

4 Installation and Mounting

4.1 Conditons of Installation and Mounting

The post must be provided with a ground terminal and then screwed onto concrete ground with 4 x-screws in pegs. We recommend the composite anchor order code 9.140.77.02. The company ISCO STIP Siepmann und Teutscher GmbH does not take liability for improper installation.

The installation of post and control unit, as well as the initial startup of the Buoy must exclusively be carried out by the ISCO STIP Service Department or by persons authorized by the company ISCO STIP Siepmann und Teutscher GmbH. For these persons the installation and taking into operation is specified in the following.

Further conditions:

- Maintenance position has to be adjustable
- Control unit has to be reachable
- Accessibility
- Power supply 230 V
- Temperature of the surrounding has to be between -20 and +40°C

4.2 Advance of Installation and Mounting

The installation of Buoy, control unit and post should be carried out in the following order:

1. Mounting and setup of the post (**4.2.2, 4.2.3**)
2. Mount weather protection housing and control unit to the post (**4.2.4**)
3. Prepare the electrodes according to the specifications of the manufacturer (**4.2.5 operating instructions for electrodes**)
4. Prepare the Buoy **4.2.6**)
5. Join the connection pipe to the control unit (**4.2.7**)
6. Join the power supply to the control unit (**4.2.8**)
7. J Check the Buoy Pressure System (**4.2.9**)
8. Join the connection pipe to the Buoy (**4.2.10**)

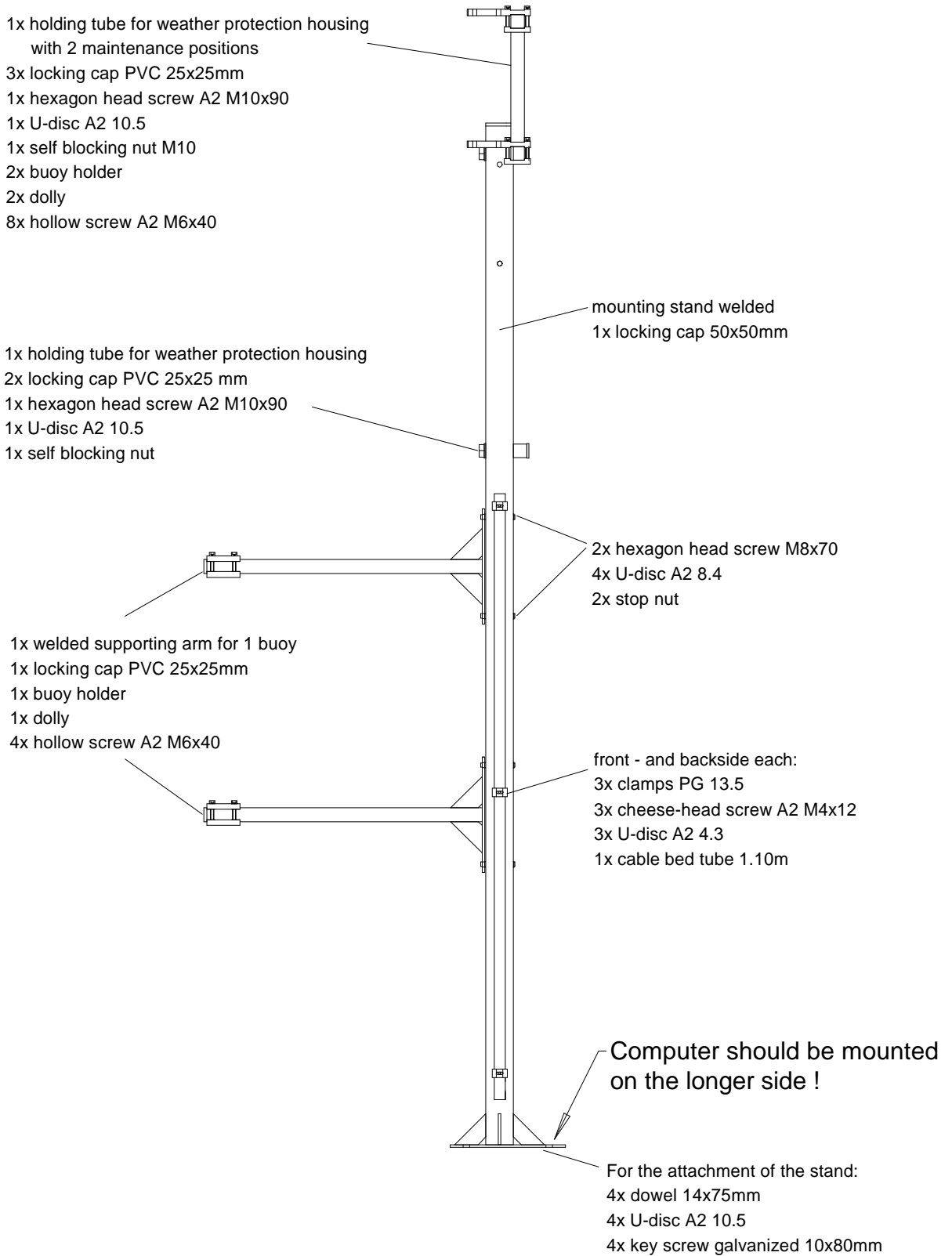
- 1.+2. For the installation of post, weather protection housing and control unit you require:
 - Drill
 - Fork wrench SW19, 2xSW17, 2xSW13
 - Accessories for post
3. To prepare the electrodes you require:
 - Pipette to fill in the electrolyte (in the probe box)
 - Accessories for electrodes
 - Electrodes

Read the supplements in the addition of the manual and the information in electrode box.
4. To prepare the Buoy you require:
 - Special wrench SW50 (buoy accessory)
 - Prepared electrodes
 - Spacer tubes, o-rings,
 - Measuring vessel to test the settling behavior of the waste water on site (see preparing activities)
6. To join the power supply you require:
 - Cross-slot screw wrench size 2,5 and 4
- 5.+7. To join the conduit to the control unit and to the Buoy you require:
 - Special wrench SW50 (buoy accessory)
 - Pressure test cap.
 - hollow key seize 5

4.2.1 Scope of Delivery

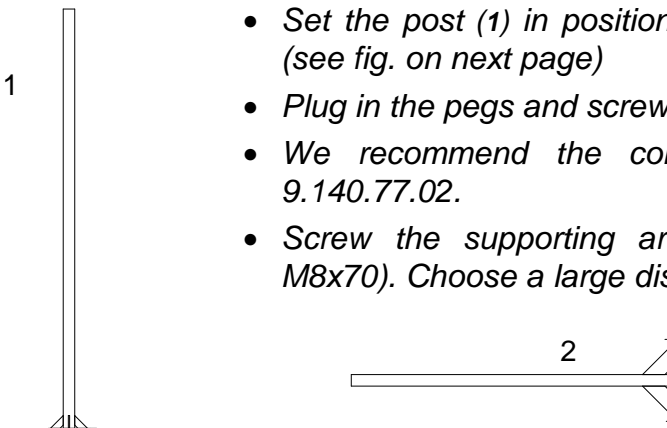
Delivered components must be checked against the delivery note for completeness in order to assemble the ISCO STIP Process Buoy at the customers in accordance with the specifications.

4.2.2 Construction of the post

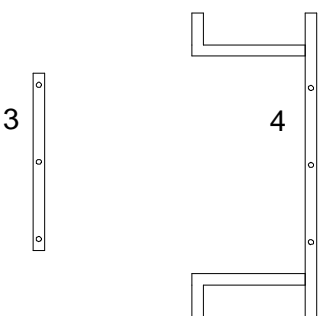


4.2.3 Mounting of the Post

Fig. installed post, see next page

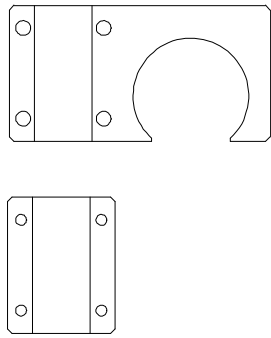


- Set the post (1) in position, mark the bore hols and drill (see fig. on next page)
- Plug in the pegs and screw on the post tightly
- We recommend the composite anchor order code 9.140.77.02.
- Screw the supporting arms (2) to the post (screws M8x70). Choose a large distance.



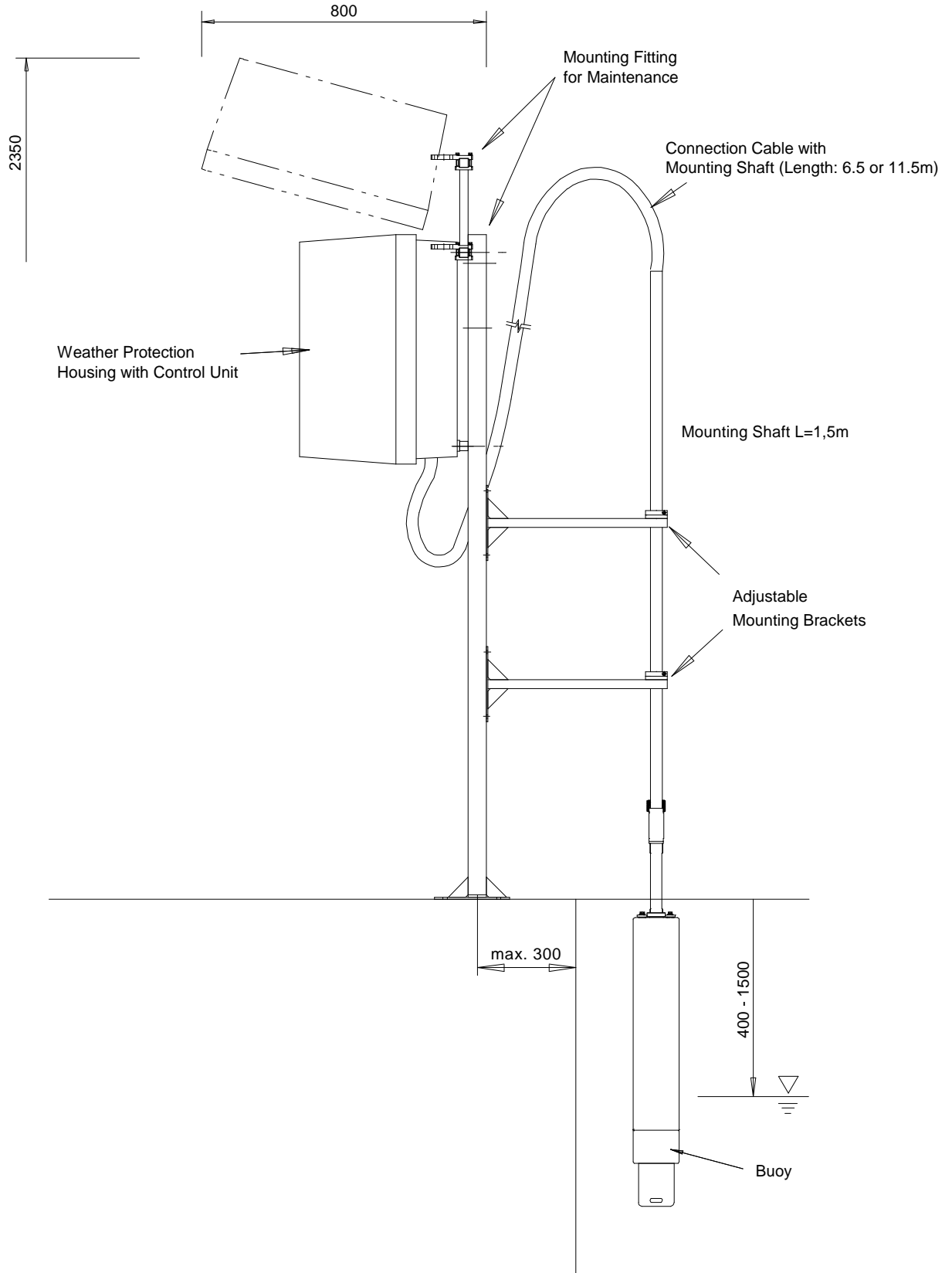
- Mount the supporting pipe for the weather protection housing (3) concentric to the second bore hole from top on the post (1) (screws M10x90)
- Mount the supporting pipe with 2 maintenance positions (2) to the top bore hole on the post (1) to where the maintenance positions point to the top (screws M10x90).

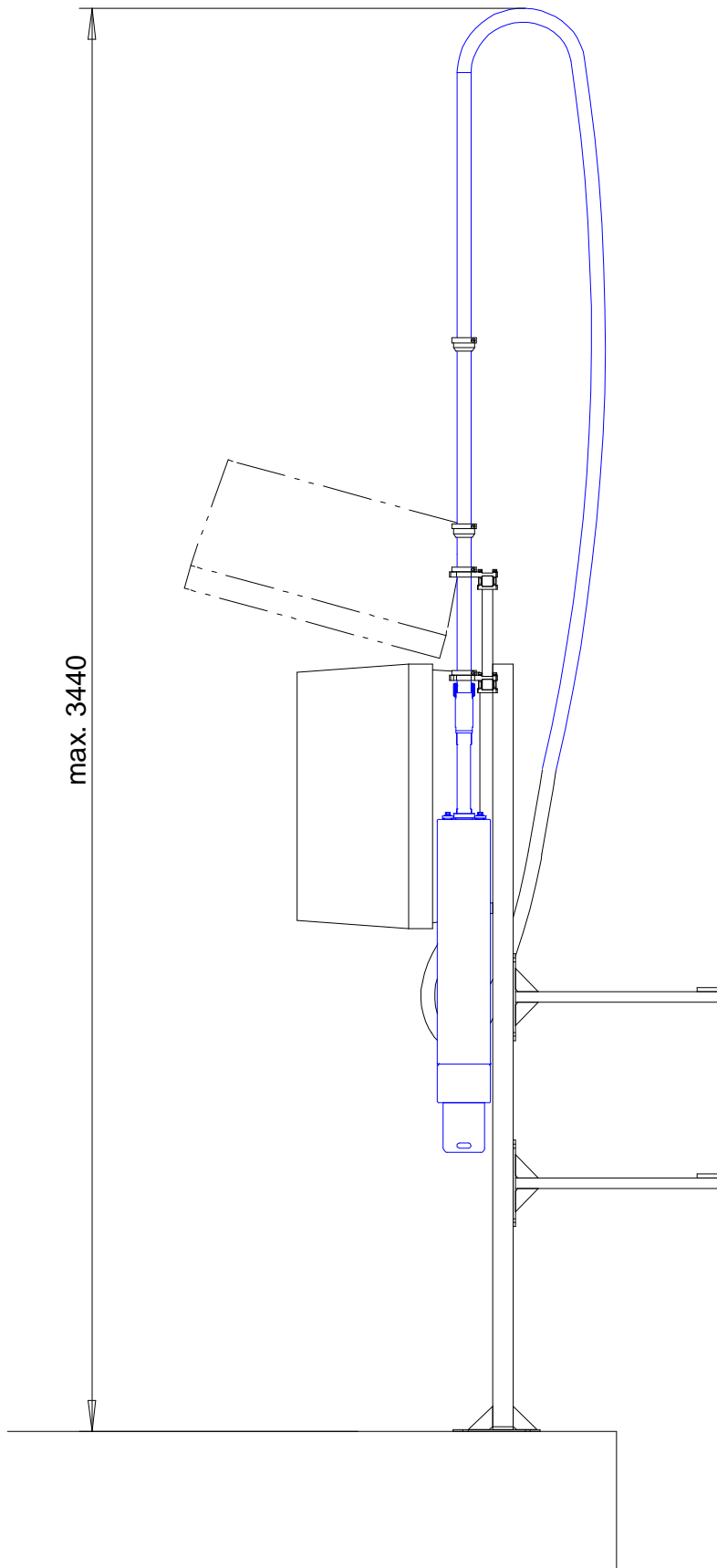
- Now screw the weather protection housing with the control unit (see next page) to the outer bore holes on the supporting pipes (3, 4) (screws M10x40).

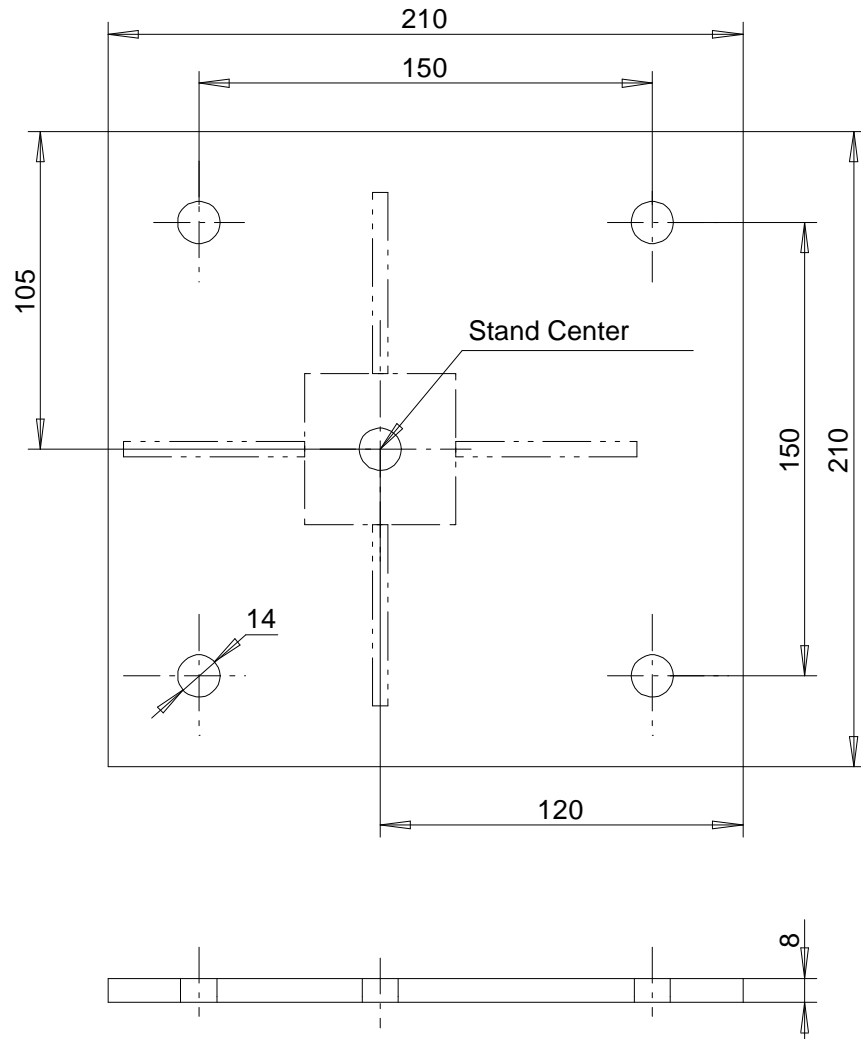


- Screw on each one buoy holder (5) and arm bracket (5.1) to the supporting arm (2).
- Screw on each one buoy holder (5) and arm bracket (5.1) in the desired maintenance position to the supporting pipe for the weather protection housing with 2 supporting arms (4) (screws M6x25)

4.2.4 Installation of the Post





dimensions of the base plate**4.2.5 Preparing Activities**

- Prepare the electrodes according to the specifications of the manufacturer. Therefore have the pipette handy to fill in the electrolyte.
- Test the settling behavior of the waste water on site.
Therefore take a sample and fill it into the measuring vessel. Follow the settling behavior of the sample and note the time, that proceeds, until the sedimental material has dropped to half of the volume.

4.2.6 Prepare the Buoy

Open the Buoy:

- *Open Buoy according to chapter 7.2*

Insert the Electrodes:

- *Prepare the electrodes according to the info sheet of the electrode box*
- *Remove electrode dummies out of the Buoy body*
- *Insert electrodes according the instructions out of the electrode accessories*
- *Slide the black spacer tube (NH4 electrode 39 mm, NO3 electrode 35 mm) and the o-ring onto the electrode A*
- *Set electrode A into the Buoy body and press carefully to snap it on*
- *screw safety stirrup over electrode A*
- *Electrode B (pH or conductivity), put on the cable head and screw it on tightly*
- *Slide the red spacer tube (pH electrode 29 mm, cond. electrode 9 mm) and the o-ring onto the electrode B*
- *Set electrode B into the Buoy body and press carefully to snap it on*
- *screw safety stirrup over electrode B*

Close the Buoy:

- *Check the o-rings on the main body on defects and wrong positioning*



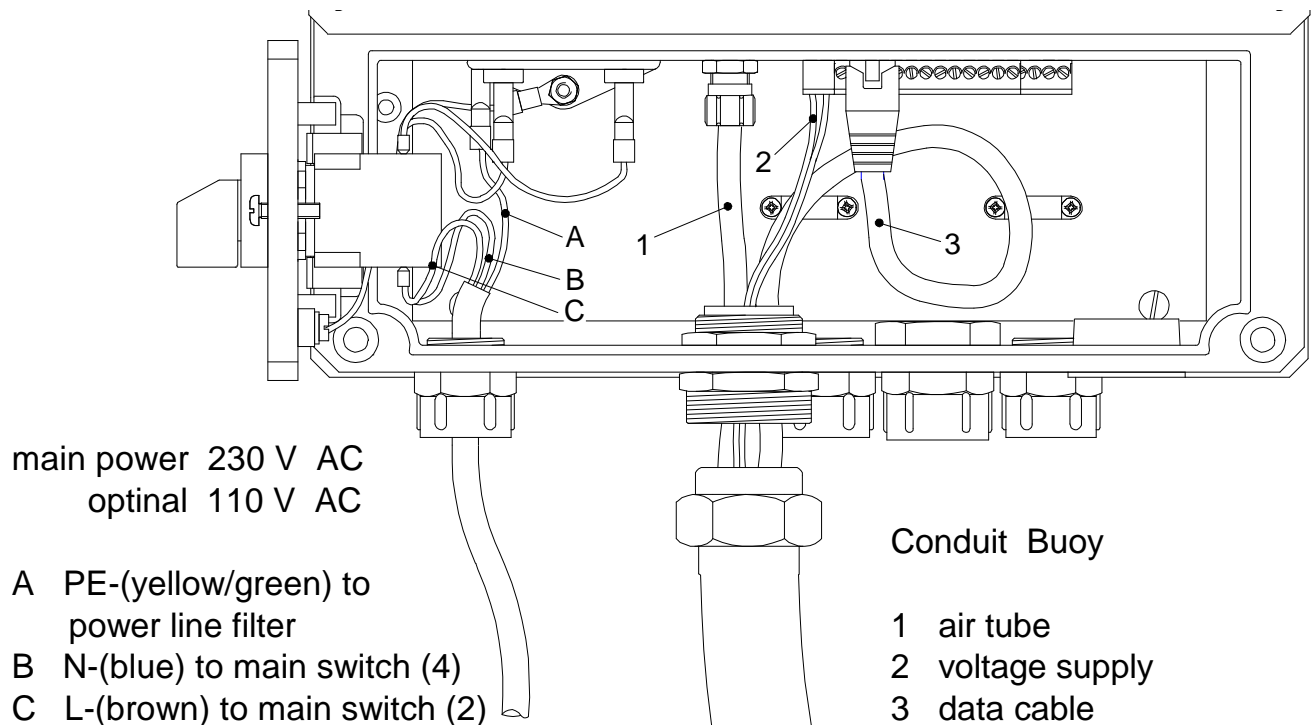
NOTE

Stow away the electrode cables carefully, to where the housing can be slid on easily

- *Close the Buoy according to chapter 7.2*

4.2.7 Connecting the Conduit to the Control Unit:

- Push the cables and the compressed air tube through the opening of the junction box of the control unit
- Connect the data cable, the power supply and the compressed air tube according to the instructions in chapter „technical data“
- Screw Sleeve nut of the conduit onto male thread



4.2.8 Connecting the Control Unit:

- Connect the 230-V cable to the main switch and the protective conductor
- Close the junction box

4.2.9 Check the Buoy Pressure System:

- Screw the pressure test cap (accessory) onto the Buoy and connect it to the compressed air tube in the conduit.
- Switch on the main switch on the control unit
- The compressor is running.
- Read the pressure indicated on the test cap after stabilization

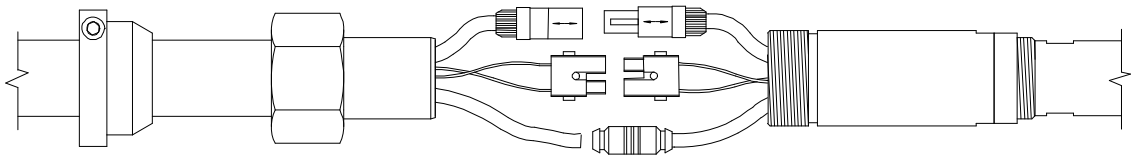
- *Switch off the main switch*
- *Now read the pressure indicated on the test cap*

If the Buoy air system is sealed the indicated pressure is constant for more than 3 minutes.

If the Buoy air system is not sealed check the o-rings on electrodes and Buoy body, reinsert the electrodes or exchange o-rings if necessary.

4.2.10 Connect the Conduit to the Buoy:

- *Lay the Buoy and the conduit on the ground*
- *Connect the plugs of the data cable*
- *Connect the power supply cable*
- *Connect the compressed air tube*
- *Check if the compressed air tube is fastened properly by pulling the tube. The tube must not come loose.*



- *Push the cables and compressed air tube into the conduit and the mounting pipe into the Buoy.*

- *Fasten the sleeve nut of the conduit with the special wrench.*
- *Fix the Buoy in maintenance position. Therefore hook it onto the according holding device and bring the holding device into the right position and attach the holding device with a hollow key seize 5*



Take note, that systems with two Buoys the second Buoy also has to be hooked up accordingly. Use the according inlets.



note

Turn on main switch only after complete installation of all parts !
