

Well Construction

Cementing Technologies

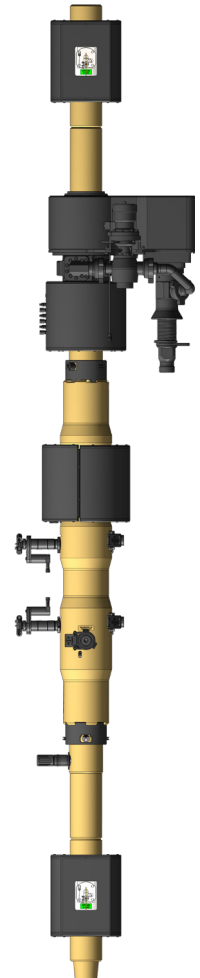
BLACKHAWK® Top-Drive Cement Head

The Expro BLACKHAWK® Top-Drive Cement Head is ideal for rotating while cementing drill pipe-deployed casing strings or liners.

The BLACKHAWK® Top-Drive Cement Head can be configured with dual or quad chamber bodies to adapt to any primary cementing application and upgraded with an optional wireless automation system and Expro's SKYHOOK® Wireless Cement Line Make-Up Device.

Features and benefits

- Universal design facilitates the operational flexibility to drop multiple styles of darts or wiper balls
- Large 6.625" cage ID prevents "wadding" or deformation of dart fins and mitigates fluid bypass and displacement volume discrepancies to prevent costly remedial cementing operations
- Industry-exclusive LED tattle-tale enables visual and audible confirmation of dart or wiper ball release to eliminate personnel manually confirming from the rig floor
- Industry-exclusive inspection port on each chamber allows for viewing inside the cement head, improving operational efficiencies by ensuring proper load out and release of darts and wiper balls
- Proprietary Quik-Lock™ connection provides the industry's fastest dart and wiper ball reloads to improve operational efficiency
- High-pressure swivel facilitates high RPMs and long-duration rotation while conditioning and cementing to improve quality of cement job
- Swivel can be removed from assembly when pumping cement through the top-drive to reduce overall length for various applications
- Industry-exclusive ball droppers provide the ability to drop two liner setting balls, up to 3" in diameter, without adding additional chambers to the cement head
- Administrative CE marking available for required environments





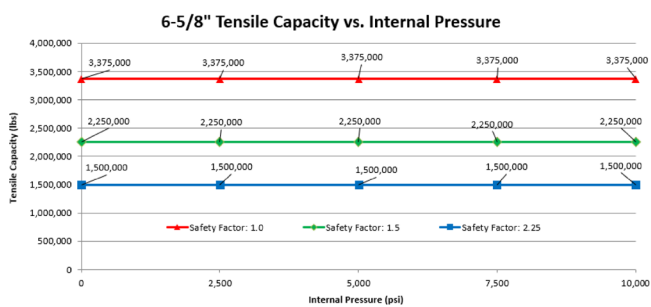
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Specifications

| Casing size (in.) | Max hook load (lbs) | Max. working pressure (psi) | Max. combined loading | Torque-thru tool rating (ft-lbs) | Max. pump rates (bpm) | Complete tool weight (lbs) | Connections |
|-------------------|---------------------|-----------------------------|-------------------------------------|----------------------------------|---|----------------------------|----------------------|
| 5 1/2 | 810,000 (SF 1.5) | 10,000 | Contact engineering | 50,000 | 35 BPM through top drive 15 BPM through 2" 1502 | 4,500 | API NC50 (4-1/2" IF) |
| 6 5/8 | 2,250,000 (SF 1.5) | 10,000 | 2,250,000 lbs @ 10,000 psi (SF 1.5) | 100,000 | 35 BPM through top drive 15 BPM through 2" 1502 20BPM through 3" 1502 | 5,500 | 6-5/8" API FH |



Optional wireless features and benefits

- Includes cementing plug valve, pin pullers, ball droppers and wireless isolation valves that eliminate hydraulic umbilical lines to reduce the number of riding belt trips above the rig floor
- Fully-wireless automation system eliminates the requirement to pause pumping, reciprocating, or rotating during cementing operations to enhance operational efficiencies
- Manual backup on all remote-operated features ensures redundancy and risk-free operation
- Continuous wireless link monitoring and radio signal filtering blocks Wi-Fi® and other wireless transmission interference for increased reliability
- ATEX Zone 1, IECEx, and UL Class I, Division 2 safety certifications available for required environments