

## QUESTION 4: MECHANICAL ASSEMBLY

**Given:**

- The exploded isometric drawing of the parts of a v-belt drive assembly, showing the position of each part relative to the others.
- Orthographic views of each of the parts or the v-belt drive.
- Starting point S and Z respectively indicated on the front view of the housing (part 1) and right view of the pulley (part 2) as well as on the answer sheet, page 6.

## Instructions:

- Answer this question on page 6.
- Draw, to scale 1 : 1 and in third angle orthographic projection, the following views of the assembled parts of the v-belt drive.

#### 4.1 The sectional front view of the v-belt drive

assembly, on cutting plane A-A, as seen from the direction of the arrow shown on the exploded isometric drawing. The cutting plane is shown on the right view of the housing (part 1).

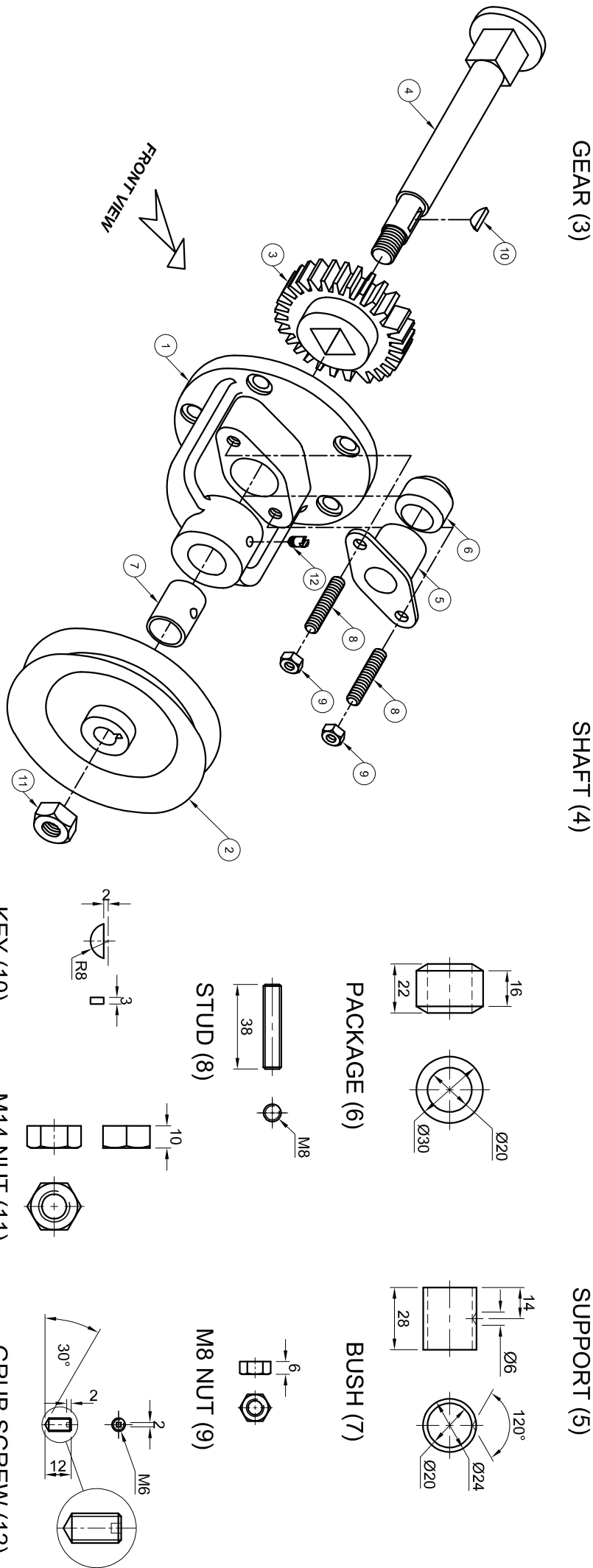
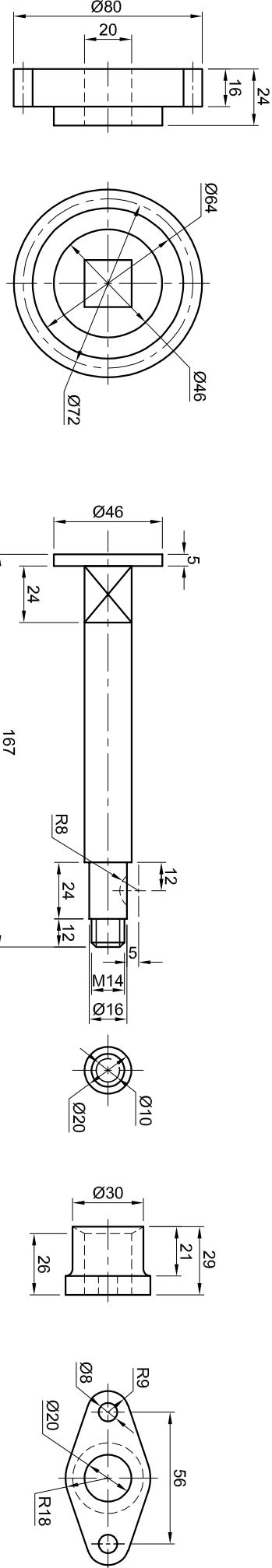
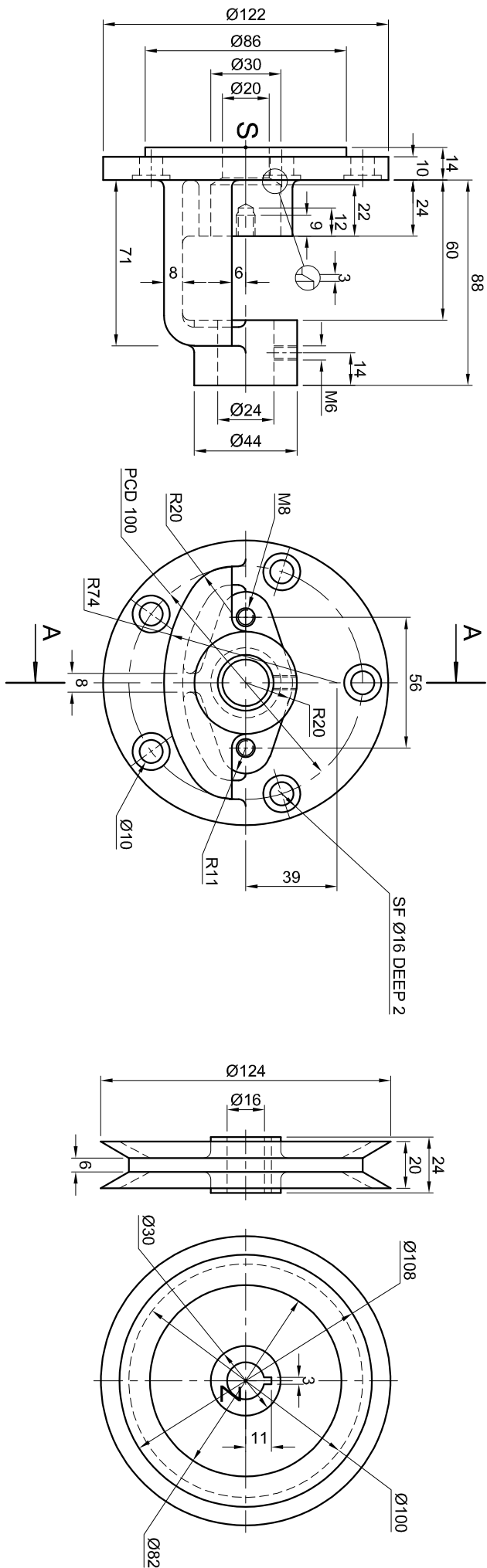
#### 4.2 A right view without any hidden detail.

**NOTE:**

- Planning of the layout of the views is essential.
- All drawings must comply with the guidelines contained in *SANS 10111*.
- Show, in the sectional front view, **THREE** faces of the M14 nut.
- Show ALL nut constructions.
- NO hidden detail is required.

**Add the following features on the drawing:**

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PARTS LIST			
PART	MATERIAL	QUANTITY	
1. HOUSING	CAST IRON	1	
2. PULLEY	ALUMINUM	1	
3. GEAR	STEEL	1	
4. SHAFT	STEEL	1	
5. SUPPORT	CAST IRON	1	
6. PACKAGE	MCS	1	
7. BUSH	BRONZE	1	
8. STUD	STD	2	
9. M8 NUT	STD	2	
10. KEY	STEEL	2	
11. M14 NUT	STD	2	
12. GRUB SCREW	STD	1	

**TITLE:**

# V-BELT DRIVE

# AMATHOLE

## ENGINEERING MANUFACTURERS

ALL DIMENSIONS ARE MILLIMETRES.

ALL UNSPECIFIED RADII ARE R3.

