# iCruise® CX Intelligent Rotary Steerable System
# COMPACT. CONNECTABLE. CONSISTENT.

## OVERVIEW

The iCruise® CX intelligent rotary steerable system (RSS) from Halliburton Sperry Drilling is a compact automation-enabled platform designed to connect with any measurement-while-drilling (MWD) system to precisely place wellbores. The iCruise CX RSS is built around the proven robust mechanical design of the iCruise X® intelligent RSS and designed to accurately place wellbores in challenging environments to enhance reliability and reduce well time.

## BENEFITS

- Longer runs in tough conditions
- Precise well placement
- Smooth VCL wells
- Reduced well time
- Connectable to any MWD system
- Faster steering decisions with continuous inclination, azimuth, and tool face measurements
- Automated steering

## FEATURES

- Compact design
- Five high-speed processors
- Reliable short-hop communication
- 1,000 measurements per second
- High mechanical specifications to reduce well time including rotating up to 400 RPM
- CruiseControl technology
- Advanced metal-to-metal seals
- High-strength materials and connections
- Greater pad force at same downhole pressure

ALTITUDE ENERGY PARTNERS

## ICRUISE® CX INTELLIGENT ROTARY STEERABLE SYSTEM
## TECHNICAL SPECIFICATIONS

| Nominal Tool OD | 4.75 in. (121 mm) with Short-Hop Connectivity | 6.75 in. (171 mm) with Short-Hop Connectivity |
|---|---|---|
| Nominal Hole Size | 5.875–6.75 in. (149–171 mm) | 8.375 in.-9.5 in. (213–241 mm) |
| Maximum Housing OD | 5.25 in. (133 mm) | 7.5 in. (191 mm) |
| Length | 25.6 ft (7.80 m)<br>(RSS 17.3 ft [5.27 m]) | 26.5 ft (8.08 m)<br>(RSS 17.0 ft [5.18 m]) |
| Minimum Inside Diameter | 1.40 in. (36 mm) | 1.88 in. (48 mm) |
| Nominal Tool Weight | 1,290 lbs (585 kg) | 2,333 lbs (1,058 kg) |
| Top Collar Connection | XTF40 Box | NC50 Box |
| Bottom Collar Connection | 3½-in. REG Box | 4½-in. REG Box |
| Minimum Steering Inclination | 0° | |
| Maximum Dogleg Severity (Non-Rotating) | 30°/100 ft (30.5 m) | 21°/100 ft (30.5 m) |
| Maximum Dogleg Severity Capability | 12°/100 ft | 10°/100 ft (30.5 m) |
| Maximum Drilling or Operating Rotary Torque | 12,000 ft-lbf (1627 daN-m) | 18,500 ft-lbf (2,508 daN·m) |
| Bit Makeup Torque | 8,000 ft-lbf (1085 daN-m) | 16,000 ft-lbf (2,169 daN·m) |
| Maximum Overpull | 340,000 lbf (151 240 daN) | 822,684 lbf (365,948 daN) |
| RPM Range | 30-400 RPM | |
| Maximum Weight on Bit | 30,000 lbf (13,344 daN) | 65,000 lbf (28,913 daN) |
| Maximum RPM | 400 rpm | |
| Vibration | Refer to Sperry Drilling Logging-While-Drilling Vibration Limits (Available on request) | |
| Mud Type | Compatible with All Fluid Systems Including: WBM, OBM, SBM, and Silicates | |
| Maximum Sand Content | 2% | |
| Pressure Loss Through Tool in Water | 145 psi (275 gpm) | 150 psi (575 gpm) |
| Maximum LCM Limit | 50 lb/bbl WAL-NUTT® Medium | |
| Maximum Operating Temperature | 302°F (150°C) | |
| Survival Temperature | 329°F (165°C) | |
| Maximum Pressure | 20,000 psi (137.9 MPa) | |
| Power Supply | Turbine | |
| Flow Range | 150 to 350 gpm | 250 to 750 gpm |
| Makeup Torque Range | 23,000–25,000 ft-lb (10 231–11 121 daN) | 30,000–33,000 ft-lb (4,067 to 4,474 daN) |
| Downlink Method | Rotational and flow downlinks | |
| Uplink | Short-hop communication from RSS to Altitude MWD | |
| Surface Software | Tablet and application based | |