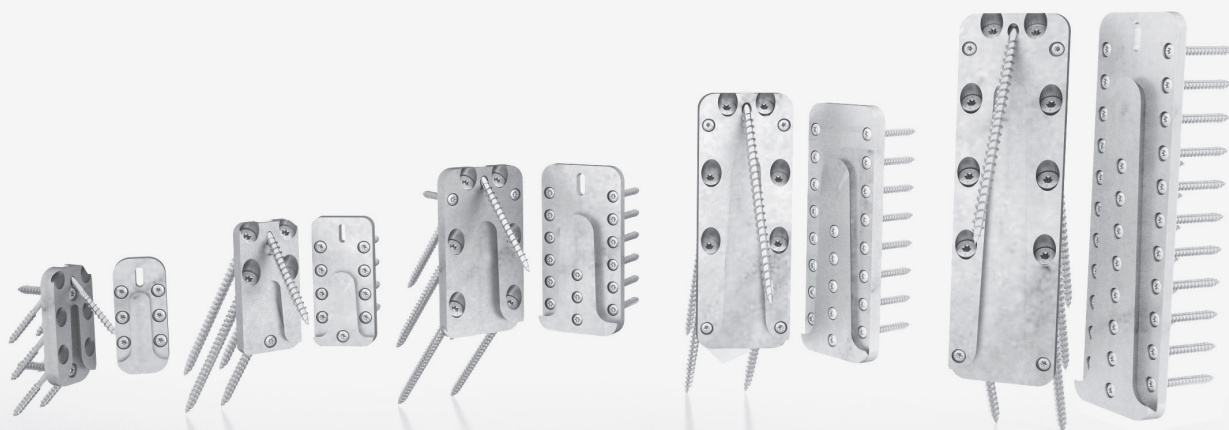


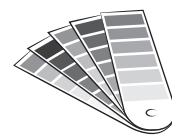
## Concealed hook connector TIMBER - TIMBER

Aluminum three dimensional perforated plate



### COMPLETE RANGE

Available in 5 versions, to work with the secondary beam and load applied.  
Resistance over 60 kN



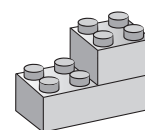
### FIELD OF USE

Timber to timber shear joints and application requiring strength in all directions

- Solid timber
- glulam (Glued Laminated Timber)
- XLAM (Cross Laminated Timber)
- LVL (Laminated Veneer Lumber)

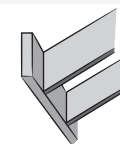
### CAN BE DISASSEMBLED

The hook system makes for quick installation and can easily be removed. Ideal for use in temporary structures



### SLENDER STRUCTURES

The UVT3070 version is ideal for joining secondary beams of smaller width, starting from a base of 45 mm



### WIND AND EARTHQUAKE

Certified resistance in all load directions, for secure fastening even in the presence of lateral, axial and lifting forces





## INSTALLATION

Completely concealed, meets fire resistance requirements. Installed without cutting, it creates a vent that is also an attractive architectural detail

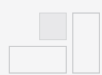
## ALL DIRECTIONS

The inclined screws inserted in the secondary beam guarantee resistance in all directions: vertical, horizontal and axial. The joint is secure even in the case of wind and earthquake forces

## QUICK ASSEMBLY

Installation is intuitive, easy and fast. The locking screw impedes unthreading, guaranteeing resistance even in the direction opposite to insertion

## APPLICATIONS

 Secondary beam joint  
45 mm x 100 mm with UVT3070

 Creation of a temporary pergola

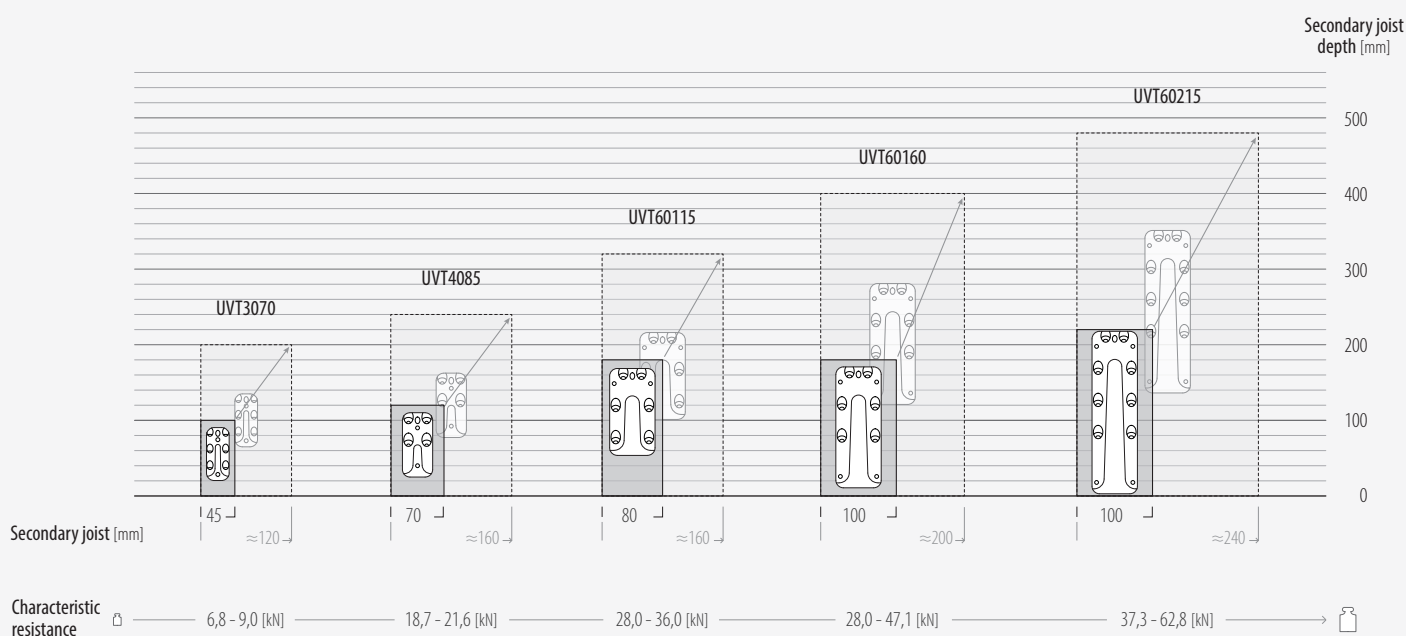
 Large structure joints with  
UVT60215



## RANGE

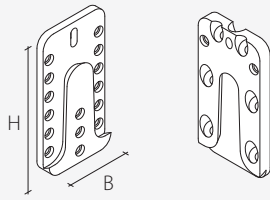
The range of UV-T concealed connectors for wood-wood joints consists of 5 items, to be selected based on the load acting on the joint and the dimensions of the secondary beam. Every connector offers different resistance, based on the length of the screws used.

The smallest connector can be used for beams with minimum dimensions of 45 mm x 100 mm. The largest connector offers characteristic resistance exceeding 60 kN.



# CODES AND DIMENSIONS

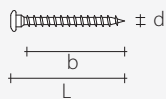
## UV-T



| code            | B [mm] | H [mm] | s [mm] | Ø <sub>90°</sub> [mm] | Ø <sub>45°</sub> [mm] | pcs/box |
|-----------------|--------|--------|--------|-----------------------|-----------------------|---------|
| <b>UVT3070</b>  | 30     | 70     | 16     | 5                     | 4                     | 25      |
| <b>UVT4085</b>  | 40     | 85     | 16     | 5                     | 6                     | 25      |
| <b>UVT60115</b> | 60     | 115    | 16     | 5                     | 6                     | 25      |
| <b>UVT60160</b> | 60     | 160    | 16     | 5                     | 6                     | 10      |
| <b>UVT60215</b> | 60     | 215    | 16     | 5                     | 6                     | 10      |

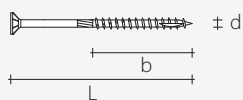
Screws not included in the box

## LBS: 90° SCREWS



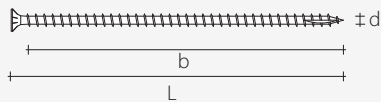
| code            | d [mm] | L [mm] | b [mm] | TX   | pcs/box |
|-----------------|--------|--------|--------|------|---------|
| <b>PF603550</b> | 5      | 50     | 46     | TX20 | 200     |
| <b>PF603560</b> | 5      | 60     | 56     | TX20 | 200     |
| <b>PF603570</b> | 5      | 70     | 66     | TX20 | 200     |

## HBS: 45° SCREWS for UVT3070



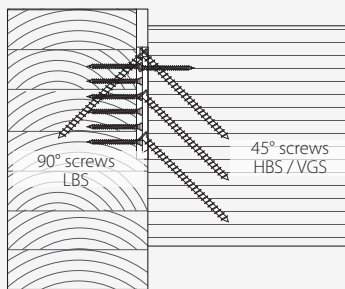
| code          | d [mm] | L [mm] | b [mm] | TX   | pcs/box |
|---------------|--------|--------|--------|------|---------|
| <b>HBS450</b> | 4      | 50     | 30     | TX20 | 200     |
| <b>HBS470</b> | 4      | 70     | 40     | TX20 | 200     |

## VGS: 45° SCREWS for UVT4085 / UVT60115 / UVT60160 / UVT60215



| code           | d [mm] | L [mm] | b [mm] | TX   | pcs/box |
|----------------|--------|--------|--------|------|---------|
| <b>VGS6100</b> | 6      | 100    | 88     | TX30 | 100     |
| <b>VGS6160</b> | 6      | 160    | 148    | TX30 | 100     |

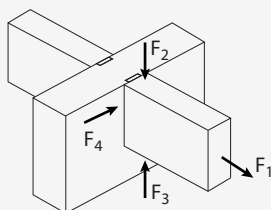
## FASTENERS



### MAXIMUM NUMBER OF FASTENERS PER INDIVIDUAL CONNECTOR (total nailing)

| code            | n 90° [pcs - Ø] | n 45° [pcs - Ø] |
|-----------------|-----------------|-----------------|
| <b>UVT3070</b>  | 8 - LBS Ø5      | 6 (+1) - HBS Ø4 |
| <b>UVT4085</b>  | 11 - LBS Ø5     | 4 (+1) - VGS Ø6 |
| <b>UVT60115</b> | 17 - LBS Ø5     | 6 (+1) - VGS Ø6 |
| <b>UVT60160</b> | 25 - LBS Ø5     | 6 (+1) - VGS Ø6 |
| <b>UVT60215</b> | 34 - LBS Ø5     | 8 (+1) - VGS Ø6 |

## EXTERNAL LOADS



## MATERIAL AND DURABILITY

UV: aluminum alloy.

To be used in Service class 1 and 2 (EN 1995:2008)

## FIELD OF USE

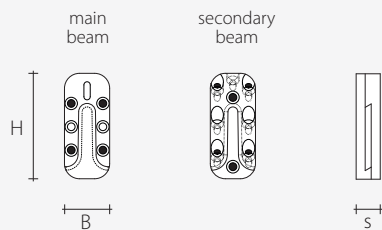
Timber to timber joints

Secondary beam on main beam or column



# UVT3070

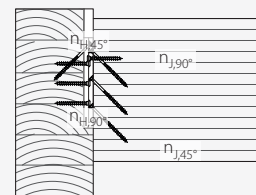
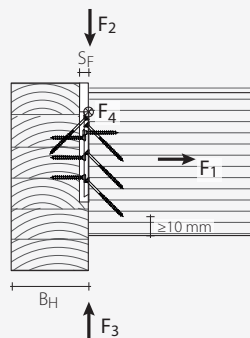
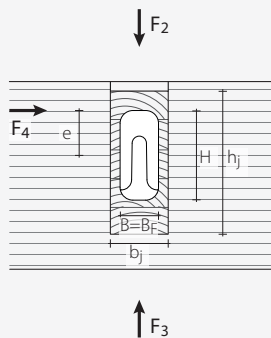
## MINIMUM DIMENSIONS, WOOD ELEMENTS



| UV CONNECTOR |                   | 45° SCREWS    | MAIN BEAM                  |                                                     | SECONDARY BEAM <sup>(1)</sup> |                            |
|--------------|-------------------|---------------|----------------------------|-----------------------------------------------------|-------------------------------|----------------------------|
| type         | B x H x s<br>[mm] | Ø x L<br>[mm] | B <sub>H,MIN</sub><br>[mm] | GROOVING<br>B <sub>F</sub> [mm] S <sub>F</sub> [mm] | b <sub>J,MIN</sub><br>[mm]    | h <sub>J,MIN</sub><br>[mm] |
| UVT3070      | 30 x 70 x 16      | HBS Ø4 x 50   | 45                         | 30 16                                               | 45                            | 100                        |
|              |                   | HBS Ø4 x 70   | 60                         |                                                     | 45                            | 115                        |

## FASTENERS

|         |                        | MAIN BEAM                       |                                                | SECONDARY BEAM                  |                                 |
|---------|------------------------|---------------------------------|------------------------------------------------|---------------------------------|---------------------------------|
| type    | nailing                | n <sub>H,90°</sub><br>[pcs - Ø] | n <sub>H,45°</sub> <sup>(3)</sup><br>[pcs - Ø] | n <sub>J,90°</sub><br>[pcs - Ø] | n <sub>J,45°</sub><br>[pcs - Ø] |
| UVT3070 | total                  | 6 - LBS Ø5                      | 1 - HBS Ø4                                     | 2 - LBS Ø5                      | 6 - HBS Ø4                      |
|         | partial <sup>(2)</sup> | 4 - LBS Ø5                      | 1 - HBS Ø4                                     | 2 - LBS Ø5                      | 4 - HBS Ø4                      |



## STATIC CHARACTERISTIC VALUES - TIMBER TO TIMBER JOINT

| UVT3070    |             |                   | TOTAL NAILING ● + ○ |                     | PARTIAL NAILING ●   |                     |
|------------|-------------|-------------------|---------------------|---------------------|---------------------|---------------------|
|            |             |                   | 45° SCREWS          |                     | 45° SCREWS          |                     |
|            |             |                   | HBS Ø4 x 50<br>[kN] | HBS Ø4 x 70<br>[kN] | HBS Ø4 x 50<br>[kN] | HBS Ø4 x 70<br>[kN] |
| 90° SCREWS | LBS Ø5 x 50 | R <sub>1,Rk</sub> | 1,45                | 1,45                | 1,45                | 1,45                |
|            |             | R <sub>2,Rk</sub> | 6,77                | 9,03                | 4,51                | 6,02                |
|            |             | R <sub>3,Rk</sub> | 1,13                | 1,50                | 1,13                | 1,50                |
|            |             | R <sub>4,Rk</sub> | 1,72                | 1,81                | 1,49                | 1,57                |
|            | LBS Ø5 x 60 | R <sub>1,Rk</sub> | 1,76                | 1,76                | 1,76                | 1,76                |
|            |             | R <sub>2,Rk</sub> | 6,77                | 9,03                | 4,51                | 6,02                |
|            |             | R <sub>3,Rk</sub> | 1,13                | 1,50                | 1,13                | 1,50                |
|            |             | R <sub>4,Rk</sub> | 1,72                | 1,81                | 1,49                | 1,57                |
|            | LBS Ø5 x 70 | R <sub>1,Rk</sub> | 2,08                | 2,08                | 2,08                | 2,08                |
|            |             | R <sub>2,Rk</sub> | 6,77                | 9,03                | 4,51                | 6,02                |
|            |             | R <sub>3,Rk</sub> | 1,13                | 1,50                | 1,13                | 1,50                |
|            |             | R <sub>4,Rk</sub> | 1,72                | 1,81                | 1,49                | 1,57                |

## NOTES

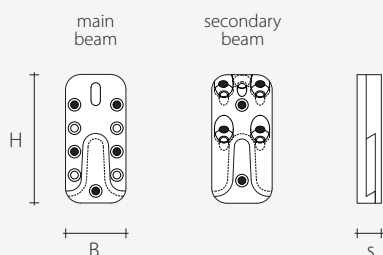
<sup>(1)</sup> The minimum dimensions of the wood elements vary based on changes in the direction of the load and must be verified on a case by case basis. The table shows minimum dimensions to guide the designer when selecting the connector. Dimensioning and verification of the timber elements must be carried out separately.

<sup>(2)</sup> Partial nailing must be performed in accordance with the assembly instructions shown in the figure and in compliance with ETA.

<sup>(3)</sup> In the case of F<sub>2</sub> or F<sub>3</sub> loads, the use of a supplementary inclined screw in the main beam is required, to be inserted after the connector is applied.

# UVT4085

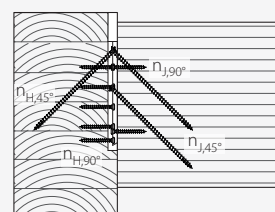
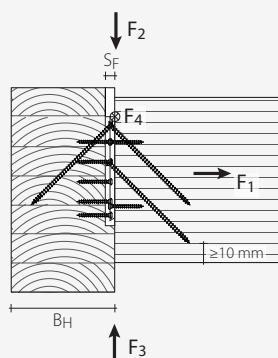
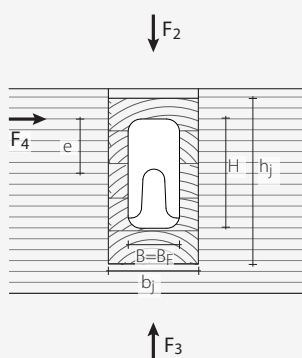
## MINIMUM DIMENSIONS, WOOD ELEMENTS



| UV CONNECTOR |                   | 45° SCREWS    | MAIN BEAM                  |                                                     | SECONDARY BEAM <sup>(1)</sup> |                            |
|--------------|-------------------|---------------|----------------------------|-----------------------------------------------------|-------------------------------|----------------------------|
| type         | B x H x s<br>[mm] | Ø x L<br>[mm] | B <sub>H,MIN</sub><br>[mm] | GROOVING<br>B <sub>F</sub> [mm] S <sub>F</sub> [mm] | b <sub>J,MIN</sub><br>[mm]    | h <sub>J,MIN</sub><br>[mm] |
| UVT4085      | 40 x 85 x 16      | VGS Ø6 x 100  | 80                         | 40 16                                               | 70                            | 120                        |
|              |                   | VGS Ø6 x 160  | 120                        |                                                     | 70                            | 160                        |

## FASTENERS

|         |                        |       | MAIN BEAM                       |                                       | SECONDARY BEAM                  |                                 |
|---------|------------------------|-------|---------------------------------|---------------------------------------|---------------------------------|---------------------------------|
| type    | nailing                |       | $n_{H,90^{\circ}}$<br>[pcs - Ø] | $n_{H,45^{\circ}}^{(3)}$<br>[pcs - Ø] | $n_{J,90^{\circ}}$<br>[pcs - Ø] | $n_{J,45^{\circ}}$<br>[pcs - Ø] |
| UVT4085 | total                  | ● + ○ | 9 - LBS Ø5                      | 1 - VGS Ø6                            | 2 - LBS Ø5                      | 4 - VGS Ø6                      |
|         | partial <sup>(2)</sup> | ●     | 5 - LBS Ø5                      | 1 - VGS Ø6                            | 2 - LBS Ø5                      | 4 - VGS Ø6                      |



## STATIC CHARACTERISTIC VALUES - TIMBER TO TIMBER JOINT

| UVT4085    |             |                   | TOTAL NAILING ● + ○  |                      | PARTIAL NAILING ●    |                      |
|------------|-------------|-------------------|----------------------|----------------------|----------------------|----------------------|
|            |             |                   | 45° SCREWS           |                      | 45° SCREWS           |                      |
|            |             |                   | VGS Ø6 x 100<br>[kN] | VGS Ø6 x 160<br>[kN] | VGS Ø6 x 100<br>[kN] | VGS Ø6 x 160<br>[kN] |
| 90° SCREWS | LBS Ø5 x 50 | R <sub>1,Rk</sub> | 1,45                 | 1,45                 | 1,45                 | 1,45                 |
|            |             | R <sub>2,Rk</sub> | 18,67                | 19,22                | 10,68                | 10,68                |
|            |             | R <sub>3,Rk</sub> | 4,67                 | 7,85                 | 4,67                 | 7,85                 |
|            |             | R <sub>4,Rk</sub> | 1,50                 | 1,50                 | 1,50                 | 1,50                 |
|            | LBS Ø5 x 60 | R <sub>1,Rk</sub> | 1,76                 | 1,76                 | 1,76                 | 1,76                 |
|            |             | R <sub>2,Rk</sub> | 18,67                | 20,40                | 11,33                | 11,33                |
|            |             | R <sub>3,Rk</sub> | 4,67                 | 7,85                 | 4,67                 | 7,85                 |
|            |             | R <sub>4,Rk</sub> | 1,57                 | 1,57                 | 1,57                 | 1,57                 |
|            | LBS Ø5 x 70 | R <sub>1,Rk</sub> | 2,08                 | 2,08                 | 2,08                 | 2,08                 |
|            |             | R <sub>2,Rk</sub> | 18,67                | 21,58                | 11,99                | 11,99                |
|            |             | R <sub>3,Rk</sub> | 4,67                 | 7,85                 | 4,67                 | 7,85                 |
|            |             | R <sub>4,Rk</sub> | 1,64                 | 1,64                 | 1,64                 | 1,57                 |

## NOTES

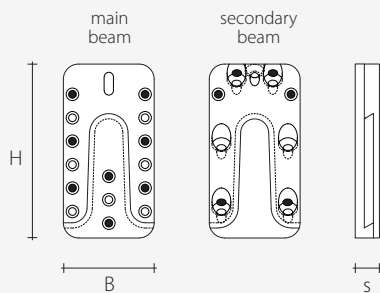
<sup>(1)</sup> The minimum dimensions of the wood elements vary based on changes in the direction of the load and must be verified on a case by case basis. The table shows minimum dimensions to guide the designer when selecting the connector. Dimensioning and verification of the timber elements must be carried out separately.

<sup>(2)</sup> Partial nailing must be performed in accordance with the assembly instructions shown in the figure and in compliance with ETA.

<sup>(3)</sup> In the case of F<sub>2</sub> or F<sub>3</sub> loads, the use of a supplementary inclined screw in the main beam is required, to be inserted after the connector is applied.

# UVT60115

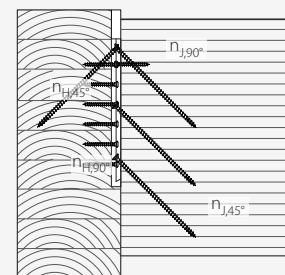
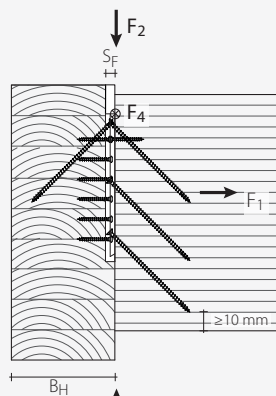
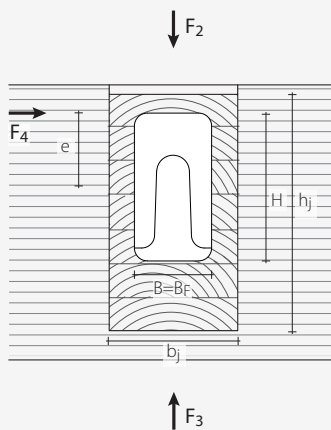
## MINIMUM DIMENSIONS, WOOD ELEMENTS



| UV CONNECTOR |                   | 45° SCREWS    | MAIN BEAM                  |                                                     | SECONDARY BEAM <sup>(1)</sup> |                            |
|--------------|-------------------|---------------|----------------------------|-----------------------------------------------------|-------------------------------|----------------------------|
| type         | B x H x s<br>[mm] | Ø x L<br>[mm] | B <sub>H,MIN</sub><br>[mm] | GROOVING<br>B <sub>F</sub> [mm] S <sub>F</sub> [mm] | b <sub>J,MIN</sub><br>[mm]    | h <sub>J,MIN</sub><br>[mm] |
| UVT60115     | 60 x 115 x 16     | VGS Ø6 x 100  | 80                         | 60 16                                               | 80                            | 180                        |
|              |                   | VGS Ø6 x 160  | 120                        |                                                     | 80                            | 220                        |

## FASTENERS

|          |                        | MAIN BEAM                       |                                                | SECONDARY BEAM                  |                                 |
|----------|------------------------|---------------------------------|------------------------------------------------|---------------------------------|---------------------------------|
| type     | nailing                | n <sub>H,90°</sub><br>[pcs - Ø] | n <sub>H,45°</sub> <sup>(3)</sup><br>[pcs - Ø] | n <sub>J,90°</sub><br>[pcs - Ø] | n <sub>J,45°</sub><br>[pcs - Ø] |
| UVT60115 | total                  | 15 - LBS Ø5                     | 1 - VGS Ø6                                     | 2 - LBS Ø5                      | 6 - VGS Ø6                      |
|          | partial <sup>(2)</sup> | 8 - LBS Ø5                      | 1 - VGS Ø6                                     | 2 - LBS Ø5                      | 4 - VGS Ø6                      |



## STATIC CHARACTERISTIC VALUES - TIMBER TO TIMBER JOINT

| UVT60115   |             |                   | TOTAL NAILING ● + ○  |                      | PARTIAL NAILING ●    |                      |
|------------|-------------|-------------------|----------------------|----------------------|----------------------|----------------------|
|            |             |                   | 45° SCREWS           |                      | 45° SCREWS           |                      |
|            |             |                   | VGS Ø6 x 100<br>[kN] | VGS Ø6 x 160<br>[kN] | VGS Ø6 x 100<br>[kN] | VGS Ø6 x 160<br>[kN] |
| 90° SCREWS | LBS Ø5 x 50 | R <sub>1,Rk</sub> | 1,45                 | 1,45                 | 1,45                 | 1,45                 |
|            |             | R <sub>2,Rk</sub> | 28,00                | 32,03                | 17,08                | 17,08                |
|            |             | R <sub>3,Rk</sub> | 4,67                 | 7,85                 | 4,67                 | 7,85                 |
|            |             | R <sub>4,Rk</sub> | 2,59                 | 2,59                 | 2,18                 | 2,18                 |
|            | LBS Ø5 x 60 | R <sub>1,Rk</sub> | 1,76                 | 1,76                 | 1,76                 | 1,76                 |
|            |             | R <sub>2,Rk</sub> | 28,00                | 34,00                | 18,13                | 18,13                |
|            |             | R <sub>3,Rk</sub> | 4,67                 | 7,85                 | 4,67                 | 7,85                 |
|            |             | R <sub>4,Rk</sub> | 2,70                 | 2,70                 | 2,28                 | 2,28                 |
|            | LBS Ø5 x 70 | R <sub>1,Rk</sub> | 2,08                 | 2,08                 | 2,08                 | 2,08                 |
|            |             | R <sub>2,Rk</sub> | 28,00                | 35,97                | 18,67                | 19,18                |
|            |             | R <sub>3,Rk</sub> | 4,67                 | 7,85                 | 4,67                 | 7,85                 |
|            |             | R <sub>4,Rk</sub> | 2,82                 | 2,82                 | 2,38                 | 2,38                 |

## NOTES

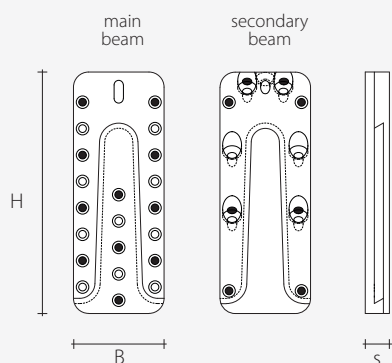
<sup>(1)</sup> The minimum dimensions of the wood elements vary based on changes in the direction of the load and must be verified on a case by case basis. The table shows minimum dimensions to guide the designer when selecting the connector. Dimensioning and verification of the timber elements must be carried out separately.

<sup>(2)</sup> Partial nailing must be performed in accordance with the assembly instructions shown in the figure and in compliance with ETA.

<sup>(3)</sup> In the case of F<sub>2</sub> or F<sub>3</sub> loads, the use of a supplementary inclined screw in the main beam is required, to be inserted after the connector is applied.

# UVT60160

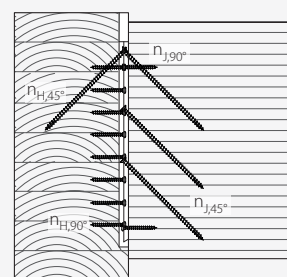
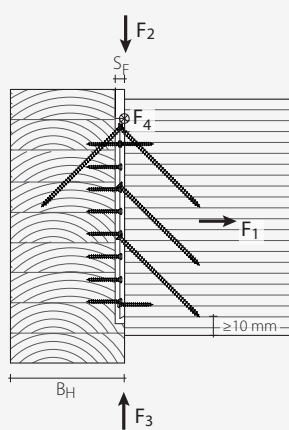
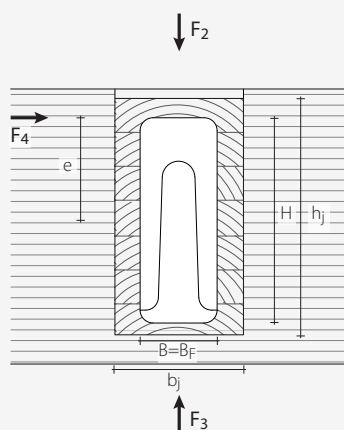
## MINIMUM DIMENSIONS, WOOD ELEMENTS



| UV CONNECTOR |                   | 45° SCREWS    | MAIN BEAM                  |                                                     | SECONDARY BEAM <sup>(1)</sup> |                            |
|--------------|-------------------|---------------|----------------------------|-----------------------------------------------------|-------------------------------|----------------------------|
| type         | B x H x s<br>[mm] | Ø x L<br>[mm] | B <sub>H,MIN</sub><br>[mm] | GROOVING<br>B <sub>F</sub> [mm] S <sub>F</sub> [mm] | b <sub>J,MIN</sub><br>[mm]    | h <sub>J,MIN</sub><br>[mm] |
| UVT60160     | 60 x 160 x 16     | VGS Ø6 x 100  | 80                         | 60 16                                               | 100                           | 180                        |
|              |                   | VGS Ø6 x 160  | 120                        |                                                     | 100                           | 220                        |

## FASTENERS

|          |                        | MAIN BEAM                       |                                                | SECONDARY BEAM                  |                                 |
|----------|------------------------|---------------------------------|------------------------------------------------|---------------------------------|---------------------------------|
| type     | nailing                | n <sub>H,90°</sub><br>[pcs - Ø] | n <sub>H,45°</sub> <sup>(3)</sup><br>[pcs - Ø] | n <sub>J,90°</sub><br>[pcs - Ø] | n <sub>J,45°</sub><br>[pcs - Ø] |
| UVT60160 | total                  | 21 - LBS Ø5                     | 1 - VGS Ø6                                     | 4 - LBS Ø5                      | 6 - VGS Ø6                      |
|          | partial <sup>(2)</sup> | 11 - LBS Ø5                     | 1 - VGS Ø6                                     | 4 - LBS Ø5                      | 4 - VGS Ø6                      |



## STATIC CHARACTERISTIC VALUES - TIMBER TO TIMBER JOINT

| UVT60160   |             |                   | TOTAL NAILING        |                      | PARTIAL NAILING      |                      |
|------------|-------------|-------------------|----------------------|----------------------|----------------------|----------------------|
|            |             |                   | 45° SCREWS           |                      | 45° SCREWS           |                      |
| 90° SCREWS | LBS Ø5 x 50 | R <sub>1,Rk</sub> | VGS Ø6 x 100<br>[kN] | VGS Ø6 x 160<br>[kN] | VGS Ø6 x 100<br>[kN] | VGS Ø6 x 160<br>[kN] |
|            |             | R <sub>2,Rk</sub> | 2,90                 | 2,90                 | 2,90                 | 2,90                 |
|            |             | R <sub>3,Rk</sub> | 28,00                | 44,85                | 18,67                | 23,49                |
|            |             | R <sub>4,Rk</sub> | 4,67                 | 7,85                 | 4,67                 | 7,85                 |
|            | LBS Ø5 x 60 | R <sub>1,Rk</sub> | 3,53                 | 3,53                 | 3,53                 | 3,53                 |
|            |             | R <sub>2,Rk</sub> | 28,00                | 47,09                | 18,67                | 24,93                |
|            |             | R <sub>3,Rk</sub> | 4,67                 | 7,85                 | 4,67                 | 7,85                 |
|            |             | R <sub>4,Rk</sub> | 3,15                 | 3,15                 | 2,83                 | 2,83                 |
|            | LBS Ø5 x 70 | R <sub>1,Rk</sub> | 4,16                 | 4,16                 | 4,16                 | 4,16                 |
|            |             | R <sub>2,Rk</sub> | 28,00                | 47,09                | 18,67                | 26,38                |
|            |             | R <sub>3,Rk</sub> | 4,67                 | 7,85                 | 4,67                 | 7,85                 |
|            |             | R <sub>4,Rk</sub> | 3,28                 | 3,28                 | 2,95                 | 2,95                 |

## NOTES

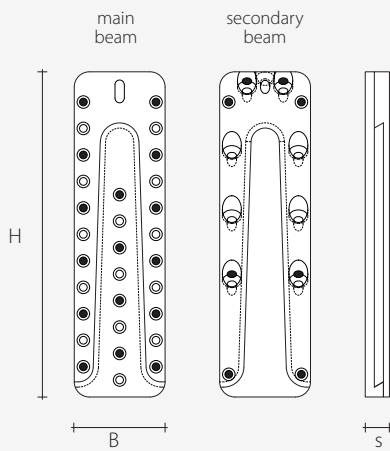
<sup>(1)</sup> The minimum dimensions of the wood elements vary based on changes in the direction of the load and must be verified on a case by case basis. The table shows minimum dimensions to guide the designer when selecting the connector. Dimensioning and verification of the timber elements must be carried out separately.

<sup>(2)</sup> Partial nailing must be performed in accordance with the assembly instructions shown in the figure and in compliance with ETA.

<sup>(3)</sup> In the case of F<sub>2</sub> or F<sub>3</sub> loads, the use of a supplementary inclined screw in the main beam is required, to be inserted after the connector is applied.

# UVT60215

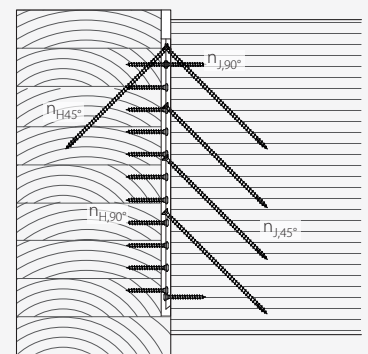
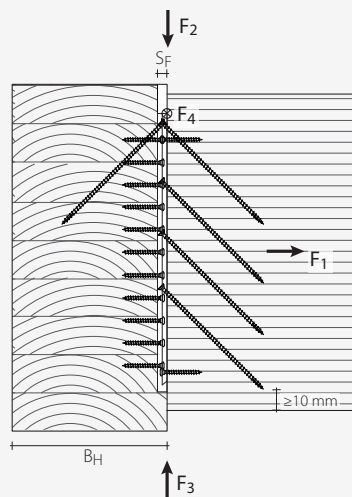
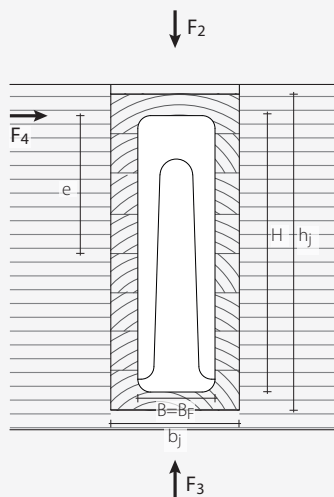
## MINIMUM DIMENSIONS, WOOD ELEMENTS



| UV CONNECTOR |                   | 45° SCREWS    | MAIN BEAM                  |                                                     | SECONDARY BEAM <sup>(1)</sup> |                            |
|--------------|-------------------|---------------|----------------------------|-----------------------------------------------------|-------------------------------|----------------------------|
| type         | B x H x s<br>[mm] | Ø x L<br>[mm] | B <sub>H,MIN</sub><br>[mm] | GROOVING<br>B <sub>F</sub> [mm] S <sub>F</sub> [mm] | b <sub>J,MIN</sub><br>[mm]    | h <sub>J,MIN</sub><br>[mm] |
| UVT60215     | 60 x 215 x 16     | VGS Ø6 x 100  | 80                         | 60 16                                               | 100                           | 220                        |
|              |                   | VGS Ø6 x 160  | 120                        |                                                     | 100                           | 260                        |

### FASTENERS

|          |                        | MAIN BEAM                       |                                                | SECONDARY BEAM                  |                                 |
|----------|------------------------|---------------------------------|------------------------------------------------|---------------------------------|---------------------------------|
| type     | nailing                | n <sub>H,90°</sub><br>[pcs - Ø] | n <sub>H,45°</sub> <sup>(3)</sup><br>[pcs - Ø] | n <sub>J,90°</sub><br>[pcs - Ø] | n <sub>J,45°</sub><br>[pcs - Ø] |
| UVT60215 | total                  | 30 - LBS Ø5                     | 1 - VGS Ø6                                     | 4 - LBS Ø5                      | 8 - VGS Ø6                      |
|          | partial <sup>(2)</sup> | 16 - LBS Ø5                     | 1 - VGS Ø6                                     | 4 - LBS Ø5                      | 4 - VGS Ø6                      |



## STATIC CHARACTERISTIC VALUES - TIMBER TO TIMBER JOINT

| UVT60215   |             |                   | TOTAL NAILING ● + ○  |                      | PARTIAL NAILING ●    |                      |
|------------|-------------|-------------------|----------------------|----------------------|----------------------|----------------------|
|            |             |                   | 45° SCREWS           |                      | 45° SCREWS           |                      |
|            |             |                   | VGS Ø6 x 100<br>[kN] | VGS Ø6 x 160<br>[kN] | VGS Ø6 x 100<br>[kN] | VGS Ø6 x 160<br>[kN] |
| 90° SCREWS | LBS Ø5 x 50 | R <sub>1,Rk</sub> | 2,90                 | 2,90                 | 2,90                 | 2,90                 |
|            |             | R <sub>2,Rk</sub> | 37,34                | 62,79                | 18,67                | 31,40                |
|            |             | R <sub>3,Rk</sub> | 4,67                 | 7,85                 | 4,67                 | 7,85                 |
|            |             | R <sub>4,Rk</sub> | 3,37                 | 3,37                 | 2,78                 | 2,78                 |
|            | LBS Ø5 x 60 | R <sub>1,Rk</sub> | 3,53                 | 3,53                 | 3,53                 | 3,53                 |
|            |             | R <sub>2,Rk</sub> | 37,34                | 62,79                | 18,67                | 31,40                |
|            |             | R <sub>3,Rk</sub> | 4,67                 | 7,85                 | 4,67                 | 7,85                 |
|            |             | R <sub>4,Rk</sub> | 3,53                 | 3,53                 | 2,90                 | 2,90                 |
|            | LBS Ø5 x 70 | R <sub>1,Rk</sub> | 4,16                 | 4,16                 | 4,16                 | 4,16                 |
|            |             | R <sub>2,Rk</sub> | 37,34                | 62,79                | 18,67                | 31,40                |
|            |             | R <sub>3,Rk</sub> | 4,67                 | 7,85                 | 4,67                 | 7,85                 |
|            |             | R <sub>4,Rk</sub> | 3,68                 | 3,68                 | 3,03                 | 3,03                 |

## NOTES

<sup>(1)</sup> The minimum dimensions of the wood elements vary based on changes in the direction of the load and must be verified on a case by case basis. The table shows minimum dimensions to guide the designer when selecting the connector. Dimensioning and verification of the timber elements must be carried out separately.

<sup>(2)</sup> Partial nailing must be performed in accordance with the assembly instructions shown in the figure and in compliance with ETA.

<sup>(3)</sup> In the case of  $F_2$  or  $F_3$  loads, the use of a supplementary inclined screw in the main beam is required, to be inserted after the connector is applied.

## GENERAL PRINCIPLES

- Characteristic values comply with the EN 1995:2008 standard in accordance with product ETA.
- Design values can be obtained from characteristic values as follows:

$$R_d = \frac{R_k \cdot k_{mod}}{\gamma_m}$$

- Coefficients  $\gamma_m$  and  $k_{mod}$  must be taken according to the current Standard.
- For the calculations, a timber density  $\rho_k = 350 \text{ kg/m}^3$  has been considered.
- Dimensioning and verification of the timber elements must be carried out separately.
- In case of combine loading the following expression shall be satisfied:

$$\left( \frac{F_{1,d}}{R_{1,d}} + \frac{F_{2/3,d}}{R_{2/3,d}} \right)^2 + \left( \frac{F_{4,d}}{R_{4,d}} \right)^2 \leq 1$$

- Fixing through full nailing is possible for applications on a beam or partial nailing for applications on columns. Inclined screws must always be inserted on the secondary beam side, in the two upper openings and two lower openings.
- Lateral  $F_4$  loads are assumed to act at a distance of  $e = H / 2$  from the centre of the connector. For different values of "e", the resistance values can be calculated in accordance with ETA.
- It is assumed that the main beam is impeded from rotating. In the case the UV connector is installed on only one side of the beam, an eccentric moment,  $M_v = F_d \cdot (B_H / 2 \cdot 14 \text{ mm})$  must be considered. The same also applies in the case of connections on both sides of the main beam when the difference between acting forces is  $> 20\%$ .