

# FLOW-SURE ST™

THE WIRELESS DOWNHOLE SHUT-IN TOOL FROM METROL

The Metrol FLOW-SURE ST is a wirelessly controlled, multi actuation or single acting downhole valve that can be installed with wireline or run with the completion.

## DESCRIPTION

The tool features instant (<1second) actuation for closure and opening. This ensures a clean start to the downhole buildup.

When integrated with Metrol's Paragon wireless telemetry, the valve can be closed and opened at any time by the sending of a wireless command from surface. All flow pressure and subsequent build up data recorded on the OCULUS gauge is also monitored using the PARAGON system

The tool can be supplied with valve OD's, flow areas and materials matched to the requirements of the well.

Running Options:

- > Wireline/Coil Tubing - Run below any lock or bridge plug.
- > Tubing conveyed - Run below Metrol custom flow-sub assembly enables installation below obstructions such as guns or pumps, and permits larger flow areas than wireline conveyed option.
- > Wirelessly controlled, timer controlled or pressure pulse signature actuation.

## FEATURES & BENEFITS

### FEATURES

- > Multiple instant closures, for clean start to build-ups.
- > Non elastomeric dynamic seals.
- > Reduced wellbore storage.
- > Eliminate or reduce the effect of phase segregation on pressure data.
- > Wireless control.
- > Surface controlled actuation eliminates downtime waiting on timers or the risk of early shut-in.

### BENEFITS

- > Wireless pressure data acquisition confirms build-up and optimises build-up duration.
- > Wireless and/or timer activation.
- > Shock resistant electronics.
- > Single activation tool can be pumped open for well kill pressure equalisation.

## APPLICATIONS

- > Transient testing
- > Multizone testing
- > Wireline well test without rig
- > Extended buildup
- > Leaking surface valve contingency
- > Formation isolation valve

## OPTIONS

- > Sizes: 2 7/8", 3 1/2", 4 1/2" or 4 1/2" MS
- > Standard and custom sizes, threads & materials
- > Custom flow subs
- > Higher temperature available
- > Long term deployment 1 year plus before actuation
- > H2S, CO2 and acid compatible materials



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The Metrol FLOW-SURE ST is a wirelessly controlled, single actuation, non elastomeric sealed, downhole valve.

## SPECIFICATIONS

|                            | MULTI-SHOT                                  | SINGLE-SHOT                                 |   |  |  |
|----------------------------|---|---|---|--|--|
|                            | 4 1/2" MS                                   | 2 7/8"                                      | 3 1/2"                                      | 3 1/2"<br><small>Increased Flow Area</small> | 4 1/2"                                       |
| Actuator OD                | 2.56" [65mm]                                | 1.25" [31.75mm]                             | 1.25" [31.75mm]                             | 1.25" [31.75mm]                              | 2.56" [65mm]                                 |
| Number of Actuators        | 2   | 1   | 1   | 1  | 2  |
| Max. Tool OD               | 3.205" [81.04mm]                            | 1.791" [45.5mm]                             | 1.969" [50.00mm]                            | 2.441" [50.00mm]                             | 3.15" [80.00mm]                              |
| ID Flow Area               | Ø2.252" (3.983in <sup>2</sup> )             | Ø1.102" (0.954in <sup>2</sup> )             | Ø1.339" (1.407in <sup>2</sup> )             | Ø1.654" (2.147in <sup>2</sup> )              | Ø2.25" (3.976in <sup>2</sup> )               |
| Port Flow Area             | 4.493in <sup>2</sup> [2899mm <sup>2</sup> ] | 2.159in <sup>2</sup> [1393mm <sup>2</sup> ] | 3.871in <sup>2</sup> [2497mm <sup>2</sup> ] | 9.905in <sup>2</sup> [6391mm <sup>2</sup> ]  | 12.523in <sup>2</sup> [8079mm <sup>2</sup> ] |
| Pressure Rating            | 15,000psi [103MPa]                          | 15,000psi [103MPa]                          | 15,000psi [103MPa]                          | 15,000psi [103MPa]                           | 15,000psi [103MPa]                           |
| Max. Differential Pressure | 10,000psi [69MPa]                           | 10,000psi [69MPa]                           | 10,000psi [69MPa]                           | 10,000psi [69MPa]                            | 10,000psi [69MPa]                            |
| Min. Hydrostatic Required  | 800psi [5.52MPa]                            | 800psi [5.52MPa]                            | 800psi [5.52MPa]                            | 800psi [5.52MPa]                             | 800psi [5.52MPa]                             |
| Pump Open Pressure         | N/A   | >1.5 • D/Hole P                             | >1.5 • D/Hole P                             | >1.5 • D/Hole P                              | >1.5 • D/Hole P                              |
| Length                     | 18.444ft [5.622m]                           | 11.365ft [3.46m]                            | 12.066ft [3.678m]                           | 12.287ft [3.745m]                            | 13.846ft [4.22m]                             |
| Temperature Rating         | 348°F [175°C]                               | 348°F [175°C]                               | 348°F [175°C]                               | 348°F [175°C]                                | 348°F [175°C]                                |
| Number of Movements        | 4 [2 cycles]                                | 1   | 1   | 1  | 1  |
| Min. Battery Life          | 3 months                                    | 3 months                                    | 3 months                                    | 3 months                                     | 3 months                                     |
| Connection                 | User Defined                                | User Defined                                | User Defined                                | User Defined                                 | User Defined                                 |
| Material Standard          | NACE MR<br>0175/ISO 15156                   | NACE MR<br>0175/ISO 15156                   | NACE MR<br>0175/ISO 15156                   | NACE MR<br>0175/ISO 15156                    | NACE MR<br>0175/ISO 15156                    |

