

DECLARATION of PERFORMANCE

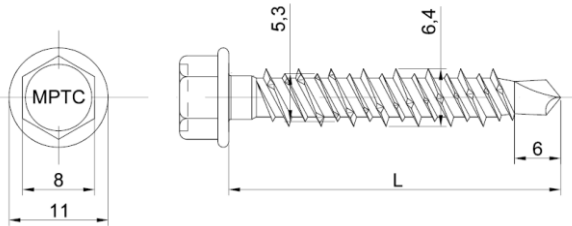
No 02/MPTC/0371/2022



1. *Unique identification code of the product-type:* **MPTC**
2. *Intended use:* **MPTC self-drilling screws are intended to be used for fastening steel sheeting to steel and timber 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 ÷ 4 below	ETA 18/0371
3.1.2	Characteristic Tension Resistance of the Connection	see Table 1 ÷ 4 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.12 mikron	Category C1	ETA 18/0371
	Ceramic coating Ruspert Silver	according to individual Producer documentation	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 (Ruspert Silver) Washer: - Component I: S280GD, S320GD or S350GD – EN 10346 Component II: structural timber – EN 14081
	Drilling capacity: -
	Timber substructures For timber substructures performance determined with $M_{y,Rk} = 9,28 \text{ Nm}$ $f_{ax,k} = 15,76 \text{ N/mm}^2$ for $l_{ef} \geq 30 \text{ mm}$

$t_{N,II}$ [mm]	0,75	0,88	1,00	1,13	1,25	1,50	2,00	3,00	Wood class $\geq C24$		
$M_{t,nom}$	7 Nm								30 mm	40 mm	
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,75	0,88	1,00	1,13	1,25	1,50	2,00	3,00	0,96	0,96	*bearing resistance of component I **bearing resistance of component II
	0,88	—	—	—	—	—	—	—	1,18	1,18	
	1,00	—	—	—	—	—	—	—	1,42	1,42	
	1,13	—	—	—	—	—	—	—	1,42	1,42	
	1,25	—	—	—	—	—	—	—	1,44	1,44	
	1,50	—	—	—	—	—	—	—	1,44	1,44	
	1,75	—	—	—	—	—	—	—	—	—	
	2,00	—	—	—	—	—	—	—	—	—	
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,75	0,88	1,00	1,13	1,25	1,50	2,00	3,00	1,60*	1,60*	*bearing resistance of component II **bearing resistance of component I
	0,88	—	—	—	—	—	—	—	1,96*	1,96*	
	1,00	—	—	—	—	—	—	—	2,14*	2,14*	
	1,13	—	—	—	—	—	—	—	2,14*	2,14*	
	1,25	—	—	—	—	—	—	—	2,17*	2,17*	
	1,50	—	—	—	—	—	—	—	2,17*	2,17*	
	1,75	—	—	—	—	—	—	—	—	—	
	2,00	—	—	—	—	—	—	—	—	—	

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

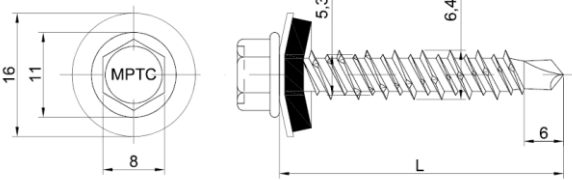
If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

MPTC fastening screws for metal members and sheeting

MPTC 6,4 × L
with hexagon 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 (Ruspert Silver) Washer: EPDM sealing ring with metal top made of coated carbon steel Component I: S280GD, S320GD or S350GD – EN 10346 Component II: structural timber – EN 14081
	Drilling capacity: -
	Timber substructures For timber substructures performance determined with $M_{y,Rk} = 9,28 \text{ Nm}$ $f_{ax,k} = 15,76 \text{ N/mm}^2$ for $l_{ef} \geq 30 \text{ mm}$

$t_{N,II}$ [mm]	0,75	0,88	1,00	1,13	1,25	1,50	2,00	3,00	Wood class \geq C24		
$M_{t,nom}$	7 Nm								30 mm	40 mm	
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,75	0,88	1,00	1,13	1,25	1,50	2,00	3,00	0,96	0,96	*bearing resistance of component I **bearing resistance of component II
	—	—	—	—	—	—	—	—	1,18	1,18	
	—	—	—	—	—	—	—	—	1,42	1,42	
	—	—	—	—	—	—	—	—	1,42	1,42	
	—	—	—	—	—	—	—	—	1,44	1,44	
	—	—	—	—	—	—	—	—	1,44	1,44	
	—	—	—	—	—	—	—	—	—	—	
	—	—	—	—	—	—	—	—	—	—	
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,75	0,88	1,00	1,13	1,25	1,50	2,00	3,00	3,03**	3,44*	*bearing resistance of component II **bearing resistance of component I
	—	—	—	—	—	—	—	—	3,03**	3,84**	
	—	—	—	—	—	—	—	—	3,03**	3,84**	
	—	—	—	—	—	—	—	—	3,03**	3,84**	
	—	—	—	—	—	—	—	—	3,03**	3,84**	
	—	—	—	—	—	—	—	—	3,03**	3,84**	
	—	—	—	—	—	—	—	—	—	—	
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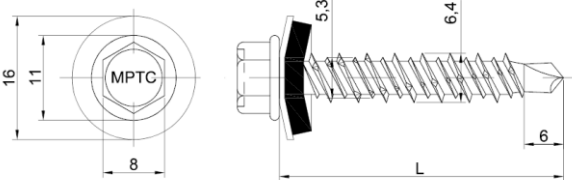
If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
 If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

MPTC fastening screws for metal members and sheeting

MPTC 6,4 × L + S16
 with hexagon head and sealing washer $\geq \text{Ø}16 \text{ mm}$
 with metal top made of coated carbon steel

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 (Ruspert Silver) Washer: EPDM sealing ring with metal top made of stainless steel Component I: S280GD, S320GD or S350GD – EN 10346 Component II: structural timber – EN 14081
	Drilling capacity: -
	Timber substructures For timber substructures performance determined with $M_{y,Rk} = 9,28 \text{ Nm}$ $f_{ax,k} = 15,76 \text{ N/mm}^2$ for $l_{ef} \geq 30 \text{ mm}$

$t_{N,II}$ [mm]	0,75	0,88	1,00	1,13	1,25	1,50	2,00	3,00	Wood class \geq C24		
$M_{t,nom}$	7 Nm								30 mm	40 mm	
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,75	0,88	1,00	1,13	1,25	1,50	2,00	3,00	0,96	0,96	*bearing resistance of component I **bearing resistance of component II
	—	—	—	—	—	—	—	—	1,18	1,18	
	—	—	—	—	—	—	—	—	1,42	1,42	
	—	—	—	—	—	—	—	—	1,42	1,42	
	—	—	—	—	—	—	—	—	1,44	1,44	
	—	—	—	—	—	—	—	—	1,44	1,44	
	—	—	—	—	—	—	—	—	—	—	
	—	—	—	—	—	—	—	—	—	—	
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,75	0,88	1,00	1,13	1,25	1,50	2,00	3,00	3,03**	3,44*	*bearing resistance of component II **bearing resistance of component I
	—	—	—	—	—	—	—	—	3,03**	3,84**	
	—	—	—	—	—	—	—	—	3,03**	3,84**	
	—	—	—	—	—	—	—	—	3,03**	3,84**	
	—	—	—	—	—	—	—	—	3,03**	3,84**	
	—	—	—	—	—	—	—	—	3,03**	3,84**	
	—	—	—	—	—	—	—	—	—	—	
	—	—	—	—	—	—	—	—	—	—	

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

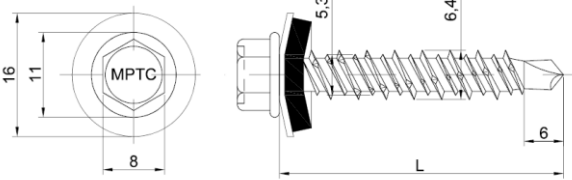
 If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

MPTC fastening screws for metal members and sheeting

MPTC 6,4 × L + I16
 with hexagon head and sealing washer $\geq \text{Ø}16 \text{ mm}$
 with metal top made of stainless steel

Table 3

Table 4: Characteristic Tension Resistance $N_{R,k}$ and Shear Resistance $V_{R,k}$ [kN]

	Materials Fastener: carbon steel – SAE1022 quenched, tempered and galvanized (Ruspert Silver) Washer: EPDM sealing ring with metal top made of aluminum Component I: S280GD, S320GD or S350GD – EN 10346 Component II: structural timber – EN 14081
	Drilling capacity: -
	Timber substructures For timber substructures performance determined with $M_{y,Rk} = 9,28 \text{ Nm}$ $f_{ax,k} = 15,76 \text{ N/mm}^2$ for $l_{ef} \geq 30 \text{ mm}$

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$M_{t,nom}$	7 Nm								30 mm	40 mm	
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,75	0,88	1,00	1,13	1,25	1,50	1,75	2,00	0,96	0,96	*bearing resistance of component I **bearing resistance of component II
	—	—	—	—	—	—	—	—	1,18	1,18	
	—	—	—	—	—	—	—	—	1,42	1,42	
	—	—	—	—	—	—	—	—	1,42	1,42	
	—	—	—	—	—	—	—	—	1,44	1,44	
	—	—	—	—	—	—	—	—	1,44	1,44	
	—	—	—	—	—	—	—	—	—	—	
	—	—	—	—	—	—	—	—	—	—	
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,75	0,88	1,00	1,13	1,25	1,50	1,75	2,00	3,03**	3,44*	*bearing resistance of component II **bearing resistance of component I
	—	—	—	—	—	—	—	—	3,03**	3,84**	
	—	—	—	—	—	—	—	—	3,03**	3,84**	
	—	—	—	—	—	—	—	—	3,03**	3,84**	
	—	—	—	—	—	—	—	—	3,03**	3,84**	
	—	—	—	—	—	—	—	—	3,03**	3,84**	
	—	—	—	—	—	—	—	—	—	—	
	—	—	—	—	—	—	—	—	—	—	

If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
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MPTC fastening screws for metal members and sheeting

MPTC 6,4 × L + A16
 with hexagon head and sealing washer $\geq \text{Ø}16 \text{ mm}$
 with metal top made of aluminum

Table 4

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, 14.01.2022

Signed by:

R&D Director

Janusz Kabała

Dyrektor Działu Rozwoju
Produktów



Janusz Kabała
Janusz Kabała