



**CASING TECHNICAL DATA SHEET**  
**4.5 x 0.337 HPP110 GBCD**

Reviewed by: Sr. Quality Engineer  
 Approved by: Corporate Director-QEHS

TDS Date (MM/DD/YY)

6/25/24

**PIPE BODY DATA**

Nominal Outside Diameter  
 Nominal Wall Thickness  
 Remaining Body Wall (RBW)  
 Type of Thread  
 Grade

Label Weight  
 Plain End Weight  
 Pipe Minimum Yield  
 Pipe Maximum Yield  
 Pipe Minimum Tensile  
 Standard Drift Diameter (min)  
 Alternate Drift Diameter (min)  
 Pipe Body Plain End Yield  
 Pipe Body Internal Yield  
 Collapse Pressure - Standard  
 Collapse Pressure - High

Unit	Imperial	Metric	Unit
in	4.500	114.30	mm
in	0.337	8.56	mm
	95.0%	95.0%	
	GBCD	GBCD	
	HPP110	HPP110	
	15.10	15.10	
lb/ft	15.00	22.32	kg/m
ksi	125	862	MPa
ksi	140	965	MPa
ksi	125	862	MPa
in	3.701	94.00	mm
in	N/A	N/A	mm
lb	551,000	249,930	kg
psi	17,790	122,660	kPa
psi	N/A	N/A	kPa
psi	16,290	112,320	kPa

**CONNECTION DATA**

Coupling Minimum Yield  
 Coupling Maximum Yield  
 Coupling Minimum Tensile  
 Coupling or Joint Outside Diameter (nom)  
 Coupling Thread Fracture Strength  
 Pipe Thread Fracture Strength  
 Pull Out Strength  
 Nominal Make-Up Torque or Make-up Torque Range  
 Coupling Internal Yield  
 Internal Yield of Joint

ksi	See Next Page	See Next Page	MPa
ksi	See Next Page	See Next Page	MPa
ksi	See Next Page	See Next Page	MPa
in	See Next Page	See Next Page	mm
lb	See Next Page	See Next Page	kg
lb	See Next Page	See Next Page	kg
lb	See Next Page	See Next Page	kg
ft-lb	See Next Page	See Next Page	N-m
psi	See Next Page	See Next Page	kPa
psi	See Next Page	See Next Page	kPa

**WELED TUBE GENERAL INPUT CRITERIA**

Coupling Color Code  
 Coupling Color Code for the Band  
 Pipe Color Code Identification  
 Additional Color Band (approx. 10' from box end)

2" Band(s)

White
None
One White
Orange

Note:

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**GB Connection Performance Properties Sheet**

Rev. 0 (07/01/2024)

ENGINEERING THE RIGHT CONNECTIONS

**Casing:** 4.5 OD, 15.1 ppf  
**Casing Grade\*\*:** WTC P-110HP (95% RBW)

**Connection:** GB CD Butt 5.250  
**Coupling Grade:** API P-110

**PIPE BODY GEOMETRY**

Nominal OD (in.)	4 1/2	Wall Thickness (in.)	0.337	Drift Diameter (in.)	3.701
Nominal Weight (ppf)	15.10	Nominal ID (in.)	3.826	API Alternate Drift Dia. (in.)	N/A
Plain End Weight (ppf)	15.00	Plain End Area (in. <sup>2</sup> )	4.407		

**PIPE BODY PERFORMANCE\*\***

Material Specification	WTC P-110HP (95% RBW)	Min. Yield Str. (psi)	125,000	Min. Ultimate Str. (psi)	125,000
<b>Collapse</b>		<b>Tension</b>		<b>Pressure</b>	
API (psi)	15,830	Pl. End Yield Str. (kips)	551	Min. Int. Yield Press. ** (psi)	17,790
High Collapse** (psi)	16,290	<b>Torque</b>		<b>Bending</b>	
		Yield Torque (ft-lbs)	51,380	Build Rate to Yield (°/100 ft)	127.3

**GB CD Butt 5.250 COUPLING GEOMETRY**

Coupling OD (in.)	5.250	Makeup Loss (in.)	4.0625
Coupling Length (in.)	8.125	Critical Cross-Sect. (in. <sup>2</sup> )	6.570

**GB CD Butt 5.250 CONNECTION PERFORMANCE RATINGS/EFFICIENCIES**

Material Specification	API P-110	Min. Yield Str. (psi)	110,000	Min. Ultimate Str. (psi)	125,000
<b>Tension</b>		<b>Efficiency</b>		<b>Bending</b>	
Thread Str. (kips)	520	Internal Pressure (%)	100%	Build Rate to Yield (°/100 ft)	96.0
Min. Tension Yield (kips)	687	External Pressure (%)	100%	<b>Yield Torque</b>	
Min. Tension Ult. (kips)	780	Tension (%)	100%	Yield Torque (ft-lbs)	21,510
Joint Str. (kips)	520	Compression (%)	100%		
		Ratio of Areas (Cplg/Pipe)	1.49		

**MAKEUP TORQUE**

Min. MU Tq. (ft-lbs)	7,150	Max. MU Tq. (ft-lbs)	14,300	Running Tq. (ft-lbs)	See GBC RP
				Max. Operating Tq. (ft-lbs)*	20,430

Units: US Customary (lbm, in., °F, lbf)

1 kip = 1,000 lbs

\* See Running Procedure for description and limitations.

See attached: Notes for GB Connection Performance Properties.

GBC Running Procedure (GBC RP): [www.gbconnections.com/pdf/RP-GB-DWC-Connections.pdf](http://www.gbconnections.com/pdf/RP-GB-DWC-Connections.pdf)

Blanking Dimensions: [www.gbconnections.com/pdf/GB-DWC-Blanking-Dimensions.pdf](http://www.gbconnections.com/pdf/GB-DWC-Blanking-Dimensions.pdf)

Connection yield torque rating based on physical testing or extrapolation therefrom

\*\* Casing properties applicable to WTC P-110HP (95% RBW) grade with min. yield 125 ksi.

