I N T E G R A T I N G P R E C E S S I O N C A M E R A

OPERATING INSTRUCTIONS

200-1965

E N R A F - N O N I U S
DELFT - HOLLAND

tion = 7 x 8 = 56 minutes). The main frequency must be 50 or 60 cycles.
The driving gear is based on the principle of worm and wormwheel. Engaging and disengaging the driving gear is done by means of knob (IV-43).
When the gear is disengaged, arc (IV-48) can be rotated freely with knob (IV-45).
Any clearance between worm and wormwheel, appearing from play in arc (IV-48) can be corrected with screw (IV-44).

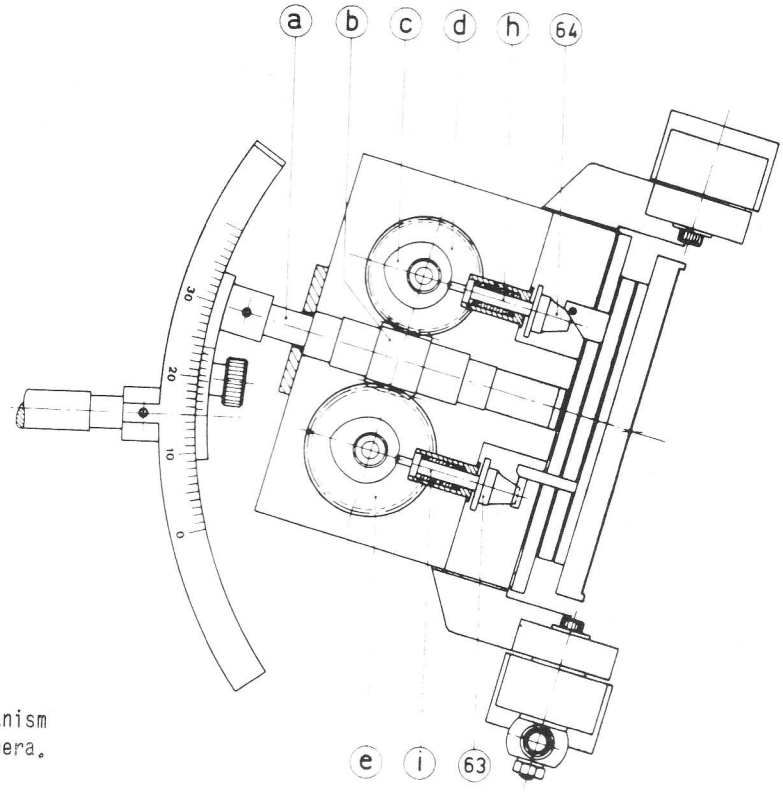
The knob (IV-45) is used for rotating and oscillating the precession arc (IV-48). For rotating the precession arc, the knob (IV-45) must be pulled backwards to its end.

Setting the oscillation angle the knob (IV-45) must be placed in the forward position and locked with a screw (IV-28b). The desired oscillation angle is adjusted on the dial (IV-28) and locked with screw (IV-28a). By turning to the right of the precession arc (IV-48) viewed from the knobside, the number of turns will be counted on the counter (IV-75). Reset with knob (IV-76).

The precession arc (IV-48) is provided with a graduated scale (0-30o), on which a precession angle ($\bar{u}$) can be set.

Readings are made with index (IV-49) and the arc is locked by means of screw (IV-50).

Chambers (VI-54a) contain springs for compensating any unbalance. The film-to-crystal distance can be varied by loosening lock handle (IV-60), after which adjustments are made with (IV-57) and the distance is read on scale (IV-58) and vernier (IV-59).

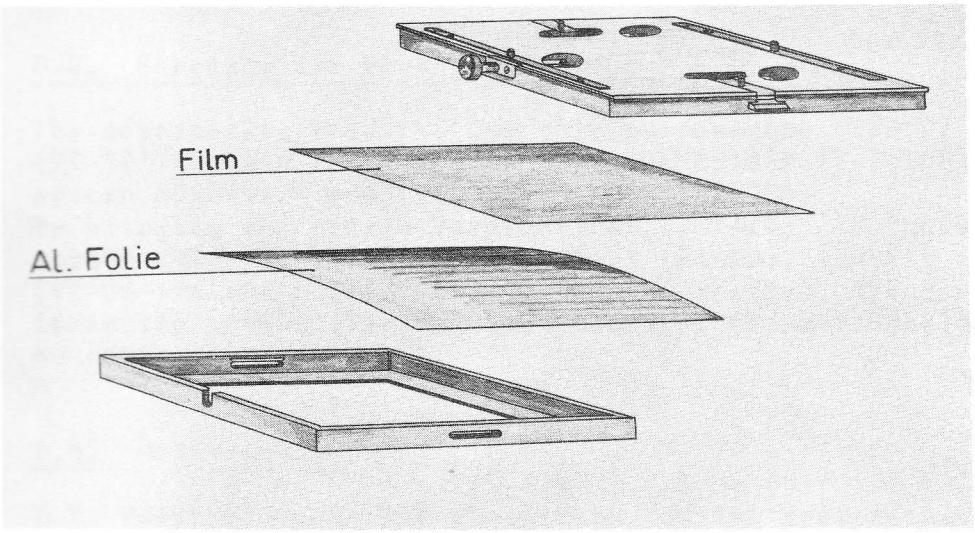


The integrating mechanism of the precession camera.

The vertical as well as the horizontal integration are made by means of the interchangable coins (VI-63) and (VI-64). The standard coins are 0,0 - 0,5 - 1,0 - 1,5 - 2,0 - 2,5 mm. On special demand other coins can be delivered.

B.3. Cassette

The size of the film is 125 x 125 mm^2.
To keep the film flat in the cassette, which is of great importance, approximately 0,2 mm thick aluminium foil is used instead of black paper. Before inserting, the foil sheet is to be given the form shown in the sketch.
Aluminium foil is especially recommended when using Mo X-rays.

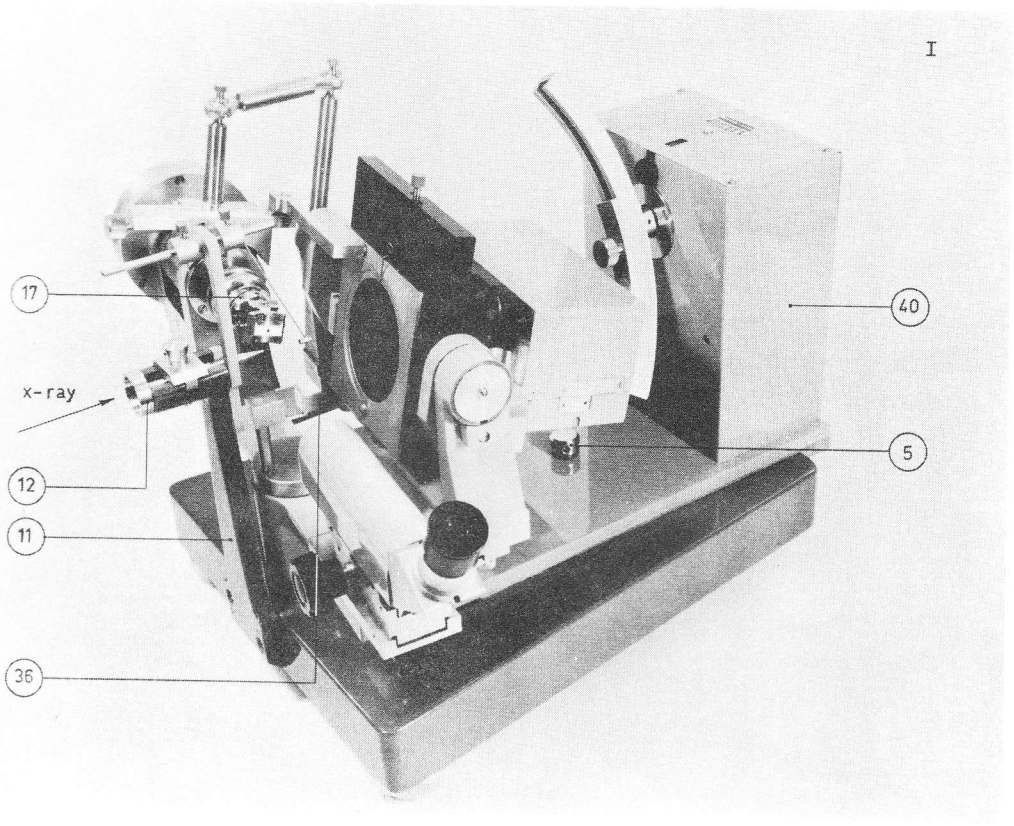


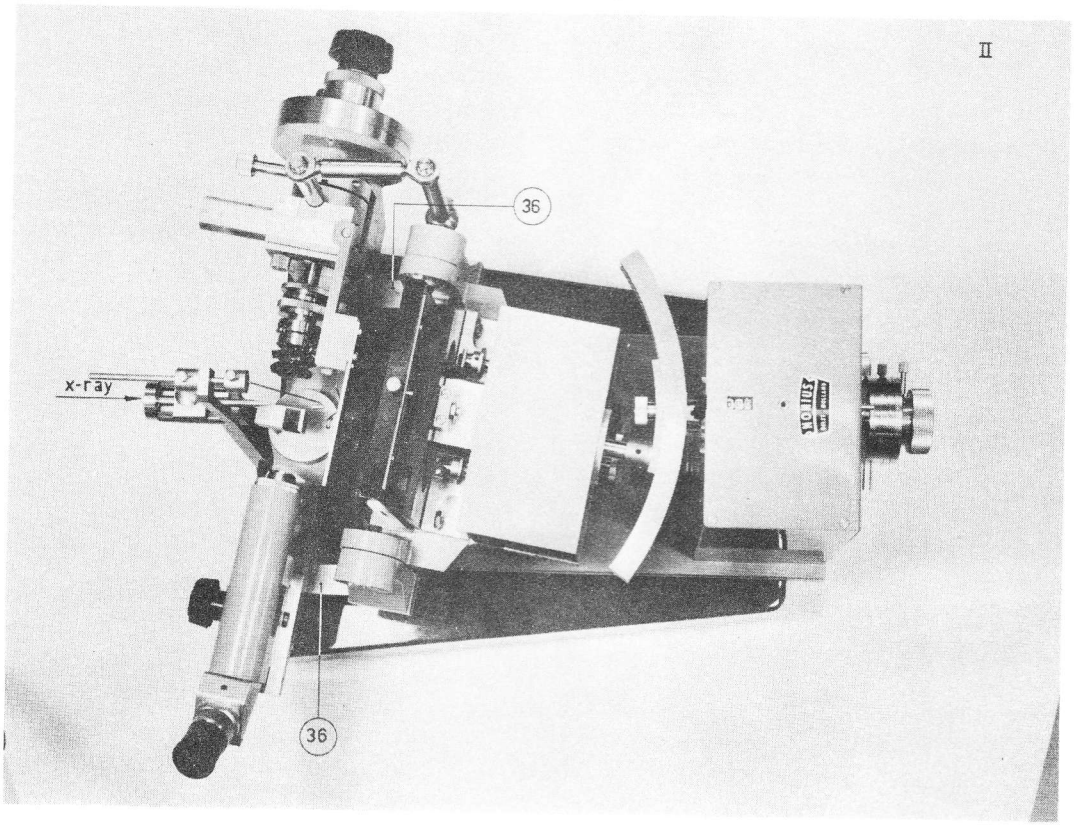
For giving marking points on the film the shutters (VII-71) can be used. Mounting the cassette the pins (VII-72a) and lock (VII-72b) correspond with the cassette bearings (VI-61) and the cassette slot (VI-62).

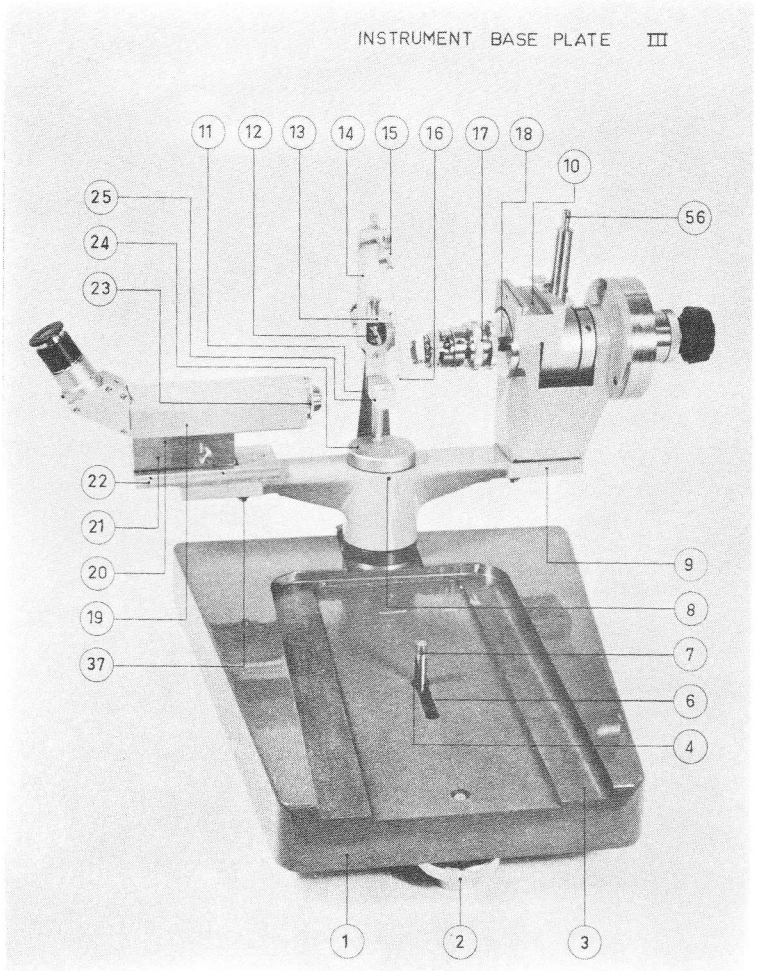
C. Conversion instructions.

Changing the crystal-to-film distance = F.

As a standard, the precession camera is supplied with connecting bars F - 60 mm.
Connecting bars for crystal-to-film distances F = 75 and 100 mm can be supplied as accessories (4927).
Changing these bars must be carried out in accordance with the following method.
Set the precession angle ($\bar{u}$) at zero. Loosen nut (I-5) and remove the four screws (V-38) of the connecting bars (II-36).
By removing bolts (V-35a), the connection bar (V-35) can be removed and changed.


I
17
40
x-ray
5
12
11
36


II
36
x-ray
36


INSTRUMENT BASE PLATE III
11
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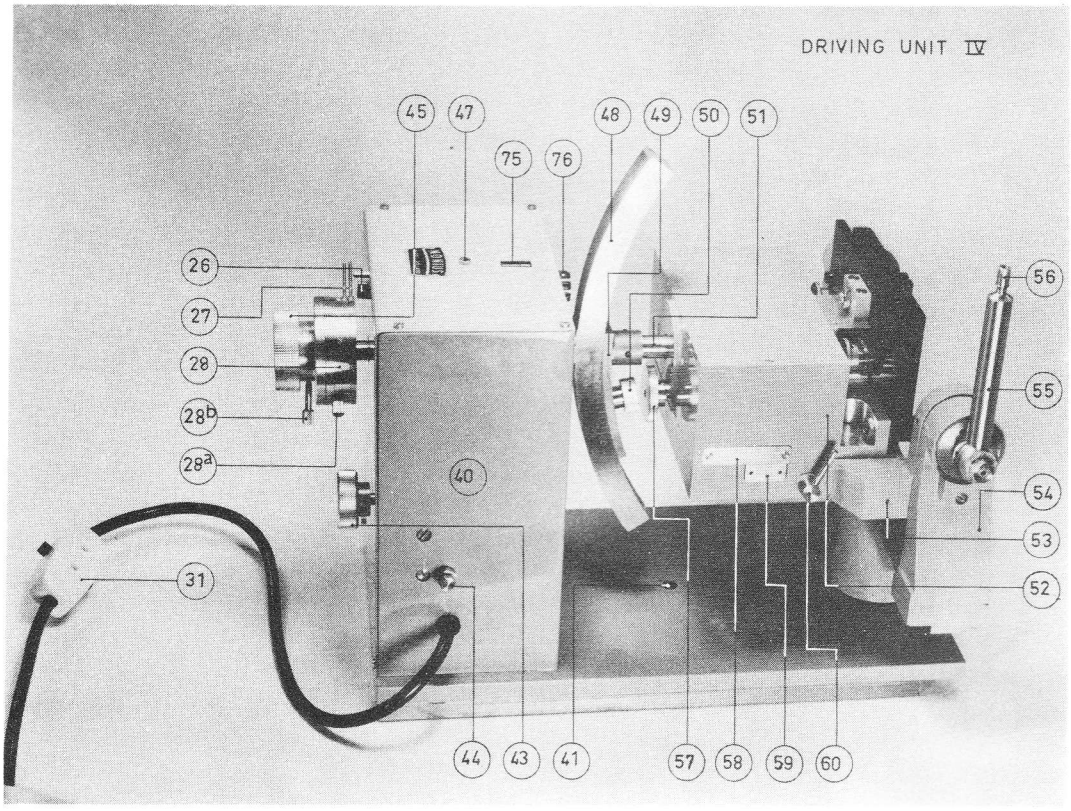
DRIVING UNIT IV
45
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48
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75
76
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28b
28a
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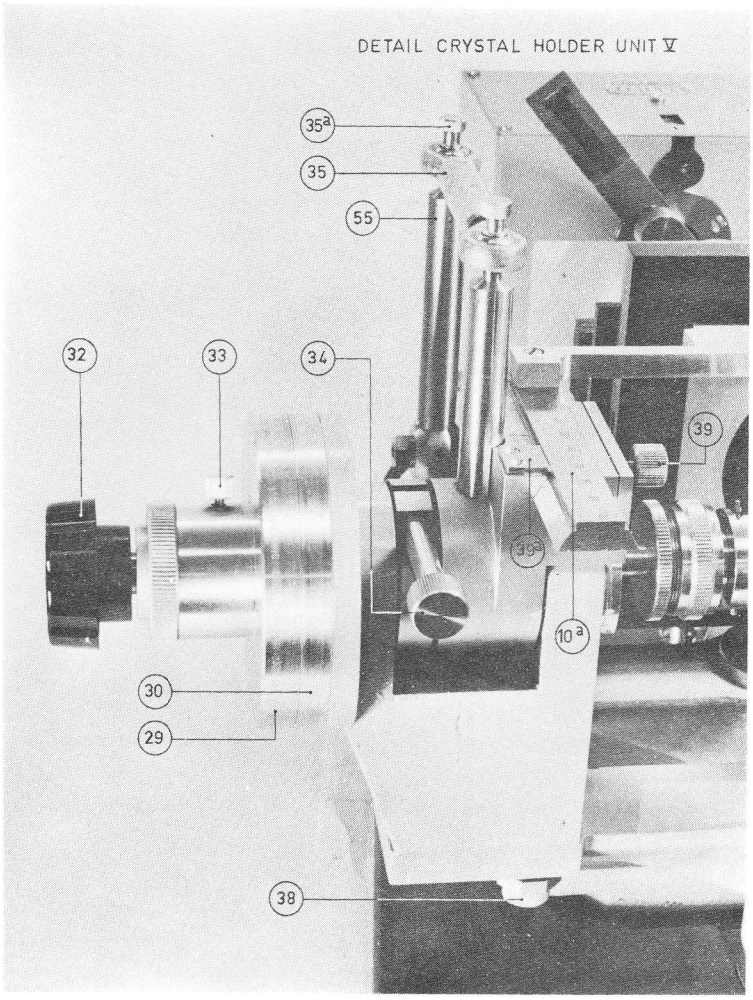
DETAIL CRYSTAL HOLDER UNIT V
35a
35
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35a
10a
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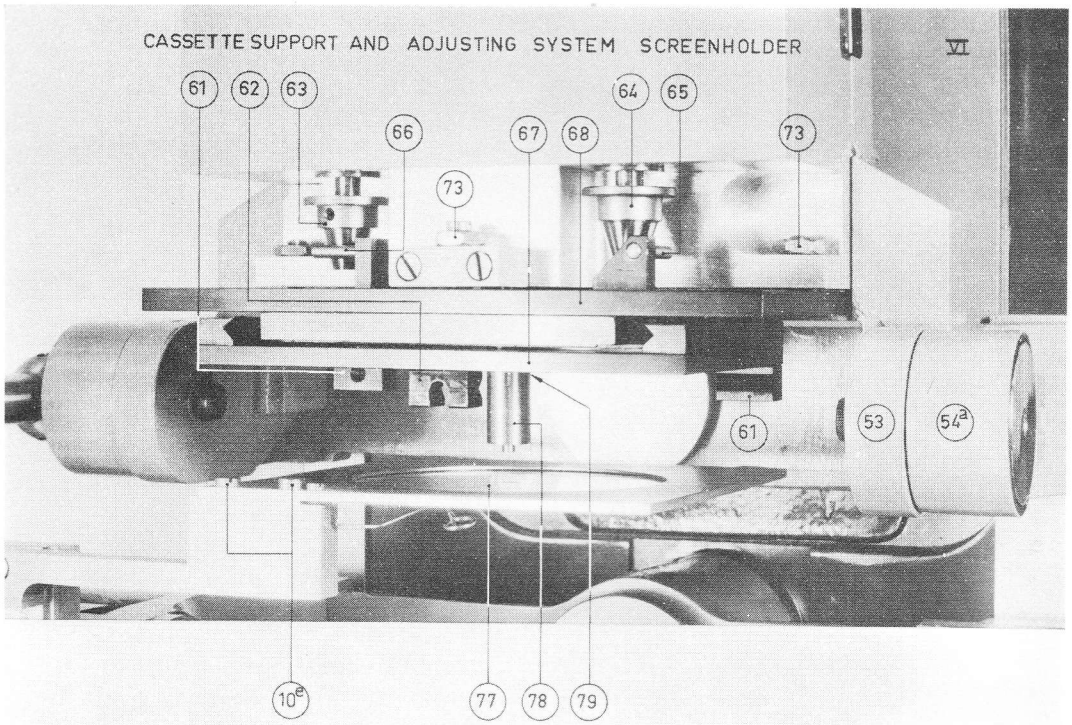
CASSETTE SUPPORT AND ADJUSTING SYSTEM SCREENHOLDER VI
61
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73
61
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54a
10c
77
78
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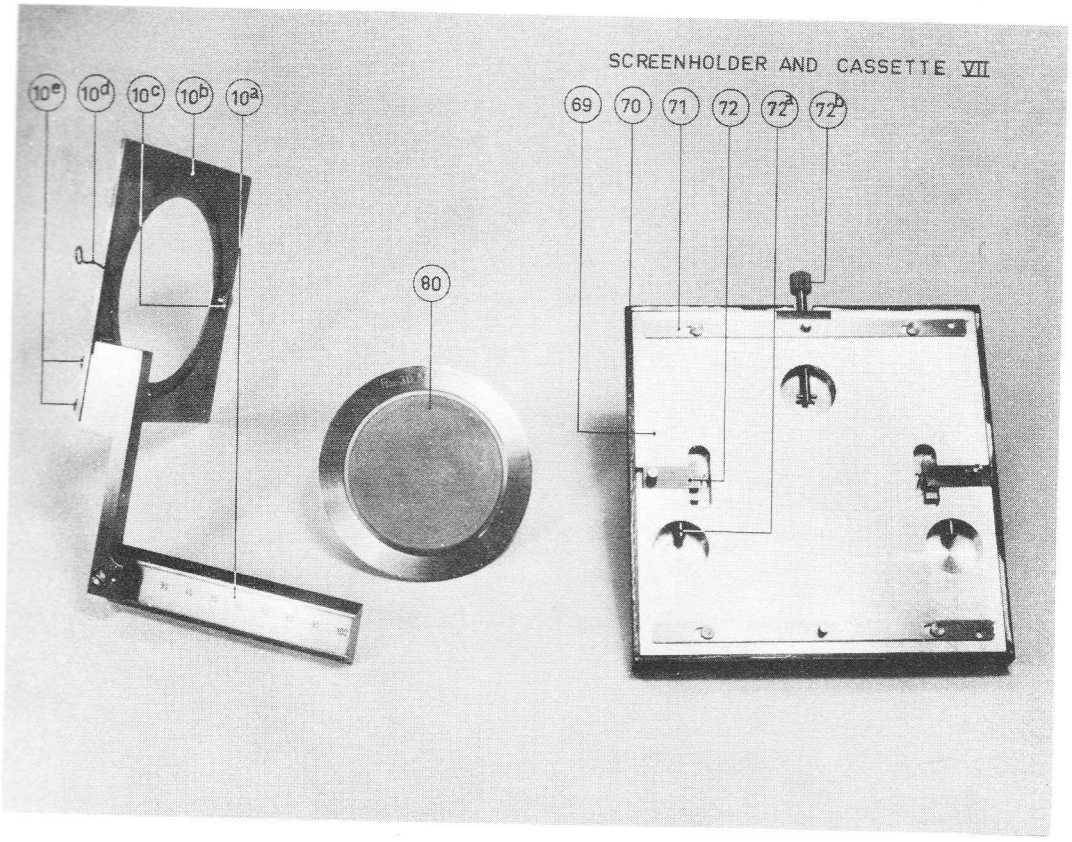
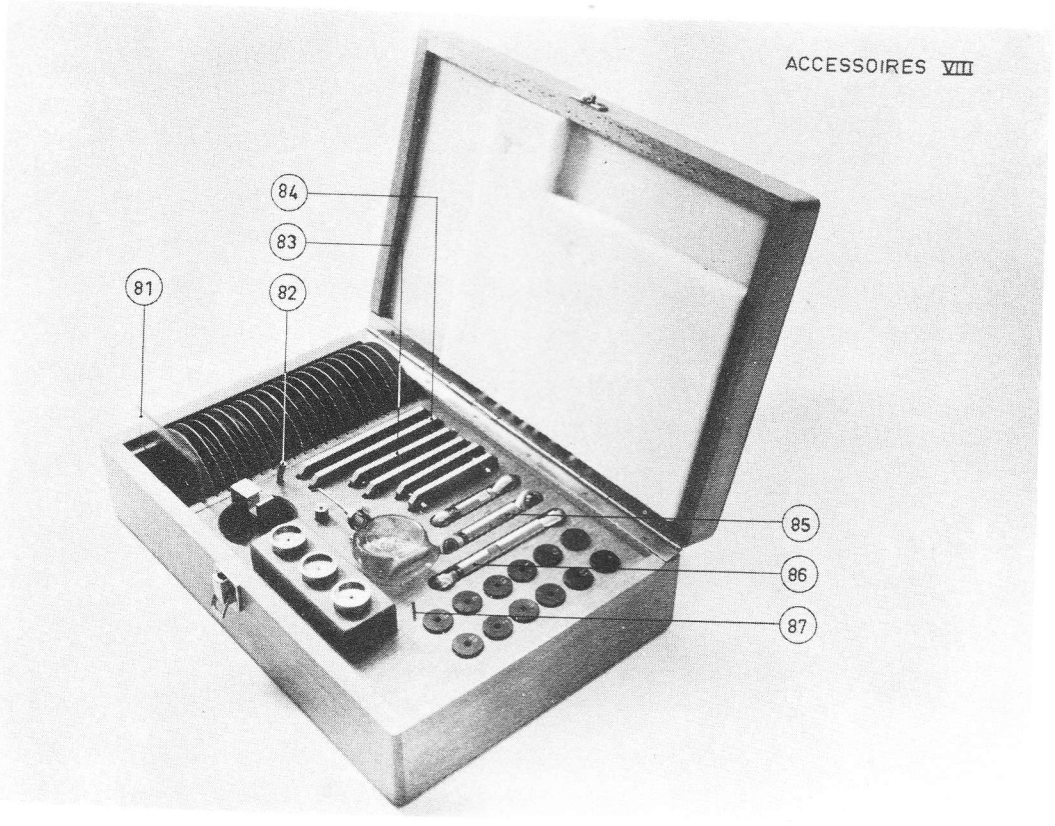

SCREENHOLDER AND CASSETTE VII
10e
10d
10c
10b
10a
80
69
70
71
72
72a
72b


ACCESSOIRES VIII
84
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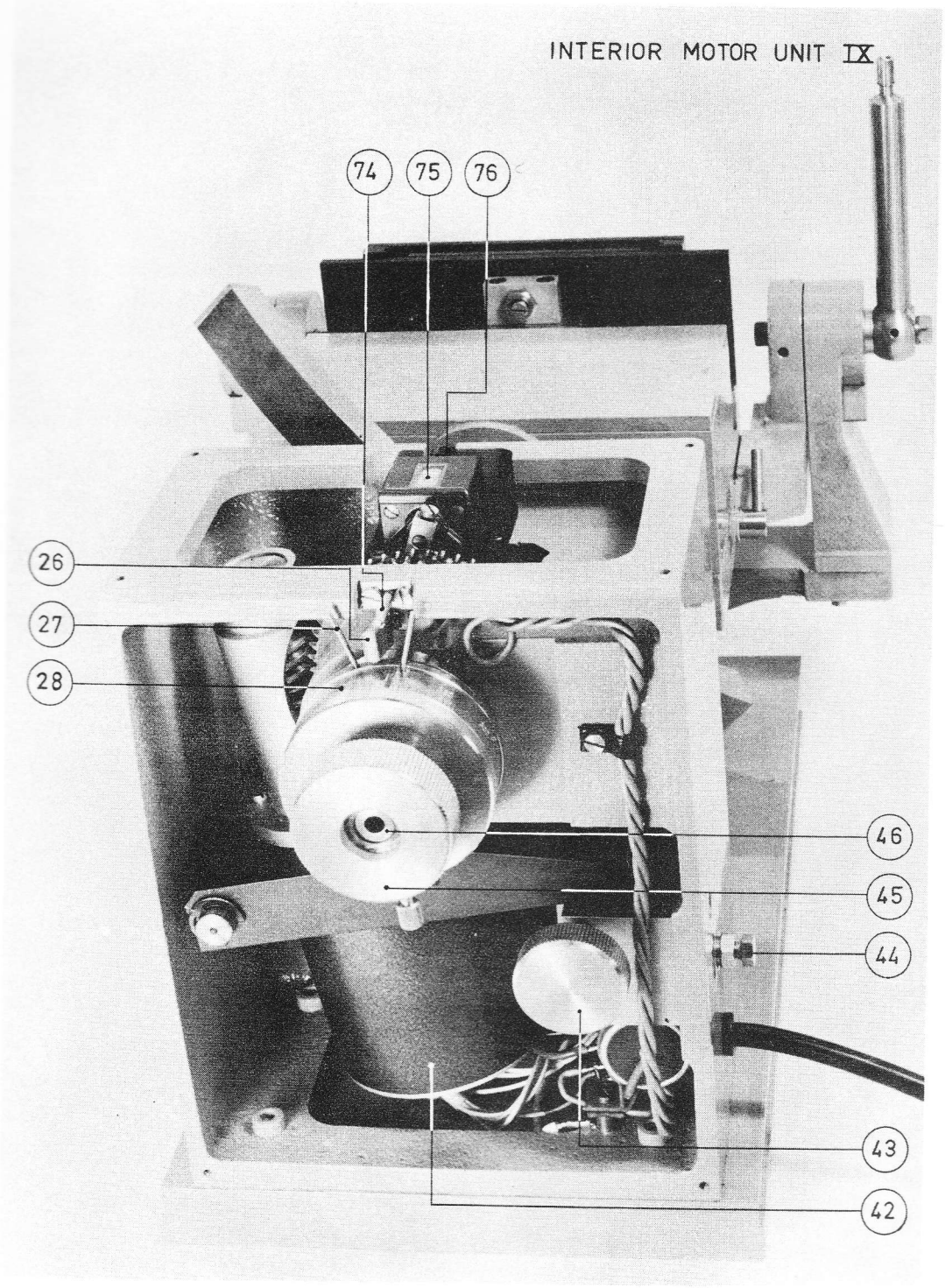
INTERIOR MOTOR UNIT IX
74
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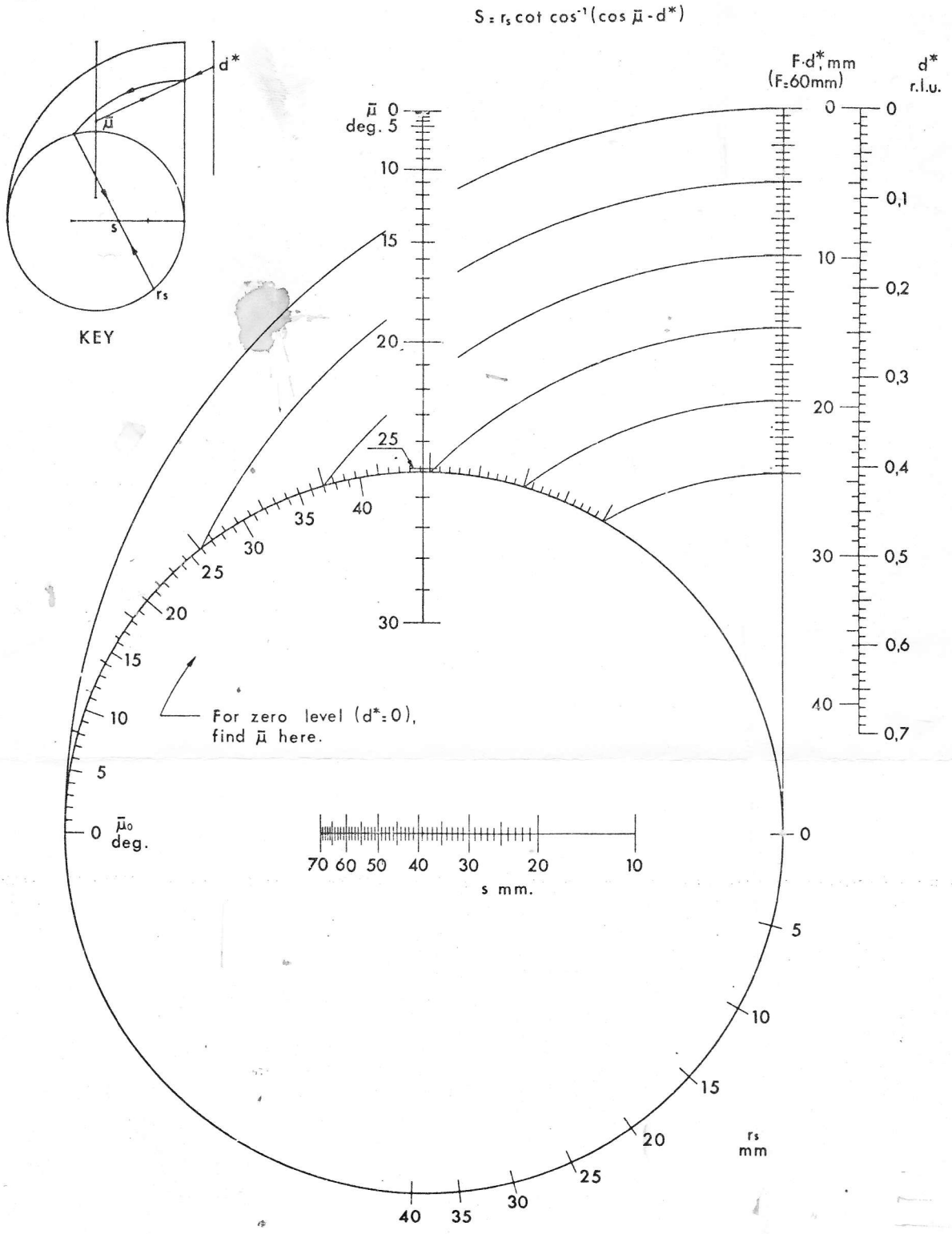

key:

$d^* = \frac{\lambda}{c}$ c = c-axis setting

μ = precession angle (to choose) choose)

r_s = radius screen (to choose) choose)

s = crystal to screen distance