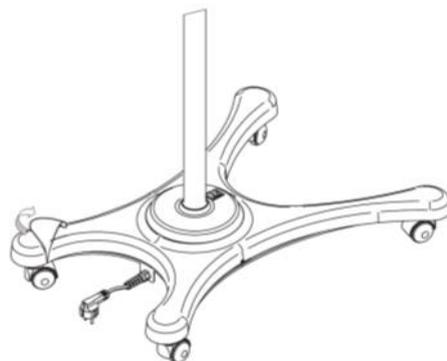
	CAUTION – Permanent damage to Product
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Prime the fuses in the switchboard terminal box after the mechanical and electrical assembly of the Product. Priming the fuses too early could permanently damage the Product. If the Product is not used for long periods of time, remove the fuses.

See drawing 176

Stand version Pentaed 30E, 30N: lift the closing ring (1) and the stand cover (2) by 30-40 cm in order to access the power section. Join the connectors coming from the stem and switch. Return the cover and seal to original position and faster the cover (2) by means of the screws (3) to be fastened to the threaded bush (4). In the case of a battery lamp, also connect the battery faston.

After making the connection, engage the fuses and remove the protective film from the stand cover.



See drawing 176

Stand version Pentaed 81, 63N: lift the cover (6) remove the screws (5) to engage the fuses. In the case of the battery version (7) connect the battery faston.

Reposition the cover (6) in its housing and tighten the screws (5).

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See drawing 177

Ceiling version: remove the silicone ring (1) and the Bar cover (2) downwards to be able to access the switchboard (3). Engage the fuses and reposition the Bar cover (2) and the silicone ring (1) in their housings.

See drawing 177

Wall version: remove the cover (4) of the wall box by loosening the screws (5). Engage the fuses and reposition the wall box cover (4) in place and tighten the screws (5).

4.6 Mechanical adjustments

The Product is supplied correctly clutched and balanced. To make movement adjustment, refer to the setting instructions shown in the operation and maintenance manual.

4.7 Initial start-up

To ensure the Product operates correctly, proceed as follows:

1. Make sure the power rating of the premises corresponds to that of the Product;
2. Fit the plug in the power socket of the premises – Floor and Wall versions only;
3. Close the switch upstream of the system;
4. Move the Product switch located on the base cover for the floor version and on the power box for the wall version respectively to position “I” (ON);
5. Press the 0/I keyboard positioned on the lateral part of the Product dome. The Product will switch on and perform its lighting function.

At the time of commissioning, perform the electrical tests and prescriptions indicated in the IEC 62353 standard.

4.8 Check the result of Product installation and testing before use

Ticking the requirements listed below, if applicable to the Product version, is mandatory to ensure correct installation.

1. Make sure the ceiling/wall is suitable for Product installation.
2. Using a spirit level, make sure the bar is perpendicular with the ceiling or that the wall plate is horizontal with the wall.
3. Make sure the switchboard is correctly fastened to the Bar by

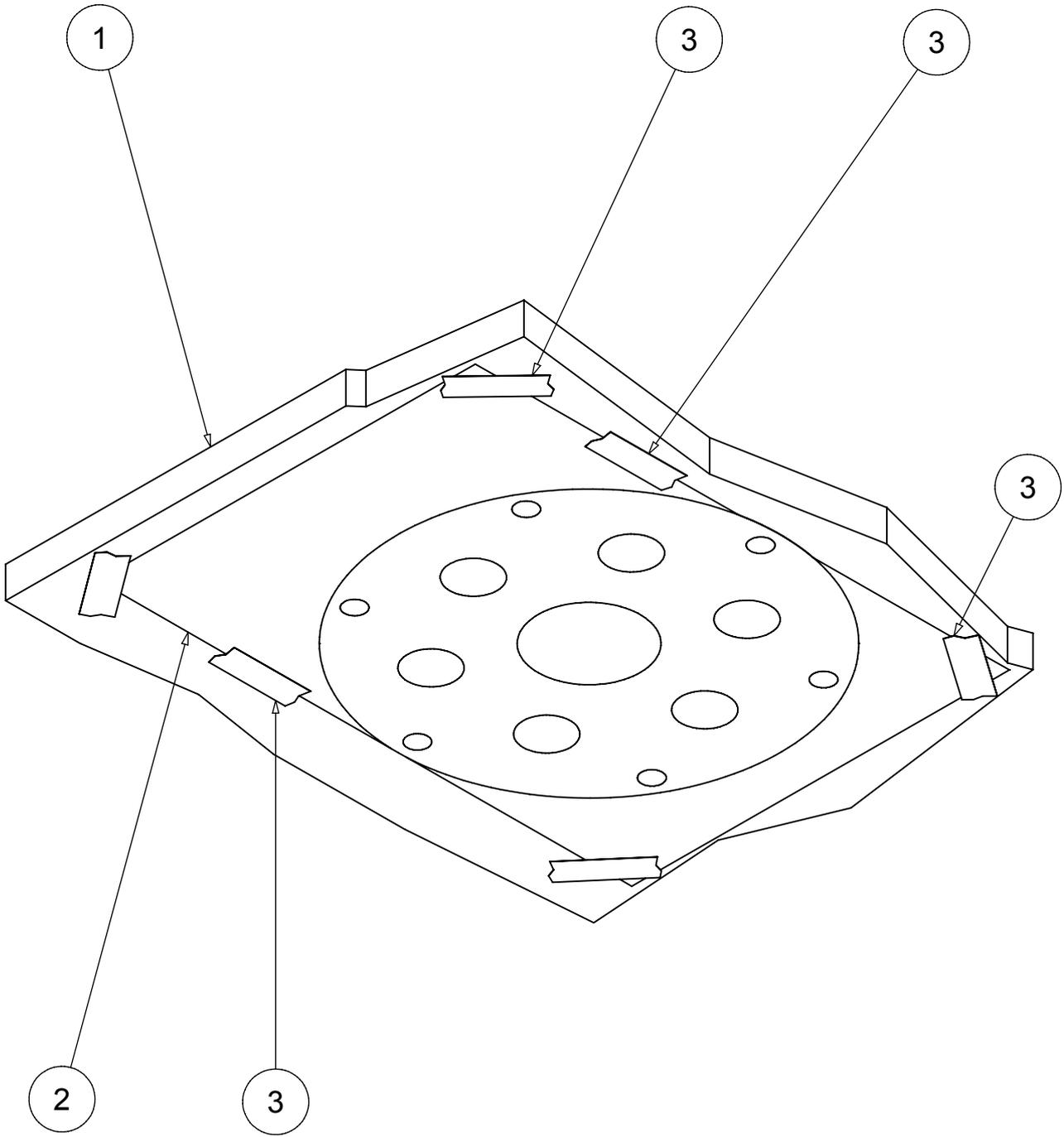
- means of the threaded hole provided.
4. Make sure the screws sustaining the horizontal arm are tight (*ceiling version*).
 5. Make sure the stem guide is correctly fitted in the base centring slot (*floor version*).
 6. Check the Product earth connection and make sure the clamps are well tightened.
 7. Check the correct rotation of the articulated joints and mechanical movements.
 8. Adjustment and rotation operations must be carefully clutched to ensure the Product is stable and maintains its position.
 9. Make sure the Product emits light.

Stamp and signature of SERVICE PERSONNEL:

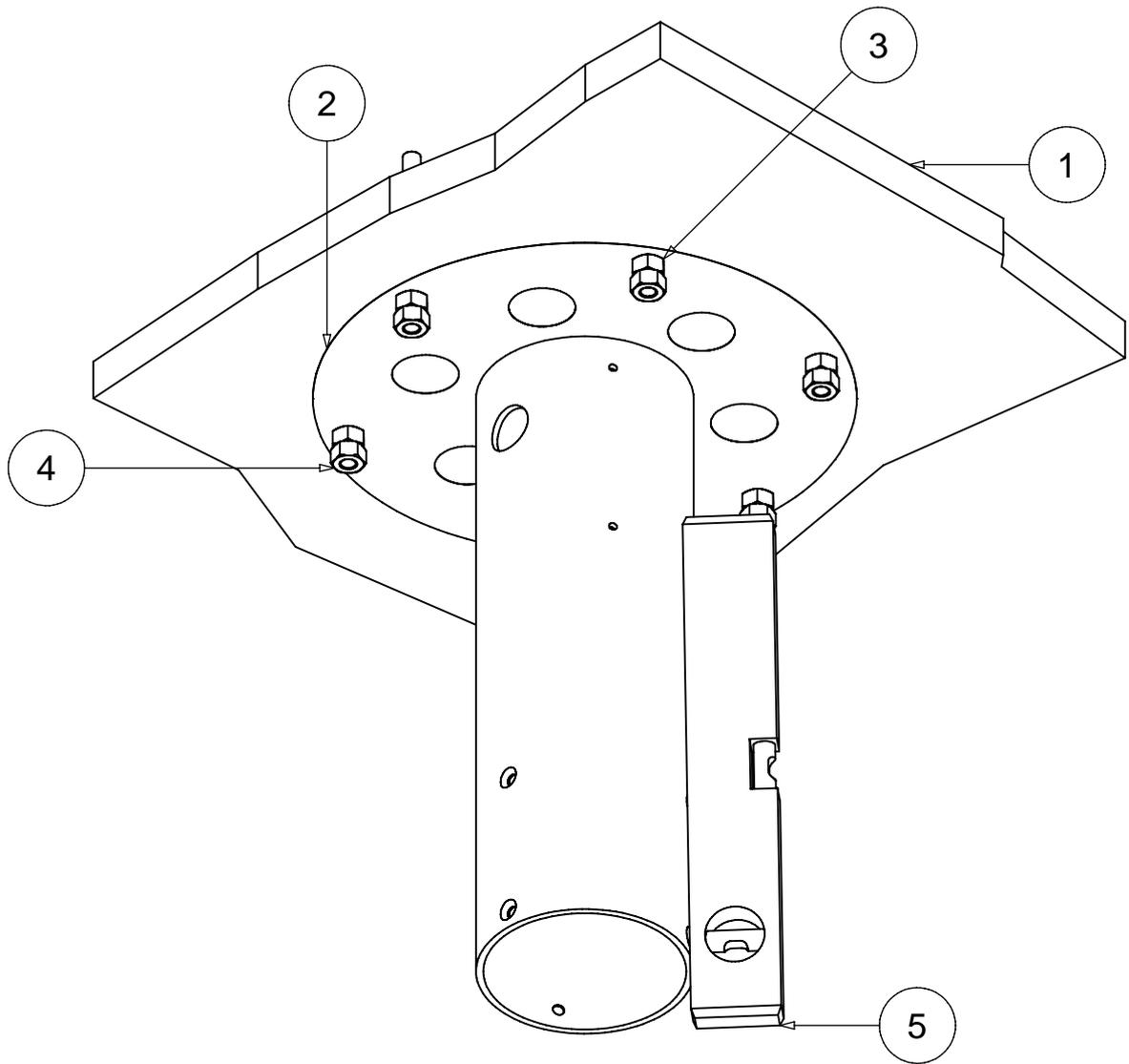
5 Troubleshooting



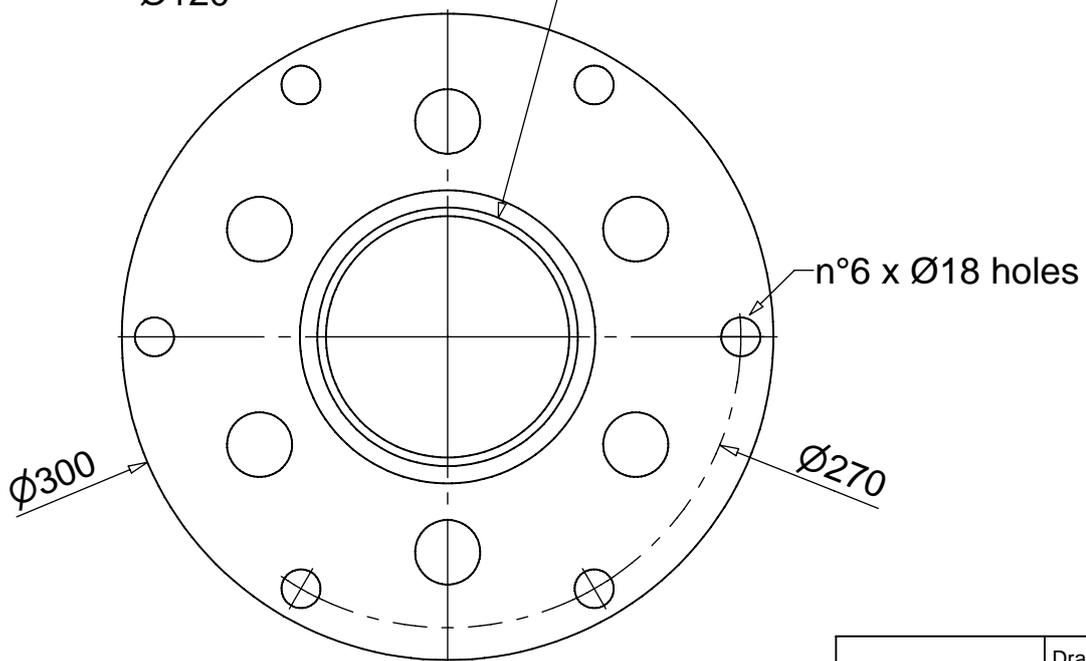
No.	Problem	Solution
1	The Product fails to remain in stable position	Make sure the instructions in this manual, in the “Product installation” paragraph, have been correctly followed. Make reference to setting instructions in the operation and maintenance manual.
2	The Product fails to work	Make sure fuses have been fitted inside the terminal board. Make sure the electrical connectors are fitted. Make sure there is power voltage in the Product.
3	The fuse continues to burn out	Check the specifications of the fitted fuses.
4	The light flickers and produces a stroboscopic effect	Contact the after-sales service.
5	The Product does not switch on	Check the supply power voltage and check the fuses. The electronics are faulty: contact the after-sales service.



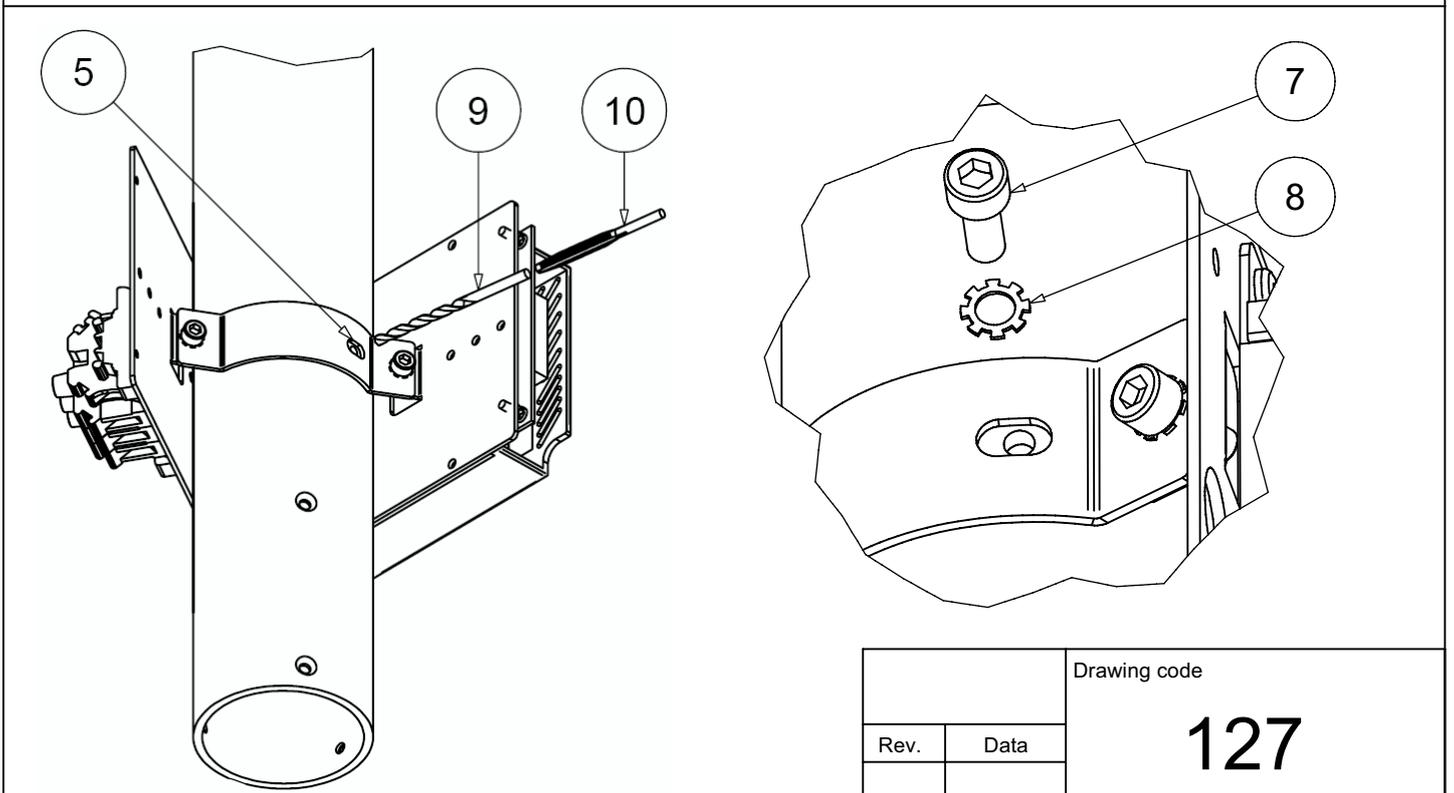
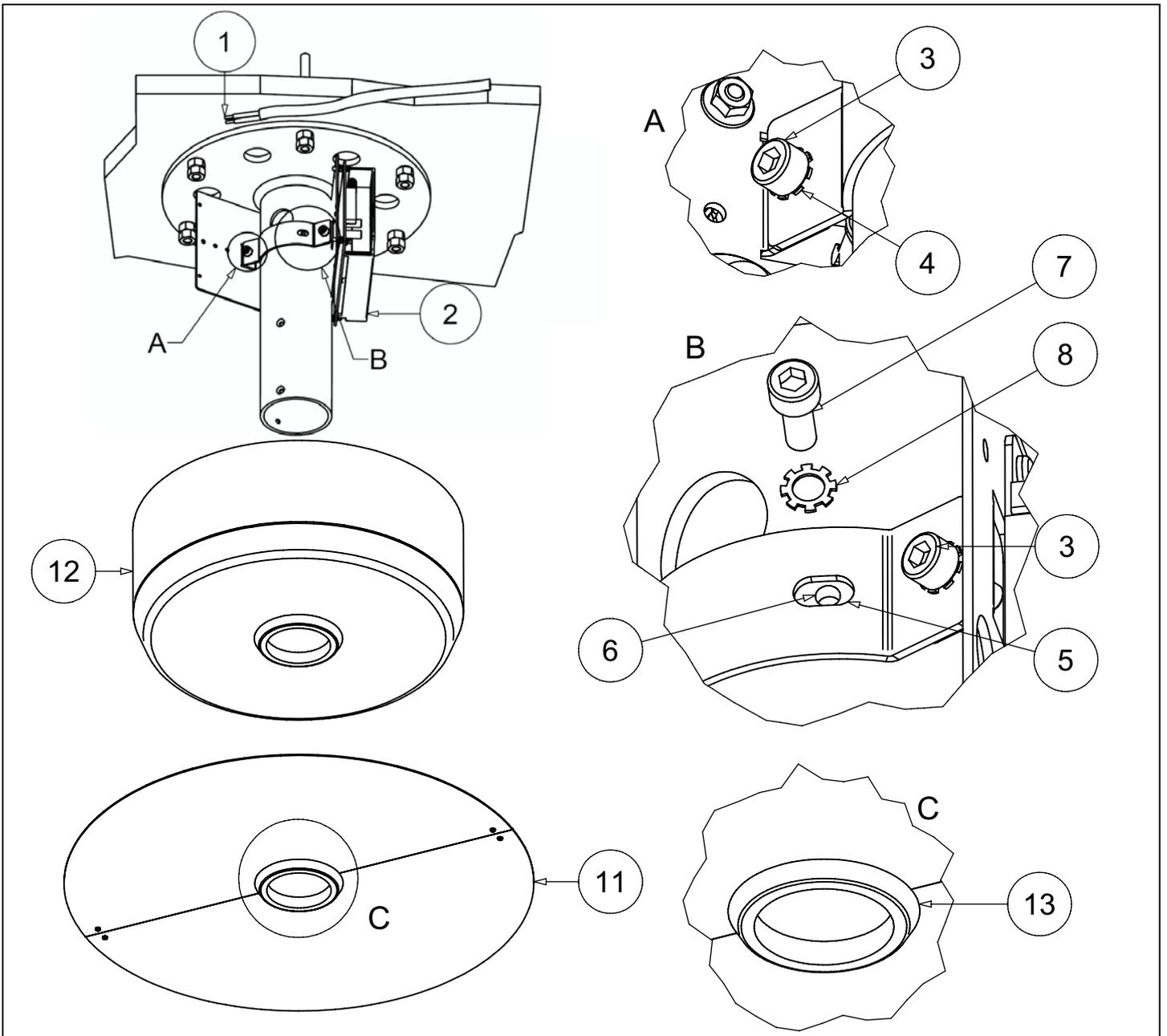
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Rev.	Data	13



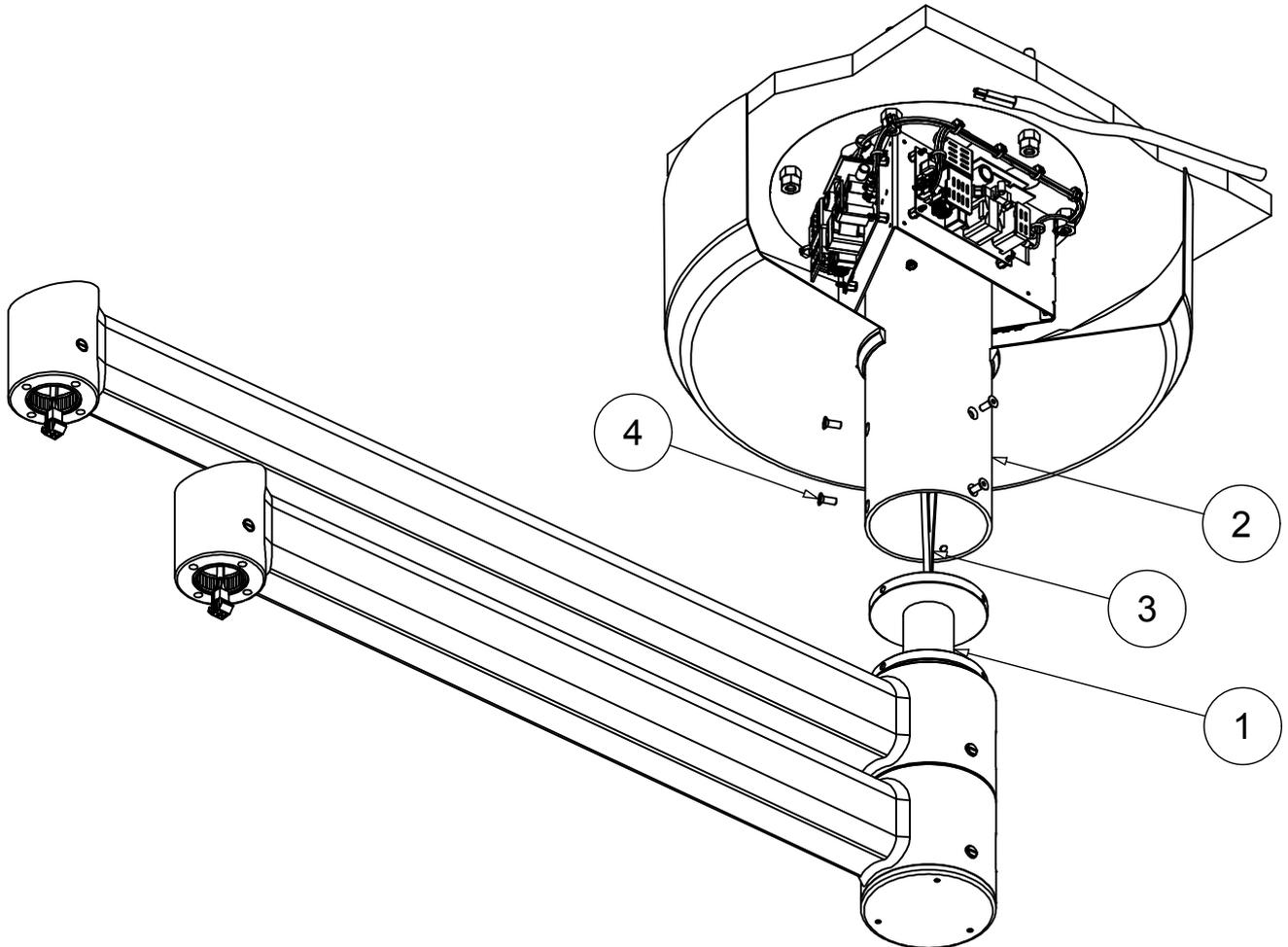
Tube external diameter:
 $\text{Ø}120$



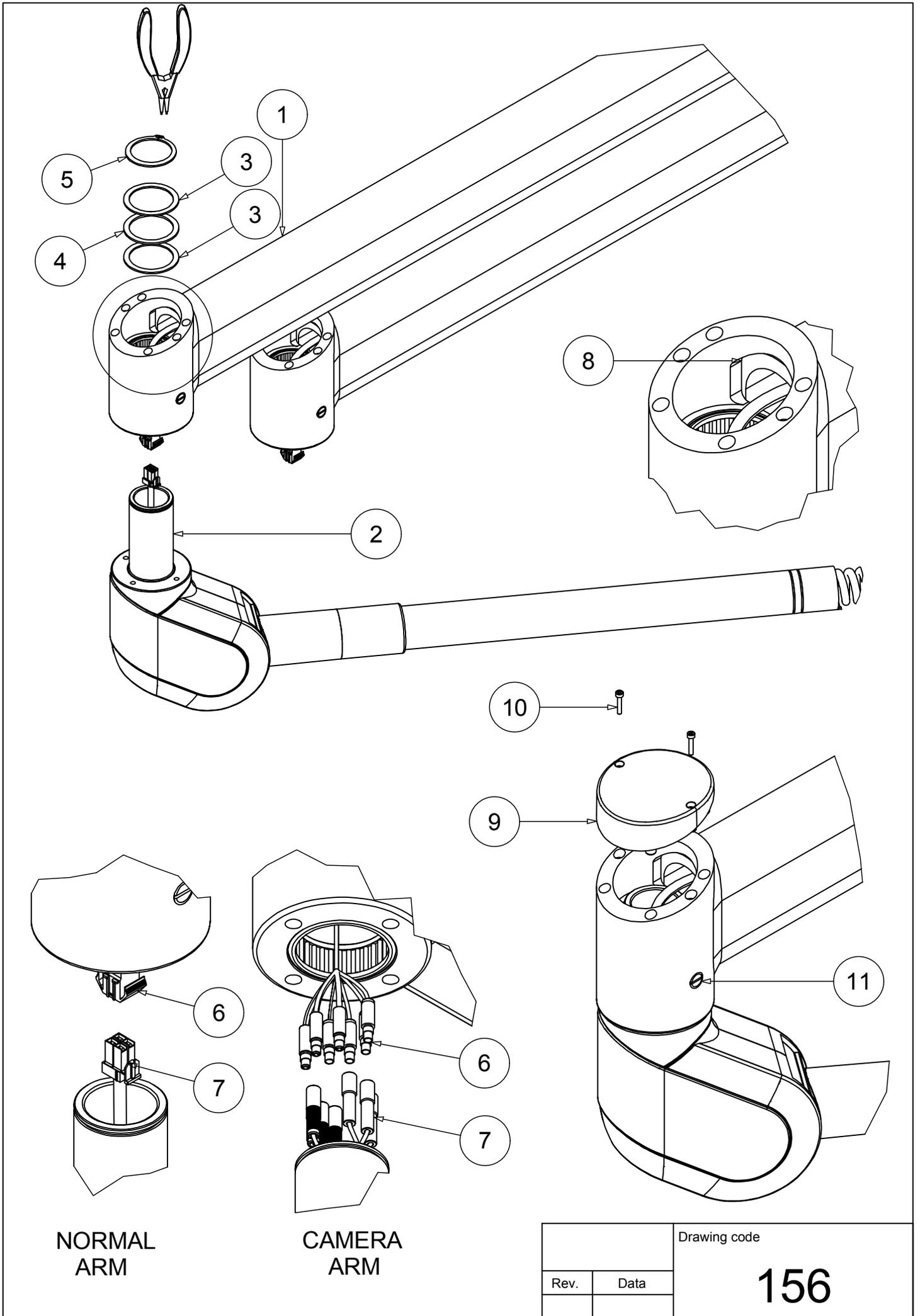
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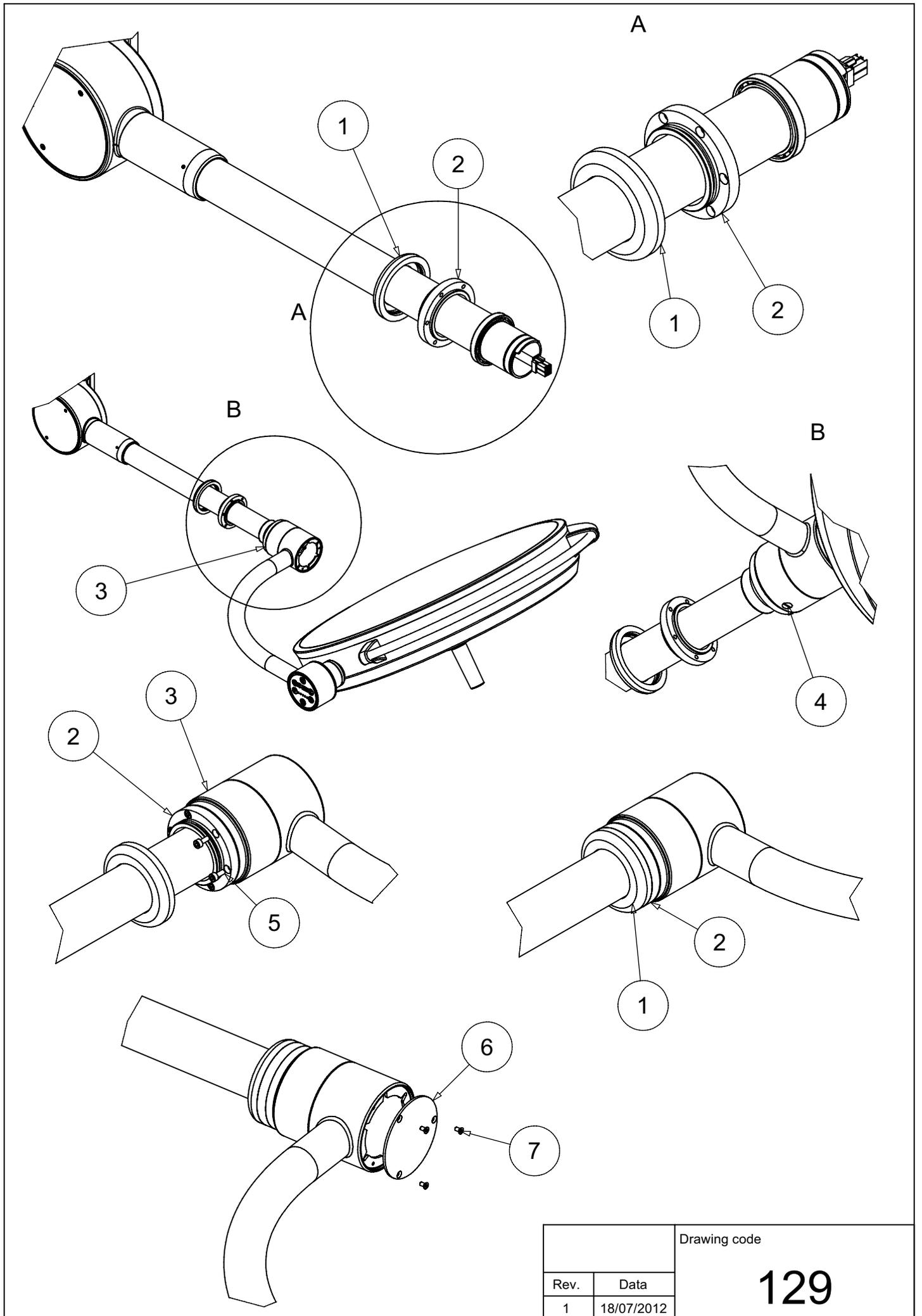


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Rev.	Data	127



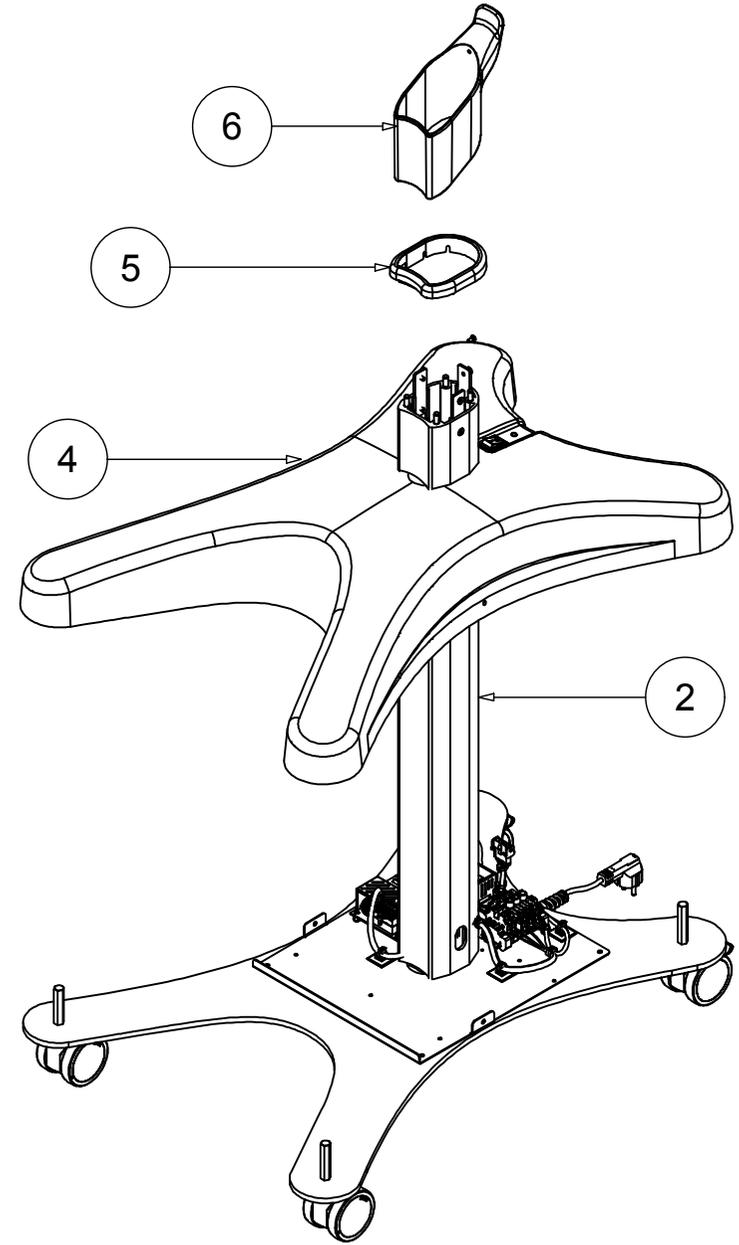
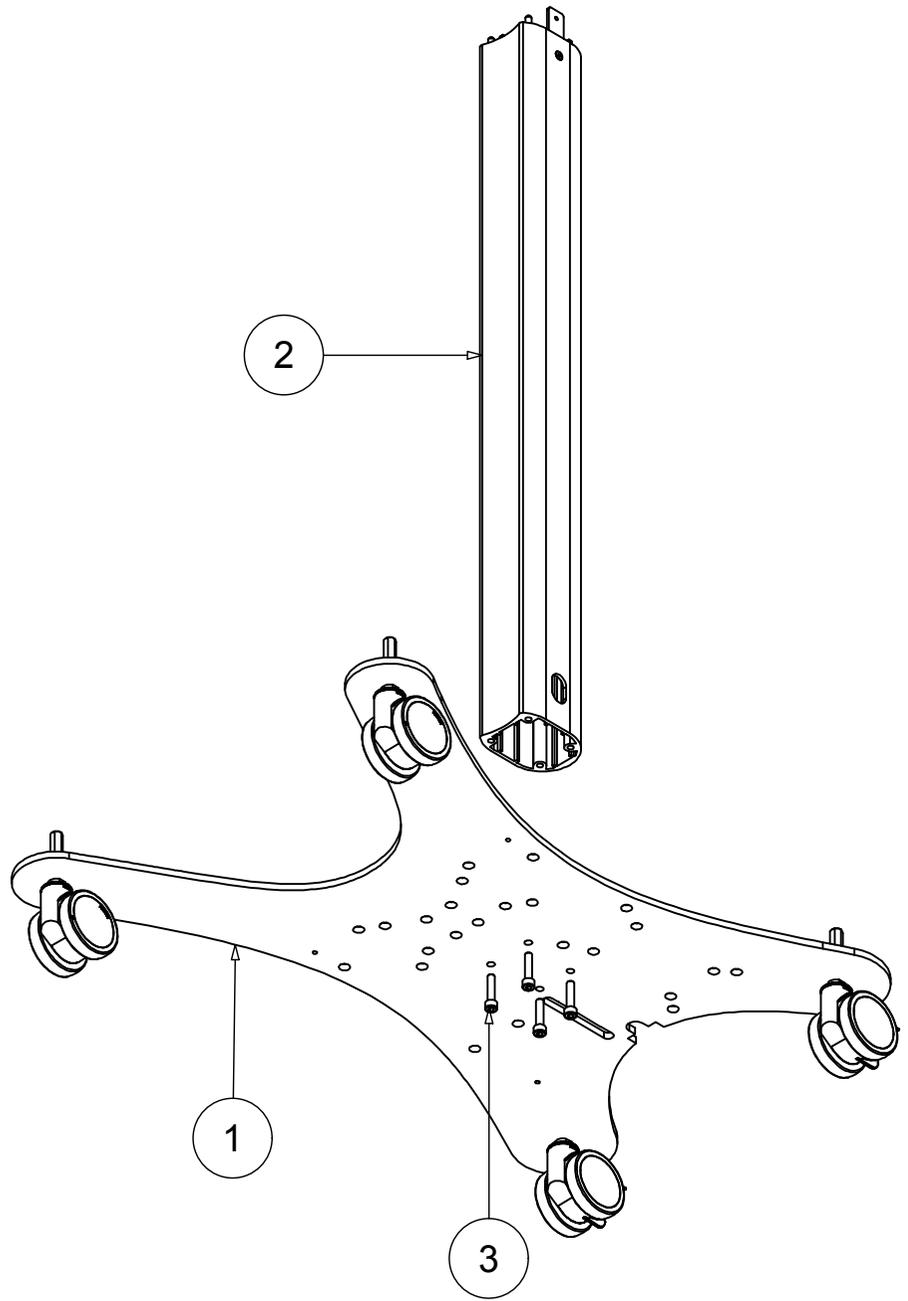
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Rev.	Data	155



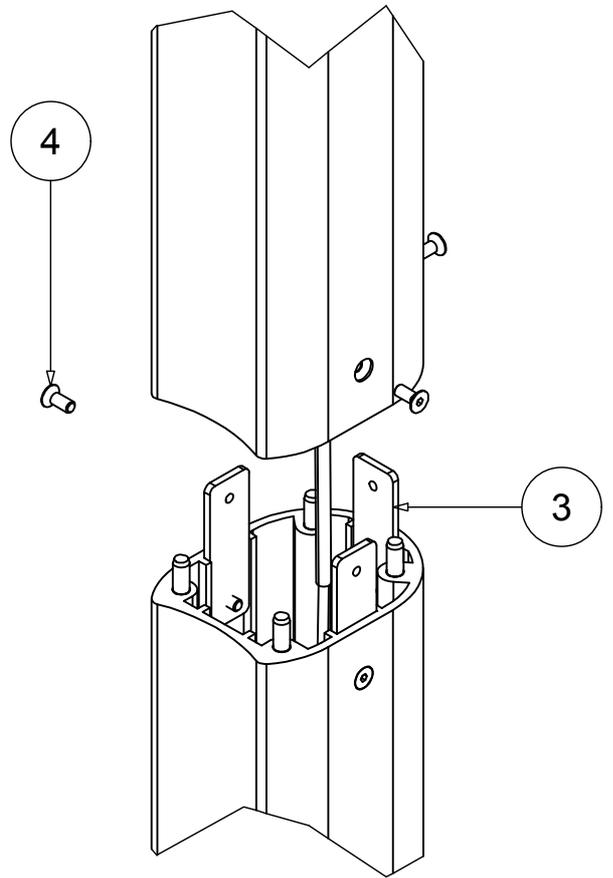
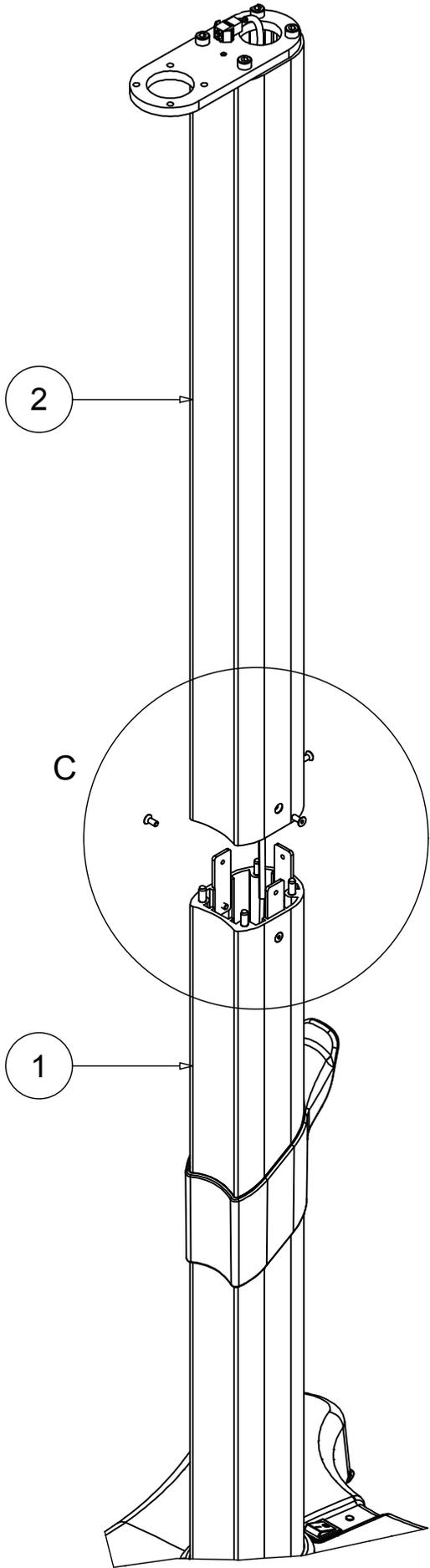


Rev.	Data
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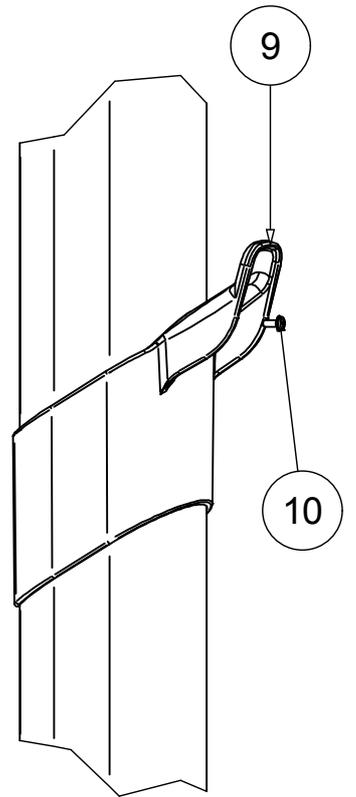
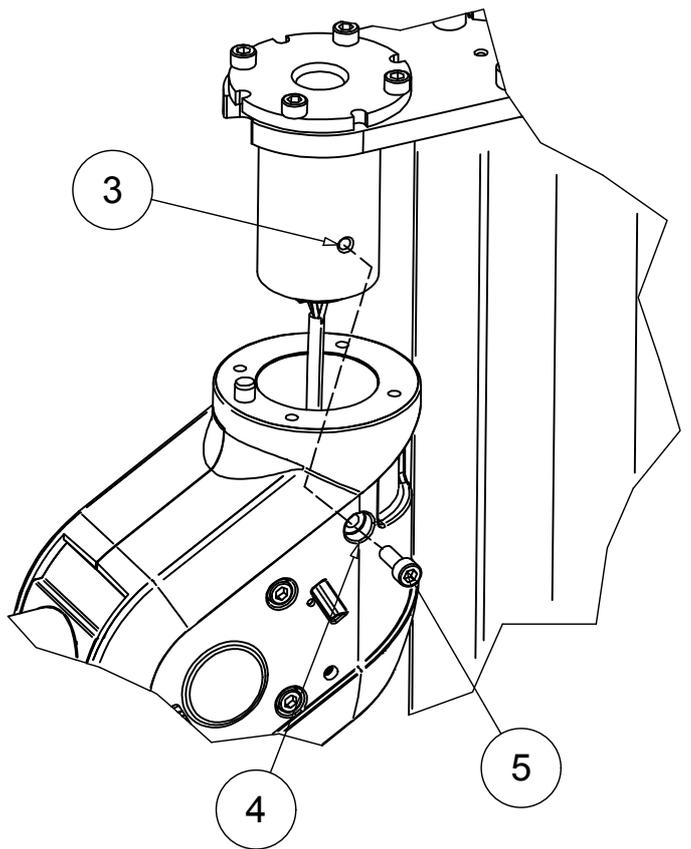
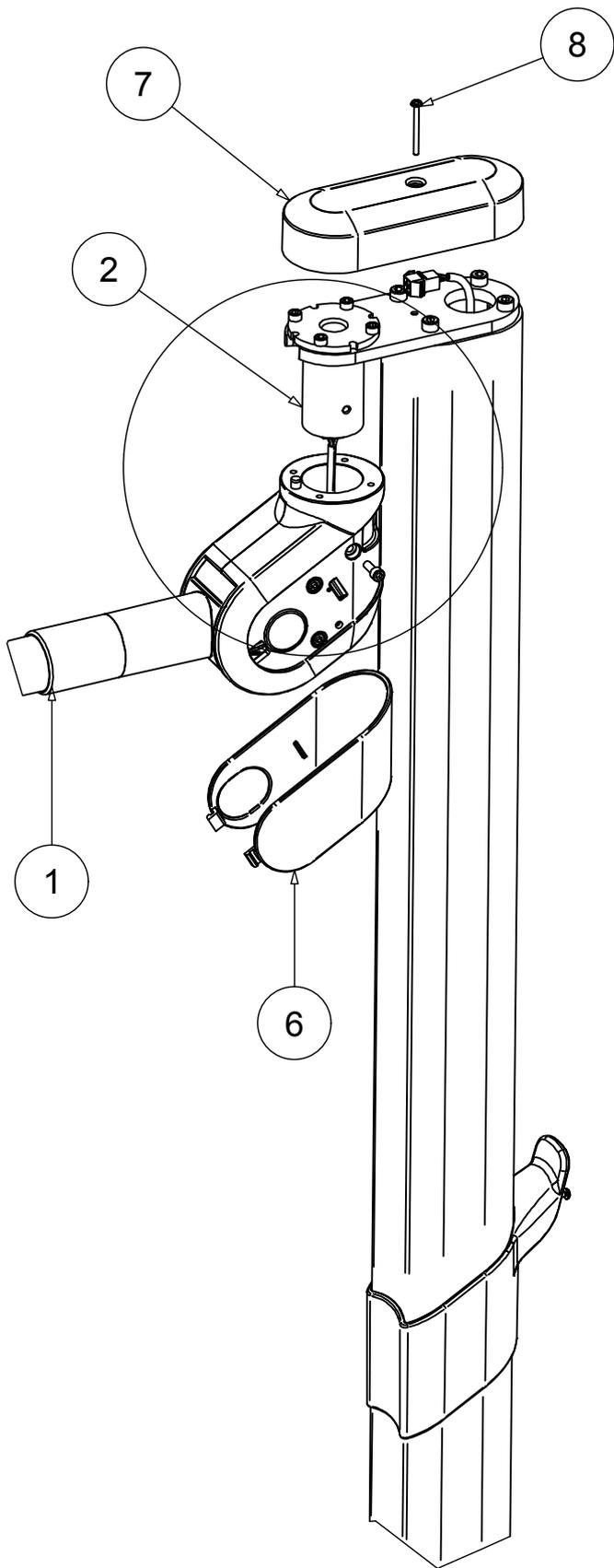
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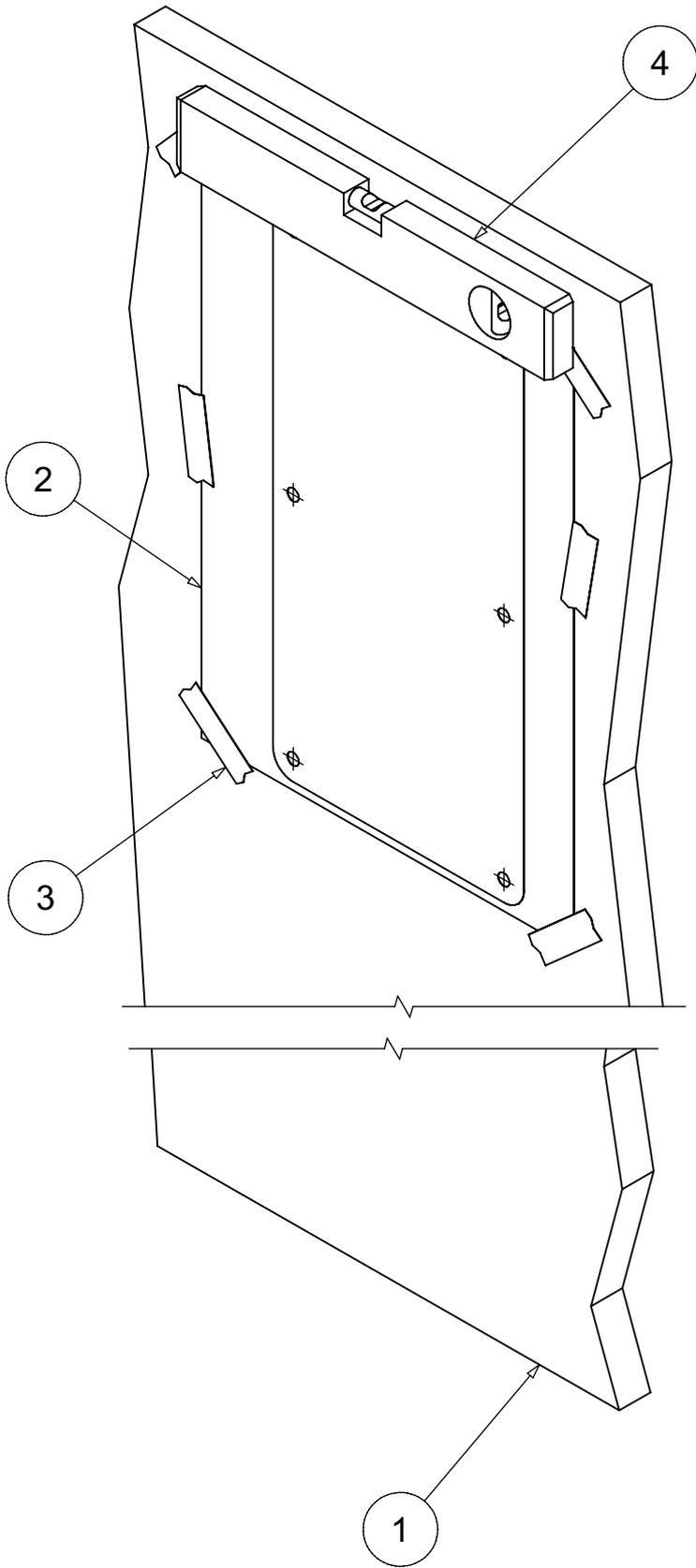
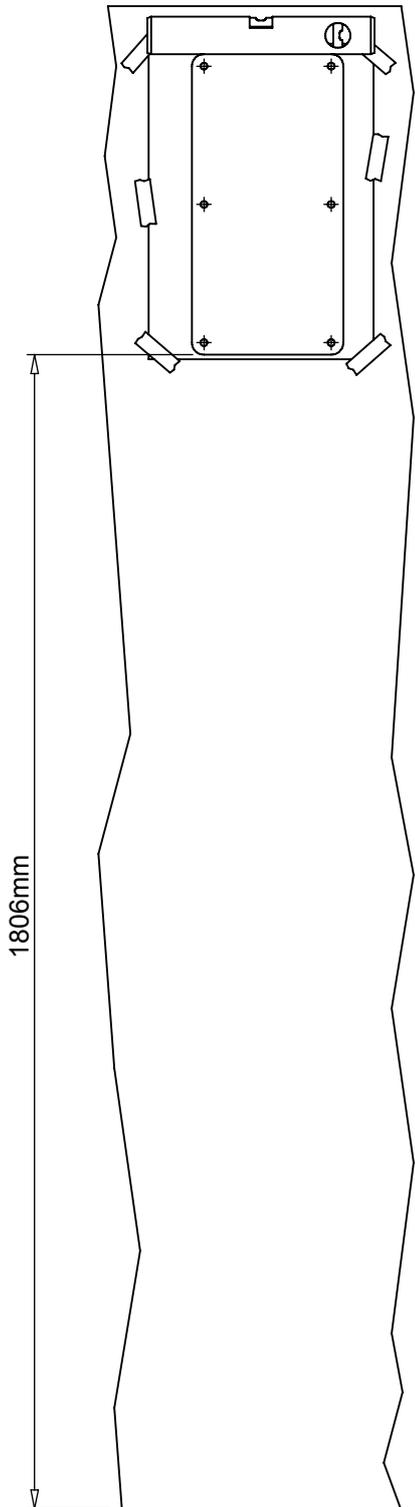
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Rev.	Data	171



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Rev.	Data	172

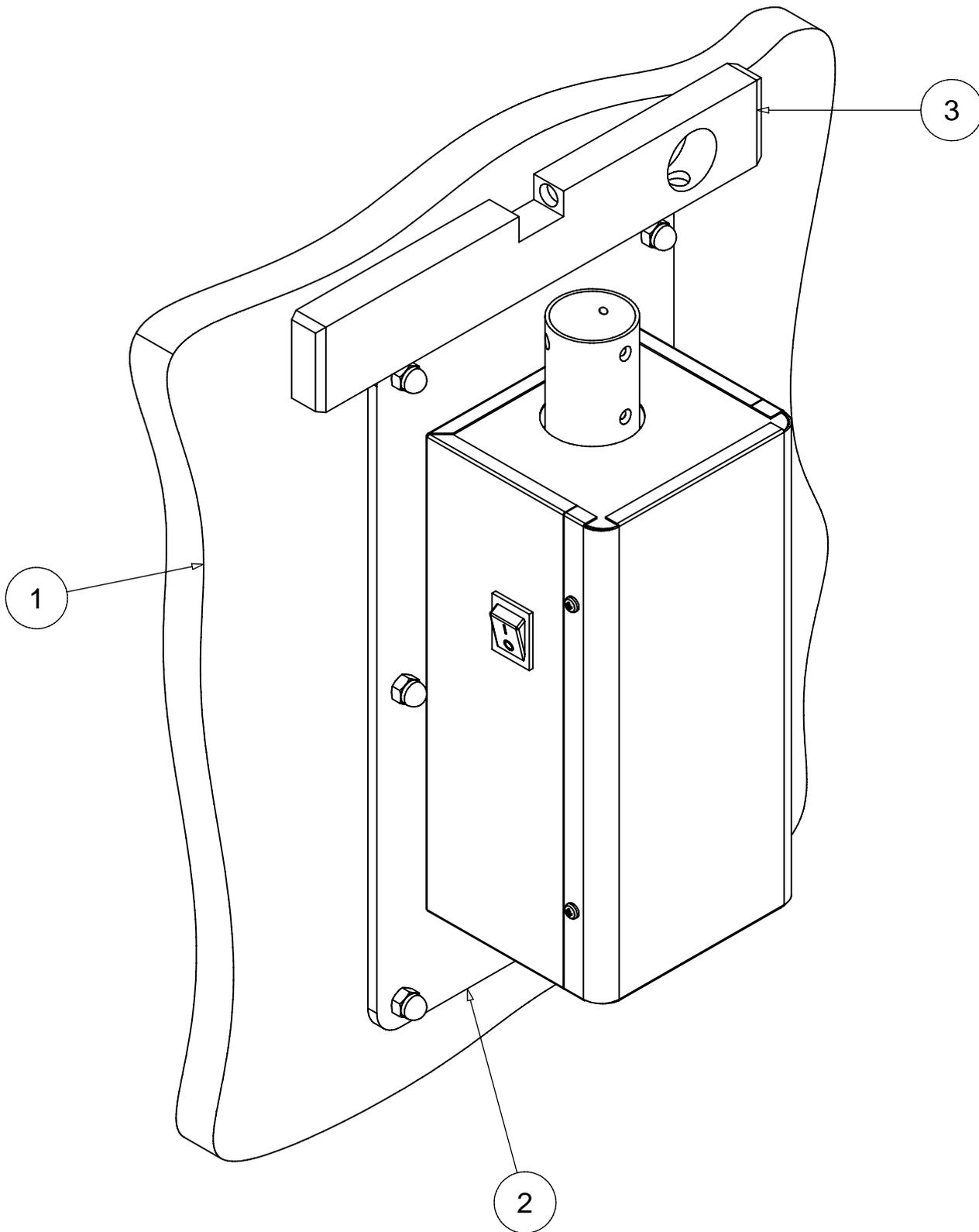


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Rev.	Data	189

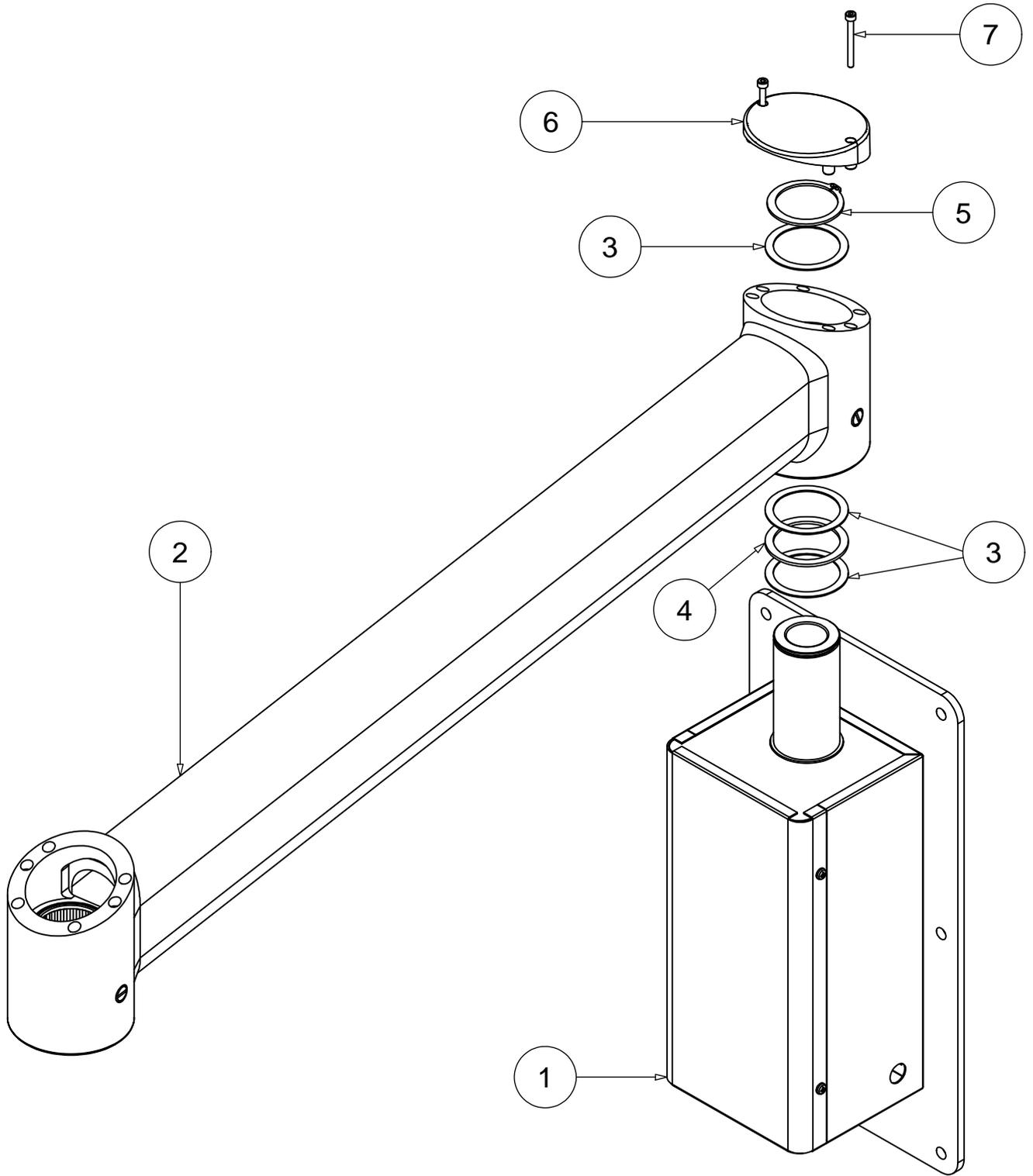


Rev.	Data
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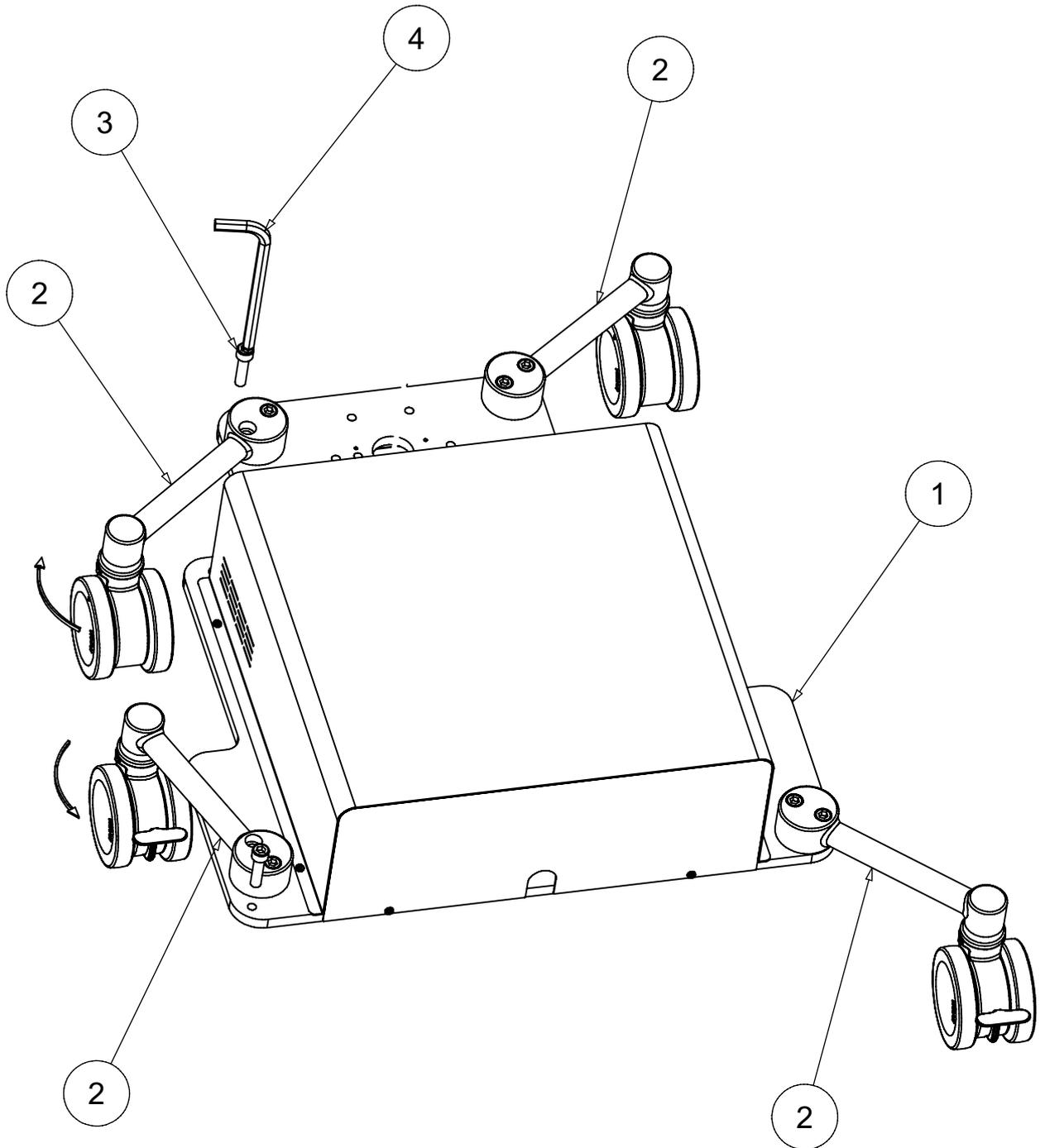
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066



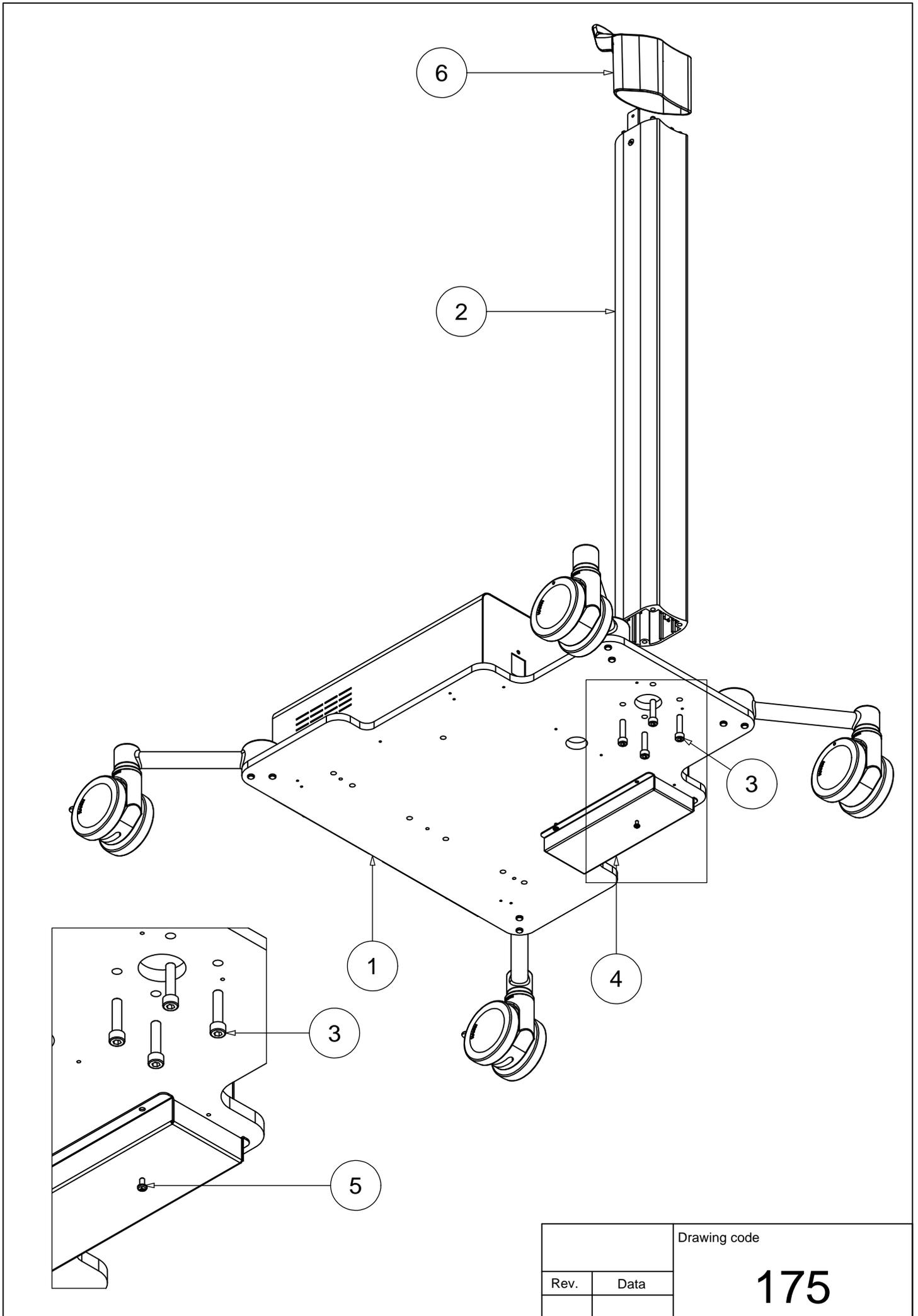
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Rev.	Data	067



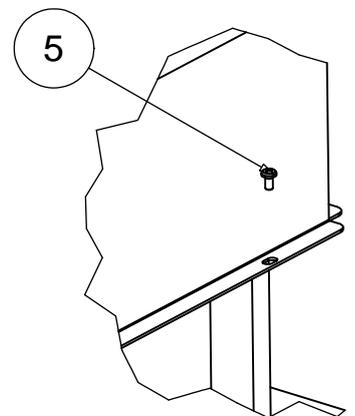
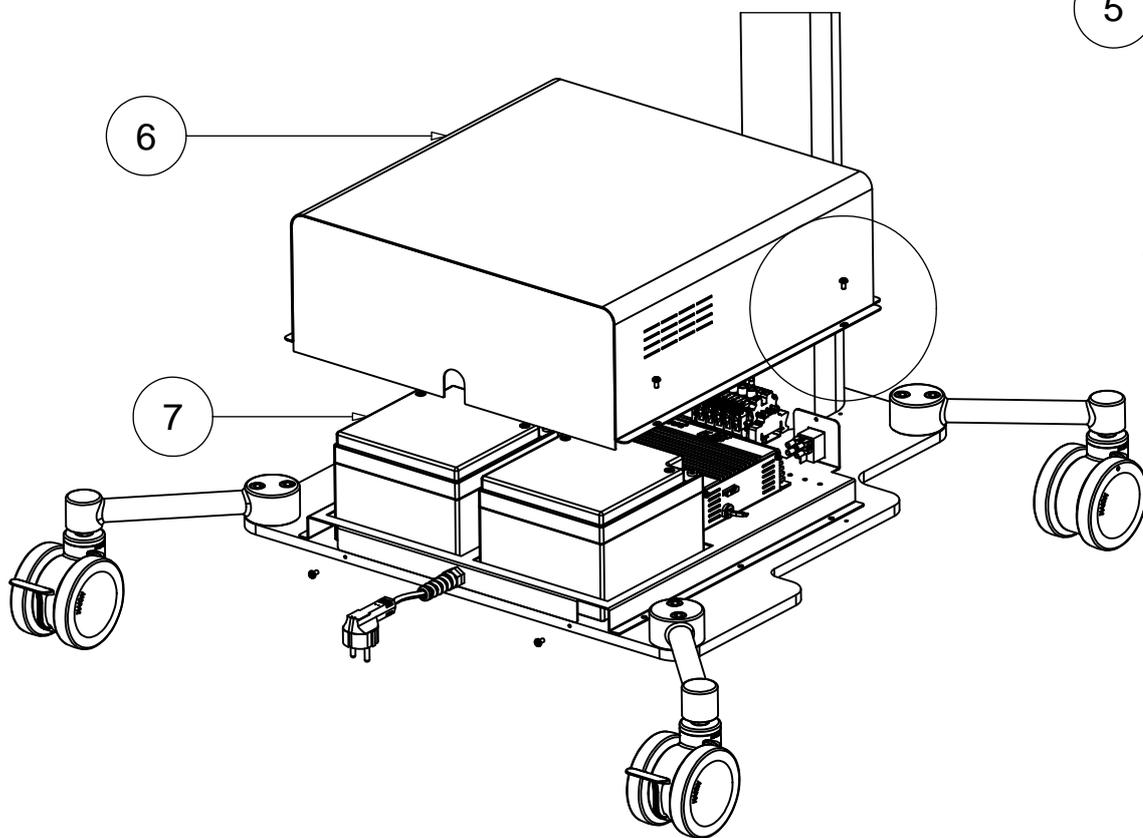
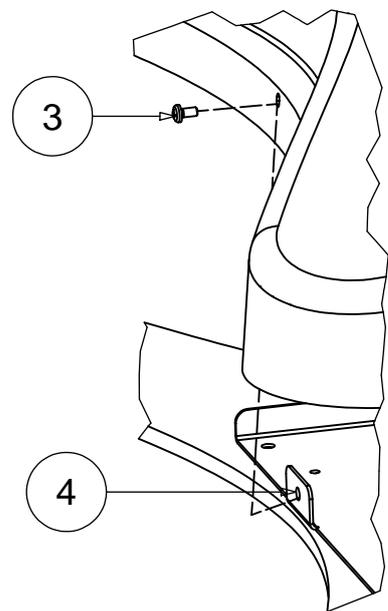
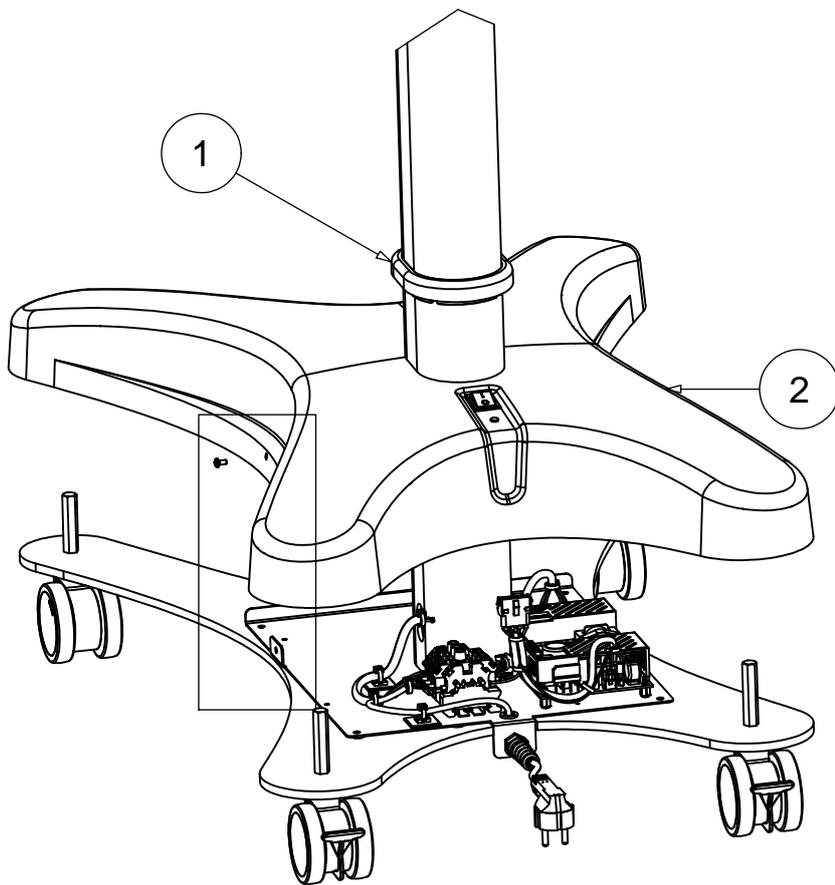
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Rev.	Data	174



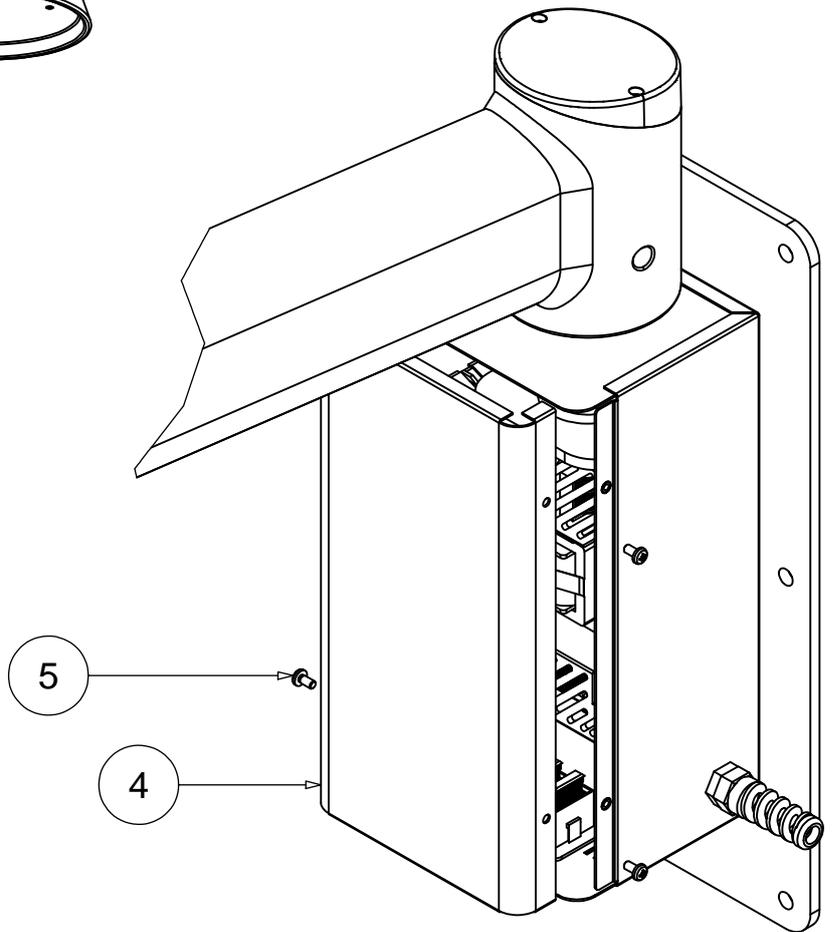
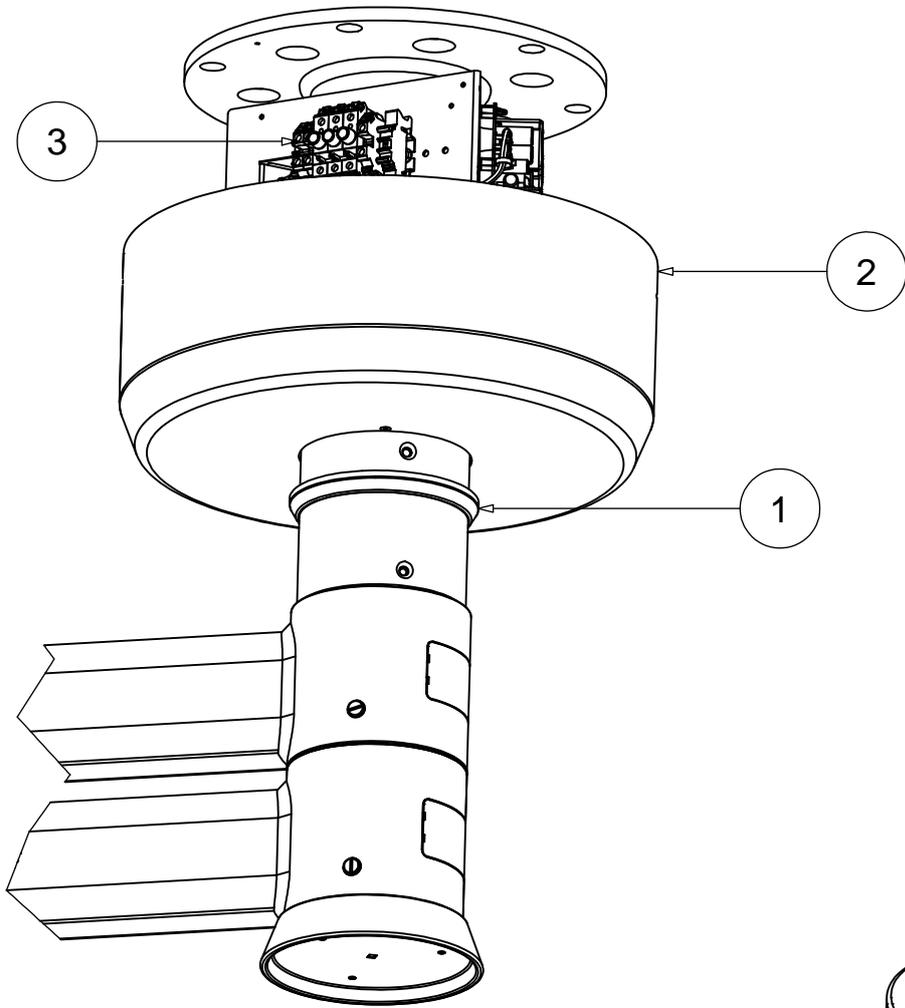
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Rev.	Data	175



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Rev.	Data	176



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Rev.	Data	177