

## **Preface**

The purpose of this manual is to provide to installers and maintenance technicians enough information to safely and properly install aluminum light poles from Hydro. The light poles should be installed according to the guidelines in this manual to ensure the quality and longevity.

This manual contains a description of our product and instructions for installation.

The installer / maintenance technician is supposed to have sufficient knowledge and experience in the field of electrical installations. It is also believed that he or she has basic knowledge of security and is authorized to use the required machinery and equipment.



### **ATTENTION:**

- Read this manual carefully before mounting or installing Hydro products.
- Always wear personal protection equipment, helmet, boots, gloves and safety glasses.
- As a result of the manufacturing process, the presence of loose particles such as chips, grit, dust, etc. is inevitable. Take care when removing the inspection door, as material can be blown from the inside of the pole. The use of eye protection (safety glasses) is recommended.
- Around the inspection door and at the edges of the door itself sharp edges may occur. Take precautions (gloves, long-sleeved clothing) to prevent injuries.
- Treat the lighting column carefully.
- The columns must be inspected regularly for physical damage around ground level. Any damage must be repaired.
- Hydro advises to inspect the columns on life span after 25 years.

If you have any questions about the safety precautions, we refer you to the SCC rules or please contact us

### **Disclaimer:**

Despite the careful development and compilation of this installation manual, it is possible that incorrect or incomplete information is included. Hydro is not liable for any damage, directly or indirectly, related to the use of the information in this manual.

### Introduction

Hydro light poles are made of aluminum and have a cylindrical or conical shape. They are equipped with an inspection door giving access to the cable box and the electrical connections that are necessary to relieve the pole.

Light poles are installed in the ground or on a base plate, depending on the capabilities and desired installation. In case where light poles are installed in the ground, a protective anti-corrosive tape is disposed.

### Installation of poles with ground piece

We advise you to assemble the light pole before installing it. The luminaire can be mounted on or at the pole before placement to avoid the installation of heavy loads. See Appendix A: "Checklist installation luminaire" on light pole of this manual.

Aluminum light poles that come with a ground piece are standard equipped with a ground piece protection around the base of the pole to 25 cm above ground level. This ground piece protection needs to remain undamaged before, during and after installation. In case of damage, it is possible that the technical service life of the pole is shortened.

Poles with a ground piece placed into unstirred (sand) ground with an implant depth according to the EN 40-2 are stable enough to resist the stresses to which the pole is subjected during its service life, without further aids.

However, if the pole is not be placed in a stable foundation, e.g. verge of a ditch, peat soil e.g., then additional measures may be required such as:

- A bottom plate against the sinking of the pole
- A set of ground wings to prevent rotation of the pole
- Filling the root section property with clean sand to ground level
- In extreme cases, application of a foundation tube
- Greater embedment depth, EN 40-2

Extra measures to be taken must be decided on by the person responsible for the installation.

## Placement of the pole

Placement of an aluminum light pole up to 7 meters / < 25 kg, can be done manually. If it is desired / required to place the pole with a crane. We recommend you do this only by means of a sling and not by means of a hoisting hook in the doorway (see figure 1). All the usual precautions should be observed.

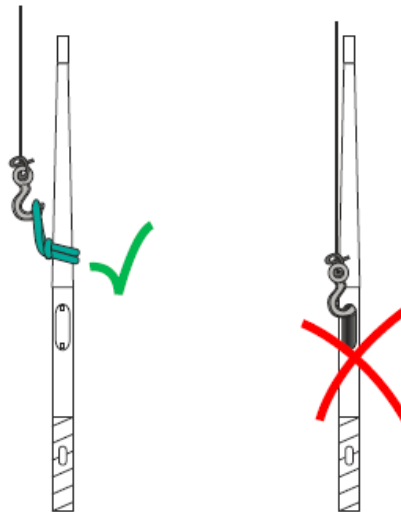


Figure 1

## Grounding

Light poles from Hydro feature a welded reinforcement profile type 5+ with integrated welded mounting rail with 2 sliding nuts M6x16 and a M8 grounding screw. To this, the grounding wire can be connected.

## Installation of electrical components

For the installation of the electrical components of the light pole please check the manual of the supplier carefully and follow the instructions.

## De-installation of light poles

To dismantle or remove the light pole, the steps described in this manual should be carried out in reverse order. Follow the same safety precautions and use the appropriate personal protective equipment as specified for installation. After de-installation, check for any damage to the components and dispose of waste and materials responsibly.

### Handling aluminium

It is important that all users of aluminium poles handle and store the products in a safe and expedient way. As a rule, aluminium is a robust material that is easy to handle if you take a few simple precautions. This includes:

- Avoid allowing aluminium to scrape against hard or sharp surfaces.
- Do not drag or throw aluminium poles;
- To avoid distortion or damage, use soft slings when lifting heavy poles.

### Storing aluminium

Aluminum should be stored in a clean, dry, dust and chemical free place which includes good air circulation. The products should not have contact with other materials and contact with the ground should be prevented.

Aluminium poles should have all their transport packaging removed prior to storage, this to include any plastic, cardboard and felt.

## Appendix A Checklist installation luminaire on light pole

### 1. Preparation

- Check that you have the correct fixture and mounting hardware.
- Read the manufacturer's full manual.
- Provide personal protective equipment (safety shoes, helmet, gloves, safety harness).
- Check that the power is off (if applicable).
- Check the mast for stability and damage.

### 2. Tools and equipment

- Spanners or torque wrenches
- Screwdrivers (cross and flat)
- Cables and connectors (preferably waterproof)
- Mounting Brackets or Clamps
- Grounding and lightning protection (if required)

### 3. Mounting the luminaire

- Attach the bracket or adapter to the pole according to the instructions.
- Mount the fixture securely on the bracket.
- Make sure the fixture is aligned correctly (e.g. facing downwards for street lighting).
- Check that all nuts and bolts are properly tightened.

### 4. Electrical connection

- Connect the power cables according to the connection diagram.
- Use waterproof connectors or junction boxes.
- Check the polarity (L, N, PE).
- Connect to switching or timing relays if applicable.

### 5. Control Test

- Turn on the power and check that the fixture is working.
- Check for flickering or abnormal behavior.
- Check that the light distribution is correct.
- Record the installation in the logbook or maintenance register.

### 6. Aftercare

- Remove tools and waste material.
- Report any discrepancies or defects.
- Schedule periodic maintenance (e.g. annual check-up).

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#### Pole Products

Extrusion Netherlands B.V.  
P.O. Box 75  
5150 AB Drunen  
The Netherlands

#### Visiting address:

Alcoalaan 1  
5151 RW Drunen  
The Netherlands

[hydro.com/poleproducts](https://hydro.com/poleproducts)

E: [info.poleproducts.nl@.com](mailto:info.poleproducts.nl@.com)  
T: +31 416 386 200

#### Registration No.

No. 17205924