CAMERON
A Schlumberger Company

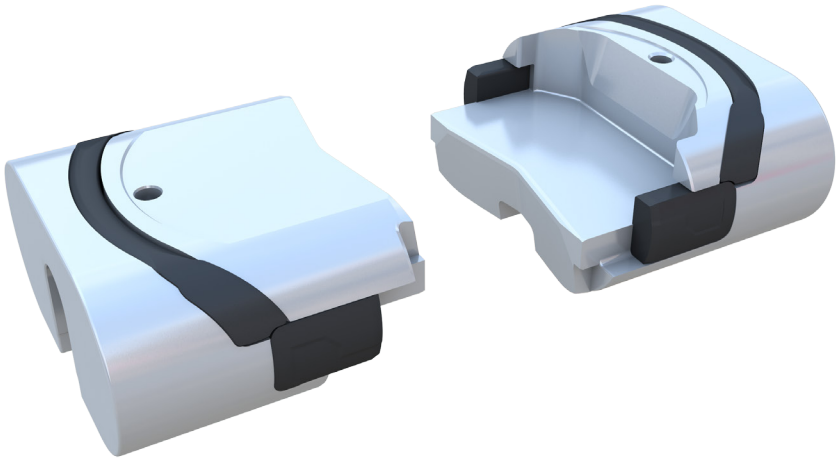
ISR

Interlocking shear rams

APPLICATIONS
Drilling and production

BENEFITS
- Improved operational integrity with blades integral to ram body
- Enhanced reliability with greater shearing ability

FEATURES
- Blades integral to ram body
  - Dual cutting structures with V-shaped cutting edges on both rams
- Compatibility with
  - U* surface ram-type BOP
  - TL* offshore ram-type BOP for shearing wireline



ISR interlocking shear rams.

Cameron ISR* interlocking shear rams feature the same shearing action as DS* dual-string shear rams and offer extended seal life. ISR rams have nearly identical blades located approximately halfway up the rams at the widest point. The ISR rams interlock in the last inch of travel to keep the blade seals in the upper ram in contact with the lower sealing surface, helping to maintain seals' operational integrity.

Shearing action
Upon completion of shearing, the lower fish is housed in a vertical pocket while the blade face seal provides a seal between the horizontal faces of the upper and lower blades.

Wireline shearing capability
Wireline is an integral part of drilling, and the ability to shear wireline improves the safety of drilling operations. Cameron engineered a set of ISR interlocking shear rams with improved interlocking capabilities, enabling the ability to shear wireline. These rams were designed to fit in the existing body of 18-in 5,000- and 10,000-psi TL BOPs.

Specifications	Lower Ram	Upper Ram
Weight, lbm [kg]	417 [189]	462 [210]
Dimensions, in [cm]	22 × 16½ × 7¾ [56 × 42 × 20]	22 × 16½ × 7¾ [56 × 42 × 20]
Closing volume and force	Dependent on the bonnet assembly chosen	

*Mark of Schlumberger
Other company, product, and service names are the properties of their respective owners.