



# Pneumatic Equipment for Food Industry



Theme / Application	Stainless	Hygienic	Heat resistant	High-pressure	Electrostatic removal
Food	●	●	●		●
Packaging	●	●			●
Washing	●	●	●		
Blow molding				●	●
Conveyer					●



\*Above graph is for reference purpose only.

## Stainless Cylinders

Corrosion resistant



Series	Action	Bore size (mm)
<b>CJ5-S</b>	Double acting	10, 16
<b>CG5-S</b>		20, 25, 32, 40, 50, 63, 80, 100
Features	Material • External metal parts: Stainless steel 304 Seal parts: NBR or FKM are selectable. Ambient and fluid temperature: -10 to 70°C (without auto switch) -10 to 60°C (with auto switch) Grease for food processing machines	

## Stainless Steel Cylinder with ISO 6432 Dimensions

Made to Order

Corrosion resistant

Hygienic



"This cylinder is made in Italy.  
Please contact SMC Italy for all inquiries."

Series	Action	Bore size (mm)
—	Double acting	16, 20, 25, 32, 40, 50
Features	Hygienic design for splash area	

## Stainless Speed Controller

Corrosion resistant



Series	Applicable tubing O.D. (mm)	Connection thread
<b>ASG</b>	4, 6, 8, 10, 12	M5, 1/8, 1/4, 3/8, 1/2
Features	Material • Metal parts: Stainless steel 316 Seal parts: Special FKM Ambient and fluid temperature: -5 to 60°C	

## Stainless Steel 316 One-touch Fittings

Corrosion resistant

Heat resistant



Series	Applicable tubing O.D. (mm)	Connection thread
<b>KQG</b>	4, 6, 8, 10, 12	M5, 1/8, 1/4, 3/8, 1/2
Features	Material • Metal parts: Stainless steel 316 Seal parts: Special FKM Operating fluid temperature: -5 to 150°C Grease-free Can be used with steam. Certified to meet current Food Sanitation Law standards.	

## Stainless Steel 316 Insert Fittings

Corrosion resistant

Heat resistant



Series	Applicable tubing O.D. (mm)	Connection thread
<b>KFG</b>	4, 6, 8, 10, 12	1/8, 1/4, 3/8, 1/2
Features	Material: Stainless steel 316 Operating fluid temperature: -5 to 150°C Grease-free Can be used with steam.	

## Stainless Steel 316 Miniature Fittings

Corrosion resistant



Series	Applicable tubing O.D. (mm)	Connection thread
<b>M</b>	3.2, 4, 6	M5, 1/8
Features	Material: Stainless steel 316 Operating fluid temperature: 0 to 60°C	

## S Couplers / Stainless Type

Corrosion resistant

Heat resistant



Series	Connection thread
<b>KKA</b>	1/8, 1/4, 3/8, 1/2, 3/4, 1, 1¼, 1½
Features	Material • Metal parts: Stainless steel 304 Seal parts: Special FKM Operating fluid temperature: -5 to 150°C Grease-free

## Air Operated Chemical Valve

Corrosion resistant

Heat resistant



Series	Actuation	Port size	Orifice diameter mmø
Thread type	<b>LVA</b>	N.C./N.O./C.O.	1/8 to 1
Features	Body material: Stainless steel Diaphragm material: PTFE, NBR, EPR are selectable. Operating fluid temperature: 0 to 100°C (when the diaphragm is PTFE.) 0 to 60°C (when the diaphragm is NBR or EPR.)		

## ISO

Profile Design ISO/VDMA Cylinder  
Piston Rod and End Nut Made of Stainless Steel (-XC6)

Made to Order

Corrosion resistant



Series	Action	Bore size (mm)
<b>CP95 (-XC6)</b>	Double acting	32, 40, 50, 63, 80, 100
Features	Piston rod and rod end nut are changed from standard materials to stainless steel.	

## Hygienic Design Cylinders

Hygienic



Type	Series	Action	Bore size (mm)
Round type	<b>HYB</b>	Double acting	20, 25, 32, 40, 50, 63, 80, 100
Basic type	<b>HYQ</b>		20, 25, 32, 40, 50, 63
ISO standard type	<b>HYC</b>		32, 40, 50, 63
With guide	<b>HYG</b>		20, 25, 32, 40, 50, 63
Features	Water resistant cylinders configured for easy cleaning Five times increase in service life, compared to other water resistant cylinders Grease for food is available. Ambient and fluid temperature: 0 to 70°C (without auto switch) 0 to 60°C (with auto switch)		

## Hygienic NAMUR Interface Valve 3/5 Port Solenoid Valve

Made to Order

Hygienic



Series	Port size	Cv factor	Power consumption
<b>VFN (-X19)</b>	NPT1/4"	1.4	0.5 W
Features	Conformed to VDMA standard. IP67 (for M12 connector) Ambient and fluid temperature: -10 to 60°C 3 and 5 port can be changed by changing the function plate. Electrical entry: M12, DIN terminal		

## Related Products

### Water Resistant Cylinders



Type	Series	Bore size (mm)
Air cylinder	<b>CM2</b>	20, 25, 32, 40
Air cylinder	<b>CG1</b>	20, 25, 32, 40, 50, 63, 80, 100
Compact cylinder	<b>CQ2</b>	20, 25, 32, 40, 50, 63, 80, 100
Air cylinder	<b>CA2</b>	40, 50, 63, 80, 100
Compact guide cylinder	<b>MGPM</b>	20, 25, 32, 40, 50, 63, 80, 100
Guide cylinder	<b>MGGM</b>	32, 40, 50, 63, 80, 100
Features	Using a special scraper improved water resistance, compared to standard cylinders	

### Related Made to Order

<b>XC4</b>	With heavy duty scraper
<b>XC35</b>	With coil scraper

### Cylinder / Made to Order

<b>XB6</b>	Heat resistant cylinder (-10 to 150°C)	Heat resistant
<b>XB14</b>	Cylinder with heat resistant auto switch (0 to 150°C)	Heat resistant
<b>XB7</b>	Cold resistant cylinder (-40 to 70°C)	

<b>XC6</b>	Piston rod and rod end nut made of stainless steel	Corrosion resistant
<b>XC7</b>	Tie-rod, cushion valve, tie-rod nut, etc. made of stainless steel	Corrosion resistant
<b>XC27</b>	Double clevis pin and double knuckle pin made of stainless steel	Corrosion resistant

## Resin Products

### Clean One-touch Fittings

Corrosion resistant



Series	Applicable tubing O.D.	Connection thread
<b>KP</b>	4, 6, 8, 10, 12	1/8, 1/4, 3/8, 1/2
Features	Material • Resin parts: Polypropylene Seal parts: EPDM Operating fluid temperature: -20 to 80°C	

### FEP Tubing

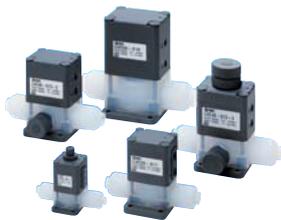
Corrosion resistant Heat resistant



Series	Tubing O.D.		Color
	Metric size	Inch size	
<b>TH/THH</b>	4, 6, 8, 10, 12	1/8, 3/16, 1/4 3/8, 1/2, 3/4	Translucent, Black, Red, Blue
Features	Material: FEP (Fluororesin) Maximum operating temperature: 200°C (This can vary depending on the operating conditions.) Certified to meet current Food Sanitation Law standards.		

### Air Operated Chemical Valve

Corrosion resistant Heat resistant



Series		Actuation	Applicable tubing O.D.	Orifice diameter mmø
Integral fitting	<b>LVC</b>	N.C./N.O./C.O.	mm: 4 to 25 inch: 1/8 to 1	4 to 22
Features		Body material: PFA Diaphragm material: PTFE Operating fluid temperature: 0 to 100°C		

## Serial Transmission

### Serial Transmission



Series	Enclosure	Communication protocol	Applicable valve
<b>EX250</b>	IP67	DeviceNet	SV1000/2000/3000 VQC1000/2000/4000
		PROFIBUS-DP	
		CC-Link	
		Actuator Sensor interface (AS-I, ASI)	
		CAN Open	
Features	<ul style="list-style-type: none"> <li>• IP67 compliant</li> <li>• Input/Output available</li> </ul>		

## Ionizer

### Ionizer

Electrostatic removal



Series	Type	Ion generation method	Output for emitting electricity	Ion balance
<b>IZS30</b>	Bar type	Corona discharge type	±6000 V	±30 V or less
Features	Discharge time 0.3 seconds With surface potential sensor Measures the polarity of a discharged object, as well as the amount of charged electricity. Continuously emits ions of reversed polarity to charged objects.			

## Pilot Operated 2 Port Solenoid Valve

High-pressure



Series	Maximum operating pressure (MPa)	Port size
VCH41 (N.C.)	5.0	3/4, 1
VCH42 (N.O.)		
Features	Service life: 10 million cycles (based on SMC's test condition) Adopting a polyurethane elastomer poppet in a valve seat Improved durability under a high-pressure environment	

## Pilot Operated 3 Port Solenoid Valve

High-pressure



Series	Maximum operating pressure (MPa)	Port size
VCH410	5.0	1/2, 3/4, 1
Features	Service life: 10 million cycles (based on SMC's test condition) Adopting a polyurethane elastomer poppet in a valve seat Improved durability under a high-pressure environment	

Made to Order

Manifold unit

## Check Valve

High-pressure



Series	Maximum operating pressure (MPa)	Port size
VCHC40	5.0	3/4, 1
Features	Service life: 10 million cycles (based on SMC's test condition) Adopting a polyurethane elastomer poppet in a valve seat Improved durability under a high-pressure environment	

## Direct Operated Regulator (Relieving type)

High-pressure



Series	Maximum operating pressure (MPa)	Port size
VCHR30	Inlet pressure 5.0 Set pressure 0.5 to 5.0	3/4, 1
VCHR40		1, 1 1/2
Features	Service life: 10 million cycles (based on SMC's test condition) Adopting a polyurethane elastomer poppet in a valve seat Improved durability under a high-pressure environment	

Made to Order

6.0 MPa pilot operated regulator (Air operated type)

## Silencer

High-pressure



Series	Maximum operating pressure (MPa)	Port size
VCHN3	5.0 (Relief valve release pressure: 1.8)	3/4, 1
VCHN4		1, 1 1/4, 1 1/2
Features	Noise reduction 35 dB(A) Clogging-reduction with double-layer construction	

## 5.0 MPa Compatible

### 5.0 MPa Pressure Sensor

Made to Order

High-pressure



Series	Rated pressure range (MPa)	Proof pressure (MPa)
<b>PSE (X512)</b>	0 to 5.0	10.0

### Related Equipment/ Digital Pressure Switch

High-pressure



Series	Rated pressure range (MPa)	Proof pressure (MPa)
<b>ISE75</b>	0.4 to 10.0	30.0
<b>ISE75H</b>	0.5 to 15.0	45.0
Features	2-color display IP67	

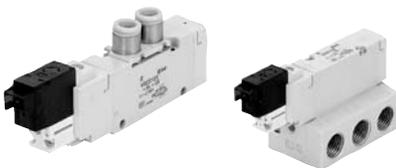
## High Frequency, High Speed Response and Long Service Life

### 5 Port Solenoid Valve / Metal Seal Type



Series	Sonic conductance: C	Applicable cylinder size (mm)	Power consumption (W)
<b>VQC1000</b>	0.72 dm <sup>3</sup> /(s-bar)	50	0.5
<b>VQC2000</b>	2.6 dm <sup>3</sup> /(s-bar)	80	
<b>VQC4000</b>	6.9 dm <sup>3</sup> /(s-bar)	140	
Features	Response time 10 ms (VQC1000) 20 ms (VQC2000) 17 ms (VQC4000) Dispersion accuracy ±2 ms (VQC1000/2000) ±3 ms (VQC4000) Long service life 200 million cycles (VQC1000/2000) 100 million cycles (VQC4000) (based on SMC's test condition) IP67		

### 5 Port Solenoid Valve / Metal Seal Type



Series	Sonic conductance: C	Applicable cylinder size (mm)	Power consumption (W)
<b>VQZ1000</b>	1.3 dm <sup>3</sup> /(s-bar)	40	0.5
<b>VQZ2000</b>	2.3 dm <sup>3</sup> /(s-bar)	63	
<b>VQZ3000</b>	4.6 dm <sup>3</sup> /(s-bar)	80	
Features	Response time 10 ms (VQZ1000) 12 ms (VQZ2000) 15 ms (VQZ3000) Dispersion accuracy ±2 ms Long service life 200 million cycles (based on SMC's test condition)		

### Low Friction Cylinders / Metal Seal Type



Series	Type	Bore size (mm)	Minimum operating pressure (MPa)
<b>MQQ</b>	Compact	10, 16, 20, 25, 30, 40	0.005
<b>MQM</b>	Anti-lateral load	6, 10, 20, 25	ø6: 0.02, ø10 to 25: 0.005 (MQML□□H: 0.01)
Features	Long service life of 10,000 km or 100 million full cycles (based on SMC's test condition) Achieves speeds up to 3,000 mm/s or continuous actuation up to 50 cpm (MQML□□H)		

### 3 Port Solenoid Valve

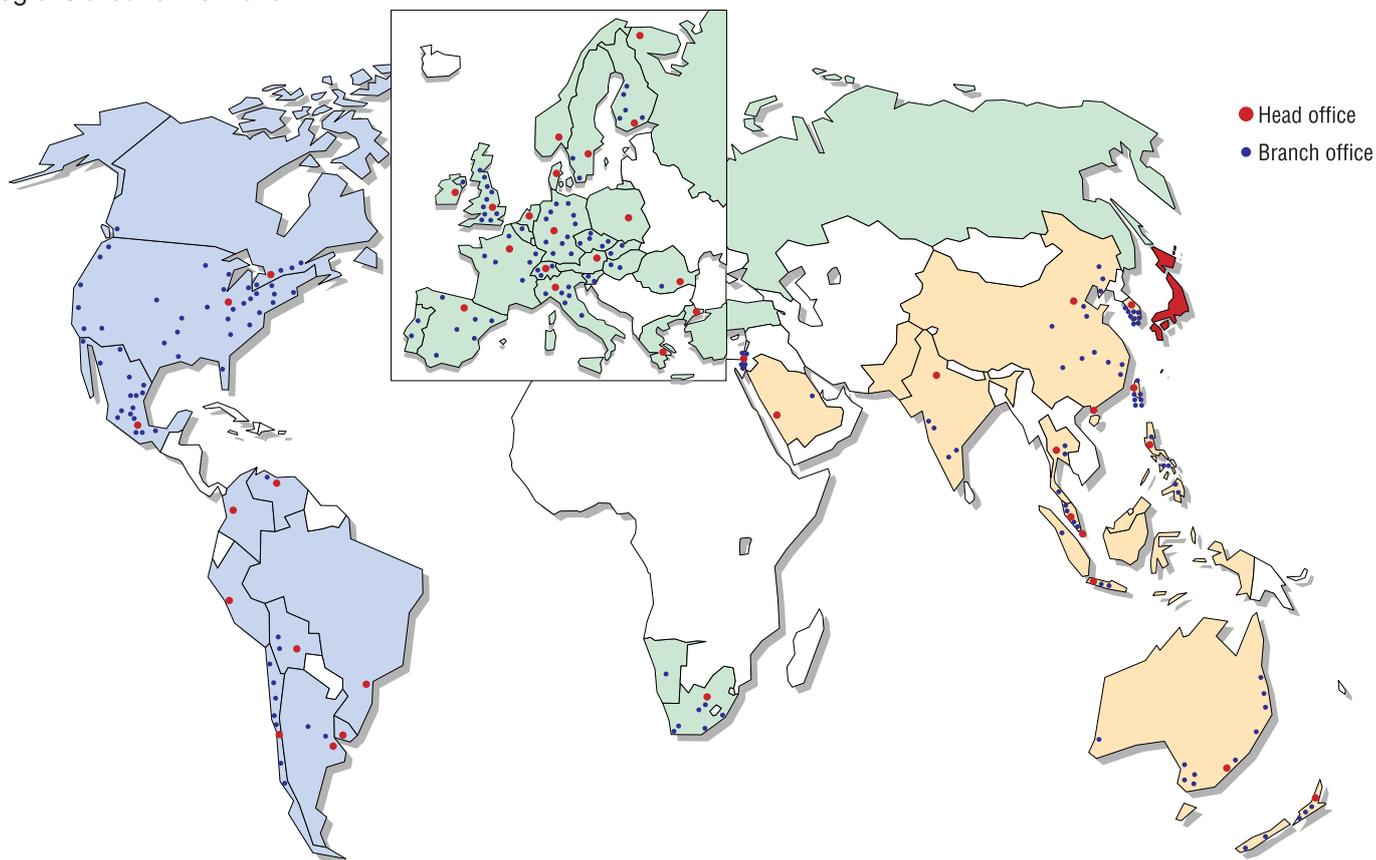
Made to Order



Series	Port size	Sonic conductance: C
<b>XT323</b>	1/8	2 dm <sup>3</sup> /(s-bar)
Features	Operating frequency 300 to 1500 C.P.M	

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