

API 5DP Drill Pipe Standard Summary

Focused extract for sales, RFQ review, and technical checking. This file summarizes the parts most often needed in practice: product form, dimensions, grade-based strength requirements, and inspection/testing scope.

Important: this is a technical summary, not the full copyrighted standard text. API 5DP is the current drill-pipe basis used by API; API 5D is historical context rather than the current purchasing focus.

What the standard covers

Focus area	What API 5DP / ISO 11961 control
Product form	Steel drill pipe with upset pipe-body ends and weld-on tool joints for drilling and production operations in the petroleum and natural gas industries.
Grade families	API 5DP commercial grades commonly centered on E75, X95, G105, and S135. ISO 11961 also recognizes grade E, high-strength grades X/G/S, and enhanced H2S-resistance grades D/F.
Technical delivery basis	Product specification levels PSL-1, PSL-2, and PSL-3; pipe body, tool joints, dimensions, marking, and testing must be aligned under one delivery basis.
Connection basis	Threading / gauging must be confirmed clearly; field supply commonly references NC, IF, REG, FH, or approved premium connections together with the applicable gauging basis.

Common size and configuration framework

Item	Common API 5DP framework
OD sizes often quoted	2 3/8 in, 2 7/8 in, 3 1/2 in, 4 in, 4 1/2 in, 5 in, 5 1/2 in, 6 5/8 in
Length ranges	R1: 18-22 ft; R2: 27-30 ft; R3: 38-45 ft
Upset types	IU, EU, IEU
Typical connection families	NC26, NC31, NC38, NC40, NC46, NC50, 5 1/2 FH, 6 5/8 FH, or approved premium connections as specified
Pipe body form	Seamless drill pipe body with weld-on tool joints

These dimensions are the common commercial API 5DP OD / range combinations widely used in drill-string supply. The full standard includes detailed dimension and mass tables; use the purchased standard when an exact size / weight / tolerance line must be contractually locked.

Mechanical property requirements - pipe body

Grade	Yield strength min	Yield strength max	Tensile strength min	Charpy impact (full-size) min
E75	75 ksi / 517 MPa	105 ksi / 724 MPa	100 ksi / 689 MPa	80 J avg / 65 J single
X95	95 ksi / 655 MPa	125 ksi / 862 MPa	105 ksi / 724 MPa	80 J avg / 65 J single
G105	105 ksi / 724 MPa	135 ksi / 931 MPa	115 ksi / 793 MPa	80 J avg / 65 J single
S135	135 ksi / 931 MPa	165 ksi / 1138 MPa	145 ksi / 1000 MPa	80 J avg / 65 J single

Reading note: the grade code reflects minimum yield strength in ksi. In order review, strength class should be checked together with OD, range, upset, and exact connection designation rather than used alone.

Material and chemical points commonly checked

- Pipe body and tool-joint assembly are steel products controlled under one delivery basis.
- ISO 11961 identifies grade E, high-strength grades X/G/S, and enhanced H₂S-resistance grades D/F within its scope.
- Public market summaries that reproduce API 5DP tables consistently list low phosphorus and sulfur limits for E75/X95/G105/S135 and tool joints (commonly P ≤ 0.015%, S ≤ 0.003%).

Inspection and testing requirements

Inspection / test item	What is checked
Dimensional and mass checks	Outside diameter, inside diameter, wall thickness, length, mass, upset ovality, body/tool-joint alignment, and straightness.
End-drift and profile	End-drift test and internal profile checks to confirm through-bore continuity and minimum ID requirements.
Weld testing	Testing of welds and weld-zone acceptance for the body-to-tool-joint transition.
Mechanical tests	Tensile tests, hardness tests, and Charpy V-notch impact tests as required by grade / product level.
Surface and NDE	Visual inspection, non-destructive examination, documented procedures, reference standards, and inspection thresholds.
Purchaser / PSL controls	Annex D purchaser inspection and Annex G product specification levels (PSL-1/2/3) increase quality and inspection requirements above the basic level.

Use this summary correctly

Use this file to confirm RFQ basics, build product pages, and brief customers on what the standard actually controls. When a contract needs exact table values, full tolerances, or clause-by-clause acceptance language, the purchased API / ISO standard should be checked directly.

Source basis used for this summary

1) API 2025 publications catalog and API 5DP addendum / update notices for the current standard status. 2) ISO 11961:2018 official overview / preview for scope, PSL, and testing structure. 3) Public market data sheets reproducing the widely used API 5DP mechanical-property and size tables for E75, X95, G105, and S135.