



aquasyn
LLC

High Purity Diaphragm Valves



When you want it done right and on time ... the first time!

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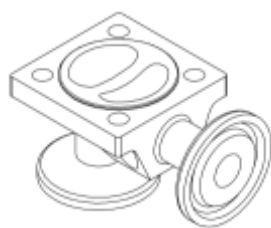
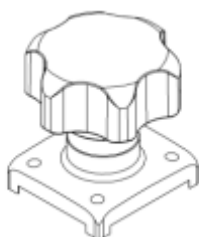
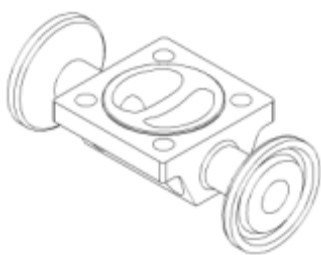


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A New Standard in High Purity Diaphragm Valves

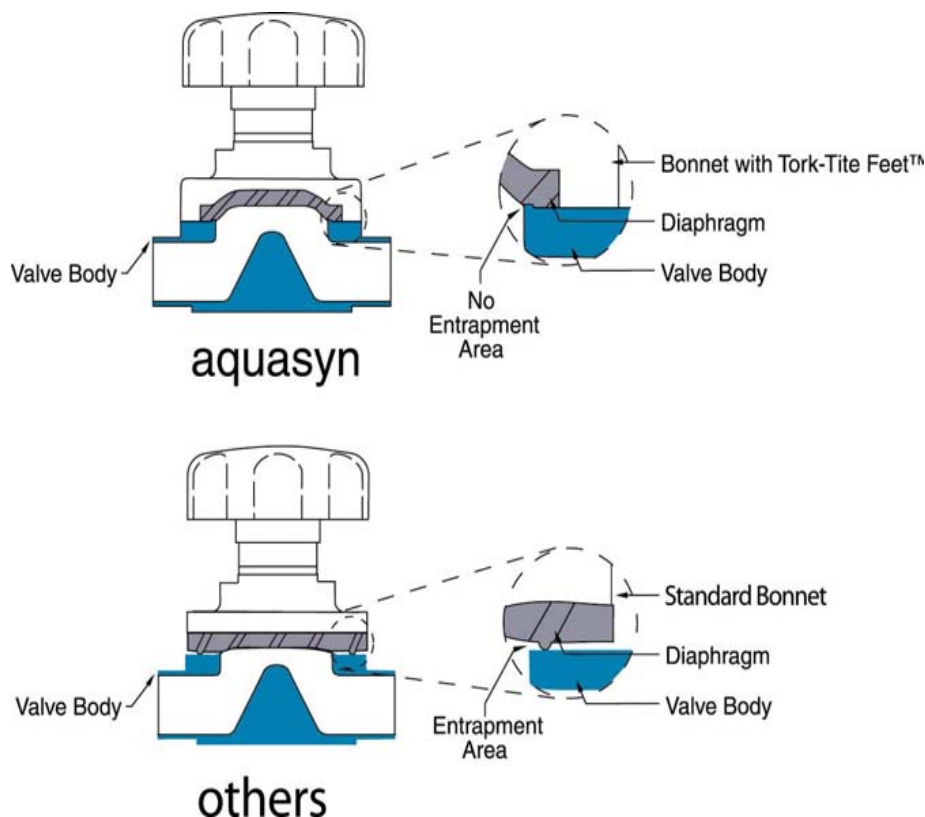
Since 1996, aquasyn has prioritized innovation in process engineering and manufacturing, setting ourselves apart from others in the industry. We cater to the biotech, cellular agriculture, and pharmaceutical sectors with a distinguished reputation for exceptional innovation and top-notch quality, providing a wide array of valves and components, available in both standard and customizable options. Our customers trust us to provide reliable solutions for even the most demanding applications.



aquasyn does not simply modify industrial diaphragm valves to meet industry requirements. Instead, we design and manufacture products specifically for the bio-pharmaceutical industry. Our innovative products, like the Valbow® valve and Sample Bottle Assembly, solve unique process challenges. We work closely with our customers to bring their ideas to life, setting ourselves apart from other high-purity valve companies. It's no surprise that some of the biggest names in the industry trust us to deliver solutions that meet their exacting standards. aquasyn is a leading provider of bioprocessing solutions, dedicated to meeting our customers' unique challenges with innovative and high-quality products. Our commitment to close collaboration with clients sets us apart from other high-purity valve companies. We take pride in being a partner in our customers' success.

The aquasyn® Difference

- Material certifications for all product contact materials
- Quick Turnaround Time
- American made and stocked
- In-house machining, welding, fabrication, polishing ID, OD, and EP



Tork-Tite® Feet

aquasyn's approach to valve sealing is different from other diaphragm valve manufacturers.

Instead of placing the primary seal on the diaphragm, which can trap process fluids, we machine the sealing ring directly into the valve body at the flow chamber's intersection. Our patented Tork-Tite® feet ensure a zero-leakage seal by holding the diaphragm securely in place with controlled compression. These unique features reduce entrapment potential, deliver consistent and repeatable flow, and increase diaphragm life. We're committed to providing innovative solutions that exceed our customers' expectations for performance and reliability.

Biotech Valves

Applications

aquasyn small frame Biotech valves utilize a common valve body for 1/4", 3/8" and 1/2" nominal sizes. They effectively provide a compact alternative to full sized valves on bioreactors, filtration and chromatography skids, and other systems where available space is at a premium, with no sacrifice in performance. Our fractional sized valves also share all of the same features as our standard sized valves.



Unique Options

Custom built hybrid valves and assembly fabrications incorporating fractional valves are just one of aquasyn's areas of expertise.



Valbow®



The Valbow's® unique orientation allows for easier integration into existing systems, accommodating various applications and requirements. Its versatility empowers users to adapt the valve to their needs, enhancing operational efficiency and performance. The Valbow® is uniquely suited for that one spot where nothing else will do. Whether it's a hard to reach sample valve on an R/O system, or for a directional change valve on a Bioreactor, valbows® just seem to come in handy.

The Valbow® was created several years ago when a customer had an interesting request that no one else in the industry wanted to pursue. This inquiry led to aquasyn's groundbreaking creation, the Valbow®, which represents a paradigm shift in valve design, introducing a new orientation that revolutionized the industry. Stocked in a variety of sizes and with its compact footprint, the Valbow® challenges traditional valve configurations, offering a space-efficient solution that optimizes system design and installation. This innovative design not only saves valuable space but also provides flexibility and versatility to its users.



Features

- Unique problem solving design, unlike any other in the industry
- 90 degree angle pattern for directional changes
- Minimal hold up volume
- Sampling capability
- Hygienic clamp, orbital weld, end cap and other connections available
- Custom designs and other special options available

Unique Products

Sample Bottle Assembly

One of a Kind

aquasyn's unique sample bottle assembly with an integrated Valbow® solves a number of process problems and has become the industry standard. It is designed for those who prefer a re-usable component over one that is disposable. Sample bottles can be provided with a number of options including different bottle sizes, color coded caps, and unusual Valbow® sample valve configurations. Unlike other designs, aquasyn also offers inspection and refurbishment services for sample bottle assemblies.



Features

- Bottle sizes from 50ml to 1000ml
- Color coded caps
- Fully autoclavable
- Custom designs available
- Inventory of stocked product
- Industry standard acceptance
- Lightweight design

Two-Way Valves

An Industry Standard

The standard aquasyn two-way valve is available in sizes 1/4" to 4" and can be supplied in any number of configurations with options involving body type, diaphragm type, end connections and surface finish. Whether combined with our manual bonnets featuring smooth operating high temperature plastic handwheels or our pneumatic actuators, aquasyn's innovative design capabilities set us apart.

Quality

Our two-way weir type diaphragm valves feature robust construction, precision machining and state of the art surface finishes, with ASME-BPE compliant chemistry.

Please see ordering information on page 14 for a range of options or contact us with any special requirements you may have.



Features

- BPE Compliant machined bar stock bodies with controlled Sulfur (0.005-0.017%) Ferrite < 0.5%
- Integral valve body sealing ridge prevents excessive entrapment of contaminants
- Sizes from 1/4" to 4" provide process application flexibility
- Exterior body surfaces radiused and sloped promote cleanability by wash-down or COP methods
- Fully traceable bodies insure ease of validation/documentation
- Drain angle marks etched on end connections insure self-draining alignment
- Surface finishes available from 25Ra to 5Ra, mechanical and electropolished
- Exotic materials including Hastelloy¹ and AL6XN² available
- Hygienic clamp, butt weld, orbital weld and special end connections available

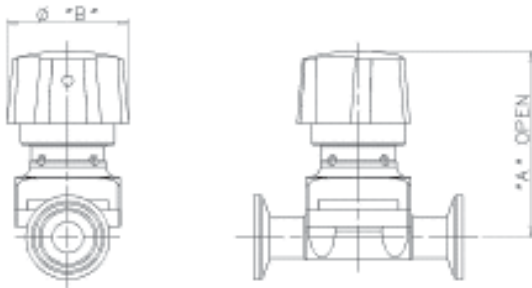
¹Hastelloy is a trademark of Haynes International
²AL6XN is a trademark of Allegheny Ludlum

Manual Bonnet Assemblies



Trouble Free

aquasyn bonnets are designed and manufactured from stainless steel to provide long, trouble free service. All internal parts are machined to exacting tolerances for smooth and consistently reliable operation. Our patented Tork-Tite® feet on the bonnet corners and compressors, which are precisely machined and finished to match the profile of the weir on the valve body, insure a fixed diaphragm position to provide consistent zero leakage closure and repeatable flow control characteristics.



Dimensions

Size	"A"	Ø "B"
1/4" - 1/2"	2.25"	1.25"
3/4"	3.00"	2.00"
1"	4.25"	3.20"
1 1/2"	5.63"	4.20"
2"	7.00"	5.00"

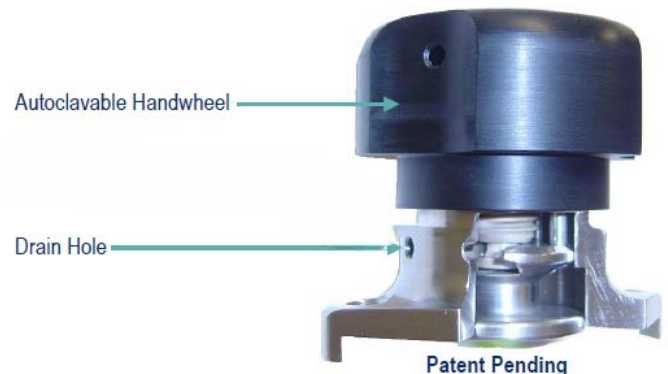
Features

- Readily cleanable exterior
- Fully autoclavable
- Patented Tork-Tite® feet provide consistent fixed diaphragm position
- Stainless steel internals
- Ergonomic performance plastic handwheel
- Fully formed compressor exactly matches weir profile for tight shut-off, smooth operation
- Manual bonnet options include: standard, O-ring sealed and submersible
- Fixed internal travel stops



Submersible Bonnet

The aquasyn patent-pending submersible bonnet assembly has been developed to meet the needs of biopharm cleaning protocols. Designed to provide trouble free performance, these bonnets are fully drain-able, autoclave-able and available in sizes 1/4" through 2". The bonnet provides a compact light weight solution to complement Aquasyn's range of diaphragm valves.



Pneumatic Valve Actuation



Features

- Compact lightweight design
- Choice of spring return or double acting operation
- Selected limit switch options available
- Banjo mount solenoid options available
- NAMUR adaptor available
- High cycle life
- Integral controlled travel stop

Performance

as with other aquasyn components, our pneumatic actuators provide design and construction which meet or exceed industry standards. The actuators feature lightweight performance plastic housings, precision stainless internals, and O-rings machined and molded to tight tolerances. Only high quality materials are used for long, trouble free performance.

Control

Both our manual and actuated bonnets feature our patented Tork-Tite® feet and cover a complete range of automation requirements from basic on/off service to fine modulating control.

Options for integration:

- **Stroke Limiter**
- **Electrical Position Feedback**
- **Intrinsically Safe Control On/Off Head**
- **Electrical Feedback Switch**
- **Manual Override**



Positioner

The positioner serves to position pneumatically actuated diaphragm valves.

The positioner is an electropneumatic position controller for the pneumatically actuated continuous diaphragm valve. The device includes the following main function groups: a feedback/positional transducer, an electropneumatic system and a microprocessor electronic system. The feedback/positional transducer measures the actual position of the continuous valve. The microprocessor electronic system continuously compares the actual position (actual valve) with a desired position value that was preset via the standard signal input and supplies the result to the position controller. If an error exists, the electropneumatic system causes the actual position to be appropriately corrected.

Sterile Access/GMP Combinations

Capabilities

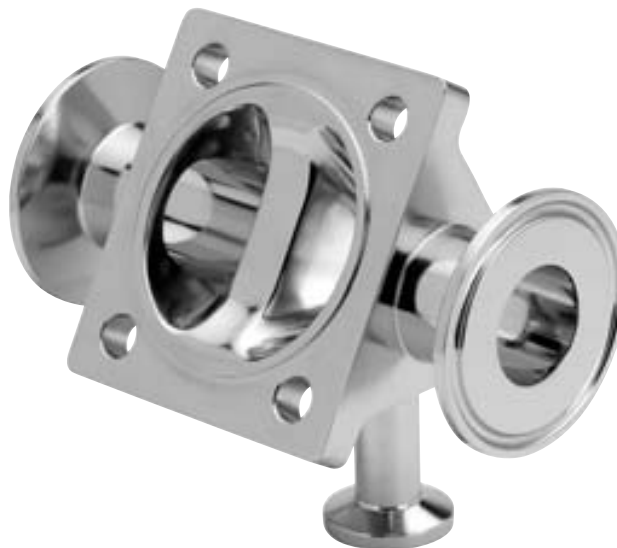
aquasyn has the unique capability to craft Sterile Access valves with any conceivable valve-to-valve or valve-to-fitting configuration within the industry, in both traditional valve-to-valve or block body styles. Our component stocking system, coupled with specially dedicated in house machining, internal polishing, external polishing and electropolishing offers the added benefit of extremely fast lead times. Our fabrication, welding and polishing exhibit inherent quality to meet and exceed industry standards for drainability, minimal dead legs, surface finish and performance



Features

- Minimized dead legs
- Maximum drainability
- Configured to specific system layout
- Selection sheet available
- Stocked components enable "made-to-order" assemblies
- Short lead times

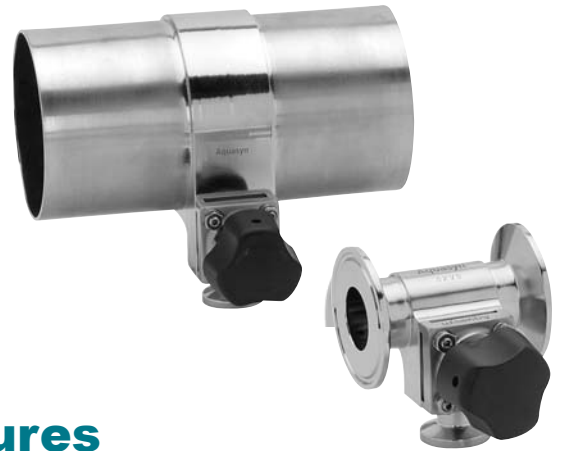
For complete ordering information and selection chart, please see page 15-16



Zero Static Tee Bodies

Innovation

aquasyn's Zero Static block body tee valves are the premiere product of their kind in the industry. Our design offers the smallest footprint to facilitate installation within complicated piping geometries and is the lightest weight of any similar style body. And they can be customized into a variety of configurations, including sampling or diverting flow.



Features

- True Zero Static design
- Fully machined from block
- Completely drainable
- Readily cleanable exterior, all surfaces sloped and radiused
- Integrated sampling valves and other custom options available
- Stocked components enable "made-to-order" assemblies in very short lead times.

Points of Use



Features

- Minimized footprint
- Compact centerline dimensions
- Readily cleanable exterior, all surfaces sloped and radiused
- True Zero Static design
- Low pressure drop, high flow co-efficient (Cv) insures optimum performance
- Integrated sampling valves and other custom options available

Compact

State of the art block body design, coupled with the tightest bend radii in the industry allow aquasyn point of use valves to be easily integrated into areas where space is at a premium. Our design provides minimal pressure drop and superior system performance. We can deliver customized and standard point of use valves on a fast track basis.



Custom Valve Design

The Custom Valve Design at aquasyn is a pivotal factor that sets us apart and positions us as superior to our competitors. By offering tailored valve solutions, we meet our customers' specific needs and exceed their expectations. Our experienced engineers and designers work closely with clients to understand their unique requirements and challenges. Leveraging our deep expertise and cutting-edge technology, we develop customized valve designs that optimize performance, enhance efficiency, and ensure seamless integration into their systems. This personalized approach empowers us to deliver innovative solutions tailored to each customer's application, resulting in superior product performance, increased reliability, and reduced downtime.

Please ask us how our extensive custom design and fabrication capabilities can assist you in providing unique solutions for your process requirements.

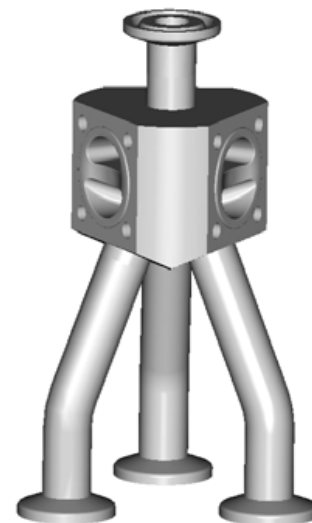
Exceptional Capabilities

Customized and hybrid valve assemblies for unusual applications have been aquasyn's forte since its inception. We don't think anyone does it quite as well as us. Call us when you need it done right and on time... the first time!



Unique Applications

- Special end connections, configurations and material
- Innovative designs assist in providing application specific process solutions
- Sole source responsibility from concept through production
- CAE design in state of the art 3-D formats in SolidWorks & AutoCAD
- Fully detailed drawings for review and approval
- Rapid customer turnaround with concepts, drawings and production
- Exotic materials a specialty
- Expert fabrication, welding, and polishing by skilled craft persons
- Advanced machining capabilities optimize manufacture of complex assemblies



Diaphragms



Features

- Full traceability
- Certificates of conformance supplied with all diaphragms
- Molded in the open position for long service life
- Material options include
 - EPDM
 - PTFE faced (TFM 1700)/EPDM
 - Silicone
 - Viton
- All aquasyn diaphragms conform to USP Class VI specifications, ASME-BPE and FDA Title 21, CFR Part 177 indirect food additives, polymers section 177.2600 - Rubber articles intended for repeated use and has passed the CFR 21 177.2600 extractables test

Precision Materials

aquasyn's diaphragms are unlike any others in the bio-pharmaceutical industry. Our diaphragms are precision molded to tight tolerances for superior service life and crafted of approved materials which will not sacrifice the purity of the most sensitive of processes.

Certification

Diaphragms used by aquasyn are fully traceable and are manufactured of USP and/or FDA compliant materials. Certificates of Conformance and lot traceable information are supplied as standard procedure

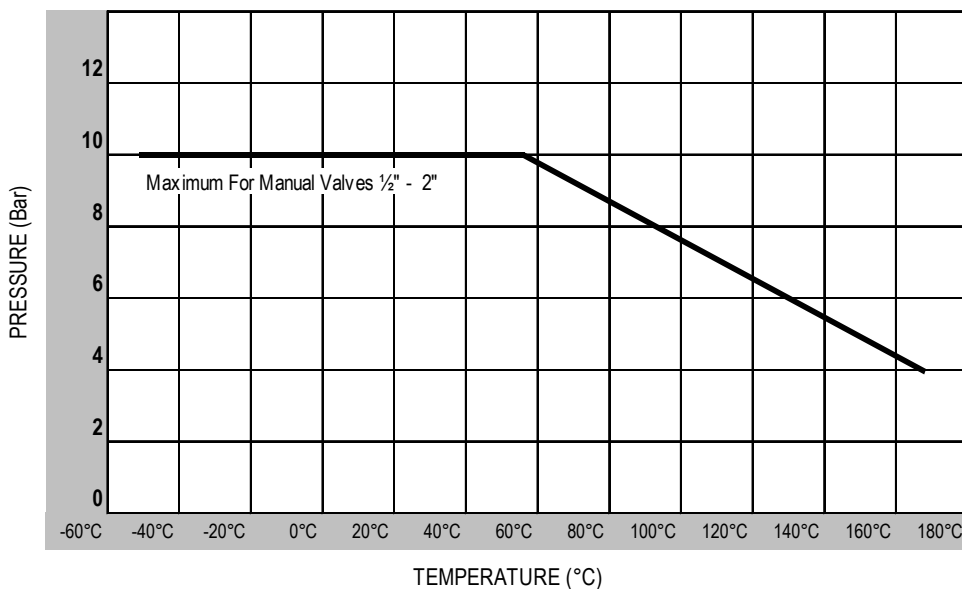


Diaphragm Temperature Range

-70°C	EPDM RUBBER	130°C
-20°C	RUBBER / PTFE	150°C

These temperature ranges are for guidance only under static conditions.

Valve Body Temperature/Pressure Relationship



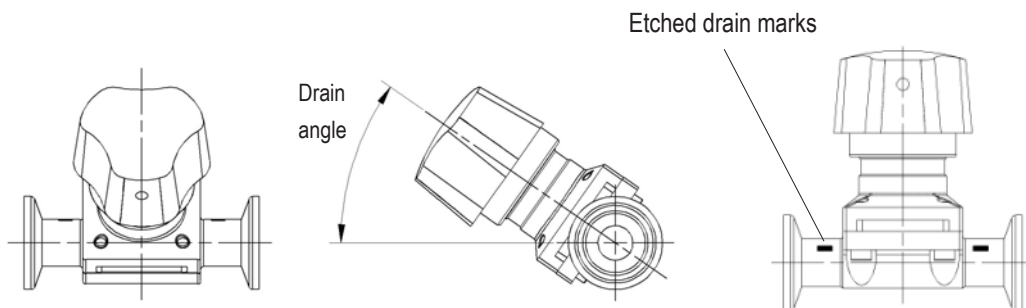
Maximum Rating Working Pressure (Bar) For Manually Operated Valves

Valve Size	1/4"	3/8"	1/2"	3/4"	1"	1 1/2"	2"
Pressure (Bar)	10	10	10	10	10	10	10

It is essential with any valve selection to provide accurate process and operating details.

Optimum Self Drain Angles

Valve Size	Self Drain Angle
1/4"	41°
3/8"	30°
1/2"	25°
3/4"	18°
1"	30°
1½"	25°
2"	23°

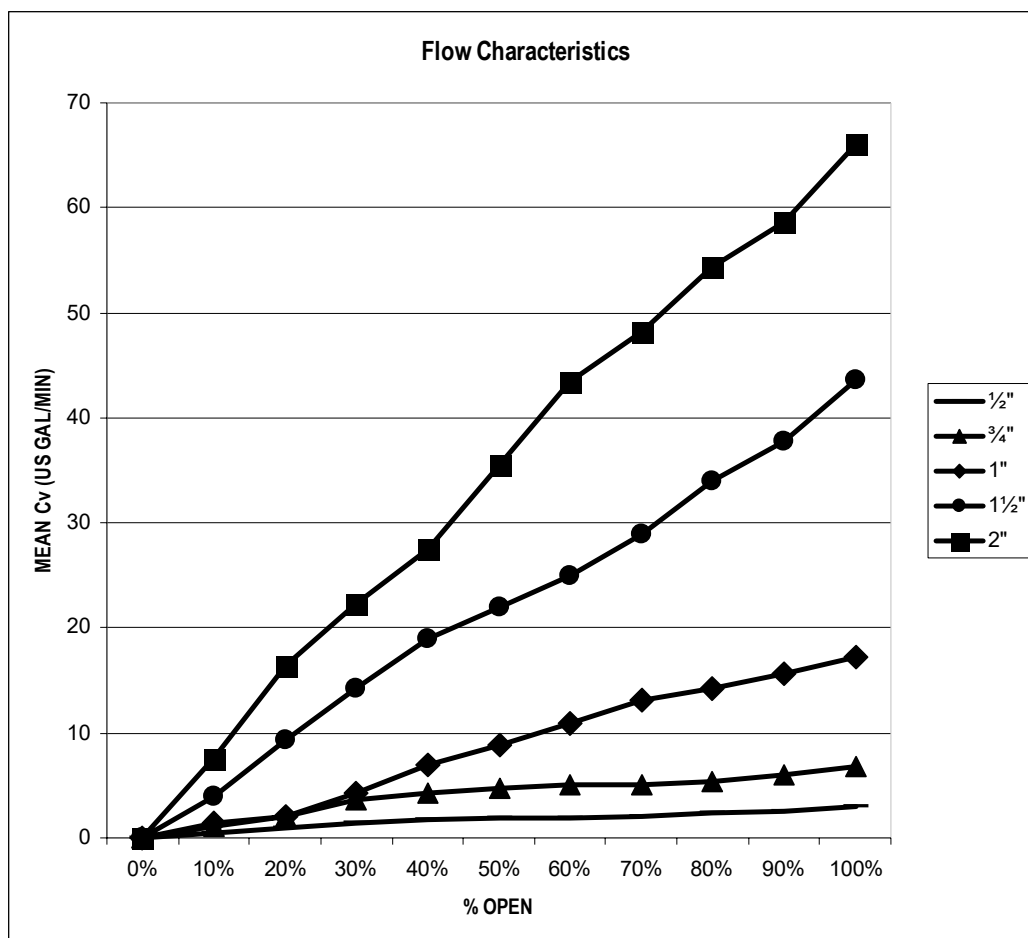


Flow Co-Efficients (Cv Data)

2-Way Valves

Valve Size	% Open Cv Value										
	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
1/2"	0	0.5	1	1.4	1.7	1.9	1.9	2	2.3	2.6	3
3/4"	0	1.1	2	3.7	4.3	4.8	5	5	5.4	6	6.8
1"	0	1.4	2.1	4.3	6.9	8.8	10.9	13.1	14.2	15.6	17.3
1½"	0	4	9.3	14.2	18.9	22	25	28.9	34	37.8	43.6
2"	0	7.6	16.5	22.3	27.5	35.6	43.5	48.2	54.3	58.6	66

Tolerance +/- 10% Cv Units - US gallons/minute



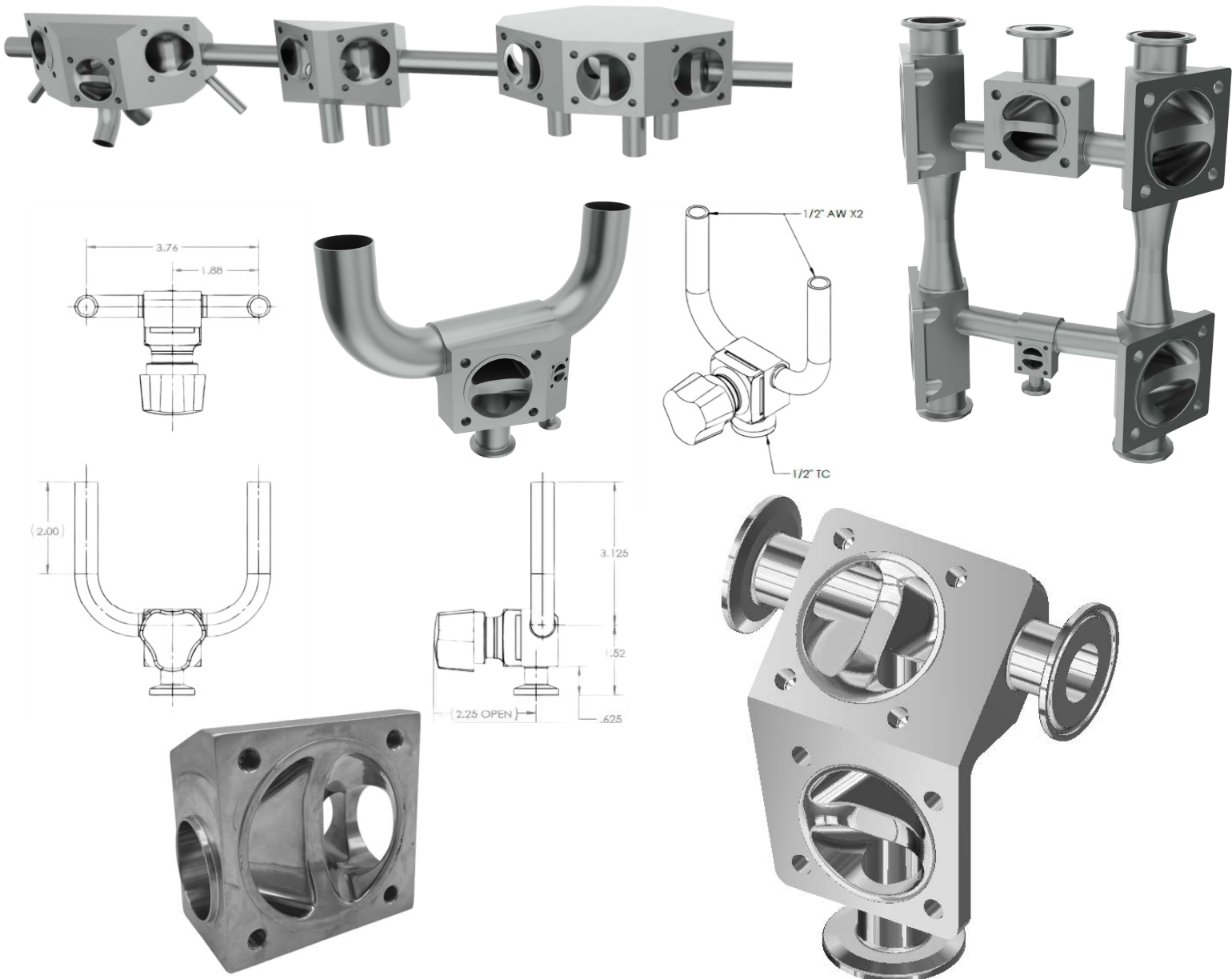
Design and Production Capability

Design Capabilities

- High end CAE design
- Solidworks & AutoCAD
- CAD/CAM Software
- Shown here are some examples of Aquasyn's 3D Design capabilities

Production Features

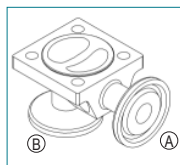
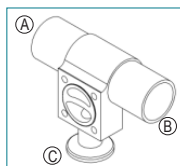
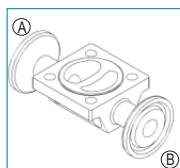
- Orbital welding
- Polishing & Electropolishing
- High Volume production capability
- State of the art 5-axis machining centers
- Products made in the USA, with your satisfaction as our ultimate goal



Ordering Information

Standard Valves, U-Bends, Tee Bodies, Ported Valves and Valbows®

Type	Size	Material	Finish	Outlet A	Outlet B	Outlet C (leave blank if only 2 outlets)	Diaphragm	Operation																																																																																																																																																																																																		
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Operation	Code																																																																																																																																																																																																									
Standard Manual Bonnet	16																																																																																																																																																																																																									
O-Ring Sealed Manual Bonnet	17																																																																																																																																																																																																									
Pneumatic Actuator N/O	18																																																																																																																																																																																																									
Pneumatic Actuator N/C	19																																																																																																																																																																																																									
Submersible Bonnet Assembly	21																																																																																																																																																																																																									



Examples

A 24 H 4 AG AG E 19

Straight Thru Valve

Type: 2-Way Valve
 Size: 1 1/2"
 Material: Hastelloy¹
 Finish: 25Ra/Electropolished
 Outlet A: 1 1/2" Sanitary Clamp
 Outlet B: 1 1/2" Sanitary Clamp
 Diaphragm: EPDM
 Operation: Actuator Normally Closed (N/C)

GAP2 08 L 8 AC AC AC P 16

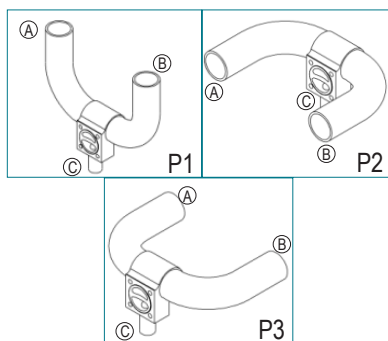
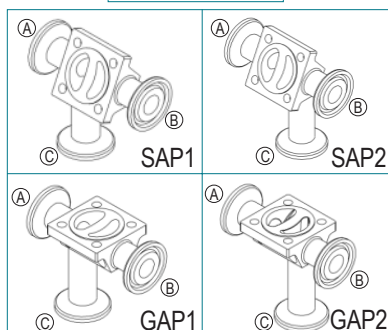
GMP Access Port

Type: GMP Access Port Right Side (GAP2)
 Size: 1/2"
 Material: 316L Stainless Steel
 Finish: 25Ra (No Electropolish)
 Outlet A: 1/2" Sanitary Clamp
 Outlet B: 1/2" Sanitary Clamp
 Outlet C: 1/2" Sanitary Clamp
 Diaphragm: PTFE
 Operation: SS Manual Bonnet Assembly

P1 12 L 2 11 11 AD S 16

Point of Use Valve

Type: Point of Use (Orientation 1 - 0°)
 Size: 3/4"
 Material: 316L Stainless Steel
 Finish: 15Ra/Electropolished
 Outlet A: 1" Tubing
 Outlet B: 1" Tubing
 Outlet C: 3/4" Sanitary Clamp
 Diaphragm: Silicone
 Operation: SS Manual Bonnet Assembly



¹Hastelloy is a trademark of Haynes International
²AL6XN is a trademark of Allegheny Ludlum

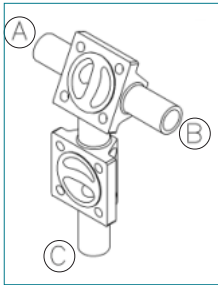
Ordering Information

Valve to Valve Combinations

Type	1st Valve	Material	Finish	2nd Valve	Outlet A	Outlet B	Outlet C	Diaphragm1	Operation 1	Diaphragm2	Operation 2
Valve Type Code	Size Code	Material Code	ASME BPE Finish Code	Size Code	Outlet A Code	Outlet B Code	Outlet C Code	Diaphragm Code	Operation Code		
Steril Access Valve Combo see fabrication selection sheet on page 16	SAL1 1/4" 04 SAL2 3/8" 06 SAL3 1/2" 08 SAL4 3/4" 12 SAL5 1" 16 SAL6 1 1/2" 24 SAR1 2" 32 SAR2 2 1/2" 40 SAR3 3" 48 SAR4 4" 64	316L Hastelloy ¹ AL6XN ²	L H A	10Ra/EP 1 1/4" 04 15Ra/EP 2 1/2" 08 20Ra/EP 3 3/4" 12 25Ra/EP 4 1" 16 10Ra 5 1 1/2" 24 15Ra 6 2" 32 20Ra 7 2 1/2" 40 25Ra 8 3" 48	Standard Clamp 1/4" Sanitary Clamp AA 1/4" .049 wall OD Tube 17 3/8" Sanitary Clamp AB 3/8" .049 wall OD Tube 18 1/2" Sanitary Clamp AC 1/2" .065 wall OD Tube 09 3/4" Sanitary Clamp AD 3/4" .065 wall OD Tube 10 1" Sanitary Clamp AE 1" .065 wall OD Tube 11 1 1/2" Sanitary Clamp AG 1 1/2" .065 wall OD Tube 12 2" Sanitary Clamp AH 2" .065 wall OD Tube 13 2 1/2" Sanitary Clamp AJ 2 1/2" .065 wall OD Tube 14 3" Sanitary Clamp AK 3" .065 wall OD Tube 15 4" Sanitary Clamp AL 4" .083 wall OD Tube 08			EPDM E PTFE P Silicone S Viton V	Standard Manual Bonnet 16 O-Ring Sealed Manual Bonnet 17 Pneumatic Actuator N/O 18 Pneumatic Actuator N/C 19 Submersible Bonnet Assembly 21		
GMP Valve Combination see fabrication selection sheet on page 16	HGV1 HGV2 HGV3 HGV4 VG1 VG2 VG3 VG4				Step Up Clamps 1/4" to 1/2" Sanitary Clamp AP 1/4" Hosebarb HA 3/8" to 1/2" Sanitary Clamp AT 3/8" Hosebarb HB 1/2" to 1" Sanitary Clamp AY 1/2" Hosebarb HC 1/2" to 1 1/2" Sanitary Clamp AZ 3/4" Hosebarb HD 3/4" to 1" Sanitary Clamp BA 3/4" to 1 1/2" Sanitary Clamp BB 1" to 2" Sanitary Clamp BD 1 1/2" to 2" Sanitary Clamp BE	Standard Hosebarb Code 1/4" Hosebarb HA 3/8" Hosebarb HB 1/2" Hosebarb HC 3/4" Hosebarb HD	Reducing Hosebarb Code 3/8" to 1/4" Hosebarb HK 1/2" to 3/8" Hosebarb HL 1/2" to 1/4" Hosebarb HM 3/4" to 1/2" Hosebarb HN 3/4" to 1/4" Hosebarb HP				

SAL1 08 L 2 08 09 09 09 E 19 E 16

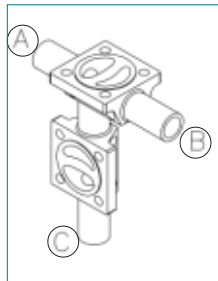
Sterile Access Valve to Valve Combination



Type	Sterile Access Valve Left Side (SAL1)
1st Valve	1/2"
Material	316L Stainless Steel
Finish	15Ra/Electropolished
2nd Valve	1/2"
Outlet A	1/2" Tubing
Outlet B	1/2" Tubing
Outlet C	1/2" Tubing
Diaphragm 1	EPDM
Operation 1	Actuator Normally Closed (N/C)
Diaphragm 2	EPDM
Operation 2	SS Manual Bonnet Assembly

HGV1 16 L 7 12 AE AE AD P 16 P 16

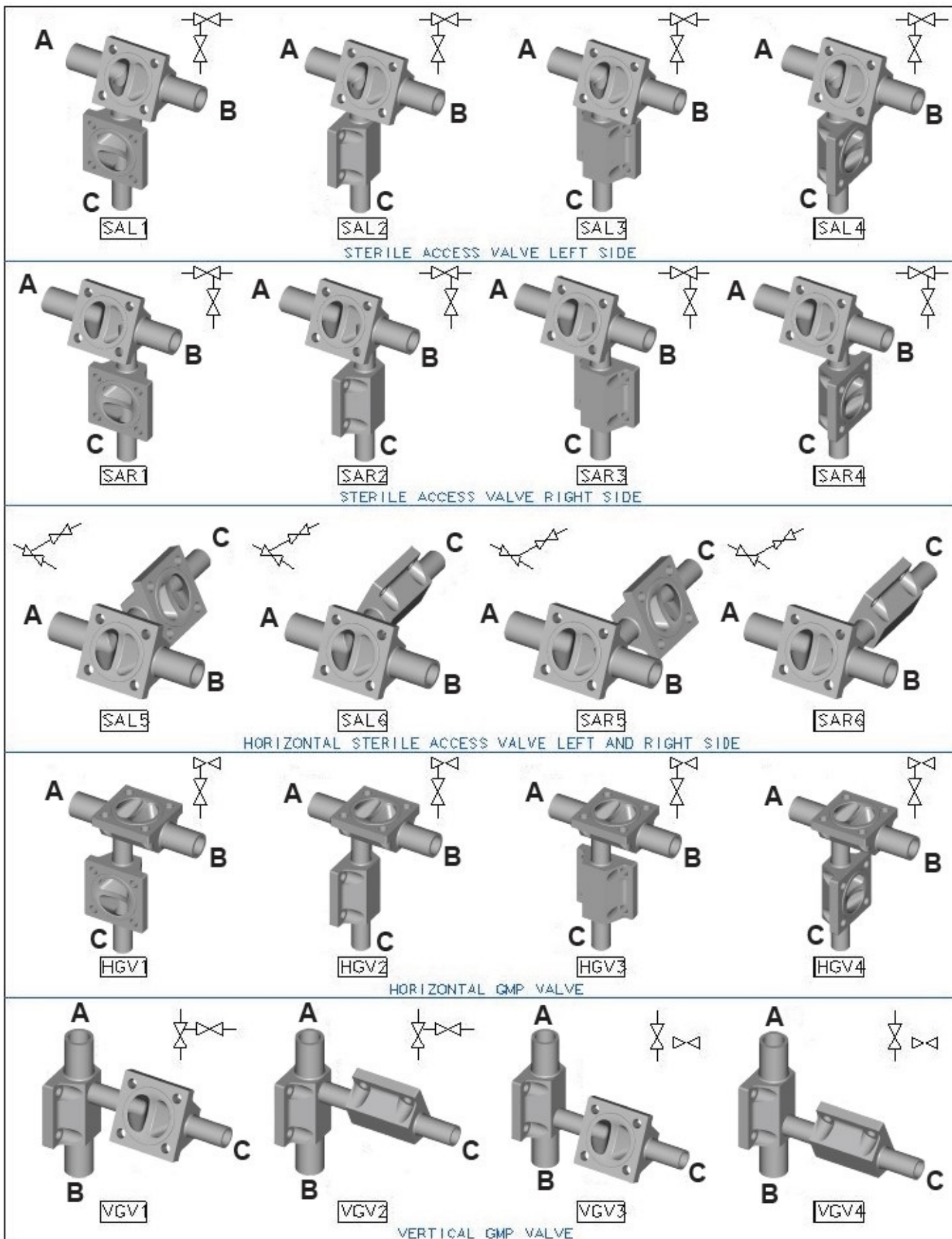
GMP Valve to Valve Combination



Type	Horizontal GMP Valve (HGV1)
1st Valve	1"
Material	316L Stainless Steel
Finish	20Ra (No Electropolish)
2nd Valve	3/4"
Outlet A	1" Sanitary Clamp
Outlet B	1" Sanitary Clamp
Outlet C	3/4" Sanitary Clamp
Diaphragm 1	PTFE
Operation 1	SS Manual Bonnet Assembly
Diaphragm 2	PTFE
Operation 2	SS Manual Bonnet Assembly

¹Hastelloy is a trademark of Haynes International
²AL6XN is a trademark of Allegheny Ludlum

Fabrication Selection Chart



Sampling / Bleed Valves

An Industry Standard

The aquasyn sample and bleed valves can be supplied in any number of configurations with options involving body type, end connections and surface finish.

aquasyn's innovative design capabilities set us apart. The compact and economical design features robust construction, precision machining and state of the art surface finishes with ASME-BPE compliant chemistry. All are machined from 316L austenitic stainless steel bar stock. No castings are used whatsoever, and all are fully traceable with material test reports (MTRs) and heat numbers provided as standard procedure.

Features:

- 316L standard bodies
- Optional material alternatives
- 316L Stem with TFM Sealing Tip
- Crevice free chamber
- Two piece handle
- USP Class VI Seal
- Rising stem with central indicator
- No tools necessary- easy maintenance
- Less than 1 turn fully open/closed
- Simple design and operation

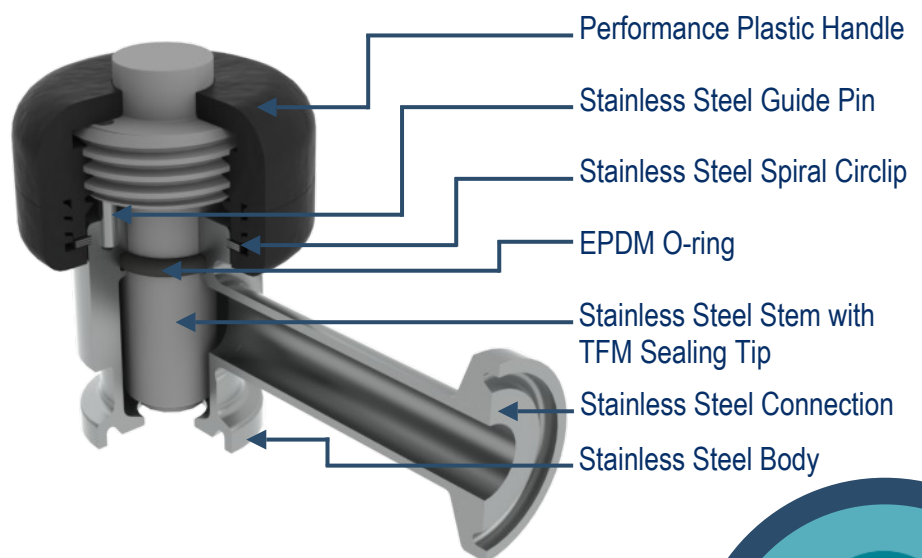


The aquasyn® Difference

Welcome to aquasyn's vision of how a sample/bleed valve should be designed. Our valve revises the tired & flawed original design with improvements that can be evidenced at a glance. With hybridized options of your liking, we are confident that we can execute your desires for options or further improvements better than any other company. Our integrated manufacturing capabilities ensure that you won't be charged for these improvements the way you might by others. Take a look to see what you have been missing.

Applications:

- Vent Drain Valve
- Sampling
- Housing / Pump Air Bleed
- Transfer Panel Safety / Drain Valve
- Bleeding systems



aquasyn LLC

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Web: www.aquasyn.com

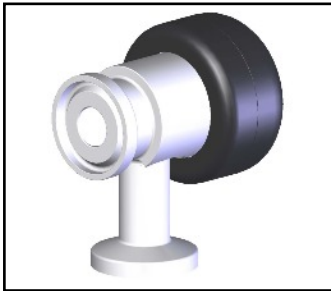
E-mail: sales@aquasyn.com



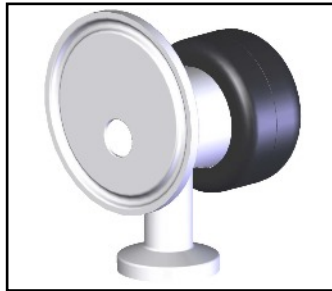
Sampling / Bleed Valves

Part Numbers

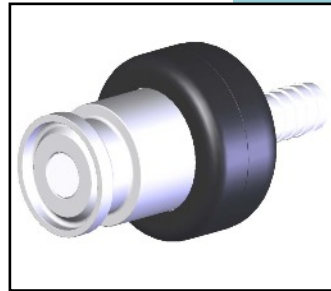
Type/Orientation Options:



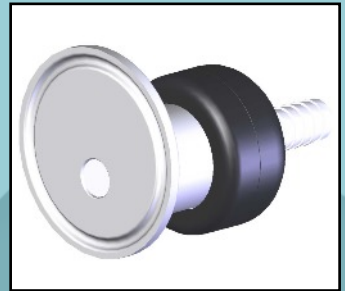
SCR
Sample / Bleed Concentric
Right Angle



SER
Sample / Bleed Eccentric
Right Angle



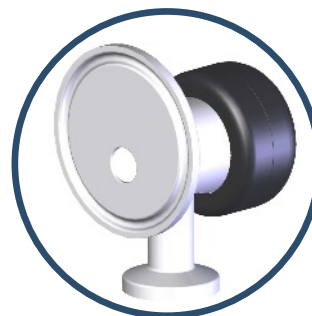
SCI
Sample / Bleed
Concentric Inline



SEI
Sample / Bleed
Eccentric Inline

Type	Inlet Orifice	Body Material	Surface Finish	Inlet Connection	Outlet Connection	Seal	Operation
---	--	-	-	--	--	-	--
↓	↓	↓	↓	↓	↓	↓	↓
SCR	06 - .370"	L - SS 316L	1 - 10Ra/EP	AC - 1/2" Sanitary Clamp	AA - 1/4" Sanitary Clamp	PTFE	16 - Manual
SER		H - Hastelloy ¹	2 - 15Ra/EP	AD - 3/4" Sanitary Clamp	AB - 3/8" Sanitary Clamp		
SCI		A - AL6XN ²		AE - 1" Sanitary Clamp	AC - 1/2" Sanitary Clamp		
SEI				AG - 1 1/2" Sanitary Clamp	HA - 1/4" Hosebarb		
				AH - 2" Sanitary Clamp	HB - 3/8" Hosebarb		
				AJ - 2 1/2" Sanitary Clamp	HC - 1/2" Hosebarb		
				AK - 3" Sanitary Clamp	17 - 1/4" Tubing		
				AL - 4" Sanitary Clamp	18 - 3/8" Tubing		
					09 - 1/2" Tubing		

Example - SER 06 L 2 AE AC P 16	
Type	- Eccentric Sample Valve With Right Angle
Inlet Orifice	- .370"
Body Material	- Stainless Steel 316L
Surface Finish	- 15Ra / Electropolished
Inlet Connection	- 1" Sanitary Clamp
Outlet Connection	- 1/2" Sanitary Clamp
Seal	- TFM
Operation	- S/S Manual Bonnet Assembly



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²AL6XN is a trademark of Allegheny Ludlum



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Web: www.aquasyn.com

E-mail: sales@aquasyn.com

Tank Bottom Valves

Machined Design Solutions

aquasyn's range of tank bodies have been developed and designed with existing customers to meet all your system needs.

By attentively comprehending our customers' needs and collaborating closely with them to address their system challenges, we have successfully developed the most comprehensive and design-centric tank valve range offered by any manufacturer.

Available in two styles, our tank valves offer something that will meet both your budgetary and process needs.

Available in Two Styles:

- Welded Flange

Sizes range from 1/4" to 4"

- Tri-Tank

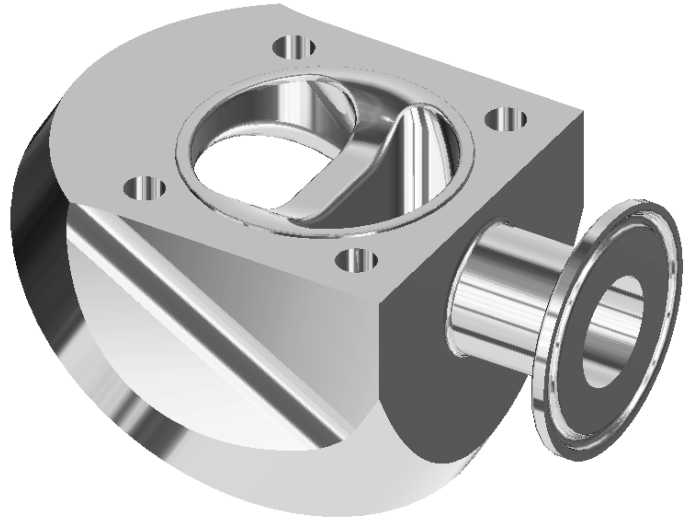
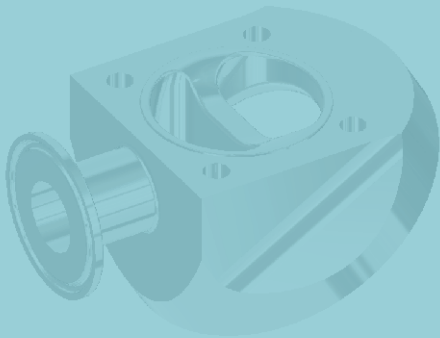
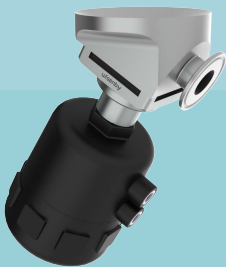
For Sizes 1/4" to 1/2"

-Connection Size: 1.5" TC & Up

For Size 3/4"

-Connection Size: 2" TC & Up

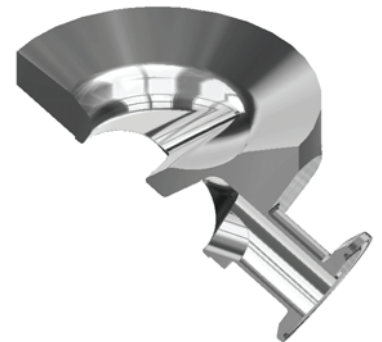
Other Sizes Available on Request



Welded Flange

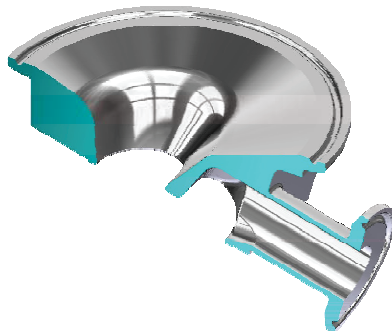
aquasyn's original tank bottom body, available in sizes 1/4" to 4" has been re-engineered. Originally a bulky item, it has been redesigned to be a more compact unit. Machined from bar stock the welded flange option is available in a variety of materials including Hastelloy and AL6XN.

Also, the new design has meant that the weir face has been moved closer to the weld flange and the chamber between the weir and flange has been opened to ensure that stagnant fluid in the bottom of the vessel is eliminated.



Tri-Tank

Similar in design to the welded flange tank body, but with a tri-clamp connection. This valve is perfect for sampling from vessels or in situations where vessels regularly require stripping and cleaning. Available in sizes 1/4" to 4" with various tri-clamp connections. We can supply a combination that best suits your requirements and we can also produce customized solutions utilizing different connection types.



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Terms and Conditions

These Terms and Conditions shall constitute the sole and exclusive Agreement ("Agreement") in regard to the goods purchased by Purchaser from aquasyn LLC, a Nevada limited liability company ("aquasyn").

1. Purchaser is solely responsible for determining whether the goods ordered and purchased from aquasyn are suitable for their intended application. aquasyn makes no representation or warranty concerning the suitability of any goods for any particular project or application. aquasyn has no control over the actual use of the goods purchased and, therefore, shall have no liability. Purchaser shall be solely responsible and assumes all risk of loss arising out of or relating to the use of the goods purchased. Purchaser shall be solely responsible for developing a maintenance schedule for the goods purchased. Any statements by aquasyn or its employees, representatives, consultants or advisors are only general comments and shall not constitute recommendations, representations, warranties, binding agreements or anything that would cause aquasyn to be liable for any reason.

2. All prices exclude excise, sales, use, G.S.T., or similar taxes, freight, other delivery expenses, insurance charges and duties, all of which shall be borne by Purchaser.

Any notice canceling or rescheduling any portion of a purchase order must be in writing and, unless such notice is received by aquasyn at least fourteen (14) days prior to the scheduled shipment date, Purchaser shall be subject to aquasyn's standard cancellation, rescheduling and restocking charges and policies in effect from time to time.

4. Shipment shall be F.O.B. at aquasyn's warehouse in Carson City, Nevada. Purchaser assumes all risk of loss upon delivery of the goods by aquasyn to Purchaser or its agents or shippers at aquasyn's warehouse. aquasyn reserves the right to make deliveries in installments. All such installments shall be separately invoiced and paid for when due without regard to subsequent deliveries. Delay in delivery of any installment shall not relieve Purchaser of its obligation to accept remaining deliveries. Purchaser shall have seven (7) days from the date of delivery within which to notify aquasyn of any nonconforming goods, defective materials, workmanship or shortages in the goods delivered. No goods may be returned unless the Purchaser notifies aquasyn within said seven (7) day time period and aquasyn authorizes the return. All returned goods must be shipped freight prepaid by Purchaser. All shipping and restocking charges on any goods improperly rejected shall be paid by Purchaser.

5. On approved credit, Purchaser shall pay aquasyn for all goods delivered to Purchaser within thirty (30) days of delivery by aquasyn. In the absence of approved credit, all goods shall be paid for in cash on delivery in advance unless the Purchaser and aquasyn expressly agree otherwise in writing. All references to money amounts herein, unless otherwise specified, shall be in United States currency. All payments shall be made in United States dollars at the closing rate of exchange for the United States dollar at the primary bank of aquasyn on the day preceding the date on which payment is made to aquasyn as required by this Agreement. Failure to make payment pursuant to the terms provided for herein shall constitute a default by Purchaser which shall give aquasyn the right to elect to terminate its obligation to ship further goods to Purchaser or request adequate assurances from Purchaser. If aquasyn requests adequate assurances from Purchaser, aquasyn shall have the sole and absolute discretion as to whether such assurances, if any, are adequate. aquasyn reserves the right to reject orders and withhold shipment in the event Purchaser's account is past due. Payments past due shall bear interest on the daily balance at the rate of one and one-half percent (1.5%) per month (18% APR) or the maximum rate permitted by law, whichever is lower.

6. DISCLAIMER AND LIMITATION OF LIABILITY. AQUASYN GRANTS NO WARRANTIES OR CONDITIONS, EXPRESS, IMPLIED, STATUTORY OR OTHERWISE, REGARDING THE GOODS, THEIR FITNESS FOR ANY PURPOSE, QUALITY OR MERCHANTABILITY ALL OF WHICH ARE HEREBY DISCLAIMED. AQUASYN SHALL NOT BE LIABLE FOR ANY SPECIAL, CONSEQUENTIAL, PUNITIVE, INCIDENTAL OR INDIRECT DAMAGES, LOST PROFITS, THE COSTS OF PROCUREMENT OF SUBSTITUTE PRODUCTS OR SERVICES HOWEVER CAUSED, OR ON ANY THEORY OF LIABILITY ARISING IN ANY WAY OUT OF THIS AGREEMENT. PURCHASER

AGREES THAT AQUASYN'S LIABILITY UNDER THIS AGREEMENT, REGARDLESS OF THE FORM OF ACTION, SHALL IN NO EVENT EXCEED THE PRICE PAID BY THE PURCHASER FOR THE SUBJECT GOODS. THIS LIMITATION SHALL APPLY EVEN IF AQUASYN HAS BEEN ADVISED IN ADVANCE OF THE POSSIBILITY OF SUCH DAMAGES AND NOTWITHSTANDING ANY FAILURE OF ESSENTIAL PURPOSE OF ANY LIMITED REMEDY PROVIDED HEREIN.

7. aquasyn shall not be responsible for any delays or failure to perform caused by government orders or requirements, transportation conditions, labor or material shortages, supplier delays, strikes, riots, fires, weather, acts of God, terrorist acts, or any other cause beyond the reasonable control of aquasyn and aquasyn's performance shall be excused and this Agreement shall be deemed suspended during the continuance of such prevention and for a reasonable time thereafter. If the output or operations of aquasyn or its suppliers is reduced by any such cause, then aquasyn may allocate goods among its customers in a manner and to an extent that aquasyn deems equitable in its sole and absolute discretion.

8. The relationship of aquasyn and Purchaser established by this Agreement is that of vendor and purchaser and nothing contained herein shall be construed so as to create a partnership, joint venture or franchisor-franchisee relationship.

9. The provisions set forth herein, may not be supplemented, modified or amended in any manner, except by an instrument in writing stating that it is a supplement, modification or amendment of these provisions and signed by each party hereto. The terms and conditions on any purchase order forms issued by Purchaser shall not be deemed to be a part of this Agreement and shall not be deemed to modify or supplement this Agreement in any way, notwithstanding the fact that aquasyn may acknowledge or otherwise approve such purchase orders. No waiver of any of these provisions shall be deemed or constitute a waiver of any other provision, whether or not similar, nor shall any waiver constitute a continuing waiver. No waiver shall be binding unless executed in writing by the party making the waiver.

10. In any action arising out of or relating to the terms, conditions, interpretation, construction or enforcement of this Agreement, the prevailing party in such action shall be entitled, in addition to all other relief awarded therein, to its actual attorney's fees paid or incurred. Any and all controversies claims and disputes arising out of or relating to this Agreement, or the breach thereof, shall be settled by binding arbitration in the County of Carson City, State of Nevada, in accordance with the Commercial Arbitration Rules of the American Arbitration Association then in effect. The arbitration shall be conducted by one (1) arbitrator who is a retired judge or an attorney licensed to practice law in Nevada with at least fifteen (15) years commercial law experience. The arbitration award made in accordance with these provisions shall be final and binding and not subject to appeal. The arbitrator's award shall be in the form of findings of fact and conclusions of law. Judgment may be entered to enforce the award in any court of competent jurisdiction and the party against whom such award is made waives all rights of objection to such enforcement. The prevailing party in any arbitration shall be entitled to an award of its attorneys' fees.

11. Neither party hereto, nor any of their employees, agents or representatives has made any statements, promises or agreements verbally or in writing in conflict with the terms set forth herein. Any and all representations by either of the parties or their employees, agents or representatives made during negotiations, which representations are not contained herein, shall not be binding upon either of the parties hereto. This Agreement contains the entire agreement between the parties. Time is of the essence of this Agreement and all of the terms, provisions, covenants and conditions hereof.

12. This Agreement shall be deemed to have been made under, and shall be construed and interpreted in accordance with the laws of the State of Nevada without reference to principles of conflicts of laws. The parties expressly disclaim the provisions of the United Nations Convention for the International Sales of Goods. The English language version of this Agreement shall be controlling for all purposes. In the event that any provision hereof is deemed to be illegal or unenforceable, such a determination shall not affect the validity or enforceability of the remaining provisions, hereof, all of which shall remain in full force and effect. The rights, duties and obligations of each of the parties shall not be assigned without the consent of all the parties.



aquasyn
LLC

Due to the continuous development of our product range, we reserve the right to alter dimensions and information contained in this catalog without notice. All statements, technical information and recommendations in this catalog are for general use only. For specific applications or requirements please contact an authorized Aquasyn representative.

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