

# Mark IV

## Subsea BOP control system

### APPLICATIONS

- Offshore subsea drilling

### BENEFITS

- Improved POD reliability
- Thoughtfully designed for easier maintenance
- Heightened performance built-in
- Increased system availability

### FEATURES

- Three-POD option, each with 160 functions to accommodate eight cavity stacks
- Large drilling valves are sub-plate-mounted soft seat type for improved flow capacity
- Tungsten carbide shear seals for ultra wear resistance life and contamination tolerance
- Pressure-compensation of pilot regulators eliminating manual pre-charge and uses 50% fewer POD accumulators
- Regulators with expanded flow capacity and greater stability
- Robust solenoids with uncomplicated servicing access for reduced maintenance burden
- Precision alignment system for stack stinger extend and retract, including disposable wear bands
- Smooth piping network removes flow restrictions and has been relocated inside frame protected from external hazards
- Dual sealing connections and non-corrosive materials used throughout POD
- Top and rear sides conveniently open for personnel access
- Dimensions: 46 in × 49 in × 168 in (from base)
- Weight: 22,000 lb
- Compliance with API 16D/53, DNV Drill, and ABS CDS requirement

The Cameron Mark IV\* control system — featuring an industry-first three-POD design option — improves operational reliability of the drilling system through a simplified POD design.

### Simplified design increases reliability and functionality in a smaller footprint

The Mark IV control system's simple design increases the functionality of each POD in a smaller, lighter package. Designed with 60% fewer connection points, the potential for leak paths is reduced, and the addition of redundant ROV isolated solenoid supply regulators increases the availability of that critical component within the POD.

Each POD has 33% more available functions to accommodate eight cavity stacks. The new POD is also designed with pressure-compensation of pilot regulator accumulators that adjust automatically for water depth. This feature prevents the chance of human failure and reduces maintenance costs. The POD footprint is 30% smaller than its predecessor and weighs one-third less than some of its competition.

### Three-POD option increases system availability

Offshore subsea BOP stacks require the availability of two PODs to maintain safe drilling operations. Often these drilling rigs will have a third POD 'cold spare' in their storage. The smaller footprint of a Mark IV POD enables that third POD to be installed into the control system as a 'hot spare'. Incorporating this third POD can improve the subsea BOP control system's availability to as much as 98% and reduce the likelihood of a POD-related stack pull by up to 73%.<sup>†</sup> Resulting in valuable uptime by simply reallocating an asset. A huge advantage for drilling contractors, especially those who cannot accommodate a complete secondary BOP stack.

<sup>†</sup> Actual availability will vary with conditions



Mark IV control system POD