



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

Valve Overview

Ball valves
Diaphragm valves
Butterfly valves
Check valves

The largest selection in the world
in thermoplastic valves.



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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.

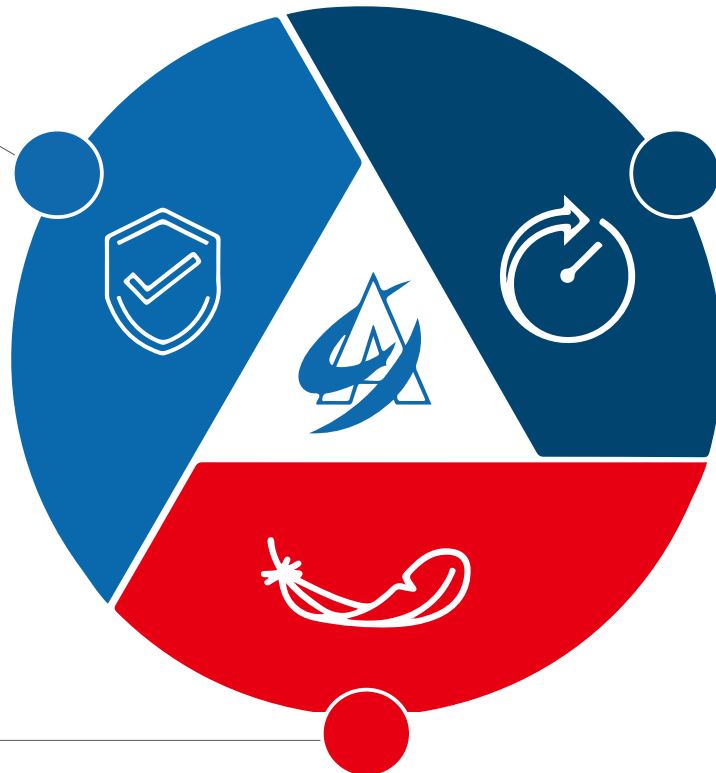
Made in Japan

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.

Superior Corrosion Resistance

PVC and PP thermoplastic resins have excellent chemical resistance to inorganic corrosive chemicals such as hydrochloric acid and sulfuric acid. The corrosion resistance, to hydrochloric acid, for instance, is 35%, sulfuric acid 98%, nitric acid 50%, and mixed acid hydrofluoric acid 15%. Not only to acid but also to seawater and alkalis such as sodium hydroxide (NaOH) and ammonia, our thermoplastic resins show great chemical resistance. In addition, it has very low elution with respect to ultrapure water used in the electronics industry or boiler facilities.



Lightweight

PVC has a specific gravity of 1.4, which is equivalent to 1/5.5 of iron, 1/6 of a copper alloy, and 1/2 of aluminium. For example, an ASAHI AV DN100 thermoplastic diaphragm valve weighs eleven kilogram which is less than half the weight of a metal valve and can be easily carried by hand. There will be no need for heavy machinery to lift and carry the valve. The lightweight ASAHI AV thermoplastic valves offer safety, shorter construction time and reduced costs.

Long Lasting Reliability

Thermoplastic resins and rubber or fluororesin that we use as our sealing materials in our ASAHI AV products are highly compatible. Thanks to this, high sealing performance can easily be achieved with low tightening force. Soft-touch sealing is also possible between the valve body and sealing material or flange and gasket, which means a reliable bubble-tight seal can be maintained for a long period of time. Since the load on the sealings is relatively small, they last longer and the frequency of replacement can be reduced, resulting in a large economic advantage.

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

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.



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.



Ball valves

Diaphragm valves

Butterfly valves

Check valves

Small details make big difference

Ball Valve

- Safe, durable and reliable -



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).



1

Lockable handle as option

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



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 accidentally 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.

Ball valves

Diaphragm valves

Butterfly valves

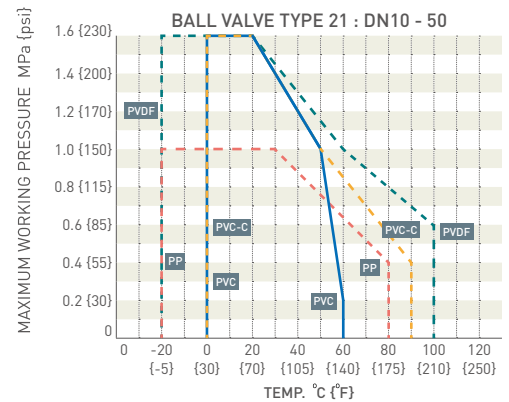
Check valves

2-Way Ball Valve Type 21

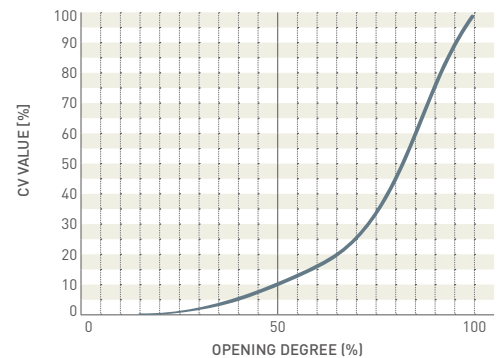
The current version of ASAHI AV's thermoplastic ball valve is the result of over 70 years' product development and experience in multiple industrial fields and applications. Normally used as an open-close valve, from water to whatever chemical media our customers are dealing with, the Ball Valve Type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



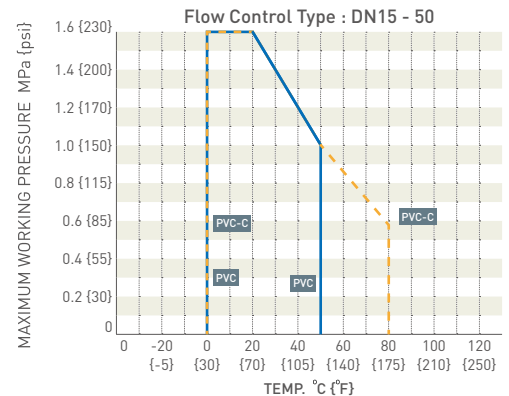
Half Open



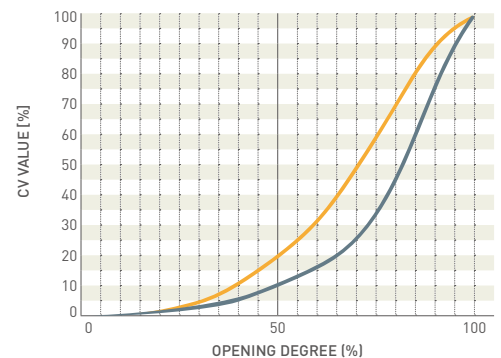
Fully Closed



Working pressure vs. Temperature



CV Value



Flow Control Type

Standard Type 21

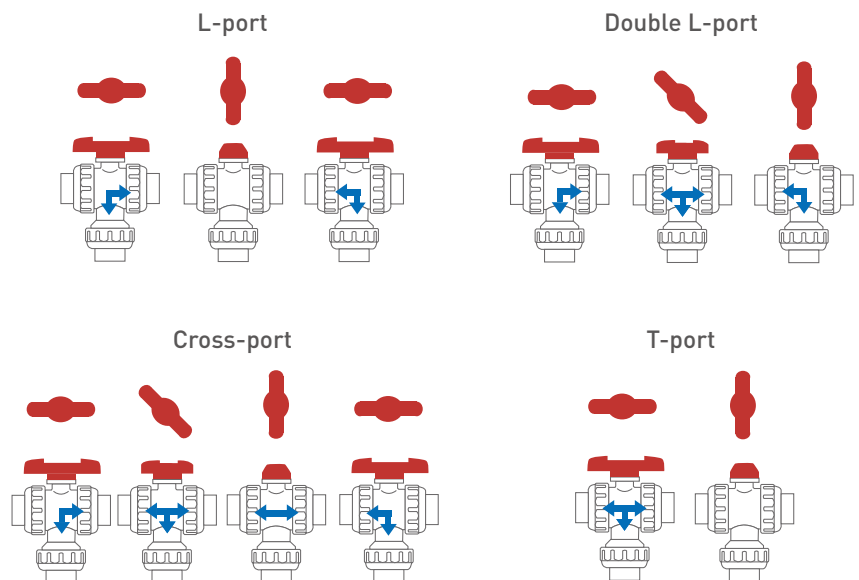
3-Way Ball Valves Type 23 & Type 23H

- 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.

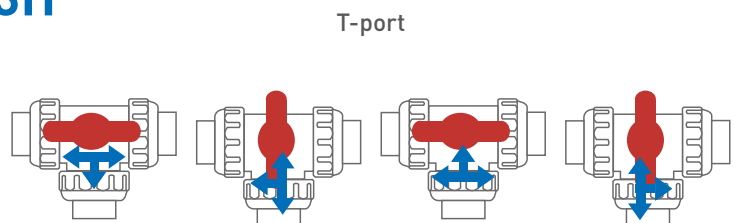
Vertical

3-Way Ball Valve Type 23



Horizontal

3-Way Ball Valve Type 23H



Ball valves

Diaphragm valves

Butterfly valves

Check valves

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, pneumatic 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

Ball valves

Diaphragm valves

Butterfly valves

Check valves

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



The right product for all your needs

Diaphragm Valves

Asahi Yukizai's ASAHI AV range of diaphragm valves provides solutions for every application. Even for very demanding and requiring processes, you will find the perfect ASAHI AV diaphragm valve, which is corrosion-free, precise, reliable, and safe. Switching from manual to automatic operation is also available. Our tradition is to never overlook challenges and our priority is to meet your requirements.

Small dimensions (DN15 – 100)

Diaphragm Valve Type 14

Diaphragm Valve Type 14 made of solid thermoplastic materials for maximum corrosion resistance has a one-piece molded construction body without production joints for spigot or flange, and increases safety and durability to the maximum level. It features excellent body-to-bonnet sealing performance, weir design for excellent throttling capabilities, and built-in travel stop to prevent overtightening and eliminate compressive strain. Bubble-tight sealing can be achieved even in tough applications. True union design for socket, threaded, and spigot connections is available up to DN50.



Ball valves

Diaphragm valves



Big dimensions (DN125 – 250)

Diaphragm Valve Type 15 & 72

ASAHI AV Type 15 and Type 72 diaphragm valves are a multi-turn valve, good for flow control and use with viscous/slurry lines due to their high resistance to clogging. These valves have a uniquely designed body and bonnet, as well as a diaphragm with new sealing designs. All Type 15 and 72 diaphragm valves shall be of a solid thermoplastic construction for body and bonnet with molded flanged ends.

Butterfly valves

Check valves

Small details make big difference

Diaphragm Valve

- Safe, durable and reliable -



2 Built-in travel stop

Built-in adjustable travel stop prevents overtightening on diaphragm, which allows the diaphragm to function long-term.



3 Bayonet joint

Bayonet structure to connect compressor and diaphragm enables to replace the diaphragm easily and saves time and costs.



4 Bonnet separate from body

Unlike diaphragm body, bonnet does not come in contact with the media, which allows you to select more cost-effective materials.



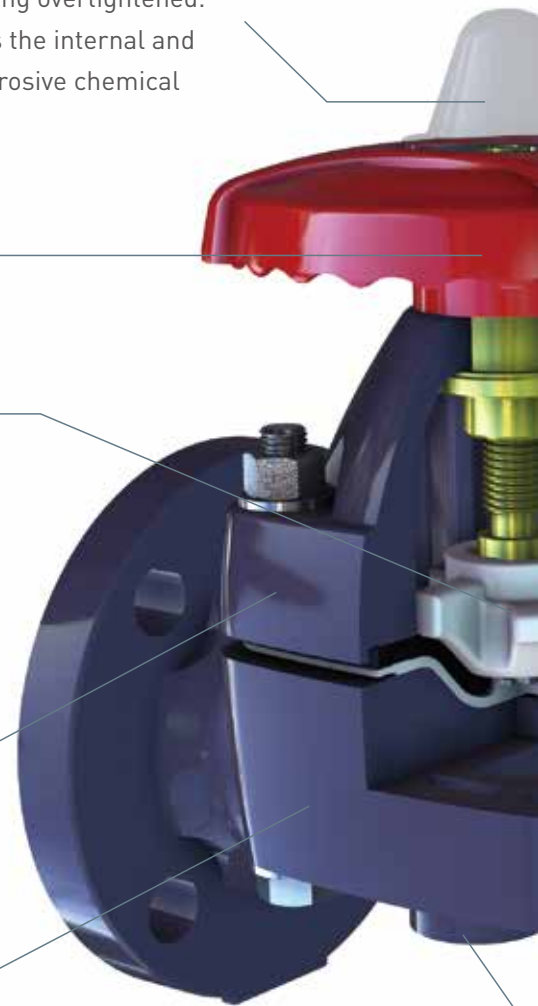
5 One-piece molded body

Body of the valve is of one-piece molded structure for maximum durability and corrosion resistance.

1 Visual position indicator with cover



Visible valve position indicator to prevent the diaphragm from being overtightened. Indicator cover protects the internal and external parts from corrosive chemical gases.



This industrial ASAHI AV diaphragm valve's optimized design is suitable for abrasive and aggressive media and offers you unconditional safety. The built-in travel stop prevents overtightening and eliminates compressive strain. Diaphragms that Asahi Yukizai developed with the new technology have a low compression set, which results in the longevity. For each and every demand of our customers, we have a solution.



6 Lockable handle as option

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

7 Diaphragms of new sealing designs

Asahi Yukizai's diaphragm of new sealing designs lasts longer and seals better because of its low compression set.



8 PVDF gas barrier on request

PVDF gas barrier which protects EPDM backing cushion from gas permeation is available.

9 International F-F standard

Face-to-face dimensions are designed according to EN558/ DIN and ASME B16/ANSI which are equivalent to most commonly used metal valves, making it ideal for retrofitting.

10 Fastening system

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



Ball valves

Diaphragm valves

Butterfly valves

Check valves

Diaphragm Valve Type 14

The current version of ASAHI AV's thermoplastic diaphragm valve is the result of over 70 years' product development and experience in multiple industrial fields and applications. This valve has a flow characteristic of nearly linear and its low-torque operation enables more precise control and adjustment of the media flow.

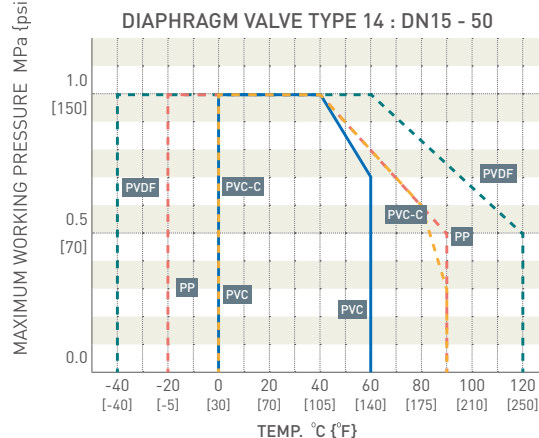
Type 14
(DN15-100)



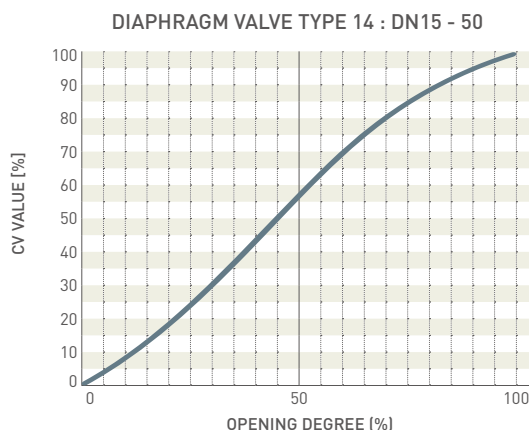
True Union Type 14
(DN15-50)



Working pressure vs. Temperature



CV Value



Long valve life in chlorine service

When a diaphragm valve is used in chlorine applications, PTFE is typically the diaphragm material of choice. The ASAHI AV PTFE diaphragm consists of three un-bonded layers: The primary layer is PTFE, the middle layer is a PVDF gas barrier, and the top cushion is EPDM. The PVDF gas barrier prevents the migration of gas, which permeates the PTFE layer, from attacking the EPDM backing cushion and metallic stem parts in bonnet. This added protection provides for longer valve life.



For chlorine electrolysis application

EL-PVDF Diaphragm Valve

PVDF is often used in chlorine electrolysis applications in combination with high pH values. This often results in blistering on the surfaces of PVDF valves. To avoid this, Asahi Yukizai has developed the special material, EL-PVDF and the special diaphragm, EL-PTFE. Various tests and decades of experience in real applications have shown that valves in the EL version increase the service life considerably, compared to PVDF.



Images below show PVDF and EL-PVDF bodies after 5 years of use under the conditions of 88°C, 3 bars (0.3MPa) in return brine line at a soda electrolysis plant. Blisters can be observed on the PVDF body surface whereas EL-PVDF body is still smooth and in perfect condition.

PVDF



EL-PVDF



Diaphragm valves



Standard specification		EL specification
DN15 - 250	Dimensions	DN15 - 150
Flange	Connections	Flange
PVC-U, PVC-C, PP, PVDF	Body	EL-PVDF
PVC-U, PP, PPG, PVDF	Bonnet	PPG, PVDF
EPDM, FKM, FKM-F, FKM-C, PTFE, NBR	Diaphragm	EL-PTFE with PVDF gas barrier
SUS 304	Inserts	Palladium-titanium
	Others	Metal liners & conical spring washers

Ball valves

Diaphragm valves

Butterfly valves

Check valves

Options and Accessories

From handle lock to switching manual/automatic operations, ASAHI AV diaphragm valve accessories are always there to offer you customized solutions for your special needs.



Limit Switch



Locking Device



Metal Liners &
Conical Spring Washers

Automations

ASAHI AV valves can be easily converted from manual to actuated.



Compact Pneumatic Actuator Type AI with Dedicated Valve Design

- » Dimensions: DN15 - 50
- » Compact design – ideal for limited piping space
- » Long lasting (more than 500.000 open/close cycles)
- » PN10 or PN7
- » Double Acting, Air to Open or Air to Close
- » Position indicator
- » Stopper for fully closed position
- » NAMUR air connection



Pneumatic Actuator / Type AP

- » Dimensions: DN65 - 100
- » Lightweight plastic actuator
- » PN10 or PN6
- » Double Acting, Air to Open or Air to Close
- » Position indicator
- » Stopper for fully closed position
- » NAMUR air connection



Pneumatic Actuator / Type AV

- >> Dimensions: DN125 - 250
- >> Lightweight aluminum actuator
- >> PN10
- >> Double Acting, Air to Open or Air to Close
- >> Position indicator
- >> Stopper for fully closed position
- >> NAMUR air connection



Pneumatic Actuator / Type AD

- >> Dimensions: DN15 - 50
- >> Lightweight plastic actuator
- >> Long lasting (more than one million open/close cycles)
- >> Ideal for semiconductor application
- >> Delivered in cleaned bag
- >> PN5 or PN4
- >> Double Acting or Air to Open
- >> Position indicator
- >> Stopper for fully closed position
- >> NAMUR air connection



Electric Actuators

- >> Dimensions: DN15 - 250
- >> Wide range with various models
- >> Type H for on/off service
- >> Type M for fluid control
- >> Type S for large dimensions

Perfect solution for the extreme

Pneumatic Actuators for Diaphragm Valves

- Long-lasting, compact and flexible -



Type AP (DN65 - 100)

Long-lasting

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

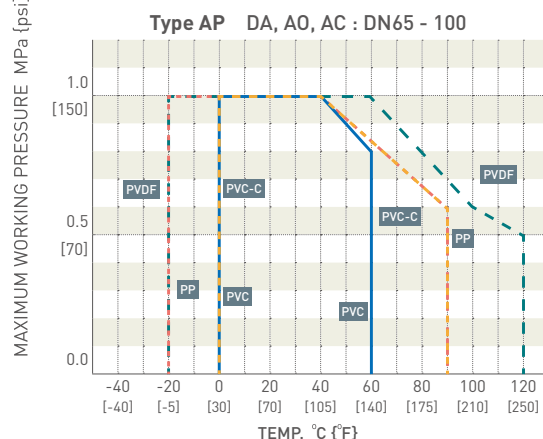
Compact

- » Roughly half the weight of a metal actuator
- » Reduced costs thanks to scale down pipe layout
- » Reduced maintenance costs and downtime
- » Reduced installation space

Flexible

- » Choice between working pressure PN10 (1.0MPa) and PN6 (0.6MPa)
- » Multifarious accessories available
- » NAMUR air connection
- » Valve body available in various materials including EL-PVDF

Working pressure vs. Temperature



Accessories and Options for Pneumatic Actuators

There is a broad range of accessories available for the pneumatic actuators, which include 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



Limit Switch Box



Speed Controller



Solenoid Valve



Positioner



Bypass Valve



Full Opening Adjustment



Ball valves

Diaphragm valves

Butterfly valves

Check valves

The right product for all your needs

Butterfly Valves

Asahi Yukizai's ASAHI AV range of butterfly valves provides solutions for every application. From simple shutoff valves to fully automated valves, from the harshest chemicals to the toughest environmental conditions, our fluid flow solutions provide extended life cycle and dependable performance. Our tradition is to never overlook challenges and our priority is to meet your requirements.

DN40 – 350

Butterfly Valve Type 57

Butterfly Valve Type 57 is a quarter-turn valve with equal percentage type flow characteristics that is ideal for chemical processing and wastewater applications. Its spherical symmetric design of the disc allows smooth operation, reduces flow turbulences, and achieves excellent CV values. The massive sealing design overcomes problems that may occur in case of slurry in the media. The valve provides moderate flow control and therefore can be used in both on/off and modulating services. Plastic construction gives the valve superior corrosion resistance.



DN400 – 600, PN3.5 – 6

Butterfly Valve Type 56 & 75

Type 56 (DN400) and Type 75 (DN450 – 600) valves are quarter-turn valves with equal percentage type flow characteristics. These valves are ideal for chemical processing and wastewater applications and have the advantage of a robust construction with a one-piece body and a full-plastic gear box. Strong sealing on the elastomer seal in both flow directions is ensured. They provide moderate flow control and therefore can be used for both on/off and modulating service.

DN400 – 600, PN7.5

Butterfly Valve Type 56D & 75D

Valve body made of PDCPD (polydicyclopentadiene) ensures the valve to withstand higher pressure rating than the standard Type 56 or 75 for all sizes. These valves are intended for shutting down and controlling aggressive or corrosive liquids.



DN700

Butterfly Valve Type 58

Butterfly Valve Type 58 has been developed using the latest technology and production methods which ensure a quality product from design through production resulting in high performance. Weight of the valve has been cut by roughly 60% compared with conventional metal valves. The valve is an excellent choice for seawater applications.

Butterfly Valve Type 55IS

Butterfly Valve Type 55IS features an epoxy powder-coated ductile cast iron body with PTFE disc and liner. It is designed for use in applications where extremely aggressive chemicals are used and conventional rubber liners and thermoplastic discs are not suitable, such as chlorination, steel pickling and other chemical processings.



Ball valves

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Lug Butterfly Valve Type 57L

The Type 57L incorporated a lug function into the design of Butterfly Valve Type 57. The lug style valve has metal threaded inserts at both sides of the valve body and enables easy and uncomplicated maintenance on reservoirs, tanks and pipe systems without extensive emptying and at existing operating pressure. The valve is ideal for water treatment and aquaculture applications.

Rotary Damper Valve

Rotary Damper Valve is specifically designed for ventilation and exhaust systems, not for complete shut-off but for controlling the volume of corrosive fumes. It is perfect for applications as diverse as chemical plant, water treatment facilities, electroplating, gas scrubber systems and laboratories.



Our tradition is to never overlook challenges.



Small details make big difference

Butterfly Valve

- Safe, durable and reliable -



2

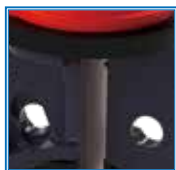
ISO mounting pad interface

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

1

Lockable handle lever

Handle lever features a lockable hole as standard. Attach a padlock to prevent erroneous operations and ensure safety. Lever colour choices of standard red and blue.



3

Placement of O-rings

In order to prevent infiltration from the outside through the lever, O-rings and rubber-attached washers are placed effectively.



4

Seat with double ribs

Seat incorporates double ribs and eliminates the need of additional gaskets when installing the valve.



5

Symmetric spherical disc

The symmetric spherical disc shape that was designed with the full use of CAE allows an excellent flow rate characteristic and smoother operation and reduces flow turbulences.

This industrial ASAHI AV butterfly valve's optimized design is well suited for large bore lines and is low profile; making it ideal for tight spaces and is suitable for abrasive and aggressive media. Small details are there to offer you unconditional safety. For each and every demand of our customers, we have a solution.



6 Full-plastic gear box. Lockable gear as option

Alternatively to the lever, our industrial, non-metallic gear box offers superior corrosion resistance. Lockable gear box is also available as option.



7 PP stem retainer

PP stem retainer and tapping screws prevent the stem from coming out of the valve accidentally when switching manual/automated operations.



8 Throttling plate for fine opening adjustment

Lever handle features the throttling plate that gives you 19 fine adjustment locking positions.



9 Flange stopper

Stopper design to prevent bolt over-tightening and gasket over-compression caused by flanges.



10 Triple sealing barriers

Triple sealing barriers prevent the stem to directly contact corrosive fluid and guarantee extreme safety for operators.



Ball valves

Diaphragm valves

Butterfly valves

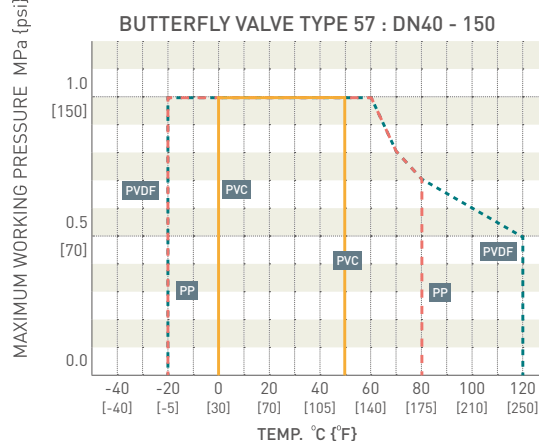
Check valves

Butterfly Valve Type 57

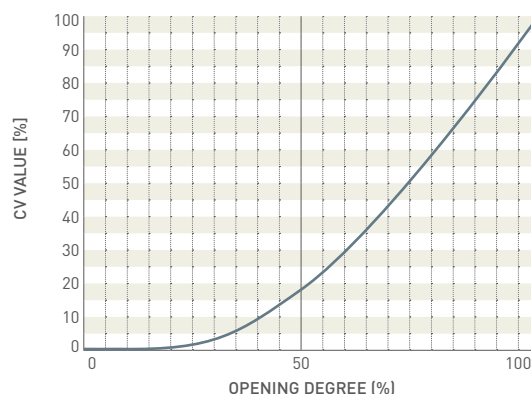
The current version of ASAHI AV's thermoplastic butterfly valve is the result of over 70 years' product development and experience in multiple industrial fields and applications. We provide a dependable way to handle corrosive chemicals, including sulfuric and hydrofluoric acid, nitric acid, oxidizing chemicals, caustics, solvents, halogens, and various other tough fluids.



Working pressure vs. Temperature



CV Value



Superior stem materials for aggressive chemicals

Stainless steel 403 is the standard choice for our butterfly valves stem material as it is a non-wetted part. Upon request, however, stainless steel 316, 316L or Alloy C-276 can be selected for absolute unconditional safety.

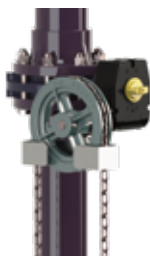
Options and Accessories

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

Stem Extension



Vertical / Horizontal
Chain Operator



Top Gear



Blue Handle



Locking Device



Limit Switch



Automations

Thanks to ISO/DIN interface, ASAHI AV valves can be easily converted from manual to actuated. A wide range of actuators and accessories are available. Please contact our local sales office for details.



Pneumatic Actuator / Type TA

- >> Horizontal actuator reduces installation piping space.
- >> Reduces costs by mounting and replacing options easily on actuator after installation.
- >> Air piping is compatible with NAMUR standard.
- >> Reliable sealing performance achievable with Scotch Yoke mechanism, which has high output torque when fully closed.



Electric Actuator / Type T

- >> Light and compact design.
- >> Waterproof design protects against rain water or condensation and is equivalent to IP65.
- >> Manual override function is equipped and allows you to operate with a standard Allen wrench, when necessary.
- >> Equips conspicuous opening display indicator.

Made for the extreme
For applications with the most aggressive chemicals

Butterfly Valve Type 55IS

- Long-lasting, flexible and compact -



Long-lasting

- » Powder-coated cast ductile iron body for excellent corrosion resistance
- » Highly corrosion-resistant PTFE disc and seat are the only parts in contact with the process media
- » Non-wetted stainless steel stem, isolated from process media
- » 50% less of gas permeation

Compact

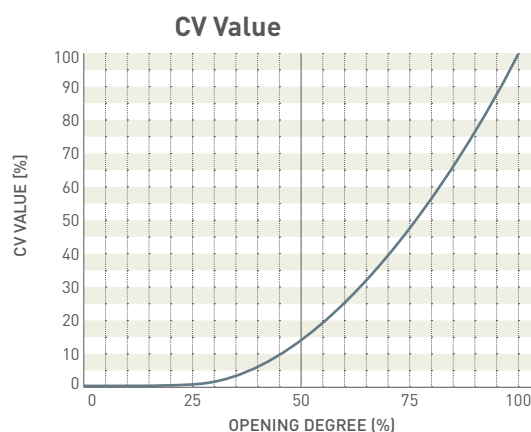
- » High CV value achieved with strong, thin disc
- » Reduces costs thanks to 50% weight-cut compared with standard metal valves
- » Reduces installation space

Flexible

- » F-F dimension conforms to ISO 5752 short pattern which allows to directly replace metal valves
- » Top flange conforms to ISO 5211 for automation

Dimensions	DN50 – 400 (Gear)
	DN50 – 125 (Lever)
Body	Ductile Cast Iron (FCD-S)
Disc / Seal	PTFE
Temperature	-20°C – 100°C (-5°F – 210°F)
Working Pressure	10 bar (1.0 MPa) / DN50 – 300
	7 bar (0.7 MPa) / DN350 & 400
Standards	DIN, ANSI, JIS
Connection	ISO 5752 short pattern
Top Flange Interface	ISO 5211

See our technical catalogue for more details.



1 Overtightening prevention structure

Body is designed to prevent excessive deformation of the seat that could happen from overtightening of the flanges, extending the valve's durability.

2 Primary and back-up stem seals

There are primary and back-up stem seals to give additional safety, avoiding leakage outside through the stem.

3 Bonded PTFE seat with cushion rubber

Because cushion rubber is completely bonded to PTFE seat, the clamping force is properly and stably transferred to the seat, and will prevent of rubber being torn.

4 Optimized cushion rubber design

There is a gradual change in thickness of cushion rubber in order to optimize the clamping force.

5 Gas barrier

3mm-thick PTFE seat prevents gas permeation by roughly 50% compared with our conventional model, increasing product life time and protecting the actuator.



Ball valves

Diaphragm valves

Butterfly valves

Check valves

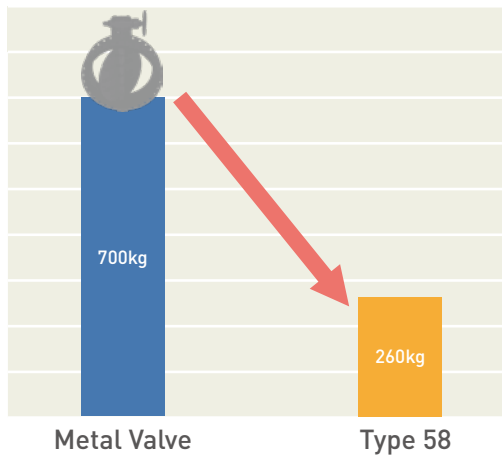
The large thermoplastic valves

Butterfly Valves Type 58

With long experience in developing thermoplastic valves, Asahi Yukizai has been offering the large thermoplastic butterfly valves for more than 50 years. The available material selection for body, disc, and sealing makes ASAHI AV valves in big dimensions suitable for different applications from seawater to chemical waste water treatment. In several applications, thermoplastic valves are the ideal solution offering a lot of advantages compared with conventional metal valves.

Advantages compared to metal valves:

- » Corrosion-free and Longlasting
- » Easier and safer installation (Lightweight : 60% less compared to metal valve)
- » Reduces costs for shipping, installation and anchoring, no cranes needed on site
- » Maintenance-free

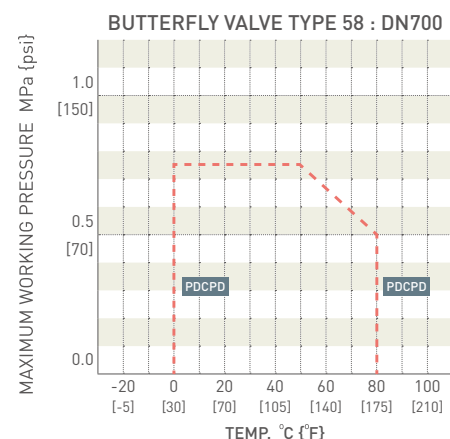


Type 58 (DN700)

Dimensions	DN 700
Operation	Gear
Body	PDCPD
Disc	PP, PVDF
Seal	EPDM, FKM
Temperature	0°C – 80°C (30°F – 175 °F)
Working Pressure	7.5 bar (0.75 MPa)
Standards	DIN, ANSI, JIS
Connection	ISO 5752 short pattern
Top Flange Interface	ISO 5211

See our technical catalogue for more details.

Working pressure vs. Temperature



Flawless in desalination

Desalination is a process consists of various steps that removes dissolved salts and minerals from brackish seawater in order to produce clean, fresh drinking or service water.

Due to the considerably corrosive nature of seawater, metallic valves that are being used in desalination facilities get rusted and damaged, which will simply cause more frequent maintenances resulting in increasing costs; Therefore, corrosion resistance is one of the main requirements to be considered in the selection of materials. That's when Asahi Yukizai, the expert in thermoplastics, steps in and solves the problem.



Ball valves

It's common to see metallic butterfly valves installed with plastic piping at desalination plants. These metal butterfly valves tend to corrode and not function properly in a relatively short period of time.

Consider replacing corroded metal valves with thermoplastic butterfly valves. Replacing with Type 58 Butterfly Valve is easy thanks to the same face-to-face dimension as a metal valve, and it offers many years of maintenance-free service going forward.



Diaphragm valves

Butterfly valves

Check valves

Size / Operation Chart

>> General Info.

Product				
	Butterfly Valve	Butterfly Valve	Butterfly Valve	Butterfly Valve
Type	Type 57	Type 56	Type 75	Type 56D

>> Operations

DN40 (1 1/2")	L / G / P / E			
DN50 (2")	L / G / P / E			
DN65 (2 1/2")	L / G / P / E			
DN80 (3")	L / G / P / E			
DN100 (4")	L / G / P / E			
DN125 (5")	L / G / P / E			
DN150 (6")	L / G / P / E			
DN200 (8")	L / G / P / E			
DN250 (10")	G / P / E			
DN300 (12")	G / P / E			
DN350 (14")	G / P / E			
DN400 (16")		G / P / E		G / P / E
DN450 (18")			G / P / E	
DN500 (20")			G / P / E	
DN600 (24")			G / P / E	
DN700 (28")				
DN800 (32")				
DN900 (36")				
DN1000 (40")				
DN1100 (44")				
DN1200 (48")				

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

L = Lever style



G = Gear style



P = Pneumatic actuated



E = Electric actuated



					
Butterfly Valve	Butterfly Valve	Butterfly Valve	Butterfly Valve	Butterfly Valve	Rotary Damper Valve
Type 75D	Type 58	Type 55IS	Type 57L	Type 57TL	

					L / G / P / E
		L / G			L / G / P / E
		L / G			L / G / P / E
		L / G	L / G / P / E	L / G / P / E	L / G / P / E
		L / G	L / G / P / E	L / G / P / E	L / G / P / E
		L / G	L / G / P / E		L / G / P / E
		G	L / G / P / E	L / G / P / E	L / G / P / E
		G	L / G / P / E	L / G / P / E	L / G / P / E
		G	G / P / E	G / P / E	L / G / P / E
		G		G / P / E	L / G / P / E
		G			L / G / P / E
G / P / E					L / G / P / E
G / P / E					L / G / P / E
G / P / E					L / G / P / E
	G				

Ball valves

Diaphragm valves

Butterfly valves

Check valves

The right product for all your needs

Check Valves

Asahi Yukizai's ASAHI AV range of check valves provides solutions for every application.

Even for very demanding and requiring processes, you will find the perfect ASAHI AV check valve, which is corrosion-free, precise, reliable, and extremely safe.

Our tradition is to never overlook challenges and our priority is to meet your requirements.



Swing Check Valve

ASAHI AV swing check valves offer several advantages in comparison to other check valve models. The swing check valve is the ideal choice for a long-lasting solution even in case of media that may contain debris or other items that could potentially damage or clog the valve. The smooth sealing movement without any vibrating components inside increases the durability to the highest level, proven in decades of operation in our customers' plants. In terms of maintenance, the removable bonnet allows comfortable and easy access into the valve body. This enables to reduce maintenance costs significantly. Only a minimal pressure is required for the smooth sealing in horizontal as well as vertical installation and the fluid's "full flow" design provides a minimum pressure drop, reducing costs for needed pump power.

Ball Check Valve

The ASAHI AV ball check valve employs a moving ball, which permits flow in one direction and prevents back-flow. The valve design that eliminates any metallic components offers a corrosion-free solution ideal for applications with aggressive, corrosive or soiled media. Thanks to its high degree of reliability and safety, this valve is perfect not only for sewage, drainage, and storm water but also for industrial usage. Intended for horizontal or vertical mounting and available in a variety of connections.



Ball Foot Valve

The ASAHI AV ball foot valves can be installed vertically or horizontally on the suction side of a pump. The valve design assures the highest degree of safety and durability. Commonly used in chemical processes, mining, water & wastewater, landfills and irrigation applications.

Wafer Check Valve

Asahi's wafer check valves avoids back-flow thanks to the solid thermoplastic sealing disc. Typical applications for the valve include tank inlets/outlets, preventing back-flow into a pump, one-way mixing, water hammer mitigation, pressure balancing, and process intakes.

Face-to-face dimensions conform to ISO 5752 allowing replacing metallic valves with the corrosion-free alternative. Spring attached disc to assist a quicker sealing, and drain plug integrated body for fast drainage of the pipeline in case of maintenance are available as option.



Ball valves

Diaphragm valves

Butterfly valves

Check valves

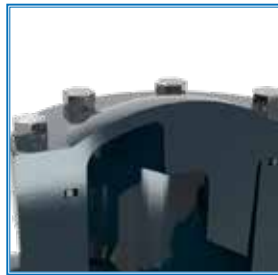
Small details make big difference

Swing Check Valve

Reliable, easy-care and efficient

1 Removable bonnet

Removable bonnet design allows an easy care. Maintenance can be performed by unscrewing a few bolts the bonnet assembly including shaft and disc can be removed from the body. All this can be done without removing the valve from the pipeline.



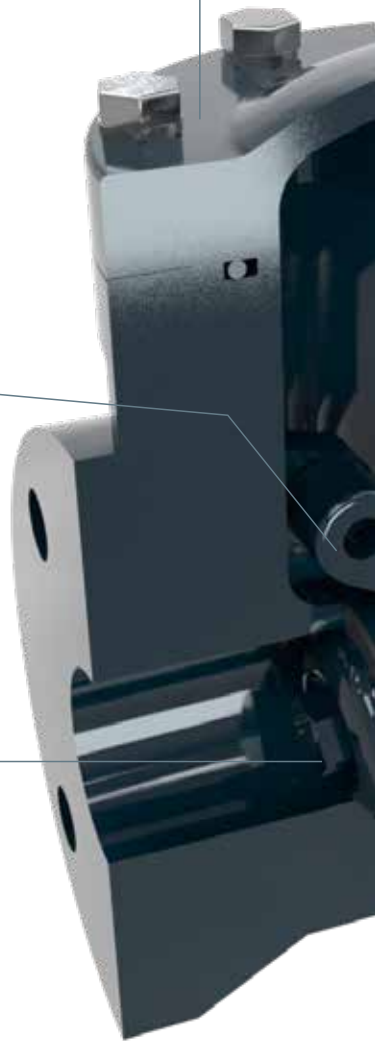
7 Smooth swinging movement

Asahi Yukizai successfully designed the shaft/disc structure to allow the self-return disc to swing smoothly for better operation and control. This allows the valve to withstand wear and tear.



6 Soft sealing

The disc has a soft sealing. This will help all components fit and tight together without excess vibrations which could lead to a frequent maintenance. It contributes to a longevity of the valve.



This industrial ASAHI AV swing check valve's optimized design offers you unconditional safety even in installations that may contain debris or other items that could potentially damage the valve. The fluid's "full flow" design only allows minimal pressure loss resulting in cutback of costs, required pump power and size. For each and every demand of our customers, we have a solution.

2 Metallic liner on request

In order to withstand harsh conditions such as high temperatures, the metallic liner can be installed upon request. This will support the bonnet and the body tightly stay together for a long period of time, resulting in reducing maintenance costs and downtime.



3 Extra sealing for maximum safety

O-Ring is inserted in between the bonnet and the body which will not allow any leakage to occur and ensures maximum safety when in operation. The O-Ring can be selected from various material choices that are anti-corrosion.



4 Solid anti-corrosive thermoplastic body

The solid and robust thermoplastic body and a variety of material choice for O-rings and seats promise longevity of the valve, promising corrosion-free and safety under harsh conditions.

5 Full flow design

When the disc is in a fully-open position, the valve has a clear pathway for the media to flow without any obstructive components in the way. This „full flow“ design allows the pressure to drop as little as possible contributing in minimising pumping energy.



Ball valves

Diaphragm valves

Butterfly valves

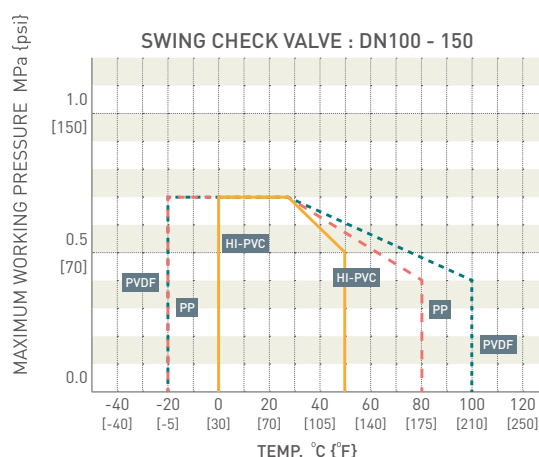
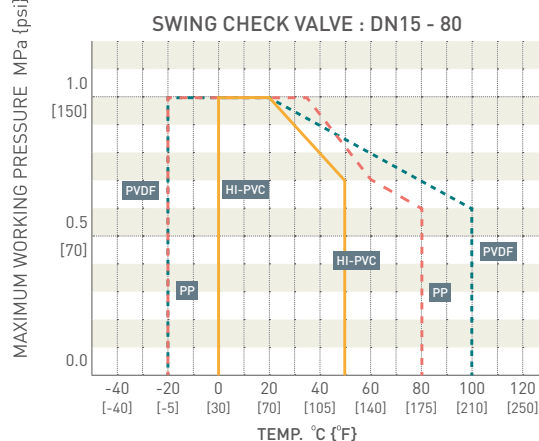
Check valves

Swing Check Valve

The current version of ASAHI AV's thermoplastic swing check valve is the result of over 70 years' product development and experience in multiple industrial fields and applications. This valve provides a large fluid flow area and can handle media that contain debris or contaminations well.



Working pressure vs. Temperature



For chlorine electrolysis application

PVDF is often used in chlorine electrolysis applications in combination with low pH values. This often results in blistering on the surfaces of PVDF valves. To avoid this and elongate the valve life, Asahi Yukizai has developed the special material, EL-PVDF. Various tests and many years of experience have shown that valves in the EL version increase the service life considerably, compared with the standard PVDF. These yellow valves will provide you peace of mind even under harsh conditions. Dimensions available from the smallest DN15 up to DN150.





⌘ Vertically-installed swing check valve at an aquarium in Japan.



⌘ PVDF swing check valve installed horizontally at a chemical plant and has been working for more than 20 years.

Ball Check Valve

Our ball check valves are simple and reliable with a ball inside the valve body is the only moving part. The ball will seal against a seat and check properly when exposed to back flow conditions. Asahi Yukizai offers a variety of materials and connections for the valve to serve your needs in the pipelines.

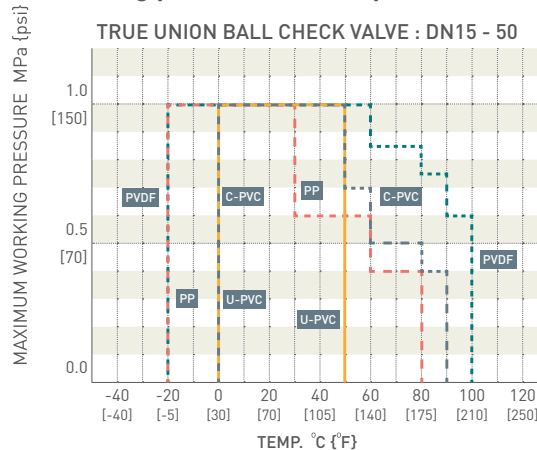


True Union Ball Check Valve
(DN15-50)




Single Union Ball Check Valve
(DN15-100)

Working pressure vs. Temperature



System Overview at a Glance

>> General Info.

Product			
Type	Ball Valve	Ball Valve (Flow Control Type)	3-Way Ball Valve (Vertical)
Dimension: DN (inch)	Type 21 10 - 100 [3/8" - 4"]	Type 21a 15 - 50 [1/2" - 2"]	Type 23 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			

System Overview at a Glance

>> General Info.

				
Product	Diaphragm Valve	Diaphragm Valve	Diaphragm Valve	Pneumatic Diaphragm Valve
Type	Type 14	Type 15	Type 72	Type AN
Dimension: DN (inch)	15 - 100 (1/2" - 4")	125 - 150 (5" - 6")	200 - 250 (8" - 10")	15 - 50 (1/2" - 2")
Nominal Pressure: PN (MPa)	PN10 (1.0 MPa)	PN1.5 - 2.5 (0.15 - 0.25 MPa)	PN0.75 - 2 (0.075 - 0.2 MPa)	PN7.5 (0.75 MPa)
Top Flange Interface				

>> Connections

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

>> Body Materials

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

>> Bonnet Materials






PVC-U	•	•	•	
PP	•	•	•	
PPG	•	•	•	
PVDF	•	•	•	

>> Seal Materials

EPDM	•	•	•	
PTFE	•	•	•	• (2)
EL-PTFE	•	•		• (2)
FKM	•	•	•	
FKM-F	•	•	•	
FKM-C	•	•	•	
NBR	•	•	•	
Others / Special Materials	•	•	•	

>> Options & Accessories





Locking Device	•			
Label / Chain Tag	•	•	•	
Bottom Stand Ensat	•	•	•	•
Lubricant Free	•	•	•	•
Speed Controller				•
Filter Regulator				•
Solenoid Valve				•
Limit Switch Box				
Limit Switch				•
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				

 Pneumatic Diaphragm Valve Type AI 15 - 50 (1/2" - 2") PN7.5 (0.75 MPa)	 Pneumatic Diaphragm Valve Type AP 65 - 100 (2 1/2" - 4") PN10 (1.0 MPa) or PN6 (0.6 MPa)	 Pneumatic Diaphragm Valve Type AV 125 - 250 (5" - 10") PN7.5 (0.75 MPa)	 Pneumatic Diaphragm Valve Type AD 15 - 50 (1/2" - 2") PN3 - 3.5 (0.3 - 0.35 MPa)	 Electric Diaphragm Valve Type H 15 - 150 (1/2" - 6") PN2 - 10 (0.2 - 1.0 MPa)
•			•	•
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(1): Comes as standard spec. (2): Comes with PVDF gas barrier (cushion cover).
For more detail, please contact us or refer to our technical datasheets and catalogue.

System Overview at a Glance

>> General Info.

Product				
Type	Type 57	Type 56	Type 75	Type 56D
Dimension: DN (inch)	DN40 - 350 (1 1/2" - 14")	DN400 (16")	DN450 - 600 (18" - 24")	DN400 (16")
Nominal Pressure: PN (MPa)	PN7.5 - 10 (0.75 - 1.0 MPa)	PN6 (0.6 MPa)	PN3.5 - 5 (0.35 - 0.5 MPa)	PN7.5 (0.75 MPa)
Top Flange Interface	ISO 5211	ISO 5211	ISO 5211	ISO 5211

>> Operations

Lever	•			
Gear	•	•	•	•

>> Connections

Wafer	•	•	•	•
Lug Wafer				

>> Body Materials

PVC-U	•			
PP	•	•	•	
PVDF	•	•	•	
PDCPD				•
FCD-S				

>> Disc Materials

PVC-U	•			
PP	•	•	•	•
PVDF	•	•	•	•
PTFE				
PDCPD				

>> Seal Materials

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

>> Options & Accessories

Locking Device	•	•	•	•
Label / Chain Tag	•	•	•	•
Special Stem Material	•	•	•	•
Wetted Parts Lubricant Free	•			



Butterfly Valve



Butterfly Valve



Butterfly Valve



Butterfly Valve



Butterfly Valve








Rotary Damper Valve

[illegible]

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

System Overview at a Glance

>> General Info.

Product					
	Swing Check Valve	Single Union Ball Check Valve	True Union Ball Check Valve	Ball Foot Valve	Wafer Check Valve
Dimension: DN (inch)	DN15 - 200 (1/2" - 8")	DN15 - 100 (1/2" - 4")	DN15 - 50 (1/2" - 2")	DN15 - 100 (1/2" - 4")	DN80 - 300 (3" - 12")
Nominal Pressure: PN (MPa)	PN5 - 10 (0.5 - 1.0 MPa)	PN5 - 10 (0.5 - 1.0 MPa)	PN5 - 10 (0.5 - 1.0 MPa)	PN5 - 10 (0.5 - 1.0 MPa)	PN6 - 10 (0.6 - 1.0 MPa)

>> Connections

Wafer					•
Flanged	•	•	•	•	
Socket		•	•	•	
Threaded		•	•	•	
Spigot		•	•	•	

>> Body/ball Materials

HI-PVC	•				
PVC-U		•	•	•	•
PVC-C		•	•	•	
PP	•	•	•	•	
EL-PVDF	•				
PVDF	•	•	•	•	

>> Disc Materials

HI-PVC	•				
PVC-U					•
PP	•				
PVDF	•				

>> Seal Materials

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

>> Options & Accessories

Metal Liner	•				
Label / Chain Tag	•	•	•	•	•
Lubricant Free	•	•	•	•	•
Drain Plug					•
Spring					•
Drain Plug & Spring					•

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

We provide new value to our customers
through technological capabilities.







We are close to you

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



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