



ONE-PIECE, FULL-OPEN ISOLATION VALVES

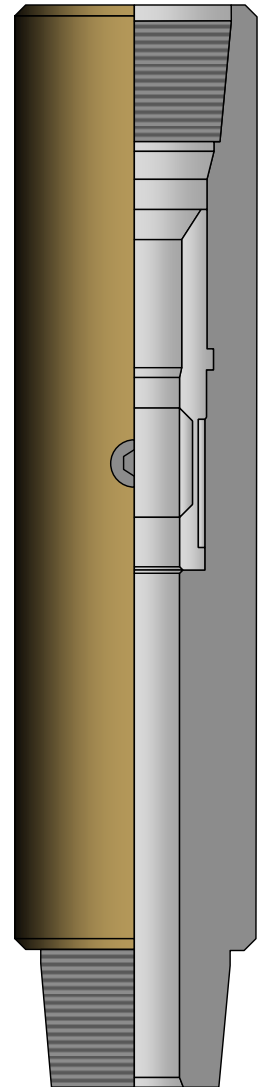
Blackhawk's One-Piece, Full-Open Isolation Valves can be run in conjunction with Blackhawk's Automated and Wireless cement heads or as a standalone Isolation valve.

FEATURES

- LITE-TORC™ feature allows operator the ability to close the valve under significant flow. Once closed, the valve can be reopened with less than 30 ft-lbs of torque
- SURE-STOP™ feature prevents over rotation of the ball valve, providing a fully-opened or fully-closed position, preventing damage to the darts due to ledges created by partially-opened valve.
- Dart-friendly funnel allows darts to be pumped through the ID of the Isolation Valve without damage to the dart fins.
- 15,000 psi working pressure
- High-Yield material is ideal for deepwater applications where high pressure and high tensile strengths are needed.
- Isolation Valve can be used in conjunction with Automated or Wireless package with manual backup.

VALUE

- Increased ease of operation with LITE-TORC™ feature when utilized in an isolation scenario.
- Reduced likelihood of plug/dart/ball damage improves cementing efficiency.
- When used in conjunction with the Blackhawk Top Drive Cement head, isolates the top drive during cementing operations and isolates flow from the wellbore.





SPECIFICATIONS

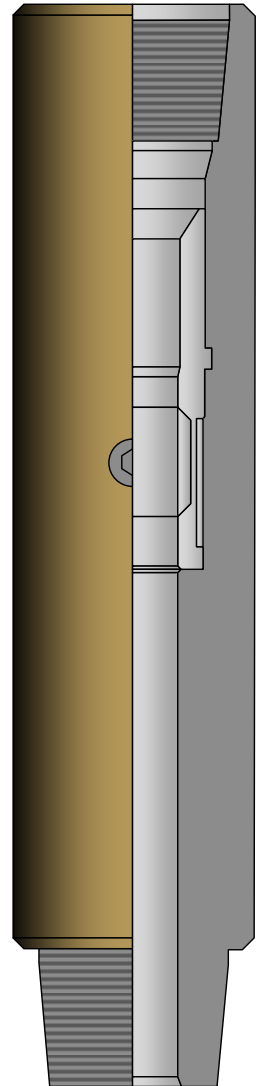
One-Piece Valves			
OD	ID	Max Tensile Load	Connection
6 5/8"	2 13/16"	1,233,831 lbs @ 15K psi	4 1/2" IF (NC50)
7 3/8"	3 5/64"	1,389,004 lbs @ 15K psi	5 1/2" FH
8 1/2"	3 1/16"	2,569,401 lbs @ 15K psi	6 5/8" FH
9 3/4"	3 1/16"	3,502,824 lbs @ 15K psi	6 5/8" FH

Note: A) The mating connection could be the governing member for max tensile load and is outside control of this document.

B) Connection ratings, when used as governing member for max tensile load, are in accordance to the latest revision of API RP7G and API 7-1.

C) Max tensile load ratings do not include safety factor. Blackhawk Specialty Tools recommends using a 1.5 SF for max working load.

Blackhawk Specialty Tools Inc. has published these ratings for general information only and should be verified by the end user before being accepted as adequate design criteria for their use. Although every effort has been made as to the accuracy contained herein, Blackhawk Specialty Tools, Inc. in no way assumes responsibility or liability for any loss, damage or injury resulting from the use of information and data herein.





BLACKHAWK
SPECIALTY TOOLS
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ENGINEERED CEMENTING SOLUTIONS

TWO-PIECE, FULL-OPEN ISOLATION VALVES

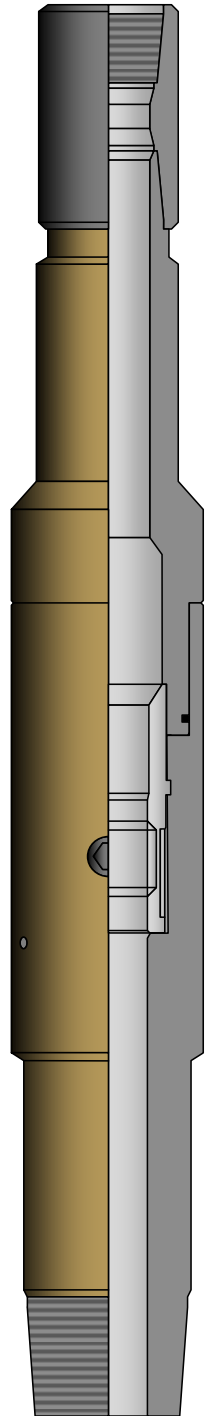
Blackhawk's Two-Piece, Full-Open Isolation Valves can be run in conjunction with Blackhawk's Automated and Wireless cement heads or as a standalone isolation valve.

FEATURES

- LITE-TORC™ feature allows operator the ability to close the valve under significant flow. Once closed, the valve can be re-opened with less than 30ft-lbs of torque
- SURE-STOP™ feature prevents over rotation of the ball valve, providing a fully-opened or fully-closed position, preventing damage to the darts due to ledges created by partially-opened valve.
- Dart-friendly funnel allows darts to be pumped through the ID of the Isolation Valve without damage to the dart fins.
- 15,000 psi working pressure
- High-Yield material is ideal for deepwater applications where high pressure and high tensile strengths are needed.
- Isolation Valve can be used in conjunction with Automated or Wireless package with manual backup.
- Modified API middle connection with high torque capability to prevent premature breakout

VALUE

- Increased ease of operation with LITE-TORC™ feature when utilized in an isolation scenario.
- Reduced likelihood of plug/dart/ball damage improves cementing efficiency.
- Isolates flow to and from the wellbore..
- Larger ID to allow passage of larger OD setting balls and darts.



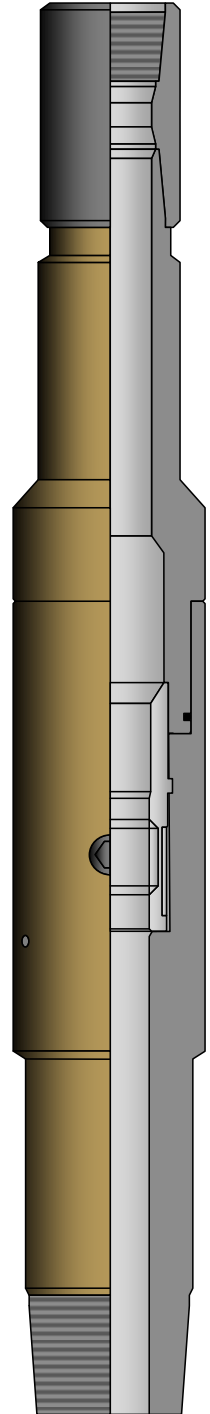


SPECIFICATIONS

Two-Piece Valves				
OD	ID	Max Tensile Load	Connection	Middle Thread Make-Up Torque
6 3/8"	2 11/16"	587,561 lbs @ 15K psi	3 1/2 IF (NC38)	31,940-lbs
6 3/8"	2 9/16"	1,057,026 lbs @ 15K psi	4 XT39	42,078-lbs
6 3/8"	2 13/16"	924,898 lbs @ 15K psi	4 1/2" XH (NC46)	31,940-lbs
8 3/4"	4"	1,802,589 lbs @ 15K psi	5 1/2 HT-55	97,451-lbs
9 1/8"	4 1/4"	1,375,162 lbs @ 15K psi	5 7/8" XT 57	94,764-lbs
9 1/8"	4 1/4"	1,375,162 lbs @ 15K psi	5 7/8" XTM 57	94,764-lbs
9 3/4"	4 1/4"	2,032,776 lbs. @ 15K psi	6 5/8" FH	143,815-lbs

- Note:** A) The mating connection could be the governing member for max tensile load and is outside control of this document.
B) Make-up torque for middle thread to be the lesser of the value listed above and 1.1 times the maximum recommended make-up torque of the end connection.
C) Connection ratings, when used as the governing member for max tensile load, are in accordance to the latest revision of API RP7G and API 7-1.
D) Max tensile load ratings do not include safety factor. Blackhawk Specialty Tools recommends using a 1.5 SF for max working load.

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ENGINEERED CEMENTING SOLUTIONS

FULL-OPEN ISOLATION VALVE AUTOMATION PACKAGE

Our fully-automated, Full-Open Isolation Valve package adds safety to the rig floor by reducing workers' exposure to high-pressure elements and by adding full isolation to a remote operator. When added to the Blackhawk Cement head, the top full-open isolation valve helps isolate the top drive from any unexpected flow backs and pressure surges. It can then be opened and closed to displace the job. The valve can be functioned an unlimited number of times, even when rotating the cement head during a job. All of the rugged control lines and valves actuators are protected by heavy-grade shielding to reduce the chances of damaging any critical components while handling this equipment. Every automation package also has a manual override for complete redundancy and reliability.



FEATURES

- Fits the One-Piece and Two-Piece Full-Open Isolation Valves
- Runs on hydraulic power for maximum amount of torque transfer to the valve
- Can open and close in 5.4 seconds for complete isolation