

PRODUCT OVERVIEW

UROS UNDER REAM OFFSET BOW SPRING CENTRALIZER

ENGINEERING SOLUTIONS FOR CHALLENGING WELLS

The UROS centralizer features a patented offset bow design that significantly reduces starting and running forces in wells with under-reamed sections. It is specifically engineered to address challenges in navigating through previously set casings and expanding into open-hole sections. With its ultra-high-strength, single-piece bow spring design, the UROS centralizer offers enhanced durability and flexibility, allowing it to handle both axial and radial loads effectively without any weak points.

This robust centralizer provides over a 50% reduction in starting and running forces compared to traditional under-ream products, ensuring smoother run-in-hole (RIH) performance even in tight annular restrictions. The UROS centralizer is designed to return to gauge in open-hole sections, enhancing standoff and zonal isolation. Ideal for demanding applications like under-reamed well sections, tight annular spaces, offshore and deepwater projects, and complex well paths such as horizontal/ERD and S-Type/J-Type wells, the UROS centralizer meets the unique engineering challenges posed by compressed bows in under-reamed sections.

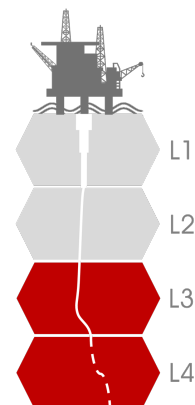
KEY PRODUCT BENEFITS

- Engineered for ultra-high-strength and flexibility
- Returns to gauge in the open hole
- Enhanced run-in-hole (RIH), stand-off and zonal isolation

TARGET APPLICATIONS

- Under-reamed well sections
- Tight annular applications
- Offshore and deep-water
- Highly deviated wells
- Horizontal/ERD wells
- S-Type/J-Type

PERFORMANCE RATINGS



CORE PRODUCT SIZING

| Product size | Centralizer Part Number | Recommended Stop Collar Part Number |
|------------------------------------|-------------------------|-------------------------------------|
| 7" ID for use in 8-1/2" Hole | 0700-0812UROS | 0700-00SO |
| 7" ID for use in 9-1/2" Hole | 0700-0912UROS | 0700-00SO |
| 7" ID for use in 9-7/8" Hole | 0700-0978UROS | 0700-00SO |
| 7-3/4" ID for use in 9-1/2" Hole | 0758-0900UROS | 0758-00SO |
| 7-5/8" ID for use in 9" Hole | 0758-0912UROS | 0758-00SO |
| 7-5/8" ID for use in 9-1/2" Hole | 0734-0912UROS | 0734-00SO |
| 9-5/8" ID for use in 12-1/4" Hole | 0958-1214UROS | 0958-00SO |
| 9-5/8" ID for use in 13-1/2" Hole | 0958-1312UROS | 0958-00SO |
| 9-7/8" ID for use in 12-1/4" Hole | 0978-1214UROS | 0978-00SO |
| 9-7/8" ID for use in 14" Hole | 0978-1400UROS | 0978-00SO |
| 10-3/4" ID for use in 14-3/4" Hole | 1034-1434UROS | 1034-00SO |
| 13-3/8" ID for use in 17-1/2" Hole | 1338-1712UROS | 1338-00SO |
| 13-5/8" ID for use in 17-1/2" Hole | 1358-1712UROS | 1358-00SO |
| 13-5/8" ID for use in 19" Hole | 1358-1900UROS | 1358-00SO |
| 14" for use in 17-1/2" Hole | 1400-1712UROS | 1400-00SO |
| 16" for use in 20" Hole | 1600-2000UROS | 1600-00SO |
| 17" for use in 20" Hole | 1700-2000UROS | 1700-00SO |

APPLICATION

UNDER REAM SECTIONS

Under reamed well sections, where part of the well that has been enlarged beyond the diameter of the original drilled hole, create several engineering issues which affect the run-in-hole (RIH) performance due to the bows being 'compressed' while passing through smaller ID of the previous set casing.

FULL CENTRALIZER PRODUCT RANGE

| MODEL | DUTY | | | STYLE | | CONSTRUCTION | | | STANDOFF | UNDER-REAMED | | FLEX | | APPLICATION | | | | PERFORMANCE | | | | | | | |
|----------|-------|----------|-------|---------|--------|--------------|--------------|-------------|------------|--------------|------------|---------------|-------------|-----------------|-----|---------------------|----------------------|-------------|---------|---------|---------|-------------|------------|----------|---|
| | Light | Standard | Heavy | Slip-on | Hinged | Heat Treated | Single Piece | Welded Bows | Mechanical | Bow Spring | Solid Body | Standard Bows | Offset Bows | Close Tolerance | Sub | Used in tight spots | Used in restrictions | Level 1 | Level 2 | Level 3 | Level 4 | Flexibility | Runability | Strength | |
| OBH | | | | | | | | | | | | | | | | | | | | | | | 5 | 4 | 4 |
| OBH-W | | | | | | | | | | | | | | | | | | | | | | | 5 | 5 | 5 |
| OSN | | | | | | | | | | | | | | | | | | | | | | | | | |
| ES | | | | | | | | | | | | | | | | | | | | | | | 6 | 7 | 6 |
| OBS | | | | | | | | | | | | | | | | | | | | | | | 4 | 5 | 7 |
| S2 | | | | | | | | | | | | | | | | | | | | | | | | | |
| S2-H | | | | | | | | | | | | | | | | | | | | | | | 7 | 8 | 7 |
| S2-HD | | | | | | | | | | | | | | | | | | | | | | | 7 | 7 | 8 |
| TUR | | | | | | | | | | | | | | | | | | | | | | | | | |
| TUR-CT | | | | | | | | | | | | | | | | | | | | | | | | | |
| TUR-SUB | | | | | | | | | | | | | | | | | | | | | | | | | |
| UROS | | | | | | | | | | | | | | | | | | | | | | | 8 | 8 | 7 |
| UROS-CT | | | | | | | | | | | | | | | | | | | | | | | | | |
| UROS-SUB | | | | | | | | | | | | | | | | | | | | | | | | | |