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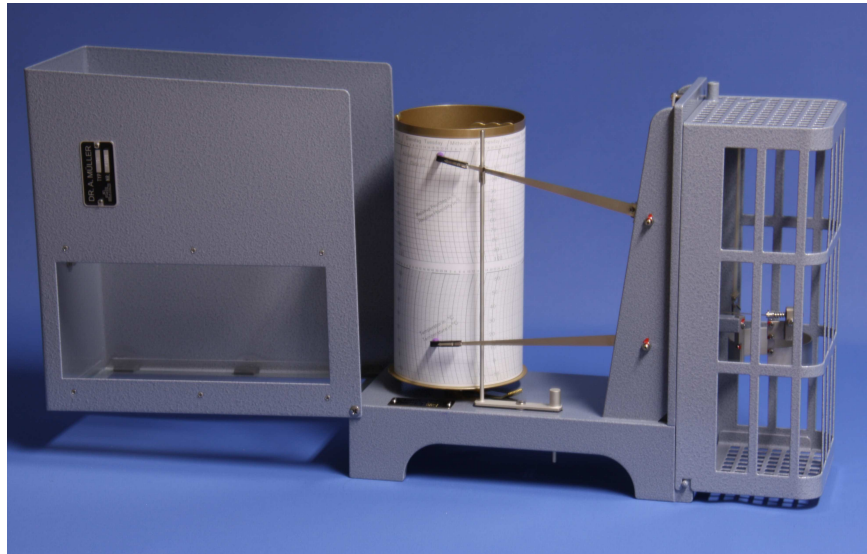
## Thermohygrograph 79t



Thermohygrograph 79t records temperature and relative humidity of the atmosphere on a common chart. These two important climatic factors play a decisive role in the meteorological and climatological investigation, in the storing of raw-materials, victuals and stimulants, in the processing of tobacco, textiles, paper, wood, furthermore in agriculture and horticulture, for the human wellbeing in meeting places, theatres, schools, hospitals, restaurants etc.

In its mechanical design, Thermohygrograph 79t represents a new construction. Of the Fuess types of thermohygrographs, up to now, it differs essentially by the reversion of the humidity graduation, in the case of which the 0%-value, now, lies at the upper rim of diagram. The simplification of the transmission mechanism resulting in this way, in connection with an ameliorated humidity measuring element, has led to an increase in reliability, as well as in fine structure of recording.

The humidity measuring element consists of prepared human hair, the changes in the length of which, depending upon alteration of humidity, are utilised as measuring effect. Several hair-bundles are arranged vertically in harplike fashion outside of the casing in such a way that the ambient air may, freely, wash around them and they react with the least degree of inertia.



The likewise outside arranged measuring element of temperature consists of a ringlike bimetal, which stretches or bends itself, in the case of changes in temperature.

The motions of the measuring elements are transmitted to the pen-arms by means of lever systems, the bearing points of which consist of corrosion-resisting material. The pens rest against the chart with an always equal pressure, by the proper weight of the pen-arms, and can be lifted-off, from without. The metal casing is varnished with a weather-resisting, light-grey hammertone finish. Its upper part is flapped-open to the left for operation and, in closed position, held by a catch-lock.

Against damage, the measuring elements are secured by a protective basket with wide openings that does not hinder the entrance of air. The thermohygrograph is suited for installation, indoors as well as outdoors. The measuring instrument must be mounted in such a way that the air may reach it unhindered, from all sides. In the open, it is to be protected against precipitation and insulation.

Longer utilisation in dry air impairs functioning of the hairs. By bringing it into saturated air occasionally, they get back their original characteristics, however. This regeneration is expediently to be repeated every two to four weeks, in the case of installation in very dry rooms, using the wetting cloth. In the case of installation in a weather-screen, less frequent regeneration will suffice, as the air in the free atmosphere often reaches the dew-point and, thus, regenerates the hair in a natural kind of way.

For an occasional control, adjustment and regeneration a wetting cloth is supplied additionally. If the protecting cage is covered by same, almost full saturation is reached in the so formed closed room within short time, at which the pen should balance out at 96 %. Its position may be corrected by means of the zero-screw.

Hair-harps having become unusable, may be replaced by the user, without difficulty.

Measuring accuracy of bimetal and strand of hairs correspond to highest requirements. The limits of error in the measurement of humidity amount to  $\pm 2,5$  % of the extent of the measuring range.

Temperature is recorded with a highest error of about  $\pm 0,2$  % in the case of mean temperatures and of  $\pm 0,5$  % in the case of higher temperatures (above 50 °C).

At temperatures above 65 °C, as well as in acidiferous atmosphere, one should not use the instruments, as the hairs would suffer, in this case.

The period of rotation of the drum may be chosen according to requirements for one day or one week. On demand there is available a reversible clock for 1 day/1 week against additional charge. The period of running of these clockworks amounts to appr. 9 days.

## Specifications

**79t**

### Thermohygraph

Drum: 93,3 mm diameter x 186 mm height  
Height of recording: 80 mm, each, for temperature and humidity  
Time of rotation of drum: 1 day or 1 week or reversing clock, reversible from 1 day to 1 week  
Dimensions (mm): 340 width x 130 depth x 290 height  
Weight: 4.9 kg

Accessories (no extra charge):

- 1 wetting cloth
- 1 set of charts
- 2 spare-cartridge-pens

### Additional and Spare Parts

**904d**

Spare drum with clock-drive:  
for 1-day's rotation

**904w**

for 1-week's rotation

**904u**

Reversible 1 day/1 week

**78wfd**

Spare-cartridge-pen

**78q**

Spare-metall-pen

**1095v**

1 Bottle of recording ink

**BG49 UG19** (= No.77m)

Spare hair-harp

**BG50 T331** (= No. 79z)

Spare wetting-cloth

**BG38 T029** (= No. 79/40)

Spare measuring bimetal ring, for measuring-extent 80 °C

**BG38 T028** (= No. 79/50)

Spare measuring bimetal ring, for measuring-extent 40 °C and 55 °C

### Recording charts

**Sheet-No. as per table**

1 Set = 100 sheets for daily rotation (24 hours rotation)

1 Set = 54 sheets for weekly rotation (168 hours rotation)

**Charts available**

Period of rotation of recording drum	Measuring range		Sheet-No. of chart	Height of Recording for 1 °C (mm)	Paper-feed (mm/h)
	Thermograph	Hygrograph			
24 hours *)	0 ... +40°C	30 ... 100 %	114t	2,0	12,25
7 days *)	0 ... +40°C	30 ... 100 %	113t	2,0	1,75
1 day	-30 ... +25°C	0 ... 100 %	159t-1	1,45	11,2
	-20 ... +35°C		159t-2		
	-10 ... +45°C		159t-3		
	0 ... +55°C		159t-4		
1 day	-45 ... + 35°C	0 ... 100 %	119t-1	1,0	11,2
	-35 ... + 45°C		119t-2		
	-25 ... + 55°C		119t-3		
	-15 ... + 65°C		119t-4		
	-5 ... + 75°C		119t-5		
1 week	-30 ... + 25°C	0 ... 100 %	115t-1	1,45	1,67
	-20 ... + 35°C		115t-2		
	-10 ... + 45°C		115t-3		
	0 ... + 55°C		115t-4		
1 week	-45 ... + 35°C	0 ... 100 %	116t-1	1,0	1,67
	-35 ... + 45°C		116t-2		
	-25 ... + 55°C		116t-3		
	-15 ... + 65°C		116t-4		
	-5 ... + 75°C		116t-5		

Other measuring-ranges on request.

\*) Fastening by adhesive margin, without clip.

When ordering, please, indicate sheet-No. of chart.

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