

# CM110, CM115, CM120

## Lightweight Instrumentation Tripods



Campbell Scientific's CM110, CM115, and CM120 tripods are corrosion-resistant, stainless steel instrument mounts that support the attachment of sensors, mounts, solar panels, and environmental enclosures. Measurement heights are 10 feet (3 m) for the CM110, 15 feet (4.6 m) for the CM115, and 20 feet (6.1 m) for the CM120. Tripods include UV-resistant cable ties, grounding kit, and six spikes for the tripod feet. CM115 and CM120 tripods also include a guy kit, which is an option for the CM110.

### Features

- Tilt-down mast for better access to the sensors
- Mounting provided for multiple enclosures
- Individually adjustable legs that allow installation over uneven terrain

The CM110, CM115, and CM120 are used as portable instrument mounts in a variety of applications. For meteorological applications, tripods augmented with mounts support the attachment of sensors such as wind sets, pyranometers, and temperature/relative humidity probes. Barometers, soil temperature and moisture probes, and rain gages are also used with tripod-based weather stations. For non-meteorological applications, tripods can provide a portable instrument mount for enclosures and a mounting point for antennas.



Our CM200-series crossarms are used to attach sensors to the tripod. The crossarm mounts to the tripod mast via the CM210 bracket, which is included with each CM200-series crossarm.



The CM110 10-foot tripod shown above is not guyed. An optional guy kit is offered for the CM110 if additional stability is required. A guy kit is shipped with the CM115 and CM120.

## Guy Duckbill Anchor Kits

Two duckbill anchor kits are offered for securing the guy wires (see Ordering Information). Duckbill anchors are not required to use the guy wire kits. Without them, the guy wires are run from the mast to the feet of the tripod. Duckbill anchors are recommended for areas subjected to higher winds. They allow the guy wires to be anchored at points beyond the feet, thereby increasing the rating of the tripod for higher winds.

The 19282 Guy Duckbill Standard Anchor Kit is for standard soils. The 25699 Guy Duckbill Heavy Duty Anchor Kit is for aggressive soils. Aggressive soils have:

- Resistivity of less than 3000 ohm-cm
- pH of less than 5
- Chloride of greater than 1000 ppm
- Sulfate of greater than 500 ppm
- Poor aeration

## Specifications

### Height with Mast Insert:

CM110:	10.5 ft (3.1 m)
CM115:	15.2 ft (4.5 m)
CM120:	20 ft (6 m)

### Weight

CM110:	34 lbs (15 kg)
CM115:	40 lbs (18 kg)
CM120:	46 lbs (21 kg)

### Base Diameter with Legs Extended:

7 ft (2 m)

### Dimensions of

**Collapsed Tripod:** 6 x 6 x 57 in (15 x 15 x 145 cm)

**Vertical Load Limit:** 100 lb (45 kg)

**Number of Mast Sections:** 1 (CM110), 2 (CM115), 3 (CM120)

### Mast Length

CM110:	4.6 ft (1.4 m)
CM115:	9.3 ft (2.8 m)
CM120:	14.0 ft (4.3 m)

### Mast Length with Insert

CM110:	8.6 ft (2.6 m)
CM115:	13.3 ft (4.1 m)
CM120:	18.0 ft (5.5 m)

### Outer Diameter

<b>Mast:</b>	1.9 in (4.8 cm)
<b>Insert:</b>	1.75 in (4.45 cm)

## Ordering Information (see note 1)

### Tripods

<b>CM110</b>	10 ft (3 m) lightweight tripod with grounding kit.
<b>CM115</b>	15 ft (5 m) lightweight tripod with grounding kit and guy kit.
<b>CM120</b>	20 ft (6 m) lightweight tripod with grounding kit and guy kit.

### Accessories

<b>19192</b>	Carrying Tote Bag that holds one lightweight tripod.
<b>19239</b>	Guy Kit for the CM110 tripod
<b>19241</b>	Tripod Extension Kit that increases the height of a CM110 or CM115 mast by 5 ft (1.6 m). Maximum measurement height provided by the 19241 is 20 ft (see note 2).
<b>19282</b>	Guy Duckbill Standard Anchor Kit, 1100 lbs. Not recommended for aggressive or rocky soils. Use the 25699 heavy duty anchor kit for aggressive soils (see below).
<b>25699</b>	Guy Duckbill Heavy Duty Anchor Kit, 3000 lbs. Recommended for aggressive soils.

Our enclosures attach to either the leg base (shown) or mast. The ENC16/18 enclosure only attaches to the tripod mast.



### Mounting Hole in Tripod Foot:

0.75 in diameter hole for user-supplied 0.5 in J-bolts

### Tote Bag Dimensions

<b>Length:</b>	60 in (152 cm)
<b>Diameter:</b>	8 in (20 cm)

## Wind Load Recommendations (see note 3)

### Sustained Wind

<b>CM110:</b>	75 mph (unguyed), 80 mph (guyed at feet)
<b>CM115:</b>	56.25 mph (guyed at feet), 75 mph (guyed at 60°)
<b>CM120:</b>	42.25 mph (guyed at feet) 65 mph (guyed at 60°)

### Gust Tolerance

<b>CM110:</b>	95 mph (unguyed), 100 mph (guyed at feet)
<b>CM115:</b>	71.25 mph (guyed at feet), 95 mph (guyed at 60°)
<b>CM120:</b>	55.25 mph (guyed at feet) 85 mph (guyed at 60°)

### Notes:

1. See the "Instrumentation Mounts" brochure for crossarm, solar radiation mounts, and radiation shield options.
2. The 19241 extension kit is not recommended for the CM120. Customers who require measurement heights greater than 20 ft should use a UT30 tower.
3. The Wind Load Recommendations for the CS115 and CS120 assume the guy wire anchors are able to hold at least 400 lbf (728 kgf).

