

- Tight Shut-Off
 - Off 🛛 🛢 Full bore

Bi-directional

Cavity Free

Engineered for Critical Applications

Molecular Sieve Service

A dehydration bed switching valve is expected to operate continuously for 5 years. During the 5-year operation, the valve will operate approximately 1100 cycles per year or 5500 cycles in total. **OMB DUEX** eccentric ball valve, with its simple ¹/₄ turn design and few moving parts, has consistent torque and shut-off performance and can handle desiccant carryover. It is suitable for molecular sieve switching applications.

Materials

Design

Design to ASME B16.34 & ASME VIII Div.1 ATEX EX II 2G PED Certificate III Cat. Firesafe to API 607, ISO 10497

Construction

Top Entry Construction DN from ½" to 24" ASME Class 150 to 2500 (Special cl. on request) Flanged & BW ½" to 24", SW ½" to 2" Manual or easily actuated with standard readily available actuators.





Part	Description	A105/WCB
01	Body	A105/WCB
02	Bonnet	A105/WCB
03	Ball	410SS+CCC
04	Stem	410SS
5A	Seat Ring	410SS+CCC
5C	Seat Seal	Graphite
08	Gaskets	Graphite
09, 10	Body Bearing	316SS+HF
11, 12	Thrust Bearing	316SS+HF
14	Stem Packing	Graphite
20	Seat Retainer	410SS
35, 36 38, 39	External Bolting/Nuts	B7M/2H





Molecular Sieve Gas Treatment Dehydration

A molecular sieve unit is used to dry or absorb gases and liquids. Porous materials called zeolite are used to separate or collect moisture on a molecular level.

The 3 stages of the dehydration process:

1. Adsorption – Natural gas is fed into a column or dryer bed containing the desiccant. Moisture is drawn out of the gas and is trapped in the zeolite material.

2. Regeneration – The desiccant is heated and the moist gas is expelled from the dryer bed column to a cooler where condensation occurs, and the moisture is disposed.



There are usually 3 columns or dryer beds. Each is performing either adsorption, regeneration or cooling

Repeated Cycles.

DuEX Eccentric Ball Valve

2"-12" Class 300 & 600 DuEX® ACT-D-3TCF-RF **3. Cooling** – The dryer bed is allowed to cool to an ambient condition while the cycle is repeated.

The valves controlling the gas flow switch open or closed 3-5 times per day depending on which column is in adsorption, regeneration or cooling phase.

The gases can be from ambient temperature to approximately 500°F or higher.



Zeolite is a family of several microporous, crystalline aluminosilicate materials commonly used as commercial adsorbents and catalysts., mainly consist of silicon, aluminum, oxygen.

Features	DuEX	Rising Stem Ball
Cavity Free	v	~
Easy Maintenance	~	
Eccentric/Non-Rubbing	~	~
Torque Seated	~	~
Simple Automation	~	
Simple Design	~	
Control Ability	~	
Low Running Torque	~	~

wherever energy flows

in succession. Often multiples of 3 columns are in operation

Weakness/ Failure Point

Typical Figure Number

Automation Type

OMB Solution

Typical BOM

Typical Sizes

Historical Valve Type Used Rising Stem Ball Valve

Made in Italy OMB Valves s.p.a. Cenate Sotto, BG

WCB/F6a Cl.2/CA15/F6a Cl.2+CCC

Cenate Sotto, BG S www.ombvalves.com a company of OMB group

S-Shape Stem Groove Galls with complex and

expensive automation. Ball Guides Fail With

Body: Carbon Steel Trim: 12 Chrome + HF

Pneumatic Spring Return or Double Acting

Made in USA OMB Valves Inc. Stafford, Tx

Sales office and service

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