Draw a Flanged Mace: Head Geometry and Handle Attachment

Original task 1 / independent drawing and calculation

Task 1

Draw a four-flange mace head with an outer radius of 25 mm and a core radius of 8 mm. Calculate the angular spacing between flange centre lines and state it. Use flange widths of 7 mm at the core and 3 mm at the tip. Add a handle 100 mm long with top diameter 10 mm and bottom diameter 7 mm, and a collar 12 mm wide and 8 mm tall.

Keep the original task measurements. Use the full drawing sheet in this PDF for a response needing more room; use the stated paper size when a task specifies larger paper.

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Original task 2 / independent drawing and calculation

Task 2

A six-flange mace head has an outer radius of 35 mm. Calculate the straight-line distance from the centre to a flange tip along a radial line. Then draw the head with a core radius of 12 mm and flange widths of 9 mm at the core and 5 mm at the tip. Add a handle 140 mm long with top diameter 14 mm and bottom diameter 9 mm, and a collar 16 mm wide and 12 mm tall.

Keep the original task measurements. Use the full drawing sheet in this PDF for a response needing more room; use the stated paper size when a task specifies larger paper.

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Original task 3 / independent drawing and calculation

Task 3

Draw an eight-flange mace head with an outer radius of 40 mm and a core radius of 15 mm. Calculate the angular spacing and state it. Use flange widths of 10 mm at the core and 6 mm at the tip. Add a handle 160 mm long with top diameter 16 mm and bottom diameter 10 mm, and a collar 18 mm wide and 14 mm tall. Label the core, two flanges, collar, and handle.

Keep the original task measurements. Use the full drawing sheet in this PDF for a response needing more room; use the stated paper size when a task specifies larger paper.

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Original task 4 / independent drawing and calculation

Task 4

Design a six-flange mace head with an outer radius of 28 mm and a core radius of 9 mm. Choose flange widths at the core and tip that taper by 4 mm, and state your chosen values. Add a handle 110 mm long with a taper of 4 mm between top and bottom diameters, and state your chosen diameters. Add a collar 13 mm wide and 9 mm tall. Calculate the angular spacing and state it.

Keep the original task measurements. Use the full drawing sheet in this PDF for a response needing more room; use the stated paper size when a task specifies larger paper.

Full drawing sheet / reusable blank workspace

Reusable full drawing sheet for Tasks 1 to 4. Print another copy when needed. Keep all original task measurements; if a task specifies larger paper, use that paper size.