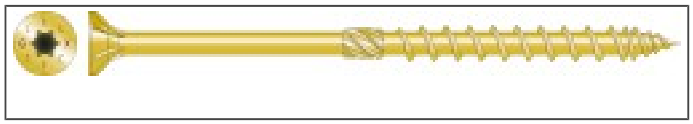
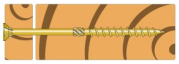
Technical data sheet

ESCRC - COUNTERSUNK STRUCTURAL WOOD SCREW





The ESCRC is a countersunk washer head screw designed to connect two or more timber members together.

EN-ETA-13/0796, UK-DoP-e13/0796

FEATURES

CL.2 EZGJ INDOOR

Material

Heat Treated Carbon Steel. Finish: Electrogalvanised and anti-friction coating with Yellow Chromate. Zinc coating thickness is ≥ 5µm.

Warning: Industry studies show that hardened fasteners can experience performance problems in wet or corrosive environments. Accordingly, the ESCRC wood screw should only be used in dry, interior and non-corrosive environments e.g. Service class 1 & 2.

Benefits

The ESCRC screw has a reamer to allow for smooth driving of the shank. The countersunk head gives flush fitting while allowing the timber members to close up firmly.

APPLICATIONS

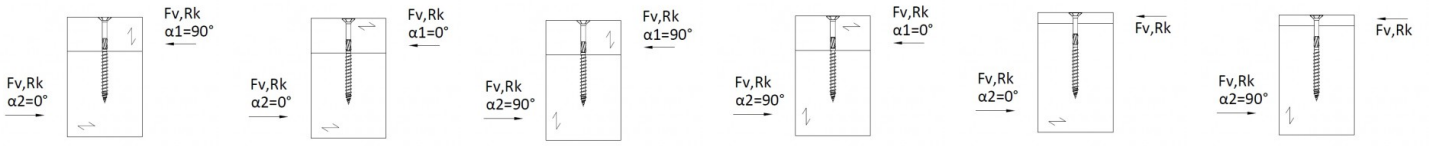
Suitable On

Multi-ply timbers.

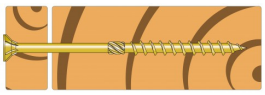
When to Use

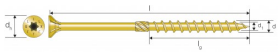
I-Joists, SIP Panels, Roof Trusses, Timber Frame Panels, Composite Panels, Engineered Timber, Metal Web Joists.

TECHNICAL DATA



Product Dimensions





References	Tun / DB nr.	NOB nr.	Product Dimensions [mm]						
			d	l	d_h	d_1	l_g	t_{fix}	bit
ESCRC5.0X50	-	-	5	50	10	3.3	30	20	T-25
ESCRC5.0X60	-	-		60	10	3.3	30	30	T-25
ESCRC5.0X90	-	-		90	10	3.3	55	35	T-25
ESCRC5.0X70	-	-		70	10	3.3	37	33	T-25
ESCRC5.0X80	-	-		80	10	3.3	37	43	T-25
ESCRC6.0X60	1806125	51664616	6	60	12	4	36	24	T-30
ESCRC6.0X90	1712397	51664646		90	12	4	48	42	T-30
ESCRC6.0X70	1806126	51664620		70	12	4	36	34	T-30
ESCRC6.0X100	1806123	51664480		100	12	4	48	52	T-30
ESCRC6.0X160	1712390	51664533		160	12	4	64	96	T-30
ESCRC6.0X80	1806127	51664635		80	12	4	48	32	T-30
ESCRC6.0X120	1712386	51664495		120	12	4	64	56	T-30
ESCRC6.0X180	1712391	51664544		180	12	4	64	116	T-30
ESCRC6.0X140	1712388	51664514		140	12	4	64	76	T-30
ESCRC6.0X200	1712392	51664552		200	12	4	64	136	T-30
ESCRC8.0X80	1806129	51665017	8	80	15	5.3	54	26	T-40
ESCRC8.0X100	1806128	51664862		100	15	5.3	54	46	T-40
ESCRC8.0X120	1712399	51664654		120	15	5.3	54	66	T-40
ESCRC8.0X140	1712398	51664877		140	15	5.3	84	56	T-40
ESCRC8.0X160	1712400	51664881		160	15	5.3	84	76	T-40
ESCRC8.0X180	1712401	51664896		180	15	5.3	100	80	T-40
ESCRC8.0X200	1712402	51664900		200	15	5.3	100	100	T-40
ESCRC8.0X220	1712403	51664915		220	15	5.3	100	120	T-40
ESCRC8.0X240	1712404	51664926		240	15	5.3	100	140	T-40
ESCRC8.0X260	1712405	51664934		260	15	5.3	100	160	T-40
ESCRC8.0X280	1712406	51664945		280	15	5.3	100	180	T-40
ESCRC8.0X300	1712407	51664953		300	15	5.3	100	200	T-40
ESCRC8.0X320	1712408	51664964		320	15	5.3	100	220	T-40
ESCRC8.0X340	1712409	51664972		340	15	5.3	100	240	T-40
ESCRC8.0X360	1712411	51664983		360	15	5.3	100	260	T-40
ESCRC8.0X400	1712413	51665002		400	15	5.3	100	300	T-40
ESCRC10.0X120	1712373	51664722	10	120	18.5	6.2	60	60	T-40
ESCRC10.0X140	1806121	51664737		140	18.5	6.2	60	80	T-40
ESCRC10.0X160	1712374	51664741		160	18.5	6.2	100	60	T-40
ESCRC10.0X180	1806122	51664756		180	18.5	6.2	100	80	T-40
ESCRC10.0X200	1712375	51664760		200	18.5	6.2	100	100	T-40
ESCRC10.0X220	1712376	51664775		220	18.5	6.2	100	120	T-40

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References	Tun / DB nr.	NOB nr.	Product Dimensions [mm]						
			d	l	d_h	d_1	l_g	t_{fix}	bit
ESCRC10.0X240	1712377	51664786		240	18.5	6.2	100	140	T-40
ESCRC10.0X280	1712379	51664805		280	18.5	6.2	100	180	T-40
ESCRC10.0X300	1712380	51664813		300	18.5	6.2	100	200	T-40
ESCRC10.0X320	1712381	51664824		320	18.5	6.2	100	220	T-40
ESCRC10.0X340	1712382	51664832		340	18.5	6.2	100	240	T-40
ESCRC10.0X360	1712383	51664843		360	18.5	6.2	100	260	T-40
ESCRC10.0X400	1712385	51665104		400	18.5	6.2	100	300	T-40

Product characteristic properties

References	Product characteristic properties					
	Characteristic Yield Moment – $M_{y,k}$ [Nm]	Characteristic withdrawal parameter - $f_{ax,k,90°}$ [N/mm²]	Characteristic head pull-through parameter - $f_{head,k}$ [N/mm²]	Characteristic tensile capacity - $f_{tens,k}$ [kN]	Characteristic torsional strength - $f_{tor,k}$ [Nm]	Torsional ratio
ESCRC5.0X50	6.5	13.6	14.6	8.8	6.3	3
ESCRC5.0X60	6.5	13.6	14.6	8.8	6.3	3
ESCRC5.0X90	6.5	13.6	14.6	8.8	6.3	3
ESCRC6.0X60	10.1	13	14.6	12.8	10.1	4.04
ESCRC6.0X90	10.1	13	14.6	12.8	10.1	4.04
ESCRC5.0X70	6.5	13.6	14.6	8.8	6.3	3
ESCRC6.0X70	10.1	13	14.6	12.8	10.1	4.04
ESCRC6.0X100	10.1	13	14.6	12.8	10.1	4.04
ESCRC6.0X160	10.1	13	14.6	12.8	10.1	4.04
ESCRC5.0X80	6.5	13.6	14.6	8.8	6.3	3
ESCRC6.0X80	10.1	13	14.6	12.8	10.1	4.04
ESCRC6.0X120	10.1	13	14.6	12.8	10.1	4.04
ESCRC6.0X180	10.1	13	14.6	12.8	10.1	4.04
ESCRC6.0X140	10.1	13	14.6	12.8	10.1	4.04
ESCRC6.0X200	10.1	13	14.6	12.8	10.1	4.04
ESCRC8.0X80	22.6	10.7	12.4	22.7	25.6	3.08
ESCRC8.0X100	22.6	10.7	12.4	22.7	25.6	3.08
ESCRC8.0X120	22.6	10.7	12.4	22.7	25.6	3.08
ESCRC8.0X140	22.6	10.7	12.4	22.7	25.6	3.08
ESCRC8.0X160	22.6	10.7	12.4	22.7	25.6	3.08
ESCRC8.0X180	22.6	10.7	12.4	22.7	25.6	3.08
ESCRC8.0X200	22.6	10.7	12.4	22.7	25.6	3.08
ESCRC8.0X220	22.6	10.7	12.4	22.7	25.6	3.08
ESCRC8.0X240	22.6	10.7	12.4	22.7	25.6	3.08
ESCRC8.0X260	22.6	10.7	12.4	22.7	25.6	3.08
ESCRC8.0X280	22.6	10.7	12.4	22.7	25.6	3.08
ESCRC8.0X300	22.6	10.7	12.4	22.7	25.6	3.08
ESCRC8.0X320	22.6	10.7	12.4	22.7	25.6	3.08
ESCRC8.0X340	22.6	10.7	12.4	22.7	25.6	3.08
ESCRC8.0X360	22.6	10.7	12.4	22.7	25.6	3.08
ESCRC8.0X400	22.6	10.7	12.4	22.7	25.6	3.08
ESCRC10.0X120	33	9.5	12.2	33.2	47.5	3.34
ESCRC10.0X140	33	9.5	12.2	33.2	47.5	3.34
ESCRC10.0X160	33	9.5	12.2	33.2	47.5	3.34
ESCRC10.0X180	33	9.5	12.2	33.2	47.5	3.34
ESCRC10.0X200	33	9.5	12.2	33.2	47.5	3.34
ESCRC10.0X220	33	9.5	12.2	33.2	47.5	3.34
ESCRC10.0X240	33	9.5	12.2	33.2	47.5	3.34
ESCRC10.0X280	33	9.5	12.2	33.2	47.5	3.34
ESCRC10.0X300	33	9.5	12.2	33.2	47.5	3.34
ESCRC10.0X320	33	9.5	12.2	33.2	47.5	3.34
ESCRC10.0X340	33	9.5	12.2	33.2	47.5	3.34
ESCRC10.0X360	33	9.5	12.2	33.2	47.5	3.34

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References	Product characteristic properties					
	Characteristic Yield Moment – $M_{y,k}$ [Nm]	Characteristic withdrawal parameter - $f_{ax,k,90°}$ [N/mm²]	Characteristic head pull-through parameter - $f_{head,k}$ [N/mm²]	Characteristic tensile capacity - $f_{tens,k}$ [kN]	Characteristic torsional strength - $f_{tor,k}$ [Nm]	Torsional ratio
ESCRC10.0X400	33	9.5	12.2	33.2	47.5	3.34

Product characteristic capacities

References	Product characteristic capacities - Timber C24 [kN]							
			Timber to timber – $R_{lat,k}$				Steel to timber – $R_{lat,k}$	
	$R_{ax,k}$ config [1]	$R_{head,k}$ config [2]	α_1=90° and α_2=0° config [3]	α_1=0° and α_2=0° config [4]	α1=90° and α2=90° config [5]	α1=0° and α2=90° config [6]	α_2=0° config [7]	α_2=90° config [8] [kN]
ESCRC5.0X50	2.04	1.46	a)	a)	a)	a)	2.25	2.3
ESCRC5.0X60	2.04	1.46	1.5	1.5	1.5	1.5	2.25	2.3
ESCRC5.0X90	3.74	1.46	1.6	1.6	1.6	1.6	2.68	2.7
ESCRC6.0X60	2.81	2.1	1.81	1.81	1.81	1.81	3.02	3
ESCRC6.0X90	3.74	2.1	2.16	2.16	2.16	2.16	3.25	3.3
ESCRC5.0X70	2.52	1.46	1.58	1.58	1.58	1.58	2.37	2.4
ESCRC6.0X70	2.81	2.1	1.96	1.96	1.96	1.96	3.02	3
ESCRC6.0X100	3.74	2.1	2.16	2.16	2.16	2.16	3.25	3.3
ESCRC6.0X160	4.99	2.1	2.16	2.16	2.16	2.16	3.57	3.6
ESCRC5.0X80	2.52	1.46	1.58	1.58	1.58	1.58	2.37	2.4
ESCRC6.0X80	3.74	2.1	1.96	1.96	1.96	1.96	3.25	3.3
ESCRC6.0X120	4.99	2.1	2.16	2.16	2.16	2.16	3.57	3.6
ESCRC6.0X180	4.99	2.1	2.16	2.16	2.16	2.16	3.57	3.6
ESCRC6.0X140	4.99	2.1	2.16	2.16	2.16	2.16	3.57	3.6
ESCRC6.0X200	4.99	2.1	2.16	2.16	2.16	2.16	3.57	3.6
ESCRC8.0X80	4.62	2.79	a)	a)	a)	a)	6.18	5.3
ESCRC8.0X100	4.62	2.79	3.68	4.25	3.5	3.9	6.18	5.3
ESCRC8.0X120	4.62	2.79	3.9	4.25	3.63	3.9	6.18	5.3
ESCRC8.0X140	7.19	2.79	3.9	4.25	3.63	3.9	6.82	5.9
ESCRC8.0X160	7.19	2.79	3.9	4.25	3.63	3.9	6.82	5.9
ESCRC8.0X180	8.56	2.79	3.9	4.25	3.63	3.9	7.17	6.3
ESCRC8.0X200	8.56	2.79	3.9	4.25	3.63	3.9	7.17	6.3
ESCRC8.0X220	8.56	2.79	3.9	4.25	3.63	3.9	7.17	6.3
ESCRC8.0X240	8.56	2.79	3.9	4.25	3.63	3.9	7.17	6.3
ESCRC8.0X260	8.56	2.79	3.9	4.25	3.63	3.9	7.17	6.3
ESCRC8.0X280	8.56	2.79	3.9	4.25	3.63	3.9	7.17	6.3
ESCRC8.0X300	8.56	2.79	3.9	4.25	3.63	3.9	7.17	6.3
ESCRC8.0X320	8.56	2.79	3.9	4.25	3.63	3.9	7.17	6.3
ESCRC8.0X340	8.56	2.79	3.9	4.25	3.63	3.9	7.17	6.3
ESCRC8.0X360	8.56	2.79	3.9	4.25	3.63	3.9	7.17	6.3
ESCRC8.0X400	8.56	2.79	3.9	4.25	3.63	3.9	7.17	6.3
ESCRC10.0X120	5.7	4.18	5.29	5.79	4.92	5.29	8.14	6.9
ESCRC10.0X140	5.7	4.18	5.29	5.79	4.92	5.29	8.14	6.9
ESCRC10.0X160	9.5	4.18	5.29	5.79	4.92	5.29	9.09	7.9
ESCRC10.0X180	9.5	4.18	5.29	5.79	4.92	5.29	9.09	7.9
ESCRC10.0X200	9.5	4.18	5.29	5.79	4.92	5.29	9.09	7.9
ESCRC10.0X220	9.5	4.18	5.29	5.79	4.92	5.29	9.09	7.9
ESCRC10.0X240	9.5	4.18	5.29	5.79	4.92	5.29	9.09	7.9
ESCRC10.0X280	9.5	4.18	5.29	5.79	4.92	5.29	9.09	7.9
ESCRC10.0X300	9.5	4.18	5.29	5.79	4.92	5.29	9.09	7.9
ESCRC10.0X320	9.5	4.18	5.29	5.79	4.92	5.29	9.09	7.9
ESCRC10.0X340	9.5	4.18	5.29	5.79	4.92	5.29	9.09	7.9
ESCRC10.0X360	9.5	4.18	5.29	5.79	4.92	5.29	9.09	7.9
ESCRC10.0X400	9.5	4.18	5.29	5.79	4.92	5.29	9.09	7.9

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a) The thickness of the secondary member is not sufficient according to ETA-13/0796 annex 7 table A6.9, so no values are given for these dimensions in case of wood to wood connection. For Steel to wood connection no minimal thickness is defined.

- The tension resistance of the thread have been calculated with an angle between 45° and 90° compared with the grain.
- The geometry and mechanical properties are defined in ETA-13/0769.
- The values are for a timber class C24 ρ = 350 kg/m³.
- The thickness of the secondary member (AD) has been chosen equal to the length of the smooth part.
- All values have been calculated with a thread totally drown in the primary member.
- For connection steel to timber, the thickness of the steel plate is equal to the diameter for calculation.
- Subject to setting and printing error.
- The values given are available to help the design. Projects must be carried out exclusively by duly licensed professionals.

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