

Liner Tieback

Metal-to-metal, gas-tight liner tieback system



Rated to 11,700 psi [103 MPa]



Rated to 160 degC [320 degF]

APPLICATIONS

- Structural integrity
- Extended-reach drilling
- Slot recovery
- Long-term intervention operations

BENEFITS

- Enables connection of liners to a tieback string of casing using a durable, permanent metal-to-metal seal
- Provides flexibility in landing casing and liner space-out
- Enables greater equivalent circulating density (ECD)
- Eliminates need for polished bore receptacle elastomeric sealing
- Enables planning for well integrity over the field's lifetime
- Eliminates weak points in the completion or casing string
- Rapidly reinstates well integrity during production in adverse situations

FEATURES

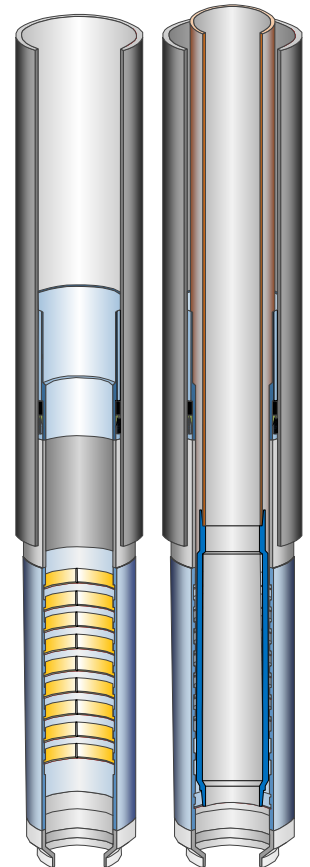
- ISO 14310 V0-rated
- Installation depth not limited by liner tieback technology
- Full axial load-bearing capability of 2,500,000 lbf
- Burst pressure ratings close to base casing
- Effective for the life of the well
- NACE compatible

As a part of the COLOSSUS M2M* metal-to-metal expandable liner hanger system portfolio, the metal-to-metal, gas-tight liner tieback system is a V0 ISO 14310 certified, full axial-load-bearing connection system that connects liners to a tieback string of casing with a permanent, durable seal. The unique Metalmorphology* metal-to-metal sealing and anchoring technology shapes metal downhole to create metal-to-metal solutions that conform perfectly to the shape of the casing string.

Applications

To be able to reach setting depths of 30,000 ft [9,144 m] or more, operators are increasing the number of casing strings in well designs. Tighter annular clearances require the use of more flush joint connections. Conventional liner hanger equipment is unable to match the ratings of the casing in these well designs, especially when the liner needs to be tied back to surface. With the liner tieback system, operators are able to run a conventional hanger system and tie the liner string back to the wellhead without loss of casing integrity or rating. The liner tieback system can also be installed higher up the wellbore, enabling the operator to drill a new wellbore for an existing well without losing a slot in the subsea permanent guide structure.

As casing strings become longer, there is an advantage to running the string in two stages. Installing a liner string in the lower openhole section and then tying the liner back to the wellhead greatly reduces the equivalent circulating density of the cement as well as the installation time compared with running a long string. It also enables the operator to space out the tieback into the wellhead in a controlled environment. Running the liner tieback system in the liner hanger assembly provides the operator with full V0-rated downhole casing connection integrity.



Liner tieback system with metal-to-metal sealing elements in yellow and tieback to surface in red.

Liner Tieback Specifications					High-Pressure Systems		
Size, in [cm]	7 [17.780]	9.625 [202.248]	9.875 [25.083]	13.375 [33.973]	13.625 [34.608]	7.625 [19.368]	14 [35.56]
Casing weight, lbm [kg]	29 [13.2]	53.5 [24.3]	62.8 [28.5]	72 [32.7]	858.2 [389.3]	47.1 [21.4]	115 [52.2]
OD, in [cm]	8.350 [21.209]	12.097 [30.726]	12.035 [30.569]	16.750 [42.545]	17.000 [43.18]	10.340 [26.264]	17.000 [43.18]
Standard ID, in [cm]	6.184 [15.707]	8.535 [21.679]	8.535 [21.679]	12.347 [31.361]	12.375 [31.433]	6.760 [17.170]	12.375 [31.433]
Burst rating, psi [MPa]	11,220 [77.2]	10,900 [75.2]	10,900 [75.2]	7,400 [51.0]	8,830 [60.9]	11,000 [75.8]	10,200 [70.3]
Collapse rating, psi [MPa]	8,500 [58.6]	7,930 [54.7]	7,930 [54.7]	2,880 [19.9]	4,590 [31.6]	11,700 [80.7]	10,400 [71.7]