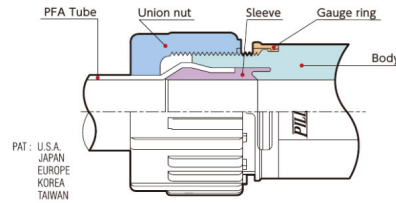


PILAFLON™ FOR SEMICONDUCTOR & FPD INDUSTRY



SUPER 300 TYPE PILLAR FITTING™

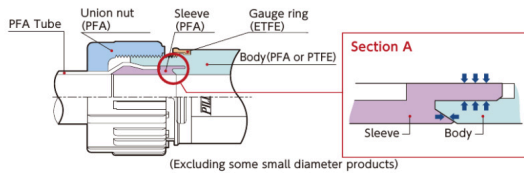


Type	Max Operating Pressure (MPaG)	Operating Temperature (°C)	Tube Size (mm, Inch)
SUPER 300 TYPE	0.7 ^(※1)	0~200	3~25 1/8"~1-1/2"

(※1) If the operating temperature exceeds 60°C, the maximum operating pressure varies accordingly.

The unique sealing mechanism also reduces tightening torque

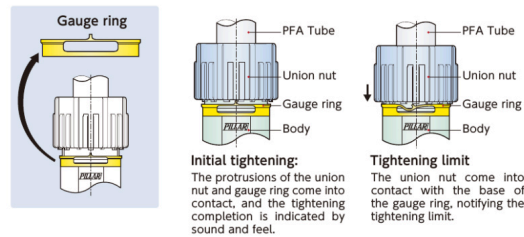
The sealing force acts not only in the thrust direction but also in the radial direction, providing stable sealing performance over a wide temperature range for a long period of time and withstanding thermal cycles.



Simplified tightening management greatly improves workability

The use of a gauge ring allows union nut tightening management to be performed by sound, touch, and visual inspection, greatly improving workability.

This eliminates construction variations such as insufficient or excessive tightening, resulting in safe and stable performance. (Excluding some small diameter products)



PILAFLO™ PFA Tube

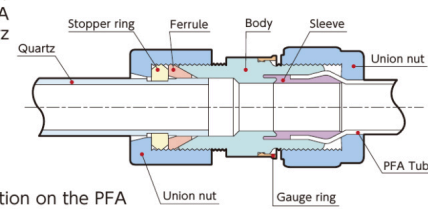
- "SUPER CLEAN NEW PFA TUBE" has unique features as follows, Low elution of fluorine ion and Excellent in the smoothness inside tube. (We also line up low permeation tube.)

Materials	Tube Size (O.D Inch)
PFA	1/8"~1 1/2"



QUARTZ TYPE PILLAR FITTING™

- A fitting type for connecting a PFA tube and a quartz piping.

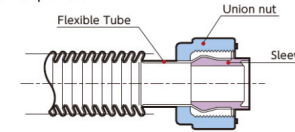


- The fitting connection on the PFA tube side is Super 300 type.



Flexible Tube Fitting

- Excellent flexibility, Absorb thermal expansion.

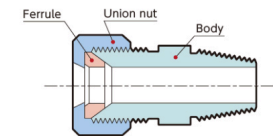


- Fitting side connection is SUPER 300 TYPE.



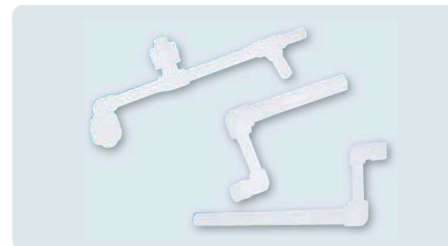
Male Connector Through Pillar Fitting

- A fitting type for passing PFA tube through equipment, panels, etc.



Nonbead™ Welded PFA Tube

- There are no beads on both the inner and outer surfaces of welded portions, thanks to our own welding technology



Bent tube piping

- Bended PFA tubes processed in our own factory.



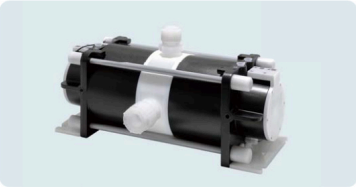
Pump Series

Low-pulsation bellows pump

Achieving low pulsation pressure, no need to install a separate accumulator.

New Low-pulsation Bellows Pump

Application
 • Chemical supply system
 • Wafer Cleaning System



PRS Series For Medium Temp.

- The left and right bellows are operated independently through feedback control, achieving lower pulsation with just the pump without using accumulator.

Type	Max Discharge Capacity(L/min)	Operating Temperature(°C)
PRS-50M	50	15~100

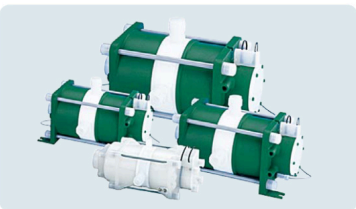
SPELA™ 300 Bellows Pump



PS Series For Medium Temp.

- Minimized pulsation.
- Space saving design.

Type	Max Discharge Capacity(L/min)	Operating Temperature(°C)
PS-10MA	12	10~100
PS-20MA	24	
PS-30M	35	
PS-40MA	48	



PS-E Series For Medium and High Temp.

- Minimized pulsation.
- As compact as PE series pump.

Type	Max Discharge Capacity(L/min)	Operating Temperature(°C)
PS-E2MA	3	10~100
PS-E10MA	10	
PS-E20MA	20	
PS-E40MA	40	
PS-E10H	10	10~180
PS-E20H	20	
PS-E40H	40	10~180

Pump Series

SPELA™ Bellows Pump

PE Series For Medium and High Temp.

- By changing the solenoid valve and the diameter of the supply air pipe, it is now possible to achieve a large volume discharge. (except PE-80MA)

Type	Max Discharge Capacity(L/min)	Operating Temperature(°C)
PE-5MA	8	10~100
PE-10MA	16	
PE-20MA	32	
PE-40MA	60	
PE-80MA	82	10~80
PE-10HB	16	10~180
PE-20HB	32	
PE-40HBH	64	
PE-40HBH	64	

Application
 • Chemical supply system
 • Wafer Cleaning System



PE-E Series For Medium Temp.

- Compact type of PE series pump

Type	Max Discharge Capacity(L/min)	Operating Temperature(°C)
PE-E2M	2.5	10~100
PE-E10M	10	
PE-E20M	20	
PE-E40M	40	

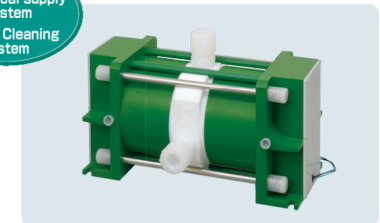


PK Series For Medium and High Temp.

- Small footprint and large flow rate (100L/min).
- This pump can be used for the high discharge head.

Type	Max Discharge Capacity(L/min)	Operating Temperature(°C)
PK-100H	121	10~180

Application
 • Chemical supply system
 • Wafer Cleaning System



Slurry Pump for CMP Process

PC Series For Medium Temp.

- No secondary cohesion or retention of slurry.

Application
 For CMP slurry process, circulation or supply lines

Type	Max Discharge Capacity(L/min)	Operating Temperature(°C)
PC-10MB	12	10~100
PC-20MB	24	
PC-40MB	48	



High accuracy metering pump



PD Series

- Repeatability : ±0.005 mL
- Maximum fluid viscosity : 1000cP



Type	Max discharge capacity (mL/shot)	Repeatable dispense accuracy (mL)	Operating Temperature (°C)
PD-1000R	10	±0.005	20~40

Metering pump



PW Series

- Achieved repeatability ±1%



Type	Max discharge capacity (mL/shot)	Discharge accuracy (Repeatability)	Stroke speed (spm)	Operating Temperature (°C)
PW-5MA	5 ^(※1)	±1.0 ^(※2)	4~40	10~100
PW-10MA	10 ^(※1)			

(※1) These values are applicable when 25°C pure water is discharged.

(※2) This value is applicable only when the temperature and supply air pressure are constant.

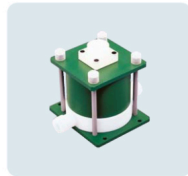
Bellows Pump Controller



Photo: PB-12

Type	Applicable Pump
PB-12	PS-E series, PS series, PK series, PE series, PE-E series, PC series, PW series
PB-13	PRS series

Automatic accumulator



- automatic pressure adjustment function

Type	Applicable Pump
PA-10HB	PE-5MA, PE-10MA, PE-10HB
PA-20HB	PE-20MA, PE-20HB
PA-40HB	PE-40MA, PE-40HBH
PA-80MB	PE-80MA
PA-100H	PK-100H
PA-C10MB	PC-10MB
PA-C20MB	PC-20MB
PA-C40MB	PC-40MB

Model Map	Type	Operating Temperature	Max. Supply Air Pressure (MPaG)	Discharge Capacity (L/min)												Remarks	Application
				2	5	10	15	20	30	40	50	60	80	100			
Circulation, Supply Pump	Low pulsation	PRS Series	Medium	15~100	0.4												Cleaning equipment Chemical supply system
		PS Series	Medium	10~100	0.5			○	○	○	○						
		PS-E Series	Medium	10~100	0.4	○											
	General type	PE Series	Medium	10~100*	0.5		○	○	○	○	○			○			
		PE-E Series	Medium	10~180*	0.3		○	○	○	○							
		PK Series	High	10~180*	0.7												
Pump for slurry	PC Series	Medium	10~100	0.5			○	○	○						For CMP slurry process		
Metering Pump	PD Series	Medium	20~40	—											10mL / shot	Photoresist solution	
	PW Series	Medium	10~100	0.25											5mL, 10mL / shot	For feeding, Mixing	
Accumulator	PA Series	High	10~180* ¹	0.5* ²		○	○	○	○	○			○	○		*1 PA-80MB: 10~80°C *2 PA-100H: 0.7	Automatic pressure adjustment
	PA-C Series	Medium	10~100	0.5			○	○	○							For PC series Pump only.	

Manual Valve

Stop Valve



Check Valve



Flow Control Valve



Air Vent Valve

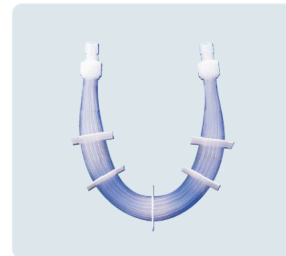


Type	Stop Valve	Check Valve	Flow Control Valve	Air Vent Valve
Max Operating Pressure (MPaG)	0.7 ^(※1)	0.7 ^(※1)	0.7 ^(※1)	0.3 ^(※1)
Operating Temperature (°C)	0~100	0~150	0~100	0~80

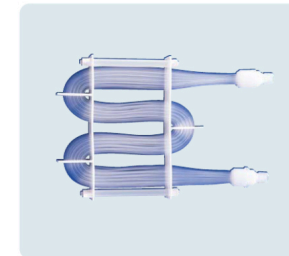
(※1) If the operating temperature exceeds 60°C, the maximum operating pressure varies accordingly.

Heat Exchanger

Module type



W type



End Connector



High-standard clean room

We have installed large-scale industrial clean rooms at our Fukuchiyama factory and Kyushu factory. We monitor the cleanliness of the clean rooms and always maintain them at an appropriate level.



Fukuchiyama Factory No. 2





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**Safety
precaution**

- When using this product, please use correctly and pay sufficient attention to safety.

* Please understand that this catalog may change without prior notice.
* The values shown on this catalog are reference values, not guaranteed values.

