

FRONTIER TECHNOLOGY

■ Products : Ball Valve

As derivatives of the ball valve, we also handle V-ball valves, three-way valves, diverter valves, and tank ball valves.

■ Product Features

The combined effect of the following characteristics achieves extended longevity!



**Ultra-Precision Ball
in Micron Units**

Precision machining technology capable of achieving dimensions in the range of several micrometres enables the manufacture of balls and metal sheets. Competitors' machining precision is around 20 micrometres.



**Leak-resistant
metal sheet**

Through ultra-precision machining, Class VI compliance with ANSI/FCI 70-2 / IEC 60534-4 is achieved using a metal sheet. Typically, Class VI compliance is only possible with a soft sheet.



**Highly wear-resistant
proprietary thermal
spray coating**

Achieves high wear resistance with balls featuring sprayed tungsten carbide.



■ Competitors

<Japan>

- Nippon Ball Valve Co., Ltd.
- Hatanaka Special Valve Industries Co., Ltd. (HSV+)

<Overseas>

- MOGAS INDUSTRIES, INC.
- McCANNA ↘
- METSO

■ Compliance standard

- CE
- API607 (Adopting a double-seal structure)
- ISO15848 (Adopting a double-seal structure)
- NACE MR0103/MR0175
- Regarding SIL, target components can be selected.



■ Main application and markets

- **High Performance PLastics (PP / PE / SM / MMA etc)**

Acetic acid, sulphur, hydrogen, oxygen, nitrogen, catalysts, slurry, pellets, monomers, and other applications

- **Nickel smelting**

Nickel-cobalt, sulphides, copper sulphides, hydrogen sulphide and other applications

- **Building Services/Water Treatment**

Applications such as rotary control valves for pump outlets and steam control valves

- **Power Plant**

Coal-fired power plant slurry, powder lines, synthesis gas, acidic wastewater, ammonia lines and other applications

- **Polysilicon**

Applications with demanding conditions such as TCS, DCS, CVD, STC, Si, PH, etc.

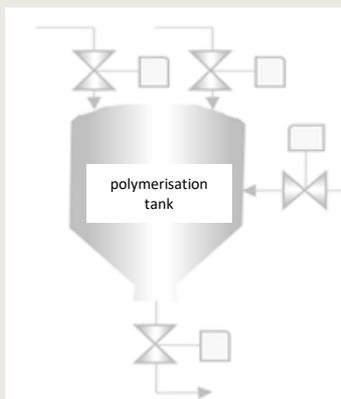
- **PTA (High-purity terephthalic acid)**

Applications including CTA/PTA slurry lines, catalysts, ethylene, bromine, N₂, TA slurry lines, etc.

- **Acetic acid**

Applications for ethanol, methanol, aldehydes, ethylene, sodium hydroxide

■ Troubleshooting Case Studies



CASE 1

Replacing standard Teflon-seated valves with our metal-seated valves tripled their service life.

Replacing the Teflon-seated valves used in the catalyst injection line and polymerisation equipment with our metal-seated valves resulted in a threefold increase in service life.

CASE 2

Replacing third-party ball valves requiring frequent maintenance with our metal-seated ball valves significantly reduced maintenance part costs.

Third-party metal-seated ball valves used in RFCC and FCC lines incurred substantial maintenance costs due to expensive replacement parts, yet no improvement proposals were made. Introducing our metal-seated ball valves alongside an improvement proposal resulted in extended service life and substantial reductions in part costs.

