



# HINGES

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Assa offers a comprehensive range of hinges meeting all requirements, from the simplest case to the most demanding security door.

Assa hinges are available with a number of security enhancing functions, e.g. security pins that make it impossible to lift the door off.

Together we can even develop hinges to meet your or your company's specific requirements for design and construction.



## Right Hand Door, Left Hand Door

Look at the door/window at the hinge side to determine whether it is right or left handed.

If the hinges are on the right, it is a right hand door/window.

If the hinges are on the left, it is a left hand door/window.

**Traditional style:**

Hinges with welded knobs on hinge pins in traditional style.

**Security pins:**

Hardened steel pins that prevent forced entry on the hinge side of the door.

**Centre line**

When the hinge positioning has been determined, the position for preparations in the door (window, hatch etc.) can be defined. After spring width S has been added, the preparation in the frame (cabinet frame etc) can be determined.

**Automatically closing doors**

Positioning in vertical direction, see Doors below.

Spring hinges 2220, 2228, and 2248 are positioned in the centre of the door.

**French doors**

Journal-supported hinges and coupling hinges are mounted 150 mm from the corner of the frame. The third hinge is placed in between the other two hinges. When four are hinges are fitted, the fourth one is positioned 150 mm below the top hinge. The dimensions are measured to hinge centre line.

**Windows**

Journal-supported hinges and coupling hinges are mounted 150 mm from the corner of the frame. The third hinge is placed in between the two other ones. The dimensions are measured to hinge centre line.

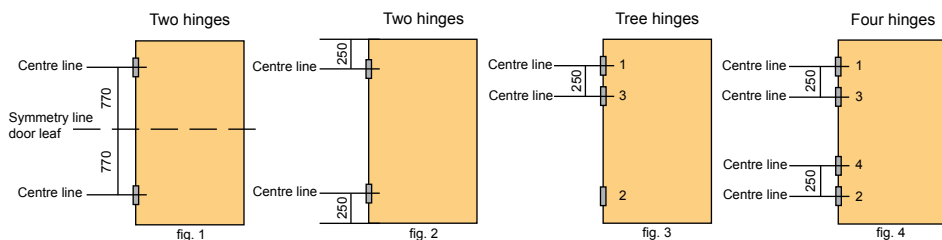
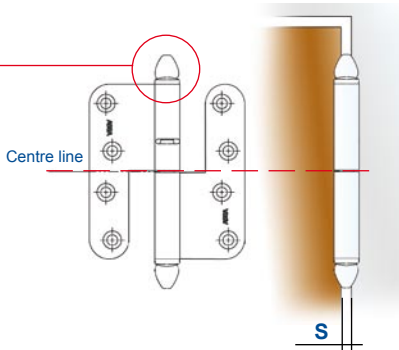
## Doors

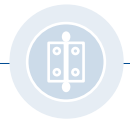
Door hinges is positioning, see fig. 1-4.

Hinges 1 and 2 is positioning, see fig. 1 and 2.

Doors with height 21M (door leaf 2040 mm).

Doors with other height then 21M (door leaf 2040 mm).





## Grades/Dimensioning

### Classification of Hinges

In accordance with standard EN 1935. Hinges can be classified depending on their strength and durability.

#### Windows, 3-glazed

For number of hinges, please see diagram 4. Height and width refer to external frame dimensions for single-light windows. 1 M = 100 mm.

#### Hinge types

For outward opening windows, use journal-supported hinges 1228 or coupling hinges 1206-65 or 1205.

For increased protection against forced entry, use journal-supported hinges 3220.

For inward opening windows, use journal-supported hinges 1223-100-1 and coupling hinges 1206-65 or 1205.

#### Windows, 2-glazed

Please refer to diagram 5 for number of hinges per frame. Height and width refer to external frame dimensions for single-light windows. 1 M = 100 mm.

#### Hinge types

For outward opening windows, use journal-supported hinges 1222, 1228, 1212 and coupling hinges 1201, 1207-65 or 211.

For increased protection against forced entry, use journal-supported hinges 3220.

For inward opening windows, use journal-supported hinges 1223-85, 1223-100 and coupling hinges 1201 or 211.

| GRADING TABLE FOR LIFT-OFF HINGES |         |
|-----------------------------------|---------|
| Hinge type                        | EN 1935 |
| 1212                              | 5       |
| 1222                              | 5       |
| 1228                              | 8       |
| 1223-85                           | 5       |
| 1223-100                          | 8       |
| 2418                              | 7       |
| 2472                              | 9       |
| 2465                              | 4       |
| 2010                              | 10      |



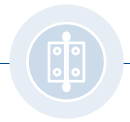
Grades/Dimensioning

| GRADING TABLE FOR JOURNAL-SUPPORTED HINGES |         |
|--|---------|
| Hinge type                                 | EN 1935 |
| 3012                                       | 14      |
| 3210                                       | 11      |
| 3211                                       | 13      |
| 3212                                       | 11      |
| 3213                                       | 13      |
| 3220                                       | 11      |
| 3225                                       | 13      |
| 3228                                       | 13      |
| 3229                                       | 13      |
| 3232                                       | 13      |
| 3244                                       | 13      |
| 3248                                       | 13      |
| 3278                                       | 14      |
| 3288                                       | 14      |
| 3240, 3241*                                | 13      |

\*N.B. Together with door leaf 3228, 3229 3244 or 3248

| Height |    |    |    |    |    |     |     |     |     |     |   |
|--------|----|----|----|----|----|-----|-----|-----|-----|-----|---|
| 16M    | 3  | 3  | 3  | 3  | 3  | 3   | 3   | 3   | 3   | 3   | 3 |
| 15M    | 3  | 3  | 3  | 3  | 3  | 3   | 3   | 3   | 3   | 3   | 3 |
| 14M    | 3  | 3  | 3  | 3  | 3  | 3   | 3   | 3   | 3   | 3   | 3 |
| 13M    | 3  | 3  | 3  | 3  | 3  | 3   | 3   | 3   | 3   | 3   | 3 |
| 12M    | 3  | 3  | 3  | 3  | 3  | 3   | 3   | 3   | 3   | 3   | 3 |
| 11M    | 2  | 2  | 2  | 2  | 3  | 3   | 3   | 3   | 3   | 3   | 3 |
| 10M    | 2  | 2  | 2  | 2  | 2  | 3   | 3   | 3   | 3   | 3   | 3 |
| 9M     | 2  | 2  | 2  | 2  | 2  | 2   | 3   | 3   | 3   | 3   | 3 |
| 8M     | 2  | 2  | 2  | 2  | 2  | 2   | 2   | 3   | 3   | 3   | 3 |
| 7M     | 2  | 2  | 2  | 2  | 2  | 2   | 2   | 3   | 3   | 3   | 3 |
| 6M     | 2  | 2  | 2  | 2  | 2  | 2   | 2   | 3   | 3   | 3   | 3 |
| 5M     | 2  | 2  | 2  | 2  | 2  | 2   | 2   | 3   | 3   | 3   | 3 |
| 4M     | 2  | 2  | 2  | 2  | 2  | 2   | 2   | 3   | 3   | 3   | 3 |
| Width  | 5M | 6M | 7M | 8M | 9M | 10M | 11M | 12M | 13M | 14M |   |

| Height |    |    |    |    |    |    |     |     |     |     |     |     |     |     |
|--------|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|
| 19m    | 3  | 3  | 3  | 3  | 3  | 3  | 3   | 3   | 3   | 3   | 3   | 3   | 3   | 3   |
| 18m    | 3  | 3  | 3  | 3  | 3  | 3  | 3   | 3   | 3   | 3   | 3   | 3   | 3   | 3   |
| 17m    | 3  | 3  | 3  | 3  | 3  | 3  | 3   | 3   | 3   | 3   | 3   | 3   | 3   | 3   |
| 16m    | 3  | 3  | 3  | 3  | 3  | 3  | 3   | 3   | 3   | 3   | 3   | 3   | 3   | 3   |
| 15m    | 2  | 2  | 2  | 2  | 3  | 3  | 3   | 3   | 3   | 3   | 3   | 3   | 3   | 3   |
| 14m    | 2  | 2  | 2  | 2  | 3  | 3  | 3   | 3   | 3   | 3   | 3   | 3   | 3   | 3   |
| 13m    | 2  | 2  | 2  | 2  | 3  | 3  | 3   | 3   | 3   | 3   | 3   | 3   | 3   | 3   |
| 12m    | 2  | 2  | 2  | 2  | 3  | 3  | 3   | 3   | 3   | 3   | 3   | 3   | 3   | 3   |
| 11m    | 2  | 2  | 2  | 2  | 2  | 3  | 3   | 3   | 3   | 3   | 3   | 3   | 3   | 3   |
| 10m    | 2  | 2  | 2  | 2  | 2  | 3  | 3   | 3   | 3   | 3   | 3   | 3   | 3   | 3   |
| 9m     | 2  | 2  | 2  | 2  | 2  | 3  | 3   | 3   | 3   | 3   | 3   | 3   | 3   | 3   |
| 8m     | 2  | 2  | 2  | 2  | 2  | 2  | 2   | 2   | 2   | 3   | 3   | 3   | 3   | 3   |
| 7m     | 2  | 2  | 2  | 2  | 2  | 2  | 2   | 2   | 2   | 3   | 3   | 3   | 3   | 3   |
| 6m     | 2  | 2  | 2  | 2  | 2  | 2  | 2   | 2   | 2   | 3   | 3   | 3   | 3   | 3   |
| 5m     | 2  | 2  | 2  | 2  | 2  | 2  | 2   | 2   | 2   | 3   | 3   | 3   | 3   | 3   |
| 4m     | 2  | 2  | 2  | 2  | 2  | 2  | 2   | 2   | 2   | 3   | 3   | 3   | 3   | 3   |
|        | 4M | 5M | 6M | 7M | 8M | 9M | 10M | 11M | 12M | 13M | 14M | 15M | 16M | 17M |



## Selection & Dimensioning

### Door with spring hinges

When you have determined the weight and width of the door, please see diagram 3 for recommended size and the number of hinges.

### French doors

For number of hinges, please see the diagram.  
 Height and width refer to external frame dimensions.  
 1 M = 100 mm.  
 The number of coupling hinges is always 3.

### Hinge types

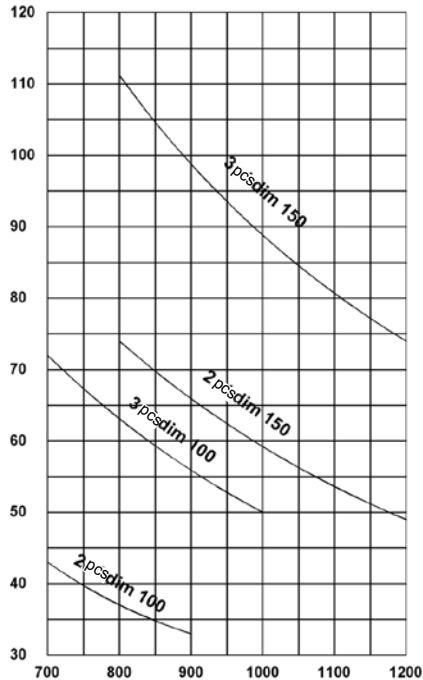
French doors in ground floor.  
 For outward opening French doors, use journal-supported hinges 3228, 3244 or 3248.  
 For inward opening French doors, use journal-supported hinges 3229.  
 For coupled French doors, use coupling hinges 1205.

### French doors above ground floor

For outward opening French doors, use journal-supported hinges 3220.  
 For inward opening French doors, use journal-supported hinges 3229.

For journal-supported hinges according to this recommendation the number of hinges is indicated in brackets in diagram 3.

| Height |    |    |       |       |
|--------|----|----|-------|-------|
| 22M    | 3  | 3  | 3 (4) |       |
| 21M    | 3  | 3  | 3 (4) |       |
| 20M    | 3  | 3  | 3 (4) |       |
|        | 8M | 9M | 10M   | Width |





## Selection & Dimensioning

Information below are general recommendations. Variations may occur due to the product which the hinges are used in, the environment etc.

### A.

Exterior doors, light-weight exterior doors institutional doors etc.  
Unrebrated doors: 3248, 3228, 3288, 3278  
Rebrated doors: 3229

### B.

Interior doors, light-weight interior doors institutional doors etc.  
Unrebrated doors: 3220, 2465, 2418  
Rebrated doors: 3229

### C.

Steel doors  
3012, 3012-01

### D.

Garage doors  
3278, 3288

### E.

Automatically closing doors  
Two way swing doors: 280  
One way swing doors: 279  
Unrebrated automatically closing doors: 2220, 2228, 2248

### F.

Outward opening French doors:  
3228, 3244, 3248, 3210  
Coupling hinges: 1206-65, 1206, 1207-65

### G.

Inward opening French doors: 3229  
Coupling hinges: 1206-65

### H.

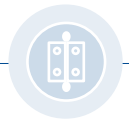
Outward opening windows  
3-glazed: 1228, 3220  
2-glazed: 1222, 1212  
Coupling hinges:  
3-glazed: 1206-65, 1205  
2-glazed: 1201, 211, 1207-65

### I.

Inward opening windows  
With weather seal: 1223-01-100  
Without weather seal: 1223-100  
Coupling hinges: 1201, 1206-65, 211, 1205

### J.

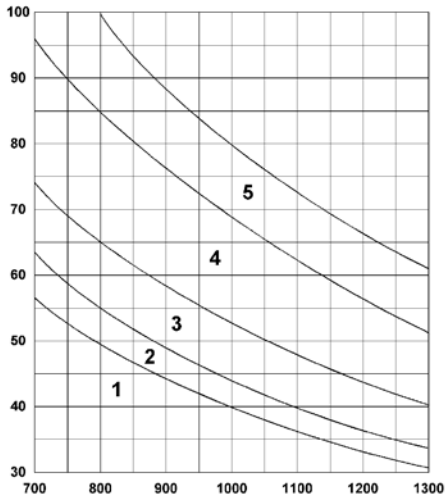
Butt hinges for hatches, cases, sherds, attics, collapsible tables, ladders etc.  
8, 10, 12, 14, 18, 5000, 5001, 5002



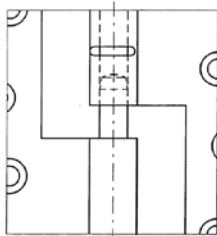
With knowledge of the door weight this should be cross-refermed with the width of the door out the graph below, to identify which hinges should be fitted.

Note that while it is common practice to fit two hinges to lightweight doors, Assa recommended that at least three hinges should always be fitted. This is especially important when a door closer is used.

The graph below can be used if positioning of the hinges are made after positioning on page 276.



|              | Unrebated        | Rebated         |
|--------------|------------------|-----------------|
| <b>Field</b> | 1228, 2 pcs      | 1223-100, 3 pcs |
| <b>1</b>     | 2418, 2 pcs      |                 |
|              | 3212, 2 pcs      |                 |
|              | 3220, 2 pcs      |                 |
| <b>Field</b> | 1228, 3 pcs      | 3229, 2 pcs     |
| <b>2</b>     | 2418, 3 pcs      |                 |
|              | 3220, 3 pcs      |                 |
|              | 3212, 3 pcs      |                 |
|              | K1227-110, 2 pcs |                 |
| <b>Field</b> | 3210, 2 pcs      | 3229, 3 pcs     |
| <b>3</b>     | 3211, 2 pcs      |                 |
|              | 3225, 2 pcs      |                 |
|              | 3228, 2 pcs      |                 |
|              | 3232, 3 pcs      |                 |
|              | 3244, 2 pcs      |                 |
|              | 3248, 2 pcs      |                 |
|              | K1227-110, 3 pcs |                 |
| <b>Field</b> | 3210, 3 pcs      | 3229, 4 pcs     |
| <b>4</b>     | 3211, 3 pcs      |                 |
|              | 3012, 2 pcs      |                 |
|              | 3225, 3 pcs      |                 |
|              | 3228, 3 pcs      |                 |
|              | 3232, 4 pcs      |                 |
|              | 3244, 3 pcs      |                 |
|              | 3248, 3 pcs      |                 |
|              | 3278, 2 pcs      |                 |
|              | 3288, 2 pcs      |                 |
| <b>Field</b> | 3012, 3 pcs      |                 |
| <b>5</b>     | 3210, 4 pcs      |                 |
|              | 3211, 4 pcs      |                 |
|              | 3225, 4 pcs      |                 |
|              | 3228, 4 pcs      |                 |
|              | 3248, 4 pcs      |                 |
|              | 3278, 3 pcs      |                 |
|              | 3288, 3 pcs      |                 |



## Adjustment

### Height adjustment

When height adjusting hinges, it is important to ensure that all hinges are supporting after the adjustment. Therefore, hinges with stepless height adjustment are recommended.

#### Lift-off hinges, journal-supported

The height is adjusted by placing one or several adjustment discs 249 through the adjustment disc slot on the door leaf so that the disc(s) are placed between the pins in the knuckle. When doing this, the door must be lifted a few millimetres but is not to be lifted off.

#### Lift-off hinges

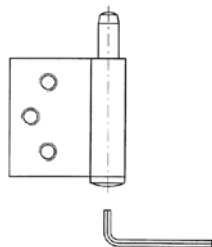
The door is lifted off and a disc is placed over the hinge pin.

#### Hinges with stepless height adjustment

These hinges incorporate a built-in adjustment screw in the hinge pin. The height can be adjusted steplessly with a 3 mm Allen key.

#### Spring hinges 2220, 2228 and 2248

Since these hinges are not supporting they do not need height adjustment. When the belonging supporting hinge is adjusted within appropriate limits the spring hinge follows without influencing function.



### Horizontal adjustment

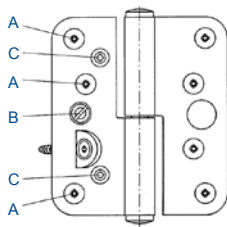
Horizontal adjustment may be necessary because the door/window touches the frame or the chink on the lock side is too wide.

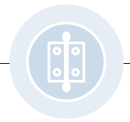
These hinges can easily be adjusted horizontally with the adjustment screws. First loosen fixing screws A and security pin B a couple of turns. Adjust then the hinges by turning the adjustment screws C out or in. Tighten thereafter screws A and B.

Adjust both screws C equally so that the hinge is not askew.

### Adjustment of spring power

Spring hinges are adjusted with a pin supplied with the hinges. Place the pin in the knob hole and turn it so that the adjustment pin can be released. Turn the knob to increase or decrease the spring power. The adjustment pin is replaced in the adjustment knob.





## Maintenance

As all constructions including moving parts, hinges need some maintenance to function faultlessly over their entire life time. The amount of maintenance needed depends on e.g. opening frequency, strain and environment.

Maintenance consists of:

- overhaul
- cleaning
- lubrication

### Overhaul

Overhaul of hinges should be carried out frequently. The overhaul interval is determined by opening frequency and load.

You should control the following at least once a year:

- function
- need for lubrication
- possible loose screws

This can be carried out in connection with the overhaul and control of locks, door closer, weather seals, glass panes, putty and painting.

### Cleaning

As hinges are worn, a fine black dust is spread around the bearing. The dust also often settles on the frame and the door/window/hatch door. The best way to avoid the dust is to keep the hinges well-lubricated.

### Function

Hinges should function easily, be undamaged and securely fastened in both frame and door. The door should not touch frame or threshold when it is closed. Damaged or worn-out hinges should be replaced. Loose screws should be tightened. Loose hinges impair the door function, increase wear on the hinges and make break-in easier.

Screws in newly installed doors must always be tightened after a few months when the wood in the frame and the door has dried.

When necessary, the hinges are adjusted according to the instructions below. However, the reason for adjustment should be carefully analysed before the actual adjustment is carried out. Hinges often get the blame for a badly functioning door, when in fact the real reason is carelessly mounted frame or subsidence in the house. It is useless for example to adjust the hinges of a heavy door if the frame is not mounted to the wall properly.

Before adjusting the hinges, check the following:

- Is the frame right by the plummet?
- Are the diagonal dimensions of the frame correct?
- Is the frame side straight in the rebate (does not bulge inwards or outwards)?
- Is the frame rebate width correct?
- Is the frame rebate width the same in different heights?
- Is frame side straight?
- Is the frame securely mounted in the wall?
- Is the wall stable enough to hold the frame?
- Is the frame mounted so that it cannot warp?
- Are the hinges securely fastened in the frame and door?
- Is the door leaf straight and level?

Do not attempt to adjust the hinges if you cannot answer all the above questions in the affirmative.



## Maintenance

### Lubrication

For lubrication of hinges, water-free mineral lubricant or synthetic lubricant should be used. Do not use oil unless it is absolutely impossible to apply grease. It is very important to use right kind of lubricant, since stress especially in the case of journal-supported hinges can be very high.

### Lubrication of journal-supported lift-off hinges

The easiest way to lubricate the hinges is through the adjustment disc slot. Lift the door a couple of centimetres and apply the lubricant. Lift and lower the door a few times and open the door wide to spread the lubricant on the whole contact surface. The lifting of the door can be done easily with the help of a foot-operated door or board lifter.

Older journal-supported hinges without adjustment disc slot are lubricated by lifting the door/window off and applying lubricant in the knuckle or on the journal. It is important to apply lubricant even on the top of the journal.

Hinges without an adjustment disc slot are lubricated either as older journal-supported hinges or by leaving the door hanging and screwing off the height adjustment screw, applying lubricant in the screw hole and retightening the screw. The lubricant is spread in the knuckle to the contact surfaces.

Simple lift-off hinges (non- journal-supported) should be lubricated as the door/window is installed and thereafter when necessary. They are lubricated in the same way as journal-supported hinges. Make sure that the contact surface between the upper and lower part is well-lubricated.

After lubricating, wipe off any excess lubricant on the surface of the hinges with a dry cloth.

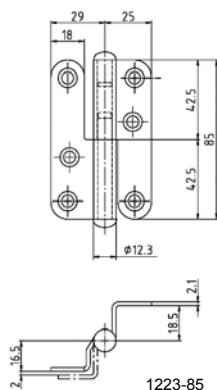
### Lubrication of coupling hinges and butt hinges

In the case of these hinges it is not possible to reach the lubrication point. Consequently, machine oil that is not all too thin should be applied. Wipe off excess oil afterwards. Sewing machine oil is too thin and should not be used.

### Lubrication of spring hinges

In general, spring hinges should be demounted for satisfactory lubrication result. Lubricate even the spring so that it does not squeak against the inside of the spring housing.





## 1223-100, 1223-85

### Application

1223, for inward opening windows without weather seal.  
1223-01, for inward opening windows with weather seal, only 100 mm.

### Material

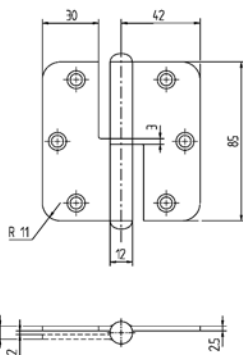
Zinc coated steel.

### Features

- Right or left handed.

### Accessories

- Recommended screws for 1223-85: six TFX 4,5 x 25.
- Recommended screws for 1223-100: six TFX 5 x 30.



## 2418

### Application

For outward opening windows and unrebutted lighter doors.

### Material

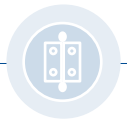
Steel.

### Features

- Right or left handed.
- Several pin lengths to facilitate mounting.
- Powder lacquered hinges are not suitable for outward opening windows.

### Accessories

Recommended screws: six TFX x 30.



**3220**

**Application**

For unrebated doors, outward opening French doors and windows etc.

**Material**

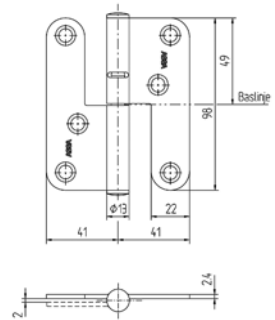
- Zinc coated steel.
- Hardened steel pins.

**Features**

- Right or left handed.
- Journal-supported.
- Also available in traditional style
- With adjustment disc slot for easy height adjustment.

**Accessories**

Recommended screws: six TFX 5 x 30.  
Adjustment discs 249.



**3210**

**Application**

For unrebated doors, outward opening French doors and windows etc.  
Slot-guided. Slot; door 18 mm, frame 12mm.

**Material**

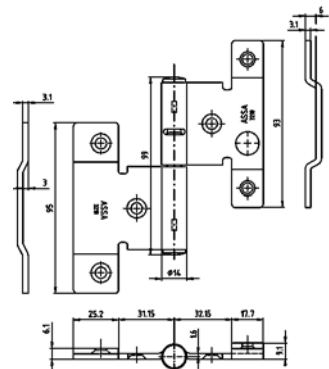
- Zinc coated steel
- Hardened steel pins

**Features**

- Right or left handed.
- Journal-supported.
- With adjustment disc slot for easy height adjustment.

**Accessories**

Recommended screws: six TFX 4,5 x 30.  
Adjustment discs 249.





**3211-1**

**Application**

For unrebated doors and windows, slot-guided.  
Slot; door 17,3 mm, frame 12 mm.

**Material**

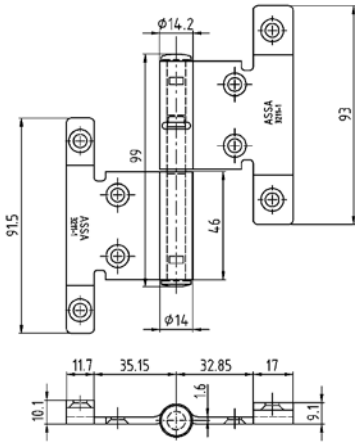
- Yellow zinc-iron.
- Pin of stainless steel.

**Features**

- Right or left handed.
- Journal-supported.
- With adjustment disc slot for easy height adjustment.

**Accessories**

Recommended screws: eight 4,5 x 30  
Adjustment discs 249.



**3212**

**Application**

For unrebated windows, slot-guided.  
Slot; door 17,3 mm, frame 12 mm.

**Material**

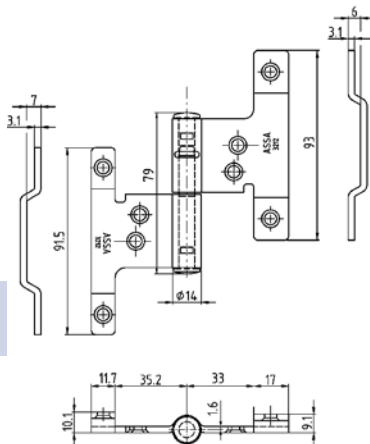
- Yellow zinc-iron.
- Pin of stainless steel.

**Features**

- Right or left handed.
- Journal-supported.
- With adjustment disc slot for easy height adjustment.

**Accessories**

Recommended screws: eight 4,5 x 30  
Adjustment discs 249.





### 3228, 3228-08

**Application**

For unrebated doors, outward opening windows etc.

**Material**

- Zinc coated steel. Black and yellow zinc-iron.
- Hardened steel pins.

**Features**

- Version 3228-08, for security doors.
- Right or left handed.
- Also available in traditional style.
- Journal-supported.
- With adjustment disc slot for easy height adjustment.
- Can be combined with 3240-01 or 3241-04, 05 on doors with steel frame.

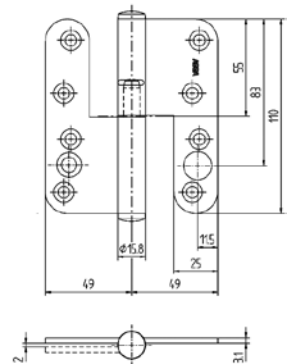
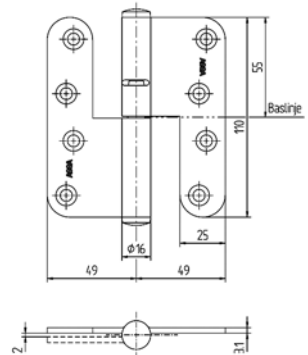
**Accessories**

Recommended screws: eight TFX 5 x 30.

Can be complemented with frame-reinforcing mounting plate 248-28, fitting with machine screw. When using the mounting plate, four MFX 6 and two TFX 5 X 30 are recommended.

Adjustment discs 249.

Security pins 2301 for 3228-08.



### 3228-30

**Application**

For unrebated doors, outward opening French doors etc.

**Material**

Stainless steel, SS 2333.

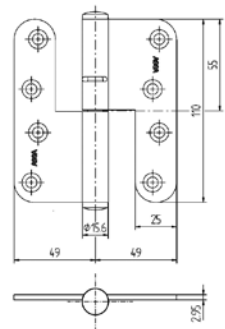
**Features**

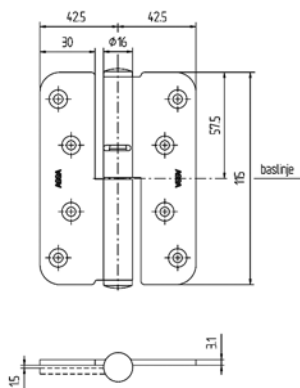
- Right or left handed.
- Journal-supported.
- With adjustment disc slot for easy height adjustment.

**Accessories**

Recommended screws: eight TFX 5 x 30 RF.

Adjustment disc 249.





## 3244

### Application

For unrebated doors etc.

### Material

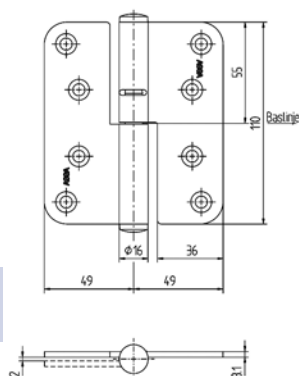
- Zinc coated steel. Black and yellow zinc-iron.
- Hardened steel pins.

### Features

- Right or left handed.
- Also available in traditional style.
- Half-symmetrical, journal-supported.
- With adjustment disc slot for easy height adjustment.
- Allows symmetrical mortise.
- Can be combined with 3240-01 or 3241-04, 05 on doors with steel frame.

### Accessories

Recommended screws: eight TFX 4,5 x 25.  
Adjustment discs 249.



## 3248

### Application

For unrebated doors, outward opening French doors etc.

### Material

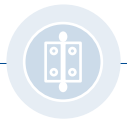
- Steel, zinc coated, black and yellow zinc-iron.
- Hardened steel pins.

### Features

- Right or left handed.
- Also available in traditional style.
- Half-symmetrical, journal-supported.
- With adjustment disc slot for easy height adjustment.
- Allows symmetrical mortise.
- Can be combined with 3240-01 or 3241-04, 05 on doors with steel frame.

### Accessories

Recommended screws: eight TFX 5 x 30.  
Can be complemented with frame-reinforcing mounting plate 248-48, fitting with machine screw. When using the mounting plate, four MFX 6 and two TFX 5 x 30 are recommended.  
Adjustment discs 249.



**3229**

**Application**

For rebated doors etc.

**Material**

- Zinc coated steel.
- Hardened steel pins.

**Features**

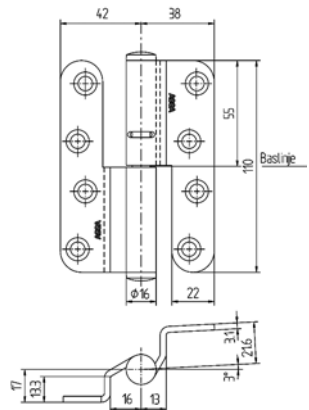
- Right or left handed.
- Journal-supported.
- With adjustment disc slot for easy height adjustment.
- Can be combined with 3240-01 or 3241-04, 05 for doors with steel frame.

**Accessories**

Recommended screws: eight TFX 5 x 30.

Can be complemented with frame-reinforcing mounting plate 248-28, fitting with machine screw. For fitting the mounting plate, four MFX 6 and two TFX 5 x 30 are recommended.

Adjustment discs 249.



**3232**

**Application**

For anti-squeeze unrebated doors in day-care centres, hospitals etc.

**Material**

Zinc coated steel.  
Hardened steel pins.

**Features**

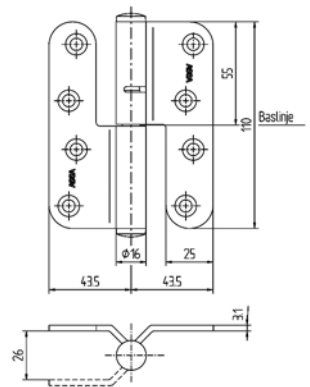
- Right or left handed.
- Journal-supported.
- With adjustment disc slot for easy height adjustment. 26 mm turning allowance accommodates an anti-squeeze rubber list.
- Suits same preparation as 3228.

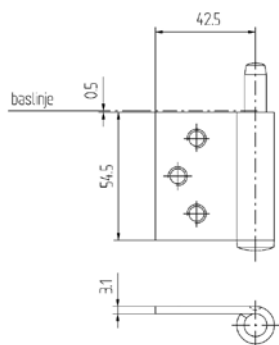
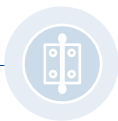
**Accessories**

Recommended screws: eight TFX 5 x 30.

Can be complemented with frame-reinforcing mounting plate 248-28, fitting with machine screw. For fitting the mounting plate, four MFX 6 and two TFX 5 x 30 are recommended.

Adjustment discs 249.





## 3240-01

### Application

For steel frames. For use together with door leaf of hinges 3228, 3229, 3244 or 3248.

### Material

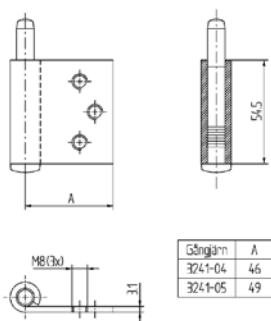
- Zinc coated steel.
- Hardened steel pin.

### Features

- Right or left handed.
- Journal-supported frame leaf.
- Stepless height adjustment.

### Accessories

Recommended screws: three MFX 8 x 16.



## 3241-04, 3241-05

### Application

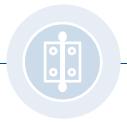
For steel frames. For use together with door leaf of hinges 3228, 3229, 3244 or 3248.

### Material

Zinc coated steel.  
Hardened steel pins.

### Features

- Right or left handed.
- Journal-supported.
- Leaf width 3241-04, 46 mm. 3241-05 49 mm.
- Recommended screws three MFX 8x16.



**3225-04**

**Application**

For unrebrated doors, outward opening French doors and windows etc.  
Security doors.

**Material**

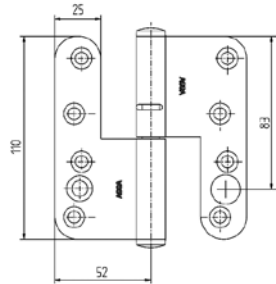
- Zinc coated steel.
- Hardened steel pins.

**Features**

- Right or left handed.
- Journal-supported.
- With adjustment disc slot for easy height adjustment.

**Accessories**

Recommended screws: eight TFX 5 x 30.  
Can be complemented with frame-reinforcing mounting plate 248-28, fitting with machine screw. When fitting the mounting plate, four MFX 6 and two TFX 5 x 30 are recommended.  
Adjustment discs 249.  
Security pins 2301.



**K1227, Ball Bearings**

**Application**

For doors with special decorative demands.

**Material**

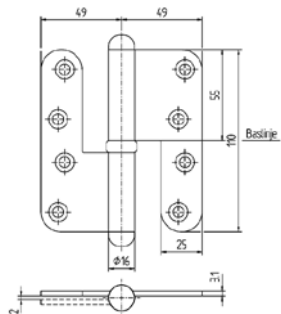
Brass, polished or nickel-plated.

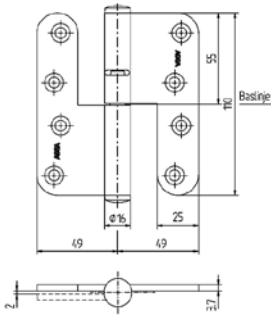
**Features**

- Right or left handed.
- With ball bearings.

**Accessories**

Recommended screws: eight TFX 5,5 x 30.  
Can be complemented with frame-reinforcing mounting plate 248-28. In this case four screws MFX 6 and two wood screws according to above are recommended.  
Spare ball bearings 540-9.25.





## 3278

### Application

For unrebated doors, outward opening French doors etc.

### Material

- Zinc coated steel.
- Hardened steel pins.

### Features

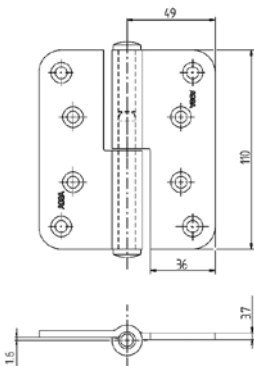
- Right or left handed.
- Journal-supported.
- With adjustment disc slot for easy height adjustment.

### Accessories

Recommended screws: eight TFX 5 x 30.

Can be complemented with frame-reinforcing mounting plate 248-28, fitting with machine screw. For fitting the mounting plate, four MFX 6 x 30 and four TFX 5 x 30 are recommended.

Adjustment discs 249.



## 3288

### Application

For unrebated doors, outward opening French doors etc.

### Material

- Zinc coated steel.
- Hardened steel pins.

### Features

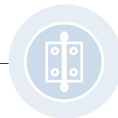
- Right or left handed.
- Half-symmetrical, journal-supported.
- Allows symmetrical mortise.
- With adjustment disc slot for easy height adjustment.

### Accessories

Recommended screws: eight TFX 5 x 30.

Can be complemented with frame-reinforcing mounting plate 248-48, fitting with machine screw. For fitting the mounting plate, four MFX 6 and two TFX 5 x 30 are recommended.

Adjustment discs 249.



**3288-09, 3288-10**

**Application**

For unrebated doors, outward opening French doors etc. security doors.

**Material**

- Zinc coated steel.
- Hardened steel pins.

**Features**

- Right or left handed.
- Half-symmetrical, journal-supported.
- Allows symmetrical mortise.
- With adjustment screw for easy stepless height adjustment.
- With adjustment screws for adjusting the door horizontally.
- Version 09 without deflection.

**Accessories**

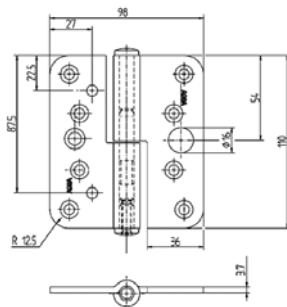
Recommended screws: eight TFX 5 x 30.

Security pins 2301.

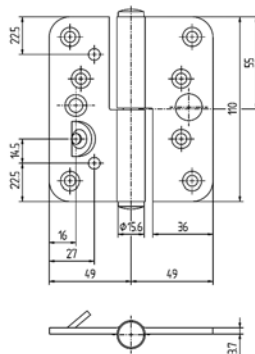
Horizontal adjustment screw 2302.

Mounting plate 248-48

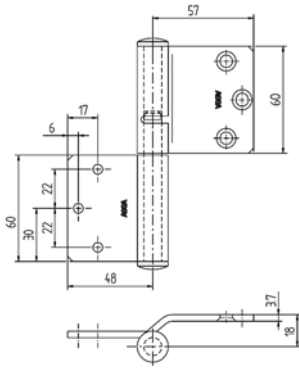
When fitting mounting plate 248-48, four MFX 6 and four TFX 5 x 30 are recommended.



3288-09



3288-10



### 3012

#### Application

For steel doors with steel frame.

#### Material

Zinc coated steel.

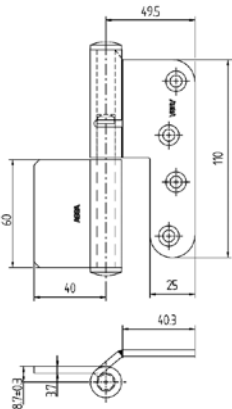
#### Features

- Right or left handed.
- Journal-supported.
- With adjustment disc slot for easy height adjustment.
- Slot hinge.

#### Application

Adjustment discs 249.

Screws depending on the frame design.



### 3012-01

#### Application

For wooden doors with steel frame. For use with 3012 frame leaf.

#### Material

Zinc coated steel.

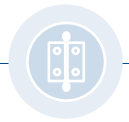
#### Features

- Right or left handed.
- Journal-supported.
- With adjustment disc slot for easy height adjustment.

#### Accessories

Screws: four TFX 5 x 30

Adjustment disc 249.



**8, 10, 12, 14, 18, 1218**

**Application**

Butt hinges for hatches, cases, sheds, attics, collapsible tables, ladders etc.

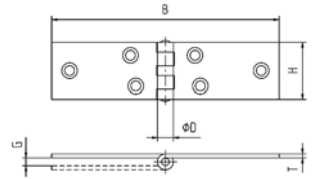
**Material**

- Zinc coated steel
- Pin of brass.
- 1218 non-surface finished.

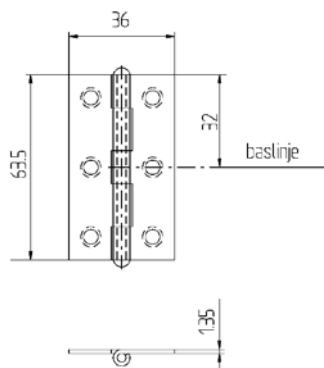
**Accessories**

Recommended screws according to the table.

1218 is designed to be welded and does not have screw holes.



| Ref. no | B (mm) | H (mm) | D (mm) | G (mm) | T (mm) | No. of screws | Dim. of screws |
|---------|--------|--------|--------|--------|--------|---------------|----------------|
| 8-75    | 71     | 19     | 6,3    | 3,3    | 1,5    | 4             | 3,5×20         |
| 8-100   | 101    | 19     | 7,9    | 4      | 1,9    | 4             | 3,5×20         |
| 10-100  | 102    | 25,5   | 8,3    | 4      | 2,1    | 4             | 3,5×20         |
| 12-100  | 102    | 31,5   | 9,2    | 4,5    | 2,3    | 6             | 4×20           |
| 12-125  | 127    | 31,5   | 9,2    | 4,5    | 2,3    | 6             | 4×20           |
| 12-150  | 152    | 31,5   | 9,2    | 4,5    | 2,3    | 6             | 4×20           |
| 14-100  | 101    | 38     | 10,8   | 5,5    | 2,6    | 6             | 4,5×25         |
| 14-125  | 127    | 38     | 10,8   | 5,5    | 2,6    | 6             | 4,5×25         |
| 14-150  | 152    | 38     | 10,8   | 5,5    | 2,6    | 6             | 4,5×25         |
| 18-100  | 101    | 50,5   | 11,8   | 6,5    | 2,7    | 6             | 5×30           |
| 18-125  | 127    | 50,5   | 11,8   | 6,5    | 2,7    | 6             | 5×30           |
| 18-150  | 152    | 50,5   | 11,8   | 6,5    | 2,7    | 6             | 5×30           |
| 18-200  | 203    | 50,5   | 11,8   | 6,5    | 2,7    | 6             | 5×30           |
| 18-250  | 246    | 50,5   | 13,5   | 7      | 3,25   | 8             | 5×30           |
| 19-300  | 50,5   | 50,5   | 13,5   | 7      | 3,25   | 8             | 5×30           |



### 211-65

#### Application

Coupling hinges for windows.

#### Material

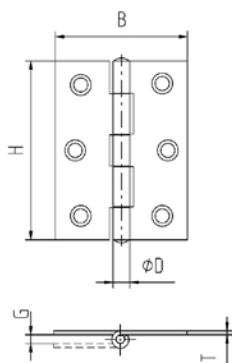
- Zinc coated steel.
- Pin of brass.

#### Features

- Both halves countersunk on the rear.

#### Accessories

Recommended screws: six TFX 3 x 20.



### 5000, 5001, 5002

#### Application

Butt hinges for furniture, hatches, cases etc.

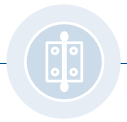
#### Material

- Zinc coated steel.
- Pin of brass.

#### Accessories

Recommended screw according to the table below.

| Ref.no  | B (mm) | H (mm) | D (mm) | G (mm) | T (mm) | No. of screws | Dim. of screws |
|---------|--------|--------|--------|--------|--------|---------------|----------------|
| 5000-32 | 30     | 22     | 4      | 2,2    | 0,9    | 4             | 2,4×16         |
| 5000-38 | 38     | 26     | 4,7    | 2,6    | 1,05   | 4             | 3×16           |
| 5000-50 | 50,5   | 31     | 5,5    | 3      | 1,25   | 6             | 3×20           |
| 5000-65 | 63,5   | 37     | 6      | 3,3    | 1,35   | 6             | 3×20           |
| 5001-25 | 25     | 21,5   | 3,6    | 2      | 0,8    | 4             | 2,4×12         |
| 5001-32 | 30     | 31     | 4,5    | 2,7    | 0,9    | 4             | 2,4×16         |
| 5001-38 | 38     | 32     | 4,7    | 2,6    | 1,05   | 4             | 3×16           |
| 5001-50 | 50,5   | 40     | 5,5    | 3      | 1,25   | 6             | 3×20           |
| 5001-65 | 63,5   | 48     | 6      | 3,3    | 1,35   | 6             | 3×20           |
| 5002-25 | 25,5   | 26,5   | 3,8    | 2,2    | 0,8    | 4             | 2,4×12         |
| 5002-32 | 32     | 32     | 4,4    | 2,4    | 1      | 4             | 2,4×16         |
| 5002-38 | 38     | 38     | 4,7    | 2,6    | 1,05   | 4             | 3×16           |
| 5002-50 | 50,5   | 48     | 5,5    | 3      | 1,25   | 6             | 3×20           |
| 5002-65 | 63,5   | 62,5   | 6      | 3,3    | 1,35   | 6             | 3×20           |



**1201, 1205, 1206**

**Application**

Coupling hinges for windows and French doors. Journal-supported hinges for lighter hatches etc.

**Material**

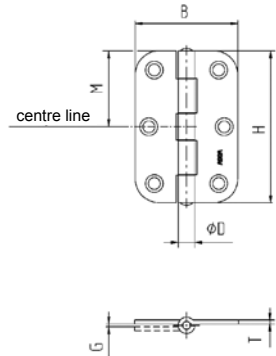
- Zinc coated steel.
- Pin of brass.

**Features**

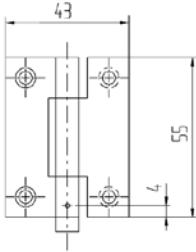
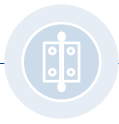
- 1205, one half countersunk on the rear.

**Accessories**

According to the table.



| Ref. no | H (mm) | B (mm) | D (mm) | G (mm) | M (mm) | Tool Ø | T (mm) | No. of screws | Dim. of screws |
|---------|--------|--------|--------|--------|--------|--------|--------|---------------|----------------|
| 1201-65 | 63,5   | 36     | 6      | 0,7    | 32     | 20     | 1,35   | 6             | 3×20           |
| 1205    | 63,5   | 44     | 7      | -      | 32     | 20     | 1,6    | 6             | 3,5×25         |
| 1206-65 | 63,5   | 44     | 7      | 1,2    | 32     | 26     | 1,6    | 6             | 3,5×25         |
| 1206-75 | 76     | 50     | 8      | 1,4    | 38     |        | 1,7    | 6             | 3,5×25         |



## 3881

### Application

Coupling hardware for windows.

### Features

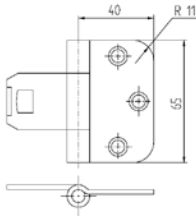
- Right and left handed.

### Material

- Zinc coated steel.
- Pin of plastic.

### Accessories

Screw 3,5 mm zinc coated



## Hinges for Light-weight Interior Doors

## 2465

### Application

For light-weight interior doors.

### Features

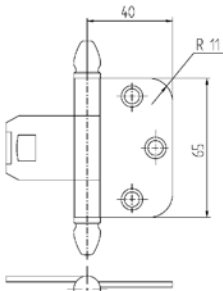
- Snap-In function.
- Symmetrical right/left.
- Approved for B 30 doors together with Assa 2465 Fire
- Also available in traditional style.

### Material

Frame leaf of steel, lacquered bronze or white.

### Accessories

Recommended screws: three TFX 5 x 25.



Antic style

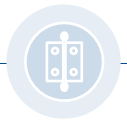
## 2010

The new frame leaf 2010 is equipped with a composite bearing hinge pin for a quiet and easily swinging door. The new bearing reduces wear and makes the frame leaf more precise, resulting with less sagging of the door. In addition, the hinges do not produce black dust.

Assa Snap-In 2010 series is available in colours white, silver and gold. Bronze is available on request. Suits also door leaves for Assa 2465.

### Variant

- Traditional style
- Approved for B 30 doors together with Assa 2465 Fire

**3886, 3887****Application**

Coupling hardware for windows.

**Features**

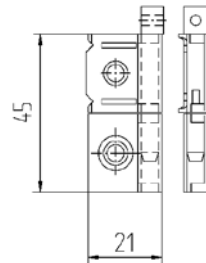
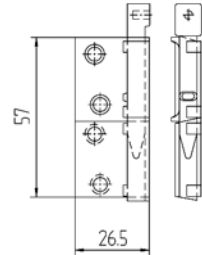
- Right and left.

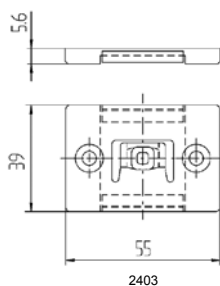
**Material**

- Zinc coated steel.
- Pin of plastic.

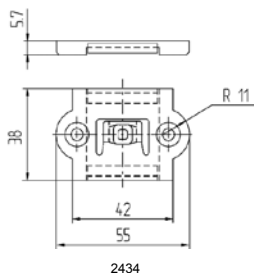
**Accessories**

Screw 3,5 mm zinc coated.

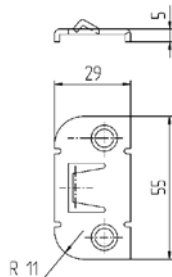
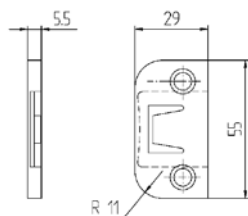




2403



2434



## 2403, 2434, 2465

### Application

Door leaf for use together with frame leaf 2465.

### Features

- Mortise dimensions depending on the type.
- For door thickness 38 mm or 39 mm.

### Material

Nylon, bronze or white lacquered.

### Accessories

Recommended screws: two TFX 5 x 25.

## 2465 Fire

### Application

Door leaf for use together with frame leaf 2465.

### Features

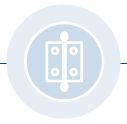
- For fire doors.

### Material

Steel, bronze or white lacquered.

### Accessories

Recommended screws: two TFX 5 x 25.



**2439, 2441, 2459**

**Application**

Door leaf for use together with frame leaf 2465.

**Features**

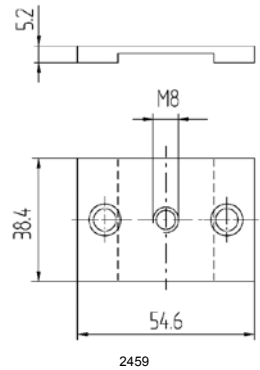
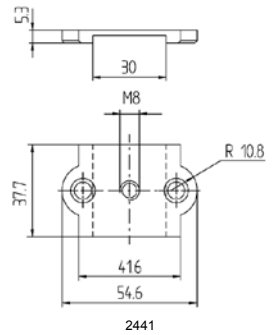
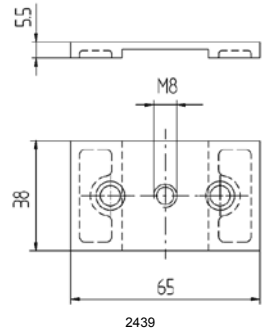
- Different mortise dimensions depending on the type.
- For door thickness 38 mm or 39 mm.

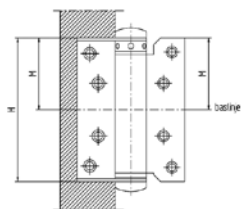
**Material**

Zink, bronze or white lacquered.

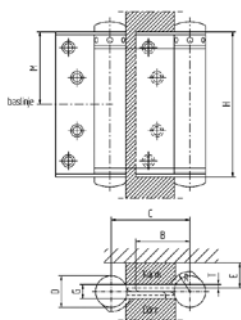
**Accessories**

Recommended screws: two TFX 5 x 25.





279



280

## 279, 280

### Application

For one- and two-way swing doors.  
279 for automatically closing single-action doors.  
280 for swing doors.

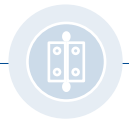
### Material

Steel, zinc coated or nickel-plated.

### Features

- 279, one-way spring function, supported.
- 280, two-way spring function, supported.
- Adjustable spring power, regardless of right or left handedness.
- Adjustable closing force.

| Ref. no | H<br>(mm) | B<br>(mm) | C<br>(mm) | D<br>(mm) | E<br>(mm) | M<br>(mm) | G<br>(mm) | R<br>(mm) | T<br>(mm) | No. of<br>screws | Dim. of<br>screws | Max. door thickness* |
|---------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------------|-------------------|----------------------|
| 279-100 | 101       | 38        | -         | 22        | 15        | 50,5      | 9         | 14        | 4         | 8                | 4×25              | -                    |
| 279-150 | 152       | 48        | -         | 28        | 20        | 76        | 9         | 18        | 4         | 10               | 5×30              | -                    |
| 280-75  | 76        | 33        | 48        | 22        | 15        | 38        | 9         | 13,5      | 4         | 8                | 4×25              | 25                   |
| 280-100 | 101       | 38        | 54,5      | 22        | 15        | 50,5      | 11        | 14        | 5         | 8                | 4×25              | 30                   |
| 280-150 | 152       | 48        | 73,5      | 28        | 20        | 76        | 11        | 18        | 5         | 10               | 5×30              | 42                   |



**2220, 2228, 2248**

**Application**

For unrebrated automatically closing doors.  
2220 for lighter doors.

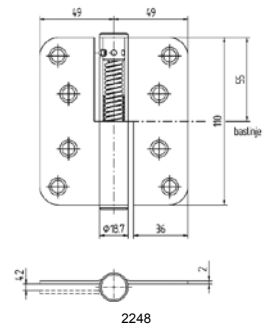
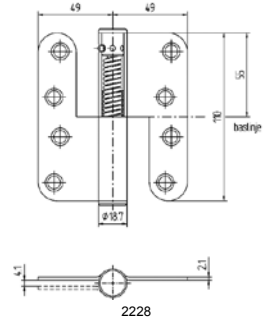
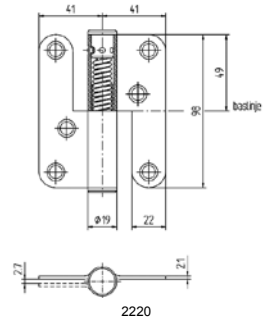
**Material**

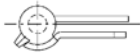
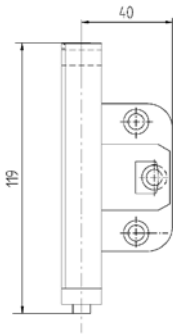
Zinc coated steel.

**Features**

- One-way, non-supported.
- Right or left handed.
- Adjustable spring power.
- Adjustable closing force.
- For closing function only use:
  - 2220 together with journal-supported hinges 3220.
  - 2228 together with journal-supported hinges 3228 or 3278.
  - 2248 together with journal-supported hinges 3248 or 3288.

The hinges have the same fitting dimensions and can therefore be combined.  
The depth of the mortise is the same as for supported hinges. The hinges can be lifted off after the spring power has been released.





### 2466

#### Application

For single-action swing doors.  
Together with hinges 2465.

#### Material

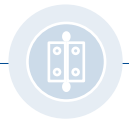
Steel, lacquered.

#### Features

- Single-action with adjustable spring power.

#### Accessories

Mounting plates. See symmetrical hinges.



**248**

**Application**

Mounting plate for hinges in heavier doors. Frame-reinforcing for security doors.

**Material**

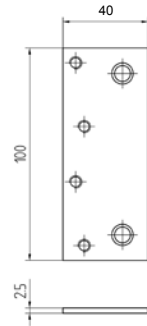
Steel.

**Features**

- Right or left handed.
- Hinges are fixed to the mounting plate with machine screw M 6.
- Four MFX 6 x 30 are used for frame.
- Mounting on the outside of the frame.
- 248-28 for hinges 3228, 3278, K1227.
- 248-48 for hinges 3248, 3288.

**Accessories**

Recommended screws: two TFX 5 x 30.

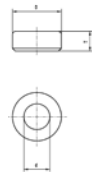


**540**

**Application**

Spare parts for Assa ball bearing hinges.

| Ref. no  | For pin Ø d | Dim in mm |     |
|----------|-------------|-----------|-----|
|          |             | D         | T   |
| 540-9,25 | 9,25        | 18        | 7,5 |
| 540-12   | 12          | 24        | 8   |



**249**

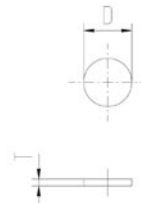
**Application**

Adjustment disc for height adjustment of doors with journal-supported lift-off hinges.

**Material**

Steel, hardened and zinc coated.

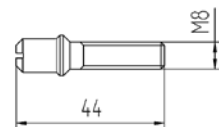
| Ref. no     | Dim in mm |     |
|-------------|-----------|-----|
|             | D         | T   |
| 249-7X1     | 7         | 1   |
| 249-7X1,5   | 7         | 1,5 |
| 249-8,5X1   | 8,5       | 1   |
| 249-8,5X1,5 | 8,5       | 1,5 |



**2301**

**Application**

Security pins of hardened steel for screwing through hinges into the frame. For hinges with holes for security pins.



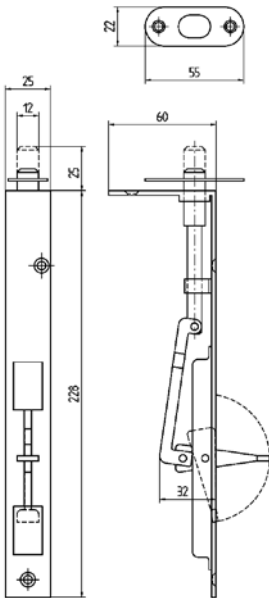
**2302**

**Application**

Screw for adjusting the width of door chink. For screwing into the frame behind the hinge leaf of hinges that can be horizontally adjusted.

Allen key 3 mm.





## 96

### Application

Flush bolt for double doors.

### Material

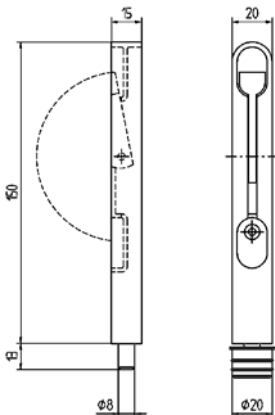
- Zinc coated steel.

### Features

- With pivot arm and robust design.
- Material of steel for fire-rated doors.
- Also available with rounded plate corners.

### Accessories

Recommended screws: three TFX 4 x 45 and two TFX 3 x 20.



## 97

### Application

Flush bolt for double doors and windows.

### Material

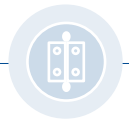
- Zinc alloy with bolt of steel.
- Striking plate of propene plastic.

### Features

- The bolt is operated by the pivot arm and is easy to install.

### Accessories

Recommended screws: two TFX 3,5 x 25.



### 1296, 1396

**Application**

Flush bolt, manual, for the passive door leaf in wooden, steel or aluminium double doors.

**Features**

- Manual single-action.
- Bolt Ø 12 mm with 25 mm throw. Material of steel for fire-rated doors.
- Door preparation for flush bolt 1296, 1396 and 2396 is the same.
- Face plate width 22 mm.
- Dimension from the face plate to the centre of the bolt is adjustable 30-36 mm.
- Finish: Bright zinc-coated

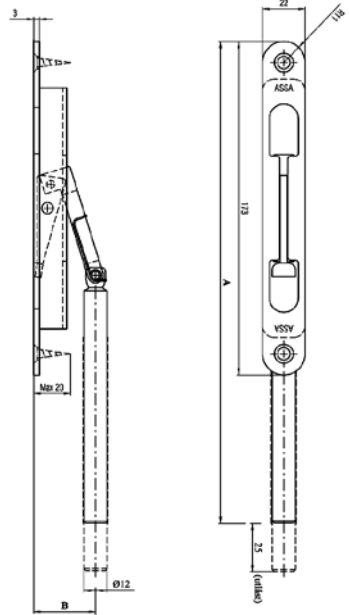
**Function**

The bolt is operated by the pivot arm.

**Accessories**

Striking plate.

Guide, for use in wooden doors when climate changes may affect its features, and in doors with profiles of various materials.



### 2396

**Application**

Flush bolt, automatic, for the passive door leaf in wooden, steel or aluminium double doors.

**Features**

- Automatic single-action.
- Bolt Ø 12 mm and with a min 17 mm throw, adjustable +10mm.
- The latch is reversible.
- Material of steel for fire-rated doors.
- Door preparation for flush bolt 1296, 1396 and 2396 is the same.
- Face plate width 22 mm.
- Dimension from the face plate to the centre of the bolt is adjustable 30-36 mm.
- Finish: Bright zinc-coated

**Function**

The bolt is operated by the latch bolt.

**Accessories**

Striking plate.

Guide, for use in wooden doors when climate changes may affect its features, and in doors with profiles of various materials.

