



THRUSTER

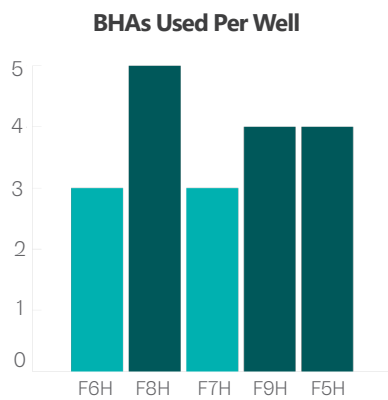
Designed to increase reliability in your BHA components, the Thruster provides consistent drilling parameters, from ROP to WOB and differential pressure..

The Thruster provides a consistent force to the bit by balancing hydraulic (pressure drop below the tool) against mechanical forces (weight on bit). This balance provides smooth energy transfer to the bit—even in erratic situations.

Unplanned trips are expensive and burden your AFE. Thruster is proven to reduce excess trips and associated costs.

FEATURES AND BENEFITS

- **CONSISTENT** bit engagement to prevent stick slip
- **DECREASE SHOCK** and vibration
- **REDUCE DAMAGES** to bits and other BHA components
- **REDUCE WEIGHT AND TORQUE** swings while drilling



Wells F 6H and F 7H A were drilled with a Thruster, while F 8H, F 9H and F 5H were drilled without Thruster.

\$750MM

AGGREGATED SAVINGS
Minimum estimate of aggregated savings achieved by reducing the number of trips and days drilling as the result of adding Thruster to BHA (worldwide, excluding savings on prevented damages to BHA)

\$80k

SAVINGS PER DAY
Average savings per day per BHA achieved by increasing the efficiency of drilling while reducing the time drilled as a result of using Thruster as a dysfunction mitigation tool

24/7

ON-CALL SUPPORT
Our operations and technical support team take on-call shifts to make sure there is always help available to our clients.

10k+

RUNS GLOBALLY
The Thruster achieved its 10,000 runs in 2023. Some of the countries where the Thruster has been deployed include USA, Canada, Saudi Arabia, Pakistan, Turkey, and Egypt.

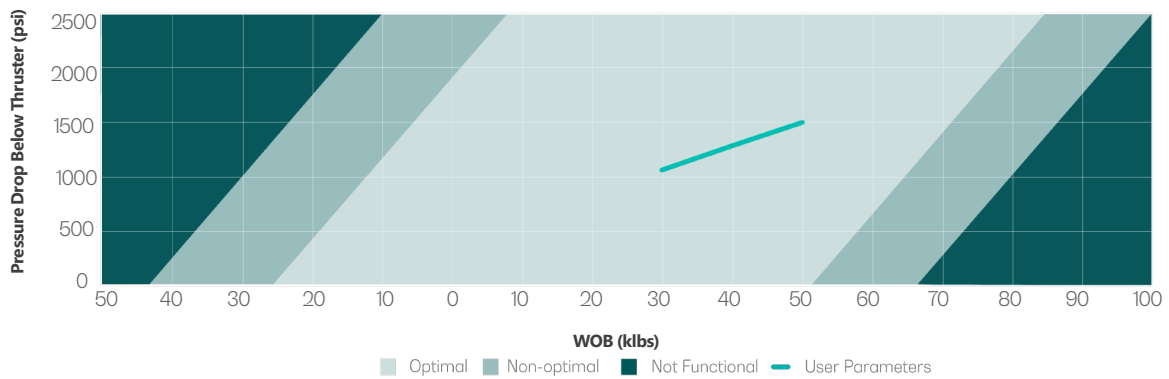
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IADC RATE
Continuous improvement to ensure maximum reliability.



THRUSTER OPTIMIZATION EXAMPLE

Each Thruster is customized per job and based on well and BHA specifics.



SPECIFICATIONS

Series	OD (in)	ID (in)	Length (ft)	Weight (lb)	Pump Open Area (in ²)	Stroke Up (in)	Stroke Down (in)	Max Rotating Dogleg (°/100ft)	Maximum Torque (ft-lb)
500	5.00	2.25	22.0	1,000	11.0	12.0	12.0	13.8	21,000
650	6.55	2.50	19.8	1,600	16.8	8.0	8.0	10.5	45,000
675	6.75	2.50	21.0	1,600	16.8	8.0	8.0	10.2	45,000
800	8.00	3.00	22.5	3,000	30.7	12.0	12.0	8.6	60,000

MAX TEMPERATURE
 Standard Seals: 250°F
 High Temp Seals: 405°F
 Geo Seals: 405°F + Steam