

# R-CS-WH Timber screws with wafer head

High reliability hardened screws for timber constructions



## Approvals and Reports

- ETA 17/0023



## Product information

### Features and benefits

- Easy to screw-in
- The partial thread on the shaft of the screw allows multiple elements to be clamped together securely without separation
- Notched thread and wax coating for reduced friction
- Crack avoidance
- Power and battery saving application
- Yellow or white zinc plated version
- TX drive guarantees secure transmission of screw-in torque and no pop-out of the bit
- Wide washer head for better pull-through resistance

### Applications

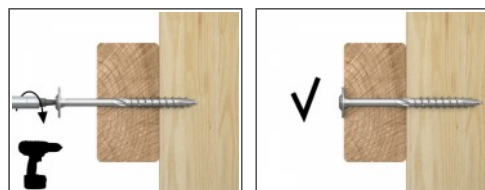
- Fastening timber and wood construction elements
- Rafter fastening to the purlins
- Fastening chipboards to wooden elements
- General wood joints
- Pergolas, bowers, sheds

### Base materials

Approved for use in:

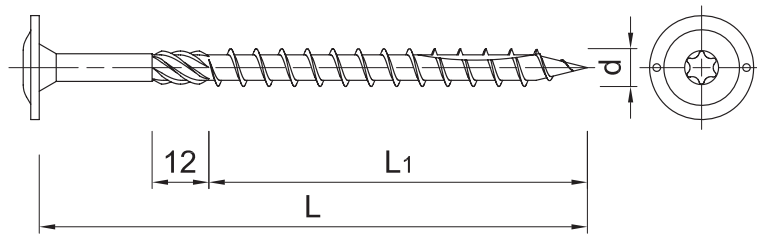
- Wood
- Timber

## Installation guide



1. Choose the right length of the screw
2. Drive the screw straight until the head is flush
3. Screws with partial thread can clamp wooden parts avoiding spaces between them
4. Screws with countersunk head allow flush connection
5. Washer head effects on high pull-through resistance

## Product information



Size	Product Code	Screw			Screw drive
		Diameter	Length		
		d [mm]	L [mm]	L1 [mm]	
6,0	R-CS-60080-WH	6	80	50	T30
	R-CS-60100-WH	6	100	50	T30
	R-CS-60120-WH	6	120	75	T30
	R-CS-60140-WH	6	140	75	T30
	R-CS-60160-WH	6	160	75	T30
	R-CS-60180-WH	6	180	75	T30
	R-CS-60200-WH	6	200	75	T30
	R-CS-60220-WH	6	220	75	T30
	R-CS-60240-WH	6	240	75	T30
	R-CS-60080-WH-W	6	80	50	T30
	R-CS-60100-WH-W	6	100	50	T30
	R-CS-60120-WH-W	6	120	75	T30
	R-CS-60140-WH-W	6	140	75	T30
	8,0	R-CS-80080-WH	8	80	52
R-CS-80100-WH		8	100	52	T40
R-CS-80120-WH		8	120	80	T40
R-CS-80140-WH		8	140	80	T40
R-CS-80160-WH		8	160	80	T40
R-CS-80180-WH		8	180	80	T40
R-CS-80200-WH		8	200	80	T40
R-CS-80220-WH		8	220	80	T40
R-CS-80240-WH		8	240	80	T40
R-CS-80260-WH		8	260	80	T40
R-CS-80280-WH		8	280	80	T40
R-CS-80300-WH		8	300	80	T40
R-CS-80320-WH		8	320	80	T40
R-CS-80340-WH		8	340	80	T40
R-CS-80360-WH		8	360	80	T40
R-CS-80380-WH		8	380	80	T40
R-CS-80400-WH		8	400	80	T40
R-CS-80100-WH-W		8	100	52	T40
R-CS-80120-WH-W		8	120	80	T40
R-CS-80340-WH-W		8	340	80	T40
R-CS-80380-WH-W	8	380	80	T40	
R-CS-80400-WH-W	8	400	80	T40	
10,0	R-CS-10120-WH	10	120	80	T40
	R-CS-10140-WH	10	140	80	T40
	R-CS-10160-WH	10	160	80	T40
	R-CS-10180-WH	10	180	80	T40
	R-CS-10200-WH	10	200	80	T40
	R-CS-10220-WH	10	220	80	T40
	R-CS-10240-WH	10	240	80	T40
	R-CS-10260-WH	10	260	80	T40
	R-CS-10280-WH	10	280	80	T40
R-CS-10300-WH	10	300	80	T40	

## Product information

Size	Product Code	Screw			Screw drive
		Diameter	Length		
		d [mm]	L [mm]	L1 [mm]	-
10,0	R-CS-10320-WH	10	320	80	T40
	R-CS-10340-WH	10	340	80	T40
	R-CS-10360-WH	10	360	80	T40
	R-CS-10380-WH	10	380	80	T40
	R-CS-10400-WH	10	400	80	T40
	R-CS-10120-WH-W	10	120	80	T40
	R-CS-10140-WH-W	10	140	80	T40
	R-CS-10160-WH-W	10	160	80	T40
	R-CS-10180-WH-W	10	180	80	T40
	R-CS-10220-WH-W	10	220	80	T40
	R-CS-10240-WH-W	10	240	80	T40
	R-CS-10340-WH-W	10	340	80	T40
	R-CS-10360-WH-W	10	360	80	T40
	R-CS-10380-WH-W	10	380	80	T40
R-CS-10400-WH-W	10	400	80	T40	

## Installation data

Size			Ø6	Ø8	Ø10
Substrate			Timber	Timber	Timber
Min. installation depth	$h_{nom}$	[mm]	24	32	40
Min. substrate thickness	$h_{min}$	[mm]	48	64	80
Min. spacing	$s_{min}$	[mm]	30	30	30
Min. edge distance	$c_{min}$	[mm]	30	30	30
Screw drive	-		T30	T40	T40

## Basic performance data

Performance data for single anchor without influence of edge distance and spacing

Size			Ø6	Ø8	Ø10
Characteristic yield moment	$M_{y,k}$	[Nmm]	1244	28080	46966
Characteristic pull-out strength (perpendicular to grain)	$f_{ax,k}$	[N/mm <sup>2</sup> ]	11.59	16.82	22.47
Characteristic pull-out strength (parallel to grain)	$f_{ax,k}$	[N/mm <sup>2</sup> ]	6.71	9.9	10.42
Characteristic head pull-through strength	$f_{head,k}$	[N/mm <sup>2</sup> ]	16.74	23.65	20.87
Characteristic tensile strength	$f_{tens,k}$	[kN]	9.59	17.49	26.76
Characteristic torsional strength	$f_{tor,k}$	[Nm]	9.65	29.94	27.83
Characteristic ratio of moments (the ratio of torque and characteristic resistance)	$f_{tor,k} / R_{tor,k}$	[-]	2.21	4.31	1.76

## Product commercial data

Product Code	Screw		Quantity [pcs]			Weight [kg]			Bar Codes
	Length [mm]		Box	Outer	Pallet	Box	Outer	Pallet	
R-CS-60080-WH	80	50	100	1200	38400	0.99	11.9	410.2	5906675389011
R-CS-60100-WH	100	50	100	1200	38400	1.22	14.7	499.6	5906675389042
R-CS-60120-WH	120	75	100	1200	38400	1.44	17.2	581.0	5906675389073
R-CS-60140-WH	140	75	100	1200	38400	1.64	19.6	657.8	5906675389097
R-CS-60160-WH	160	75	100	1200	38400	1.92	23.0	767.3	5906675422534
R-CS-60180-WH	180	75	100	800	25600	2.2	17.3	583.0	5906675422541

## Product commercial data

Product Code	Screw		Quantity [pcs]			Weight [kg]			Bar Codes
	Length [mm]		Box	Outer	Pallet	Box	Outer	Pallet	
R-CS-60200-WH	200	75	100	800	25600	2.4	18.9	634.2	5906675422558
R-CS-60220-WH	220	75	100	800	25600	2.6	20.5	685.4	5906675422565
R-CS-60240-WH	240	75	100	800	25600	2.8	22.2	739.1	5906675422572
R-CS-60080-WH-W	80	50	100	1200	38400	0.99	11.9	410.2	5906675389028
R-CS-60100-WH-W	100	50	100	1200	38400	1.22	14.7	499.6	5906675389059
R-CS-60120-WH-W	120	75							
R-CS-60140-WH-W	140	75							
R-CS-80080-WH	80	52	50	600	14400	1.16	13.9	363.7	5906675077512
R-CS-80100-WH	100	52	50	600	14400	1.38	16.6	427.2	5906675077529
R-CS-80120-WH	120	80	50	600	14400	1.58	19.0	485.1	5906675077536
R-CS-80140-WH	140	80	50	600	14400	1.79	21.5	546.7	5906675077543
R-CS-80160-WH	160	80	50	600	14400	2.0	24.2	609.7	5906675077550
R-CS-80180-WH	180	80	50	400	9600	2.3	18.1	463.6	5906675077567
R-CS-80200-WH	200	80	50	400	9600	2.3	18.5	474.5	5906675077574
R-CS-80220-WH	220	80	50	400	9600	2.6	20.9	531.8	5906675077581
R-CS-80240-WH	240	80	50	400	9600	2.8	22.4	566.4	5906675077598
R-CS-80260-WH	260	80	50	400	9600	2.9	23.4	590.7	5906675077604
R-CS-80280-WH	280	80	50	50	6400	3.2	3.2	443.2	5906675077611
R-CS-80300-WH	300	80	50	50	6400	3.4	3.4	469.3	5906675077628
R-CS-80320-WH	320	80	50	50	6400	3.7	3.7	509.0	5906675077635
R-CS-80340-WH	340	80	25	25	3200	2.1	2.1	296.0	5906675077642
R-CS-80360-WH	360	80	25	25	3200	2.2	2.2	310.3	5906675077659
R-CS-80380-WH	380	80	25	25	4550	2.2	2.2	438.2	5906675077666
R-CS-80400-WH	400	80	25	25	4550	2.4	2.4	457.9	5906675077673
R-CS-80100-WH-W	100	52	50	600	12000	1.38	16.6	361.5	5906675230061
R-CS-80120-WH-W	120	80	50	600	15000	1.57	18.9	502.3	5906675230078
R-CS-80340-WH-W	340	80	25	25	3200	2.1	2.1	297.3	5906675230191
R-CS-80380-WH-W	380	80	25	25	4550	2.2	2.2	438.2	5906675230214
R-CS-80400-WH-W	400	80	25	25	4550	2.4	2.4	461.5	5906675230238
R-CS-10120-WH	120	80	50	50	8400	1.92	1.92	352.6	5906675388717
R-CS-10140-WH	140	80	50	50	8400	2.2	2.2	405.5	5906675388748
R-CS-10160-WH	160	80	50	50	8400	2.8	2.8	497.3	5906675428550
R-CS-10180-WH	180	80	50	50	8400	3.1	3.1	557.7	5906675428567
R-CS-10200-WH	200	80	50	50	8400	3.1	3.1	557.5	5906675388779
R-CS-10220-WH	220	80	50	50	8400	3.7	3.7	650.6	5906675428574
R-CS-10240-WH	240	80	50	50	8400	4.0	4.0	704.3	5906675428581
R-CS-10260-WH	260	80	50	50	5600	4.1	4.1	487.5	5906675388847
R-CS-10280-WH	280	80	50	50	5600	4.6	4.6	543.4	5906675428598
R-CS-10300-WH	300	80	50	50	5600	4.9	4.9	577.6	5906675428604
R-CS-10320-WH	320	80	50	50	5600	5.2	5.2	613.9	5906675428611
R-CS-10340-WH	340	80	25	25	4550	2.8	2.8	532.3	5906675428635
R-CS-10360-WH	360	80	25	25	4550	2.9	2.9	560.8	5906675428642
R-CS-10380-WH	380	80	25	25	4550	3.1	3.1	586.6	5906675428659
R-CS-10400-WH	400	80	25	25	4550	3.2	3.2	613.3	5906675428666
R-CS-10120-WH-W	120	80	50	50	8400	1.92	1.92	352.6	5906675388724
R-CS-10140-WH-W	140	80	50	50	8400	2.2	2.2	405.5	5906675388755
R-CS-10160-WH-W	160	80							
R-CS-10180-WH-W	180	80							
R-CS-10220-WH-W	220	80	50	50	8400	3.4	3.4	604.4	5906675388809
R-CS-10240-WH-W	240	80	50	50	8400	3.7	3.7	658.2	5906675388823
R-CS-10340-WH-W	340	80	25	25	4550	2.7	2.7	524.1	5906675388939
R-CS-10360-WH-W	360	80	25	25	4550	2.9	2.9	556.9	5906675388953
R-CS-10380-WH-W	380	80	25	25	4550	3.1	3.1	597.1	5906675388977
R-CS-10400-WH-W	400	80	25	25	4550	3.3	3.3	631.2	5906675388991

1) ETA 17/0023