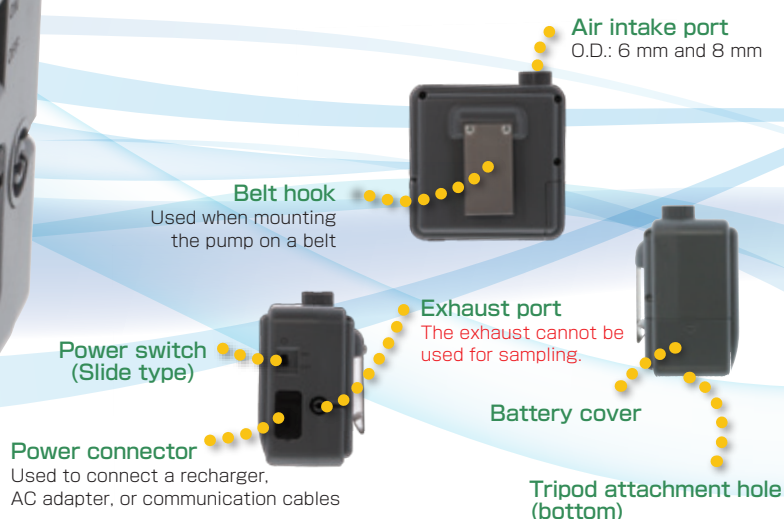


# Sampling Pump, Model MP-W5P

## MINIPUMP MODEL MP-W5P



The MP-W5P Minipump is a portable air sampling pump equipped with functionality for measuring accumulated flowrates and constant flowrates. Its small, lightweight design is suitable for personal exposure measurements. Due to the fact that the flowrate can be set in a wide range from 0.05 L/min to 5.00 L/min, it can also be used for a variety of other purposes such as air sampling in each of occupational health, indoor and atmospheric environments.



## Features

- Thanks to the wide flowrate settings range from 0.050 to 5.00 L/min, the ranges of all of the MP-ΣNII series basic type minipumps (30NII/300NII/500NII) can be covered by a single pump unit.
- The constant flowrate function incorporated in the MP-W5P delivers comparable or better performance than the existing basic type MP-ΣNII series minipumps (30NII/300NII/500NII).
- Small/lightweight  
The capacity is approximately 1/2 that of the MP-ΣNII series, and it is 200 g lighter.
- In terms of operability, the MP-W5P pump has the same screen display and the button operations as the MP-ΣNII series.
- Compatible with three types of power supply  
The pump can be run using AC power, regular batteries (six AA batteries), or an NiMH rechargeable battery. The product includes an NiMH rechargeable battery, a quick charger with AC adapter (model QCA-W5), and a battery holder (model SN3-6B).

## Specifications

Item Code	080860-5
Model	MP-W5P
Variable Flowrate Range	0.050 to 5.00 L/min
Instantaneous Flowrate Display Range	0.000 to 6.50 L/min
Constant Flowrate Operational Range	0.05L/min: 0 to 7.0kPa   1.0L/min: 0 to 10.0kPa 0.1L/min: 0 to 10.0kPa   1.5L/min: 0 to 10.0kPa 0.5L/min: 0 to 10.0kPa   5.0L/min: 0 to 3.0kPa
Flowrate Accuracy	5 mL or $\pm 5$ % of the specified flowrate value (whichever is larger)
Accumulate Flowrate Settings Range (Volume Timer)	0.0 to 9999.9 L
Integrated Flowrate Display Range	0.00 to 99999 L
Time Setting and Display Range	0.00 to 999.59 (hours, minutes)
Built-in Flow Meter	Differential pressure type
Pump Type	Diaphragm
Materials	Pump head: PC and POM Diaphragm: EPDM   Flow line: ABS   Case: PC
Measurement Mode	Manual, countdown timer, volume timer
Display	LCD display (with backlight)
Air Intake Diameters	O.D.: 6mm and 8mm (Tube used: 5mm or 7mm I.D)
Ambient Temperature and Humidity Range	0°C to 40°C; 10 %RH to 90 %RH (no condensation)
Power Supply	AC adapter (100 V AC) NiMH rechargeable battery and six AA batteries
Operating Time (when unloaded and using the NiMH rechargeable battery)	0.1 L/min: 24 hours 1.0 L/min: 18 hours or longer
Dimensions	W95×D56×H95 mm (not including protruding parts)
Weight	0.45 kg (including the NiMH rechargeable battery)
Accessories	NiMH rechargeable battery (model NH-W5), quick charger with AC adapter (model QCA-W5), battery holder (model SN3-6B), color caps (red, blue, yellow, one each)

## Optional and Spare Parts



Soft case



Quick charger (model QCA-W5)

Item Code	Product Name
080860-51	NiMH rechargeable battery, model NI-W5
080860-52	Battery holder for the MP-W5P, model SN3-6B
080860-53	Three-color caps: Red, blue, yellow, one each
080860-54	Quick charger, model QCA-W5※1
080860-55	Soft case for MP-W5P
080860-56	Air intake port set for MP-W5P
080860-57	Filter element VFE-2, set of 5※1
080860-58	Connection cable for LI-10N
080860-010	LI-10N Battery unit, model LI-10N※2
080860-110	Quick charger, model QC-10N※3

- ※1 Specifically designed for the MP-W5P. It cannot be used with the MP-ΣN/ΣII series minipumps.  
 ※2 See the option usage example at right regarding how to use the LI-10N battery unit for the MP-ΣN/ΣII series. Note that the QC-10N charger is required to charge the LI-10N battery unit.  
 ※3 This charger is specifically for the LI-10N battery unit. It cannot be used to charge the NI-W5 battery.

## Related Products

### PM4 Personal Dust Sampler Set

Using an inertia collision type particle size selector, the sampler separates dust in accordance with the PM4 (50 % reduction in 4 μm particles) sizing characteristics. Coarse particles larger than PM4 are collected by a stainless steel collection plate, and the PM4 particles are collected by a filter paper. As a result, the exposure to dust by working personnel can be measured both in terms of PM4 dust concentration and the total dust concentration.



Soft case included

## Specifications

Item Code	080150-445
Filter Paper Holder	NWPS-254: Plastic 25 mm dia., × 1
Sizing Characteristics	PM4 (50 % reduction in 4 μm particles)
Suction Pump	Minipump, model MP-W5P
Flowrate	2.5 L/min
Weight	Approx. 0.5 kg
Composition	NWPS-254 personal sampler holder×1 MP-W5P Minipump × 1 Grease set (with spatula and micro-spatula) × 1; intermediate clip × 1 T60A20 25-mm dia. fluoropolymer-coated fiberglass filter × 50 Toalon tube × 1 Soft case

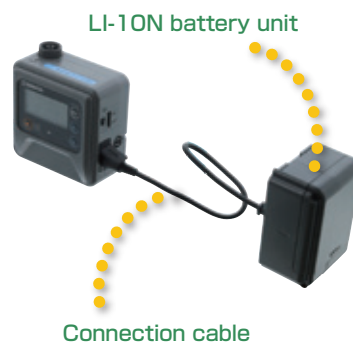
## Example of How to Use the Optional and Spare Parts

### Example of How to Use the Three-Color Caps



They can be used to distinguish instruments by usage site or application. If you attach a 7 mm dia. × 10 mm tube to the air intake port and then use the color cap, it will help to prevent the tubing from coming loose.

### Example of Operation Connecting with the Battery for the MP-ΣN/ΣII



The instrument can be operated for an extended period by connecting it externally to the LI-10N battery for the MP-ΣN/ΣII, which has a larger capacity than the NI-W5 battery provided as standard.

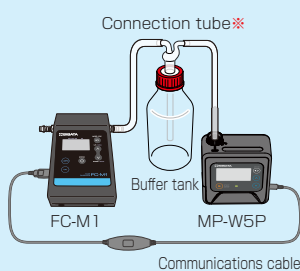
### Flow Calibrator, Model FC-M1 (for Minipumps)

It can automatically calibrate the intake flowrate for MP-Σ30NII, MP-Σ300NII, MP-Σ500NII, MP-Σ100HNII, and MP-W5P minipumps. It is also conveniently portable and can be used to check the flowrate at the measurement worksite.



#### [Connection Example]

The MP-W5P pump can be calibrated with the combination of the flow calibrator (model FC-M1) and the buffer tank.



※Provide a Toalon tube (7 mm I.D.) if necessary.

#### Features

- Easy-to-operate dry flowmeter
- You can select the flowrate display mode freely from the value converted based on temperature and atmospheric pressure (25 °C at 1 atm; 20 °C at 1 atm; 0 °C at 1 atm), or the actually measured flowrate.

## Specifications

Item Code	080120-151
Model	FC-M1
Measurement Range	0.05 to 5.00 L/min※2
Instantaneous Flowrate Display Range	0 to 6 L/min
Flowrate Accuracy	±0.003 L/min or ±2 % of the standard flowrate (whichever is larger)
Flowrate Detection Method	Differential pressure detection
Ambient Temperature and Humidity Range	0°C to 40°C; 10 %RH to 90 %RH (no condensation)
Power Supply	9 V DC (four AA alkaline batteries) Operating time of 8 hours or longer※2
Dimensions	W105 × D170 × H100 mm
Weight	Approx. 900 g (including batteries)

※1 Actually measured or converted flowrates can be displayed. Flowrate can be converted in terms of 25 °C at 1 atm, 20 °C at 1 atm, and 0 °C at 1 atm. The specified precision may not be achieved when operated at a site with a large difference between high and low temperatures.

※2 Approximation based on continuous operation using AA alkaline batteries at 25 °C

## Options

Item Code	Product Name
080120-1511	Soft case for FC-M1
080040-3212	AC adapter
080880-1000	Buffer tank
080880-10001	Middle tube for the buffer tank
080860-59	Communications cable; set of two types (1 cable for MP-W5P and 1 cable for MP-ΣNII)