

DECLARATION of PERFORMANCE

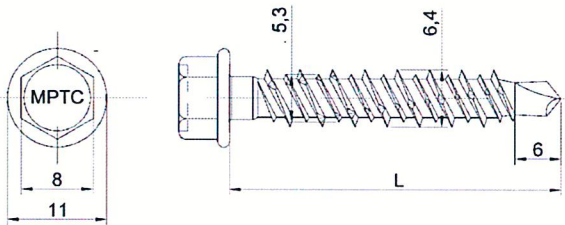
No 01/MPTC/0371/2019



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 15.02.2019**
Technical Assessment Body: **Technický a zkušební ústav stavební Praha, s.p.**
Notified Body: **Number: 1488 - Instytut Techniki Budowlanej**
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.	Durability		
	Zinc coating min.12 mikron	Category C1	EN 1993-1-3; EN 1993-1-4; EN 1999-1-4
	Ceramic coating Ruspert Silver	according to individual Producer documentation	EN ISO 12944-2
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
3.3 BWR 3: Hygiene, health and the environment			
3.3.1.	Content, emission and/or release of dangerous substances	Content of dangerous substances less than 0,1%	EU Regulation REACH 1907/2006

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_{Lnom}	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	—	—	—	—	—	—	—	—	1,60*	1,60*	*bearing resistance of component II ** bearing resistance of component I
	—	—	—	—	—	—	—	—	1,96*	1,96*	
	—	—	—	—	—	—	—	—	2,14*	2,14*	
	—	—	—	—	—	—	—	—	2,14*	2,14*	
	—	—	—	—	—	—	—	—	2,17*	2,17*	
	—	—	—	—	—	—	—	—	2,17*	2,17*	
	—	—	—	—	—	—	—	—	—	—	
	—	—	—	—	—	—	—	—	—	—	

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

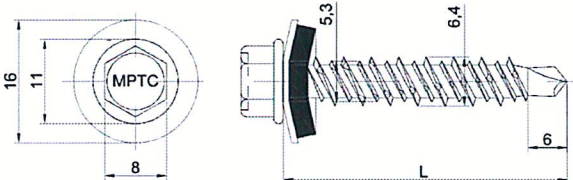
 If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

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

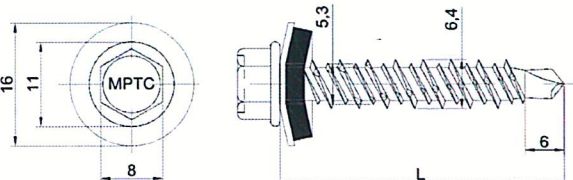
If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

MPTC fastening screws for metal members and sheeting
MPTC 6,4 × L + S16

 with hexagon head and sealing washer $\geq \varnothing 16 \text{ mm}$
 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		
$M_{L,nom}$	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%

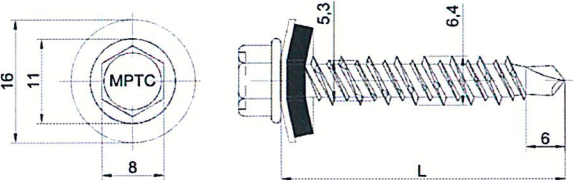
 If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

MPTC fastening screws for metal members and sheeting

MPTC 6,4 × L + I16
 with hexagon head and sealing washer $\geq \varnothing 16 \text{ mm}$
 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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$V_{R,k}$ [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 6,4 × L + A16
 with hexagon head and sealing washer $\geq \varnothing 16 \text{ mm}$
 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, 01.04.2019

Signed by:

R&D Director

Janusz Kabała

Dyrektor Działu Rozwoju
Produktów


Janusz Kabała