



# GULF ENGINEERING SERVICES LTD. DRILL PIPE PERFORMANCE SHEET

Size and Weight: 3.500" 15.50 ppf 0.449" wall EU  
 Grade: S-135  
 Range: 2  
 Tool Joint: 4.875" x 2.438" NC38

## PIPE BODY:

	Nominal 100% RBW	95% RBW	Ultra Class 90% RBW	Premium 80% RBW
OD (in):	3.500	3.455	3.410	3.320
Wall Thickness (in):	0.449	0.427	0.404	0.359
Nominal ID (in):	2.602	2.602	2.602	2.602
Tensile Strength (lbs):	580 994	547 883	515 200	451 115
Torsional Strength (ft-lbs):	37 954	35 661	33 415	29 063
Burst Capacity (psi):	30 308	32 905	31 173	27 710
Collapse Capacity (psi):	30 194	29 218	28 203	26 049

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.

## CONNECTION: NC38

Tool Joint OD (in):	<b>4.875</b>
Tool Joint ID (in):	<b>2.438</b>
Connection MYS (ksi):	120
Maximum MUT (ft-lbs):	<b>13 200</b>
Tension at Shoulder Separation @ Max MUT (lbs):	Tensile Limited
Tension at Connection Yield @ Max MUT (lbs):	566 800
Minimum MUT (ft-lbs):	<b>11 000</b>
Tension at Shoulder Separation @ Min MUT (lbs):	679 900
Tension at Connection Yield @ Min MUT (lbs):	693 700
N/A Tool Joint Torsional Strength (ft-lbs):	22 000
N/A Tool Joint Tensile Strength (lbs):	693 700

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

## TUBULAR ASSEMBLY:

Adjusted Weight (lbs/ft):	17.67	Fluid Displacement (gal/ft):	0.27
Approximate Length (ft):	31.6	Fluid Displacement (bbls/ft):	0.0064
Box TJ Length (in):	12.5	Fluid Capacity w/IPC (gal/ft):	0.26
Pin TJ Length (in):	10	Fluid Capacity w/IPC (bbls/ft):	0.0062
Upset Type:	EU	Fluid Capacity w/o IPC (gal/ft):	0.27
Max Upset OD (in):	3.875	Fluid Capacity w/o IPC (bbls/ft):	0.0063
Drift Size (in):	2.313		

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".

## ELEVATOR SHOULDER:

Smooth Edge Height (in):	3/32
Smooth Edge OD (in):	5.062
SE Elevator Shoulder Capacity (lbs):	854 100
Nominal TJ OD (in):	4.875
Nominal TJ OD Elevator Shoulder Capacity (lbs):	693 000
Assumed Elevator Bore (in):	3.969

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.

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