



# WORLD LEADER

## WORLD BEST IN DISPENSER

# &



### COMPANY HISTORY

- 1996**
  - Established BANSEOK engineering.
  - Standardization of dispenser and developed the controller, valve and pump for dispensing system.
  - Developed various dispensing accessories like component assembly and launched the mass-production.
- 1997**
  - Developed the robot dispenser for mobile phone key-pad and put the products on the market.
    - In the first dispenser-only robot development in the interior of a country.
- 1999**
  - Finalized development of two bed sealing robot.
    - Apply the world's first two bed type dispenser robot.
  - Established BANSEOK PRECISION IND., CO., LTD.
- 2001**
  - Sales agent contract with Malaysia & Netherlands.
- 2003**
  - Patent registration for liquid mixed discharge device.
  - Acquired CE certification.
  - Established local branch in Gumi city.
- 2004**
  - Acquired ISO 9001/KSA9001.
- 2005**
  - BANSEOK Automation Co., Ltd. established in Shenzhen in China.
    - China to sell produce directly from the corporation .
- 2006**
  - Patent registration for liquid unit dose inhalation discharge.
  - Liquid Automation established business FA.
- 2007**
  - Desktop robot dispenser development completion and patent application.
  - Vietnam agent agreement.
- 2008**
  - Research Institute Established.
  - Representative Director award of the Secretary of Ministry of Education, Science and Technology
  - India agent contract.



## 21st century is an era of technology-intensive high value added creation.

R&D is improving productivity and product quality in display, solar energy, radio communication, electric, electronics, semiconductors, automobiles, bio industry, space airline etc and the success of a company depends on them.

Liquid control techniques are evolving with diverse ranges of application developments and expertise BANSEOK is stepping forward by strong research and development.

BANSEOK is researching and developing in liquid creative control technology. Also BANSEOK leads exclusive application developments in the field.

If you look for specialized liquid control techniques, unique facilities and liquid control techniques needed in an industrial field, please share it with us.

BANSEOK promises to provide you right answer to your needs.

You will experience our world class applications exclusively for liquid control, which is exported to all over the world.

[www.banseok.co.kr](http://www.banseok.co.kr)

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**TOTAL APPLICATION BY DISPENSER - BANSEOK**

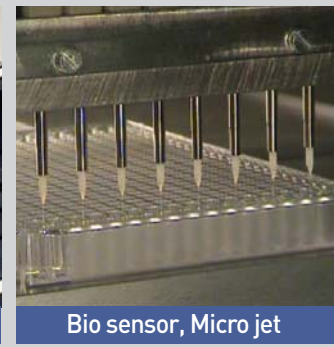
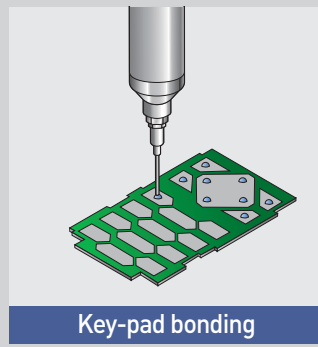
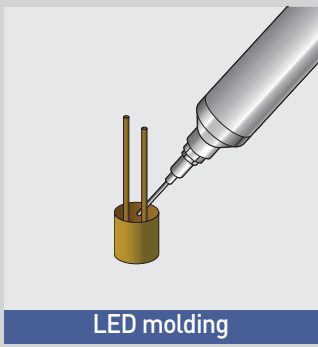
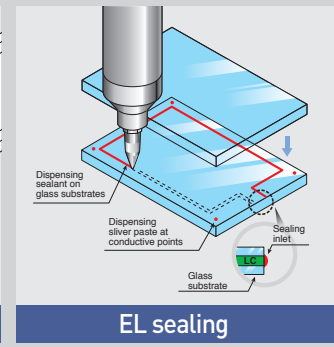
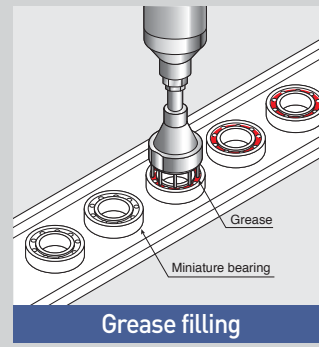
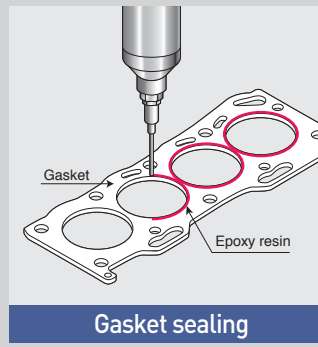
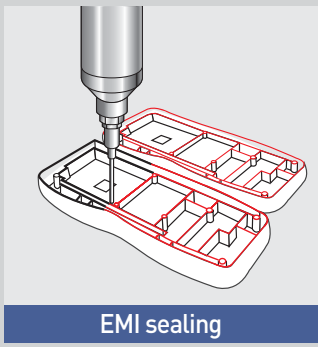
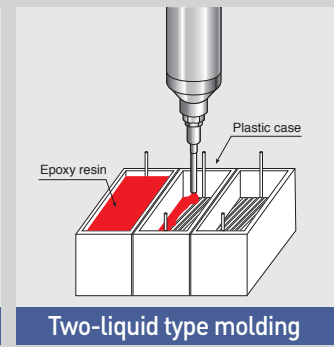
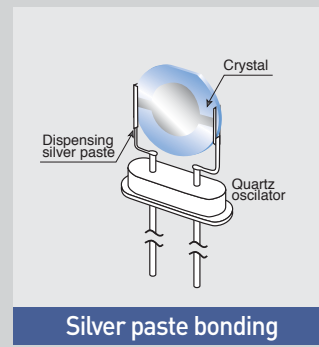
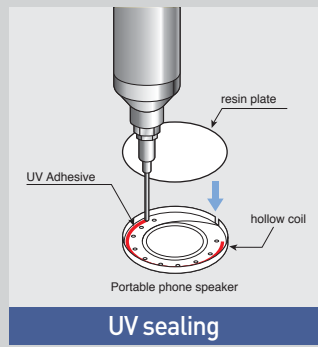
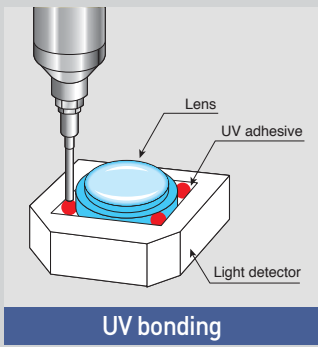
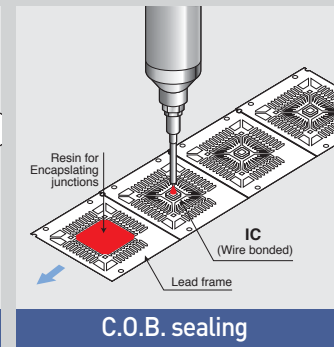
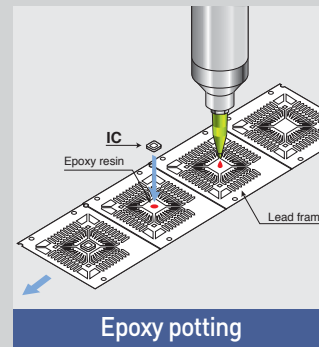
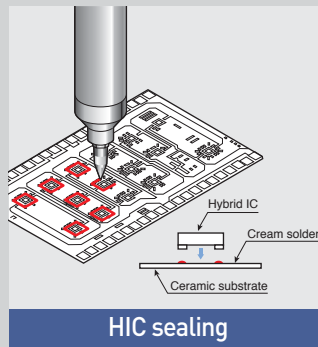
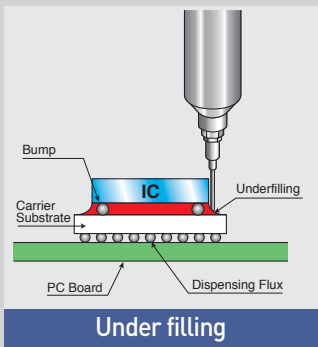
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# APPLICATION

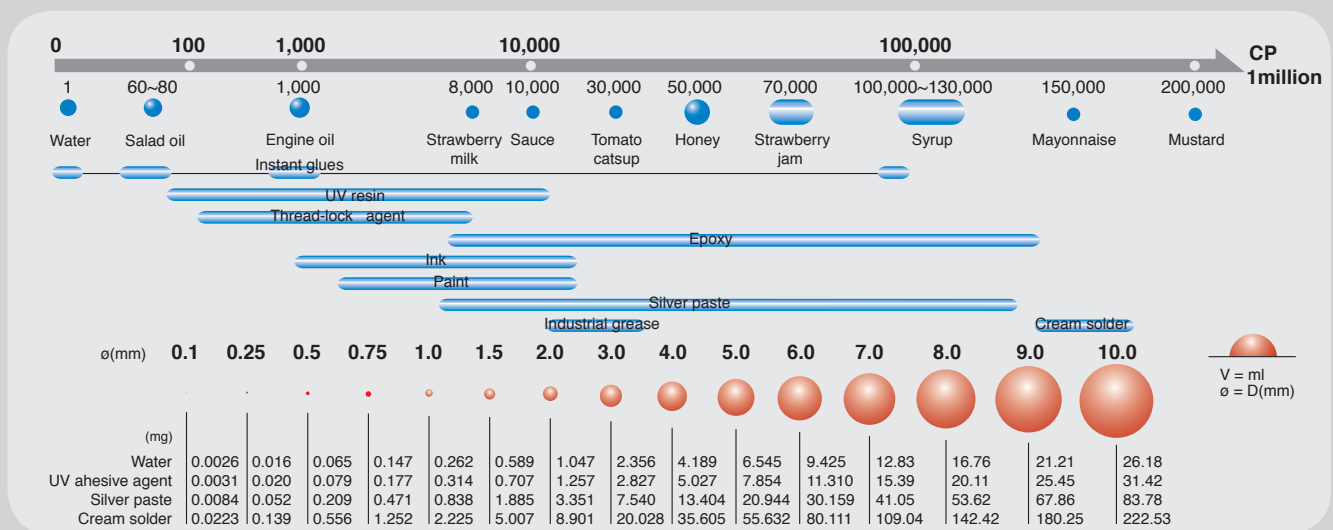
Liquid precise control is closely related to our lives together with continuous industrial growth, and will be applied in various ways to production, contributing to higher productivity and reliability with precision and a lot of application technologies.



## Display product, Solar energy industry, Radio communication product, Electric industry, Electronics industry, Semiconductors, Auto industry, Bio industry, Space airline industry etc.

The fluid control technology is various according to the physical properties, fluid characteristics, and hardening characteristics of materials dispensed. Therefore we should know the properties and viscosity of liquids, the amount and pattern of dispensing, working method to look for the suitable dispensing system to each application.

### Concept of viscosity and dispensation pattern



### • Viscosity unit

Unit	cP	P(g/cm.s)	gmf.s/cm <sup>2</sup>	lbf.s/in <sup>2</sup>	mPa-s	N.s/m <sup>2</sup>
cP	1	0.01	1.02e-7	1.45e-7	1	0.001
P(g/cm.s)	100	1	1.02e-6	1.45e-5	100	0.1
gmf.s/cm <sup>2</sup>	98039.2	980.392	1	0.014219	98039.2	98.0392
lbf.s/in <sup>2</sup>	6894757	68947.57	70.3265	1	6894757	6894.76
mPa-s	1	0.01	1.02e-7	1.45e-7	1	0.001
N.s/m <sup>2</sup>	1000	10	0.0102	1.45e-7	1000	1

### • Applied liquids

- Various adhesives : epoxy, rubber, Silicone, bond, UV hard resin, instantaneous adhesives, anaerobic adhesive
- Molding agents : epoxy, Silicone, 2-liquid type epoxy, 2-liquid type Silicone, 2-liquid type urethane, Acryl resin
- Pastes : Silver paste, RTV Silicone, Cream solder conductive epoxy
- Oil : Silicone oil, Silicone grease, grease, lubricant
- Paint : enamel, water paint
- Chemicals : alcohol, MEK, TCE, toluene, acetone
- Sealant : cartridge Silicone, 2-liquid type Silicone, 2-liquid type urethane

### • Viscosity of liquids

Viscosity of liquids is generally expressed in centi poise(cps) at 25°C.  
If SSU unit, SSU x 1.455/specific gravity = cps

### • Specific gravity of liquids

Relation between the weight of a liquid and that of the same volume of water. It decides mixing proportion of two liquids.

### • Pot life

In general, 100g of liquids do not change a lot in viscosity at 25°C during pot life, which means the time takes for the viscosity at the beginning to become double. Liquids harden precipitously after pot life.

### • How to harden liquids

Liquids will be hardened by nature, heat, high reaction, ultraviolet rays, or moisture.  
You can link materials to dispensing equipment after checking their properties.

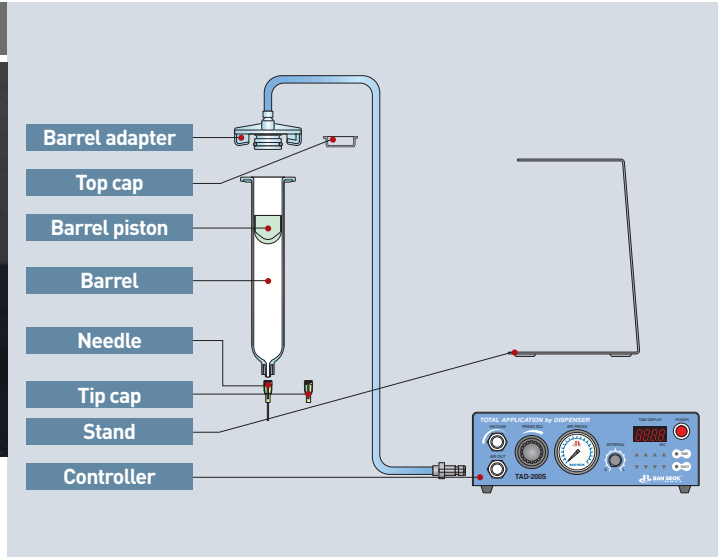
# System

BANSEOK provides you with a wide range of fluid control applications by using air pressure.

## TAD-101 SYSTEM



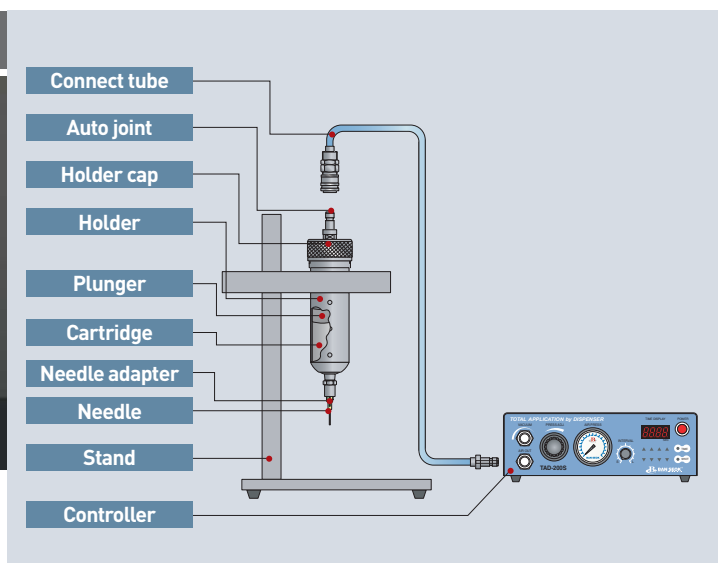
It uses the principal of inserting air into the liquid surface, to precisely control output by selecting time, pressure, needle size where the minimum level is 0.0001cc.



## TAD-102 SYSTEM



Same principal as TAD-101 system but it handles more quantity by putting the raw material into a cartridge. The system consists of a holder, cartridge, needle adapter etc.



## TAD-102S SYSTEM



Same principal as TAD-102 system but it handles more quantity by putting the 330ml cartridge holder set directly into the 330ml cartridge holder. The system consists of a holder, screw adapter, needle adapter etc.

## TAD-102T SYSTEM



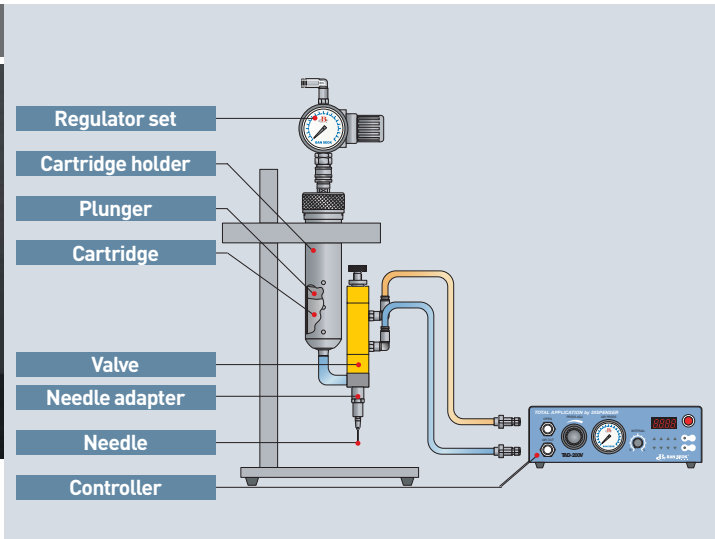
Same principal as TAD-102 system but it handles more quantity by putting the tube directly into a tube holder. The system consists of a holder, tube holder, cartridge holder, needle adapter etc.

## TAD-103 SYSTEM



TAD-200V, Valve, Cartridge holder set

Another variation of TAD-102 system. It removes liquid dripping due to remaining pressure after extraction. In case of low viscosity, using a valve is good to prevent the liquid dripping.

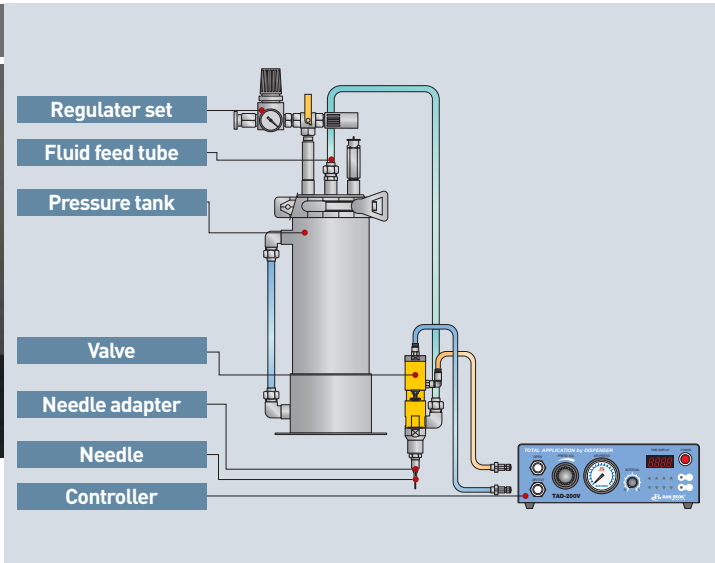


## TAD-104 SYSTEM



TAD-200V, Valve, Tank

This system with a pressure tank and a valve holds a large amount of liquids. So, it is suitable to dispense a large amount at a time and reduce the number of frequent changing the container.

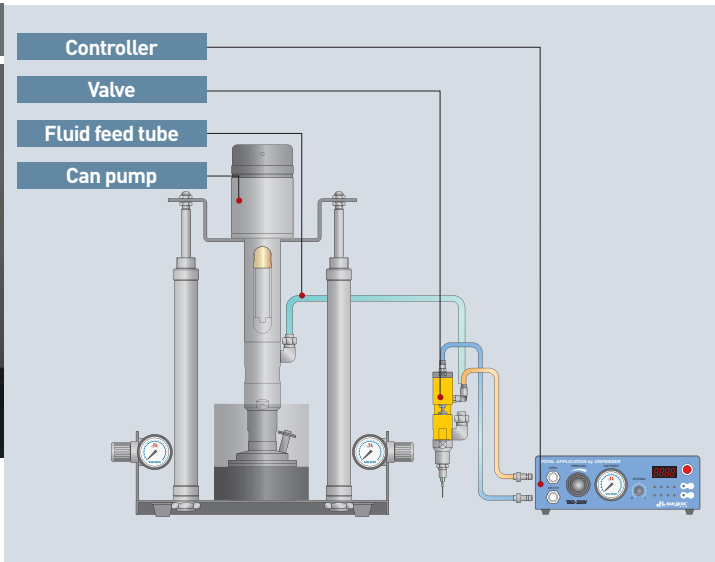


## TAD-105 SYSTEM



TAD-200V, Valve, PCP-α135

No need to transfer the materials from the container to another reservoir—very convenience. No waste of material, no air in a material. Ideal for highly viscous materials like grease, Silicone, epoxy, paste, etc.



# Air pulse dispenser controller

## Time calibration type dispenser controller

### AUTOMATIC-7

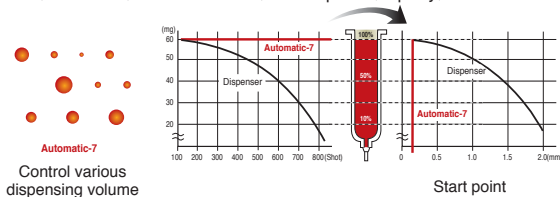


You can get the exact deposit volume by auto-correcting the difference of deposit volume might happen in the depth of material/liquid in barrel. Also, you can input each different Dispensing time of up to 10 channels.

- Inputting each different Dispensing time to multi channels (up to 10 channels) helps you control the different deposit volume easily.
- It has the function of auto - correcting the difference of dispensing volume by the change of material/liquid depth and position change of start point.
- The minimum time for auto- correction : 0.001sec (auto- revision of Dispensing time per 100~500 shots in case of 50cc barrel)
- Ease to use LCD display type
- Intellectual controller in high speedy reaction.
- Fixed quantity dispensing in high precision is possible even at the case of two type liquids changed in its viscosity.
- It is useful to cope with various changes, and you can realize perfect fixed - quantity dispensing on In- line.

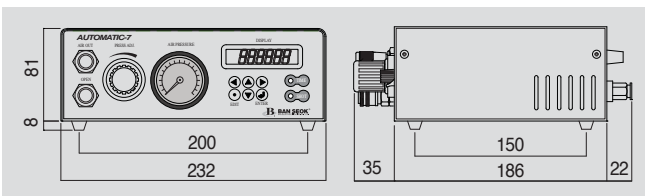
#### Applied materials

Silicone, UV resin, Cream solder, Silver paste, Epoxy, Bond etc.



#### SPECIFICATIONS

Model	AUTOMATIC-7
Control method	Electronic / Pneumatic system
Pattern channel	1 ~ 10 channels
Memory function	500 memory
Dispensing pressure	0~10kg/cm <sup>2</sup> (S:Standard), 0~4kg/cm <sup>2</sup> (L:Option), 0~2kg/cm <sup>2</sup> (P:Option)
Dispensing time	0.01 sec ~ 99.99 sec
Dispensing section	LCD digital display
Input / Output signal	Open connector, DC 24V (Selector by change)
Power source	AC 220V 50/60Hz (AC100V 50/60Hz: Option)
External dimension and weight	232 (W) x 186(D) x 81(H)mm, 2.7kg



## Barrel control dispenser controller

### TAD-200S



High performance controller with our independently developed microprocessor.

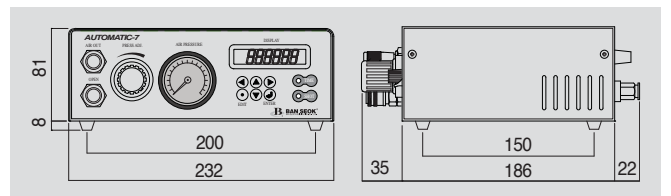
- High quality with the functions ; minimal amount dispensation control, high -speed work, and automatic dispensation and automatic stop by the interval work.
- Vacuum control stops liquids from flowings after dispensation finishes.
- Varied output functions facilitate automation and interface.
- The Digital timer displayed on LED in manual mode makes it easy to set time.
- Memory the values for dispensing until you set the values again.

#### Applied materials

Silicone, UV resin, Cream solder, Silver paste, Epoxy, Bond etc.

#### SPECIFICATIONS

Model	TAD-200S
Control method	Electronic / Pneumatic system
Dispensing pressure	0~10kg/cm <sup>2</sup> (S:Standard), 0~4kg/cm <sup>2</sup> (L:Option), 0~2kg/cm <sup>2</sup> (P:Option)
Time range	0.01 ~ 99.99 sec
Interval timer	0.01 ~ 3.99 sec
Vacuum pressure	0 ~ -350mmHg
Out signal	Open connector, DC 24V 20mmsec(Relay), 100mmsec(Relay)
Power source	AC220V 50/60Hz(AC100V 50/60Hz:Option)
Power consumption	32W
External dimension and weight	232 (W) x 186(D) x 81(H)mm, 2.7kg





## Valve control dispenser controller

### TAD-200V



This controller has the same function as TAD-200S and it is suitable when a valve is used.

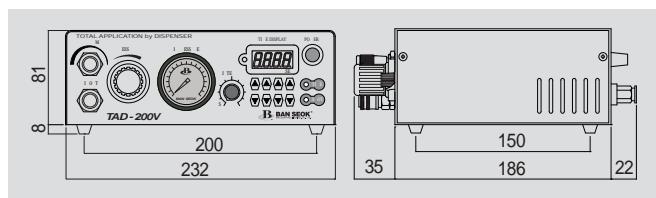
- High quality with the functions ; minimal amount dispensation control, high-speed work, and automatic dispensation and automatic stop by the interval work.
- Is optimum to the fluidal control of high tension with double action control type.
- Varied output functions facilitate automation and interface.
- The Digital timer displayed on LED in manual mode makes it easy to set time.
- Memory the values for dispensing until you set the values again.

#### Applied materials

Silicone, UV resin, Cream solder, Silver paste, Epoxy, Bond etc.

#### SPECIFICATIONS

Model	TAD-200V
Control method	Electronic / Pneumatic system
Dispensing pressure	0~10kg/cm <sup>2</sup> (S:Standard), 0~4kg/cm <sup>2</sup> (L:Option), 0~2kg/cm <sup>2</sup> (P:Option)
Time range	0.01 ~ 99.99 sec
Interval timer	0.01 ~ 3.99 sec
Out signal	Open connector, DC 24V 20mmsec(Relay), 100mmsec(Relay)
Power source	AC220V 50/60Hz(AC100V 50/60Hz:Option)
Power consumption	32W
External dimension and weight	232 (W) x 186(D) x 81(H)mm, 2.7kg



## Analog dispenser controller

### AUTOMATIC-3



Cost-effective analogue dispenser. Not restricted by working place with the advantage of its light and compact size. Its simplified construction makes even beginner use the dispenser easily. It has two modes : manual/pre-set timer.

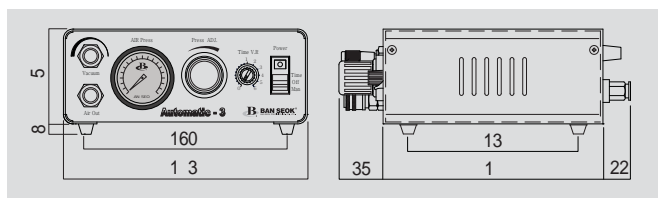
- Ideal for dispensing small amount of liquids as the analog time setting is possible from 0.02 sec to 3.39 sec.
- Vacuum function is equipped with this dispenser and it prevents dripping of fluid after dispensation.
- It is convenient to be installed in automatic machines due to its small and light size.
- Cost- saving choice.

#### Applied materials

Silicone, UV resin, Cream solder, Silver paste, Epoxy, Bond etc.

#### SPECIFICATIONS

Model	AUTOMATIC-3
Control method	Electronic / Pneumatic system
Dispensing pressure	0~10kg/cm <sup>2</sup> (S:Standard), 0~4kg/cm <sup>2</sup> (L:Option), 0~2kg/cm <sup>2</sup> (P:Option)
Vacuum pressure	0~-350mmhg
Dispensing time	0.01 sec ~ 5.99 sec
Power source	AC220V 50/60Hz(AC100V : 50/60Hz:Option)
Power consumption	32W
External dimension and weight	193 (W) x 174(D) x 75(H)mm, 2.5kg



# Multi dispenser controller

## TAD-200S double type



**This 2-series controller has the same function as TAD-200S and it is suitable when a robot is used.**

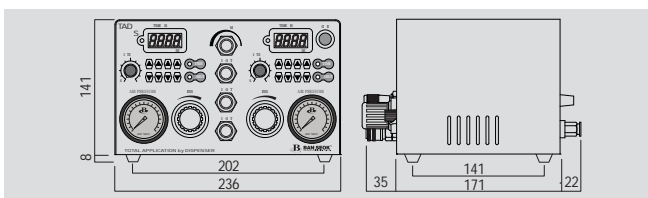
- High quality with the functions ; minimal amount dispensation control, high-speed work, and automatic dispensation and automatic stop by the interval work.
- Vacuum control stops liquids from flowing after dispensation finishes.
- Varied output functions facilitate automation and interface.
- The Digital timer displayed on LED in manual mode makes it easy to set time.
- Memory the values for dispensing until you set the values again.
- It is suitable for narrow spaces or automation lines as it has as many functions as two controllers have.

### Applied materials

Silicone, UV resin, Cream solder, Silver paste, Epoxy, Bond etc.

### SPECIFICATIONS

Model	TAD-2000S
Control method	Electronic / Pneumatic system
Dispensing pressure	0~10kg/cm <sup>2</sup> (S:Standard), 0~4kg/cm <sup>2</sup> (L:Option), 0~2kg/cm <sup>2</sup> (P:Option)
Time range	0.01 ~ 99.99 sec
Interval timer	0.01 ~ 3.99 sec, 0.01 ~ 05.99 min
Out signal	Open connector, DC 24V 20mmsec(Relay), 100mmsec(Relay)
Power source	AC220V 50/60Hz(AC100V 50/60Hz: Option)
Power consumption	64W
External dimension and weight	236(W) X 171(D) X 141(H)mm, 4.0Kg



## TAD-200S / TAD-200V quintuple type



**This 5-series controller has the same function as TAD-200S/ TAD-200V and it is suitable when a robot is used.**

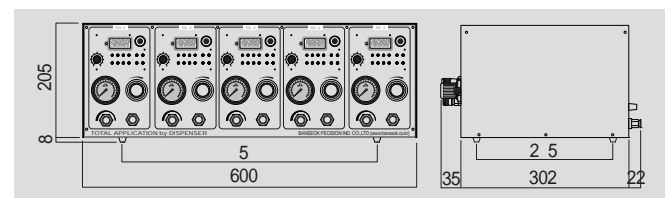
- High quality with the functions ; minimal amount dispensation control, high-speed work, and automatic dispensation and automatic stop by the interval work.
- Vacuum control stops liquids from flowing after dispensation finishes.
- Varied output functions facilitate automation and interface.
- The Digital timer displayed on LED in manual mode makes it easy to set time.
- Memory the values for dispensing until you set the values again.
- It is suitable for narrow spaces or automation lines as it has as many functions as five controllers have.

### Applied materials

Silicone, UV resin, Cream solder, Silver paste, Epoxy, Bond etc.

### SPECIFICATIONS

Model	TAD-5000S / TAD-5000V
Control method	Electronic / Pneumatic system
Dispensing pressure	0~10kg/cm <sup>2</sup> (S:Standard), 0~4kg/cm <sup>2</sup> (L:Option), 0~2kg/cm <sup>2</sup> (P:Option)
Time range	0.01 ~ 99.99 sec
Interval timer	0.01 ~ 3.99 sec, 0.01 ~ 05.99 min
Out signal	Open connector, DC 24V 20mmsec(Relay), 100mmsec(Relay)
Power source	AC220V 50/60Hz(AC100V 50/60Hz: Option)
Power consumption	160W
External dimension and weight	600(W) X 302(D) X 205(H)mm, 13.5kg



# Vacuum controller

## Vacuum pick-up control dispenser controller

### TAD-200SP



Pickup pen MN-5

**Its vacuum pick up pen makes this dispenser ideal for precise dispensing with assembly of small components and repairing /reworking.**

- Two functions of dispensing and vacuum pick up are solved in one body.
- You transport the parts(work) with the vacuum pad while dispensing is operated.
- It's ideal for assembly line after bonding lens, glass, small sized parts.
- You can adjust the range of vacuum according to size or weight of product.

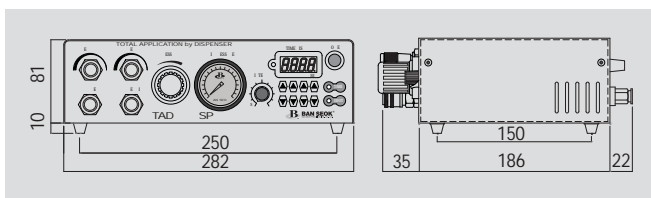
➔ Vacuum pad is selectable among below size.  
 Ø2, Ø3, Ø4, Ø5, Ø6, Ø8, Ø10, Ø12, Ø20, Ø32

### Applied materials

Silicone, UV resin, Cream solder, Silver paste, Epoxy, Bond etc.

### SPECIFICATIONS

Model	TAD-200SP
Control method	Electronic / Pneumatic system
Time range	0.01~99.99sec
Interval timer	0.01~3.99sec
Vacuum pressure	0~-350mmHg
Out signal	Open connector, DC24V, 20mmsec(Relay)
Power source	AC220V 50/60Hz(AC100V 50/60Hz: Option)
Power consumption	32W
External dimension and weight	282(W) X 186(D) X 81(H)mm, 3.0Kg



# Barrel heater

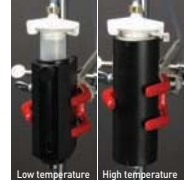
## Barrel heater controller

### EZ TEM-3



**Temperature control unit is combined with its barrel. It preheat the high viscous materials in barrel by heating from the barrel to the end of needle. It makes the viscosity of materials weak and get high productivity.**

BTH-80/BTH-200

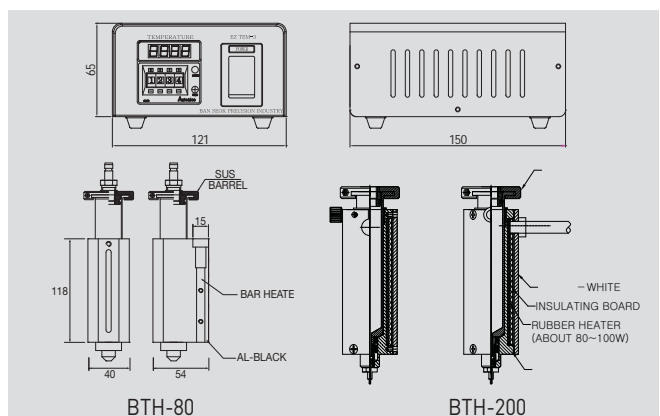


Barrel temp holder

- Dual PID auto tuning function : High-speed response of PID control to reach to the desired value fast, low-speed of response of PID control to minimize the overshoot even though response is a little bit slow.
- High display accuracy :  $\pm 0.3\%$  (by FUS value of each input)
- 2-Steps auto tuning control function.
- Multi-input function(13 kinds of multi-input selection function) : Temperature sensor, voltage and current selection function.
- Various sub output function : Includes in LBA, SBA, 7 kinds of alarm output and 4 kinds of alarm option function, PV value transmission output(4-20mADC), RS485 communication output.
- Display the decimal point for analog input.

### SPECIFICATIONS

Model	EZ TEM-3
Indication degree	SV $\pm 0.3\%$ or in is big, side
Control method	ON/OFF control P, PI, PD, PIDF, PIDS
Indication method	7segment LED display (Data(PV): Red, Index value(SV): Green)
Control sensitivity	1~100(0.1~100.0) $^{\circ}$ C variable (ON/OFF control use at the time of)
Temperature range	Low temperature : Normal temperature ~ 80 $^{\circ}$ C High temperature : Normal temperature ~ 200 $^{\circ}$ C
Power source	AC110 ~ 240V 50/60HZ
Dimension	121(W) X 150(D) X 65(H)mm



# Rotary tubing dispenser controller

## Tubing dispenser controller

### BX-2



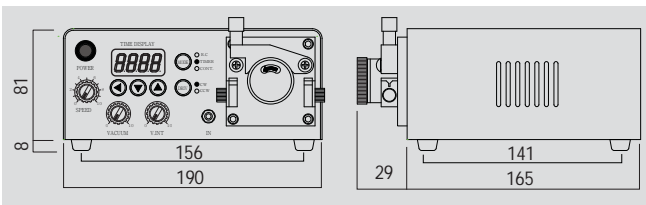
- No abrasion to tube, no pulsation while dispensing.
- It has all functions like sucking liquids, Rotation/backlash, auto timer, etc.
- Ideal for low-viscosity materials such as instant adhesives, ink, etc.
- Manual/Timer controls the shot size, easy to use.
- Dispenses materials directly from the container of materials without using Compressor air.



Tubing pen MN-7

### SPECIFICATIONS

Model	BX-2
Control method	Electronic / Rotary tubing system
Dispensing pressure	0.15kg/cm <sup>2</sup>
Time range	0.01~99.99sec
Rotor speed	0~120rpm(max.)
Flow speed	0.01~6ml/min.(Teflon tube) 0.1~20ml/min.(Silicone tube)
Material viscosity	300cps(max.)
Pump direction	Both direction (Forward & reverse)
Power source	AC100~220V 50/60Hz [Free voltage]
External dimension and weight	190(W) X 165(D) X 81(H)mm, 2.6Kg



### PUMP HEAD TIME

Pump head	Using tube	Size (In Dia X Out Dia)
M type	Teflon	0.3 X 0.8 (30G)
		0.5 X 1.0 (26G),
		0.6 X 1.1 (24G),
S type	Teflon	0.7 X 1.2 (22G)
		0.9 X 1.5 (20G)~ 3.8 X 4.4 (7G)
G type	Silicone	0.5 X 2.5 ~ 8 X 10

## Analog tubing dispenser controller

### BRP-3



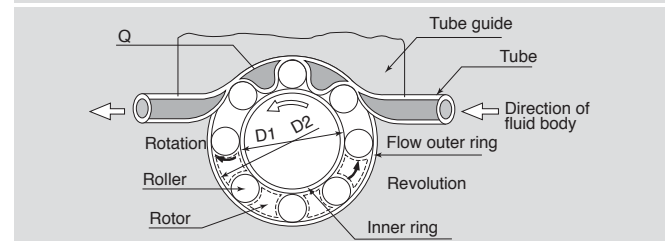
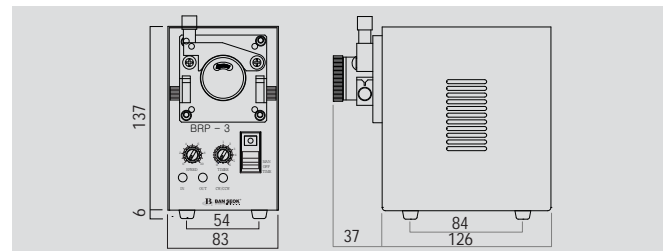
- No abrasion to tube, no pulsation while dispensing.
- Compact size, it can be incorporated desk top robot and installed multi-controllers.
- Ideal for low-viscosity materials such as Instant adhesives, ink, etc.
- It has all functions like sucking liquids, rotation/backlash, auto timer, etc.
- Dispense materials directly from the container of materials without using Compressor air.
- It is a cheap and popular model.



Tube union

### SPECIFICATIONS

Model	BRP-3
Control method	Electronic / Rotary tubing system
Dispensing pressure	0.15kg/cm <sup>2</sup>
Dispensing time	0.01~3.99
Rotor speed	0~120rpm(max.)
Flow speed	0.01~6ml/min.(Teflon tube) 0.1~20ml/min.(Silicone tube)
Material viscosity	300cps(max.)
Pump direction	Both direction (Forward & reverse)
Power source	AC100~220V 50/60Hz [Free voltage]
External dimension and weight	83(W) X 126(D) X 137(H)mm, 2.0Kg





# Multi tubing dispenser controller

## Multi tubing dispenser controller

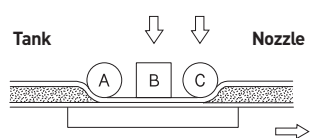
### NPD-340MD



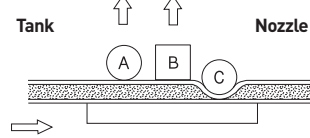
This series controls perfectly by measuring volume with the tube. The systems dispense on 1 point to 4 points after precise measurement.

- Teflon tube and Silicone tube used. Air is unnecessary.
- It dispenses liquid on up to 4 points at the same time.
- The device to remove remaining pressure sucks in liquids from the outlet after measurement and dispensation to prevent liquids from hardening at the outlet. It is specially fit for materials such as instant adhesive.

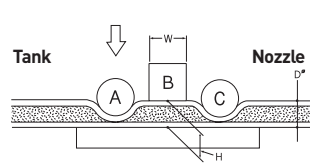
#### 1. Dispensing



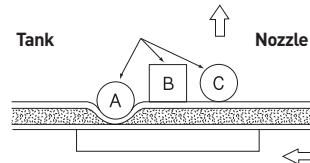
#### 2. Absorption



#### 3. Maintain



#### 4. Compression



### SPECIFICATIONS

Model		NPD-340MD
Central plate		12m/m
No. of channels		4ch
Cycle time		1.2
Max. amount of dispensation/ch		46μl
Max amount of dispensation for tube diameter (Inside x Outside)	0.5X1.0	1.2μl
	1.4X2.0	1.2μl
	2.4X3.0	32μl
	3.3X3.9	46μl

1. 1μl=0.001cc

2. Dispensation date : The amount at a time using the designated tube and water

3. Range of dispensation : within ±1%

4. Viscosity : 10,000cps and below

5. Power source : AC 100V 50/60Hz

# Spray system

## Spray valve dispenser controller

### TAD-400SR



It realizes the highly precise spraying prevent forming the drop of liquids by setting the Air blow and Dispensing time on LCD panel.

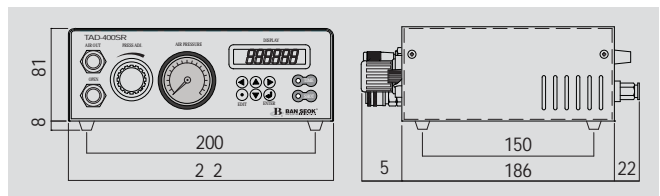
- High quality with the functions ; minimal amount dispensation control, high -speed work, and automatic dispensation and automatic stop by the interval work.
- Varied output functions facilitate automation and interface.
- The Digital timer displayed on LED in manual mode makes it easy to set time.
- Memory the values for dispensing until you set the values again.
- A blow function is built in to prevent liquid drip formation at needle ends after liquid is discharged.
- It is possible to correspond against various discharge capacities at automatic mode as a timer is built in for up to 10 channels.

### Applied materials

Low viscosity liquid, Coating liquid, Oil, Flux

### SPECIFICATIONS

Model		TAD-400SR
Control method		Electronic / Pneumatic system
Patten channel		1~10 channels
Memory function		500 memory
Dispensing pressure		0~6kg/cm <sup>2</sup> , (0~2kg/cm <sup>2</sup> : Option)
Dispensing time		0.01 sec ~ 99.99 sec
Dispensing section		LED digital display
Input/Output signal		Open connector, DC24V, 20mmsec(Relay)
Power source		AC220V 50/60Hz(AC100V : 50/60Hz: Option)
External dimension and weight		232(W) X 186(D) X 81(H)mm, 2.7Kg



# Precision valve



Item	Type	Viscosity	Applied materials	Application	Needle & Nozzle
① BV-300N/T	Diaphragm	Low	Chemical, UV bond, Anaerobic/ Instant adhesives, Epoxy, Medical	Extracting Low viscosity liquid such as instant adhesives	Teflon, Taper
② BV-500	Needle off (Spray)	Low	Flux, Oil, Ink, Grease, Bond	Spray type extraction, wider than 7mm wide	Non
③ BV-505	Needle off (Spray)	Low	Flux, Oil, Ink, Grease, Bond	Spray type extraction, wider than 2mm wide	Non
④ BV-520P	Needle off (Precision)	Middle, Low	Silicone, Bond, UV	Extra precision extraction in very small quantity	Precision
⑤ BV-520M	Needle off (Precision)	High, Middle, Low	Silicone, Bond, UV	Precision extraction in small quantity	Plastic, Metal
⑥ BV-520PK	Needle off (Precision)	Middle, Low	Anaerobic UV, Anaerobic adhesives	Extra precise extraction in very small quantity of anaerobic liquid	Precision(PK)
⑦ BV-M0250T	Metering	Low	Chemical, UV bond, Anaerobic/ Instant adhesives, Epoxy, Medical	Discharge of the exact quantity of Low viscosity liquid	Plastic, Metal, Teflon, Taper
⑧ BV-386	Needle off (High pressure)	High	Grease, Silicone, Oil, Epoxy	Extracting high viscosity liquid using High pressure	Plastic, Metal, Taper
⑨ BV-305	Suck back	Middle, Low	Two liquid type epoxy, Silicone, Urethane, Epoxy	Excellent stop of liquid discharge without residual pressure.	Plastic, Metal, Taper
⑩ BV-303	Suck back	Middle, Low	Epoxy, Silicone, Urethane, Engine oil	Excellent stop of liquid discharge without residual pressure.	Plastic, Metal, Taper
⑪ BV-302	Needle off	High, Middle, Low	Grease, Oil, Silicone, Bond	Less conglomeration of liquid during discharging.	Plastic, Metal, Taper
⑫ BV-322P	Needle off	Middle, Low	Grease, Oil, Silicone, Bond, UV	Extraction in very small quantity	Precision
⑬ BV-322M	Needle off	High, Middle, Low	Grease, Oil, Silicone, Bond, UV	Extraction in small quantity	Plastic
⑭ BV-600C	Actuator	High, Middle, Low	EMI Silicone, Silicone, Rubber	Precise discharge of high viscosity liquid, Exclusively used for sealing	Precision
⑮ BV-600	Actuator	High, Middle, Low	EMI Silicone, Silicone, Rubber	Precise discharge of high viscosity liquid, Exclusively used for sealing	Precision
⑯ BV-T900	Suck back (Two liquid type)	High, Middle	Two liquid type epoxy, Silicone, Urethane, Hard lock, Two liquid type Acryl resin	Extracting Two liquid type	Static mixer
⑰ BV-T520P	Needle off (Two liquid type)	Middle, Low	Two liquid type epoxy, Silicone, Urethane, Hard lock, Two liquid type Acryl resin	Extracting very small quantity of Two liquid type	Precision
⑱ BV-389	Needle off	High	Grease, Silicone, Oil, Epoxy	For High viscosity and High pressure	Plastic, Metal, Teflon
⑲ BV-350	Needle off	High	Grease, Silicone, Oil, Epoxy	For High viscosity and High pressure	Plastic, Metal, Teflon

## Metering valve

### BV-M0250T



Metering valve. It is suitable for low viscosity adhesive such as anaerobic fluid. The precision degree of discharge is within  $\pm 2\%$  as it is a volume measuring type. (0.01~0.25cc/shot)

## Diaphragm valve

### BV-300N



Diaphragm and needle type. The device of which the part to contact liquids is made of UPE and it's suitable for anaerobic and liquids requiring the chemical resistance.

## Diaphragm valve

### BV-300T



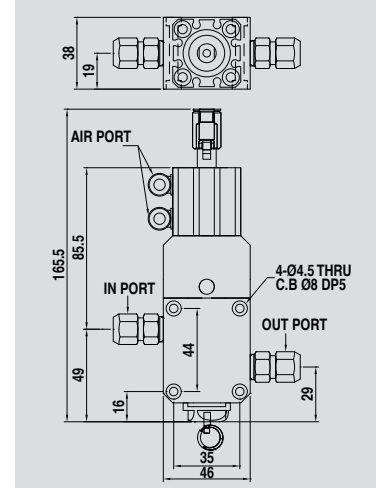
Diaphragm and needle type. The device of which the part to contact liquids is made of UPE and it's suitable for anaerobic and liquids requiring the chemical resistance.

## SPECIFICATIONS

Model	BV-M0250T
Operating type	Metering
Maximum dose	Max 0.25cc/shot
Viscosity range	1~5,000cps
Operating air pressure	4kgf/cm <sup>2</sup>
Maximum fluid charge pressure	4kgf/cm <sup>2</sup>
Maximum number of cycles	180times/min
Air operating port	PT1/4"(In), PT1/8"(Out)
Material of dosing part	Teflon
Material of driving part	SUS 304
Weight	510g

## Applied materials :

Chemical, UV bond, Epoxy, Medical, etc  
Low viscosity materials

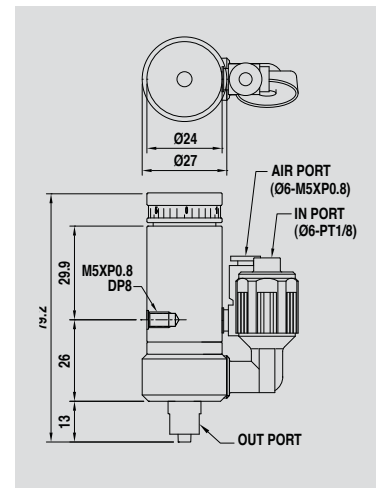


## SPECIFICATIONS

Model	BV-300N
Operating type	Diaphragm
Maximum dose	0.3l/min
Viscosity range	1~5,000cps
Operating air pressure	4kgf/cm <sup>2</sup>
Maximum fluid charge pressure	5kgf/cm <sup>2</sup>
Maximum number of cycles	400times/min
Air operating port	PT1/8"
Material of dosing part	UPE
Material of driving part	AL 6061
Weight	76g

## Applied materials :

Chemical, UV bond, Anaerobic/Instant adhesives, Epoxy, Medical, etc  
Low viscosity materials

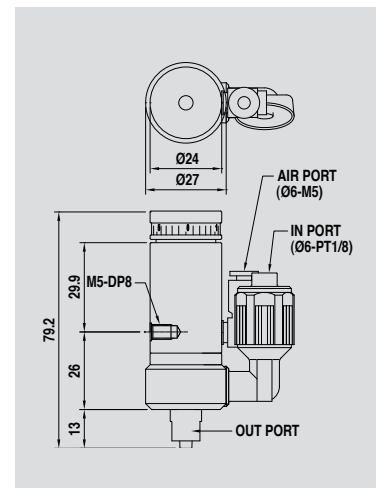


## SPECIFICATIONS

Model	BV-300T
Operating type	Diaphragm
Maximum dose	0.3l/min
Viscosity range	1~5,000cps
Operating air pressure	4kgf/cm <sup>2</sup>
Maximum fluid charge pressure	5kgf/cm <sup>2</sup>
Maximum number of cycles	400times/min
Air operating port	PT1/8"
Material of dosing part	UPE
Material of driving part	AL 6061
Weight	76g

## Applied materials :

Chemical, UV bond, Anaerobic/Instant adhesives, Epoxy, Medical, etc  
Low viscosity materials



# Precision valve

## Needle off valve

### BV-302



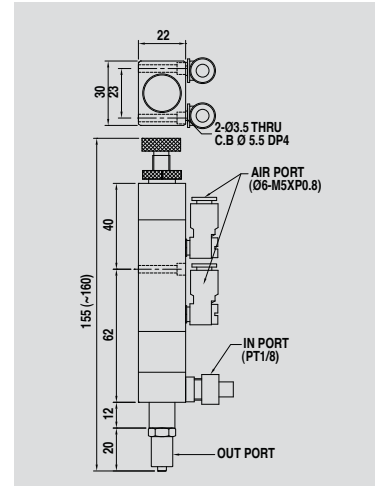
Needle off type. Offer highly precise dispensing. You can simply adjust deposit volume minutely.

#### SPECIFICATIONS

Model	BV-302
Operating type	Needle off
Maximum dose	8l/min
Viscosity range	1~100,000cps
Operating air pressure	4kgf/cm <sup>2</sup>
Maximum fluid charge pressure	6kgf/cm <sup>2</sup>
Maximum number of cycles	150times/min
Air operating port	PT1/8"
Material of dosing part	SUS 303
Material of driving part	AL 6061
Weight	290g

#### Applied materials :

Grease, Oil, Silicone, Bond



## Suck back valve

### BV-303



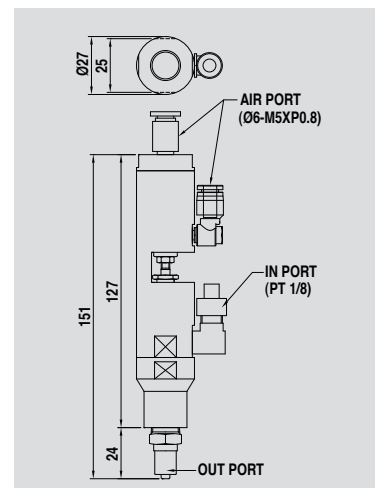
Suck- off type. Most suitable for the process requiring the vacuum efficiency to prevent the remaining pressure after dispensing.

#### SPECIFICATIONS

Model	BV-303
Operating type	Suck-back
Maximum dose	8l/min
Viscosity range	1~200,000cps
Operating air pressure	5kgf/cm <sup>2</sup>
Maximum fluid charge pressure	30kgf/cm <sup>2</sup>
Maximum number of cycles	150times/min
Air operating port	PT1/8"
Material of dosing part	AL 6061
Material of driving part	AL 6061
Weight	240g

#### Applied materials :

Epoxy, Silicone, Urethane, Engine oil



## Suck back valve

### BV-305



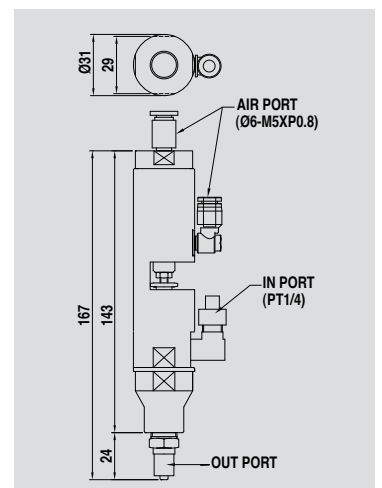
Suck back type. The big orifice is fit for dispensation of large capacity works.

#### SPECIFICATIONS

Model	BV-305
Operating type	Suck-back
Maximum dose	28l/min
Viscosity range	1~200,000cps
Operating air pressure	5kgf/cm <sup>2</sup>
Maximum fluid charge pressure	50kgf/cm <sup>2</sup>
Maximum number of cycles	150times/min
Air operating port	PT1/4"
Material of dosing part	AL 6061
Material of driving part	AL 6061
Weight	300g

#### Applied materials :

Two liquid type epoxy, Silicone, Urethane, Epoxy





## Needle off valve

### BV-322M



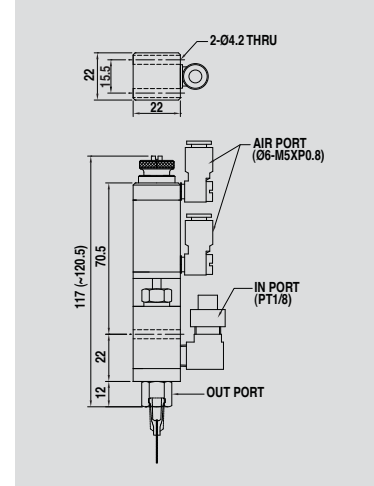
Needle off type. There is no remaining pressure and very good for cutting off the liquid with using thin general hub needles or metal needles. (Needle type)

#### SPECIFICATIONS

Model	BV-322M
Operating type	Needle off
Maximum dose	8l/min
Viscosity range	1~100,000cps
Operating air pressure	4kgf/cm <sup>2</sup>
Maximum fluid charge pressure	10kgf/cm <sup>2</sup>
Maximum number of cycles	150times/min
Air operating port	PT1/8"
Material of dosing part	SUS 303
Material of driving part	AL 6061
Weight	220g

#### Applied materials :

Grease, Oil, Silicone, Bond, UV



## Needle off valve

### BV-322P



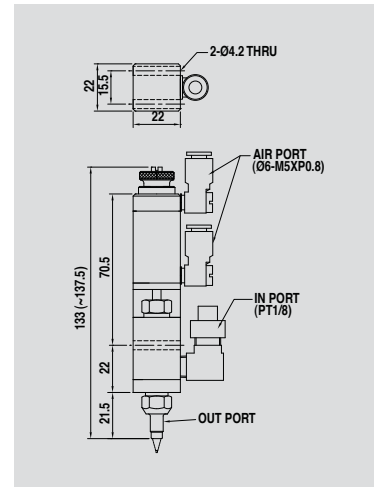
There is no remaining pressure and very good for cutting off the liquid with using precision nozzle. (Precision nozzle type)

#### SPECIFICATIONS

Model	BV-322P
Operating type	Needle off
Maximum dose	8l/min
Viscosity range	1~100,000cps
Operating air pressure	4kgf/cm <sup>2</sup>
Maximum fluid charge pressure	10kgf/cm <sup>2</sup>
Maximum number of cycles	150times/min
Air operating port	PT1/8"
Material of dosing part	SUS 303
Material of driving part	AL 6061
Weight	220g

#### Applied materials :

Grease, Oil, Silicone, Bond, UV



## High pressure valve

### BV-350



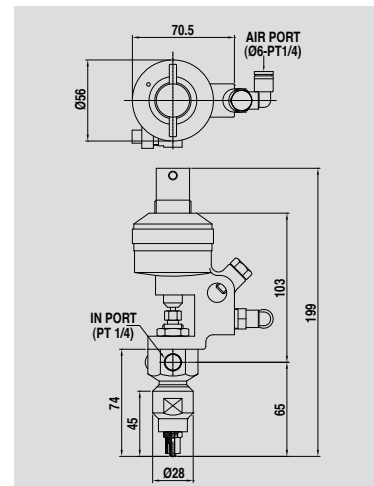
Needle off type. Ultra High pressure valve to be used for liquid of very high viscosity.

#### SPECIFICATIONS

Model	BV-350
Operating type	Needle off
Maximum dose	28l/min
Viscosity range	1~Paste
Operating air pressure	4kgf/cm <sup>2</sup>
Maximum fluid charge pressure	300kgf/cm <sup>2</sup>
Maximum number of cycles	150times/min
Air operating port	PT1/4"
Material of dosing part	SUS 303
Material of driving part	AL 6061
Weight	780g

#### Applied materials :

Grease, Silicone, Oil, Epoxy



# Precision valve

## High pressure valve

### BV-386



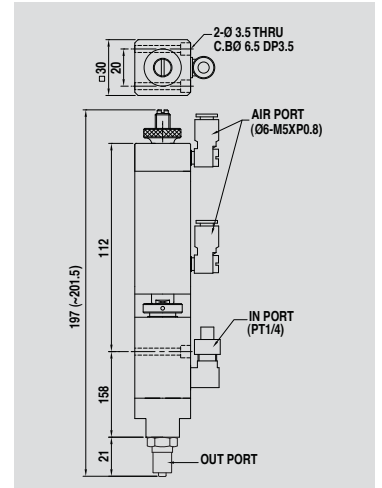
High pressure valve of high discharge accuracy, capable to easily fine tune the discharge flow.

#### SPECIFICATIONS

Model	BV-386
Operating type	Needle off
Maximum dose	28l/min
Viscosity range	1~Paste
Operating air pressure	5kgf/cm <sup>2</sup>
Maximum fluid charge pressure	150kgf/cm <sup>2</sup>
Maximum number of cycles	150times/min
Air operating port	PT1/4"
Material of dosing part	SUS 303
Material of driving part	AL 6061
Weight	680g

#### Applied materials :

Grease, Silicone, Oil, Epoxy



## High pressure valve

### BV-389



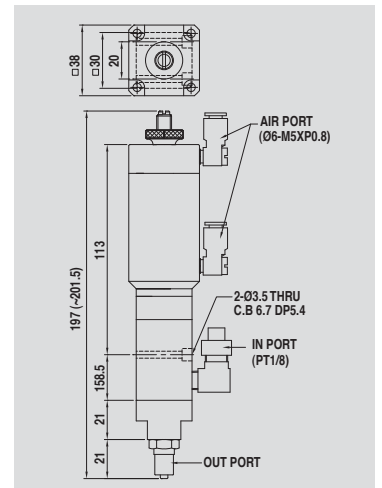
High pressure valve of high discharge accuracy, capable to easily fine tune the discharge flow.

#### SPECIFICATIONS

Model	BV-389
Operating type	Needle off
Maximum dose	28l/min
Viscosity range	1~1,000,000cps
Operating air pressure	5kgf/cm <sup>2</sup>
Maximum fluid charge pressure	210kgf/cm <sup>2</sup>
Maximum number of cycles	150times/min
Air operating port	PT1/4"
Material of dosing part	SUS 303
Material of driving part	AL 6061
Weight	840g

#### Applied materials :

Grease, Silicone, Oil, Epoxy



## Spray valve

### BV-500



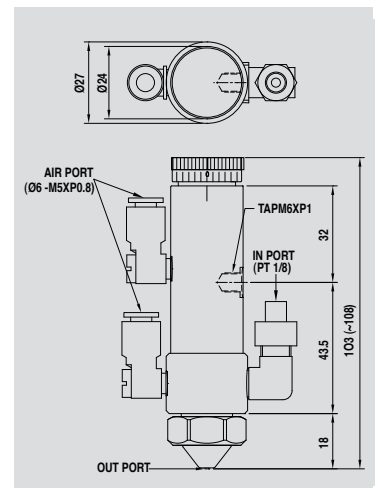
The valve only for spray. It controls spraying up to 7mm width at minimum.

#### SPECIFICATIONS

Model	BV-500
Operating type	Needle off
Maximum dose	8l/min
Viscosity range	1~1,000cps
Operating air pressure	5kgf/cm <sup>2</sup>
Maximum fluid charge pressure	10kgf/cm <sup>2</sup>
Maximum number of cycles	400times/min
Air operating port	PT1/8"
Material of dosing part	SUS 303
Material of driving part	SUS 303
Weight	285g

#### Applied materials :

Flux, Oil, Ink, Grease, Bond



## Spray valve

### BV-505



The valve only for spray. It controls spraying up to 2mm width at minimum.

## Precision valve

### BV-520M



Mostly attached to FA line, and used with general hub needles or metal needles. The position settle faculty is very excellent, so easily use it with no extra position control even after replacing needle. (Needle type)

## Precision valve

### BV-520P



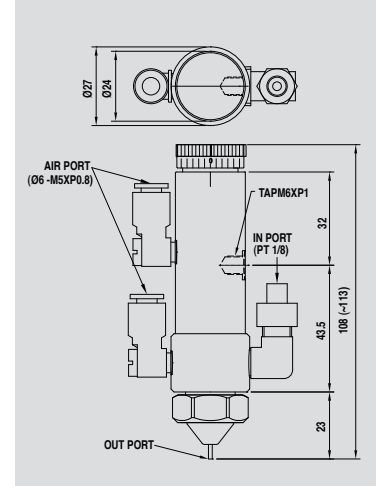
Mostly attached to FA line, and used with precision nozzle. The position settle faculty is very excellent, so easily use it with no extra position control even after replacing nozzle. (Precision nozzle type)

## SPECIFICATIONS

Model	BV-505
Operating type	Needle off
Maximum dose	8l/min
Viscosity range	1~1,000cps
Operating air pressure	5kgf/cm <sup>2</sup>
Maximum fluid charge pressure	10kgf/cm <sup>2</sup>
Maximum number of cycles	400times/min
Air operating port	PT1/8"
Material of dosing part	SUS 303
Material of driving part	SUS 303
Weight	285g

### Applied materials :

Flux, Oil, Ink, Grease, Bond

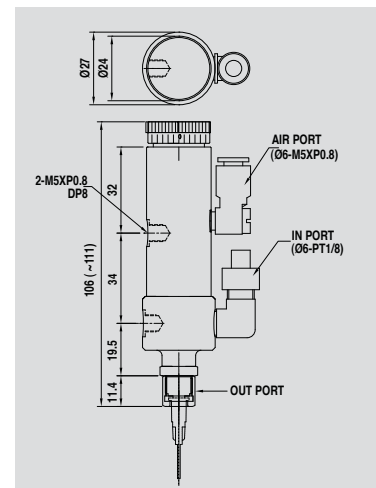


## SPECIFICATIONS

Model	BV-520M
Operating type	Needle off
Maximum dose	0.8l/min
Viscosity range	1~50,000cps
Operating air pressure	5kgf/cm <sup>2</sup>
Maximum fluid charge pressure	10kgf/cm <sup>2</sup>
Maximum number of cycles	400times/min
Air operating port	PT1/8"
Material of dosing part	SUS 303
Material of driving part	SUS 303
Weight	300g

### Applied materials :

Silicone, Bond, UV

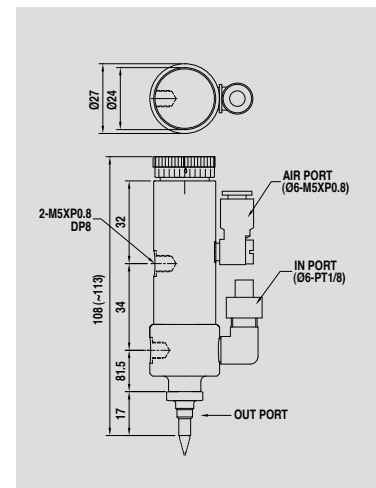


## SPECIFICATIONS

Model	BV-520P
Operating type	Needle off
Maximum dose	0.8l/min
Viscosity range	1~50,000cps
Operating air pressure	5kgf/cm <sup>2</sup>
Maximum fluid charge pressure	10kgf/cm <sup>2</sup>
Maximum number of cycles	400times/min
Air operating port	PT1/8"
Material of dosing part	SUS 303
Material of driving part	SUS 303
Weight	300g

### Applied materials :

Silicone, Bond, UV



# Precision valve

## Precision valve

### BV-520PK



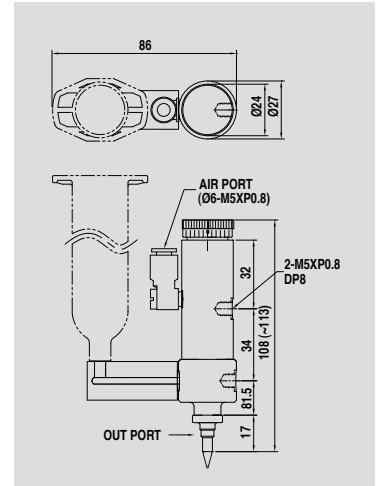
Valve for accurately discharging the anaerobic UV & anaerobic adhesive.

#### SPECIFICATIONS

Model	BV-520PK
Operating type	Needle off
Maximum dose	0.8l/min
Viscosity range	1-50,000cps
Operating air pressure	5kgf/cm <sup>2</sup>
Maximum fluid charge pressure	6kgf/cm <sup>2</sup>
Maximum number of cycles	400times/min
Air operating port	PT1/8"
Material of dosing part	PK
Material of driving part	SUS 303
Weight	300g

#### Applied materials :

Anaerobic UV, Anaerobic adhesives



## Actuator valve

### BV-600



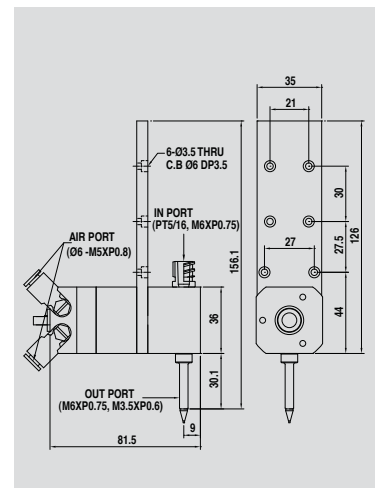
This actuator valve removes the remaining pressure after dispensing and prevents gathering of liquids.

#### SPECIFICATIONS

Model	BV-600
Operating type	Rotary
Maximum dose	8l/min
Viscosity range	1~Paste
Operating air pressure	5kgf/cm <sup>2</sup>
Maximum fluid charge pressure	20kgf/cm <sup>2</sup>
Maximum number of cycles	150times/min
Air operating port	PT5/16", M6
Material of dosing part	SKD 11
Material of driving part	SKD 11
Weight	460g

#### Applied materials :

EMI Silicone, Silicone, Rubber



## Actuator valve

### BV-600C



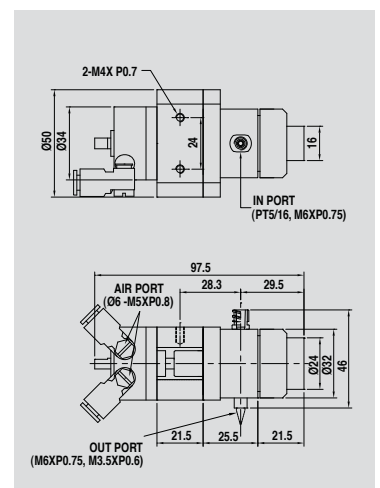
This actuator valve removes the remaining pressure after dispensing and prevents gathering of liquids.

#### SPECIFICATIONS

Model	BV-600C
Operating type	Rotary
Maximum dose	8l/min
Viscosity range	1~Paste
Operating air pressure	5kgf/cm <sup>2</sup>
Maximum fluid charge pressure	21kgf/cm <sup>2</sup>
Maximum number of cycles	150times/min
Air operating port	PT5/16", M6
Material of dosing part	Ceramic
Material of driving part	AL 6061
Weight	420g

#### Applied materials :

EMI Silicone, Silicone, Rubber





## Two liquid type valve

### BV-T520P



Capable to continuously work on the Two liquid type materials of minimum quantities, with no interference of pot life by discharging the respective primary agent & hardener simultaneously with mixing.  
(Precision nozzle type)

## Two liquid type valve

### BV-T900



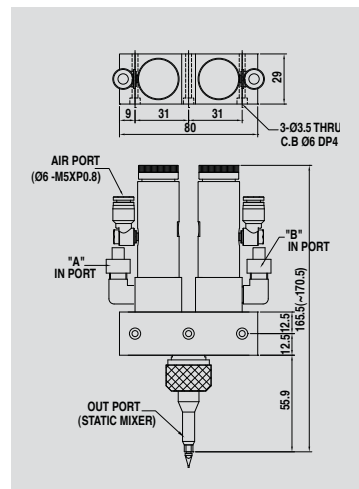
Twin valve in one body for two type mixer.  
It has two fluid inlets.

#### SPECIFICATIONS

Model	BV-T520P
Operating type	Needle Off
Maximum dose	0.8l/min
Viscosity range	1~10,000cps
Operating air pressure	5kgf/cm <sup>2</sup>
Maximum fluid charge pressure	10kgf/cm <sup>2</sup>
Maximum number of cycles	400times/min
Air operating port	PT1/8"
Material of dosing part	SUS 303
Material of driving part	SUS 303
Weight	1040g

#### Applied materials :

Two liquid type epoxy, Silicone, Urethane, Hard lock, Two liquid type Acryl resin

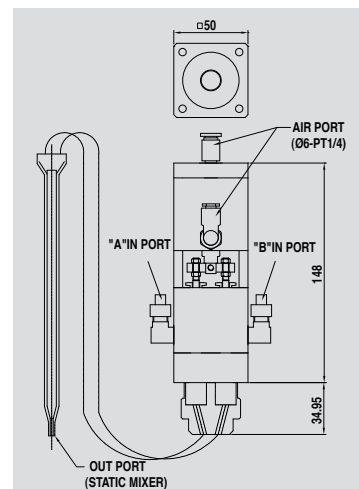


#### SPECIFICATIONS

Model	BV-T900
Operating type	Suck-back
Maximum dose	8l/min
Viscosity range	1~Paste
Operating air pressure	5kgf/cm <sup>2</sup>
Maximum fluid charge pressure	60kgf/cm <sup>2</sup>
Maximum number of cycles	60times/min
Air operating port	PT1/4"
Material of dosing part	AL 6061
Material of driving part	AL 6061
Weight	1040g

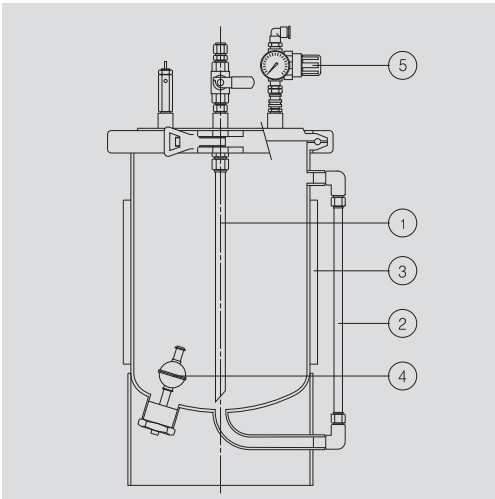
#### Applied materials :

Two liquid type epoxy, Silicone, Urethane, Hard lock, Two liquid type Acryl resin



# Pressure tank

## STAINLESS PRESSURE TANK

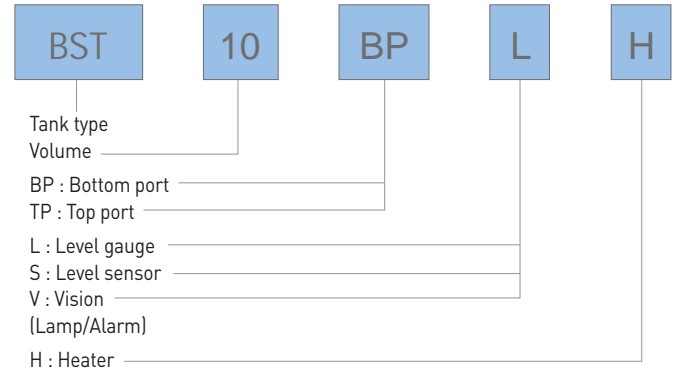


1. Top port
2. Level gauge
3. Heater
4. Level sensor
5. Regulator set

These pressure tanks reserve the liquids of low viscosity and give pressure on them and dispense.

### HEATER

Capacity	Value(220V)	Dimensions
1l	305W	165X312
3l	430W	165X434
5l	615W	200X513
10l	885W	220X670
20l	1240W	260X795



### LEVEL GAUGE

- Ø6, Ø8 PFA tube

### LEVEL SENSOR

Type	Value
Float sensor	SUS 304, Upper limit, Lower limit
Liquid level sensor (Capacitive)	Level gauge, Upper limit, Lower limit

### REGULATOR SET

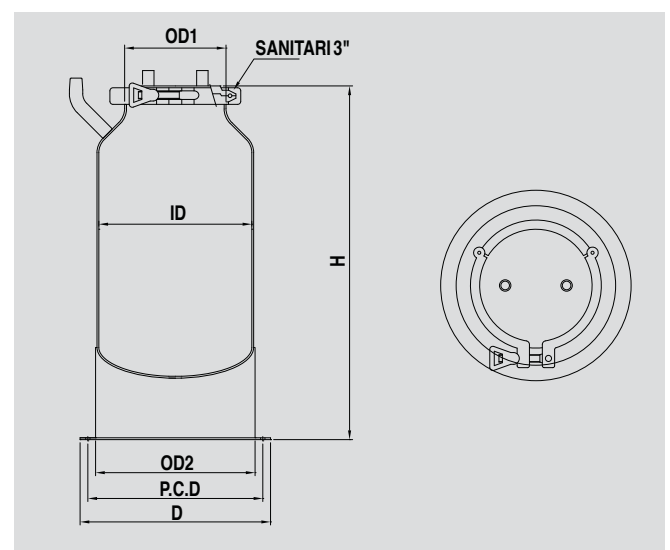
Model	Value
BR-10K	For High pressure 0 ~10kg/cm <sup>2</sup>
BR-04K	For low pressure 0 ~4kg/cm <sup>2</sup>
BR-02K	For precision 0 ~2kg/cm <sup>2</sup>

## One touch tank

### BFT TYPE



- It is easy to open and close the tank(clamp). With the inner and outer sides abraded, it is excellent in cleanness and endurance.
- It is suitable for using when transporting Low viscosity liquid by pneumatic pressure.



### SPECIFICATIONS

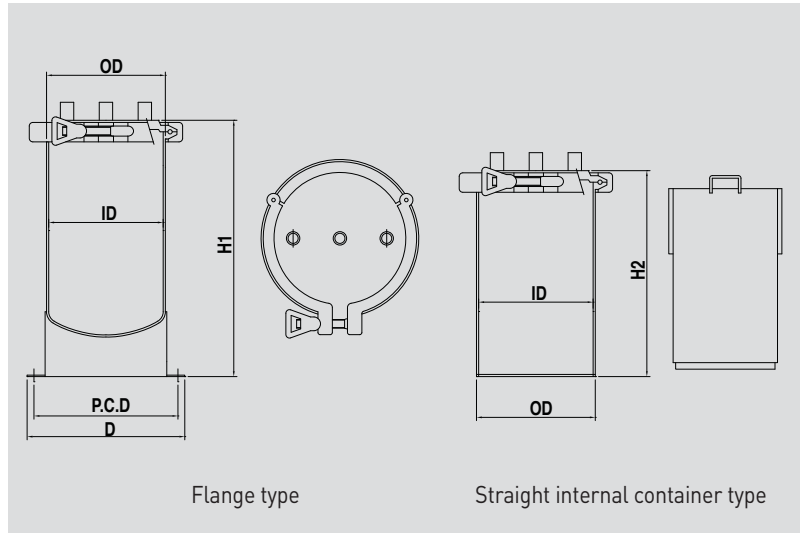
Capacity	H	OD1	OD2	ID	D	P.C.D	Hole size
BFT-3l	422	76	139	134	200	170	3-120°Ø7
BFT-8l	506	76	200	194	260	230	

## Small size tank

### BST TYPE



- Interior and upper size of the tank are identical which enables use of interior case.
- Generally used for under 20 liter container



#### SPECIFICATIONS

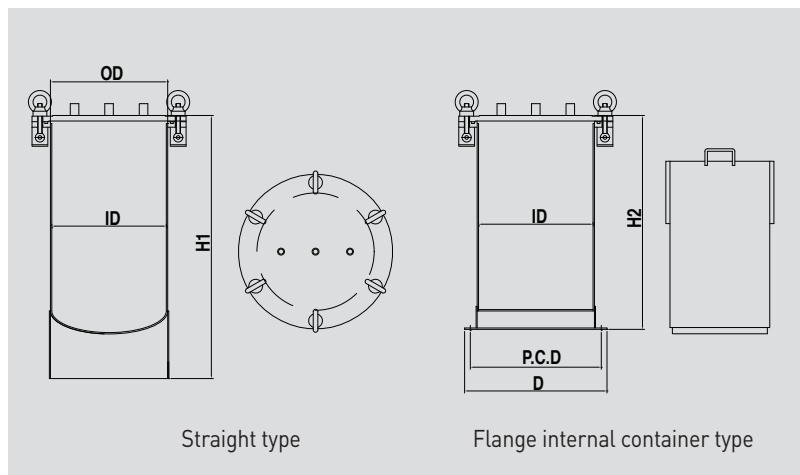
Capacity	H1	H2	OD	ID	D	P.C.D	Bolt	Hole size	Internal container
BST-1L	306	216	114	108	174	154	4.5"	3-120°Ø7	Option Material : SUS, PE, Teflon, Teflon coating
BST-3L	326	236	140	134	200	180	5"		
BST-5L	366	266	165	159	225	205	6"		
BST-10L	416	316	216	210	276	256	8"		
BST-20L	566	416	255	249	315	295			

## Large size tank

### BMT TYPE



- Hinge clamp type tank. Used by directly inserting the interior container
- Suitable for large quantity and High pressured material.



#### SPECIFICATIONS

Capacity	H1	H2	OD	ID	D	P.C.D	Bolt	Hole size	Internal container
BMT-5L	366	266	165	159	225	205	M10-4EA	3-120°Ø7	Option Material : SUS, PE, Teflon, Teflon coating
BMT-10L	416	316	216	210	276	256	M12-4EA		
BMT-20L	566	416	255	249	315	295	M12-6EA		
BMT-40L	566	416	350	344	410	390	M12-8EA	4-90°Ø7	
BMT-100L	776	596	460	454	520	500	M12-16EA	6-60°Ø7	

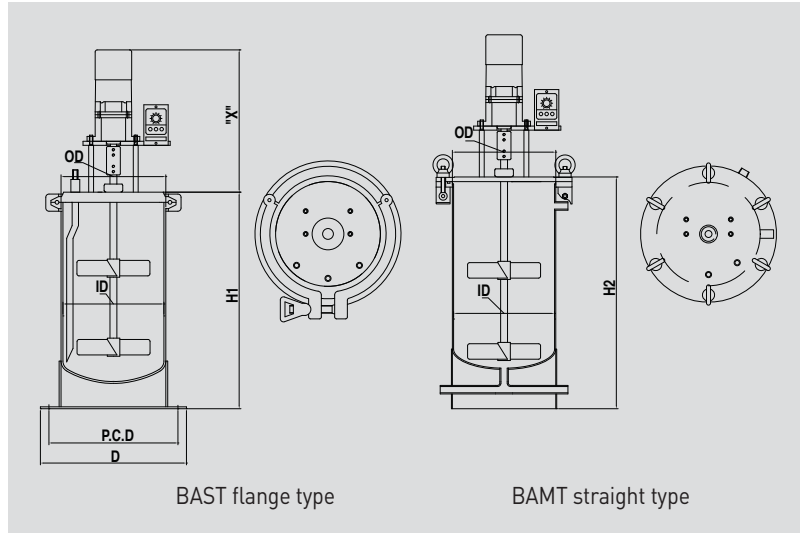
# Pressure tank

## Agitation tank

### BAT TYPE



- Used to stir the liquid in case of any precipitation, vacuum extraction, heating ups.



### SPECIFICATIONS

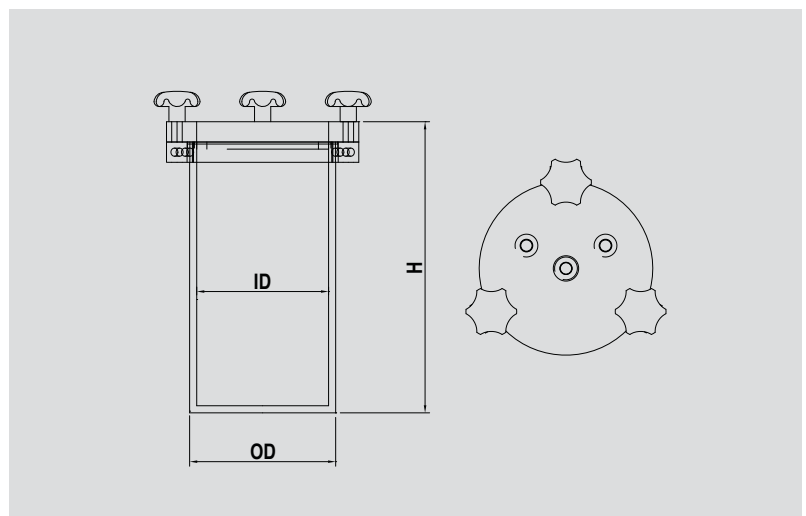
Capacity	H1	H2	OD	ID	D	P.C.D	Sanitary	Bolt	Hole size	X	Internal container
BAT-1l	306	336	114	108	174	154	4.5"	M10-4EA	3-120 Ø7	Motor - Made	Option Material :SUS, PE, Teflon, Teflon coating
BAT-3l	326	356	140	134	200	180	5"	M10-4EA			
BAT-5l	366	396	165	159	225	205	6"	M10-4EA			
BAT-10l	416	446	216	210	276	256	8"	M12-4EA			
BAT-20l	566	596	255	249	315	295		M12-6EA			
BAT-40l	566	596	350	344	410	390		M12-8EA			
BAT-100l	776	806	460	454	520	500		M12-16EA	6-60Ø7		

## Casting tank

### BIT TYPE



- Casting type tank that comes economical with low price.



### SPECIFICATIONS

Capacity	H	ID	OD
BIT-1l	206	97	108
BIT-3l	295	133	148



## BAST TANK INTERNAL CONTAINER TYPE



It is convenient to agitate and input the liquid and to wash it as the agitation tank has a container inside.

## VACUUM AGITATOR



This system removes bubbles from the liquid by evacuating the tank.

## TANK FOR ANAEROBIC LIQUID



Pressure tank



Non pressure tank

The tank is suitable when containing anaerobic solutions as its interior is coated with teflon.

## AUTO TWO LIQUID TYPE MIXING MACHINE



It automatically mixes two kinds of liquids with the automatic valve.

## CELL AUTO/HEATING BAST TANK



It automatically lifts the lid of the tank when liquid is input into the large capacity area of the tank.

It is suitable when using high viscosity fluid as the tank uses a heater.

# Precision gear pump system

## 330ml cartridge gear pump dispenser

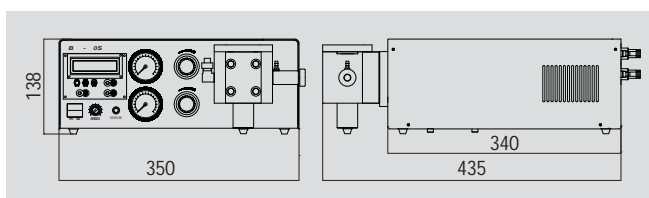
### BGP-330S



- Available for no pulsation type sealing.
- Applied to various viscosity from low to paste.
- No inflow blowholes.
- It has all functions to control precise dispensing like suck in liquid, clock-wise rotation/-counterclockwise rotation, auto-timer etc.
- It is easy to set Auto/Manual mode.
- It intakes liquid from the general containers and discharges a fixed quantity.
- It is suitable for a 330ml Silicone cartridge.

### SPECIFICATIONS

Model	BGP-330S
Time range	0.1 ~ 99.99sec
Motor speed	1 ~ 90rpm
Viscosity	~ paste
Out pressure	~ 150kg/cm <sup>2</sup>
Power source	AC110 ~ 220V 50/60HZ
Off method	Check needle adapter, Dispenser valve



## Low viscosity type gear pump dispenser

### BGP-330L BALL CHECK HANDLE TYPE



- It dispenses a fixed quantity of liquid by electricity without pneumatic pressure.
- The system is suitable when using low viscosity materials.
- It transports low viscosity materials from the general container by Gear pump and dispenses materials through a ball check handle.

## Middle viscosity type gear pump dispenser

### BGP-330T TANK TYPE



- System is suitable when using medium viscosity materials.
- It transports liquid, which has low fluidity, from the pressure tank to the gear pump and dispenses it through the quantitative valve.

### BGP-330

- S : Detachable Silicone cartridge type.
- L : It uses general low pressure hoses.
- T : It uses High pressure hoses.

## 10:1/20L high viscosity liquid pressurized transfer can gear pump

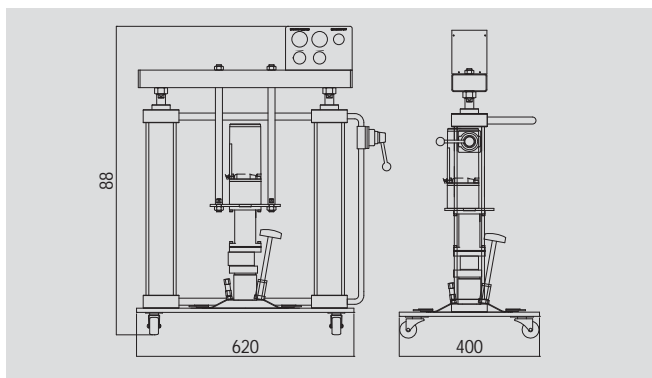
### PGP-20-10



- This is a system for quantity dispensing by simply applying high viscosity liquid within 5 gallon pail can.
- Dispensing operation of high viscosity materials of 10,000 ~600,000cps without bubbles or materials loss.
- Convenient installing and operating condition based on small size and light type design
- Self-developed valve for simultaneous application able to precisely apply with-multi points simultaneous dispensing, increasing productivity and quality.
- Dedicated pressurized transfer pump for transmitting the materials within pail can using high pressure.
- Expiration period of one pail can is 1 month.
- Diverse application is possible like sealing, bonding and molding of materials.

#### SPECIFICATIONS

Model	PGP-20-10
Pump sending ratio	10 : 1
Volume per stroke(cc)	8
Applying viscosity	10,000 ~ 600,000cps
Air consumption	80ml/min(max)
Weight	30kg
Air pressure	1~7 bar
Power	AC220V 50/60Hz (110V : Option)



### GEAR PUMP



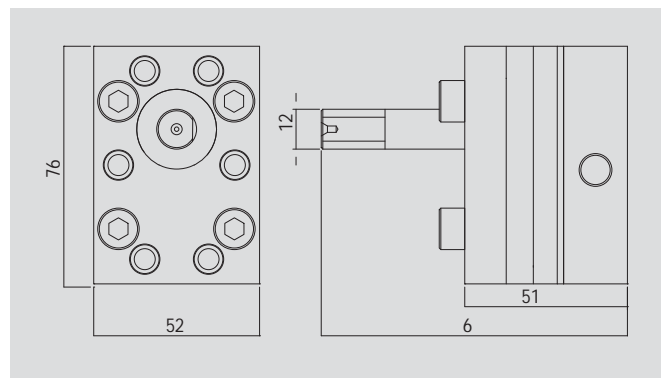
The groove of the rotation gear is filled with fluid when gear engagement is released at the intake. When the space caused by the gear casing and plate is filled with fluid, the fluid moves to the discharging side, following the internal circumference of the casing. The fluid in the discharge side flows by the engagement of the gears.



- Correction of discharge quantity without errors.
- Durability
- Diversity of the pump which can be used for many applications.
- Non-pulsation of feeding liquid.

#### SPECIFICATIONS

Model	GP-03	GP-15	GP-30	GP-45	GP-100
cc/Rev	0.3	1.5	3.0	4.5	10
Volume range	27ml/min	135ml/min	270ml/min	405ml/min	900ml/min
IN-LET pressure	0.5 ~ 19.6MPa				
OUT-LET pressure	Max 49.1MPa				
Difference pressure	39.2MPa				
Viscosity	Max 10,000 poise				
RPM	10 ~ 90				
Material	High speed tool steel				



# Pressure pump

## 10:1/small capacity high viscosity liquid pressurized transfer can pump

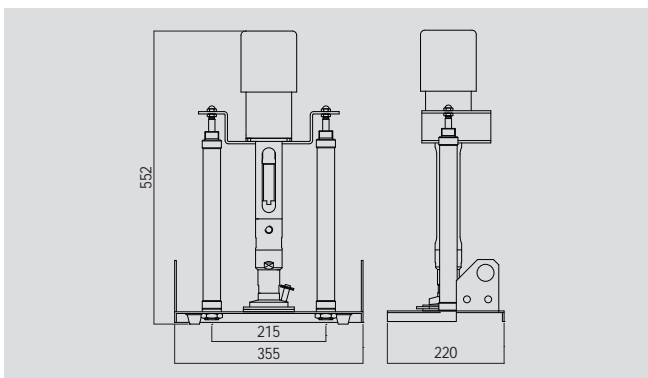
PCP- $\alpha$ 135



- This is a system for quantity dispensing by simply applying high viscosity liquid to 1kg, 3kg and 5kg cans.
- No loss or inconvenience of transferring of materials as wiper makes it possible to dispense in close contact with the can that carries high viscosity materials
- Dispensing operation of high viscosity materials of 10,000~600,000cps without pulsation based on various pressure transmitting ratio.
- Convenient installing and operating condition based on small size and light type design
- No bubbles generated or no mixing with impurities

### SPECIFICATIONS

Model	PCP- $\alpha$ 135
Pump sending ratio	10:1
Volume per stroke(cc)	8
Applying viscosity	10,000~600,000cps
Air pressure	1~7bar
Air consumption	80ml/min(max)
Applying container	1kg, 3kg, 5kg
Power	AC220V 50/60Hz(110V : Option)
Weight	9.5



## 10:1/20L high viscosity liquid pressurized transfer can pump

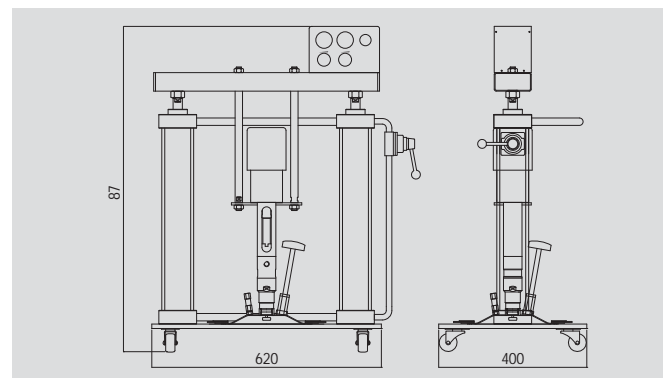
PCP-20-10



- This is a system for quantity dispensing by simply applying high viscosity liquid within 5 gallon pail can.
- Dispensing operation of high viscosity materials of 10,000 ~ 600,000cps without bubbles mixing or materials loss.
- Convenient installing and operating condition based on small size and light type design
- Self-developed valve for simultaneous application able to precisely apply with-multi points simultaneous dispensing, increasing productivity and quality.
- Dedicated pressurized transfer pump for transmitting the materials within pail can using High pressure.
- Expiration period of one pail can is 1 month.
- Diverse application is possible like sealing, bonding and molding of materials.

### SPECIFICATIONS

Model	PCP-20-10
Pump sending ratio	10 : 1
Volume per stroke(cc)	8
Applying viscosity	10,000 ~ 600,000cps
Air consumption	80ml/min(max)
Weight	30kg
Air pressure	1~7 bar
Power	AC220V 50/60Hz (110V : Option)





## High viscosity liquid pressurized transfer can pump

### PCP-SERIES



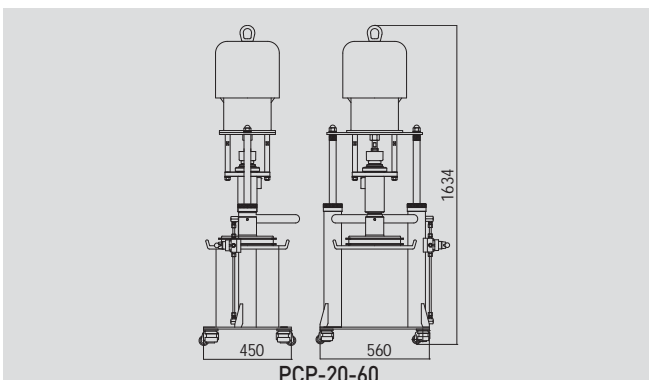
PCP-20-60

PCP-200-60

- Low noise level and high discharge pressure.
- More anti-freezing-special pump inner structure prevents air motor from freezing.

#### SPECIFICATIONS

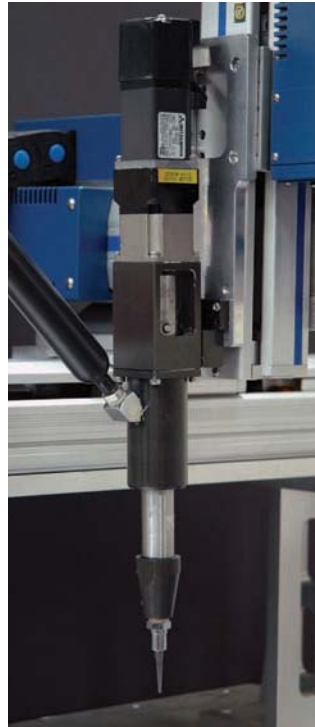
Model	PCP-20-48	PCP-20-60	PCP-200-60
Container size	5G(20l)	5G(20l)	55G(200l)
Pump sending ratio	48 : 1	60 : 1	60:1
Volume per stroke(cc)	18	25	25
Applying viscosity	30,000~100,000CPS	50,000~1,000,000cps	50,000~1,000,000cps
Air consumption	200l/min (max.)	480l/min (max.)	480l/min (max.)
Weight	50kg	90kg	110kg
Air pressure	1~7 bar		
Power	AC220V 50/60Hz (110V : Option)		



PCP-20-60

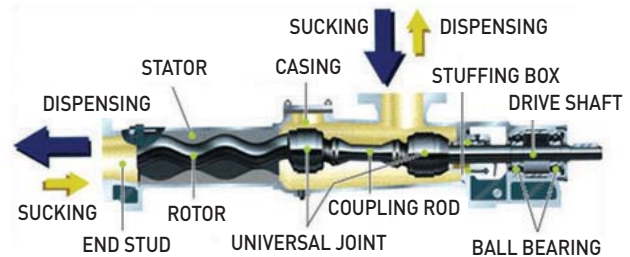
## Mono screw pump

### BM-2



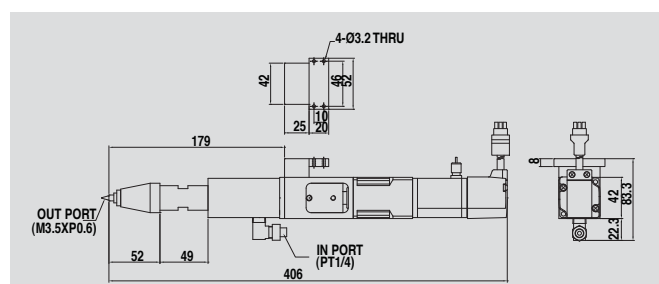
- It is compact and usable by connecting it to the robot directly.
- It realizes the control of non-pulsation quantity mono screw.
- It is possible to control various fluids from low to high viscosity.
- It is excellent for discharging fixed quantities of very abrasive materials.
- It makes high quality discharge interlinked with various pressure sensors.
- It has all the necessary functions to control fluid, such as the fluid intake function, normal/reverse rotation function, automatic timer function, etc.

Dispensing Example		
	SCREW MONO PUMP	Out of Control
Line, Circle		
Square		
Concentric circle		
Dotting		



#### SPECIFICATIONS

Model	BM-2	
Motor	AC servo motor	AC geared motor
Flow speed	0 ~ 360ml/mm	0 ~ 180ml/mm
Viscosity	100 ~ Paste	100 ~ Paste
Motor speed	1 ~ 360rpm (speed program available)	1 ~ 180rpm (speed control available)
Power source	AC220V, 50/60 HZ	AC220V 50/60 HZ
Material	Teflon, NBR, EPDM, Viton	
Pump capacity cc/rev	0.2	~ 72ml/mm
	0.8	~ 288ml/mm
	1.6	~ 576ml/mm
	3.2	~ 1152ml/mm



# Pressure pump

## Single silicone cartridge pressurized transfer pump

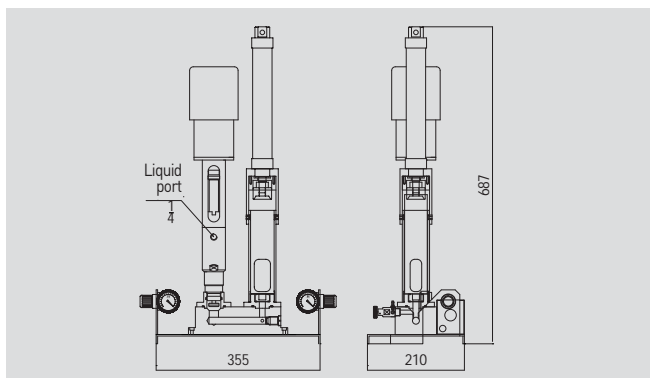
### BSP-330S



- Possible to perform quantity dispensing operation of Silicone cartridge without bubbles mixed using pressurized transfer pump.
- Convenient work with and no loss of high viscosity materials
- Minimizing working space and convenient installing and operating condition based on small size and light type design
- Pumping of high viscosity materials of 10,000~1,000,000cps when cylinder pushes the piston within cartridge causes no mixed bubbles or no material loss.
- Multi-points dispensing along with precision/quantity valve is effective for drastic increase of productivity.

#### SPECIFICATIONS

Model	BSP-330S
Air pressure	Higher than 2kgf/cm <sup>2</sup>
Air consumption	80ml/min(max)
Sending ratio	10:1
Max. dispensing pressure	50kgf/cm <sup>2</sup>
Min. dispensing volume	0.005cc/shot
Applied viscosity	10,000~1,000,000cps
Applied container	300ml, 310ml, 330ml cartridge
Power	AC220V 50/60Hz (110V : Option)



## Double silicone cartridge pressurized transfer pump

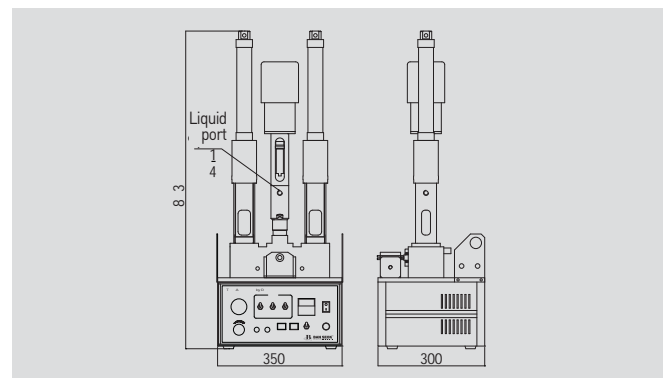
### BSP-330D



- Possible to perform quantity dispensing operation of Silicone cartridge without bubbles mixed using pressurized transfer pump.
- Dual cylinder type allowing automatic conversion to No. 2 cylinder when No.1 cylinder is exhausted.
- Suitable for productivity enhancement and automation equipment/line as continuous operation is possible.

#### SPECIFICATIONS

Model	BSP-330D
Air pressure	Higher than 2kgf/cm <sup>2</sup>
Air consumption	80ml/min(max)
Sending ratio	10:1
Max. dispensing pressure	50kgf/cm <sup>2</sup>
Min. dispensing volume	0.005cc/shot
Applied viscosity	10,000~1,000,000cps
Applied container	300ml, 310ml, 330ml cartridge
Power	AC220V 50/60Hz (110V : Option)



## Syringe pump

### BS-1

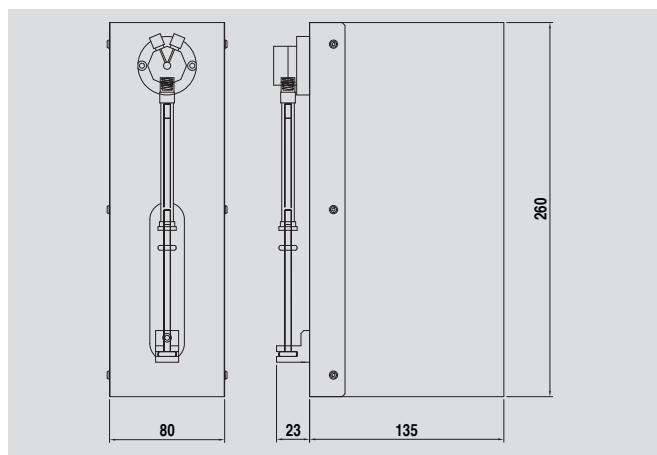


The syringe pump provides the highest resolution and powerful syringe driving force enough to mount a large syringe. It can be used for all fields which require precise fluid quantity by taking various valve options such as ceramic valves.

- The highest resolution. (2,000:1 resolution)
- Powerful syringe driving force. (25 $\mu$ l~25ml syringe)
- Super precision error range. ( $\pm 1.0\%$ )
- Excellent reproducibility. ( $\pm 0.2\%$  RSD)
- Used for various fields (3,4,8-way valve)
- Useful for precise fluid, specimen pre-treatment, bio science, medical diagnosis, medical treatment equipment, etc.

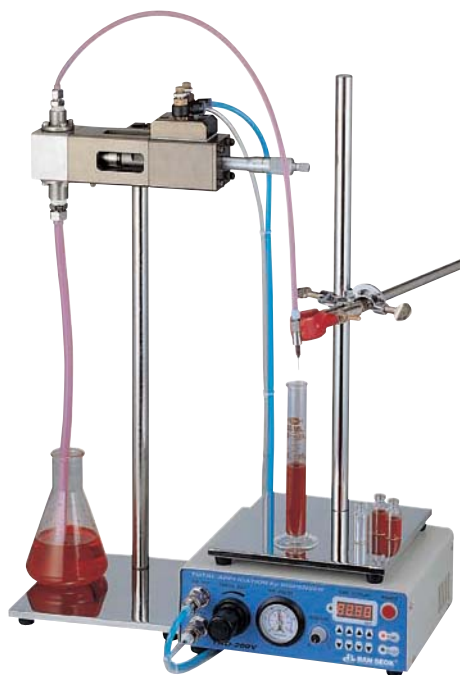
### SPECIFICATIONS

Model	BS-1	
Power requirements	Voltage	24 VDC
	Current	1 amp maximum
Syringes	Sizes	25 $\mu$ l, 50 $\mu$ l, 100 $\mu$ l, 250 $\mu$ l, 500 $\mu$ l, 1ml, 2.5ml, 5ml, 10ml, 25ml
	Fluid contact	Glass, PTFE, CTFE, UHMWPE
Syringe drive	Drive type	DC stepper motor: self lubricating and wear compensating lead nut/screw
	Travel/speed	2 to 60 seconds/stroke
	Resolution	Half 1,000 counts, Full 2,000 counts
	Accuracy	$\pm 1.0\%$ @ > 30% stroke
	Precision	+0.2% @ > 30% stroke
Valve drive	Valves	Ceramic or rotating plug
	Drive type	Stepper motor with encoder
	Speed	500 ms @ 90°
	Fluid contact	PTFE & CTFE or ceramic
Environment	Fittings	1/4" - 28
	Operating temperature	60°F to 95°F (15°C to 25°C)
	Operating humidity	20% to 90%, non-condensing



## Offers high accuracy dispensing

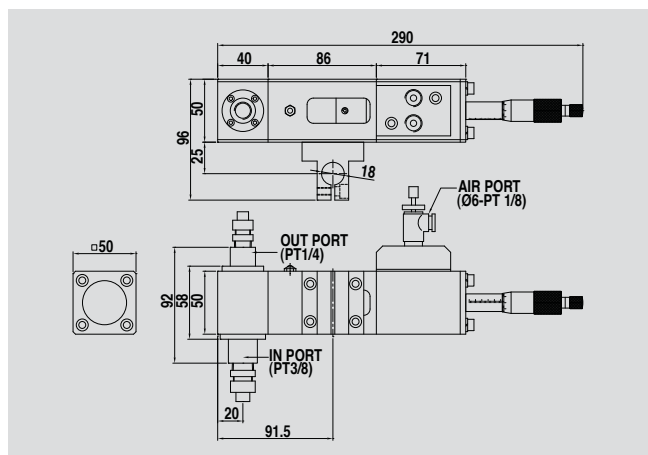
### PRECISION METERING PUMP



Useful for precise dispensing and controlling lubricator, Paint, Glue, Dosage of medicine, Perfume, Cosmetics, Aromatics, etc.

### SPECIFICATIONS

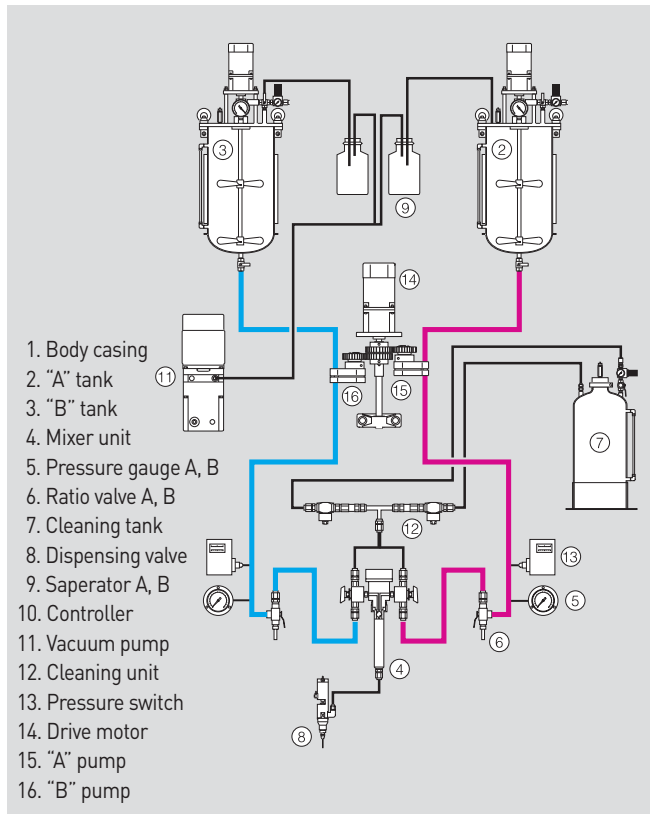
Model	BV-M10	BV-M60	BV-M250
Plunger dia	22.5mm	55mm	80mm
Max.stroke	25mm	25mm	50mm
Volume	~10ml	~60ml	~250ml
Cycle speed	100cycle/min	80cycle/min	70cycle/min
Air usage	87.8l/min	140l/min	310l/min
Dimensions	284 X 50 X 142	317.4 X 75 X 157	492 X 110 X 189



# Two liquid type automatic dispenser

Mixes A liquids(Resin) and B liquids(Hardener) in fixed ratio automatically and dispenses them in precision. For two type liquid automatic dispensing, please confirm and give us information on each viscosity of resin/hardener, gravity, mixing ratio, deposit volume, pot life, method of dispensing, etc. According to the property of materials, we can add the functions such as ; blowhole removal in vacuum, pre-heating/agitation, injection in vacuum in the system separately.

## FLOW SHEET(TAD-233)



- Use the exclusive pump for two- liquid type approved its quality all over the world considering each property of two liquids.
- Select certified mixer for perfect mixing of resin/hardener.
- Simply adjust the deposit volume and dispensing speed by the auto timer and motor speed.
- Convenient to choose automatic dispensing as it keeps Dispensing time by digital at manual mode.
- Acquired the convenience focused on domestic users and so many customers approved its superiority.
- Perform the 2nd cleaning perfectly by air and cleanser after finishing dispensing.
- Remove the back- flow of liquids by stable equipments to prevent resin and hardener from back- flowing in each line.
- Adjust the mixing ratio of resin/hardener.

### ※Order-made

- Injector in vacuum
- In -line oven injector
- Discharger of urethane and robot

## Agitation/Vacuum deaeration two liquid type automatic dispenser

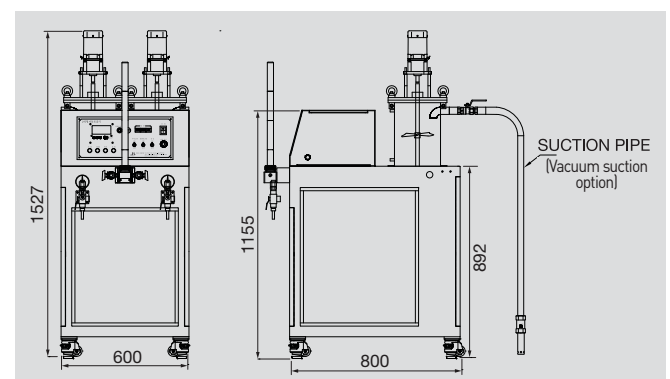
### TAD-233



- Possible to agitate resin and adjust temperature within tanks
- Structure with stable mixing ratio
- Complete deaeration (Removing bubbles)
- Complete mixing
- Built-in stabilizing device
- Automatic washing
- Quantity dispensing

### SPECIFICATIONS

Model	TAD-233
Mixing	Static mixer
Pump	Gear pump with abrasion inside
Tank	Resin20L X Hardener20L
Applied materials	2-liquid type epoxy, Silicone, Urethane
Viacosity	1 ~ 80,000cps(25°C)
Ratio	100 : 10 ~ 100 : 100
Volume	Higher than 0.2cc/min
Accuracy	±3%(max)
Dimension	600(W) X 800(D) X 1155(H)
Power	220V, 50Hz/60Hz
Weight	120Kg





## Reserve tank type Two liquid type dispenser

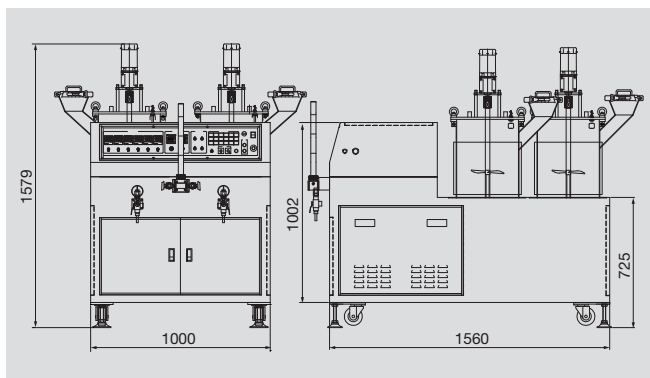
### TAD-244



- Using the reserve tank installed, continuous removing bubbles of materials is possible.
- Productivity maximized using the continuous operation of dispenser
- Securing sufficient time for agitation and removing bubbles
- Optimized for two liquid epoxy, urethane and Silicone
- Securing sufficient agitation and deaeration when using it for molding high voltage parts etc.
- Continuous operation possible using functions of detecting residual liquid and supplementing inhalation

#### SPECIFICATIONS

Model	TAD-244
Mixing	Static mixer
Pump	Gear pump with abrasion inside
Tank	40l X 40l X 40l X 40l
Applied materials	2-liquid type epoxy, Silicone, Urethane
Viscosity	1 ~ 200,000cps(25°C)
Ratio	100 : 10 ~ 100 : 100
Volume	Higher than 0.2cc/min
Accuracy	±3%(max)
Dimension	1000(W) X 1560(D) X 1002(W)
Power	ø3, 220V 60Hz
Weight	200Kg



## Non agitation/Non deaeration two liquid type automatic dispenser

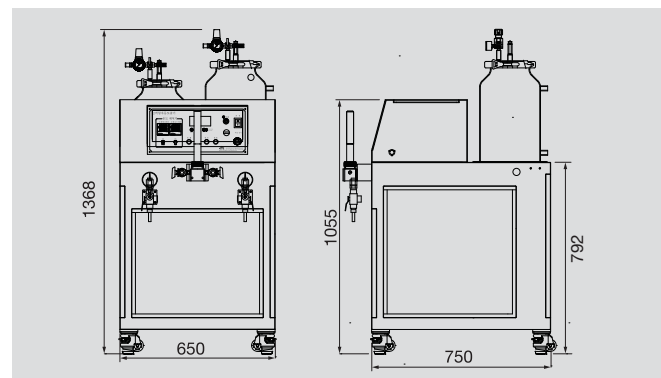
### TAD-202



- Low cost
- High accuracy
- Light & compact
- Ideal for dispensing two - liquid type of epoxy, use Gear pump.
- Stable application without the change of deposit volume even in the change of liquid's viscosity.
- Perfect cleaning of mixer after dispensing.

#### SPECIFICATIONS

Model	TAD-202
Mixing	Static mixer
Pump	Gear pump with abrasion inside
Tank	Resign 5l X Hardener 3l
Applied materials	2-liquid type epoxy, Silicone, Urethane
Viscosity	1 ~ 20,000cps(25°C)
Ratio	100 : 10 ~ 100 : 100
Volume	Higher than 0.2cc/min
Accuracy	±3%(max)
Dimension	650(W) X 750(D) X 1055(W)
Power	220V 60Hz/50Hz
Weight	40Kg



# Two liquid type automatic dispenser

## Small size two liquid type dispenser

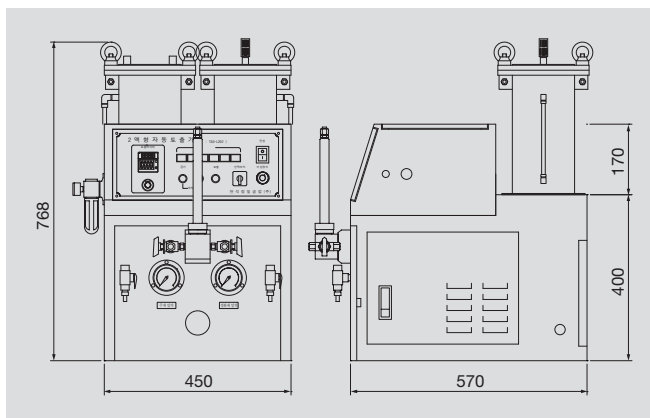
### EcoMIX-1000



- It is available to mix various rate.
- It is suitable for small space with compact Desk Top type.
- Applied to various jobs.
- It can be use with other equipments.  
(Automatic conveyor operation with X.Y.Z. Robot, manual operation etc.)
- High accuracy
- Ultra-low price

### SPECIFICATIONS

Model	EcoMIX-1000
Applied materials	Two-liquid epoxy, Silicone, Urethane
Viscosity	1 ~ 20,000cps
Ratio	100:10 ~ 100:100
Accuracy	±3% (max)
Tank	1L, 3L, 5L
Power	Single-phase 220V, 50/60Hz



### APPLICATION



Vacuum pump



Heater



Agitator



Pressure tank

### OPTION

- ① Vacuum pump
- ② Heater
- ③ Pressure tank
- ④ Agitator

# Two liquid type dispenser

## For high speed / high viscosity

These devices to measure, mix and dispense 2- liquid type materials are applied to specifications requiring high viscosity and High pressure conveyance. With the plunger pump it is most suitable for the works requiring exact measurement and fixed- quantity input. In particular, if liquid is abrasive, the part of plunger pump which contacts liquids can be made of abrasion- resistant ceramic to lengthen the life of the device.

You don't need to clean the system after use as it has Static mixer separation.

## High viscosity two liquid type dispenser

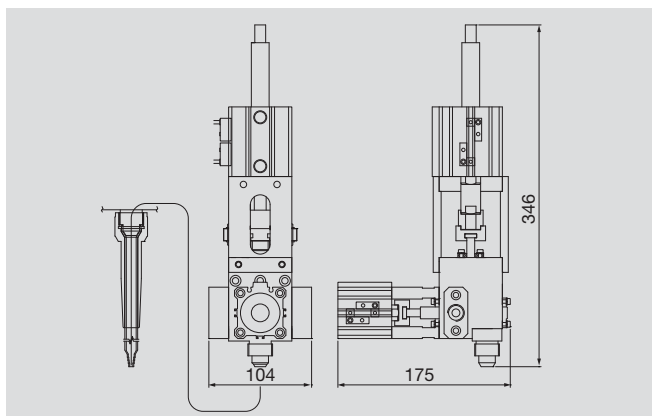
### TAD-275P



It performs automatic mixing, quantity dispensing operation of high viscosity Two liquid type materials using High pressure transfer pump of pressure transferring ratio of 60:1.

#### SPECIFICATIONS

Model	TAD-275P	TAD-275PM
Driven by	Air	Motor
Max. deposit volume	5ml(g)	5ml(g)
Resolution	0.03ml(g)	0.3ml(g)
Reproducibility	Within ±2%	Within ±2%
Allowed viscosity	1~Paste	1~Paste
Mixing ratio	00:10~100:100	100:10~100:100
IN LET pressure	~300bar	~300bar



## Low viscosity two liquid type dispenser

### TAD-275T

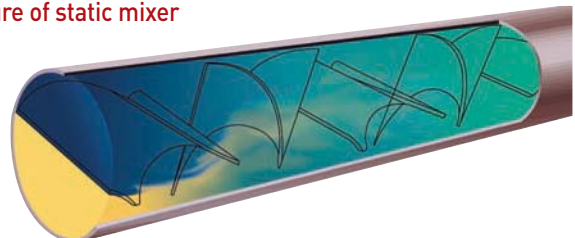


It conveys the two- type liquids with the flow from the pressure tank to pump by using air pressure. It performs auto-mixing and precise dispensing.

#### SPECIFICATIONS

Model	TAD-275T	TAD-275TM
Driven by	Air	Motor
Max. deposit volume	5ml(g)	5ml(g)
Resolution	0.03ml(g)	0.3ml(g)
Reproducibility	Within ±2%	Within ±2%
Allowed viscosity	1~Paste	1~20,000cps
Mixing ratio	100:10~100:100	100:10~100:100

#### Structure of static mixer



#### Static mixer cross section

$S=2^n$

(Number of elements)

1 2 3 4 5

left-hand element Interface Right-hand element

(Number of layers)

2 4 8 16 32

6 after elements : 64 strata  
 12 after elements : 4,096 strata  
 18 after elements : 262,144 strata  
 24 after elements : 16,777,216 strata  
 30 after elements : 1,073,741,824 strata

S: Number of layers produced by flow : mix  
 n: Number of element  
 d: Thickness of layers

Clowwise rotation Counterclowwise rotation

$d = \frac{D}{2^n}$

D=in diameter of mixer tube

# Two liquid type dispenser application

## TAD-233 CAN PUMP TYPE



The system is suitable when using high viscosity fluid, applying the PCP-20-10 can pump to the TAD-233 two-component equipment.

## TAD-233 CARTESIAN ROBOT APPLICATION



The TAD-233 two-component equipment is met with a robot dispenser at a right angle in the system (fire alarm sealing equipment).

## TAD-233 TWIN MIXER TYPE



The system improves the productivity of the TAD-233 two-component equipment by using a twin mixer.

## TAD-233 DESKTOP ROBOT APPLICATION



A desktop robot dispenser is applied to the TAD-233 two-component equipment in this system.

## TAD-233 IN-LINE APPLICATION



It realizes the best productivity in the automatic line by applying a multi-auto filling system to the TAD-233 2-component equipment.

## TAD-233 VACUUM CHAMBER APPLICATION



A robot inject vacuum is applied to the TAD-233 2-component equipment in the vacuum chamber in this system.



# Turn table dispenser

As a equipment which dispenses the liquid with rotation of jig part mounted on the product, it is suitable for liquid coating with original form on the product.

Since the control of rotating angle, speed of jig through LCD window of control part and angle control are available, it is possible for partial dot and dispensing discharge of circle along the selection of user.

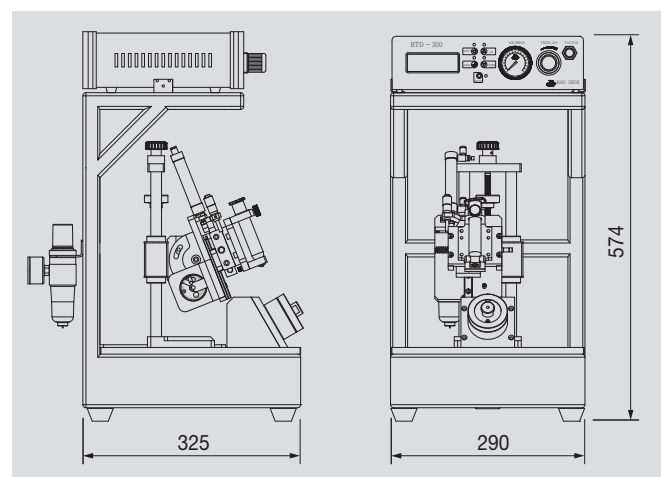
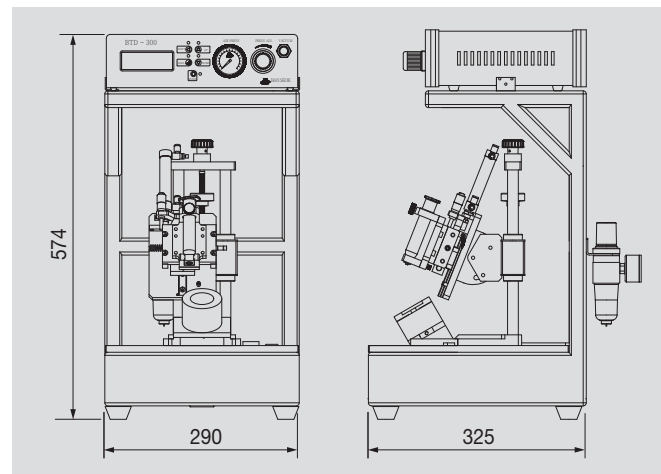
Tool part is configured to freely change coating area, and minute setting is available for the part for liquid coating.

## Turn table dispenser



### SPECIFICATIONS

Model	BTD-300
Cycle initiation	Manual or automatic
Vertical travel, Rotation speed	70mm, 0~60rpm
Air input	70~100ps(5~7bar)
Air output	1~100ps(0.1~7 bar)
Size	290(W) X 325(L) X 574(H)



# Desktop robot dispenser

AC servo/step motor 1bed/2bed robot

EcoYES / EcoWIN-SERIES



EcoYES-331



EcoYES-221



EcoWIN-3351

- Light weight and robust desktop robots with newly developed aluminum frame
- Up-to-date design consists of new aluminum frame and new plastic cases
- Line-up of new models from light weight model to heavy weight model
- Diverse models from small area to large
- Newly developed built-in robot controllers for stepper-motor and servomotor

- 3D interpolation under the conditions of heavy weight, high speed and high accuracy also precise motion control at the corner
- Special dispensing software for sealing, coating and spread of adhesive
- Built-in all electrical wirings and pneumatic lines related dispenser and controller
- Easy after-service of controller by pull-out and slide-in system.

## SPECIFICATIONS

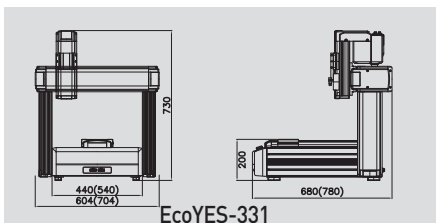
Model (AC servo)	331(R)	441(R)	3351	4461	
Range of operation	X axis	300mm	400mm	300mm	400mm
	Y axis	300mm	400mm	500mm	600mm
	Z axis	100mm	100mm	100mm	100mm
	R/(W) axis	300deg	300deg	(300mm)	(400mm)
Speed	PTP X, Y, Z	500mm/sec	500mm/sec	500mm/sec	500mm/sec
	PTP R/(W)	360deg/sec	360deg/sec	(500mm/sec)	(500mm/sec)
	CP X, Y, Z	500mm/sec	500mm/sec	500mm/sec	500mm/sec
Repeatability accuracy(MAX)	X, Y, Z axis	± 0.02mm	± 0.02mm	± 0.02mm	± 0.02mm
	R (W) axis *1	± 0.11°	± 0.11°	(± 0.02mm)	(± 0.02mm)
Position command resolution (All)	0.001mm	0.001mm	0.001mm	0.001mm	
Portable weight	Work X, W	15kg	15kg	15kg	15kg
	Tool Z (R)	7kg (4Kg)	7kg (4Kg)	7kg	7kg
Number of controllable axis (R)	3 Axis(4Axis)	3 Axis(4Axis)	4 Axis	4 Axis	
Motion program language	Dispenser language (Dispense line / DOT / Arc / Circle, Various brush area, Step & Repeat, Line dispense setup, Point dispense setup, Dispense end setup, Z clearance, Retract, Auto purge, Round, PALLET, Mathematic calculation, Cycle counter, etc)				
PLC program language	30 instruction sets				
Drive method	3Ø AC servo motor				
Control method	PTD & CP (2D/3D line, Circle)				
External interface	RS232-C 2ch				
User input/output	System I/O (IN : 4, OUT : 5), User I/O (IN : 16, OUT : 15)				
Extension (Option) user input/output	IN : 16, OUT : 15				
CPU performance	Main : 32bit, 1200MFLOFS, Servo : 16Bit, 40MIPS * 2				
PLC function	10 programs, 1000 steps/PGM				
Program capacity	100 programs, 1000 steps/PGM				
Data memory capacity	20,000 step / 20,000 points				
Program storage	512KB Battery backup SRAM				

Remark 1. R axis : include gear, 50:1

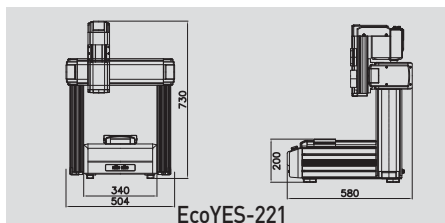
## SPECIFICATIONS

Model (Step)	221(R)	331(R)	441(R)	3351	4461	
Range of operation	X axis	200mm	300mm	400mm	300mm	400mm
	Y axis	200mm	300mm	400mm	500mm	600mm
	Z axis	100mm	100mm	100mm	100mm	100mm
Speed	R/(W) axis	300deg	300deg	300deg	(300mm)	(400mm)
	PTP X, Y	500mm/sec	500mm/sec	500mm/sec	500mm/sec	500mm/sec
	PTP Z	200mm/sec	200mm/sec	200mm/sec	200mm/sec	200mm/sec
	PTP R/(W)	360deg/sec	360deg/sec	360deg/sec	(500mm/sec)	(500mm/sec)
Repeatability accuracy(MAX)	CP X, Y, (Z)	0.1-500mm/sec (0.1-200mm/sec)				
	X, Y axis	± 0.05mm	± 0.05mm	± 0.05mm	± 0.05mm	± 0.05mm
Position command resolution (All)	Z axis	± 0.02mm	± 0.02mm	± 0.02mm	± 0.02mm	± 0.02mm
	R (W) axis *1	± 0.02°	± 0.02°	± 0.02°	(± 0.05mm)	(± 0.05mm)
Portable weight	Work X, W	11kg	11kg	11kg	11kg	11kg
Number of controllable axis (R)	Tool Z (R)	5kg (2Kg)	5kg (2Kg)	5kg (2Kg)	5kg	5kg
Motion program language	Dispenser language (Dispense line / DOT / Arc / Circle, Various brush area, Step & Repeat, Line dispense setup, Point dispense setup, Dispense end setup, Z clearance, Retract, Auto purge, Round, PALLET, Mathematic calculation, Cycle counter, etc)					
PLC program language	30 instruction sets					
Programming method	T - box, PC					
Operating method	T - box, PC, Front-panel, I/O					
Drive method	Micro stepping motor					
Control method	PTD & CP (2D/3D line, Circle)					
External interface	RS232-C 2ch					
User input/output	System I/O (IN : 4, OUT : 5), User I/O (IN : 16, OUT : 15)					
CPU performance	Main : 32bit, 1200MFLOFS, Servo : 16Bit, 40MIPS * 2					
PLC function	10 programs, 1000 steps/PGM					
Program capacity	100 programs, 1000 steps/PGM					
Data memory capacity	20,000 step / 20,000 points					
Program storage	512KB Battery backup SRAM					

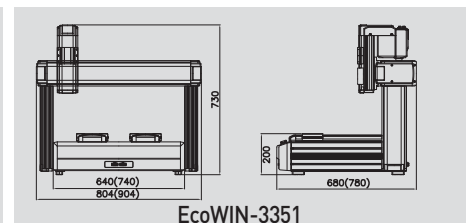
Remark 1. R axis : include gear, 50:1



EcoYES-331



EcoYES-221



EcoWIN-3351

Desktop robot EASYES series has an advantage of being able to use all 3D applications with little space. It produces high accuracy and speedy work by employing AC servo motor and ball screw in X, Y, Z axis.

## AC servo motor 1bed robot

### EASYES-331(R)/441(R)

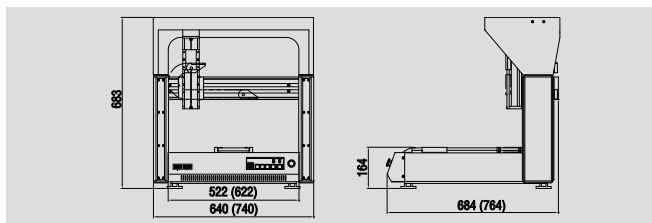


Even beginners can enter simple to use programs.

- High precision  
Repeatability:  $\pm 0.02\text{mm}$   
Resolution:  $0.01\text{mm}$  high load,
- High speed operation point moving speed Max. :  $500\text{mm/sec}$
- Easy operation for non-experts
- Excellent quality, reasonable price
- Fast delivery

#### SPECIFICATIONS

Model	EASEYES-331(R)	EASEYES-441(R)
Range of operation X/Y/Z/R (Axis)	300mm X 300mm X 100mm X 300deg	400mm X 400mm X 100mm X 300deg
Speed PTP X&Y, Z	500mm/sec, 300mm/sec	
Speed CP X&Y&Z	500mm/sec	
Repeatability accuracy X&Y&Z(Axis)	$\pm 0.02\text{mm}$	
Resolution (All axis)	0.001mm	
Portable weight (Tool)	7kg	
Machine type	Ball screw	
Programming method	T-box, PC	
Operating method	T-box, PC, Front-panel, System I/O	
Drive method	$3\phi$ , AC servo	
Control method	PTD & CP (2D/3D line, Circle)	
Number of controllable axes	3 axes, 4 axes ( $360^\circ$ )	
External interface	RS232-C 2ch	
System input, Output	In:24, Out:6	
External input, Output	In:32, Out:32	
Program capacity	100 programs, 1000 steps/PGM	
Data memory capacity	20,000 step, 20,000 points, Batt backup SRAM	
CPU	32bit DSP (900 MFLOPS)	
Dimensions	640mm(W) X 684mm(D) X 683mm(H)	740mm(W) X 764mm(D) X 683mm(H)
Weight	55kg	70kg
Input power	$2\phi$ AC 180-253V	
Consumption power	MAX 2000VA	
Working ambient temperature	0-40°C	
Relative humidity	20-95%, No condensation	



## AC servo motor 2bed robot

### EASYWIN-3351

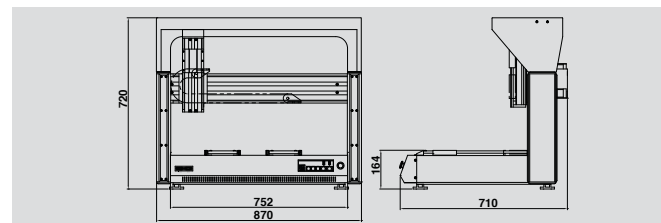


A robot of two-bed type with all the outstanding features of EASYES-series

- High precision and speed operations are available by adopting ball screws in all axes of AC servo motor.
- With the development of new dispenser exclusive operation method, users are simply able to operate in short period.
- Reasonable price compared to the same-level specifications
- Small space required and in-line operation based on multi-units connection

#### SPECIFICATIONS

Model	EASEYWIN-3351
Range of operation X/Y/Z/R (Axis)	300mm X 300mm X 500mm X 100mm
Speed PTP X&Y, Z	500mm/sec, 300mm/sec
Speed CP X&Y&Z	500mm/sec
Repeatability accuracy X&Y&Z(Axis)	$\pm 0.02\text{mm}$
Resolution (All axis)	0.001mm
Portable weight (Tool)	7kg
Machine type	Ball screw
Programming method	T-box, PC(Jog, Programming, Program up/down
Operating method	T-box, PC, Front-panel, System I/O
Drive method	$3\phi$ , AC servo
Control method	PTD & CP (2D/3D line, Circle)
Number of controllable axes	3 axes, 4 axes
External interface	RS232-C 2ch
System input, Output	In:24, Out:6
External input, Output	In:32, Out:32
Program capacity	100 programs, 1000 steps/PGM
Data memory capacity	20,000 step, 20,000 points, Batt backup SRAM
CPU	32bit DSP (900 MFLOPS)
Dimensions	870mm(W) X 710mm(D) X 720mm(H)
Weight	75kg
Input power	$2\phi$ AC 180-253V
Consumption power	MAX 2000VA
Working ambient temperature	0-40°C
Relative humidity	20-95%, No condensation



# Desktop robot dispenser

## Stepping motor robot

### EcoEco-331(R)

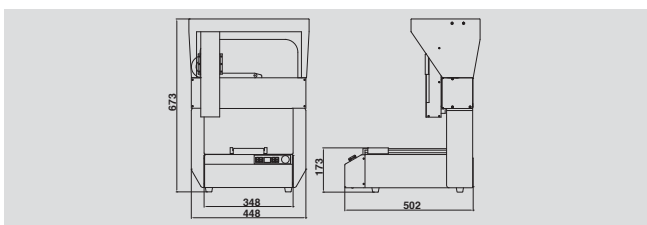


**This stepping desktop robot is a dispenser exclusive robot with low price and high performance.**

- With the development of new dispenser exclusive operation method, users are simply able to operate in short period.
- Various dispenser exclusive functions are mounted which are needed for dispensing processes.
- This robot is produced by high strength casting.
- With supporting CAM, complicate shape can be easily processed.

#### SPECIFICATIONS

Model	EcoEco-331(R)
Range of operation X/Y/Z/R (Axis)	300mm X 300mm X 100mm X 300deg
Speed PTP X&Y, Z	500mm/sec, 300mm/sec
Speed CP X&Y&Z	0.1~500mm/sec
Repeatability accuracy X&Y&Z(Axis)	± 0.05mm
Portable weight (Work, Tool)	11kg, 5kg
Programming method	T-box, PC
Operating method	T-box, PC, Front-panel, I/O
Drive method	2-phase, Stepping motor
Control method	PTD & CP (2D/3D line, Circle)
Number of controllable axes	3 axes
External interface	RS232-C 2ch
External input, Output	In:16, Out:15
PLC function	100 programs
Program capacity	100 programs, 1000 steps/PGM
Data memory capacity	20,000 step, 20,000 points, Batt backup STAM
CPU	32bit
Dimensions	448mm(W) X 502mm(D) X 673mm(H)
Weight	38kg
Power supply	AC 180-253V
Consumption power	1500VA
Working ambient temperature	0-40°C
Relative humidity	20-95%, No condensation



## Stepping motor base rotation robot

### EcoEco-R331

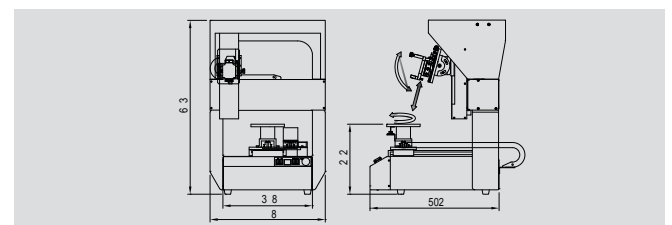


**Economical stepping type dispenser robot. Rotating axis is assembled in X axis to form multi tool head that increases productivity compare to the existing Z axis rotating machines.**

- Precise amount of dispensing volume is possible thanks to rotation jig, vacuum structure in the lower part.
- Angle adjustable type, 3 way precise adjustable tool head enables very precise work.

#### SPECIFICATIONS

Model	EcoEco-R331
Range of operation X/Y/Z/R (Axis)	300mm X 300deg X 300mm X 100mm
Speed PTP R, X&Y, Z	360deg/sec, 500mm/sec, 300mm/sec
Speed CP X&Y&Z	0.1~500mm/sec
Repeatability accuracy R, X&Y&Z(Axis)	±0.02°, ±0.05mm
Portable weight (Work, Tool)	11kg, 5kg
Programming method	T-box, PC
Operating method	T-box, PC, Front-panel, I/O
Drive method	2-phase, Stepping motor
Control method	PTD & CP (2D/3D line, Circle)
Number of controllable axes	4 axes
External interface	RS232-C 2ch
External input, Output	In:16, Out:15
PLC function	100 programs
Program capacity	100 programs, 1000 steps/PGM
Data memory capacity	20,000 step, 20,000 points, Batt backup STAM
CPU	32bit
Dimensions	448mm(W) X 502mm(D) X 673mm(H)
Weight	38kg
Power supply	AC 180-253V
Consumption power	1500VA
Working ambient temperature	0-40°C
Relative humidity	20-95%, No condensation





# Cartesian robot dispenser

ANY CARTESIAN series is a robot dispensing system that guarantees excellent capabilities and quality under specific environment where a dispensing operation that requires mass production of large-sized products at a high speed.

## AC servo motor cartesian robot

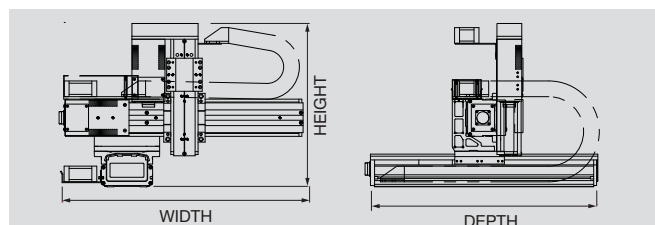
### ANY CARTESIAN-SERIES



- High precision and high speed processing are available based on AC servo motor & ball screw & LM guide.
- Easy patterning job with built-in sealing dedicated program.
- Function to correct existing coordinates when exchanging tools.
- Functions of various modes for pre-application end point treatment & for filling the designated area.
- Automatic conversion of moving trace designed using CAD to robot program.
- Minimizing the path tracing error by using dynamic feed & forward control.
- Suppressing vibration of mechanical part joints by notch filter installed.
- Various acceleration & deceleration modes supports.

#### SPECIFICATIONS

Model		331(R)	441(R)	552(R)	662(R)	882(R)
Range of operation	X	300mm	400mm	500mm	600mm	800mm
	Y	300mm	400mm	500mm	600mm	800mm
	X	100mm	100mm	200mm	200mm	200mm
	R(Axis)	300deg	300deg	300deg	300deg	300deg
Speed PTP R, X & Y, Z		500mm/sec, 300mm/sec				
Speed CP X & Y & Z		500mm/sec				
Speed R Axis		360°/sec				
Repeatability accuracy R, X&Y&Z(Axis)		±0.02mm, ±0.02°				
Resolution (All axis)		0.001mm				
Portable weight (Tool)		7kg				
Machine type		Ball screw				
Programming method		T-box, PC				
Operating method		T-box, PC, Front-panel, System I/O				
Drive method		3ø, AC servo				
Control method		PTD & CP (2D/3D line, Circle)				
Number of controllable axes		3 axes, 4 axes [360°]				
External interface		RS232-C 2ch				
System input, Output		In:24, Out:6				
External input, Output		In:32, Out:32				
Program capacity		100 programs, 1000 steps/PGM				
Data memory capacity		20,000 step, 20,000 points, Batt backup SRAM				
CPU		32bit DSP (900 MFLOPS)				
Dimensions	W	676mm	802mm	902mm	1002mm	1202mm
	D	673mm	773mm	873mm	973mm	1173mm
	H	390mm	390mm	454mm	454mm	454mm
Weight		40kg	43kg	47kg	50kg	53kg
Input power		2ø AC 180-253V				
Consumption power		MAX 2000VA				
Working ambient temperature		0-40°C				
Relative humidity		20-95%, No condensation				



# Robot multi tool head

It is a multi-tool head which is applied to the robot dispenser and it can mount the barrel, valve, and tube. You can select from among them the one that is suitable for the job as there are many kinds, from one to five series.

## MHB-3-1A-10



3 axis 1 array micro holder for barrel 10cc.

## MHV-3-3A-520P



3 axis 3 array micro holder for valve BV-520P.

## MHT-3-5A-24



3 axis 5 array micro holder for tube 24G.

MHB

Micro holder  
B : Barrel  
V : Valve  
T : Tube

3

3 axis adjuster  
for manual

5A

Count of head

30

Model No. of barrel  
Model No. of valve  
Model No. of tube

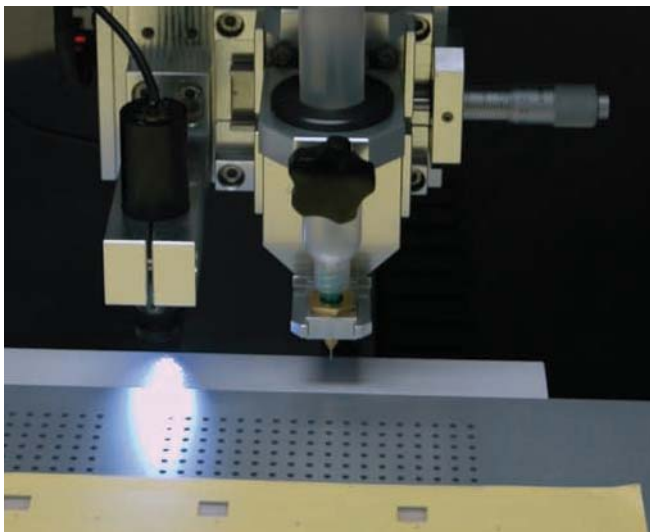
# Robot dispenser system

## Touch-pad

### TOUCH-PAD SOLDER PASTE DISPENSING M/C



- Automatic correct dispensing position setting after recognition of the vision mark.
- Ensure precision of flatness of the robot using a granite plate.
- It is easy to use and amend the program controlling a PC.
- Ensure correct quantity of dispensing using the compensation controller.

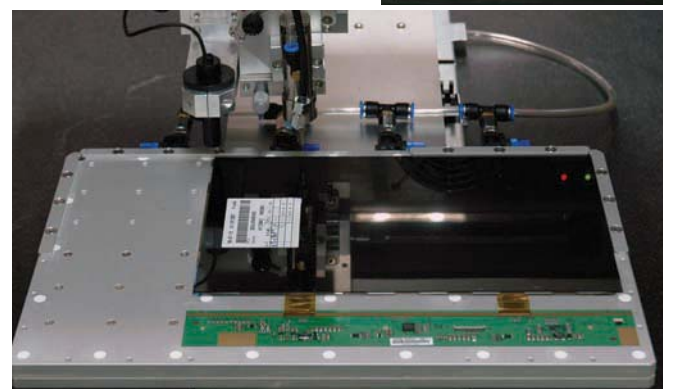


## Touch-screen

### TOUCH-SCREEN UV BONDING DISPENSING M/C



- Automatic correct dispensing position setting after recognition of the vision mark.
- Ensure precision of flatness of the robot using a granite plate.
- It is easy to use and amend the program controlling a PC.
- Realize small but precise dispensing volume using precision valves and nozzles.



## TFT-LCD

### TFT-LCD DISPENSING M/C



- Silicone sealing between Mobile TFT-LCD and FPCB
- Reinforced joining between TFT-LCD and FPCB, circuit protection, moisture-proofing, etc.
- Adopting twin bed to minimize production loss, applying simultaneous multi-axis to maximize productivity.
- Applying the dedicated valve with excellent responsibility to guarantee dispensing quality.
- Vacuum dedicated jig for implementing stable product installation.



## LCD-BLU

### BLU SILICONE DISPENSING M/C

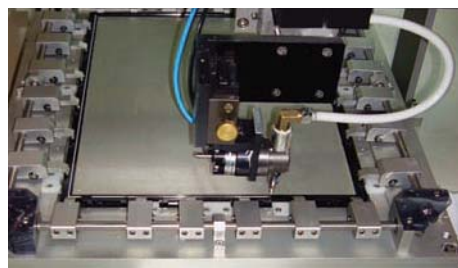


**This equipment uses Silicone instead of a pad, which is attached to the support main when assembling the support main and glass during back light unit production.**

- Secured structural precision by introduction of a robot system equipped with a servo motor.
- It realizes the best productivity and removes work loss from input to discharge of products composing the twin bed type (twin jig) system.
- It is easy to change models and set dispensing conditions by developing and using a PC based controller and dedicated BLU sealing software.
- User interface was strengthened in the dedicated software and consequently, the user does not need any other program. The dispensing conditions, moving speed, sealing speed can be freely edited using the menu and icons on the screen. Beginners also can operate and set the operation conditions.
- High precision sealing is possible with the precision sealing valve and controller which our company developed.

#### SPECIFICATIONS

Effective stroke	Y1,Y2 axis	600mm, 600mm
	X axis	1000mm
	Z axis	100mm
Maximum speed	Y1,Y2 axis	500mm/sec
	X axis	500mm/sec
	Z axis	250mm/sec
Repetitive precision	Y1,Y2 axis	0.02mm
	X axis	0.02mm
	Z axis	0.01mm
Out dimension	1400(W) x 1200(D) x 1812(H)	





# Robot dispenser system

## Digital camera / Mobile PCB

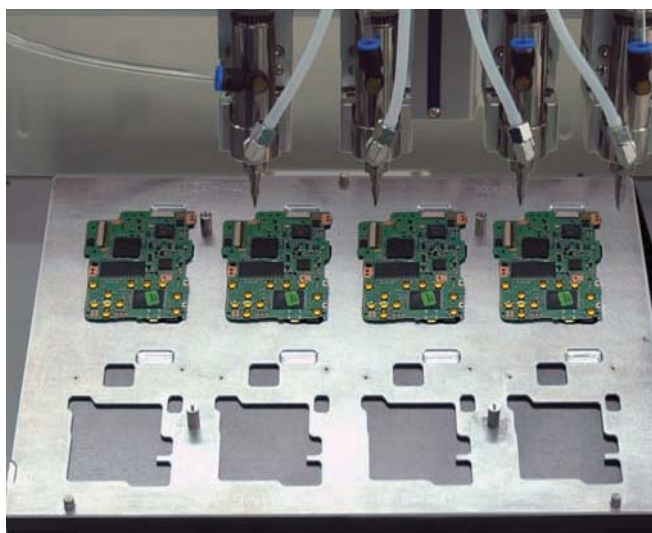
### DIGITAL CAMERA PCB UNDERFILL M/C



- PCB underfill dedicated equipment for digital camera
- Jig heating type for easy liquid dispersing
- Immediate curing by using dedicated furnace

Tray

Truck



## Mobile EMI sealing

### EMI SEALING DISPENSING M/C



- EMI sealing of mobile phone case for blocking electro-magnetic wave.
- Adopting twin bed to minimize production loss, applying simultaneous multi-axis to maximize productivity.
- Applying the dedicated valve with excellent responsibility to guarantee dispensing quality.
- Vacuum dedicated jig for implementing stable product installation.
- Cost reduction by using liquid without loss.





## Mobile key-pad

### KEY-PAD BONDING M/C



- Dispense instantaneous adhesives to the mobile key-pad.
- Dispensing process to the assemble key-pad and key.
- Minimized production loss using the twin bed.
- Applying simultaneous multi-axis to maximize productivity.
- Application of instantaneous adhesive dispensing machine with excellent quantitiveness and stability.
- Vacuum dedicated jig for implementing stable product installation.

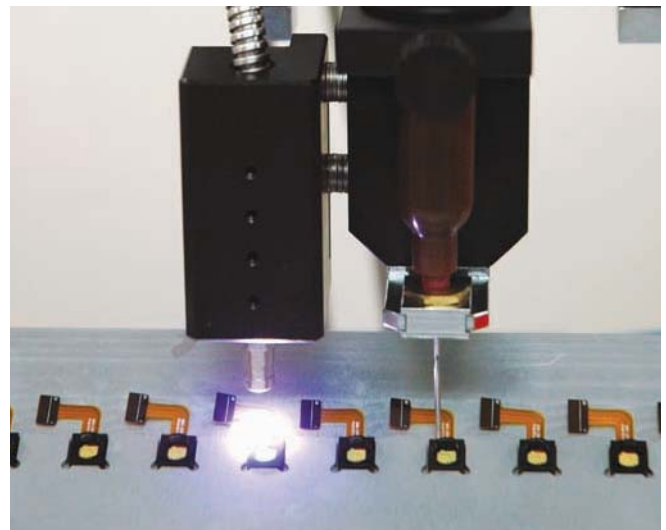


## Mobile camera module housing

### HOUSING FPCB UV BONDING M/C



- UV resin bonding to prevent separation between housing and FPCB.
- Immediate hardening between FPCB and housing with a UV hardening machine after precision dispensing of the UV resin and assembling the housing.
- Fast hardening prevents the flow and spread of fluid.
- It minimizes the work space to hardening work.



# Robot dispenser system

## Mobile camera module IR filter

### HOUSING DISPENSING IR FILTER ATTACH M/C



#### PAD TYPE, VISION

- Assembly of IR filter and pick up of pad conditions after holder dispensing.
- Function to separate unsatisfactory products.
- No tool change when model is changed.
- Ensure the precision of facility by controlling servo.
- No scratches and foreign materials when picking up.
- It is possible to set up the site operator after only brief training.



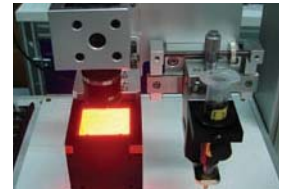
## Mobile camera module IR filter

### MEGA MODULE VISION DISPENSING M/C



#### PAD TYPE, VISION

- Paint array and module after checking position by vision.
- It is possible to use the common jig for various models.
- Designate paint trace and paint array by offset.
- Realization of paint with the outline array of products
- It is possible to use the in-line facility right away when the distribution process is added.
- It is easy to use additional attach functions if the need arises.



## Mobile camera module IR filter

### HOUSING DISPENSING & IR FILTER ATTACH M/C



#### TRAY TYPE, NON VISION

- Assembly of IR filter of tray conditions after housing painting.
- No application of vision, realization of low price and high precision work.
- No tool change when model is changed.
- Ensure high precision of facility with servo control.
- No scratches and foreign materials when picking up.
- It is possible to set up the site operator after only brief training.
- Removal of tray deviation using an assembly jig on the upper part.
- Realization of high precision and precise quantity dispensing.



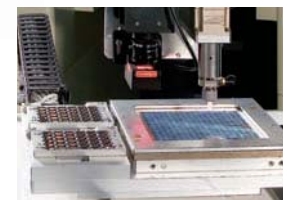
## Mobile camera module IR filter

### IR FILTER ATTACH M/C



#### PAD TYPE, VISION

- Assembly of IR filter and pick up of pad conditions after holder discharging.
- Function to separate unsatisfactory products.
- No tool change when model is changed.
- Ensure the precision of facility by controlling servo.
- No scratches and foreign materials when picking up.
- It is possible to set up the site operator after only brief training.





## EASYES - 441R CAN PUMP TYPE



It is a robot dispenser. R axis is mounted on Z axis of the desk top robot and high viscosity grease is sprayed to the side of the products. (Gear side grease dispensing)

## SILICONE SEALING ROBOT DISPENSING M/C



It is a robot dispenser for sealing Silicone and it can be used for big sizes. (Silicone sealing for PDP PCB)

## EASYES-331 BARREL TYPE



It is a robot dispenser of the barrel 4 array, 1 bed type. It can be used for various dispensings.

## EASYWIN-3351 330ml CARTRIDGE TYPE



It is a robot dispenser of the cartridge 3 array, 2 bed type and it can use a 330ml cartridge.

# FA dispenser system

## Underfill

### UNDERFILL DISPENSING & OVEN IN-LINE SYSTEM [EASYLINE-3000]



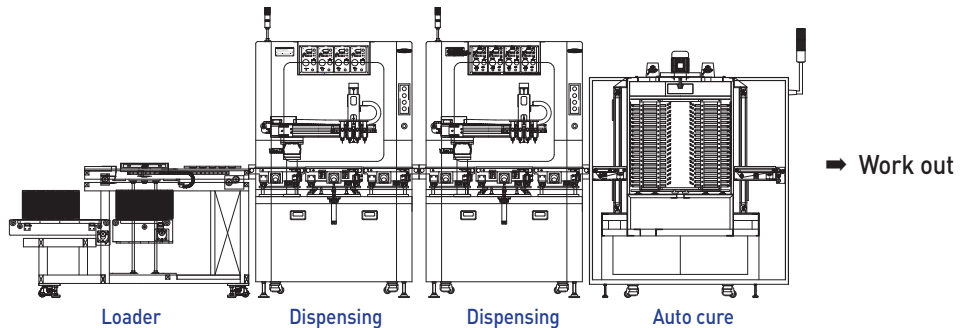
- Implementing rectangular precision by adopting orthogonal type 3 axis Robot System, Servo Motor, Ball Screw and LM
- Implementing quantity and precision dispensing by adopting dispensing dedicated tool and controller
- Multi-points simultaneous dispensing allows maximizing productivity and adjusting the minute position of needles
- Using selectively the conveyer width adjustment function, tilting and upper location function depending on program structure makes it possible to meet requirements from various models and dispensing.
- All controls and operations to be processed on touch screen
- 3 step conveyer for applying buffer sector is effective for increasing productivity.
- Rotational drying features excellent power consumption and space arrangement

#### SPECIFICATIONS

Model	EASYLINE-3000
Robot stroke	400 X 300 X 200(z) rectangular coordinates
Robot speed	500mm/sec
Conveyor speed	0~15M/min
Conveyor belt	Flat belt type
Drive motor	40W, 1/30
Adjustable width	80 X 250mm manual
Air	4~5Kg/cm <sup>2</sup>
Power	220(330)V, 50/60Hz



In-line auto cure system



## Bio

### 25 POINT MULTI BIO PRODUCT IN-LINE SYSTEM

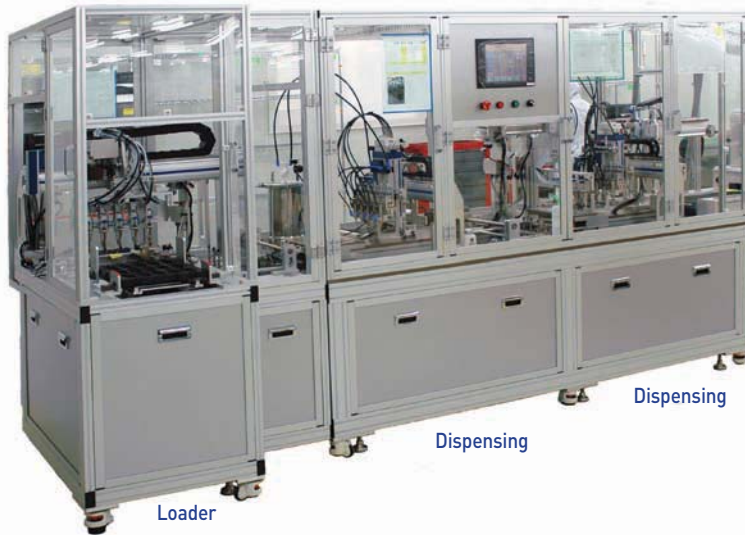


- Full automatic bio in-line equipment
- Outstanding productivity based on 25 points simultaneous dispensing
- No man on the whole production process
- Implementation of ultra-precision dispensing : 1μ dispensing, quantity within 2%
- Self-developed drying allows superior space saving
- User-friendly easy control



## TFT-LCD

### TFT-LCD DISPENSING IN-LINE SYSTEM [FALINE-500]



- In-line quantity dispensing system with precision robot system applied
- Adopting servo motors, precision ball screw and LM results in implementation of mechanical precision with durability as well as excellent precision for positional repeatability.
- Implementing quantity and precision dispensing by adopting dispensing dedicated tool and controller
- Reflecting operator's convenience by installing 3-way minute adjusting tool on fixed area of dispensing area
- Considering operator's maximum convenience by adopting touch screen
- Applying job of arc, straight line, circle, ellipse and 3 dimensional shape is possible.
- Any starting motion required available with simple loader handling only without separate program works
- Even operators on production site can meet model change with training of only 1~2 hours.



5 Head multi dispenser

## Mobile glass

### PC + GLASS BONDING IN-LINE SYSTEM



- Mobile glass dispensing & assembly, compression, curing line
- No man on the whole processes based on full auto facility
- Application of pallets with diverse models available
- Operations and facility monitoring to be processed on touch screen
- Maximizing productivity by applying our company's own development system
- Minimizing investment cost by simplifying process
- User-friendly easy control



# Components

## BARRELS AND ACCESSORIES



Capacity	Item	1. Barrel (Size Ø X L)	2. Piston(H, L, R)	3. Top cap	4. Tip cap	5. O-ring	6. Barrel adapter
5cc		BR-05 (14.7 X 72.5)	BP-05	BC-05	BTC	BA-05-0	BA-05
10cc		BR-10 (18 X 103.7)	BP-10	BC-10	BTC	BA-10-0	BA-10
30cc		BR-30 (26.2 X 128.1)	BP-30	BC-30	BTC	BA-30-0	BA-30
50cc		BR-50 (26.2 X 161.2)	BP-30	BC-30	BTC	BA-30-0	BA-30

### 1.Barrel

This high precise barrels only for dispenser are designed to stand High pressure considering the liquid's flow property. It's designed to dispense highly viscous liquids with no remainder. The shapes and the materials are decided in consideration of safety.

### 2. Piston

It plunges materials filled in the barrel with no remainder. There are three kinds for highly viscous Materials(H:light blue), low viscous materials(L:white) and for prevent liquids from contacting air(R:rubber).

### 3. Top cap

It is used to close the top of the

barrel when you fill it with liquids in advance or store liquids after use.

### 4. Tip cap

It is used to close the bottom of all kinds of barrels.

### 5. O-ring

It is used for sealing the barrel and adapter.

### 6.Barrel adapter

It connects the barrel with the controller, there is one model for each barrel size.

### 7. Hand switch (BS-H3)

The convenient hand switch attached to the barrel can be operated manually, it makes you convenient in operating.

### 8. Foot switch

The convenient hand switch attached to the barrel can be operated manually, it makes you convenient in operating.

### 9. Barrel stand(BS-101)

It is keeping barrel during manual operation.

### 10. Pick up pen (MN-5)

For TAD-200SP

### 11. Hand switch (MN-7)

For BX-2 / BRP-3

### 12. Nozzle for MN-7 [MN-7N-00G]

Use after replacing the Teflon tube by gauge.



# NEEDLES AND NOZZLES



## 1. Plastic needle

The plastic needle is used to dispense liquids in general. Needle L=13mm, 25mm

Model	In Dia.	Out Dia.	Color
BPN-14G	1.75	2.08	Green
BPN-15G	1.49	1.81	Orange
BPN-16G	1.33	1.63	Purple
BPN-17G	1.15	1.46	White
BPN-18G	0.97	1.25	Pink
BPN-19G	0.77	1.04	Brown
BPN-20G	0.62	0.90	Yellow
BPN-21G	0.54	0.81	Light green
BPN-22G	0.44	0.71	Black
BPN-23G	0.39	0.63	Light blue
BPN-24G	0.31	0.55	Red
BPN-25G	0.28	0.50	Blue
BPN-26G	0.24	0.45	Beige
BPN-27G	0.20	0.40	Gray
BPN-30G	0.12	0.30	Lavender

## 3. Taper needle

It's useful for dispensing of highly viscous liquids, without damage on products.

Model	In Dia	Color
BTN-14G	1.61	Salmon
BTN-16G	1.22	Gray
BTN-18G	0.89	Green
BTN-20G	0.62	Pink
BTN-22G	0.43	Blue
KTN-25G	0.01	Red

## 4. Precision nozzle

It's used for precise dispensing of high viscosity.(Anaerobic liquid application)

Model	In Dia.
KPN-0.1(With hub)	0.1
KPN-0.2(With hub)	0.2
KPN-0.25(With hub)	0.25
PN-0.3S	0.3
PN-0.4S	0.4
PN-0.5S	0.5
PN-0.6S	0.6
PN-0.7S	0.7
PN-0.8S	0.8
PN-0.9S	0.9
PN-1.0S	1.0

## High quality precision nozzle

Model	In Dia.
PN-0.2A	0.2
PN-0.25A	0.25
PN-0.3A	0.3
PN-0.4A	0.4
PN-0.5A	0.5

## Peek for anaerobic

Model	In Dia.
PN-0.3PK	0.3
PN-0.4PK	0.4
PN-0.5PK	0.5

## 5. Teflon needle

Needle of Teflon materials with fire-resistance and flexibility. Needle L=13mm, P=40mm

Model	In Dia.	Out Dia.	Color
BTFN-14G	1.676	2.083	Olive
BTFN-16G	1.346	1.651	Purple
BTFN-18G	1.067	1.372	Pink
BTFN-20G	0.864	1.168	Yellow
BTFN-22G	0.711	1.016	Black
BTFN-23G	0.660	0.965	Sky blue
BTFN-24G	0.559	0.864	Red
BTFN-30G	0.305	0.610	Lavender

## 2. Metal needle

There are various kinds in its length 5mm, 13mm, 50mm and 100mm.

Model	In Dia.	Out Dia.
BMN-12G	2.20	2.80
BMN-13G	1.90	2.40
BMN-14G	1.60	2.10
BMN-15G	1.40	1.80
BMN-16G	1.25	1.65
BMN-17G	1.07	1.47
BMN-18G	0.86	1.26
BMN-19G	0.67	1.07
BMN-20G	0.60	0.90
BMN-21G	0.50	0.80
BMN-22G	0.40	0.70
BMN-23G	0.33	0.63
BMN-24G	0.31	0.55
BMN-25G	0.26	0.50
BMN-26G	0.21	0.45
BMN-27G	0.16	0.40
BMN-28G	0.15	0.35



## 6. Twin needle

It's used for simultaneous dispensing 2 points. Needle L=20mm, P=2.5mm

Model	In Dia.	Out Dia.
BDN-18G	0.86	1.26
BDN-19G	0.67	1.07
BDN-20G	0.60	0.90
BDN-21G	0.50	0.80
BDN-22G	0.40	0.70
BDN-23G	0.33	0.63
BDN-24G	0.31	0.55
BDN-25G	0.26	0.50
BDN-26G	0.21	0.45

## 7. Angled needle

It is bent by 45° and it is used when discharge is interrupted by products.

Model	In Dia.	Out Dia.	Color
BAN-18G	0.84	1.27	Green
BAN-20G	0.60	1.91	Pink
BAN-21G	0.51	1.82	Lavender
BAN-22G	0.41	1.72	Blue
BAN-23G	0.34	1.64	Orange
BAN-25G	0.26	0.51	Red
BAN-27G	0.21	0.41	White

## 8. Teflon needle with sus guide

Ideal for very low viscous materials, It has chemical-resistance.

Model	Teflon	Sus	Color
TN-21G	0.66	1.65	Gray
TN-25G	0.30	1.27	Pink
TN-27G	0.20	0.90	Red



## 9. Polypropylene needle

It has chemical-resistance and flexible polypropylene tubing.

Model	In Dia.	Out Dia.
BFN-14G	1.60	2.11
BFN-16G	1.19	1.65
BFN-18G	0.84	1.27
BFN-20G	0.58	0.91
BFN-22G	0.41	0.71

## 10. Brush needle

Useful when brushing applications of grease or materials difficult to harden.

Model	In Dia.	Out Dia.	Color
BRN-AG-18G	0.84	1.27	Red
BRN-AP-21G	0.51	0.81	Purple
BRN-AO-23G	0.33	0.64	Orange
BRN-AR-25G	0.25	0.51	Green
BRN-BB-15G	1.37	1.65	Brown
BRN-BG-18G	0.84	1.27	Green

Model	Tip
BRN - F	Soft
BRN - H	Hard

## 11. Multi needle

Used when applying liquids multi points more than 2 points. It's order-made according to user's application.

Order-made	
MN - 12G - 13L - 3Q - 4X5P	
Model	Pitch
Gauge	Length
	Point Q'ty



# Components

## CARTRIDGES AND ACCESSORIES



Item Capacity	① Holder	② Cap	③ Cartridge	④ Plunger
170cc	CH-170	CC-170	CR-170	CP-170
340cc	CH-340	CC-340	CR-340	CP-340
650cc	CH-650	CC-650	CR-650	CP-650
1,000cc	CH-1000	CC-1000	CR-1000	CP-1000

### 1. Cartridge holder

This holder is made of aluminium and has a hole for you to see how much liquids remains in it.

### 2. Cartridge cap

It is made of metal and can be connected to the cartridge holder at one touch.

### 3. Cartridge [Material:HDPE]

It is the inside container with strong chemical-resistance.

### 4. Cartridge plunger

### 5. Cartridge top cap

### 6. Cartridge tip cap

### 7. Needle adapter

It is a plastic needle adapter.

### 8. Quick coupler connector tube [QC-35]

It is used to connect when supplying air, which is supplied to the controller to the cartridge by connecting the controller and cartridge holder at just one touch.

## 300ml CARTRIDGE HOLDER



① Needle adapter	NA - 1/4"
② Screw adapter	BA- 330
③ Silicone holder	BH-330
④ Gasket	BG-330
⑤ Cartridge cap	BC-330
⑥ Quick coupler	QC-35

Holder to dispense the 330ml Silicone cartridge, to be used by directly inserting the Silicone cartridge container. Screw adapter is to be manufactured depending on the type of screw located at the end of cartridge.

## TUBE HOLDER



Capacity	Model
Tube 120g	BT- 170
Tube 170g	BT- 340
Tube 200g	BT- 340
Tube 300g	BT- 650

Holder to dispense the liquid inside Tube with fixed quantity, to produce the screw adapter depending on the type of screw located at the end of cartridge.

1. Tube holder adapter



## NEEDLE ADAPTER



Used when connecting precision valve and needle.

Model	Screw
1. NA - 41	PT 1/4"
2. NA - 81	PT 1/8"
3. NA - 516	PT 5/16"
4. NA - M6	M6
5. NA - 516S	PT 5/16" (SUS)

## LUER LOCK ADAPTER



Used when connecting precision valve and barrel.

Model	Screw
1. LA - 41	PT 1/4"
2. LA - 81	PT 1/8"
3. LA - M6	M6
4. LA - M6T	M6(Teflon)

## AUTO JOINT COUPLER



It is a one-touch connection joint and used when supplying compressed air.

Model	Connector size
1. QC -41/81	PT 1/4"/PT 1/8"
2. QC -H4/H6	4ø hose / 6ø hose
3. QJ -41/81	PT 1/4"/PT 1/8"
4. QJ -H4/H6	4ø Hose / 6ø Hose

## CHECK NEEDLE ADAPTER



It stops the flow of liquid immediately without residual pressure when pressure is removed.

Model	Connector size
1. NAC - 41 / 81	Needle adapter, PT 1/4" / PT 1/8"
2. NAC - M6	Needle adapter, M6
3. NAC - L	Needle adapter, Luer lock
4. NAC -H4 / H6	Needle adapter, 4ø hose / 6ø hose

## BALL CHECK HANDLE



It ensures the stop of liquid by ball check even though an automatic quantitative valve is not used when discharging Low viscosity liquid.

## CHEMICAL RESISTANCE FITTINGS



It is used when fitting to anaerobic/UV liquid.

## TEFLON FITTINGS



It is used when fitting to anaerobic liquid.

## FLAT NOZZLE



It is used to dispense low viscosity liquid in a fan shape.



## SURFACE NOZZLE



It is used to paint a wide surface of 200mm.

# Components

## DUAL CARTRIDGE GUN SET



It is a dual mixer gun which is used when manually dispensing the liquid in a 2-component cartridge. There are ratios such as 1:1, 1:2, 1:4, 1:10.

1. Dual cartridge	DCR-1:1, DCR-1:2, DCR-1:4 DCR-1:10
2. Dual cartridge gun	DCG
3. Dual cartridge mixer	∅6.35 X 20step
4. Dual cartridge tip cap	DCC
5. Dual cartridge plunger	DCP-1, DCP-2, DCP-4 DCP-10

## STATIC MIXER/MIXER ELEMENT



A Static mixer for mixing 2 different materials.

Static mixer	Description
SM-12.65/36	∅12.65 X 36 step
SM-12.65/30	∅12.65 X 30 step
SM-12.65/24	∅12.65 X 24 step
SM-12.65/12	∅12.65 X 12 step
SM-9.4/30	∅9.4 X 30 step
SM-9.4/24	∅9.4 X 24 step
SM-6.4/16	∅6.4 X 16 step
SM-5.4/7	∅5.4 X 7 step
SM-3/7	∅3 X 7 step
Mixer element	Description
SME-16.4/10	∅16.4 X 10 step
SME-16/10	∅16 X 10 step
SME-12.65/12	∅12.65 X 12 step
SME-9.4/12	∅9.4 X 12 step
SME-6.4/16	∅6.4 X 16 step

## TEFLON TUBE(UV)/ SILICONE TUBE



It's exclusive for tubing dispenser.

AWG	In X Out Dia.	Type
TT-30G	0.3 X 0.8	M
TT-26G	0.5 X 1.0	S
TT-24G	0.6 X 1.1	S
TT-22G	0.7 X 1.2	S
TT-20G	0.9 X 1.5	T
TT-19G	1.0 X 1.6	T
TT-18G	1.1 X 1.7	T
TT-17G	1.2 X 1.8	T
TT-16G	1.4 X 2.0	T
TT-15G	1.6 X 2.2	T
TT-14G	1.7 X 2.3	T
TT-13G	1.9 X 2.5	T
TT-12G	2.2 X 2.8	T
TT-11G	2.4 X 3.0	T
TT-10G	2.7 X 3.3	T
TT-9G	3.0 X 3.6	T
TT-8G	3.3 X 3.9	T
TT-7G	3.8 X 4.4	T
Silicone tube	0.5 X 2.5	G
Silicone tube	3.0 X 5.0	G
Silicone tube	8.0 X 10	G
TT-24B (UV)	0.6 X 1.0	S
TT-19B (UV)	1.0 X 1.6	T
TT-16B (UV)	1.4 X 2.0	T
TT-13B (UV)	1.9 X 2.5	T

## REGULATOR SET



1. Air regulator  
Set and display the air pressure that is supplied to a vessel.  
BR-10K(S:0~10kg/cm<sup>2</sup>, Standard)  
BR-04K(L:0~4kg/cm<sup>2</sup>, Low pressure)  
BR-02K(P:0~2kg/cm<sup>2</sup>, Precision)
2. Filter regulator  
Cleans the air and supplies it to a dispenser.

## Centrifugation de-aerator

### BDM-10/50



- Centrifugation type de-aerator
- Low noise at the highest speed.
- Easy operation.
- Economical price.

## Agitation mixer

### SP-500



**It improves the stability of the SMT line and controls the viscosity to the optimum using the centrifugal mixer and mixing by stage.**

- It is possible to use immediately after heating the frozen solder to the ideal temperature quickly.
- Mixing by stage in ten levels to control the optimum temperature and viscosity.
- Mixing, dispersion, and de-bubbling are possible within a couple of minutes.
- Complete mixing and de-bubbling are achieved when two-component Silicone or various high viscosity liquids are mixed with pigments.



Micro scope image

## Magnetic stirrer

### MS-200



Magnetic stirrer

## Non noise small size compressor

### BCOM-28/90



- It supplies air under quiet conditions as the compressor does not make any noise.
- It is easy to install and move as it is compact and light.
- It makes automatic continuous operation possible with the pressure automatic switch.

### Applications

- It is for operating a dispenser which consumes less air.
- When using air in the laboratory and house.
- When using noiseless air is required.

### SPECIFICATIONS

Model	BCOM-28	BCOM-90
Tank material	Iron	SUS
Capacity of motor	1/6 HP	3/4 HP
Air product	28 L/min	90 L/min
Pressure range	5bar ON / 7bar OFF	5bar ON / 7bar OFF
Air store amount	2.5 L	6L
Dimension (mm)	310(W) X 300(D) X 280(H)	240(W) X 500(D) X 440(H)
Weight	8.4 kg	20 kg



# Special order made

## Crystalline cell module frame sealing

### TAD-233 CAN PUMP TYPE



It is a 2 liquid type automatic discharge equipment for sealant sealing of crystalline solar cell module frame.

- It is a suitable system for high viscosity liquid dispensing to integrate can pump with TAD-233

## Solar cell module junction box potting

### TAD-244 VACUUM SUCTION TYPE



It is a 2 part type silicon automatic spray equipment for potting solar cell module junction box.

- It is a spare tank type in which sufficient agitation and deaeration take place and continuous operation is possible with automatic conversion.
- It is possible to directly supply liquid from large container as vacuum suction equipment is attached.

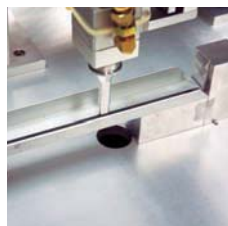
## Crystalline cell module frame sealing

### TAD-233 CAN PUMP TYPE ROBOT APPLICATION



It is a 2 liquid type silicone sealant sealing system for crystalline solar cell module frame.

- Width up to 2,000 mm is possible.



## Solar cell module junction box fixing

### SEALANT ROBOT DISPENSING M/C



Automatic dispensing equipment of silicone sealant for sticking PV module junction box.

- It is an integrated type of PCP-20-10 can pump that improves the work environment and provides users with convenience.
- The plate of the lower part of the can pump is a slide type, and replacement of container is easy cement is easy.



## Thin film cell module edge sealing

### PCP-200-60 BOOSTER PUMP



It is a 200l automatic conversion can pump system for sealing thin film type solar cell module edge.

- Continuous operation is possible with reduced pulsating phenomena by changing the can pump when liquid of one can pump is used up.

## Solar cell module junction box fixing

### PCP-20-10 BOOSTER PUMP



It is a 20l automatic conversion can pump system for sealing solar cell module junction box.

- Continuous operation is possible with reduced pulsating phenomena by changing the can pump when liquid of one can pump is used up.



## LED molding

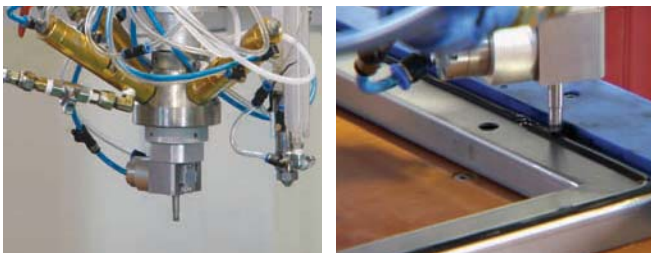
### TAD-233 CAN PUMP TYPE



It is a 2 liquid type automatic dispensing equipment which supplies quantitatively at fixed mixing ratio of raw materials of high viscosity LED fluorescein and activator

## Foam gasket

### FOAM GASKET DISPENSING SYSTEM



It is 2 liquid type urethane foam discharge system. It is more economic for gasket sealing than general rubber packing and o-ring. Moulds are not needed to be made again when product model is changed. Correction is possible with program modification only. (Foaming width and depth are dependent on the product size)

## Hot melt

### HOT MELT DISPENSING SYSTEM



A robot system which mounts 300ml cartridge type high viscosity hot melt, heats it to about 160°C, and discharges it.

### HOT MELT GUN



It dispenses hot melt of high viscosity by heating to a certain temperature(50°C~120°C)

# Overseas products

## Jet valve

### Piezo based free jet micro dosing valve

#### MDS-3000



- It is possible to get high quality by ensuring a certain distance from the materials in a free jet micro dosing method.
- Precise droplet production and continuous dosing quality (Precision degree of 1~2%).
- 24-hours non stop application possible.
- It is possible to arrange many valves in a row with thin valves(10 mm).
- Easily exchangeable nozzles for various applications.
- Valve closed in power-off mode.  
(No dripping and uncontrolled pollution)
- Very good chemical stability.
- Frequency from single pulse to 450Hz.  
(Higher frequencies on demand)
- It is possible to use a temperature compensation function against temperature change by controlling heating of the nozzle with a heating module (valve body fluid line). (option)
- Software-controlled temperature- and pressure independent dispensing due to external Control-Unit.

#### APPLICATIONS

- Spot dispensing process
- Semiconductor dam and fill process
- Precision marking process
- Precision thin fluid coating process
- Sealing compound process
- Fluxing process
- Solvent process
- Pharmaceutical process
- Biotechnology
- Super precision fluid filling process, mixing of precision chemicals.
- Precise grease injection process.



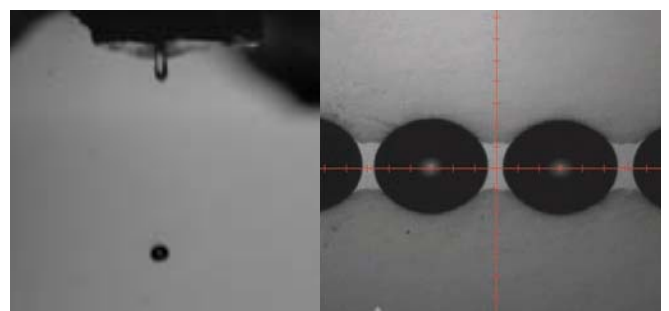
Controller



Application

#### SPECIFICATIONS

Model	MDS-3000
Dispensing quantity range	10nl to 10 $\mu$ l (= mm <sup>3</sup> ) per pulse *
Feed pressure range	300 to 3500 HPa *
Viscosity of dispensed fluids	1 to 2000 mPas *
Switching time	approx. 1 ms
Dispensing quantity accuracy at a dispensing frequency of	<1 % (with P, T = const.) *
Life time	>> 109 dosages
Operating temperature range	10 to 50°C
Weight	220 g
Nozzle	Quick exchange system
Stability	All aqueous media, organic solvents, weak acids and alkaline solutions
Dimensions	103 x 39 x 10 mm
Protocol for remote control	SCPI
Interfaces	RS232C; RS485; i2C/SM-Bus; 24V SPS
Optional interfaces	IEE-488; RS422; RS458; Ethernet; Can-Bus



# Overseas products

## Nano-pipettor

Jet valve including flow sensor

### FSI-100

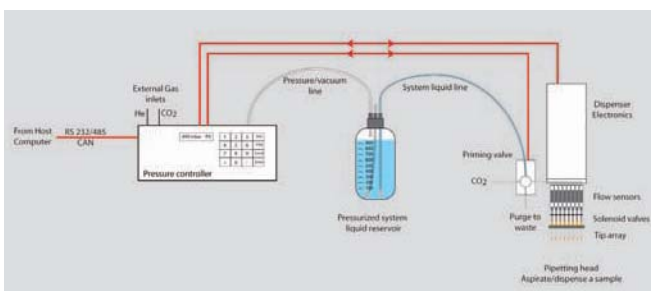


**High precision dispensing valve which is a smart jet spray type, including flow sensor.**

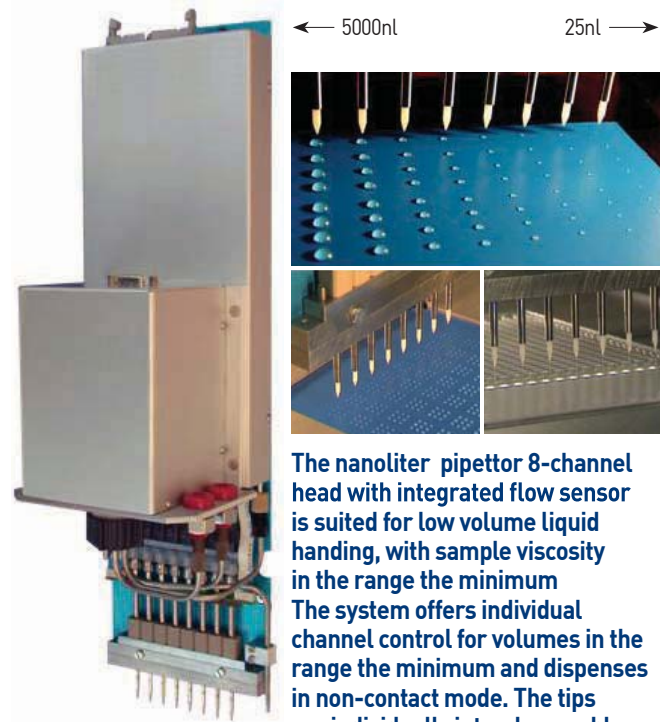
- Optimization design for dispensing a minimum quantity of low viscosity fluid.
- Non-contact jet valve.
- High precision dispensing valve controlling the dispensing capacity by flow sensor.
- Prevention of contamination and clogging by automatic cleaning.

### VALVE SPECIFICATIONS

Item	Value
Operation temperature of system solutions	20~40°C
Dispensing pressure	1.2 bar
Dispensing liquid viscosity	0.5~40cP
Vacuum volume	25nl ~15μl
Dispensing volume	25nl ~15μl(non-contact mode)
Dispensing precision	1%



### 8-CHANNEL NANO-PIPETTOR



The nanoliter pipettor 8-channel head with integrated flow sensor is suited for low volume liquid handling, with sample viscosity in the range the minimum. The system offers individual channel control for volumes in the range the minimum and dispenses in non-contact mode. The tips are individually interchangeable (without need to recalibrate), and can be adapted to the application by choosing the proper tip size. A command set allows setting aspirate and dispense volumes independently for each channel and to retrieve data from the head. Aspirated and dispensed volume, as well as other data for head diagnostic purposes. (Alert for clogging, validation of action completion, etc...) are available for each individual dispense.

- Real time individual channel control
- Wide dynamic range
- Contact-less dispense
- Validation and reporting for all actions on all channels
- High accuracy and precision
- Temperature compensated

### APPLICATIONS

- Laboratory instrumentation
- High throughput screening
- Reagent dispensing
- Protein crystallization
- Array spotting
- Nanoliter liquid handling

### SYSTEM SPECIFICATIONS

Item	Value
Sample viscosity	0.5 to 5 cP, 0.5 to 25cP
Operating temperature	10 to 40°C
Volume range[1]	Aspirate/dispense 25nl to 10nl, 100nl to 15μl
Precision aspirate/dispense	25nl to 50nl < 10%CV Above 50nl < 5%CV
Accuracy aspirate/dispense	25nl to 50nl < 10% Above 50nl < 5%
Dispensing speed	15 to 25μl/s, 30 to 80μl/s
Dispense frequency[2]	Up to 5 Disp/s
Power requirements	24V/1.3A
Communication	RS 232/485
Communication speed[3]	Up to 115, 200 baud
Weight	1.35kg



## GLOBAL MARKET



HQ / R&D center



2nd factory



**HQ/R&Dcenter** #656-253, Seongsu 1ka, Seongdong-ku, Seoul, Korea  
TEL : 82-2-469-1239 FAX : 82-2-469-6955

**Kumi branch** #632-2, (Goldcastle 1st Floor) Inuei-dong, Gumi City, Korea  
TEL : 82-54-472-5910 FAX : 82-54-472-5911

**China Shenzhen Branch** Adong 612Shi Tianfuanshangwuzhongxin 25qu Baoanqu Shenzhenshi, China  
中国 深圳市 宝安区 25区 前进一路 天富安商务中心 A栋612号  
TEL : 86-755-8204-6882 FAX : 86-755-8204-4378

**E-mail** overseas@banseok.co.kr

**Website** <http://www.banseok.co.kr>  
<http://www.banseokgroup.com> (English)  
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