

# Lift Assist Hinge

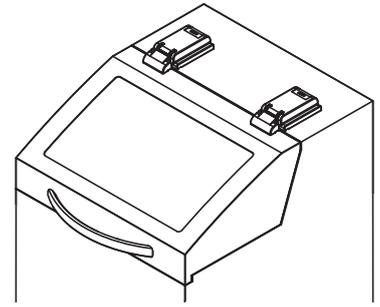
LAMP®

## HG-PA200 Outside Mount Installation Manual

Thank you for selecting our product. Before starting installation, please read this manual thoroughly to ensure correct installation. Please keep this manual at hand for future reference.

### ABOUT THE PRODUCT

- Hinge for upward opening.
- The built-in spring lets you easily open the lid.



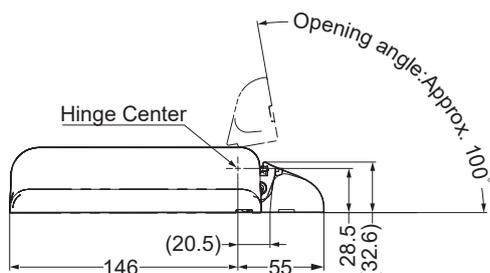
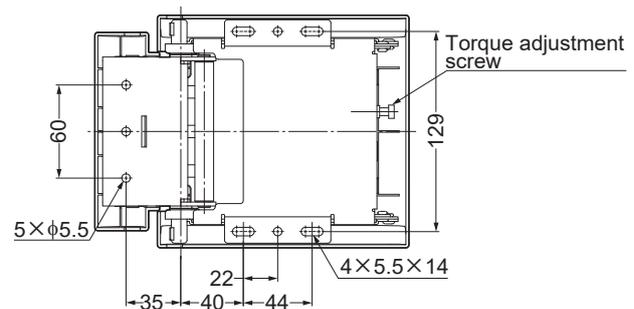
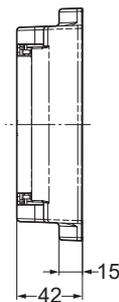
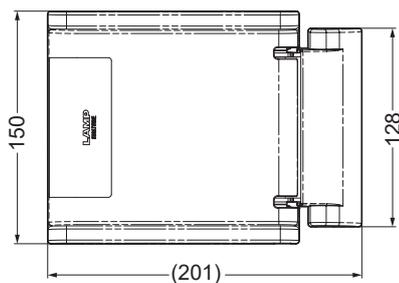
### FOR YOUR SAFE WORK AND CORRECT INSTALLATION

	This symbol denotes prohibited action.
	This symbol denotes what must be done.

#### **Caution:** If these cautions are not followed, it may result in injury or damage.

- It is necessary to manufacture the cabinet with sufficient strength so as to endure the weight of the lid.
- Do not put an unbalanced load on the hinges.
- Use more than 2 hinges per lid and adjust hinge center.
- Provide a stopper to prevent the hinges from opening beyond the fully opened angle. Hinges may be damaged if no stopper is provided.
- If the housing that the hinge is installed on is rotated the hinge may suddenly open. Provide a lock to prevent the hinge from opening in this case.
- This product is for indoor use only. Do not use outside or anywhere it will be exposed to water.
- Do not open/close the hinges repeatedly.

### DIMENSIONS



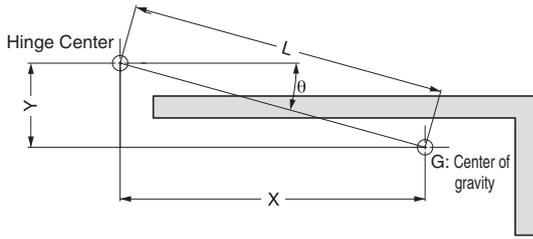
- Installation screws are not included. Select screws with a suitable length.

### SPECIFICATIONS

- Torque: 15±10% N·m (HG-PA200-15)  
20±10% N·m (HG-PA200-20)  
25±10% N·m (HG-PA200-25)
- Torque adjustment range: ±5%
- Operating temperature range: 0 - 40° C
- Lift assist angle: 0 - 90°
- Opening angle: 0 - 100°  
(Torque free range: 90° - 100°)

## 1 Maximum Lid Torque Calculation

Calculation formula:  $\mu = W \times L \times \cos \theta$



X	Horizontal distance from hinge center to center of gravity
Y	Vertical distance from hinge center to center of gravity
L	Distance from hinge center to center of gravity
$\theta$	Angle from hinge center to center of gravity
W	Lid weight
G	Center of gravity

## 2 Relationship between lid torque and hinge torque

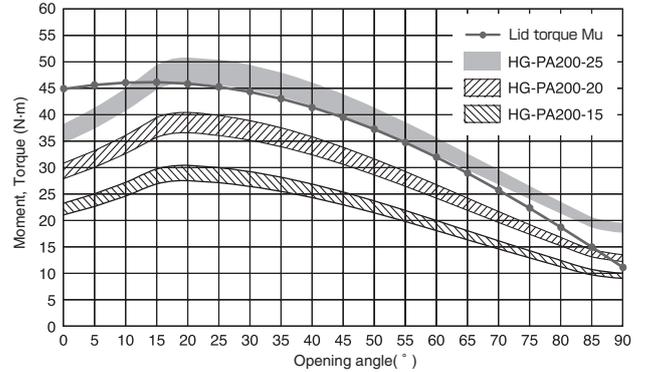
The chart shows an ideal example of lid torque and hinge torque.

Lid torque  $\mu >$  Hinge torque . . . Lid will close.  
Lid torque  $\mu <$  Hinge torque . . . Lid will open.

■ Please confirm whether hinges move correctly if Lid torque  $\mu$  is Max or Min.

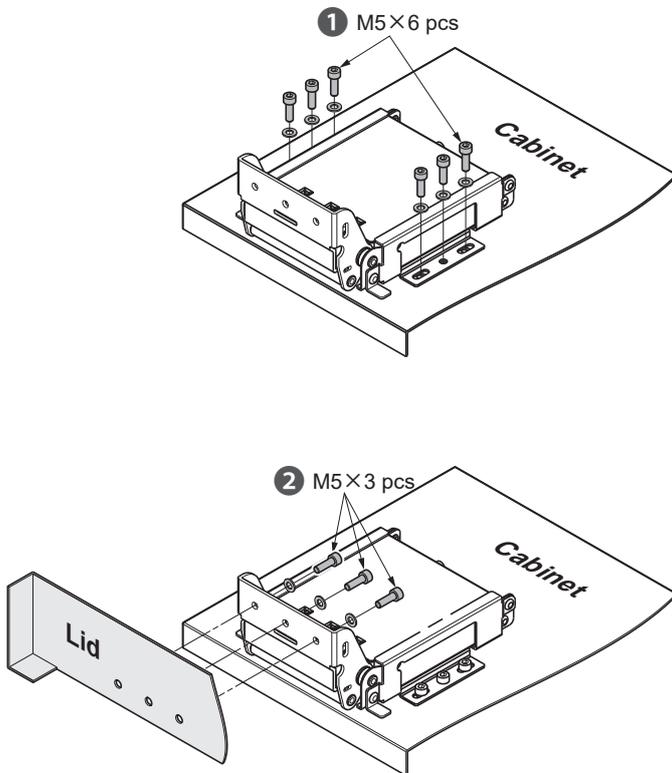
Example of lid size: X = 43 cm, Y = -10.5 cm, L = 44.3 cm, W = 10.8 kg

Example of overlapped torque for lid and hinges (for two hinges)



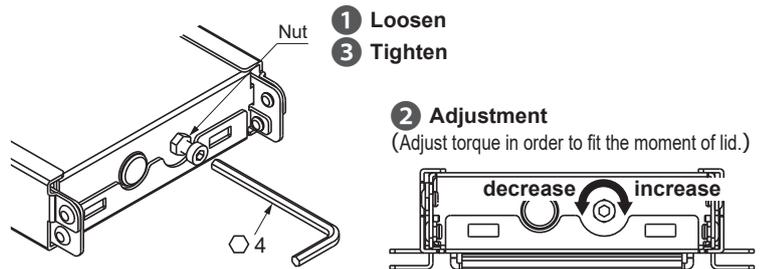
## INSTALLATION PROCEDURE

### 1 Installing hinges



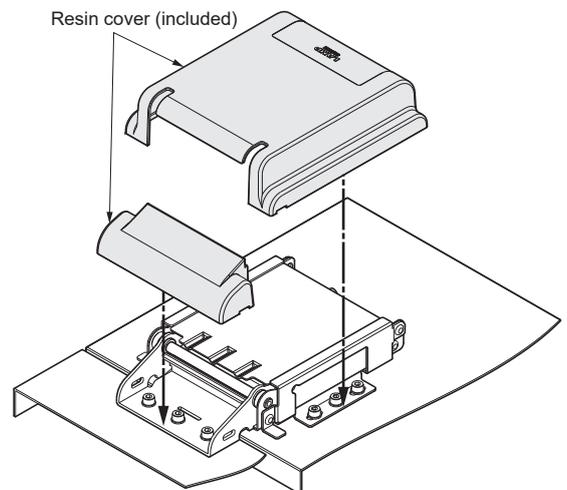
3 Open and close the lid and check the operation.

### 2 Torque adjustment



### 3 Assembling covers

Mount the covers firmly.



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