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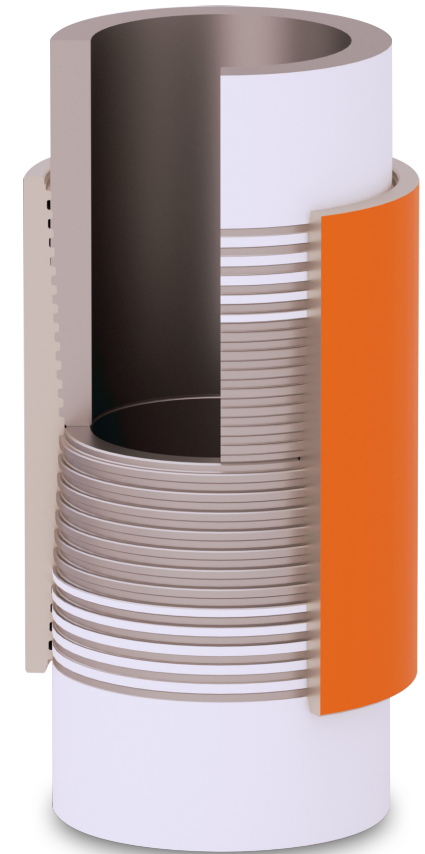
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PANTHER™

Fast. Rugged. Reliable.



MITUBULARS™
Marubeni-Itochu Steel

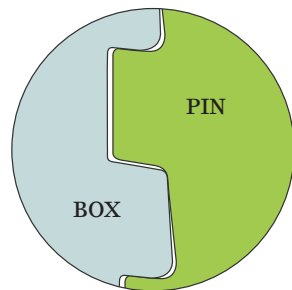
PANTHER™ Semi-Premium connection delivers superior running performance with full pipe body performance. **PANTHER™** is a new generation of Semi-Premium connection and not just another modified buttress connection.

Designed with an advanced thread form that ensures fast, efficient running is built into every connection. Shorter thread length and easy stabbing thread form reduce make-up time by more than 40%. Available in a pin-to-pin contact version or internal shoulder version.

Superior performance and running efficiencies for shale applications, horizontal and extended reach wells, and drilling with casing applications. **PANTHER™** saves time and money at the rig site.

Qualified to meet or exceed pipe body ratings at independent laboratories with third party witness based on API 5C5 and technical recommendations of major operators.

- High torque
- High bending
- Fast, easy running with tongs, CRT's, or top drives
- Pin-to-Pin or Internal Shoulder (IS) option
- Compatible with 5CT 9th and 10th edition coupling OD
- Special clearance and matched strength coupling OD options
- Available in sizes from 3½" to 13¾"



The **PANTHER™** thread form is designed to capture thread compound for a more effective thread seal and is not sensitive to over-doping.

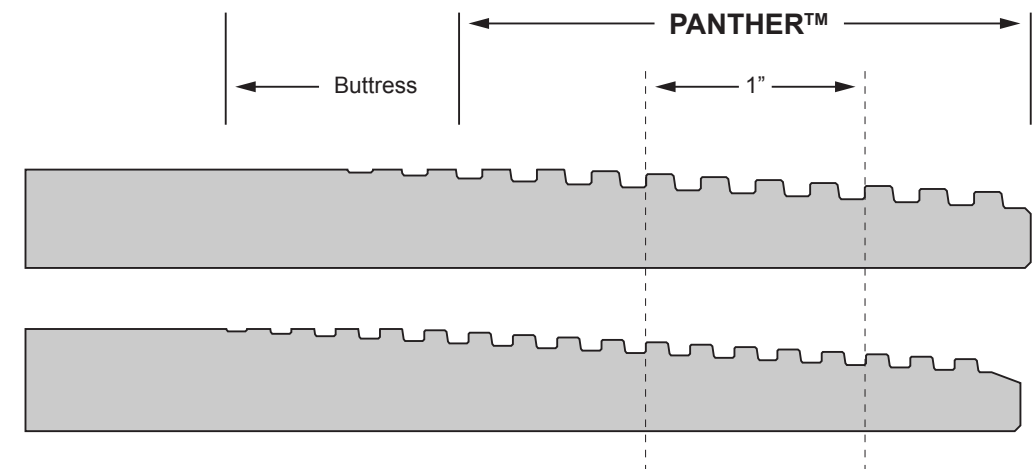


Laboratory test – 5 1/2" 20.00# P110EC
Pipe body rupture 19,409 psi, 731 KIPS, no leakage or connection failure at 123% of pipe



Torque shoulders and thread form optimization provide higher torques and reduced hoop stresses in made-up connections.

Features	Benefits
(-6°) Negative Load Flank	✓ Increased bending and tension rating
(+9°) Positive Stab Flank	✓ Higher torque and compressive loads
Steep Thread Taper (0.1118 in/in)	✓ Deeper stabbing and shorter connection
4 Pitch 3½" to 85/8" 3 Pitch ≥ 95/8"	✓ Faster connection make-up with fewer turns
void flank to root radius	✓ Reduces stress for increased fatigue performance
Proprietary patented thread form	<ul style="list-style-type: none"> ✓ Deep, trouble-free stabbing ✓ Eliminates risk of cross to cross cross threading ✓ Traps thread compound for sealing ✓ Higher bending and fatigue performance



Compared to 5 pitch buttress style connections, the **PANTHER™** steep taper and reduced thread pitch is easy and dependable to run.