Toilet Isometric Drawing: Bowl, Tank, Seat and Base

Ordinary topic reference / separately checked pixels



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Original worked example / unchanged complete key

Prompt: Using a scale of 1 unit = 10 mm, construct a toilet with tank height 4 units, tank depth 2 units, tank width 3 units, bowl opening 4 units long and 3 units wide, seat offset 0.3 units, and base height 1 unit. Describe the construction and give two checks.

Answer: Draw vertical and two 30-degree axes. Mark tank height 40 mm on the vertical axis, tank depth 20 mm and width 30 mm on the receding axes. Complete the tank box with edges parallel to the axes. Draw a 40 mm by 30 mm parallelogram on the isometric plane in front of the tank for the bowl opening, draw both diagonals, mark their crossing as the centre, and sketch a smooth ellipse tangent to all four sides. Draw a second ellipse offset outward by 3 mm for the seat ring on the same plane. Draw a base box 10 mm high centred under the bowl. Check one: opposite sides of each parallelogram measure equal within pencil width. Check two: the centre line passes through tank, bowl and base.

Reason: The tank is a box because its faces are flat. The bowl opening is horizontal, so it must be an ellipse on the isometric plane, constructed tangent to the parallelogram sides with its centre at the diagonal crossing. The seat ring shares that plane and is offset outward. The base is a shorter box centred under the bowl. Checks confirm projection consistency and alignment.

Check: Measure opposite parallelogram sides for equality and verify the common centre line. Confirm all receding edges are at 30 degrees and all vertical edges are vertical.