

Group 255 Evaporation Stations

The **Group 255 Evaporation Stations** are complete systems used to measure the amount of water lost each day to evaporation. There are two commonly used procedures for making these measurements. In both, a U.S. National Weather Service Class A Evaporation Pan, 10 inches deep and 47.5 inches in diameter, holds the water and is normally installed on a wooden platform set on the ground in a grassy location.

One alternative for measuring the daily evaporation loss is to use a graduated hook gauge set on a stillwell to determine the water level in the pan. The hook gauge is adjusted until the point just breaks the water surface, and a reading is taken from the attached scale. The second alternative uses a stillwell with a fixed point. Each time a measurement is taken, the pan is refilled to the level of the point using a calibrated graduate. The graduate has a surface area of 1/100 that of the pan, so that the amount of water added is the equivalent evaporation. The choice between these alternatives is generally made on a practical basis, such as the availability of daily replacement water.

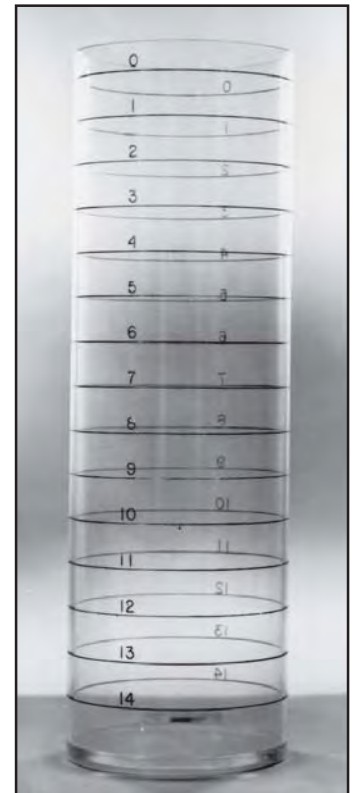
The U.S. National Weather Service standard evaporation and climatological station requires daily observations to collect the data; thus, it is not suitable for remote, unattended locations. The recommended layout of the plot and instruments for a station in the northern hemisphere is shown in the diagram. The 16' x 20' plot is the minimum for the equipment shown. Accessories such as a rain gauge wind screen would require enlargement of the plot to 20' x 20'. This station should be installed on a sod surface where obstructions are no closer than 4 times their height. Shadows should not fall on the evaporation pan except for brief periods at sunrise and sundown. NovaLynx can provide the instruments to satisfy U.S. National Weather Service requirements.



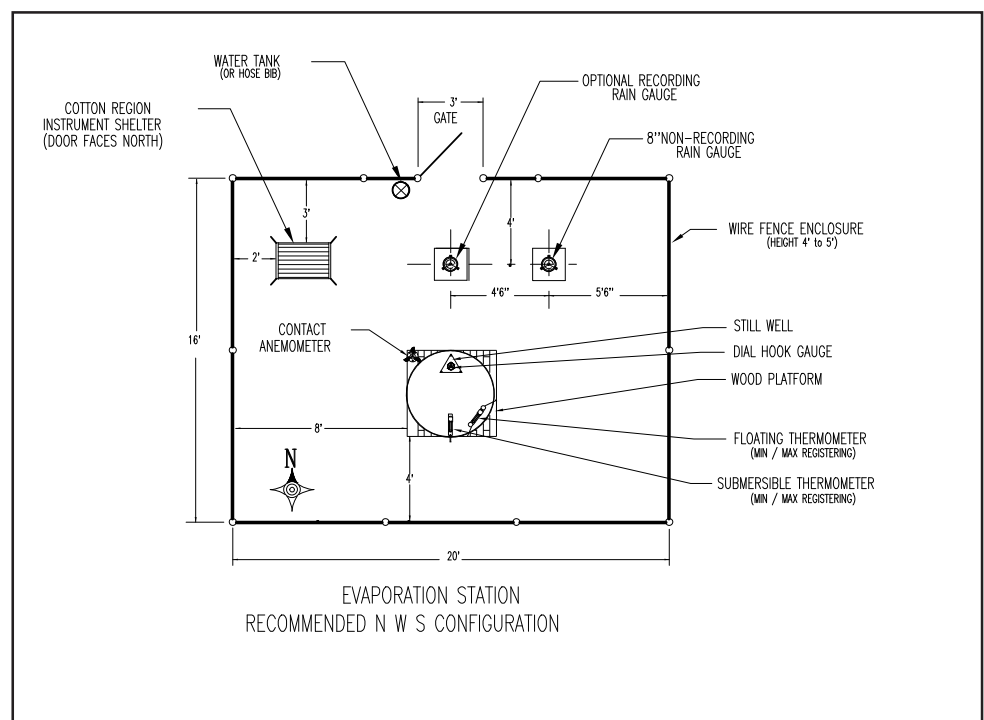
255-214 Hook Gauge



255-205 Stillwell



255-211E Replacement Graduate



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The amount of evaporation is a function of temperature, humidity, wind, and other ambient conditions. In order to relate the evaporation to current or expected conditions, the maximum and minimum temperatures of the water and the amount of air passage are normally recorded along with evaporation. Instruments for measuring air temperature, humidity, rainfall, and other parameters are described in their respective catalog sections.

Specifications

Evaporation Pan

Material: Low carbon stainless steel
Construction: Heliarc welded, with 1/2" drain plug
Size: 10" H x 47.5" I.D. (254 mm x 1206 mm)
Weight/shipping: 50 lbs/68 lbs (23 kg/31 kg) (Box 50" x 49" x 11")

Hook Gauge

Span: 3" or 7 cm
Graduations, stem: Major divisions 1" or 1 cm
Minor divisions 0.1" or 0.1 cm (1 mm)
Graduations, dial: Major divisions 0.01" or 0.1 mm
Minor divisions 0.002" or .02 mm
Size: 7" L x 5.25" Dia (178 mm x 133 mm)
Weight/shipping: 1 lb/3 lbs (0.5 kg/1.4 kg)

Stillwell

Material: Stainless steel
Size: 4" Dia x 9" H (102 mm x 229 mm)
Weight/shipping: 6.5 lbs/10 lbs (2.9 kg/4.5 kg)

Stillwell with Fixed Point

Height of point: 7.5" (191 mm)
Material: Stainless steel
Size: 4" Dia x 9" H (102 mm x 229 mm)
Weight/shipping: 6.6 lbs/10 lbs (3.0 kg/4.5 kg)

Replacement Graduate

Graduations: 0.01" or 0.2 mm
Material: Polycarbonate
Size: 4.75" I.D. x 16" H (121 mm x 406 mm)
Weight/shipping: 1.5 lbs/3 lbs (0.7 kg/1.4 kg)

Floating/Submersible Thermometer

Type: Digital minimum-maximum
Typical range: -18° to +65° C or 0° to +150° F
Mounting: Polypropylene floats with sun shield
Size: 11-1/4" long without floats, 13-1/2" with floats
Weight/shipping: 1 lb/3 lbs (0.5 kg/1.4 kg)

Totalizing Anemometer

Sensor: 3-cup assembly, glass reinforced nylon, 1.125" dia cups
Counter type: 8-digit electronic, LCD in NEMA-4X enclosure
Resolution (counter and contact): 0.1 mile or 0.1 km
Materials: Thermoplastic, anodized aluminum, stainless steel
Mounting: Pre-drilled flanged base
Size: 5.5" W x 5" D x 16" H (140 x 127 x 400 mm)
Weight/shipping: 5 lbs/9 lbs (2.3 kg/4 kg)

Wooden Platform

Material: Pressure treated 2x6 & 2x4 lumber
Size: Assembled 4' x 4', Disassembled 10" x 10" x 4'
Weight/shipping: 55 lbs/60 lbs

Ordering Information

Hook Gauge Evaporation Station, English (Class A Station)

255-200	Evaporation Pan
255-205	Stillwell
255-212	Floating/Submersible Min-Max Thermometer °F
255-214	Hook Gauge, English units
200-2510-A	Totalizing Anemometer, miles

Hook Gauge Evaporation Station, Metric

255-200	Evaporation Pan
255-205	Stillwell
255-212	Floating/Submersible Min-Max Thermometer °C
255-215	Hook Gauge, metric
200-2511-A	Totalizing Anemometer, kilometers

Fixed Point Evaporation Station, English

255-200	Evaporation Pan
255-210	Stillwell with Fixed Point
255-211E	Replacement Graduate, English
255-212	Floating/Submersible Min-Max Thermometer °F
200-2510-A	Totalizing Anemometer, miles

Fixed Point Evaporation Station, Metric

255-200	Evaporation Pan
255-210	Stillwell with Fixed Point
255-211M	Replacement Graduate, Metric
255-212	Floating/Submersible Min-Max Thermometer °C
200-2511-A	Totalizing Anemometer, kilometers

