



The BreakThru™ Single-Cycle Barrier Valve boosts efficiency and saves costs.

**INNOVATION REVEALED**

## BREAKTHRU™ SINGLE-CYCLE BARRIER VALVE

This product may be covered by one or more patents or pending patent applications.

### ISO 14998 V0, 14310 V0 AND ISO 28781 CERTIFIED WELL BARRIER

Nine's BreakThru™ Single-Cycle Barrier Valve is an interventionless pressure actuated ISO V0 certified well barrier plug. It provides operators with a remotely operated and cost effective, ISO V0 certified well barrier. It effectively isolates the wellbore reservoir pressure utilizing glass. The BreakThru™ Single-Cycle Barrier Valve is made of a proprietary glass material that gives them incredible strength and durability in a variety of downhole conditions up to 10,000psi (68.9MPa) differential pressure.

Unlike the BreakThru™ Barrier Valve that requires intervention to be removed the BreakThru™ Single-Cycle Barrier Valve is removed by applying 1 pressure cycle to a preset activating pressure. This gives the operator flexibility to set hydraulic packers, inflow test DHSV, test the tubing and packer from above and any other tests needed to perform. The opening system is a mechanical system that is protected in a clean environment to ensure proper function in all harsh environments. Once the preset activation pressure is surpassed, the BreakThru™ Single-Cycle Barrier Valve will activate and open. Once the tool is opened, the wellbore fluids can be produced up through the full ID of the production tubing as the tool provides no restrictions to tubing ID once activated.

### Applications

- Pressure Testing of Completion
- Well Barrier Plug
- Setting of hydraulic Packers
- Fluid loss control
- Flotation of Completion
- Isolate Lower Completion

### Benefits

- ISO 14998 V0 / ISO 14310 V0 and ISO 28781 certified well barrier
- Does not require Nine personnel to RIH and operate
- Reduced rig time over wire line plugs no intervention needed
- Preset activation pressure
- Easy removal remotely by surface applied pressure
- RIH as an integrated part of the completion
- Can be run in hostile environments (H<sub>2</sub>S and CO<sub>2</sub>)
- Debris tolerant pressure activation
- Full bore access post opening
- Patented Technology

| BREAKTHRU™ SINGLE-CYCLE BARRIER VALVE CASING SPECS |                      |                            |                                |   |             |
|--|----------------------|----------------------------|--------------------------------|---|-------------|
| Description<br>inch<br>(mm)                        | O.D.<br>inch<br>(mm) | Tool I. D.<br>inch<br>(mm) | Overall Length<br>inch<br>(mm) | ISO Differential Pressure<br>Rating 125 ksi | Temperature |
| 3-1/2  | 4.80                 | 2.91                       | 34.0                           | 10k psi                                     | 320° F      |
| 4-1/2  | 5.91                 | 3.93                       | 34.0                           | 10k psi                                     |             |
| 5-1/2  | 7.00                 | 4.89                       | 34.0                           | 10k psi                                     |             |
| 6-5/8  | 8.13                 | 5.88                       | 34.0                           | 7,5k psi                                    |             |

Other sizes and higher pressure/temperature ratings may be available upon request.  
Casing Specs are according to API Tubing/Casing Dimension Chart Information.

For more information, and to find a representative near you, visit [nineenergyservice.com](http://nineenergyservice.com)