



LAMP

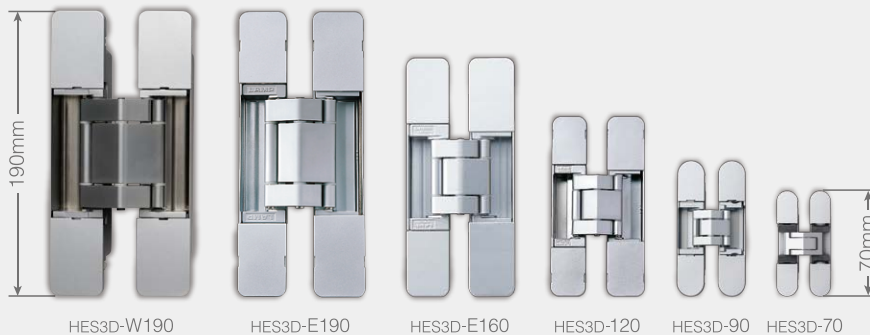
CONCEALED HINGES

HES 3D Series

Hinge + Esprit

No.362

Variation



Colour



HES3D-W190

HES3D-E190

HES3D-E160

HES3D-120

HES3D-90

HES3D-70

HES
Hinge + Esprit®

Concealed design enables flush design.

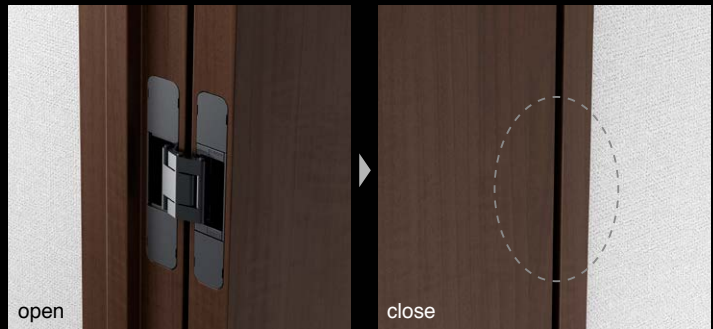


Design

- **Hinge is hidden when doors are closed.**

Concealed hinge for inset doors. Axis does not protrude.

Because hidden door is aligned perfectly with walls, the door completely matches the interior. This also gives a better sense of security to those in the room.



- **Enhance your design by choosing quality hardware**



The squared shape and hinge covers create breathtaking design.

- **Seamless & Safe**

Hidden door closes softly with Door Damper LDD Series.



Door Damper LDD-V100 (P.20)



Variation

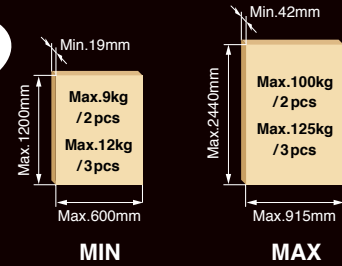
• Size



Our HES series can be used with a vast range of sizes and applications.

Furniture, entrance doors, industrial machines, secret doors are all possible with our concealed HES hinges.

Applicable Door Size



• Colour



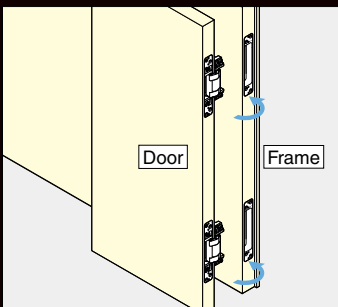
Standard 3 colors available.

*Nickel only for HES3D E190

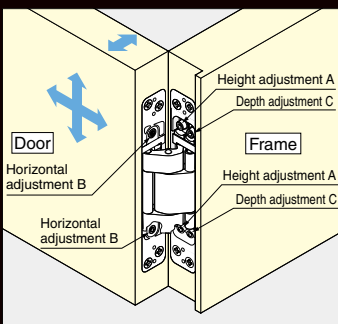
Possible to customize colours for special design requirement.



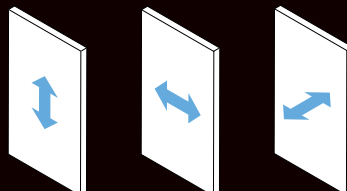
Installation & Adjustment



Door can be hung temporarily and hinge parts can be detached from door frame during installation. This makes installation easier and safer.



3-WAY adjustment function allows vertical, horizontal, and depth adjustment after hinge installed.



Special brackets available

Glass doors

Metal doors



HES Concealed Hinge Series Index

Item Image / Item Name	Door Width (mm)	Door Height (mm)	Door Thickness (mm)	Door Weight	Recommended Door Damper	Page
 HES3D-W190	Max. 915	Max. 2440	Min. 42	Max. 100 kgf / 2 pcs Max. 125 kgf / 3 pcs	LDD-V100	P.6
 HES3D-E190	Max. 900	Max. 2400	Min. 38	Max. 100 kgf / 2 pcs Max. 125 kgf / 3 pcs	LDD-V100	P.8
 HES3D-E160	Max. 900	Max. 2400	Min. 36	Max. 55 kgf / 2 pcs Max. 70 kgf / 3 pcs	LDD-V100 LDD-V LDD-S	P.9
 HES3D-120	Max. 900	Max. 2400	Min. 29	Max. 30 kgf / 2 pcs Max. 40 kgf / 3 pcs	LDD-V LDD-S	P.10
 HES3D-90	Max. 600	Max. 1500	Min. 23	Max. 12 kgf / 2 pcs Max. 16 kgf / 3 pcs	LDD-V LDD-S DC-200	P.11
 HES3D-70	Max. 600	Max. 1200	Min. 19	Max. 9 kgf / 2 pcs Max. 12 kgf / 3 pcs	DC-200 DC-100	P.12
 HES3D-V135LGR	Max. 900	Max. 2400	Min. 30	Max. 40 kgf / 2 pcs Max. 50 kgf / 3 pcs	LDD-V100	P.13
 HES-3038BK	Max. 900	Max. 2000	Min. 36	Max. 45 kgf / 3 pcs	LDD-V100	P.14
 HES-3030BR	Max. 900	Max. 2000	Min. 36	Max. 50 kgf / 3 pcs	LDD-V100	P.14
 HES-3030PR	Max. 900	Max. 2000	Min. 36	Max. 25 kgf / 3 pcs	DC-200 DC-100	P.15

Application for
Steel Frame door
(with optional bracket)

Application for
Glass door
(with optional bracket)

Application for
Steel Frame door
(with optional bracket)

Application for
Glass door
(with optional bracket)

Additional Values of Concealed Door

Optional parts for the HES concealed hinge series make it possible to be used in different applications.

■ Glass Door / Steel Frame Door Installations

Glass Door Bracket



HES3D-G90BKT

P.16



HES3D-G120BKT

P.17

Steel Frame Door Bracket



HES3D-120BKT

P.18



HES3D-E190BKT

P.18

■ Soft-closing Concealed Door

LAPCON Door Damper absorbs slamming shock and closes door without noise. The LDD provides interiors with a feeling of luxury.

Recessed Mount



LDD-V100

P.20



Max. Door Weight: 100kg

Winner of International Prestigious Awards



Recessed Mount



LDD-V

P.22

Surface Mount for Retrofitting



LDD-S

P.24

Easy Positioning



DC-200

P.26

■ Push-open, no handle needed

With magnetic push latch, door can be opened by pushing. No visible accessories so door can be perfectly flush with walls.



ML-ZN80

P.27

3-WAY ADJUSTABLE CONCEALED HINGE



HES3D-W190



Features

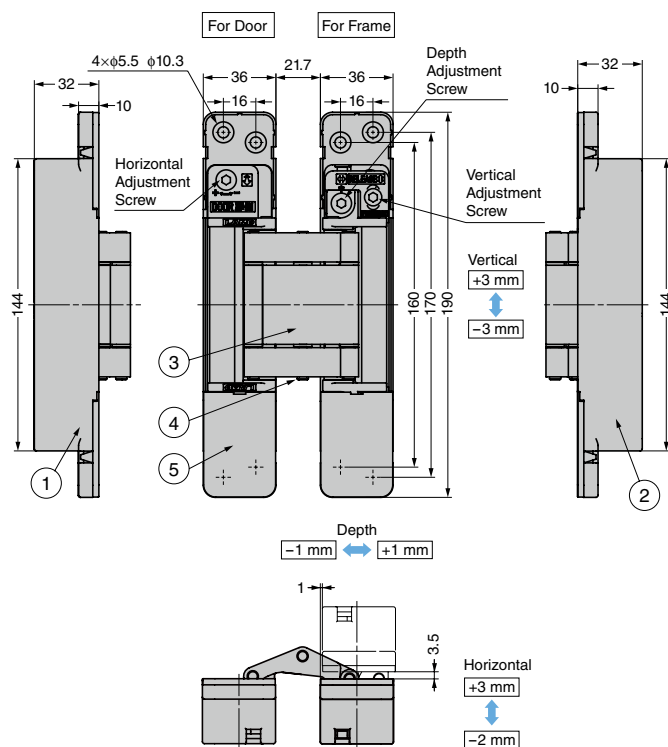
- Has a long arm for a wider throw. This allows for use on clad and thick doors.
- The small bore depth allows for easy mortising of doors and frames.
- Vertical, horizontal and depth adjustments are available.
- Easy and quick installation features:
 - Can separate into two parts during installation.
 - Can be provisionally hung on doors before fixing screws.
- Custom colours are available.
- Replacement screw covers are also available. Please contact us.

Parts Included

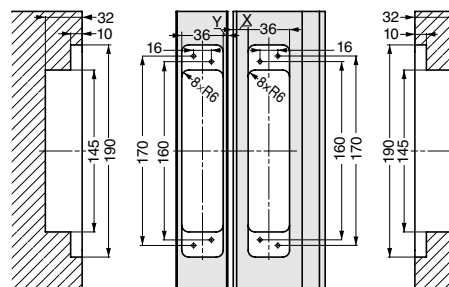
- Cross-recessed countersunk tapping screw 5 × 30 (8 pcs / hinge) stainless steel
- Hex key 4
- Cutout template

Optional Parts

- Installation jig HES3D-W190-TMP(P.19)
- Stainless steel screw cover (made to order)

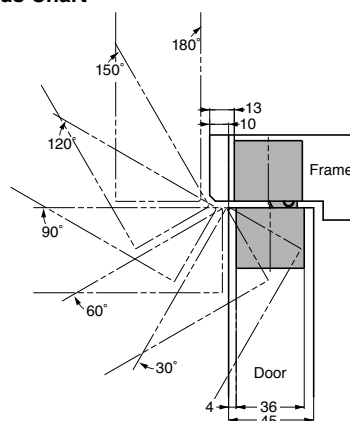
[Video : Features](#)


Cut Out Dimension



Please drill prepared holes for the tapping screws if the optional jig (HES3D-W190-TMP) is not used.

Locus Chart



The example drawing shows the case that there is a step of 10 mm between the door and the frame.

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

Flush Installation

● Open

● Closed

C (detail)

* Chamfering is required depending on clearance for proper door motion.

Y	B	X	A
Door Clearance	Door Chamfering	Frame Clearance	Frame Chamfering
4 and under	0	3 and under	0
5	1	4	1
6	2	5	2
7	3	6	3
8	4	7	4
9	6	8	6

Cladded Installation

● Open

● Closed

If something is attached to a frame, for example decorative sheets, please include the thickness into the X.

C (detail)

* Chamfering is required depending on clearance for proper door motion.

Available on doors which are not aligned flush to the wall or frame.

Y	B	X	A	X-Y+1
Door Clearance	Door Chamfering	Frame Clearance	Frame Chamfering	Step Amount
3	0	3 to 12	0	1 to 10
		13	1	11
		14	2	12
		15	4	13
4	1	3 to 10	0	0 to 7
		11	1	8
		12	2	9
		13	3	10
		14	4	11
5	2	3 to 6	0	-1 to 2
		7	1	3
		8	2	4
		9	3	5
	3	10	4	6
		11	4	7
		12	5	8
		13	6	9

Y	B	X	A	X-Y+1
Door Clearance	Door Chamfering	Frame Clearance	Frame Chamfering	Step Amount
6	3	3 to 6	0	-2 to 1
		7	1	2
		8	2	3
		9	3	4
7	4	10	4	5
		11	5	6
		12	6	7
		3 to 6	0	-3 to 0
		7	1	1
8	5	8	2	2
		9	3	3
		10	5	4
		11	7	5
		3 to 6	0	-4 to -1
8	6	7	1	0
		8	3	1
		9	5	2
		10	7	3

CAD	Item Code	Item Name	Colour	Door Size			Load Capacity				Opening Angle	Weight (g)	Box (pcs)	Carton (pcs)
				Width	Height	Thickness	N/2pcs	kgf/2pcs	N/3pcs	kgf/3pcs				
2D/3D	170-047-901	HES3D-W190DC	Silver	Max. 915	Max. 2440	Min. 42	981	100	1230	125	180°	-	2	12
2D/3D	170-047-902	HES3D-W190DN	Champagne Gold										2	12
2D/3D	170-047-903	HES3D-W190BL	Black										2	12

3-WAY ADJUSTABLE CONCEALED HINGE



HES3D-E190



Passed 300,000 open/close private cycle test



Features

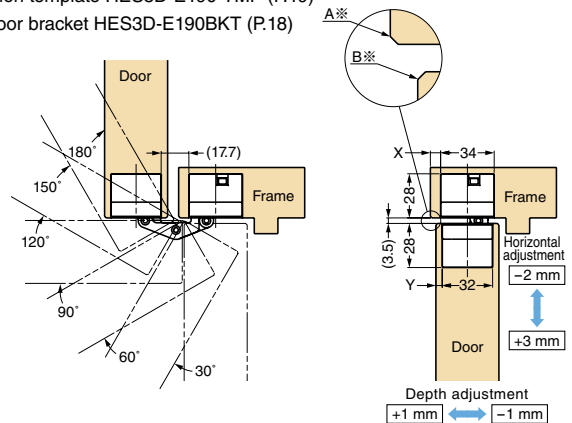
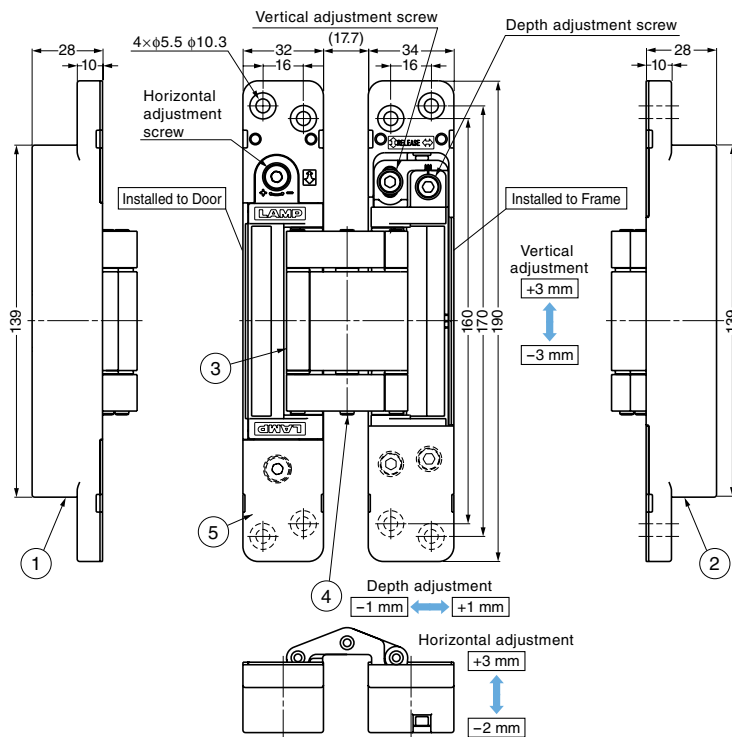
- Thin profile allows for shallow mortise and makes installation easier
- Jig (sold separately) makes installation easy.
- Has a fire safety rating of ANSI/UL 10C, CAN/ULC-S104
- Vertical, horizontal and depth adjustment possible post-installation (3way)
- Can be split into two parts (one for the frame and one for the flap) making installation easy
- Temporary holding feature: can temporarily be hung and hold position without being affixed with screws. This makes installation much easier.
- Custom colors available on request. Please contact us for details.
- Passed a 300,000 open/close cycle test in private testing.

Parts Included

- Countersunk head screw 5x30 (4 pcs/hinge)
- Allen key size 4

Sold Separately

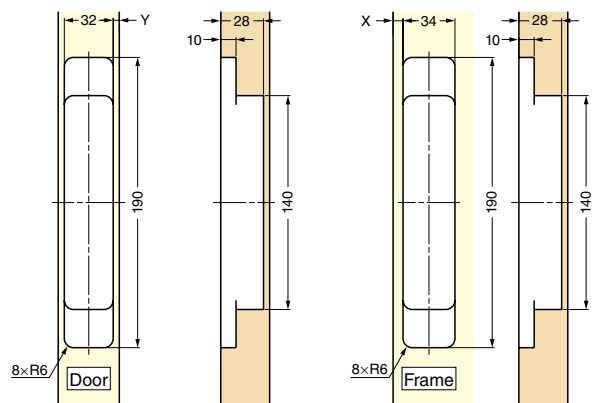
- Installation template HES3D-E190-TMP (P.19)
- Metal door bracket HES3D-E190BKT (P.18)



Please process the part (corner of door/frame) of ※ marked on the drawing to C1 or more (or R1 or more).

	Y: Door machining margin	B: Door chamfering	X: Frame machining margin	A: Frame chamfering
4 and under	2	1	6.5 and under	1
		7	8	2
		6.5 and under	7	3
5	3	7	8	2
		8	7	3
			8	4

Cut Out Dimensions



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

Video : Features



CAD	Item Code	Item Name	Colour	Door Specs				Opening Angle	Weight	Box	Carton	
				Width	Height	Thickness	Weight					
2D/3D	170-045-815	HES3D-E190DC	Silver	Max. 900	Max. 2400	Min. 38 mm	Max. 100 kg/2 pcs	Max. 125 kg/3 pcs	180°	1,100 g	2 pcs	12 pcs
2D/3D	170-045-816	HES3D-E190DN	Champagne Gold	Max. 900	Max. 2400	Min. 38 mm	Max. 100 kg/2 pcs	Max. 125 kg/3 pcs	180°	1,100 g	2 pcs	12 pcs
2D/3D	170-045-817	HES3D-E190BL	Black	Max. 900	Max. 2400	Min. 38 mm	Max. 100 kg/2 pcs	Max. 125 kg/3 pcs	180°	1,100 g	2 pcs	12 pcs
-	170-033-568	HES3D-E190NI	Nickel	Max. 900	Max. 2400	Min. 38 mm	Max. 100 kg/2 pcs	Max. 125 kg/3 pcs	180°	1,100 g	2 pcs	12 pcs

3-WAY ADJUSTABLE CONCEALED HINGE



HES3D-E160



Features

- Shallow drilling depth enables easy drilling of the door and frame.
- Three-way adjustment feature enables fine adjustment up, down, left, right, forward and back.
- The hinge can be divided between the door and frame and the door can be temporarily fastened to the frame, making it easy to hang the door.
- The structure is designed to prevent the door from sagging.
- Screw covers can be purchased separately in the event that the original covers are broken or lost. Contact us for details.

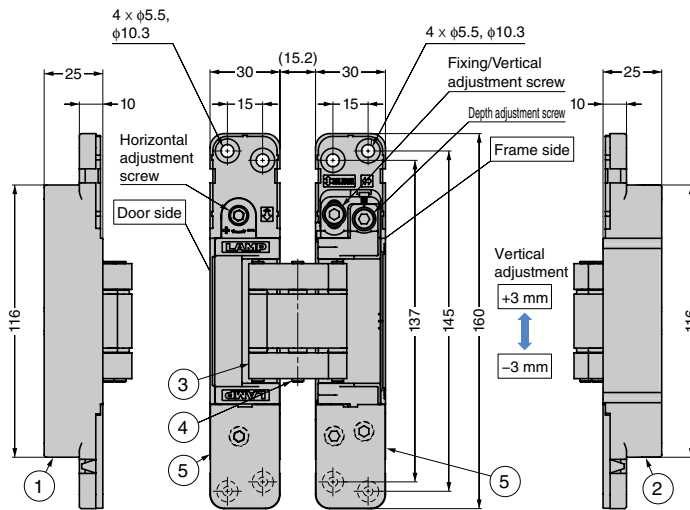
Remarks

- Read all remarks on handling thoroughly before use.
- When using with a door damper and/or closer, select the LAPCON LDD-S Door Damper, LAPCON LDD-V Door Damper.
- Select a door weight within a range satisfying the conditions of both the hinge and the door damper and/or closer.
- Some closers may cause the door to move awkwardly or not close fully. Test the product before purchase.
- When using a closer with a stopper, be sure to use a door stopper too (floor mounting type, wall mounting type, etc.). Install the door stopper in a position further forward than the stopper of the closer, and between the centre and end of the door.

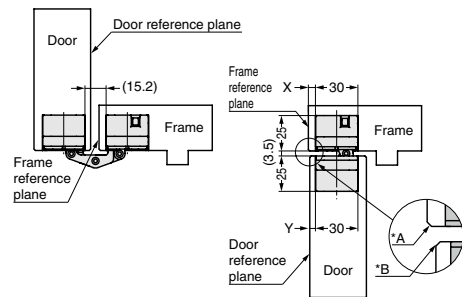
Parts Included

- Size 5 x 25 cross-recessed flat head tapping screws (stainless steel) (8 screws per hinge)
- Nominal size 4 hex bar spanner

This figure shows this product with the upper screw cover removed.



Installation Drawing

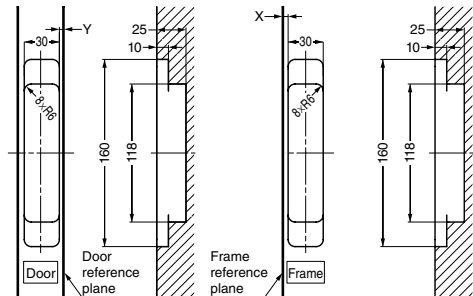


*The door and frame need to be chamfered based on the machining margin.

Y: Door machining margin	B: Door chamfering	X: Frame machining margin	A: Frame chamfering
4 and under	1	5 and under	1
4 and under	2	6	2
4 and under	2	7	3
5	3	5 and under	3
5	3	6	4

(Reference values)

Cut Out Dimensions



No.	Part Name	Material	Finish/Colour		
			DC	DN	BL
①	Body	Zinc Alloy (ZDC)	Satin Chrome	Satin Nickel	Baked Enamel
②	Base Frame		Satin Chrome	Satin Nickel	Finish/Black
③	Arm	Aluminium Alloy	Plain	Plain	Plain
④	Shaft	Stainless Steel	Plain	Plain	Plain
⑤	Screw Covers	ABS	Silver	Champagne Gold	Black

CAD	Item Code	Item Name	Colour	Door Specs			Load Capacity				Opening Angle
				Width (mm)	Height (mm)	Thickness (mm)	N / 2 pcs	kgf / 2 pcs	N / 3 pcs	kgf / 3 pcs	
2020	170-046-000	HES3D-E160DC	Silver	Max. 900	Max. 2400	Min. 36	539	55	686	70	180°
2020	170-046-001	HES3D-E160DN	Champagne Gold								
2020	170-046-002	HES3D-E160BL	Black								

3-WAY ADJUSTABLE CONCEALED HINGE



HES3D-120



Features

- Thin profile (21mm) allows for shallow mortise.
- Jig (sold separately) makes installation easy.
- Vertical, horizontal and depth adjustment possible post-installation (3way).
- Passed a 300,000 open/close cycle test in private testing.
- Can be split into two parts (one for the frame and one for the flap) making installation easy
- Temporary holding feature: can temporarily be hung and hold position without being affixed with screws. This makes installation much easier.
- Custom colors available on request. Please contact us for details.
- Max door weight: 30kg/2pc, 40kg/3pc
- Min. door thickness: 29mm
- Max door width: 900mm
- Max door height: 2400mm (recommended. Larger doors can be used if the weight is within specification)

Remarks

Recommend to use with bellow door closer/ damper as bellow.

- LAPCON DOOR DAMPER LDD-S (P.24)
- LAPCON DOOR DAMPER LDD-V (P.22)

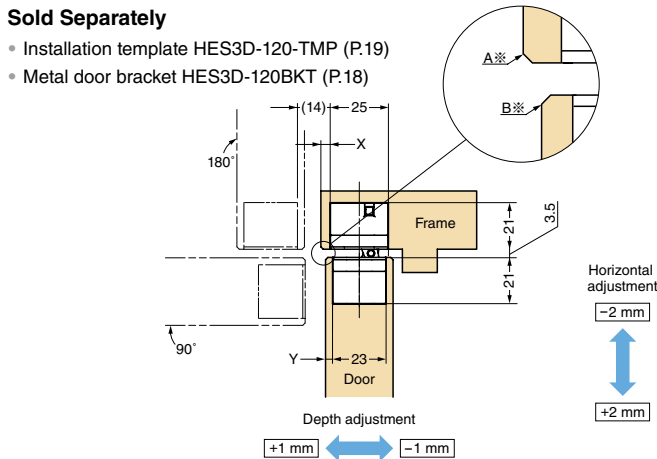
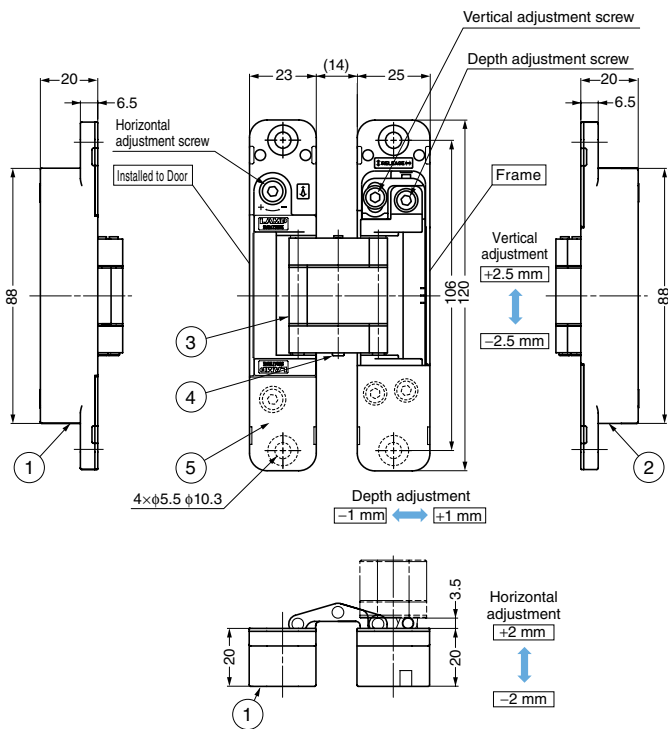
Parts Included

- Countersunk head tapping screw 5x20
- Hex. wrench (a nominal diameter 3)

Sold Separately

- Installation template HES3D-120-TMP (P.19)
- Metal door bracket HES3D-120BKT (P.18)

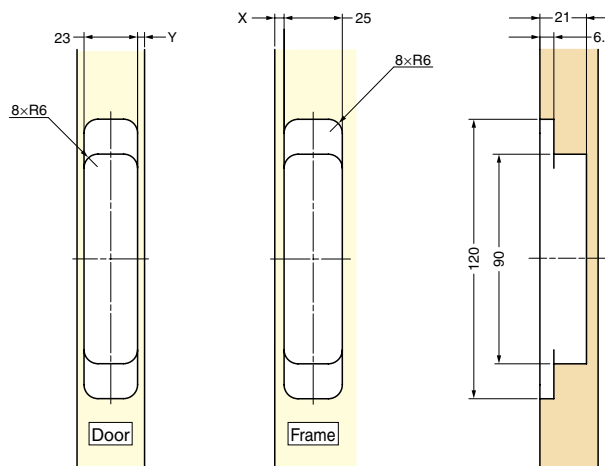
Video : Features



Please process the part (corner of door/frame) of * marked on the drawing to C1 or more (or R1 or more).

Y: Door machining margin	B: Door chamfering	X: Frame machining margin	A: Frame chamfering
4 and under	1	5 and under	1
	2	6	2
		7	
5	3	5 and under	3

Cut Out Dimensions



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

CAD	Item Code	Item Name	Colour	Door Width	Door Height	Door Thickness	Door Weight		Opening Angle	Weight	Box	Carton
2D/3D	170-045-819	HES3D-120DC	Silver	Max. 900	Max. 2400	Min. 29	Max. 30 kg/2 pcs	Max. 40 kg/3 pcs	180°	401 g	2 pcs	24 pcs
2D/3D	170-045-820	HES3D-120DN	Champagne Gold	Max. 900	Max. 2400	Min. 29	Max. 30 kg/2 pcs	Max. 40 kg/3 pcs	180°	401 g	2 pcs	24 pcs
2D/3D	170-045-821	HES3D-120BL	Black	Max. 900	Max. 2400	Min. 29	Max. 30 kg/2 pcs	Max. 40 kg/3 pcs	180°	401 g	2 pcs	24 pcs

3-WAY ADJUSTABLE CONCEALED HINGE



HES3D-90

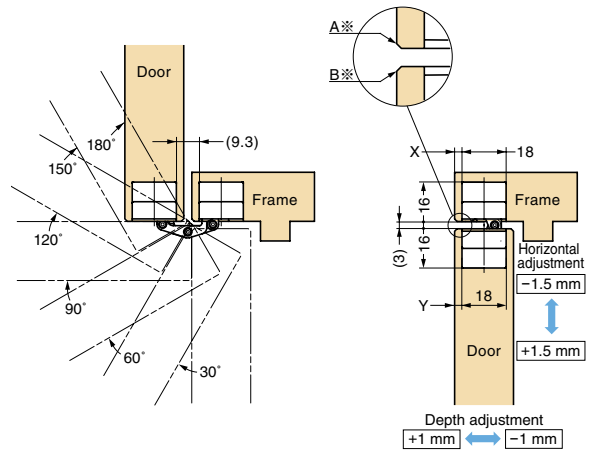
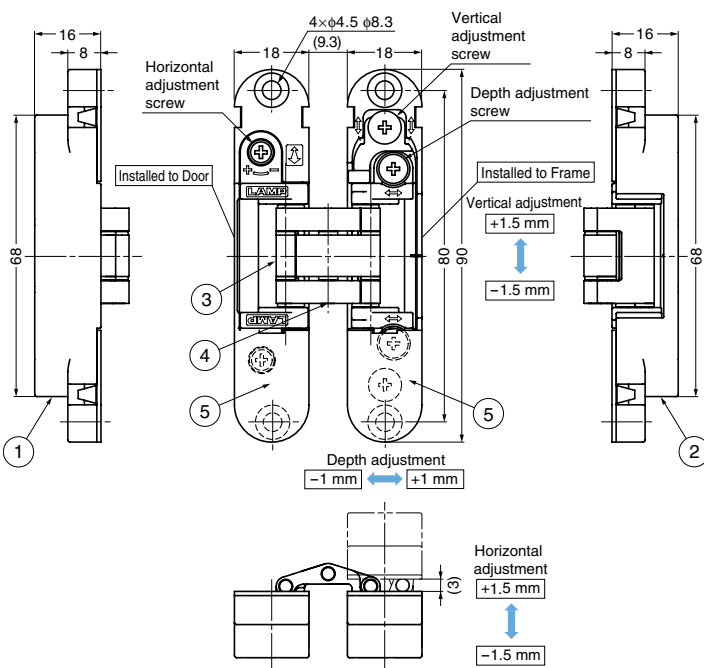


Features

- Thin profile allows for shallow mortise and makes installation easier
- Jig (sold separately) makes installation easy
- Vertical, horizontal and depth adjustment possible post-installation (3way)
- Can be split into two parts (one for the frame and one for the flap) making installation easy
- Custom colors available on request. Please contact us for details.
- Minimum door thickness: 23mm
- Max door width: 600mm
- Max door height: 1500mm (Can be used on taller doors if weight is within specifications)
- Can be used with DC-200 damper catch but can not be used with lid stays or other door damper.

Parts Included

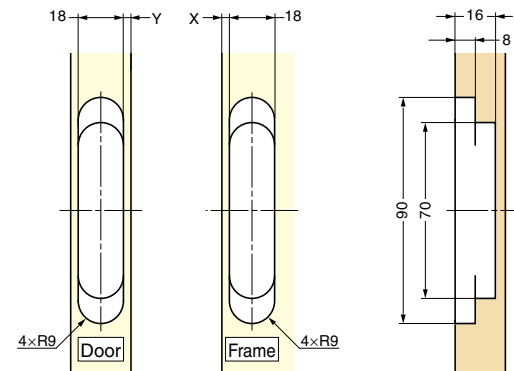
- Countersunk head screw 4x20 (4 pcs./hinge)
- Hexagonal spanner x2



Please process the part (corner of door/frame) of ※ marked on the drawing to C1 or more (or R1 or more).

Y: Door machining margin	B: Door chamfering	X: Frame machining margin	A: Frame chamfering
3 and under	1	3 and under	1
3.5	2	4	2
		3.5	

Cut Out Dimensions



No.	Part Name	Material	Finish		
			DC	DN	BL
①	Body	Zinc Alloy (ZDC)	Satin Chrome	Satin Nickel	Black Enamel
②	Base Frame	Zinc Alloy (ZDC)	Satin Chrome	Satin Nickel	Black Enamel
③	Arm	Zinc Alloy (ZDC)	Satin Chrome	Satin Nickel	Black Enamel
④	Shaft	Stainless Steel	-	-	-
⑤	Cover	ABS	Silver	Champagne Gold	Black

CAD	Item Code	Item Name	Colour	Door Width	Door Height	Door Thickness	Door Weight		Opening Angle	Weight	Box	Carton
2D/3D	170-029-221	HES3D-90DC	Silver	Max. 600	Max. 1500	Min. 23	Max. 12 kg/2 pcs	Max. 16 kg/3 pcs	180°	198 g	2 pcs	48 pcs
2D/3D	170-029-222	HES3D-90DN	Champagne Gold	Max. 600	Max. 1500	Min. 23	Max. 12 kg/2 pcs	Max. 16 kg/3 pcs	180°	198 g	2 pcs	48 pcs
2D/3D	170-033-588	HES3D-90BL	Black	Max. 600	Max. 1500	Min. 23	Max. 12 kg/2 pcs	Max. 16 kg/3 pcs	180°	198 g	2 pcs	48 pcs

3-WAY ADJUSTABLE CONCEALED HINGE



HES3D-70



Features

- Small HES series can be applied with Min. door thickness of 19 mm.
- Small bore depth, easy to cut out the door and frame.
- 3-way adjustment function allows vertical, horizontal, and depth adjustment after hinge installed.
- Hinge can be split into the door side and the frame side.

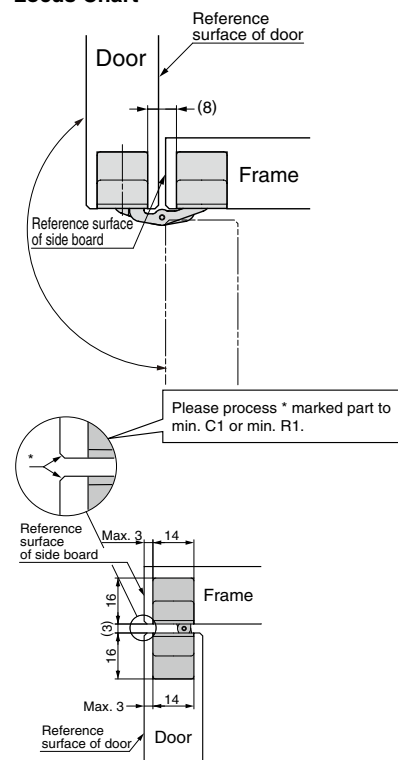
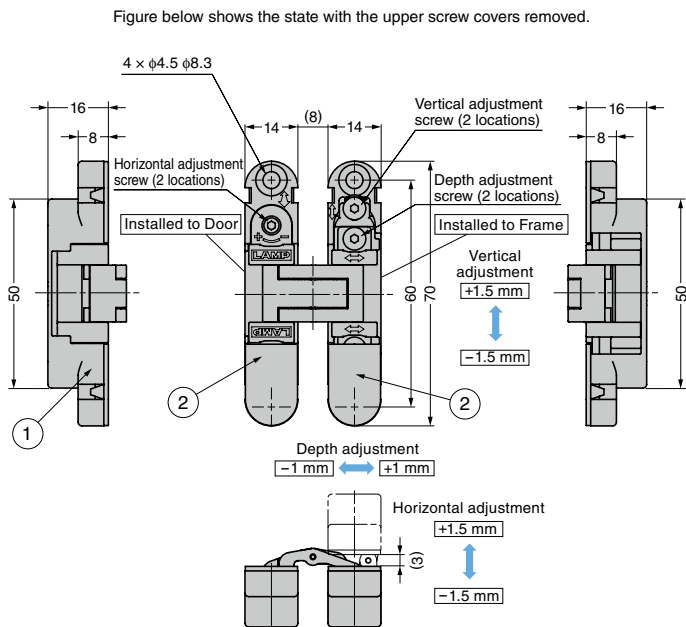
Remarks

- Can not be used with lid stays or door damper.
- Use below opening angle 180°.

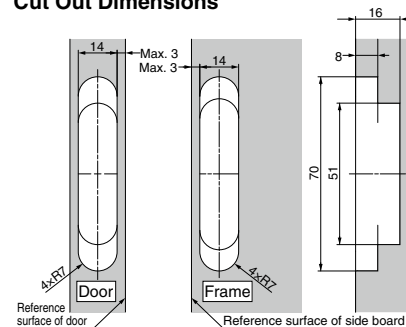
Parts Included

- Countersunk head tapping screw 4 × 20 (4 pcs/hinge) SUS
- Hex key 2

Locus Chart



Cut Out Dimensions



No.	Part Name	Material	Finish		
			DC	DN	BL
①	Body	Zinc Alloy (ZDC)	Satin Chrome	Dull Nickel	Black Paint
②	Cover (2 pairs)	ABS	Silver Paint	Champagne Gold Paint	Black

CAD	Item Code	Item Name	Colour	Door Width (mm)	Door Height (mm)	Door Thickness (mm)	Door Weight kg/2 pcs	Door Weight kg/3 pcs	Opening Angle	Weight (g)	Box (pcs)	Carton (pcs)
	170-035-441	HES3D-70DC	Silver	Max. 600	Max. 1200	Min. 19	Max. 9	Max. 12	180°	95	2	48
	170-035-442	HES3D-70DN	Champagne Gold								2	48
	170-035-443	HES3D-70BL	Black								2	48

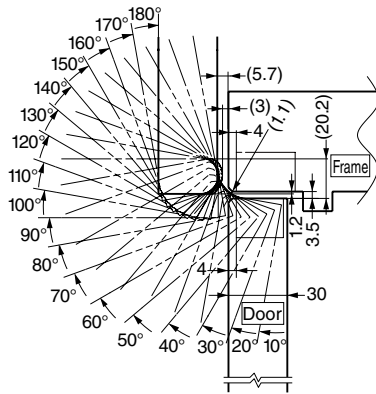
3-WAY ADJUSTABLE CONCEALED HINGE



HES3D-V135LGR



Locus Chart



Video : Features



Motion Design Video Locus & Open/Close Angle



Features

- Small bore depth for compact assembly.
- 3-way adjustment function allows vertical, horizontal, and depth adjustment after hinge installed.
- Easy installation: Hinge can be split into the door side and the frame side and has temporary door holding feature.
- Unique seven link structure helps to prevent door sagging.

Remarks

- Our original new link arm mechanism provides different locus from other products of the same series. Please confirm the position where the door is opened by 90° on the left figure.
- Can be used with Sugatsune door damper/door closer shown below. Please check and follow product specifications.
 - LAPCON DOOR DAMPER LDD-S
 - LAPCON DOOR DAMPER LDD-V
 - LAPCON DOOR CLOSER LDC-N2
- Using with other door closers might lead to hinge damage.
- For using Sugatsune door closer, please install the door holder separately at the stop position.

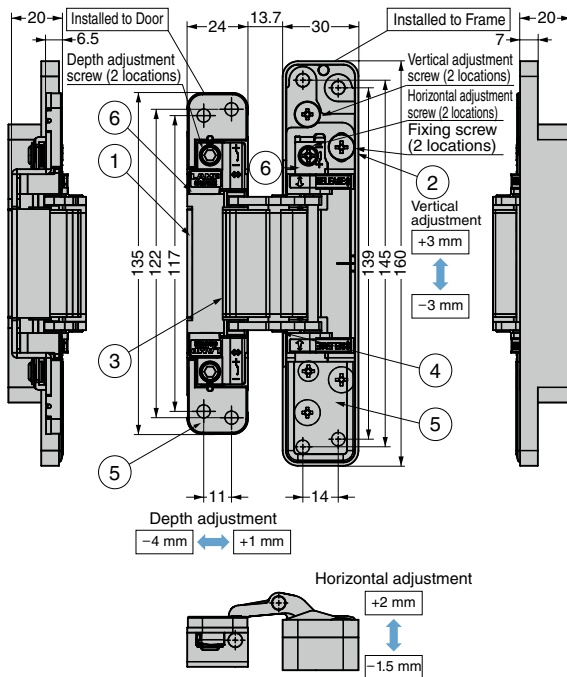
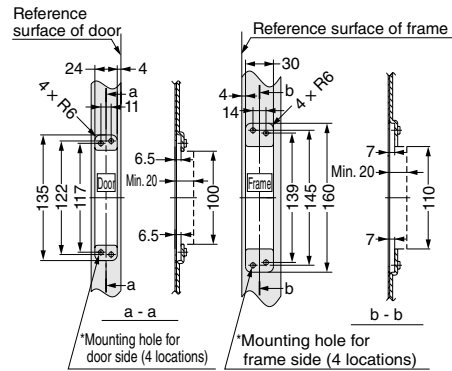
Parts Included

Binding head tapping screw 5 × 15

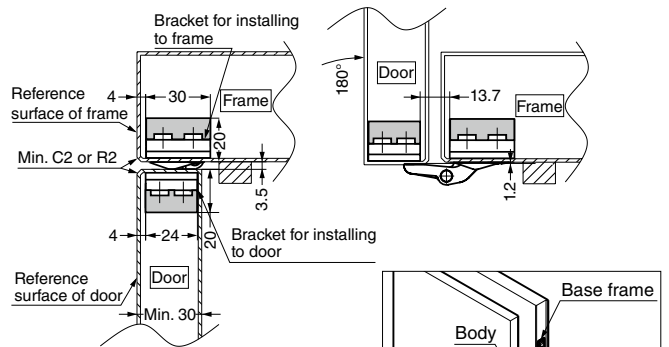
Option

Installation template HES3D-V135-TMP

Cut Out Dimensions



Installation



Temporary Holding Feature

1. Hinge can be split into the body and base frame. Install the body to the door and the base frame to the frame.
2. Push the hinge body horizontally into the base frame in the direction of the arrow. The door is held to the frame due to the temporary holding feature.
3. Temporarily tighten the fixing screws and adjust the door position.
4. After adjustment, tighten the fixing screws completely to fix the hinge body.

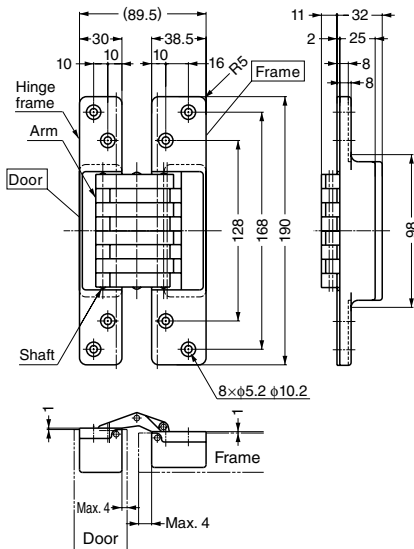
No.	Part Name	Material	Finish / Colour
①	Body	Steel	Nickel
②	Base Frame	POM	Light Grey
③	Arm	Aluminium Alloy	Anodised Silver
④	Shaft	Steel	Nickel
⑤	Cover	POM	Light Grey
⑥	Adjustment Block	Zinc Alloy (ZDC)	Nickel

CAD	Item Code	Item Name	Door Width	Door Height	Door Thickness	Frame Thickness	Door Weight kg/2 pcs	Door Weight kg/3 pcs	Opening Angle	Weight (g)	Box (pcs)	Carton (pcs)
ec3d	170-020-804	HES3D-V135LGR	Max. 900	Max. 2400	Min. 30	Min. 20	Max. 40	Max. 55	180°	400	2	24

CONCEALED HINGE



HES-3038BK



Features

Finish available in rich polished brass or sleek stain chrome.

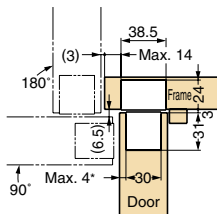
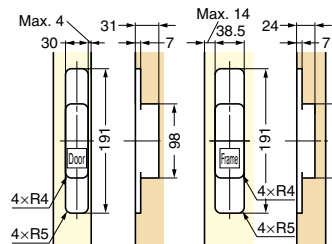
Remarks

- Recommend to use 3 pcs per one door.
- Secure to check the dimension of * marked on below drawings.

Parts Included

Countersunk head tapping screw 5x26

Cut Out Dimensions

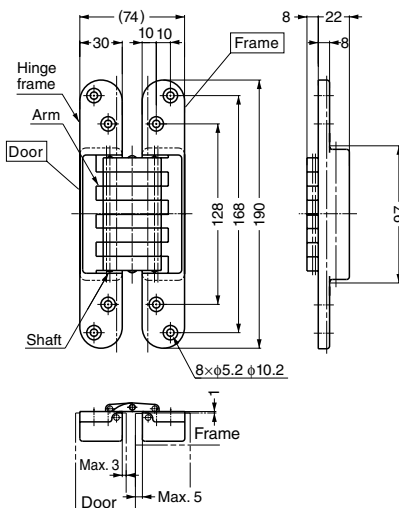


CAD	Item Code	Item Name	Material	Finish	Door Width	Door Height	Door Thickness	Door Weight	Opening Angle	Weight	Box	Carton
2D/3D	170-091-013	HES-3038BK PB	Brass	Polished	Max. 900	Max. 2000	Min. 36	Max. 45 kg/3 pcs	180°	1360 g	2 pcs	20 pcs
2D/3D	170-091-015	HES-3038BK SC	Brass	Satin Chrome	Max. 900	Max. 2000	Min. 36	Max. 45 kg/3 pcs	180°	1360 g	2 pcs	20 pcs

CONCEALED HINGE



HES-3030BR



Features

Finish available in rich polished brass or sleek stain chrome.

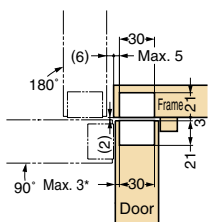
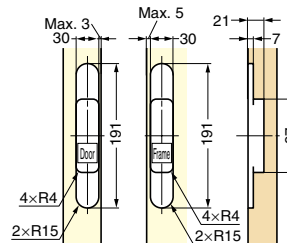
Remarks

- Recommend to use 3 pcs per one door.
- Secure to check the dimension of * marked on below drawings.

Parts Included

Countersunk head tapping screw 5x26

Cut Out Dimensions



CAD	Item Code	Item Name	Material	Finish	Door Width	Door Height	Door Thickness	Door Weight	Opening Angle	Weight	Box	Carton
2D/3D	170-091-003	HES-3030BR PB	Brass	Polished	Max. 900	Max. 2000	Min. 36	Max. 50 kg/3 pcs	180°	1030 g	2 pcs	20 pcs
2D/3D	170-091-014	HES-3030BR SC	Brass	Satin Chrome	Max. 900	Max. 2000	Min. 36	Max. 50 kg/3 pcs	180°	1030 g	2 pcs	20 pcs

CONCEALED HINGE



HES-3030PR



Features

Concealed hinge for small cabinet door or partition.

Remarks

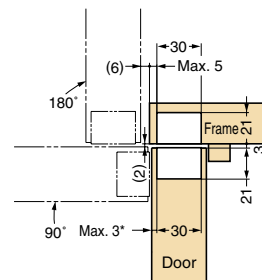
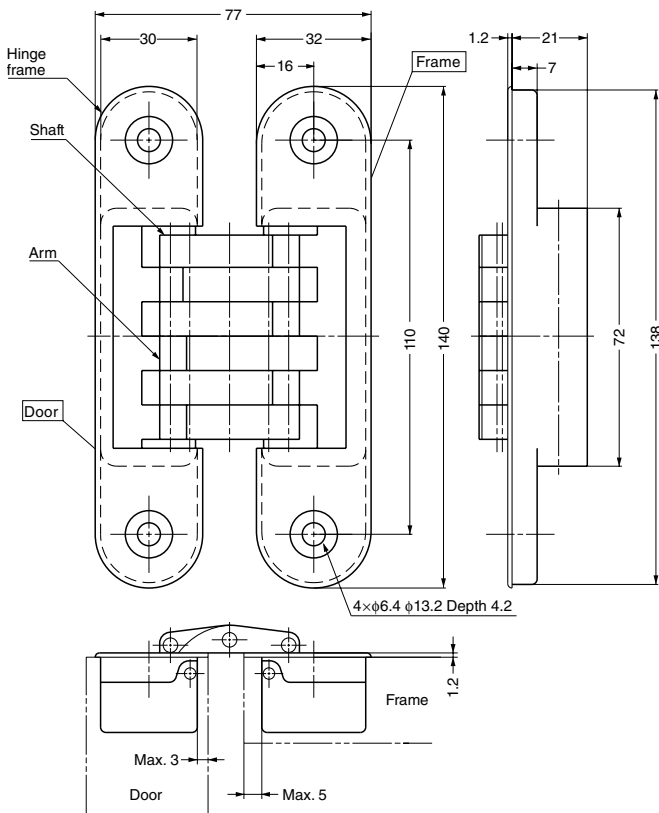
Recommend to use 3 pcs per one door.

Parts Included

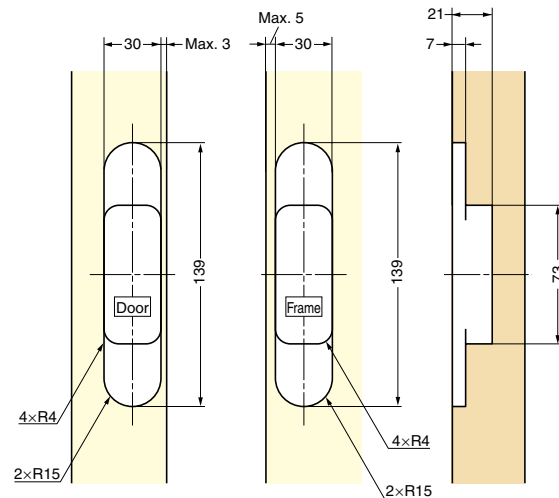
Binding head tapping screw 6x20

Caution

Secure to check the dimension of * marked on bellow drawings.



Cut Out Dimensions



CAD	Item Code	Item Name	Finish/Colour	Material	Door Width	Door Height	Door Thickness	Door Weight	Opening Angle	Weight	Box	Carton
	170-091-006	HES-3030PR WT	White, Chrome	PBT/Brass	Max. 900	Max. 2000	Min. 36	Max. 25 kg/3 pcs	180°	320 g	5 pcs	40 pcs
	170-091-004	HES-3030PR BR	Brown, Chrome	PBT/Brass	Max. 900	Max. 2000	Min. 36	Max. 25 kg/3 pcs	180°	320 g	5 pcs	40 pcs
	170-091-005	HES-3030PR GR	Grey, Chrome	PBT/Brass	Max. 900	Max. 2000	Min. 36	Max. 25 kg/3 pcs	180°	320 g	5 pcs	40 pcs

GLASS DOOR BRACKET



HES3D-G90BKT



Features

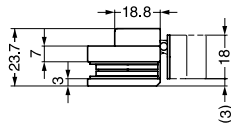
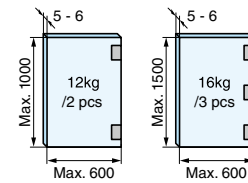
- Glass door bracket for HES3D-90 series (P.11).
- Screw covers match the bracket with the finish. For the black type, please use the covers which are included with the HES3D-90 hinge.

Parts Included

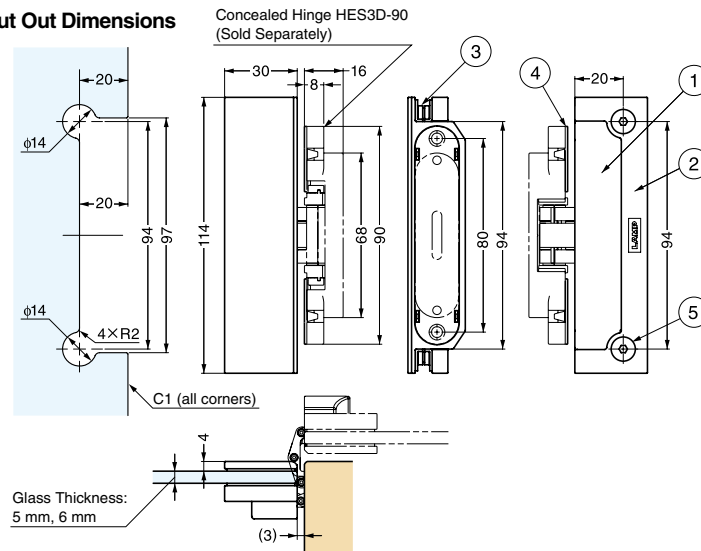
- Hexagon socket countersunk head screw M5 x 12
- Countersunk head screw M4 x 12
- Hex key size 3



Door Dimensions and Number of Hinges



Cut Out Dimensions



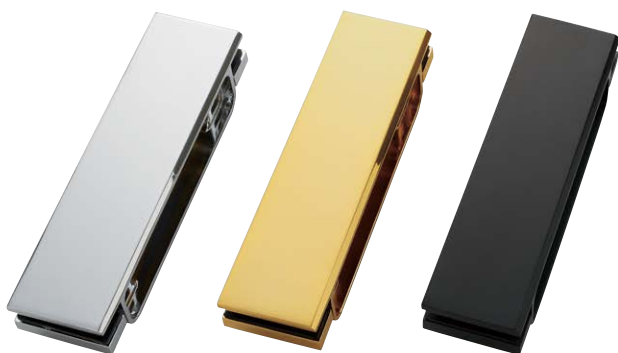
No.	Part Name	Material	Finish		
			CR	GP	BL
①	Body	Zinc Alloy (ZDC)	Chrome	24K Gold plating	Black Enamel Finish
②	Back Plate				
③	Gasket	Chloroprene Rubber (CR)	-	-	-
④	Screw Cover	ABS	Chrome	24K Gold plating	-
⑤	Hexagon Socket Countersunk Head Screw M5 x 12	Steel	Chrome	24K Gold plating	Black Enamel Finish

CAD	Item Code	Item Name	Colour	Weight (g)	Box (pcs)	Carton (pcs)
2020	170-035-802	HES3D-G90BKT-CR	Silver	245	2	24
2020	170-035-803	HES3D-G90BKT-GP	Gold	245	2	24
2020	170-035-804	HES3D-G90BKT-BL	Black	245	2	24

GLASS DOOR BRACKET



HES3D-G120BKT



Features

- Allows the HES3D-120 hinge (P.10) to be installed on glass doors.
- The silver and gold types come with screw covers in the same colours.

For the black type, please use the ones included with HES3D-120BL.

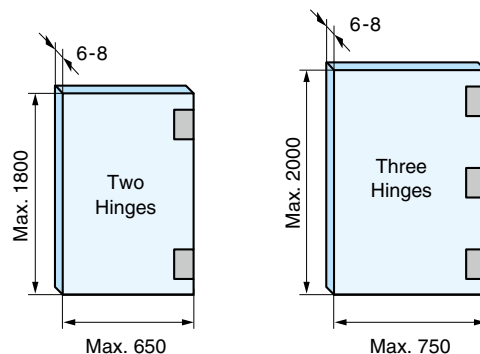
Parts Included

- Hexagon socket countersunk head screw M5 × 12
- Countersunk head screw M4 × 12
- Hex key (size: 3)

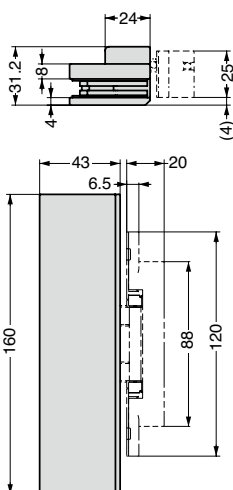
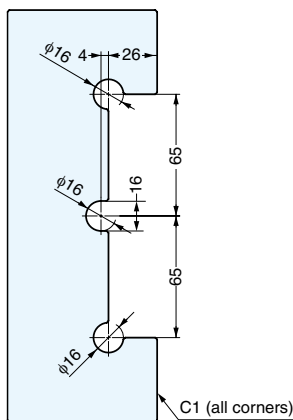
Component Parts



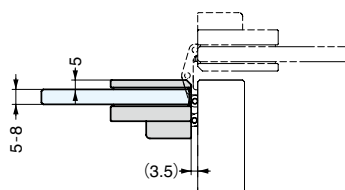
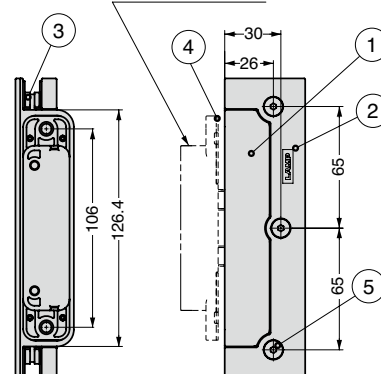
Door Sizes and Number of Hinges



Cut Out Dimensions



HES3D-120 Hinge (sold separately)

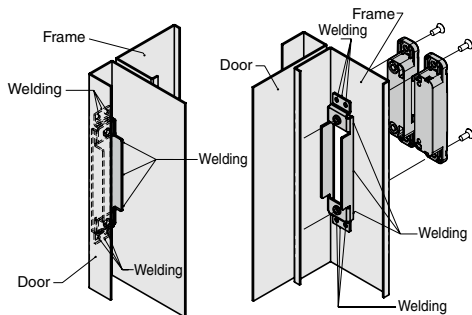
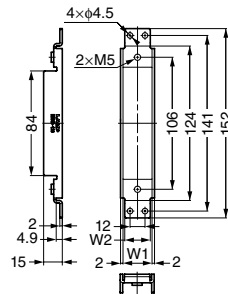


No.	Part Name	Material	Finish		
			CR	GP	BL
①	Body	Zinc Alloy (ZDC)	Chrome	24K Gold Plating	Black Enamel
②	Back Plate				
③	Gasket	Chloroprene Rubber (CR)	-	-	-
④	Screw Cover	ABS	-	-	-
⑤	Hexagon Socket Countersunk Head Screw M5 x 14	Steel	Chrome	24K Gold Plating	Black Paint

CAD	Item Code	Item Name	Colour	Glass Thickness	Box (pcs)	Carton (pcs)
2030	170-043-469	HES3D-G120BKT-CR	Silver	6-8	2	12
2030	170-043-470	HES3D-G120BKT-GP	Gold		2	12
2030	170-043-471	HES3D-G120BKT-BL	Black		2	12

BRACKET OF HES3D-120 FOR SHEET METAL

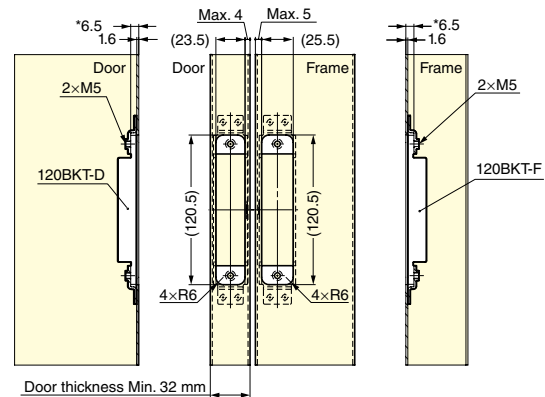
HES3D-120BKT



Features

Bracket to use HES3D-120 hinge (P.10) with sheet metal.

Installation

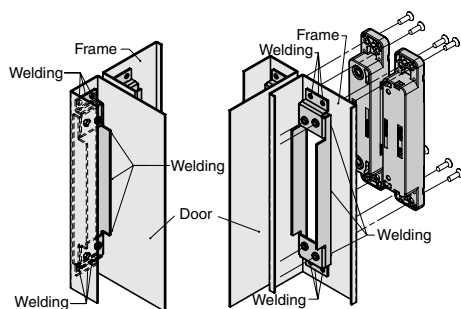
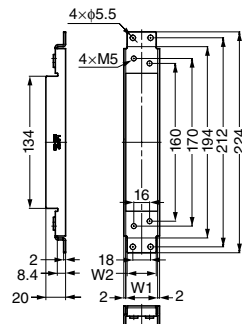


*Dimensions: For flat surface in case of 1.6 mm thick sheet metal.

CAD	Item Code	Item Name	Type	Material	Finish/Colour	W1	W2	Weight	Carton
	170-032-739	HES3D-120BKT-D	For Door	Steel (SPCC)	Zinc Chromate	23.3	20.5	58 g	50 pcs
	170-032-740	HES3D-120BKT-F	For Frame			25.3	22.5	58 g	50 pcs

BRACKET OF HES3D-E190 FOR SHEET METAL

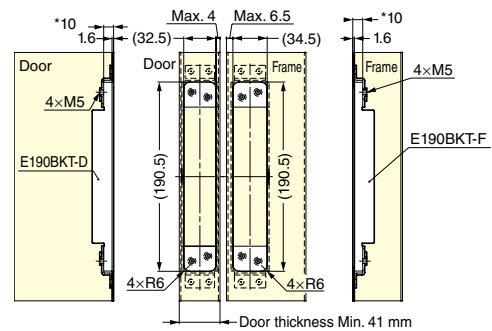
HES3D-E190BKT



Features

Bracket to use HES3D-E190 hinge (P.8) with sheet metal.

Installation



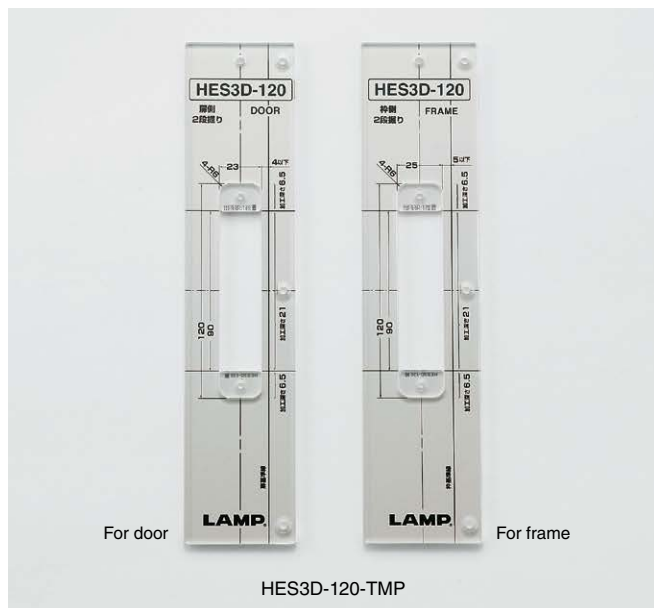
*Dimensions: For flat surface in case of 1.6 mm thick sheet metal.

CAD	Item Code	Item Name	Type	Material	Finish/Colour	W1	W2	Weight	Carton
	170-032-741	HES3D-E190BKT-D	For Door	Steel (SPCC)	Zinc Chromate	32.3	29.5	135 g	50 pcs
	170-032-742	HES3D-E190BKT-F	For Frame			34.3	31.5	135 g	50 pcs

INSTALLATION TEMPLATE



HES3D-TMP



Features

- Installation template for HES3D hinges.
- The HES3D-70-TMP and HES3D-90-TMP are now available.

Remarks

- The HES3D-120TMP, HES3D-160-TMP, HES3D-E190-TMP, and HES3D-V135-TMP are sold in pairs, one for the door and one for the frame.
- The HES3D-70TMP and HES3D-90-TMP are sold singly, because they can be used on both the door and frame.
- Recommended working tool is a straight bit with guide bearings of which guide diameter and bit diameter are the same.

Sold Separately

- HES3D-70 (P.12)
- HES3D-90 (P.11)
- HES3D-120 (P.10)
- HES3D-E160 (P.9)
- HES3D-E190 (P.8)
- HES3D-W190 (P.6)
- HES3D-V135LGR (P.13)



CAD	Item Code	Item Name	Applicable Hinge	Material	Colour
-	170-040-988	HES3D-70-TMP	HES3D-70	Methacrylic Resin (PMMA)	Clear
-	170-029-034	HES3D-90-TMP	HES3D-90		
-	170-024-569	HES3D-120-TMP	HES3D-120		
-	170-024-570	HES3D-160-TMP	HES3D-160		
-	170-028-808	HES3D-E190-TMP	HES3D-E190		
-	170-024-572	HES3D-V135-TMP	HES3D-V135LGR		
-	170-047-841	HES3D-E160-TMP	HES3D-E160		
-	170-047-842	HES3D-W190-TMP	HES3D-W190		

DOOR DAMPER



LDD-V100



LDD-V100-NI-L shown.



Counter plate cover (Nickel/Dark brown)



reddot award 2019 winner



Features

- Unique door damper applicable to door weight up to 100 kg.
- Suitable for door weight 40 - 100 kg.
- Damper body is completely hidden when the door is closed.
- Damper and door pull-in functions work just before the door fully closes, preventing the door from slamming shut.
- Door can be opened more easily as compared with door closer.
- Damper force is adjustable.
- Counter plate is 3-way adjustable.
- iF Design Award winner 2019.
- Reddot Product Design winner 2019.
- Can be used with the following hinges.
 - HES3D-W190 (P.6)
 - HES3D-E190 (P.8)
 - HES3D-E160 (P.9)
 - HES-V135LGR (P.13)
 - HES-3038BK (P.14)
 - HES-3030BR (P.14)

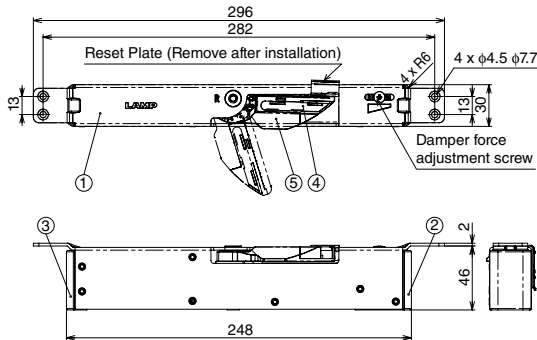
Applications

Heavy duty interior door (shop, housing)

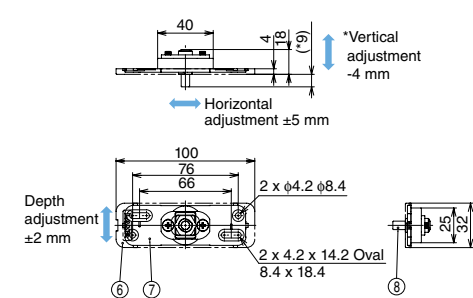
Parts Included

- Tapping screw 3.5 x 20
- Attachment Jig
- Cutout template

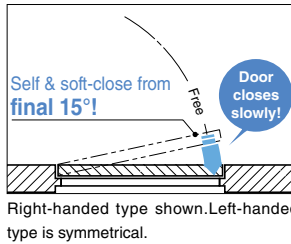
Body



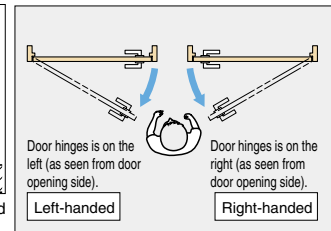
Counter Plate



Door Movement

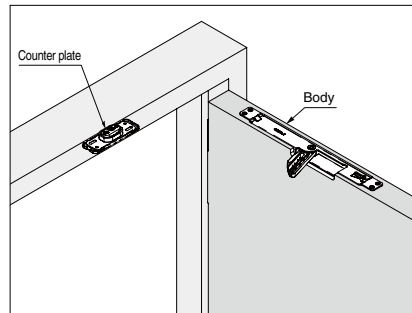


Door Hinge Side



*Below drawing shows right-handed type. Left-handed type is symmetrical.

Installation

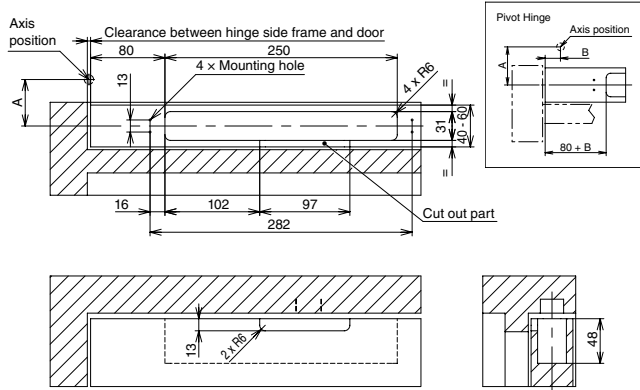


No.	Part Name	Material	Finish / Colour
①	Case	Steel (SPCC)	Nickel
②	Damper Base	POM	Grey
③	Spring Base	POM	Grey
④	Arm Cover	POM	Grey
⑤	Arm	Zinc Alloy (ZDC)	Nickel
⑥	Counter Plate Cover	ABS	Dark Brown/Nickel
⑦	Counter Plate Base	Zinc Alloy (ZDC)	-
⑧	Counter Plate Shaft	Steel (SUM)	Nickel

CAD	Item Code	Item Name	Type	Counter Plate Cover	Door Width	Door Thickness	Door Weight (kg)	Weight (g)	Box (pcs)	Carton (pcs)
	270-034-821	LDD-V100-DBR-R	Right-handed	Dark Brown	Max. 900	40 - 60	40 - 100	920	1	10
	270-034-822	LDD-V100-DBR-L	Left-handed					920	1	10
	270-034-823	LDD-V100-NI-R	Right-handed	Nickel				920	1	10
	270-034-824	LDD-V100-NI-L	Left-handed					920	1	10

Cut Out Dimensions for Door

LDD-V100-R (right-handed) shown. LDD-V100-L (left-handed) is symmetrical.



Dimension from frame to bore position of counter plate (mm)

Door Hinge	Clearance Between Hinge Side Frame and Door (mm)					
	1	2	3	4	5	
HES3D-160, E190	217	218	219	220	221	
Butt Hinge	A=20 - 35	220	221	222	223	224
	A=35 - 50	223	224	225	226	227
Pivot Hinge	A=20 - 35	220 + B	221 + B	222 + B	223 + B	224 + B
	A=35 - 50	223 + B	224 + B	225 + B	226 + B	227 + B

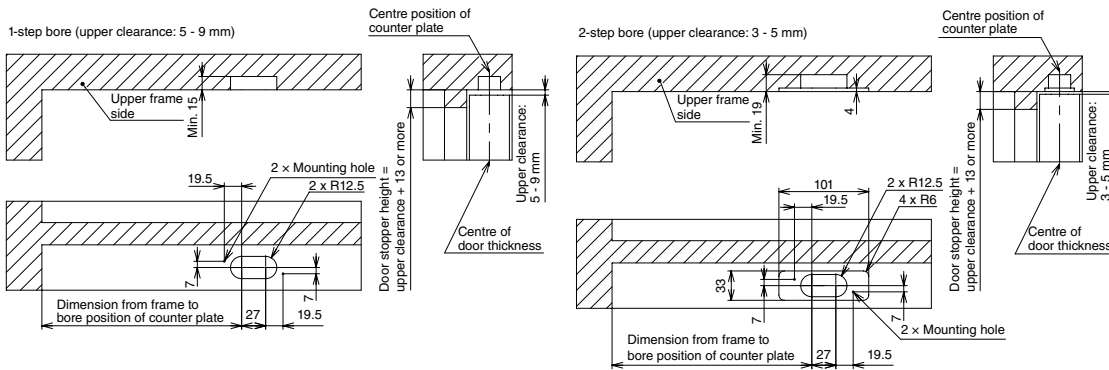
*If clearance between hinge side frame and door is beyond the range in the table above, calculate as per the table below.

Door Hinge	Dimension from Frame to Bore Position of Counter Plate (mm)	
HES3D-160, E190	216 + Clearance Between Hinge Side Frame and Door	
Butt Hinge	A=20 - 35	219 + Clearance Between Hinge Side Frame and Door
	A=35 - 50	222 + Clearance Between Hinge Side Frame and Door
Pivot Hinge	A=20 - 35	219 + B + Clearance Between Hinge Side Frame and Door
	A=35 - 50	222 + B + Clearance Between Hinge Side Frame and Door

* Refer to for 3-way adjustable concealed hinge HES3D.

Cut Out Dimensions for Frame

LDD-V100-R (right-handed) shown. LDD-V100-L (left-handed) is symmetrical.



⚠ Safety Cautions

- Do not drop or give strong impact to this product.
- This product can not resist strong wind. Do not use it under strong wind, or the damper effect will decrease.
- If you close the door with excessive force, the damper effect may decrease.
- The door may not close enough depending on the case lock used.
- This product is designed for interior use. Do not use it outdoors.
- Do not use it at places subject to moisture and water.
- At the entrance of highly airtight room, the door closing speed and damper force may change, and the door may not close enough.
- The closing speed varies depending on the use environment (temperature, wind and hinges used on the door, etc.). Operating temperature: 0°C - 40°C
- Do not apply a load in the vertical direction or excessive force to pull-in arm. Otherwise, it may be damaged.
- Please install and adjust this product after adjusting the door hinges.
- Please use the door hinges within the adaptive door weight range of this product.
- Please install this product horizontally. Otherwise, it may not operate properly.
- After vertical adjustment of counter plate, tighten the fixing nut firmly.
- This product is supplied with installation instruction. Be sure to read before installation or use.
- Regularly check for looseness or dropout of screws during use.

DOOR DAMPER



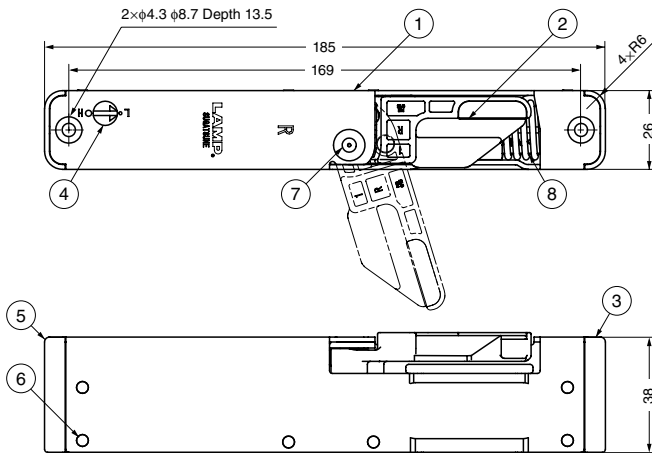
LDD-V



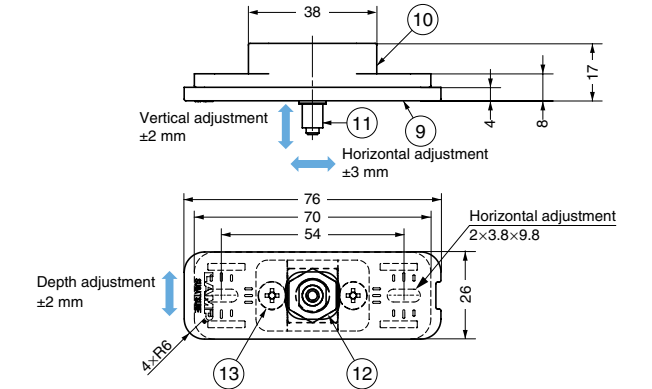
Right-handed



Body



Counter Plate

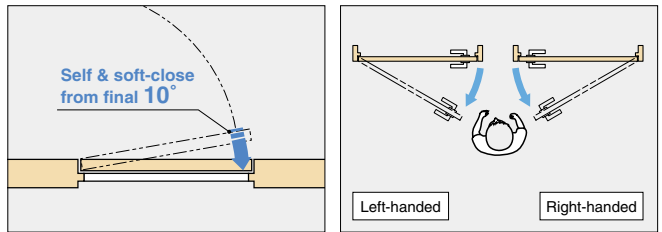


Features

- Concealed type that is hidden from view when door is closed.
- Self and soft-closes within a 10° radius of closing. Closes gently, preventing slamming.
- Doors feel lighter to open compared to standard door closers.
- Closing speed adjustable post-installation.
- Counter plate has 3-way adjustment post-installation.
- 2011 Good Design Award Winner
- Recommended Door Specifications:
Thickness : Min. 33 mm
Width : Max. 900 mm
Weight : 15 - 40 kg
- For doors 40-100kg, please use LDD-V100. Surface mount without mortise type LDD-S also available.
- Successfully passed 100,000 open/close cycles in a private test.
- Recommended hinge: HES3D series (P.8-P.11)
- Adjustment Jig LDD-V-JIG & Template LDD-V-TMP available. (P.23)

Parts Included

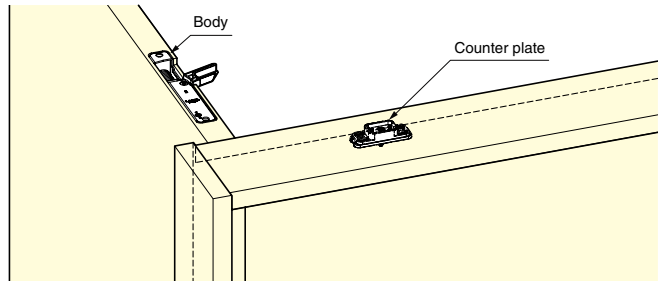
- Binding head tapping screw 4x45
- Binding head tapping screw 3.5x15



Right-handed type shown.

Installation

*Below drawing shows right-handed.



No.	Part Name	Material	Finish/Colour
①	Body Case	Steel (SPCC)	Clear Zinc Chromate
②	Arm	Polyacetal (POM)	Grey
③	Spring Base	Polyacetal (POM)	Grey
④	Damper Force Adjustment Shaft	Polyacetal (POM)	Grey
⑤	Damper Base	Polyacetal (POM)	Grey
⑥	Countersunk Hollow Pin	Steel (SWCH)	Clear Zinc Chromate
⑦	Shoulder Shaft	Steel (SUM)	Nickel
⑧	Spring	Steel (SWP)	Clear Zinc Chromate
⑨	Counter Plate Cover	Polyacetal (POM)	Grey
⑩	Counter Plate Case	Polyacetal (POM)	Grey
⑪	Counter Plate Shaft	Steel (SUM)	Nickel
⑫	Vertical Adjustment Screw	Steel (SWRCH)	Clear Zinc Chromate
⑬	Depth Adjustment Screw	Steel (SWCH)	Clear Zinc Chromate

CAD	Item Code	Item Name	Type	Door Width	Door Thickness	Door Weight	Weight	Carton
	270-017-563	LDD-V-R	Right-handed	Max. 900	Min. 33	15 - 40 kg	427 g	24 pcs
	270-017-564	LDD-V-L	Left-handed	Max. 900	Min. 33	15 - 40 kg	427 g	24 pcs

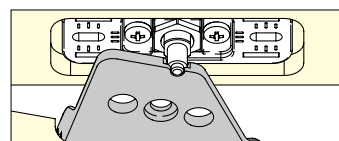
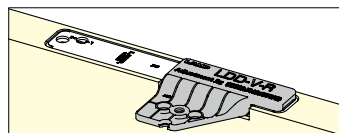
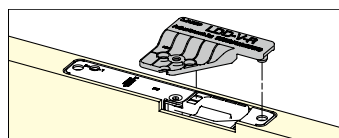
ADJUSTMENT JIG FOR COUNTER PLATE OF LDD-V

LDD-V-JIG



Features

Easy to adjust position of counter plate.

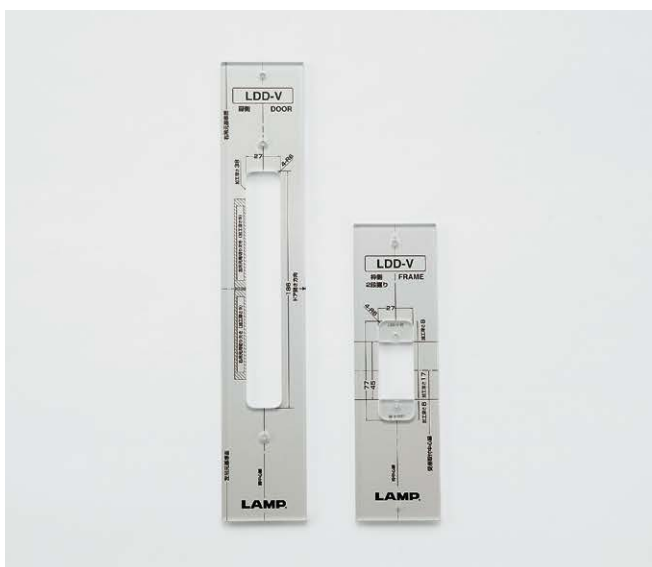


LDD-V (Sold separately)

CAD	Item Code	Item Name	Material	Weight	Carton
-	270-025-276	LDD-V-R-JIG	ABS	11 g	1000 pcs
-	270-025-275	LDD-V-L-JIG	ABS	11 g	1000 pcs

TEMPLATE FOR LDD-V

LDD-V-TMP



Features

- Easy to make mortise on wood door and frame.
- Possible to use repeatedly.
- Two templates included: for door & frame.

Remarks

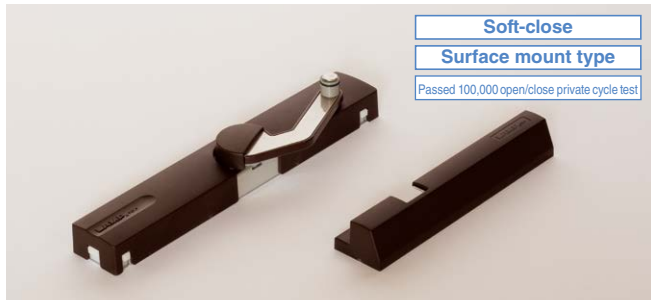
- Recommended working tool is a straight bit with guide bearings of which guide diameter and bit diameter are the same.

CAD	Item Code	Item Name	Material	Colour
-	270-024-568	LDD-V-TMP	Methacrylic Resin (PMMA)	Clear

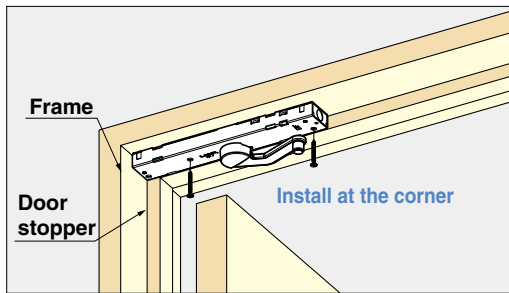
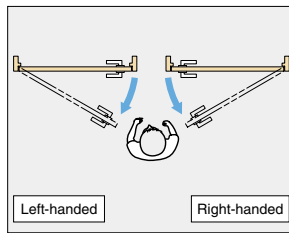
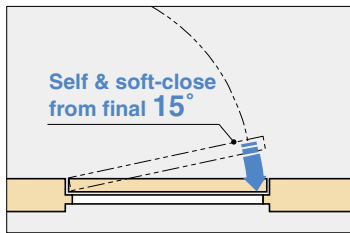
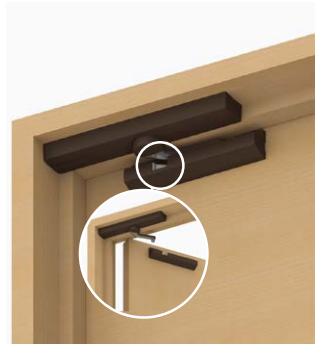
DOOR DAMPER



LDD-S



Right-handed shown.



Available Colours



Features

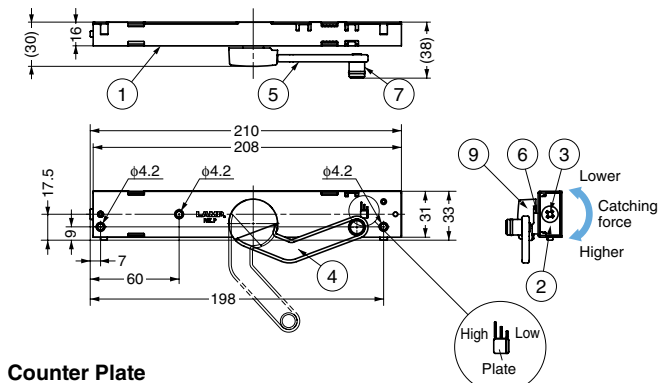
- Surface mount that can be retrofitted onto current door installations.
- Easy to align to proper positioning, speeding up installation.
- Slim profile (body height only 16 mm) can handle doors up to 40 kg in weight.
- Self and soft-closes within a 15° radius of closing. Closes gently, preventing slamming.
- Doors feel lighter to open compared to standard door closers.
- Successfully passed 100,000 open/close cycles in private test.
- Counter plate position can be adjusted after installation.
- Damper force can be adjusted post-installation.
- Recommended Door Specifications:
Width : Max. 900 mm
Weight : 15 - 40 kg
- Successfully passed 100,000 open/close cycles in private test.
- Available in 4 colours to match your door: White (WT), Light Grey (LGR), Light Brown (LBR) or Dark Brown (DBR).
- Recommended hinge: HES series (P.8-P.11)

Parts Included

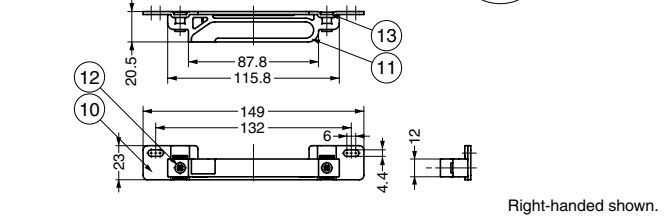
- Countersunk head tapping screw 3.5x30
- Binding head tapping screw 4x16



Body



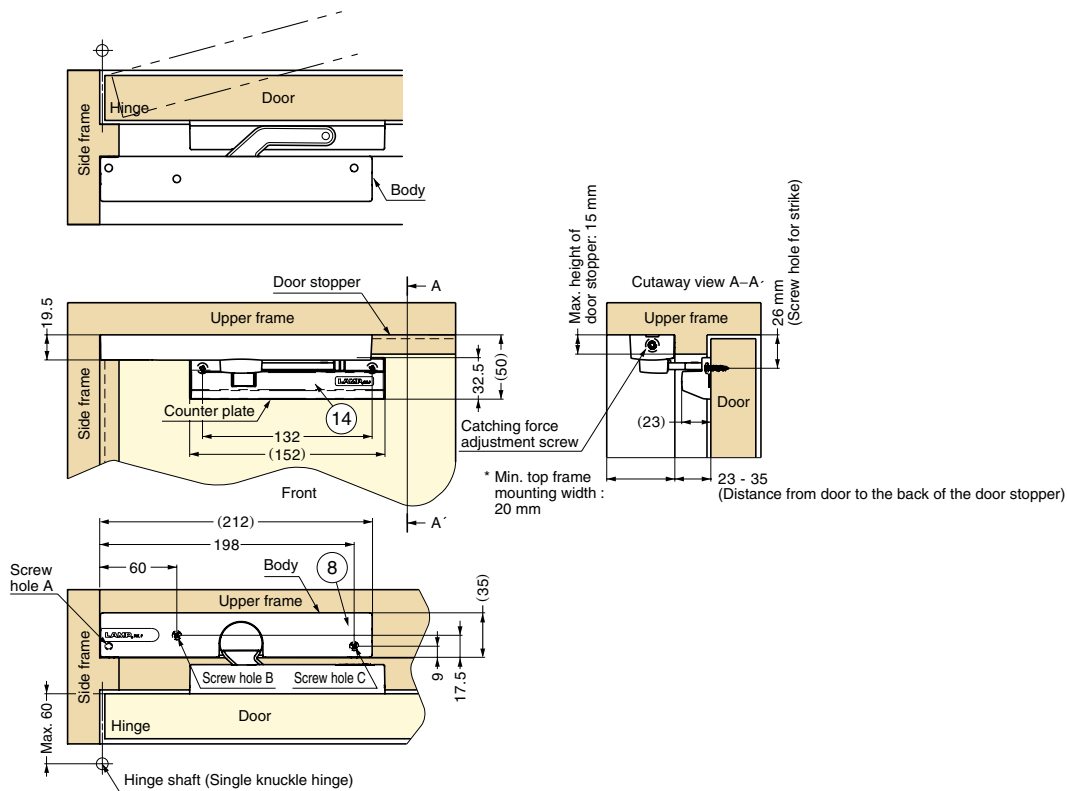
Counter Plate



No.	Part Name	Material	Finish/Colour
①	Case	Steel (SGCC)	Chromate
②	Block	Polyacetal (POM)	Natural
③	Catching Force Adjustment Screw	Steel	Chromate
④	Arm	Stainless Steel (SUS304)	Plain
⑤	Arm Spacer	Polyacetal (POM)	(As Left)
⑥	Arm Axis	Zinc Alloy (ZDC)	Chromate
⑦	Roller	Polyacetal (POM)	Grey
⑧	Body Cover	ABS	(As Left)
⑨	Arm Cover	ABS	(As Left)
⑩	Counter Plate	Steel (SPCC)	Chromate
⑪	Guide	Zinc Alloy (ZDC)	Chromate
⑫	Screw	Steel (SWCH)	Nickel
⑬	Nut	Steel (SPCC)	Nickel
⑭	Counter Plate Cover	ABS	(As Left)

CAD	Item Code	Item Name	Colour	Type	Door Width	Door Weight	Weight	Carton
	270-018-984	LDD-S-R WT	White	Right-handed	Max. 900	15 - 40 kg	550 g	20 pcs
	270-018-985	LDD-S-L WT		Left-handed				
	270-018-986	LDD-S-R LGR	Light Grey	Right-handed				
	270-018-987	LDD-S-L LGR		Left-handed				
	270-018-988	LDD-S-R LBR	Light Brown	Right-handed				
	270-018-989	LDD-S-L LBR		Left-handed				
	270-018-990	LDD-S-R DBR	Dark Brown	Right-handed				
	270-018-991	LDD-S-L DBR		Left-handed				

Installation



*When the distance from door to the back of the door stopper is 20 mm - 25 mm, please use the screw hole A and C.

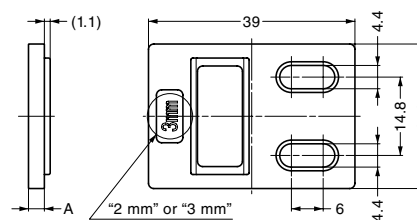
SPACER FOR LDD-S

LDD-S-P



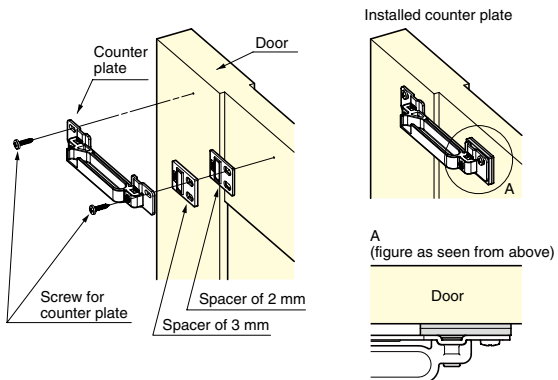
Features

- Two types available: 2 mm thickness and 3 mm thickness.
- Can be used for Max. 6 mm thickness gap.



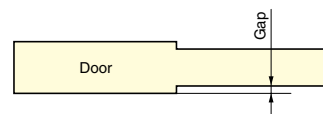
Installation

(In case of 5 mm thickness gap)



Remarks Before Installation

Check the gap of the door surface and choose the suitable spacer (combination of spacers).



Part Name	Material	Colour
Body	ABS	Black

CAD	Item Code	Item Name	A	Weight	Box	Carton
	270-021-019	LDD-S-P2 BL	2	2 g	100 pcs	1000 pcs
	270-021-020	LDD-S-P3 BL	3	3 g	100 pcs	1000 pcs

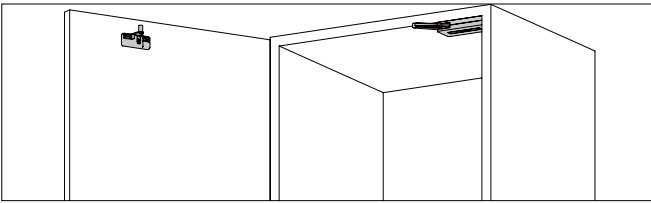
DAMPER CATCH



DC-200



Installation Example



Attach to the interior of the cabinet.

Features

- Damper and catch combination for sideways opening doors.
- Prevents doors from slamming.
- Holds doors in closed position.
- Easy to install by simply aligning body with the interior wall.
- Non-handed.
- Can handle doors up to 40 kg. (When using DC-200 - 40).
- Strike can be adjusted post-installation: horizontally ± 5 mm, vertically ± 4 mm.
- Passed 50,000 open/close cycles in a private test.

Recommended hinges

- Heavy Duty Concealed Hinge J95 (With catch type)
- 3way Adjustable Concealed Hinge HES3D-90 (P:11)
- Single axis furniture hinges

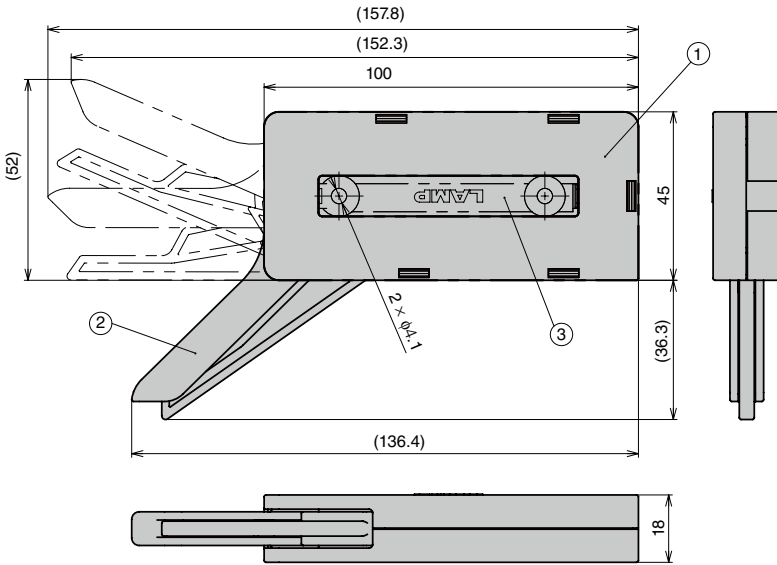
Caution

- The screws for installing on sheet metal are not included. We recommend the following screws:
Recommended screws for body: Cross binding head M4 \times 30
Recommended screws for counter plate: Cross binding head M4 \times 15
- Do not install to body or strike to hollow surfaces.
- If there is a large resistant force during closing, the door may not close fully.

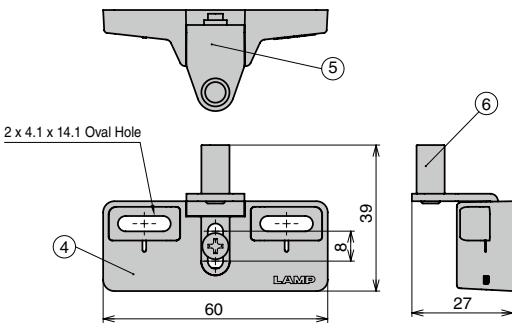
Parts included

- Body Cover
- Counter
- Screws to attach body: 3.5 \times 30
- Screws to attach counter: 3.5 \times 15

Body



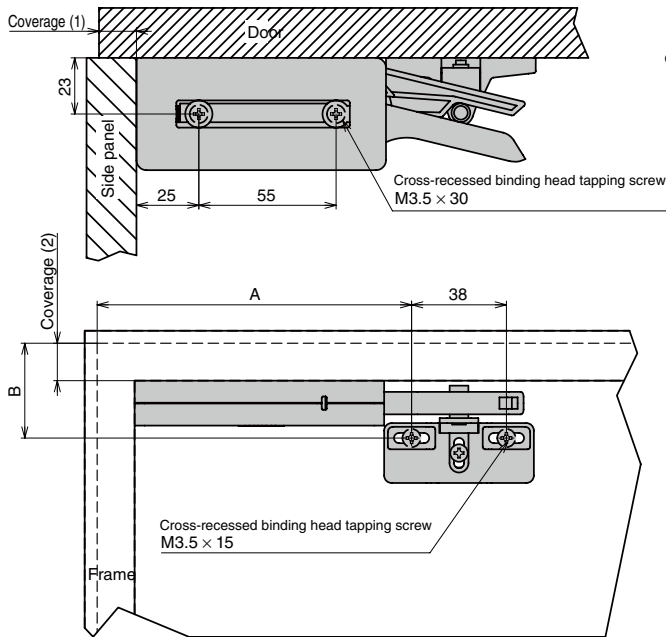
Counter Plate



No.	Item Name	Materials	Finish/Colour
①	Body	PC/ABS	White / Black
②	Arm	PA	White / Black
③	Body Cover	ABS	White / Black
④	Counter	PC/ABS	White / Black
⑤	Counter Plate	Steel (SPCC)	Nickel Plating
⑥	Bumper	Elastomer	Gray

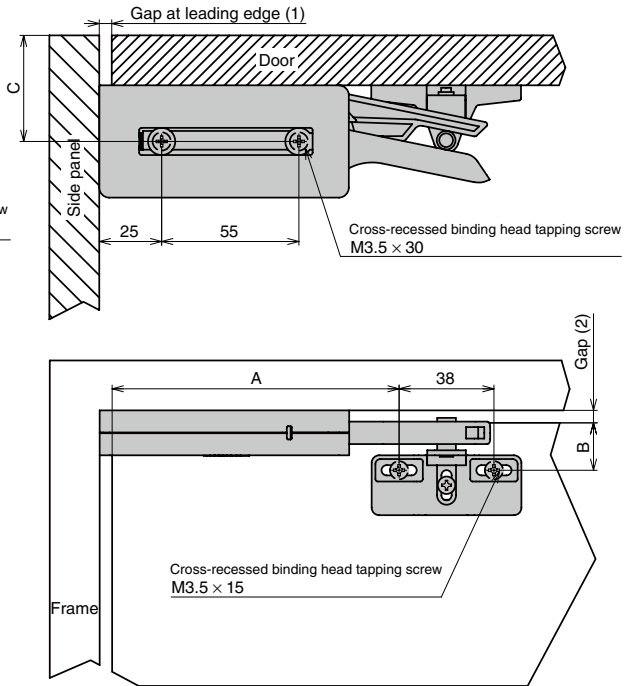
CAD	Item Code	Item Name	Colour	Door Width	Door Height	Load Capacity (kg)	Weight (g)
2F3D	140-043-604	DC-200-25WT	White	450 - 900	Under 2400	7 - 25	105
2F3D	140-043-605	DC-200-25BL	Black				
2F3D	140-043-606	DC-200-40WT	White				
2F3D	140-043-607	DC-200-40BL	Black				

For lapped (outset) doors



For inset doors

Install a door stopper in addition to this product.



	A	B	C
Outset Doors	114 + Coverage (1)	24 + Coverage (2)	
Inset Doors	114 - gap at leading edge (1)	24 - gap (2)	23+Door Thickness

METAL MAGNETIC TOUCH LATCH



ML-ZN80

Passed 100,000 open/close private cycle test



Features

- The body is made of metal for high durability.
- Designed for use on large doors due to its strong push force.
- The plastic part is flame resistant and compliant with the UL94V-0 standard.
- The magnet part has an allowance of 1.5° on each side to catch the strike plate correctly. This helps the magnet to adjust even if there is a slight misalignment.
- The screws for the mounting plate are designed to be hidden from view.
- For overlay doors, please make sure there is correct clearance between the door and side board as shown in the drawings below.

Application

- Walk-in closets, concealed doors.

Remarks

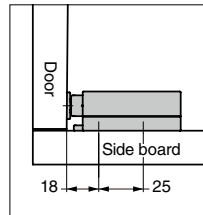
- The magnetic force may vary. Please confirm with actual products before use.
- Please install the body at the height where people are supposed to push.
- Please use hinges which do not have catch functions.

Parts Included

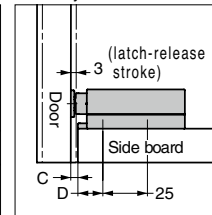
- Cross-recessed tapping screw M4 × 16
- Cross-recessed tapping screw M3 × 16

Installation

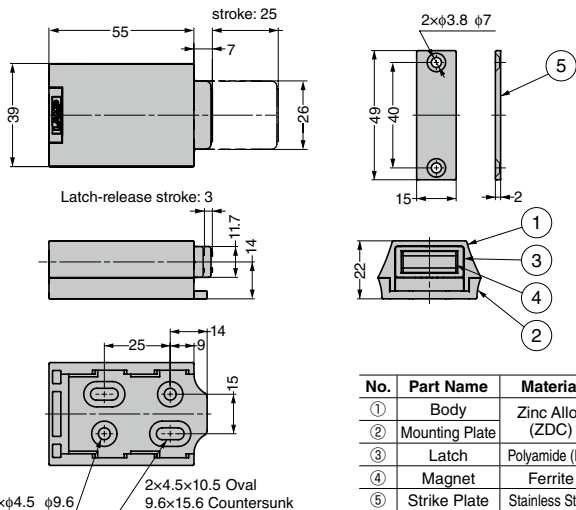
- Inset Doors



- Overlay Doors



Video : Features



No.	Part Name	Material	Finish/Colour
①	Body	Zinc Alloy	Enamel
②	Mounting Plate	(ZDC)	Finish
③	Latch	Polyamide (PA)	-
④	Magnet	Ferrite	-
⑤	Strike Plate	Stainless Steel	Barrel Polished

[Dimension]	
C (mm)	D (mm)
3	15
4	14

Please make sure there is the "C clearance" on the side board. It makes the installation easier to align the edge of the body to the edge of the side board.

CAD	Item Code	Item Name	Colour	Magnetic Force N	Magnetic Force kgf	Push Force N	Push Force kgf	Weight (g)	Box (pcs)	Carton (pcs)
	140-043-880	ML-ZN80BL	Black	29.4	3	49	5	160	10	40
	140-043-881	ML-ZN80WT	White						10	40

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