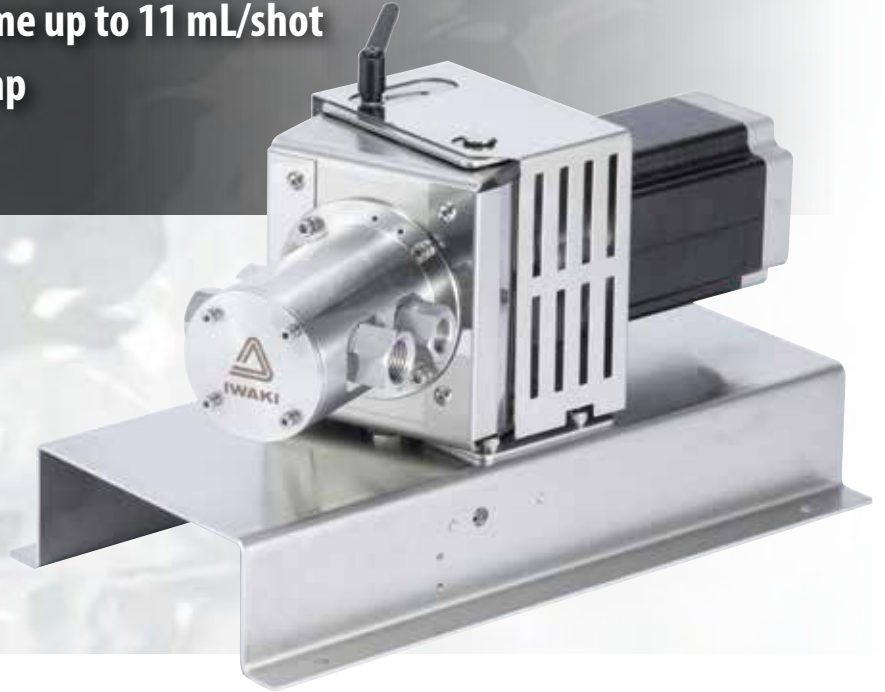


Large amount of dispense volume up to 11 mL/shot
Precision valveless plunger pump



Ideal for electrolyte injection of lithium-ion secondary batteries

Large capacity valveless plunger pump

Hi-Cera pump V-25 is a high-capacity pump with an injection volume that is 3.8 times that of the conventional model (V-15). The unique valveless structure of Hi-Cera pumps and stepper motors enable highly accurate injection with excellent controllability. Coupling connection type that can be connected to motors other than stepper motors is also available.



Ultra-high precision

To adjust the dispense volume, precise stroke adjustment is possible by adjusting the swing angle of the pump head with the rotary knob as desired. Stepper motor type is high-precision injection with excellent controllability.



High chemical compatibility

Ceramics, SUS316, PTFE, and FEPM are used for wetted parts.



CE marking Compliant

By complying with European EN standards, CE marking is now available as standard. The coupling connection type complies with the Machinery Directive without the motor installed.



Simple structure

The pump head design is ease for maintenance because of its simple structure with fewer parts. Pump head is also disassemble easily.



Reduces plunger seizing

The flushing port reduces the plunger lock caused by adhesive or crystallization of the fluid used.



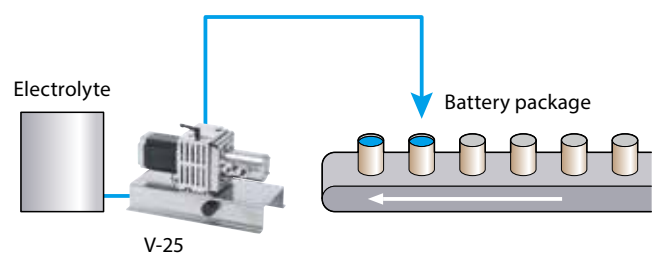
Application

Electrolyte injection for rechargeable battery



Eliminating problems with the gas lock

The unique valveless structure eliminates problems with the gas lock. Even if gas is mixed in the chamber, it is discharged simultaneously with the pushing-out action of the plunger.





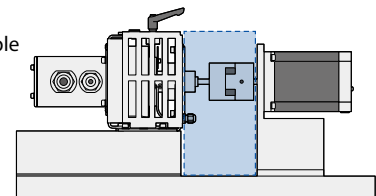
Coupling connection type V-25-N

Coupling connection type V-25-N can be used by connecting a prepared motor with a coupling.



- * It is necessary to select a motor by referring to the recommended values of motor torque described in the product specifications and instruction manual.
- * This product does not come with connecting parts such as motors and couplings, and covers for rotating parts. Prepare them.
- * A cover must be added to the rotating parts before operation. Be sure to prepare them and install them before operation. (Blue part in right figure)

• Motor connection example

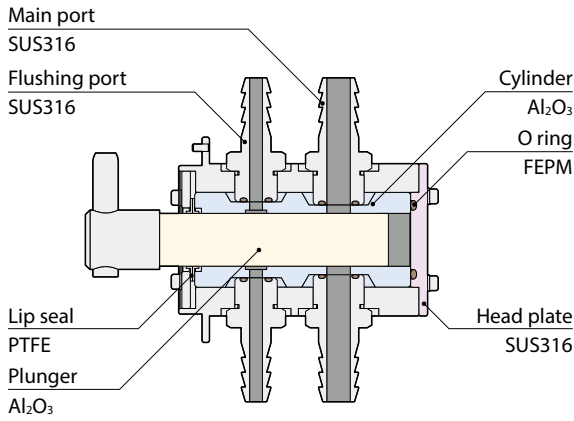


Identification

V - 25 A S P 7 7 - P

- | | | | |
|--|--|---|--|
| ① Series name
V : Hi-Cera pump | ③ Plunger/Cylinder material
A : Al ₂ O ₃ /Al ₂ O ₃ | ⑤ Flushing port
P : With flushing port | ⑦ Power voltage
7 : DC48V
Blank : Without motor |
| ② Plunger diameter
25 : Ø25mm | ④ Pump head material
S : SUS304 | ⑥ Joint
7 : Ø19 hose (Flushing port Ø14 hose)
8 : Rc1/2 female adapter (Flushing port Rc3/8 female)
9 : Ø16×Ø13 Union (Flushing port Ø8×Ø6 Union) | ⑧ Motor specifications
P : Stepper motor
N : Without motor
(Coupling connection type) |

Materials



Specifications

Pump

Max. discharge capacity per shot	Max. discharge capacity per min (RV)	Max. motor speed	Max. discharge pressure	Mass ^{Note}
mL/shot	mL/min	min ⁻¹	MPa	kg
11	3300	300	0.2	About 15

Note : Coupling connection type mass about 9 kg

*The above information is based on pumping clean water at the full stroke length, ambient temperature and zero discharge pressure.

*The max flow volume per shot were collected at 100min⁻¹ with a discharge line open to the atmosphere.

*Allowable room temperature : 0 - 40°C (32-104°F)

*Allowable liquid temperature : 5 - 40°C (41-104°F)

*Allowable ambient humidity : 35 - 85%RH (non-condensing)

*The maximum allowable suction lift : 2m with clean water (can be changed with liquid characteristics)

*Flush the pump head with clean water or solvent after operation with the crystallizing or adhesive liquid.

Stepper motor

Type	Basic step angle	Power voltage	Insulation class
2-phase bipolar	1.8°	48VDC±1V	B

Photo micro sensor

Power voltage Vcc	Output open-circuit voltage Vo	Output inflow current Isink
DCV	V	mA
5 - 24	Vcc	50

Options

*Motor cable 4 wires 1m, 3m (Photo 1.)

*Stepper motor driver (Photo 2.)

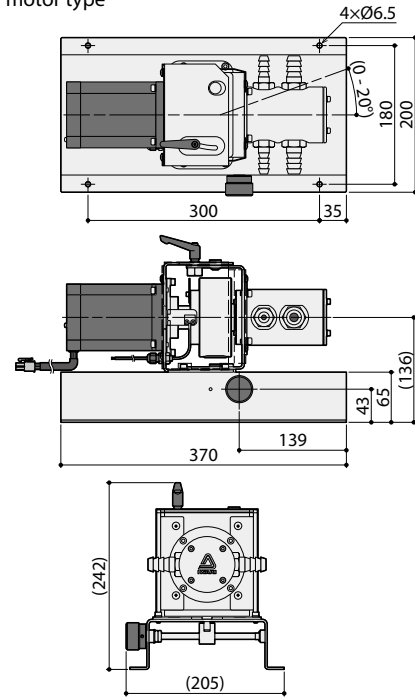
*AC-DC power supply 100 - 240V/48V (Photo 3.)

*Lip seal insertion jig (Photo 4.)

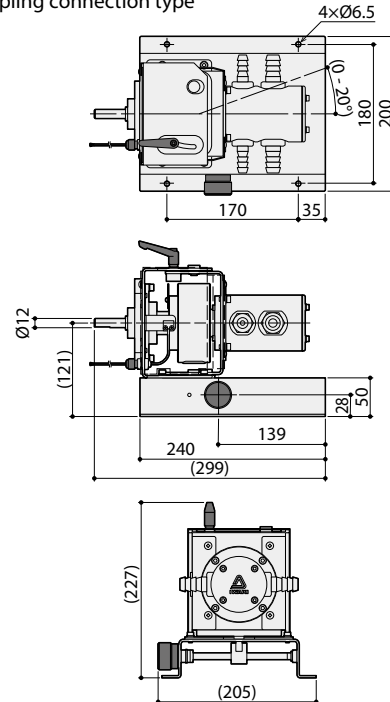


Dimensions (mm)

• Stepper motor type



• Coupling connection type



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Caution for safety use:
 Before use of pump, read instruction manual carefully to use the product correctly.

Actual pumps may differ from the photos. Specifications and dimensions are subject to change without prior notice. For further details please contact us.

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