

## FLOW-SURE MC™

THE WIRELESS MULTI-CYCLE SLEEVE FROM METROL

The Metrol FLOW-SURE MC is a wirelessly controlled, hydrostatic pressure operated, in-flow control or circulating valve. The valve can also be actuated directly from surface using an annulus pressure pulse signature.

### DESCRIPTION

The FLOW-SURE MC is a sliding sleeve with a non-elastomeric high pressure sealing system that can be controlled from surface without pressure pulsing or control lines.

The wireless technology enables the sleeve to be sited either above or below a packer, without any requirement for packer feed-throughs.

Primarily intended for use in a well testing environment, the sleeve can be used to perform multi-zone well tests without the need to re-run the test string. It is possible to operate the sleeve as an alternate flow path enabling well kill, or continued flow in the event of plugging of screens.

The sleeve can also be used below a permanent packer to isolate the well enabling the DST string to be removed for extended build-ups or long-term reservoir observation.

Metrol's PARAGON wireless gauges, in conjunction with the sleeve, provide 'real-time' tubing and annulus pressure monitoring both above and below the packer or packers.

The sleeve includes dual redundant control systems each capable of independently cycling the tool multiple times.

### FEATURES & BENEFITS

#### FEATURES

- > Multiple tools can be run at the same time for fully selectable zonal testing
- > Integrated with proven Metrol PARAGON Telemetry
- > Dual redundant control system
- > Non-elastomeric primary seals
- > Built-in control system diagnostics including pressure verification
- > 15 cycles

#### BENEFITS

- > Wireless control
- > No control lines
- > No packer feed-throughs
- > No nitrogen
- > Activation and sleeve position confirmation provided at surface
- > H<sub>2</sub>S, CO<sub>2</sub> and acid compatible
- > Sleeve position sensor in-built

### APPLICATIONS & OPTIONS

#### OPTIONS

- > Long-term battery packs
- > Back-up mechanical shifting\*
- > Wireline tools can be run through FLOW-SURE MC
- > Shorter version available
- > Metal barrier seals available
- > Low pressure nitrogen charged FLOW-SURE MC (well pressures below 1200psi)
- > Multi-zone testing
- > Extended build-up
- > Circulation valve
- > Alternate flow path
- > Back-up to well test valve

### SPECIFICATIONS

<b>Max. OD:</b>	5.5"[139.7mm]	<b>Temperature rating:</b>	350°F[175°C]
<b>Tool ID:</b>	2.25"[57mm]	<b>Length:</b>	22.3ft[6.8m]
<b>ID Flow Area:</b>	3.976sq.in[2565mm <sup>2</sup> ]	<b>Length (mech shift option)*:</b>	23.6ft[7.2m]*
<b>Port Flow Area:</b>	4.287sq.in[2766mm <sup>2</sup> ]	<b>Shifting Profile*:</b>	B profile*
<b>Differential Pressure:</b>	18,500psi[127MPa]	<b>Weight:</b>	1268lbs[575kg]
<b>Max. Annular Pressure:</b>	18,500psi[127MPa]	<b>Tensile Strength:</b>	260,000lbf[1156kN]
<b>Max. Tubing Pressure:</b>	18,500psi[127MPa]	<b>Number of movements:</b>	15 + 15
<b>Max. Opening Differential:</b>	5,000psi[34MPa]	<b>Min. battery life:</b>	3 months
<b>Min. Hydrostatic required:</b>	1,200psi[8.3MPa]	<b>Connection:</b>	3 ½" 15.8# PH6
<b>Qualified:</b>	ISO-28781	<b>Material Standard:</b>	NACE MR 0175/ISO 15156



\*Available upon request  
 Specifications subject to change without notice.  
 Contact Metrol for API 19TT specifications.  
 Multi year options, design life available on request.