



Level



Pressure



Flow



Temperature



Liquid
Analysis



Registration



Systems
Components



Services



Solutions

Operating Instructions

Flexdip CYH112

Holder for water and wastewater assemblies

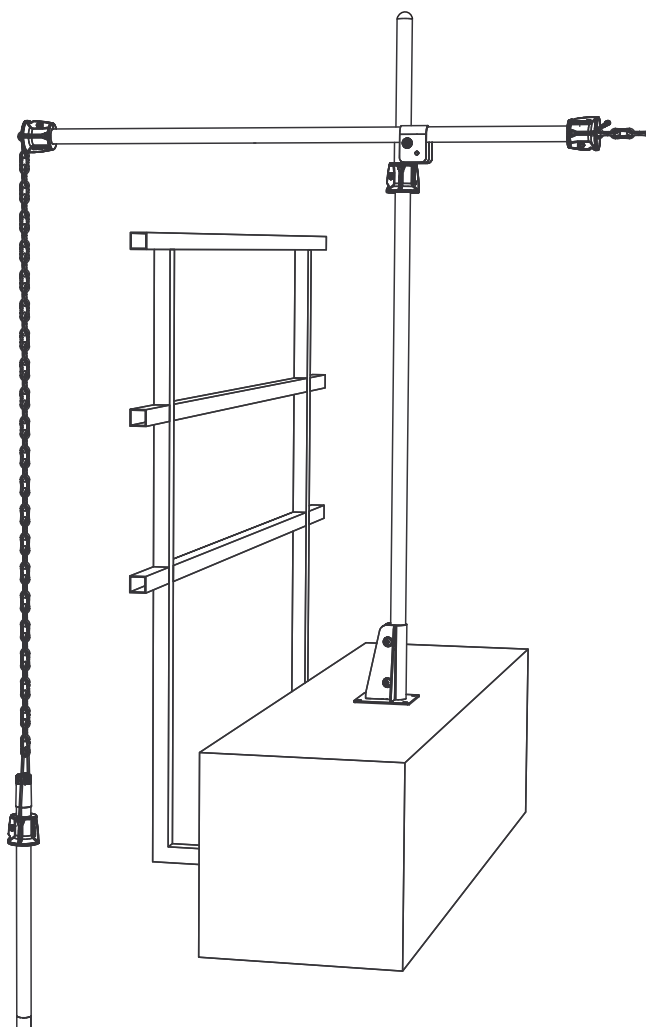


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1 Safety instructions

1.1 Designated use

CYH112 is designed as a modular retainer system for sensors and assemblies in open basins, channels and tanks.

Any other use than the one described here compromises the safety of persons and the entire measuring system and is not permitted.

The manufacturer is not liable for damage caused by improper or non-designated use.

1.2 Installation, commissioning and operation

Please note the following items:

- Installation, commissioning, operation and maintenance of the measuring system must only be carried out by trained technical personnel.
Trained personnel must be authorized for the specified activities by the system operator.
- Electrical connection must only be carried out by a certified electrician.
- Technical personnel must have read and understood these Operating Instructions and must adhere to them.
- Before commissioning the entire measuring point, check all the connections. Ensure that electrical cables and hose connections are not damaged.
- Do not operate damaged products and secure them against unintentional commissioning.
Mark the damaged product as being defective.
- Measuring point faults may only be rectified by authorized and specially trained personnel.
- If faults can not be rectified, the products must be taken out of service and secured against unintentional commissioning.
- Repairs not described in these Operating Instructions may only be carried out at the manufacturer's or by the service organization.

1.3 Operational safety

The assembly has been designed and tested in accordance with the latest industry standards and left the factory in perfect functioning order.

Relevant regulations and standards have been met.

As the user, you are responsible for complying with the following safety conditions:

- Installation instructions
- Local prevailing standards and regulations.

1.4 Notes on safety icons and symbols



Warning!

This symbol alerts you to hazards that can cause serious damage to the instrument or to persons if ignored.



Caution!

This symbol alerts you to possible faults which could arise from incorrect operation. They could cause damage to the instrument if ignored.



Note!

This symbol indicates important items of information.

2 Identification

2.1 Nameplate

You can identify the type of holder from the order code on the nameplate. Please compare this information to that of your order.

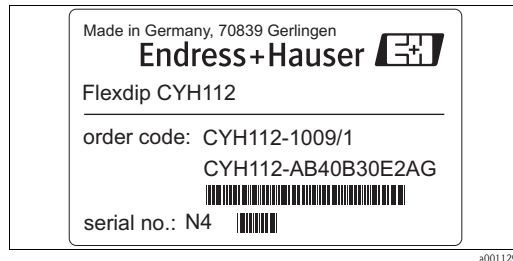


Fig. 1: Example of a nameplate

Line 1 of the order code indicates the product ID, which is an abbreviated version of the order code.
Line 2 of the order code indicates the order code.
Please refer to the product structure for the possible versions of the holder unit and the resulting order code.

2.1.1 Product structure

Approvals									
	A	w/o							
	Mounting of main pipe								
	A	w/o							
	B	Mounting to floor							
	C	Mounting to wall (1x)							
	D	Mounting to wall (2x)							
	E	Mounting to rail (1x)							
	F	Mounting to rail (2x)							
	Main pipe (vertical 40 mm)								
	11	w/o							
	20	500 mm (19.7 ")							
	40	1000 mm (39,4 ")							
	60	1800 mm (70,9 ")							
	Mounting of traverse pipe								
	A	w/o							
	B	Cross clamp							
	C	Mounting to wall							
	D	Flat surface mount							
	E	Mounting to rail (1x)							
	Traverse pipe (horizontal 40 mm)								
	11	w/o							
	30	500 mm (19.7 ")							
	50	1000 mm (39.4 ")							
	70	1500 mm (59 ")							
	Connection immersion pipe								
	A	w/o							
	B	Chain, plastic							
	C	Chain, stainless steel							
	D	Cross clamp							
	E	Pendulum holder (rail)							
	F	Pendulum holder (flat surface mount)							
	Adapter								
	1	w/o							
CYH112-									basic order code

The following options are available:

Option code	Description
KA	Multifunctional clamp ring
KB	Quick clamp
KC	Immersion pipe tray
KE	Hook-and-loop cable ties (4 pcs.)
KF	Triangle carabiner (chain clip)
KG	Allen key
KH	Pipe protection cap

Example:

Main pipe: Mounting to floor, 1800 mm (70.9")

Traverse pipe: Mounting with cross clamp, 1000 mm (39.4")

Connection immersion pipe: Cross clamp

Accessories: 1 multifunctional clamp ring, 1 quick clamp

Order code: CYH112-AB60B50D1 KA KB

2.2 Scope of delivery

The scope of delivery comprises:

- Ordered assembly holder system
- Operating Instructions, English.

If you have any questions, please contact your supplier or your local sales center.

2.3 Certificates and approvals

The CYH112 holder system is suitable for use in hazardous zones 1 and 2.

The ATEX directive 94/9/EC does not apply because the holder system has no potential ignition source. Accordingly, it is not designated according to ATEX. Potential equalization must be implemented as described in the chapter "Installation conditions".

3 Installation

3.1 Incoming acceptance, transport, storage

- Make sure the packaging is undamaged!
Inform the supplier about any damage to the packaging.
Keep the damaged packaging until the matter has been settled.
- Make sure the contents are undamaged!
Inform the supplier about damage to the contents. Keep the damaged products until the matter has been settled.
- Check that the order is complete and agrees with your shipping documents.
- The packaging material used to store or to transport the product must provide shock protection and humidity protection. The original packaging offers the best protection. Also, keep to the approved ambient conditions (see "Technical data").
- If you have any questions, please contact your supplier or your local sales center.

3.2 Installation conditions

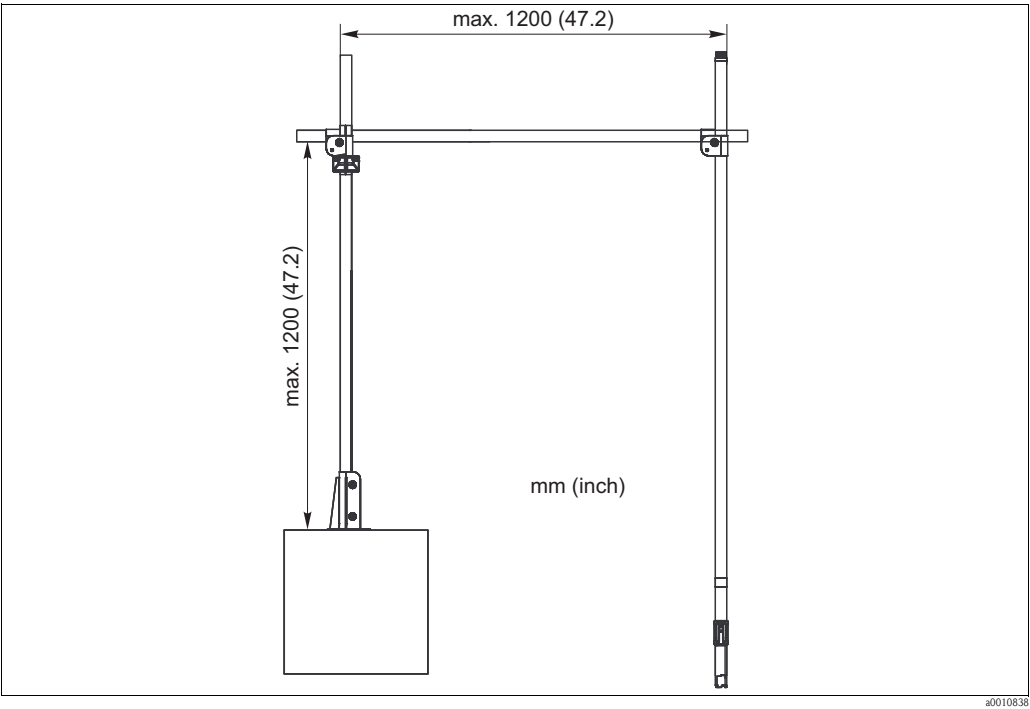


Fig. 2: Maximum extension

The given values are valid for floor, wall and rail mounting.
The maximum extension depends on the load (weight of immersion pipe, assembly and cable). See the following diagram:

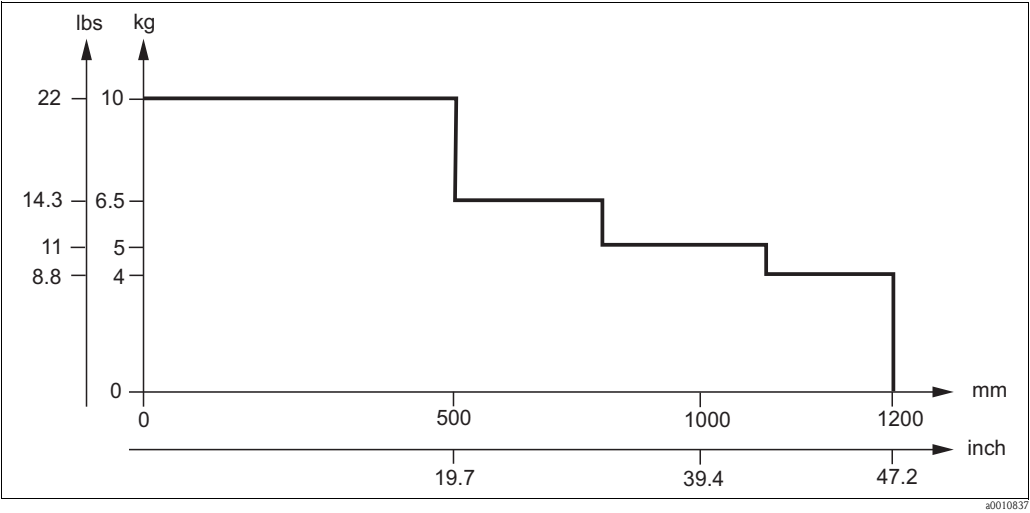


Fig. 3: Extension over load

The maximum load for rail mounting and pendulum adapter is 5 kg (11 lbs).
The grounding has to be done on-site. All conductive parts have to be connected to each other.

3.3 Installation instructions

3.3.1 Installing the base

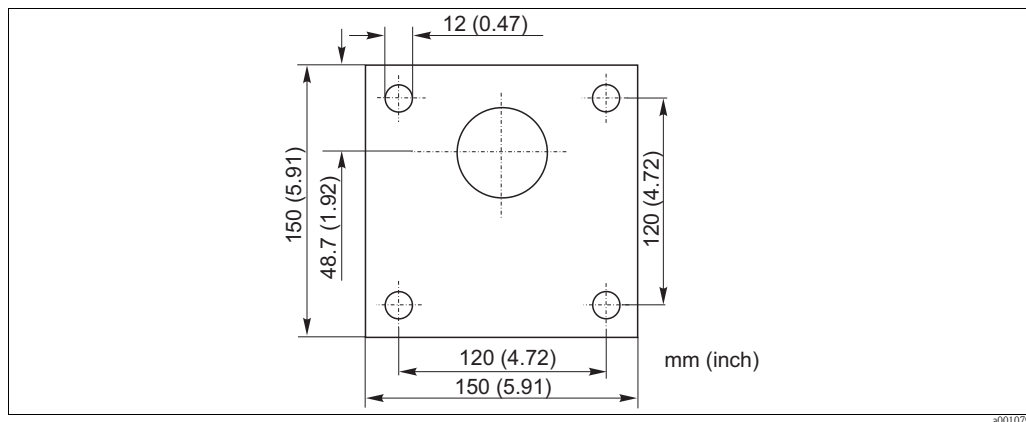


Fig. 4: Drilling dimensions for base



Note!

Use M10 chemical anchors to mount the base on a concrete floor.

Mount the base as follows:

1. Set the base in position with the open part facing the basin rim. The minimum distance between the bores and the basin rim is 40 mm (1.57").
2. Mark the securing holes for the base on the floor.
3. Drill the securing holes with a 12 mm drill.
4. Install the four chemical anchors.
5. Firmly screw down the base.
6. Ground the base with a ground cable ($\geq 4 \text{ mm}^2$ ($\geq 12 \text{ AWG}$)).

3.3.2 Installing the main pipe

Mount the main pipe as follows:

1. Adjust the clamps in the base.
2. Insert the main pipe into the base.
3. Lift the main pipe approx. 5 mm (0.2") and bolt it down. In this way, no backwater can form in the main pipe.
4. Attach the protection cap to the upper end of the main pipe.

3.3.3 Installing the transverse pipe with fixed-installation assemblies

Mount the transverse pipe as follows:

1. With the funnel-shaped side pointing downwards, attach the multifunctional clamp ring to the main pipe. The distance between the upper edge of the multifunctional clamp ring and the base plate should not be exceeded 1 100 mm (43.3") (see installation conditions).
The multifunctional clamp ring acts as an anti-slip lock here.
2. Firmly screw down the multifunctional ring.
3. If you have not done so already, attach the protection cap to the upper end of the main pipe.

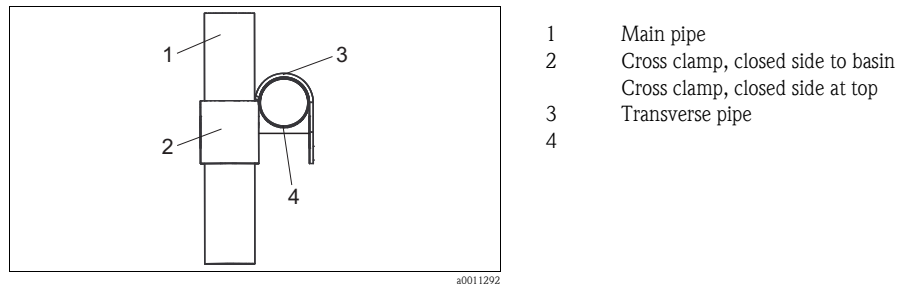


Fig. 5: Mounting the cross clamp

4. Adjust the clamps on the cross clamp.
5. Slide the cross clamp over the transverse pipe. Make sure that the closed side of the cross clamp is at the top (→  5).
6. Attach the cross clamp, along with the transverse pipe, to the main pipe. Make sure that the closed side of the cross clamp faces the basin (→  5).
7. Now mount the cross clamp for the assembly on the transverse pipe. Make sure that the closed sides are pointing upwards and to the basin.
8. Align the holder.
9. Tighten the clamping screws.

3.3.4 Installing the transverse pipe with assembly chain retainer

Prepare the main pipe as follows:

1. With the funnel-shaped side pointing downwards, attach the multifunctional clamp ring to the main pipe. The distance between the upper edge of the multifunctional clamp ring and the base plate should not be exceeded 1100 mm (43.3") (see installation conditions).
2. Firmly screw down the multifunctional ring.
3. If you have not done so already, attach the protection cap to the upper end of the main pipe.

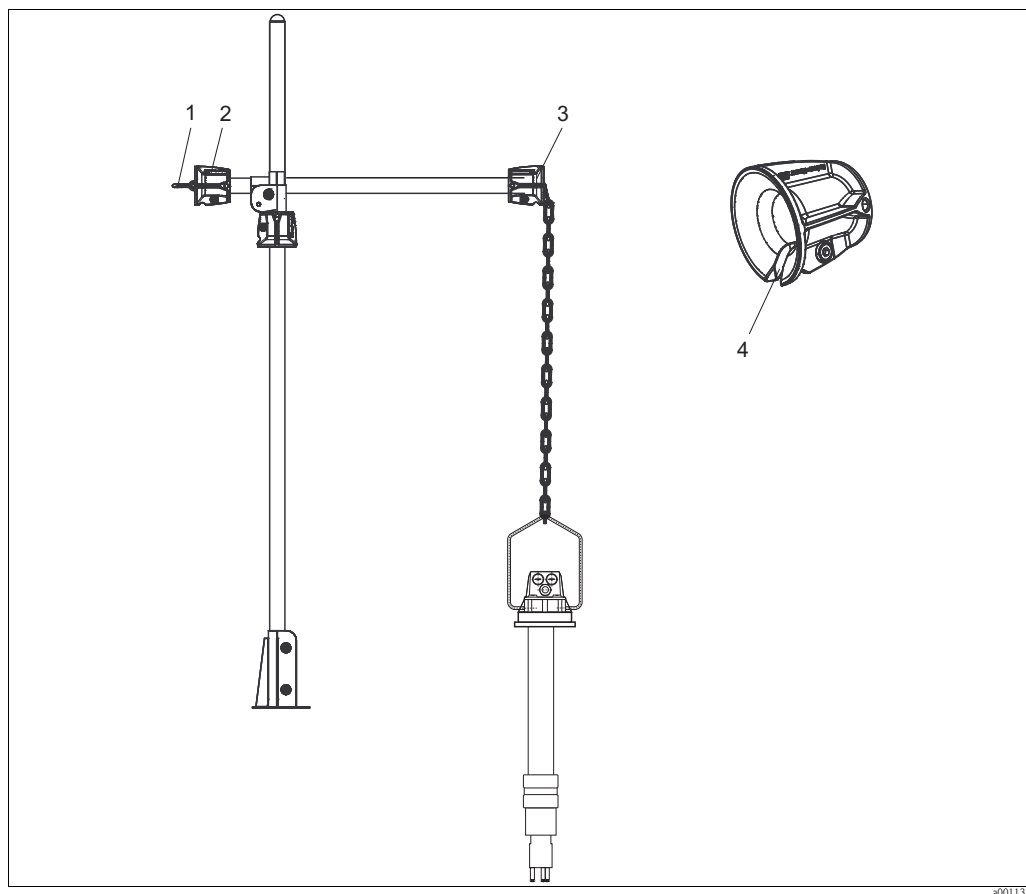


Fig. 6: Mounting the multifunctional clamp rings on the transverse pipe

- 1 Triangular carabiner as anti-slip lock for the chain
- 2 Multifunctional clamp ring (stand side), slot at bottom
- 3 Multifunctional clamp ring (basin side), slot at top
- 4 Slot in multifunctional clamp ring

Mount the transverse pipe as follows:

1. Adjust the clamps on the cross clamp.
2. Slide the cross clamp over the transverse pipe. Make sure that the closed sides of the cross clamp are pointing upwards and to the basin.
3. Mount a multifunctional clamp ring at either end of the transverse pipe (funnel-shaped sides facing outwards).
4. Adjust the multifunctional clamp rings (the slot should be at the bottom on the stand side and at the top on the basin side (→  6)).
5. Guide the chain through the transverse pipe.
6. Slide the chain into the slot of the multifunctional clamp ring (on the stand side) and secure the chain with the triangular carabiner (item 1 →  6).

7. Attach the cross clamp, along with the transverse pipe, to the main pipe.
8. Align the holder.
9. Tighten the clamping screws.

3.3.5 Installing the rail mounting, pendulum holder and immersion tube tray

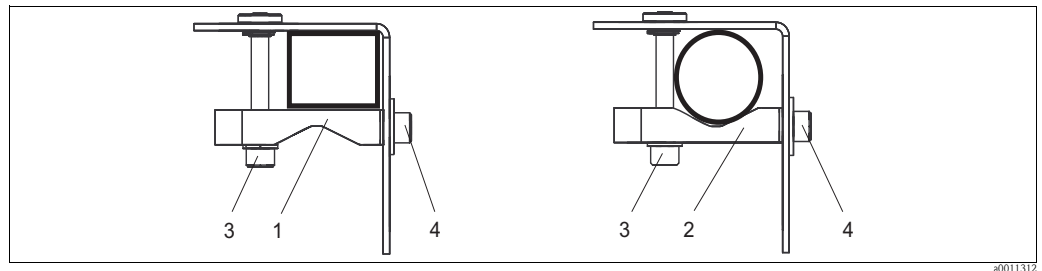


Fig. 7: Installing the rail mounting, pendulum holder and immersion tube tray

- 1 Mounting on rectangular pipes
- 2 Mounting on circular pipes
- 3 Securing screw
- 4 Securing screw in clamping jaw



Note!

In the case of rectangular pipes, mount the clamping jaw with the V-notch facing outwards. In the case of circular pipes, mount the clamping jaw with the V-notch facing inwards.

Mount the holder as follows:

1. Screw in securing screws 3 and 4 such that they sit loosely.
2. Press the clamping jaw against the pipe and ensure that the clamping jaw is aligned parallel to the holder.
3. Tighten securing screw 4.
4. Position securing screw 3 close to the pipe.
5. Tighten securing screw 3.

3.3.6 Installation for wall and capstone mounting

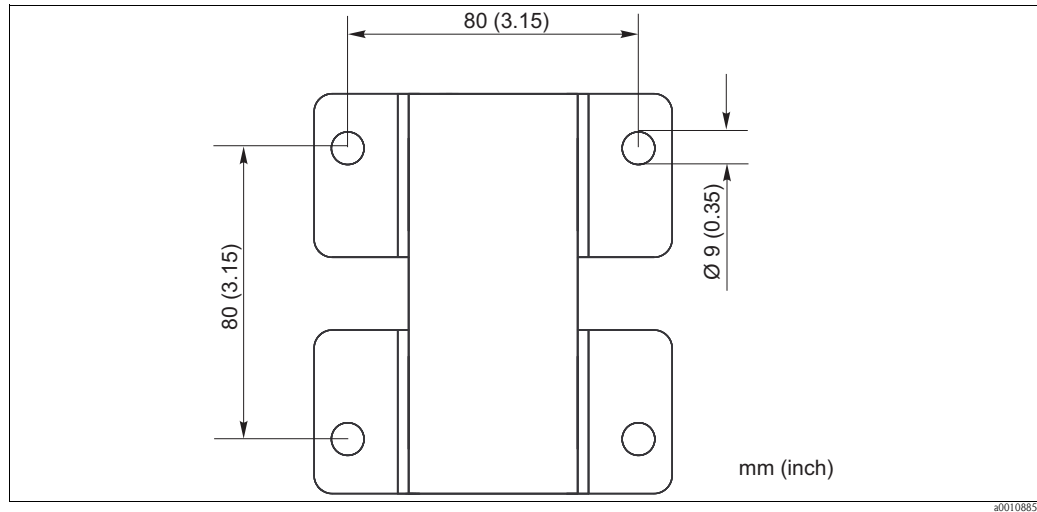


Fig. 8: Dimensions of bores for wall or capstone mounting



Note!

Use M8 chemical anchors for mounting on a concrete floor or concrete wall.

Mount the holders for wall or capstone mounting as follows:

1. Mark the securing holes on the concrete.
2. Drill the securing holes with a 10 mm drill.
3. Install the chemical anchors.
4. Firmly screw down the holder.
5. Ground the holder with a ground cable ($\geq 4 \text{ mm}^2$ ($\geq 12 \text{ AWG}$)).

3.3.7 Installing the pendulum holder on the capstone

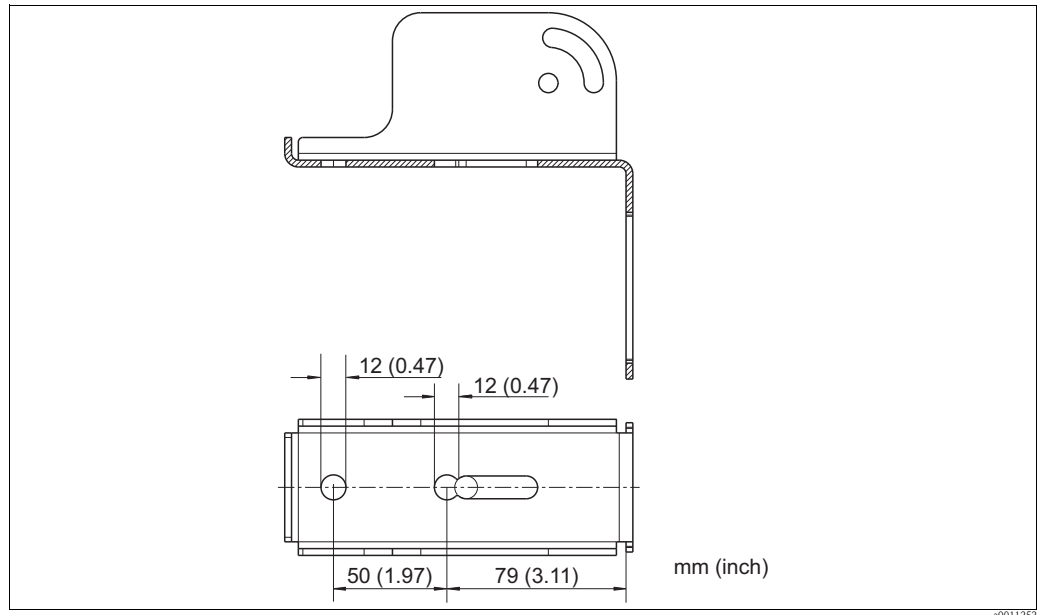


Fig. 9: Dimensions of bores for pendulum holder on capstone



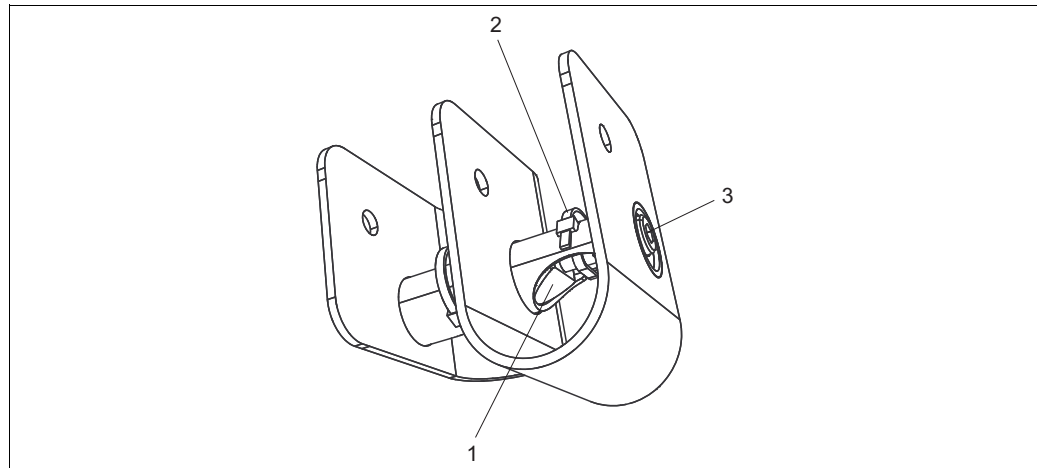
Note!

Use M10 chemical anchors to mount the base on a concrete floor.

Mount the base as follows:

1. Mark the securing holes for the pendulum holder on the floor.
2. Drill the securing holes with a 12 mm drill.
3. Install the two chemical anchors.
4. Firmly screw down the pendulum holder.
5. Ground the pendulum holder with a ground cable ($\geq 4 \text{ mm}^2$ ($\geq 12 \text{ AWG}$)).

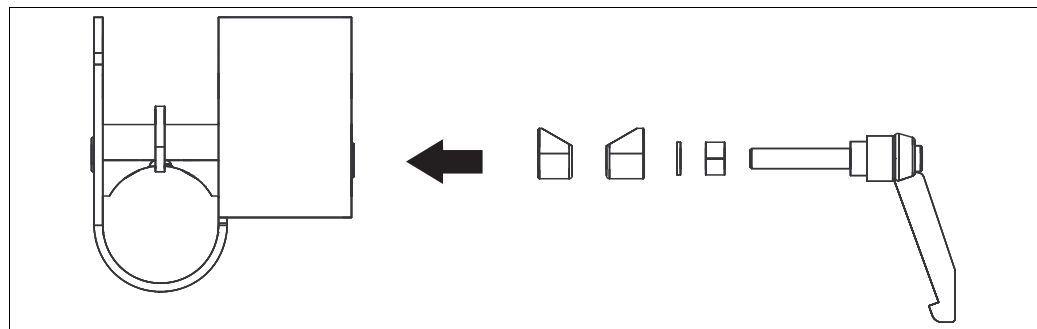
3.3.8 Installing the quick-action clamp



a0011342

Fig. 10: Clamping unit

- 1 Clamps
- 2 Cable tie
- 3 Locking screw



a0011403

Fig. 11: Mounting the quick-action clamp

Mount the quick-action clamp as follows:

1. Cut off the cable tie (→  10, item 2).
2. Remove the clamping unit.
3. Insert the quick-action clamp.
4. Adjust the clamps.
5. Secure the quick-action clamp with a cable tie.
6. Mount the second quick-action clamp in the same way.

3.4 Post-installation check

- After mounting, check whether all the screws are tightened correctly.
- If mounting using a pendulum holder, ensure the assembly has sufficient clearance.

4 Operation



Warning!

There is a risk of infection when working with wastewater!

Therefore, wear protective gloves, goggles and protective clothing.

4.1 Setting the assembly to the service position (fixed installation)

Set the assembly to the service position as follows:

1. Release the screws on the cross clamp.
2. Move the transverse pipe with the assembly to the stand side.
3. Turn the transverse pipe 90° (assembly tilts upwards).
4. Move the transverse pipe over the basin rim and the railing.
5. Move the transverse pipe back until the desired service position is reached.

4.2 Setting the assembly to the service position (chain retainer)

Set the assembly to the service position as follows:

1. Pull up the assembly as far as possible by the chain.
2. Suspend the chain from the multifunctional clamp ring and secure the chain with the triangular carabiner.
3. Release the screws on the cross clamp.
4. Move the transverse pipe with the assembly to the stand side to the desired service position (if necessary, raise the assembly over the railing).

4.3 Operating the pendulum holder

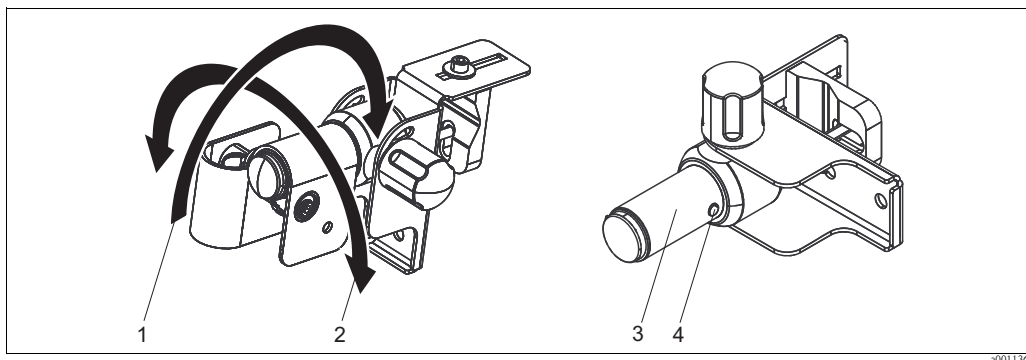


Fig. 12: Specifying the swing axis

- 1 Swing axis with rotating sleeve blocked
- 2 Swing axis with rotating sleeve not blocked
- 3 Rotating sleeve
- 4 Blocking screw for rotating sleeve

You can determine the swinging direction (swing axis) at the pendulum holder by blocking the rotating sleeve (→ Fig. 12, item 3) (item 1) or not blocking the rotating sleeve (item 2).

To specify swinging direction "1", proceed as follows:

1. Unscrew the cross clamp from the pendulum holder.
2. Unscrew the blocking screw (item 4) slightly until the rotating sleeve can no longer rotate.
3. Reattach the cross clamp to the pendulum holder and screw it tight.
4. Release the locking lever.
5. Press the locking button to release the square head bolt on the opposite side.

To specify swinging direction "2", proceed as follows:

1. Unscrew the cross clamp from the pendulum holder.
2. Screw the blocking screw into the plastic body until the rotating sleeve can rotate slightly.
3. Reattach the cross clamp to the pendulum holder and screw it tight.
4. Tighten the locking lever.

4.4 Anti-slip lock for rail mounting

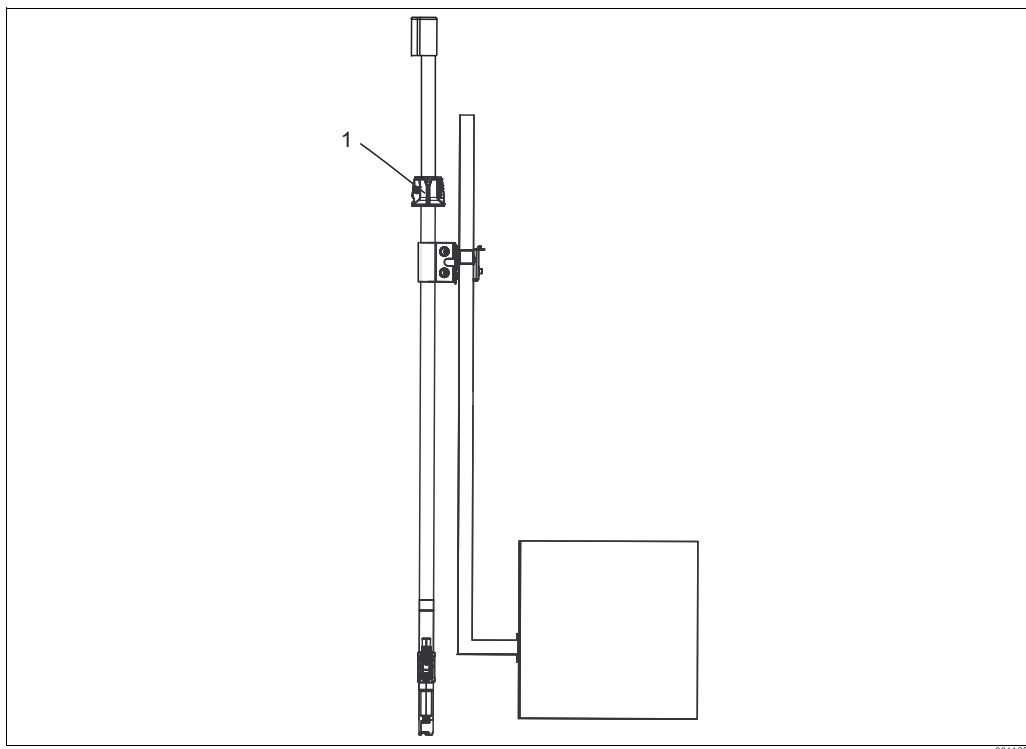


Fig. 13: Anti-slip lock for rail mounting

1 Multifunctional clamp ring

The multifunctional clamp ring acts as an anti-slip lock for rail mounting. The multifunctional clamp ring is available as an accessory.

Mount the multifunctional clamp ring at the desired height.

4.5 Immersion tube tray

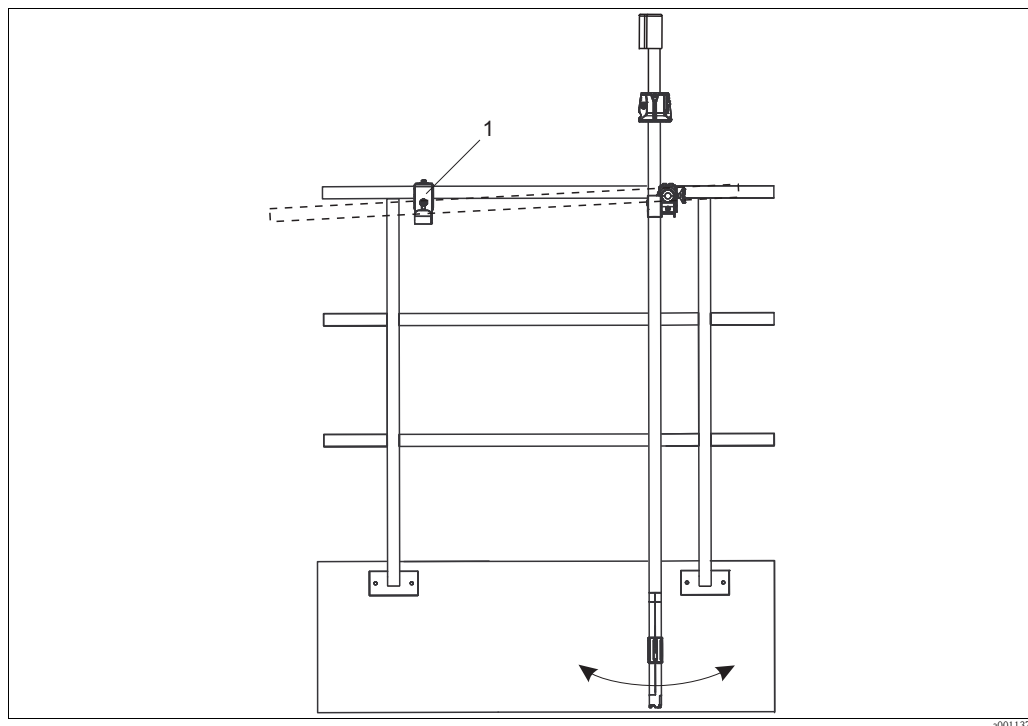


Fig. 14: Immersion tube tray for assembly service position

1 Immersion tube tray

The immersion tube tray makes it easier to perform maintenance tasks with rail mounting involving a pendulum holder and cross clamp.

5 Maintenance



Warning!

There is a risk of infection when working with wastewater!
Therefore, wear protective gloves, goggles and protective clothing.

Lubricate the clamping systems and threads at regular intervals.

Proceed as follows to do so:

1. Clean the clamps and threads with soapy water.
2. Dry the clamps and threads.
3. Provide the cleaned parts with a thin film of lubricant (e.g. Syntheso Glep1).

6 Accessories

Multifunctional clamp ring

- Chain retainer in conjunction with the triangle carabiner
- Working height adjustment of the main pipe (version main pipe with transverse pipe)
- The multifunctional clamp ring acts as an anti-slip lock on transverse pipes, main pipes and assemblies.
- Material: POM – GF
- Order No. 71092049

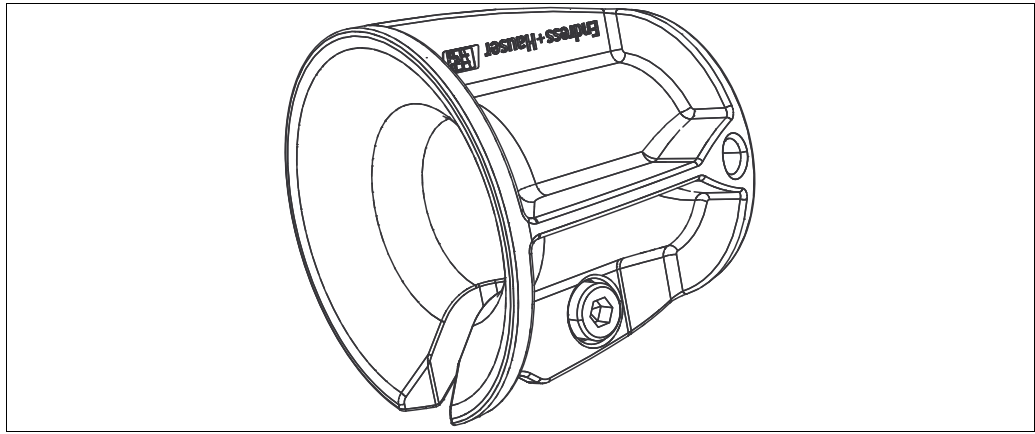


Fig. 15: Multifunctional clamp ring

Immersion pipe support

- Immersion pipe support for comfortable maintenance
- Material: stainless steel
- Order No. 71092054

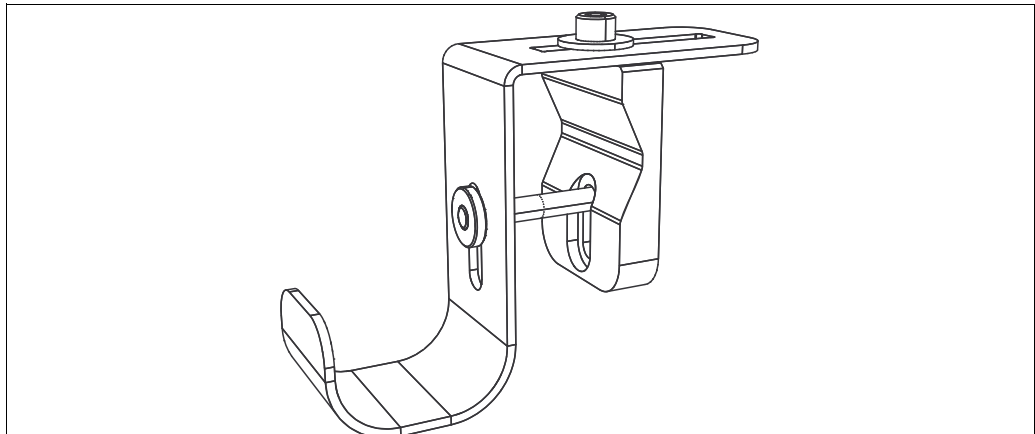


Fig. 16: Immersion pipe support

Quick clamp

- Replaces bolted connection
- Material: stainless steel
- Order No. 71092050

Triangle carabiner

- Used to fix the chain (together with multifunctional clamp ring)
- Material: stainless steel
- Order No. 71092052

Hook-and-loop cable ties

- To fix the cables
- Material: PE / PA (polyethylene / polyamide)
- Order No. 71092051

Allen key

- Size: 6 mm
- Order No. 71092057

Pipe protection cap

- Material: PE (polyethylene)
- Order No. 71092053

CYY101 weather protection cover for field devices, absolutely essential if operating the unit outdoors

- Material: stainless steel 1.4031 (AISI 304)
- Order No. CYY101-A

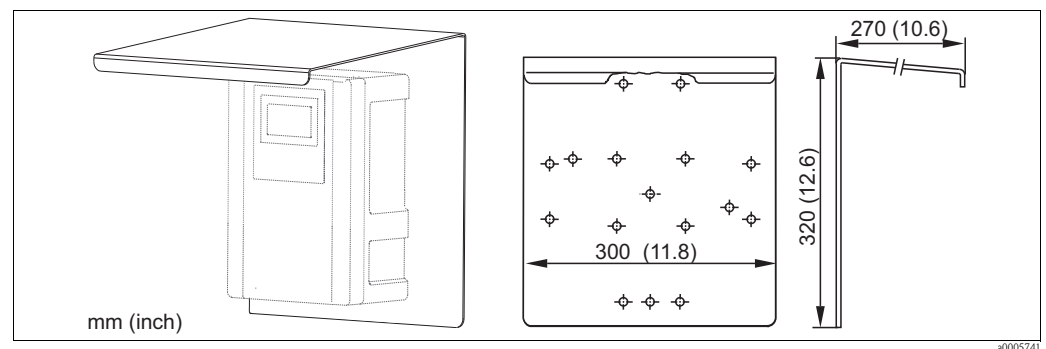


Fig. 17: Weather protection cover for field devices

- Round post fixture to fix the stainless steel weather protection cover CYY101 to vertical or horizontal posts with diameters of up to 70 mm (2.76");

Order no. 50062121

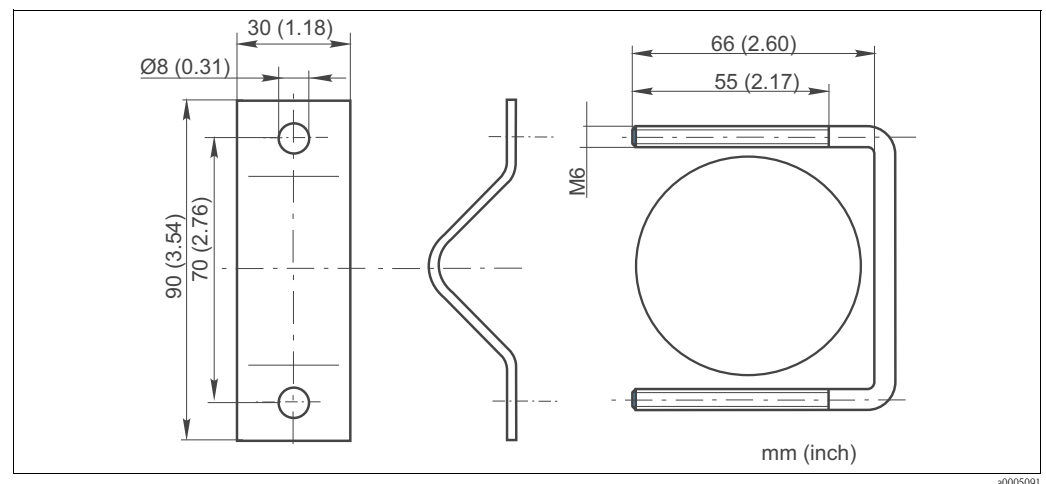


Fig. 18: Round post fixture for CYY101

Overvoltage protection

- Overvoltage protection HAW56X
- Plus additional installation material

7 Technical Data

7.1 Environment

Air temperature	-20 to +60 °C (-4 to +140 °F)
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7.2 Mechanical construction

Dimensions	Main pipe: Transverse pipe: Chain:	Ø 40 mm (1.57") length: 500, 1000 and 1800 mm (19.7", 39.4" and 70.9") Ø 40 mm (1.57") length: 500, 1000 and 1500 mm (19.7", 39.4" and 59") 5 m (16.4")
Weight	Main pipe: Transverse pipe: Chain:	0.7 / 1.5 / 2.6 kg (1.5 / 3.3 / 5.7 lbs) 0.7 / 1.5 / 2.2 kg (1.5 / 3.3 / 4.9 lbs) 0.7 kg (1.5 lbs) 0.7 kg (1.5 lbs) 1.75 kg (3.86 lbs) 1.1 kg (2.4 lbs) 0.7 kg (1.5 lbs) 2.15 kg (4.7 lbs) 0.15 kg (0.33 lbs)
Materials	Main pipe: Transverse pipe: Wall retainer: Cross clamp: Base clamping element: Pendulum holder: Chain (plastic): Chain (stainless steel): Multifunctional clamp ring: Cap for end of pipe: Quick-action clamp lever:	Stainless steel V4A Stainless steel V4A Stainless steel V4A Stainless steel V4A Stainless steel V4A Stainless steel V4A / POM / thermoplastic PA (polyamide) UV-resistant, tensile-tested Stainless steel V4A POM - GF PE PA

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