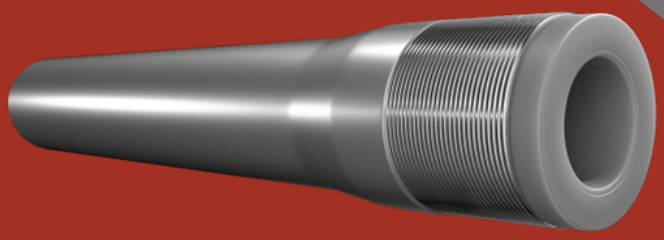
ForceFlow **ACE**



Tubing Liner for Elevated Temperatures

PRODUCT BENEFITS

- Increases the life of tubing
- Extends the life of Sucker Rods
- Mitigates the rod side-loading
- Lowers pump power consumption
- Reduces wax and scale build-up

PRODUCT PROPERTIES

- Immune to corrosion
- Rated to maximum 95 °C
- Erosion and abrasion-resistant
- Very low coefficient of friction
- H_2S and CO_2 compatible
- Chemically inert

PRODUCT APPLICATIONS

- All Injection and production wells
- Any type of rod pump completions
- New and used tubing strings

Reduce your operational expenditure, boost your well performance, and protect your assets from corrosion and wear with our thermoplastic ForceFlow products. Alike **CORE** and **DURA** liners, **ACE** is mechanically bonded to pipe I.D., built to exceed ASTM standards, and complimented with a rugged teflon-coated coupling to safeguard the J-area.

Unlike other products, **ACE** is created to last long where many flake or melt. It is made of a specialized, unique polymer that withstands up to 95 °C in harsh downhole conditions. FORCE liners require no supervision at wellsite. Simple water, sour or sweet oil, brine disposal, or chemical injections in vertical or highly deviated wells - **ACE** takes it all, if used right it can stay in service twice as long as others and keep saving your OPEX.

Tubing liners have been renowned in the industry for over 30 years, we managed to make this technology truly cost-efficient, while providing seamless and one of the fastest on-time delivery. Made in Canada for Canadian conditions.

FORCE

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TYPICAL DIMENSIONS OF LINED EUE 8RD API TUBING

Standard API Outer Diameter		Weights with Liner installed		Inner Diameter with Liner installed		Drift Diameter with Liner Installed	
[in]	[mm]	[lb/ft]	[kg/m]	[in]	[mm]	[in]	[mm]
2 ⅜	60.30	5.05	7.44	1.72	43.96	1.60	40.64
2 ⅞	73.00	6.95	8.92	2.10	53.34	2.00	50.80
3 ½	88.90	9.95	13.39	2.67	67.81	2.50	63.50
4 ½	114.30	13.72	19.34	3.68	93.47	3.40	86.36

STANDARD TUBING API TORQUES

Standard API Outer Diameter		Material Strength	API Suggested Min. Torque	API Suggested Opt. Torque	API Suggested Max. Torque
[in]	[mm]	N/A	[ft/lbs]	[ft/lbs]	[ft/lbs]
2 ⅜	60.30	J-55	970	1,290	1,610
		L-80	1,320	1,760	2,200
2 ⅞	73.00	J-55	1,240	1,650	2,060
		L-80	1,690	2,250	2,810
3 ½	88.90	J-55	1,710	2,280	2,850
		L-80	2,350	3,130	3,910
4 ½	114.30	J-55	2,150	2,866	3,580
		L-80	2,960	3,940	4,930

TYPICAL OUTER DIAMETER OF EUE 8RD API COUPLING

Standard API Outer Diameter		Regular API Coupling Outer Diameter		Slim Hole API Coupling Outer Diameter	
[in]	[mm]	[in]	[mm]	[in]	[mm]
2 ⅜	60.30	3.063	77.80	2.910	73.91
2 ⅞	73.00	3.668	93.16	3.460	87.88
3 ½	88.90	4.500	114.3	4.180	106.17
4 ½	114.30	5.563	141.3	5.094	129.38

Force Inspection Services is a Canadian privately owned company headquartered in Leduc, AB. The company specializes in the inspection, repair, and storage of oilfield tubulars with 8 facilities located in Western Canada. In addition to in-plant inspection, Force also provides mobile field services and repairs including bottom-hole assembly (BHA) inspection, transverse electromagnetic (EMI) drill pipe inspection, refacing and straightening. Over the years, Force has established a strong reputation in the industry for quality work, timely service, integrity, technology, and proven capability to execute the most complex projects in our industry. Please consult with a Force representative to confirm that our lined products can be used in your well conditions. Detailed information about the well environment is the key to selecting the correct tubing protection, as certain downhole factors and operational practices may affect the performance or prohibit the use of lining products.