

BAKA® Protect Series 2000 / 4000



SIMONSWERK
BAKA® Protect

BAKA Protect
Series 2000 / 4000

The adjustable hinge system
for timber entrance doors

BAKA PROTECT

2D

BAKA Protect 2010 2D	two-dimensionally adjustable	up to 120 kg	4
BAKA Protect 2010 2D FD	two-dimensionally adjustable	up to 120 kg	4
BAKA Protect 2020 2D	two-dimensionally adjustable	up to 120 kg	4
BAKA Protect 2030 2D FD	two-dimensionally adjustable	up to 120 kg	4
BAKA Protect 2040 2D FD	two-dimensionally adjustable	up to 120 kg	4

3D

BAKA Protect 4010 3D	three-dimensionally adjustable	up to 160 kg	6
BAKA Protect 4010 3D FD	three-dimensionally adjustable	up to 160 kg	6
BAKA Protect 4020 3D	three-dimensionally adjustable	up to 160 kg	6
BAKA Protect 4030 3D FD	three-dimensionally adjustable	up to 160 kg	6
BAKA Protect 4040 3D FD	three-dimensionally adjustable	up to 160 kg	6

Technical Information	8
------------------------------	----------

Drilling Jigs	12
----------------------	-----------



Hinge systems for timber entrance doors... ...innovative hardware for outstanding stability and safety

BAKA Protect – timber entrance door hinges for current profile constructions

Deciding to have a timber entrance door is deciding to use a natural material that should convey well-being and individuality, without neglecting the requirement for modern functionality and tested safety. The SIMONSWERK innovative BAKA Protect product family provides an optimum range of two and three dimensionally adjustable hinge systems that is specifically aimed at the high quality timber entrance doors market sector.

A high degree of transparency using glass and narrower profile views is the current trend in modern exterior door design. New, innovative rebate constructions are used that also require a completely new approach in hinge technology for wooden exterior doors, taking legal requirements such as the energy saving legislation and the requirement for thicker and therefore heavier glass into consideration.

The newly developed door hinge systems in the BAKA Protect 2000 product range (with 2D adjustment) and the BAKA Protect 4000 product range (with 3D adjustment) are optimally adapted to the requirements of the current rebate constructions and make it possible to follow the trend towards narrower door profiles. The increased load capacities up to 120 kg with 2D adjustment and up to 160 kg with 3D adjustment also support heavy glass, which is in line with current market requirements. This hinge system is rounded off by the usual comprehensive range of finishes and the template technology that is required for functional and efficient installation.

Features at a glance

- Matched to current profile constructions
- Increased load capacities: 2D up to 120 kg
3D up to 160 kg
- Comfortable adjustment
- Internal hinge pin
- Security pin (MSTS) option for outward opening doors
- Finish: stainless steel satin brushed, top zinc,
traffic white - RAL 9016, brown - H9

SIMONSWERK
BAKA®

Series BAKA Protect 2000

Hinge system with 2D adjustment for timber entrance doors

entrance door	up to 120 kg	2D adjustment
---------------	--------------	---------------

Technical Data

Load capacity	120.0 kg
Knuckle length	120.0 mm
Knuckle diameter	20.0 mm
Cutter diameter	20.0 mm

Product features

- Matched to current profile constructions
- Comfortable 2D-adjustment
 - Side +/-3.0 mm
 - Compression +/-3.0 mm
- Minimized routing work

Model version

Hinge system	BAKA Protect 2010 2D
	BAKA Protect 2010 2D FD
	BAKA Protect 2020 2D
	BAKA Protect 2030 2D FD
	BAKA Protect 2040 2D FD

Detailed information on www.bandsysteme.com

Installation Tools

Jig	Frame	Plug-in drilling jig BAKA Protect 2000
	ball bearing location	jig BAKA Protect 2000 frame
door		routing jig BAKA Protect 2000
	ball bearing location	routing jig BAKA Protect 2000 door

See page 12 and following

Finish

stainless steel satin brushed, top zinc, traffic white - RAL 9016, brown - H9

Note

Also available with security pin (MSTS).

Download routing data from www.bandsysteme.com.

Functional range

burglar resistance

Quality marks



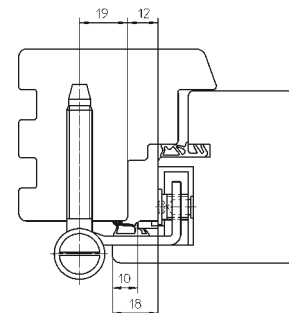
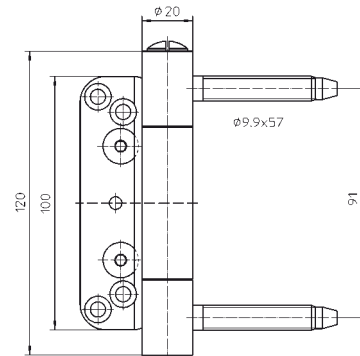
Finial options



Basic

Soft

ZK

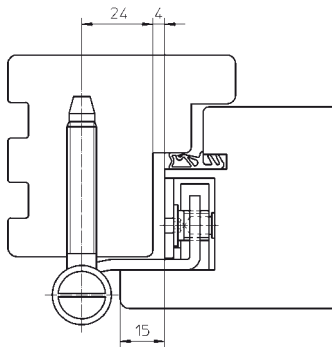


MODEL VERSIONS

Series BAKA Protect 2000

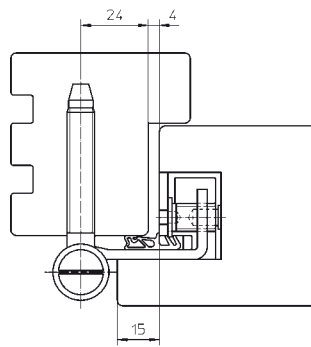
**15 mm overlap
without sash accoustic seal**

Model: BAKA Protect 2010 2D



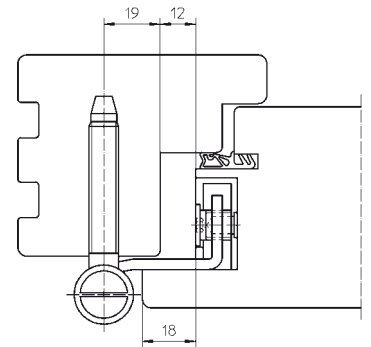
**15 mm overlap
with sash accoustic seal**

Model: BAKA Protect 2010 2D FD



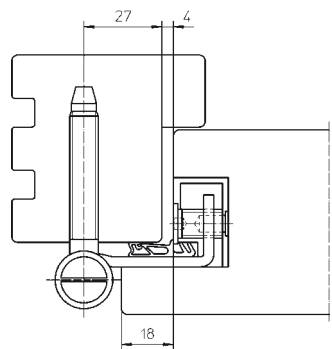
**18 mm overlap
without sash accoustic seal**

Model: BAKA Protect 2010 2D



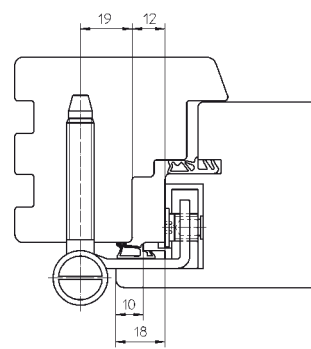
**18 mm overlap
with sash accoustic seal**

Model: BAKA Protect 2010 2D FD



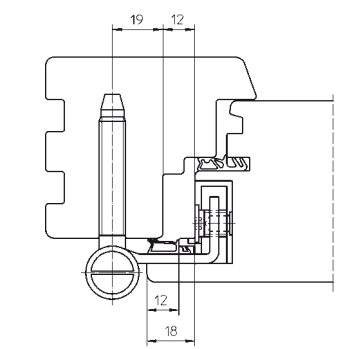
**18 mm overlap
with sash accoustic seal (10 mm)**

Model: BAKA Protect 2030 2D FD



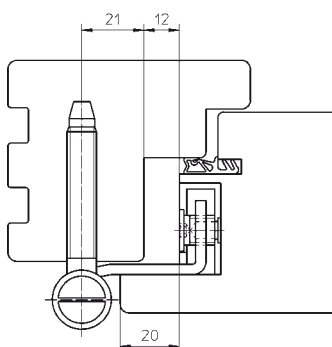
**18 mm overlap
with sash accoustic seal (12 mm)**

Model: BAKA Protect 2040 2D FD



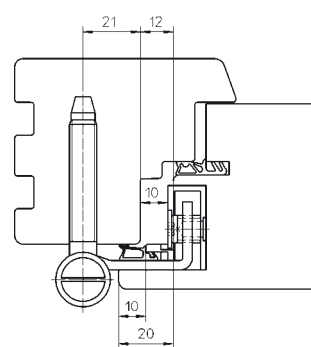
**20 mm overlap
without sash accoustic seal**

Model: BAKA Protect 2020 2D



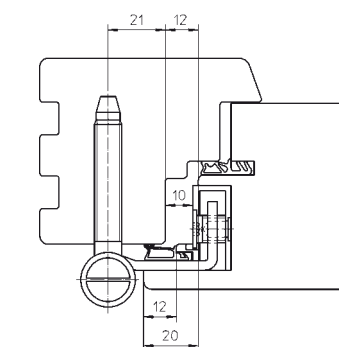
**20 mm overlap
with sash accoustic seal (10 mm)**

Model: BAKA Protect 2030 2D FD



**20 mm overlap
with sash accoustic seal (12 mm)**

Model: BAKA Protect 2040 2D FD



SIMONSWERK
BAKA®

Series BAKA Protect 4000

Hinge system with easy adjustment by means of an eccentric for timber entrance doors

entrance door	up to 160 kg	3D adjustable
---------------	--------------	---------------

Technical Data

Load capacity	160.0 kg
Knuckle length	140.0 mm
Knuckle diameter	20.0 mm
Cutter diameter	20.0 mm

Product features

- Matched to current profile constructions
- Comfortable 3D-adjustment
 - Side +/-3.0 mm
 - Height +/-3.0 mm
 - Compression +/-3.0 mm
- Minimized routing work
- Internal hinge pin

Model version

Hinge system	BAKA Protect 4010 3D
	BAKA Protect 4010 3D FD
	BAKA Protect 4020 3D
	BAKA Protect 4030 3D FD
	BAKA Protect 4040 3D FD

Detailed information on www.bandsysteme.com

Installation Tools

Jig	Frame	Drilling-/Routing jig BAKA Protect 4000 frame ball bearing location drilling/routing jig BAKA Protect 4000 frame
	door	routing jig BAKA Protect 4000 door ball bearing location routing jig BAKA Protect 4000 door

See page 12 and following

Finish

stainless steel satin brushed, top zinc, traffic white - RAL 9016, brown - H9

Note

Set consists of 3 hinges (1 hinge = height adjustment, 2 hinges = compression adjustment).

Also available with security pin (MSTS).

Download routing data from at www.bandsysteme.com.

Functional range

burglar resistance

Quality marks



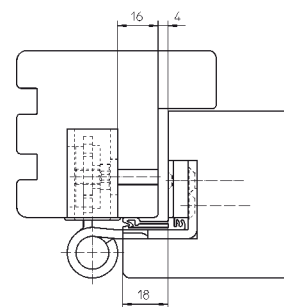
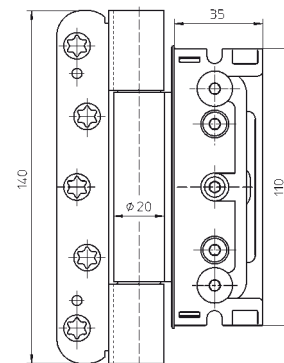
Finial options



Basic

Soft

ZK

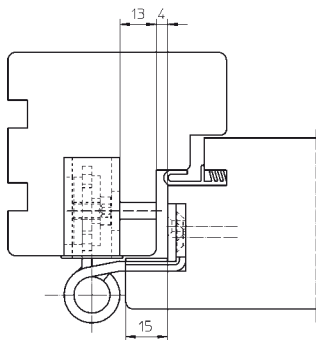


MODEL VERSIONS

Series BAKA Protect 4000

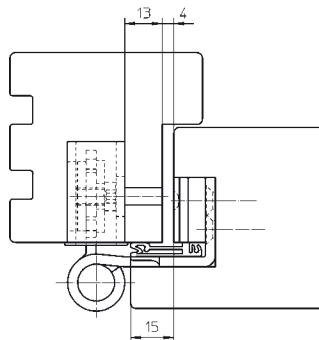
**15 mm overlap
without sash acoustic seal**

Model: BAKA Protect 4010 3D



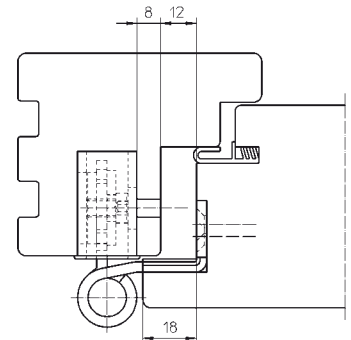
**15 mm overlap
with sash acoustic seal**

Model: BAKA Protect 4010 3D FD



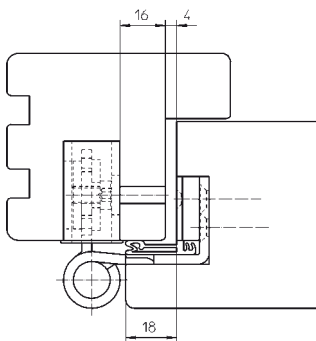
**18 mm overlap
without sash acoustic seal**

Model: BAKA Protect 4010 3D



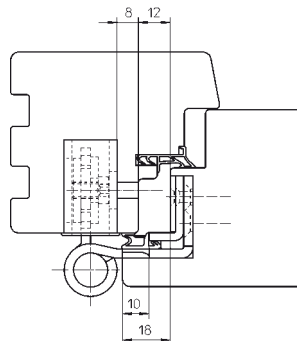
**18 mm overlap
with sash acoustic seal**

Model: BAKA Protect 4010 3D FD



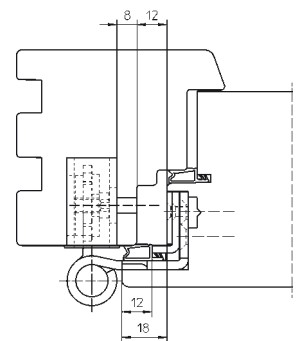
**18 mm overlap
with sash acoustic seal (10 mm)**

Model: BAKA Protect 4030 3D FD



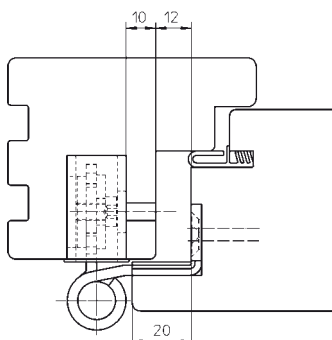
**18 mm overlap
with sash acoustic seal (12 mm)**

Model: BAKA Protect 4040 3D FD



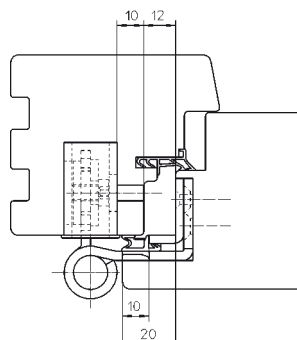
**20 mm overlap
without sash acoustic seal**

Model: BAKA Protect 4020 3D



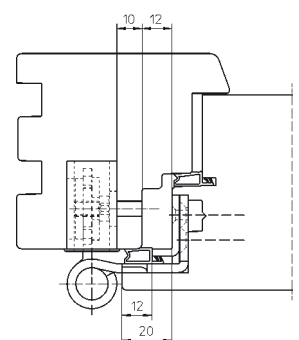
**20 mm overlap
with sash acoustic seal (10 mm)**

Model: BAKA Protect 4030 3D FD



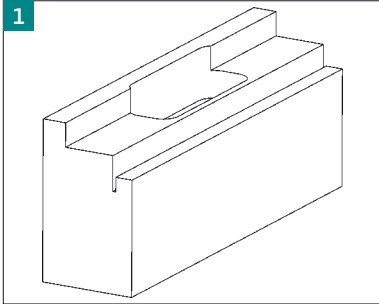
**20 mm overlap
with sash acoustic seal (12 mm)**

Model: BAKA Protect 4040 3D FD

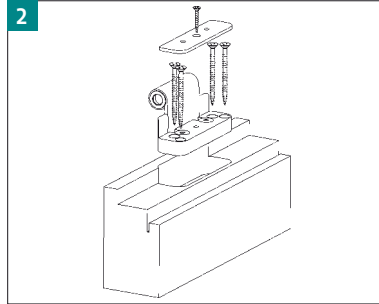


FITTING

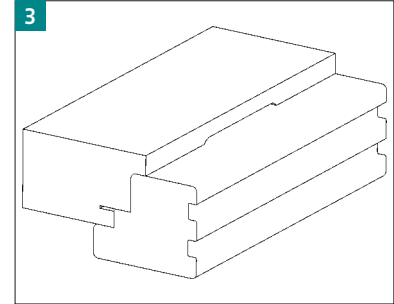
Series BAKA Protect 2000



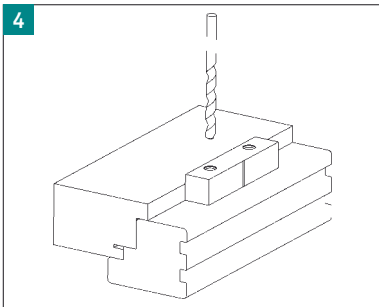
1 Determine the hinge position in the door. Conduct the routing work. Cutter \varnothing according to data on the template.



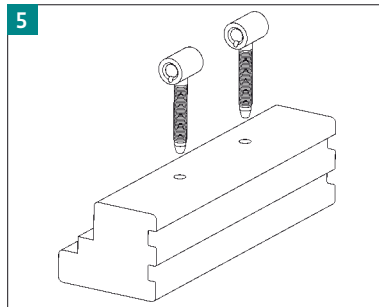
2 Fasten the door part in the mortise with 4 wood screws 5 x 40 mm.



3 Insert the door into the frame and pull to the hinge side.



4 Insert the jig in the mortise (4 mm clearance on the hinge side is taken into account in the jig). Determine upper clearance by means of spacer blocks.

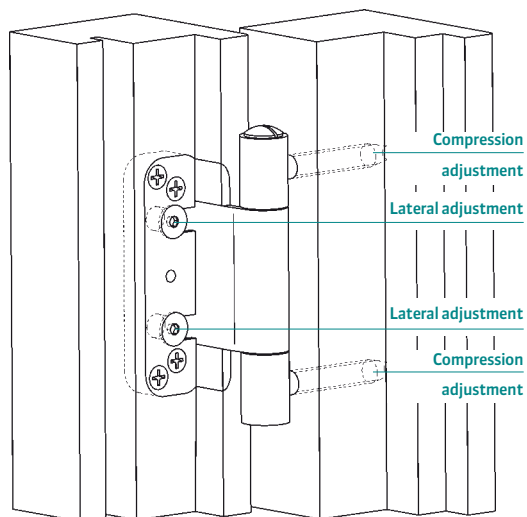


5 Drill the holes using a 8.8 mm \varnothing bit. Remove the door from the frame. Screw the frame parts in, depending on the sealing compression and bring them in an upright position. Insert the door and drive the hinge pin in.

Note

Avoid damaging the bearings when fitting the door!

ADJUSTMENT



Series BAKA Protect 2000

Two-dimensionally, continuously adjustable

Side	+/- 3.0 mm
Compression	+/- 3.0 mm

Lateral adjustment

- Turn the adjustment screws in the required direction.
- Avoid strain on the axis of all hinges.

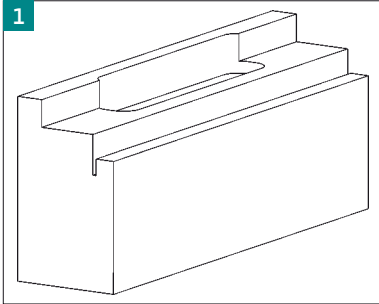
Compression adjustment

- Remove the door
- Adjust by turning the frame pins in or out
- Refit the door

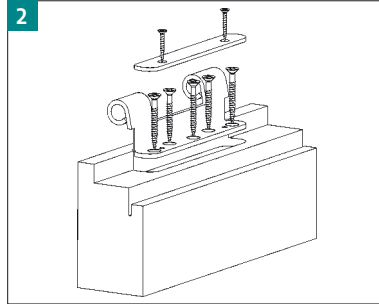
All adjustments can be conducted by a 4 mm Allen key.

FITTING

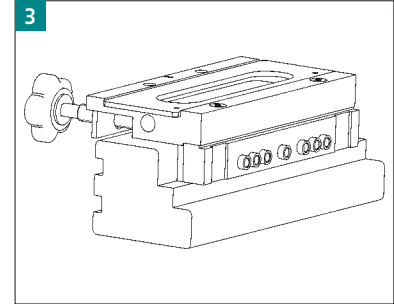
Series BAKA Protect 4000



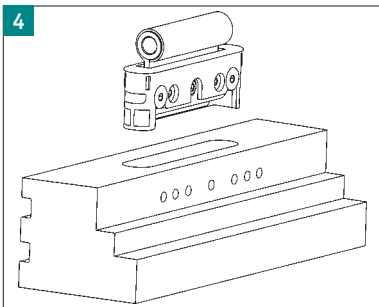
1 Determine the hinge position in the door. Conduct the routing work. Cutter \varnothing according to data on the template.



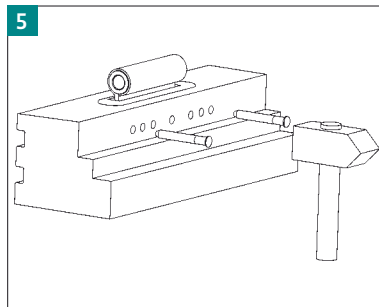
2 Fasten the door part in the mortise with 4 wood screws 5 x 40 mm.



3 Clamp on the drilling/milling jig. Drill the holes using a 6.0 mm \varnothing bit; cutter \varnothing according to data on the template.



4 Insert the receivers and place the side with the adjustment screws to the drill holes. Caution: Hinges „A“ are inserted at the top and bottom, hinge „H“ is inserted in the middle.

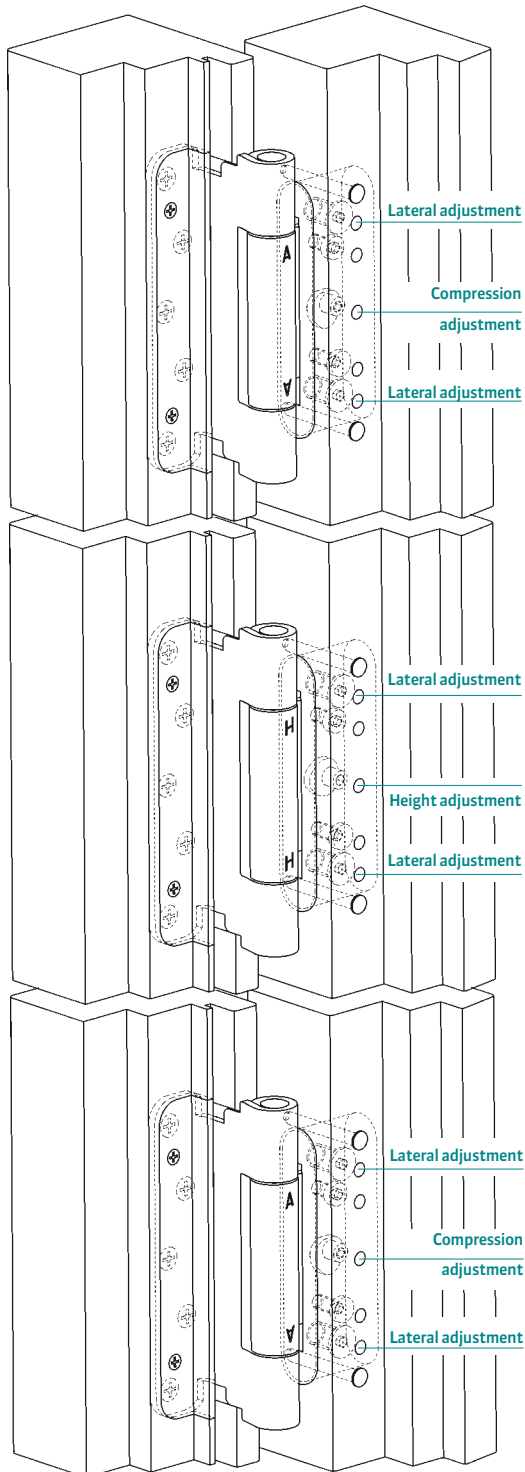


5 Drive fastening pins into the upper and lower drill hole, mount the door, insert the hinge pin.

Note

Avoid damaging the bearings when fitting the door!

ADJUSTMENT



Series BAKA Protect 4000

Three-dimensionally, continuously adjustable

Side	+/- 3.0 mm
Height	+/- 3.0 mm
Compression	+/- 3.0 mm

Lateral adjustment

- Turn the adjustment screws in the required direction.
- Avoid strain on the axis of all hinges.

Height adjustment

- Slightly loosen the clamping screws in the frame part of all hinges.
- Adjust the height by turning the eccentric adjustments of the middle hinge in the desired direction.
- Retighten the clamping screws.

Compression adjustment

- Slightly loosen the clamping screws in the frame part of all hinges.
- Adjust the compression by turning the eccentric adjustments of the upper and the lower hinge in the desired direction.
- Retighten the clamping screws.

All adjustments can be conducted by a 4 mm Allen key.

Plug-in drilling jig BAKA Protect 2000

Jig for the frame drillings.

To be used for

BAKA Protect 2010 2D
BAKA Protect 2010 2D FD
BAKA Protect 2020 2D
BAKA Protect 2030 2D FD
BAKA Protect 2040 2D FD

The complete jig consists of

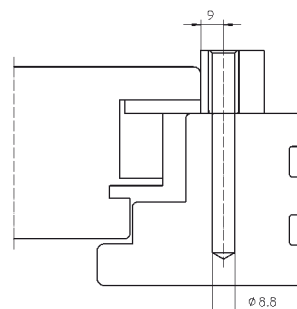
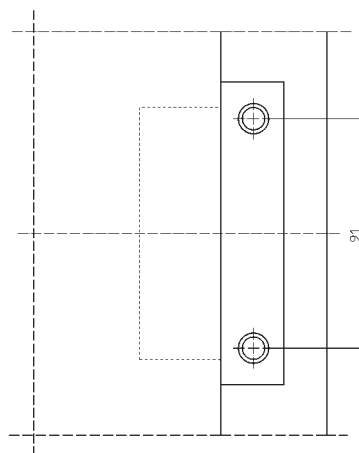
- 1 drilling jig
- 1 drill bit $\varnothing 8.8$ mm
- 1 set ring
- 1 wind-in claw $\varnothing 20$ mm
- 1 fitting instruction

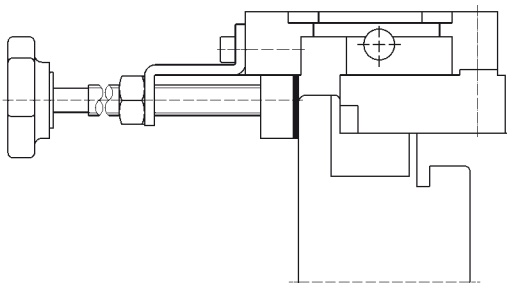
Fitting instructions

1. Determine hinge position on door leaf. Rout the mortise in the door leaf with BAKA Protect 2000 routing jig.
2. Insert door leaf in frame. The 4-mm clearance on the hinge side is considered in the drilling jig.
3. If necessary, screw the compensation plate to the plug-in drilling jig BAKA Protect 2000 (see imprint). Dependent on the door construction!
4. Fix BAKA Protect 2000 plug-in jig in the mortise slot and drill holes. Remove door leaf from frame, screw in frame parts according to seal pressure and align vertically. Screw BAKA Protect 2000 door part into the mortise. Insert door leaf and drive the pin.

Note

Please indicate hinge type when ordering drilling jig.





Routing jig BAKA Protect 2000 door

Jig for the door part routings.

To be used for

BAKA Protect 2010 2D
 BAKA Protect 2010 2D FD
 BAKA Protect 2020 2D
 BAKA Protect 2030 2D FD
 BAKA Protect 2040 2D FD

The complete jig consists of

1 routing jig
 1 routing template BAKA Protect 2000 door 20/3D
 1 fitting instruction

Fitting instructions

1. Clamp routing jig onto workpiece, insert template and conduct the routing.
2. Loosen quick-release clamp and remove routing jig.
 Cutter: $\varnothing 20$ mm
 Collar ring: $\varnothing 30$ mm

Note

Templates for the following combinations (cutter/collar ring) are also available as accessories:

template BAKA Protect 2000 door 16/30
 template BAKA Protect 2000 door 16/27
 template BAKA Protect 2000 door 20/27

Ball bearing location drilling jig 2000 frame

Jig for ,the drillings in the frame separately.

To be used for

BAKA Protect 2010 2D
 BAKA Protect 2010 2D FD
 BAKA Protect 2020 2D
 BAKA Protect 2030 2D FD
 BAKA Protect 2040 2D FD

The complete jig consists of

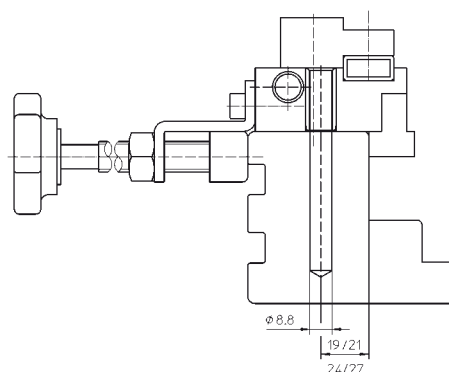
3 drilling jigs
 1 square connecting rod with ball-bearing location guide
 2 fittings
 1 drill bit $\varnothing 8.8$ mm
 1 set ring
 1 wind-in claw $\varnothing 20$ mm
 1 fitting instruction

Fitting instructions

1. The end stops need to be individually adjusted for right- or left hand and placed into the frame rebate.
2. Align ball-bearing location drilling jig with the door jig.
3. Adjust the side stops depending on door construction (see imprint)
4. Clamp ball-bearing location drilling jig to the work piece. The 4 mm clearance on the hinge side is considered in the drilling jig.
5. Drill holes ($\varnothing 8.8$ -mm drill bit)
6. Screw in frame parts according to required depth position, and align vertically.
7. Insert door leaf and drive the pin in.

Note

Additional drilling jigs for mounting further hinges are available on request.





Ball bearing location routing jig BAKA Protect 2000 door

With this serial routing jig door leaves and frames can be fitted rationally. Easy setting of jig due to ball bearing location. Applicable for right and left hand.

To be used for

BAKA Protect 2010 2D
BAKA Protect 2010 2D FD
BAKA Protect 2020 2D
BAKA Protect 2030 2D FD
BAKA Protect 2040 2D FD

The complete jig consists of

- 3 routing jigs
- 3 routing templates BAKA Protect 2000 door 20/30
- 1 square connecting rod with ball-bearing location guide
- 2 end stops
- 1 fitting instruction

Fitting instructions

1. The end stops need to be individually adjusted for right - or left hand and placed into the door rebate.
2. Align BAKA Protect 2000 door ball bearing location routing jig with frame jig.
3. Clamp ball bearing location routing jig to the workpiece, insert template and rout.
4. Conduct the routing, loosen quick-release clamp and remove ball bearing location routing jig.

Cutter: Ø 20 mm

Collar ring: Ø 30 mm

Note

Templates for the following combinations (cutter/collar ring) are also available as accessories:

routing template BAKA Protect 2000 door 16/30

routing template BAKA Protect 2000 door 16/27

routing template BAKA Protect 2000 door 20/27

SIMONSWERK
BAKA®

Drilling-/routing jig BAKA Protect 4000 frame

For drilling the 7 frame holes and the routing for the following hinges.

To be used for

BAKA Protect 4010 3D
BAKA Protect 4010 3D FD
BAKA Protect 4020 3D
BAKA Protect 4030 3D FD
BAKA Protect 4040 3D FD

The complete jig consists of

1 drilling-/ routing jig
1 routing template BAKA Protect 4000 frame 20/30
1 drill bit \varnothing 6 mm
1 set ring
1 fitting instruction

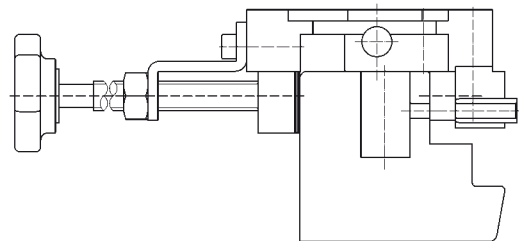
Fitting instructions

1. Determine hinge position.
2. Adjust the side stops depending on door construction (see imprint).
3. Clamp drilling-/routing jig onto the workpiece. The clearance on the hinge side is considered in the jig.
4. Drill frame holes (\varnothing 6.0 mm drill bit).
5. Rout mortise
Cutter: \varnothing 20 mm
Collar ring: \varnothing 30 mm.
6. Insert receiver and lock in place with fastening pins.

Note

Templates for the following combinations (cutter/collar ring) are also available as accessories:

routing template BAKA Protect 4000 frame 16/30
routing template BAKA Protect 4000 frame 16/27
routing template BAKA Protect 4000 frame 20/27





Routing jig BAKA Protect 4000 door

Jig for door routings for the following hinges.

To be used for

BAKA Protect 4010 3D
 BAKA Protect 4010 3D FD
 BAKA Protect 4020 3D
 BAKA Protect 4030 3D FD
 BAKA Protect 4040 3D FD

The complete jig consists of

1 routing jig
 1 routing template BAKA Protect 4000 door 20/30
 1 fitting instruction



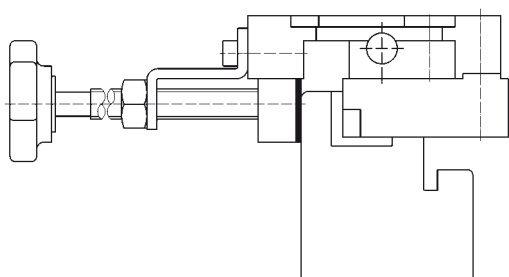
Fitting instructions

1. Clamp routing jig onto workpiece, insert template and conduct the routing.
2. After routing, loosen quick-release clamp and remove ball bearing location routing jig.
 Cutter: $\varnothing 20$ mm
 Collar ring: $\varnothing 30$ mm

Note

Templates for the following combinations (cutter/collar ring) are also available as accessories:

routing template BAKA Protect 4000 door 16/30
 routing template BAKA Protect 4000 door 16/27
 routing template BAKA Protect 4000 door 20/27



SIMONSWERK
BAKA®

Ball bearing location drilling/routing jig BAKA Protect 4000 frame

With this serial drilling/routing jig the 7 frame drillings and the routings for the hinges listed below can be done.

Easy settings of jig due to ball bearing location.

To be used for

BAKA Protect 4010 3D

BAKA Protect 4010 3D FD

BAKA Protect 4020 3D

BAKA Protect 4030 3D FD

BAKA Protect 4040 3D FD

The complete jig consists of:

3 drilling-/routing jigs

3 routing templates BAKA Protect 4000 frame 20/30

1 square connecting rod with ball-bearing location guide

2 end stops

1 drill bit Ø 6 mm

1 set ring

1 fitting instruction

Fitting instructions

1. The end stops need to be individually adjusted for right- or left hand and placed into the frame rebate.
2. Adjust the side stops depending on door construction (see imprint)
3. Align ball-bearing location drilling/routing jig with door jig.
4. Clamp drilling-/routing jig into workpiece. The clearance on the hinge side is considered in the jig.
5. Drill frame holes (Ø 6.0 mm drill bit).
6. Rout mortise
Cutter: Ø 20 mm
Collar ring: Ø 30 mm
7. Insert receiver and lock in place with fastening pins.

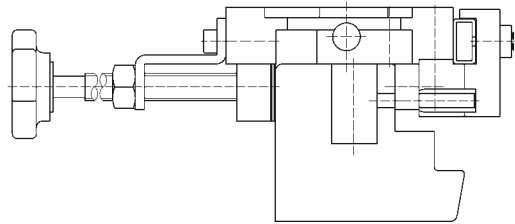
Note

Templates for the following combinations (cutter/collar ring) are also available as accessories:

routing template BAKA Protect 4000 frame 16/30

routing template BAKA Protect 4000 frame 16/27

routing template BAKA Protect 4000 frame 20/27





Ball bearing location routing jig BAKA Protect 4000 door

With this serial routing jig door leaves and frames can be fitted rationally. Easy setting of jig due to ball bearing location. Applicable for right and left hand.

To be used for

BAKA Protect 4010 3D
BAKA Protect 4010 3D FD
BAKA Protect 4020 3D
BAKA Protect 4030 3D FD
BAKA Protect 4040 3D FD

The complete jig consists of:

- 3 routing jigs
- 3 routing templates BAKA Protect 4000 door 20/30
- 1 square connecting rod with ball-bearing location guide
- 2 end stops
- 1 fitting instruction

Fitting instructions

1. The end stops need to be individually adjusted for right- or left hand and placed into the door rebate.
2. Align BAKA Protect 4000 door ball bearing location routing jig with frame jig.
3. Clamp ball bearing location routing jig into the workpiece, insert template and conduct the routing.
4. After routing, loosen quick-release clamp and remove ball bearing location routing jig.

Cutter: Ø 20 mm

Collar ring: Ø 30 mm

Note


Templates for the following combinations (cutter/collar ring) are also available as accessories:

routing template BAKA Protect 4000 door 16/30

routing template BAKA Protect 4000 door 16/27

routing template BAKA Protect 4000 door 20/27

CONTENTS

 SIMONSWERK BAKA® Protect	2010 2D 2010 2D FD	2020 2D 2030 2D FD	2040 2D FD 4010 3D	4010 3D FD 4020 3D	4030 3D FD 4040 3D FD
---	-----------------------	-----------------------	-----------------------	-----------------------	--------------------------

FURTHER BRANDS MADE BY SIMONSWERK

 **SIMONSWERK**
TECTUS®

 **SIMONSWERK**
VARIANT® VX

 **SIMONSWERK**
VARIANT® VN

 **SIMONSWERK**
VARIANT® VG

 **SIMONSWERK**
VARIANT® V

 **SIMONSWERK**
SIKU®

 **SIMONSWERK**
ALPRO®

Brochure BAKA® Protect



11/2010
5 800334 0 00001/2.0

SIMONSWERK do not accept responsibility for misprints and subsequent specification changes although every effort has been made to avoid any errors during preparation of this brochure.

OUR PRODUCT INFORMATION SYSTEM

www.bandsysteme.com

SIMONSWERK GmbH

Bosfelder Weg 5
33378 Rheda-Wiedenbrück
Germany

Fon +49 (0)5242 / 413-0
Fax +49 (0)5242 / 413-260

sales@simonswerk.de
www.simonswerk.com
www.bandsysteme.com

SIMONSWERK advise **FESTOOL** routing technology. Please contact us.