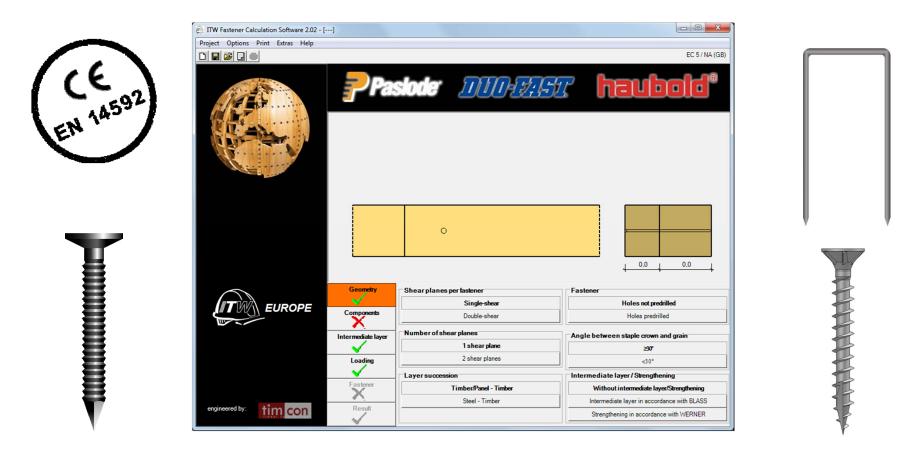




FASTENER CALCULATION SOFTWARE VERSION 2.02 HELPFILE

CE CE marked fasteners according to EN 14592



This software program is designed to aid the calculation of various timber connections according to EN 1995-1-1 (EC5).

It enables design with all ITW nails, staples and screws which are CE marked in accordance with the product standard EN 14592.

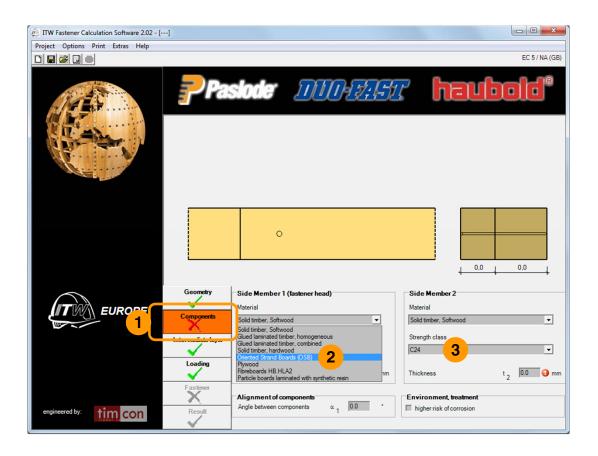
Step 1: Select appropriate NA

Project Options	ulation Software 2.02 - [] Print Extras Help			2 [×]	
	Language option			EC 5 / NA (GB)	
	Design regulation		DIN1052:2008-12		
	Fasteners assortment				
1251-1	Strainen Station	4	EC 5	7 haubold®	
			EC 5 / NA (F)		
			EC 5 / NA (GB)		
			EC 5 / NA (A)		
			EC 5 / NA (I)		
			EC 5 / NA (NL)		
13th			EC 5 / NA (DK)		
			EC 5 / NA (CZ)		
			0		
	Geometr	TV.	⊂Shear planes per fastener	Fastener	_
		,	Single-shear	Holes not predrilled	Note: Screws > 6r
		nts	Double-shear	Holes predrilled	need to be predril
					need to be pream
	· · · · ·				
	Intermediate	layer	Number of shear planes	Angle between staple crown and grain	
	√ _		1 shear plane	Angle between staple crown and grain ≥30°	
	Intermediate Loading				
	Loading	,	1 shear plane	≥30"	
	√ _	,	1 shear plane 2 shear planes	230°	
engineered by:	Loading	,	1 shear plane 2 shear planes	230° 30°	

Smm illed

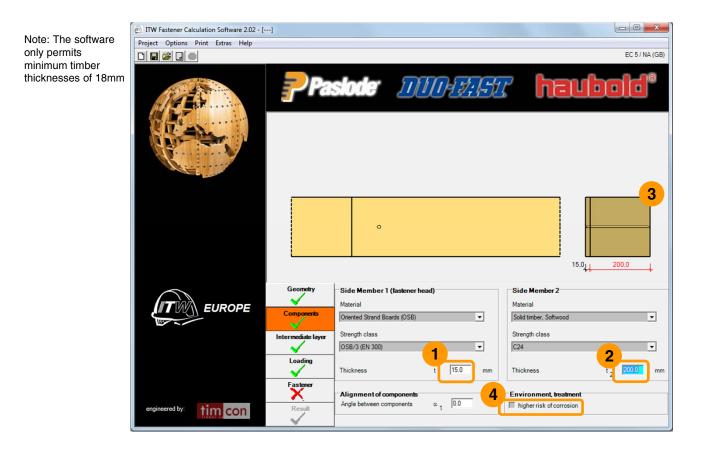
- Select the appropriate National Annex (NA) for where the project is located. If EC5 only is chosen, the recommended standard definitions are set.
- Note: The interface always shows the currently selected standard.
- There are options to select an intermediate layer that 3 is either bonded to the structure or not bonded. The calculations for bonded materials are in accordance with the work of H. Werner, University of Karlsruhe. The calculations for non-bonded materials are in accordance with the practical test work of H. J. Blass, developing the theories of Johansen.

Step 2: Component input

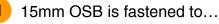


- Select Components to access the component input fields to the right
- 3 Choose the required strength class from the menu.
- 2 Choose the required material from the menu.

Step 2: Component input



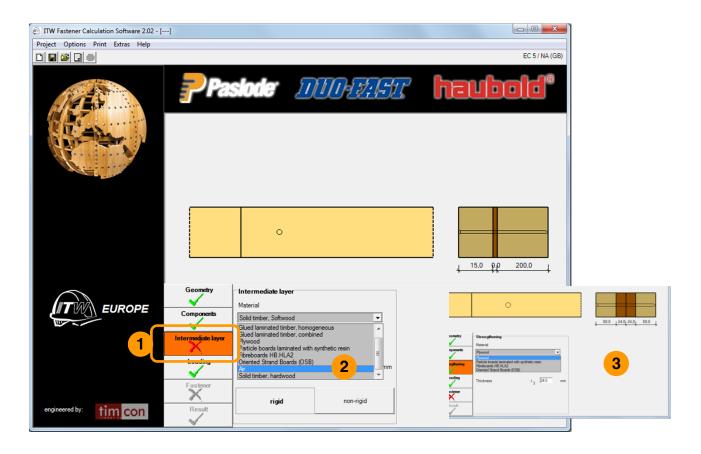
Enter the thickness of the chosen material. In this example...



200mm timber.

- 3 Note: The diagram changes to reflect your input.
- 4 Note: If there is a high risk of corrosion (e.g. through timber treatment, polluted environment or timber type) the *higher risk of corrosion* box should be ticked.

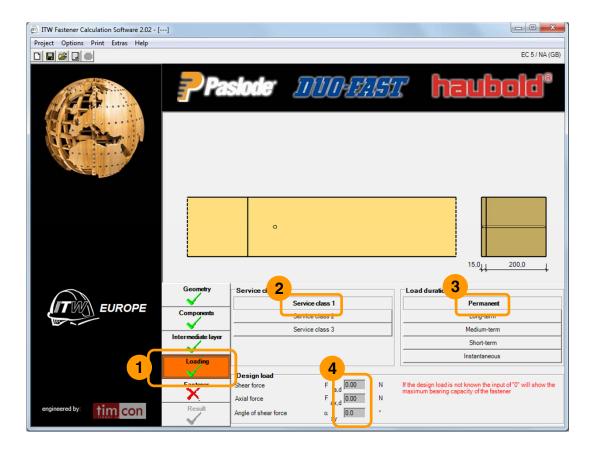
Step 2a (optional): Intermediate layering



- 1 The Intermediate layer screen needs to be completed if the options of BLASS or WERNER were selected in step 1.
- 2 The BLASS version for non-bonded intermediate layers allows any material including an optional air gap. In general these layers are non-rigid.
- The WERNER version allows only the selection of a limited amount of materials which is bonded to the timber members.

In both versions it is necessary to enter the thickness of the chosen material.

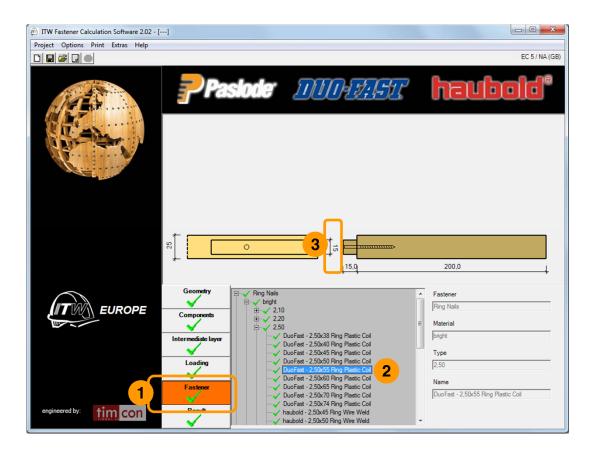
Step 3: Loading input



- Select Loading to open the loading menu to the right
- 2 Select the required service class
 - Select the required load duration

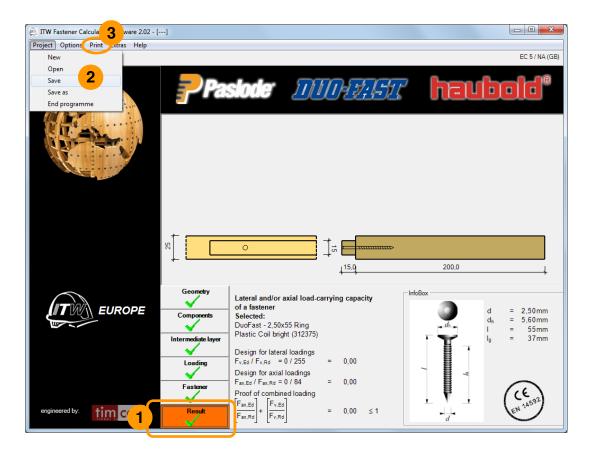
4 If the design load is unknown, the input of "0" in the *design load* fields will calculate the maximum bearing capacity of the fastener.

Step 4: Fastener selection



- 1 Select *Fastener* to open the fastener menu to the right
- 2 Use the menu tree to navigate to your preferred fastener. In this example we have selected "DuoFast 2,50x55 Ring Plastic Coil".
- 3 The diagram shows the minimum required width of the previously selected material calculated from 2 x the edge distance.

Step 5: Result summary



- 1 Select *Results* to show a summary of the selected fastener and loadings. Design loads are shown as a factor of the fastener's loading capability.
- 2 There is an option to save this calculation
- 3 There is an option to print this calculation

9

Step 6: Print & export

All Print preview		-]
Export_ Print Zoom 100%		
		-
		ITW Benerinauginofiware 2.00 (00.03.2010) .3.
ITW Fastener Calculation Software 2.02	- 1 - Spate 3:	MMMMAA Saturhid: 1 (Vetricorgunitalioph 098 - Pitterier0380 (EN 300) Saturhid: 2 Volhol: toolehid://224
Lateral and/or axial load-carrying capacity of a connection in accordance with EN 1995-1-1:2004-A1:2008 (Oriented Strand Board (OSB) + Ring Nails)	ITM Intercognetions 12.0 (9) (2010 -2. Base: Field-context: Name Name Name Asserting-services (Ed., %205 kg/m² Los, k/m² Norm² Norm² September 2010 (Ed., %205 kg/m² Los, k/m² Norm² Norm²	1 2 3 4 dist or France 6, 31,0 26,0 mm fixed to art France 8, 14,0 12,5 mm reform of any 6,00 37,5 mm miniparticle reform of any 10,00 27,5 28,0 mm ref 4a,1 17,5 12,5 mm
Selected conditions	* Ee gibt keine Anforderungen an einen erhöhten Korroekonsechutz! Lasteinwitkung	Rand 84.6 17,5 12,5 mm
National Annex of United Kingdom, BS EN 1995-1-1/NA-2012	Nuzznagrafasás Lastanewinkungsbauor stándig Ben Schwitzt F _{x Ma} r ON Ben Zugiratt F _{x Ma} r ON	
	Name Kong <th< th=""><th></th></th<>	
	Mallgebender Bemessungswert: F _{an Re} 207 N	15
	Tragibligheit auf Abacharan je Baharfuga nach EN 1995-1-1:2004-A1:2008, Abachait 8.2.2 $P_{1_1NN}^{-}$ = 515 N (8.3-e)	F
	$\begin{array}{rcl} F_{22,AV} & & & & & F_{22} \\ F_{3,AV} & & & & & & & \\ F_{43,AV} & & \\ F_{$	er <u>unter folgenden Antehmen berechtest</u> T _{ensen} werden genereten int dem Einn (g/2009 multiplicitiet Reunden bestimmter), und Grugs auf dem Antehnet von F _{our} nich EM 201 konfiger unter Berchskieltigtung der Exponeterin er 15 millerefaget. Besungemenn word eins speint dicht die einschligkende dem Belschlicherbekeiterte
المعادم بالمعادي بالمعادي المعادي المعا المعادي المعادي	Minimum F ₂₀₁₄ + 329 H Kristen Kagel Mallgebander Witt: Fanz Jan & Fanz Jaha & 329 N Entra Danse Analy Gar Salahanang Ming 25 F ₂₀₁₂ 25 F ₂₀₁₄ = 07 N	r (TW Benessurgsschesst setzt die unfergreiche Kerrtris der EN 12008 und dessen Hrielt vorzu. Denber timus gelein immer zustätzlich die sonstigen ageit nas dieser Norm. Ber Averender und kollen die rechten immer zustätzlich die sonstigen für die Uberpführt gelein tilt aufgen überchnungsregeleinisten. Ausgebeitingungen er TW Benessurgsprochenen.
Service class 1 Load duration permane Design shear force F _{v.Ed} = 0N	$\begin{array}{rcl} Min(\mathbf{r}_{22};\mathbf{r}_{m,\mathbf{k}_{2}},0:5\cdot\mathbf{F}_{c,k,\mathbf{k}_{2}})^{-} & 0: \mathbf{N} \\ & & Machands \\ \mathbf{r}_{c,k,l}^{-}\mathbf{r}_{c,k,l}^{-}\mathbf{n} \\ \mathbf{r}_{m,k,l}^{-}\mathbf{r}_{m,k,l}^{-}\mathbf{r}_{m,k,l}^{-}\mathbf{P}_{r,k,l}^{-}\mathbf{P}_{r,k,k}^{-}\mathbf{P}_{r$	ais Günner, ITW Befestigungssysteme Gabbi Telefon: 6611-4204212 Fax: 8611-4204224
Design axial force F _{ax,Ed} = 0N		
Geometry and material		
Column 2: Side Member 1 (fastener head) Oriented Strand Board (OSB)/OSB/3 (DIN EN 13986) Column 3: Side Member 2 Solid timber, Softwood/C24		
1 2	3 4	
	200,0 mm	
Load-grain angle q _i 0,0	0.0 *	-

Click on the print button to open the print preview window. This window provides further valuable information such as detailed descriptions of the axial / lateral behaviour of the fastener and spacing information.

- 1 Click *Print* to print
- 2 Or click *Export* to export to Acrobat PDF, Microsoft Word, or rich text. The latter two formats allow for editing of text.

Other features

Tooltips are shown when some information is moused over.

Load duration	
Permanent	
more than 10 years, e.g.	self-weight
Medium-term	
Short-term	
Instantaneous	
1	

Name		
Telephone		
Fax		

Under "Options" the *Person in charge* can be entered for the printout.

The interface can be switched between English, German, Dutch, French, Italian and Danish languages.



A "default" button resets settings to default.



A help file in PDF format can be accessed under the "Help" menu option or by pressing F1.



PASLODE / DUO-FAST / HAUBOLD | ITW FASTENER CALCULATION SOFTWARE 2.02 HELPFILE