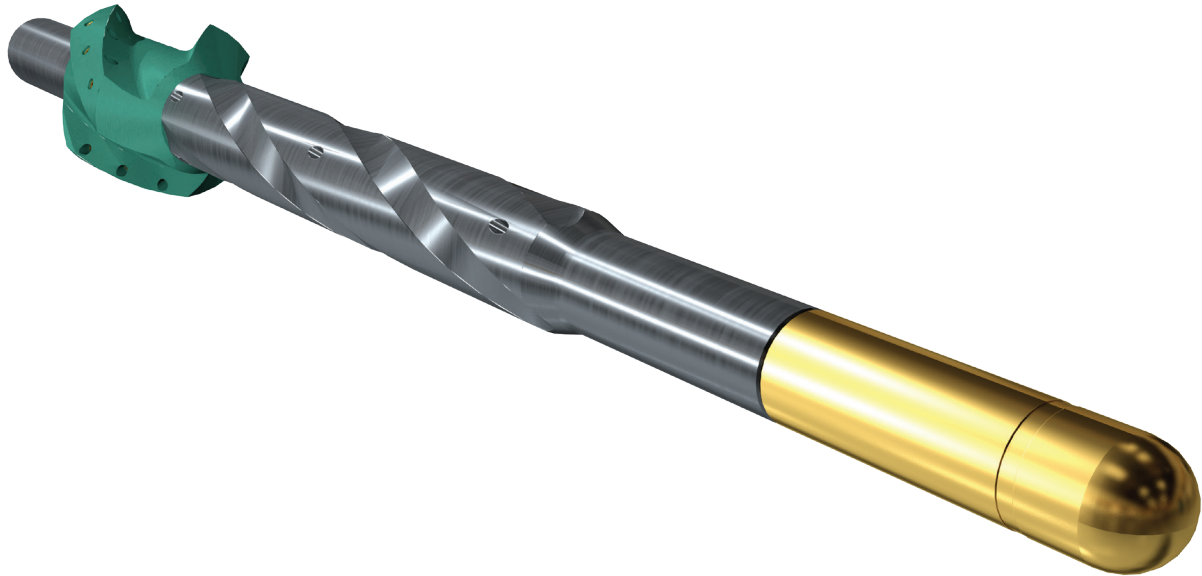


# Hydraflow™ Advanced Wellbore Cleaning System



The **Hydraflow™ Advanced Wellbore Cleaning System (HAWCS)** utilizes a high flow rate combined with lower pump pressure to optimize Riser & BOP cleaning efficiency.

## FEATURES

- The 16" OD High-Flow Sleeve features 12 offset large TFA ports designed to clean the riser wall and effectively penetrate the BOP cavities to clear and flush out debris.
- Nine upward-angled large TFA ports are arranged along the body to help reintroduce debris into the flow path, allowing it to be carried upward to the surface.
- An optional integral pup joint is available for easier handling.
- An optional Lower Bull Nose or Pin Down connection to accommodate various applications.

# Wellbore Clean-up Technology

## BENEFITS

### Cost Savings

- Maximizing Riser & BOP cleaning efficiency to reduce operating time has a huge impact on operating costs on expensive semi-submersibles
- No field maintenance required

### Integrity

- Available with high torque connections reducing the need for reduced strength crossovers
- Single piece mandrel with no internal connections for increased strength

### Reducing Non-Productive Time

- Reduces premature failure of completion equipment by debris which can interfere or damage valves, electronics and other hardware

## APPLICATIONS

- Deep water pre-completion wellbore clean-ups from semi-submersible drilling units
- Riser cleaning during displacement to sea water before disconnection or moving from location

## OPERATIONAL

- The Hydraflow™ Advanced Wellbore Cleaning System (HAWCS) is typically run in conjunction with the Riser Cleaning Tool and XTractR™ BOP Junk Catcher or as a standalone tool.
- The 16" OD High-Flow Sleeve features 12 offset large TFA ports designed to clean the riser wall and effectively penetrate the BOP cavities to clear and flush out debris.
- Best practice recommends to function the rams and annular to help dislodge debris before jetting the BOP stack at 35 BPM while rotating slowly, making 3 passes.
- The upward angled nozzles assist in carrying debris to surface through inducement of turbulent flow.
- HAWCS can also be run with a wear bushing retrieval tool below.
- The high-flow sleeve is available in various sizes, 16" OD or 12.750" OD.