unicomvalve.com

# Perfect Harmony with Technology

Since 1983
UNICOM
BUTTERFLY VALVE

# COMPANY **INTRODUCTION**


Since 1983, Korea Unicom Valve co., Ltd. (dba Unicom) has been manufacturing butterfly valves for a wide range of industrial applications and global projects. Our continuous improvements in engineering and design without compromising overall product quality led us to become a recognized manufacturer in the world.

All butterfly valves manufactured by Unicom are designed in accordance with recognized national and industrial standards such as ASME, API and ISO etc. The valve production takes place based on system management of ISO 9001 and ISO 45001 and products are certified to meet various international standards.

Furthermore, Unicom is striving in the R&D of future butterfly valves. We look forward to providing you with the highest quality butterfly valves based on our technological know-how and experience, from our modern facilities under stringent quality and HSE systems.

# COMPANY **HISTORY**

## 1980's

**1983**
Established the Company as Sales Representative of Foreign Valve Manufacturer

**1988**
Registered the trademark 'Unicom' to the Patent Bureau

## 1990's

**1990**
Manufacturing of 'High Performance' HIGH SEAL Butterfly

**1992**
Construction of Incheon Plant, Korea.

## 2000's

**2000**
Appointed as Qualified Vendor by K.O.C and Q.G.P.C.

**2001**
Appointed as Qualified Vendor by KNPC

**2006**
Awarded 'One of the Most Contributed Exporter' by Korean Government.

**2009**
Construction of Dang-jin Plant, Korea.

## 2010's

**2010**
Actively participated in global projects

**2016**
Appointed as Qualified Vendor by Oil Majors

## 2020's

**2020**
Certificate of Type Approval for Cryogenic butterfly valve From B.V

**2022**
Quintuple Offset Patent

# WHY **UINICOM?**

### High Quality and Cost effective design

Unicom provides the highest quality and most cost effective effective design available on customer's spec.

### Finding the best solution

Unicom has the best solution to provide the valves in right valve and right place.

### Various Project Experience

Unicom has been participated many of the world's large projects over the past 30 years.

### Proven Performance

Unicom's products had proven its quality, reliability and performance under the most demanding applications.

### Short -term deliveries and customized valve

Unicom offers the valve short-term deliveries available and can customize to customer requirements.

# APPLICATION **AREAS**

Off shore & Marine

Petrochemical

Oil and Gas Plant


LNG Terminal

Power Plant

District Heating

# VALVE **LINE UP**

## **01** Concentric Valve - API 609 Category A

- GRS (General Rubber Seat) type is elastomer seated butterfly valve used for the process demanding positive shut-off and effective flow control.
- Rating : ASME CL.150 / PN10, 16
- Size : DN50(2") to DN1000 (40")
- Connection Type : Lugged & Wafer

## **02** Eccentric Valve - API 609 Category B

### 1) High Performance Double Eccentric Valve

#### Soft Seat (Teflon and Modified Teflon)

- Soft (Teflon) Seat design's mechanism with and eccentric structure minimizes an on-off torque at high pressure, providing tight shut-off.
- Rating : ASME CL.150, 300, 600 / PN10, 16, 25, 40, 60, 64
- Size : DN50(2") to DN1800 (72")
- Connection Type : Double Flanged / Lugged & Wafer

#### Soft & Metal Seat (Teflon + Metal seat / Modified Teflon + Metal seat)

- Having a combined function of Soft seat and Metal seat, Soft +Metal seat gives a tight shut-off at nominal pressure and temperature rating. Although it has double seat structure, it requires relatively low operating torque.
- Rating : ASME CL.150, 300, 600 / PN10, 16, 25, 40, 60, 64
- Size : DN50(2") to DN1800 (72")
- Connection Type : Double Flanged / Lugged & Wafer

#### Metal Seat / Metal & Metal Seat

- Precious metal seated butterfly valve, Metal seat is applicable to high temperature as well as nominal pressure and temperature.
  Wide selection of valve materials ensures efficient performance in various industries.
- Rating : ASME CL.150, 300, 600 / PN10, 16, 25, 40, 60, 64
- Size : DN50(2") to DN1600 (64")
- Connection Type : Double Flanged / Lugged & Wafer

#### Rubber Lining

- Rubber lining valve has an eccentric structure enabling smooth operation and tight shut-off at any condition. And it is applicable to the inner body for anti-corrosion duty to prevent rust and corrosion on the body.
- Rating : ASME CL.150, 300, 600 / PN10, 16, 25, 40, 60, 64
- Size : DN150(6") to DN2250 (90")
- Connection Type : Double Flanged

* Please contact for additional sizes and class rating.

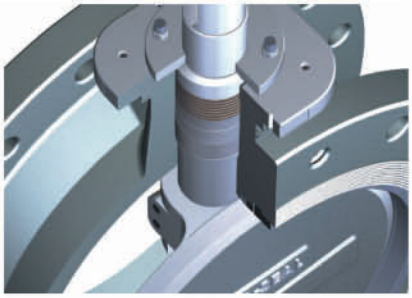
# VALVE **LINE UP**

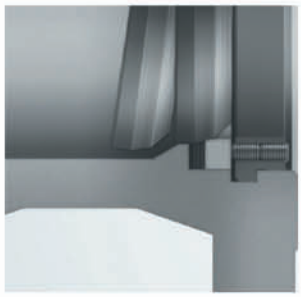
## 2) Triple Offset Valve

- Metal & Graphite Seat
- Solid Metal Seat

- Triple offset Design features a special sealing mechanism that consists of an inclined conical disc and a laminated seat. The unique characteristics of TOD are low torque operation, broad sealing width and bi-directional tight shut-off.

TOD has its own unique sealing design. The body seat ring is secured using set screws, and when assembled, the body seat ring is hydrodynamically and structurally hidden. This design minimizes the possibilities of in-service damages.





## Type of body seat rings

### Laminated Metal Seat

Laminated metal + graphite seat enables smooth mating, which makes TOD flawless not only in general application but also in LNG/LPG gas applications. Along with Triple Offset Design, laminated seat ring shows excellent performance and help provide lower operating torque during opening and closing. Different types of materials are selected for laminated metal plate depending on applications.

### Solid Metal Seat

Solid metal seat ring is also available in Unicom's TOD design. Currently, Unicom uses solid metal seats in heavy duty and high temperature applications.

- Rating : ASME CL.150, 300, 600, 900, 1500 /
  PN10, 16, 25, 40, 60, 64, 100
- Size : DN80(3") to DN2000 (80")
- Connection Type : Double Flanged / /
  Lugged & Wafer / Butt Weld End

Laminated metal + graphite seat

Solid metal seat

## 3) Quintuple Offset Valve(LSW)

- Introducing our newest patented quintuple offset valve,

This valve is based on 5 offset design, capturing
- Sealing performance of triple offset design
- Lower torque compared to double offset design
- Higher rangeability and Cv value compared to triple offset design

- Rating : ASME CL.150, 300, 600, 900, 1500 / PN10, 16, 25, 40, 60, 64, 100
- Size : DN80(3") to DN2000 (80")
- Connection Type : Double Flanged / / Lugged & Wafer / Butt Weld End

* Please contact for additional sizes and class rating.

# TEST **FACILITIES**

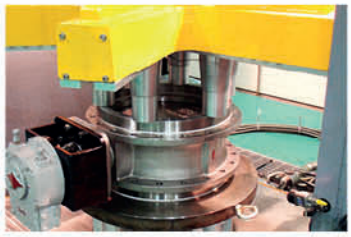
## ▸ Shell Test

| | |
|---|---|
| Test Standard | API 598 / ASME B16.34 / EN 12266 / ISO 5208 |
| Test Medium | Water, Nitrogen Gas |
| Allowable leakage | No Leakage |

## ▸ Seat Test

| | |
|---|---|
| Test Standard | API 598 / ASME B16.34 / EN 12266 / ISO 5208 |
| Test Medium | Water, Air, Nitrogen Gas |
| Allowable leakage | Tight Shut-off(Zero Leakage) / API 598(TOD, MTD MODEL) |

- All valves go through pressure and operation tests in Unicom facilities.
- Test is conducted under the specific acceptance criteria of customers.
- Additionally, we apply Unicom test standards which are more stringent than the generally accepted test criteria in the industry.
- Test is conducted gradually from low pressure to high pressure to ensure the perfect seal in all the pressure within the design pressure.
- Since both gas test and hydro test are conducted as Unicom's internal test criteria, a perfect seal is guaranteed under any conditions, gas or liquid.



## ▸ CRYOGENIC TEST

| | | | |
|---|---|---|---|
| Test Standard | BS 6364 / SHELL SPE 77/306 / KOGAS-GSM-1015 | Coolant | Liquid Nitrogen |
| Test Temperature | -196℃±1℃ | Acceptance Standard | Seat Leakage : BS 6364 (100mm3/s x DN)<br>Outside Leakage : Shell SPE 77/306 |
| Test Medium | Helium Gas | | |

- Unicom conducts the most stringent quality inspection in the test lab. Specially designed for cryogenic valves.
- Cryogenic valves are tested by soaking in the liquid nitrogen and cooling down all components to -196℃.
- The valve is tested by increasing the pressure gradually to comply with the requirements of BS6364 to assure the sealing from low pressure to high pressure.

# CERTIFICATES

## System Certificate

| Certificate | | Institution | Scope |
|---|---|---|---|
| BUREAU VERITAS | ISO 9001:2015 | BUREAU VERITAS | Quality Management |
| | ISO 14001:2015 | BUREAU VERITAS | Environmental Management |
| | ISO 45001:2018 | BUREAU VERITAS | Safety & Health Management |

## Product Certificate

| Certificate | | Institution | Scope |
|---|---|---|---|
| | API 609 MONOGRAM | AMERICAN PETROLEUM INSTITUTE | API 609 License |
| | CE-PED | BUREAU VERITAS | All valves of Unicom production |
| | TYPE APPROVAL | BUREAU VERITAS | Butterfly Valves<br>(TOD CX BUTTERWELD / TOD CX DOUBLE FLANGE) |
| | TYPE APPROVAL | BUREAU VERITAS | Butterfly Valves (HP, GRS) |
| | MODE II SCHEM | BUREAU VERITAS | Factory acceptance |
| | FUGITIVE EMISSION | BUREAU VERITAS | High performance Valves |
| | TYPE APPROVAL | DNV GL | High performance Valves |
| | SIL 3 CAPABLE | EXIDA | HP, TOD Valves |
| | FIRE PROTECTION | UL | GRSU |
| Applus+ | FIRE TEST (API 607 / 6FA) | APPLUS | HP(FSD), TOD |
| ABS | LIFE CYCLE TEST | ABS | High performance Valves |

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UNICOM
BUTTERFLY VALVE


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