RV-1 Venturi Orifice Valve

Provides enhanced gas-lift flow performance and dependability by maximizing production and reducing nonproductive time

Applications

- Wells requiring equipment to be wireline retrievable
- Wells that require high injection rates to maximize production rates
- · High-profile wells with high intervention cost

Features and Benefits

- Provides maximum gas passage with minimum differential between injection pressure and production pressure, which enables a lower injection point and higher production rates.
- Increases the injection volume capability through 1-in. gas-lift valves in wells with large tubing—without requiring installation of multiple standard, wireline-retrievable gas-lift valves at the injection point.
- Reduces needed gas-injection pressure by requiring lower differential pressure between the casing and tubing to maximize flow performance.
- Aids in achieving critical flow in unstable wells, which contributes to well stability.
- Contributes to optimization and stabilization of dual-gas-lift wells by means of more exact orifice sizing, which enables both production strings to produce simultaneously.

Tool Description

Weatherford RV-1 wireline-retrievable gas-lift orifice valves feature a special Venturi flow area that significantly reduces gas-flow friction. Designed specifically for deepwater or other high-profile well applications, these valves can achieve critical flow with only 10% pressure drop across the valve; standard orifice valves require about 40 to 50% pressure drop to achieve critical flow. This enhanced performance enables RV-1 orifice valves to deliver higher injection rates at deeper injection points—with a more stable flow regime and at a lower operating cost.

Weatherford RV-1 valves can be equipped with the Weatherford premium reverse-flow check valve, which has a combination modified-PTFE and metal-to-metal seal. These check valves were designed by applying computational flow-dynamics analysis and physical testing to maximize gas-passage capability and erosion resistance.



Cutaway of the RV-1 Venturi orifice valve



RV-1 Venturi Orifice Valve

Specifications

Valve		Latch Type	Valve OD	Port Size
Model	Model #	Laten Type	valve OD	Fort Size
RV-1	3301-XXX	BK-2	1.00 in. (25.40 mm)	1/8 in. (3.18 mm)
				5/32 in. (3.97 mm)
				3/16 in. (4.76 mm)
				1/4 in. (6.35 mm)
				5/16 in. (7.94 mm)



weatherford.com

© 2016 Weatherford. All rights reserved. 11522.00

Weatherford products and services are subject to the Company's standard terms and conditions, available on request or at weatherford.com. For more information contact an authorized Weatherford representative. Unless noted otherwise, trademarks and service marks herein are the property of Weatherford and may be registered in the United States and/or other countries. Weatherford products named herein may be protected by one or more U.S. and/or foreign patents. Specifications are subject to change without notice. Weatherford sells its products and services in accordance with the terms and conditions set forth in the applicable contract between Weatherford and the client.