BLACKHAWK SPECIALTY TOOLS
A division of Frank's International

ENGINEERED DOWNHOLE SOLUTIONS

LARGE-BORE HYDRO-MECHANICAL BRIDGE PLUG

Blackhawk's Large-Bore HM Bridge Plug (HMBP) is set using hydraulic force to set the top slips and then mechanical pull to complete the set. The versatility of the HMBP allows the equipment to be utilized for high-pressure/high-temperature well environments, single-trip negative tests applications, single-trip permanent & temporary abandonment/cementing operations, and more.

The setting mechanism for the HMBP is built-in to the assembly with the ability to circulate prior to setting. A ball is placed in the tubing string to allow for setting of the bridge plug, which can be circulated into position. Once the ball lands on seat, pressure is applied to start the process of setting the top slips. Mechanical overpull is then applied to complete the setting process allowing for simplistic and efficient setting method of the HMBP.

Once released from the HMBP, the full tubing ID flow area allows full circulation and increased pump rates for cement placement. If balanced plugs are required to be placed into the wellbore after isolating with the HMBP, the reduced OD (no setting tool required) ensures cement does not become contaminated or disturbed while removing the string from the plug.

FEATURES

- High-flow capability through workstring and hydraulic sleeve during circulation or displacement
- Versatile design allows for use in multiple applications adding efficiencies and cost savings to standard operations
- Running tool maintains slim profile allowing for proper balanced cement plug placement versus pulling through with large drag block or drag spring designs
- 325°F temperature rating standard
    - Higher ratings available upon request.
- Drillable cast-iron construction
- Sets in casing grades up to V-150
- Anti-swab/anti-preset characteristics with 360 degree slips and angled backup design
- Setting force held in place by internal body lock ring
- Retaining rings prevent element extrusion
- Brushes and scrapers can be easily installed using a universal threaded adapter

APPLICATIONS

- Permanent/temporary Abandonment operations
- Isolation barrier for single-trip negative tests
- Mechanical and cement barrier
- Highly deviated and horizontal wellbores

SPECIFICATIONS

LARGE-BORE HYDRO-MECHANICAL BRIDGE PLUG SPECIFICATIONS							
Casing Details				Tool Details			
Casing Size (IN.)	Weight (LBS/FT)	Casing Min ID Setting Range (IN.)	Casing Max ID Setting Range (IN.)	OD (IN.)	Maximum Temperature (°F)	Maximum Pressure (PSI)	Setting Tool Options
4-1/2"	9.5 - 16.6	3.826	4.090	3.500 3.593	325	10,000	**NO SETTING TOOL REQUIRED** **HYDRAULIC HEAD INCLUDED W/ ASSEMBLY** ***BALL-ACTIVATED (1.25" - 2.50")***
4-1/2"	9.5 - 13.5	3.920	4.560	3.710	325	10,000	
5"	11.5 - 21	4.154	4.560	3.937			
5-1/2"	13 - 25	4.580	5.047	4.240	325	10,000	
		4.580	5.044	4.312			
6"	14 - 26	5.140	5.595	4.750	325	10,000	
6-5/8"	14						
6" - 6-5/8"	10.5 - 12	5.595	6.366	5.340	325	10,000	
7"	32 - 38	5.595	6.135	5.375	325	10,000	
7"	17 - 35	5.989	6.655	5.610	325	10,000	
		6.004	6.560	5.687			
7-5/8"	20 - 39	6.560	7.263	6.090 6.312	325	10,000	
8-5/8"	24 - 49	7.511	8.248	6.960 7.125	300	8,000	
9-5/8"	29.3 - 53.5	8.435	9.063	7.710 8.125	300	8,000	
10-3/4"	85.3	8.979	9.342	8.690	300	8,000	
10-3/4"	54 - 81	9.250	9.784	8.710	300	5,000	
		9.250	9.660	9.000			
10-3/4"	32.75 - 60.7	9.660	10.192	9.437	300	5,000	
11-3/4"	38 - 60	9.850	11.190	9.500	300	5,000	
		9.850	11.150				
11-3/4"	60 - 70	10.192	10.772	9.937	300	5,000	
13-3/8"	77 - 102	11.633	12.464	11.562	300	5,000	
13-3/8"	48 - 72	12.175	12.715	12.000	300	5,000	
16"	65 - 118	14.438	15.250	14.250	200	2,000	
18-5/8"	76 - 96.5	17.655	18.730	17.250	200	2,000	
20"	133 - 169