

# BroadShear

## Off-center tool joint shear ram

### APPLICATIONS

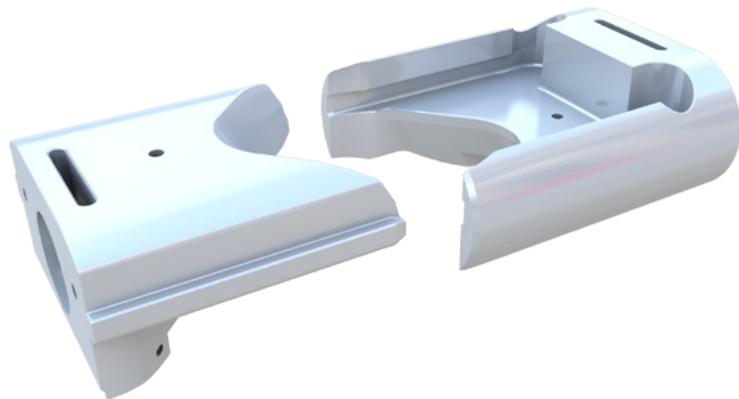
Shearing tool joint hardbanding and off-center tubulars

### BENEFITS

- Improves certainty in shearing performance
- Reduces HSE risk
- Enables meeting regulatory requirements
- Saves rig time

### FEATURES

- Industry's only technology that shears both tool joint hardbanding and off-center tubulars
- Enhanced metallurgy for improved strength and control
- Reduced time that unshearable drillstring components are across the BOP rams from 10% to 2%
- Compliant with Bureau of Safety and Environmental Enforcement (BSEE) Well Control Rule
- Compatibility with TL\* offshore ram-type BOP or EVO\* compact offshore ram-type BOP



*BroadShear off-center tool joint shear rams.*

Engineered with enhanced metallurgy for exceptional strength and control, BroadShear\* off-center tool joint shear rams can successfully shear both tool joint hardbanding and off-center tubulars — drillstring components previously considered unshearable — in a single stroke.

### Unsurpassed shearing ability

BroadShear rams reliably shear casing diameters up to 16 in as well as tool joints and hardbanding. The tool joints can even be sheared off-center. With these two advances, more drillstring components can be sheared than ever before.

Operations can be further enhanced by integrating the ram with other Cameron subsea solutions. Using the BroadShear ram with SPRA\* subsea pressure reduction assembly results in an improved BOP system with reduced accumulators.

### Proven reliability

In a series of rigorous tests, a single set of BroadShear rams successfully sheared various drillstring components seven times. These tests included through the pin/box, hardbanding, and off-center components. These tests are some of the toughest shear tests performed in the industry to date.

According to our engineering analysis, BroadShear rams reduce the time that unshearable drillstring components are across the BOP rams from approximately 10% to 2% for a hole depth of 25,000 ft and standard tripping procedures.

### Advanced regulatory compliance

In 2016, BSEE released its new Well Control Rule. BroadShear rams are already capable of shearing in compliance with this rule, providing customers with more progressive technology to help them better achieve complex subsea objectives.

### Shearing action

Shearing action is similar to the SuperShear\* casing shear ram with added capacity. The BroadShear ram uses a different connection from the SuperShear ram, so it is not directly retrofitable with a SuperShear ram bonnet. However, an upgrade kit is available to permit the use of BroadShear rams with an existing SuperShear ram bonnet.

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