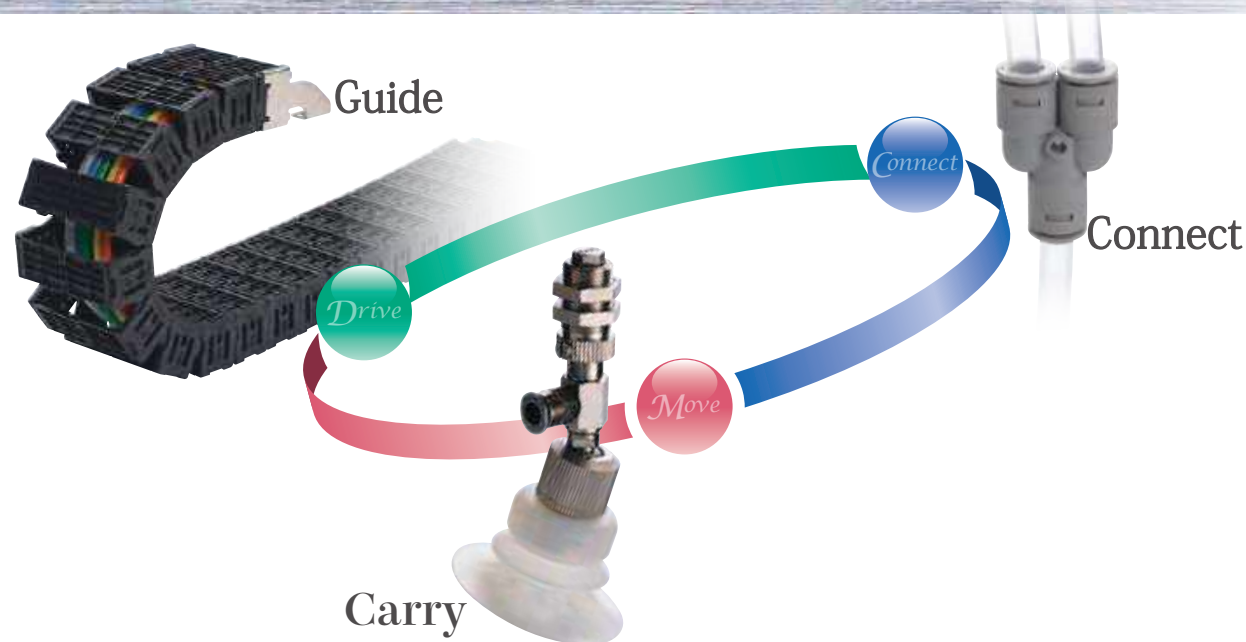
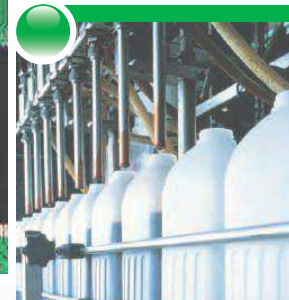
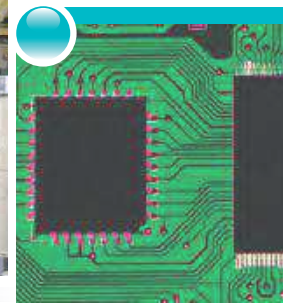


PISCO Industries-applications



A variety of suitable products for machine tools

Primal piping

Filter & Regulator Unit

Pressure regulation and removing drain, dust and oil mist from air.



Shut-off/Ball valve

It comes with an incorporated Push-in Fitting as standard.



Shut off 3 way vavle

Safety maintenance is possible by discharging residual air.



Separate Indicator with Digital Display

Low cost large LCD display with dual vision, in 3 colors.

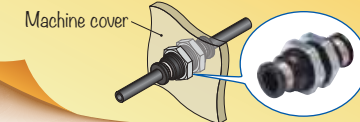


Small Pressure Sensor

Using an analog output sensor and a separate large display indicator allows remote indication.



Panel-mount Union is ideal to install on a through hole drilled on the machine cover in order to supply air to the machine tool.



Main Block

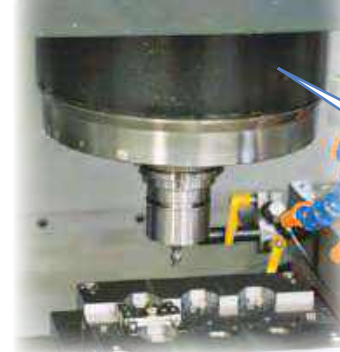
Best suitable for manifold piping from primary air line.



Cutting Oil Piping



Cooling Oil Piping for Main Spindle Axis



All Brass Push-in and/or Compression Fitting

For use with Heat medium oil.



Nylon Tubing

Suitable for heat medium oil.



Piping for Air Blowing



When only 1 air-gun is used for multiple machines, use of **Light Coupling**, allowing easy one-hand attachment/detachment, is recommended.

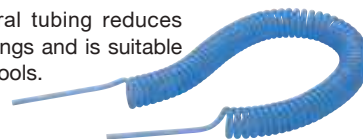


Use of **Positive-Negative Pressure Inline Filter**, which removes dust in compressed air, is recommended.



Spiral Coil Tubing

Expandable spiral tubing reduces load on tube fittings and is suitable for piping to air tools.



Where precision processing and high durability are required.

Cable Hose Carriers

Protect and guide multiple cables and hoses neatly.

Door Opening and Closing

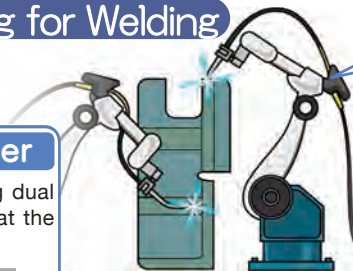
2-stage Speed Controller

Act like a shock absorber. Controlling dual speed of cylinder to moderate shock at the cylinder end.



You may use this together with shock absorbers to make their lives longer.

Piping for Welding



Welding Spatter Resistant Products

Fitting and flow controller Fitting and flow controller using flame-retardant resin made of brass. (UL94 V-0 equivalent).



Anti-spatter (2 layer) Tubing covered by flame-retardant resin (UL94 V-0 equivalent).

Vacuum Generator

Simple vacuum generator has variety in shapes so that they can fit to various piping conditions.



Complex vacuum generator is all-in-one type with compact body which has all features to control vacuum.



Vacuum system Integrated Valve Unit

Integrated valve for a vacuum system has all features to control vacuum such as on/off valve, blow-off valve and vacuum switch for energy saving.



Rotary Vacuum Pump

Lightweight, compact, quiet, low vibration, low heat generation, long life and energy saving compatible eco-friendly next generation pump.

Possible to use as vacuum source for vacuum chuck.



Handling Steel Plate before/after/ during Presswork Performing, or before/after Laser Processing

Vacuum Cup Standard

Suitable for transporting thick and flat work-pieces.
Pad dia.: $\phi 10 \sim \phi 200\text{mm}$



Vacuum Cup Bellow

An ideal substitute where a level compensator does not fit space-wise.
Pad dia.: $\phi 10 \sim \phi 100\text{mm}$



Vacuum Cup Skidproof

Suitable for transporting greasy work-pieces.
Pad dia.: $\phi 10 \sim \phi 50\text{mm}$



Pad Direct Mounting Vacuum Filter

To remove dust when sucking work-pieces.



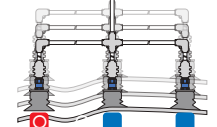
Swivel Joint

Suitable for work-pieces having irregular contact angles on the surfaces.



Vacuum Retention Valve

To prevent correctly sucked objects from falling off.



A must for operating multiple vacuum cups with a single vacuum system.

Compact and lightweight products

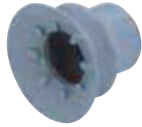
Vacuum Cup Standard

Suitable for transporting thick and flat work-pieces.
Pad dia.: $\phi 10 \sim \phi 200\text{mm}$



Vacuum Cup Bellows

An ideal substitute where a level compensator does not fit space-wise.
Pad dia.: $\phi 10 \sim \phi 100\text{mm}$



Vacuum Cup Skidproof

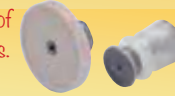
Suitable for transporting greasy work-pieces.
Pad dia.: $\phi 10 \sim \phi 50\text{mm}$



Viton material which is less likely to cause repelling of paint, is suitable for suction conveyance of large work-pieces.



Vacuum Pad Mark-free Series leaving less suction mark and preventing the adhesion of rubber ingredients on work-piece, is suitable for suction conveyance of small work-pieces.



Vacuum System Integrated Valve Unit

Integrated valve for a vacuum system has all features to control vacuum such as on/off valve, blow-off valve and vacuum switch for energy saving.



Welding Spatter Resistant

Fitting and flow controller using flame-retardant resin (UL94 V-0 equivalent).

Fitting and flow controller made of all brass exterior.

Anti-spatter (2 layer) **Tubing** covered by flame-retardant resin (UL94 V-0 equivalent).

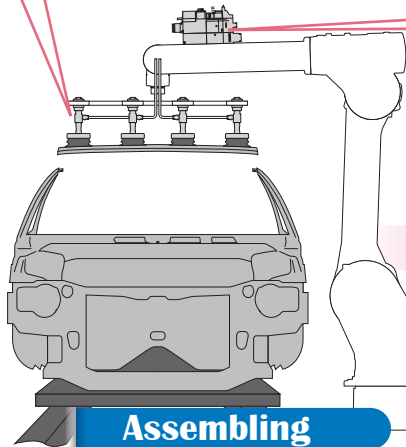


Chemical Resistant

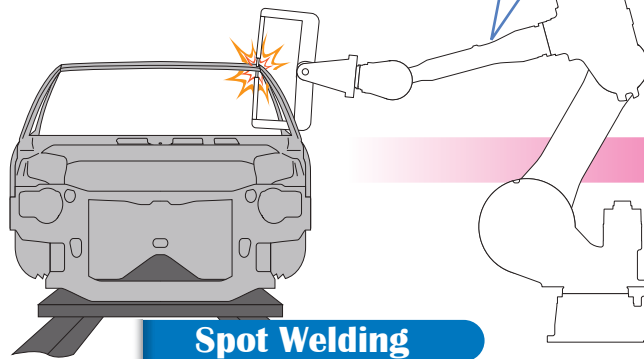
SUS Compression Fitting, which is best suitable for airtight piping, and other **SUS Push-in Fitting**.



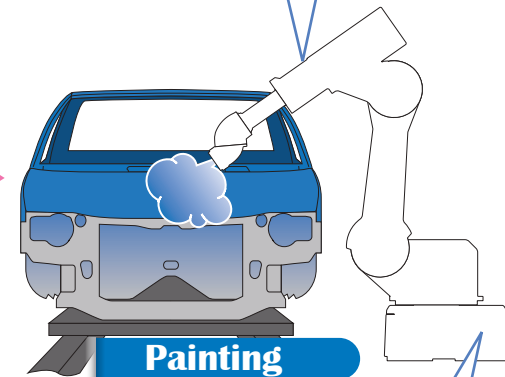
Fluororesin Tubing with excellent chemical resistance.



Assembling



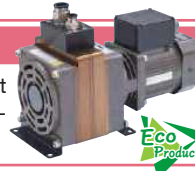
Spot Welding



Painting

Rotary Vacuum Pump

Lightweight, compact, quiet, low vibration, low heat generation, long life and energy saving compatible eco-friendly next generation pump.



Turning Table



Rotary - High speed swivelling

Rotary Joint is best suitable for high speed swinging and rotating applications.



High Rotary Joint is best suitable for ultra high-speed swinging and rotating applications.

Multi-Circuit Rotary Manifold can serve max. 8 independent circuits.



Dry Unit

Removing drain, dust and oil mist from air and dehumidifying and reducing pressure.



Cable & Hose Safety



Cable & Hose Carrier

Neatly protect and guide multiple cables and hoses.



Suitable for industrial robot / High-speed operation

Industrial Robot

High-speed Picking Robot

Light Coupling

Quick connect and disconnect with one-hand operation. Best suitable for the piping where connection and disconnection of air line is frequently conducted.



■ Vacuum cup for fragile work-pieces.

Soft Lip Vacuum Cup

Pad dia.: $\phi 4 \sim \phi 40\text{mm}$



Soft Bellows Vacuum Cup

Suitable for work-pieces with the inclined sucked surface. Pad dia.: $\phi 6 \sim \phi 20\text{mm}$



Multi-Bellows Vacuum Cup

For work-pieces of various shapes conveyed at a high-speed. Pad dia.: $\phi 10 \sim \phi 50\text{mm}$



Miniature Regulator

Pressure reducer comes with compact body to install to a limited space. Gauge mounted models are available.



Flow Control Valve

Standard type flow control valve for driving device.



Low-Flow type is best suitable for slow speed adjustment.



Large-Flow type is best suitable for high-speed control.



Orifice Flow Controller requires no speed adjustment by preset speed with low cost.



Vacuum Series

Environmentally friendly next generation **Rotary Vacuum Pump**.



Large Digital Pressure Sensor makes it easy to monitor and control vacuum pressure.

Vacuum Filter removes the dust in vacuum line.



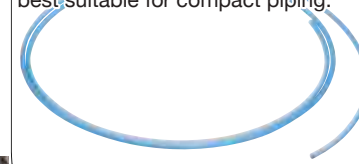
Small Vacuum Regulator is designed to optimize the control of vacuum pressure.

Integrated Valve Unit for Vacuum controls vacuum flow on/off.

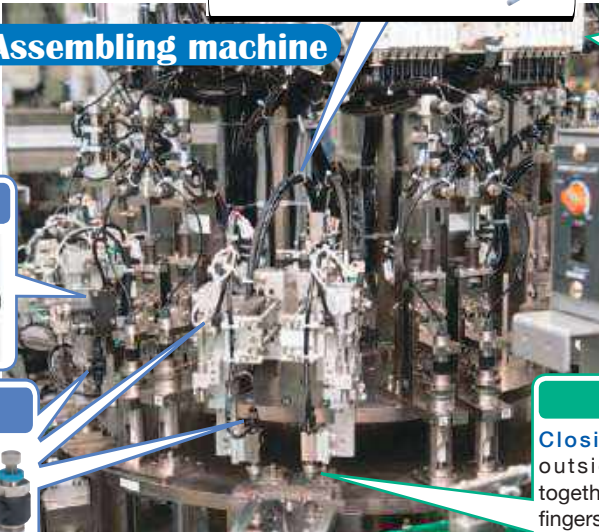


Polyurethane Tubing

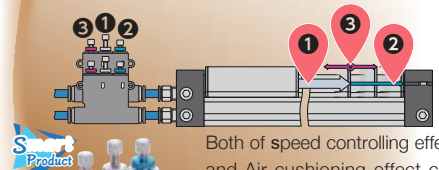
Featuring excellent flexibility and best suitable for compact piping.



Assembling machine



To transfer work-piece by a slider of long rod-less cylinder, we recommend **2-stage Speed Controller** which not only reduces impact shock and sound at the stroke end without using a shock absorber but also is low cost and easy to install.



Both of speed controlling effect and Air cushioning effect can be obtained just by adjusting above ① ~ ③ needles.

Industry's First!

■ To control compressed air on/off automatically.

Solenoid Valve Manifold

SVB Series is focusing on basic functions and pursuing cost performance.



SVA Series secures large flow rate, but lightweight.



SVR Series secures large flow rate, but compact and lightweight.



Angular Gripper

Closing Gripper grips outside of work-piece together with its dedicated fingers.



Opening Gripper grips inside of work-piece and light press fitting work can also be possible.

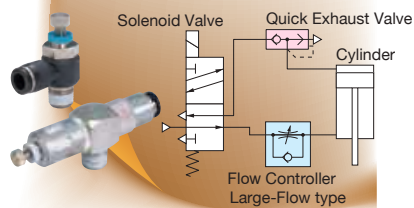


Parallel Gripper

Parallel Gripper features compact body, high precision, yet high gripping force. Choose external gripping or internal gripping by the mounting position of the attachment.



■ To attain more efficient high-speed control of devices, use in combination with **Flow Control Valve Large-Flow type** and **Quick Exhaust Valve** is recommended.





Products best suitable for special environments /Clean room

Polyolefin (Cleanroom Pkg) Tubing

Polyolefin resin suitable for clean environment.
Superior in water resistance.

Teflon Tubing

Superior in chemical resistance. PFA tubing, which has high inner surface smoothness, transparency and purity while inexpensive FEP tubing are available.

PP (Cleanroom Pkg) Products for Piping

Oil-free. Checking flow of fluid (liquid) is possible with its translucent body.

Push-in Fitting

Flow Control Valve

Needle Valve

Check Valve



Semiconductor manufacturing process

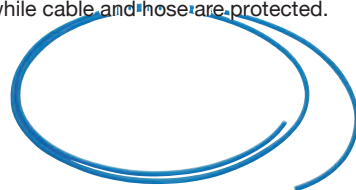
Hose & Cable Carriers

To protect and guide wiring & piping in surface mounting machine.
SP Series with less inner surface friction reduces abrasion of electric wires or air tubes.
SC Series with structure of no sliding parts minimizes dust generation.



Low Friction Polyurethane Tubing

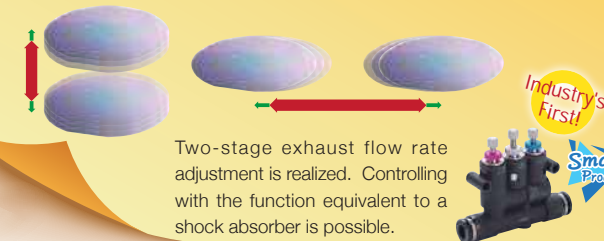
Tubing having low friction coefficient. Best suitable for piping in guiding devices while cable and hose are protected.



Vacuum Pen is a pen like shaped vacuum generator suitable for assembling small components. Antistatic type is best suitable for processes which should avoid static electricity.



At wafer inspection, **2-stage Speed Controller** is recommended to absorb impact of cylinder elevating or lowering wafer stage. The product is also recommended to improve cycle time and to absorb impact of cylinder, conveying wafer stage, at wafer conveyance.



Fittings

For high speed small parts mounting.

Polyurethane tubing that is excellent for compact piping with excellent flexibility.

Push-in Fitting comes in a wide variety of models to meet piping requirement.



Rotary Joint is best suitable for high speed swinging and rotating applications.



SUS Push-in Fitting best suitable for a piping of ionizer.



Vacuum Series

Vacuum Cup Small type is good for mounting electric component on printed circuit board. Pad dia.: Min. $\phi 0.7\text{mm}$ ~

Lightweight, compact, quiet, low vibration, low heat generation, long life and energy saving compatible eco-friendly next generation **Rotary Vacuum Pump**.

Complex Vacuum Generator realized High-speed and stable response.



Integrated Valve Unit for a Vacuum System has all features to control vacuum such as on/off valve, blow-off valve and vacuum switch for energy saving.



Semiconductor, Solar cell, Secondary battery, Physical/Chemical Industries

Corrosion, Chemicals and Heat resistance as well as Cleanness and Electrostatic Discharge

① Products for Clean Environment

Polypropylene Products are oil-free and its resin body is translucent by which hygiene confirmation of fluid is easily conducted with eyes.

Push-in Fitting Speed Controller Needle Valve Check Valve



PPS (all-resin) made Fitting



SUS Products



Hollow Fiber Membrane Filter is marked by the filtration accuracy of 0.01 μm and, trapping efficiency of 99.99%.



② Products for Heat Resistance

Polyphenylene sulphite (all-resin) made fitting is superior in heat resistance and flame retardancy (UL94 V-0 equivalent).



SUS316 products are resistant to heat.

Push-in Fitting Compression Fitting Needle Valve



③ Products for Corrosion Resistance

SUS Products are superior in corrosion resistance.

Push-in Fitting, Compression Fitting, Push-in Fitting, Barb Fitting, Push-in Fitting Needle Valve



PPS (all-resin) made fitting is recommended for metal-free environment. The fitting has excellent chemical resistance, too.

Opening or Closing Gripper grips outside, bore, or groove of work-pieces and convey them.



Products for Piping

For diatoms analyzing equipment.

Push-in Fitting Regulator Ball Valve



Direction Change Valve



Polyurethane Tubing



Production process of solar cell and secondary battery

Corresponding to requirements at battery manufacturing process, which are (1) Cleanness (2) Heat Resistance (3) Corrosion Resistance (4) Prevention of static charge (5) Vacuum (6) Contactless conveyance.

④ Electrostatic Discharge

Conductive resin is used.

Push-in Fitting

Air Tubing

Cable & Hose Guide



Electric conductive rubber is used.

Vacuum Cup



Physical/Chemical Industry

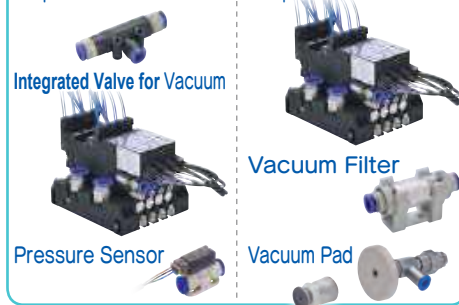


⑤ Vacuum

To cope with fields of "No copper alloy" and "Low-level ozone resistance".

Simple Vacuum Generator

Complex Vacuum Generator



⑥ Contactless Conveyance

Air Float Transporting Plate Unit is best suitable for contactless conveyance of LCD panel, PDP, or solar panel.



Products for Piping

Agricultural chemical spraying device on drone

Polyurethane Tubing features excellent flexibility, best suitable for compact piping.



Push-in Fitting comes in a wide variety of models to meet piping requirement.



Products suitable for packaging and conveyance industries

Filling machine



Products for Piping

Rich line-up of air piping equipments around the filling nozzles.
Light Coupling enables easy one-hand attachment/detachment.
Flow Controller is for controlling speed of an air cylinder.



Polyurethane Tubing and **Multi-core Bonded Tubing** for compact piping with wide color variations.



Automatic pharmaceutical tablet packer



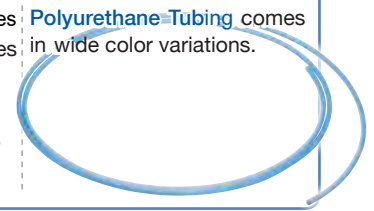
Products for Piping

Application for automatic pharmaceutical tablet packer.

Push-in Fitting is for piping other than direct work-piece contact.
Flow Controller is for controlling speed of a driving unit.



Shut-off Valve (3-way) discharges residual pressure and enables safe maintenance.
Polyurethane Tubing comes in wide color variations.



Hydrogen Water Generating Server

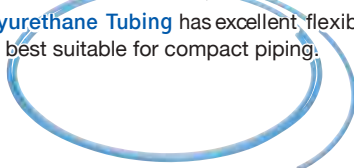


Products for Piping (filling)

Pressure Gauge is compact and suitable to visually check primary and injection pressure of hydrogen.



Polyurethane Tubing has excellent flexibility and best suitable for compact piping.



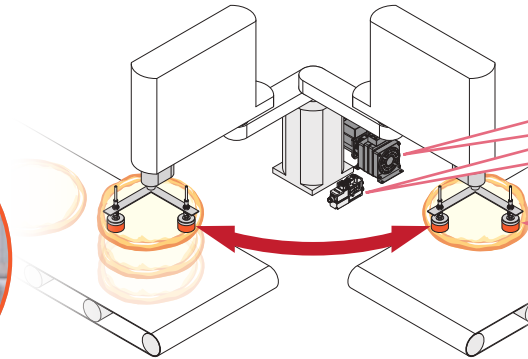
Light Coupling enables easy connection between a hydrogen tank and a server.



Polyurethane Spiral Coil Tubing is helpful for compact piping between a server and a bottle.



Suction Conveyance



Vacuum Series

Vacuum Cup Sponge Series to convey frozen pizza crust.



Vacuum Cup Soft Bellows Series is best suitable to feed retort pouches to a steam sterilizing apparatus.



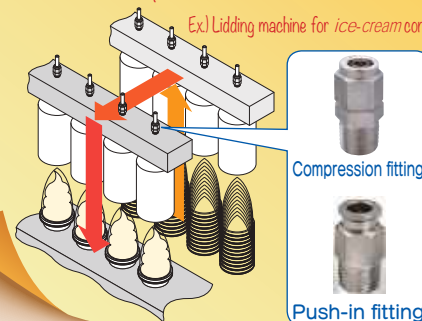
Lightweight, compact, quiet, low vibration, low heat generation, long life and energy saving compatible eco-friendly next generation **Rotary Vacuum Pump**.



Integrated Vacuum Controller VQP is suitable to control large flow-rate.



Stainless steel SUS316 - both Compression Fitting and Push-in Fitting are suitable for piping in food-related industries that require resin material free.



Compression fitting

Push-in fitting

Food, Pharmacy / Packaging Machinery

For clean environment

Automatic Packaging Machines



Products for Piping

Flow Controller is suitable to control air-cylinder speed for receiving products or moving cutter blade in and out.

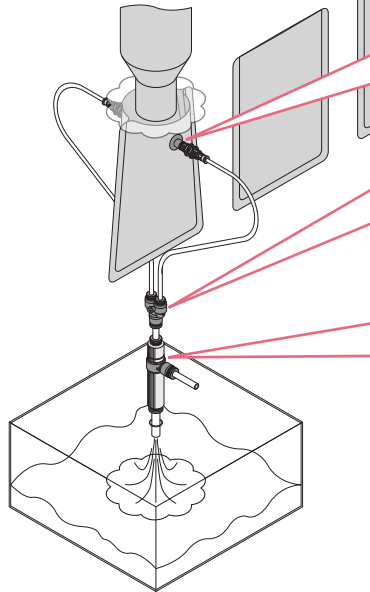
Orifice Fitting is suitable to control air-cylinder speed to open/close gate in automatic weighing machine.

Positive/Negative Pressure In-line Filter removes dust in compressed air to supply clean cooling air.

Push-in Fitting and **Polyurethane Tubing** are suitable for air distribution.



Bagging




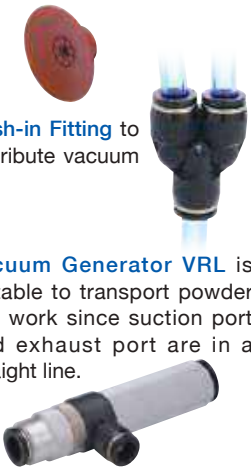
Vacuum Series

Vacuum Cup Ultrathin Series for suctioning vinyl sheets.

Push-in Fitting to distribute vacuum air.

Vacuum Generator VRL is suitable to transport powder like work since suction port and exhaust port are in a straight line.

 **Suitable for opening pouches as well as collecting flying around powders.**



 **Vacuum Pad Soft Series and Soft Bellows Series** are also suitable for opening/closing bag.



Dental Treatment Unit



Products for Piping

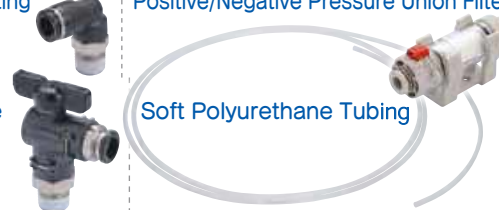
For inner piping of dental treatment unit.

Push-in Fitting

Positive/Negative Pressure Union Filter

Ball Valve

Soft Polyurethane Tubing



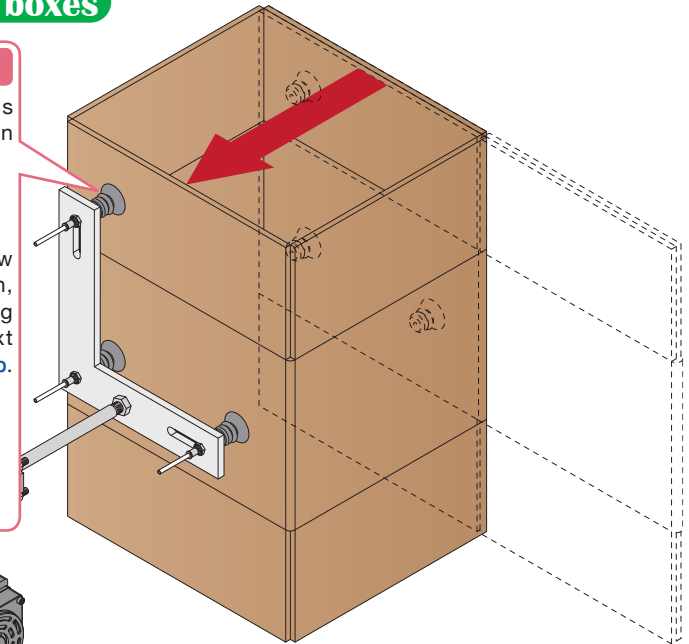
Food and medical industries

Assembling carton boxes

Vacuum Series

Vacuum Cup Bellows Series is suitable to assemble carton boxes.

Lightweight, compact, quiet, low vibration, low heat generation, long life and energy saving compatible eco-friendly next generation **Rotary Vacuum Pump**.



Vacuum Packaging



Degassing application



Vacuum Series

For deaeration and degassing at vacuum packaging. Lightweight, compact, quiet, low vibration, low heat generation, long life and energy saving compatible eco-friendly next generation **Rotary Vacuum Pump**.



Vacuum Generator VV with multi-stage nozzle ensures high vacuum and flow rates.



Products for piping with heat medium which is necessary for injection molding

Mold Temperature Control

Push-in Fitting, which can be used with water, enables parts commonization.

Use of **Insert ring** is recommended to prevent shrink of Tube I.D. and utilize PISCO products longer.

Die Temperature Control Fitting

Thread part and push-in fitting part can be uncoupled. No convex projection on the mold surface which is convenient when storing molds.

Nylon Tubing

Possible to use for hot water and heat medium oil. Various tube colors are available.

Air Blowing Piping

Hollow Fiber Membrane Filter with filtration accuracy of 0.01 μm (Trapping efficiency: 99.99%).

Positive/Negative Pressure Union Filter removes dust in compressed air.

Shut-off Valve exhausts residual pressure and enables safe maintenance.

Polyurethane Tube enables compact piping.

Vacuum Series

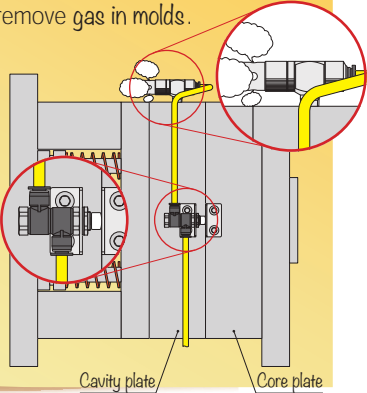
To remove gas inside molds. Lightweight, compact, quiet, low vibration, low heat generation, long life and energy saving compatible eco-friendly next generation **Rotary Vacuum Pump**.

Vacuum Generator VVV with multi-stage nozzle ensures high vacuum and flow rates.

PISCO's **Mechanical Valve** and **Vacuum Generator VC** make it such **easy** with **reasonable price** to remove gas in molds.

- ① Install a **Mechanical Valve MVP** in the way the push pin is pressed when a cavity plate and a core plate are mated.
- ② Output air from the **Mechanical Valve MVP** is supplied to **Vacuum Generator VC** mounted on top of the molds.
- ③ Vacuum is generated and the gas in the molds is exhausted to the air.

Utilizing the movement of the cavity and core plates to switch air.



More Products for Mold Temperature Control

Push-in Fitting

Good versatility. Water can be used.

Push-in Fitting Long Type

8 choices in length. Select the best length according to an application.

Tube Fitting Brass

All brass made except for lock-claws and sealing rubber. Heat medium oil and water can be used.

Brass Compression Fitting

Focused on air tightness. By using special brass for main metal body, it has greatly improved corrosivity for water.

Stainless Steel SUS316 Push-in Fitting

SUS316, highly resistance to corrosion, is used. Operating temperature range is wide.

Stainless Steel SUS316 Compression Fitting

Focused on air tightness. Can be used up to the operating temp. range of connected tubes.

Fluororesin (PFA) Tubing

Wide range of operating temperature: -65 ~ 260°C.

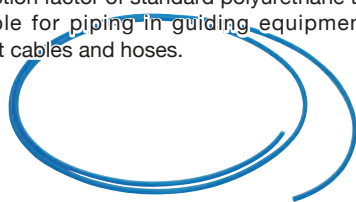
Fluororesin (FEP) Tubing

Reasonable price. Wide range of operating temperature: -65 ~ 200°C.

Protection and guiding wiring and piping / End of arm tooling.

Low-Friction Polyurethane Tubing

1/3 friction factor of standard polyurethane tubing. Suitable for piping in guiding equipment that protect cables and hoses.



Complex Vacuum Generator

Vacuum Generator VK with wide variety of unit combinations enables an optimal selection according to an application.



Products for Piping

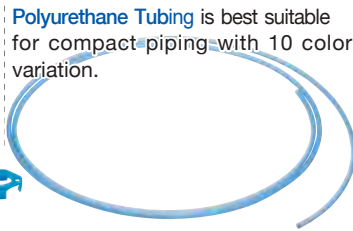
Multiple Connector realizes simultaneous connection and disconnection of 2 lines with separate male terminal and female terminal which is stackable up to 4 layers.



Flow Controller is for controlling speed of a driving unit.



Polyurethane Tubing is best suitable for compact piping with 10 color variation.



Color Caps with 10 color variations realizes easy distinguishing of each piping.



Cable Hose Carriers

To protect and guide multiple cables and hoses of sprue picker, take-out robot for molded parts. **SP Series** with less inner surface friction. **SC Series** with structure of no sliding reduces abrasion of electric wires or air parts minimizes dust generation. tubings.



Air Preparation & Detection Switch

Filter Regulator controls quality and pressures of compressed air supplied to each parts of sprue picker for molded parts.



Pressure Sensor is suitable for check air pressure at each piece of equipment with its easily viewable dual LCD 3-color displays.



Grippers & Vacuum cups

Angular Gripper with sprue jaws is to grip runners and spools.



Vacuum Cup Soft Series is suitable for molded parts easily to get a scratch.

Vacuum Cup Soft Bellows Series is suitable for molded parts having the inclined suction surface.



Parallel Gripper

Parallel Gripper features compact body, high precision, yet high gripping force. Choose external gripping or internal gripping by the mounting position of the attachment.

