

## EVAPORATION PAN “Class A”

**232,0E**

### No. 73EP - Evaporation Pan “Class A”

The evaporation pan is made of stainless steel and will be filled with water for exposition to the open air. When water evaporates the level falls. The differences of the level are measured by using the suspension measuring rod suspended in the smoothing pipe (No. 73 EB).

The Evaporation Pan Class A pan is of cylindrical design, 25.4 cm deep and 120.7 cm in diameter. The bottom of the pan should be supported 3 to 5 cm above the ground level on an open-frame wooden platform (locally acquisition or using the transport pallet), which enables air to circulate under the pan, keeps the bottom of the pan above the level of water on the ground during rainy weather, and enables the base of the pan to be inspected without difficulty. The pan itself is constructed of 2 mm stainless steel and is normally left unpainted.

Diameter:	1206,5 mm = 47,5 "
Height:	254 mm = 10 "
Material:	2 mm stainless steel
Weight:	32 kg



**Fig. 1:** Evapotation pan

### No. 73EB - Smoothing pipe with suspension measuring rod (stilling well with hook gauge)

This is an instrument to determine the water level in the evaporation pan.

By using the suspension measuring rod (hook gauge) suspended in the smoothing pipe (stilling well) the variation of water level can be measured very accurately by using the micrometer scale on the measuring rod.

Measuring range:	0 ... 100 mm
Graduation:	0.02 mm
Height of level:	177.8 mm = 7 "
Material:	
of hook gauge:	white silver and stainless steel
of stilling well:	anodised aluminium
Dimensions:	
of stilling well:	Ø 90 x 200 mm
Weight:	1,7 kg



**Fig. 2 and 3:** Hook gauge 73EB UG01  
with stilling well 73EB UG02

The still well should be located on north side of pan, across from the six's thermometer (Floating Maximum Minimum Thermometer). The pan is filled to 10 cm below the rim (which is known as the reference level). The water level is measured by means of either a hookgauge or a fixed-point gauge. The hookgauge consists of a movable scale and vernier fitted with a hook, the point of which touches the water surface when the gauge is correctly set. (Art. No. 73EB UG02) A stilling well (Art. No. 73EB UG01) with a small hole at the bottom, breaks any ripples that may be present in the tank, and serves as a support for the hookgauge during an observation. The pan is refilled whenever the water level, as indicated by the gauge, drops by more than 2.5 cm (or up to 5 cm) from the reference level.

The water level in a ‘Class A’ pan is measured, usually every 24 hours, by adjusting the height of the hook until its point just breaks the surface. The Hook Gauge is used to measure water level changes inside an evaporation pan. It features a sharply pointed "U" shaped hook attached to a calibrated stem and a micrometer dial. Measurements are made by placing the hook gauge into an evaporation pan and on top of a stilling well. The still well serves to isolate the device from any ripples that might be present in the sample being measured, while allowing the water level to equalize. The micrometer dial is rotated until the point at the end of the hook pierces the water's surface from below. As the water evaporates, the hook point is moved to the new surface position. The measurement is taken by turning the knob to lower the hook through the surface of the water until capillary action causes a small depression to form around the tip of the hook. The knob is then turned slowly until the depression "pops," with the measurement showing on the micrometer scale. Adjustments to the hook's point are made daily and the new dial reading is recorded to determine the amount of water loss.

Full millimeter and tenths of millimetres read from staff; hundredths of mm read from circular wheel; knob is twirled until points of hook forms small depression (capillary) of the water surface — knob is slowly turned until capillary depression “pops” (disappears) beneath the water’s surface; this pop is due to the top of the hook being overtaken by the meniscus of the water.

**Additional equipment for this system:**

**Counter Anemometer No. 91ge (see leaflet No. 212.5)**

**Rain gauge No. 69d resp. Rain recorder No. 95 (see leaflet No. 221.0E)**

**No. FT2 - Floating Maximum-Minimum Thermometer (see also leaflet No. 122.E)**

This is a Six's type thermometer mounted on an inclined non-magnetic frame supported in water by two aluminium floats which allow the thermometer to rest just below the water surface. It is used to measure the maximum and minimum temperature reached in water in an evaporation tank since the previous reading was made. The thermometer bulbs are protected by an anti-radiation shield. Each thermometer is graduated in 1°C readable with a resolution of 0.5°C. The maximum and minimum temperatures are registered by indices which have to be reset after the temperatures have been read. To avoid calcification it is essential to use rainwater.

**GENERAL SPECIFICATION**

Range	: - 40 °C to + 50 °C
Divided to	: 1 °C
Accuracy	: 0.5 °C
Scale length	: 100mm
Dimensions	: 140 x 310 x 55 mm
Weight	: 0.4 kg
Mercury-free	



**Fig. 4:** Floating Maximum-Minimum Thermometer

**Maximum-minimum-thermometer**



**1. Before you start using it**

- Please make sure to read the instruction manual carefully.
- Please take particular note of the safety advice!
- Please keep this instruction manual for future reference.

**2. Field of operation and all of the benefits of your instrument at a glance**

- Indoor or outdoor temperature
- Max/min values
- Weather resistant
- Mercury free / patented capillary filling

**3. For your safety**

- The product is exclusively intended for the field of application described above.
- Unauthorised repairs, modifications or changes to the product are prohibited.
- Keep it out of reach of children.



**Important information on product safety!**

- Do not place the unit near extreme temperatures, vibrations or shocks.
- Clean it with a soft damp cloth. Do not use solvents or scouring agents.

**4. Operation**

- You can read the actual measured temperature at the top of the transparent column.

**Maximum-minimum-thermometer**



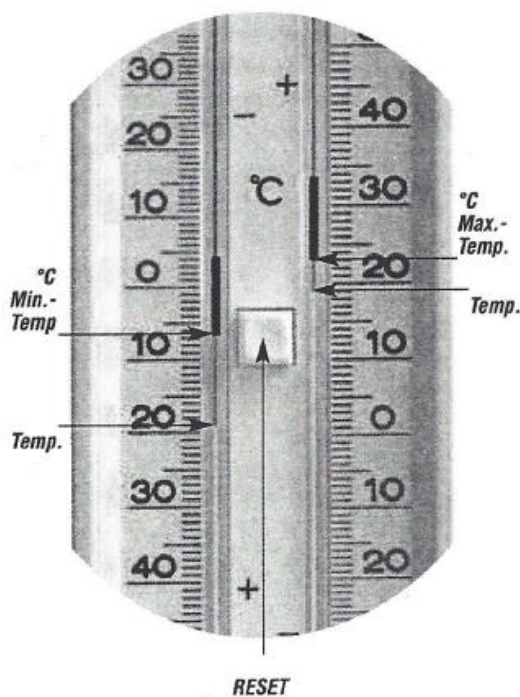
- The highest temperature since the last reset is shown at the lower edge of the blue marker on the right scale.
- The lowest temperature since the last reset is shown at the lower edge of the blue marker on the left scale.
- Reset: Press the RESET button until the two blue markers moved down to the transparent column.

**5. Fixing**

- Secure the thermometer with a nail on a wall. Avoid radiators and direct sunshine.

**6. Troubleshooting**

- The capillaries are filled with a patented, mercury-free liquid. It is possible that the red liquid column becomes separated, e.g. during transport. **This is no manufacturing error!** You can resolve this by yourself: Bring both metal markers to the top of the scale by using a magnet. Then hold the thermometer firmly at the top end and shake it down using quick, sharp, downward wrist motions (as with a clinical glass thermometer). Repeat if necessary. Press the button to move the metal markers down the column again.
- Should one of the metal markers slip into the clear liquid, bring it back into the red liquid with the magnet.



**Instruction Manual**

◀ Fig. 1

Scale varies depending on model

**DR. ALFRED MÜLLER**  
**METEOROLOGISCHE INSTRUMENTE KG**  
 Chausseestraße 39 / 42c  
 D-15712 Königs Wusterhausen

**Tel.:** +49 3375 9025-32  
**Fax:** +49 3375 9025-36  
**e-mail:** info@meteomueller.de  
**www.rfuess-mueller.de**