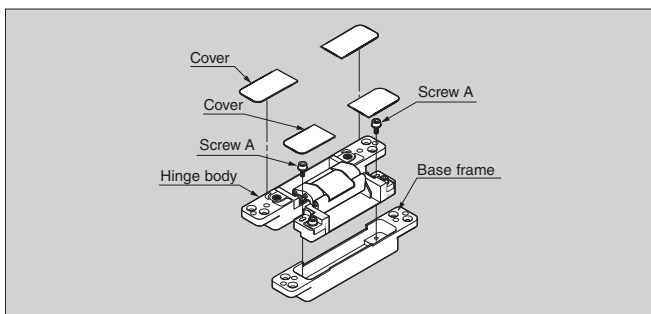
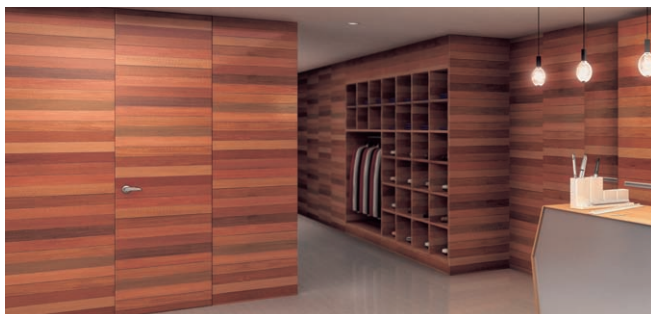


HES CONCEALED HINGE SERIES



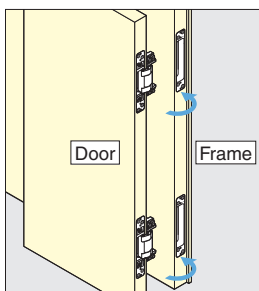
■ Features

- The hinges are completely hidden when the door is closed.
- 3-WAY adjustment function allows vertical, horizontal, and depth adjustment after hinge installed.
- Can be used together with a door closer or door damper.
 - LAPCON DOOR DAMPER LDD-S (P.720-721)
 - LAPCON DOOR DAMPER LDD-V (P.718)
 - LAPCON DOOR CLOSER LDC-N2 (P.722-724)

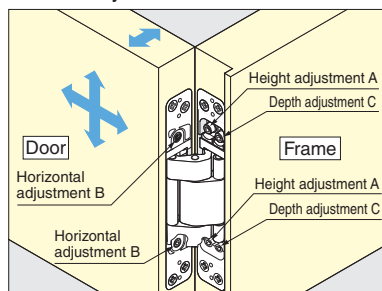
■ For Easy Installation

1. Separate parts as shown in picture "a".
2. Screw on the hinge body to door, and hinge bracket to door frame.
3. As shown in picture "b", insert hinge body straight into hinge bracket. Bracket will temporarily hold the body for easy installation.
4. Use "screw A" to fix body on bracket.
5. Adjust horizontally by turning "screw B".
6. Loosen "screw A" for vertical adjustment. Tighten "screw A" after vertical adjustment completed.
7. For depth adjustment, loosen "screw C" (one turn). Tighten "screw C" after completed.
8. Snap on plastic covers after all above completed.

■ Installation



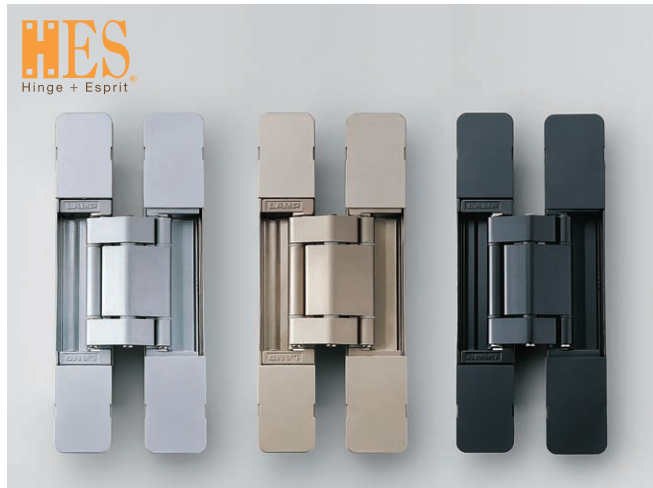
■ 3-WAY Adjustment



3-WAY ADJUSTABLE CONCEALED HINGE



HES3D-E190



■ Features

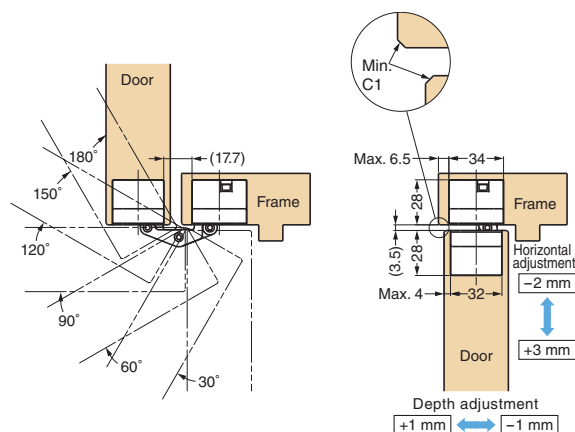
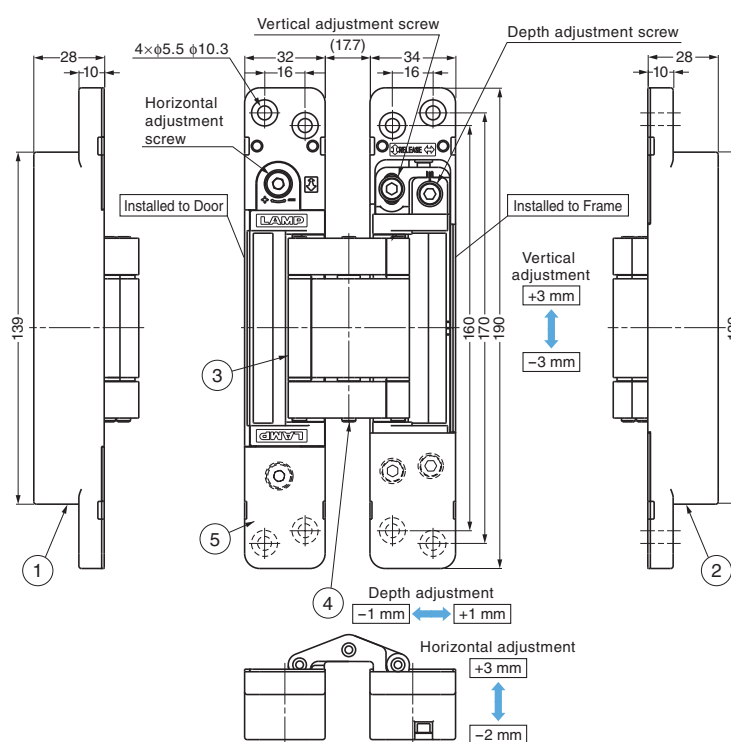
- 3-way adjustment function allows vertical, horizontal, and depth adjustment after hinge installed.
- Easy installation: Temporary door holding feature.
- Successfully passed for the 300,000 open/close private cycle test.
- Cover hides all screw heads for clean appearance.
- Order-made colour available. For further details, please contact local representatives.

■ Parts Included

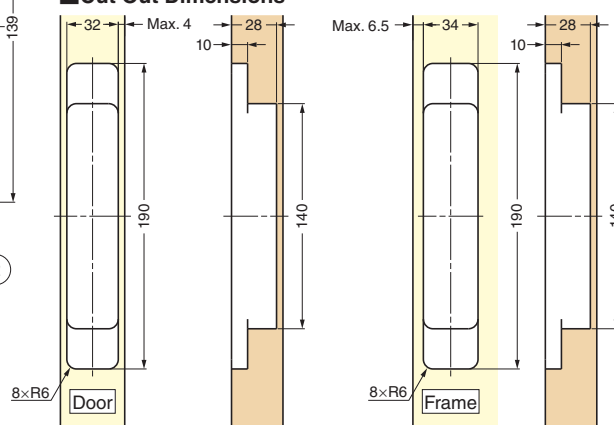
- Countersunk head screw 5×30 (4 pcs/hinge)
- Allen key size 4

■ Sold Separately

- Installation template HES3D-E190-TMP (P.474)
- Metal door bracket E190BKT (P.475)



■ Cut Out Dimensions



No.	Part Name	Material	Finish/Colour		
			DC	DN	BL
①	Body	Zinc Alloy (ZDC)	Satin Chrome	Satin Nickel	Black
②	Base Frame	Zinc Alloy (ZDC)	Satin Chrome	Satin Nickel	Black
③	Arm	Aluminum Alloy	Satin Chrome	Satin Nickel	Black
④	Shaft	Stainless Steel	Plain	Plain	Plain
⑤	Cover	ABS	Satin Chrome	Satin Nickel	Black

Video Link



Item Code	Item Name	Colour	Door Width	Door Thickness	Door Weight		Opening Angle	Weight	Box	Carton
170-025-498	HES3D-E190DC	Silver	Max. 900	Min. 38 mm	Max. 100 kg/2 pcs	Max. 125 kg/3 pcs	180°	1,113 g	2 pcs	12 pcs
170-025-499	HES3D-E190DN	Champagne Gold	Max. 900	Min. 38 mm	Max. 100 kg/2 pcs	Max. 125 kg/3 pcs	180°	1,113 g	2 pcs	12 pcs
170-025-539	HES3D-E190BL	Black	Max. 900	Min. 38 mm	Max. 100 kg/2 pcs	Max. 125 kg/3 pcs	180°	1,113 g	2 pcs	12 pcs

LAMP.

HES 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

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)

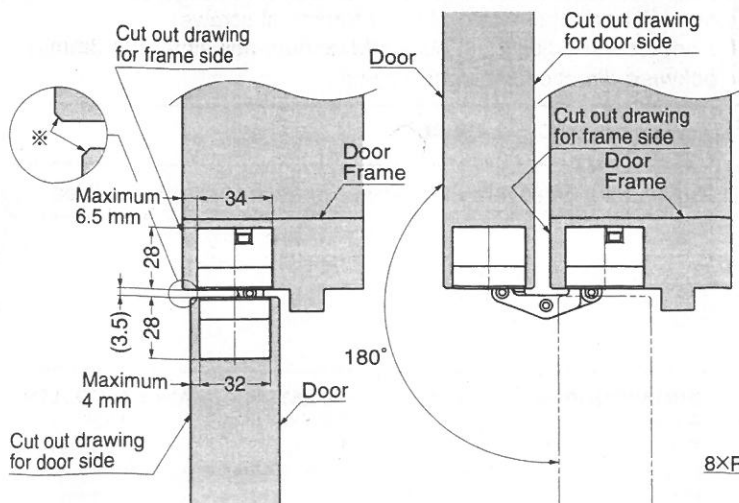
ADJUSTMENTS

Vertical adjustment	±3mm
Horizontal adjustment	+3mm, -2mm
Backward / orward adjustment	±1mm

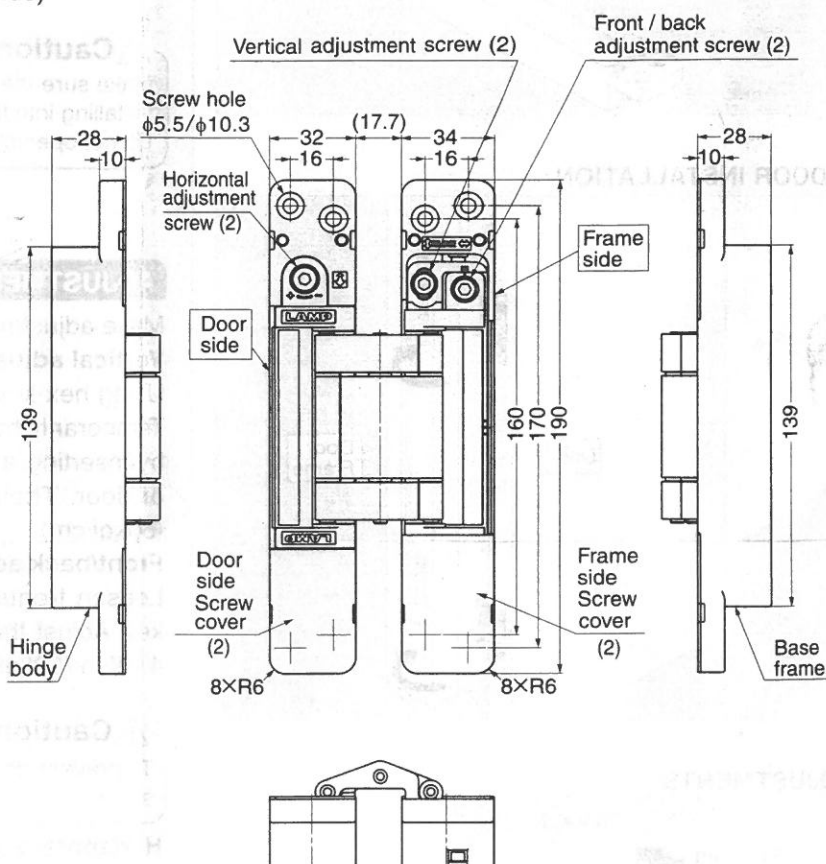
CUT OUT DRAWING

⚠ Caution

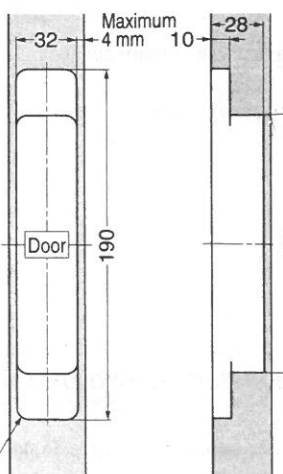
Round edges of door and frame by applying cuts with "C1 and over" or "R1 and over." (Reference to "*" in the drawing.)



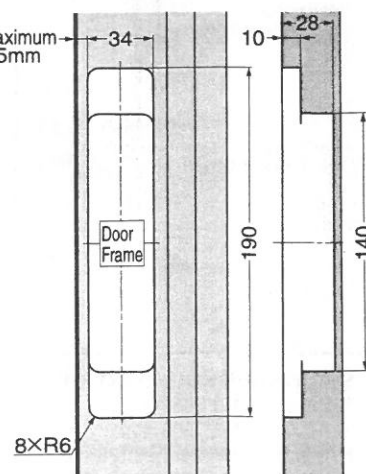
HINGE PARTS



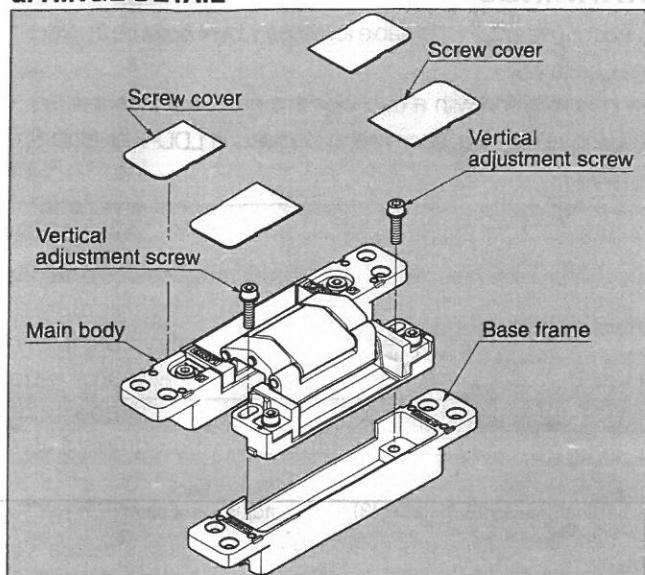
● Cut out drawing for door side



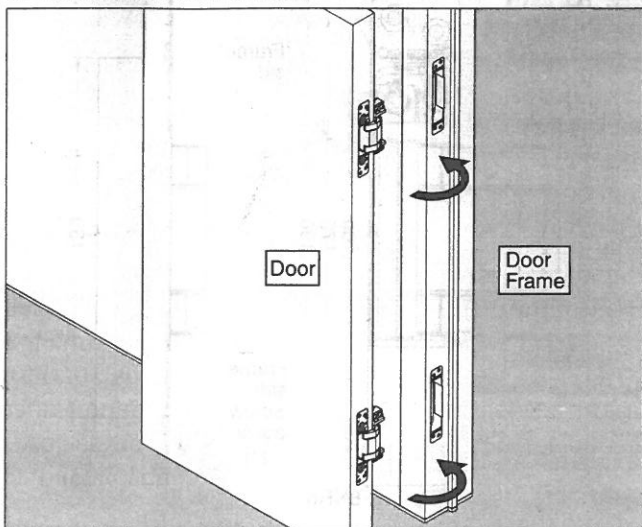
● Cut out drawing for frame side



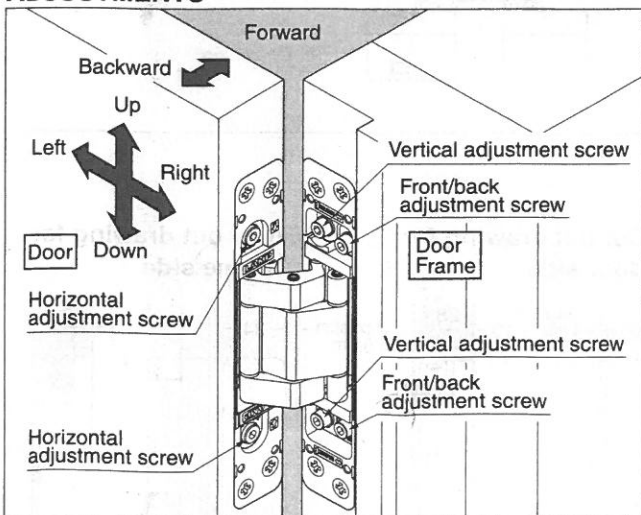
a. HINGE DETAIL



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.

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