## Thermoplastic Valves and Piping Systems









Thermoplastic Valves & Actuators - Industrial & Environmental Piping Systems High Purity Piping Systems - Wet Process Solutions - Welding Equipment

Another Corrosion Problem Solved.™



#### Introduction



Asahi/America pioneered the market for thermoplastic valves in the United States and Latin America, during a time when there was no viable alternative to metal for piping systems. Asahi/ America began by promoting valves from a company known as Asahi Organic Chemical Industry Co., Ltd. (AOC) and piping through AGRU GmbH in Austria. Through distributor and end user education and acceptance, the use of thermoplastics has grown. Asahi/America now manufactures and distributes thermoplastic products including valves, actuators, single and double wall piping systems and specialty components throughout the US and Latin America.

Asahi/America has partnered with the world's leading plastics companies to provide you the best thermoplastic fluid flow solutions available on the market today.





in Plastics









#### Plastics, Purity, Performance, Problem Solved.

Asahi/America is a diversified ISO9001:2008 certified manufacturer and supplier of corrosion resistant fluid flow products. Headquartered in Malden, Massachusetts, where we operate a 100.000 square foot manufacturing and warehouse facility, Asahi/America supports all of our products with a comprehensive selection of in-depth technical documents and product catalogs. To access any of Asahi/America's technical documentation, testing information, or product catalogs, visit the company's web site at www.asahi-america.com or contact Customer Service at 1-800-343-3618.

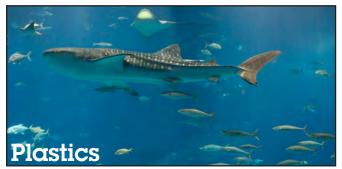
What makes Asahi/America special is our ability to provide solutions for corrosive or high purity fluid handling systems individualized to meet virtually any customer's need. The Asahi/America technical staff is able to provide superior knowledge of products, applications and installations. Asahi/America is poised to support your next project with the assistance of our large distribution network.

#### Interested in purchasing any of Asahi/America's products?

Asahi/America sells its products through the industry's largest distributor network with stocking locations nationally and throughout Latin America. If you wish to locate your local Asahi/America distributor, contact our Customer Service department at 1-800-343-3618 or visit our web site at www.asahi-america.com and select the "where to buy" link.



#### Introduction



#### Plastics - Valves & Actuators

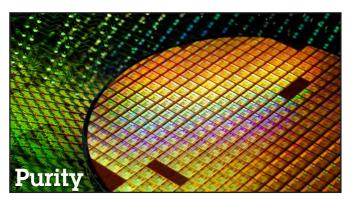
Asahi/America's valve and actuation products have been used in the field for over four decades.

We feature a full complement of thermoplastic valves including ball, butterfly, diaphragm, globe, gate and ball check. In addition, both pneumatic and electric actuators are available to be factory mounted to our valves in our shop or purchased separately for field mounting.

#### Purity - High Purity & Wet Process Solutions

Asahi/America is the complete one-source solution for your high purity and wet process needs.

We feature Purad® (PVDF), PolyPure® (PPn) and PP-Pure® (pigmented PP) pipe, valves and fittings, Dymatrix™ specialty valves, and EM Technik™ fittings and tubes. We also offer Polytetra heat exchangers and heaters, a full fleet of welding equipment and feature extensive cleanroom fabrication capabilities.



## Performance

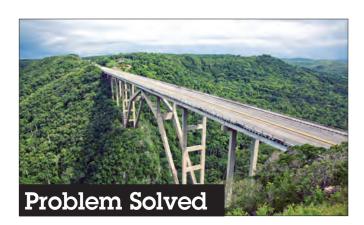
#### Performance - Environments & Industrial Piping

Asahi/America offers a full selection of industrial and environmental piping systems. We have five unique double containment systems including Pro-Lock® PVC and CPVC systems, Fluid-Lok® HDPE system, Poly-Flo® PP and HDPE, Chem Prolok® PE system and the versatile Duo-Pro® line. In addition, we provide a wide array of industrial single wall piping systems including Air-Pro® for compressed air, Chem Proline® PE, Ultra Proline® Halar® system, Proline® polypropylene piping systems and Super Proline® chemical grade PVDF system.

#### **Problem Solved**

Our valves, actuators and piping systems have been solving corrosion problems in the world's leading industrial, municipal and entertainment installations for more than four decades. From the harshest chemicals, to the toughest weather conditions, our family of fluid flow solutions provides extended life cycle and dependable performance to a wide range of applications...

- Chemical Processing
- Petrochemical
- Mining
- · Pulp and Paper
- Plating
- Pharmaceutical
- Food
- Semiconductor Processing
- Wastewater Treatment
- Aguariums
- · Landfill Recovery
- Ultra Pure Water
- Theme Parks
- Cruise Ship Construction
- Solar Panel Manufacturing
- Ethanol Production
- Municipal & Industrial Water
   Railroad Yard Switching Systems





#### **Thermoplastic Valves**

#### Type-21/21a Ball Valve

Specifications Sizes: 1/2"- 6"

Models: PVC and CPVC:

Socket, Threaded and Flanged (ANSI) PP and PVDF:

IPS and Metric (DIN) Socket,

Threaded, Butt and Flanged (ANSI)

Bodies: PVC, CPVC, PP and PVDF

Seats: PTFE backed with EPDM or FKM

Seals: EPDM, FKM or AFLAS®

NSF-61 Approved (1/2" - 4" PVC/EPDM/FKM)

#### Type-23 Multiport® Ball Valve

**Specifications** 

Sizes: 1/2"- 6"
Models: Socket, Threaded and Flanged (ANSI)

Bodies: PVC, CPVC, PP, PVDF

Seats: PTFE backed with

EPDM or FKM

Seals: EPDM, FKM or AFLAS®

#### **NSF-61 Approved**

(1/2" - 4" PVC/EPDM/FKM)

## Omni® Ball Valve Specifications Sizes: 3/8"- 2"

**Models:** Socket and Threaded **Bodies:** PVC. CPVC

Seats: PTFE backed with EPDM

Seals: EPDM

NSF-61 Approved

(3/8" - 3" PVC/EPDM)

#### Labcock® Ball Valve

**Specifications** 

Size: 1/4"
Bodies: PVC
Seats: EPDM
Seals: EPDM

**Models:** Male thread x Male thread, Male Thread x Hose (ID 3/8").

Male Thread x Female Thread, Male Thread x Hose, Hose x Hose, Female Thread x Female Thread, Male Thread Elbow (OD .63") 90°

#### **NSF-61 Approved**

(1/4" PVC/EPDM)

#### Type-14 Diaphragm Valve

**Specifications** 

**Sizes:** 1/2"- 2" - True Union 1/2" - 10 - Flanged

**Body:** PVC, CPVC, PP and PVDF **Bonnet:** PVC, PP, PPG and PVDF

End Connectors: PVC, CPVC, IPS Socket or Threaded PP, PVDF, IPS & Metric (DIN) Socket, Threaded, Butt, Flanged

**Diaphragms:** EPDM, 3-Layer PTFE, Nitrile & FKM



#### **Globe Valve**

Specifications Sizes: 1/2"- 4"

Bodies: PVC and PP

Models: Flanged ANSI 1/2"- 4"

Socket or Threaded 1/2" - 2"

Seals: EPDM or FKM



#### Electromni® Ball Valve

Specifications Sizes: 3/8"- 2"

Models: Socket and Threaded

Voltages: 120/220 VAC 12/24 VAC/VDC Enclosure: NEMA 4X

Valves: Omni

Type-21 Ball Valve Type-23 Multiport



#### **Gate Valve**

Specifications Sizes: 1-1/2"- 14" Body: HI-PVC

Models: Flanged (ANSI)
Types/Sizes: (non-rising stem)

1-1/2"- 8"

Seals: EPDM, FKM (optional)

**NSF-61 Approved** 

(1-1/2" - 14" PVC/PP/EPDM/FKM)





#### **Thermoplastic Valves**

**Type-57 Butterfly Valve** 

**Specifications** 

Sizes: Lever 1-1/2" - 8"

Gear: 8"- 14"

Models: Wafer Style Operators: Lever and Gear

**Bodies:** PVC, PP and PVDF **Discs:** PVC, CPVC, PP & PVDF

Seats and Seals: EPDM,

FKM or Nitrile

Stems: 403 and 316 SS, Titanium, Hastelloy®

**NSF-61 Approved** 

(1-1/2" - 14" PVC/PP/EPDM)

**Type-57IL Butterfly Valve** 

**Specifications** 

**Sizes:** Lever 3" - 8" Gear 8"- 12"

Models: Lug Style

Operators: Lever and Gear

**Bodies:** PVC

Discs: PVC, CPVC, PP & PVDF Seats and Seals: EPDM, FKM

or Nitrile

Stems: 316 SS, Titanium, Hastelloy®

Lugs: 304 SS or 316 SS

#### **Type-57LIS Butterfly Valve**

Specifications

Sizes: 3" - 8"

**Models:** Wafer or Lug Style **Operators:** Lever and Gear

**Bodies: PVC** 

Discs: PVC, CPVC, PP & PVDF

Seats and Seals: EPDM, FKM or

Nitrile

Stems: 316 SS, Titanium, Hastelloy®

**Lugs:** 316 SS

Type-75 Butterfly Valve

Specifications

Sizes: 18"- 24"

Models: Wafer Style/Machined

Lug Style

Operators: Gear Bodies: PP and PVDF Discs: PP and PVDF

Seats and Seals: EPDM, FKM

or Nitrile

Stems: 403 SS, 316 SS, Titanium, Hastelloy®

Lugs: 304 SS or 316 SS

#### **Ball Check Valve**

**Specifications** 

Sizes: True Union: 1/2"- 2"

Single Union: 3"-4"

Models: Socket, Threaded,

Flanged (ANSI), Butt Bodies: PVC, CPVC, PP

and PVDF

Seats: EPDM, FKM, PTFE Seals: EPDM, FKM, PTFE

**Options:** Foot Valve Screen/SS Springs

**NSF-61 Approved** 

(1/2" - 2" PVC/EPDM/FKM)

#### **Swing Check Valve**

**Specifications** 

**Sizes:** 3/4" - 8"

Models: Flanged (ANSI)
Bodies: HI PVC, PP and PVDF

Seats: EPDM, FKM, PTFE Options: Lever & Weight/

SS Spring



#### **Wafer Check Valve**

**Specifications** 

Sizes: 10" and 12" Bodies: PVC Seats: EPDM. FKM

Options: SWP-8 (SS)

Spring E-CTFE Coated



#### **Constant Flow Valve**

**Specifications** 

Sizes: 1/2", 3/4", 1", 2", 3" and 4"

Body: PVC Bonnet: PVC

Models: Flanged ANSI

Seals: EPDM

Springs: 304 Stainless Steel

with E-CTFE Coating





#### **Thermoplastic Valves Options**

#### Options available for Asahi/America Ball, Butterfly, Diaphragm & Gate Valves

#### Plasgear™ - Plastic Gear

Constructed of composite plastic with black urethane coating. Plasgear will not corrode or rust as a result of exposure to harsh chemicals. Plasgear is standard on all Asahi/America 1-1/2" - 14" Type-57 Butterfly Valves, or can be supplied without the valve.



#### **Chain Operator**

Installed on the round handwheel of a valve in overhead. out-of-reach locations. The valve is operated by pulling on the chain.



#### **Ball Valve Options**

**Operating Nuts** -Available in 2" square nut or "T" nut configurations.



Used for remote operation of a valve by a wrench.

Locking Handle -To prevent unauthorized operation, the valve handle can be padlocked in the open or closed position.



#### **Globe Control Valve**

**Specifications** Sizes: 1/2" - 4"

Materials: PVC, PP, PVDF & PTFE

Model: Flanged (ANSI) Stem Seal: PTFE bellows Valve Seal: FKM. EPDM. PTFE encapsulated FKM Flow Curves: Linear or equal

percentage

Rangeability: 1:50 for 1/2"-3", 1:30 for 4"

#### **Sediment Strainer**

**Specifications** Sizes: 1/2"- 4"

Models: Socket, Threaded,

Flanged (ANSI) Body: PVC

Screens: Standard 20 mesh PVC. (Optional 30 and 40

PVC, 20, 40 and 60 Stainless Steel)

Seals: EPDM, FKM

**NSF-61 Approved** (1/2" - 4" PVC/EPDM/FKM)



#### **AV Gasket**

**Specifications** Materials/Sizes:

EPDM: 1/2" - 12" PTFE-bonded EPDM:

1/2"-12"

**PVDF-bonded EPDM:** 

1/2" - 10"

(except 1-1/4" and 2-1/2")



Bodies: Glass filled polyamide, aluminum, 316 SS

**Construction:** Double piston, double rack/pinion

**Options:** Positioners, Solenoids, Limit Switches, De-clutchable Gearbox Manual Overrides. Travel

Series 79 Pneumatic Actuator

#### **Series 94 Electric Actuator**

**Specifications** 

**Torque:** 150, 300 in/lbs. **Voltage:** 230/115/12/24 VAC

12/24 VDC

Action: Quarter-turn Indicator: Visual indication

of valve position. Limit switch contacts for

light indication.

Declutchable manual override.



NEMA 4X enclosure. 5 second cycle time.

**UL-508 LISTED** 

#### **Series 92 Electric Actuator**

**Specifications** 

Torque: 400, 700, 1100, 2000 in/lbs.

Voltages: 230/115/24/12 VAC,

24/12 VDC

Action: Quarter-turn Indicator: Visual beacon indication of valve position. Limit switch contacts for light indication. Declutchable manual

override.



#### Type-14 Pneumatic

Indicator: Visual position indicator

Specifications Sizes: 1/2" - 2"

**Specifications** 

Size: 1/2" - 24"

44611 in/lbs.

Air-to-Spring

Stops

Torque: 50 in/lbs. to

Models: Air-to-Air.

Models: Air-to-Air, Air-to-Spring

Indication: Top visual indication of valve position Travel Stops: Adjustable stops prevent over tightening

of diaphragm

Bodies: PVC, CPVC, PP & PVDF

**Bonnet: PPG** 



NEMA 4X/7 enclosure. 10 second cycle time (400 & 700) 25 second cycle time (1100 & 2000)

**UL-508 LISTED** 

**ATEX Directive 94/9EC** 

#### **Series 10 Electric Actuator**

**Specifications** 

Torque: 1320-10, 440 in/lbs. Voltages: 120 VAC 1Ph 50/60Hz, Options: Positioner, Transmitter, Two-wire control, Voltages: 230/1, 380/3, 460/3. 24 VDC, ATEX Enclosure, NEMA 7 Enclosure,

**Local Remote Station** 



#### **Local/Remote Station**

Used in conjunction with Series 92 or Series 94 Electric Actuators.

Permits actuator operation.

"Local" or "Remote"
NEMA 4X enclosure
Open/Close selector
Switch and Indicator lights
120 VAC.





#### **Wet Process Solutions**

#### **Dymatrix<sup>™</sup> Specialty Valves**

#### **Multiport Valves**

Size: 1/8" - 1"

**Models:** Manual, Pneumatic **Options:** Electric Solenoid,

Feedback Switches

**Connections:** Flare, S-300, NPT Compression, Triclamp and others



#### **Diaphragm Valves**

Size: 1/4" - 1"

Models: Manual, Pneumatic

**Connections:** Flare, S-300, NPT, Custom



#### **Falconics™ Flow Controller**

Size: 1/4" - 1/2"
Models: Electric

Connections: Flare, S-300



#### **Needle Valves**

Size: 1/4" - 1/2"

Models: Manual, Pneumatic

Connections: Flare, S-300



#### **Pressure Regulators**

Size: 1/4" - 1"

Models: Manual, Pneumatic Connections: Flare, S-300



#### **Pinch Valves**

Size: 1/4" - 1"

Models: Manual, Pneumatic,

Electric

Connections: Flare, S-300



## **EM Technik™ Fittings & Valves Compression Fittings**

Series 1C

**Size:** 1/4" - 3/4" PFA in stock



#### **Ball Valves**

Series 6

Size: 1/8" - 1/2" PP, PPn, PVDF, PFA up to 13 port valves

available



#### **Inline Gas Filters**

Series 7

**Size:** 1/4" - 1/2" 5 micron - 100 micon



#### The Wet Process People™



#### **Purad® (Ultra High Purity PVDF)**

#### Supply Range Pipe and Fittings

- 20 315mm (1/2" 12") SDR 21 / PN 16 / 230 psi
- 90 315mm (3" 12") SDR 33 / PN 10 / 150 psi



#### **Valves**

- T-342 Diaphragm Valves: 20 110mm (1/2" 4")
- T-343 Zero Dead Leg (ZDL) Valve: 20 110mm (1/2" 4")
   Over 49 different sizes and configurations
- T-21 Ball Valves: 20 110mm (1/2" 4")
- Frank Series Regulating Valves: 20 75mm (1/2" 2-1/2"

#### Welding

• IR/Butt, Socket, Beadless, Electrofusion

#### PolyPure® (Natural PP)

#### Supply Range Pipe and Fittings

• 20 - 110mm (1/2" - 4") SDR 11 / PN 10 / 150 psi



#### **Valves**

- T-342 Diaphragm Valves: 20 63mm (1/2" 2")
- T-343 Zero Dead Leg (ZDL) Valve: 20 63mm (1/2" 2")
- Ball Valves: 20 63mm (1/2" 2")
- 3" and 4" Valves: Only available in PP

#### Welding

• IR/Butt, Socket, Beadless

#### PP-Pure® (Pigmented PP)

#### Supply Range Pipe and Fittings

• 20 - 315mm (1/2" - 12") SDR 11 / PN 10 / 150 psi



#### **Valves**

- T-342 Diaphragm Valves: 20 110mm (1/2" 4")
- T-343 Zero Dead Leg (ZDL) Valve: 20 63mm (1/2" 2")
- T-21 Ball Valves: 20 110mm (1/2" 4")

#### Welding

• IR/Butt, Beadless

#### **Frank Pressure Regulators**

Size: 20 - 110mm (1/2" - 4")

Models: Pressure

Regulators, Back Pressure,

Relief Valves

Materials: PVC, PP, PPn,

PVDF, E-CTFE



#### **Welding Equipment**

The SP Series of automated fusion equipment

#### SP 110-S IR Fusion

• 20 - 110mm (1/2" - 4")



#### SP 110-B Beadless Fusion

• 20 - 110mm (1/2" - 4")



#### SP 250-S IR Fusion

• 110 - 250mm (4" - 10")



#### SP 315-S IR Fusion

• 110 - 315mm ( 4" - 12")



### Polytetra Heat Exchangers

Polytetra Series are all-thermoplastic, corrosion resistant heat exchangers that are designed and built per customer specification.

**Size:** Up to 500 sq. ft. **Models:** Shell & Tube, Modular in Tank Bundle **Materials:** PE, PP, PPn, PVDF, E-CTFE, PFA



#### **Heaters**

Completely encapsulated with corrosion resistant PFA and PTFE, able to withstand the most aggressive chemicals over an extended period of time.

Size: Up to 6 kw single line Models: Coil, Panel, Custom Bend



#### **Industrial Piping Systems**





Supply Range Pipe and Fittings • 50 - 315mm (1/2" - 12") SDR11, 150 psi



#### **Valves**

- T-21 Ball Valves: 20 63mm (1/2" 2")
- T-57 Butterfly Valves: 50 315mm (1-1/2" 12")
- T-14 Diaphragm Valves: 20 63mm (1/2" 2")
- Ball Check Valves: 20 63mm (1/2" 2")

#### Welding

· Butt, Socket, Electrofusion

#### Proline® (PP)

#### Supply Range Pipe and Fittings

- 20 1200mm (1/2" 48") SDR11, 150psi
- 110 1400mm (4" 55") SDR33, 45psi



#### **Valves**

- T-21 Ball Valves: 20 110mm (1/2" 4")
- T-57 Butterfly Valves: 50 1400mm (1-1/2" 55")
- T-14/15/G Diaphragm Valves: 20 200mm (1/2" 10")
- Ball Check Valves: 20 110mm (1/2" 4")
- Frank Series Regulating Valves: 20 110mm (1/2" 4")

#### Welding

· Butt, Socket, Electrofusion

#### Ultra Proline® (Halar®)

#### Supply Range Pipe and Fittings

- 20 50mm (1/2" 1-1/2") SDR21, 150psi
- 63-110mm ( 2" 4") SDR21, 120psi



#### **Valves**

- T-21 Ball Valves: 20 32mm (1/2" 1")
- T-342 Diaphragm Valves: 20 63mm (1/2" 2")
- Frank Series Regulating Valves: 20 63mm (1/2" 2")

#### Welding

Butt



#### **Super Proline® (PVDF)**

#### Supply Range Pipe and Fittings

- 20 315mm (1/2" 12") SDR21, 230 psi
- 90 400mm (3" 16") SDR33, 150 psi

#### Valves

- T-21 Ball Valves: 20 110mm (1/2" 4")
- T-57 Butterfly Valves: 50 315mm (1-1/2" 12")
- T-14 Diaphragm Valves: 20 63mm (1/2" 4")
- Ball Check Valves: 20 110mm (1/2" 4")
- Frank Series Regulating Valves: 20 75mm (1/2" 2-1/2")

#### Welding

Butt, Socket

#### Air-Pro® Compressed Air Piping

#### Supply Range Pipe and Fittings

- 20 110mm (1/2" 4") SDR 7.4 / 230 psi
- 160 315mm (6" 12" SDR 11 / 160 psi



#### Valves

Ball Valves: 20 - 90mm (1/2" - 3")

#### Welding

Butt, Socket, Electrofusion

#### **Double Containment Piping Systems**

#### Duo-Pro®

#### **Supply Range**

• 1x3 through 16x20 **Materials:** Polypropylene, PVDF, & E-CTFE (Halar®)

#### Welding

 Simultaneous or Staggered Butt



#### Poly-Flo®

#### **Supply Range**

• 1x2, 2x3, or 4x6

Materials: Black
Polypropylene & HDPE

#### Welding

 Simultaneous or Staggered Butt



#### Pro-Lock®

#### **Supply Range**

• 1/2x2 through 4x8 Materials: PVC & CPVC

#### **Assembly**

 Simultaneous or Staggered Glue



#### Fluid-Lok®

#### Supply Range

• 1x3 through 18x24 **Materials:** HDPE

#### Welding

 Simultaneous or Staggered Butt



#### **Welding Equipment**

ProWeld welding equipment offers the latest innovations in reliable thermoplastic fusion technology.



**Models:** Shop (manual), Field (hydraulic), Socket (both hand and bench styles), Electrofusion, Hot Air and Extrusion Welders.

#### **Leak Detection Systems**

For underground pressure systems of hazardous chemicals

#### **Options:**

Continuous Sensing
Cable, Low Point
Sensors, or a
combination of
Components, Cable and
Probes.

PAL-AT™: A continuous leak detection cable system that can also incorporate low point probes.

**Liquid Watch™**: A flexible, modular low point system based on inline probes.



# Another Corrosion Problem Solved.™



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