higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

T740**(E)**(A12)T

NATIONAL CERTIFICATE: MULTI-DISCIPLINARY DRAWING OFFICE PRACTICE

GENERAL DRAUGHTING

(8090194)

12 April 2018 (X-Paper)
09:00–13:00

CLOSED-BOOK EXAMINATION

REQUIREMENTS: **A2 drawing sheet**

Calculators may be used.

This question paper consists of 4 pages and 7 diagram sheets.

Copyright reserved

DEPARTMENT OF HIGHER EDUCATION AND TRAINING
REPUBLIC OF SOUTH AFRICA

NATIONAL CERTIFICATE: MULTI-DISCIPLINARY DRAWING
OFFICE PRACTICE
GENERAL DRAUGHTING
TIME: 4 HOURS
MARKS: 100

INSTRUCTIONS AND INFORMATION

1. Answer ALL the questions.
2. Read ALL the questions carefully.
3. Number the answers according to the numbering system used in this question paper.
4. ALL drawings must be large, clear, neat and in good proportion.
5. Keep questions and subsections of questions together.
6. Write neatly and legibly.

Copyright reserved

QUESTION 1: GEOMETRIC CONSTRUCTION

FIGURE 1, DIAGRAM SHEET 1 (attached), shows a guide plate.

Draw, to scale 1 : 2, the guide plate.

Insert any dimensions.

Print the title and scale centred beneath the drawing.

Show ALL construction lines. **[20]**

QUESTION 2: DEVELOPMENT

FIGURE 2, DIAGRAM SHEET (attached), shows a part of a pipe with an oblique cut at the top and a radial cut at the bottom.

Draw the given views in first-angle orthographic projection.

Develop the front view.

Show ALL construction lines. **[20]**

QUESTION 3: INTERPENETRATION

FIGURE 3, DIAGRAM SHEET 3 (attached), shows a conical roof with a horizontal outlet.

Draw the front and top views.

Use projection lines to draw the point of interpenetration on both the front and top views. **[15]**

Copyright reserved

QUESTION 4: ORTHOGRAPHIC PROJECTION

FIGURE 4, DIAGRAM SHEET 4 (attached), shows the auxiliary and front views of a right regular solid and a cutting plane A–A.

Draw:

4.1 The given views

4.2 A sectional top view

4.3 A sectional left view

Show ALL hidden details. **[24]**

QUESTION 5: THE LOCI

FIGURE 5, DIAGRAM SHEETS 5A and 5B (attached), shows two views drawn in first-angle orthographic projection.

Draw a conical helix according to the given information and represent only ONE revolution.

Show hidden details **[15]**

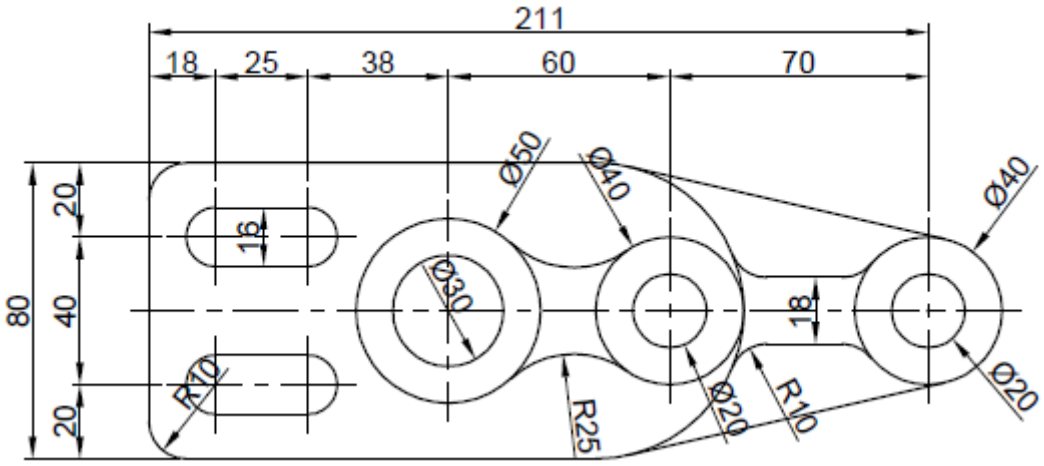
QUESTION 6: THEORY

Copy the block given in FIGURE 6, DIAGRAM SHEET 6 (attached), and give any THREE drawing instruments as well as its uses. (3 × 2) **[6]**

TOTAL: 100

Copyright reserved

DIAGRAM SHEET 1



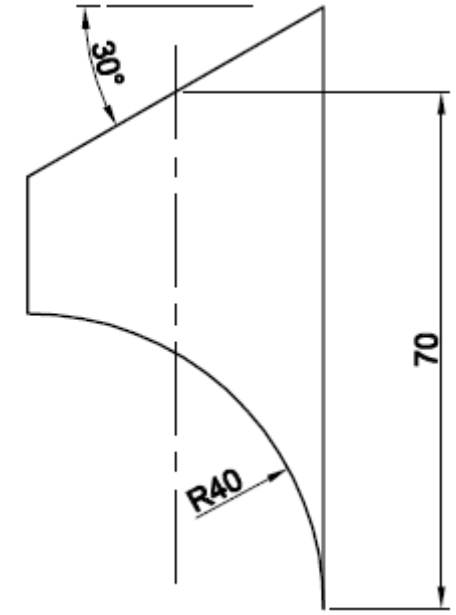
GUIDE PLATE

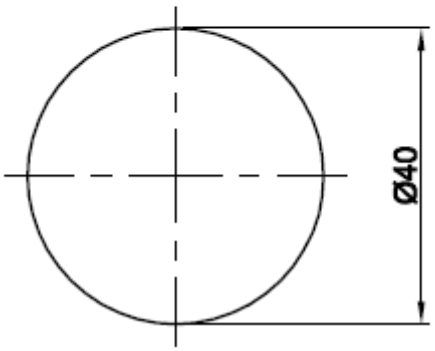
SCALE 1 : 2

FIGURE 1

Copyright reserved

DIAGRAM SHEET 2



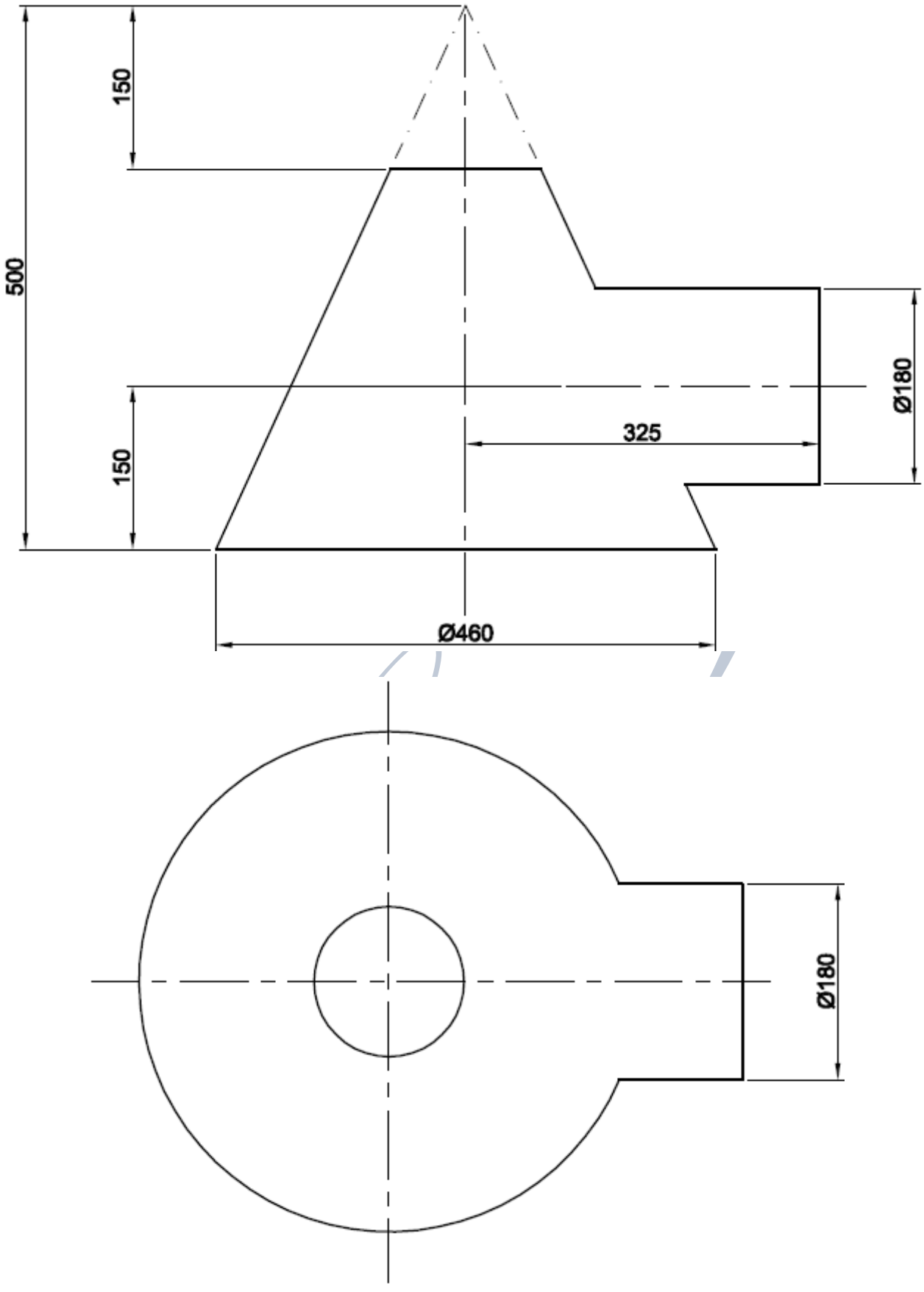


SCALE 1 : 1

FIGURE 2

Copyright reserved

DIAGRAM SHEET 3



CONICAL ROOF WITH DUCT
SCALE 1 : 5
FIGURE 3

Copyright reserved

DIAGRAM SHEET 4

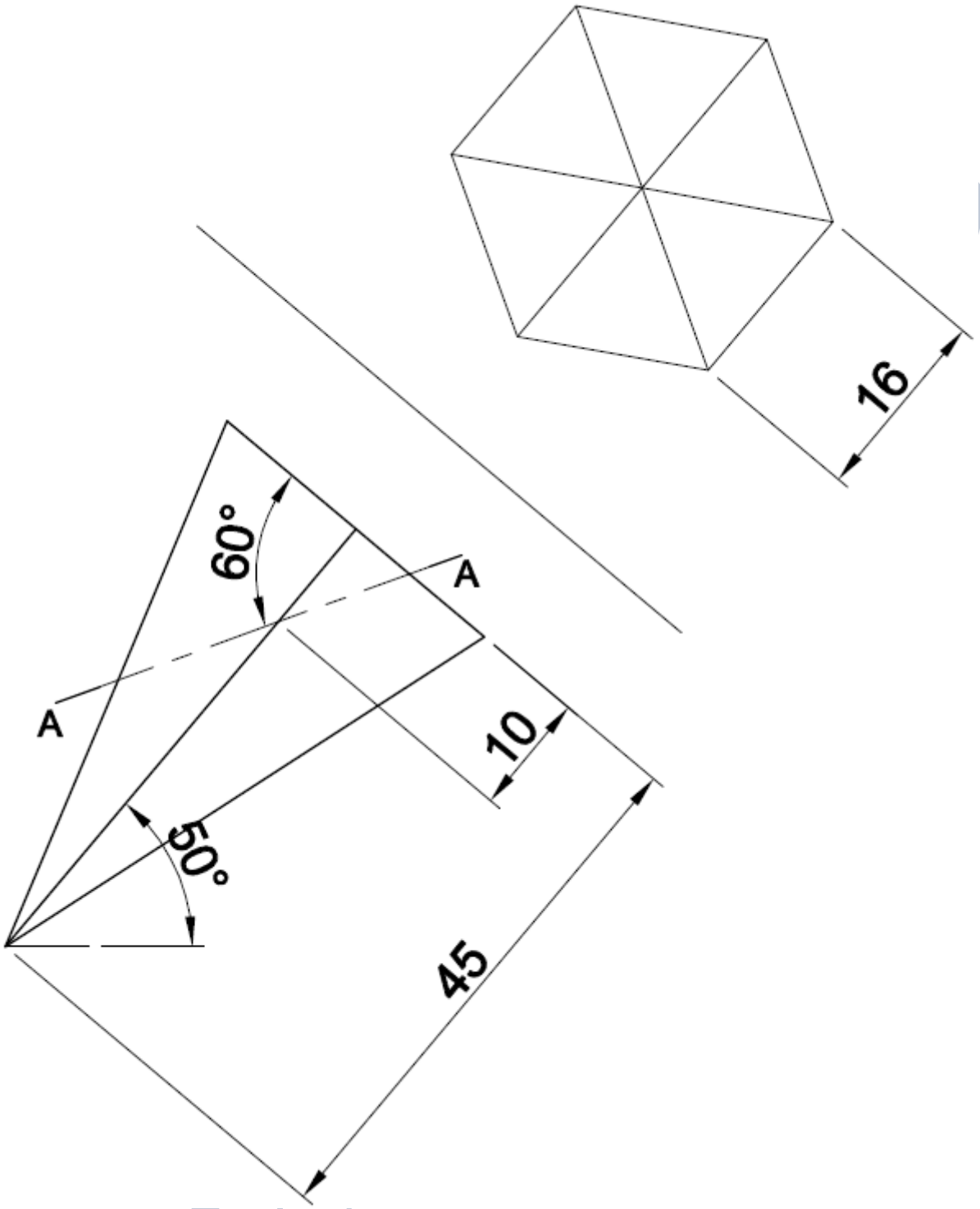
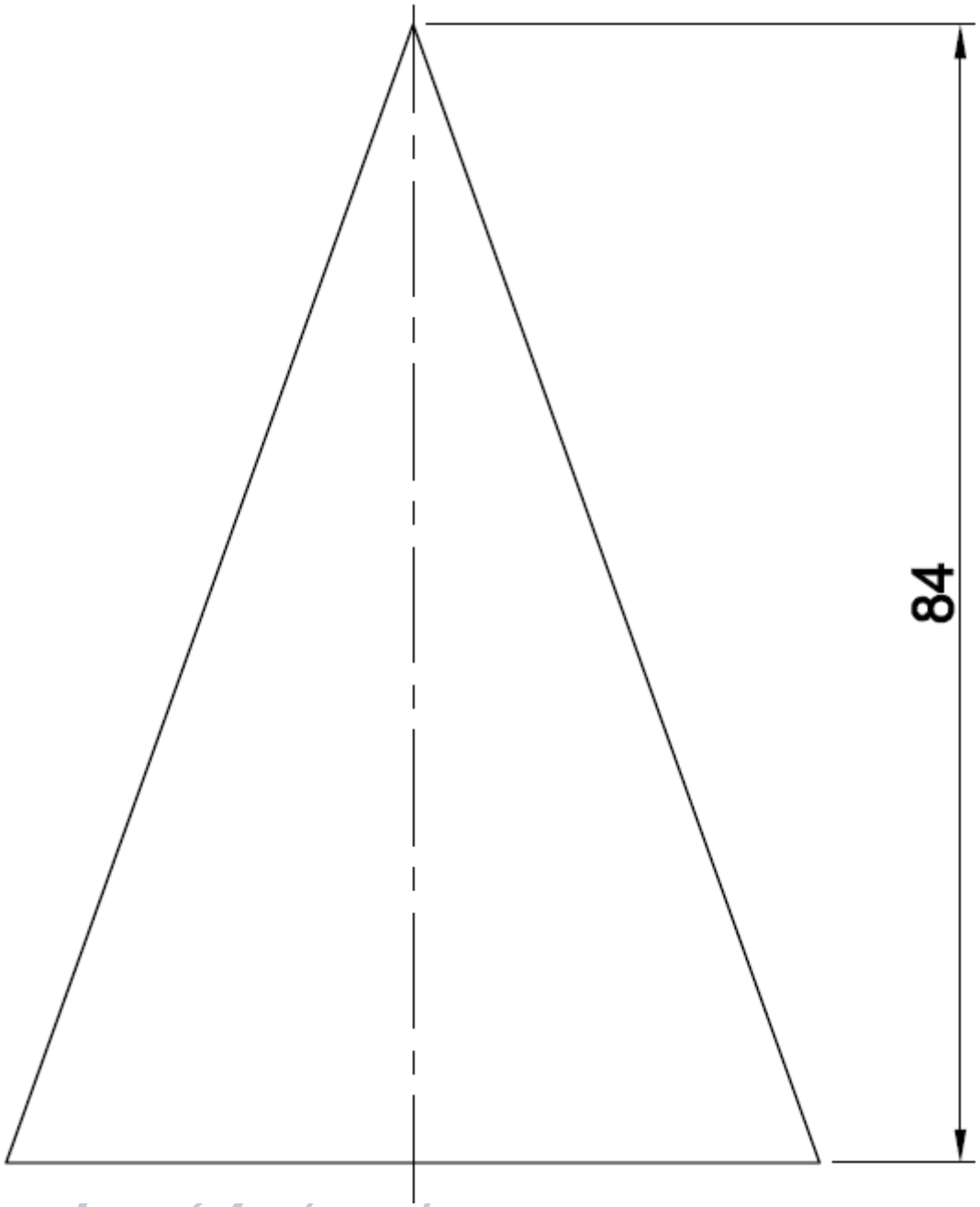


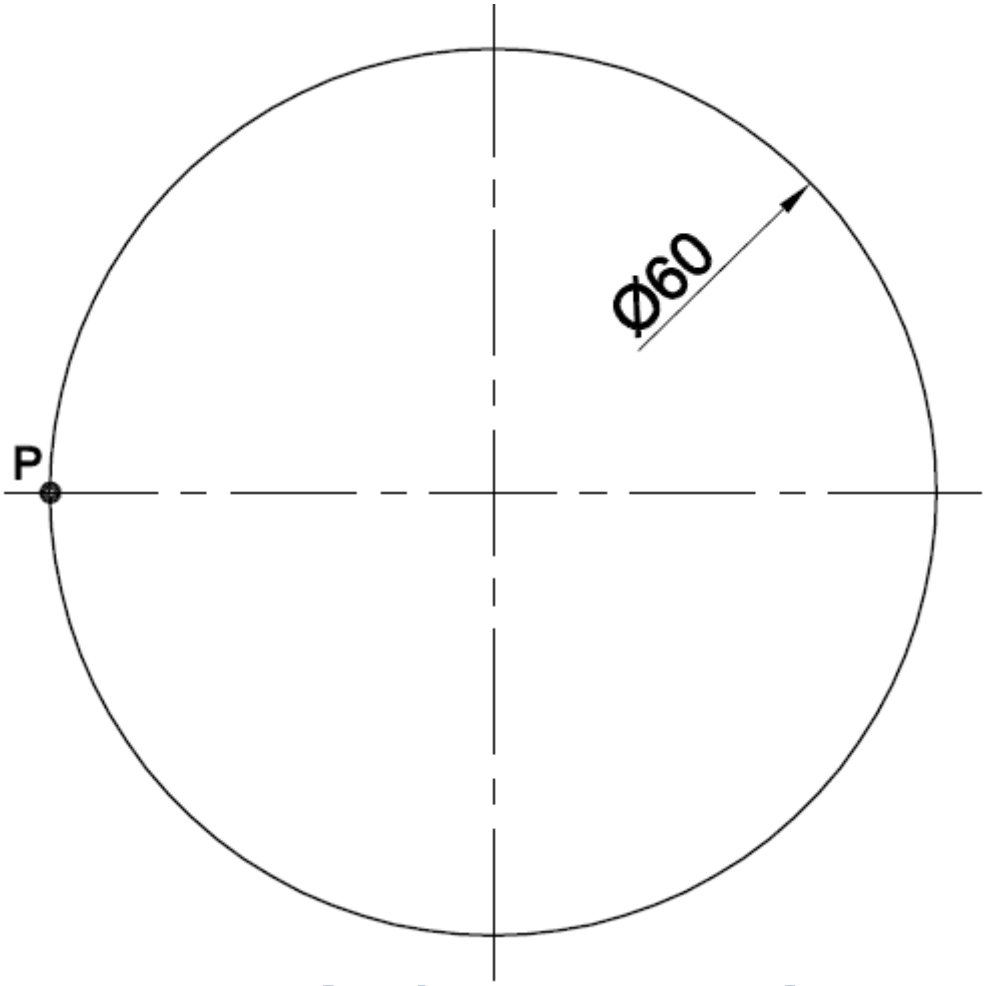
FIGURE 4

DIAGRAM SHEET 5A



Copyright reserved

DIAGRAM SHEET 5B



CONICAL HELIX

SCALE 1 : 1

FIGURE 5

Copyright reserved

DIAGRAM SHEET 6

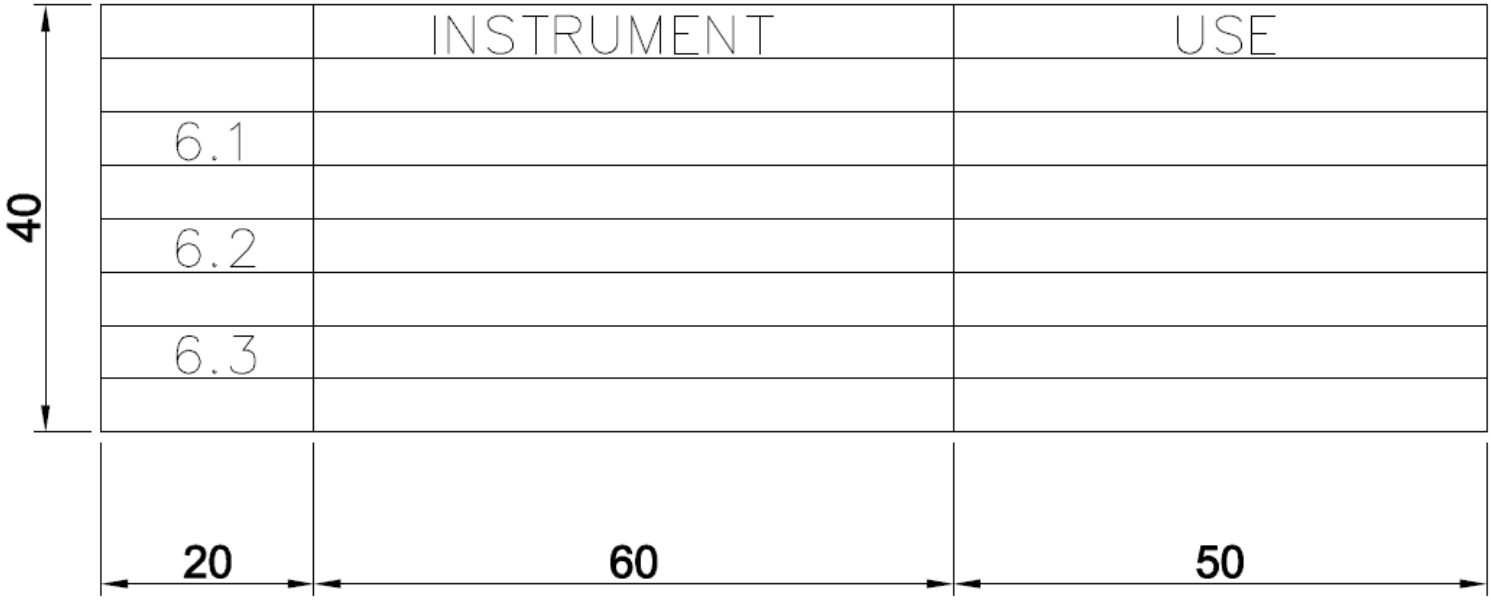


FIGURE 6

Copyright reserved