

Description

The OmniFrac™ Multi Pressure Toe Valve provides a flow path from the casing ID to the formation without the need for a casing perforation. The valve is deployed in the closed position to the toe of the well as part of the casing string. Applying several hydraulic pressure cycles from the surface opens the valve. The valve design makes it possible for the casing to be pressure tested several times.

The OmniFrac™ Multi Pressure Toe Valve operates by absolute (hydrostatic plus applied) casing pressure. The absolute pressure acts on a pressure activated device that is engineered to rupture at a precise pressure. Once the pressure activated device is ruptured, the absolute pressure is applied to hydraulic pistons that are attached to an indexing device. In order to open the valve, the casing applied pressure should be cycled several times, which gives the operator the option to conduct several casing pressure tests. The maximum applied pressure required for opening the valve is set to be lower than the casing pressure. The number of cycles to open the valves can be set upon operator preference.

Applications

- » Horizontal, deviated, or vertical wells
- » Cemented or open hole
- » Casing test to high pressures

Features and Benefits

- » Allows casing formation communication without perforating
- » Valve opens below casing test pressure
- » Allows several casing pressure tests without opening the valve
- » Simple design with limited parts
- » Easily adjustable to meet different well requirements
- » Reliable function under severe debris and cement conditions
- » Two pressure activated devices installed at 180° apart for the worst debris/cement scenario
- » 18 ksi absolute burst pressure rating at 350 °F



Technical Data

OmniFrac™ Multi Pressure Toe Valve											
Liner Size		Model	Maximum OD		Minimum ID		Flow Area	Abs. Collapse	Abs. Burst	Temp	Tensile
in.	mm		in.	mm	in.	mm	in ²	psi	psi	°F	lbs
4.5	114.3	MPV-450-01	5.75	146.05	2.62	66.54	12.5	16,000	18,000	350 ⁰	350,000
5.5	139.7	MPV-550-01	6.875	174.625	3.0	76.2	14	16,000	18,000	350 ⁰	650,000