

Recording Dew Gauge

acc. to Hiltner

Instruction for Use 5.4050.00.000



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1. General

The recording Dew Gauge acc. to Hiltner determines the quantity of the dew precipitation. Dew, hoarfrost, etc. is detected by a small-meshed hair sieve of a 100 cm² surface. The weight of dew, hoarfrost, etc. is transmitted via balance bar and lever system to the recording device. The balance bar and the protective cover are removable for the transport of the instrument. The balance bar is provided with a hydraulic damping in order to avoid effects of wind on the recording. The Recording Dew Gauge is made of non-corrosive materials.

The instrument consists of:

- a white-varnished protective metal cover
- an hydraulic-damped balance bar
- a small-meshed hair sieve with a surface area of 100 cm² as collecting area
- a built-in level for alignment of the instrument
- a mounting device for fixing the instrument to the respective base
- a wind shield for the collecting sieve
- a recording device with clock work drum.

Accessory: 1 set of recording charts (100 sheets).
 1 bottle of damping oil

2. Technical Data

Collecting area: 100cm²
Measuring range: 0.5 g
Division: 0,05 g
Recording width: 82 mm
Clock work drum: hand wound drive
Recording time: 7 days (40 mm thrust / day)
Dimensions: 650 x 175 x290 mm
Weight: 6kg

3. Taking into Operation

After you have unpacked the instrument, you can set it up in the following manner:

First open the case, screw off the protective cover (1) by means of the screws (2), release the locking screw (3) and tighten the limit screws (4) for the complete turn of the scale. Place the balance bar (5) into position and fix it by means of the screw (6). Then hang the sieve (7) onto the hook of the balance bar. Now screw-on the bar (11) with the base (12) and the height-adjustable wind shield (13).

The base is for use when the instrument is to be set up out-of-doors. Just insert it into the ground and place the instrument onto the round bar. Rotate the knurled-head screws (14) to align the instrument in accordance with the built-in level and to fix the instrument into place.

Fill the damping oil provided with the instrument into the container (16) after you have tightened the drain plug (15). Remove the protective cap from the attached recording pen. Put the pen onto the recording arm. Release the recording pen by pulling the small lever (17) from back to front, turn the clockwork drum clockwise until the recording pen on the chart stops at the correct time sector - with the appropriate time and day. The tip of the recording pen must be exactly on the zero point. If this is not the case, then correct the instrument by adjusting the weight (18) and the guard disc (19). The upper edge of the wind shield should be about 5 - 10 mm above the sieve when the recording pen is on the zero position. Just loosen the knurled-head screws and move the wind shield into the correct position. After the wind protection is in place, use the key (20) to wind up the clockwork.

Move the pen gently in a horizontal direction to make sure that it traces effectively. Make sure that the pen doesn't press too firmly against the recording chart. You can regulate the pressure by means of the knurled-head screw (21) on the recording arm. At the correct pressure, the pen will just rest on the paper firmly enough to ensure a clear trace. Before closing the cover the recording arm and the pen must be set closely to the clockwork in order to avoid a change of adjustment at the recording and measuring system.

Attention

Never close the cover when:

- ***the protective cap is still stuck on the recording pen***
- ***the recording arm with the pen has not been set closely to the clockwork***

4. Inserting a new Recording Paper

For instruments with a 7-day-drum rotation period, and which are in continuous use, the new paper should be inserted early every Monday morning. Please do so in the following manner: Lock the recording arm into place (by moving the small lever (17) from the front to the back, the pen will raise). Then open the case by pulling down the button. Unscrew the knurled nut screw on the axis of the clockwork-drum and raise the clockwork. Pull out the chart holder and remove the strip chart from the drum. Now insert the new strip chart. When inserting the new one make sure that the lower edge of the strip chart coincides perfectly with the edge of the drum and that it fits smoothly against the drum. The strip chart paper can then be locked into position by pushing the chart holder in. Put the clockwork on the clockwork drum axis, fix and wind it up. As soon as the drum has been set to the correct time and the recording pen has been positioned to the clockwork, the instrument is once again ready for use.

5. Recording Problems

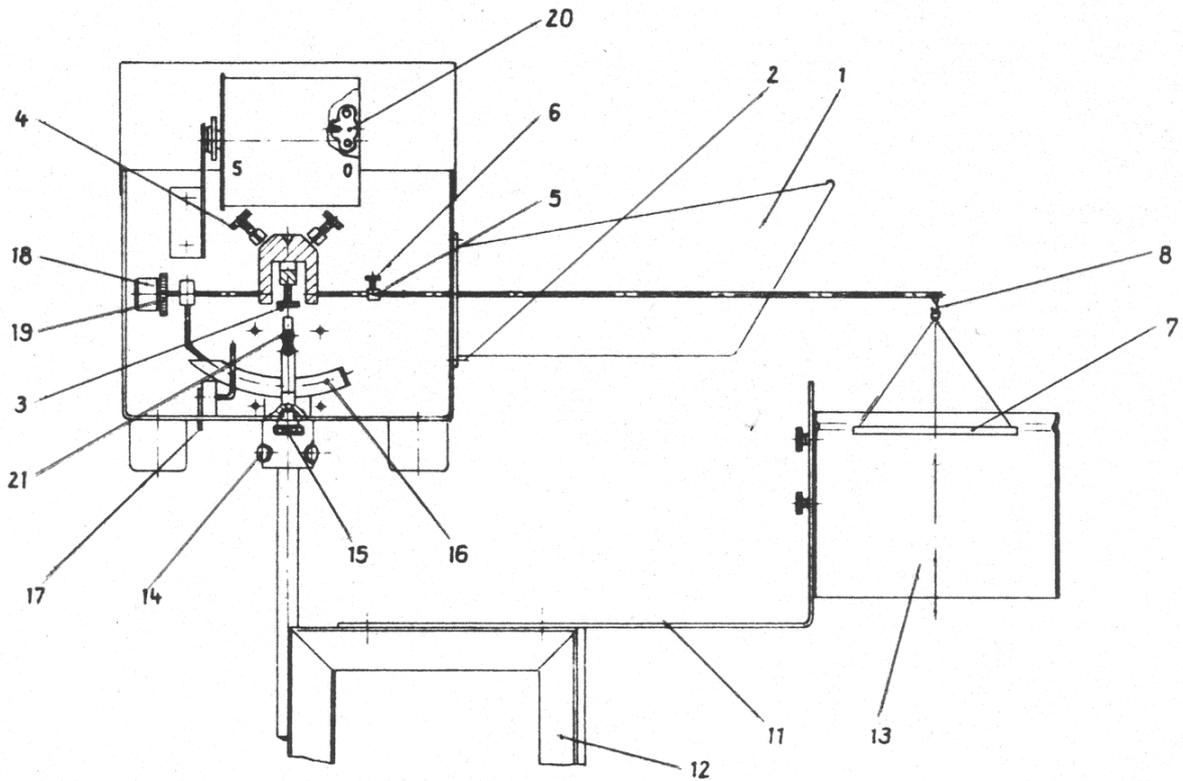
If the writing pressure of the pen is too firm the values measured will be inaccurate and recorded in steps.

How to eliminate this problem: Regulate the pressure of the pen by means of the knurled-head screw on the recording arm (see above).

If the recording becomes too faint after some time the pen has to be replaced.

When the instrument is not used, or during the transport the damping oil can be drained off by unscrewing the drain plug (15). Remove the pen from the recording arm.

6. Drawing



7. Spare Parts / Consumable Material

Description	Order – No.
Recording pen	507631
Recording Chart 4050/7	205253
Clock work	202501



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