KUDU Cam-Loc

Progressing Cavity Pump Anchor

Proven Locking Action

- Improved longevity through decreased wear on slips, drag blocks and casing ID
- Specialized coatings to prevent corrosion, scale and erosion
- Simple tool servicing

Bringing solutions to the surface since 1989.

KUDU INDUSTRIES INC.

KUDU Cam-Loc Anchor

KUDU Cam-Loc anchors contain the proven locking action of a cam with an improved separate slip activating mechanism. Extra bypasses allow for additional flow area and avoid sand bridging around the tool. Ask your KUDU representative about the specialized coatings that are available for preventing corrosion or scale and reducing erosion.

How it Works

The Cam-Loc uses separate slip and drag blocks to eliminate premature slip wear during installation. An Inconel X 750 spring retracts the slips into the body while it is running in the hole. The drag blocks centralize the tool and provide the frictional interference to deploy the slips when torque is applied. As the torque is applied, the cam profile, which is integral to the body, moves underneath the slips thus forcing them outward (illustrated in Figures 1 and 2). The cam then drives the slips into contact with the casing ID. Large, vertical teeth will securely grip the casing, preventing a clockwise rotation, while still allowing for vertical movement as the tubing expands or contracts. Using separate slip and drag blocks offers each component a greater cross-sectional area, which translates into more area for load distribution applied to each part. The result is less wear on the slips, drag blocks and casing ID thus improving the service life.

5 1/2" CSG X 2 7/8"
EVE Anchor

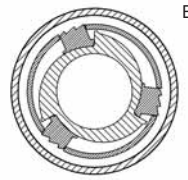

Figure 1 Slips fully retracted.

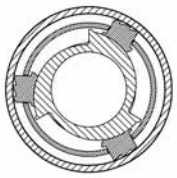

Figure 2. Slips fully deployed.

Repairs in Minutes

Servicing the tool is simple. The slip and drag housings are joined together with a breech lock connection and six screws. Remove the screws and rotate the housings. The only tool required is an allen wrench.

Running Procedures

- Consider installing a coupling on the pin end to eliminate potential thread damage to the exposed threads, if the Cam-Loc is on the bottom of the string.
- Only use back-ups or tongs on the box area of the tool, never on the slip or drag housing.
- Always follow API recommended connection make-up and torque guidelines.
- Run the Cam-Loc below or above the PCP.
- Set the anchor by applying right hand torque to the tubing string.
- Prevent unnecessary wear on the slips by using back-ups on the tubing string during connection make-up.
- During installation and removal, run the anchor and pump slowly through BOP's.
- After setting the anchor in the casing string, familiarize the crew with the setting and unsetting procedures (left hand rotation unsets the anchor).

Additional,detailed instructions supplied with each tool.

Canadian Patent: 2,241,358.
United States Patent: 6,155,346.
Other patents pending.

KUDU Cam-Loc Anchor Specifications

Casing Size O.D.		Tool O.D.		Tool I.D.		Overall Length		Weight		API Connection (EUE)		Setting Range	
INCHES	MM	INCHES	MM	INCHES	MM	INCHES	MM	INCHES	MM	INCHES	MM	CASING WT (lbs/ft)	CASING WT (kg/m)
4 1/2	114.30	3.63	92.2	1.9	48.3	21.0	533.4	30.0	13.6	2 3/8	60.3	9.5 - 13.5	14.1 - 20.1
5	127.00	3.63	92.2	1.9	48.3	21.0	533.4	33.0	15.0	2 3/8	60.3	13.0 - 20.8	19.3 - 30.9
5 1/2	139.70	4.45	113.0	2.5	63.5	26.0	660.4	48.0	21.8	2 7/8	73.0	14.0 - 26.0	20.8 - 38.7
5 3/4	146.05	4.45	113.0	2.5	63.5	26.0	660.4	48.0	21.8	2 7/8	73.0	ID 5.17" - 4.87"	ID 131.00mm - 123.54mm
6 5/8	168.28	4.45	113.0	2.5	63.5	26.0	660.4	51.0	23.1	2 7/8	73.0	20.0 - 29.0	29.7 - 43.1
7	177.80	4.45	113.0	2.5	63.5	26.0	660.4	53.0	24.0	2 7/8	73.0	17.0 - 30.0	25.3 - 44.6
7	177.80	5.63	143.0	3.0	76.2	26.0	660.4	84.0	38.1	3 1/2	88.9	17.0 - 32.0	25.3 - 44.6
7 5/8	193.68	5.63	143.0	3.0	76.2	26.0	660.4	86.0	39.0	3 1/2	88.9	24.0 - 33.7	35.7 - 50.1
8 5/8	219.08	5.63	143.0	3.0	76.2	26.0	660.4	86.0	39.0	3 1/2	88.9	24.0 - 44.0	35.7 - 65.5
9 5/8	244.48	5.63	143.0	3.0	76.2	26.0	660.4	86.0	39.0	3 1/2	88.9	38.0 - 58.4	56.5 - 86.9
9 5/8	244.48	7.15	181.6	4.0	101.6	29.0	736.6	112.0	50.8	4 1/2	114.3	38.0 - 58.4	56.5 - 86.9
*10 3/4	273.05	7.15	181.6	4.0	101.6	29.0	736.6	114.0	51.7	4 1/2	114.3	40.5 - 60.7	60.3 - 90.3

**Pending*

ISO 9001:2000

KUDU INDUSTRIES INC.

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