

MSVi™ & MSVe™ Mudsaver Valve

Volant's patented Mudsaver Valve adapts to Volant's Casing Running Tools with either internal or external grip architecture. Installed between the casing running tool and casing seal, the Mudsaver Valve is designed to entirely stop fluid flow after fluid circulating or casing running operations. The valve opens with applied pressure when circulating begins, and closes when it is stopped. The Mudsaver Valve allows back flow and will not trap pressure in the casing string.

Both Volant's MSVi™ and MSVe™ have been designed to the same open area as each corresponding Volant Casing Running Tool.

Tool Model: MSVe1-4.5, MSVi1-4.5, MSVi1-5.5, MSVi1-7.0 Specification Summary

Tool Characteristics

Model		MSVe1-4.5	MSVi1-4.5	MSVi1-5.5	MSVi1-7.0	
Compatible Tool		CRTe-1.0	CRTi2-4.5	CRTi2-5.5	CRTi3-7.0 CRTi4-7.0	CRTi2-8.63
Maximum Flow Rate ¹	US gpm (m ³ /min)	449 (1.70)	291 (1.10)	449 (1.70)	660 (2.50)	1,162 (4.40)
Maximum Solids Content ¹	% vol	5.0	5.0	5.0	5.0	5.0
Maximum Sand Content ¹	% vol	1.0	1.0	1.0	1.0	1.0
Typical Pressure Drop ²	psi (MPa)	92 (0.6)	131 (0.9)	92 (0.6)	73 (0.5)	53 (0.3)
Opening Pressure	psi (MPa)	200 (1.3)	200 (1.3)	150 (1.0)	150 (1.0)	150 (1.0)
Closing Pressure	psi (MPa)	180 (1.2)	180 (1.2)	130 (0.8)	130 (0.8)	130 (0.8)
Pressure Limit ³	psi (MPa)	5,000 (34.4)	5,000 (34.4)	5,000 (34.4)	5,000 (34.4)	5,000 (34.4)
Maximum Pressure End Load	ton (tonne)	60 (54)	50 (45)	125 (113)	250 (226)	250 ⁴ (226)
Max. Mudsaver Valve Diameter ⁵	in (mm)	3.45 (88.0)	3.77 (96.0)	4.53 (115.5)	5.85 (149.0)	5.85 ⁴ (149.0)
Mudsaver Valve Length ⁶	in (mm)	11.2 (285)	10.1 (260)	11.6 (295)	13.3 (340)	14.1 (360)

1. Maximum flow rate, solids and sand content are based on managing erosion rates, which may vary depending on other fluid properties. Please regularly inspect Mudsaver Valve internals. Reduce flow rates if erosion occurs. Pumping lost circulation material through Mudsaver Valve is not recommended due to risk of blockage.
2. Value calculated based on 160 lb/gal (1,200 kg/m³) density, 63 s.qt (60 s/L) viscosity working fluid at maximum rated flow rate. Does not include pressure drop induced by casing running tool or casing seal.
3. Circulation pressure is generally governed by packer cup pressure capacity. Pressure capacity may be less than indicated if alternative seal arrangements are used or end load is exceeded. Contact Volant for maximum MSVi or MSVe body pressure capacity.
4. Provision for 500 ton (455 tonne) CRTi2-8.63 end load capacity is available upon request. Maximum MSVi diameter will increase to 6.33 in (160.8 mm).
5. Does not consider casing running tool or casing seal assembly.
6. Combine MSVi and CRTi tool lengths for total assembly overall length. CRTe length is not affected when used in conjunction with MSVe.

MSVi1-7.0



MSVi1-7.0 installed on CRTi4-7.0



Give us a problem. Or just drop us a line if you want to know more.

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