

# The ORBIT<sup>®</sup> Valve For Mol Sieve Dryers

A Low Maintenance, High Integrity, Zero Leakage Valve





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## THE ORBIT® VALVE FOR MOL SIEVE DRYERS

### ORBIT HAS SET THE STANDARD IN MOL SIEVE SWITCHING VALVES FOR OVER 40 YEARS

With temperatures cycling between 60°F and 800°F (15°C and 427°C) and tower changes three or four times every day, it takes a tough valve to survive in Mol Sieve service.

Hot, abrasive carry over from Mol Sieve beds will destroy the seals in ordinary valves, causing leakage and system shutdown. ORBIT valves thrive in these difficult conditions, **lasting more than two to five times longer than conventional ball valves.**

Utilizing ORBIT's tilt then turn operation and mechanical cam action of the seating surfaces during closure, ORBIT valves avoid the damage

caused by scratching and tearing suffered by other types of valves.

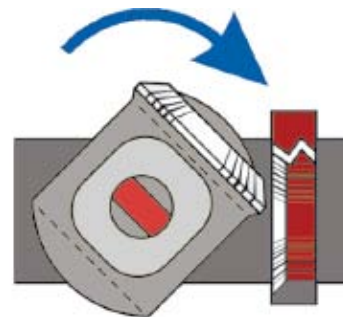
The unique operation of the ORBIT valve achieves tight sealing, again and again, even when there is low differential pressure across the valve.

ORBIT rising stem, top entry valves are approved and used by the leading dryer manufacturers because of ORBIT'S outstanding reliability in Mol Sieve service.

ORBIT valves are specified by process gas plants and licensors' operations worldwide.

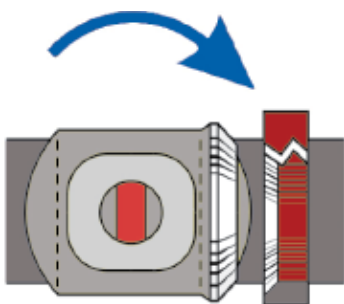


In the full open position, there is unobstructed flow through the valve.



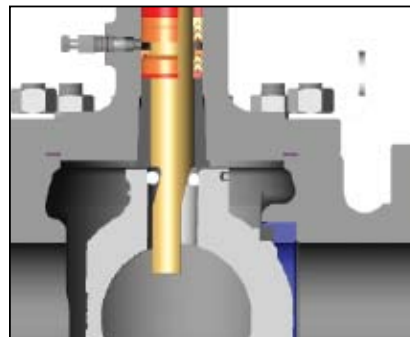
Top View

Precision dual spiral grooves in the stem act against fixed guide pins, causing the stem and core to rotate.



Top View

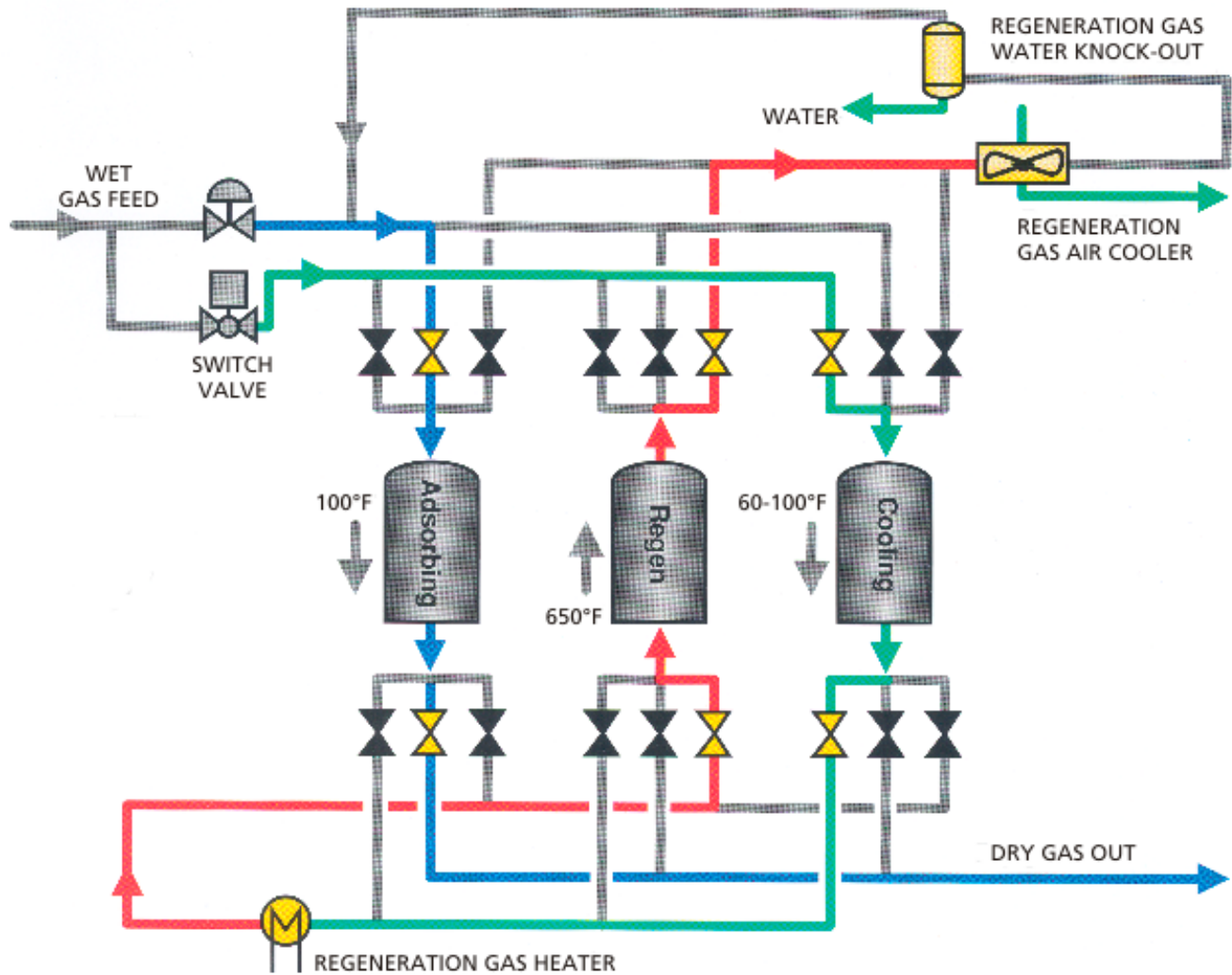
Continued closing action rotates the core and stem a full 90° without the core touching the seat.



Final closing action mechanically cams the stem down, pressing the core firmly against the seat.

**THE ORBIT® VALVE FOR MOL SIEVE DRYERS**

SCHEMATIC OF MOL SIEVE DRYER SYSTEM,  
USING ORBIT SEQUENCE SWITCHING VALVES



**TYPICAL CHALLENGE**

Wet gas leaking through ordinary valves will cause dryer efficiency to decline.



**ORBIT SOLUTION**

ORBIT valves are CAMMED positively closed, eliminating wet gas leakage.

**TYPICAL CHALLENGE**

Leaking valves can prolong the regeneration time and waste energy.



**ORBIT SOLUTION**

The ORBIT design eliminates rubbing between seat sealing surfaces assuring zero leakage, conserving energy.

**TYPICAL CHALLENGE**

Daily operation in hot, abrasive service can create high maintenance costs.



**ORBIT SOLUTION**

ORBIT valves provide reliable long life in hot, abrasive service, with minimal maintenance.

**SPECIFY ORBIT RISING STEM, TOP ENTRY VALVES FOR MOL SIEVE SERVICE**

## THE ORBIT® VALVE FOR MOL SIEVE DRYERS

ORBIT CARRIES SINGLE SOURCE RESPONSIBILITY  
FOR THE TOTAL VALVE / ACTUATOR PACKAGE



### Specifications and Compliance

- API 6D / ASME B16.34
- ISO 9001:2008
- PED (Pressure Equipment Directive) 97 / 23 / EC
- ATEX Directive 94 / 9 / EC
- ISO Rate 'A' Zero Leakage
- ISO 15848-1 & API 622 (Fugitive Emission Type Testing)
- Shell GSI SPE 77/300 TAT Qualified
- Shell TAMAP 2 Star Rating
- SIL 3 Rating

### Orbit Actuators

Sequence switching valves from ORBIT can be either manual or power operated.

ORBIT Pneumatic Actuators have a performance record to match the long life and low maintenance of the ORBIT valves that they control.

ORBIT actuators can be easily retrofitted to manual ORBIT valves in the field, without removing the valve from the line.

### O.S.&Y. Bonnet Design with Graphite Packing Metal Seat

+800°F (+427°C) maximum Full and Reduced Port Sizes from 1 in. through 24 in. (25 mm through 600 mm)  
ASME / ANSI Classes 150 through 2500.



**Valves & Measurement**

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For the most current contact and location information go to: [www.c-a-m.com](http://www.c-a-m.com)

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