

**LAMP®****HES**  
Hinge Expert

# INSTALLATION MANUAL

## FOR HES3D-E190 CONCEALED HINGE

### (3-DIMENSIONAL ADJUSTABLE HINGE)

#### ⚠ WARNINGS

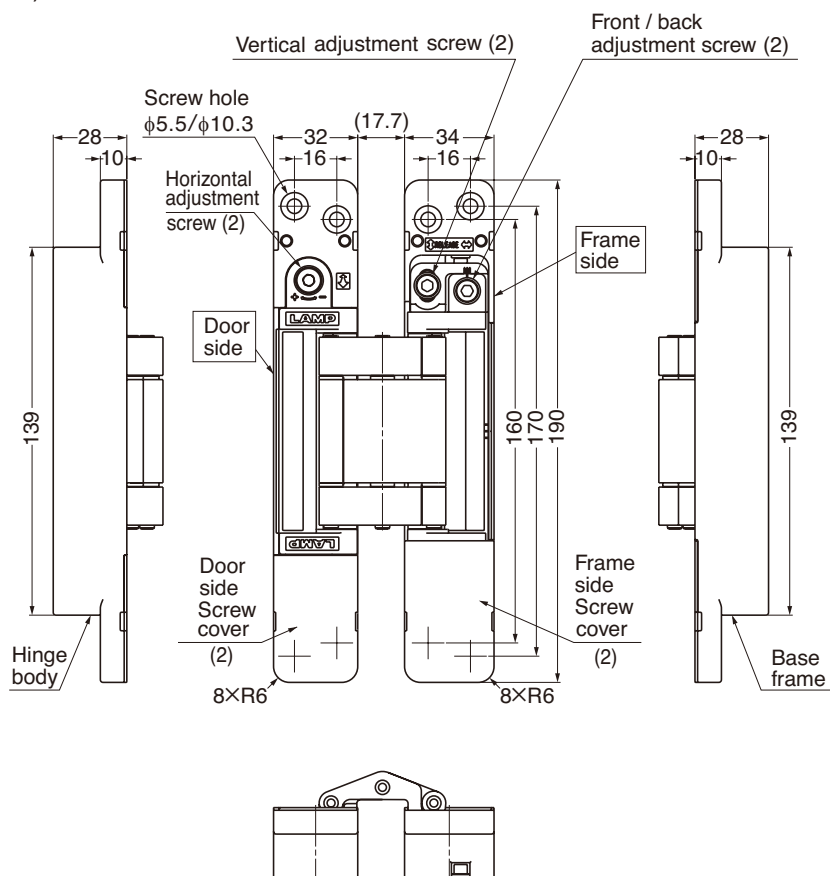
- For indoor use only. Not suitable for areas where it can be in direct contact with water.
- Use in conjunction with a door closer is not recommended. For soft-close option, we recommend Sugatsune LDD-V or LDD-S door damper.

Read all instructions carefully for proper use.

#### COMPONENT PARTS

- CONCEALED HINGE 2 pcs
- Screw cover 2 pcs.ea. (Door side, Frame side)
- Flat Head Screw (5×30) 8 pcs×2
- Hex Key (Key size 4) 1 pc
- Template 1 pc
- INSTALLATION MANUAL

#### HINGE PARTS



#### ITEM NO. / FINISH

ITEM NO.	FINISH
HES3D-E190DC	Silver
HES3D-E190DN	Champagne Gold
HES3D-E190BL	Black

#### DOOR SPECIFICATIONS

Recommended door dimensions :

Maximum Door Weight	100kg (220lbs) per 2 hinges 125kg (276lbs) per 3 hinges
Minimum Door Thickness	38mm (1-1/2)
Maximum Door Height	2400mm (94)
Maximum Door Width	900mm (36)

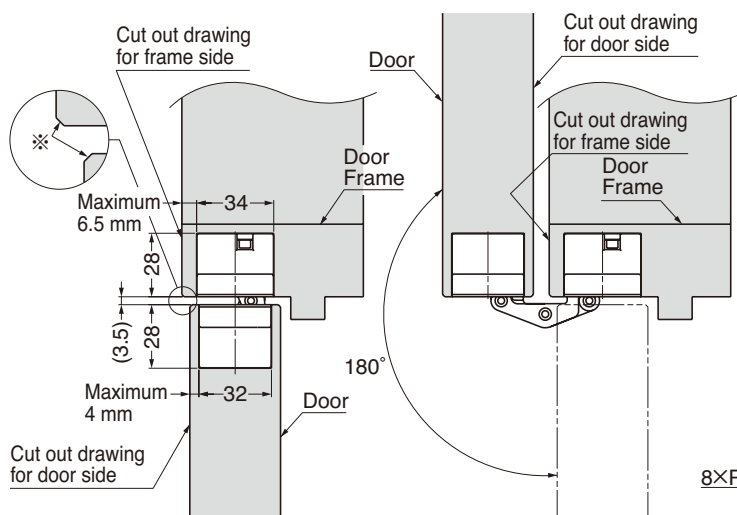
#### ADJUSTMENTS

Vertical adjustment	±3mm
Horizontal adjustment	+3mm, -2mm
Front / back adjustment	±1mm

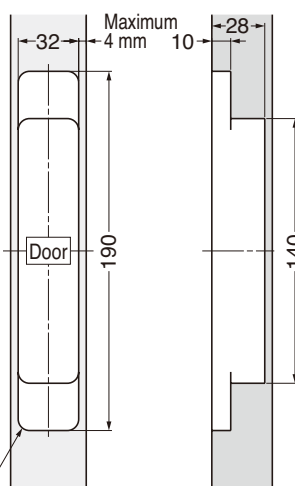
#### CUT OUT DRAWING

#### ⚠ Caution

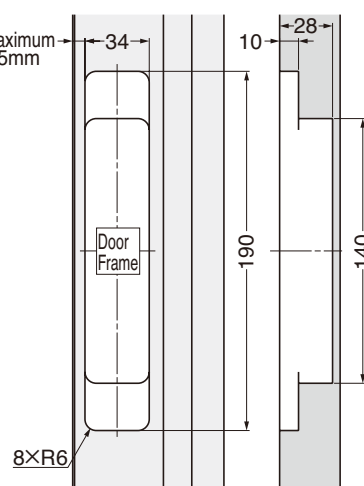
Round edges of door and frame by applying cuts with "C1 and over" or "R1 and over." (Reference to "\*" in the drawing.)



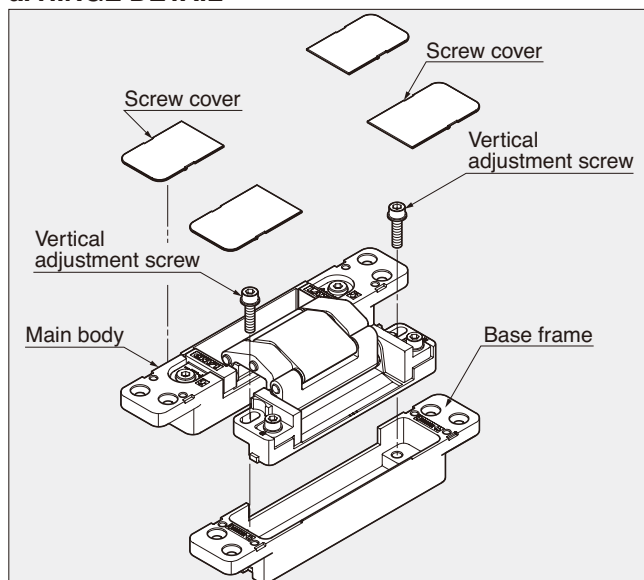
#### ● Cut out drawing for door side



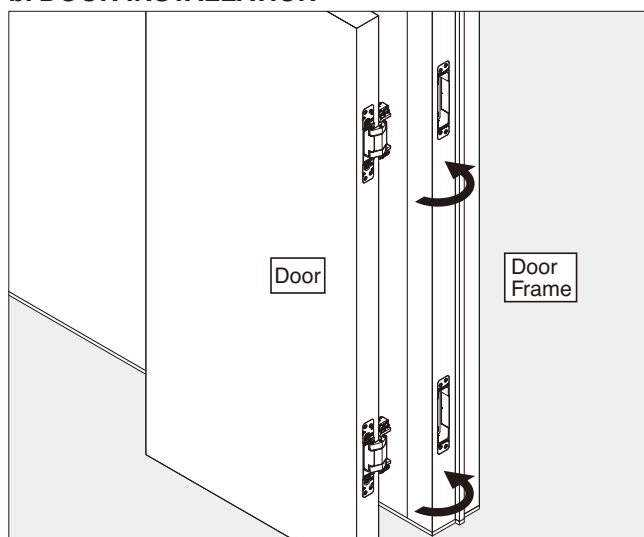
#### ● Cut out drawing for frame side



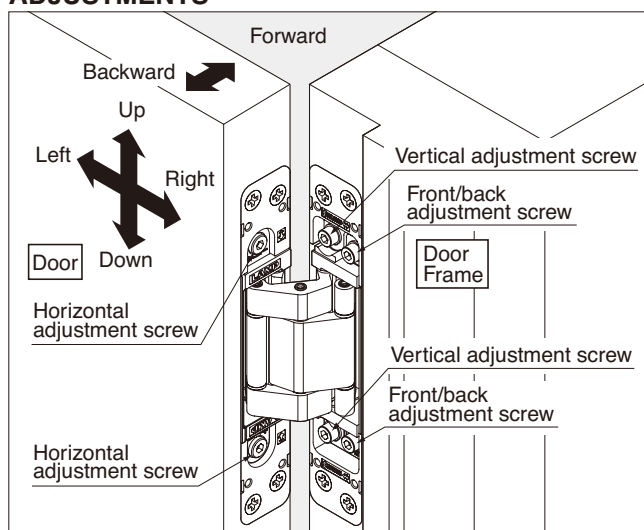
## a. HINGE DETAIL



## b. DOOR INSTALLATION



## ADJUSTMENTS



## INSTALLATION PROCESS

Remove screw cover and vertical adjustment screw from hinge body. Separate door side leaf and base frame. Repeat process for remaining hinge.

Install door side leaf into the cut out of the door with installation screws. Then, with screws, install the base frame into the cut out of the door frame. Repeat process for remaining hinge.

Refer to Figure B. Temporarily hang the door by inserting both upper and lower main hinge bodies into the upper and lower base frames at the same time. The door will be temporarily held in place by the easy installation function.

Insert vertical adjustment screws (removed in Step 1) into vertical adjustment holes. With a hex key, loosely fasten screws to temporarily hold frame side leaf in place.

### Caution

Make sure the base frame is set firmly in the proper direction before installing into the cut out of the frame.

Do not open/close door with excessive force, or door may fall.

## ADJUSTMENTS

Make adjustments in each (vertical and front/back) direction.

### Vertical adjustment

Using hex key, loosen vertical adjustment screw just one turn. Temporarily hold door in place during adjustment of door height by inserting a piece of wood in gap between floor and bottom of door. Then tighten screws. Fastening torque is 4.9N·m (50kgf·cm).

### Front/back adjustment

Loosen front/back adjustment screw just one turn using hex key. Adjust the door. Then tighten screws. Fastening torque is 4.9N·m (50kgf·cm).

### Caution

To prevent door from falling, do not remove front/back adjustment screw.

### Horizontal adjustment

To widen the gap between door and door frame (on the hinged side of door), turn the horizontal adjustment screw in clockwise direction. (Maximum adjustment is 3mm). To narrow the gap, turn the screw in counter clockwise direction.

### Caution

Gently turn adjustment screws, alternating from one screw to the other and back again. Do not force turning of screws.

Do not loosen adjustment screw (Maximum adjustment is 3mm) in clockwise direction, as door may fall.

Finally, replace screw cover.

### Caution

Do not handle the covers with excessive force, as they may break.

#### SUGATSUNE KOGYO CO.,LTD.

Phone: +81 3 3866 2260

F a x : +81 3 3866 4447

E-mail: export@sugatsune.co.jp

Website: www.sugatsune-intl.com

#### SUGATSUNE KOGYO (UK) LTD.

Phone: +44 118 9272 955

F a x : +44 118 9272 871

E-mail: sales@sugatsune.co.uk

Website: www.sugatsune.co.uk

#### SUGATSUNE AMERICA, INC.

Phone: +1 310 329 6373

F a x : +1 310 329 0819

E-mail: sales@sugatsune.com

Website: www.sugatsune.com

#### SUGATSUNE SHANGHAI CO., LTD.

Phone: +86 21 3632 1858

F a x : +86 21 3632 1868

E-mail: lamp@sugatsune.com.cn

Website: www.sugatsune.com.cn