

This manual seeks to explain the installation of Cable Operating Mechanism (COM) using Flange Handle.

Flange Handle Assemblies, cable operating mechanisms, and cables are all required to be assembled together to operate an MCCB GCB800/GCB1200.

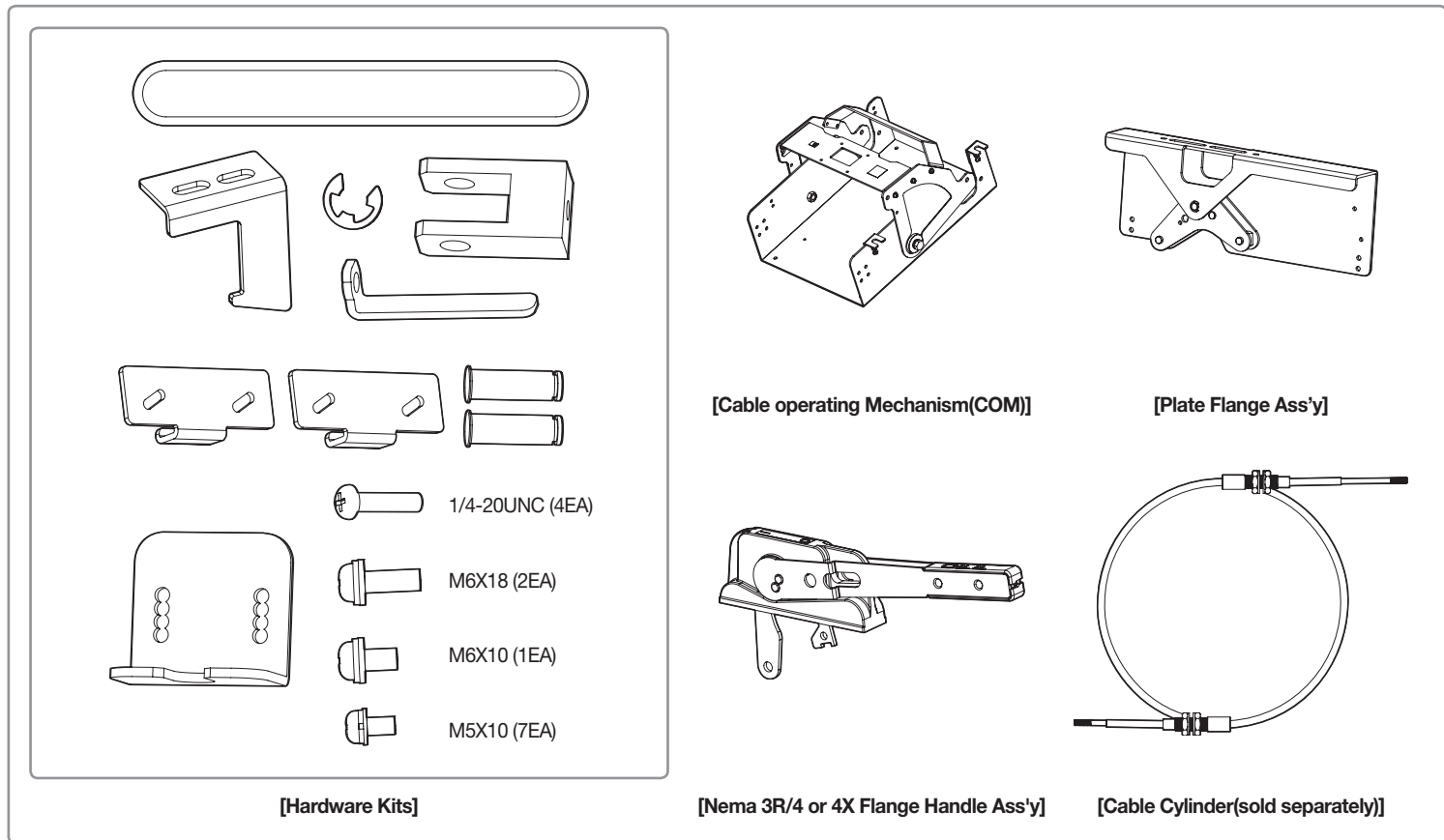
⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION OR ARC FLASH

- 1) Apply appropriate personal protective equipment (PPE) and follow safe electrical work practices. See NFPA 70E.
- 2) This equipment must be installed and serviced only by qualified electrical personnel.
- 3) Turn off all power supplying this equipment before working on or inside equipment.
- 4) Always use a properly voltage sensing device to confirm power is off.
- 5) Replace all devices, doors and covers before turning on power to this equipment.

Failure to follow these instructions will result in death or serious injury.

1. Verify quantity and condition of the parts in the drawings below before installing.



※ **Tightening Torque**

[Unit: lb-in (N•m)]

Classification	Tightening Torque	Purpose of its use
M5 x 10	25.5(2.9)	Coupling Lever to Flange Handle Link and Plate Flange Ass'y Connection of Bracket and Handle Holder
M6 x 18	46.0(5.2)	Connection of Plate Flange Ass'y and Flange Handle Ass'y
M6 x 10	46.0(5.2)	Connection of Release Lever, a Door Lock equipment
1/4-20UNC	46.0(5.2)	Coupling of COM to Enclosure
10-24UNC	19.1(2.2)	Connection of MCCB to COM(Included in hardware kits of MCCB)
M14 Nut	34.7(3.9)	Coupling bracket and Cable Cylinder (Assembled in Cable Cylinder)

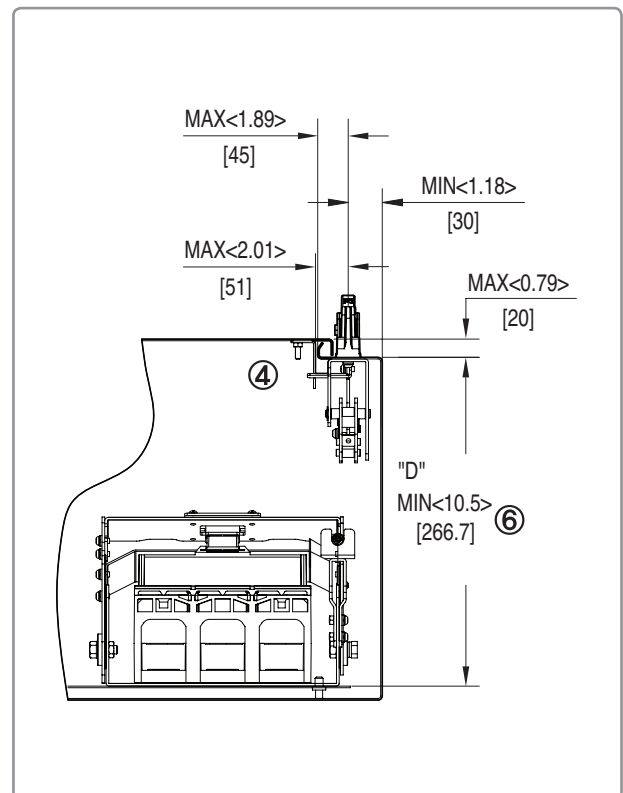
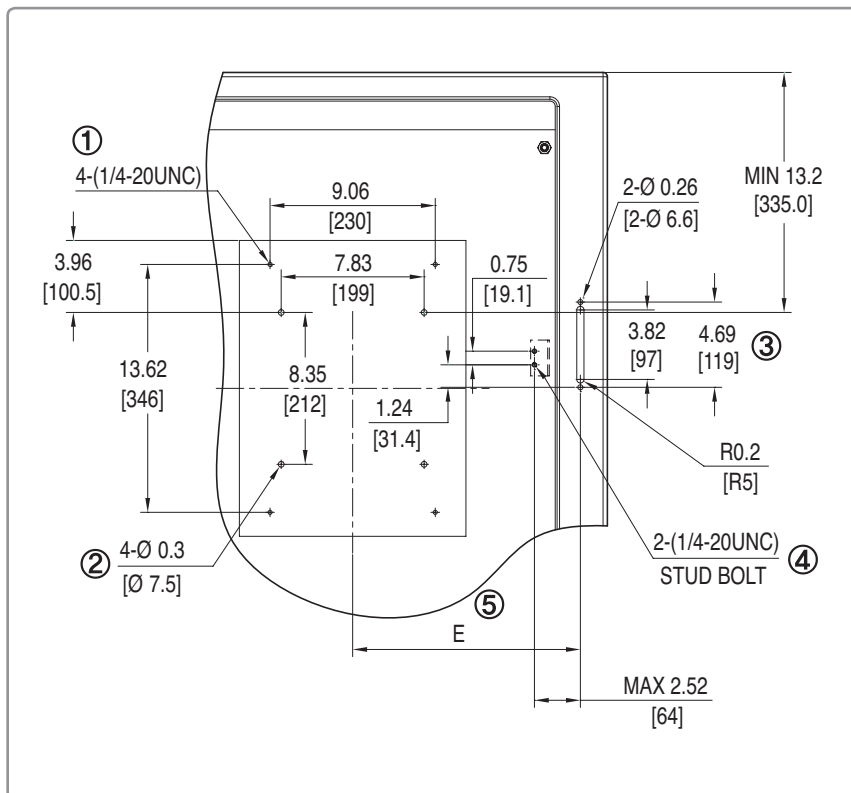
2. Tap & Hole Measure needed to install COM and Flange Handle

- ① Prepare 4 spots of Tap 1/4-20UNC to adhere COM.
- ② Prepare 4 Holes $\varnothing 0.3$ inch($\varnothing 7.5$ mm) to adhere GCB800 or GCB1200.
- ③ Prepare to adhere the Flange Handle Assembly.
- ④ Prepare 2 spots of Bolt Stud 1/4-20UNC to adhere Lock to Door.
- ⑤ Installation spot may change depending on Cable Extension. Cable Extension: 60/84/128 inch(1524.0/2133.6/3251.2 mm)
- ⑥ Enclosure Depth "D" has to be at least 10.5 inch(266.7 mm).

※ Maximum Measure of "E" to Install COM

[Unit: inch (mm)]

Installation Spot Measure "E" max	Enclosure Depth	
	10.5 (266.7)	18.9 (480.1)
Cable Lengths		
60 (1524.0)	25 (635.0)	21 (533.4)
84 (2133.6)	35 (889.0)	30 (762.0)
128 (3251.2)	54 (1371.6)	45 (1143.0)

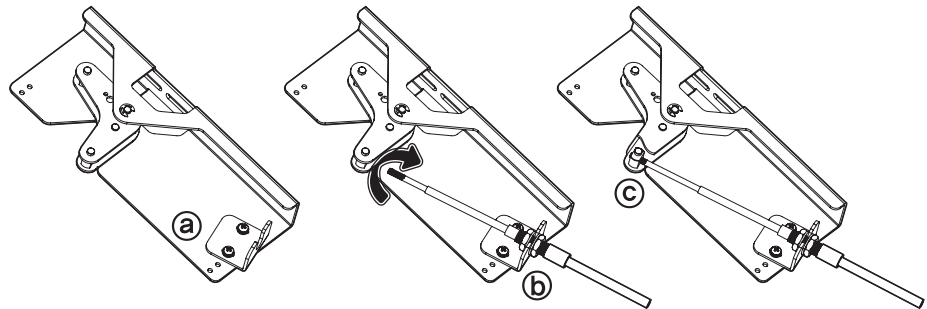
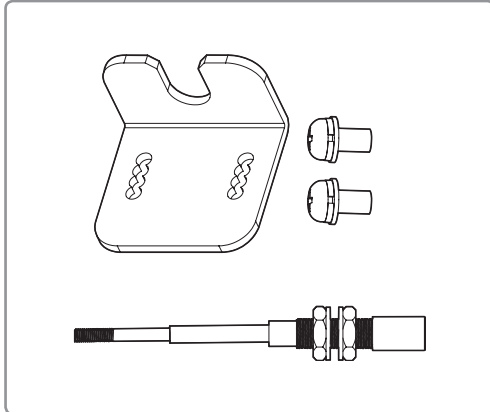


Installation Instruction

GCB800/1200
(GCBX5-FHC-N3R4-M/GCBX5-FHC-N4X-M)

3. How to couple Plate Flange Ass'y and Cable cylinder

Install Bracket in the front part of Plate Flange Ass'y as ① with M5X10(2ea), insert Cable cylinder to Bracket and attach it loosely as ②. Rotate the Cylinder Screw along the Lever's M6 Tap until 2~3 lines sticks out as ③.

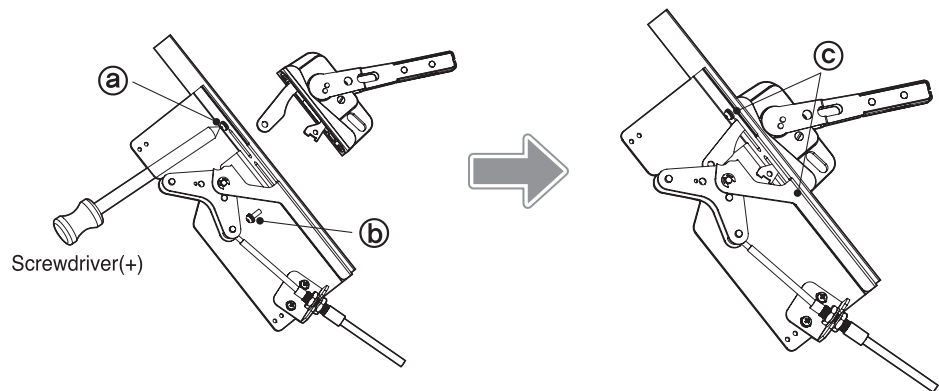
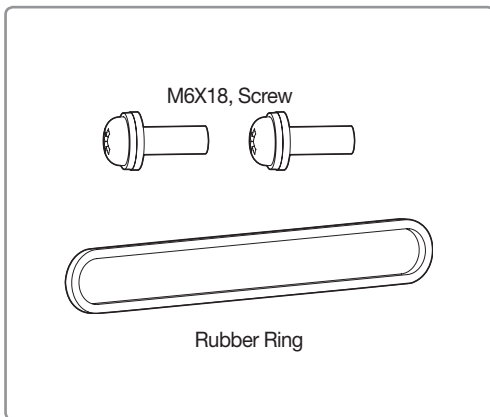


4. How to connect Plate Flange Ass'y and Handle to Enclosure

Place Rubber Ring in the slot of Handle Ass'y. Adhere it to Enclosure's upper part.

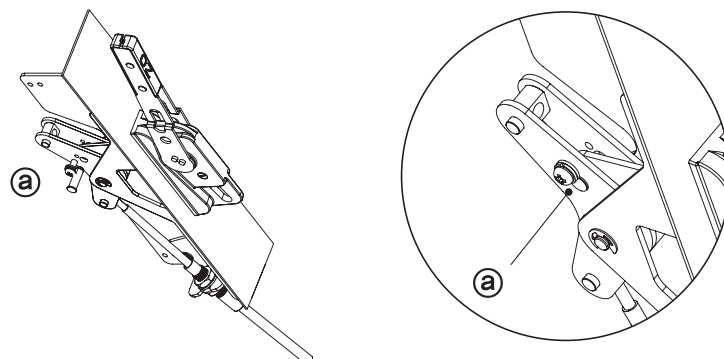
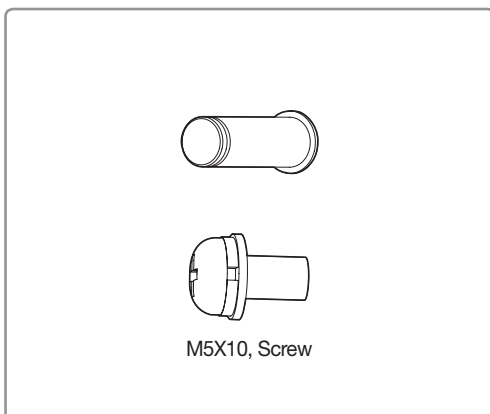
Place Plate Flange Ass'y in the slot and attach M6X18 loosely as ①.

Tighten M6X18 loosely ② in the lower side. Find the balance of Handle Ass'y moving it up-down, right-left, then as ③, tighten Screw from the upper side with the one from the lower side.

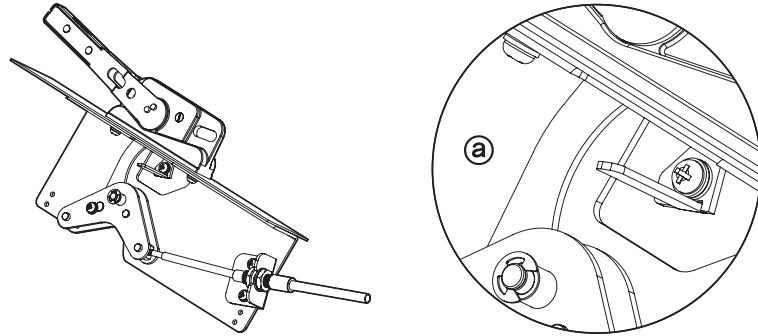
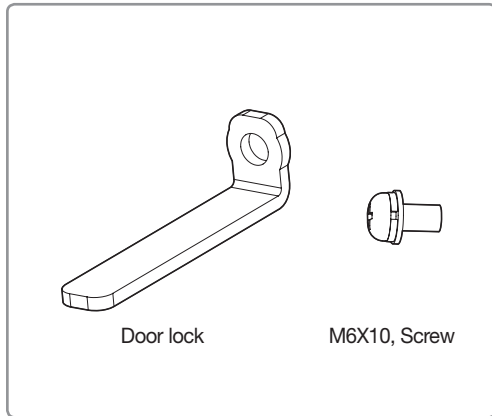


5. How to Connect Handle Lever and Lever of Plate Flange Ass'y

Move Handle in ON-OFF direction, and insert Pin into Link Hole of Handle and into Lever Hole of Plate Ass'y as ①. Use M5X10 Screw to fix Pin.

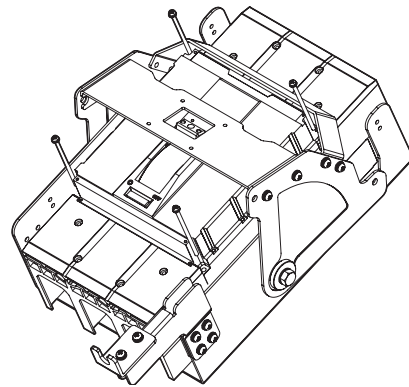
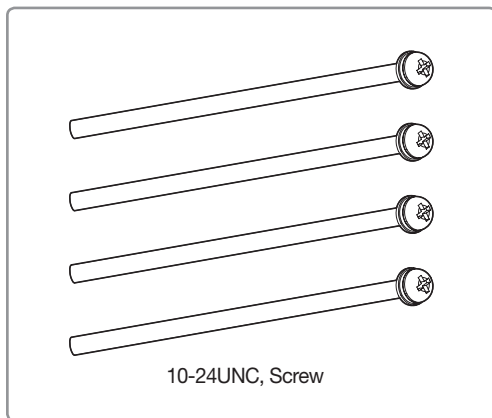


6. Connect Door Lock component to Release Lever as (a) using M6X10 Screw.

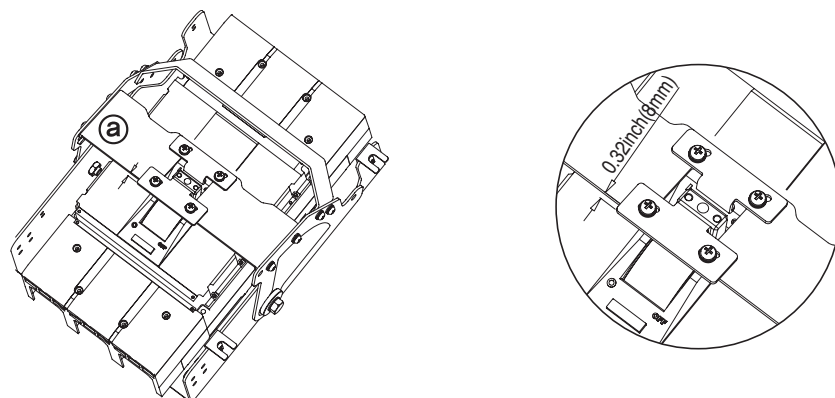
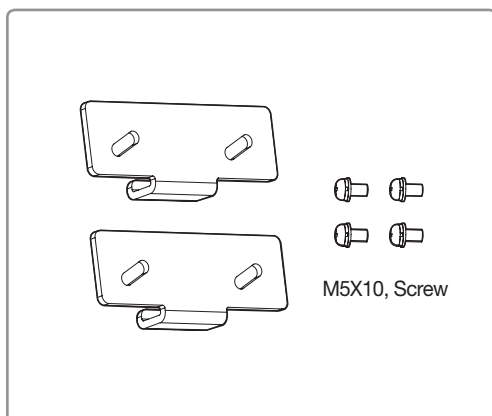


7. How to Connect MCCB and COM

Maintain Handle of GCB800 or GCB1200 on ON status and tighten it to COM using 10-24UNC(4ea) Screw.



There are 2 Handle Holders in the plastic bag that must be connected to COM as (a). The upper part must match with Bail Arm and the lower part must stick out 0.32inch(8mm). After attaching, connect M5X10(4ea) according to designated torque.



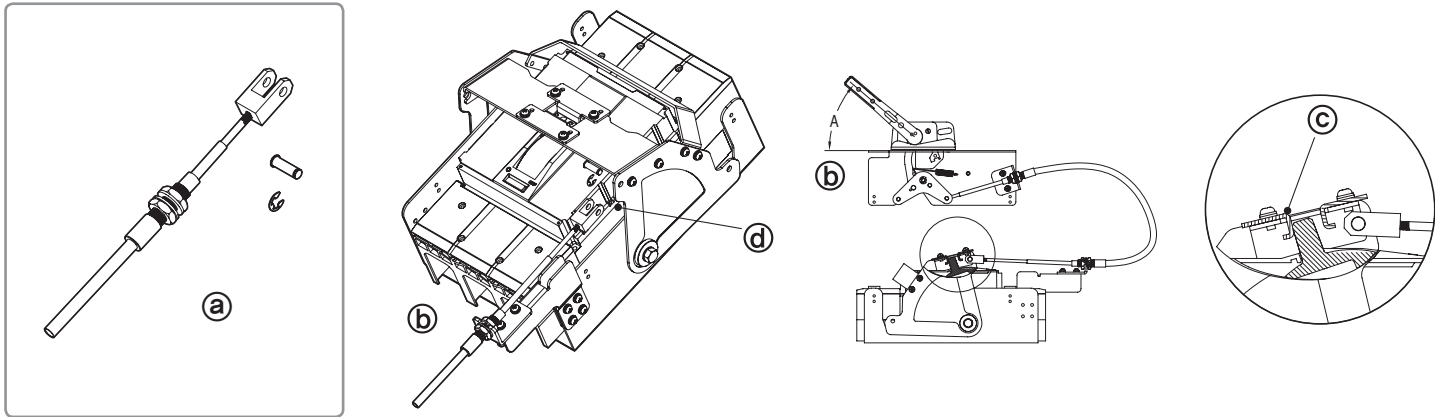
Installation Instruction

GCB800/1200
(GCBX5-FHC-N3R4-M/GCBX5-FHC-N4X-M)

8. How to Connect COM and Flange Handle Ass'y to Cable

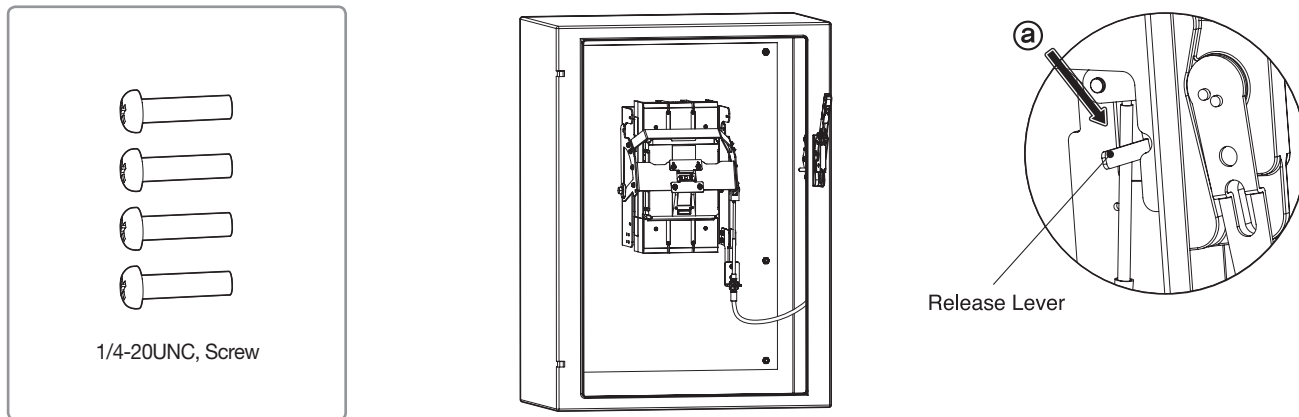
Connect Hanger component to Cylinder Screw as (a) and attach M14 Nut loosely to the attachment spot of COM as (b).

- 1) When the angle A of the Handle is 30°~35°, the Hangar and the Hole of Side Plate must match while the Holder Handle and MCCB Handle are in contact with each other (c). (d)
- 2) Insert the Pin and connect "E-Ring".
- 3) Trip the MCCB, and reset F-Handle to check the operation.
- 4) Fine adjustment can be made with the position of M14 Nut and Holder Handle. After the adjustment connect with designated torque.



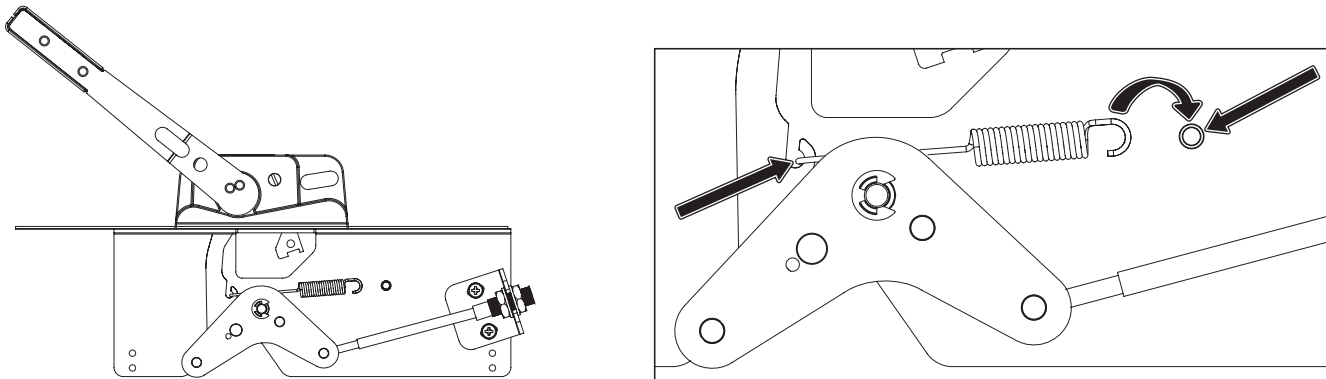
9. Adhere COM to Enclosure using 1/4-20UNC(4ea) Screw

Do a final examination of Handle's Trip, Reset, On, and Off function. When operating OFF to ON function of Flange Handle while Enclosure Door is open, must pull down Handle Release Lever to unlock as (a) and, then operate.



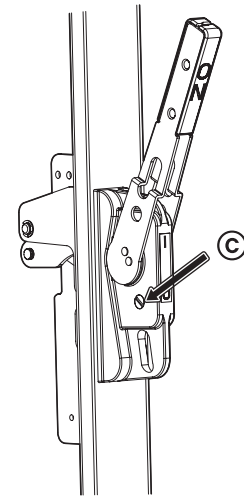
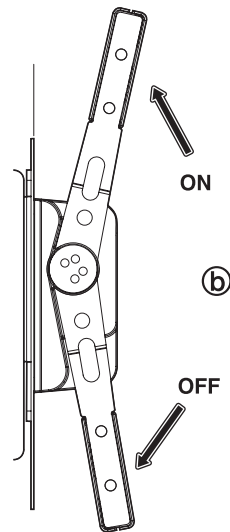
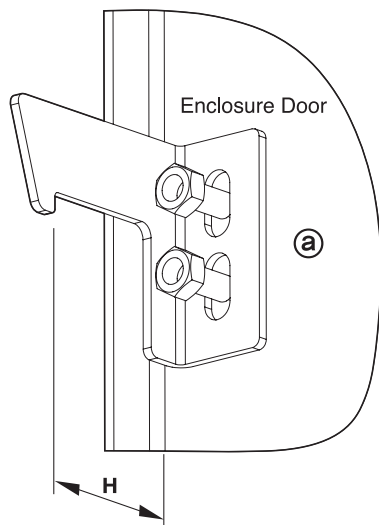
10. How to assemble Return Spring

Check that all functions of the Handle work properly, then put it on ON position and hook the long part of Spring Hook to Handle Link groove and extend the short part to the Pin groove.



11. How to Connect Enclosure Door and Lock Hook

Open Enclosure Door and attach Plate Hook Lock loosely as (a), push Handle totally to OFF. Doing this, close Door and adjust Locking status. If height "H" is insufficient for proper locking of the door, adjust the elevation of the Plate Hook Lock from the door with washers and re-check operation.



12. Flange Handle's Principal Movements

- ON, OFF(RESET) movements must operate smoothly when Door is locked.
- Flange Handle movement has to be verified during ON, OFF operation by totally pushing the handle as (a).
- Enclosure Door only opens when Flange Handle is in "OFF" status.
- Door Open is impossible when Handle is on "ON". In case of being necessary its opening, you have to unblock Lock equipment with a screwdriver (—) and twisting clockwise the Pin Release that is located next to Handle as (c).
- Do not move Flange Handle to ON if electricity flows at the moment of turning it on. Electric shock might occur.

Installation Instruction

GCB800/1200
(GCBX5-FHC-N3R4-M/GCBX5-FHC-N4X-M)

Este manual tiene como objetivo explicar la instalación de Cable Operating Mechanism (COM) usando Flange Handle. Se aplica Handle FHU-L o FHX-L y el COM-5 en MCCB GCB800/GCB1200.

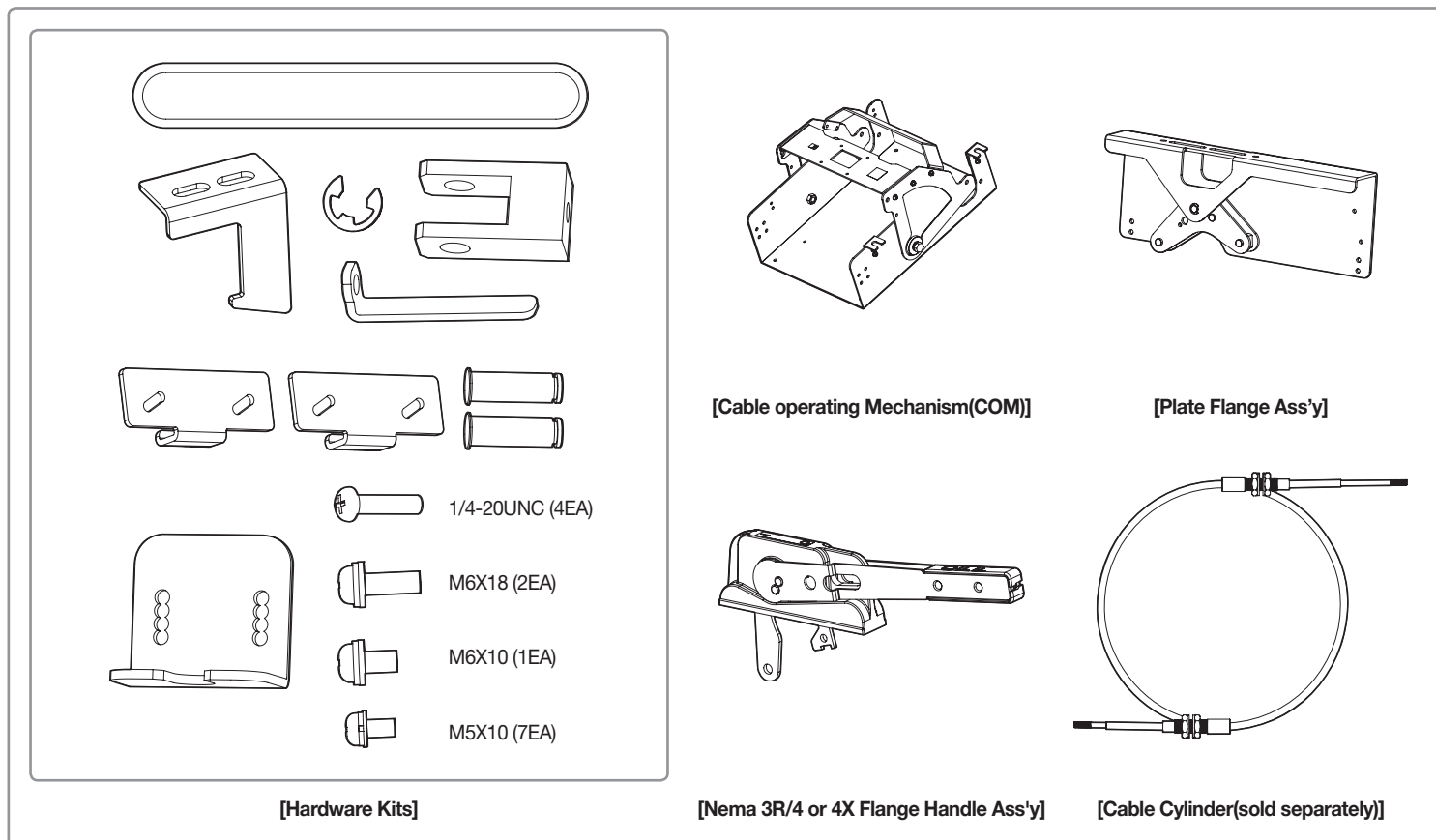
⚠ PELIGRO

PELIGRO DE DESCARGA ELÉCTRICA, EXPLOSIÓN O DESTELLO POR ARQUEO

- 1) Utilice equipo de protección personal (EPP) apropiado y siga las prácticas de seguridad en trabajos eléctricos establecidas por su Compañía, consulte la norma 70E de NFPA y NOM-029-STPS.
- 2) Solamente el personal eléctrico especializado deberá instalar y prestar servicio de mantenimiento a este equipo.
- 3) Desenergice el equipo antes de realizar cualquier trabajo dentro o fuera de él.
- 4) Siempre utilice un dispositivo detector de tensión nominal adecuado para confirmar la desenergización del equipo.
- 5) Vuelva a colocar todos los dispositivos, las puertas y las cubiertas antes de energizar este equipo.

El incumplimiento de estas instrucciones podrá causar la muerte o lesiones serias.

1. Verifique cantidad y condición de las partes de los siguientes dibujos antes de instalar.



※ Par de torsión de Apriete

[Unidad: lbs-pulg (N•m)]

Clasificación	Par de torsión de Apriete	Objetivo de su uso
M5 x 10	25.5(2.9)	Acoplamiento de Lever al Flange Handle Link y Plate Flange Ass'y Conexión de Bracket y Handle Holder
M6 x 18	46.0(5.2)	Conexión de Plate Flange Ass'y y Flange Handle Ass'y
M6 x 10	46.0(5.2)	Conexión de Release Lever, un aparato Door Lock
1/4-20UNC	46.0(5.2)	Acoplamiento de COM a Enclosure
10-24UNC	19.1(2.2)	Conexión de MCCB a COM (Incluido en el kit de hardware del MCCB)
M14 Nut	34.7(3.9)	Acoplamiento de Bracket y Cable Cylinder (Ensamblado mediante Cable Cylinder)

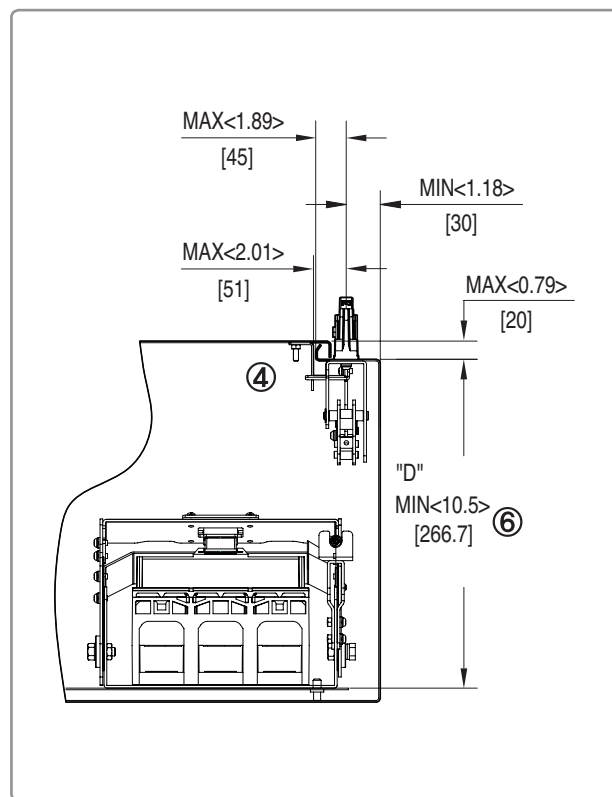
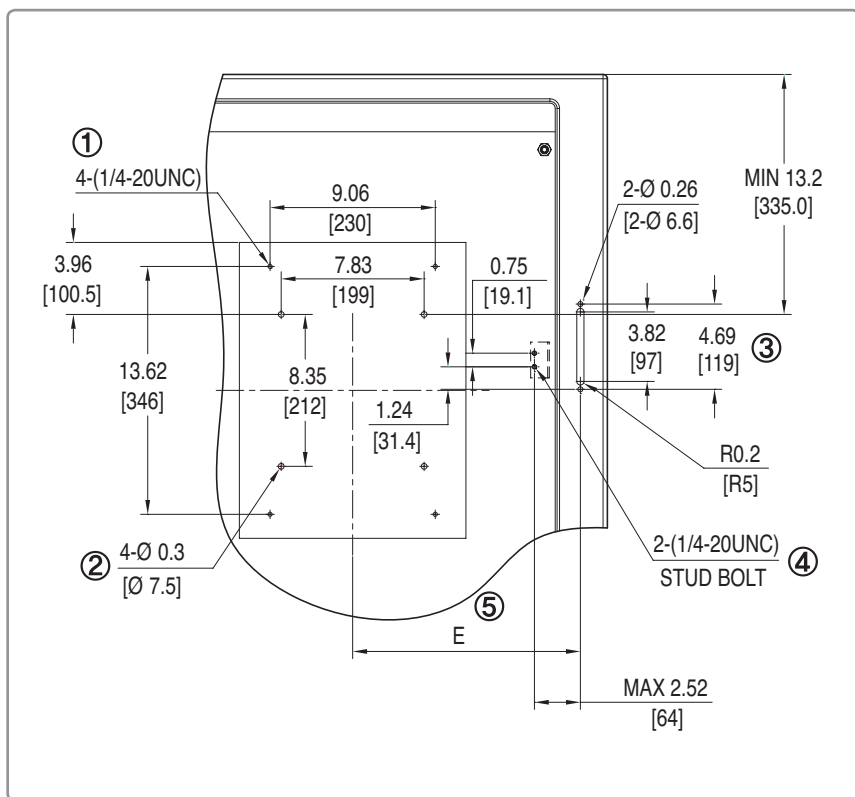
2. Medida del Tap & Hole necesaria para instalar el COM y Flange Handle

- ① Prepare 4 lugares del Tap 1/4-20UNC para adherir COM.
- ② Prepare 4 Hole Ø0.3 pulg(Ø7.5 mm) para adherir GCB800 o GCB1200.
- ③ Prepare para adherir the Flange Handle Assembly.
- ④ Prepare 2 lugares de Bolt Stud 1/4-20UNC para adherir Lock a Door.
- ⑤ El lugar de instalación puede cambiar dependiendo de Cable Extension. Cable Extension: 60/84/128 pulg(1524.0/2133.6/3251.2 mm)
- ⑥ Enclosure Depth "D" debe ser mínimo 10.5 pulg(266.7 mm).

※ Medida máxima de "E" para instalar COM

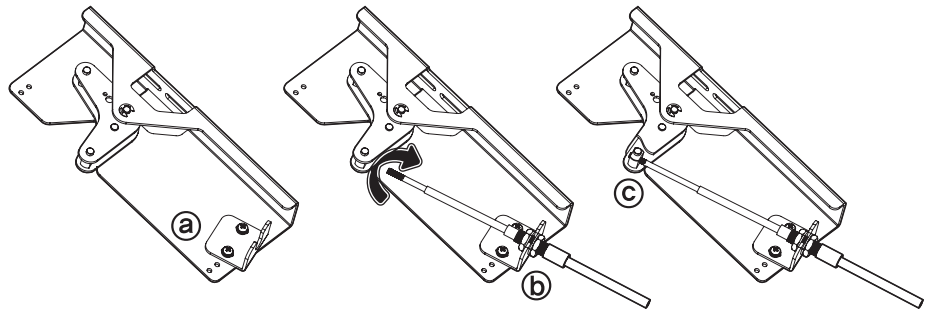
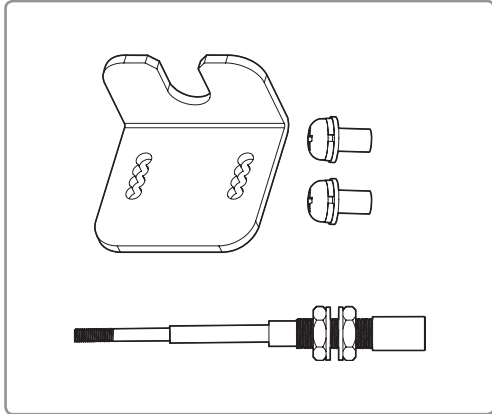
[Unidad: pulg (mm)]

Medida del lugar de instalación "E" max	Enclosure Depth	
	10.5 (266.7)	18.9 (480.1)
Cable Lengths		
60 (1524.0)	25 (635.0)	21 (533.4)
84 (2133.6)	35 (889.0)	30 (762.0)
128 (3251.2)	54 (1371.6)	45 (1143.0)



3. Manera de acoplar Plate Flange Ass'y y Cable cylinder

Instale Bracket en la parte delantera de Plate Flange Ass'y como ① con M5X10(2ea), inserte Cable cylinder a Bracket y fíjelo flojamente con M14 NUT(2ea) como ②. Gire Cylinder Screw hasta que 2-3 líneas se sobresalte de M6 Tap de la palanca como ③.

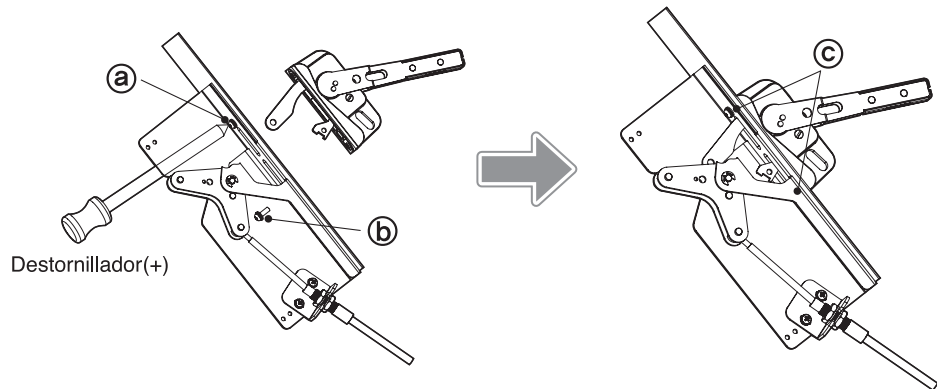
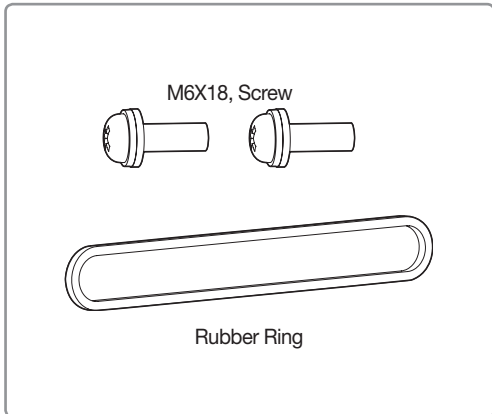


4. Manera de Conectar Plate Flange Ass'y y Handle a Enclosure

Ponga Rubber Ring en la muesca de Handle Ass'y. Adhiéralo en la parte superior de Enclosure.

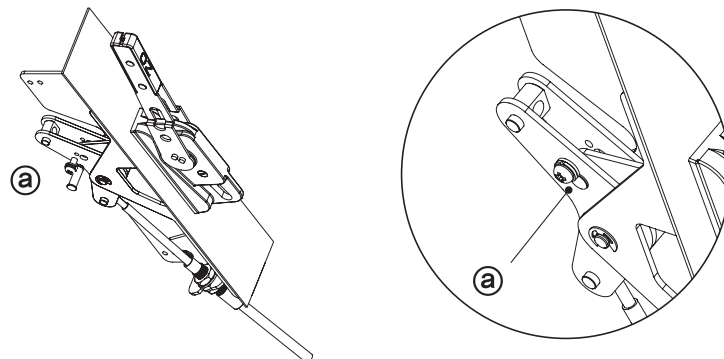
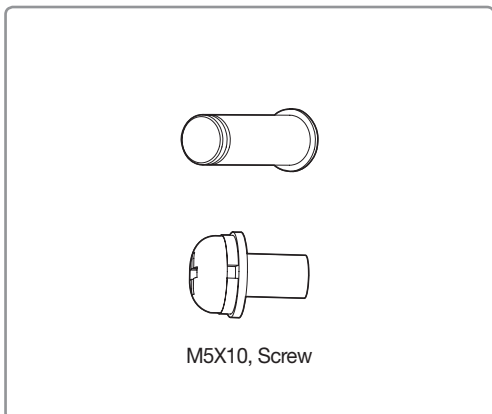
Ponga Plate Flange Ass'y en la muesca y fije M6X18 flojamente como ①.

Apriete M6x18 como ② en la parte inferior flojadamente. Encuentre el balance de Handle Ass'y moviéndolo arriba-abajo, derecha-izquierda, después como ③, conéctese Screw de la parte superior con el de inferior.

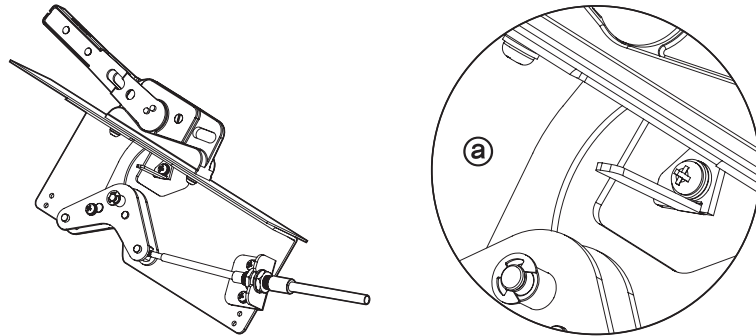
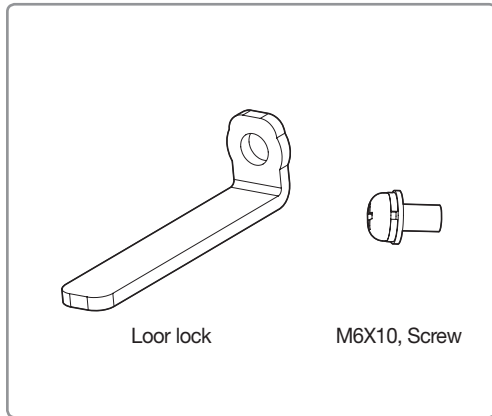


5. Manera de Conectar Handle Lever y Lever de Plate Flange Ass'y

Mueva Handle en dirección ON-OFF, e inserte Pin en Link Hole de Handle y en Lever Hole de Plate Ass'y como ①. Use M5X10 Screw para fijar Pin.

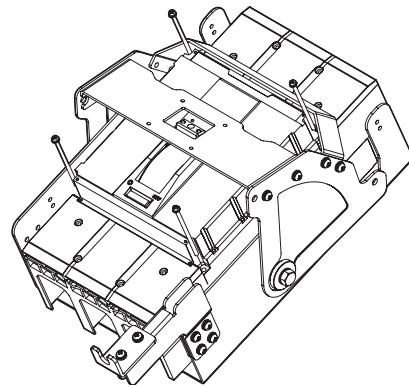
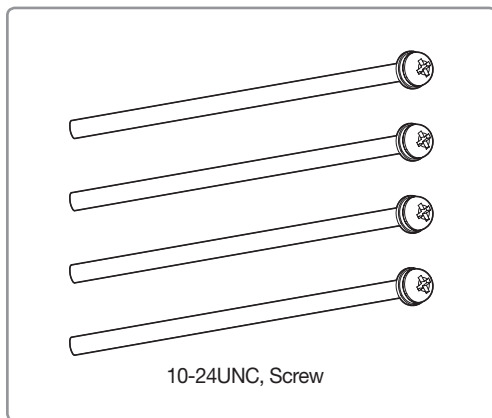


6. Conecte componente de Door Lock a Release Lever como ① usando M6X10 Screw.

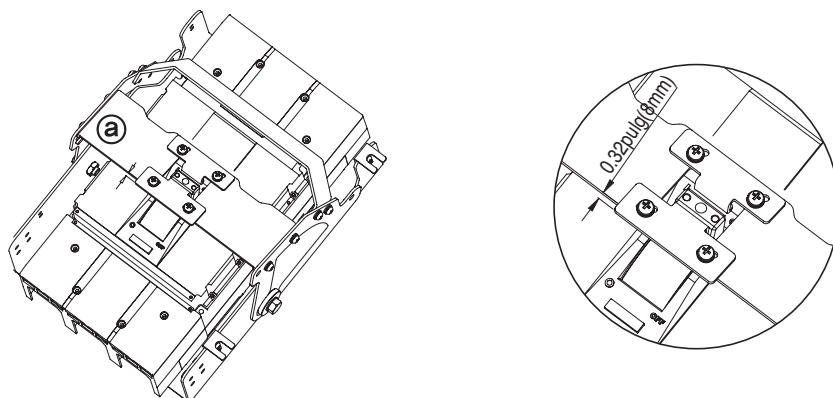
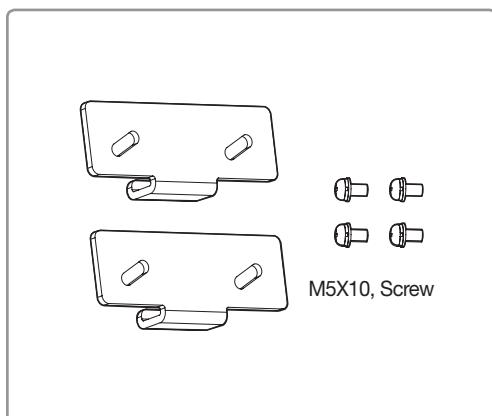


7. Manera de Conectar MCCB y COM

Mantenga en ON el Handle de GCB800 o GCB1200 y adhiéralo a COM usando 10-24UNC(4ea) Screw.



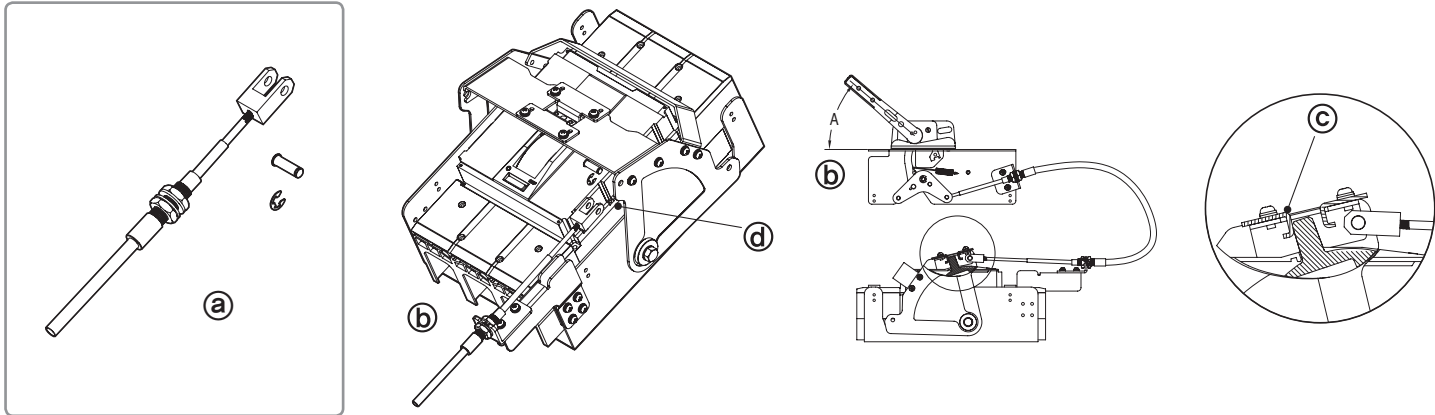
Hay 2 Handle Holder en la bolsa plástica que debe ser conectado a COM como ①. La parte superior debe coincidir con Bail Arm y la parte inferior debe sobresaltar por 0.32inch(8mm). Después de adjuntar Handle Holder, conecte M5X10(4ea) de acuerdo a par de torsión designado.



8. Manera de Conectar COM y Flange Handle Ass'y a Cable

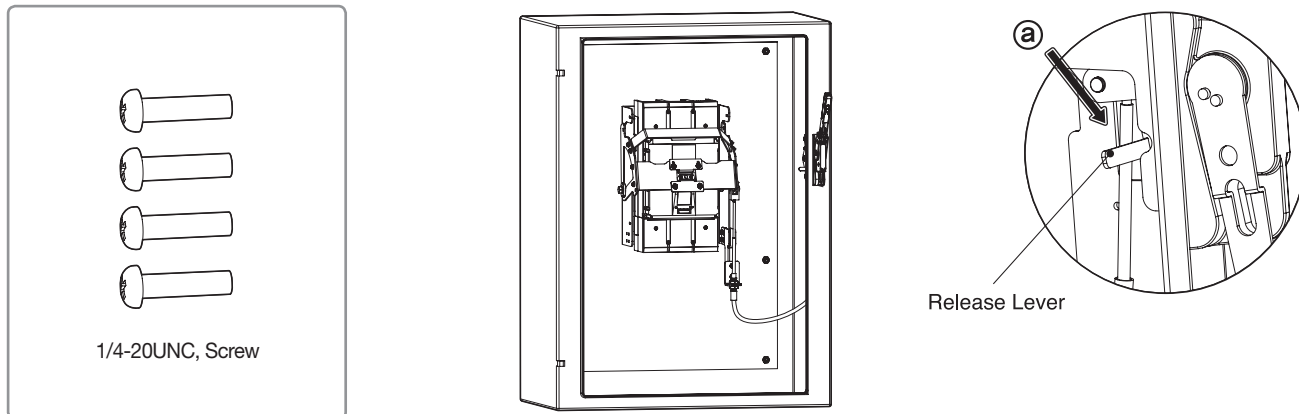
Conecte el componente de Hanger a Cylinder Screw como (a) y adhiera M14 Nut flojamente al punto de adhesión de COM como (b).

- 1) Cuando el ángulo de Handle es 30°~35°, Hangar y el hollo de Side Plate deben coincidir mientras Holder Handle y MCCB Handle estén en contacto entre sí ((c)). ((d))
- 2) Inserte Pin y conecte "E-Ring".
- 3) Dispare MCCB, y reinicie F-Handle para revisar la operación.
- 4) Se puede hacer ajustes finos con la posición de M14 Nut y Holder Handle. Después del ajuste, conecte con par de torsión designado.



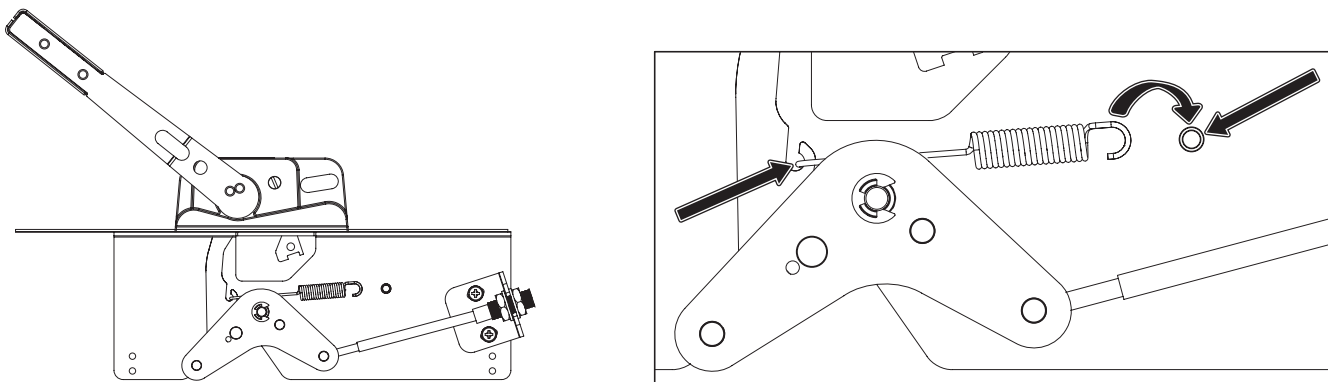
9. Adhiera COM a Enclosure usando 1/4-20UNC(4ea) Screw

Haga una examinación final de Handle: Trip, Reset, On, and Off. Cuando se opera de OFF a ON en Flange Handle mientras Enclosure Door está abierto, debe jalar Handle Release Lever hacia abajo para abrir como (a) y operar después.



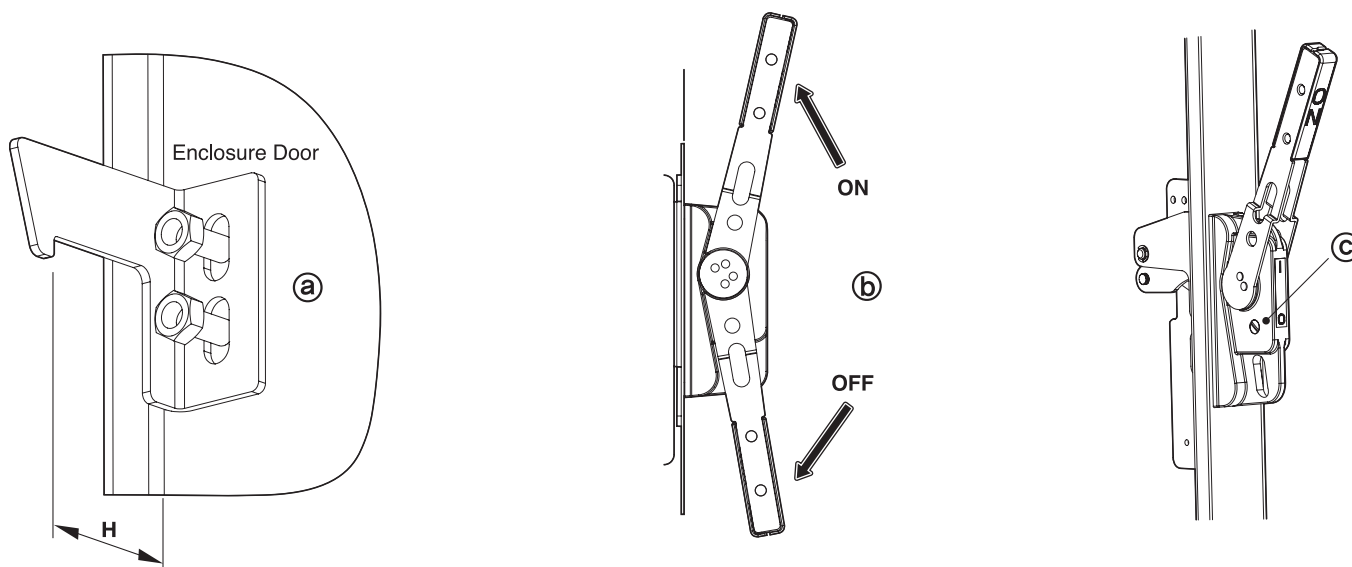
10. Manera de montar Return Spring

Revise que todas las funciones de Handle funcione bien, de ahí póngalo en posición On y enganche la parte larga de Spring Hook a la ranura de Handle Link y extienda la parte corta a la ranura de Pin.



11. Manera de Conectar Enclosure Door y Lock Hook

Abra Enclosure Door y fije flojamente Plate Hook Lock como ③, empuje totalmente el Handle a OFF. De esta manera, cierre Door y ajuste el estado de Locking. En caso de insuficiencia de la medida "H" y mala operación de Locking, verifique movimiento mediante el ajuste de la elevación colocando Washer entre Door y Plate Hook Lock.



12. Los Movimientos Principales de Flange Handle

- Los movimientos ON, OFF(RESET) deben operar suavemente cuando Door esté cerrado.
- Se tiene que verificar el movimiento de Flange Handle a través del empuje total en operación ON, OFF como ⑥.
- El Door de Enclosure solamente se abre cuando Flange Handle se encuentra en estado "OFF".
- Es imposible abrir la puerta cuando Handle se encuentra en "ON". En caso de que sea necesaria su apertura, tendrá que desbloquear el aparato Lock usando un destornillador (—) y girando Pin Release que se encuentra a lado de Handle en sentido del reloj como ⑦.
- No mueva el Flange Handle a ON en caso de haber un flujo eléctrico a la hora de prenderlo ya que existe peligro de descarga eléctrica.