



RAMPA®

Good idea. Let's make it!

TYPE SKL / SKL 330

Assembling information RAMPA®-Inserts type SKL / SKL330

The values in the table are applicable exclusively to RAMPA®-Inserts as listed below.

RAMPA®-Inserts | Type: SKL

Art. No.	Outer-Ø D (mm)	Length L (mm)	Art. No.	Outer-Ø D (mm)	Length L (mm)
0116256	12	25	0111306	18,5	30
0116306	12	30	0111406	18,5	40
0116406	12	40	0111506	18,5	50
0116506	12	50	0111606	18,5	60
0116606	12	60	0111706	18,5	70
0116806	12	80	0111806	18,5	80
0118306	16	30	0111006	18,5	100
0118406	16	40	0112606	22	60
0118506	16	50	0112806	22	80
0118606	16	60	0112106	22	100
0118706	16	70	0116616	25	60
0118806	16	80	0116816	25	80
0118006	16	100	0116016	25	100

RAMPA®-Inserts | Type: SKL330

Art. No.	Outer-Ø D (mm)	Length L (mm)	Art. No.	Outer-Ø D (mm)	Length L (mm)
4216306	12	30	4211506	18,5	50
4218406	16	40	4211706	18,5	70
4218506	16	50	4211806	18,5	80
4211406	18,5	40	4211006	18,5	100



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Preparatory work:

- ⇒ The valid pre-drill-Ø are always to be taken from ETA 12/0481
- ⇒ Outer-Ø = D
- ⇒ Core-Ø = d1
- ⇒ pre-drill-Ø $d_{drill,SW}$ (Softwood) or $d_{drill,HW/WB}$ (Hardwood)
- ⇒ Tolerance range $t_{tol,1} = d_{drill,SW} - d1$ or $d_{drill,HW/WB} - d1$
- ⇒ L = Total insert length

Example: RAMPA®-Inserts | Type: SKL Art. No.: 011 210 6 (Softwood)

- ⇒ Standard pre-drill-Ø = $d_{drill,SW} = 19,5\text{mm}$
- ⇒ Max. allowed-Ø = $d_{drill,SW} = 19,5\text{mm}$
- ⇒ Min. allowed-Ø = $d1 = 18,5\text{mm}$

Countersink: (pre-drill-Ø + 2x0,5mm) x 90°

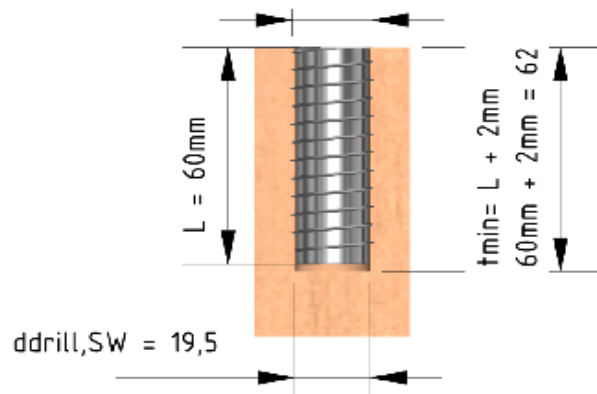


Figure 1

⇒ In principle choose pre-drill-Ø **$d_{drill,SW}$** or **$d_{drill,HW/WB}$** . The core-Ø "d1" is the minimum allowed pre-drill-Ø. The size of the pre-drill-Ø affects the required screw-in torque significantly.

⇒ Generally choose pre-drill-Ø **$d_{drill,SW}$** or **$d_{drill,HW/WB}$** !

If there are problems of assembling, the pre-drill-Ø can be adjusted according to the above listed tolerance range $t_{tol,1}$.

It is recommended, to provide the pre-drill boreholes with a countersink of min. **s = 0,5mmx45°** for avoiding possible break out of the upper fiber layers (by example by oblique application).

⇒ All pre-drill-diameters must be validated on the basis of **ETA 12/0481!**

The most actual ETA version can always be found in our download area: <https://www.rampa.com/service/de/produkte/downloads/>

The pre-drilling-depth should be $t_{min} = L + \text{min } 2\text{mm}$ (Safety against break-through due assembling too deep).



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Example: RAMPA®-Inserts | Type: SKL Art. No.: 011 210 6 (Softwood)

- ⇒ Pre-drill- \emptyset $D = d_{\text{drill, SW}} = 19,5\text{mm}$
- ⇒ Countersink- \emptyset $(d_1) = D + (2 \times s) \rightarrow 10\text{mm} + (2 \times 0,5\text{mm}) = 20,5\text{mm}$

Make sure that the predrill borehole is clean and free of chips.

Assembling:

The **RAMPA®-Insert** must be completely placed on the inner hexagon bit before starting the assembling process (Figure 2).

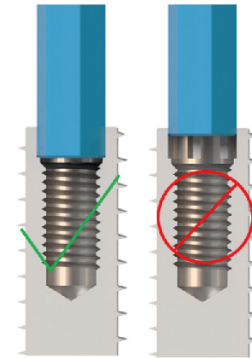


Figure 2

At the beginning of the assembling process, the **RAMPA®-Insert** has to be put in the predrilling borehole with light pressure in order to avoid bulges (Figure 3).

- ⇒ Max. assembling-speed =
 - SKL = 200min^{-1}
 - SKL330 = 175min^{-1}
- ⇒ **Attention:** The SKL330 variants can be assembled much faster as the standard SKL inserts due to the 3-start thread contour. Please pay attention to the cut-off point and the assembling speed to prevent damage to the workpiece.
- ⇒ If an impact wrench is used, ensure that it is absolutely held vertical to avoid damage of the insert drive and the inner thread.
- ⇒ It is recommended to choose the screw-in torque of the impact wrench that ensures that the insert can be assembled fast and safe without overloading the drives. If available, a soft start should be used. A too high cut-off torque can lead to damages of the workpiece / insert!

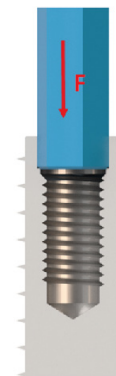


Figure 3