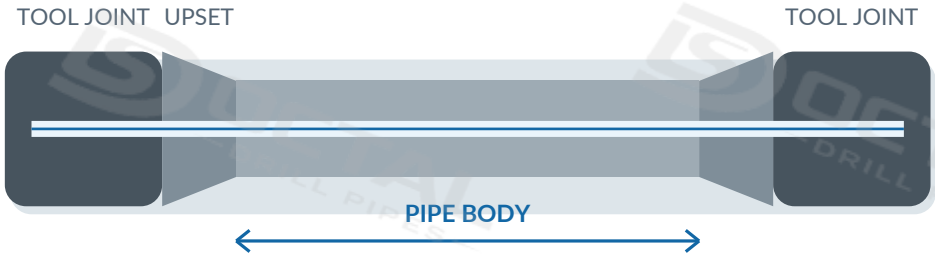
4-1/2 Inch Drill Pipe

Ordered Configuration

The finished joint is reviewed as one assembly. Pipe-body size, upset geometry, friction-weld alignment, tool-joint dimensions and the internal passage must all match the approved order.

PIPE-BODY OD **4.500 in. / 114.3 mm**	NOMINAL WEIGHT **16.60 lb/ft / 24.7 kg/m**
NOMINAL WALL **0.337 in. / 8.56 mm**	CALCULATED BODY ID **3.826 in. / 97.2 mm**

Finished Assembly



Tool-joint OD and ID: verify from the approved connection drawing.

Why Nominal Body Dimensions Are Not Enough

1 BODY

OD, minimum wall, straightness and finished length.

2 WELD ZONE

Upset transition, concentricity and bore continuity.

3 TOOL JOINT

Larger external OD and a potentially smaller internal bore.

4 DRIFT

Confirms the minimum usable passage through the complete joint.

Dimensional values are nominal unless otherwise stated.

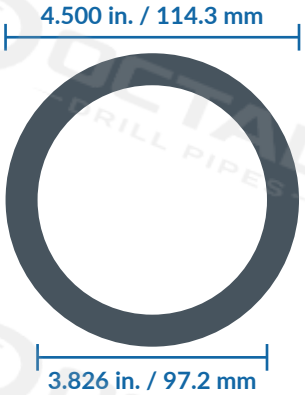
Pipe Body, Upset and Weld Area

Pipe-Body Size Verification

OD is checked at the specified locations and in more than one circumferential direction where required. Wall-thickness review focuses on the minimum measured value, not the nominal number alone.

- 4.500 in. (114.3 mm) nominal pipe-body OD
- 0.337 in. (8.56 mm) nominal wall; verify minimum recorded wall
- Range 2 finished length and overall straightness
- No rejectable dents, gouges, sharp handling marks or local deformation
- Measured configuration agrees with pipe-body marking

Nominal Cross-Section

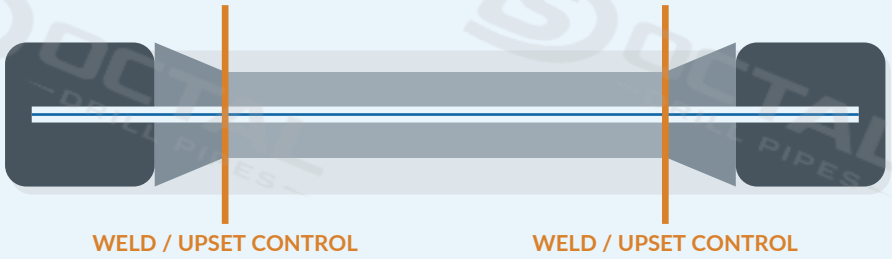


Wall = 0.337 in. / 8.56 mm

The body ID is calculated from nominal dimensions. It is not the guaranteed minimum passage through the upset and tool joint.

NOMINAL BODY VALUES

Upset and Friction-Weld Area



Release checks

- Upset type, profile and transition length
- External and internal weld-area condition
- Tool-joint-to-pipe alignment and concentricity
- No abrupt internal step or local bore restriction
- Required NDT status and pipe/tool-joint traceability

Dimensional values are nominal unless otherwise stated.

Tool-Joint Dimensions and Drift

Tool-Joint OD and ID

The tool joint is measured independently from the 4.500 in. pipe body. Its OD is larger, while its bore may be smaller than the calculated 3.826 in. body ID. Final dimensions must follow the approved NC46 connection drawing and order data sheet.

- Pin-end and box-end tool-joint OD
- Tool-joint bore diameter
- Pin/box bore alignment and counterbore condition
- NC46 connection identity
- Shoulder condition and transition continuity

Controlling Bore

Do not infer these dimensions from the pipe-body size.

The smallest opening may occur at the tool-joint bore, upset transition or weld region.

VERIFY FROM APPROVED DRAWING

Full-Length Drift Verification

Specified drift mandrel passes through the complete finished joint

Body -> upset transition -> friction-weld region -> tool-joint bore

Drift record

- Specified drift diameter and mandrel arrangement
- Individual pipe number or traceable production lot
- Full-length pass / hold status
- Inspection date and responsible inspector
- Correction and reinspection result, when applicable

Dimensional values are nominal unless otherwise stated.

Final Dimensional Release

FINISHED CONFIGURATION TO BE CONFIRMED

4.500 in. OD x 16.60 lb/ft x 0.337 in. nominal wall x Range 2 x NC46

Release Checklist

- **Pipe body**
  OD, minimum wall, straightness and finished length accepted.
- **Drift**
  Specified mandrel passes through the full finished length.
- **Upset / weld**
  Transition, bore continuity, alignment and required NDT status accepted.
- **Marking**
  Pipe identity, size, grade and connection are consistent.
- **Tool joint**
  OD, ID, bore alignment and NC46 identity match the approved drawing.
- **Records**
  Inspection status and traceability match the packing list.

Traceability Chain

Pipe marking → Dimensional report → Drift result → Connection record → Bundle tag → Packing list

Reference basis: approved PO, product drawing, API 5DP / API 7-2 requirements and project ITP.

Dimensional values are nominal unless otherwise stated.