

DECLARATION of PERFORMANCE

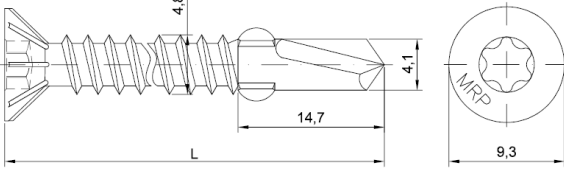
No 01/BSZ/0371/2021



1. *Unique identification code of the product-type:* **BSZ**
2. *Intended use:* **BSZ self-drilling screws are intended to be used for fastening steel sheeting to steel supporting structures.**
3. *Name, registered trade name or registered trade mark and contact address of the manufacturer:* **Marcopol Sp. z o.o. Producer of Bolts str. Oliwska 100, 80-209 Chwaszczyno Poland**
4. *System or systems of assessment and verification of constancy of performance of the construction product:* **System "2+" of assessment**
5. *European Technical Assessment:* **ETA 18/0371 issued 11.04.2021**
Technical Assessment Body: **Technický a zkušební ústav stavební Praha, s.p.**
Notified Body: **Number: 1020 - Technický a zkušební ústav stavební Praha, s.p.**
6. *Declared performance:*

	Essential characteristics	Performance	Technical specification
3.1 BWR 1: Mechanical resistance and stability			
3.1.1	Characteristic Shear Resistance of the Connection	See Table 1 ÷ 3 below	ETA 18/0371
3.1.2	Characteristic Tension Resistance of the Connection	See Table 1 ÷ 3 below	ETA 18/0371
3.1.3	Design Resistance in case of combined Tension and Shear Forces (interaction)	No performance assessed	ETA 18/0371
3.1.4	Check of Deformation Capacity in case of constraining forces due to temperature	No performance assessed	ETA 18/0371
3.1.5	Durability		
	Zinc coating min. 5 mikron	Category C1	ETA 18/0371
3.2 BWR 2: Safety in case of fire			
3.2.1	Reaction to fire	The performance of the product is class A1	EN 13501-1

Table 1: Characteristic Tension Resistance $N_{R,k}$ and Shear Resistance $V_{R,k}$ [kN]

	Materials Fastener: carbon steel – SAE1022 quenched, tempered and galvanized ($\geq 5\mu\text{m}$) Washer: - Component I: S280GD, S320GD or S350GD – EN 10346 Component II: S280GD, S320GD or S350GD – EN 10346 S235 – EN 10025-1
	Drilling capacity: $\Sigma t_i \leq 3,00 \text{ mm}$
	Timber substructures: no performance determined

$t_{N,II}$ [mm]	0,75	0,88	1,00	1,13	1,25	1,50	2,00	3,00	Wood class \geq C24		
$M_{t,nom}$	3 Nm								—	—	
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,22	0,22	0,22	0,22	0,22	0,22	1,42	1,42	—	—	*bearing resistance of component I **bearing resistance of component II
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,22	0,22	0,22	0,22	0,22	0,22	1,42	1,42	—	—	*bearing resistance of component II **bearing resistance of component I

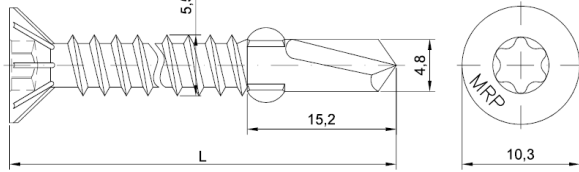
If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
 If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

BSZ fastening screws for metal members and sheeting

BSZ 4,8 × L
 with countersunk head

Table 1

Table 2: Characteristic Tension Resistance $N_{R,k}$ and Shear Resistance $V_{R,k}$ [kN]



Materials
 Fastener: carbon steel – SAE1022
 quenched, tempered and galvanized ($\geq 5\mu\text{m}$)
 Washer: -
 Component I: S280GD, S320GD or S350GD – EN 10346
 Component II: S280GD, S320GD or S350GD – EN 10346
 S235 – EN 10025-1

Drilling capacity: $\Sigma t_i \leq 5,00$ mm

Timber substructures
 no performance determined

$t_{N,II}$ [mm]	0,75	1,00	1,25	1,50	2,00	3,00	4,00	5,00	Wood class \geq C24		
$M_{t,nom}$	5 Nm										
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,31	0,31	0,31	0,31	0,31	3,15	3,15	3,15	—	—	* bearing resistance of component I ** bearing resistance of component II
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,31	0,31	0,31	0,31	0,31	3,15	3,15	3,15	—	—	* bearing resistance of component II ** bearing resistance of component I

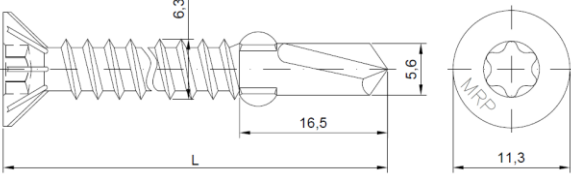
If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
 If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

BSZ fastening screws for metal members and sheeting

BSZ 5,5 × L
 with countersunk head

Table 2

Table 3: Characteristic Tension Resistance $N_{R,k}$ and Shear Resistance $V_{R,k}$ [kN]

	Materials Fastener: carbon steel – SAE1022 quenched, tempered and galvanized ($\geq 5\mu\text{m}$) Washer: - Component I: S280GD, S320GD or S350GD – EN 10346 Component II: S280GD, S320GD or S350GD – EN 10346 S235 – EN 10025-1
	Drilling capacity: $\Sigma t_i \leq 6,00$ mm
	Timber substructures no performance determined

$t_{N,II}$ [mm]	0,75	1,00	1,50	2,00	3,00	4,00	5,00	6,00	Wood class \geq C24			
$M_{t,nom}$	6 Nm											
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,60	0,60	0,60	0,60	4,82	4,82	4,82	4,82	—	—	* bearing resistance of component I ** bearing resistance of component II	
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,60	0,60	0,60	0,60	4,82	4,82	4,82	4,82	—	—	* bearing resistance of component II ** bearing resistance of component I	

If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
 If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

BSZ fastening screws for metal members and sheeting

BSZ 6,3 × L
 with countersunk head

Table 3

7. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 6

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 3.

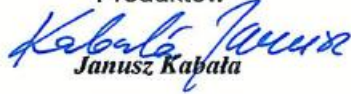
Chwaszczyno, 30.11.2021

Signed by:

R&D Director

Janusz Kabała

Dyrektor Działu Rozwoju
Produktów



Janusz Kabała
Janusz Kabała