

PAKSITAN STANDARD SPECIFICATIONS FOR POLE PRUNER

1 SCOPE

- 1.1 This standard specifies the material, dimensions, manufacturing and other requirements of major/critical components/sub-assemblies and replacement parts of pole pruner to ensure proper quality control measures in the manufacture of these implements.
- 1.2 This standard is related to trade and manufacturing practices prevailing in the country and therefore, permits the purchaser to use his option for selecting the pruner to suit his requirements.

2 NORMATIVE REFERENCES

The following standard contain provisions which, through reference in this text, constitute provisions of PS ---/2018. At the time of publication, the edition indicated was valid. All the normative references listed below are subject to revision, and parties to agreement, based on this part of PS ---/2018 are encouraged to investigate the possibility of applying the most recent edition of the standard indicated below;

- i) IS 10684 (1983): Specification of Tree Pruner (Re-affirmed 2001).
- ii) PS 877/72: The provision of Safety on farm implements
- iii) ASAE S318.9/SAE J208d: Safety for Agricultural Equipment.

3 DEFINITIONS

For the purpose of this Pakistan Standard, the following definitions shall apply.

- 3.1 **Pole pruner:** is a knife or blade mounted on a telescopic pole to cut twigs. The blade is actuated with the help of a rope while a spring helps return of blade after twig is cut. For cutting of thicker twigs/tree branches, a saw mounted on the top of blade body is used.
- 3.2 **Pole:**The telescopic rod on which pruner knife (secateurs) and saw are mounted.
- 3.3 **Blade:** Upper part of the secateurs which actually cuts the tree branches
- 3.4 **Lower holding device:** Lower part of the secateurs which supports the tree branch being cut by the knife.
- 3.5 **Saw:**An attachment of pole pruner to cut thicker branches of trees
- 3.6 **Body:** Part of the pruner on which secateurs or saw is mounted.
- 3.7 **Links:** Pivoted parts of the secateurs which actuate the knife to cut tree branches.

4 DIMENSIONAL, MATERIAL AND MANUFACTURING REQUIREMENTS

Note: All dimensions are in mm and minimum, except where tolerances are specified.

4.1 Pruner head assembly (Figure 1)

- 4.1.1 Pruner head shall consist of a blade, blade support, blade lever, spring and body.
- 4.1.2 Blade, blade support, blade lever and body shall be made of forged HCS (SAE 1045).
- 4.1.3 Blade shall have hardness of 42 to 45 HRC or (29 HRC for core and 55 HRC for tip).
- 4.1.4 Spring shall be made from spring wire of diameter 2 mm and shall have 32 coils of 14 mm diameter.

4.2 Pruner saw (Figure 2)

- 4.2.1 Pruner saw shall be made from saw blade material and shall have jigsaw/wood saw teeth.

4.3 Pruner pole (Figure 3)

- 4.3.1 Pruner pole shall be made from tempered aluminum pipe which shall be telescopic.
- 4.3.2 The inner part of pole shall have outside dia. of 22 mm and wall thickness of 2 mm.
- 4.3.3 The middle part of pole shall have outside dia of 25 mm and wall thickness of 2 mm.
- 4.3.4 The outer most part of pole shall have outside dia. of 28 mm and wall thickness of 2 mm.
- 4.3.5 Overall length of the pipe in fully extended position shall be 4.5 m.

4.4 Manufacturing requirements

- 4.4.1 Saw teeth shall be of crosscut type.
- 4.5 All other parts of pole pruner shall be manufactured by using new material.
- 4.6 The blade of the pruner shall be suitably forged to shape and shall be annealed.

5 OTHER REQUIREMENTS

- 5.1 All the market items shall be brand new.
- 5.2 Overall size and weight of the pruner shall be declared by the manufacturer.
- 5.3 The blade shall be fitted in the body so that it can freely move when pulled with rope. It shall automatically come back inside the body by the spring action.
- 5.4 In the closed position the cutting edge of the blade shall remain inside the body and shall not protrude.

- 5.5 A circular ring made from M.S having appropriate size shall be provided for tying the rope with the pruner.
- 5.6 Operation and maintenance (O&M) manual shall be provided in English & Urdu with complete illustrations of assembling of replaceable components.
- 5.7 O&M manual shall also contain relevant safety instructions as provided in PS 877:1972 and ASAE S318.9/SAE J208d.
- 5.8 The metallic parts shall preferably be zinc coated.

6 WORKMANSHIP AND FINISH

- 6.1 The cutting surface of the blade shall be ground in the direction, preferable, at right angle to the cutting edge.
- 6.2 The blade shall be puffed to give a fine finish.
- 6.3 The cutting edge shall be sharp enough for immediate use. All the sharp edges, except the cutting edge shall be rounded
- 6.4 The blade shall be free from cracks, seams, pits, burrs and other visual defects.
- 6.5 The blade of the pruner shall be smeared with suitable mineral jelly as a rust preventive treatment.
- 6.6 The complete body of the pruner shall be painted or zinc coated.
- 6.7 The welding of the pruner body and the socket for handle shall be suitably ground to give and smooth finish

7 MARKING AND PACKING

- 7.1 The following particulars shall be stamped on the body of the pruner:
 - 7.1.1 Manufacturers name or recognized trade –mark,
 - 7.1.2 Size, and
 - 7.1.3 Batch or code number.
- 7.2 The particulars listed under 7.1.1, 7.1.2 and 7.1.3 shall be stamped embossed or engraved on metallic plate and rigidly fitted on a non-wearing part of the pole pruner.
- 7.3 Each pole pruner may also carry the PSQCA Certification Mark subject to verification by the competent authority.
- 7.4 The pole pruner should be packed to ensure safety of the components in transportation as agreed between the purchaser and the manufacturer/supplier.

Note: Design of a typical pole pruner is shown in Figure 4. The design can be modified as agreed between the purchaser and the manufacturer subject to compliance of these standard specification.

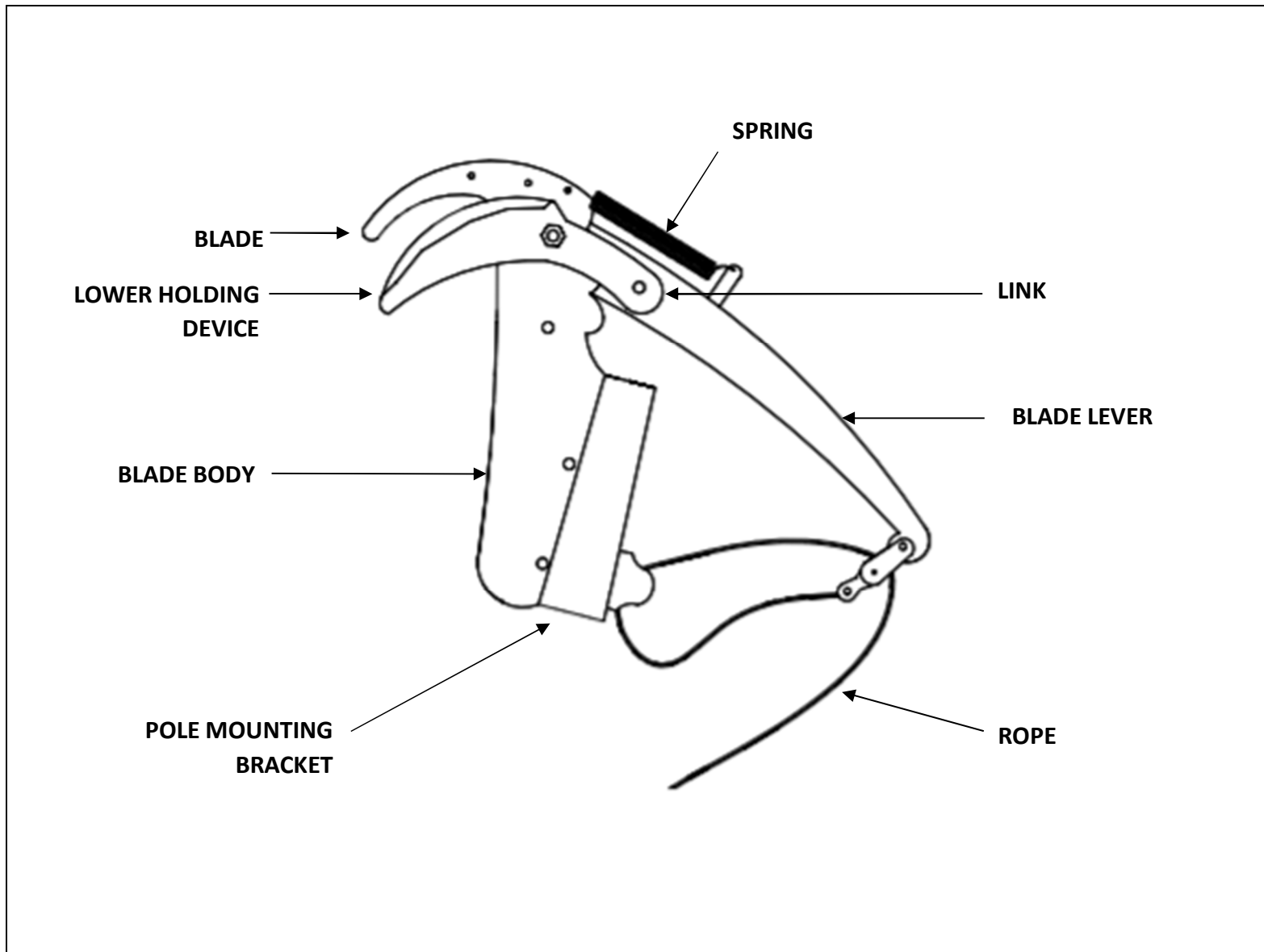


Figure 1(a): Pruner head assembly

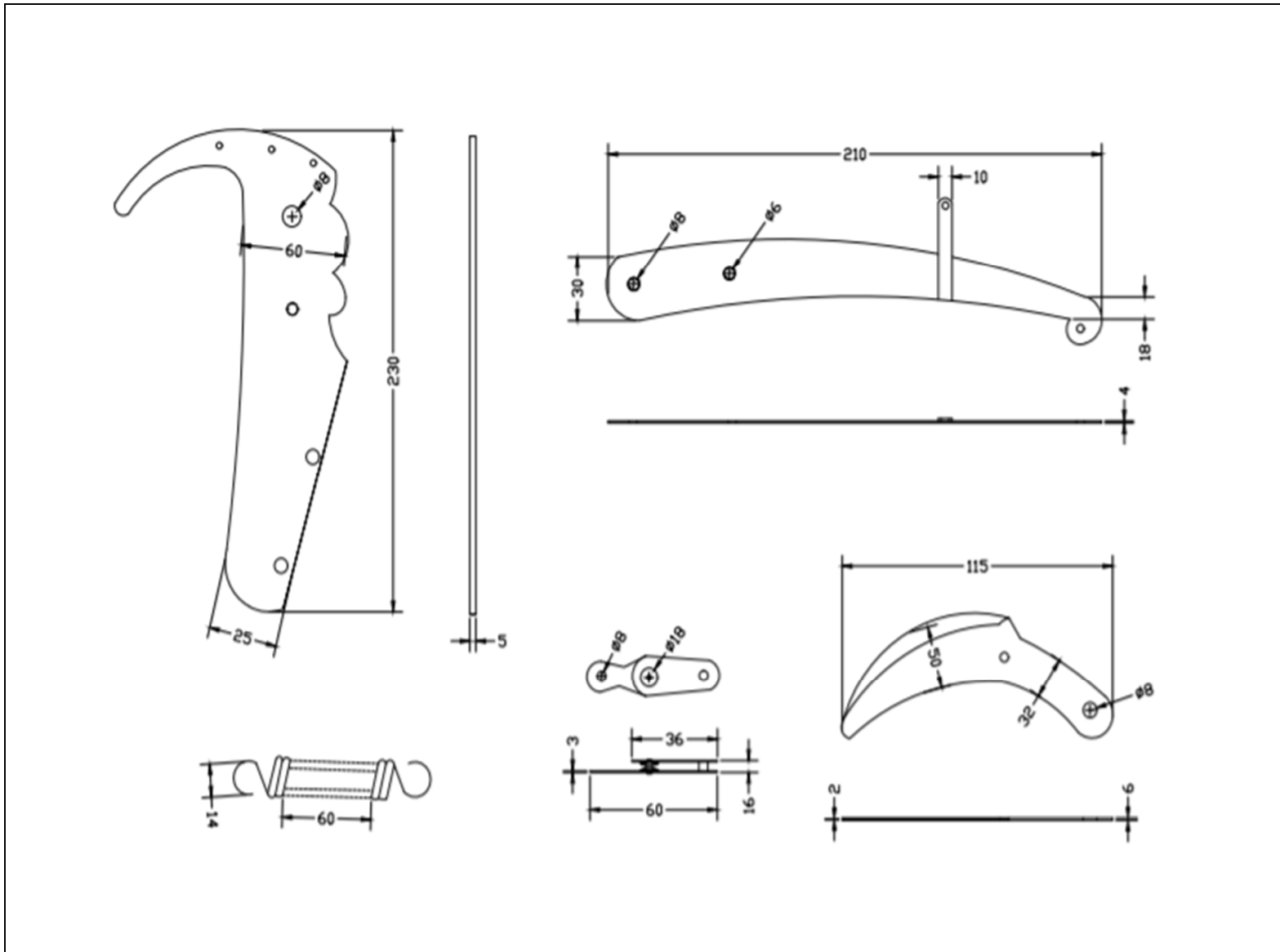


Figure 1 (b): Pruner head parts dimensions

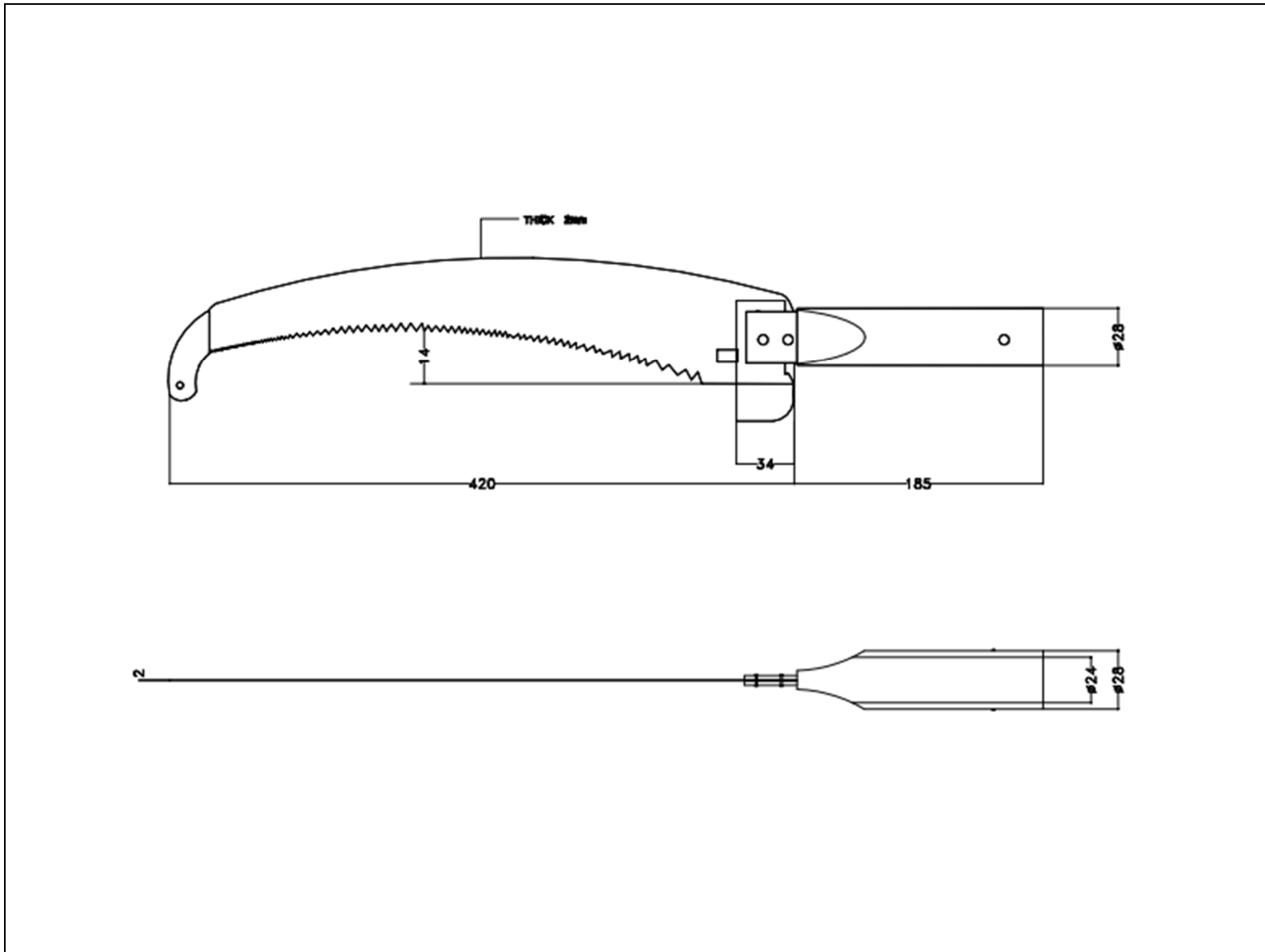


Figure 2: Pruner saw dimensions

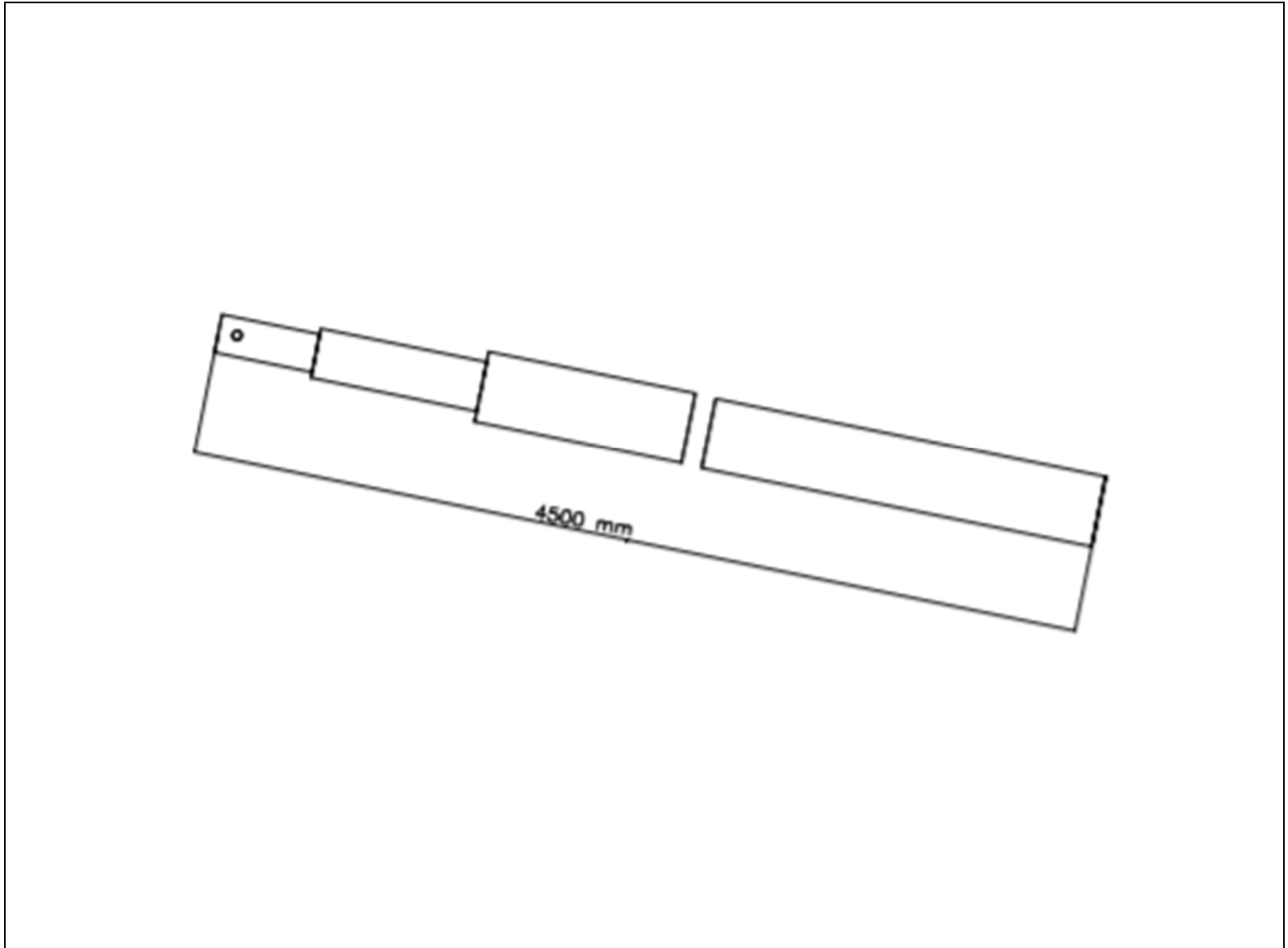


Figure 3: Pruner pole(dimensions)



Figure 4: A typical pole pruner