

ARC-V™

RUPTURE VALVE

The Annulus Rupture Circulating Valve from Metrol is a simple reversing valve with positive lock open/close feature.

DESCRIPTION

The ARC-V operates by applying annulus pressure to burst a rupture disc. Once actuated, the reversing ports are locked open. The ARC-V is typically opened at the completion of the downhole test to reverse out fluids produced during the test.

A ratchet holds the valve in the closed position until the disc is ruptured. When the rupture disc bursts, hydrostatic pressure is applied to the operator mandrel, moving it against the atmospheric chamber.

Eight circulating ports with a combined flow area that exceeds the ID of the tool are exposed to allow efficient well killing operations.

After pressure has ruptured the disc, and the circulating valve has functioned, the mandrel is positively held open using the same ratchet that originally held it closed.

FEATURES & BENEFITS

- > Positive lock in the open and closed position
- > Full bore flow area circulating ports
- > Integral pip tag if required
- > Restrictors can be fitted to flow ports if required
- > Field replaceable rupture disc

SPECIFICATIONS

Max. OD:	5.5"[139.7mm]	Temperatures	
Tool ID:	2.25"[57mm]	Max. temp. rating:	350°F[175°C]
Port flow area:	6.1sq.in[39.4cm ²]	Min. temp. rating:	41°F[5°C]
Length:	4.5ft[1.37m]	Min. test (to achieve full rating pressure test):	Ambient
Weight:	286.5[130kg]	Min. exposure (subsea pressure test):	Ambient
Connection top/box btm/pin:	3.5" Hydril PH6	Min. function testing:	Ambient
Tensile strength:	453,000lbf[2015KN]	Max. temp. drop:	257°F[125°C]
Compressive rating:	453,000lbf[2015KN]	Number of cycles:	Single shot
Min. hydrostatic pressure:	3000psi[20.6Mpa]*	Service:	H ₂ S, NACE MR0175/ ISO15156, CO ₂ , acid
Max. hydrostatic annular/tubing:	20,500psi[141.3Mpa]	Pressure drop across ports:	No pressure drop
Max. diff. annular/tubing:	20,500psi[141.3Mpa]	API 19TT grade:	TBC
Max. opening diff. annular/tubing:	20,500psi[141.3Mpa]		
Low temp. test at ambient:	21,600psi[148.9Mpa]		

*Limited by lowest pressure rating of Metrol rupture disc. Can be lower upon request.

