

ELIMINATE DOWNGRADES | IMPROVE TORQUE | LOWER OPERATING COSTS



The industry shift toward extended lateral wells has spurred technological advancements in many upstream applications and equipment requirements. **Certus Energy Solutions, LLC** has recognized the need for an evolution in tubing performance and is proud to introduce the **HZT**TM (Horizontal Tubing) connection. **HZT**TM is the perfect solution to the costly, premature downgrading of workstrings attributed to O.D. wear of PH-6 connection upset areas.

Unlike the integral PH-6 connection, **HZT[™]** utilizes a disposable, sacrificial coupling on non-upset tubing which can be easily replaced, at minimal cost, exponentially extending the life cycle of the tubing assembly while providing superior performance. The use of this coupling effectively eliminates costly repair charges attributed to downgraded tool joints, allowing for a more predictable rental cost.

In addition to substantial cost savings, the **HZTTM** connection also boasts a torque capacity up to 76% higher than that of PH-6, providing more horsepower to the bit, especially in extended laterals. The coupling may be made in various sizes and grades for specific performance requirements.

BENEFITS

- ELIMINATE DOWNGRADES due to O.D. wear of PH-6 upset areas and re-cut limitations
- IMPROVE TORQUE capacity by up to 76% when compared to PH-6
- LOWER OPERATING COSTS due to robust thread profile and elimination of premature downgrades

APPLICATIONS

- Designed for horizontal drill out, workover, & fishing operations
- Ideal for extended laterals & high angle wells

FEATURES/ADVANTAGES

- Disposable coupling eliminates the premature downgrading of tubing due to connection O.D. wear
- Metal-to-metal seal maintains pressure integrity of 10,000 psi
- Ability to convert existing workstrings – extending tubing life cycle
- Non-upset tube promotes unlimited re-cut potential
- Radiused coupling for smooth transition
- Available in 2-3/8" and 2-7/8"
- Full complement of accessory components available



TUBING SPECIFICATIONS

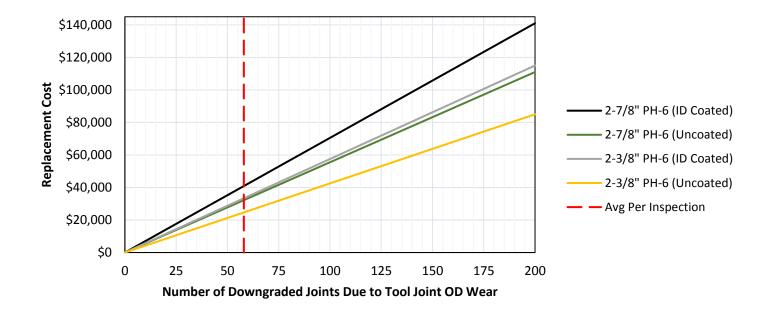
Size	Connection	Grade	Weight (PPF)	Torque (ft-lbs)				Tensile Yield	Connection (")	
				Min	Optimal	Max	Yield	(lbs)	OD	ID
2-3/8"	PH-6	P-110	5.95	2700	3038	3375	6779	186000	2.906	1.805
	HZT	P-110	5.95	2900	3500	6000	7950	186000	2.900	1.805
2-7/8"	PH-6	P-110	7.90	3500	3938	4375	10848	248000	3.438	2.265
	HZT	P-110	7.90	2000	5000	6900	9150	248000	3.438	2.265

The technical information herein is for reference only & should not be construed as a recommendation. All external data has been gathered via public sources and is subject to change. All dimensions are nominal.

ESTIMATED PH-6 DOWNGRADE REPLACEMENT COSTS

Size	Tube	Replacement Cost Per Joint	Replacement Cost per Inspection
2-3/8"	ID Coated PH-6	\$575	\$33,350
	Uncoated PH-6	\$425	\$24,650
2-7/8"	ID Coated PH-6	\$705	\$40,890
	Uncoated PH-6	\$555	\$32,190

Data gathered herein represents costs of downgraded joints due to tool joint OD wear. Replacement costs are based on full replacement price of downgraded joints. Replacement cost per inspection is based on average of 10% downgraded joints per 18,000 ft. rental string.



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