

# ***Minebea***

*Check-Rod Type Mounting Attachment  
with Slide Stop Mechanism*

*CCACBE1-※(S)*

## **Instruction Manual**

MINEBEA Co., Ltd.

Measuring Components Business Unit

EN294-1352

## Forward

Thank you very much for your purchasing Minebea's Mounting attachment with slide stop mechanism CCACBE1-B ※ (S). This manual explains operating method and important notices in the case of using CCACBE1-※(S).

Since misoperation might cause unexpected faulty condition, be sure to read this manual before use for the purpose of using this machine properly and safely.

Moreover, the end user should keep the manual at hand after reading it over.

## Marks and arrangements used in this manual

The following marks are attached to the explanation on the matters that indicate “Do not do this.”, “Take care.” and “For reference.”

Be sure to read these marks where these marks are attached.

### **Warning**

Never do these things described here.  
This is the warning that may cause injury or even to death to the operator.

### **Notice**

This is the description when the operator might suffer harm during misoperation, and when only the material damage might be occurred.



Caution during operation and working.  
Be sure to read the item to prevent from malfunction.

## For safe operation

Be sure to read this manual before use.

### 1. Installation place

#### Notice

Use the instrument where the temperature and humidity specify within the range as follows:

- Environmental temperature :  $-10\text{ }^{\circ}\text{C}$  to  $50\text{ }^{\circ}\text{C}$
- Environmental humidity : 85 %RH or less (Excludes frozen.)

#### Warning

Never install the instrument on the places such as follows: It may cause unexpected faulty in the instrument.

##### ① Location where installation is not allowed.

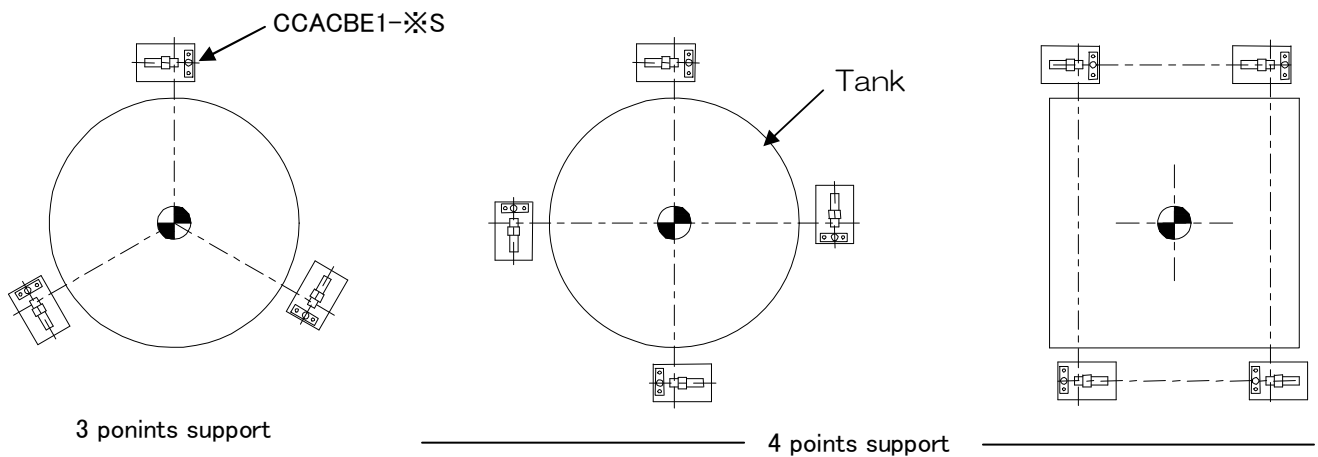
- Do not locate the instrument in direct and/or high temperature area.
- Avoid the location where corrosive gas and salty atmosphere may exist a lot.
- Do not install the instrument where there is rapid change of temperature and humidity.
- Do not install the instrument near the devices that become magnetized or generate an electromagnetic field.
- Avoid the location where influence of radioactivity or radiation may effect.
- Avoid the location where chemical reaction may take place such as in a laboratory or like that.

## ② When installing the instrument

### ⚠ Notice

When installing the instrument, be sure to follow the following items.

- To ensure the applied load fully, make design the strength of bracket and trestle where the mounting attachment with slide stop mechanism shall be installed.
- The bracket and trestle to install the mounting attachment with slide stop mechanism will be very important section to support load, so execution of works should be made carefully.
- The bracket and trestle to install the mounting attachment with slide stop mechanism should be constructed to be vertical to the direction of loading.  
(For the horizontality of the trestle shall be within 1/2 "for the general application, and if you want to require high accuracy, make it within 1/4".)
- When you want to hold the tank for the purpose of level adjustment on the tank or exchanging load cells, occupy a space for jacking up between the bracket and the trestle of the tank.
- When installing the mounting attachment with slide stop mechanism in a pit, you should consider a measure such as a drain not to stagnate water.
- Please protect cover so that neither direct sunshine, nor wind, nor rain may strike directly to the mounting attachment with slide stop mechanism in outdoor. The cover might be detached when maintaining it, and please make the cover a structure that can be detached.
- We recommend that the height of installation of the mounting attachment with slide stop mechanism should be located near the center of gravity of the tank.
- We also recommend you to install stay rods together where there may have some vibrations due to mixers or so on.
- When installing the mounting attachment with slide stop mechanism, take care fully, because it is constructed with the design of thermal expansion of a tank fully. The followings are the examples of directions of installation.



- In the case of installation, fasten the bolts tightly with looseness considered.
- Never weld the mounting attachment with slide stop mechanism to the construction (beam, bracket and so on) directly.
- It is not recommendable to weld in the condition of installing the load cell on the mounting attachment with slide stops mechanism as much as possible. If you really want to execute to weld, be sure to prepare for the earth wire near the welding point not to pass the welding current to the load cell. Moreover, remove the load cell cable from the amplifier for safety.

- Never cut off the load cell cable. If you cut off, there may have the possibility of deviation of calibration value.
- If you measure with touched condition of the top and bottom of mounting attachment with side stop mechanism, correct measurement shall not be obtained.  
Be sure to check that the top and bottom of the mounting attachments with side stop mechanism are on the concentric arrangement, after installation has over.
- Install the lower plate with the attached washer.

### ③ When delivering the instrument



#### Notice

**When you deliver the instrument, take care of the following items.**

- When you deliver the instrument, check that there will be no looseness at the fixing bolt on the side lock plate. If not, there may have the possibility of disassemble of the instrument or falling down the accessories might occur.
- Since the instrument is heavy enough, take care not to make burden on your body. So try to use a cart or other tools when you carry the instrument.
- Take care fully not to get hurt by falling down the instrument.
- Never carry the instrument by holding the cable of load cell.  
There may have the possibility of cutting off the wire or dropping the instrument.

**When you use the instrument, care should be taken fully on the following items.**

## 2. Notice in case of application



#### Notice

- Do not apply the load on the load cell more than the rated capacity of load cell.  
 $\text{Rated capacity} > \text{Tare weight} + \text{Weight of measuring object}$
- Do not apply impact load to the load cell.
- Do not throw something to the cable, nor pull it by force nor bend it.
- Never try to remodel, repair or take apart the mounting attachment with slide stop mechanism and load cell.
- Keep the manual for the instrument and some parts that have removed.  
They will be required in the case of maintenance.

## Record of revision

Date	Reference No.	Revised reason (Contents)
2010/11	DRW. NO.EN294-1352	First version

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# 1. Name of each part

## 1-1. Mounting attachment with slide stop mechanism and load cell

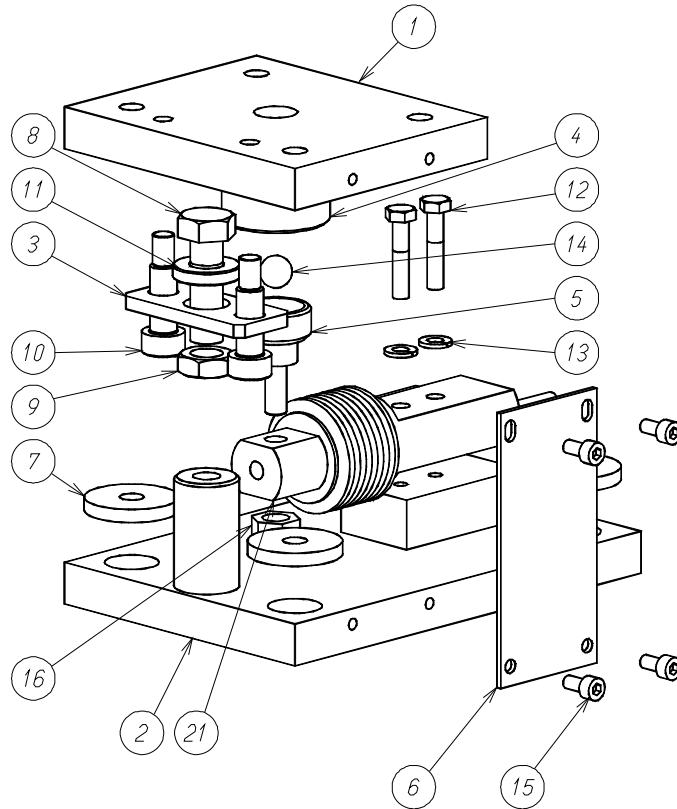


Fig.1

No.	Description	Quantity
1	Top plate	1
2	Base plate	1
3	Slide stop plate	1
4	Load plate A	1
5	Load plate B	1
6	Guide plate	1
7	Washer	4
8	Lift off protection bolt A (Width across flat :18 mm)	1
9	Lift off protection bolt lock nut A (Width across flat :18 mm)	1
10	Lift off protection bolt B (Hexagon socket head width across flat :6 mm)	2
11	Spacer	1
12	Load cell lock bolt (Width across flat for CCACBE1-1S :10 mm, for CCACBE1-2S :13 mm)	2
13	Spring washer	2
14	Steel ball	1
15	Guide plate lock bolt (M5)	4
16	Nut	1
	Options	
21	Load cell (CBE1)	1

## 2. Example of installation procedure

### 2-1. Installation of the mounting attachment with slide stop mechanism

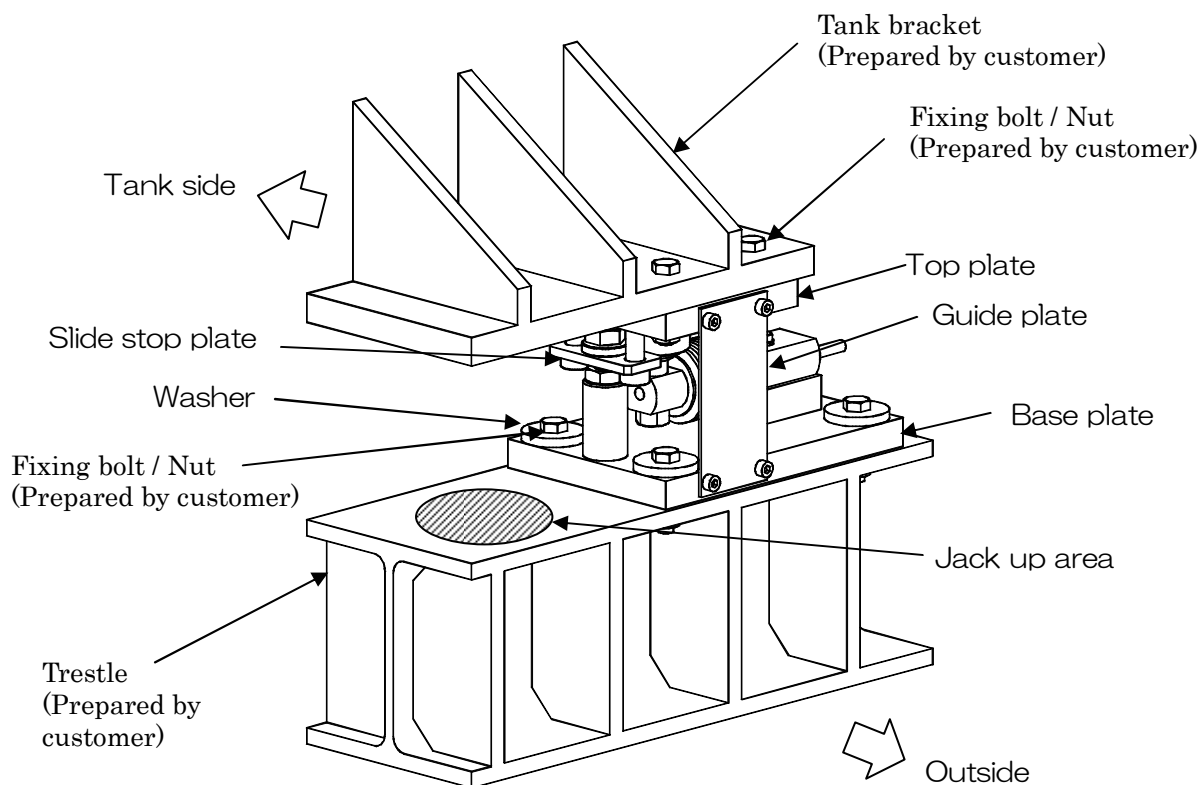


Fig.2

- ① Fix the base plate to the trestle temporarily.  
At this time, fix by using the attached washer.
- ② Lower the tank  
(Lower the tank slowly so that the holes of bracket adjust to the installation holes on the upper base of the mounting attachment with slide stop mechanism)

#### Notice

Make it slowly not to apply any impact. There is possibility of damaging load cells.



Take care fully not to catch your finer(s) or hand(s).

#### Notice

- ③ Fix the top plate to the bracket.
- ④ Fix the base plate to the trestle.
- ⑤ Remove the guide plate.  
Confirm the top plate and the base plate is not out of the position.  
If it is, adjust the position of base plate and fits the sides of the base plate and the top plate.
- ⑥ Confirm the slide stop plate is movable

## 2-2. Final check

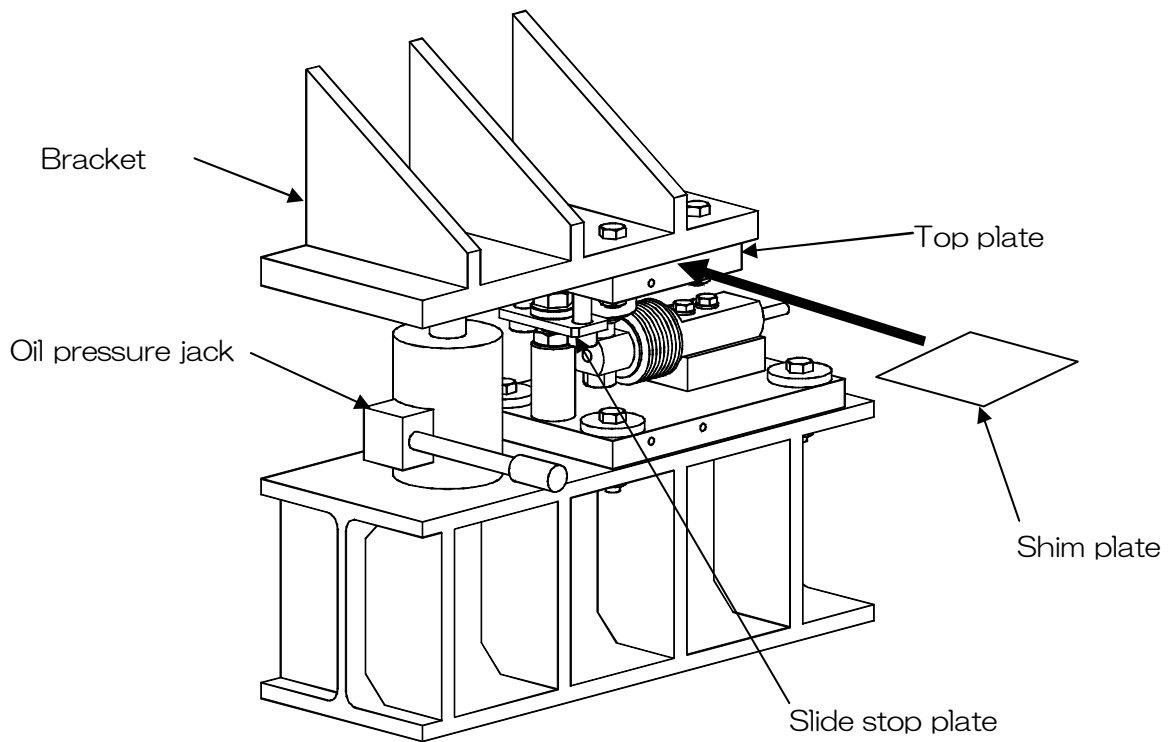


Fig.3

- ① Confirm the loading weight balance of each load cell's unevenness is under 30 %.
- ② However, if the center of tank gravity is extremely out of the support point the above-mentioned is not applicable.
- ③ Loading weight balance is not equally, adjust to put the shim plate between the top plate and the bracket or the movement absorber unit and a load cells.  
(The above figure is in case of putting the shim plate between the top plate and the bracket.)
- ④ In case of adjusting shim plate, make sure the top plate and the base plate is not out of position.  
If it is, adjust the position of base plate and fits the sides of base plate and top plate.
- ⑤ Confirm the slide stop plate is movable

### 3. Specification

#### 3-1. Specification

Models	CCACBE1-1S :CBE1-5K~50K CCACBE1-2S :CBE1-100K~200K
Allowable horizontal load	$\pm 1.961$ kN { $\pm 200$ kgf}
Allowable horizontal moving length	$\pm 3$ mm
Allowable lifting load	1.961 kN {200 kgf}
Material	SUS304 or equivalent
Weight	Approx. 5 kg

#### 3-2. Option

Instruction manual	1 piece
Guide plate	1 sheet (Shipped it while mounted in the device.)
Hexagon socket head cap screw (M5×L10)	4 pieces (Bolt for mounting the guide plate.)

### 4. Warranty

#### 4-1. Warranty

- The instrument is covered by a warranty for a period of one year from the date of delivery
- When you want to repair the instrument or request after-service, contact Minebea's sales office or sales agency from which you have purchased.

#### 4-2. Repair

Before asking repairs, please make checks once again that the installation, setting and adjustment for the instrument has finished precisely.

After that still there may be found some defects in the instrument, please contact Minebea's sales office or sales agency from which you purchased.

- The contents of this manual may subject to change without notice.

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