



## ELECTRIC VALVE ACTUATOR

### Semflex VP Series

### Handling Instruction



**SEIBU ELECTRIC & MACHINERY CO., LTD..**

Safety precautions below describes particularly important instructions to handle valve actuator.

Read these precautions carefully before using and handling valve actuator properly.

Installation of valve actuator should be performed only by trained and qualified professionals.

[Receiving, Transportation and Storage]

 **Caution --- Prevent accidents due to dropping the product or other such causes.**

- (1) Check the weight of valve actuator before suspending and slinging work. Stay out of suspended actuator and ensure utmost safety before and during the work.
- (2) Should be handling and storing actuator with care since the strengthen of packing would be weakened by getting wet or exposed to moisture.

**Failure to observe these cautions may result in injury.**

[Installation and Test Operation]

 **Caution --- Prevent accidents due to dropping or falling.**

- (1) Check the weight of valve actuator before suspending and slinging work. Stay out of suspended actuator and ensure utmost safety before and during the work.
- (2) Make sure to secure foothold for work, and never attempt to work on a pipe or anything unstable.

**Failure to observe these cautions may result in injury.**

 **Caution --- Prevent electric shock. (Electrically-operated type)**

- (1) When connecting, make sure that there is no insulation failure due to high moisture or wetting.
- (2) Securely connect ground wires.

**Failure to observe these cautions may result in electric shock.**

 **Caution --- Prevent injuries and/or accidents. (Electrically-operated type)**

- (1) Make sure to notify and maintain communications with the power supply operator.

**Failure to observe this caution may result in injury.**

[Maintenance and Inspection]

 **Caution --- Prevent electric shock. (Electrically-operated type)**

- (1) When changing wires, make sure that there is no insulation failure due to moisture or wetting.
- (2) Make sure that ground wires have been securely connected.

**Failure to observe these cautions may result in electric shock.**

- Table of Contents -

Main parts

1. Installation

1-1. Prior Inspection

1-2. Mounting on Valve

1-3. Adjusting stopper

1-4. Wiring

2. Test run

2-1. Manual Operation

2-2. Setting

2-3. Electric Operation

3. Maintenance

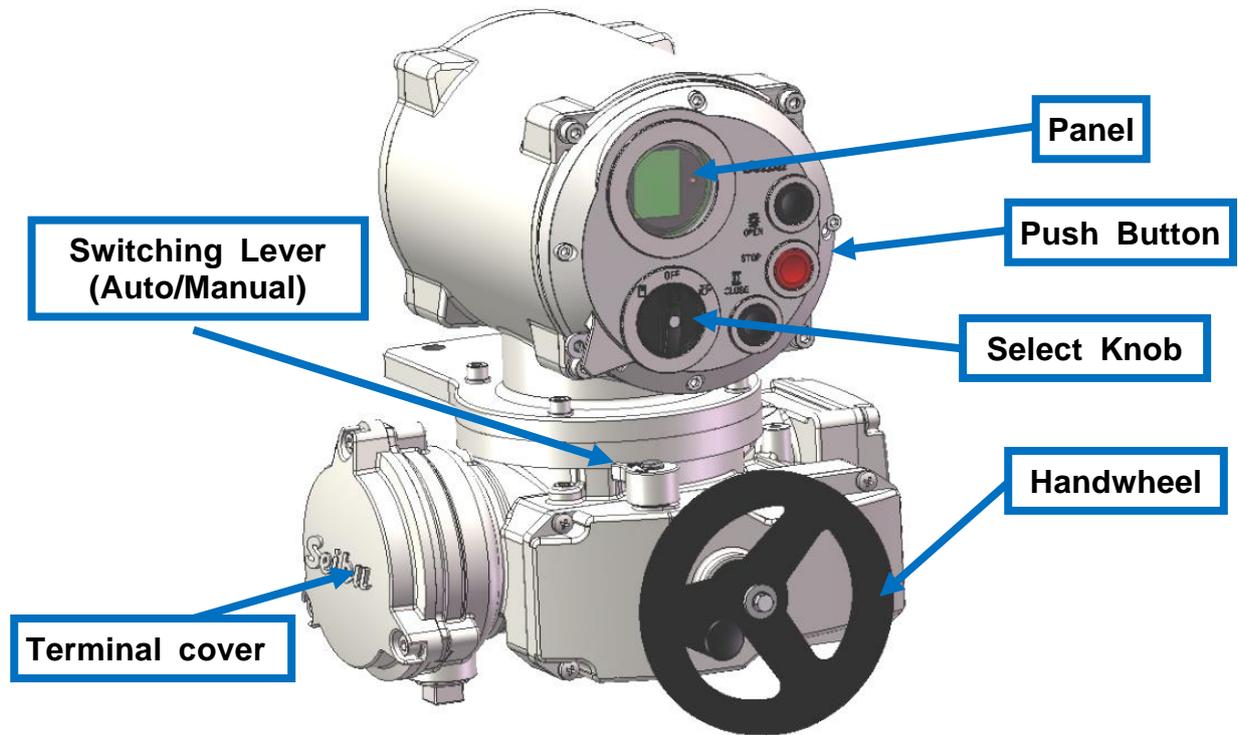
3-1. Storage

3-2. Maintenance

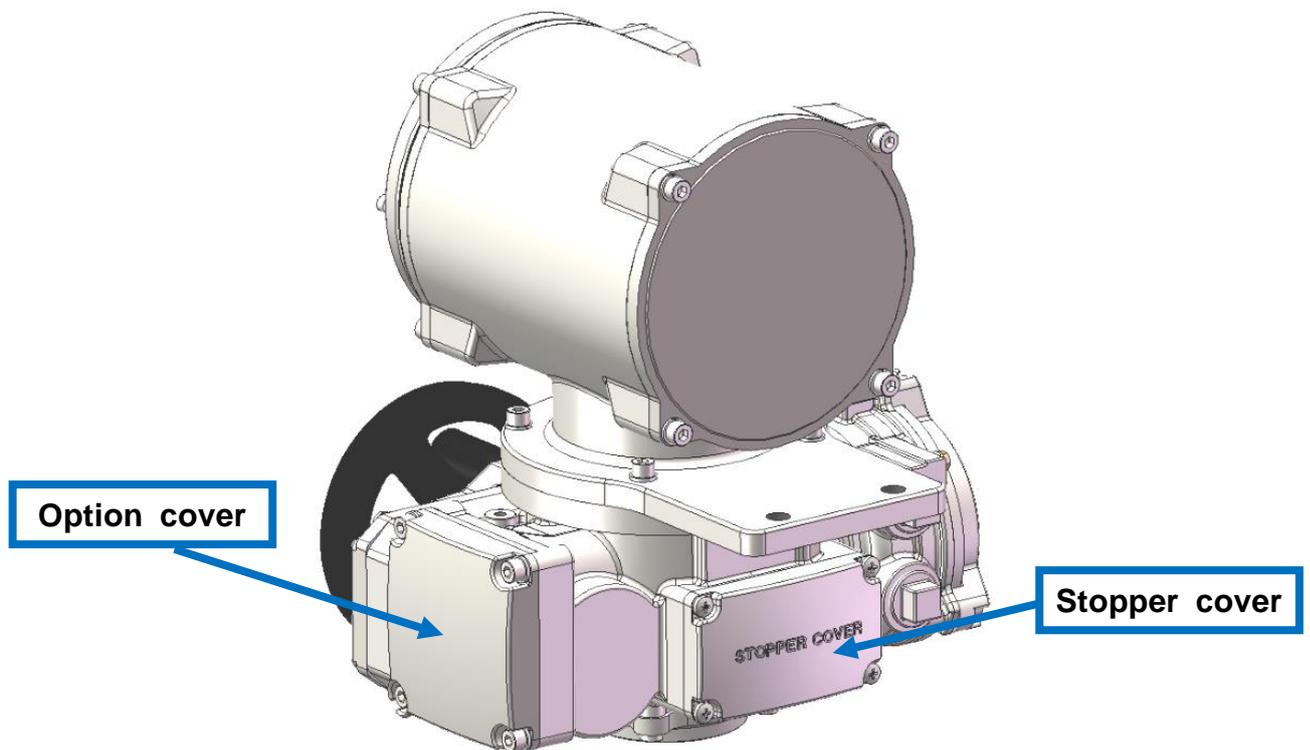
1) Refueling to Actuator

2) Periodical Activation

## Main parts



<Front side>



<Back side>

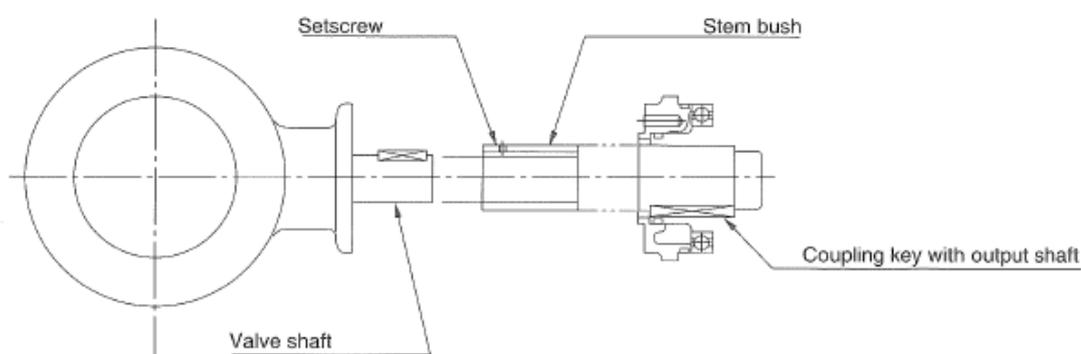
## 1. Installation

### 1.1 Prior Inspection

- \*Check specification by referring Name plate on Actuator.
- \*Check wiring diagram which is attached inside of Terminal cover.
- \*Check that each dimension of Stem bush and stem, actuator and valve flange is match.

### 1-2. Mounting on Valve

- 1) Set both Valve and Actuator to Full-Close position
- 2) Mount stem bush on valve shaft. Note that actuator does not have stem bush holding function, so use setscrew or similar method to if valve does not have holding function.

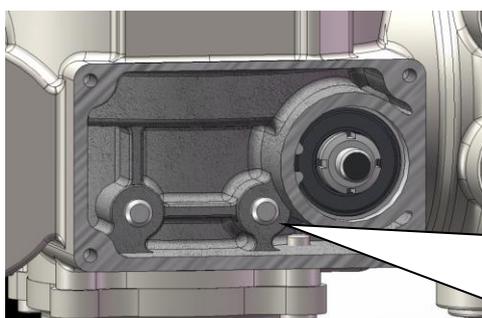


- 3) Check valve moves smoothly without eccentricity by rotating handwheel. Turn switching lever to arrow direction to set manual operation.
- 4) Adjust stopper as per instruction 1-3 Adjusting stopper, if necessary. Stopper can be adjusted within the range of  $\pm 5^\circ$ .

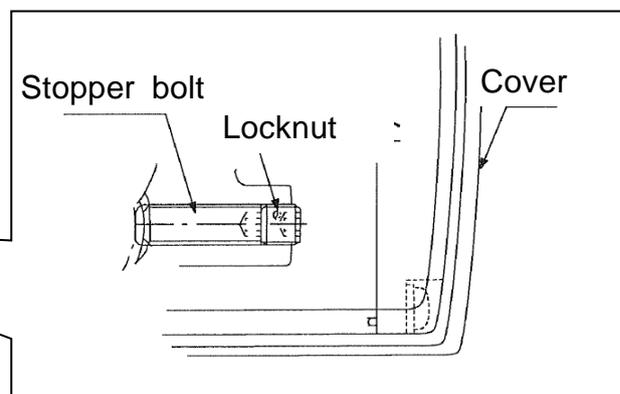
### 1-3. Adjusting Stopper

Stopper is adjusted at Seibu plant before delivery.  
If need to adjust stopper, follow the instruction below.

- 1) Open the stopper cover
- 2) Set valve to Full-Open or Full-Close manually by handwheel
- 3) Remover stopper locknut, and screw stopper bolt till hit the bottom
- 4) Return the stopper 2 rotation, and then tighten the locknut
- 5) Adjust another stopper in the same way



<Stopper cover opened>

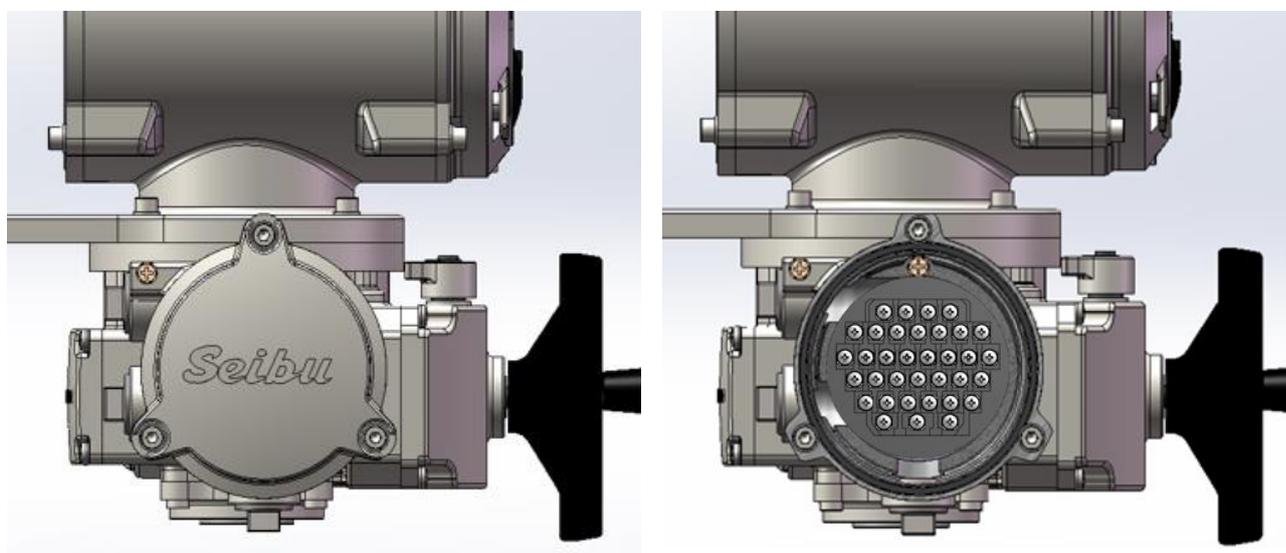


#### 1-4. Wiring

- 1) Open Terminal cover, and remove plug of cable entry to be used.
- 2) Connect ground wire to ground terminal
- 3) For outdoor installation, use waterproof wire penetration fittings to prevent rainwater intrusion from terminal box.
- 4) Connect power supply to R-U, S-V, T-W
- 5) Connect control line to the place that meets the specifications.
- 6) After connecting, keep internal wires tidy and be careful not to get them caught in the hippo. Remove dust from mounting surface and securely mount terminal cover.



Make sure there are no insulation defects due to humidity or moisture when wiring, and ground wiring is made securely.

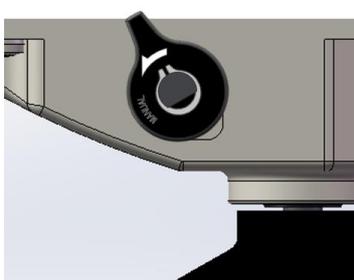


## 2. Test run

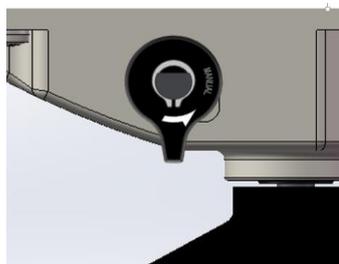
### 2-1. Manual Operation

- 1) Turn switching lever to the arrow direction (up to Status A as below) to disconnect motor and to be manual operation.
- 2) Output shaft (Valve shaft) rotates to the same direction as motor drive setting. If motor drive setting is clockwise close, handwheel is also clockwise close.
- 3) Switching lever is auto return type.
- 4) In case switching lever stops at Status B like below, internal clutch is jammed. Turn the switching lever while rotating handwheel to either left or right without forcing it.

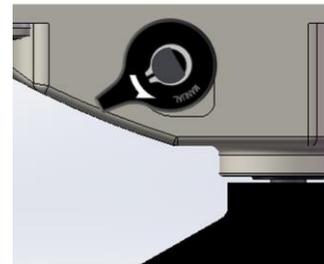
\*Caution: Do NOT perform manual operation during motor drive is on.



<Normal status>



<Status A>



<Status B>

Size	010	020	060	1	2
Manual operating force (N)	72	144	170	96	191
Rotation/90° (rev)	21	21	26	80	80

### 2-2. Setting

After installing on valve, it is necessary to do Full-Close/Full-Open position setting, etc. Refer to the "BO-1005 VM/VP Series Operation Manual" for these settings.

### 2-3. Electric Operation

- 1) Make sure that power supply and actuator power supply specifications match.
- 2) Turn Select knob on panel to LOCAL operation mode and press OPEN/CLOSE button so to automatically switch to electric operation mode.

\*Be sure to complete various settings before performing electric operation.

### **3. Maintenance**

#### **3-1. Storage**

If actuator is to be temporarily stored alone before mounting on valve, store it according to the following instruction.

- 1) Please keep in any dry place indoors.
- 2) If it is unavoidable to store outdoors, place it higher than floor level and cover it securely to prevent from any water intrusion.
- 3) Grease the stem bush.
- 4) Apply a rust preventive to mounting flange surface.
- 5) After long-term storage, check for rust and paint peeling.

#### **3-2. Maintenance**

##### **1) Refueling to Actuator**

Actuator is filled with lithium grease, which has a long life, and it is not necessary to replace the grease for several years during normal operation

##### **2) Periodical activation**

In case actuator is not used often, set a schedule and activate it at regular intervals (for example every one week) to check that there is no problem.