Increase Gas Production, Reduce Maintenance and Decrease Environmental Risks

Complete Turn-Key Two Phase Separator System
Optimized to Increase Gas Production
Two Phase Separator Optimization

Regulators or backpressure control valves keep separator pressure in the best range for optimal production and separation efficiency. At the same time, pressure relief valves provide protection by venting excess pressure, defusing dangerous conditions. With Emerson’s pressure transmitters, regulators, control valves and monitoring devices, you’ll have the ability to optimize production while improving safety and environmental regulatory compliance.

**Control Over Pressured Gas to Flare**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Purpose</th>
<th>Benefit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Backpressure Regulator</td>
<td>Protects the separator from overpressure and exhaust excess gas to the flare.</td>
<td>Accurate back pressure control with minimized pressure buildup controls gas to the flare and reduces atmospheric emissions from safety relief valves.</td>
</tr>
</tbody>
</table>

**Two Phase Separator**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Purpose</th>
<th>Benefit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Separator Vessel and Internals</td>
<td>Separate the well fluid into gas and liquid.</td>
<td>Cost-effective design, ensures separation efficiency, reduces gas carry over in the liquid and increases gas production.</td>
</tr>
</tbody>
</table>

**System Integration**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Purpose</th>
<th>Benefit</th>
</tr>
</thead>
<tbody>
<tr>
<td>System Integration</td>
<td>Process engineering, detailed engineering, procurement and supply the complete system.</td>
<td>Turn-key solutions ensure optimum performance. Emerson™ components are designed to work in sync with each other, ensuring smooth operation and reducing maintenance work and cost.</td>
</tr>
</tbody>
</table>
Gas/Liquid Measurement and Level Control

**Feature**
- Customized Reliable instruments

**Purpose**
- Control the liquid level; Measure the pressure, temperature and flow rate.

**Benefit**
- Accurate and reliable measurement, reliable level control, reduce maintenance and improve operator safety.

Pressure Control for the Gas Outflow to Gathering Line

**Feature**
- Back Pressure / Differential Pressure Control Regulator

**Purpose**
- Maintain separator back pressure and discharge the liquid into gathering line.

**Benefit**
- Accurate separator backpressure control and fast response to pressure changes minimizes pressure buildup, which results in increased production at the required backpressure as well as reducing entrained light hydrocarbon in liquid lines.

Pressure Control for the Gas Supplied as Instrument Gas

**Feature**
- Pressure Reducing Regulator

**Purpose**
- Supply constant and stable pressure gas to pneumatic instruments, regardless of pressure variations from the separator.

**Benefit**
- Reliable performance to ensure long service life, which reduces unplanned downtime and operational cost.
Emerson provides customized solutions utilizing proven technologies for oil and gas production.

It’s essential for you to meet production targets. But to maximize gas production and yield, you need reliable and efficient separator operations. Leveraging Emerson’s reliable control and measurement products, you can increase production, reduce maintenance across your wellsite and mitigate safety and environmental concerns.

<table>
<thead>
<tr>
<th>What if you could...</th>
<th>Realize in-the-field improvements...</th>
<th>With our solutions...</th>
</tr>
</thead>
</table>
| **Increase gas production** | • Ensure separation efficiency  
  • Reduce gas carry over by liquid  
  • Minimize back pressure buildup  
  • Reduce gas emissions from safety relief valve | ✓ Proven gas/liquid separation technology  
✓ Accurate back pressure / differential pressure control on gas outflow line  
✓ Accurate back pressure control to flare |
| **Spend less time on field maintenance** | • Ensure long service life  
  • Reduce unplanned shutdowns  
  • Improve site service effectiveness  
  • Ensure system compatibility | ✓ Field-proven and reliable technologies for measurement, pressure and level control  
✓ Optimized system integration |
| **Improve operator safety and minimize emissions** | • Less time spent traveling to remote locations  
  • Reduce gas emissions from safety relief valve or flare | ✓ Accurate back pressure / differential pressure control on gas outflow line  
✓ Field-proven and reliable technologies with less maintenance  
✓ Accurate back pressure control to flare |
Proven separator solutions that help increase gas production and reduce emissions and maintenance

Separator Vessel and Internals

- Optimized and fit-for-purpose equipment design
- Efficient separation
- Cost-effective
- Helps increase gas production

Backpressure/Differential Pressure Control Regulator

- Accurate control
- High capacity
- Self-contained
- No bleed to atmosphere
- Robust design
- Easy maintenance

Pressure Reducing Regulator

- Fast response
- Compact design
- Self-contained
- No bleed to atmosphere
- Robust design
- Easy maintenance

Gas/Liquid Measurement and Level Control

Pneumatic Control
- Time-tested for reliability
- Snap-acting or throttling control
- Quick performance and durability

Electric Control
- Requires no air or natural gas to operate
- No venting of process gas to atmosphere and no fugitive emissions
- Low power consumption
- Visibility from a field control system

Flow Measurement
- Multiple models available for accurate gas and liquid flow measurement
- Reliable performance and long service life

Pressure and Temperature Measurement
- Robust design for unmatched reliability and accurate pressure information
- Reliable temperature monitoring
- 4-20 HART®, WirelessHART® and Modus communication protocols

HART® and WirelessHART® are marks owned by FieldComm Group.
Increase Gas Production, Reduce Maintenance and Decrease Environmental Risks

A coal seam gas operator increased gas production and reduced maintenance and emission by using our pressure control solutions.

A shale gas operator increased gas production by using our pressure control solutions.

For further information visit www.emerson.com.