



HYDRA 4.5in. x 13.5 lb/ft P-110 Flush Joint



Pipe Body

Nominal OD	4.500	inches
Nominal Weight	13.50	lb/ft
Wall Thickness	0.290	inches
Plain End Weight	13.05	lb/ft
Standard Drift	3.795	inches
Nominal ID	3.920	inches
Grade	P-110	
Min Yield	110,000	lbf/in ²
Min Tensile	125,000	lbf/in ²
Critical Section Area	3.836	in ²
Pipe Body Yield Strength	422	kips
Min Internal Yield Pressure	12,410	psi
Collapse Pressure	10,690	psi

Connection

Connection OD	4.500	inches
Make Up Loss	4.250	inches
Critical Section Area	2.301	in ²
Internal Pressure Rating	9,920	psi
External Pressure Rating	10,690	psi
Tension Efficiency	60%	
Connection Strength	253	kips
Compression Efficiency	253	kips
Uniaxial Bend Rating	70	° / 100 ft
Reference Depth	12,935	Ft.
Optimal Make Up Torque	4,600	ft-lbs 
Min	3,825	ft-lbs 
Max	5,375	ft-lbs

v1.0

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The performance properties in these data tables are calculated per API 5C3. Calculations are based on nominal wall thickness. Loads do not reflect a design safety factor for walls thinner than nominal or other defects. Reference Depth = Connection Strength / (PE Wt./Ft)*(1.5). Reference Depth includes a 1.5 design factor. However, it does not consider bending, temperature, buoyancy or other load considerations.

Torque Data Sheet - HYDRA

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Min Make Up Torque	3,825	ft-lbs	Nom Shoulder Torque	600	ft-lbs
Max Make Up Torque	5,375	ft-lbs	Max Operating	9,900	ft-lbs
Optimum Torque	4,600	ft-lbs	Yield	12,400	ft-lbs

