



## Vinkelbeslag V12-V13-V14

### Angle connectors V12-V13-V14

### Winkelverbinder V12-V13-V14

#### DK

**Anvendelse:** Vinkelbeslagene V12-V13-V14 anvendes til samling af krydsende bjælker. Beslagene kan yderligere anvendes til montering på letbeton, beton og murværk.

**Beslagene:** Er udført i 3 mm varmforzinket stålplade forsynet med Ø5 mm huller for 4 mm NKT beslagkamsøm eller 5 mm NKT beslagskruer. Yderligere er beslagene forsynet med Ø14 mm huller for boltsamlinger. Beslagene er forsynet med kraftige ribbe for at øge beslagets styrkeegenskaber.

**Montering:** Anvendt som vist på fig. 1 fastgøres beslaget således:

Type V12: Lodret flig: 4-6 søm/skruer. Vandret flig: 1 bolt.

Type V13: Lodret flig: 6-8 søm/skruer. Vandret flig: 2 bolte.

Type V12: Lodret flig: 8-14 søm/skruer. Vandret flig: 3 bolte.

Anvend NKT beslagkamsøm 40/40 eller NKT beslagskruer 5,0 x 40 mm

Ved samlinger træ/træ anvendes SIMA kamsøm 40/60 i vandret flig og udsømmes fuldt mod bukkkant.

#### UK

**Application:** Angle connectors V12-V13-V14 are used for joining of cross beams. These connectors may also be used for fitting on light concrete, concrete, and brickwork.

**Connectors:** Made in 3 mm hot galvanized steel plate provided with diam. 5 mm holes for 4 mm NKT anchor nails or 5 mm NKT connector screws. Further these connectors are provided with 14 mm holes for bolt joints. The connectors are provided with a heavy rib for increasing the connector strength properties.

**Fitting:** Used as shown in fig. 1, this connector is fastened as follows:

Type V12: Vertical flange: 4-6 nails/screws. Horizontal flange: 1 bolt.

Type V13: Vertical flange: 6-8 nails/screws. Horizontal flange: 2 bolts.

Type V12: Vertical flange: 8-14 nails/screws. Horizontal flange: 3 bolts.

Use NKT anchor nails 40/40 or NKT connector screws 5.0 x 40 mm

For joints wood/wood, NKT anchor nails 40/60 are used in the horizontal flange and nailed fully against bending edge.

#### D

**Anwendung:** Winkelverbinder V12-V13-V14 sind für Verbindungen von kreuzenden Balken einzusetzen. Die Winkelverbinder können ausserdem für die Montage an Leichtbeton, Beton und Mauerwerk eingesetzt werden.

**Ausführung:** Die Winkelverbinder sind aus 3 mm feuerverzinkter Stahlplatte gefertigt und mit Ø5 mm Löchern für 4 mm NKT Ankernägel oder 5 mm NKT Beslagschrauben ausgerüstet. Ausserdem sind die Winkelverbinder mit Ø14 mm Löchern für Bolzenverbindungen versehen. Die Winkelverbinder sind mit einer kräftigen Rippe versehen, um die Festigkeitseigenschaften der Winkelverbinder zu erhöhen.

**Montage:** Wenn die Winkelverbinder wie an Figur 1 dargestellt, eingesetzt werden, sind sie folgendermassen zu befestigen:

Typ V12: Senkrechter Schenkel: 4-6 Nägel/Schrauben. Waagerechter Schenkel: 1 Bolzen.

Typ V13: Senkrechter Schenkel: 6-8 Nägel/Schrauben. Waagerechter Schenkel: 2 Bolzen.

Typ V12: Senkrechter Schenkel: 8-14 Nägel/Schrauben. Waagerechter Schenkel: 3 Bolzen.

Einzusetzen sind NKT Ankernägel 40/40 oder NKT Beslagschrauben 5,0 x 40 mm

Bei Verbindungen Holz/Holz sind NKT Ankernägel 40/60 in den waagerechten Schenkel einzusetzen und voll bis zur Biegekante auszunageln.

SIMA art. no.	Type	Dimension				Ø mm		Weight gram	Pcs. Box / Pallet
		H	L	t	B	Ø5 mm	Ø14 mm		
210783	V12	94	50	3	50	12	3	150	50 / 3200 CE
211060	V13	91	52	3	76	16	5	210	100 / 4800 CE
211061	V14	91	52	3	116	27	6	340	50 / 2400 CE





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**Angle connectors V12-V13-V14**  
**Winkelverbinder V12-V13-V14**

Fig. 1

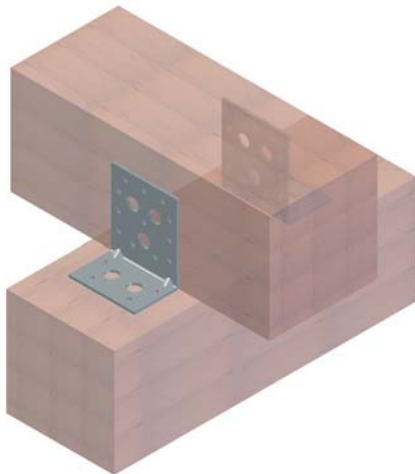
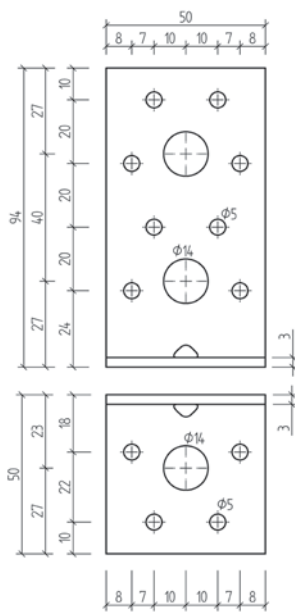
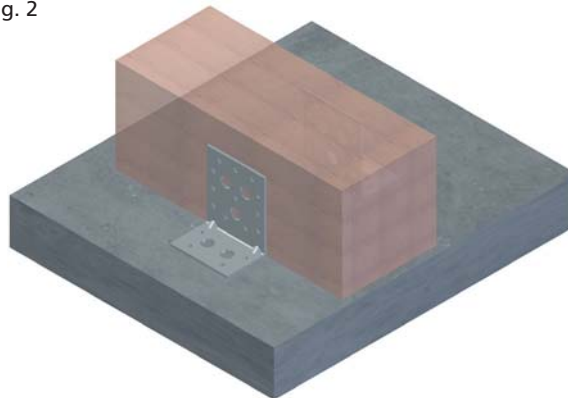
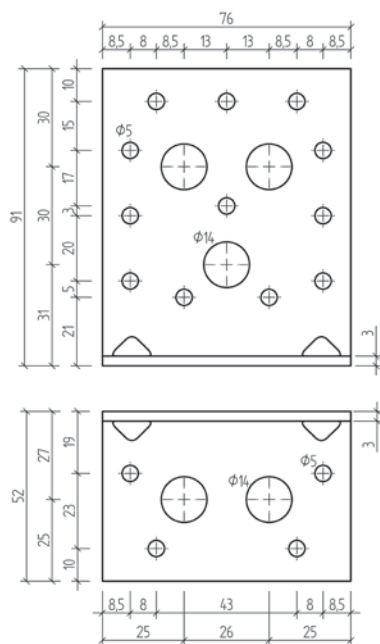


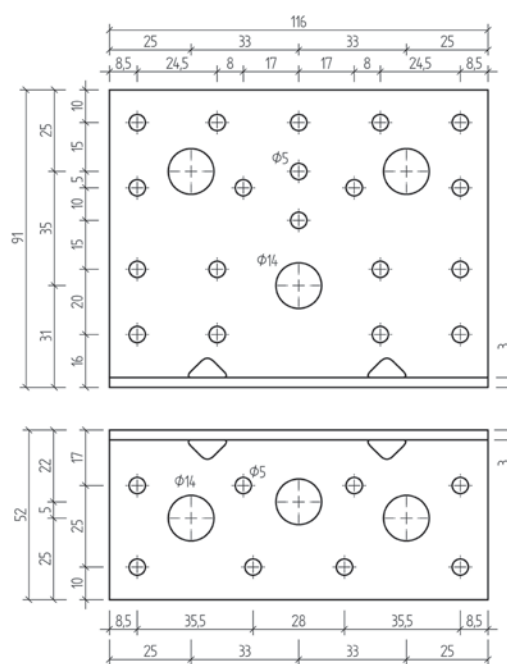
Fig. 2



V12



V13



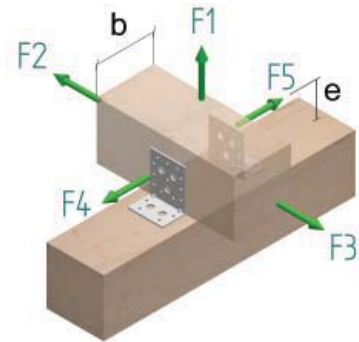
V14

# Angle connector V12

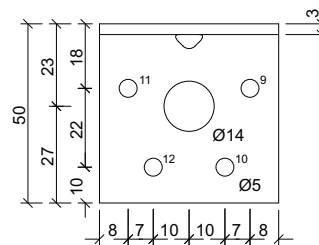
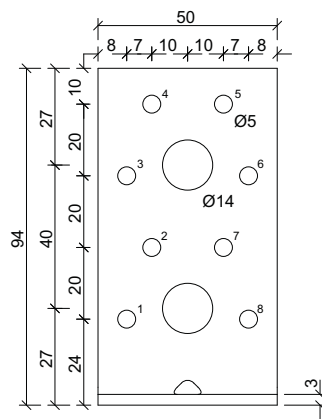
Art. no.	Type	Dimension H x L x t x B [mm]	Hole Ø5 [pcs]	Hole Ø14 [pcs]	Weight [g]	Box [pcs]
210783	V12	94 x 50 x 3,0 x 50	12	3	146	50

Information referring to the product, its applications and fitting: See section 2

Calculative carrying capacity in kN per connection:  
Normal safety class – service class 1 and 2



b and e should be inserted in mm



Anchor nail 4,0 x 40	Number of nails	Load-duration class	$F_{1d}$ [kN]	$F_{2d} = F_{3d}$ [kN]	$F_{4d} = F_{5d}$ [kN]	Maximum [kN]
2,3,4,5,6,7 / 9,10,11,12	20	Char.	3,15	6,04	$1,08 * ((1,46*(21+b))/e)$ or $1,08 * ((10,69*(3+b))/e)$	3,84
		P-load	1,40	2,69	$0,48 * ((1,46*(21+b))/e)$ or $0,48 * ((10,69*(3+b))/e)$	1,71
		L-load	1,64	3,14	$0,56 * ((1,46*(21+b))/e)$ or $0,56 * ((10,69*(3+b))/e)$	1,99
		M-load	1,87	3,58	$0,64 * ((1,46*(21+b))/e)$ or $0,64 * ((10,69*(3+b))/e)$	2,28
		S-load	2,10	4,03	$0,72 * ((1,46*(21+b))/e)$ or $0,72 * ((10,69*(3+b))/e)$	2,56
		I-load	2,57	4,93	$0,88 * ((1,46*(21+b))/e)$ or $0,88 * ((10,69*(3+b))/e)$	3,13

# Angle connector V12



## 2 per connection

(Wood-Concrete)

Anchor nail 4,0 x 40 / Bolts M12	Number of nails	Load-duration class	F1 <sub>d</sub> [kN]	F2 <sub>d</sub> = F3 <sub>d</sub> [kN]	F4 <sub>d</sub> = F5 <sub>d</sub> [kN]
1,2,3,4,5,6,7,8 / 1 M12	16	Char.	3,72	6,54	16,26
		P-load	3,38	2,91	7,71
		L-load	3,38	3,39	9,00
		M-load	3,38	3,88	10,29
		S-load	3,38	4,36	11,57
		I-load	3,38	5,33	12,05

## 1 per connection

(Wood-Concrete)

Anchor nail 4,0 x 40 / Bolts M12	Number of nails	Load-duration class	F1 <sub>d</sub> [kN]	F2 <sub>d</sub> = F3 <sub>d</sub> [kN]	F4 <sub>d</sub> = F5 <sub>d</sub> [kN]	Maximum [kN]
1,2,3,4,5,6,7,8 / 1 M12	8	Char.	1,86	3,27	28,1 kNmm/e	16,26
		P-load	1,69	1,45	25,6 kNmm/e	7,71
		L-load	1,69	1,70	25,6 kNmm/e	9,00
		M-load	1,69	1,94	25,6 kNmm/e	10,29
		S-load	1,69	2,18	25,6 kNmm/e	11,57
		I-load	1,69	2,66	25,6 kNmm/e	12,05

## 1 per connection

(Wood-wood)

Anchor nail 4,0 x 40	Number of nails	Load-duration class	F1 <sub>d</sub> [kN]	F2 <sub>d</sub> = F3 <sub>d</sub> [kN]	F4 <sub>d</sub> = F5 <sub>d</sub> [kN]	Maximum [kN]
1,2,3,4,5,6,7,8 / 9,10,11,12	8	Char.	1,46	2,80	28,1 kNmm/e	3,56
		P-load	0,65	1,24	25,6 kNmm/e	1,58
		L-load	0,76	1,45	25,6 kNmm/e	1,85
		M-load	0,86	1,66	25,6 kNmm/e	2,11
		S-load	0,97	1,87	25,6 kNmm/e	2,38
		I-load	1,19	2,28	25,6 kNmm/e	2,90