

RFID Inflow Control Device

Delivers interventionless inflow management using RFID technology

Applications

- Regulating and managing inflow or outflow profiles across a horizontal wellbore

Features and Benefits

- Eliminates the need for washpipe, intervention services, and crew, which alleviates health, safety, and environmental concerns while reducing operating costs
- Eliminates the need for an intermediate completion by running closed, which effectively makes the lower completion a reservoir barrier and fluid loss device
- Increases the percentage of the total hydrocarbon produced
- Improves drainage of unwanted fluids
- Opens remotely using radio-frequency identification (RFID) technology
- Promotes even distribution across the reservoir section
- Facilitates staged startup and toe-to-heel well cleanup
- Provides operational reliability through built-in clean hydraulic reservoir and debris tolerance
- Minimizes nonproductive time because the device is set up according to customer requirements
- Reverts to a standard mechanical sliding sleeve following remote completion operations

Tool Description

The Weatherford RFID inflow control device (ICD) combines the FloReg™ inflow control system with RFID technology to evenly distribute inflow throughout a horizontal wellbore. The ICD, or a series of ICDs, are run closed and then, at depth, sequentially opened with no intervention. This capability eliminates the need for washpipe, intervention services, wires, or control lines, which reduces completion time and risk. The ICD is customizable to customer-specific applications, and it can be opened by either circulating RFID tags, using a frequency modulated pressure signature, timers, or a combination of these.

Designed with debris, mud solids, and cement in mind, the device does not rely on debris-sensitive springs, check valves, or complex piston arrangements. Further, reliability is not compromised by the need for any pre-charged or well-sensitive piston chambers.



The ICD uses RFID technology to evenly distribute inflow throughout a horizontal wellbore.



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Specifications*

Size	Maximum Outside Diameter (OD)	Minimum Inside Diameter (ID)	Pressure Rating	Absolute Pressure Rating	Temperature
4.50 in. (114.3 mm)	5.625 in. (142.9 mm)	2.50 in. (63.5 mm)	7,500 psi (51.7 MPa)	15,000 psi (103.4 MPa)	39 to 302°F (4 to 150°C)
		2.81 in. (71.4 mm)			
		3.50 in. (88.9 mm)		10,000 psi (68.9 MPa)	
5.50 in. (139.7 mm)	7.750 in. (196.9 mm)	3.81 in. (96.8 mm)		15,000 psi (103.4 MPa)	
		4.31 in. (109.5 mm)			
	8 in. (203.2 mm)	4.56 in. (115.8 mm)			

* Customer specific specification variants are available on request.

