

# TVM

## CONNECTOR FOR DECKING

### FOUR VERSIONS

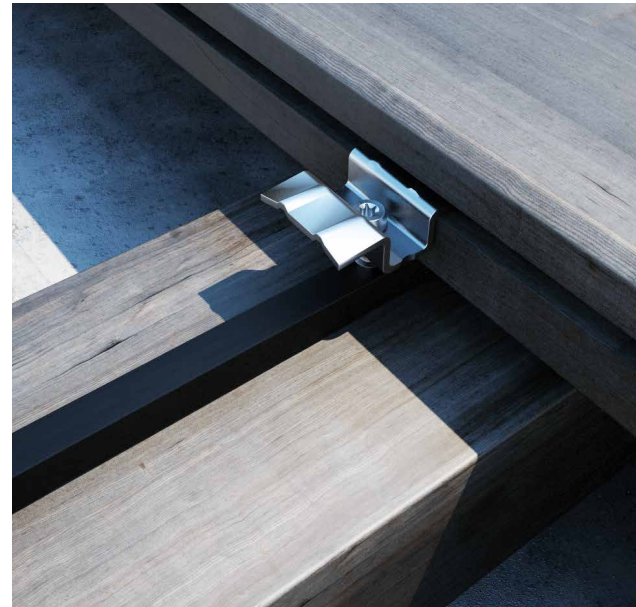
Different sizes for applications on boards with different thickness and gaps of varying width. Black version for complete concealment.

### DURABILITY

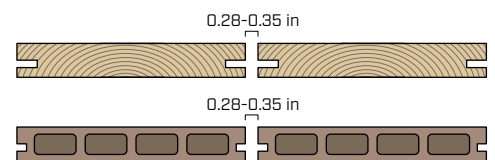
The stainless steel ensures high corrosion-resistance. The micro-ventilation between the boards helps the durability of the wooden elements.

### ASYMMETRIC GROOVING

Ideal for boards with asymmetrical "female-female" groove cuts. Ribbing on the surface of the connector ensures excellent stability.



### BOARDS



### FASTENING ON



timber



WPC



aluminium

### MATERIAL



A2 | AISI304 austenitic stainless steel (CRC II)



stainless steel with colored organic coating



TVM1



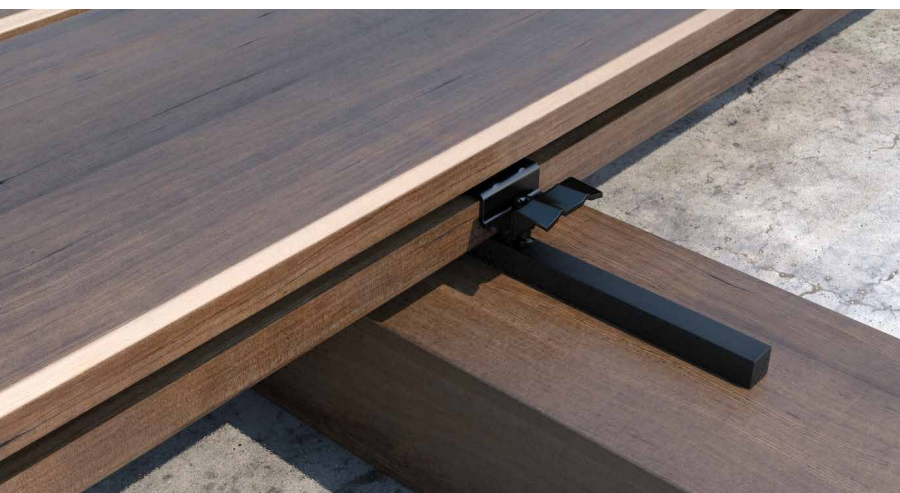
TVM2



TVM3



TVMN4



## FIELDS OF USE

Use in aggressive outdoor environments. Fastening timber or WPC boards on substructures in wood, WPC or aluminium.

## CODES AND DIMENSIONS

### TVM A2 | AISI304

**A2**  
AISI 304

CODE	material	P x B x s		pcs
		[mm]	[in]	
<b>TVM1</b>	A2   AISI304	22,5 x 31 x 2,4	0.89 x 1.22 x 0.09	500
<b>TVM2</b>	A2   AISI304	22,5 x 28 x 2,4	0.89 x 1.10 x 0.09	500
<b>TVM3</b>	A2   AISI304	30 x 29,4 x 2,4	1.18 x 1.16 x 0.09	500

### KKT X

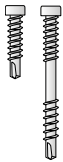
fastening on timber and WPC for TVM A2 | AISI304



d <sub>1</sub>	CODE	L		pcs
[mm] [in]		[mm]	[in]	
5	KKTX520A4	20	13/16	200
<b>0.20</b>	KKTX525A4	25	1	200
<b>#11</b>	KKTX530A4	30	1 3/16	200
<b>TX 20</b>	KKTX540A4	40	1 9/16	100

### KKA AISI410

fastening on aluminium for TVM A2 | AISI304



d <sub>1</sub>	CODE	L		pcs
[mm] [in]		[mm]	[in]	
4	KKA420	20	13/16	200
<b>0.16</b>				
<b>#7</b>				
<b>TX 20</b>				
5	KKA540	40	1 9/16	100
<b>0.20</b>	KKA550	50	1 15/16	100
<b>#11</b>				
<b>TX 20</b>				

### TVM COLOR

**A2**  
AISI 304

CODE	material	P x B x s		pcs
		[mm]	[in]	
<b>TVMN4</b>	A2   AISI304 with black coating	23 x 36 x 2,4	0.87 x 1.42 x 0.09	500

### KKT COLOR

fastening on timber and WPC for TVM COLOR



d <sub>1</sub>	CODE	L		pcs
[mm] [in]		[mm]	[in]	
5	KKTN540	40	1 9/16	200
<b>0.20</b>				
<b>#11</b>				
<b>TX 20</b>				

### KKA COLOR

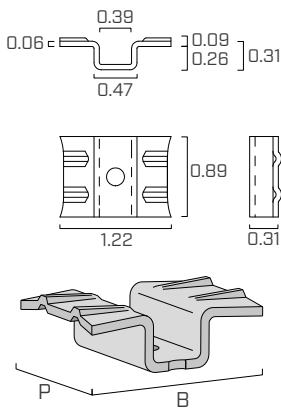
fastening on aluminium for TVM COLOR



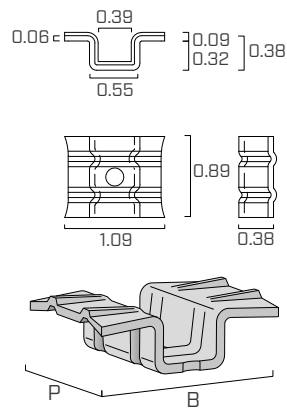
d <sub>1</sub>	CODE	L		pcs
[mm] [in]		[mm]	[in]	
4	KKAN420	20	13/16	200
<b>0.16</b>	KKAN430	30	1 3/16	200
<b>#7</b>				
<b>TX 20</b>	KKAN440	40	1 9/16	200

## GEOMETRY

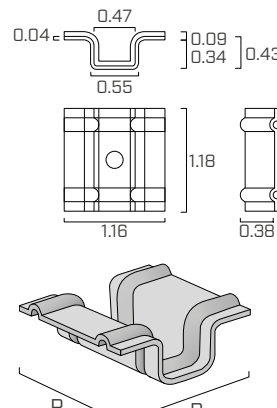
### TVM1



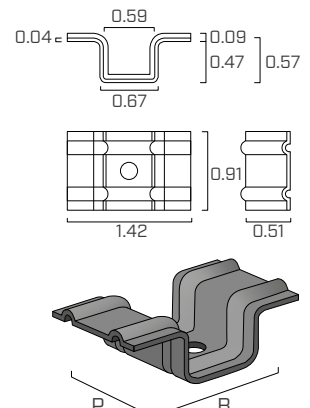
### TVM2



### TVM3



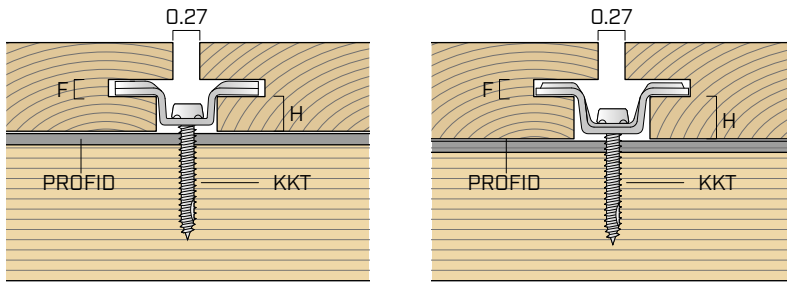
### TVMN4



### KKA

Can also be used for fastening on aluminium profiles using KKA AISI410 or KKA COLOR screws.

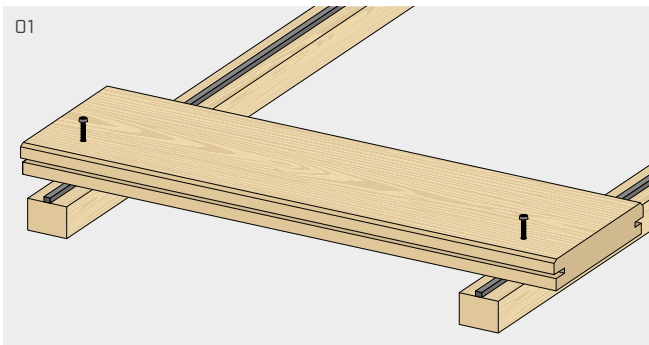
## GROOVING GEOMETRY



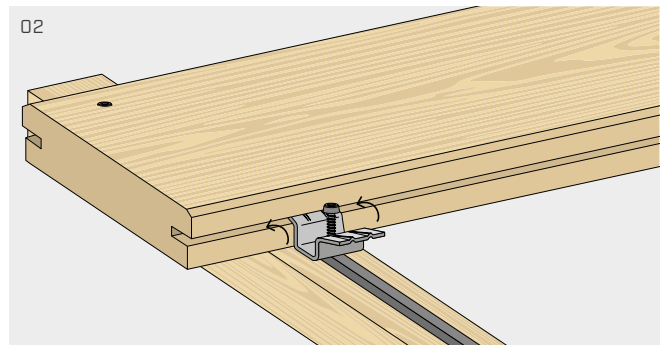
### ASYMMETRICAL GROOVING

Min. thickness	F	0.12 in
Min. recommended height TVM1	H	0.28 in
Min. recommended height TVM2	H	0.35 in
Min. recommended height TVM3	H	0.39 in
Min. recommended height TVMN	H	0.51 in

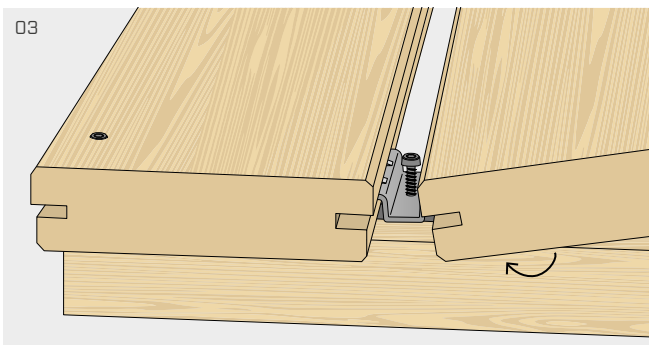
## INSTALLATION



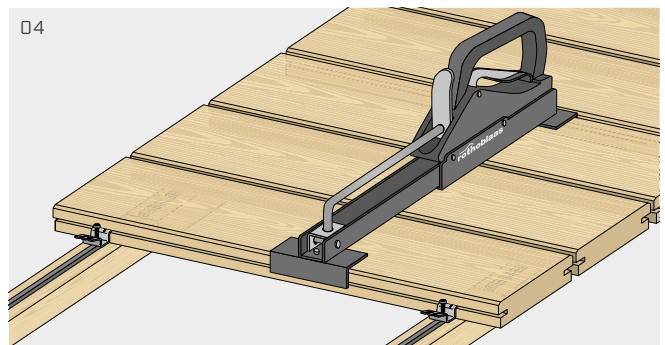
Position the PROFID spacer at the joist centerline. First board: fix with suitable screws which are left visible.



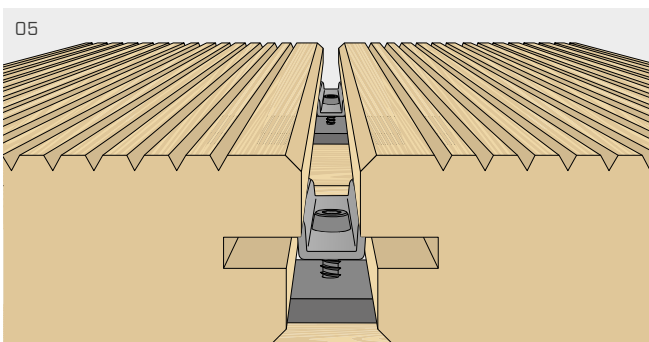
Insert the TVM fastener into the groove cut so that the side fin adheres to the groove in the board.



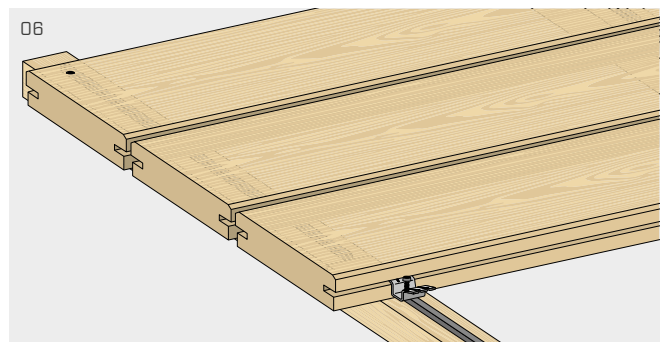
Position the next board by inserting it into the TVM fastener.



Using the CRAB MINI or CRAB MAXI clamp, tighten the two boards until the gap between them is 0.28 inch (see product page 424).

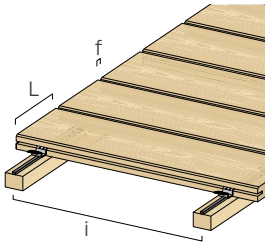


Fix the fastener to the batten underneath by using the KKT screw.



Repeat the operations for the remaining boards. Last board: repeat step 01.

## CALCULATION EXAMPLE



### INCIDENCE ESTIMATE FORMULA PER ft<sup>2</sup>

$$1 \text{ ft}^2 / i / (L + f) = \text{pcs of TVM at ft}^2$$

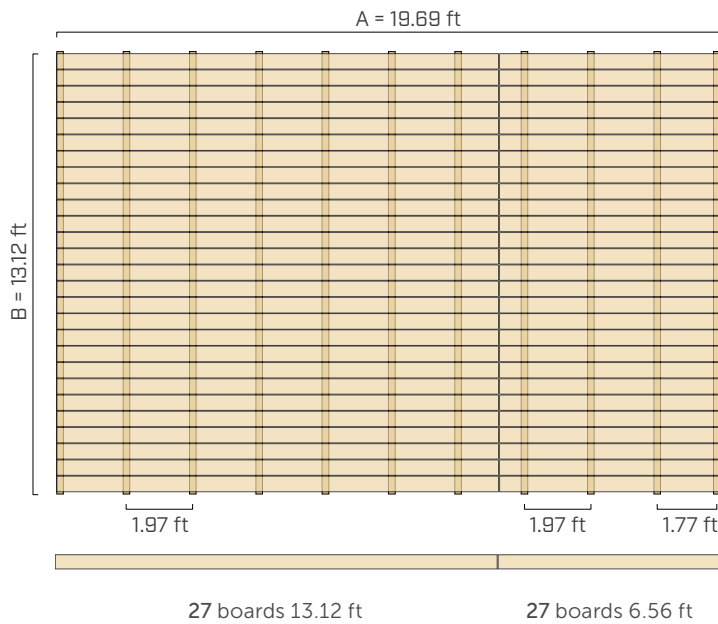
$i$  = battens spacing

$L$  = board width

$f$  = gap width

## PRACTICAL EXAMPLE

### NUMBER OF BOARDS AND BATTENS



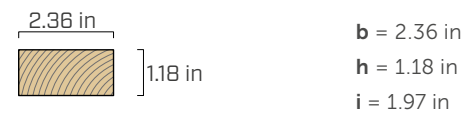
### PATIO SURFACE

$$S = A \cdot B = 16.69 \text{ ft} \cdot 13.12 \text{ ft} = 258.33 \text{ ft}^2$$

### WOODEN PLANKING

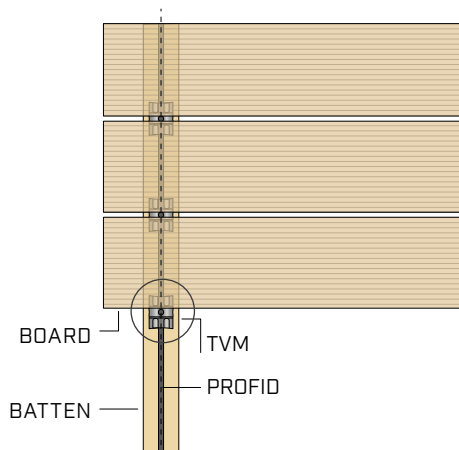


### BATTENS

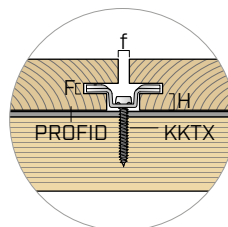


$$\begin{aligned} \text{no. boards} &= [B / (L + f)] \\ &= [13.12 / (0.46 + 0.02)] = 27 \text{ boards} \\ \text{no. 13.12 ft boards} &= 27 \text{ boards} \\ \text{no. 6.56 ft boards} &= 27 \text{ boards} \\ \text{no. battens} &= [A / i] + 1 = (19.69 / 1.97) + 1 = 11 \text{ battens} \end{aligned}$$

### SCREW SELECTION



Screw head thickness	$S_{\text{screw head}}$	0.11 in
Grooving thickness	$F$	0.16 in
Grooving dimension	$H$	0.39 in
PROFID thickness	$S_{\text{PROFID}}$	0.31 in
Pull-through length	$L_{\text{pen}}$	$4 \cdot d$ 0.80 in



### MINIMUM SCREW LENGTH

$$\begin{aligned} &= S_{\text{screw head}} + H + S_{\text{PROFID}} + L_{\text{pen}} \\ &= 0.11 + 0.39 + 0.31 + 0.8 = 1.61 \text{ in} \end{aligned}$$

### CHOICE OF SCREW

**KKTX540A4**

### TVM NUMBER CALCULATION

#### QUANTITY FOR INCIDENCE FORMULA

$$I = S / i / (L + f) = \text{pcs of TVM}$$

$$I = 258.33 \text{ ft}^2 / 1.97 \text{ ft} / (0.46 \text{ ft} + 0.02 \text{ ft}) = 272 \text{ pcs TVM}$$

waste coefficient = 1,05

$$I = 272 \cdot 1,05 = 286 \text{ pcs TVM}$$

$$I = 286 \text{ pcs TVM}$$

**TVM NUMBER = 286 pcs**

#### QUANTITY FOR THE NUMBER OF INTERSECTIONS

$$I = \text{no. boards with TVM} \cdot \text{no. battens} = \text{pcs. of TVM}$$

$$\text{no. boards with TVM} = (\text{number of boards} - 1) = (27 - 1) = 26 \text{ boards}$$

$$\text{no. of battens} = (A / i) + 1 = (19.69 / 1.97) + 1 = 11 \text{ battens}$$

$$\text{no. intersections} = I = 26 \cdot 11 = 286 \text{ pcs TVM}$$

$$I = 286 \text{ pcs TVM}$$

**SCREWS NUMBER = No. TVM = 286 pcs KKTX540A4**