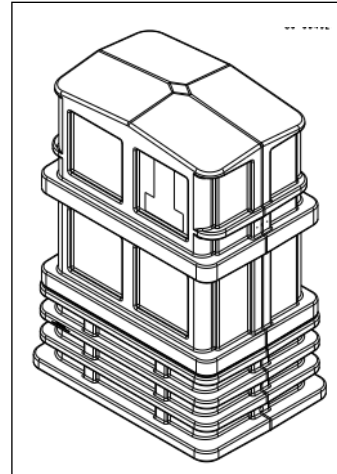


## CMPH-8500 Series Enclosures General Description and Installation

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**Figure 1 Closed Front View of a CMPH-8500 Enclosure**

### 1. GENERAL INTRODUCTION

#### 1.1 Document Purpose

This document provides general information for the CMPH-8500 Series of multi-purpose enclosures. Refer to Table 1 for base model specific configurations and Figure 1 for a closed front view of the enclosure.

-NOTE-

*Hereafter, the CMPH-8500 enclosures will be referred to as the “enclosures.”*

#### 1.2 Product Purpose

These enclosures consist of a protective high density polyethylene (HDPE) housing and are intended for in-ground mounting (with optional mounting stakes) applications to house copper splices, fiber closure and fiber cable slack or storage of other bulk equipment.

#### 1.3 Product Mounting and Location

These enclosures are suitable for outside plant-type (OSP) locations. These outdoor, HDPE housings are U/V stabilized for long life. The installer routes the copper or fiber cabling into the enclosure, dressing and connectorizing per company practice. Detailed mounting and installation information is covered in Section 3.

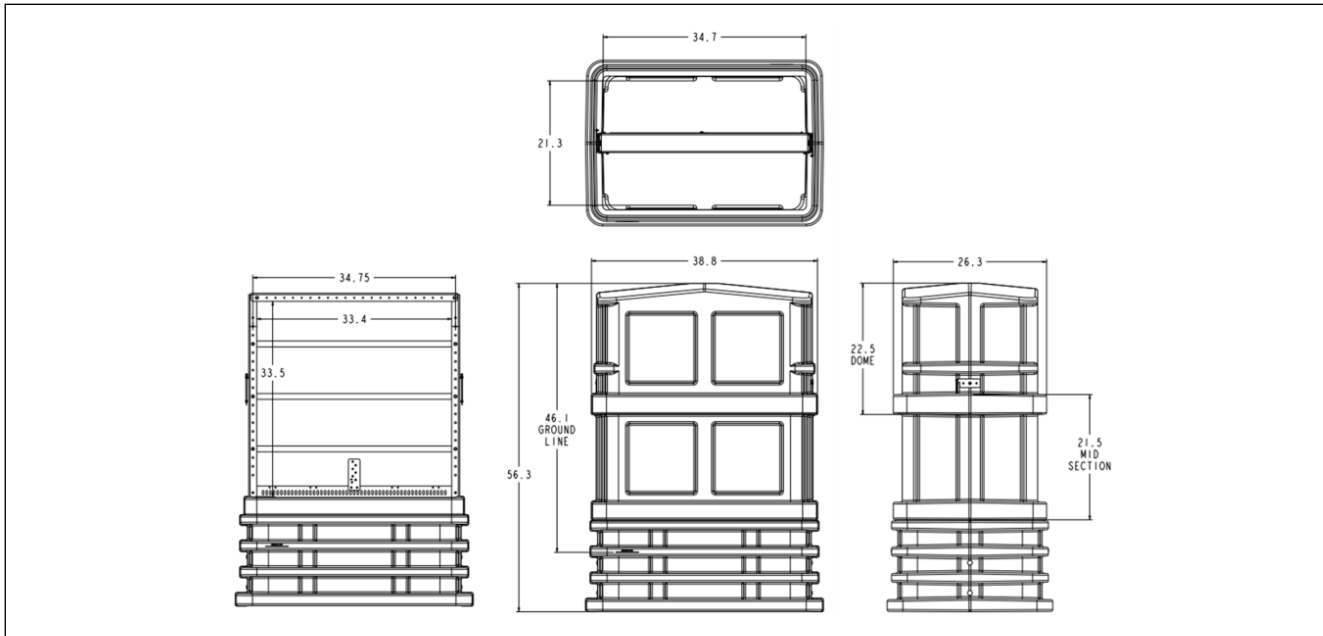
### 2. PRODUCT DESCRIPTION

This practice covers the base models of the large copper splice and fiber storage enclosures:

CMPH-8500N	Copper splice storage application
CMPH-850FN	Fiber closure and fiber cable storage application

Physical dimensions of the enclosures are shown in Figure 2 and Table 1. The following items are common to all units:

- High-density polyethylene construction
- Two-piece dome system with two captive threaded locking bolts, via CAN wrench / 216-style tool
- Corrugated one-piece in-ground base with molded-in ground line
- Six position bond plate with ground lug
- Smooth label placement area
- Accepts two universal mounting stakes (mounting stakes sold separately)



**Figure 2 Dimensions (in inches)**

Part Number	Width (W)	Depth (D)	Height Overall (H1)	Height Ground Line (H2)	Weight
CMPH-8500 Series	39"	28"	56"	46"	96 lbs.

**Table 1 Exterior Dimensions (in inches)**

### 3. INSTALLATION

#### 3.1 Inspecting the Product

The enclosure is typically shipped upright on a skid. Unpack the unit, remove and dispose of the packaging material.

*-INSPECTION NOTE-*

*Visually inspect the unit for damages prior to installation. If the enclosure was damaged in transit, immediately report the extent of the damage to the transportation company.*

#### 3.2 Following and Using Safety Precautions

Read the following site and safety tips, cautions and warnings, then proceed with the paragraphs that follow.

- For installation, follow all National Electrical Codes (NEC) ANSI/NFPA 70, local, environmental, workplace, and company codes, safety procedures, and practices.
- Read all instructions, warnings and cautions on the equipment and in the documentation shipped with the product.
- Always connect ground connections first.
- In windy conditions, be sure to cautiously remove the domes as they may be caught by the wind, causing physical injury to user or adjacent equipment.

#### 3.3 Obtaining Tools and Equipment

Obtain the following recommended or needed items for installing the enclosure for in-ground mounting.

- Sufficient length of cables
- Cable preparation tools
- Wire strippers and connector installation tools
- Protective and/or insulated work gloves
- Safety glasses
- Tape measure

- Marking utensil
- #6 ground wire or rod and earth ground materials
- Bond straps
- Any exterior cable strain relief, per company practice
- Socket wrenches, slotted and Phillips screwdrivers
- Assorted cable ties
- Can wrench (216 tool)
- Level

### 3.4 Preparing the Installation Site

Observe the following site preparation recommendations:

- Leave adequate horizontal and vertical space between multiple installations to allow for proper cable access, as well as enough room to remove dome.
- The site must meet minimal personnel and equipment safety requirements.
- The distance from the cable entry point should be consistent with local installation practices.
- Run all cable facilities to the site.

### 3.5 Lifting the Enclosure

The enclosure is manufactured from HPDE with aluminum internal brackets. It is designed with a 2-section dome for reduced lifting weight. In most instances, one individual should be able to lift and move the individual enclosure components at the job site.

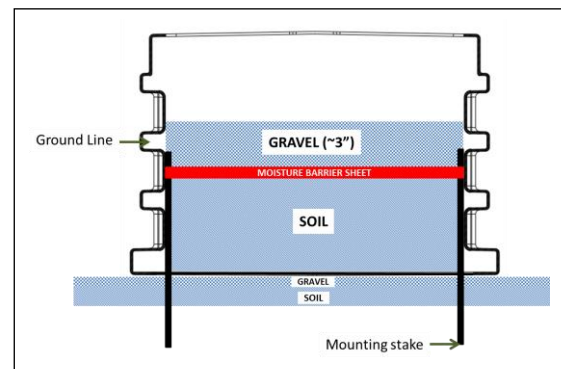
### 3.6 Installing the Enclosure In-Ground

*-NOTE-*

*When installed in-ground, confirm appropriate locate service has been completed before digging.*

The enclosure is designed to be direct buried using two mounting stakes (Figure 3).

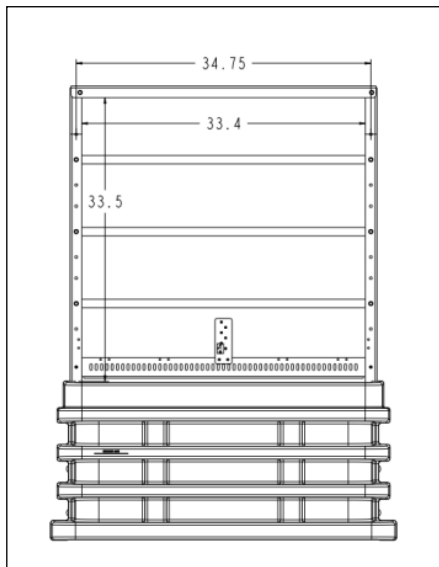
1. Review installation site map and be aware of any locate flags or markers before beginning excavation.
2. Mark the location of the enclosure, approximately 4" larger than the overall base. Remove the top layer of the soil.
3. Being careful not to damage the cables or conduits, using the ground line located on the enclosure base with the expected finished grade, dig straight down to the proper depth +1". Dig additional depth at location of mounting stakes.
4. Install pea rock (user supplied) to the depth of ~1" in the excavated hole and tamp level. Be careful not to fill the stake holes with rock. Temporarily place the enclosure into position, checking to ensure the enclosure is level in two directions (front to back and side to side). Add additional pea rock until level.
5. Install two enclosure stakes (part number detailed in Table 2) using the mounting hardware provided with the stake or enclosure. The stake should be positioned against the inside of the u-support uprights of the enclosure with the bolt's threads facing the inside.
6. Lift the enclosure into position, over installed cables. Using a level, confirm the enclosure is level in both directions. If the enclosure is not level, remove the enclosure and add backfill to the hole, tamping down to prevent settling. Repeat until level and plumb.
7. Ensure the cable conduits are sealed/plugged. Alternate backfilling the outside of the excavated area and the inside of the area with soil, tamping at 2" increments.
8. Backfill the inside of the base with soil to between the 2nd and 3rd base rib. Spread the RED plastic moisture barrier sheet (included with enclosure) on top of the soil, slitting the sheet to allow access for cables and conduits. Make sure the plastic sheet covers the entire area. This sheet prevents additional moisture from building up in the enclosure.
9. Finish by adding ~3" to 4" of pea rock (gravel).



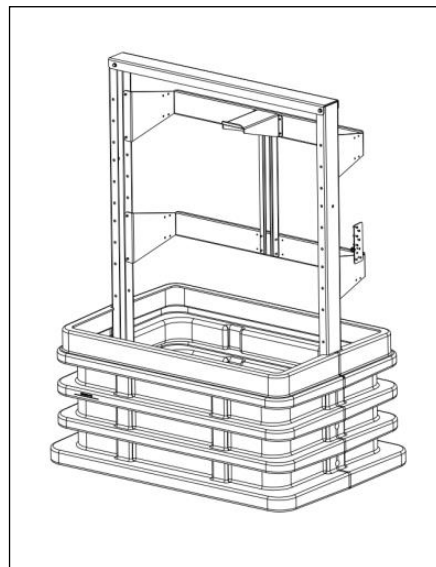
**Figure 3 Interior Base Backfill**

### 3.7 Install the Appropriate Customer Equipment

Figures 4 and 5 display the internal components of the standard enclosure configurations. Follow company practices for the type of installation to be performed.



**Figure 4 CMPH-8500N Copper Splice Internal Components**



**Figure 5 CMPH-850FN Fiber Closure and Fiber Cable Slack Storage Internal Components**

## 4. CABLING

Follow company-approved procedures for all copper cable preparation and splicing.

## 5. TECHNICAL ASSISTANCE AND REPAIR SERVICE

For questions on product repair or if technical assistance is required, contact Charles Technical Support at:

847-806-8500  
 800-607-8500  
 847-806-8556 (FAX)  
[techserv@charlesindustries.com](mailto:techserv@charlesindustries.com) (email)  
[http://www.charlesindustries.com/main/tech\\_support.htm](http://www.charlesindustries.com/main/tech_support.htm)

## 6. WARRANTY & CUSTOMER SERVICE

Charles Industries, Ltd. offers a one-year warranty on the CUBE product. The Charles warranty is limited to the operation of the CUBE hardware as described in this documentation and does not cover equipment which may be integrated by a third party. The terms and conditions applicable to any specific sale of product shall be defined in the resulting sales contract. For questions on warranty or other customer service assistance, contact your Charles Customer Service Representative at:

847-806-6300  
 847-806-6653 (FAX)  
[mkserv@charlesindustries.com](mailto:mkserv@charlesindustries.com) (email)  
[http://www.charlesindustries.com/main/telecom\\_sales\\_support.htm](http://www.charlesindustries.com/main/telecom_sales_support.htm)

## 7. ACCESSORIES

Category	Charles Part Number
Direct Bury Installation: Mounting Stake, includes mounting hardware	UMS42-STD (Order 2 pieces per enclosure)

**Table 2 Accessories**