

# Where Technology Meets Performance

## DRILLING

INNOVATIVE SOLUTIONS, LLC

## THE SENTINEL LR

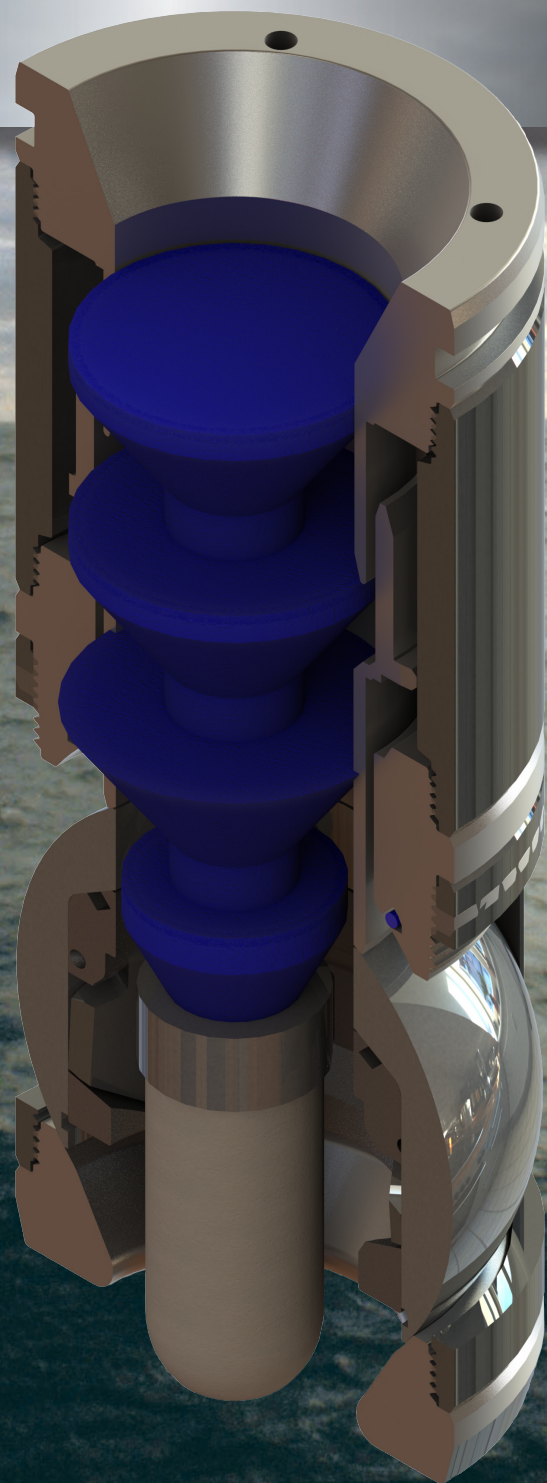
### Liner Runner Safety Valve

with

Patented Piloted Ball Technology

The Sentinel LR LRSV was designed utilizing Drilling Innovative Solutions, LLC field proven Sentinel Drilling Safety Float Valve technology.

The Sentinel LR was developed to act as a barrier to well control events during liner installation and cementing operations. All LRSVs are manufactured to the highest API and ISO 9000 standards ensuring the highest quality tools.





# THE SENTINEL LR

## Liner Runner Safety Valve

### USES

- Can be used for Conventional or Expandable Liner Installation Operations including HTHP conditions.
- Can be used for Managed Pressure Cementing (MPC) Operations.
- Designed to be used as a barrier against well control events.

### BENEFITS

- Valve is designed to allow a backflow through the valve of approximately 3 bbl./min. (dependent on fluid specifications) before closing, to allow testing of cement float equipment.
- Valve is full opening, allowing the largest industry standard darts, wipers, balls, etc. used in cementing operations to pass through the valve.
- Valve is designed to allow reading of Bottom Hole Pressure instantly in a neutral flow environment.
- Valve is designed utilizing an elastomeric-to-metal seal via a ball valve.
- Sealing surface is always protected from erosion via a flow tube, allowing consistent sealing after prolonged use.
- Can be used in conjunction with surge reduction tools.

### FEATURES

- Valves are designed to 10,000 psi and 450 degrees F, allowing for a broad range of service conditions including HTHP.
- Valves can be isolated to allow access through the valve with our Lock-Open Tool. The Lock-Open Tool utilizes standard wireline retrievable latching equipment to remove.
- Premium non-standard connections available upon request.
- Sour gas condition valves available upon request.
- Validation testing to API 7NRR and 7V Ballot

### SENTINEL LR SPECIFICATIONS

Valve	Single Valve Configuration
Outside Diameter (O.D.)	9.50 in
Inside Diameter (I.D.)	3.125 in
Length	40 in
Pressure Rating	10,000 psi
Connection Upper & Lower	7.625 in Reg. RH Box
<b>Sentinel LR Lock Open Tool</b>	
Outside Diameter (O.D.)	3.0 in
Inside Diameter (I.D.)	2.125 in
O.D. Retrieval Sleeve	4.1 in
Length	59.5 in

