Centralized Torque Anchor

The Centralized Torque Anchor (CTA) is designed to anchor the Tubing String and Progressive Cavity Pump (PCP) within the wellbore. The CTA consists of a unique anchor design, which incorporates 1 Floating Slip and 2 Rigid Slips that guarantee the Torque Anchor stays concentric within the wellbore casing. The CTA stops the right-hand rotation of the PC Pump, by providing "Superior Stabilization" of the PC Pump and eliminates tubing back-off.

Benefits:

• Centralizing the Torque Anchor in the casing, allows for increased production, by lifting the Slotted Tag Bar and Gas Separator Intakes off the casing ID and out of the sand

• The open By-Pass area and centralized design, allows for greater annular space, for gas migration up the annulus, rather than inside the PC Pump. It also, allows for sand and coiled tubing to pass the CTA

• The CTA having a main body the same OD as the Stator leaves no place for sand to build up on the Tool. Result, the tool can be removed easily from sanded in wells

• The Rigid Slips provide a space to carry and protect the tech cable and/or diluent cables down well

• Solid Drive Pin and Floating Slip design for simple setting and straight pull-up release procedures

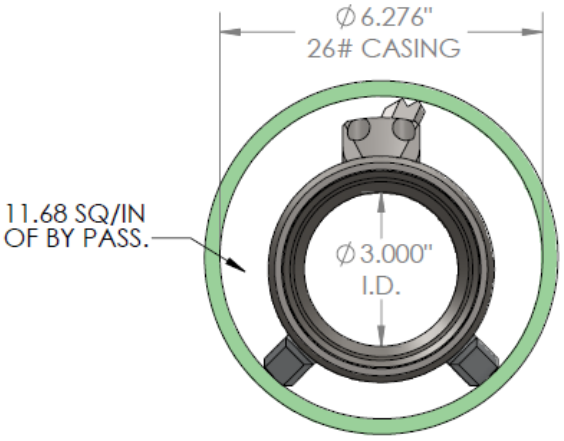
• Inconel springs for H2S and CO2 resistance

• Rebuilding procedure can be performed in the field.

Operation:

1. The Centralized Torque Anchor (CTA) is threaded onto the tubing string above or below the PC Pump.
2. Run the tubing to the desired setting depth and land the tubing hanger. DO NOT tighten the lock screws.
3. Pick up the tubing string so it is just off the hanger seat and apply right hand torque to the tubing to set the anchor.
4. Set the tubing hanger back down and lock the hanger into place.

The CTA is released by straight pull-up from the wellbore.



Example of 7" x 3-1/2 EUE CTA in 7" 26# Casing

Manufactured by Excalibre Downhole Tools
CDN Patent No. 2,611,294 / USA Patent No. 7,748,477 B2

Centralized Torque Anchor

Current Sizes

Casing Size		Casing Weight				Tool OD			Connections	Tool ID
in	mm	Weight lb/ft	Nominal ID in	Weight kg/m	Nominal ID mm	Tool Series	in	mm	Box x Pin	in
4-1/2	114.3	9.5	4.090	14.14	103.89	S1	3.808	96.7	2-3/8 EUE	2.0
4-1/2	114.3	11.6	4.000	17.62	101.60	S2	3.726	94.6	2-3/8 EUE	2.0
5-1/2	139.7	13	5.044	19.35	128.12	S1	4.600	119.6	2-7/8 EUE	2.44
		17	4.892	25.3	124.26					
5-1/2	139.7	17	4.892	25.3	124.26	S2	4.389	116.3	2-7/8 EUE	2.44
		23	4.670	34.22	118.62					
7	177.8	17	6.538	25.3	166.07	S1	6.103	155.0	2-7/8 EUE	2.50
		23	6.336	34.22	161.70				3-1/2 EUE	3.00
7	177.8	23	6.336	34.22	161.70	S2	5.935	150.7	2-7/8 EUE	2.50
		29	6.184	43.15	157.07				3-1/2 EUE	3.00
7	177.8	32	6.094	47.62	154.79	S3	5.863	149.5	2-7/8 EUE	2.50
									3-1/2 EUE	3.00
7	177.8	26	6.276	38.69	159.41	SA	5.942	150.9	2-7/8 EUE	2.50
		29	6.184	43.15	157.07				3-1/2 EUE	3.00
8-5/8	219.1	20	8.181	29.76	208.05	S1	7.750	196.6	2-7/8 EUE	2.50
		24	8.097	35.71	205.66				3-1/2 EUE	3.00
9-5/8	244.5	40	8.835	59.52	224.41	S1	8.283	210.4	3-1/2 EUE	3.00
		43.5	8.755	64.73	222.38				4-1/2 EUE	4.00
		47	8.681	69.94	220.50				5-1/2 LTC	4.00
9-5/8	244.5	29.3	9.063	43.60	230.20	S2	8.400	213.4	3-1/2 EUE	3.00
		36	8.921	53.57	226.59				4-1/2 EUE	4.00
									5-1/2 LTC	4.00

Other sizes available on request.

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