Isolation Valves for Coking Service
Refinery Coking

The delayed coker process is a batch process, one of the most hostile environments in the refinery – due to the abrasive and erosive properties of the coke by-product – and crucial to a refinery’s profitability. Valves are cycled frequently and failure can lead to a complete shutdown of a unit, resulting in large process and financial costs. Optimizing valve life-cycle is critical to operational efficiency.

**Improve Availability**

The quality of design reduces failure rates and increases reliability.

- High reliability run factors
- Most effective coker valve technology
- Continuous purging design prevents “coking up”
- Lowest life-cycle costs

**Coker Valve Applications:**

- Switch valve
- Drum overhead vapor line
- Feed and withdrawal lines
- Drum blowdown
- Heater isolation
- Cutting water isolation
- Switch valve isolation
- Safety relief valves isolation lines
- Drain and vent valves
- Fractionator isolation valves
Isolation Valves for Coking Service

Size: 1” – 36”  
Class: ANSI 300 – 1500  
Standard materials  
For steam purged valves: A217 Gr. C12, A217 Gr. C5  
For heater isolation valves: A217 Gr. C12, Incoloy® 800 H, 317SS

Features

<table>
<thead>
<tr>
<th>Features</th>
<th>Benefits</th>
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<tbody>
<tr>
<td>Integral seat</td>
<td>• Most effective technology for thermal cycling and solids containing processes. Design extends drum switching isolation for scheduled production operations and goals.</td>
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<tr>
<td>Inconel forged Belleville® spring</td>
<td>• Delivers high reliable process isolation due to consistent ball and seat loading, especially for solids conditions. Thin profile spring design eliminates resid buildup in crevices like other type springs.</td>
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<tr>
<td>HVOF RiTech® hard coatings</td>
<td>• State-of-the-art computerized applied hard coatings on ball and seat extending isolation capabilities for expected operational performance goals and repair cost reductions. 35% less repair cost than other type ball valves.</td>
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<td>Continuous purge design</td>
<td>• Ensures consistent torques for drum operations to meet production run times. Provides consistent valve operation due to effective flushing of hot resid and fines collection. 40% less steam costs than other ball designs.</td>
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<td>Reduced steam consumption</td>
<td>• Reduces total cost-of-ownership versus other ball valve designs in reducing yearly steam costs</td>
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<td>Bi-directional sealing option</td>
<td>• Provides isolation of process in both flow directions due to fluctuating pressures</td>
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<tr>
<td>Spring loaded low emission packing design</td>
<td>• Keeps hydrocarbon in containment and meets 100 PPM requirements</td>
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<tr>
<td>ValvTechnologies’ repair services</td>
<td>• Capabilities to service/repair ValvTechnologies coker valves on-site or at our manufacturing facility in Houston</td>
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Sealing: ValvTechnologies tests coker valves to zero-leakage  
Stem packing: Belleville®-loaded low emission tested Garfoil® packing ISO 15848 Rate B and API 624  
Purge connections: Single customer connection, continuous, per application and specification

Additional options per customer specification:  
• Automation – electric, hydraulic, pneumatic  
• Interlock control capabilities

Zero-Leakage Valve Solutions  
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Refinery Coker Valves

ValvTechnologies, Inc. is a global leader in the design and manufacturing of flow control devices. Founded in 1987 and headquartered in Houston, Texas, ValvTechnologies remains focused on helping customers meet their daily production and process challenges safely and efficiently.

Having built a global reputation for superior quality and dependability across every industry served with products designed to fulfill the requirements of standard applications to the most sophisticated, severe-service processes, ValvTechnologies meets the demands for total flow control solutions, whether one valve at a time, or system-wide.

Bringing together the best people and the latest in technological design and manufacturing processes, ValvTechnologies has created an atmosphere where quality and dependability are built into every product, start to finish.

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