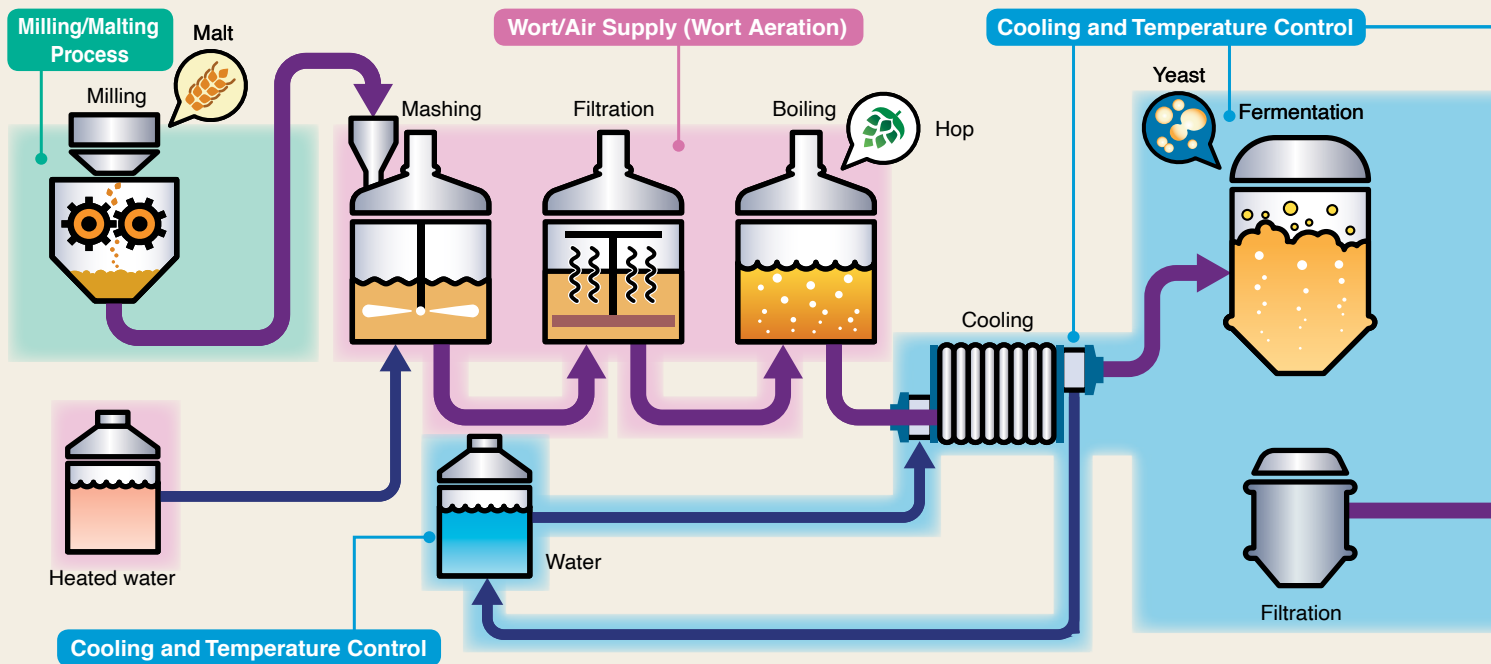


# Products for Craft Breweries



# Craft Beer Production Process

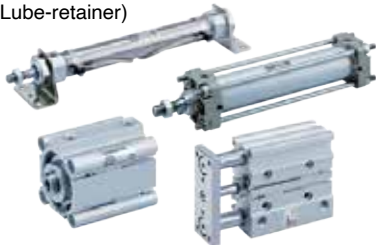


## Milling/Malting Process

p. 3

Can be used for opening and closing hatch doors in dusty environments.

Cylinder with Stable Lubrication Function (Lube-retainer)



Used for loosening up stuck grains in milling equipment.

Air Shocker



For transfer of grain material

Pulse Valve Valve for Dust Collector



\* Please refer to page 14 for details regarding applicable product usage environments.

## Wort/Air Supply (Wort Aeration)

p. 6

Can be used for supplying pressurized air for wort aeration prior to the fermentation process.

Membrane Air Dryer

It is possible to easily supply dry air using the hollow fiber membrane.



Line Filter

Mist Separator

Micro Mist Separator

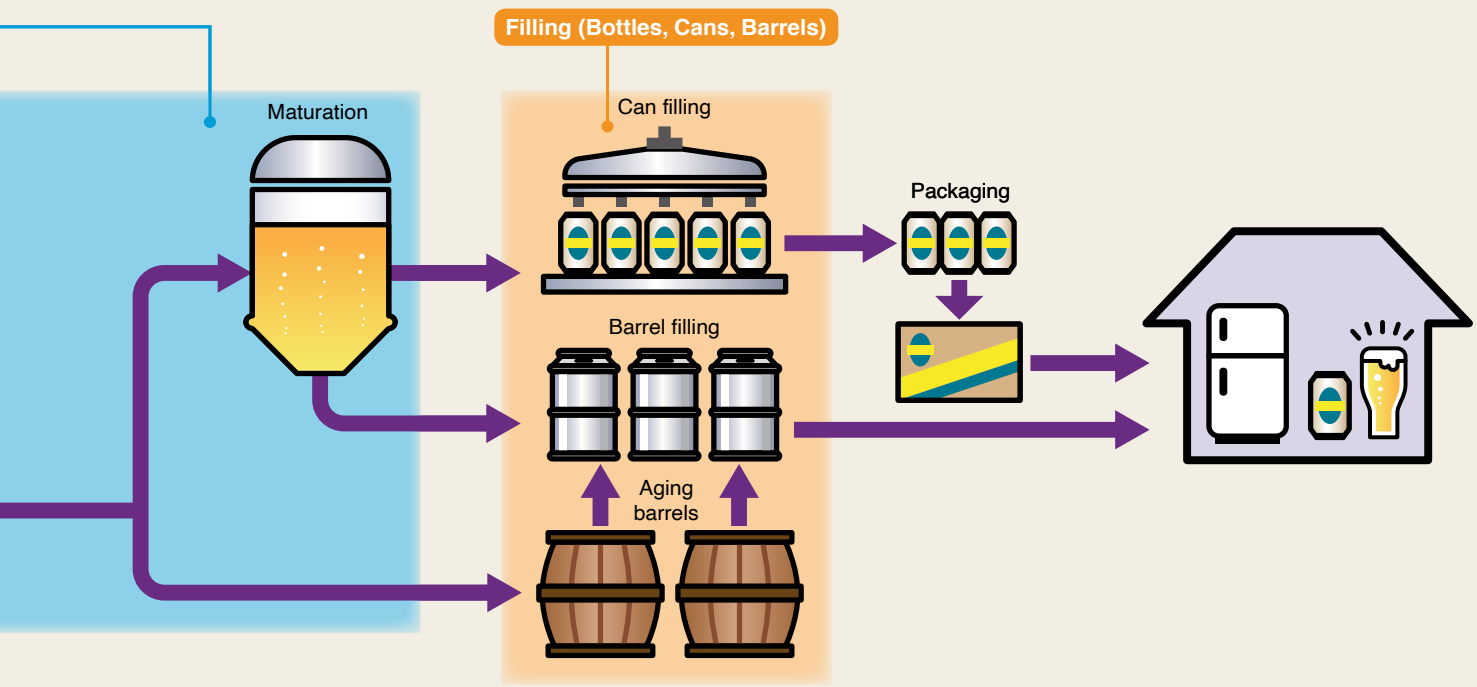
Activated Carbon Filter



Bacteria Removal Filter



\* Please refer to page 14 for details regarding applicable product usage environments.



## Cooling and Temperature Control

p. 4

For temperature control of cold liquor tanks, bright tanks, fermentation tanks, and for use with heat exchangers, etc.

Thermo-chiller



### Circulating Fluid Line Equipment

Direct Operated/  
Pilot Operated  
2-Port Solenoid Valve



S Couplers Stainless Steel Type



3-Color Display Digital Flow Switch  
for Water



\* Please refer to page 14 for details regarding applicable product usage environments.

## Filling (Bottles, Cans, Barrels)

p. 7

These products are made with stainless steel for improved corrosion resistance, hygienic design, use grease for food machinery, or use compatible materials, etc.

Hygienic Design Cylinder



Stainless Steel Cylinder



Clean Design Manifold Valve



Stainless Steel Speed Controller  
(Elbow Type)



EHEDG Compliant/Clean Design/FDA Compliant Fittings



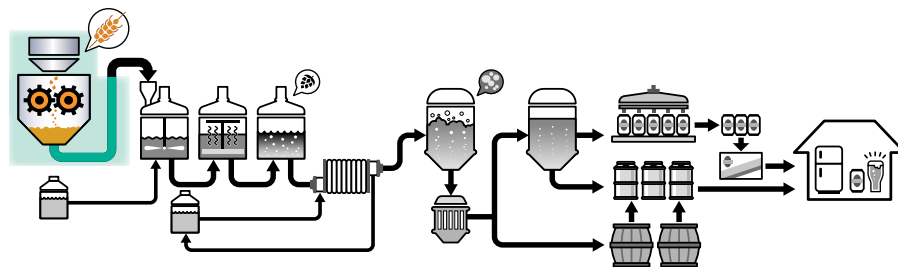
EHEDG Compliant Fittings

Clean Design Fittings

FDA Compliant Fittings

\* Please refer to page 14 for details regarding applicable product usage environments.

# Milling/Malting Process



Can be used for opening and closing hatch doors in dusty environments.

## Cylinder with Stable Lubrication Function (Lube-retainer)



- Applicable to operation in micro-powder (10 to 100  $\mu\text{m}$ )/general environments
- Durability is 4 times stronger than the standard model in micro-powder environments.
- The overall length and mounting are the same as those of the standard model. (Except for some models)
- Grease film is formed on the piston rod surface to improve durability.
- Prevents the entry of dust and foreign matter
- The number of operating cycles can be improved even in general environments.

Type	Series	Action	Bore size [mm]
Air cylinder	CM2-Z	Double acting, Single rod	20, 25, 32, 40
Air cylinder	CG1-Z	Double acting, Single rod	20, 25, 32, 40, 50, 63, 80, 100
Air cylinder	CA2-Z	Double acting, Single rod	40, 50, 63, 80, 100
Compact cylinder	CQS	Double acting, Single rod	20, 25
Compact cylinder	CQ2-Z	Double acting, Single rod	32, 40, 50, 63, 80, 100
Compact guide cylinder	MGP-Z	Double acting	20, 25, 32, 40, 50, 63, 80, 100
Dual rod cylinder/ Compact type	CXSJ	Double acting	6, 10, 15, 20, 25, 32
Dual rod cylinder	CXS	Double acting	6, 10, 15, 20, 25, 32
High power cylinder	RHC-XC93	Double acting	32, 40

Used for loosening up stuck grains in milling equipment.

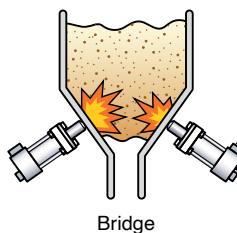
## Air Shocker XT316



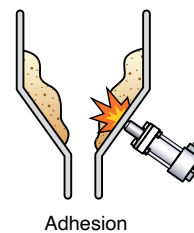
\* Please contact SMC for details.

- Pneumatic piston type shock generator

Bore size [mm]	30	40	63	80	100
Impact energy [kgm]	0.05 to 0.07	0.17 to 0.31	0.45 to 0.75	1.0 to 1.8	2.2 to 4.0
Impact cycle [cycles/min]	Max. 15				



Bridge



Adhesion

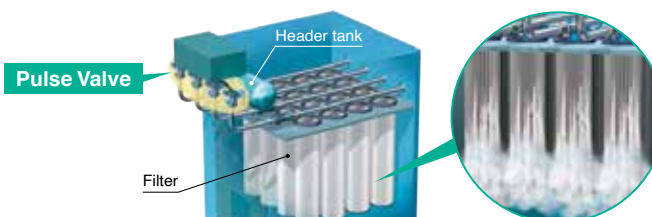
For transfer of grain material

## Pulse Valve (Valve for Dust Collector) JSXFA



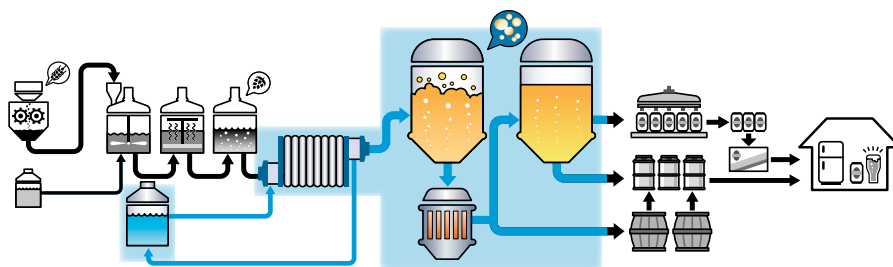
- Life: 10 million cycles or more/10 times or more
- High peak pressure and low air consumption  
Peak pressure: 15% increase  
Air consumption: 35% reduction
- Fluid temperature: -40 to 60°C

Series	Valve type	Port size	Piping	Orifice diameter [mm]
JSXFA	N.C.	3/4 (20A) 1 (25A) 1 1/2 (40A)	Compression fitting type Direct piping type (Rc, NPT, G) Immersion type	32, 40, 50





# Cooling and Temperature Control



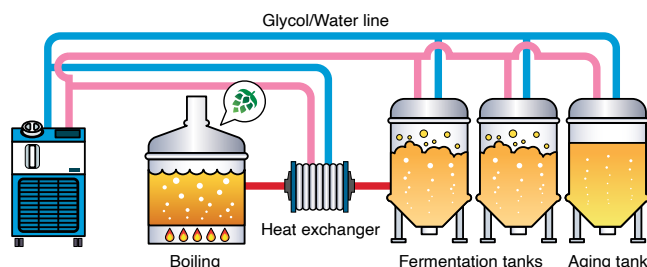
For temperature control of cold liquor tanks, bright tanks, fermentation tanks, and for use with heat exchangers, etc.

## Thermo-chiller **HRS040-A-20-T1-X135** **INR-493-010**



- Circulating fluid: Propylene glycol aqueous solution
- Set temperature:  $-10^{\circ}\text{C}$  (Lower limit)
- Cooling capacity: 0.5 kW (HRS040-A-20-T1-X135) at a circulating fluid temperature of  $-10^{\circ}\text{C}$   
1.5 kW (INR-493-010) at a circulating fluid temperature of  $-10^{\circ}\text{C}$

Series	Set temperature range	Cooling capacity Circulating fluid temperature: $-10^{\circ}\text{C}$	Temperature stability	Cooling method	Power supply	Circulating fluid	International standards
HRS040-A-20-T1-X135	$-10$ to $40^{\circ}\text{C}$	0.5 kW	$\pm 0.1^{\circ}\text{C}$	Air-cooled refrigeration	Single-phase 200 to 230 V	Ethylene glycol aqueous solution (50%)	CE (MET)
INR-493-010	$-10$ to $35^{\circ}\text{C}$	1.5 kW	$\pm 0.5^{\circ}\text{C}$		3-phase 200 V	Propylene glycol aqueous solution (31%)	—



## Circulating Fluid Line Equipment

### S Couplers Stainless Steel Type **KKA**



- Body material: Stainless steel 304
- Seal material: Fluoropolymer (Special FKM) is employed.
- Grease-free
- Check valve built in to both plug and socket
- Simple to connect and disconnect chiller

Series	Connection thread
KKA	1/8, 1/4, 3/8, 1/2, 3/4, 1, 1 1/4, 1 1/2



### Direct Operated/Pilot Operated 2-Port Solenoid Valve **JSX/JSXD**



- Body material: Stainless Steel, Seal material: EPDM for use with propylene or ethylene glycol
- Improved environmental resistance due to the stainless steel coil cover [IP67 enclosure]
- Space saving  
Compact: Valve volume reduced by 25% (Compared with the existing model),  
Lightweight: Weight reduced by 30% (Compared with the existing model)

Series	Valve type	Port size	Orifice diameter [mmφ]
JSX	N.C.	1/8, 1/4, 3/8	1.6 to 7.1
JSXD	N.C.	1/4, 3/8, 1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 32A, 40A, 50A	10 to 50



## Circulating Fluid Line Equipment

### 3-Color Display Digital Flow Switch for Water PF3W-Z/L



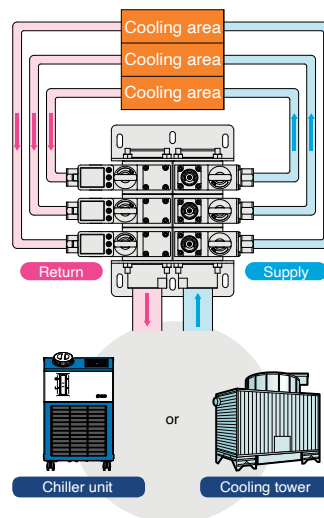
- Applicable fluid: Water, Ethylene glycol aqueous solution
- Lightweight: Max. 53% reduction (40 L/min, With temperature sensor)
- IO-Link compatible
- 3-color/2-screen display
- Compatible with the temperature sensor & flow adjustment valve
- Fluid temperature: 0 to 90°C

Series	Rated flow range [L/min]
PF3W-Z	0.5 to 4, 2 to 16, 5 to 40, 10 to 100
PF3W7-L (IO-Link compatible)	0.5 to 4, 2 to 16, 5 to 40, 10 to 100, 50 to 250

### Digital Flow Switch Manifold for Water PF3WB/C/S/R

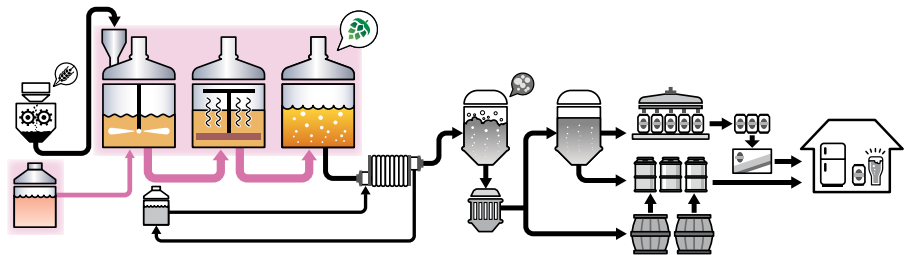


- Applicable fluid: Water, Ethylene glycol aqueous solution
- Space saving  
Footprint: Max. 85% reduction  
Weight: Max. 65% reduction
- Needs no piping:  
Work-hour for installation reduced by up to 45%
- IO-Link compatible
- 3-color/2-screen display
- Fluid temperature: 0 to 90°C



Series	Rated flow range [L/min]
PF3WB Integrated type (Basic type)	0.5 to 4, 2 to 16, 5 to 40
PF3WC Integrated type (Straight type)	0.5 to 4, 2 to 16, 5 to 40
PF3WS Remote type (Supply type)	0.5 to 4, 2 to 16, 5 to 40
PF3WR Remote type (Return type)	0.5 to 4, 2 to 16, 5 to 40

# Wort/Air Supply (Wort Aeration)



Can be used for supplying pressurized air for wort aeration prior to the fermentation process.

## Membrane Air Dryer IDG□A/IDG



- HF1 compliant product  
Non grease or NSF H1 food grade grease utilized\*1 (No Prefix No.)  
\*1 Parts in contact with fluid
- It is possible to easily supply dry air using the hollow fiber membrane.
- Non-fluorocarbon
- Power supply not required
- Compatible with low dew points (−60°C)
- No vibration or heat discharge
- With a dew point indicator

Series	Outlet flow [L/min (ANR)]	Standard dew point [°C]
IDG□A/IDG	10 to 1000	−15, −20, −40, −60

## Line Filter HF1-AFF / Mist Separator HF1-AM / Micro Mist Separator HF1-AMD / Activated Carbon Filter HF1-AMK



- Non grease or NSF H1 food grade grease utilized\*1  
\*1 Parts in contact with fluid
- Modular connection type
- Compressed air purity class: ISO 8573
- Face-to-face and depth dimensions reduced by 30%
- Weight reduced by 50%
- AFF/AM□20: 0.19 kg (Existing model: 0.38 kg)
- Flow capacity increased by 50%
- No tools are required.  
Easy replacement of the element is possible.
- Transparent bowl guard (2-layer construction)
- Color-identifiable elements

Type	Series	Filtration [μm]	Oil mist concentration on the outlet side	Rated flow [L/min (ANR)]	Port size
Line filter	AFF	1.0 (Filtration efficiency: 99%)	—	300 to 1500	1/8, 1/4, 3/8, 1/2
Mist separator	AM	0.1 (Filtration efficiency: 99%)	1 (≈ 0.8 ppm) or less	300 to 1500	1/8, 1/4, 3/8, 1/2
Micro mist separator	AMD	0.01 (Filtration efficiency: 99%)	0.1 (≈ 0.08 ppm) or less	300 to 1500	1/8, 1/4, 3/8, 1/2
Activated carbon filter	AMK	—	0.003 (≈ 0.0025 ppm) or less	300 to 1500	1/8, 1/4, 3/8, 1/2

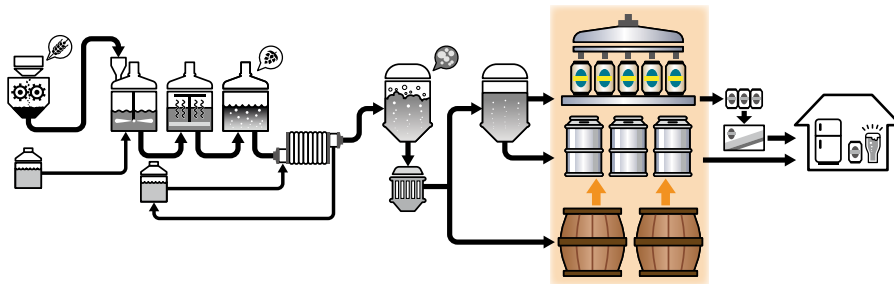
## Bacteria Removal Filter/Hollow Fiber Element SFDA



- HF2 compliant product  
Non grease or NSF H1 food grade grease utilized\*1 (No Prefix No.)  
Use of FDA compliant materials\*1 (No Prefix No.)  
\*1 Parts in contact with fluid
- Bacteria capture performance: LRV ≥ 9  
Use of FDA/Food Sanitation Law compliant materials\*1  
\*1 Parts in contact with fluid: Resin/Rubber  
Use of NSF-H1 grade lubrication for flow path  
Designed for use in applications to HACCP principles and FSSC22000 standards
- Nominal filtration rating: 0.01 μm (Filtering efficiency: 99.99%)
- Initial pressure drop: 0.03 MPa (Inlet pressure 0.7 MPa, at max. flow rate)
- Flow rate: 500 L/min (ANR)

Series	Type	Operating pressure	Filtration [μm]
SFDA	Bacteria removal filter (Bacteria removal performance: LRV ≥ 9)	Max. 1.0 MPa (For nitrogen: 0.99 MPa)	0.01 (Filtering efficiency: 99.99%)

# Filling (Bottles, Cans, Barrels)



These products are made with stainless steel for improved corrosion resistance, hygienic design, use grease for food machinery, or use compatible materials, etc.

## Improved Corrosion Resistance (Epoxy Coating)

### Modular F.R.L. Units **AC-B-X480**



- Outer layer surface: Epoxy coating
- Better visibility and environmental resistance
- Easy element replacement  
The element and the bowl are integrated.  
Replacement can be done in hand.

Combination equipment	Series	Port size	Set pressure [MPa]
Air filter, Regulator	AC20B to 60B-B-X480	1/8, 1/4, 3/8, 1/2, 3/4, 1	0.05 to 0.85 0.02 to 0.2
Air filter, Mist separator, Regulator	AC20C to 40C-B-X480	1/8, 1/4, 3/8, 1/2, 3/4	0.05 to 0.85 0.02 to 0.2
Filter regulator, Mist separator	AC20D to 40D-B-X480	1/8, 1/4, 3/8, 1/2, 3/4	0.05 to 0.85 0.02 to 0.2

#### Air Filter **AF-A**

Series	Port size	Filtration [ $\mu$ m]
AF10 to 60-A-X480	M5, 1/8, 1/4, 3/8, 1/2, 3/4, 1	5

#### Mist Separator **AFM-A**

Series	Port size	Rated flow [L/min (ANR)]
AFM20 to 40-A-X480	1/8, 1/4, 3/8, 1/2, 3/4, 1	200, 450, 1100

#### Regulator **AR-B**

Series	Port size	Set pressure [MPa]
AR20 to 60-B-X480	1/8, 1/4, 3/8, 1/2, 3/4, 1	0.05 to 0.85, 0.02 to 0.2

#### Filter Regulator **AW-B**

Series	Port size	Set pressure [MPa]	Filtration [ $\mu$ m]
AW20 to 60-B-X480	1/8, 1/4, 3/8, 1/2, 3/4, 1	0.05 to 0.85, 0.02 to 0.2	5

## Conforming to OSHA Standard: Pressure Relief 3-Port Valve with Locking Holes **VHS-X513**



- Outer layer surface: Epoxy coating
- Compliant with OSHA Standards (Occupational Safety and Health Administration Department of Labor)
- This manually operated valve can be used to prevent accidents caused by residual pressure in pneumatic lines.
- The supply and exhaust status of air flow can be confirmed at a glance.

Series	Port size	Operating pressure [MPa]
VHS20 to 50-X513	1/8, 1/4, 3/8, 1/2, 3/4, 1	0.1 to 1.0



## Filling (Bottles, Cans, Barrels)

### Improved Corrosion Resistance (Stainless Steel)

#### Stainless Steel Cylinder **CJ5-S/CDJ5-S/CG5-S/CDG5-S**



- Applicable for use in an environment with water splashing
- With auto switch (CDJ5-S series: CDJ5-S, CDG5-S series: CDG5-S)

Type	Series	Action	Bore size [mm]
Standard	CJ5-S	Double acting, Single rod	10, 16
Standard	CG5-S	Double acting, Single rod	20, 25, 32, 40, 50, 63, 80, 100
Standard	CG5W-S	Double acting, Double rod	20, 25, 32, 40, 50, 63, 80, 100

#### Stainless Steel Speed Controller (Elbow Type) **ASG**



- Material: Stainless steel 316  
Seal: Special FKM  
Seat ring: Stainless steel 303
- Applicable tubing materials:  
FEP, PFA, Nylon, Soft nylon, Polyurethane, Polyolefin

Type	Series	Port size on the cylinder side	Applicable tubing O.D.
Elbow type	ASG	M5 to 1/2	ø4 to ø12

#### Angle Seat Valve/Air Operated Type **JSB41-X1**



- Body material: Stainless steel 316L equivalent
- For steam (Can be used with air and water)
- Low pressure loss due to angle seat structure
- Space saving: Height 160 mm
- Up to 183°C (Steam), Up to 99°C (Air, Water)

Series	Valve type	Port size	Flow rate characteristics Cv/Kv
JSB41-X1	N.C.	1	28/24

#### Compact 5-Port Solenoid Valve/Plug-in Type **JSY1000/3000/5000**



- Enclosure: IP67  
D-sub connector (FW type), Terminal block box, Lead wire, Serial wiring (EX600\*1, EX250, EX260\*2)
- \*1 Excludes I/O units \*2 Excludes D-sub communication
- Size reduction possible thanks to a flow increase  
This leads to space saving, weight reduction, and a large flow rate.
- Power consumption: 0.1 W (With power saving circuit\*3), 0.4 W (Standard)
- \*3 Made to order

Series	Flow rate characteristics		Applicable cylinder size	Power consumption [W]
	4/2 → 3/5 (A/B → E)			
	C [dm³/(s·bar)]	b		
JSY1000	0.91	0.48	ø40	0.2 (With power saving circuit) 0.4 (Standard)
JSY3000	2.77	0.27	ø50	0.1 (With power saving circuit*1) *1 Made to order
JSY5000	6.59	0.22	ø80	0.4 (Standard) 0.1 (With power saving circuit*1) *1 Made to order

# Filling (Bottles, Cans, Barrels)

## Hygienic Design

### Hygienic Design Cylinder **HY□/HYD□**



- Improved water resistant air cylinder with an easily washable configuration
- 5 times the lifespan of the improved water resistant cylinder (SMC comparison)
- With auto switch (HYDB series: HYDB, HYDQB series: HYDQB, HYDC series: HYDC, HYDG series: HYDG)

Type	Series	Action	Bore size [mm]
Basic	HYB	Double acting, Single rod	20, 25, 32, 40, 50, 63, 80, 100
Basic	HYQ	Double acting, Single rod	20, 25, 32, 40, 50, 63
ISO Standard	HYC	Double acting, Single rod	32, 40, 50, 63
With guide	HYG	Double acting	20, 25, 32, 40, 50, 63

### Clean Design Manifold Valve **JSY5000-H**



- Low fluid accumulation, Easy to clean
- Large flow rate: 1,600 L/min (ANR)
- Enclosure: IP69K
- NSF-H1 grease
- External parts: FDA-compliant materials  
(Metal parts are made of stainless steel 316 with high anti-corrosion performance.)
- Wiring: Lead wire/Fieldbus type (IO-Link)

Series	Flow rate characteristics 4/2 → 5/3 (A/B → EA/EB) C [dm³/(s·bar)]	Flow rate characteristics 4/2 → 5/3 (A/B → EA/EB) b	Power consumption [W]
JSY5000-H	7.64	0.23	0.4 (Standard) 0.1 (With power-saving circuit*1) *1 Made to order

### EHEDG Compliant **KFG2H□-E**



- EHEDG certification
- Design for less residual liquid accumulation
- Achieved IP69K rating
- The rubber parts material (FKM) is compliant with the FDA (U.S. Food and Drug Administration) §177.2600.
- NSF H1-compliant paraffin grease is used.

Series	Description	Thread type
KFG2H□-E	Stainless steel 316 insert fitting	M, G thread

### Clean Design Fittings **KFG2H□-C**



- Design for less residual liquid accumulation
- Metal parts: Stainless steel 316
- The rubber parts material (FKM) is compliant with the FDA (U.S. Food and Drug Administration) §177.2600.
- NSF H1-compliant paraffin grease is used.

Series	Description	Thread type
KFG2H□-C	Stainless steel 316 insert fitting	M, G thread

# Filling (Bottles, Cans, Barrels)

## Grease for Food Processing Equipment (NSF-H1)

Air Cylinders		Series	Bore size [mm]
	Air Cylinder	CJ2-Z-XC85	10, 16
	Air Cylinder	CM2-Z-XC85	20, 25, 32, 40
	Air Cylinder	CG1-Z-XC85	20, 25, 32, 40, 50, 63, 80, 100
	Air Cylinder	CA2-Z-XC85	40, 50, 63, 80, 100
	Compact Cylinder/Compact Type	CQS-XC85	12, 16, 20, 25
	Compact Cylinder	CQ2-Z-XC85	12, 16, 20, 25, 32, 40, 50, 63, 80, 100, 125, 140, 160, 180, 200
	Stainless Steel Cylinder	CJ5-S	10, 16
	Stainless Steel Cylinder	CG5-S	20, 25, 32, 40, 50, 63, 80, 100
	Compact Guide Cylinder	MGP-Z-XC85	12, 16, 20, 25, 32, 40, 50, 63, 80, 100
	External Stainless Steel Compact Guide Cylinder	MGPM-Z-X2532	20, 25, 32, 40
	Dual Rod Cylinder/Compact Type	CXSJ-XC85	6, 10, 15, 20, 25, 32
	Dual Rod Cylinder/Basic Type	CXS-XC85	6, 10, 15, 20, 25, 32
	Hygienic Design Cylinder/Round Type	HYB-F	20, 25, 32, 40, 50, 63, 80, 100
	Hygienic Design Cylinder/Basic Type	HYQ-F	20, 25, 32, 40, 50, 63
	Hygienic Design Cylinder/ISO Standard Type	HYC-F	32, 40, 50, 63
	Hygienic Design Cylinder	HYG-F	20, 25, 32, 40, 50, 63
Solenoid Valves		Series	
	Clean Design Manifold Valve	JSY5000-H	
Compressed Air Preparation Filters		Series	
	Bacteria Removal Filter/ Hollow Fiber Element	SFDA	
Fittings for Special Environments		Series	
	FDA Compliant Fittings	KQG2-F KQB2-F KFG2-F	

# Filling (Bottles, Cans, Barrels)

## FDA (U.S. Food and Drug Administration) Compliant

\*1 Testing in compliance with Japan's Food Sanitation Law based on the 370th notice given by the Ministry of Health and Welfare in 1959

### Polyurethane Tubing TU-X214



- Complies with the FDA (U.S. Food and Drug Administration) § 177.2600 dissolution test
- Complies with the EU No 10/2011 dissolution test

Series	Tubing O.D.		Color	Fluid
	Metric size	Inch size		
TU-X214	ø4, ø6, ø8, ø10, ø12		Black, White, Red, Blue, Yellow, Green, Clear, Orange	Air, Water



### Fluoropolymer Tubing TL/TIL



- Complies with the FDA (U.S. Food and Drug Administration) § 177.1550 dissolution test
- Food Sanitation Law compliant\*1

Series	Tubing O.D.		Color
	Metric size	Inch size	
TL/TIL	ø4, ø6, ø8, ø10 ø12, ø19	ø1/8", ø3/16", ø1/4" ø3/8", ø1/2", ø3/4", ø1"	Translucent



### Fluoropolymer Tubing (PFA) TLM/TILM



- Complies with the FDA (U.S. Food and Drug Administration) § 177.1550 dissolution test
- Food Sanitation Law compliant\*1

Series	Tubing O.D.		Color
	Metric size	Inch size	
TLM/TILM	ø2, ø3, ø4, ø6, ø8, ø10 ø12, ø16, ø19, ø25	ø1/8", ø3/16", ø1/4", ø3/8" ø1/2", ø3/4", ø1", ø1 1/4"	Translucent, Black, Red, Blue



### FEP Tubing (Fluoropolymer) TH/THH



- Complies with the FDA (U.S. Food and Drug Administration) § 177.1550 dissolution test
- Food Sanitation Law compliant\*1

Series	Tubing O.D.		Color
	Metric size	Inch size	
TH/THH	ø4, ø6, ø8, ø10, ø12	ø1/8", ø3/16", ø1/4" ø3/8", ø1/2", ø3/4"	Translucent, Black, Red, Blue



### Soft Fluoropolymer Tubing TD/TID



- Complies with the FDA (U.S. Food and Drug Administration) § 177.1550 dissolution test
- Food Sanitation Law compliant\*1

Series	Tubing O.D.		Color
	Metric size	Inch size	
TD/TID	ø4, ø6, ø8, ø10, ø12	ø1/8", ø3/16", ø1/4" ø3/8", ø1/2"	Translucent



### Polyolefin Tubing TPH



- Complies with the FDA (U.S. Food and Drug Administration) § 175.300 dissolution test

Series	Applicable tubing O.D.	Color	Fluid
TPH	ø4, ø6, ø8, ø10, ø12	White, Blue, Yellow	Air, Water, etc.



# Filling (Bottles, Cans, Barrels)

## FDA (U.S. Food and Drug Administration) Compliant

### Soft Polyolefin Tubing **TPS**



- Complies with the FDA (U.S. Food and Drug Administration) § 175.300 dissolution test

Series	Applicable tubing O.D.	Color	Fluid
TPS	ø4, ø6, ø8, ø10, ø12	White, Blue, Yellow	Air, Water, etc.



### Stainless Steel 316 One-touch Fittings **KQG2-F**



- The rubber parts material (FKM) is compliant with the FDA (U.S. Food and Drug Administration) §177.2600.
- NSF H1-compliant paraffin grease is used.

Series	Applicable tubing	Connection thread
KQG2-F	Metric/Inch size	M, R, Rc, UNF, NPT, G*1 *1 ISO 16030 compliant



### Metal One-touch Fittings **KQB2-F**



- The rubber parts material (FKM) is compliant with the FDA (U.S. Food and Drug Administration) §177.2600.
- NSF H1-compliant paraffin grease is used.

Series	Applicable tubing	Connection thread
KQB2-F	Metric/Inch size	M, R, Rc, UNF, NPT, G*1 *1 ISO 16030 compliant



### Stainless Steel 316 Insert Fittings **KFG2-F**



- The rubber parts material (FKM) is compliant with the FDA (U.S. Food and Drug Administration) §177.2600.
- NSF H1-compliant paraffin grease is used.

Series	Applicable tubing	Connection thread
KFG2-F	Metric/Inch size	R, Rc, NPT, G*1, *2 *1 Swivel elbow only *2 ISO 16030 compliant



### EHEDG Compliant **KFG2H□-E**



- EHEDG certification
- Design for less residual liquid accumulation
- Achieved IP69K rating
- The rubber parts material (FKM) is compliant with the FDA (U.S. Food and Drug Administration) §177.2600.
- NSF H1-compliant paraffin grease is used.

Series	Description	Thread type
KFG2H□-E	Stainless steel 316 insert fitting	M, G thread



### Clean Design Fittings **KFG2H□-C**



- Design for less residual liquid accumulation
- Metal parts: Stainless steel 316
- The rubber parts material (FKM) is compliant with the FDA (U.S. Food and Drug Administration) §177.2600.
- NSF H1-compliant paraffin grease is used.

Series	Description	Thread type
KFG2H□-C	Stainless steel 316 insert fitting	M, G thread





# Filling (Bottles, Cans, Barrels)

## Fieldbus System (Wired/Wireless)

### Industrial Device Communication Equipment EX600

EX600



- Supports digital inputs/outputs, analog inputs/outputs, and IO-Link masters
- Various connectors available:  
M12 connector, M8 connector, D-sub connector, Spring type terminal block
- \*1 The applicable protocols differ depending on the series. For details, refer to the catalog of each series.

Series	Enclosure	Communication protocol*1	Applicable valve
EX600	IP67	EtherNet/IP™ EtherCAT PROFINET PROFIBUS DP DeviceNet™ CC-Link Ethernet POWERLINK (Made to order) Modbus TCP (Made to order) CC-Link IE Field (Made to order)	JSY1000, 3000, 5000 (Plug-in) SY3000, 5000, 7000 (Plug-in) SV1000, 2000, 3000 VQC1000, 2000, 4000, 5000 S0700 (IP40)



### Industrial Device Communication Equipment EX500

EX500



- Decentralized valve installation is possible.
- 2 types of decentralized systems

Description	Number of inputs/outputs	Number of valve manifold and input unit connections	Branch cable length
Gateway decentralized system 2	128 inputs/128 outputs	Max. 16 units	Max. 20 m
Gateway decentralized system	64 inputs/64 outputs	Max. 8 units	Max. 10 m

\*1 The applicable protocols differ depending on the series. For details, refer to the catalog of each series.

Series	Enclosure	Communication protocol*1	Applicable valve
EX500	IP67	EtherNet/IP™ PROFINET PROFIBUS DP	SY3000, 5000, 7000 (Plug-in) VQC1000, 2000, 4000, 5000 SV1000, 2000, 3000 S0700 (IP40)



### Wireless System EX600-W



- Usable even in welding environments
- Noise resistance  
Uses the 2.4 GHz ISM frequency band  
Frequency hopping: Every 5 ms
- High-speed connection: From power supply ON to start of communication: Min. 250 ms
- Communication response  
(Signal response time): 5 ms
- Communication cables not required
- Number of I/O points: Max. 1280 inputs/1280 outputs

Series	Enclosure	Communication protocol*1	Applicable valve
EX600-W	IP67 equivalent	EtherNet/IP™ PROFINET	SY3000, 5000, 7000 (Plug-in) SV1000, 2000, 3000 S0700 (IP40) VQC1000, 2000, 4000, 5000



### Wireless System Compact Remote EX600-W



- Applicable to existing wireless systems
- Compact and lightweight  
Area: Approx. 61% reduction\*1 (59.8 cm<sup>2</sup> ← 155 cm<sup>2</sup>)  
Volume: Approx. 86% reduction\*1 (159 cm<sup>3</sup> ← 1,139 cm<sup>3</sup>)  
Weight: Approx. 87% reduction\*1 (130 g ← 965 g)
- \*1 For the e-CON type (Compared with the existing remote, M8 connector/digital 8 inputs specification)
- Variations  
e-CON type, Grommet type, IO-Link device compatible

Series	Enclosure	Communication protocol	Radio wave type
EX600-W	e-CON type: IP20 Grommet type: IP67 IO-Link device compatible: IP67	SMC original protocol	Frequency Hopping Spread Spectrum (FHSS)



#### Trademark

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# Precautions

Be sure to read this before handling products.

## ⚠ Caution

### 1. Avoid installing and using inside a food zone.

<Not installable>

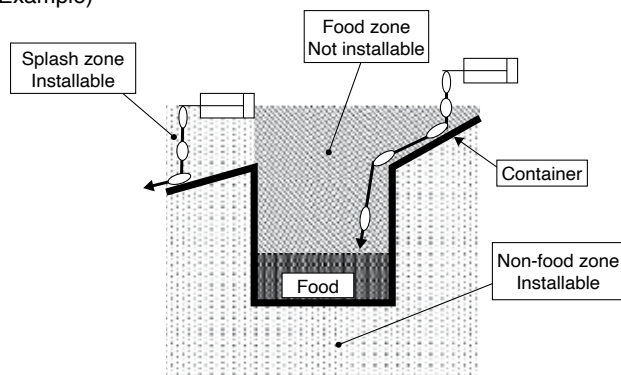
Food zone ..... An environment where food which will be sold as merchandize, directly touches the components of SMC products

<Installable>

Splash zone ..... An environment where food which will not be sold as merchandize, directly touches the components of SMC products

Non-food zone ... An environment where there is no contact with food

Example)





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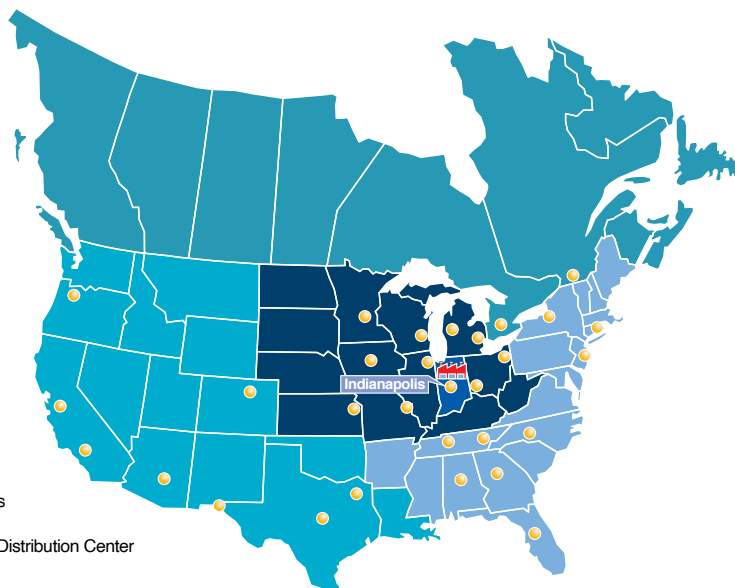
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