



ERA TUFFTM

Single Piece Rigid Centralizers are manufactured by advanced hydroforming technology. They are ideal for running casing string in ERD & horizontal Wells. The Centralizer is precision formed using hydraulic pressure and the resultant high strength body is suitable to withstand extremely high torque & drag forces in drilling, reaming & completion operations. The smooth geometry improves drilling fluid flow and solids removal and result in uniform cement distribution across the annulus.

The Spiral Blades are designed to provide maximum standoff making these Centralizers suitable for deviated and horizontal wells. The vane angles and flow area are designed for high turbulence and effective mud removal.

The single piece construction provides the strength and rigidity to withstand dynamic downhole loads while maintaining standoff under large side force without being crushed. There is no risk of sticking and breakage of any component of the Centralizer downhole.

These Centralizers are recommended for Casing While Drilling (CwD) operations. They also provide a proven alternative to conventional Centralizers in challenging hole sections where pipe rotation may be required to reach total depth and/or during cementing operations.

Available in sizes ranging from 4 1/2" to 13 3/8".



For further information contact: ERA Oilfield Service (Thailand) Co Ltd, 66/69 Moo 4, Soi 17,
Phayun, Ban Chang, Rayong, Thailand 21130. website: www.eraoilfieldservices.com Email:
casingdepthsolutions@eraoilfieldservices.com



ERA TUFFTM

DESIGN & PERFORMANCE FEATURES

- Can withstand Axial Force 50,000 lbf and Side Force 32,000 lbf when tested as per API 10TR5
- Made from seamless pipe in Single Piece Construction without any weld resulting in enhanced strength & robustness.
- Designed for highly-deviated and horizontal wells.
- Has good impact and ability to reduce torque & drag.
- Achieves high stand-off
- Easy Slip On Installation
- Enables smooth entry through the casing bowl and reduces risk of hang up
- Improves running efficiencies through reduced torque and drag
- Allows for improved hydraulic flow for fluids and solids removal
- Improved window exiting for side tracks and multilateral wells.
- Helical rib design provides maximum standoff, ideal for deviated or horizontal wells where key seating can be present.
- Helical rib design offers rotational flow in the annulus to improve mud removal and cement placement, improving hydraulic isolation and resulting in a more uniform cement distribution and improved cement bond.
- Solid Centralizers (Hydroformed) are available for tubular & casing ranging from 4.5" O.D. through 13.38"



For further information contact: ERA Oilfield Service (Thailand) Co Ltd, 66/69 Moo 4, Soi 17,
Phayun, Ban Chang, Rayong, Thailand 21130. website: www.eraoilfieldservices.com
Email: casingdepthsolutions@eraoilfieldservices.com