Dash® Large-Bore Electrohydraulic Control Module

OVERVIEW

The Dash® large-bore emergency response modules are a new generation electrohydraulic (EH) system for large bore subsea well intervention applications. The system was developed on industry-proven products and is customizable to meet individual customer requirements. While in field development, the system connects the user with the subsea safety system, tubing hanger, and completion system, providing critical well control during flow back and production well clean up. The Dash system can utilize smart, redundant electronic controls to perform the emergency well shut-in and landing string disconnect in less than ten seconds

The Dash system is a technology that challenges the status quo. It employs the EH features where they really matter most—core safety functions—providing full direct hydraulic control of all safety and intervention functions. Not only does this increase reliability, but offers a simplistic design built for efficient, cost-effective operation, and field maintenance.

Through linking with downhole and surface read-out control systems, the Dash system enables calculation of optimal performance to help avoid nonproductive time and offer efficiency during deep water developments. Safety and reliability are paramount in deep water subsea completions and field development—the Dash system can deliver both.

FEATURES

- Integrates with 6-3/8 15K and 7-3/8 10K ID equipment
- 10-second emergency shut-in and disconnect
- 6-second emergency shut-in
- Direct hydraulic controls of safety and intervention functions
- Full redundant electrical controls
- Real-time monitoring
- Compact reconfigurable design
- Designed per ISO13628-4, -6, and -7

BENEFITS

- Full-time direct hydraulic primary control increases reliability
- EH fast response capability always available via remote station or controls container to take control as required
- Simplistic design built for efficient, cost-effective operation
- Modular design enables adaptability to customer-specific requirements
- Interchangeable bore, 6-3/8 in. and 7-3/8 in., creates a flexible system
- Shortest at 23 ft. total length equates to reduced rig-up time and ease of handling
- Built on field-proven Dash 3 technology platform
- Highest external working pressure at 8,000 psi or 10,000 ft. at 15.60 lb./gal.
- Integrated surface and sub-surface flow meters enable redundant diagnostic capability and help reduce uncertainty of safety functionality
- Real-time pressure / temperature transducers on all functions, including bore and annulus

Equipment Specifications

Applicable Standards	
ISO13628-6 / API 17F	Design and Operation of Subsea Production Systems
ISO13628-7 / API 17G	Completion Workover Riser Systems
ISO13628-4 / API 17D	Design and Operation of Subsea Production Systems Wellhead and Tree Equipment
API 6A	Specification for Wellhead and Christmas Tree Equipment
NACE MR0175-2000	Materials for Use in H_2S Environments

Operating Limits		
ID	6-3/8 in. (162 mm)	7-3/8 in. (187 mm)
Maximum Working Pressure	15,000 psi (1,034 bar)	10,000 psi (689 bar)
Maximum Test Pressure	22,500 psi (1,551 bar)	15,000 psi (1,034 bar)
Minimum Working Temperature	32°F (0°C)	32°F (0°C)
Maximum Working Temperature	Bore 350°F (177°C) Electronics 275°F (135°C)	Bore 350°F (177°C) Electronics 275°F (135°C)
Tensile Capacity at 0 psi	2,000,000 lbf (8,896 kN)	1,000,000 lbf (4,448 kN)
Tensile Capacity at Working Pressure	850,000 lbf (3,781 kN)	400,000 lbf (1,779 kN)
Maximum Torque Load	20,000 ft.-lb. (27,116 N-m)	20,000 ft.-lb. (27,116 N-m)
Maximum Annulus Hydrostatic	8,000 psi (551 bar)	8,000 psi (551 bar)
Service	H_2S	H_2S

Physicals		
Overall Length	271 in. (6883 mm)	271 in. (6883 mm)
Major Diameter	18-5/8 in. (473 mm)	18-5/8 in. (473 mm)
Bore	6-3/8 in. (162 mm)	7-3/8 in. (187 mm)
End Connections	10-3/8 in. 3TPI Stub Acme	10-3/8 in. 3TPI Stub Acme
Approximate Weight	13,450 lb. (6,100 kg)	13,062 lb. (5,925 kg)

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