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.

MSVi1-7.0

Base Tool Characteristics

		MSVel-4.5	MSVil-4.5	MSVil-5.5	MSVil-7.0		MSVil-10.75
Compatible Tool		CRTe-1.0GM5.5 CRTe-1.0GM7.75	CRTi2-4.5	CRTi2-5.5	CRTi3-7.0 CRTi4-7.0	CRTi2-8.63	CRTi1-10.75
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)	1,450 (5.50)
Maximum Solids Content[1]	% vol	5.0	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	1.0
Typical Pressure Drop of MSV[2]	psi (MPa)	20 (0.14)	26 (0.18)	20 (0.14)	20 (0.14)	28 (0.19)	10 (0.07)
Typical Pressure Drop of CRT with MSV[2]	psi (MPa)	70 (0.52)	215 (1.48)	105 (0.72)	105 (0.72)	95 (0.65)	80 (0.55)
Opening Pressure[3]	psi (MPa)	240 (1.65)	200 (1.38)	200 (1.38)	200 (1.38)	200 (1.38)	180 (1.24)
Closing Pressure[4]	psi (MPa)	70 (0.52)	70 (0.52)	70 (0.52)	80 (0.55)	80 (0.55)	70 (0.52)
Pressure Limit[5]	psi (MPa)	5,000 (34.4)	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[6] (226)	750 (680)
Maximum Mudsaver Valve Outside Diameter	in. (mm)	3.45 (88.0)	3.77 (96.0)	4.53 (115.5)	5.85 (149.0)	5.85[6] (149.0)	9.12 (232.0)
Mudsaver Valve Length[7]	in. (mm)	11.2 (285)	10.1 (260)	11.6 (295)	13.3 (340)	14.1 (360)	18.2 (465)

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/m^3) density, 63 s.qt (60 s/L) viscosity working fluid at maximum rated flow rate. Typical Pressure Drop of CRT with MSV does not include pressure drop induced by casing seal.
3. Opening Pressure refers to the static differential pressure inside the Mudsaver valve required to open the valve from a fully closed position, and assumes casing pressure is equal to atmospheric. Opening pressure is not directly measurable at the rig.
4. Closing Pressure refers to the static differential pressure inside the Mudsaver valve required to fully close the valve, and assumes casing pressure is equal to internal valve pressure. Closing pressure will vary when fluid is flowing. Closing pressure is not directly measurable at the rig.
5. 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.
6. 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).
7. Combine MSVi and CRTi® tool lengths for total assembly overall length. CRTe® length is not affected when used in conjunction with MSVe.

ISO 9001 Quality