



HYDRA 4.5in. x 11.6 lb/ft P-110 Flush Joint

**Pipe Body**

Nominal OD	4.500	inches
Nominal Weight	11.60	lb/ft
Wall Thickness	0.250	inches
Plain End Weight	11.36	lb/ft
Standard Drift	3.875	inches
Nominal ID	4.000	inches
Grade	P-110	
Min Yield	110,000	lb/in ²
Min Tensile	125,000	lb/in ²
Critical Section Area	3.338	in ²
Pipe Body Yield Strength	367	kips
Min Internal Yield Pressure	10,690	psi
Collapse Pressure	7,580	psi

Connection

Connection OD	4.500	inches
Make Up Loss	4.038	inches
Critical Section Area	2.003	in ²
Internal Pressure Rating	8,560	psi
External Pressure Rating	7,580	psi
Tension Efficiency	60%	
Connection Strength	220	kips
Compression Efficiency	220	kips
Uniaxial Bend Rating	70	° / 100 ft
Reference Depth	12,923	Ft.
Optimal Make Up Torque	3,700	ft-lbs 
Min	3,075	ft-lbs 
Max	4,325	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	3,075	ft-lbs	Nom Shoulder Torque	500	ft-lbs
Max Make Up Torque	4,325	ft-lbs	Max Operating	6,500	ft-lbs
Optimum Torque	3,700	ft-lbs	Yield	7,800	ft-lbs

