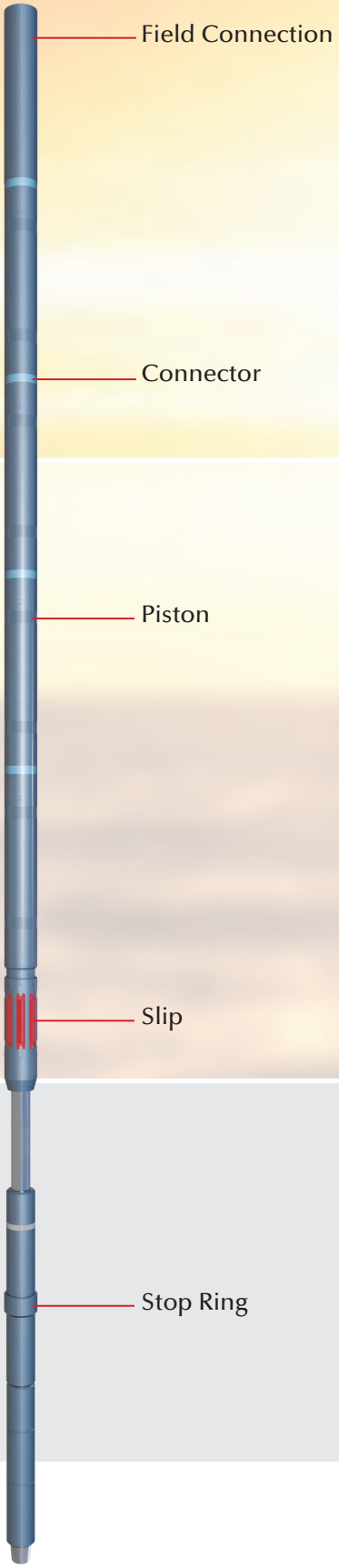
A DRIL-QUIP Company

ENGINEERING INNOVATION
WORLDWIDE

TIW® CPT

High Load Downhole Jack



TIW® Hydraulic Downhole Casing Recovery System Mitigates Rig Capacity and Saves Time and Money

The TIW Casing Pulling Tool (CPT) retrieves casing in applications where the drilling rig or work string does not have sufficient capacity and can be used as a replacement for surface casing jacking systems.

Furnished with a rotary shouldered pin connection on the bottom allowing the use of casing cutting and/or standard fishing tools the CPT provides the pulling force required to retrieve the casing. It can also be used to dislodge other material from the casing or wellbore.

The CPT downhole multi-stage hydraulic actuator functions as a hydraulic jack. After the casing has been located and tagged, hydraulically-set mechanically releasable slips anchor the CPT to the wall of the larger ID casing above. Pressure is applied to begin the upward movement of the fish. After the stroke is completed, the anchors are released. The power section can be reset and the anchor re-engaged as many time as required.

Benefits

- Applies pulling loads at the fish not at the surface
- Mitigates limited rig capacity
- Mitigates damage to work string and hoisting equipment due to tension loads or shock loads
- Quick rig up and rig down compared with surface systems

CPT Components

- Multi-Stage Hydraulic Power Section
- Anchor Section
- Safety Release Section
- Field End Connection

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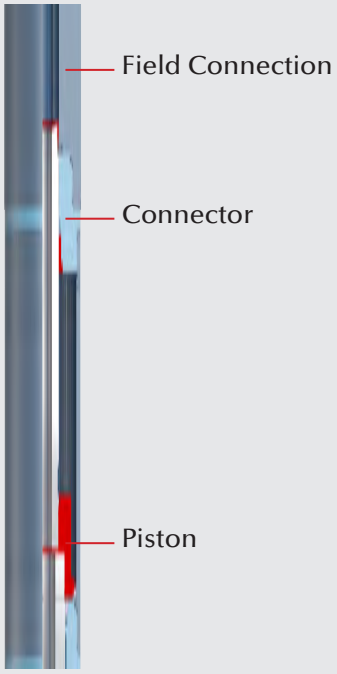
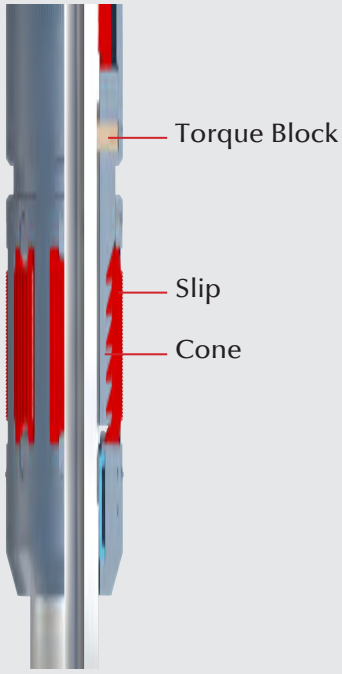
Power Section



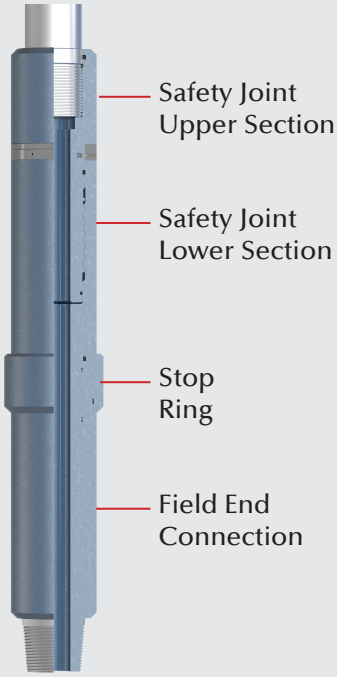
Multi-Piston Power Section provides a combined cross sectional area that when pressure is applied generates the forces required to begin the upward movement of the fish.

Anchor Section



The Anchor Section is activated with pressure on the power section and the cones push the slips outward anchoring the CPT in place. After the stroke is completed, a straight pull upward on the power section releases the slips. The power section can then be reset and the anchor re-engaged.

Safety Release Section



The Safety Release Section includes a safety joint that provides a method of releasing the power section from the fishing assembly should it be required and a Stop Ring that acts as a locator to tag the top of the fish. The field end connection is provided to connect to the fishing BHA.

TIW Casing Pulling Tool (CPT) Operational Data

TOOL SIZE (in)	CASING SIZE (in)	CASING WEIGHT (lb/ft)	PISTON AREA (in^2)	PISTON STAGES (#)	STROKE (ft)	OPERATIONAL OUTPUT PULLING POWER (lbs)
4.440	5.5	15.5-23	36.875	5	3	Up to 240,000
5.750	7	20 - 35	86.83	7	2	Up to 530,000
	7.625	29.7 - 39				
	7.75	46.1				
8.125	9.625	36	159.07	7	2	Up to 800,000
		40 - 43.5				
		47 - 53.5				
11.250	13.375	72 - 92	303.34	5	3	Up to 1,520,000
	13.625	88.2				
	14	86 - 100				
	16	65 - 146				
	18.625	87.5 - 100.5				
	20	106.5 - 133				

Figures listed above reflect standard system configurations. Numerous factors must be considered to determine actual maximum pulling power for a given well application. Higher pulling forces may be achievable if required. Contact a TIW Representative for more details.

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