



Artificial Lift Services

Disclaimer – technical information provided herein is intended solely as engineering recommendations Q2 ALS and Oilify and their employees or others acting on either or both of their behalf, make no warranties, express or implied or statutory, as to any matter whatsoever, with respect to its use. Q2 ALS and Oilify shall not be held liable for any use or misuse or for any damages related thereto.

SharkTAC™ Tubing Anchor Casing-Scraper



USE IN WELLS TO:

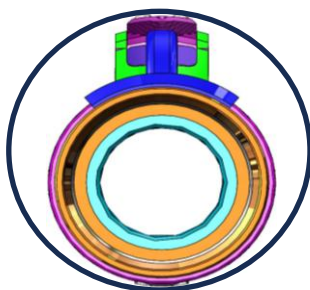
- Maximize rod pump fillage and production in combination with a **WhaleShark™** gas separator and **Q2-Flow™** pump
- Stabilize and control flow slugging and/or flumping
- Maximize pump and rod run-life
- Reduce risks with capillary lines or electrical cables
- Run anchored tubing swivels
- As a high-performance **PCP** torque anchor

VALUE FEATURES

- Patent pending mechanical tubing anchor with a fully engineered “invisible” annular flow path
- Offers greatest possible annular flowby cross sectional area and does not limit production
- Annular flow-by cross sectional area and hydraulic diameter equal to a standard EUE tubing couplings
- Eccentric annular flow path increases gas flow-by by >30%
- Does not require rotation to set or unset (only up/down movement)
- Extended auto-J avoids unplanned setting risks while running in hole
- Unrestricting, full 2-7/8” EUE tubing drift internal diameter (ID), so can be run above seat nipple
- Can be positioned above or below the downhole gas separator; can be run on bottom of mud joints
- Can be run at high inclinations with low risk setting/unsetting
- Adjustable emergency shear pin release (1 to 11 shear pins)
- Novel integrated casing scraper drag blocks avoid dedicated casing scraper runs (for low to medium risk casing scraper requirements)

Tubing Anchor Specifications

Series Model Name	45	55	70
Casing Size, in [mm]	4.5 [114.3]	5.5 [139.7]	7.0 [177.8]
Casing Weight, lb/ft [kg/m]	11.6-15.1 [17.2-22.5]	17-23 [25.4-34.3]	23-32 [34.3-47.6]
Length, feet [m]	5.6 [1.69]	5.3 [1.62]	5.3 [1.62]
Connections, in [mm]	2-3/8” [73.0] EUE	2-7/8” [73.0] EUE	2-7/8” [73.0] EUE
Torque Rating, ft.lbs [N.m]	1,760 [2,386]	2,250 [3,051]	2,250 [3,051]
Tensile Rating, klbs [kdaN]	60 [26.7]	60 [26.7]	60 [26.7]
Internal Diameter, in [mm]	1.0 [25.4]	2.441 [62.0]	2.441 [62.0]
Shear Pin Increments, klbs[kdaN]	5 [2.2]	5 [2.2]	5 [2.2]
Equivalent OD slips set, in [mm]	3.1 [78.74]	3.668 [93.98]	4.0 [101.6]
Mandrel Material	55 and 70 series: C-110 (for sour service),		45 series: L-80
Surface Treatment	Quench-Polish-Quench (QPQ)		



Eccentric Annular Flow Path

Eccentric annular flow path improves gas escaping past it by 30% or more, effectively making the SharkTAC “invisible”

The smaller a tubing anchor’s equivalent outside diameter (including when slips are set), the greater annular flowby area and the greater the production performance.

A fully engineered tubing anchor that eliminates limitations of existing tubing anchors and torque anchors (PCP no-turn tools). The **SharkTAC™ Tubing Anchor Casing-Scraper** is a high-performance downhole tubing/torque anchor that offers the greatest possible annular flowby cross sectional area and hydraulic diameter: equal to a 2-7/8” (73.0mm) EUE tubing coupling for the 55 series and equal to a 2-3/8” (60.3mm) EUE tubing coupling for the 45 series. Engineered to “no longer be” the production limiting BHA component in the annular flow path above or below a downhole pump or separator.

It is very common for annular flow-by restrictive tubing/torque anchors to cause erratic pump fillage and reduce downhole gas separator performance. An annular flow path restriction above a pump also prevents annular fluid levels from being pumped down or pumped off (limiting a well’s production potential). See technical paper: McCoy, J., Rowlan, L., Taylor, C., Podio, A. (2014), “Tubing Anchors Can Reduce Production Rates and Pump Fillage”, URTEC-1918491. See SharkTAC SPE paper SPE-219523-MS.

The “catcher” feature common with standard tubing has been limiting both the annular flowby area and the internal diameter of tubing anchors. As such, a catcher feature was engineered out from this design to avoid such limitations.

Integrated casing scraper feature reduces the need for dedicated casing scraper runs (low and medium risk casing scraper requirements).