

## NHN<sup>®</sup> KCH & KSM Series



A concealed hinge, also known as an invisible or hidden hinge, is a type of hinge that is designed to be hidden from view when a door is closed, which provides aesthetics with functionality when the door opens.

Measured material selection and an accurate design, leads to high durability and extends lifetime of the hinge. NHN Concealed hinges are available in different weight classes and finishes. With technical features you can achieve precise 3D adjustment and 200.000 test cycles ensures smooth movement of the door.

These hinges are also resistance to corrosion and have been tested for minimum 48 hours.

### Features

- Various models Suitable for doors with maximum width of 1200mm and maximum weight of 130kg.
- Maximum opening of 180 degrees.
- 3D adjustment for vertical, horizontal, depth
- After complete 200 000 cycles test, 3D adjust concealed hinge keep operational.
- Finishes available in black and silver. other finishes are available to special order.
- Quality O-rings that does not need any lubrication.

# MODEL NO. KCH 40-55



## NOTE

1. For indoor use only. not suitable for areas where it can be direct contact with water.
2. Please check with manufacturer in advanced if use with a door closer in order to make sure correct use.
3. The door is possible could not close if the door is deformed.
4. Need to check the screw at regular time to make sure it is fixed.

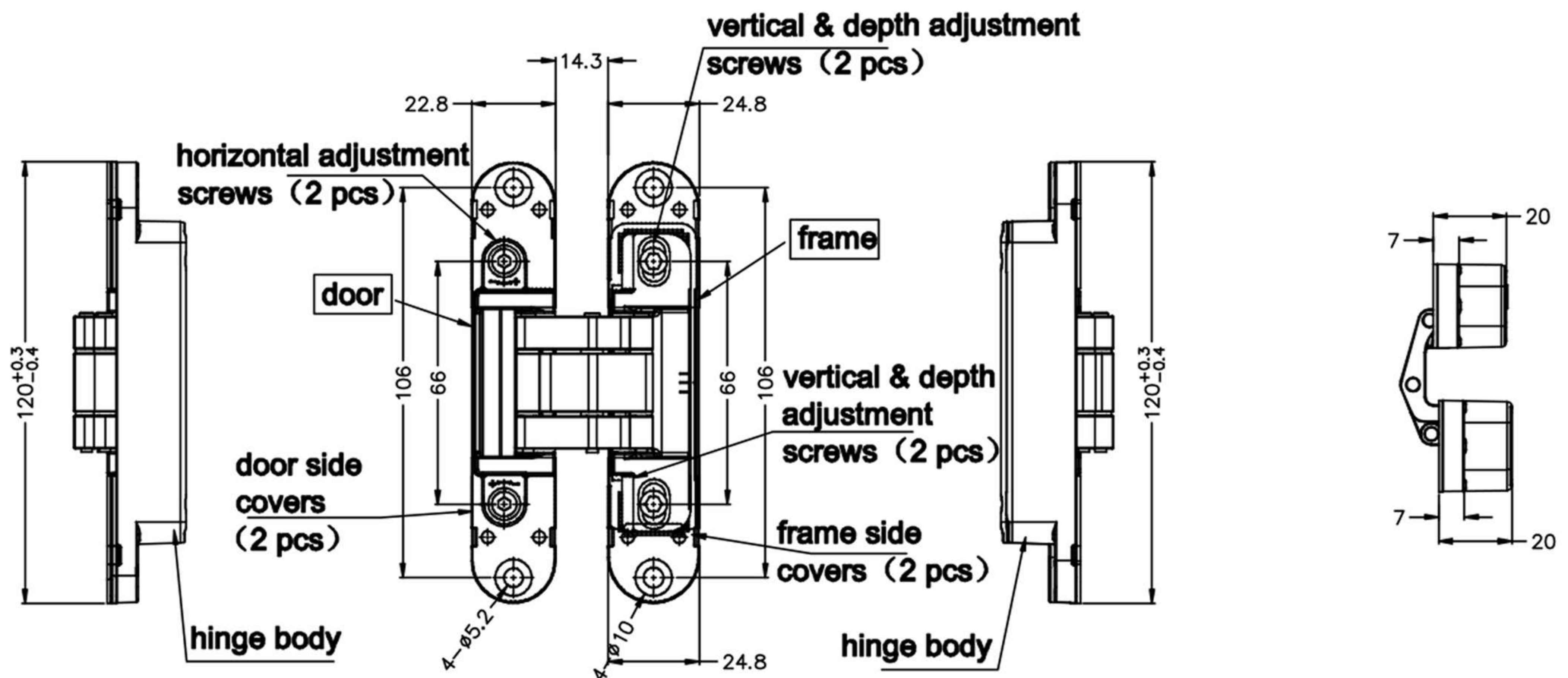
## COMPONENT PARTS

- \*Concealed Hinge 2 pcs
- \*Cover 8 pcs (door side x 4, frame side x 4)
- \*Screw (5x30) 8 pcs
- \*Allen wrench S4 1 pc
- \*Installation Manual 1 pc

## ADJUSTMENT

Vertical	±2mm
Horizontal	-2mm、+3mm
Depth	±1mm

## HINGE PARTS

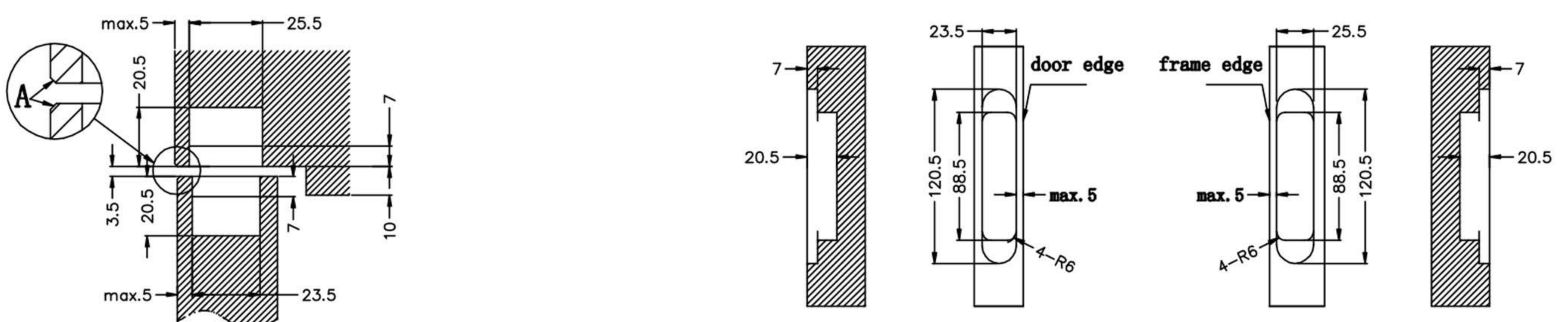


## ROUTING DRAWING

NOTE: The edge of door and frame need to be applied with C1 or R1 processing. (refer to "A" in the drawing)

cut out drawing for door side

cut out drawing for frame side



# MODEL NO. KCH 40-55



## Selection Chart

KCH4055		DW (mm)							Max. Door Weight (kg)
		700	750	800	850	900	950	1000	
DH (mm)	2100	2	2	2	2	2	3	3	40
	2200	3	3	3	3	3	3	3	
	2400	3	3	3	3	3	3	3	
	2600	3	3	3	3	3	4	4	
	2800	4	4	4	4	4	4	4	
	3000	4	4	4	4	4	4	4	
Number of hinges									

KCH4055		DW (mm)							Max. Door Weight (kg)
		700	750	800	850	900	950	1000	
DH (mm)	2100	3	3	3	3	3	4	4	55
	2200	3	3	3	3	3	4	4	50
	2400	3	3	3	3	3	4	4	
	2600	3	3	3	3	4	4	4	
	2800	4	4	4	4	4	4	4	
	3000	4	4	4	4	4	4	4	
Number of hinges									

# MODEL NO. KCH 60-80



## NOTE

1. For indoor use only. not suitable for areas where it can be direct contact with water.
2. Please check with manufacturer in advanced if use with a door closer in order to make sure correct use.
3. The door is possible could not close if the door is deformed.
4. Need to check the screw at regular time to make sure it is fixed.

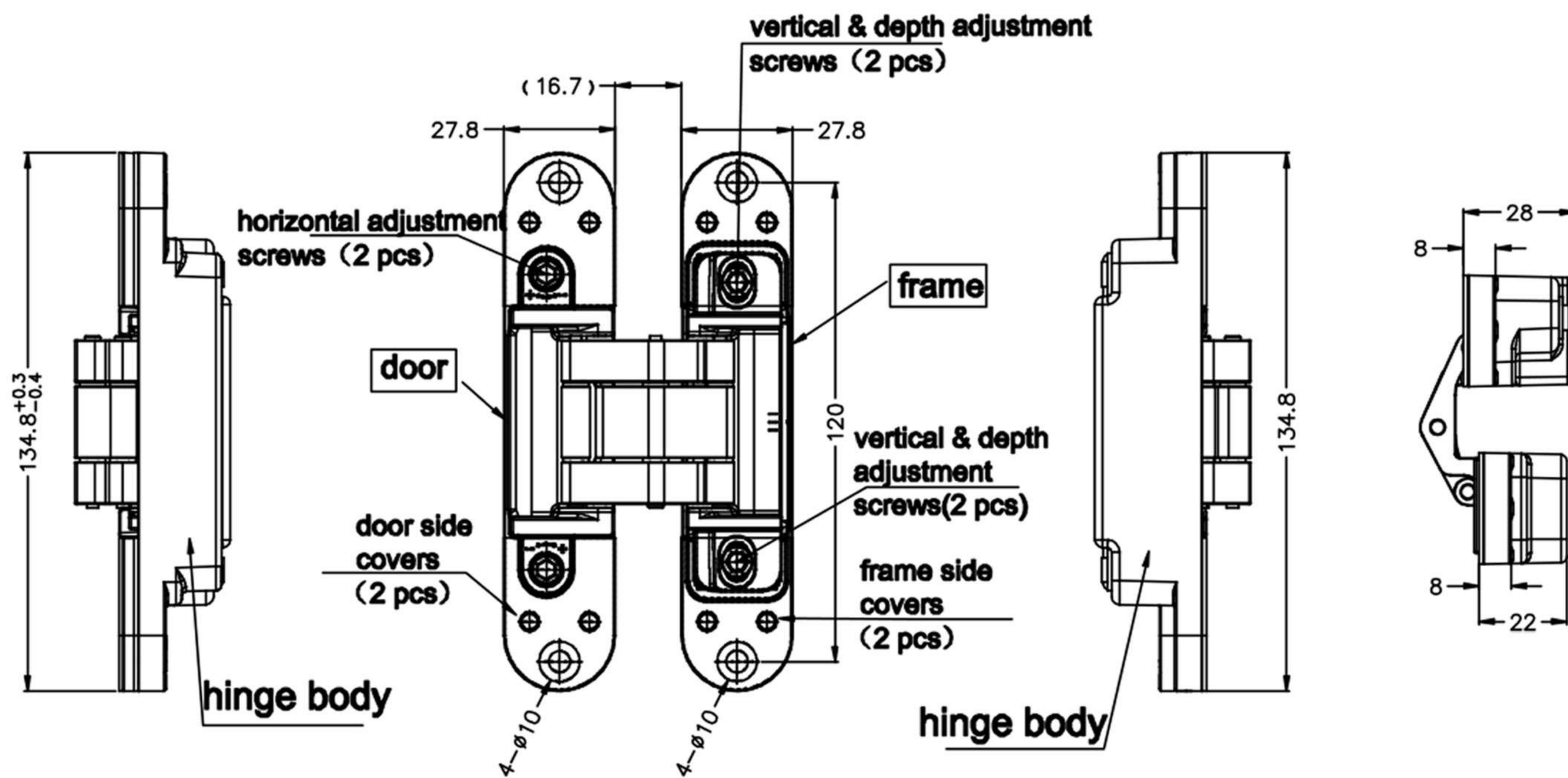
## COMPONENT PARTS

- \*Concealed Hinge 2 pcs
- \*Cover 8 pcs (door side x 4, frame side x 4)
- \*Screw (5x30) 8 pcs
- \*Allen wrench S4 1 pc
- \*Installation Manual 1 pc

## ADJUSTMENT

Vertical	±2mm
Horizontal	-2mm,+4mm
Depth	±1mm

## HINGE PARTS

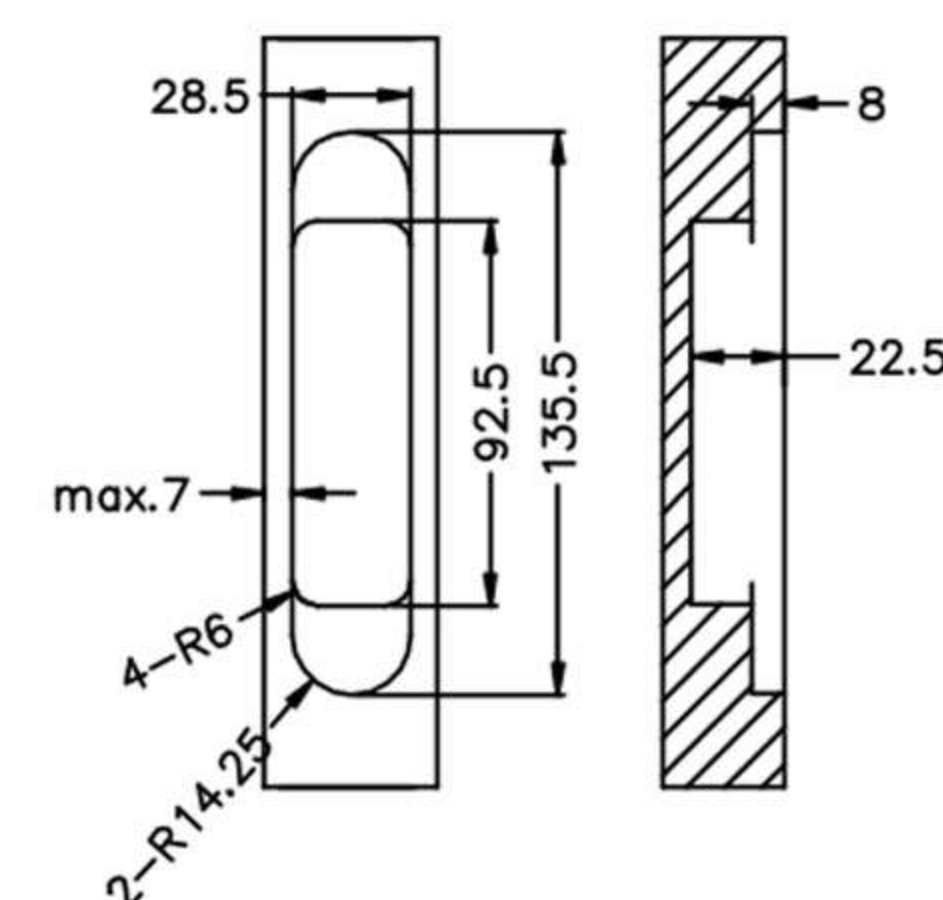
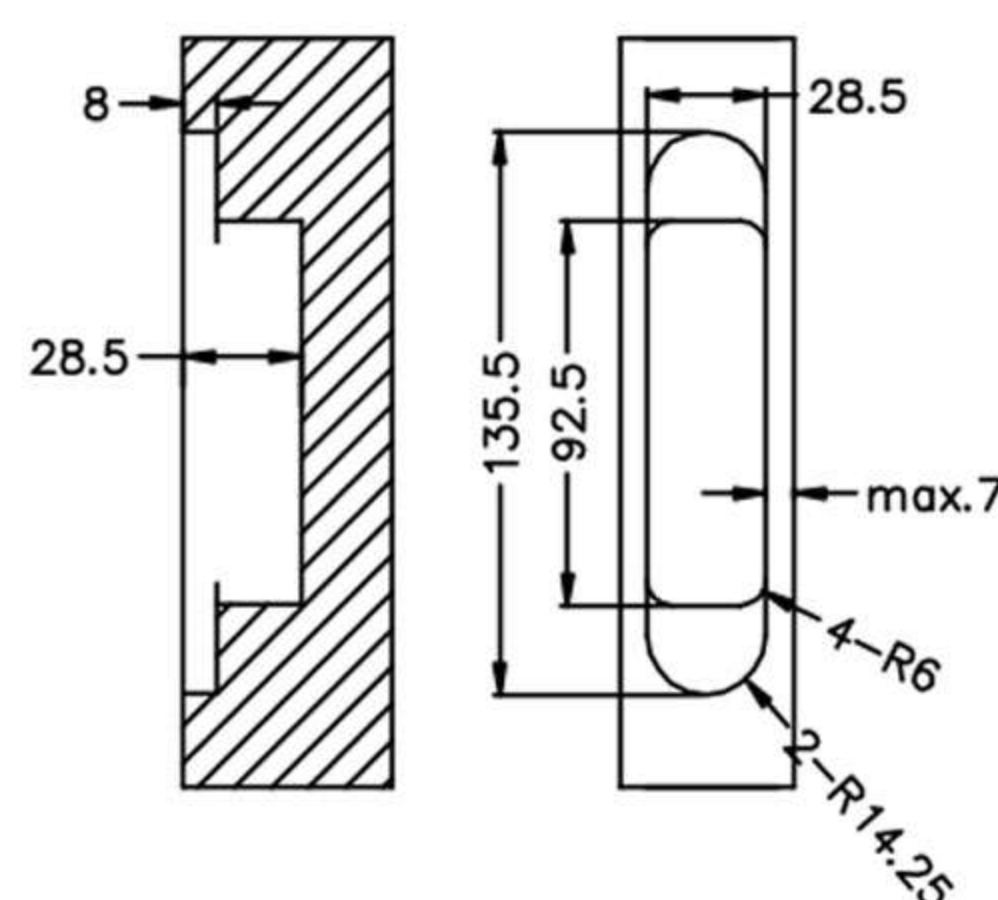
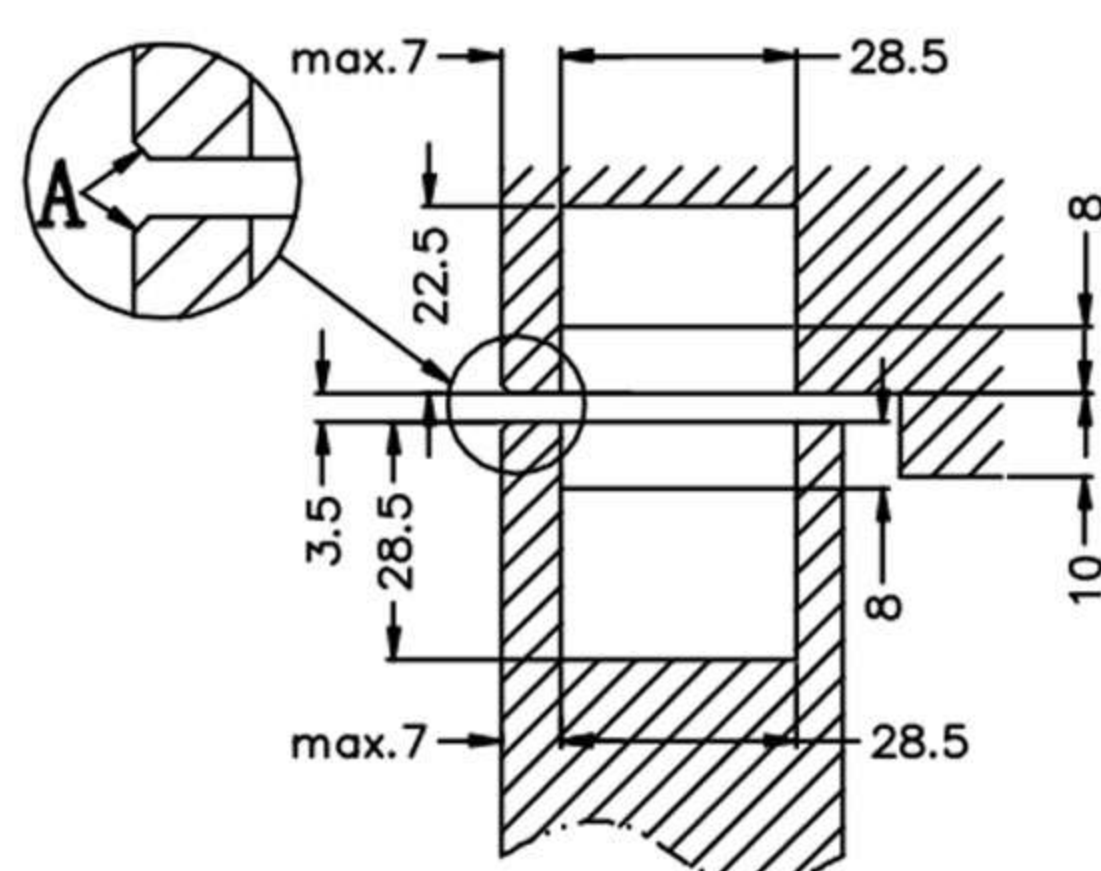


## ROUTING DRAWING

NOTE: The edge of door and frame need to be applied with C1 or R1 processing. (refer to "A" in the drawing)

routing drawing for door side

routing drawing for frame side



# MODEL NO. KCH 60-80



## Selection Chart

KCH6080		DW (mm)							Max. Door Weight (kg)
		800	850	900	950	1000	1050	1100	
DH (mm)	2100	2	2	2	3	3	3	3	60
	2200	3	3	3	3	3	3	3	
	2400	3	3	4	4	4	4	4	
	2600	3	3	4	4	4	4	4	
	2800	4	4	4	4	4	4	4	
	3000	4	4	4	4	4	4	4	
Number of hinges									

KCH6080		DW (mm)							Max. Door Weight (kg)
		800	850	900	950	1000	1050	1100	
DH (mm)	2100	3	3	3	4	4	4	4	80
	2200	3	3	3	4	4	4	4	70
	2400	3	3	4	4	4	4	4	
	2600	3	3	4	4	4	4	4	
	2800	4	4	4	4	4	4	4	
	3000	4	4	4	4	4	4	4	
Number of hinges									

# MODEL NO. KSM 60



### NOTE

1. For indoor use only. not suitable for areas where it can be direct contact with water.
2. Please check with manufacturer in advanced if use with a door closer in order to make sure correct use.
3. The door is possible could not close if the door is deformed.
4. Need to check the screw at regular time to make sure it is fixed.

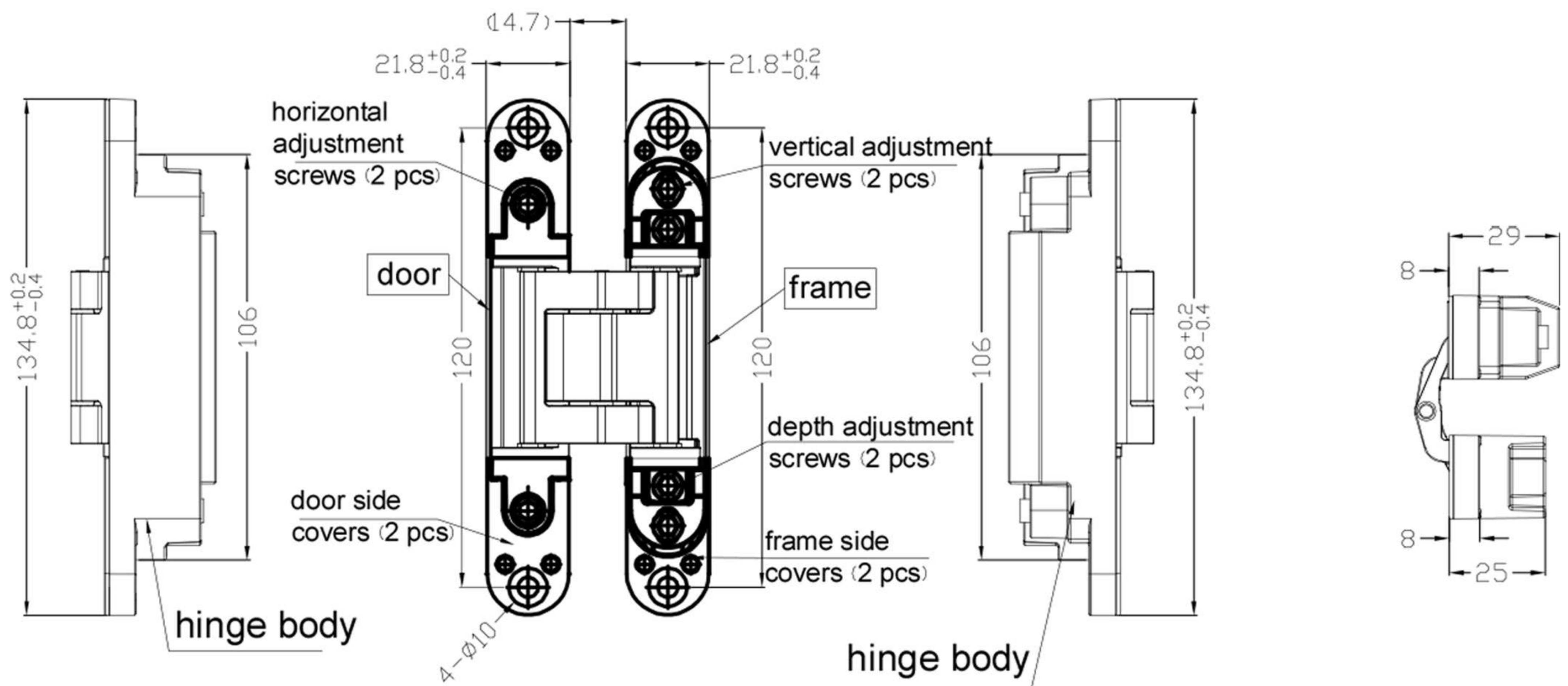
### COMPONENT PARTS

- \*Concealed Hinge 2 pcs
- \*Cover 8 pcs (door side x 4, frame side x 4)
- \*Screw (5x30) 8 pcs
- \*Allen Key S4 1 pc
- \*Installation Manual 1 pc

### ADJUSTMENT

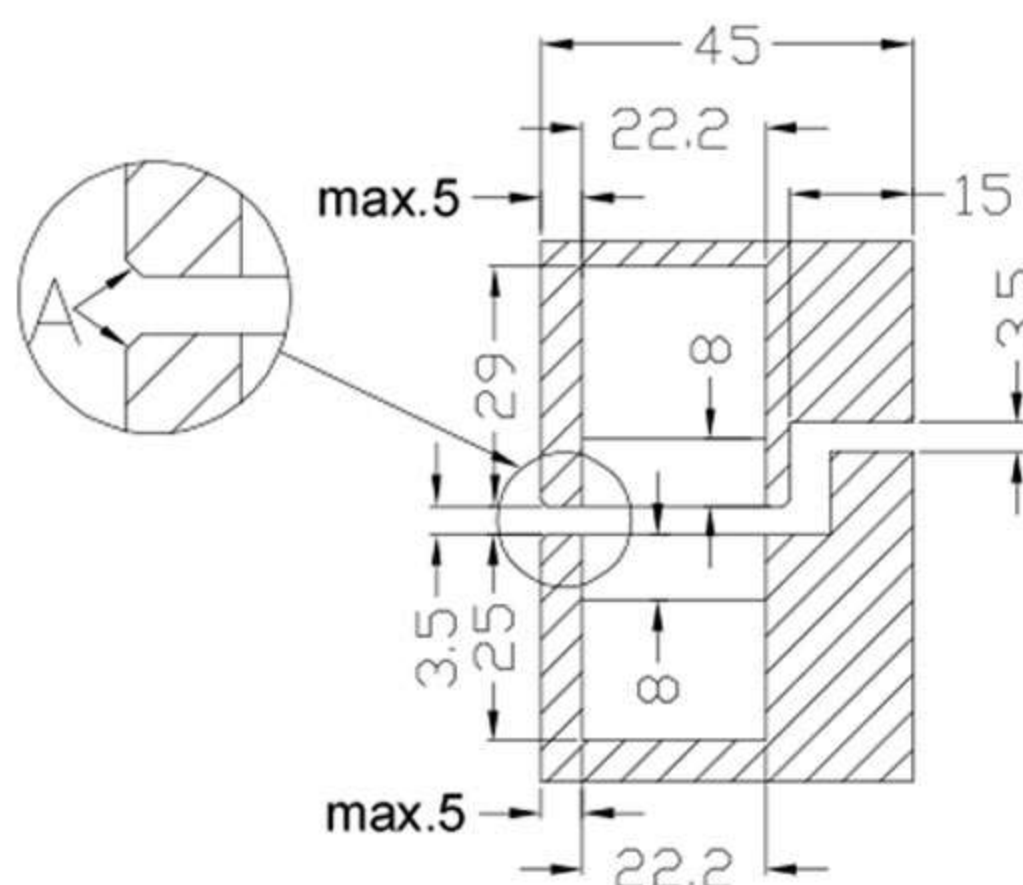
Vertical	±2.5mm
Horizontal	-2mm、 +3mm
Depth	±1mm

### HINGE PARTS

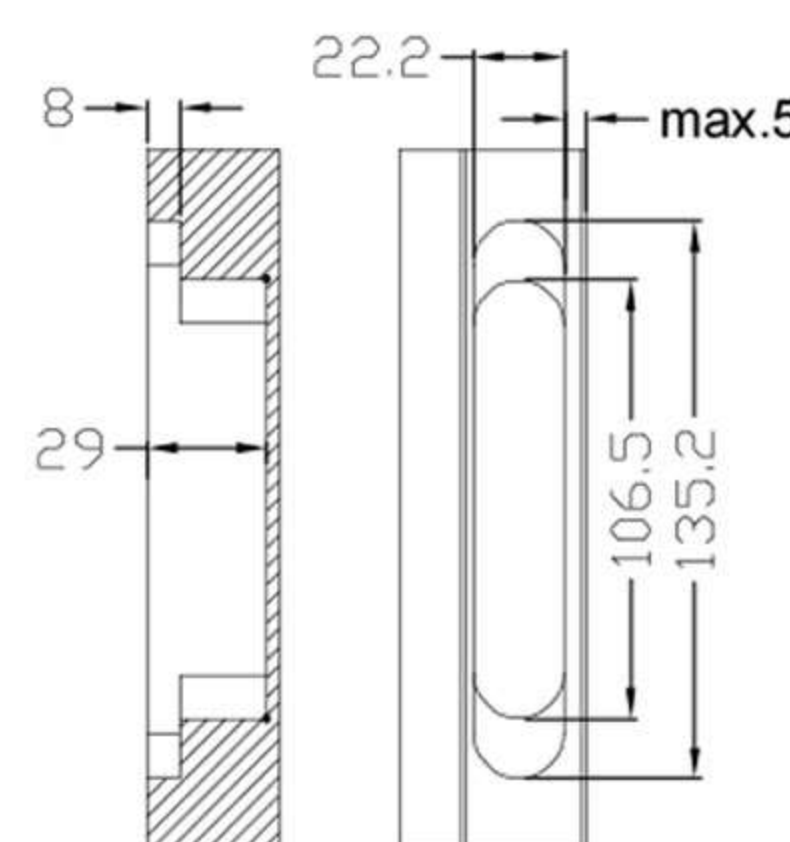


### CUT OUT DRAWING

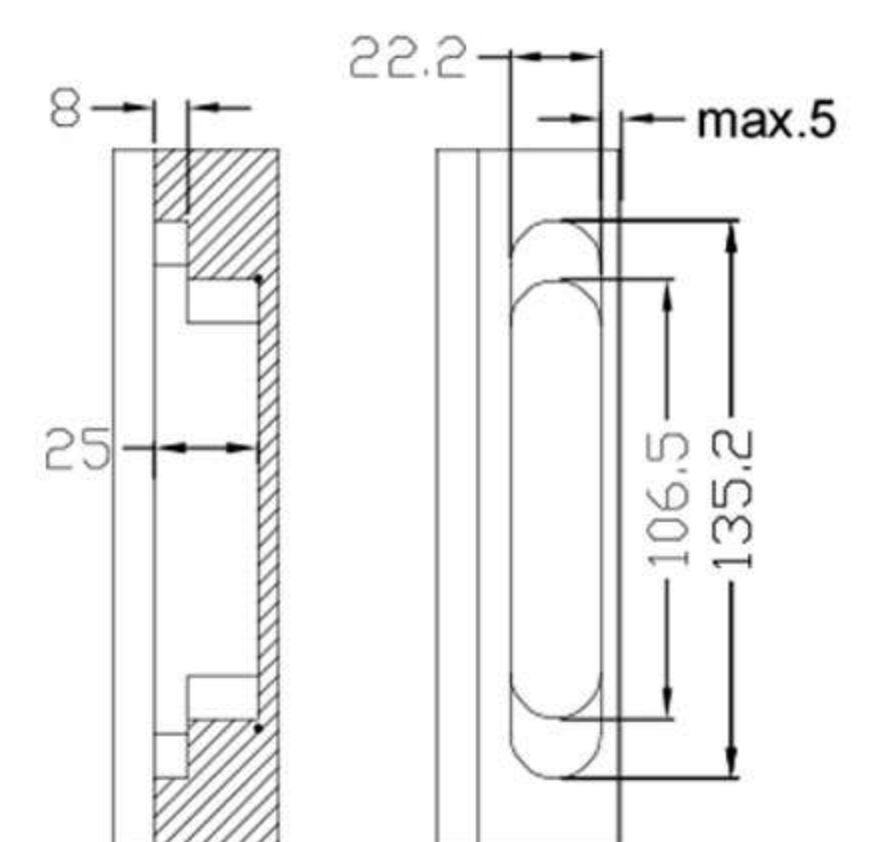
NOTE: The edge of door and frame need to be applied with C1 or R1 processing. (refer to "A" in the drawing)



cut out drawing for door side



cut out drawing for frame side



# MODEL NO. KSM 60



## Selection Chart

SM60		DW (mm)							Max. Door Weight (kg)
		600	650	700	750	800	850	900	
DH (mm)	1100	2	2	2	2	2	2	2	60
	1300	2	2	2	2	2	2	2	
	1500	2	2	2	2	2	2	2	
	1700	2	2	2	2	2	2	2	
	1900	2	2	2	2	2	2	2	
	2100	2	2	2	2	2	2	2	
Number of hinges									

SM60		DW (mm)							Max. Door Weight (kg)
		600	650	700	750	800	850	900	
DH (mm)	1100	3	3	3	3	3	3	3	80
	1300	3	3	3	3	3	3	3	
	1500	3	3	3	3	3	3	3	
	1700	3	3	3	3	3	3	3	
	1900	3	3	3	3	3	3	3	
	2100	3	3	3	3	3	3	3	
Number of hinges									

SM60		DW (mm)							Max. Door Weight (kg)
		900	950	1000	1050	1100	1150	1200	
DH (mm)	2500	3	4	4	4	4	4	4	60
	2700	4	4	4	4	4	4	4	
	2900	4	4	4	4	4	4	4	
	3100	4	4	4	4	4	4	4	
	3300	4	4	4	4	4	4	4	
	3500	4	4	4	4	4	4	4	
Number of hinges									

# MODEL NO. KCH 80-100



## NOTE

1. For indoor use only. not suitable for areas where it can be direct contact with water.
2. Please check with manufacturer in advanced if use with a door closer in order to make sure correct use.
3. The door is possible could not close if the door is deformed.
4. Need to check the screw at regular time to make sure it is fixed.

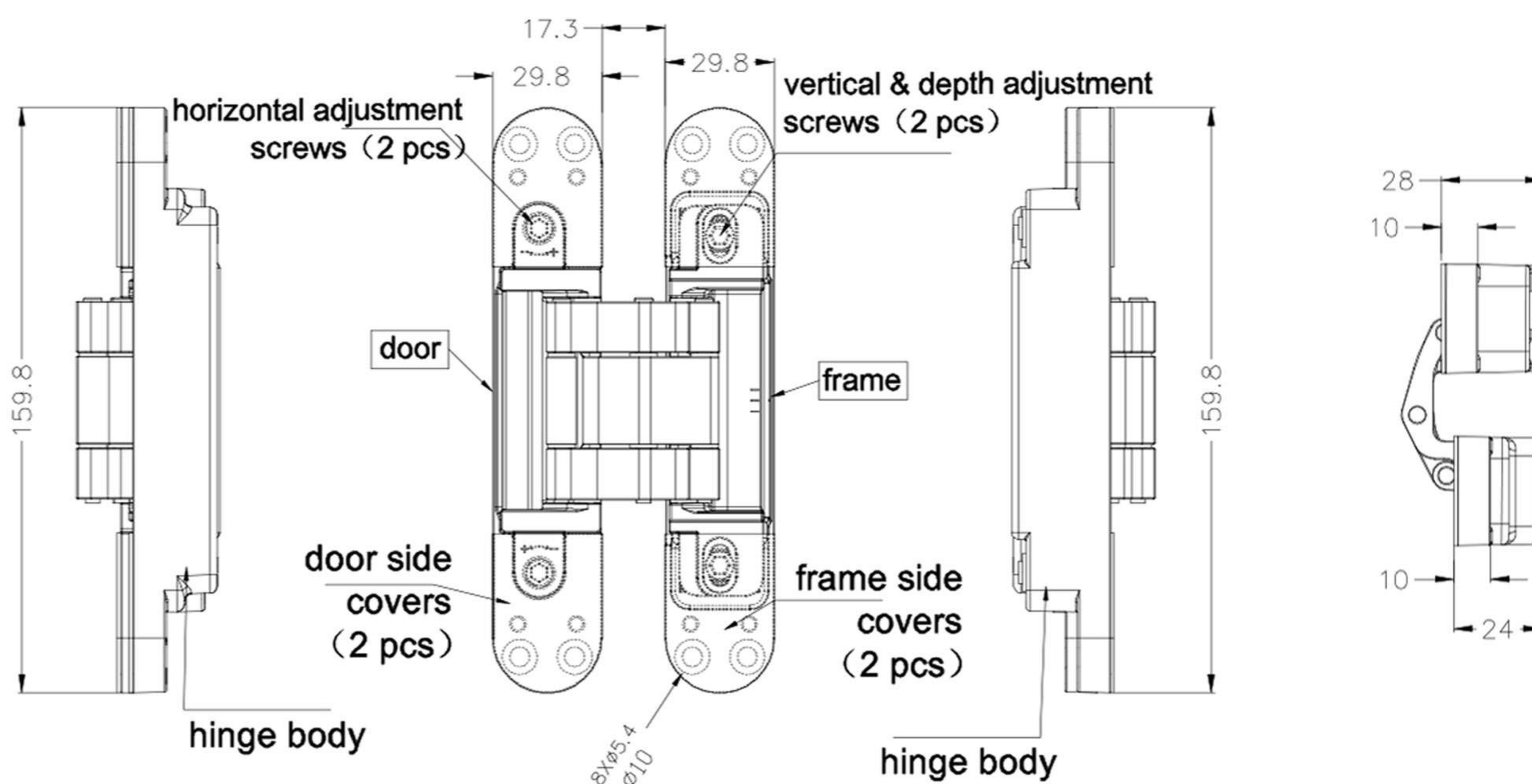
## COMPONENT PARTS

- \*Concealed Hinge 2 pcs
- \*Cover 8 pcs
- \*Screw (5x30) 16 pcs
- \*Allen wrench S4 1 pc
- \*Installation Manual 1 pc

## ADJUSTMENT

Vertical	±3mm
Horizontal	+4mm, -2mm
Depth	±1mm

## HINGE PARTS

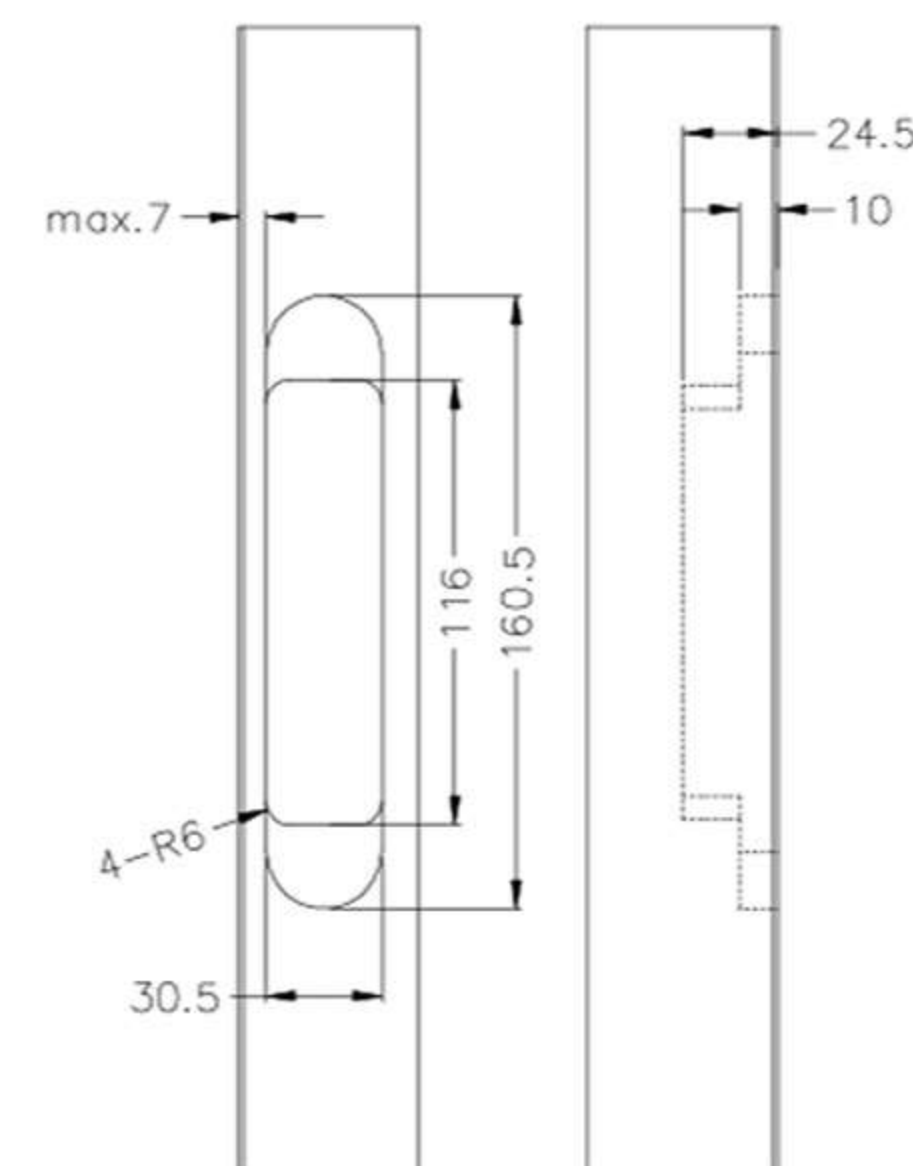
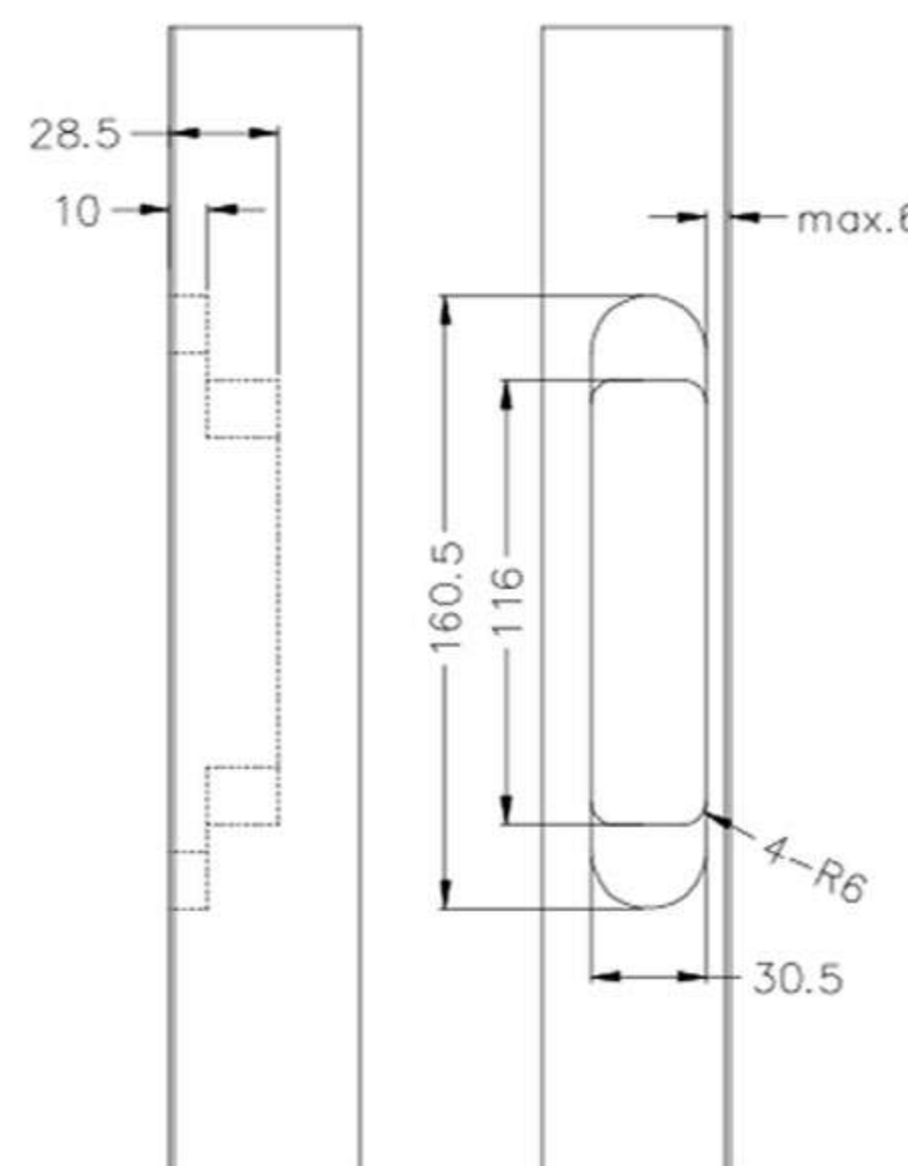
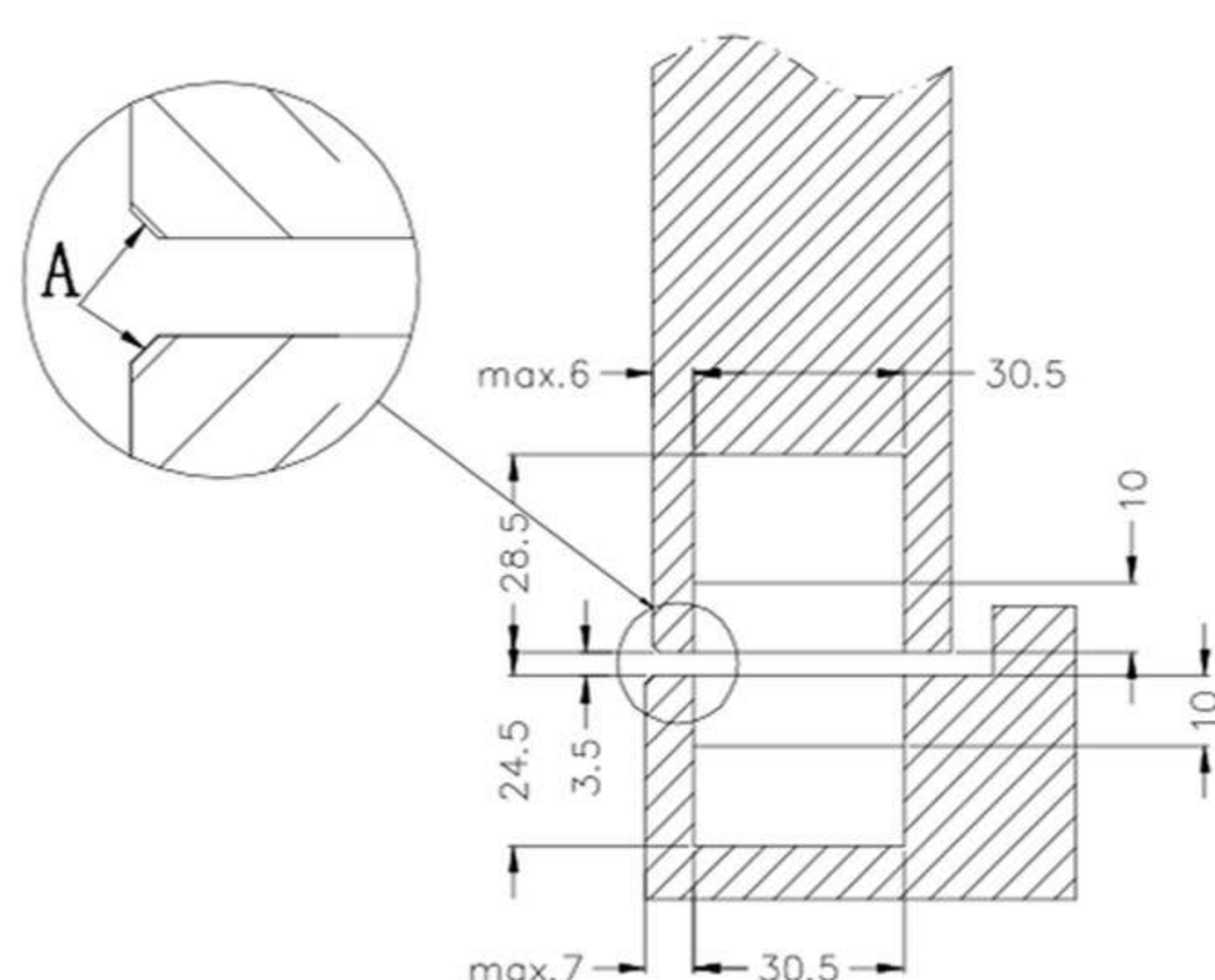


## CUT OUT DRAWING

NOTE: The edge of door and frame need to be applied with C1 or R1 processing.(refer to "A" in the drawing)

cut out drawing for door side

cut out drawing for frame side



# MODEL NO. KCH 80-100



## Selection Chart

KCH80100		DW (mm)					Max. Door Weight (kg)
		900	950	1000	1050	1100	
DH (mm)	2100	2	3	3	3	3	80
	2200	3	4	4	4	4	
	2400	3	4	4	4	4	
	2600	3	4	4	4	4	
	2800	4	4	4	4	4	
	3000	4	4	4	4	4	
Number of hinges							

KCH80100		DW (mm)					Max. Door Weight (kg)
		900	950	1000	1050	1100	
DH (mm)	2100	3	4	4	4	4	100
	2200	3	4	4	4	4	90
	2400	3	4	4	4	4	
	2600	3	4	4	4	4	
	2800	4	4	4	4	4	
	3000	4	4	4	4	4	
Number of hinges							

# MODEL NO. KCH 100130



## NOTE

1. For indoor use only. not suitable for areas where it can be direct contact with water.
2. Please check with manufacturer in advanced if use with a door closer in order to make sure correct use.
3. The door is possible could not close if the door is deformed.
4. Need to check the screw at regular time to make sure it is fixed.

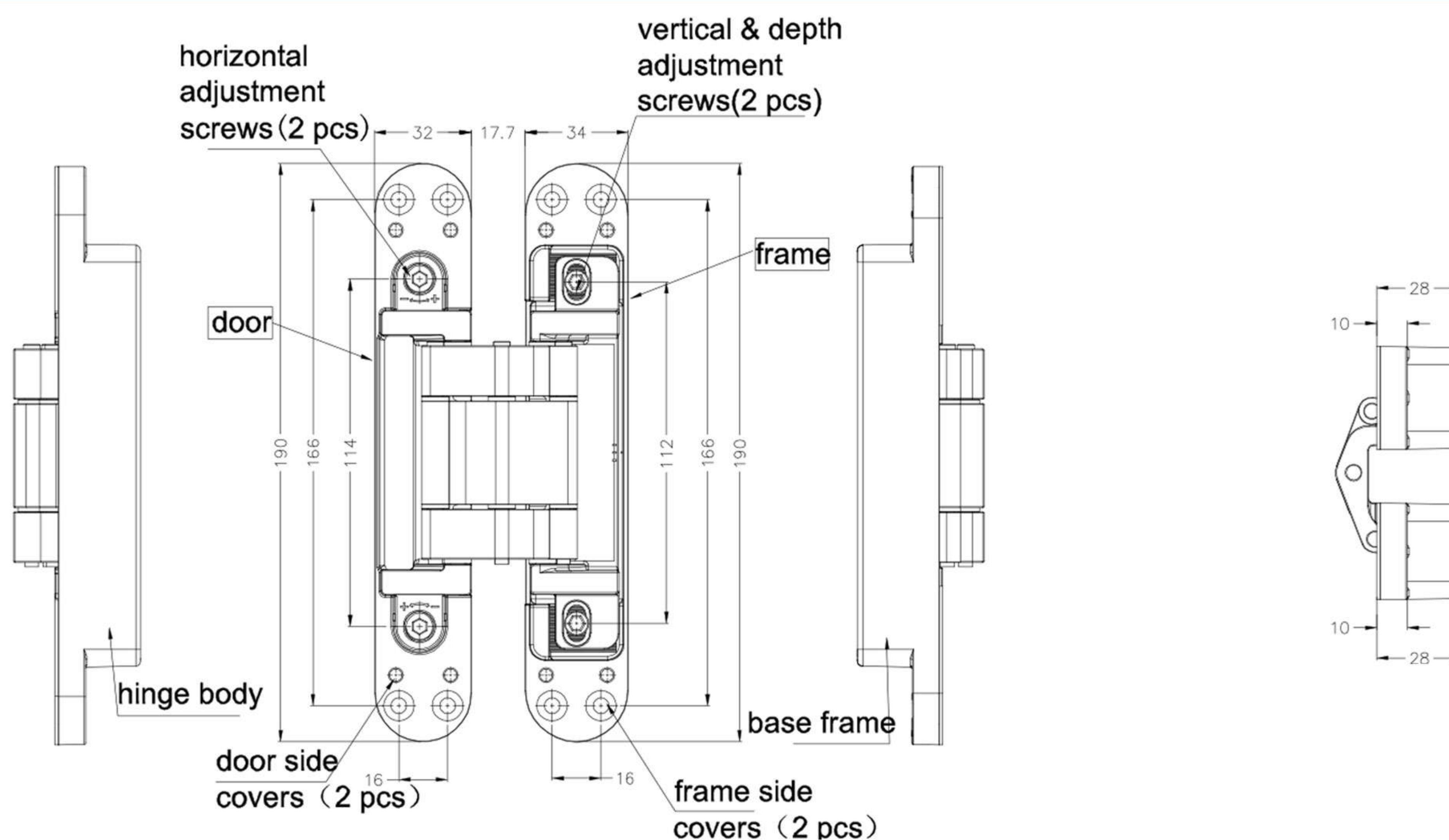
## COMPONENT PARTS

- \*Concealed Hinge 2 pcs
- \*Cover 8 pcs (door side x 4, frame side x 4)
- \*Screw (5x30) 16 pcs
- \*Allen Key S4 1 pc
- \*Installation Manual 1 pc

## ADJUSTMENT

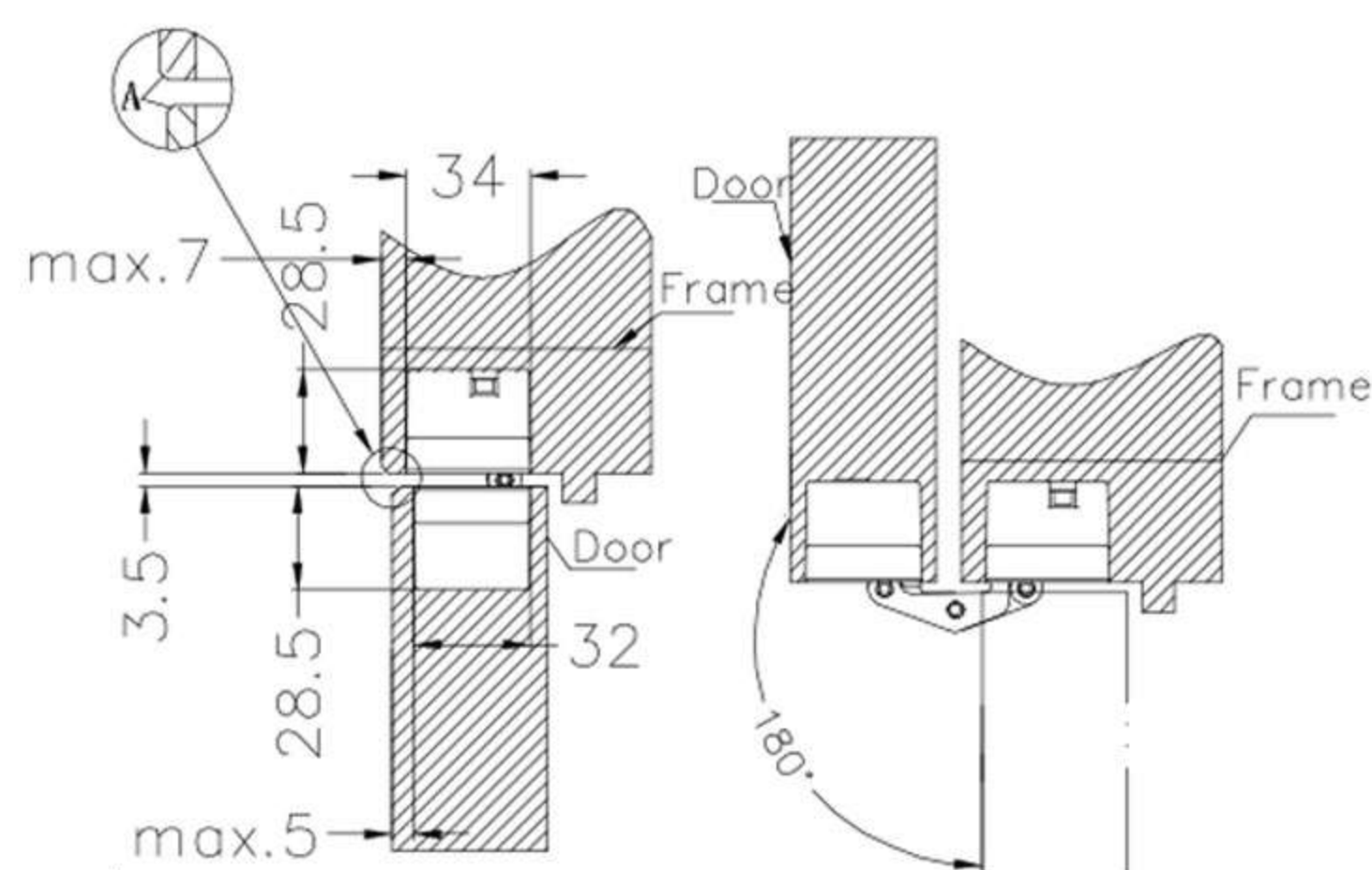
Vertical	±3mm
Horizontal	±2mm
Depth	±1mm

## HINGE PARTS

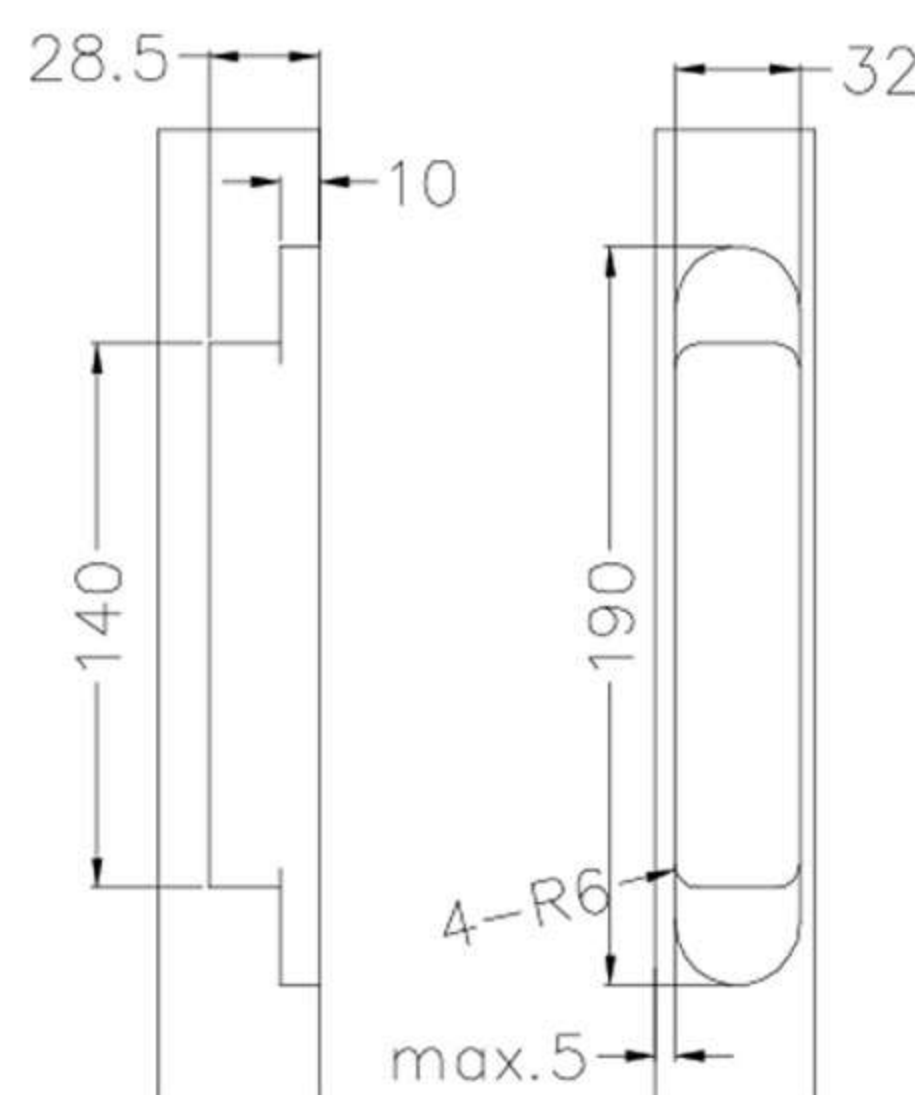


## CUT OUT DRAWING

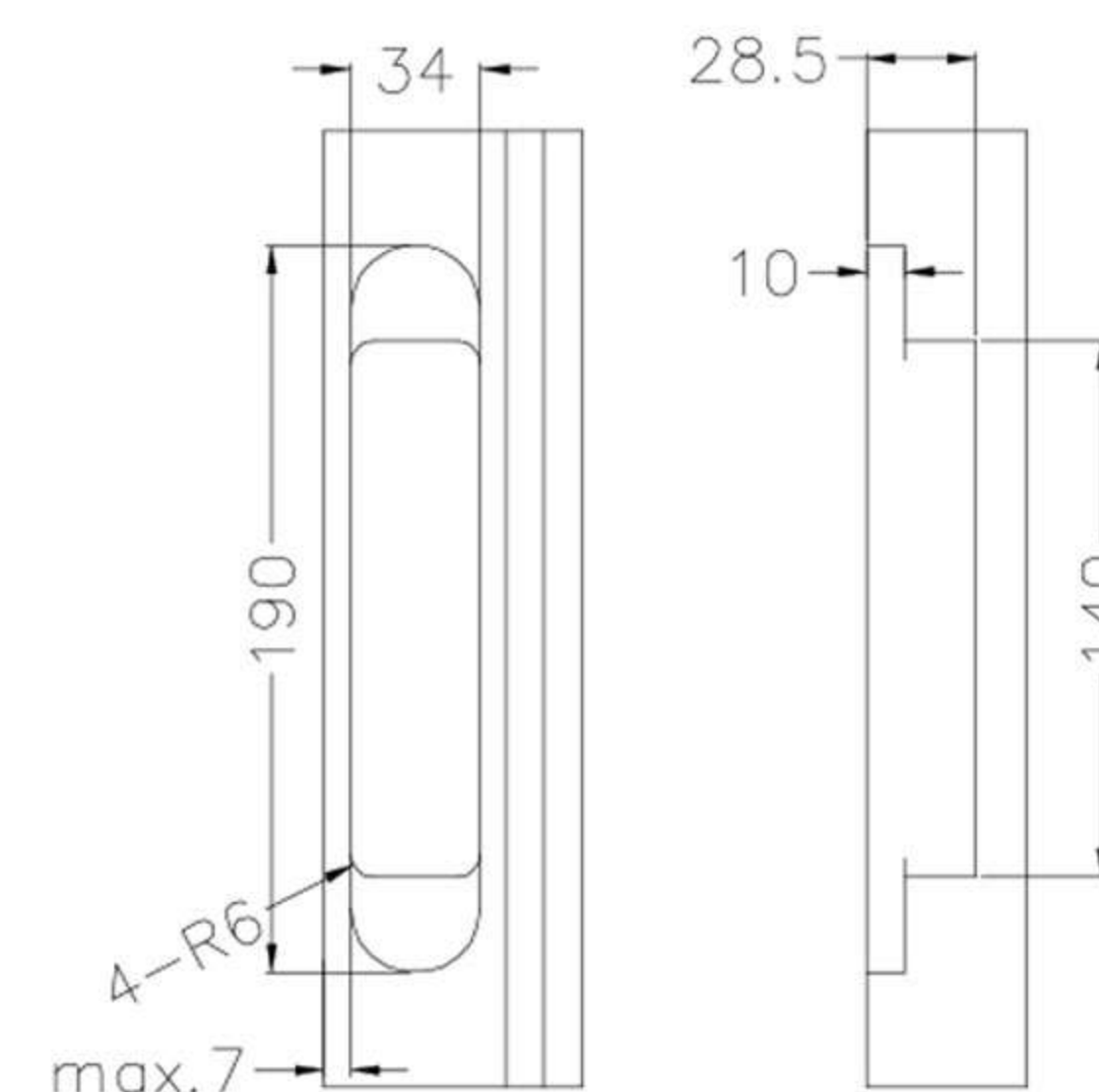
NOTE: The edge of door and frame need to be applied with C1 or R1 processing. (refer to "A" in the drawing)



cut out drawing for door side



cut out drawing for frame side



**MODEL NO. KCH 100-130****Selection Chart**

KCH100130		DW (mm)							Max. Door Weight (kg)
		900	950	1000	1050	1100	1150	1200	
DH (mm)	2100	2	3	3	3	3	3	3	100
	2300	2	3	4	4	4	4	4	
	2500	3	4	4	4	4	4	4	
	2700 to 3500	4	4	4	4	4	4	4	
Number of hinges									

KCH100130		DW (mm)							Max. Door Weight (kg)
		900	950	1000	1050	1100	1150	1200	
DH (mm)	2100	3	3	3	3	3	3	3	120
	2300 to 3500	4	4	4	4	4	4	4	
Number of hinges									

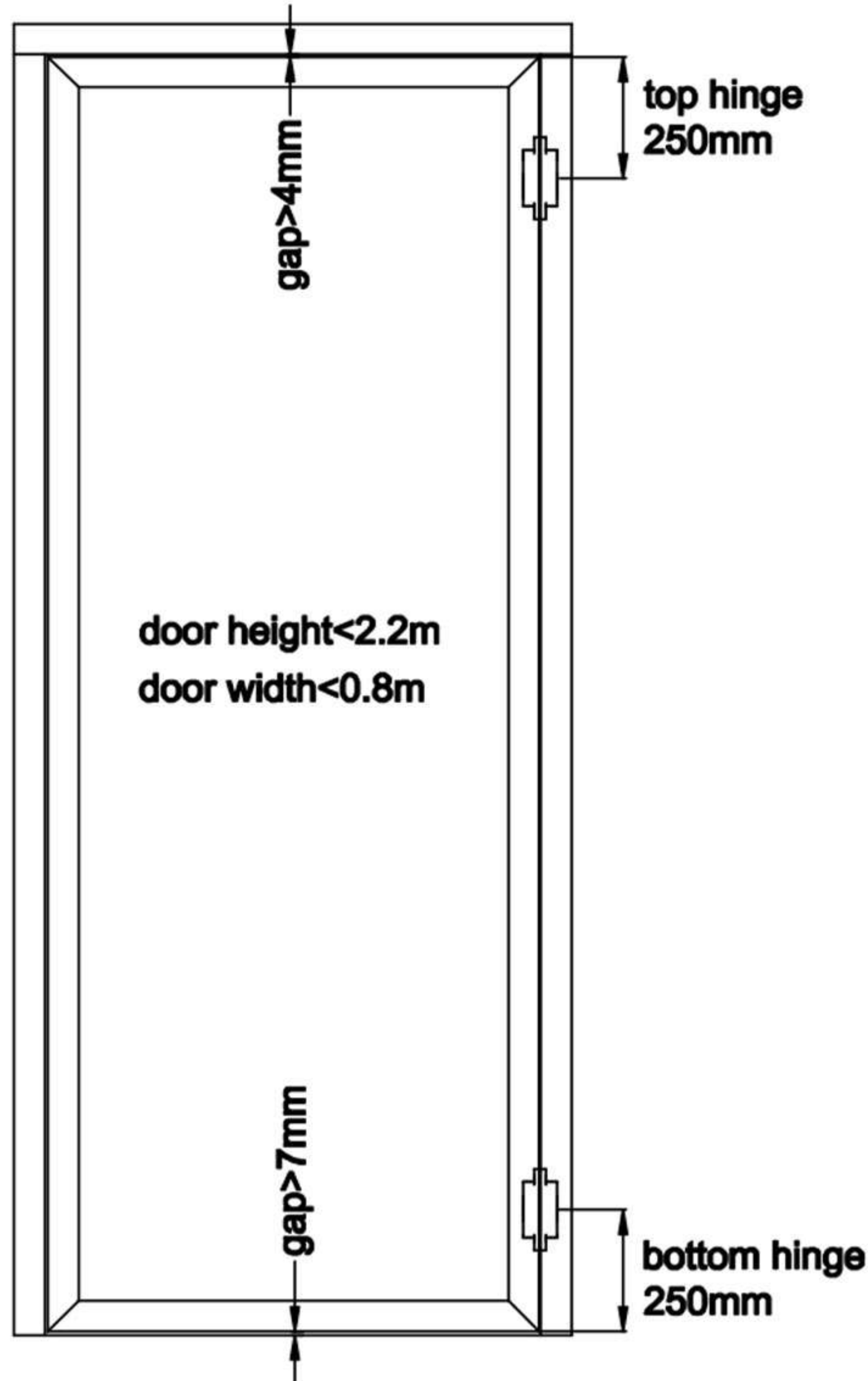
KCH100130		DW (mm)							Max. Door Weight (kg)
		900	950	1000	1050	1100	1150	1200	
DH (mm)	2100	3	4	4	4	4	4	4	130
	2300 to 3500	4	4	4	4	4	4	4	
Number of hinges									

# KCH & KSM Series

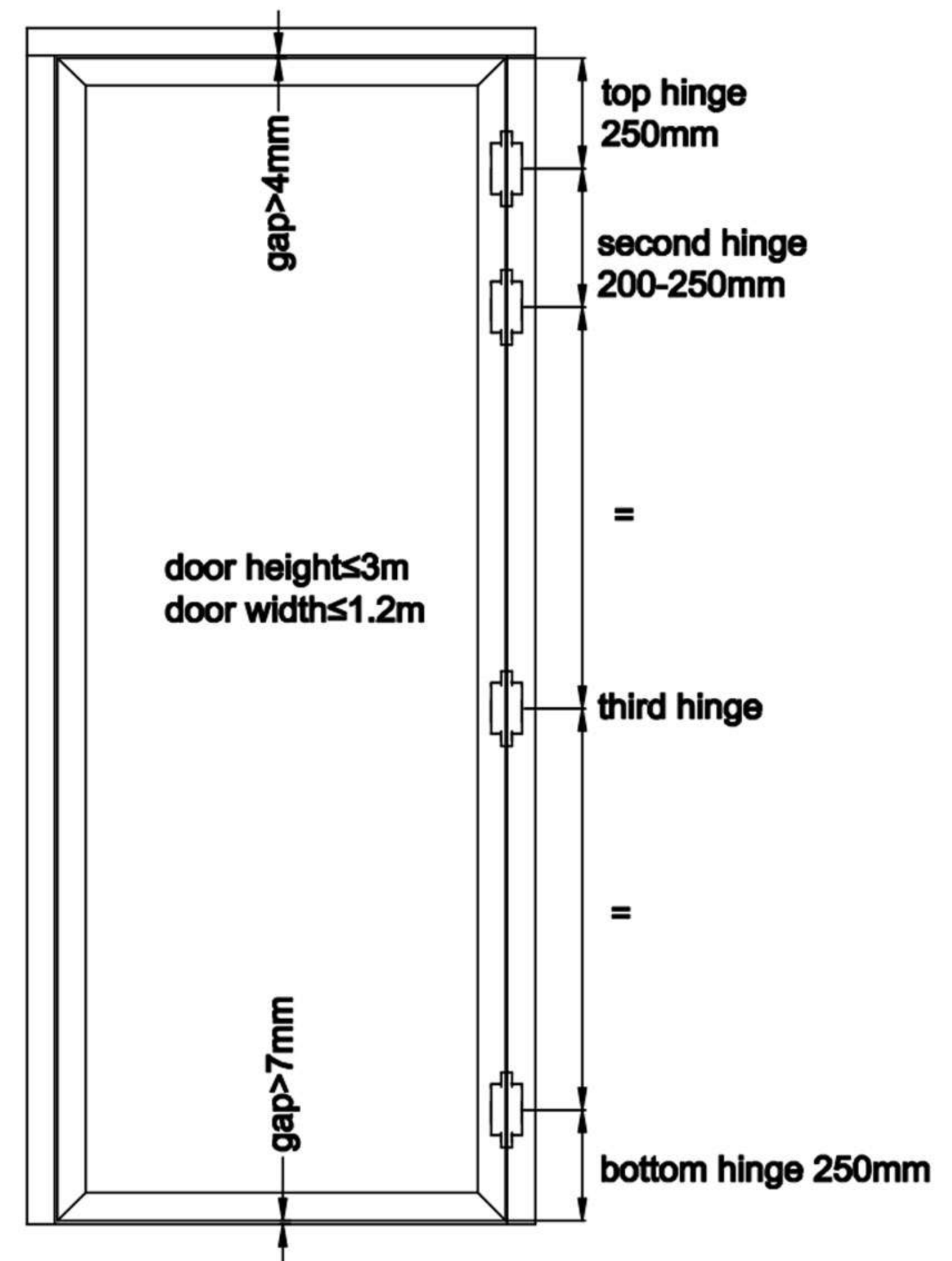
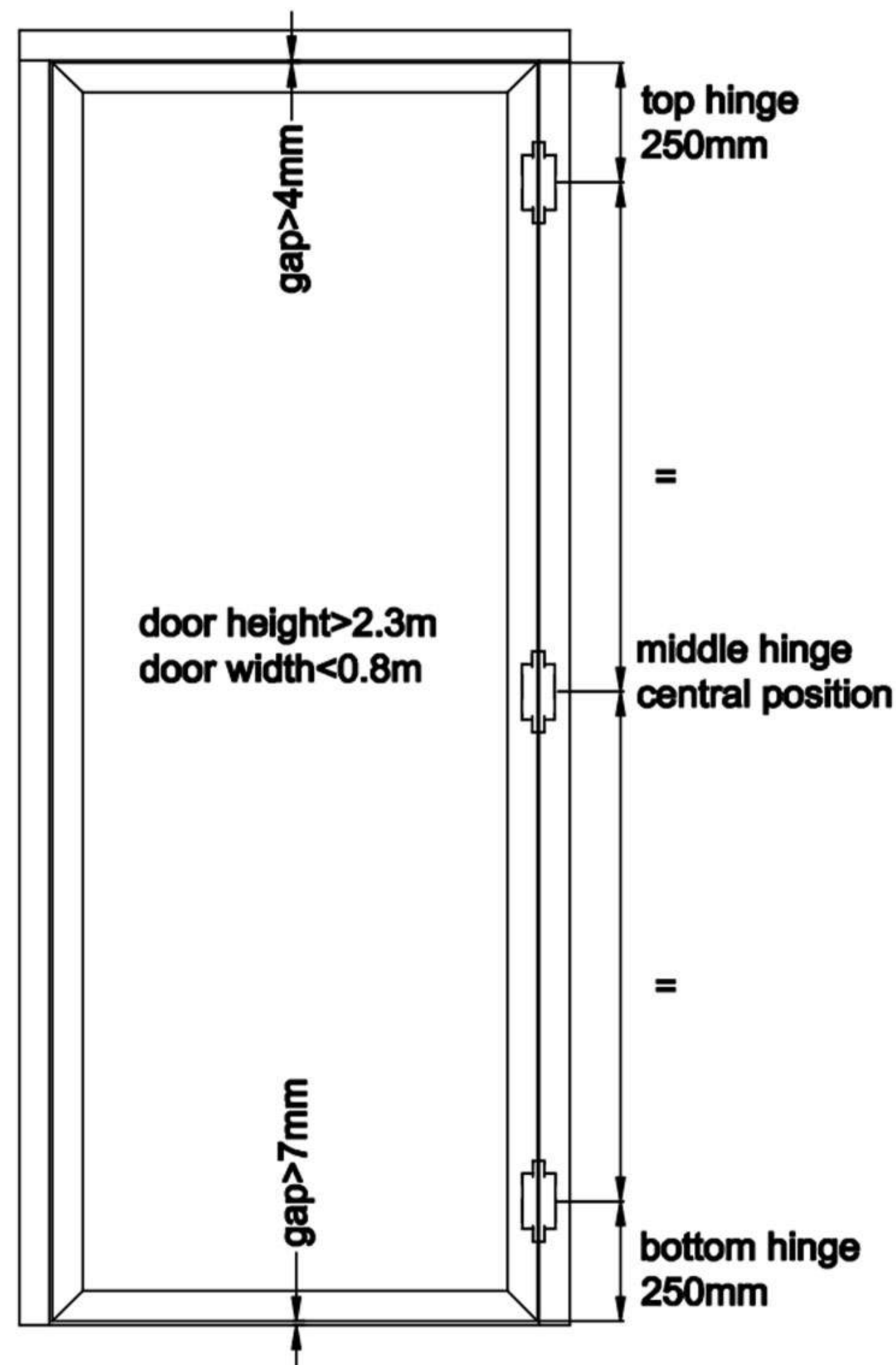
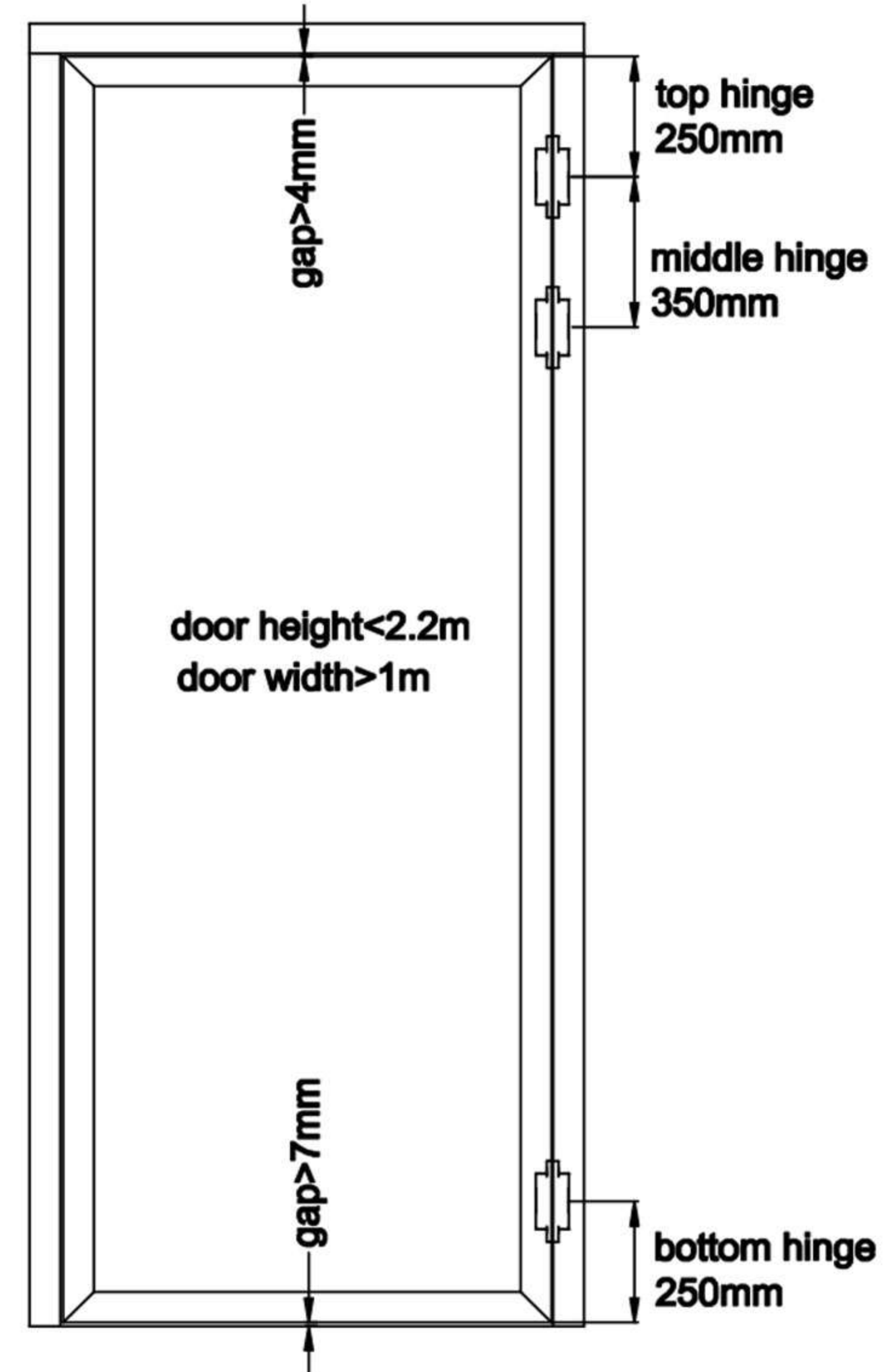


## Installation Position

Normal Door



Over-width Door



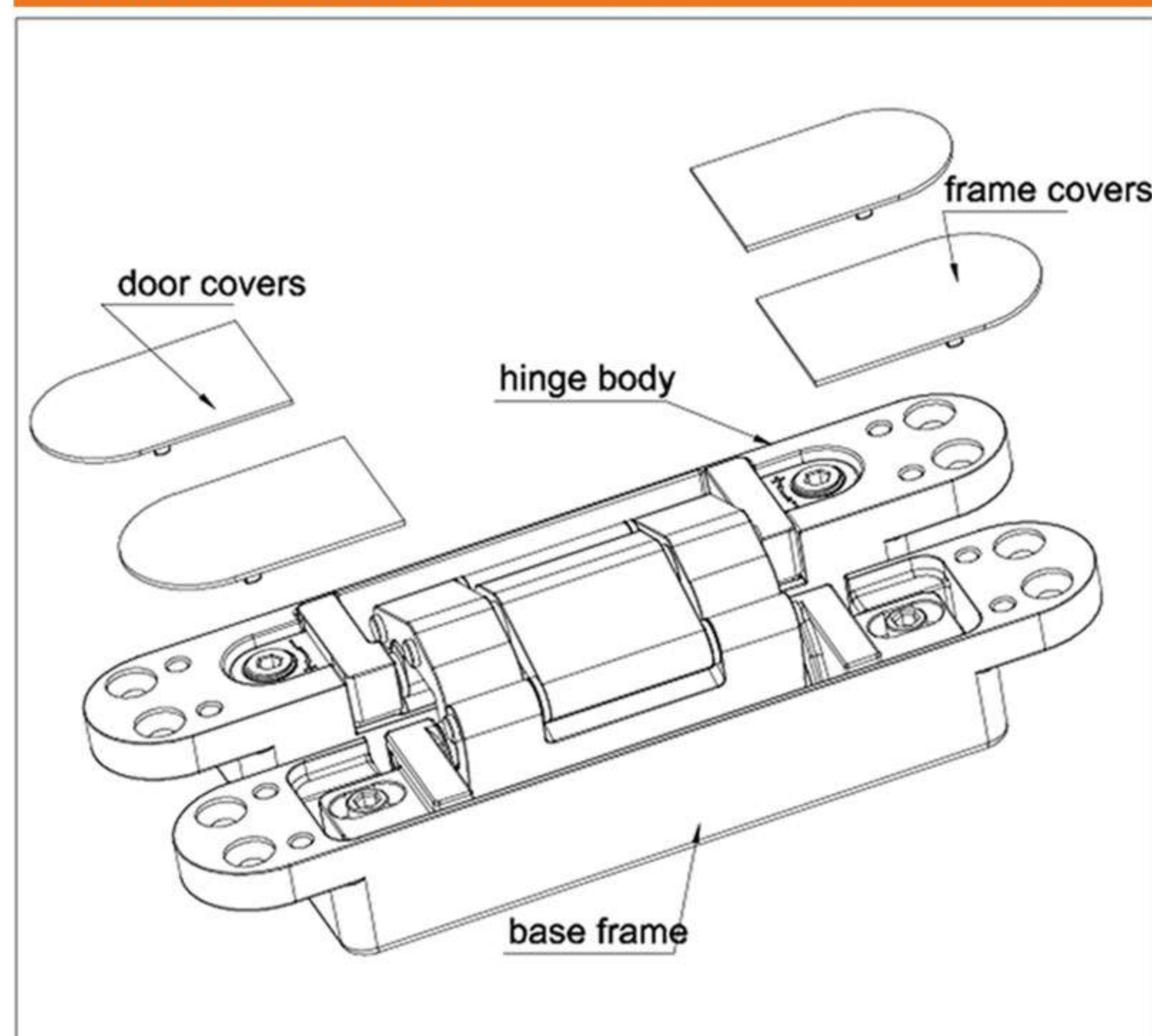
Over-height Door

Over-height & width Door

# KCH & KSM Series



## a.HINGE DETAIL



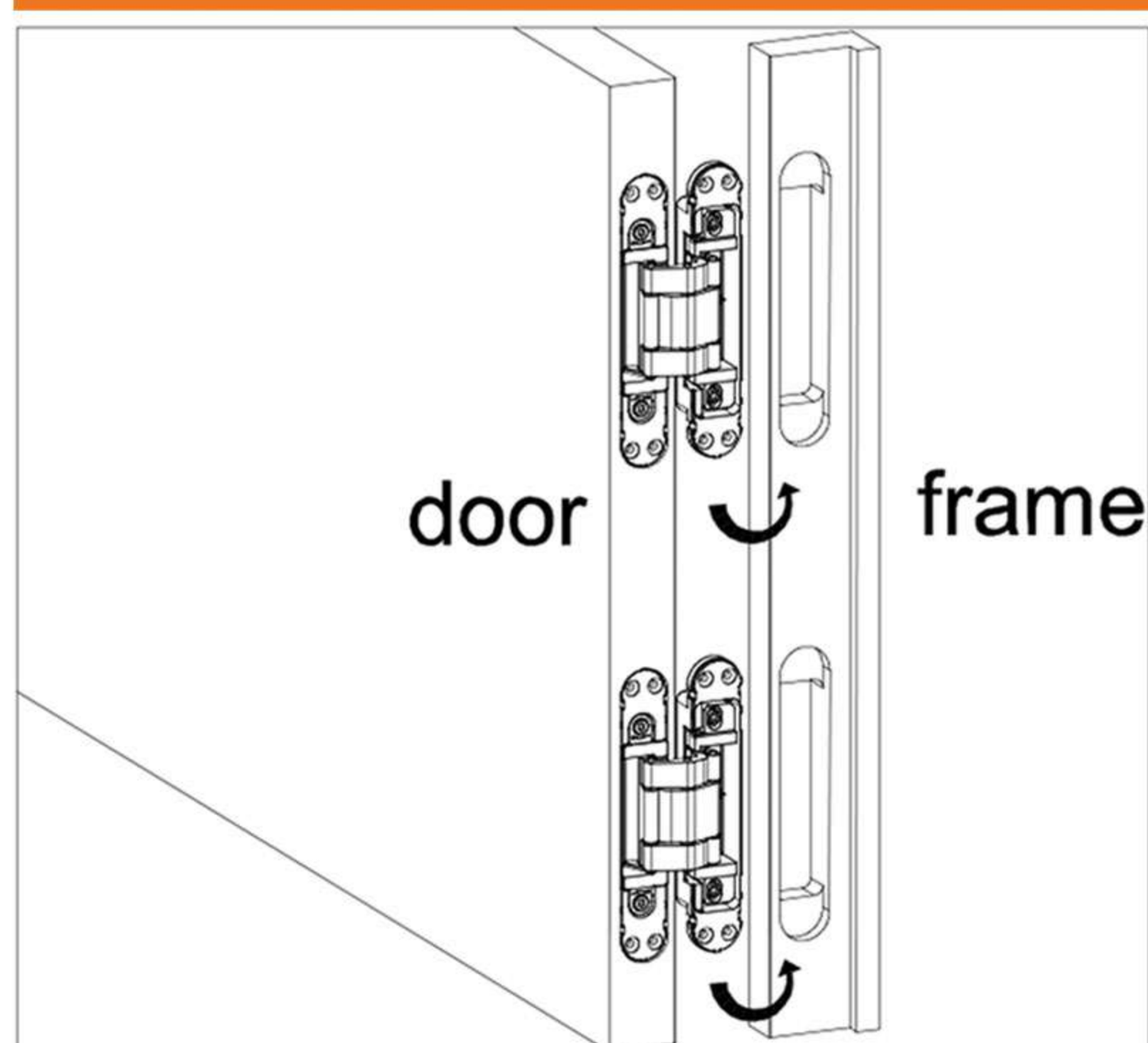
## INSTALLATION STEP

- 1.Refer to figure a,remove the cover and separate base frame from hinge.
- 2.Install base frame parts into cutout position.
- 3.Install door side parts into cutout position.
- 4.Refer to figure b,temporarily hang the door by inserting both upper and lower hinge bodies into the upper and lower base frames at the same time .
- 5.Make sure all screws are fixed after installation .

## NOTE

- 1.Make sure the hinge body is installed in correct position on door and frame.
- 2.Do not open/close with excessive force,or door may fall down.

## b.INSTALLATION



## ADJUSTMENT STEP

### 1.Vertical adjustment

Loosen vertical adjustment screw one turn with allen key to adjust.Then tighten screws once the door in proper height.

### 2.Depth adjustment

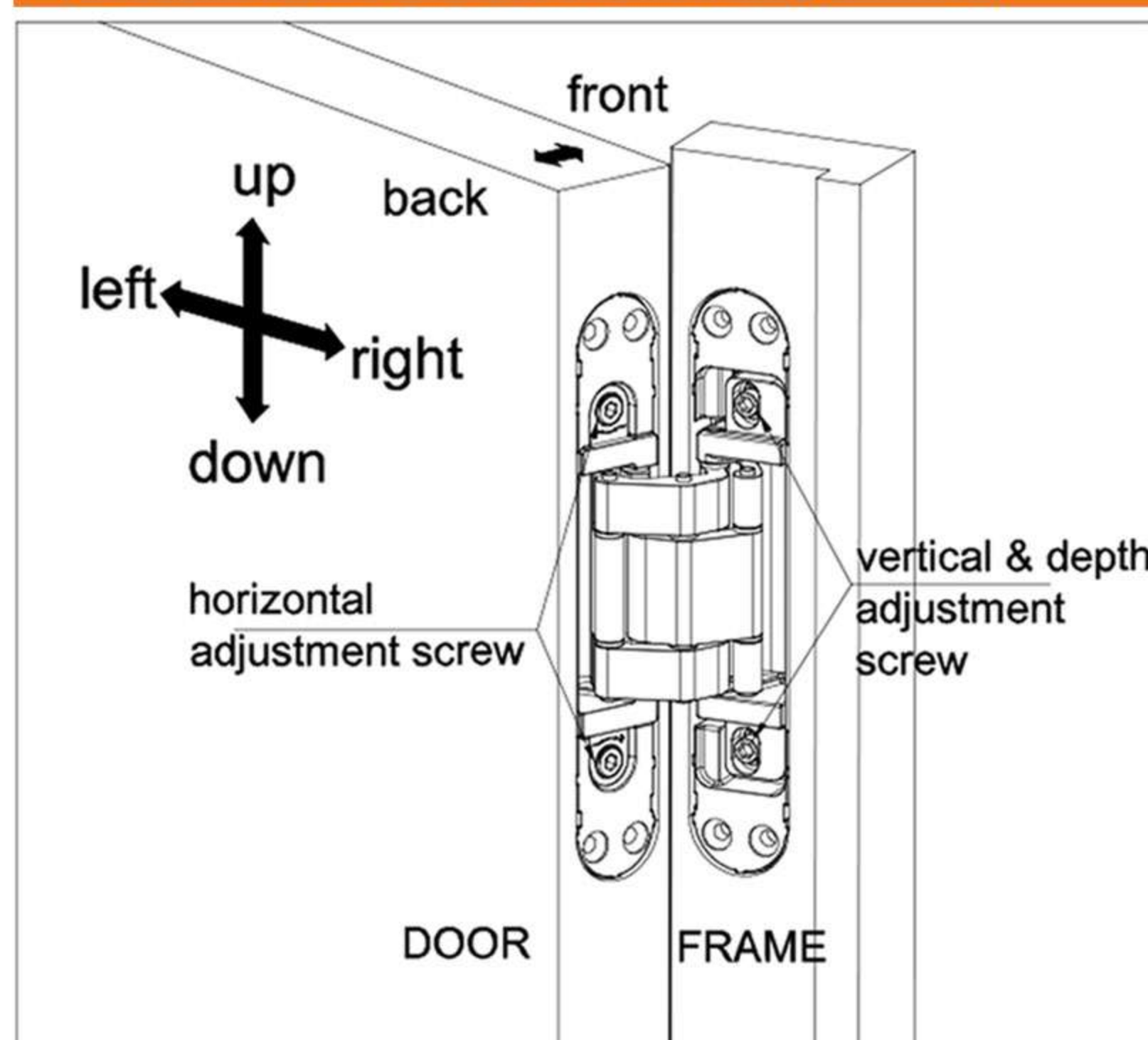
Loosen depth adjustment screw one turn with allen key to adjust.Then tighten screws once the door in proper position.

## NOTE

- 1.Recommended fastening force for vertical and depth adjustment is 3N.m(30.6kgf.cm)
- 2.To prevent door falling,do not remove vertical adjustment screws

## c.ADJUSTMENT

(direction shows when door is in closing situation)



### 3.Horizontal adjustment

Turn the horizontal adjustment screw in clockwise direction to widen the gap between door and frame.To narrow the gap,turn the screw in counter clockwise direction.

## NOTE

- 1.Gently turn horizontal adjustment screws for upper and lower hinge at the same time.do not force turning of screws.
- 2.Do not loosen the horizontal adjustment screws (maximum 2mm)in clockwise direction,as door may fall.

- 4.Finally,install four covers.

## NOTE

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



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