

## DRILL PIPE

SIZE:	2.875" OD 10.40# 0.362" Wall EU
GRADE:	S-135
RANGE:	II
CONNECTIONS:	NC31

### PIPE BODY:

### TUBULAR ASSEMBLY

	Nominal 100% RBW	Nominal 95% RBW	Ultra Class 90% RBW	Premium 80% RBW
OD (in)	2,875	2,839	2,803	2,730
Wall Thickness (in)	0,362	0,344	0,326	0,29
Nominal ID:	2,151	2,151	2,151	2,151
Tensile Strength (lbs)	385,820	363,889	342,236	299,763
Torsional Strength (in)	20,798	19,547	18,321	15,945
Burst Capacity (psi)	29747	32297	30,597	27,197
Collapse Capacity (psi)	29716	28746	27,739	25,602

Adjusted Weigh (in):	11,89	Fluid Displacement (gal/ft):	0,18
Approximate Length (ft):	31,5	Fluid Displacement (bbls/ft):	0,0043
Box TJ Length (in):	12	Fluid Capacity w/IPC (gal/ft):	0,18
Pin TJ Length (in):	10	Fluid Capacity w/IPC (bbls):	0,0042
Upset Type :	EU	Fluid Capacity w/IPC (gal/ft):	0,18
Max Upset OD (in):	3,188	Fluid Capacity w/IPC (bbls/ft):	0,0043
Drift Size (in):	1,875		

Notes: Body properties are calculated based on uniform OD and wall thickness. Burst capacity for Nominal (100% RBW) based on 87.5% RBW per API.

Note: These are OEM values that may vary with actual values due to mill tolerances, IPC tolerances, OEM rounding, and other factors. Pipe is purchased at a guaranteed 95% RBW. IPC is applied to a nominal thickness of 0.009". Pipe will have an ID of 2.705", which is smaller than pipe purchased at 87.5%.

### CONNECTIONS: API NC31

### ELEVATOR SHOULDER

TOOL JOINT OD (in):	4,125		
TOOL JOINT ID (in):	2,000		
MYS (ksi):	120		
		Maximum MUT (ft/lbs):	7.900
		Tension at Shoulder Separation @Max MUT (lbs)	Tensile Limited
		Tension at Connection Yield @Max MUT (lbs)	401.100
		Minimum MUT (ft/lbs):	6.600
		Tension at Shoulder Separation @MinMUT (lbs)	468.400
		Tension at Connection Yield @Min MUT (lbs)	483.800
		Tool Joint Torsional Strength (ft/lbs):	13.200
		Tool Joint Tensile Strength (ft/lbs):	483.800

Smooth Edge Height (in):	N/A
Smooth Edge OD (in):	N/A
SE Elevator Shoulder Capacity (lbs):	N/A
Nominal TJ OD (in):	4,125
Nominal TJ OD Elevator Shoulder Capacity (lbs):	540.300
Assume Elevator Bore (in)	3,281

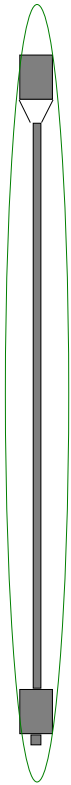
Note: MUT values are based on a friction factor of 1.0. There is no published pressure rating for this connection

Note: Elevator capacity based on assumed elevator bore, no wear factor, and contact stress of 110, 100 psi. An increased elevator shoulder OD increases elevator capacity without affecting make-up torque.

The technical information contained herein, including the product performance sheet and other attached documents, has been extracted from information available from the manufacturer and is for reference only and not a recommendation. The user is fully responsible for the accuracy and suitability of use of the technical information. Workstrings International cannot assume responsibility for the results obtained through the use of this material. No expressed or implied warranty is intended. Drill pipe assembly properties are calculated based on uniform OD and wall thickness. No safety factor is applied. The information provided for various inspection classes and for various wear conditions (remaining body wall) is for information only and does not represent or imply acceptable operation limits. It is the responsibility of the customer and the end user to determine the appropriate performance ratings, acceptable use of the product, maintain safe operational practices, and to apply a prudent safety factor suitable for the application. For API connections that have different pin and box IDs, tool joint ID refers to the pin ID. Per Chapter B, Section 4 VII of the IADC drilling manual, it is recommended that drilling torque should not exceed 80% of MUT.

# Operational Limits of Drill Pipe

<b>Connection</b>	NC31	<b>Tool Joint OD</b> (in)	4.125	<b>Tool Joint ID</b> (in)	2.000	<b>Tool Joint Specified Minimum Yield Strength</b> (psi)	120,000
<b>Pipe Body</b>	80 % Inspection Class	<b>Pipe Body OD</b> (in)	2.875	<b>Wall Thickness</b> (in)	0.362	<b>Pipe Body Grade</b>	S-135



**Combined Loading for Drill Pipe at  
Maximum Make-up Torque = 7,900 (ft-lbs)**

Operational Torque (ft-lbs)	Assembly Max Tension (lbs)	Pipe Body Max Tension (lbs)	Connection Max Tension (lbs)
0	299,800	299,800	401,100
400	299,700	299,700	401,100
800	299,400	299,400	401,100
1,200	298,900	298,900	401,100
1,700	298,100	298,100	401,100
2,100	297,200	297,200	401,100
2,500	296,100	296,100	401,100
2,900	294,800	294,800	401,100
3,300	293,300	293,300	401,100
3,700	291,600	291,600	401,100
4,200	289,200	289,200	401,100
4,600	287,000	287,000	401,100
5,000	284,600	284,600	401,100
5,400	282,000	282,000	401,100
5,800	279,200	279,200	401,100
6,200	276,200	276,200	401,100
6,700	272,000	272,000	401,100
7,100	268,400	268,400	401,100
7,500	264,500	264,500	401,100
7,900	260,400	260,400	401,100

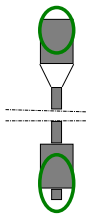
Operational drilling torque is limited by the Make-up Torque.

**Combined Loading for Drill Pipe at  
Minimum Make-up Torque = 6,600 (ft-lbs)**

Operational Torque (ft-lbs)	Assembly Max Tension (lbs)	Pipe Body Max Tension (lbs)	Connection Max Tension (lbs)
0	299,800	299,800	468,400
300	299,700	299,700	468,400
700	299,500	299,500	468,400
1,000	299,200	299,200	468,400
1,400	298,600	298,600	468,400
1,700	298,100	298,100	468,400
2,100	297,200	297,200	468,400
2,400	296,300	296,300	468,400
2,800	295,100	295,100	468,400
3,100	294,000	294,000	468,400
3,500	292,500	292,500	468,400
3,800	291,100	291,100	468,400
4,200	289,200	289,200	468,400
4,500	287,600	287,600	468,400
4,900	285,300	285,300	468,400
5,200	283,400	283,400	468,400
5,600	280,700	280,700	468,400
5,900	278,500	278,500	468,400
6,300	275,400	275,400	468,400
6,600	272,900	272,900	468,400

Operational drilling torque is limited by the Make-up Torque.

## Connection Make-up Torque Range



	Make-up Torque (ft-lbs)	Connection Max Tension (lbs)
Min MUT	6,600	468,300
	6,700	475,400
	6,900	477,500
	7,000	469,800
	7,200	454,600
	7,300	446,900
	7,500	431,700
	7,600	424,100
	7,800	408,800
	7,900	401,200
Max MUT	7,900	401,200

Note: Recommended MUT should always be used when possible. If not possible, MUT should be as close to Recommended MUT as possible.

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