

DECLARATION of PERFORMANCE

No 02/MPX3/0371/2022



1. *Unique identification code of the product-type:* **MPX 3**
2. *Intended use:* **MPX 3 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		
	Stainless steel Bi-Metal with ceramic coating Ruspert Silver	Category \geq C2	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]

	<p>Materials</p> <p>Fastener: stainless steel – A2 Fastener: carbon steel - SAE1022 Washer: - Component I: S280GD, S320GD or S350GD – EN 10346 Component II: S280GD, S320GD or S350GD – EN 10346 S235 – EN 10025-1</p>
	<p>Drilling capacity: $\Sigma(t_{N2} + t_{II}) \leq 4,50$ mm</p>
	<p>Timber substructures no performance determined</p>

$t_{N,II}$ [mm]	2,00	2,50	3,00	4,00	5,00	6,00	7,00	8,00	Wood class \geq C24			
$M_{t,nom}$	3 Nm								—	—		
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,75 0,88 1,00 1,13 1,25 1,50 1,75 2,00	1,64 1,80 1,96 1,96 1,96 1,96 — —	1,64 1,80 1,96 1,96 1,96 1,96 — —	1,64 1,80 1,96 1,96 1,96 1,96 — —	— — — — — — — —	— — — — — — — —	— — — — — — — —	— — — — — — — —	— — — — — — — —	— — — — — — — —	— — — — — — — —	*bearing resistance of component I **bearing resistance of component II
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,75 0,88 1,00 1,13 1,25 1,50 1,75 2,00	1,21 1,43 1,91 1,91 2,03 — — —	1,21 1,43 1,91 1,91 2,03 — — —	1,21 1,43 1,91 1,91 2,03 — — —	— — — — — — — —	— — — — — — — —	— — — — — — — —	— — — — — — — —	— — — — — — — —	— — — — — — — —	— — — — — — — —	*bearing resistance of component II **bearing resistance of component I

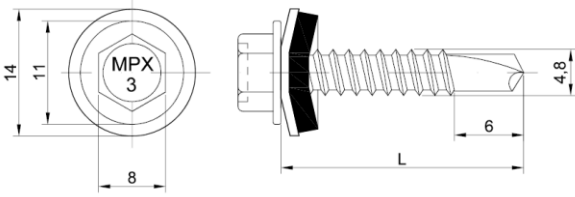
If both components I and II are made of S320GD the values $V_{R,k}$ may be increased by 8,3%
 If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

MPX 3 fastening screws for metal members and sheeting

MPX 3 4,8 × L
with hexagon head

Table 1

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

	Materials Fastener: stainless steel – A2 Fastener: carbon steel - SAE1022 Washer: EPDM sealing ring with metal top made of stainless steel Component I: S280GD, S320GD or S350GD – EN 10346 Component II: S280GD, S320GD or S350GD – EN 10346 S235 – EN 10025-1
	Drilling capacity: $\Sigma(t_{N2} + t_{II}) \leq 4,50$ mm
	Timber substructures no performance determined

$t_{N,II}$ [mm]	2,00	2,50	3,00	4,00	5,00	6,00	7,00	8,00	Wood class \geq C24		
$M_{t,nom}$	3 Nm								—	—	
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,75	1,64	1,64	1,64	—	—	—	—	—	—	*bearing resistance of component I **bearing resistance of component II
	0,88	1,80	1,80	1,80	—	—	—	—	—	—	
	1,00	1,96	1,96	1,96	—	—	—	—	—	—	
	1,13	1,96	1,96	1,96	—	—	—	—	—	—	
	1,25	1,96	1,96	1,96	—	—	—	—	—	—	
	1,50	1,96	1,96	1,96	—	—	—	—	—	—	
	1,75	—	—	—	—	—	—	—	—	—	
	2,00	—	—	—	—	—	—	—	—	—	
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,75	2,52	2,52	3,17	—	—	—	—	—	—	*bearing resistance of component II **bearing resistance of component I
	0,88	2,52	2,52	3,17	—	—	—	—	—	—	
	1,00	2,52	2,52	3,17	—	—	—	—	—	—	
	1,13	2,52	2,52	3,17	—	—	—	—	—	—	
	1,25	2,52	2,52	3,17	—	—	—	—	—	—	
	1,50	—	—	—	—	—	—	—	—	—	
	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%

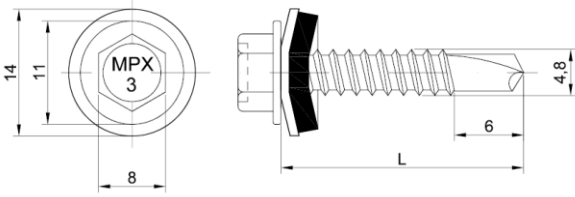
 If both components I and II are made of S350GD the values $V_{R,k}$ may be increased by 16,6%

MPX 3 fastening screws for metal members and sheeting

MPX 3 4,8 × L + I14
 with hexagon head and sealing washer $\geq \varnothing 14$ mm
 with metal top made of stainless steel

Table 2

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

	Materials Fastener: stainless steel – A2 Fastener: carbon steel - SAE1022 Washer: EPDM sealing ring with metal top made of aluminum Component I: S280GD, S320GD or S350GD – EN 10346 Component II: S280GD, S320GD or S350GD – EN 10346 S235 – EN 10025-1
	Drilling capacity: $\Sigma(t_{N2} + t_{II}) \leq 4,50$ mm
	Timber substructures no performance determined

$t_{N,II}$ [mm]	2,00	2,50	3,00	4,00	5,00	6,00	7,00	8,00	Wood class \geq C24		
$M_{t,nom}$	3 Nm								—	—	
$V_{R,k}$ [kN] for $t_{N,I}$ [mm] 0,75 0,88 1,00 1,13 1,25 1,50 1,75 2,00	1,64	1,64	1,64	—	—	—	—	—	—	—	*bearing resistance of component I ***bearing resistance of component II
	1,80	1,80	1,80	—	—	—	—	—	—	—	
	1,96	1,96	1,96	—	—	—	—	—	—	—	
	1,96	1,96	1,96	—	—	—	—	—	—	—	
	1,96	1,96	1,96	—	—	—	—	—	—	—	
	1,96	1,96	1,96	—	—	—	—	—	—	—	
	—	—	—	—	—	—	—	—	—	—	
	—	—	—	—	—	—	—	—	—	—	
$N_{R,k}$ [kN] for $t_{N,I}$ [mm] 0,75 0,88 1,00 1,13 1,25 1,50 1,75 2,00	2,52	2,52	3,17	—	—	—	—	—	—	—	*bearing resistance of component II ***bearing resistance of component I
	2,52	2,52	3,17	—	—	—	—	—	—	—	
	2,52	2,52	3,17	—	—	—	—	—	—	—	
	2,52	2,52	3,17	—	—	—	—	—	—	—	
	2,52	2,52	3,17	—	—	—	—	—	—	—	
	2,52	2,52	3,17	—	—	—	—	—	—	—	
	—	—	—	—	—	—	—	—	—	—	
	—	—	—	—	—	—	—	—	—	—	

 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%

MPX 3 fastening screws for metal members and sheeting

MPX 3 4,8 × L + A14
 with hexagon head and sealing washer $\geq \varnothing 14$ mm
 with metal top made of aluminum

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, 14.01.2022

Signed by:

R&D Director

Janusz Kabała

Dyrektor Działu Rozwoju
Produktów



Janusz Kabała
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