Welltec® Expandable Anchor (WEA)

for Tieback Liner

The Welltec® Expandable Anchor (WEA) for Tieback Liner is qualified for life-of-well, delivers maximum running clearance, and eliminates the need for further intervention runs, cementing, or waiting on swell time. Surface-controlled hydraulic expansion ensures bidirectional anchoring and sealing. The solution is qualified in accordance with the highest-level API and ISO standards.

Welltec®

Anchoring in cased hole

01 Applications

When the cementing of a single long casing is not feasible due to ECDs

02 Features

High expansion and bidirectional load capability

Rugged, all-welded, metallic construction

Design solutions to accommodate various fluid types and hydraulic requirements

Load capability independent of Delta P

Compatible with feedthrough lines

NACE compliant

03 Benefits

Full bore solution maintains the tie-back ID with minimal running OD

Modular and compact design with high modular bidirectional tieback capability

Hydraulic expansion delivers compliance to damaged or deformed casings

Minimizes stress within deformed casing via even distribution of load

Enables reciprocation, circulation, and/or rotation during deployment

Reduced inventory – higher expansion capability covers multiple casing weights

The design of the WEA for Tieback Liner minimizes subcomponents, ensuring reliability and efficiency while simplifying well construction. The WEA enables reciprocation, circulation, and/or rotation during deployment.

The Welltec Expandable Anchor (WEA) for Tieback Liner is run in combination with a Metal Expandable Packer (MEP), i.e., a proven hydraulic expansion sleeve. The rapid application of surface-controlled pressure simultaneously expands the WEA and the MEP system, offering an efficient alternative to conventional tieback solutions. The expansion sleeve hydraulically expands the bidirectional anchors, which uniformly engage with the ID of the outer casing. Increased loading/anchoring capacity is achieved via the modular addition of WEA sleeves.

The slim running OD maximizes clearance to have minimal impact on ECD during fluid circulation of cementing operations.

WCS product specifications

	General Information
Product name	Welltec® Expandable Anchor (WEA) for Tieback Liner
Product structure	Hydraulic expandable sleeve, all-metal envelope
Base pipe	Compatible with all standard casing material / weight / threads
Standard material	Alloy 28 / Super Duplex SST / AISI 316
Slip material	AISI4140 or AISI Grade 420
No. of control lines	Up to six, ¼” control lines

	534WEA*	6WEA*	812WEA*	1214WEA*
Set within a tubular range, inch (mm)	6 5/8” to 7” (168.3 to 177.8 mm) (Most weights)	6 5/8” to 7 5/8” (168.3 to 193.68 mm)	9 5/8” to 9 7/8” (244.5 to 250.83 mm) (Most weights)	13 3/8” to 13 5/8” (339.73 to 346.08 mm) (Most weights)
Base-pipe range up to, inch (mm)	4 ½” (114.33 mm)	4 ½” (114.33 mm)	7” (177.8 mm)	9 5/8” (244.48 mm)
Expansion range, inch (mm)	5.75” to 6.25” (146.05 to 158.75 mm)	5.875” to 6.094” (149.2 to 154.78 mm)	8.375” to 8.835” (212.725 to 224.41 mm)	11.5” to 12.38” (292.1 to 314.45 mm)
Maximum running OD, inch (mm)	5.6” (142.24 mm)	5.75” (146.05 mm)	8.25” (209.55 mm)	11.38” (289.05 mm)
ID, inch (mm)	Full bore (as per base-pipe)			
Qualification	API 19LH – V1			
Expansion pressure while setting	4,500 psi (310 bar)	5,000 psi (344.7 bar)	5,000 psi (344.7 bar)	5,000 psi (344.7 bar)
Anchoring capacity	Up to 80% of the tensile strength of the base-pipe			
Differential pressure	Up to 10,000 psi (689 bar)			
Temperature range °C (°F)	30°C to 130°C (86°F to 266°F)			
Compatible with	Metal Expandable Packers			

* Custom specification and control line feedthrough options available on request