



BLACKHAWK
SPECIALTY TOOLS

ENGINEERED CEMENTING SOLUTIONS

6-5/8" AUTOMATED QUAD TOP DRIVE CEMENT HEAD

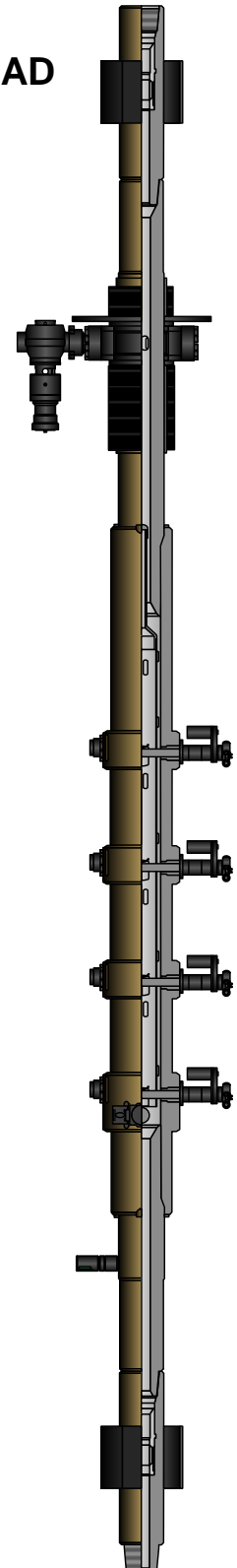
Blackhawk's 6-5/8" Quad Top Drive Cement Head has become the market leader for deepwater primary cementing operations in the GoM. Incorporating a vast-array of industry-exclusive technologies and features focused on safety, speed, and efficiency, Blackhawk continues to refine what is the most versatile cement head currently on the market.

FEATURES

- Industry-exclusive, 6.625" maximum cage ID prevents "wadding" deformation of dart fins, mitigating fluid bypass and displacement volume discrepancies.
- Remote-operated pin pullers enable fast and accurate launching of wiper plugs, darts, and rubber/nerf balls.
- Remote-operated safety valves above and below cement head can be quickly open or closed.
- Remote-operated cementing plug valve quickly isolates cementing unit during displacement.
- Industry-exclusive LED tattle-tale, effective in all weather conditions, enables confirmation of plug/dart/ball release from tool.
- Quik-LockSM connections allows for the fastest plug/dart/ball reloads in the industry.
- Manual backup on all remote-operated features ensures redundancy and risk-free operation

VALUE

- Remote-operated, "on-the-fly" wiper plug launching, eliminates the need to stop pumping, reciprocating, and/or rotating.
- Remote-operated features eliminate the number of riding belt trips above the rig floor, improving safety.
- Reduced likelihood of plug/dart/ball damage improves cementing efficiency.

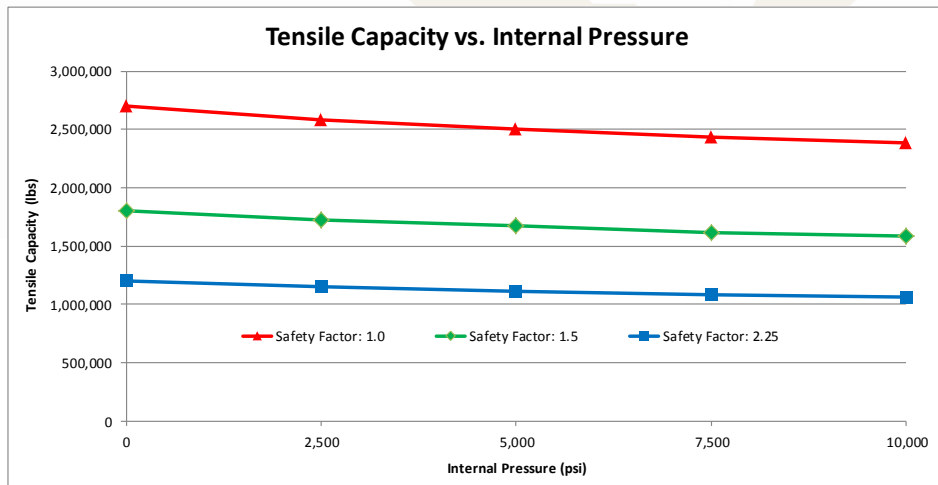




- Quick reloads on the rig floor reduce downtime.
- LED and observation ports leave no doubt that the plugs/darts/balls launched from the head as intended.
- Rotating ability further facilitates effective cementing.
- Adaptable to essentially any deepwater primary cementing application.

SPECIFICATIONS

6-5/8" Quad Top Drive Cement Head (Gen I)	
Maximum Hookload	1,800,000 lbs (SF 1.5)
Maximum Working Pressure	10,000 psi
Maximum Combined Loading	1,590,000 lbs @ 10,000 psi (SF 1.5)
Torque-thru Tool Rating	100 Kft-lbs Right, 50 Kft-lbs Left
Maximum Pump Rates	35 bpm through top drive
	15 bpm through 2" 1502
	20 bpm through 3" 1502
Complete Tool Weight	4,600 lbs
Connections	6-5/8" API FH



CERTIFICATIONS

- DNV, API Spec 7, 7G-2, 6A PSL 2.
- TH Hill Mechanical Design Review THHA E3-0722
- Mohr Stress Engineering – 2,200,000 lbs – Report 173878, 08/03/2009

