sensys.
Perfect design, perfect action

Hettich's first hinge with integrated dampening

sensys marks the latest generation in hinge technology: The dampening element is integrated invisibly into the hinge – an innovation that meets the highest criteria for convenience and functionality. Just a light touch – and the door closes smoothly and silently. The unique pull-in function closes the door gently and automatically as soon as the open angle is less than 35°. sensys delivers an exclusive closing experience. sensys incorporates high quality material and perfect ´Silent System´ soft closing action - without the need for bulky adaptors.

Clean, elegant design

sensys has an elegant, contemporary look and meets all customer expectations for outstanding design and quality. The simple, sleek, harmonious lines of the design – from the cup and the arm cover cap to the mounting plate – give the hinge its streamline modern look. All edges and radii contribute to the perfect harmony of hinge and mounting plate. Silent System dampening is integrated invisibly in the hinge, as is the unlatch tab. Specially designed cover caps conceal fixing screws and adaptors. Winner of zhe 2008 reddot Design Award and the 2009 iF Product Design Award, sensys seamlessly combines aesthetics and function.

reddot design award
winner 2008

iF product design award 2009
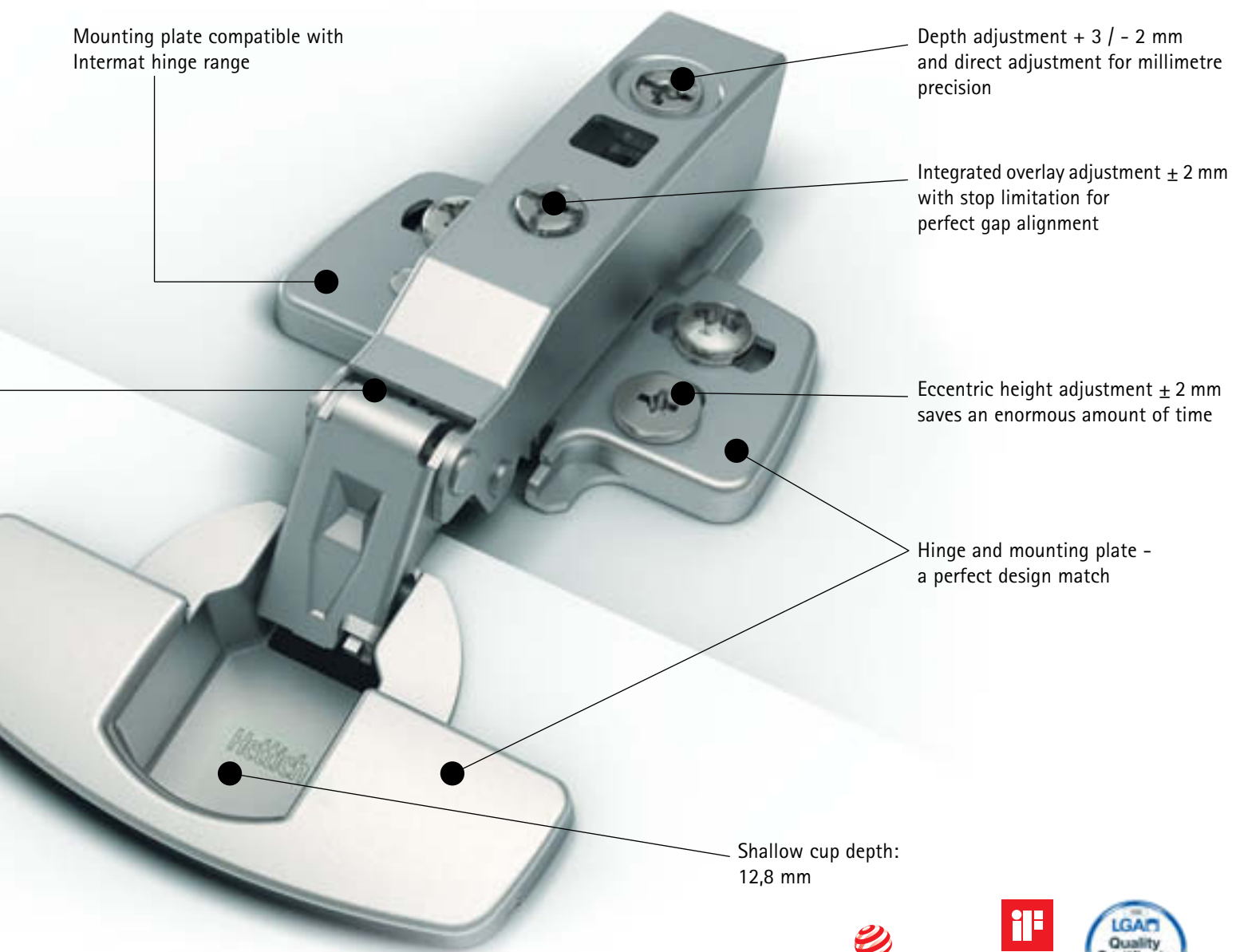
Mounting plate compatible with
Intermat hinge range

Depth adjustment + 3 / - 2 mm
and direct adjustment for millimetre
precision

Integrated overlay adjustment ± 2 mm
with stop limitation for
perfect gap alignment

Eccentric height adjustment ± 2 mm
saves an enormous amount of time

Hinge and mounting plate -
a perfect design match

Shallow cup depth:
12,8 mm

reddot design award
winner 2008

iF
product
design
award
2009

LGA
Quality
Certificate

Toolless assembly
Press gently and the hinge arm
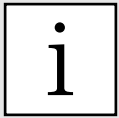engages securely in the moun-
ting plate.

Minimum door protrusion
Narrow gaps maximize space
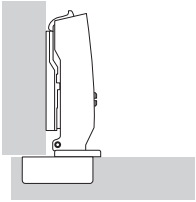available for internal drawers

Unique self-closing angle
Gentle, even closure from
an opening angle of 35°

Narrow reveals
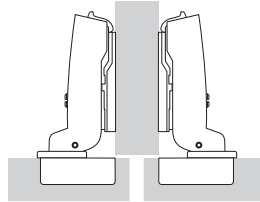Only 4 mm for 22 mm door
thickness

Mounting options

Full overlay

The door is in front of the cabinet wall providing a small reveal at the side within which the door can open reliably. Alternatively, the door can be overlaid fully (max. 19 mm), in which case sufficient space must be allowed at the side for the required minimum reveal.

Half overlay

In this case, there are two doors in front of a centre panel, with the required overall reveal between them. In other words, each door has a smaller overlay and cranked hinges are therefore used.
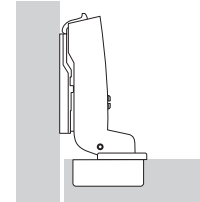
Inset

The door is located inside the cabinet, i.e. beside the cabinet wall. Here too, a reveal is needed so that the door can open reliably. Heavily cranked hinges are used here.

Minimum door reveal

**Minimum door reveal**

Minimum door reveal
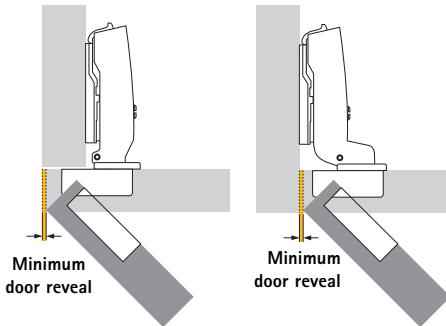
The minimum reveal (also known as the minimum clearance) is the space required at the side so that the door can open.
The size of the minimum reveal depends on the cup distance C, the door thickness and the type of hinge selected.
Radii on the door edges reduce the minimum clearance.
The required minimum reveal is shown in the table for the respective hinge types.

Minimum door reveal for half overlay
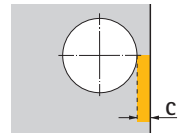
2 x Minimum door reveal
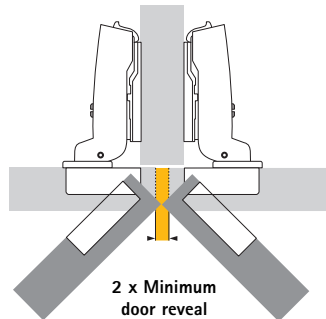
For half overlay configurations, the total reveal between the doors must be chosen to correspond to twice the door reveal. Both doors can then be opened at the same time.
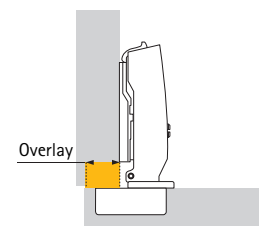
Cup distance C

The cup distance C is the distance between the edge of the door and the edge of the cup hole.
The larger the cup distance, the smaller the required minimum reveal.
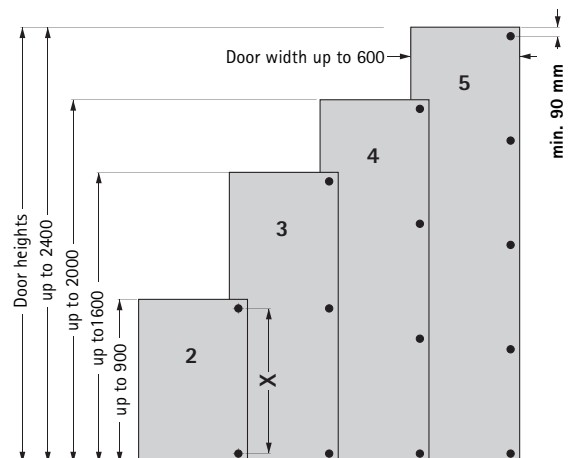
C

Overlay (Door overlay)

Overlay

The overlay is the distance by which the door projects over the cabinet front.

Number of hinges per door:

Door width, height and weight as well as the material quality of the door are decisive factors determining the number of hinges required.
The factors encountered in each individual case in practice differ enormously. For this reason, the number of hinges shown in the diagram should only be taken as a guide.
If in doubt, it is advisable to produce a trial mounting or to increase the number of hinges.
For reasons of stability, distance X between the hinges must always be made as large as possible.

Door width up to 600

5

min. 90 mm

4

Door heights

up to 2400

up to 2000

up to 1600

3

up to 900

2

X

(Guide values for 19 mm chipboard panels with a density of 750 kg/m^3)

General determination of distances

Mounting plates are available in different distances (0/1,5/3 and 5 mm). The height of the mounting plate is defined by distance D. Distance D is embossed on the top of each mounting plate. A larger distance D reduces the overlay for full and half overlay applications. In the case of inset doors, a larger distance D increases the door reveal. To calculate the required distance, the minimum reveal must first be determined from the table of minimum door reveals for the type of hinge concerned. The minimum reveal depends on the cup distance C and the door thickness. Minimum reveals can be reduced by increasing the cup distance C and/or affixing radii to the door edges. The table of minimum door reveals also shows the possible combinations of door thickness and cup distance C.

Calculating distance for overlay doors

Once the minimum reveal has been defined, the required distance D can be read off in the table for the required door overlay and the required cup distance C.

Ideally, the door overlay and value C should be selected to yield a distance D which is available as a mounting plate.

Example: Overlay = 16 mm and cup distance C = 5 mm yield a distance D equal to 1,5 mm. This distance is available as a mounting plate.

If the calculated distance D differs from the distances available as mounting plates, the difference is compensated by means of the overlay adjustment screw on the hinge arm.

Example: Door overlay = 16 mm and cup distance C = 4 mm yield a distance of 0,5 mm. The overlay is adjusted by - 0 mm when using a mounting plate with a distance = 0,5 mm.

Calculating distance for inset doors

Once the minimum reveal has been defined, the required distance D can be read off in the table for the required door thickness and the required cup distance C. This calculated distance D yields a width of joint between cabinet wall and door edge equal to the minimum reveal as listed in the table of minimum door reveals.

Ideally, door overlay and C dimension are selected to achieve a distance in which a mounting plate is available.

Example: Door thickness 19 mm and cup distance C = 6 mm yield a distance D equal to 3 mm and thus a door reveal of 1 mm (this door reveal corresponds to the minimum reveal as listed in the table of minimum door reveals).

If the calculated distance D differs from the distances available as mounting plates, the difference is compensated by means of the overlay adjustment screw on the hinge arm.

Example: Door thickness = 19 mm and cup distance C = 4 mm yield a distance of 1,0 mm.

Use of a mounting plate with D = 1,5 mm yields a door reveal of 1,5 mm (1,0 mm minimum reveal + 0,5 mm due to the difference between distance D and the mounting plate with D = 1,5 mm). However, if a door reveal of 1,0 mm is preferred, the gap must be reduced by 0,5 mm.

Distance D increases proportionally if a larger door reveal is required.

Example: Door thickness = 19 mm, cup distance C = 6 mm, required door reveal = 2,5 mm. 3 mm distance (yield a minimum reveal of 1,0 mm) + 1,5 mm enlargement (value = required reveal – minimum reveal) = 4,5 mm required distance D. A mounting plate with D = 5 mm is used. The reveal is reduced by 0,5 mm with the aid of the overlay adjusting screw on the hinge arm.

Cup distance C mm	Overlay mm								
	10	11	12	13	14	15	**16**	17	18
	Distance D mm								
3	5,5	4,5	3,5	2,5	1,5	0,5			
4	6,5	5,5	4,5	3,5	2,5	1,5	0,5		
5	7,5	6,5	5,5	4,5	3,5	2,5	**1,5**	0,5	
6	8,5	7,5	6,5	5,5	4,5	3,5	2,5	1,5	0,5

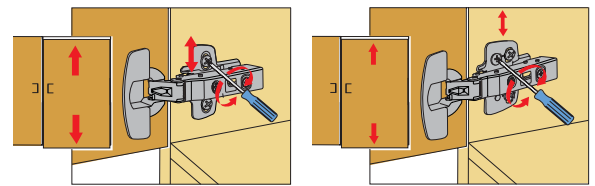| Cup distance C mm	Door thickness mm							
	15	16	17	18	**19**	20	21	22
	Distance D mm							
3				0,1	0,4	0,9	1,6	
4	0,3	0,5	0,6	0,8	1,0	1,3	1,7	2,3
5	1,3	1,4	1,6	1,8	2,0	2,3	2,6	3,1
6	2,3	2,4	2,6	2,8	**3,0**	3,2	3,6	3,9

Overlay adjustment
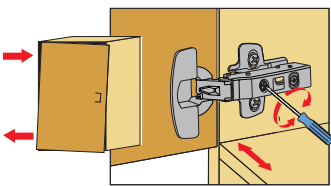
Turn screw clockwise:
Door overlay decreases (-).
Turn screw anticlockwise:
Door overlay increases (+).

Depth adjustment
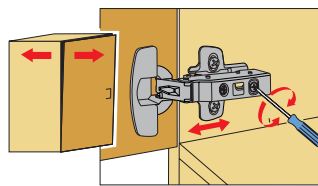
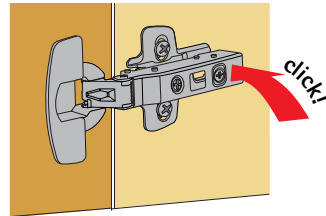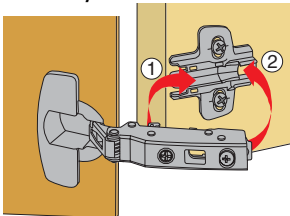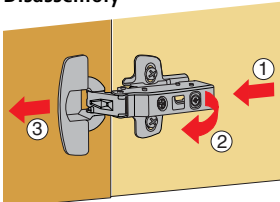Direct, infinitely variable depth adjustment

Height adjustment

Using height–adjustable mounting plates makes it possible to align the exact door height.

Direct, variable height adjustment with eccentric screw

Assembly

Disassembly

Characteristic for sensys hinges is the ergonomical snap-on assembly. The hinge is slipped into the front of the mounting plate ①, then a light finger pressure and the hinge arm latches onto the mounting plate ② with an audible click.
The hinge arm is now securely clamped, via five points, with zero play. Doors are clipped on zipper style from top to bottom.

Disassembly is carried out in the opposite direction from bottom to top. The hinge is unlatched by pressing lightly on latch ① which is hidden under the side arm for security reasons. In one movement, the hinge arm is lifted off the mounting plate ② and the door is removed from the cabinet ③.
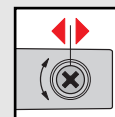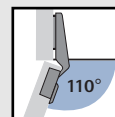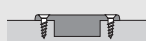
- Concealed hinge for snap-on attachment
- For door thicknesses of 15 - 22 mm
- Cup diameter 35 mm
- With self-closing feature
- Integrated overlay adjustment ± 2 mm
- Integrated depth adjustment + 3 mm / – 2 mm
- Height adjustment at mounting plate
- Hinge cup/arm: nickel-plated steel

Cup versions

Cup TH 52	Cup TH 53	Cup TB 53
Screw on	Press-in version	Press-in version

Hinge versions	Mounting options	Article/Order no.			
	Full overlay				
		8645i – TH 52	8645i – TH 53	8645i – TB 53	PU
		9 071 205	9 071 208	9 071 226	1/200
	Half overlay				
		8645i – TH 52	8645i – TH 53	8645i – TB 53	PU
		9 071 206	9 071 209	9 071 227	1/200
	Inset				
		8645i – TH 52	8645i – TH 53	8645i – TB 53	PU
		9 071 207	9 071 210	9 071 228	1/200
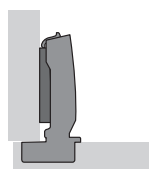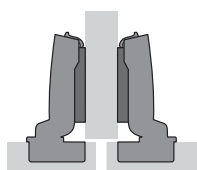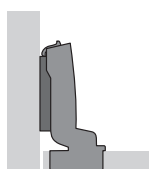
Hinge-arm cover cap
- Nickel-plated steel

Version	Order no.	PU
without Hettich Logo	9 082 612	1/200
with Hettich Logo	9 082 774	1/200

Hinge cup cover cap
- Nickel-plated steel

Cup version	X mm	Order no.	PU
TH 52 / TH 53	68,2	9 082 614	1/200
TB 53	61,4	9 084 924	1/200

| Cup distance C mm	Door thickness mm							
	15	16	17	18	19	20	21	22
	Minimum reveal per door – allow for in distance calculation Table entries apply to doors with 0 mm radius							
3	0,3	0,5	0,6	0,8	1,1	1,4	1,9	2,6
4	0,3	0,5	0,6	0,8	1,0	1,3	1,7	2,3
4,5	0,3	0,5	0,6	0,8	1,0	1,3	1,7	2,2
5	0,3	0,4	0,6	0,8	1,0	1,3	1,6	2,1
6	0,3	0,4	0,6	0,8	1,0	1,2	1,6	1,9

The minimum reveal is reduced for a door thickness of, for example, 22 mm with radii:
1 mm radius: table entry – 0,4 mm
3 mm radius: table entry – 1,0 mm
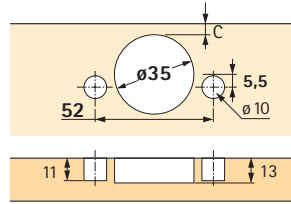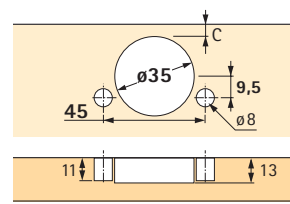
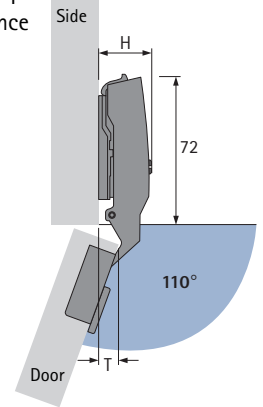Hinge protrusion H/ door protrusion T for 0 mm distance and 3 mm cup distance
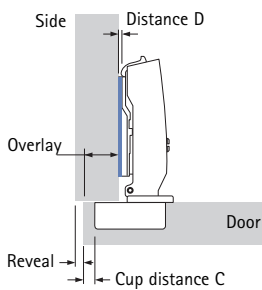

TH 52 hole dimensions

ø35   52   5,5   C   13

TH 53 hole dimensions

ø35   52   5,5   C   ø10   11   13

TB 53 hole dimensions

ø35   45   9,5   C   ø8   11   13

Mounting option	H mm	T mm
Overlay	25,0	8,5
Centre panel	31,0	18,0
Inset door	38,0	25,0

Cup distance C mm	Overlay mm								
	10	11	12	13	14	15	16	17	18
	Distance D mm								
3	5,5	4,5	3,5	2,5	1,5	0,5			
4	6,5	5,5	4,5	3,5	2,5	1,5	0,5		
4,5	7,0	6,0	5,0	4,0	3,0	2,0	1,0		
5	7,5	6,5	5,5	4,5	3,5	2,5	1,5	0,5	
6	8,5	7,5	6,5	5,5	4,5	3,5	2,5	1,5	0,5

Overlay adjustment ± 2,0 mm

Cup distance C mm	Overlay mm								
	0,5	1,5	2,5	3,5	4,5	5,5	6,5	7,5	8,5
	Distance D mm								
3	5,5	4,5	3,5	2,5	1,5	0,5			
4	6,5	5,5	4,5	3,5	2,5	1,5	0,5		
4,5	7,0	6,0	5,0	4,0	3,0	2,0	1,0		
5	7,5	6,5	5,5	4,5	3,5	2,5	1,5	0,5	
6	8,5	7,5	6,5	5,5	4,5	3,5	2,5	1,5	0,5

Overlay adjustment ± 2,0 mm
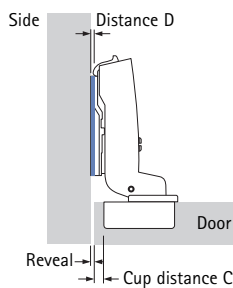
Cup distance C mm	Door thickness mm							
	15	16	17	18	19	20	21	22
	Distance D mm							
3					0,1	0,4	0,9	1,6
4	0,3	0,5	0,6	0,8	1,0	1,3	1,7	2,3
4,5	0,8	1,0	1,1	1,3	1,5	1,8	2,2	2,7
5	1,3	1,4	1,6	1,8	2,0	2,3	2,6	3,1
6	2,3	2,4	2,6	2,8	3,0	3,2	3,6	3,9

Reveal adjustment ± 2,0 mm