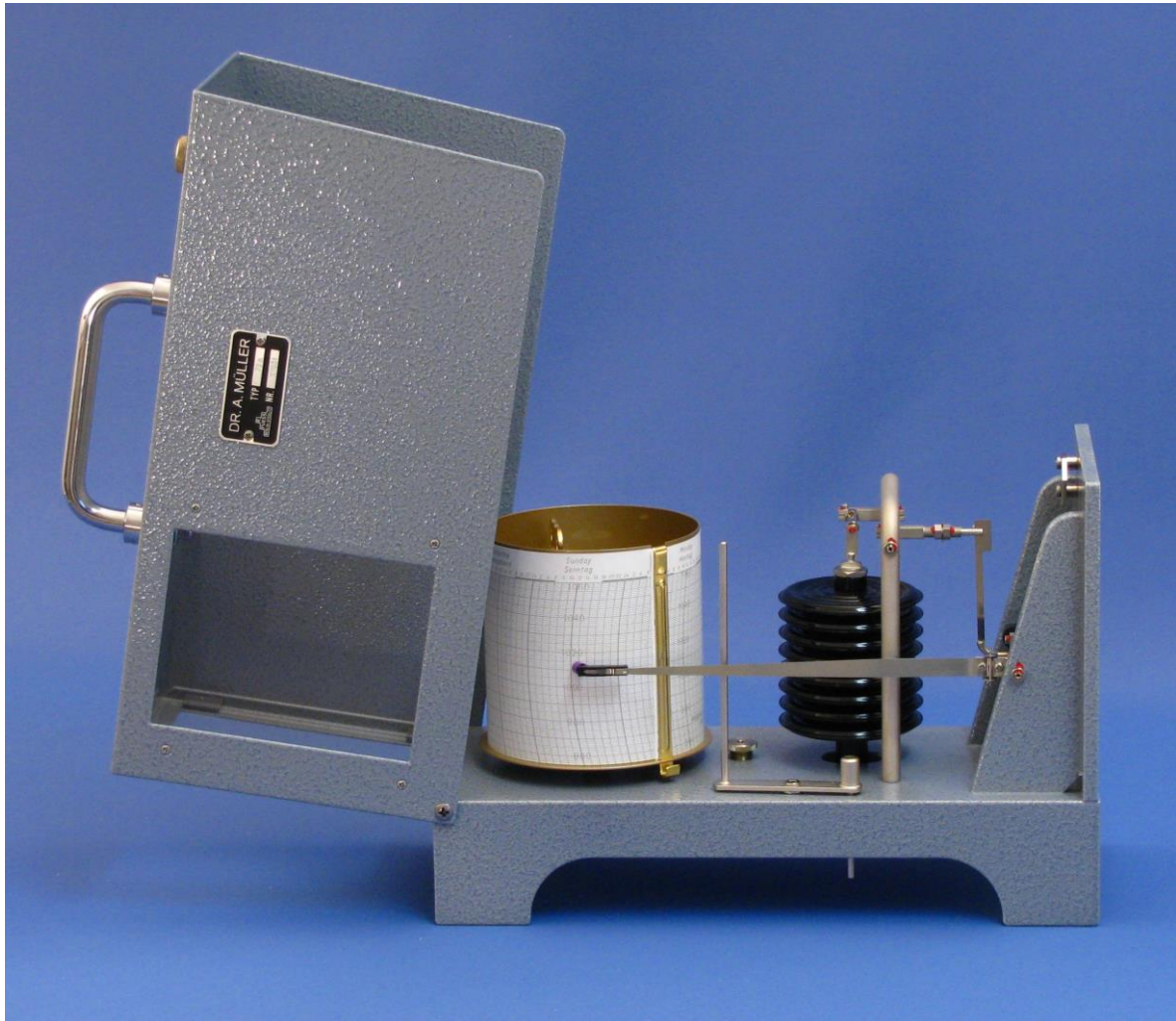


BAROGRAPHS



The aneroid barographs named in the present leaflet are precision instruments for continuous recording of atmospheric pressure.

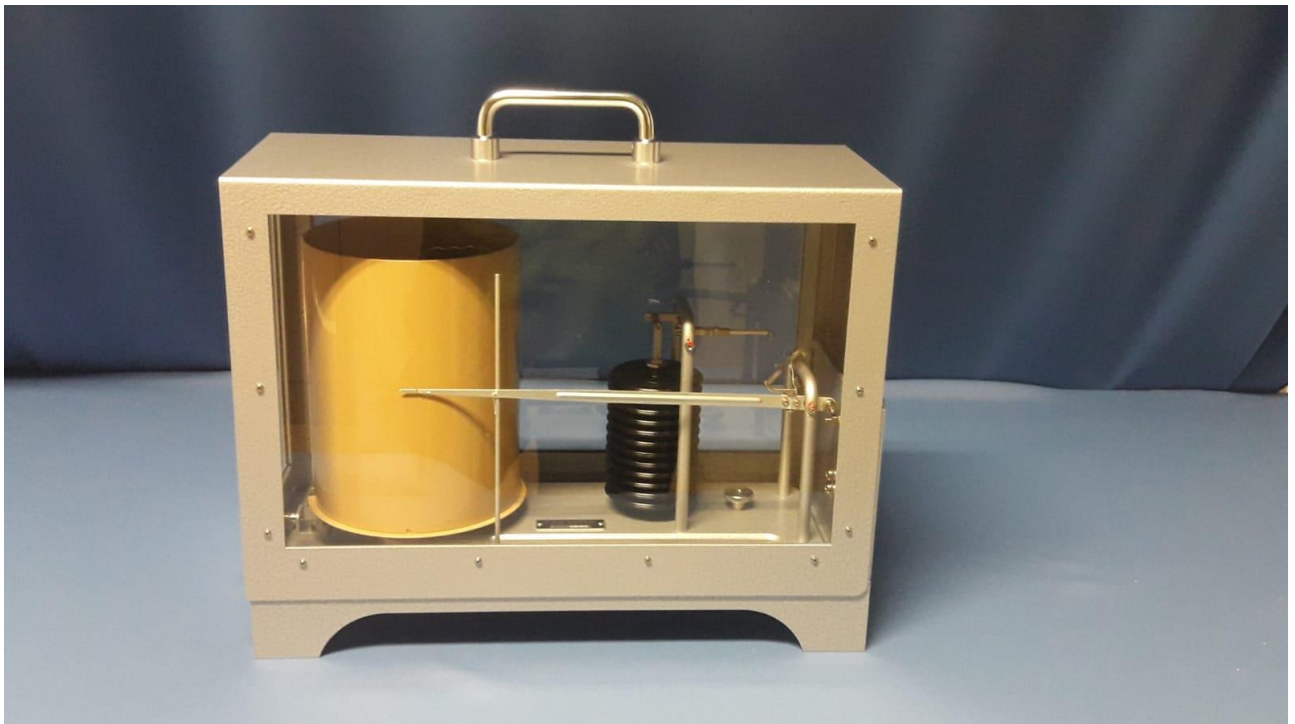
In comparison with the values of atmospheric pressure read on mercury barometers, those obtained by aneroids are independent of the resp. ambient temperature and gravitational acceleration so that the corrections customary with mercury barometers are not applicable.

Thus, aneroid barographs are used everywhere, where there's quick determination of momentary atmospheric pressure of interest, in connection with observation and documentation of barometric pressure.

As measuring element serves a set of aneroid boxes of highly qualified material, which is free of aging and after-effects to an especially high extent. Alteration in length of this latter, depending upon barometric pressure is transmitted to the pen arm, via a lever mechanism, which, thus, records the course of atmospheric pressure in a steady curve on the paper strip, placed tightly around a vertically arranged drum. An over the whole range exact functioning temperature compensation is obtained by means of a bimetal strip intercalated in the transmitting system.

The pen rests against the chart with an always equal pressure, by the proper weight of the pen arm and may be lifted-off from without. By means of a device for time-marks that can be operated from outside, certain moments of time, as for instance, checking to schedule of indication, may be marked on the diagram, in that, by pressure upon a button, projecting from the lateral wall, the pen effects a short vertical stroke.

According to choice, time of rotation of the drum may be one week or one day. Generally, the recordings best to survey are those of one week's rotation. Against additional charge there can be supplied change gear wheels. The time of running of the driving mechanism is appr. 9 days in every case.



As mean atmospheric pressure decreases with increasing height, barographs must always be adjusted to the height of the place of mounting. There is the possibility to readjust and recalibrate the instrument for different heights above sea-level at a calibration institute or at factory.

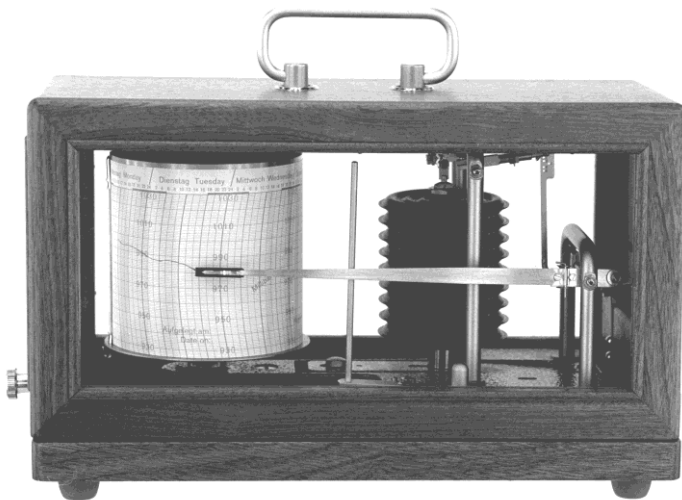
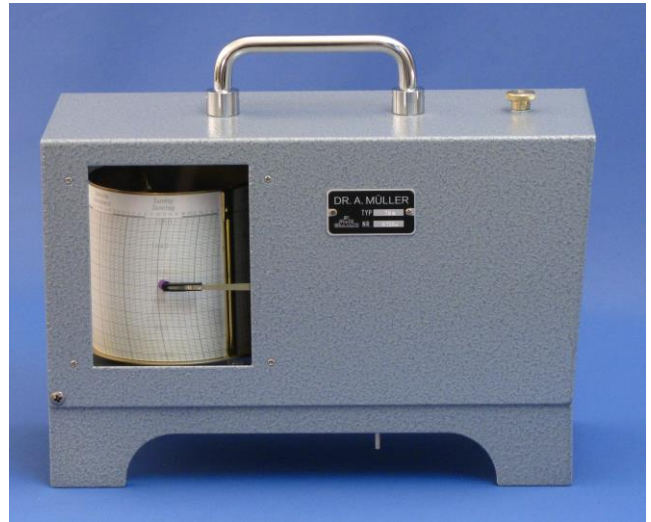
All barographs have been provided with a correction screw, which makes it possible to remove slight deviations in indication, having presented themselves, after comparison with a reliable mercury barometer.

The aneroid barographs are supplied in following types:

Normal Barograph 78a

This Barograph 78a is the preferently used type in national and foreign weather stations and in other places of climatological interest. It registers atmospheric pressure at a height of recording of 0.75 mm for 1 hPa; the limits of error amount to ± 0.3 hPa.

In standard execution the instrument is supplied in a metal casing, which has been provided with a very resistant grey hammertone finish.



Two windows allow to observe the course of atmospheric pressure without having to open the instrument. The upper part of the casing has been fitted by a hinge-screws. For operation of the instrument it is flapped-open. In closed position it is held by a catch look.

If the barographs named are to be installed in a representative locality, where the metal casing does not correspond to the frame of the equipment, they may be supplied with an all-around glazed rare-wood casing. **(model 78aH).**

This instrument will be factory calibrated for the local height of operation.

No.

78a

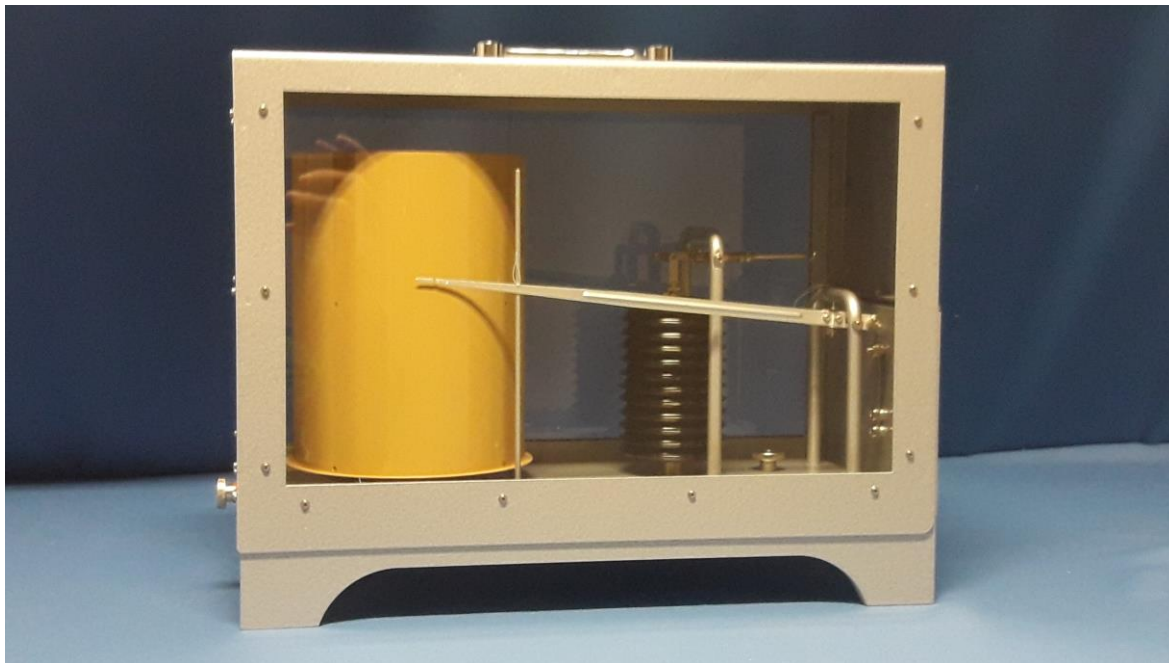
resp.

78aH

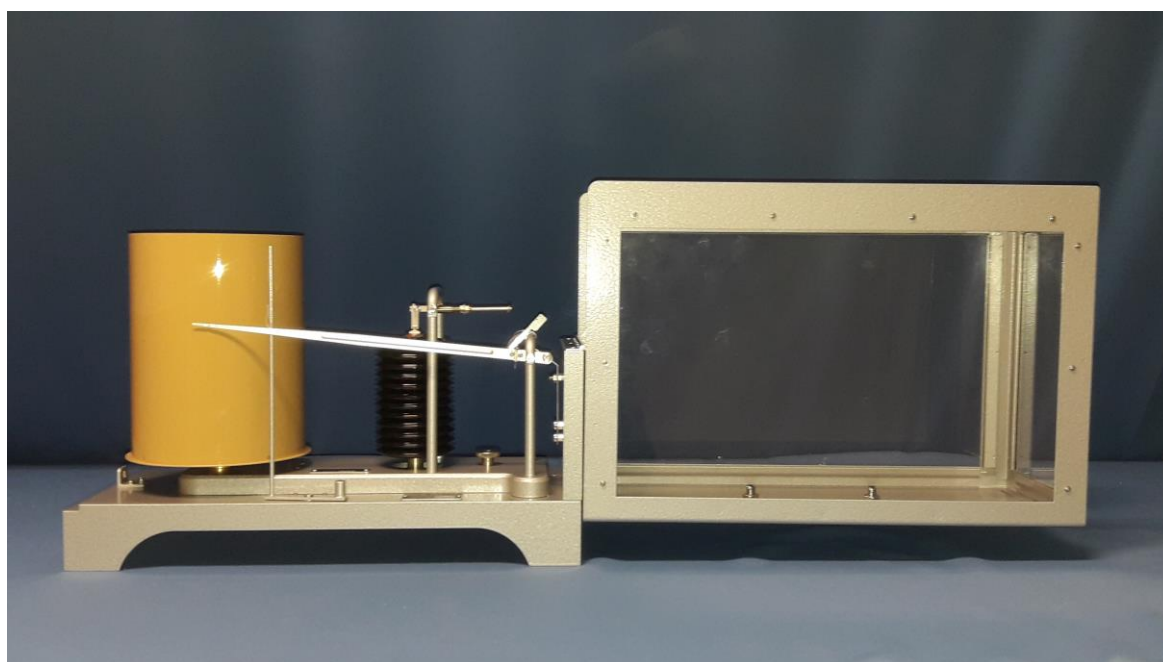
- usable at local heights from -50 to +5700 m, referring to sea level
- usable between 445 and 1060 hPa (resp. mbar)
- paper span of 79 mm for 105 hPa adjusted in a suitable measuring range
- 0.75 mm for 1 hPa
- limits of error amount to ± 0.3 hPa.

Large Barograph 78b and 78bm

This barograph for precision-measurement, as compared to the normal barograph 78a, has the double scale of recording. A corresponding larger number of aneroid-boxes (12 pcs.) guarantees measuring accuracy for recording height of 1.5 mm for 1 hPa; the limits of error amount to ± 0.2 hPa.

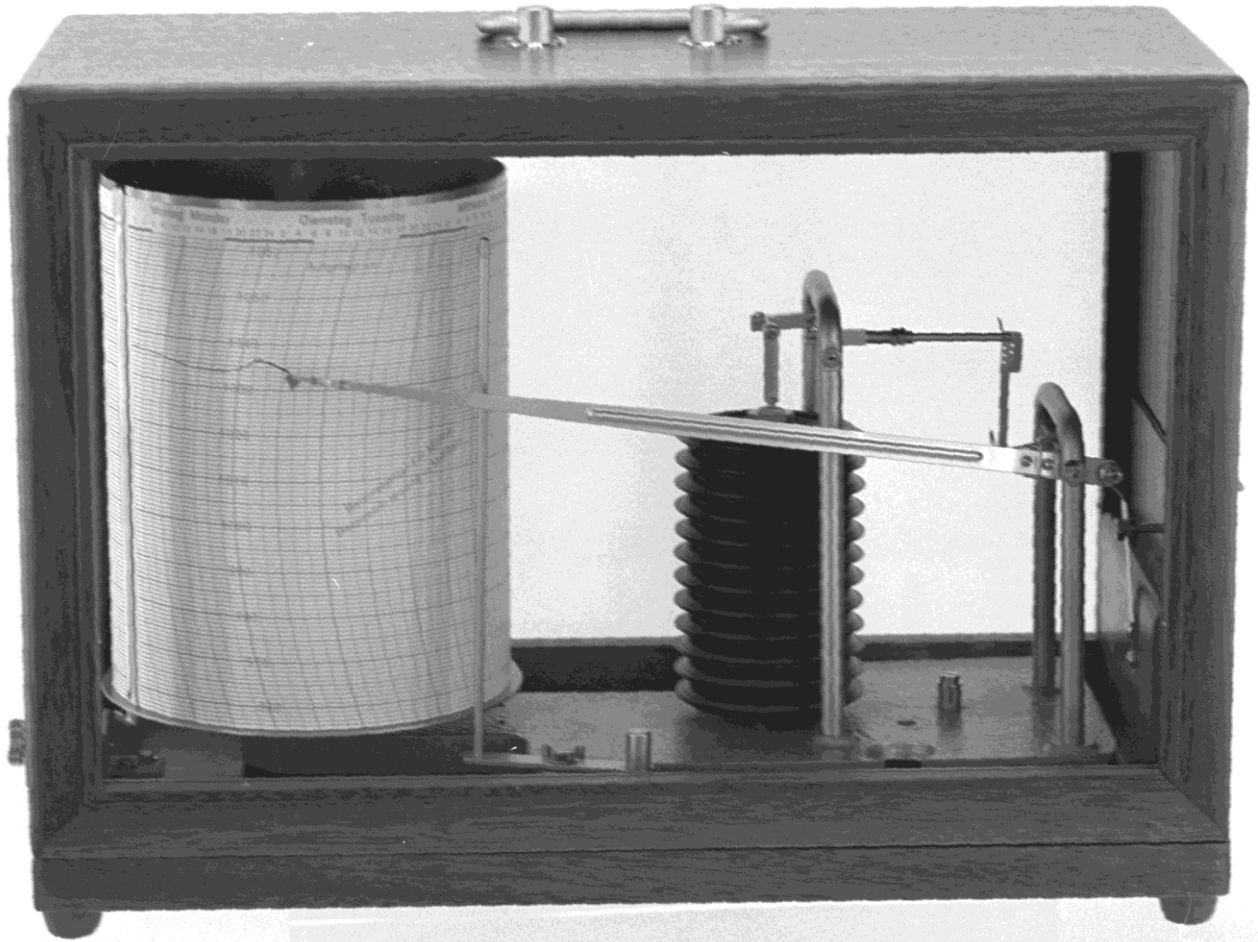


Because of its increased accuracy of reading this instrument has found large introduction in flying, as well as in many meteorological stations. It is used with preference everywhere there, where the more accurate determination of atmospheric pressure and the tendency of the course of atmospheric pressure is of importance.



Large Barograph with metal housing (**model 78bm**)

If the barographs named are to be installed in a representative locality, where the metal casing does not correspond to the frame of the equipment, they may be supplied with an all-around glazed rare-wood casing. (**model 78b**)



The large barograph is supplied in casing of rare wood (**model 78b**) or with metal housing (**model 78bm**)

No.
78bm
resp.
78b

- usable at local heights from -50 to +2700 m, referring to sea level
- usable between 685 and 1060 hPa (resp. mbar)
- paper span of 160 mm for 105 hPa adjusted in a suitable measuring range
- 1.5 mm for 1 hPa
- limits of error amount to ± 0.2 hPa.

Micro-Barograph 78m

This Barograph supplies a specially sensible recording at a height of recording of 3.8 mm per 1 hPa (mbar) change of pressure and enables to recognize very good the course of the fine structure of atmospheric pressure, because of the high resolution.

The instrument is described in detail in leaflet 113.1E.

Specifications:

Version No. Designation	Local Height above sea level in m	Range hPa (mbar)	Recording Height for 1 hPa mm	Recording Height total mm	Recording Drum		
					Diameter mm	Time of Revolution	Paperfeed mm/h
78a / 78aH Normal- Barograph	-50...5700	105	0.75	79	93.3	Daily (26 hours) or weekly (7 1/3 days)	11.2 or 1.7
78bm / 78b Large Barograph	-50... 2700	105	1.5	160	133	Daily (26 hours) or weekly (7 1/3 days)	16.0 2.4

Accessories free of additional charge:

- 1 set of recording charts
- 1 fiber pen (alternative 1 metal pen with 1 bottle of ink)

Dimensions	Width mm	Depth mm	Height mm	Gross weight kg
78a	290	125	205	4.7
78b	400	190	300	5.8
78bm	400	195	300	10.3

Additionally to the designation of type, the following indications are required, when ordering:

- The time of rotation of drum.
- Local height or No. of chart

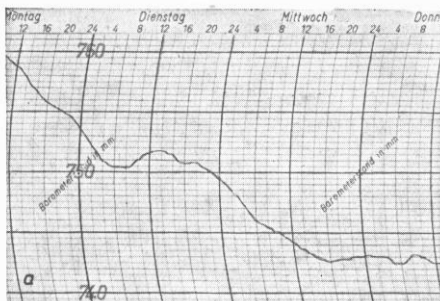


Fig. Reduced reproduction of three original recordings of same time

- Microbarograph 78m
- Large Barograph 78bm resp. 78b
- Standard Barograph 78a

No.	Designation	Range hPa (mbar)	Recording height in mm for 1 hPa
78m	Micro Barograph	66 *	3.8
78bm / 78b	Large Barograph	105	1.5
78a	Normal Barograph	105	0.75

* If occasionally occurs extrema of pressure variation the customer can use the above described device to select the suitable range of 66 hPa (mbar) within the total range of 146 hPa (mbar)

Charts available

Type No.	Local Height above sea level	Range	No. of chart	
			Weekly rotation	Daily rotation
	m over NN	hPa (mbar)		
78a resp. 78aH	-50 ... 150	955 ... 1060	6 – 2 hPa	10 – 2 hPa
	150 ... 400	925 ... 1030	8a	10a
	400 ... 600	905 ... 1010	9a	10o
	600 ... 850	875 ... 980	7	10e
	850 ... 1100	845 ... 950	13	10x
	1100 ... 1350	825 ... 930	6a	10i
	1350 ... 1600	795 ... 900	9	10h
	1600 ... 1800	765 ... 870	8b	10t
	1800 ... 2100	735 ... 840	6b	10n
	2100 ... 2400	715 ... 820	6d	10L
	2400 ... 2700	685 ... 790	6i	10r
	2700 ... 3000	655 ... 760	7a	372a
	3000 ... 3300	635 ... 740	8d	10d
	3300 ... 3600	605 ... 710	8p	10p
	3600 ... 3950	575 ... 680	6r	372
	3950 ... 4300	555 ... 660	6s	372s
	4300 ... 4650	525 ... 630	7b	372b
4650 ... 5000	495 ... 600	7c	372c	
5000 ... 5350	475 ... 580	6t	372t	
5350 ... 5700	445 ... 550	7d	372d	
78bm resp. 78b	-50 ... 150	955 ... 1060	22	21a
	150 ... 250	935 ... 1040	22a	21c
	250 ... 325	925 ... 1030	22m	21k
	325 ... 400	915 ... 1020	22g	21g
	400 ... 525	905 ... 1010	22d	21m
	525 ... 725	885 ... 990	22c	21n
	700 ... 900	865 ... 970	22h	21f
	900 ... 1050	845 ... 950	22b	21b
	1050 ... 1250	825 ... 930	22L	21L
	1250 ... 1450	805 ... 910	22w	21w
	1450 ... 1650	785 ... 890	22p	21p
	1650 ... 1850	765 ... 870	22x	21x
	1800 ... 2050	745 ... 850	30i	28i
	2050 ... 2250	725 ... 830	30k	28k
	2250 ... 2500	705 ... 810	30L	28L
2500 ... 2700	685 ... 790	22r	21r	

Spares and Supplementary Parts:

No.

for 78a resp. 78aH

spare recording drum with inner clockwork for rotation in:

901d 1 day
901w 1 week

for 78bm resp. 78b

spare recording drum with inner clockwork for rotation in:

902d 1 day
902w 1 week

for all types:

78wf Fiber pen
78q Metal pen
1095v 1 bottle of recording-ink

Recording-charts

No. acc. 1 set = 100 charts, for daily rotation
to table 1 set = 100 charts, for weekly rotation

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