

Small astrolabe *MB 90*

Brass

Weight: 230 gram

Diameter: 100 mm

Around 1500

The model for this reproduction is an unsigned astrolabe made around 1500 with a diameter of 197 mm. It may have been made by Georg Hartmann in Nuremberg. The bird-headed star points, the letters used and the design all point to this scholar and compass maker.

The reproduction is scaled down and fixed for the geographic latitude 48° or 52°; it therefore has no insert plates. Engraved are 4° almucantars, 10° azimuth lines, unequal hours and astrological houses. For better orientation, the almucantars 20°, 40°, 60° and 80° are highlighted by a thicker line.

The narrow limb on the front bears a 360° graduation; a 2 x 12 hour graduation cannot be included for reasons of space. Hours 1-16 can be found on the Capricornus ring of the rete. To read the hours, the rete must be rotated so that the zero point of the hour scale is at 0° or 180° of the graduation in Scorpio.

On the reverse side, from the outside to the inside, there is a 4 x 90° division, the zodiac and calendar circle with the beginning of spring (= March 10, 11 days date correction), a shadow square and a diagram of unequal hours in the center.

Star list

(Star positions around 1500)

	Small astrolabe	Bayer	Right ascension	Declination
1	Mirac	α And	11°	+ 35°
2	Aldebaran	α Dew	62°	+ 15°
3	alhaiot	α Aur	70°	+ 45°
4	Rigil (β Ori)	β Ori	73°	- 09°
5	Alhabor	α CMa	96°	- 16°
6	Algomeisa (α CMi)	α CMi	108°	+ 06°
7	Cor Leonis	α Leo	145°	+ 14°
8	Azimech	α Vir	196°	- 09°
9	Alramech	α Boo	209°	+ 22°
10	Alfeta	α CrB	229°	+ 29°
11	Razdalgeti	α Her	253°	+1 7°
12	Vega (α Lyr)	α Lyr	275°	+ 38°
13	Alkair	α Aql	290°	+ 08°
14	Sceat	β Peg	337°	+ 24°

Additional stars on request (without inscription)

		Bayer	Right ascension	Declination
15	(Dubhe)	α UMa	152°	+ 65°
16	(Antares)	α Sco	241°	- 25°
17	(Markab)	α Peg	340°	+ 14°

Applicationexample for the geographic latitude 48° N

Sun

On the morning of August 23, the sun is 35° above the horizon. At what clock did the measurement take place?

1. The sun's location on the ecliptic is Virgo 0° (after date correction).
2. The sun position is turned to the 35° almucantars (left half of the insert plate = morning). The pointer can be used to read 311° on the limb. To determine the true local time, rotate the rete so that the zero point of the hour scale at Scorpio is at 0° or 180° of the graduation. The true local time is 08.44 clock.

3. Corrections:

True local time	08.44 clock
Equation of time August	23 + 02 min.
Zone difference, e.g. Central Switzerland	+ 27 min.
Mean zone time	09.13 clock
Daylight saving time	10.13 clock

Stars

On the night of February 23, Aldebaran is 25° above the western horizon. At what clock did the measurement take place?

1. The sun's location on the ecliptic is pisces 5° (after date correction).
2. The rete is rotated until the star points of Aldebaran lie on the 25° almucantars of the insert plate (West = right side). Starting from the solar location 5° pisces, 155° can be read with the pointer on the limb. To determine the true local time, turn the rete so that the zero point of the hours scale in Scorpio is at 0° or 180° of the graduation. The true local time is 22.20 clock.

3. Corrections:

Mean local time	10.20 p.m.
Präzession, ca.	+ 20 Min.
Zone difference, e.g. Central Switzerland	+ 27 min.
Mean zone time	23.07 o'clock

Literature

Description of the original instruments: Auction Greppin, Zurich 1975, and Auction Linton, Paris 1980

As a supplement to this, a description of the classic astrolabe is offered as a PDF download under the SERVICE section of our website.

CHRONOS MANUFAKTUR in July 2024