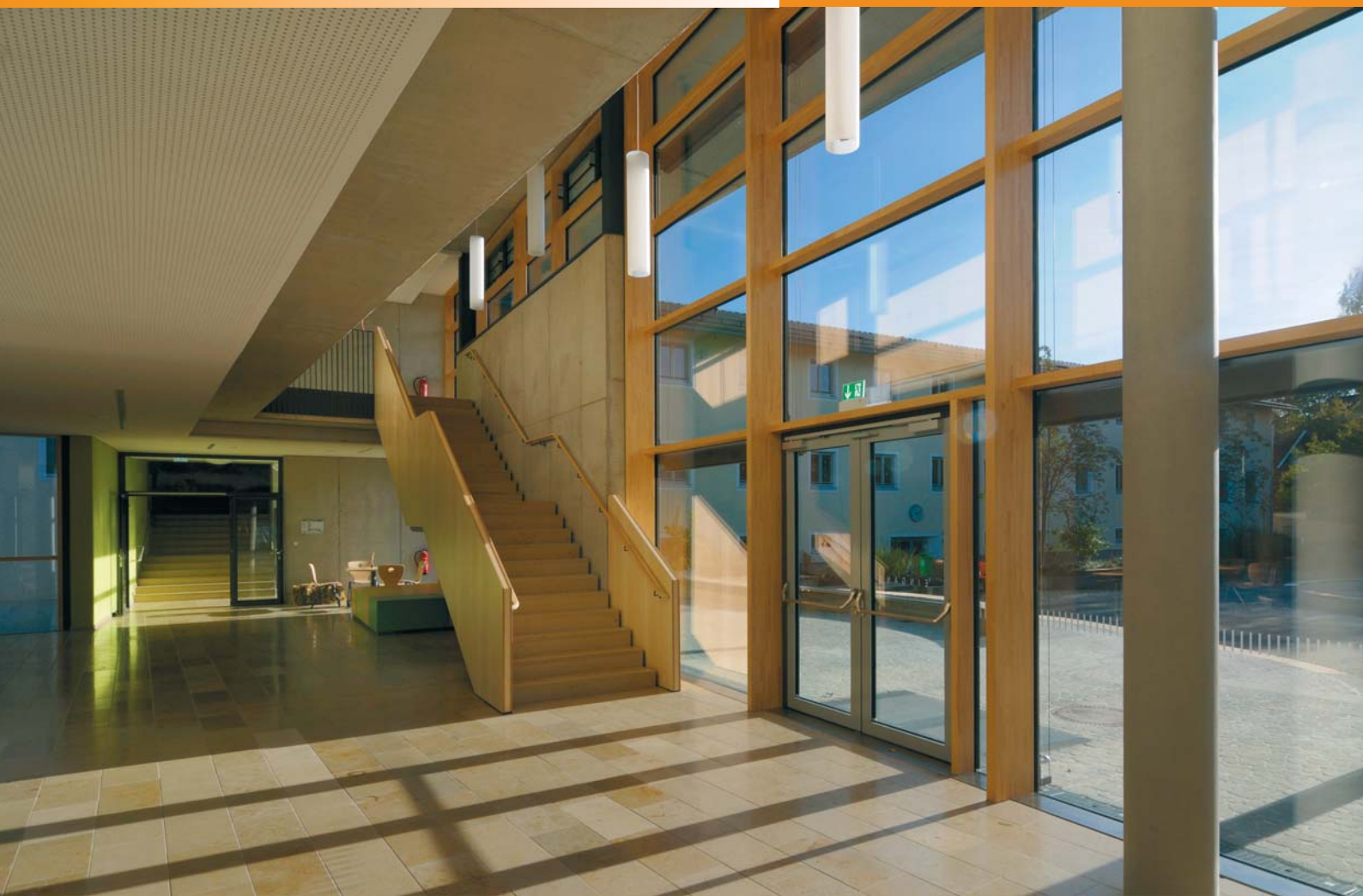


# Connecting systems

for modern post-beam wood-glass-facades

Certainly a great connection.



CE ETA



[knapp-connectors.com/facade](http://knapp-connectors.com/facade)

**KNAPP**<sup>®</sup>

*connectors.com*



Friedrich Knapp

## Welcome to the World of KNAPP®!

As a producer of patented connecting systems we develop and produce high-quality products which are distributed worldwide. Not only will our connecting systems convince – but also inspire you with the wide range of applications. The comprehensive service offers you the possibility to find the best, the most efficient and innovative solution for the realisation of your products. On the following pages you will find our connector systems for modern post-beam wood-glass-facades. Every connector permits high prefabrication and possesses the CE- and Ü-Marking through European and German certification of standards. Regular external inspection guarantees maximum security for planners, architects, manufacturers and owners.

## RICON® | The connector for main and secondary beam up to 26 kN\*

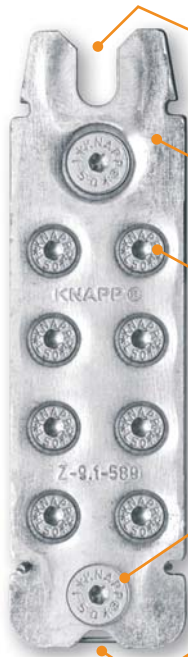
### System advantages:

- Approved for eccentric loads up to 860 kg glass
- Narrow profile – required timber width only 50 mm
- Universal access to all wood materials, steel and concrete
- Unique – for polygon facades
- Flexible – installation from outside and inside
- Always jointing – RICON® is adjustable to compensate timber tolerances
- Versatile – can be used for single and dual port
- Compatible with alu-profiles of RP, Schüco, MBJ, Guttman, RAICO (Stabalux and more on request)



### Resistance to corrosion:

RICON® for indoor swimming pools. Special coating on request (for example near coastal areas).

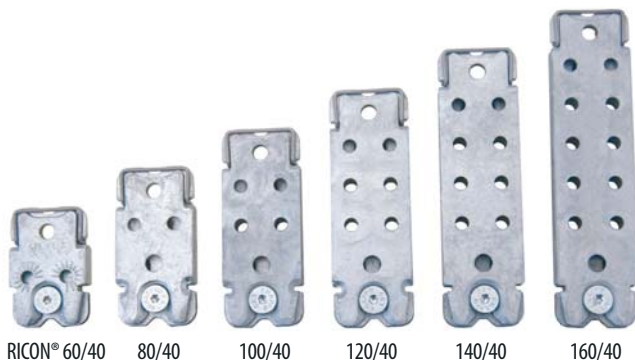


The dove-tail stamping makes it very easy to catch the CS-screws and push together the connector. It also ensures tightness.

RICON® consists of two identical parts. It is made of premium quality steel and is hot-dip galvanized and made in Austria.

Ø = 5 mm and Ø = 8 mm RICON® CS-screws. These adjustable holding screws compensate fabrication tolerances. The reinforced shaft with integrated stop guarantees exact positioning.

Clip in the stainless spring steel stirrup into the locating slots prior to final assembly. It locks the connection against the slide-in direction and can be released again.



RICON® 60/40

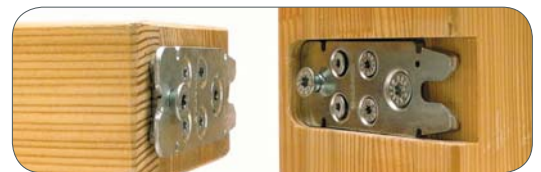
80/40

100/40

120/40

140/40

160/40



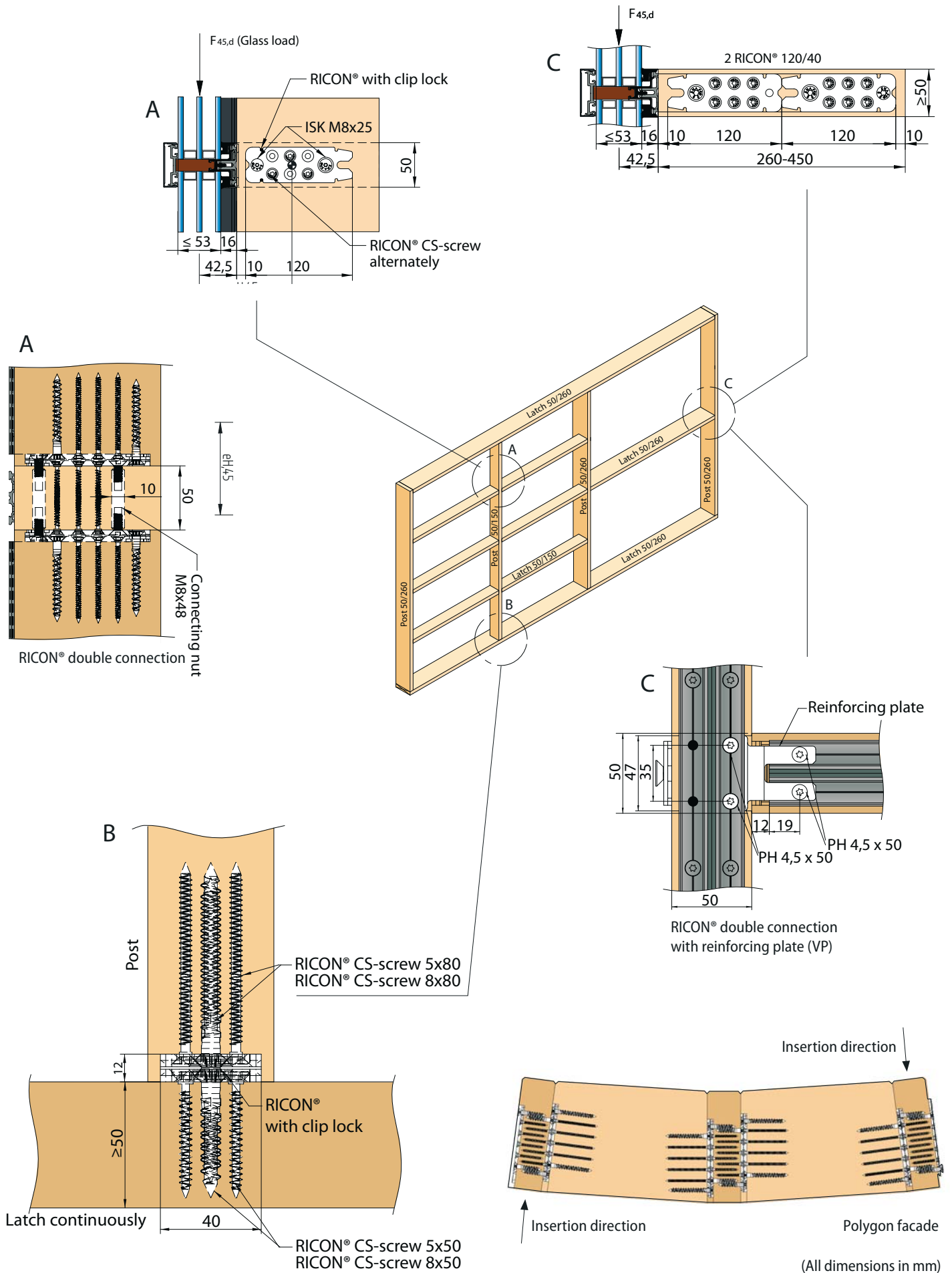
The RICON® can be milled in post and also in latch.

 **More information:**  
[www.knapp-connectors.com/ricon](http://www.knapp-connectors.com/ricon)

RICON®

Application examples and connection details

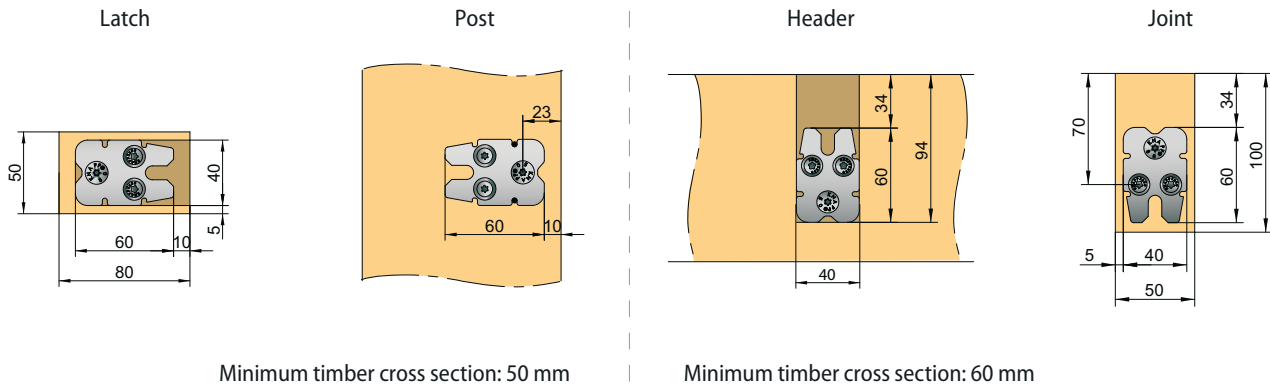
Post-beam wood-glass-facade



## RICON® 60/40

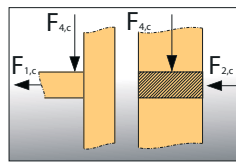
Characteristic values for dimensioning can be taken from the ETA Static Folder.

## Minimum timber cross section



## Single connection (EA) with RICON® CS-screws

Art.-No. K360



Single connection for post and latch connection with a minimum timber cross section of 50 mm (stress at mid to the axis of latch)

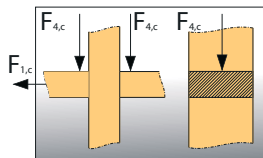
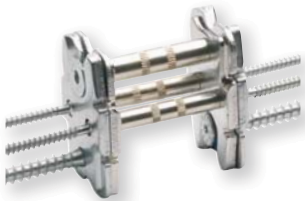
Connector	Connection	Screwing		Charact. values [GL24h]	
		Joint	Header	F <sub>1,Rk</sub> [kN]	F <sub>2,Rk</sub> [kN]
60/40	EA	2 x CS 5x80 1 x CS 8x80	2 x CS 5x50 1 x CS 8x50	6,3	5,8
1 stirrup: F <sub>3,Rk</sub> = 2,7 kN			2 stirrups: F <sub>3,Rk</sub> = 5,15 kN		

Minimum timber cross section : 50 x 80 mm

## Double connection (DA) with connecting nuts and RICON® CS-screws

Art.-No. K160/48

The article number consists of the original number for the part K160 and the size of the connecting nut.



Double connection for 50/55/60/80 mm timber cross sections (stress at mid to the axis of latch)

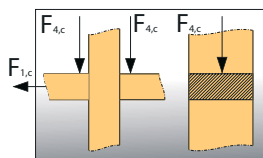
Connector	Connection	Screwing		Charact. values [GL24h]	
		Joint	Header	F <sub>1,Rk</sub> [kN]	F <sub>2,Rk</sub> [kN]
60/40	DA	4 x CS 5x80 2 x CS 8x80	-	6,3	5,8
2 stirrups per set: F <sub>3,Rk</sub> = 2,7 kN			4 stirrups per set: F <sub>3,Rk</sub> = 5,15 kN		

Minimum timber cross section : 50 x 80 mm

Size (mm)	Connecting nuts				ISK-screw	
	48	53	58	78	M5x20	M8x25
8/M5	2	2	2	2	4	-
10/M8	1	1	1	1	-	2

## Single or double connection with insert und RICON® CS-screws

Art.-No. K260



Single or double connection for special timber cross sections >50 mm (stress at mid to the axis of latch)

Connector	Connection	Screwing		Charact. values [GL24h]	
		Joint	Header	F <sub>1,Rk</sub> [kN]	F <sub>2,Rk</sub> [kN]
60/40	EAR	2 x CS 5x80 1 x CS 8x80	-	6,3	5,8
1 stirrup: F <sub>3,Rk</sub> = 2,7 kN			2 stirrups: F <sub>3,Rk</sub> = 5,15 kN		

Minimum timber cross section : 50 x 80 mm

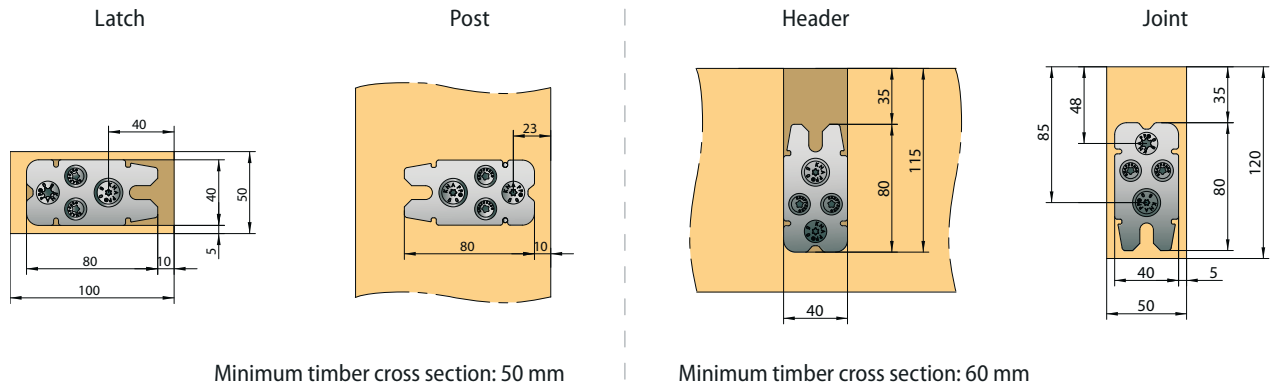
Insert		ISK-screw	
M5x14	M8x18	M5x20	M8x25
2	1	2	1



# RICON® 80/40

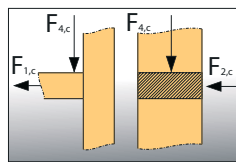
Characteristic values for dimensioning can be taken from the ETA Static Folder.

## Minimum timber cross section



## Single connection (EA) with RICON® CS-screws

Art.-No. K361



Single connection for post and latch connection with a minimum timber cross section of 50 mm (stress at mid to the axis of latch)

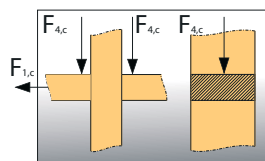
Connector	Connection	Screwing		Charact. values [GL24h]	
		Joint	Header	F <sub>1,Rk</sub> [kN]	F <sub>2,Rk</sub> [kN]
80/40	EA	2 x CS 5x80 2 x CS 8x80	2 x CS 5x50 2 x CS 8x50	10,3	9,5
1 stirrup: F <sub>3,Rk</sub> = 2,7 kN			2 stirrups: F <sub>3,Rk</sub> = 5,4 kN		

Minimum timber cross section : 50 x 100 mm

## Double connection (DA) with connecting nuts and RICON® CS-screws

Art.-No. K161/48

\*The article number consists of the original number for the part K161 and the size of the connecting nut.



Double connection for 50/55/60/70/80 mm timber cross sections (stress at mid to the axis of latch)

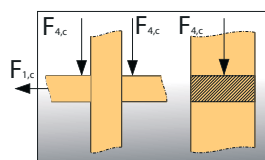
Connector	Connection	Screwing		Charact. values [GL24h]	
		Joint	Header	F <sub>1,Rk</sub> [kN]	F <sub>2,Rk</sub> [kN]
80/40	DA	4 x CS 5x80 4 x CS 8x80	2 x CS 5x50	10,3	9,5
2 stirrups per set: F <sub>3,Rk</sub> = 2,7 kN			4 stirrups per set: F <sub>3,Rk</sub> = 5,4 kN		

Minimum timber cross section : 50 x 100 mm

Size (mm)	Connecting nuts						ISK-screw
	36	48	53	58	68	78	M8x25
10/M8	2	2	2	2	2	2	4

## Single or double connection with insert und RICON® CS-screws

Art.-No. K261



Single or double connection for special timber cross sections >50 mm (stress at mid to the axis of latch)

Connector	Connection	Screwing		Charact. values [GL24h]	
		Joint	Header	F <sub>1,Rk</sub> [kN]	F <sub>2,Rk</sub> [kN]
80/40	EAR	2 x CS 5x80 2 x CS 8x80	1 x CS 5x50	10,3	9,5
1 stirrup: F <sub>3,Rk</sub> = 2,7 kN			2 stirrups: F <sub>3,Rk</sub> = 5,4 kN		

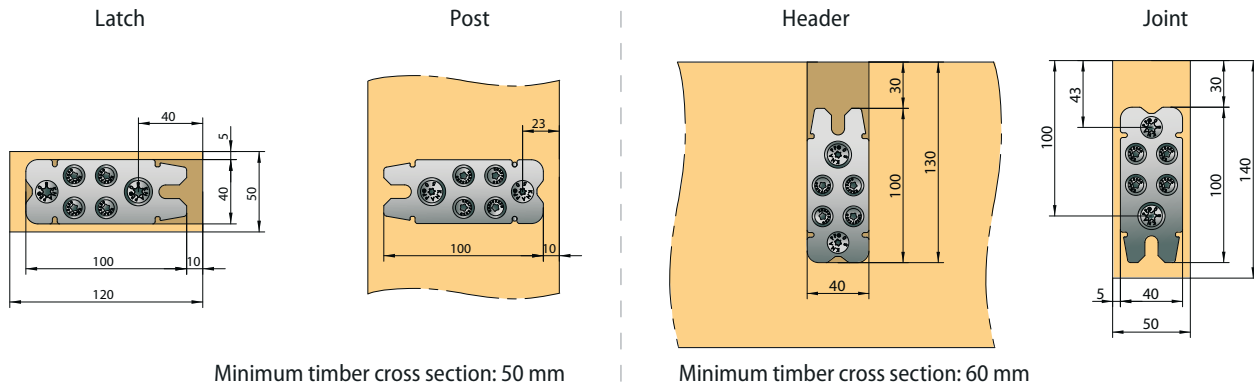
Minimum timber cross section : 50 x 100 mm

Insert		ISK-screw	
M5x14	M8x18	M5x20	M8x25
-	2	-	2

## RICON® 100/40

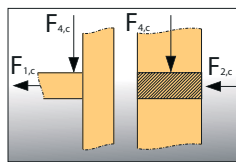
Characteristic values for dimensioning can be taken from the ETA Static Folder.

## Minimum timber cross section



## Single connection (EA) with RICON® CS-screws

Art.-No. K362



Single connection for post and latch connection with a minimum timber cross section of 50 mm (stress at mid to the axis of latch)

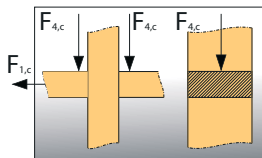
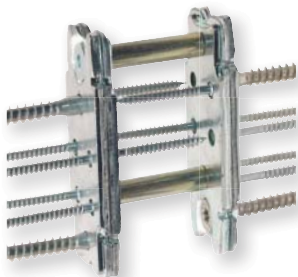
Connector	Connection	Screwing		Charact. values [GL24h]*	
		Joint	Header	F <sub>1,Rk</sub> [kN]	F <sub>2,Rk</sub> [kN]
100/40	EA	4 x CS 5x80 2 x CS 8x80	4 x CS 5x50 2 x CS 8x50	15,4	12,7
1 stirrup: F <sub>3,Rk</sub> = 2,7 kN			2 stirrups: F <sub>3,Rk</sub> = 5,4 kN		

Minimum timber cross section : 50 x 120 mm

## Double connection (DA) with connecting nuts and RICON® CS-screws

Art.-No. K162/48

\*The article number consists of the original number for the part K162 and the size of the connecting nut.



Double connection for 50/55/60/70/80 mm timber cross sections (stress at mid to the axis of latch)

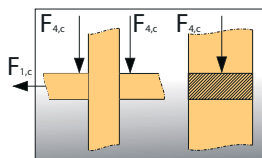
Connector	Connection	Screwing		Charact. values [GL24h]*	
		Joint	Header	F <sub>1,Rk</sub> [kN]	F <sub>2,Rk</sub> [kN]
100/40	DA	8 x CS 5x80 4 x CS 8x80	4 x CS 8x80	15,4	12,7
2 stirrups per set: F <sub>3,Rk</sub> = 2,7 kN			4 stirrups per set: F <sub>3,Rk</sub> = 5,4 kN		

Minimum timber cross section : 50 x 120 mm

Size (mm)	Connecting nuts						ISK-screw
	36	48	53	58	68	78	M8x25
10/M8	2	2	2	2	2	2	4

## Single or double connection with insert und RICON® CS-screws

Art.-No. K262



Single or double connection for special timber cross sections >50 mm (stress at mid to the axis of latch)

Connector	Connection	Screwing		Charact. values [GL24h]*	
		Joint	Header	F <sub>1,Rk</sub> [kN]	F <sub>2,Rk</sub> [kN]
100/40	EAR	4 x CS 5x80 2 x CS 8x80	2 x CS 5x50	15,4	12,7
1 stirrup: F <sub>3,Rk</sub> = 2,7 kN			2 stirrups: F <sub>3,Rk</sub> = 5,4 kN		

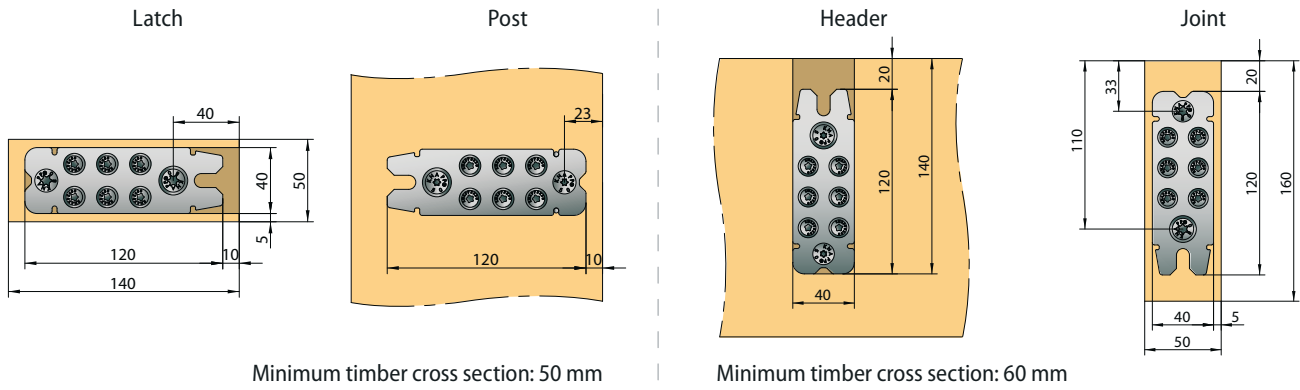
Minimum timber cross section : 50 x 120 mm

Insert		ISK-screw	
M5x14	M8x18	M5x20	M8x25
-	2	-	2

# RICON® 120/40

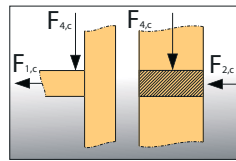
Characteristic values for dimensioning can be taken from the ETA Static Folder.

## Minimum timber cross section



## Single connection (EA) with RICON® CS-screws

Art.-No. K363



Single connection for post and latch connection with a minimum timber cross section of 50 mm (stress at mid to the axis of latch)

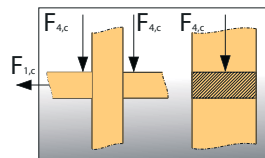
Connector	Connection	Screwing		Charact. values [GL24h]*	
		Joint	Header	F <sub>1,Rk</sub> [kN]	F <sub>2,Rk</sub> [kN]
120/40	EA	6 x CS 5x80 2 x CS 8x80	6 x CS 5x50 2 x CS 8x50	19,7	16,0
1 stirrup: F <sub>3,Rk</sub> = 2,7 kN			2 stirrups: F <sub>3,Rk</sub> = 5,4 kN		

Minimum timber cross section : 50 x 140 mm

## Double connection (DA) with connecting nuts and RICON® CS-screws

Art.-No. K163/48

\*The article number consists of the original number for the part K163 and the size of the connecting nut.



Double connection for 50/55/60/70/80 mm timber cross sections (stress at mid to the axis of latch)

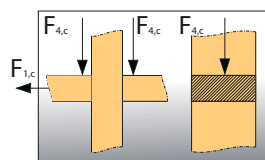
Connector	Connection	Screwing		Charact. values [GL24h]*	
		Joint	Header	F <sub>1,Rk</sub> [kN]	F <sub>2,Rk</sub> [kN]
120/40	DA	12 x CS 5x80 4 x CS 8x80	6 x CS 5x50	19,7	16,0
2 stirrups per set: F <sub>3,Rk</sub> = 2,7 kN			4 stirrups per set: F <sub>3,Rk</sub> = 5,4 kN		

Minimum timber cross section : 50 x 140 mm

Size (mm)	Connecting nuts						ISK-screw
	36	48	53	58	68	78	M8x25
10/M8	2	2	2	2	2	2	4

## Single or double connection with insert und RICON® CS-screws

Art.-No. K263



Single or double connection for special timber cross sections >50 mm (stress at mid to the axis of latch)

Connector	Connection	Screwing		Charact. values [GL24h]*	
		Joint	Header	F <sub>1,Rk</sub> [kN]	F <sub>2,Rk</sub> [kN]
120/40	EAR	6 x CS 5x80 2 x CS 8x80	3 x CS 5x50	19,7	16,0
1 stirrup: F <sub>3,Rk</sub> = 2,7 kN			2 stirrups: F <sub>3,Rk</sub> = 5,4 kN		

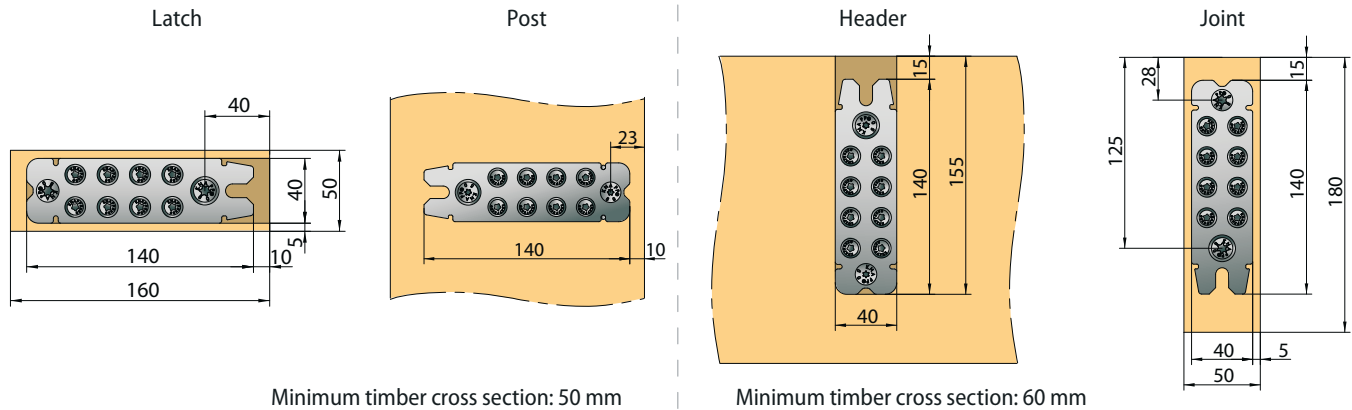
Minimum timber cross section : 50 x 140 mm

Insert		ISK-screw	
M5x14	M8x18	M5x20	M8x25
-	2	-	2

## RICON® 140/40

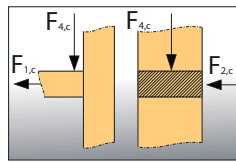
Characteristic values for dimensioning can be taken from the ETA Static Folder.

## Minimum timber cross section



## Single connection (EA) with RICON® CS-screws

Art.-No. K365



Single connection for post and latch connection with a minimum timber cross section of 50 mm (stress at mid to the axis of latch)

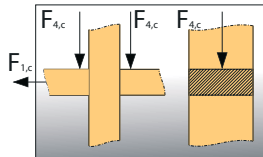
Connector	Connection	Screwing		Charact. values [GL24h]*	
		Joint	Header	F <sub>1,Rk</sub> [kN]	F <sub>2,Rk</sub> [kN]
140/40	EA	4 x CS 5x80 2 x CS 8x80	4 x CS 5x50 2 x CS 8x50	24,1	17,3
1 stirrup: F <sub>3,Rk</sub> = 2,7 kN			2 stirrups: F <sub>3,Rk</sub> = 5,4 kN		

Minimum timber cross section : 50 x 160 mm

## Double connection (DA) with connecting nuts and RICON® CS-screws

Art.-No. K165/48

\*The article number consists of the original number for the part K165 and the size of the connecting nut.



Double connection for 50/55/60/70/80 mm timber cross sections (stress at mid to the axis of latch)

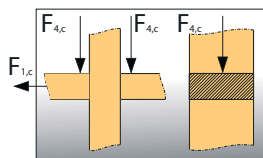
Connector	Connection	Screwing		Charact. values [GL24h]*	
		Joint	Header	F <sub>1,Rk</sub> [kN]	F <sub>2,Rk</sub> [kN]
140/40	DA	8 x CS 5x80 4 x CS 8x80	4 x CS 8x80	24,1	17,3
2 stirrups per set: F <sub>3,Rk</sub> = 2,7 kN			4 stirrups per set: F <sub>3,Rk</sub> = 5,4 kN		

Minimum timber cross section : 50 x 160 mm

Size (mm)	Connecting nuts						ISK-screw
	36	48	53	58	68	78	M8x25
10/M8	2	2	2	2	2	2	4

## Single or double connection with insert und RICON® CS-screws

Art.-No. K265



Single or double connection for special timber cross sections >50 mm (stress at mid to the axis of latch)

Connector	Connection	Screwing		Charact. values [GL24h]*	
		Joint	Header	F <sub>1,Rk</sub> [kN]	F <sub>2,Rk</sub> [kN]
140/40	EAR	4 x CS 5x80 2 x CS 8x80	2 x CS 5x50	24,1	17,3
1 stirrup: F <sub>3,Rk</sub> = 2,7 kN			2 stirrups: F <sub>3,Rk</sub> = 5,4 kN		

Minimum timber cross section : 50 x 160 mm

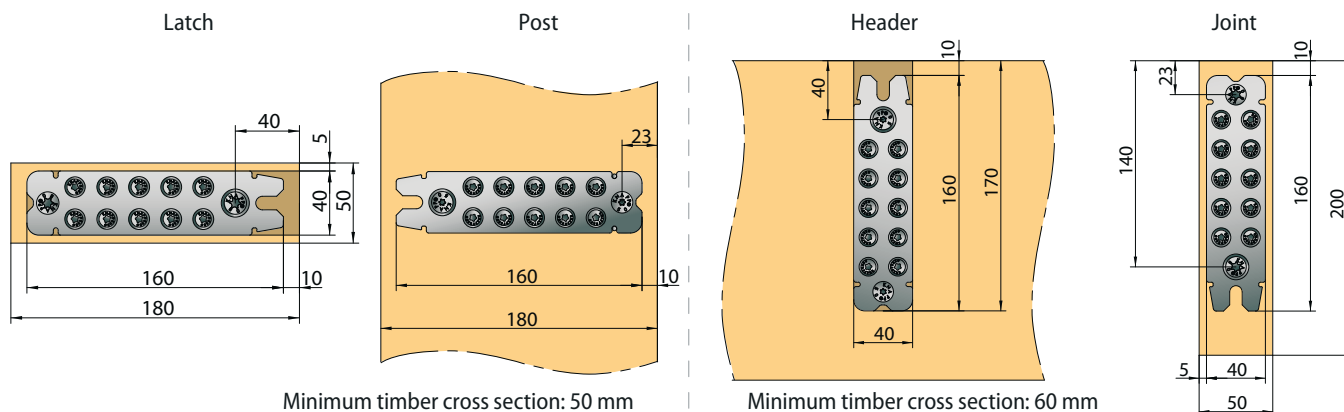
Insert		ISK-screw	
M5x14	M8x18	M5x20	M8x25
-	2	-	2



# RICON® 160/40

Characteristic values for dimensioning can be taken from the ETA Static Folder.

## Minimum timber cross section

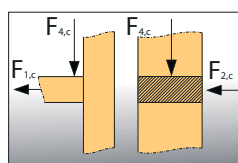


Minimum timber cross section: 50 mm

Minimum timber cross section: 60 mm

## Single connection (EA) with RICON® CS-screws

Art.-No. K364



Single connection for post and latch connection with a minimum timber cross section of 50 mm (stress at mid to the axis of latch)

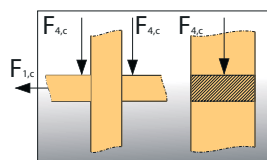
Connector	Connection	Screwing		Charact. values [GL24h]*	
		Joint	Header	F <sub>1,Rk</sub> [kN]	F <sub>2,Rk</sub> [kN]
160/40	EA	6 x CS 5x80 2 x CS 8x80	6 x CS 5x50 2 x CS 8x50	26,0	17,3
1 stirrup: F <sub>3,Rk</sub> = 2,7 kN			2 stirrups: F <sub>3,Rk</sub> = 5,4 kN		

Minimum timber cross section : 50 x 180 mm

## Double connection (DA) with connecting nuts and RICON® CS-screws

Art.-No. K164/48

\*The article number consists of the original number for the part K164 and the size of the connecting nut.



Double connection for 50/55/60/70/80 mm timber cross sections (stress at mid to the axis of latch)

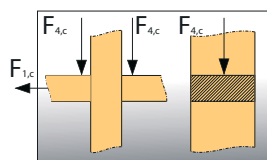
Connector	Connection	Screwing		Charact. values [GL24h]*	
		Joint	Header	F <sub>1,Rk</sub> [kN]	F <sub>2,Rk</sub> [kN]
160/40	DA	12 x CS 5x80 4 x CS 8x80	6 x CS 5x50	26,0	17,3
2 stirrups per set: F <sub>3,Rk</sub> = 2,7 kN			4 stirrups per set: F <sub>3,Rk</sub> = 5,4 kN		

Minimum timber cross section : 50 x 180 mm

Size (mm)	Connecting nuts						ISK-screw
	36	48	53	58	68	78	M8x25
10/M8	2	2	2	2	2	2	4

## Single or double connection with insert und RICON® CS-screws

Art.-No. K264



Single or double connection for special timber cross sections >50 mm (stress at mid to the axis of latch)

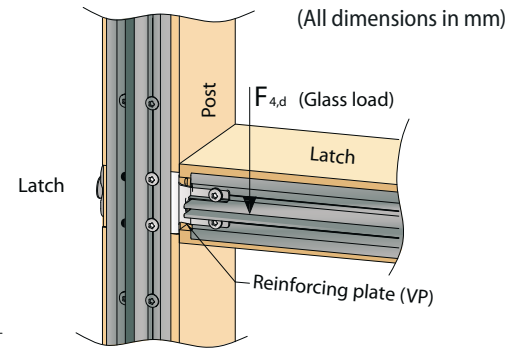
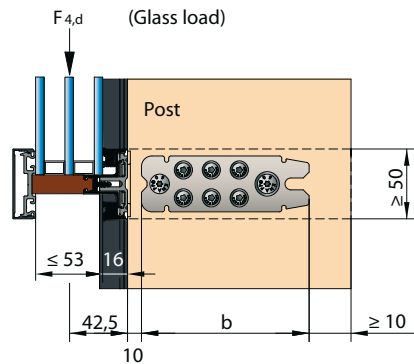
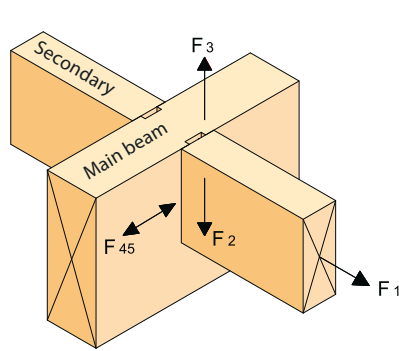
Connector	Connection	Screwing		Charact. values [GL24h]*	
		Joint	Header	F <sub>1,Rk</sub> [kN]	F <sub>2,Rk</sub> [kN]
160/40	EAR	6 x CS 5x80 2 x CS 8x80	3 x CS 5x50	26,0	17,3
1 stirrup: F <sub>3,Rk</sub> = 2,7 kN			2 stirrups: F <sub>3,Rk</sub> = 5,4 kN		

Minimum timber cross section : 50 x 180 mm

Insert		ISK-screw	
M5x14	M8x18	M5x20	M8x25
-	2	-	2

## RICON®

## Load capacity



RICON®	Wood material	Charact. values			Design value $R_{1a,i,c}$ [kN] = $F_{3,Rk}$		Eccentric glass loads/post $R_{1a,r,d}$	
		$R_{ax,k} = F_{1,Rk}$ [kN]	$R_{1a,i,k} = F_{2,Rk}$ [kN]	$R_{1a,r,k} = F_{45,Rk}$ [kN]	Stirrups		with VP [kg]	without VP [kg]
					1	2		
60/40	C24h (S10)	7,8	6,0	5,8	2,7	5,5	66	339
	GL24h (BS11)	8,4	6,3	5,8			70	344
	GL32h (BS16)	9,2	6,9	5,8			78	352
80/40	C24h (S10)	7,8	9,7	8,9	2,7	5,5	86	359
	GL24h (BS11)	8,4	10,3	9,5			92	365
	GL32h (BS16)	9,2	11,3	10,5			102	375
100/40	C24h (S10)	7,8	14,5	11,8	2,7	5,5	134	407
	GL24h (BS11)	8,4	15,4	12,7			143	417
	GL32h (BS16)	9,2	16,9	14,0			159	432
120/40	C24h (S10)	7,8	18,6	15,0	2,7	5,5	183	456
	GL24h (BS11)	8,4	19,7	16,0			196	469
	GL32h (BS16)	9,2	21,6	17,3			217	490
140/40	C24h (S10)	7,8	22,7	17,3	2,7	5,5	233	507
	GL24h (BS11)	8,4	24,1	17,3			249	523
	GL32h (BS16)	9,2	26,0	17,3			277	550
160/40	C24h (S10)	7,8	26,0	17,3	2,7	5,5	286	559
	GL24h (BS11)	8,4	26,0	17,3			306	580
	GL32h (BS16)	9,2	26,0	17,3			339	613
2 x 80/40	C24h (S10)	7,8	15,9	11,6	2,7	5,5	246	520
	GL24h (BS11)	8,4	15,9	11,6			264	537
	GL32h (BS16)	9,2	15,9	11,6			293	566
2 x 100/40	C24h (S10)	7,8	20,2	14,4	2,7	5,5	363	637
	GL24h (BS11)	8,4	20,2	14,4			389	663
	GL32h (BS16)	9,2	20,2	14,4			431	705
2 x 120/40	C24h (S10)	7,8	26,0	17,3	2,7	5,5	473	746
	GL24h (BS11)	8,4	26,0	17,3			506	780
	GL32h (BS16)	9,2	26,0	17,3			561	835

Detailed information for the structural analysis are given in the ETA STATICS FOLDER.  
Further information at: [www.knapp-connectors.com/download](http://www.knapp-connectors.com/download)

**Tested:** at the University of Karlsruhe (KIT), **Building approval:** ETA-10/0189,

**Monitored:** at the University of Karlsruhe (KIT) Research Center for Steel, Timber and Masonry, Univ.-Prof. Dr.-Ing. Blaß

$F_{1,Rk}$	Characteristic values of load-bearing capacity in the case of single stress perpendicular to the connector plate
$F_{2,Rk}$	Characteristic values in direction of insertion
$F_{3,Rk}$	Characteristic values against the direction of insertion
$F_{45,Rk}$	Characteristic values perpendicular to the direction of insertion
$F_{1,Rd}$	Design values of load-bearing capacity perpendicular to the connector plate
$F_{2,Rd}$	Design values in direction of insertion
$F_{3,Rd}$	Design values against the direction of insertion
$F_{45,Rd}$	Design values perpendicular to the direction of insertion
$e_{45}$	Distance between the force $F_{45}$ and the centroid of the fasteners in the joist or in the header
$\gamma_M$	Partial factor for material properties, also accounting for model uncertainties and dimensional variations
$k_{mod}$	Modification factors for duration of load and moisture content
$k_{mod} = 0,6$	=> Permanent (more than 10 years for example self weight)
$k_{mod} = 0,7$	=> Long term (6 months - 10 years for example storage)
$k_{mod} = 0,8$	=> Medium term (1 week - 6 months for example imposed floor load, snow load)
$k_{mod} = 0,9$	=> Short term (shorter one week for example snow- and wind load)

## RICON® screws

### RICON® CS-screws with reinforced shaft and cut-point (CS-screws are included with delivery)

Art.-No. Z533	CS-screws 5x50
Art.-No. Z531	CS-screws 8x50

**Application:** For longitudinal screwing of RICON® connectors (post).



Art.-No. Z534	CS-screws 5x80
Art.-No. Z532	CS-screws 8x80

**Application:** For end grain screwing of RICON® connectors (latch).



### CS-screws RICON® DA

Art.-No. Z545	CS-screw M5x20 (for RICON® 60/40 DA)
Art.-No. Z548	CS-screw M8x25

**Application:** For screwing RICON® double connections (DA).



### Connecting nuts RICON® DA (Connecting nuts are included with delivery)

Art.-No. K540	Connecting nut M5 8x48	50 mm post thickness
Art.-No. K541	Connecting nut M5 8x53	55 mm post thickness
Art.-No. K542	Connecting nut M5 8x58	60 mm post thickness
Art.-No. K543	Connecting nut M5 8x78	80 mm post thickness

**Utilisation :** For screwing RICON® 60/40 double connections (DA).



Art.-No. K544	Connecting nut M8 10x36	<50 mm post thickness
Art.-No. K545	Connecting nut M8 10x48	50 mm post thickness
Art.-No. K546	Connecting nut M8 10x53	55 mm post thickness
Art.-No. K547	Connecting nut M8 10x58	60 mm post thickness
Art.-No. K548	Connecting nut M8 10x68	70 mm post thickness
Art.-No. K549	Connecting nut M8 10x78	80 mm post thickness

**Application:** For screwing RICON® double connections (DA).



### Inserts RICON® EAR (Inserts are included with delivery)

Art.-No. K540	Insert M5x14 for RICON® 60/40
Art.-No. K541	Insert M8x18

**Application:** For special sizes of posts.



## RICON® Accessories

### Routing-jig for all RICON® sizes

Art.-No. K502	Routing-jig MULTI F40 (plywood)
---------------	---------------------------------

**Advice:** The routing-jig MULTI F is suitable for a  $\varnothing = 30$  mm guide bush (for plunge router) and a  $\varnothing = 15$  mm TCT router cutter.

**Application:** For milling in case of concealed mounting.



## RICON® Accessories

### Drilling-jig RICON® EA/DA (galvanized steel)

Art.-No.	K621	K622	K623	K624	K629	K630
	60/40	80/40	100/40	120/40	140/40	160/40

**Application:** For installation into the drilling-jig and exact pre-drilling of the positioning screws.



### HM router cutter

Art.-No. Zo66 HM router cutter  $\varnothing = 15$ , length = 25 mm with  $\varnothing = 8$  mm shank

**Application:** To recess the rebate for RICON® and GIGANT.



### Stirrup RICON® (stainless spring steel stirrup)

Art.-No. Ko64 Stirrup RICON®

**Application:** The stirrup locks the connection against slide-in direction. It can be released on request.



### Reinforcing plate RICON® (stainless steel)

Art.-No.	K530	K531	K532	K533	K534	K535	K536	K537	K538	K539
esco	esco	esco	esco	Gutmann	Gutmann	Gutmann	RAICO	RAICO	RAICO	
RP-tec 50-1 HA	RP-tec 50-1 HA	RP-tec 55-1 HA	RP-tec 55-1 HA	P GF50	P GF60	P GF80	GP 41 and 47	GP 41 and 47	GP 67	
50 mm	60 mm	60 mm	80 mm	50 mm	60 mm	80 mm	50 mm	60 mm	80 mm	
width of post and latch	width of post and latch	width of post and latch	width of post and latch	width of post and latch	width of post and latch	width of post and latch	Pfosten-Riegelbreite	width of post and latch	width of post and latch	

**Application:** The reinforcing plate connects the base aluminium profiles and increases the load capacity of the post and latch connection. The reinforcing plate is available for different base profiles (see table). Reinforcing plates for other profiles on request (e.g. Schüco).



### Drilling-jig RICON® EA/DA for post-latch connections

Art.-No.	K634	K635	K636	K637	K638	K639
	60/40 Set	80/40	100/40	120/40	140/40	160/40

### Drilling-jig RICON® EA/DA for header-joint connections

Art.-No.	K634	K642	K643	K644	K645	K646
	60/40 Set	80/40	100/40	120/40	140/40	160/40

**Application:** With this the positioning and through-hole drilling are made.



### Drilling-jig RICON® with adjustable drilling blocks

Art.-No.	-	K647	K647	K647	K647	K647
Drilling blocks:	-	80/40	100/40	120/40	140/40	160/40

**Application:** With this the positioning and through-hole drilling are made.



**NEW**



### RICON® mounting set

Art.-No. Ko65 Consisting of: 1 RICON®-depth gauge  
incl. 1 Torx wrench T25, 1 Allen key SW5

**Application:** For fine adjustment of RICON® screws.





# RICON®

## Installation

- Simple and fast installation with spindle moulder or routing machine and optional KNAPP® template.
- Installation with CNC joinery machine possible – all data for the standard CNC joinery machine programmes are included.



CNC joinery machine



1) With the routing-jig or routing machine on the bolt a 40 mm wide and 12 mm deep milling will be made (Length according to the assembly instructions).



2) The drilling-jig will be inserted and pre-drilled.



3) Connector parts screw on mirrored.



4) The retaining screw is turned up to the shoulder to stop. With the depth gauge the retaining screw is adjusted rationally. Also during the installation process the adjustment of the gap can be guaranteed.



5) Assembly: The connection is made by simply pushing together. At this point the locking clip will lock (if fitted).

**Stirrup:** Depending on static requirements, the stirrup can be inserted on one or on both sides. If the connection is accessible, it can be unlocked (6).



6) To unlock the connection, it is necessary to bend up the stirrup in its center eg. with a screwdriver.

Routing dimension RICON®		
Width	Length	Depth
40 mm	variable	12 mm

Alternatively, the milling done at a sufficient cross section and in the post - in this case (left), the connector is screwed on the bolt.



Construction manuals, .DXF drawings for RICON®-System as well as your personal consultant in your area, please visit: [www.knapp-connectors.com/download](http://www.knapp-connectors.com/download)

## RICON®

## Selected reference projects



## Title Object



**Object:** Primary school Feldkirchen/Munich (D), [www.schule-feldkirchen.de](http://www.schule-feldkirchen.de); **Planner/Architect:** Krug Grossmann Architekten, [www.krug-grossmann.de](http://www.krug-grossmann.de); **Facade:** Vereinigte Holzbaubetriebe Wilhelm Pfalzer & Hans Vogt GmbH & Co KG, [www.vhb-memmingen.de](http://www.vhb-memmingen.de)



**Object:** Dietel Bauelemente GmbH (D), [www.dietel.de](http://www.dietel.de); **Planner:** iproplan Chemnitz, [www.iproplan.de](http://www.iproplan.de); **Senior Architect:** Hans-Jürgen Keinert; **Rough construction:** BAS Scheibenberg, [www.bas-scheibenberg.de](http://www.bas-scheibenberg.de); **Facade:** Hörmannshofer Fassaden Niederdorf, [www.hoermannshofer.de](http://www.hoermannshofer.de); **Builder and wood-aluminum facade:** Dietel Bauelemente GmbH, [www.dietel.de](http://www.dietel.de)



**Object:** Office and commercial building „Sunyard“ in Munich (D); **Client:** Deka Immobilien Investment GmbH; **Planner/Architects:** Nickl & Partner Architekten AG, D-80939 Munich, [www.nickl-partner.com](http://www.nickl-partner.com); **Facade construction:** Lindner Fassaden GmbH, D-94424 Arnstorf, [www.lindner-group.com](http://www.lindner-group.com); **Year:** 2012



# RICON®

## Selected reference projects



**Object:** Kinderhaus Deizisau (D); **Architects:** Burkle und Hahnemann, [www.burkle-hahnemann.com](http://www.burkle-hahnemann.com); **Structural Engineer:** IP Weber Grauer Holl, [www.ipwgh.de](http://www.ipwgh.de); **Timber construction:** Holzbau Pfeiffer GmbH, [www.holzbau-pfeiffer.com](http://www.holzbau-pfeiffer.com); **Ceiling joinery:** Holzbau Amann GmbH, [www.holzbau-amann.de](http://www.holzbau-amann.de); **Ceiling / roof:** Lignotrend Produktions GmbH, [www.lignotrend.de](http://www.lignotrend.de);

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