



**SEISMIC PERFORMANCE  
EUROTEC  
WOOD CONSTRUCTION  
SCREWS**

More than  
**20**  
YEARS  
of quality

## EuroTec Paneltwistec 8.0 mm and Topduo in the highest "earthquake class", S3

Fasteners may be assigned to "low-cycle ductility classes" for use in earthquake-prone areas. The classes are designated as S1, S2 or S3 in ascending order of "seismic performance".

To achieve this, the screws are bent at a specific angle alternately in up to 3 cycles.

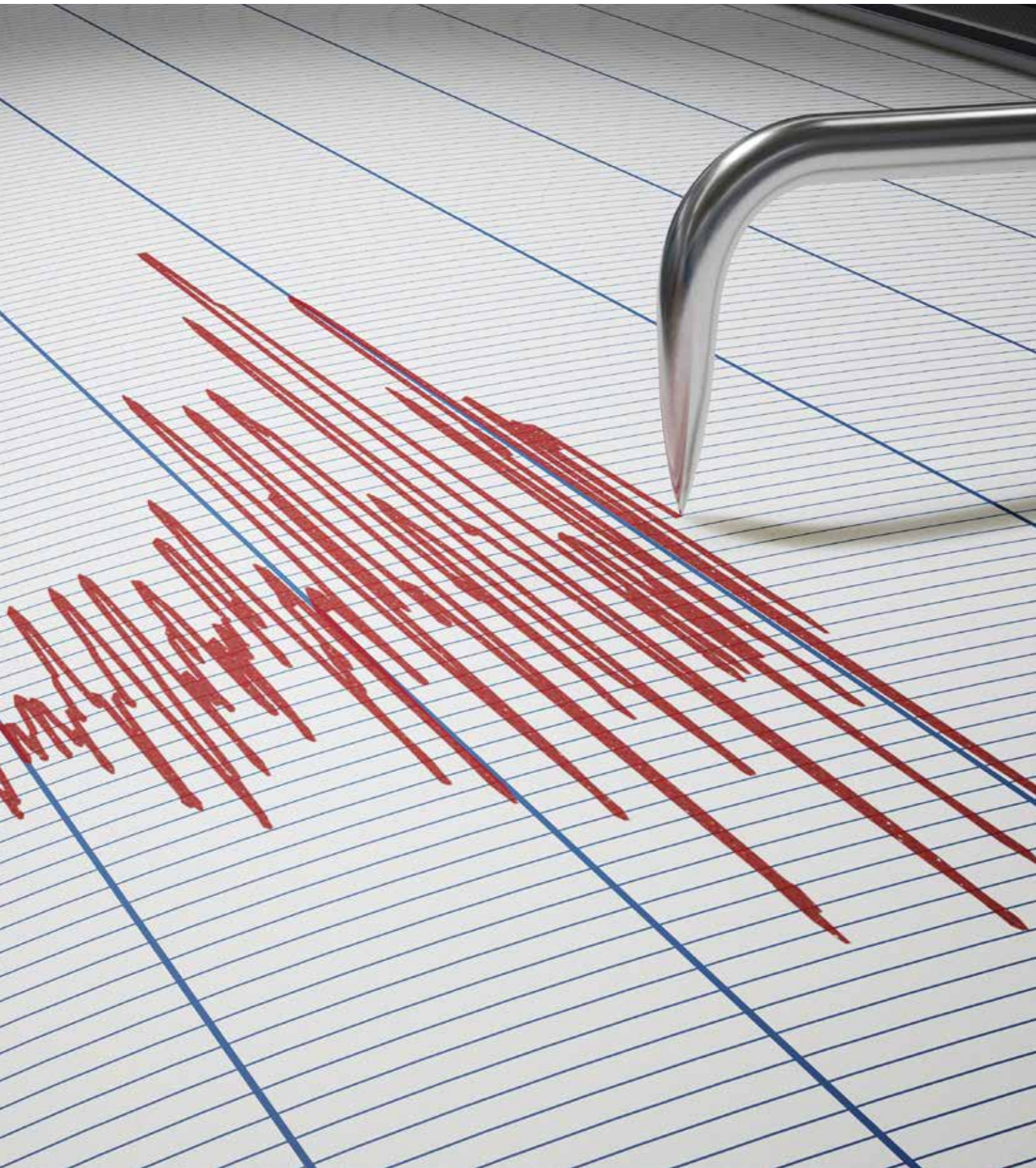
With each cycle, checks are performed to determine whether at least 80% of the mean flow torques of an unbent screw of the same type is still being achieved. If this is the case, the screws may be classified according to the respective ductility class.

This means the Eurotec wood construction screws pictured below featuring nominal diameters of 6.0 to 10.0 mm (carbon steel) and 5.0 and 6.0 mm (stainless steel A2/A4) have achieved the highest class, S3.

Despite their high strength these screws are ductile, meaning they are flexible enough to be bent backwards and forwards multiple times without failing due to becoming brittle. In the event of an earthquake, this increases the likelihood that, for example, a wood/wood connection would yield "softly" rather than failing suddenly. This may form the decisive factor when it comes to potential damage to life, limb and property.

a) The flow torque describes the resistance of the screw to bending; in other words, the 'bending stiffness'.

The specialist for fastening technology



### ECO PT

Countersunk-head screw, blue galvanised



### Hapatec Heli A4

Ornamental head screw, stainless steel A4



### ECO PT

Flange button head screw, blue galvanised



### Hobotec

Countersunk-head screw, blue galvanised



### EcoTec A2

Countersunk-head screw, stainless steel A2



### Hobotec

Countersunk-head screw, steel yellow zinc plated



### EcoTec

Countersunk-head screw, blue galvanised



### Paneltwistec A2

Countersunk-head screw, stainless steel A2



### Hapatec Heli

Ornamental head screw, stainless steel A2



### Paneltwistec A2

Flange button head screw, stainless steel A2



### Paneltwistec 1000

Flange button head screw, special coated steel



### Paneltwistec

Countersunk-head screw, steel yellow zinc plated



### Paneltwistec A4

Countersunk-head screw, stainless steel A4



### Paneltwistec

Flange button head screw, steel yellow zinc plated



### Paneltwistec AG

Countersunk-head screw, blue galvanised



### Topduo

Flange button head screw, blue galvanised



### Paneltwistec AG

Flange button head screw, blue galvanised



### Topduo

Ornamental head screw, blue galvanised



### SawTec

Ornamental head screw, blue galvanised



## Excerpt from the test report of the Karlsruhe Institute of Technology (KIT)

### Torque load capacity in Nm Paneltwistec Countersunk head AG Ø6,0 x 120 mm

No.	Testing S3		Criterion 1		Criterion 2	
	Monotone	Cyclical	$M_{0,8}$	Compliant	$\alpha_{max}$	Compliant
1	15,2	13,6	12,0	Yes	45°	Yes
2	15,0	12,7		Yes		Yes
3	14,8	13,4		Yes		Yes
Mean value	15,0	13,2				

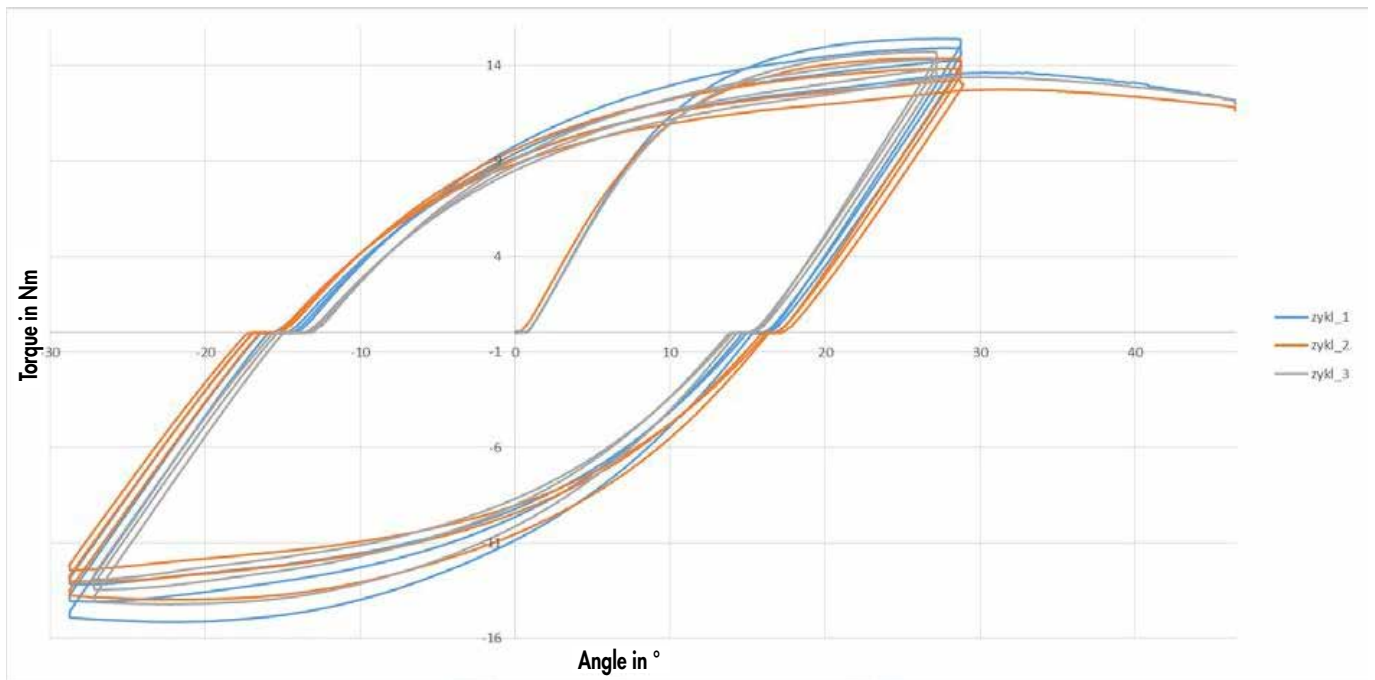
$M_{0,8}$  = 0.8 x mean value of the monotonic test

### Torque load capacity in Nm, Paneltwistec Countersunk head AG Ø8,0 x 160 mm

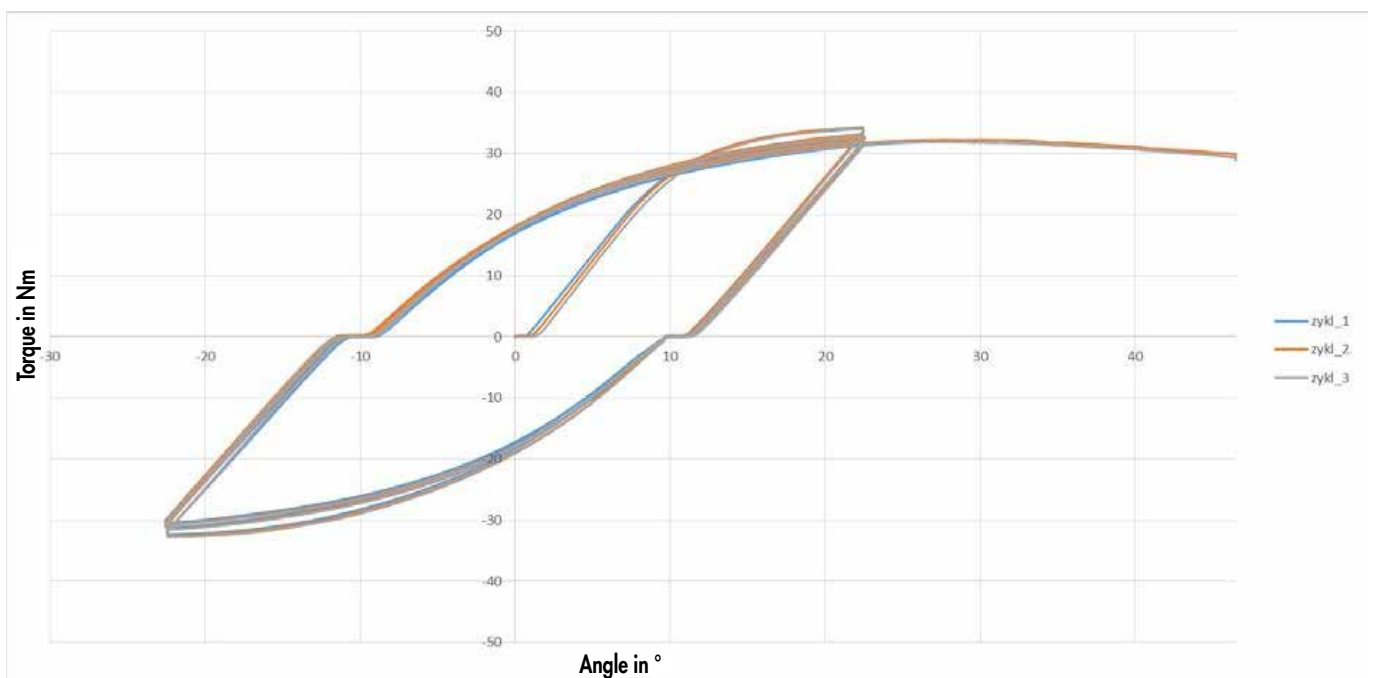
No.	Testing S3		Criterion 1		Criterion 2	
	Monotone	Cyclical	$M_{0,8}$	Compliant	$\alpha_{max}$	Compliant
1	33,0	31,9	26,6	Yes	45°	Yes
2	33,4	32,3		Yes		Yes
3	33,4	31,9		Yes		Yes
Mean value	33,3	32,0				

$M_{0,8}$  = 0.8 x mean value of the monotonic test

**Load displacement diagram**  
**Paneltwistec Countersunk head AG Ø6,0 x 120 mm**



**Load displacement diagram**  
**Paneltwistec Countersunk head AG Ø8,0 x 160 mm**



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