ASAHI YUKIZAI | ASAHIAV

The solution to your valve and piping problems has a name.



Overview: Ball Valve



The largest selection in the world
in thermoplastic valves.

Ball Valve

Overview



ASAHI YUKIZAI ASAHIAV

Why ASAHI AV ?

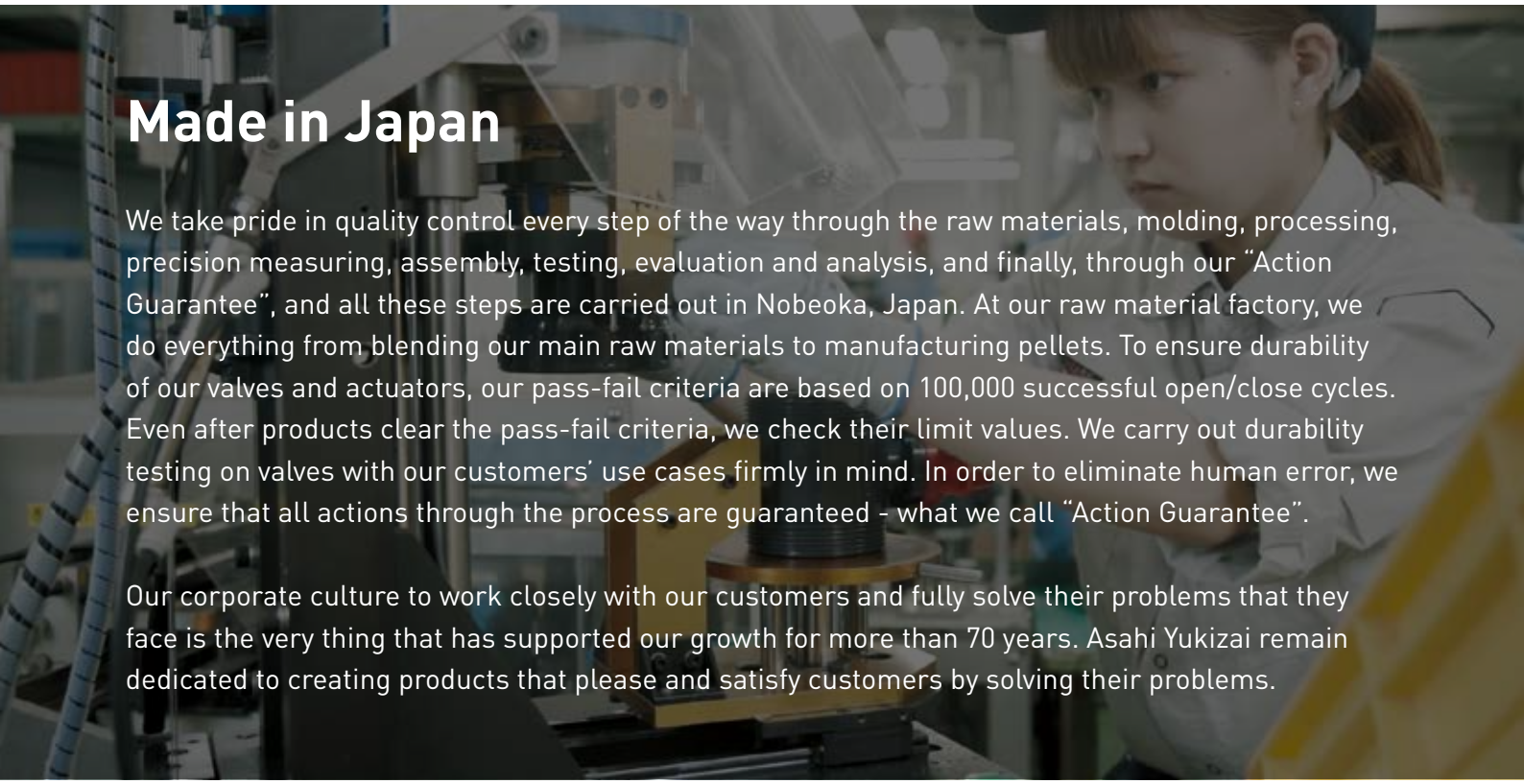
Asahi Yukizai was founded in March 1945 as a company that built aircraft parts from wood rather than metal. Since the foundation of the company, Asahi Yukizai has continued to grow with a DNA that finds organic alternatives to metal materials, and is still one of the global leaders in the development and manufacture of thermoplastic valves and pipeline systems, setting new standards year by year.

Today, we offer solutions to customers in a wide range of fields in three core businesses;

›› "ASAHI AV" - Valve & Piping Systems Business
Started the manufacturing of thermoplastic valves first in the world in 1956.

›› Resin Business
Founded in the core technologies of phenol resin polymerization and synthesis technologies which allows Asahi Yukizai to develop unique raw materials and to offer outstanding product performances.

›› Water Treatment & Natural Resources Development Business
Pursues the potential of water and renewable resources and provides solutions for design and realization of enormous projects and infrastructures.



Made in Japan

We take pride in quality control every step of the way through the raw materials, molding, processing, precision measuring, assembly, testing, evaluation and analysis, and finally, through our "Action Guarantee", and all these steps are carried out in Nobeoka, Japan. At our raw material factory, we do everything from blending our main raw materials to manufacturing pellets. To ensure durability of our valves and actuators, our pass-fail criteria are based on 100,000 successful open/close cycles. Even after products clear the pass-fail criteria, we check their limit values. We carry out durability testing on valves with our customers' use cases firmly in mind. In order to eliminate human error, we ensure that all actions through the process are guaranteed - what we call "Action Guarantee".

Our corporate culture to work closely with our customers and fully solve their problems that they face is the very thing that has supported our growth for more than 70 years. Asahi Yukizai remain dedicated to creating products that please and satisfy customers by solving their problems.



Applications in Industry

We believe in making a world without corrosion. From heavy industry and chemicals, to water treatment, desalination plants, device manufacturing, and even aquariums, Asahi Yukizai is here to provide safe and reliable solutions that support people all across the world. We offer an extensive range of ASAHI AV thermoplastic valves and associated products to suit many demanding processes and harsh environments. ASAHI AV valves are particularly durable and resistant to aggressive media and it is the right solution for your application.

- Chemical Industry Plants
- Steel Manufacturing
- Seawater Desalination Plants
- Water Treatment Services
- Food Factories
- Power Plants
- Semiconductors and LCD Factories
- Aquaculture
- Agricultural and Fertilizer
- Aquariums
- Refineries
- Spa and Hot Spring Facilities
- Public Facilities

ASAHI YUKIZAI ASAHIAV

The right product for all your needs

Ball Valves

Asahi Yukizai's ASAHI AV range of ball valves provides solutions for every application. From simple shutoff valves to fully automated valves, ASAHI AV has it all. Even for very demanding and requiring processes, you will find the perfect valve for your needs. ASAHI AV ball valves are corrosion-free, precise, reliable, flexible and safe – our tradition is to never overlook challenges and our priority is to meet your requirements.

Ball Valve Type 21

Ball Valve Type 21 is designed for industrial applications. It is corrosion-resistant, quarter-turn valves with excellent flow characteristics, minimum pressure drops and reliable sealing. Whether in PP, PVC-U, PVC-C or PVDF – it is the ideal valve for use in any application from simple water applications to highly exacting chemical processes. Its modular design and material diversity guarantees easy operation, flexibility, universal automation options and maximum process reliability.





Vertical

3-Way Ball Valve Type 23

Ball Valve Type 23 is a 3-way valve with a multiport ball that simplifies piping and eliminates the need for an additional valve and tee fitting. Fluid flow direction is governed by an interchangeable ball in the center of the valve. Because this ball can be swapped out to offer a number of different flow patterns, the Type 23 valve is customizable to specific applications. The balls are available in L, Double L, Cross and T-ports.

Horizontal

3-Way Ball Valve Type 23H

The Horizontal 3-way Ball Valve's T-shaped flow path allows an easy switch of flow channels. This valve's optimized design is ideal for skid unit applications.



Compact Ball Valve Type 27



With a small number of components, its lightweight and compact design, Compact Ball Valve Type 27 is suitable for installation in a very narrow space and ideal for facility piping system in plants. The spherical valve element allows a straight flow path and creates extremely small fluid resistance. Excellent performance even with extreme thermal expansion and contraction.

Labcock

All Labcock valves shall be of compact, lightweight and uni-body construction. These valves are ideal within laboratories, water treatment facilities, or wherever process control monitoring or fluid sampling is undertaken. They can be used for simple on/off service or for calibrating flow. Available in multiple configurations with male/female threads and hose.



Small details make big difference

Ball Valve

- Safe, durable and reliable -



1 Lockable handle as option

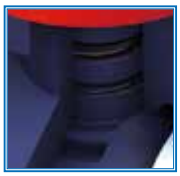
To avoid unwanted handle valve operation, the lockable device can be supplied as an option.



2 Labels and different handle colours as option

For easy identification, labels and/or handles in five different colours are available on demand (red, white, blue, yellow and green).





3 Double stem seals

Stem is equipped with double O-rings that guarantee durability and extra safety.



4 Mirror-finished ball surface

The mirror-finished molded ball with extra smooth surface guarantees perfect sealing and long service life.



5 Fastening system

The valve can be secured to a stand or panel easily thanks to a bottom stand with holes and/or metal threaded inserts.

This industrial ASAHI AV ball valve offers you unconditional safety. Special design features ensure high durability and reliability. The valve can endure extremely severe conditions and withstands the pressure up to PN16 bars (1.6 MPa). There are no metal components that could corrode. The unique thermoplastic materials and rubbers developed by Asahi Yukizai make ASAHI AV piping systems the perfect choice even for the most aggressive chemical media.



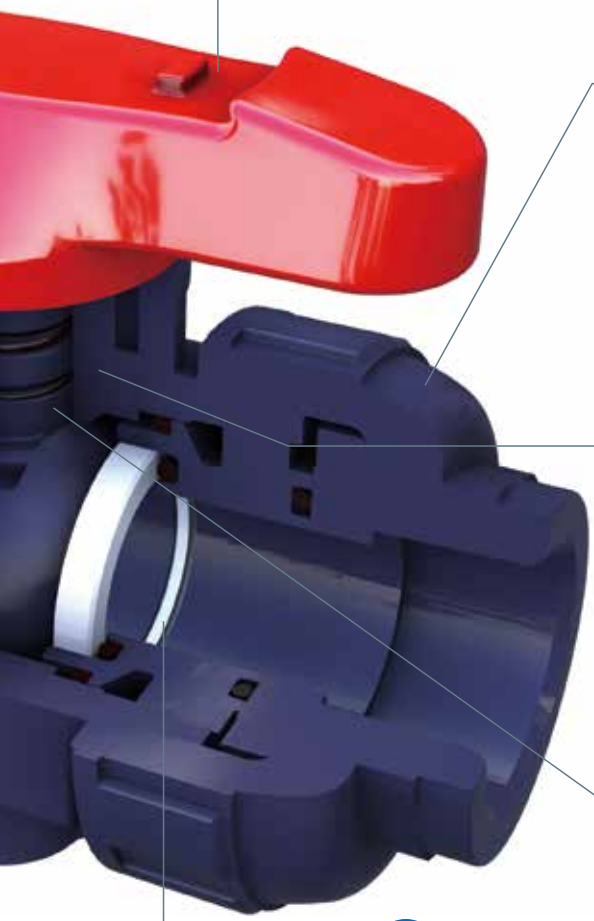
6 Integrated spanner wrench

Integrated spanner wrench on the handle enables to disassemble and re-assemble the valve quickly and easily without additional tools.



7 "Anti-popping-out" system

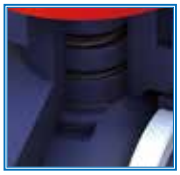
Additional safety is provided by “anti-popping-out” system: the stem and the ball will not accidently pop-out due to upstream pressure, assuring our customers additional safety even during maintenance.





8 ISO mounting pad interface

The integrated ISO top flange interface allows to convert the manual version into a pneumatic/electric actuated valve easily.



9 Predetermined stem breaking point

The predetermined stem breaking point avoids any possibilities of costly and disastrous failures in case of over torqueing. Even when excessive torque stress breaks the stem, the valve stays sealed thanks to the back-up O-ring.



10 Dynamic seals

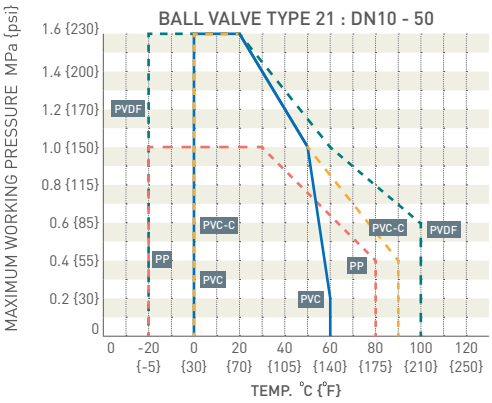
The dynamic seal system is composed of a PTFE seat with an additional elastomer backing cushion which provide pressure against the ball accomplishing long-lasting durability.

2-Way Ball Valve Type 21

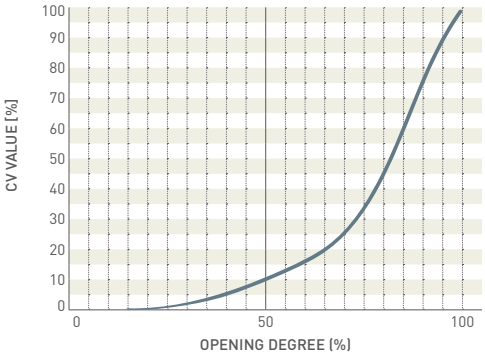
The current version of ASAHI AV's thermoplastic ball valve is the result of over 70 years' product development and experience in multiple industrial fields and applications. Normally used as an open-close valve, from water to whatever chemical media our customers are dealing with, the Ball Valve Type 21 is the ideal product.



Working pressure vs. Temperature



CV Value



Ball Valve Type 21 Flow Control Type

Flow Control Ball Valve can be used in a variety of applications where flow control is necessary. The ball is carefully designed to enable a linear flow. Processes can be configured and controlled more easily with its linearly increasing flow rate.



Fully Open



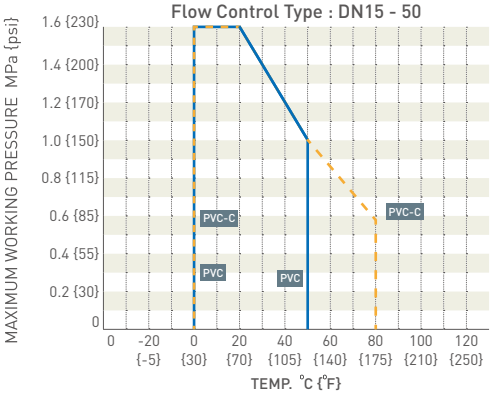
Half Open



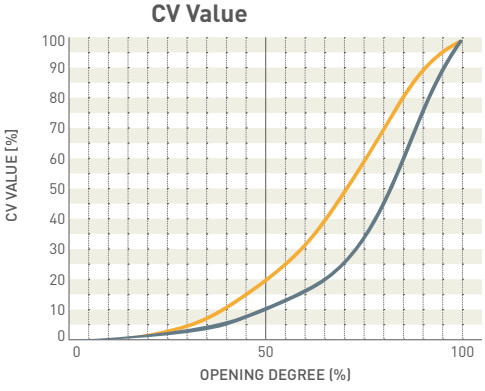
Fully Closed



Working pressure vs. Temperature



CV Value



3-Way Ball Valves Type 23 & Type 23H

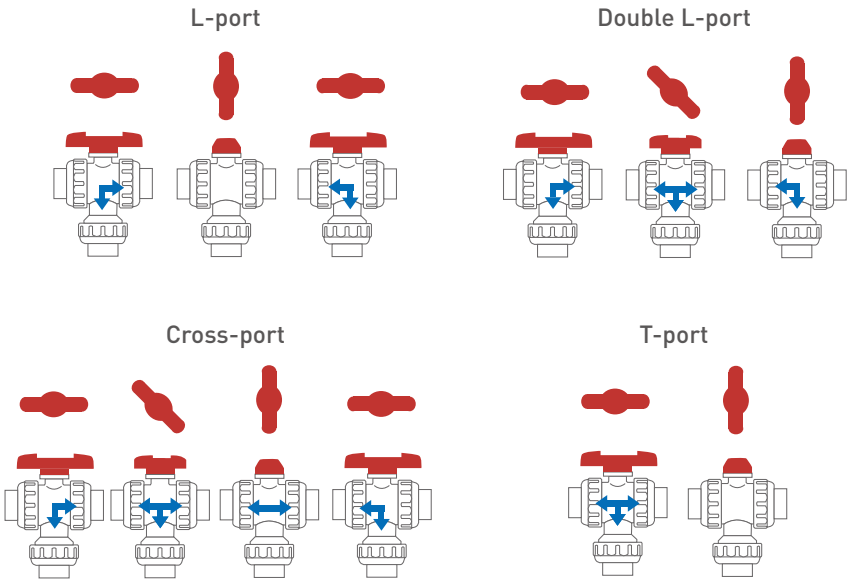
- Easy, efficient and diverse -

The 3-way ball valves from Asahi Yukizai are ideal for all mixing and distribution processes in your application. These valves have a very low pressure drop. Ball Valve Type 23 is available in a vertical version with the variety of 4 different ports: L-port, Double L-port, Cross-port and T-port. Ball Valve Type 23H is available as a horizontal version.

Vertical

3-Way Ball Valve Type 23

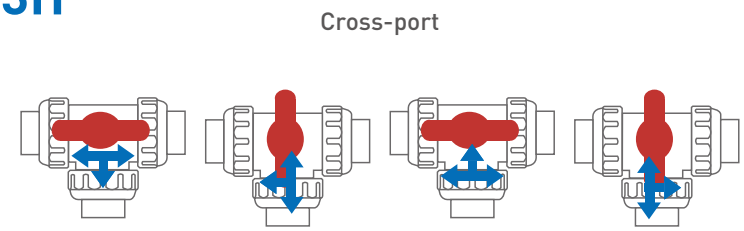




Horizontal

3-Way Ball Valve Type 23H





Options and Accessories

From extending the stem to switching manual/automatic operations, ASAHI AV ball valve accessories are always there to offer you customized solutions for your special needs.



Stem Extension





Locking Device



Handle available in 5 colours



Vented Ball for volatile media

Automations

Thanks to ISO/DIN interface, ASAHI AV valves can be easily converted from manual to actuated.



Pneumatic Actuator / Type AR

Because there is no metal components exposed and the housing made of plastic, pnuematic actuator Type AR is corrosion-free and long-lasting. The mounting plate that connects the actuator and valve features a one-click connection, which enables an easy maintenance and a reduction in work time and costs.



Electric Actuator / Type T

This electric actuator is compact, lightweight and reliable. It is equipped with an opening indicator display. The manual override function allows you to operate with a standard Allen wrench, when necessary. The stopper enables an adjustment of an angle of ±5 degrees at Fully Open or Fully Close position, which enables a very precise operation.

A dream made real

Pneumatic Actuator Type AR for Ball Valves

- Fast, compact and long-lasting -



Long-lasting

›› Full plastic body
›› No exposed metal parts
›› Corrosion-free
›› Rust-free

Compact

›› Extremely small and lightweight
›› Easy to install even in a very narrow space
›› Reduced installation space
›› Reduced costs thanks to scale down pipe layout

Fast One-Click Connection

›› One-click connection (no bolts and nuts)
›› 90% faster installation
›› Easier and faster maintenance
›› Reduced maintenance costs and downtime



Find out more about the Revolutionary Pneumatic Actuator Type AR on our video here:

SCAN ME

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Accessories and Options for Pneumatic Type AR

There is a broad range of accessories available for the Type AR pneumatic actuator, which includes solenoid valves for on/off applications, positioning devices for modulating applications, and auxiliary limit switches for position indication. This allows remote operation for a variety of reasons: piping status assurance, automatic sequencing, savings in labour, and plant safety, to name a few.

Limit Switch Box



Open-Close Counter



Speed Controller



Solenoid Valve & Filter Regulator



Positioner



Full Opening Adjustment



Bypass Valve



Nut Caps available in 4 Colours



Approvals and Certificates

Quality management

For Asahi Yukizai, quality is a decisive criteria for ensuring long-term relationships with our customers and business partners, and it is a value shared by every employee as an ISO 9001 certified company. Besides certifications, we are always working to reach the highest quality level towards one of our most important objectives: the satisfaction of our customers and stakeholders.

Environmental management

Asahi Yukizai introduced an environmental management system certified to ISO 14001 in order to promote and continually improve our environmental performance. For us, sustainability is a clear goal.

International Standards

Complying with its own national and international standards is more than just a duty for Asahi Yukizai. ASAHI AV products are produced and tested in accordance with the applicable standards and laws to be delivered globally.



ASAHI YUKIZAI ASAHI AV

System Overview at a Glance

›› General Info.

Product	 Ball Valve	 Ball Valve (Flow Control Type)	 3-Way Ball Valve (Vertical)
Type	Type 21	Type 21α	Type 23
Dimension: DN (inch)	10 - 100 (3/8" - 4")	15 - 50 (1/2" - 2")	15 - 100 (1/2" - 4")
Nominal Pressure: PN (MPa)	DN10 - 80 : PN16 (1.6 MPa) DN100 : PN10 (1.0 MPa)	PN16 (1.6 MPa)	PN10 (1.0 MPa)
Top Flange Interface			

›› Connections

Socket	•	•	•
Spigot	•	•	•
Flange	•	•	•
Threaded	•	•	•

›› Body Materials

PVC-U	•	•	•
PVC-C	•	•	•
PP	•		•
PVDF	•		•

›› Seal Materials

EPDM	•	•	•
PTFE			
FKM	•	•	•
FKM-F	•	•	•
FKM-C	•	•	•
NBR	•	•	•
Others / Special Materials	•	•	•

›› Options & Accessories

Locking Device	•		
Stem Extension	•		•
Vented Ball	•		
Handle Colours	•	•	•
Label / Chain Tag	•	•	•
Bottom Stand Ensat	•	•	
Lubricant Free	•		•
Speed Controller			
Filter Regulator			
Solenoid Valve			
Limit Switch Box			
Limit Switch	•		•
Output Contact Limit Switch			
Intermediate Output Contact Limit Switch			
E/P Positioner			
P/P Positioner			
E/E Positioner			
Full Opening Adjustment			
Open-Close Counter			
Manual Override			
Actuator Coating			
Special Fitting (Stainless Steel)			
Space Heater			
Potentiometer			

				
3-Way Ball Valve (Horizontal)	Compact Ball Valve	Pneumatic Ball Valve	Electric Ball Valve	Labcock
Type 23H	Type 27	Type AR	Type T	
25 - 40 (1" - 1 1/2")	15 - 50 (1/2" - 2")	15 - 50 (1/2" - 2")	15 - 100 (1/2" - 4")	
PN10 (1.0 MPa)	PN10 (1.0 MPa)	PN10 (1.0 MPa)	PN10 (1.0 MPa)	PN10 (1.0 MPa)
		ISO 5211	ISO 5211	
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(1): Comes as standard spec. (2): Comes as standard spec. for DN65 - 100.

For more details, please contact us or refer to our technical datasheets and catalogue.

System Overview

Asahi Yukizai's comprehensive product range up to DN1200 offers high product reliability. We are able to provide you complete system solutions for your applications. Customized solutions are also available on request.



PVDF System

Excellent chemical resistance and thermal stability.
Connections choices of socket, spigot, flange and threaded.
Diameters: DN10 – DN700 (3/4" – 28")
Temperature: -40 – 120 °C (-40 – 250 °F)



PP System

High chemical resistance. Connections choices of socket, spigot, flange and threaded.
Diameters: DN10 – DN700 (3/8" – 28")
Temperature: -20 – 80 °C (-5 – 175 °F)



PVC-U System

Solvent cementable plastic, universal use, very good chemical resistance, easy to join with adhesives.
Connections choices of socket, spigot, flange and threaded.
Diameters: DN10 – DN350 (3/8" – 14")
Temperature: 0 – 60 °C (30 – 140 °F)



PVC-C System

Solvent cementable plastic, universal use, very good chemical resistance, easy to join with adhesives. In grey or brown colours. Connections choices of socket, spigot, flange and threaded.
Diameters: DN10 – DN100 (3/8" – 4")
Temperature: 0 – 90 °C (30 – 195 °F)



EL-PVDF System

Unique material for higher chemical resistance and thermal stability. Suitable for electrolysis processes.
Connections choices of socket, spigot, flange and threaded.
Diameters: DN15 – DN150 (3/4" – 6")
Temperature: -40 – 120 °C (-40 – 250 °F)

And much more...

›› Large diameters
Products are available up to DN1200.

›› Raw materials
Variety of materials for valves and seals available.

›› Automation
Extensive range of pneumatic and electric actuators.

For more details, please contact us.



ASAHI YUKIZAI ASAHIAV

We are close to you

Our branch offices and global sales network guarantee local support to our customers.



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