

# Perista Pump®

## Peristaltic Pump

### Purpose of Use

Pumps are used for delivery at a flow rate of 0.1-1000 mL/hour. They are suited to feeding applications for a variety of purposes such as chromatography. Atto Perista® Pump is the standard of the peristaltic pumps in Japan with its reliability and years of results.

### Principles

A tube is squeezed by rollers and the liquid fed. Peristaltic Pumps have the advantage of being able to feed liquid cleanly without contamination because the place in contact with the solution is the inside of the tube alone and because the place to clean after use is just the tube.



Silicone tube

### Silicon Tube Chemical Proof Chart

◎Excellent, almost completely unaffected

○Slightly affected but presents no problem for usage

△Infiltrated to a certain degree, not recommended

×Extreme damage not usable

Sodium nitrite	◎	Monochloroacetic acid	○	Potassium hydroxide	◎	Phenol	○
Asphalt	×	Chloroform	×	Sodium hydroxide	○	Butadiene	×
Acetaldehyde	×	Chlorobenzene	×	10% sodium hydroxide	◎	Butanol	△
Acetone	○	Chloromethane	×	Magnesium hydroxide	◎	Butane	×
Aniline	×	Kerosene	×	Styrene	×	Fulfural	×
Linseed oil	◎	Coal tar	△	Stearic acid	△	2-propanol	○
2-aminoethanol	○	Fish oil	△	Ammonium hydrogen carbonate	◎	Benzene	×
Sulfurous acid	△	Acetic acid	○	Tannic acid	◎	Pentanol	○
Sodium sulfite	◎	Acetic ether	×	Diesel oil	○	+Pentane	×
Ammonia	○	Sodium acetate	○	Molasses	◎	Aromatic carbon hydride	×
Ammonia water	○	Butyl acetate	×	Triethanolamin	◎	Maleic acid	◎
Isobutane	×	Propyl acetate	×	Triethylamine	◎	Chromic acid anhydride	◎
Ethanol	○	Pentyl acetate	×	Triol	×	Acetic acid anhydride	○
Ethylene glycol	○	Methyl acetate	×	Trichloroethane	×	Phtanol acidanhydride	○
Hydrochloric acid	×	Calcium hypochlorite	◎	Trichloroacetic acid	△	Methanol	◎
Chlorine (moistened)	◎	Sodium hypochlorite	△	Naphtha	×	Methyl isobutyl ketone	×
Chlorine dielectric oil	○	Diamylamine	◎	Sulfur dioxide	△	Methyl ethyl ketone	×
Octanol	◎	1,2-dichloroethane	×	Nitrobenzene	×	2-methyl propene	×
Oleic acid	○	Dichloropentane	×	Lactic acid	◎	Melamine resin	○
Hydrogen peroxide solution	○	Dipentane	×	Hydroquinone	○	Melt sulfur	△
Formic acid	◎	Fat acid	○	Paraldehyde	×	Kalium phosphate	△
Xylene	×	Dimethyl phthalate	△	Paraform aldehyde	×	Cotton oil	◎
Benzene	×	Nitric acid	×	Palmitic acid	○	0~10% sulfuric acid	◎
Glycerol	◎	Silicon oil	△	Pitch	×	10~50% sulfuric acid	△
Creosote	×	Ammonium hydroxide	◎	Ricinus	◎	50% sulfuric acid	×

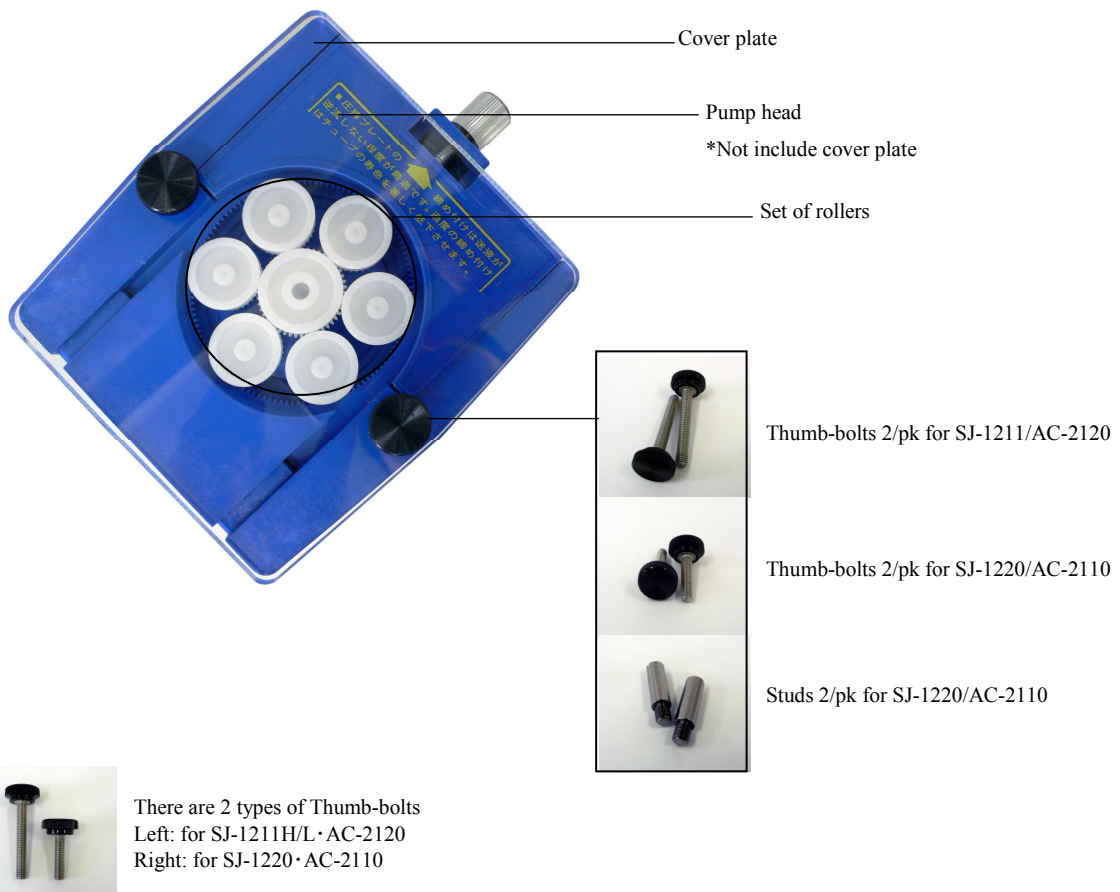
# Perista Pump®

## Peristaltic Pump

### Common Expendables for All Pumps

Code No.	Name	Note
1292121	1 mm, 5 m Silicone Tube	1 mm I.D. - 3 mm O.D.
1292302	1 mm, 10 m Silicone Tube	1 mm I.D. - 3 mm O.D.
1292303	1 mm, 20 m Silicone Tube	1 mm I.D. - 3 mm O.D.
1292301	1 mm, 50 m Silicone Tube	1 mm I.D. - 3 mm O.D.
1292120	2 mm, 5 m Silicone Tube	2 mm I.D. - 4 mm O.D.
1292305	2 mm, 10 m Silicone Tube	2 mm I.D. - 4 mm O.D.
1292306	2 mm, 20 m Silicone Tube	2 mm I.D. - 4 mm O.D.
1292304	2 mm, 50 m Silicone Tube	2 mm I.D. - 4 mm O.D.
1292119	3 mm, 5 m Silicone Tube	3 mm I.D. - 5 mm O.D.
1292308	3 mm, 10 m Silicone Tube	3 mm I.D. - 5 mm O.D.
1292309	3 mm, 20 m Silicone Tube	3 mm I.D. - 5 mm O.D.
1292307	3 mm, 50 m Silicone Tube	3 mm I.D. - 5 mm O.D.
1292124	1, 2 & 3 mm Silicone Tubes	1 m each

### Consumable parts for Pump head



# Perista Pump®

Perista Pump (High / Low flow rate Type)



SJ-1211H Perista Pump (High flow rate)



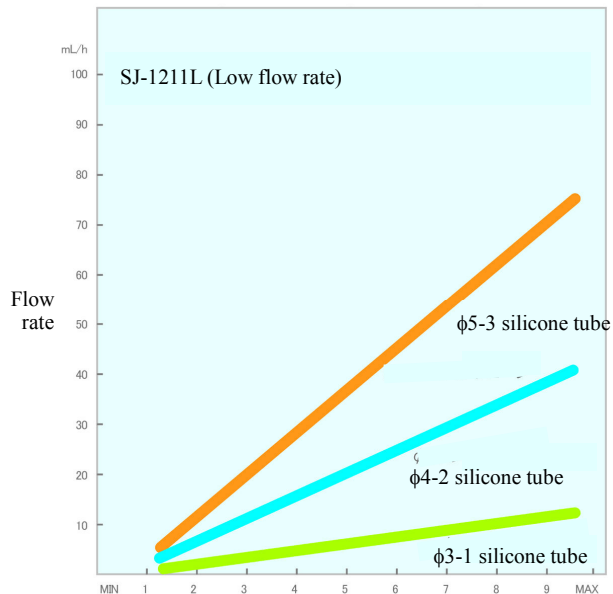
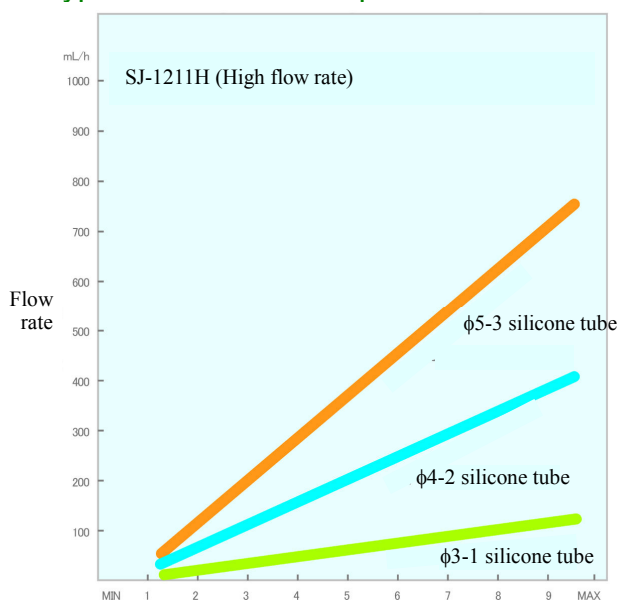
SJ-1211L Perista Pump (Low flow rate)

Code No.	Type	Name
1221124	SJ-1211H	Perista Pump®, 110V
1221109	SJ-1211H	Perista Pump®, 230V
1221125	SJ-1211L	Perista Pump®, 110V
1221110	SJ-1211L	Perista Pump®, 230V

## Specifications

Name	SJ-1211H Perista Pump	SJ-1211L Perista Pump
Number of channels	1 channel	
Flow rate	7 - 700 mL/h	0.7 - 70 mL/h
Flow rate repetitive accuracy	± 1%, subject to ± 15% variation in source voltage	
Pressure	Discharge: 205.9 kPa (2.1kg/cm <sup>2</sup> ) max Suction: 9.8kPa (0.1kg/cm <sup>2</sup> ) max	
Tube length	22 m, max	
Maximum viscosity	1.5 Pas (1500cP) max	
Motor	AC variable speed motor, 6W	AC variable speed motor, 3W
Control	Solid state automatic speed control circuit	
Operating temp.	0 - 40 degC	
Power	AC 100 - 115V or 200 - 240V, 50/60 Hz, 10W	
Dimensions	110 (W) x 150 (D) x 180 (H) mm, 2.0kg	

## Typical Flow Rate Graph

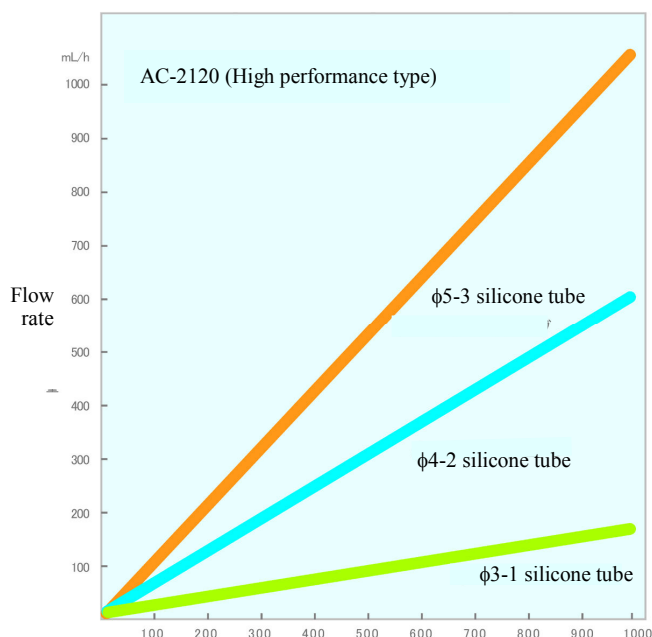


# Perista Pump®

High Performance Perista Pump(External Control Terminals Outfitted Type)



Typical Flow Rate Graph



Code No.	Type	Name
1221202	AC-2120	Perista Pump®, 110V
1221201	AC-2120	Perista Pump®, 230V

## Features

- Flow rate of 1-1000 fold in a tube with a uniform diameter possible by motor revolution control alone
- Supports a flow rate of 0.1-1000 mL/h using a tube with an internal diameter of 1-3 mm
- Easy-to-see operating panel thanks to illuminated panel switches. Flow rate is accurately set with a digital dial
- Equipped with external control terminals; supports (complex) gradient solution preparation

## Specifications

Name	AC-2120 Perista Pump
Number of channel	1 channel
Flow rate	0.1 - 1000 mL/ch (Depends on tube I.D.)
Flow rate repetitive accuracy	± 0.2%, subject to ± 1% variation in source voltage
Pressure	Discharge: 205.9 kPa (2.1kg/cm <sup>2</sup> ) max. Suction: 9.8kPa (0.1kg/cm <sup>2</sup> ) max.
Tube length	22 m max.
Maximum viscosity	1.5 Pas (1500cP) max.
Motor	AC induction motor
Flow change rate	1000 steps (Up to 1000 times)
Operating temp.	0 - 40 deg C
Control signals	Input: Flow rate 0 - 5 VDC, CW, CCW, STOP, TTL MAX FLOW Switch equipped.
Power	AC 100-115V or 200-240V, 50/60 Hz, 10W
Dimensions	120 (W) x 160 (D) x 183 (H) mm, 2.2kg
Fits for:	Tubings of 5-3, 4-2, 3-1, and 2.5-0.5 (ID-OD)

# Perista Pump®

Perista Pump (External Control Terminals Outfitted Type)



Code No.	Type	Name
1221151	AC-2110	Perista Pump® · 1-ch, 110V
1221152	AC-2110	Perista Pump® · 1-ch, 230V
1221161	AC-2110-2	Perista Pump® · 2-ch, 110V
1221162	AC-2110-2	Perista Pump® · 2-ch, 230V

## Features

- Consists of a 1-2-channel pump as the number of cassettes is increased or decreased
- Can feed liquid up to 1000 mL/h per channel using a DC motor for output enhancement
- PC control possible with external control terminals outfitted
- Equipped with a "MAX.FLOW" switch; quickly replaces solution

## Specifications

Name	AC-2110 Perista Pump
Number of channels	1-ch / 2-ch
Flow rate	10 - 1000 mL/ch (Depends on tube I.D.)
Flow rate repetitive accuracy:	± 1%, subject to ± 15% variation in source voltage
Pressure	Discharge: 205.9 kPa (2.1kg/cm <sup>2</sup> ) max. Suction: 9.8kPa (0.1kg/cm <sup>2</sup> ) max.
Tube length	22 m max
Maximum viscosity	1.5 Pas (1500cP) max
Motor	DC servo motor, 10 W
Flow change rate per channel	20 steps (Up to 20 times)
Operating temp.	0 - 40 degC
Control signals	Input: Flow rate 0 - 5 VDC, FLOW, STOP MAX FLOW Switch equipped.
Power	AC 100-115V or 200-240V, 50/60 Hz, 20W
Dimensions	110 (W) x 150 (D) x 235 (H) mm, 2.6kg (for 1 channel)

## Typical Flow Rate Graph

