

ReAct™ Inflow Valve (RIV)

The React™ Inflow Valve (RIV) is a permanently installed and electronically actuated sleeve type valve that facilitates the control of well flow through ports or installed chokes. The onboard electronics require no connection to surface as the valve utilises our ReAct remote signalling technology.

Multiple valves can be installed in a wellbore with isolation packers above and below in order to provide zonal control and isolation. Their flexible functionality and modular design allows the valves to be used for a range of applications such as remote water shut off, selective start up, sand screen optimisation, and zonal fracking.

A typical valve features two independent ReAct electronics modules, either of which can provide the actuation for the device. The electronics are easily programmed at the wellsite from a laptop computer running standard Windows software.

The valves can be run in either the open position or closed position depending on the application and current functionality allows the valve to be cycled twice. This means that once in the well a valve run in the closed position can be remotely signalled open and then remotely signalled back to the closed position. Contingency exists to open or close the valves at any time using conventional wireline techniques to mechanically shift the valves to the open or closed position, or by coiled tubing using NOV's proprietary Hydraulic Shifting Tool.

Features

- Field proven electronics
- Delayed function for up to 180 days
- Top selective profile for pressure control accessories
- Defaults to mechanical sleeve
- Multiple valves in one well
- Uses existing wireline intervention procedures when mechanically actuated
- Large flow areas
- Inexpensive option to smart well equipment
- Sleep mode to extend valve life

Benefits

- Increased production due to better contribution from minor zones
- Increased production from improved recovery
- Increased production from subsequent water shut off
- No requirement for hydraulic lines or cables from surface to function the valve
- Wirelessly open or close via Demand signal from surface removing the need for wireline conveyance

Applications

- Delay production from particular zone
- Isolate laterals to allow staged start up
- Flow control in laterals
- Water shut off after start up
- Test individual zones following start up or during start up
- Fracking operations

Technical Data

Tool Size	4.500"	5.500"
End Connections	4-½" 12.6# SL-HT	5-½" 15.5# SL-HT
Material	13% Cr & Inconel 718	13% Cr
OD	5.750" max	7.578" max
ID	3.250" min	4.313" min
Flow Area Through Valve Body	8.295 in²	14.610 in²
Length	114.0"	136.0"
Tensile Rating	288,000 lbs*	361,200 lbs*
Compressive Rating	215,700 lbs*	181,300 lbs*
Torque Rating	11,000 ft-lbs*	8,700 ft-lbs*
Working Pressure	5,000 psi	5,000 psi
Shifting Force Per 1,000 psi Well Pressure	8,618 lbs	11,600 lbs
Temperature Rating	125°C	125°C

*Governed by end connection rating.

