



CASING TECHNICAL DATA SHEET
4.5 x 0.25 WTC89 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	0.250	6.35	mm
	95.0%	95.0%	
	GBCD	GBCD	
	WTC89	WTC89	
	11.60	11.60	
lb/ft	11.36	16.91	kg/m
ksi	89	614	MPa
ksi	110	758	MPa
ksi	90	621	MPa
in	3.875	98.42	mm
in	N/A	N/A	mm
lb	297,000	134,720	kg
psi	9,390	64,740	kPa
psi	6,770	46,680	kPa
psi	N/A	N/A	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)

	Red
	Brown/Green
2" Band(s)	One Red, One White
	N/A

Note:

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GB Connection Performance Properties Sheet

Rev. 0 (07/01/2024)

ENGINEERING THE RIGHT CONNECTIONS

Casing: 4.5 OD, 11.6 ppf
Casing Grade:** WTC 89 (95% RBW)

Connection: GB CD Butt 5.250
Coupling Grade: API L-80

PIPE BODY GEOMETRY

Nominal OD (in.)	4 1/2	Wall Thickness (in.)	0.250	Drift Diameter (in.)	3.875
Nominal Weight (ppf)	11.60	Nominal ID (in.)	4.000	API Alternate Drift Dia. (in.)	N/A
Plain End Weight (ppf)	11.36	Plain End Area (in. ²)	3.338		

PIPE BODY PERFORMANCE**

Material Specification	WTC 89 (95% RBW)	Min. Yield Str. (psi)	89,000	Min. Ultimate Str. (psi)	90,000
Collapse		Tension		Pressure	
API (psi)	6,770	Pl. End Yield Str. (kips)	297	Min. Int. Yield Press.** (psi)	9,390
High Collapse (psi)	-	Torque		Bending	
		Yield Torque (ft-lbs)	28,780	Build Rate to Yield (°/100 ft)	90.7

GB CD Butt 5.250 COUPLING GEOMETRY

Coupling OD (in.)	5.250	Makeup Loss (in.)	4.0625
Coupling Length (in.)	8.125	Critical Cross-Sept. (in. ²)	6.570

GB CD Butt 5.250 CONNECTION PERFORMANCE RATINGS/EFFICIENCIES

Material Specification	API L-80	Min. Yield Str. (psi)	80,000	Min. Ultimate Str. (psi)	95,000
Tension		Efficiency		Bending	
Thread Str. (kips)	283	Internal Pressure (%)	100%	Build Rate to Yield (°/100 ft)	69.8
Min. Tension Yield (kips)	499	External Pressure (%)	100%	Yield Torque	
Min. Tension Ult. (kips)	593	Tension (%)	100%	Yield Torque (ft-lbs)	9,170
Joint Str. (kips)	283	Compression (%)	100%		
		Ratio of Areas (Cplg/Pipe)	1.97		

MAKEUP TORQUE

Min. MU Tq. (ft-lbs)	3,050	Max. MU Tq. (ft-lbs)	6,100	Running Tq. (ft-lbs)	See GBC RP
				Max. Operating Tq. (ft-lbs)*	8,720

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

Blanking Dimensions: 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 89 (95% RBW) grade with min. yield 89 ksi.

