### Description

**Product Portfolio**

**SRV**

Process viscometer for Newtonian and non-Newtonian fluids. Wide viscosity range - monitor the complete process.

**SRD**

Single instrument for process density, viscosity and temperature measurement.

### Fluid Measurements

<table>
<thead>
<tr>
<th></th>
<th>SRV</th>
<th>SRD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Viscosity Range</strong></td>
<td>3 to 10,000 cP</td>
<td>1 to 3,000 cP</td>
</tr>
<tr>
<td></td>
<td>0.5 to 50,000 cP (available)</td>
<td>wider range available</td>
</tr>
<tr>
<td><strong>Viscosity Accuracy</strong></td>
<td>5% of reading (standard)</td>
<td>5% of reading (standard)</td>
</tr>
<tr>
<td></td>
<td>1% &amp; higher accuracy available</td>
<td>higher accuracy available</td>
</tr>
<tr>
<td><strong>Density Range</strong></td>
<td>-</td>
<td>0.4 - 1.5 g/cc</td>
</tr>
<tr>
<td><strong>Density Accuracy</strong></td>
<td>-</td>
<td>0.01 g/cc</td>
</tr>
<tr>
<td><strong>Reproducibility</strong></td>
<td>Better than 1% of reading</td>
<td>Better than 1% of reading</td>
</tr>
<tr>
<td><strong>Temperature (inbuilt)</strong></td>
<td>Pt1000 (DIN EN 60751 class B)</td>
<td>Pt1000 (Class B)</td>
</tr>
</tbody>
</table>

### Operational Environment

<table>
<thead>
<tr>
<th></th>
<th>SRV</th>
<th>SRD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Process Fluid Temperature</strong></td>
<td>-40 up to 200 °C</td>
<td>-40 up to 200 °C</td>
</tr>
<tr>
<td><strong>Ambient Temperature</strong></td>
<td>max 150 °C</td>
<td>max 150 °C</td>
</tr>
<tr>
<td><strong>Pressure Range</strong></td>
<td>up to 5,000 psi</td>
<td>up to 5,000 psi</td>
</tr>
</tbody>
</table>

### Mechanical

<table>
<thead>
<tr>
<th></th>
<th>SRV</th>
<th>SRD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Material (Wetted parts)</strong></td>
<td>316L Stainless Steel</td>
<td>316L Stainless Steel</td>
</tr>
<tr>
<td><strong>Diameter x Length</strong></td>
<td>Ø35 x 140 mm</td>
<td>Ø35 x 140 mm</td>
</tr>
<tr>
<td><strong>Process Connection</strong></td>
<td>3/4” NPT</td>
<td>3/4” NPT</td>
</tr>
<tr>
<td></td>
<td>Flange &amp; sanitary connections available</td>
<td>Flange &amp; sanitary connections available</td>
</tr>
<tr>
<td><strong>Ingress Protection</strong></td>
<td>IP68</td>
<td>IP68</td>
</tr>
<tr>
<td><strong>Electrical Connection</strong></td>
<td>M12</td>
<td>M12</td>
</tr>
</tbody>
</table>

### Application

- Process viscosity control of slurries, emulsions and other non-Newtonian fluids
- Polymerization monitoring
- Coating and ink viscosity control
- Marine fuel viscosity control

**Application**

Designed for easy installation in pipelines, tanks, and process lines.

<table>
<thead>
<tr>
<th></th>
<th>SRV</th>
<th>SRD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Application</strong></td>
<td>Process viscosity control</td>
<td>Drilling mud density and viscosity</td>
</tr>
<tr>
<td></td>
<td>of slurries, emulsions and other</td>
<td>Newtonian and non-Newtonian fluids</td>
</tr>
<tr>
<td></td>
<td>non-Newtonian fluids</td>
<td>Pipeline and pumping -</td>
</tr>
<tr>
<td></td>
<td></td>
<td>efficiency and leak detection</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fuel consumption monitoring</td>
</tr>
</tbody>
</table>

†subject to change without notice
DVP

Simultaneous density, viscosity and temperature measurement at HPHT conditions.

DVM

Designed for reservoir fluid analysis. Simultaneous density and viscosity measurement at 30,000 psi & 200 °C.

SME-TRD

Analog output 4-20 mA (3 channel)
Viscosity, Density, Temp.

Digital output Modbus RTU (RS-485)
Ethernet
USB
HART (optional)

Wireless output Bluetooth LE 4.0
Wi-fi (optional)
WirelessHART/ISO100 (optional)

Display Multi-line LCD
(max. 55 °C)

Operational temp. max. 55 °C
Power supply 24 V DC
SME-TR(D) IP65/66
SME-DRM IP40/50
Software Data acquisition and service

SME-DRM

-40 up to 200 °C
-40 up to 200 °C

-40 up to 200 °C
-40 up to 200 °C

-40 up to 200 °C
-40 up to 200 °C

-40 up to 200 °C
-40 up to 200 °C

-40 up to 200 °C
-40 up to 200 °C
INVENTED, DESIGNED, AND BUILT WITH SWISS PRECISION

Invented, designed and built by an ETH Zurich spin-off team with over 150 years of collective experience in resonant sensor technology. Rheonics proprietary technology is protected by a growing portfolio of US & international patents.

Precision built in Switzerland, each Rheonics fluid density and viscosity sensor is designed to match your application needs. Whether you need to measure density and viscosity downhole at 30,000 psi and 200 °C or monitor the viscosity of polymerization reactions, we have a solution for you.

Rheonics density and viscosity sensors are available in probe and flow through styles. All Rheonics products are designed to withstand the harshest process environments including high level of shock, vibrations, abrasives & corrosives.

30 YEARS OF DEVELOPING INNOVATIVE FLUID DENSITY & VISCOSITY MONITORING

1985
Conceptual framework at ETH Zurich

1990
First viscometer patented

1998
Gated PLL technology patented

2003
Process Viscometer developed

2010
Developed HPHT D-V sensor

2012
rheonics incorporated

2013
HPHT Viscosity and Density Sensor for Oil and Gas (DVM)

2014
Inline process Density & Viscosity Sensor (DVP)

2015
Inline process Viscometer (SRV)

2016
Inline process Density & Viscosity Meter (SRD)

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