



## Compact, Precision Peristaltic Pump

# ATTO® PERISTA-PUMP®

Atto Perista-Pumps are the ideal general purpose laboratory pumps for column chromatography, fluid transfer, circulatory systems, fermentation control, density gradient formation and many other applications where precise and reproducible flow rates are required.

### FEATURES

- Repetitive accuracy  $\pm 1\%$  by precision pump head and solid state control
- Minimal flow pulsation by gear driven six rollers
- Forward & reverse flow selection
- Chemically resistant construction, and protection against spillage with pump head self-contained drainage
- Wide temperature tolerance,  $0^{\circ}$  to  $40^{\circ}\text{C}$
- Compact design for mounting on retort stand or adjacency to chromatographic columns
- Reliability by high quality manufacture backed by more than 15 years of experiences

### Multichannel – Dual Flow Range

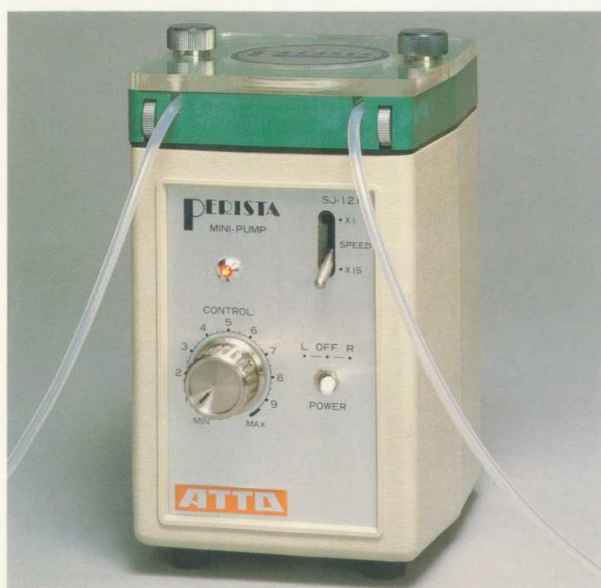
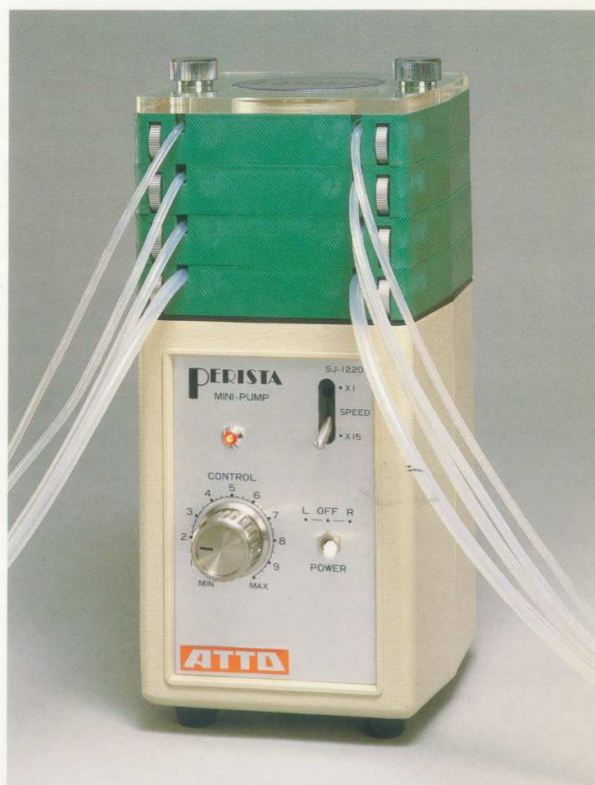
#### SJ-1220 PERISTA-PUMP

Up to 4 channels

Low flow rate: 0.3 to 66 ml/hr/channel

High flow rate: 4 to 1000 ml/hr/channel

Up to 4 channels with either the same or different ID may be simultaneously operated to give the same or different flow rates. The dual speed gearing enables a maximum flow rate variation of 700:1 with same ID tubing. May be purchased with single pump head and added to as required up to a maximum of 4 heads.



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Note: Extensions of SJ-1212, SJ-1211H and SJ-1211L are standard except the speed selector switch which is provided only for SJ-1212.

### High Flow Range

#### SJ-1211H PERISTA-PUMP

Flow rate: 7 to 700 ml/hr

Single channel

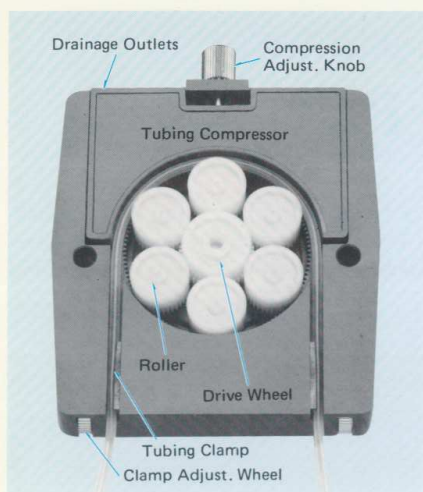
### Low Flow Range

#### SJ-1211L PERISTA-PUMP

Flow rate: 0.7 to 70 ml/hr

Single channel

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The Perista-Pump consists of a drive & control unit housed in a chemically resistant casing and a removable pump head or Tubing Cartridge®. The tubing cartridge is mounted on the drive & control unit to connect directly onto the motor drive shaft and is readily removed and replaced. Up to 4 tubing cartridges may be stacked for a ganged configuration through their drive spigots, on Model SJ-1220 only.

Flexible tubing with maximum O.D. of 5 mm is placed in the U-shaped groove of the tubing cartridge around a series of 6 rollers and held in place by the adjustable tubing clamps.

Optimum compression to the tubing is achieved by the manually adjusted tubing compressor which ensures minimal pulse effect and prolonged tubing life.

Within the cartridge, the toothed 6 rollers revolve around the central drive wheel while rotating on their own axes. As the rollers compressing the tubing continuously revolve, liquid entrapped by them is discharged as a constant and pulse dampened flow. Flow rate is dependent upon the inner diameter of the tubing and the revolution of the rollers.

A liquid being pumped is in contact only with the tubing. The liquid must be chemically compatible with the tubing. Any liquid to which the tubing is resistant may be pumped.

The tubing cartridge is molded from fiberglass-reinforced unsaturated polyester plastic, and the rollers and the central drive wheel are molded from

polyacetal plastic. Stable flow is founded on the precision pump head components with the adjustable tubing compressor. The tubing cartridge also incorporates 2 drainage outlets to which tubings may be attached to collect spillage in the event of tubing rupture.

Speed of the driving motor is continuously variable to adjust flow rates. Set flow rates are maintained by the solid state control circuit which compensates for variations in physical load, source voltage and environmental temperature. The three way power switch selects a forward or reverse flow direction. The drive and electric components are housed in a casing of A.B.S. plastic which has a good range of chemical resistance.

The high quality manufacture and functional design of Atto Perista-Pumps ensure reliability and dependability over continuous usage for a prolonged period.

## SPECIFICATIONS

**Note:** Specifications are common to all the models unless otherwise specified.

**Flow rate range:** (ml/hr/channel)

| Tubing I.D. | Single channel ONLY |          |           |            | Up to 4 channels |            |
|-------------|---------------------|----------|-----------|------------|------------------|------------|
|             | SJ-1211L            | SJ-1211H | SJ-1215   |            | SJ-1220          |            |
| 1 mm        | 0.7 – 14            | 7 – 140  | 0.4 – 8   | 8 – 140    | 0.3 – 13         | 4 – 200    |
| 2 mm        | 1.9 – 38            | 19 – 380 | 1.1 – 25  | 25 – 380   | 0.8 – 36         | 11 – 540   |
| 3 mm        | 3.5 – 70            | 35 – 700 | 2.0 – 46  | 46 – 700   | 1.4 – 66         | 20 – 1000  |
|             |                     |          | Low Range | High Range | Low Range        | High Range |

**Flow rate repetitive accuracy:**

± 1%.

**Flow rate stability:** ± 1%, subject to ± 15% variation in source voltage.

**Discharge pressure:** 2.1 kg/cm<sup>2</sup>, max.

**Maximum viscosity:** 1500 cps.

**Operating temperature:**

0° to 40° C.

**Drive:** AC variable speed motor 6 W.

DC servo motor 15 W on SJ-1220.

**Control:** Solid state automatic speed control circuit.

**Source electricity:** 100–115 VAC or 220–240 VAC, 50 & 60 Hz.

**Maximum power consumption:**

10 W. 20 W on SJ-1220.

**Dimensions:** 110 mm W x 150 mm D x 180 mm H.  
110 mm W x 150 mm D x 235 mm H on SJ-1220.

**Net weight:** 2.0 kg. 2.6 kg on SJ-1220.

**Standard accessories:**

Silicone rubber tubings, 1 meter x 1, 2 & 3 mm ID. Same tubings per channel on SJ-1220.

— Design & specifications subject to change without notice —

## ORDERING INFORMATION

|          |                  |          |                  |
|----------|------------------|----------|------------------|
| 1221 127 | SJ-1220 4ch 110V | 1221 116 | SJ-1220 4ch 220V |
| 1221 128 | SJ-1220 3ch 110V | 1221 117 | SJ-1220 3ch 220V |
| 1221 129 | SJ-1220 2ch 110V | 1221 118 | SJ-1220 2ch 220V |
| 1221 130 | SJ-1220 1ch 110V | 1221 119 | SJ-1220 1ch 220V |

|          |               |                                        |                |
|----------|---------------|----------------------------------------|----------------|
| 1221 126 | SJ-1215 110V  | 1292 118                               | Mounting Clamp |
| 1221 111 | SJ-1215 220V  | Silicone rubber tubing, 5 meters long: |                |
| 1221 124 | SJ-1211H 110V | 1292 121                               | ID 1 mm        |
| 1221 109 | SJ-121H 220V  | 1292 120                               | ID 2 mm        |
| 1221 125 | SJ-1211L 110V | 1292 119                               | ID 3 mm        |
| 1221 110 | SJ-1211L 220V |                                        |                |

Also available from ATTO: 100 l/hr Perista Bio-Pump, and a high quality range of equipments for column chromatography and electrophoresis.



**ATTO CORPORATION**

2-3, Hongo 7-chome  
Bunkyo-ku, Tokyo 113  
Japan

Telex 2722512 ATTO J  
Cable ATTOLAB TOKYO  
Phone 03-814-4861

Distributed by:

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Printed in Japan

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