DECLARATION of PERFORMANCE

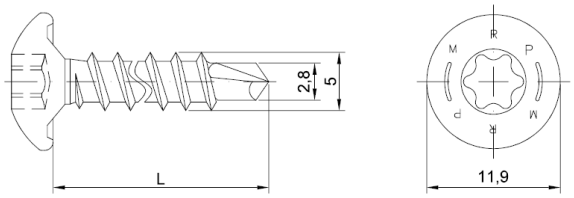
No 01/MPZ02-P/0371/2022

CE

1. *Unique identification code of the product-type*: **MPZ02 - P**
2. *Intended use:* **MPZ02 - P 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, SAE10B21, SAE10B23, 23MNB4, 19MNB4
quenched, tempered and galvanized (≥ 5 µm) or (Geomet) coating)
Washer: -
Component I: S280GD, S320GD or S350GD – EN 10346
Component II: S280GD, S320GD or S350GD – EN 10346

Drilling capacity: $\Sigma t_i \leq 2 \times 1{,}25$ mm

Timber substructures
no performance determined

$t_{N,II}$ [mm]		0,50	0,55	0,63	0,75	0,88	1,00	1,13	1,25	Wood class ≥ C24		
$M_{t,nom}$		3 Nm								—	—	
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,40	0,87	0,87	0,87	0,87	0,87	0,87	0,87	0,87	—	—	*bearing resistance of component I **bearing resistance of component II
	0,50	0,96	0,96	0,96	0,96	0,96	0,96	0,96	0,96	—	—	
	0,55	0,96	0,96	0,96	0,96	0,96	0,96	0,96	0,96	—	—	
	0,63	0,96	0,96	0,96	1,63	1,63	1,63	1,63	1,63	—	—	
	0,75	0,96	0,96	0,96	1,72	1,72	1,72	1,72	1,72	—	—	
	0,88	0,96	0,96	0,96	1,72	1,72	1,72	1,72	1,72	—	—	
	1,00	0,96	0,96	0,96	1,72	1,72	1,72	1,72	1,72	—	—	
	1,13	0,96	0,96	0,96	1,72	1,72	1,72	1,72	1,72	—	—	
	1,25	0,96	0,96	0,96	1,72	1,72	1,72	1,72	1,72	—	—	
	1,50	—	—	—	—	—	—	—	—	—	—	
	1,75	—	—	—	—	—	—	—	—	—	—	
	2,00	—	—	—	—	—	—	—	—	—	—	
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,40	0,44	0,44	0,44	0,44	0,44	0,44	0,44	0,44	—	—	*bearing resistance of component II **bearing resistance of component I
	0,50	0,48	0,48	0,48	0,53	0,53	0,53	0,53	0,53	—	—	
	0,55	0,48	0,48	0,48	0,53	0,53	0,53	0,53	0,53	—	—	
	0,63	0,48	0,48	0,48	0,53	0,53	0,53	0,53	0,53	—	—	
	0,75	0,48	0,48	0,48	0,75	0,75	0,75	0,75	0,75	—	—	
	0,88	0,48	0,48	0,48	0,75	0,75	0,75	0,75	0,75	—	—	
	1,00	0,48	0,48	0,48	0,75	0,75	0,75	0,75	0,75	—	—	
	1,13	0,48	0,48	0,48	0,75	0,75	0,75	0,75	0,75	—	—	
	1,25	0,48	0,48	0,48	0,75	0,75	0,75	0,75	0,75	—	—	
	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%

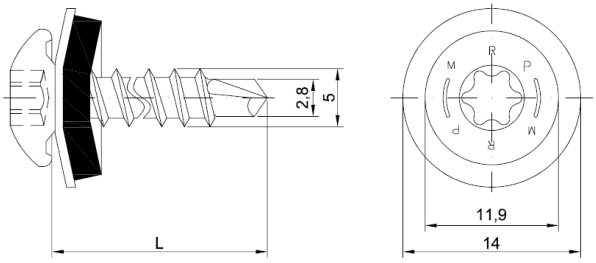
MPZ02-P fastening screws for metal members and sheeting

MPZ02-P 4,8 × L

with pan head

Table 1

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



Materials
Fastener: carbon steel – SAE1022, SAE10B21, SAE10B23, 23MNB4, 19MNB4 quenched, tempered and galvanized (≥ 5 µm) or Geomet coating
Washer: EPDM sealing ring with metal top made of pregalvanized carbon steel
Component I: S280GD, S320GD or S350GD – EN 10346
Component II: S280GD, S320GD or S350GD – EN 10346

Drilling capacity: $\Sigma t_i \leq 2 \times 1{,}25$ mm

Timber substructures
no performance determined

$t_{N,II}$ [mm]		0,50	0,55	0,63	0,75	0,88	1,00	1,13	1,25	Wood class ≥ C24		
$M_{t,nom}$		3 Nm								—	—	
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,40	0,87	0,87	0,87	0,87	0,87	0,87	0,87	0,87	—	—	*bearing resistance of component I **bearing resistance of component II
	0,50	0,96	0,96	0,96	0,96	0,96	0,96	0,96	0,96	—	—	
	0,55	0,96	0,96	0,96	0,96	0,96	0,96	0,96	0,96	—	—	
	0,63	0,96	0,96	0,96	1,63	1,63	1,63	1,63	1,63	—	—	
	0,75	0,96	0,96	0,96	1,72	1,72	1,72	1,72	1,72	—	—	
	0,88	0,96	0,96	0,96	1,72	1,72	1,72	1,72	1,72	—	—	
	1,00	0,96	0,96	0,96	1,72	1,72	1,72	1,72	1,72	—	—	
	1,13	0,96	0,96	0,96	1,72	1,72	1,72	1,72	1,72	—	—	
	1,25	0,96	0,96	0,96	1,72	1,72	1,72	1,72	1,72	—	—	
	1,50	—	—	—	—	—	—	—	—	—	—	
	1,75	—	—	—	—	—	—	—	—	—	—	
	2,00	—	—	—	—	—	—	—	—	—	—	
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,40	0,48	0,48	0,48	0,75	0,75	0,75	0,75	0,75	—	—	*bearing resistance of component II **bearing resistance of component I
	0,50	0,48	0,48	0,48	0,75	0,75	0,75	0,75	0,75	—	—	
	0,55	0,48	0,48	0,48	0,75	0,75	0,75	0,75	0,75	—	—	
	0,63	0,48	0,48	0,48	0,75	0,75	0,75	0,75	0,75	—	—	
	0,75	0,48	0,48	0,48	0,75	0,75	0,75	0,75	0,75	—	—	
	0,88	0,48	0,48	0,48	0,75	0,75	0,75	0,75	0,75	—	—	
	1,00	0,48	0,48	0,48	0,75	0,75	0,75	0,75	0,75	—	—	
	1,13	0,48	0,48	0,48	0,75	0,75	0,75	0,75	0,75	—	—	
	1,25	0,48	0,48	0,48	0,75	0,75	0,75	0,75	0,75	—	—	
	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%

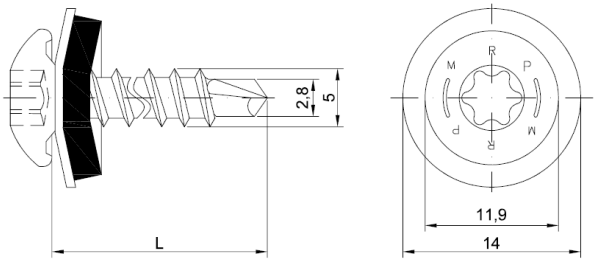
MPZ02-P fastening screws for metal members and sheeting

MPZ02-P 4,8 × L + S12 or 14

with pan head and sealing washer ø12 or 14 mm
with metal top made of pregalvanized carbon steel

Table 2

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



Materials
Fastener: carbon steel – SAE1022, SAE10B21, SAE10B23, 23MNB4, 19MNB4 quenched, tempered and galvanized (≥ 5 µm) (Geomet coating)
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

Drilling capacity: $\Sigma t_i \leq 2 \times 1{,}25$ mm

Timber substructures
no performance determined

$t_{N,II}$ [mm]		0,50	0,55	0,63	0,75	0,88	1,00	1,13	1,25	Wood class ≥ C24		
$M_{t,nom}$		3 Nm								—	—	
$V_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,40	0,87	0,87	0,87	0,87	0,87	0,87	0,87	0,87	—	—	*bearing resistance of component I **bearing resistance of component II
	0,50	0,96	0,96	0,96	0,96	0,96	0,96	0,96	0,96	—	—	
	0,55	0,96	0,96	0,96	0,96	0,96	0,96	0,96	0,96	—	—	
	0,63	0,96	0,96	0,96	1,63	1,63	1,63	1,63	1,63	—	—	
	0,75	0,96	0,96	0,96	1,72	1,72	1,72	1,72	1,72	—	—	
	0,88	0,96	0,96	0,96	1,72	1,72	1,72	1,72	1,72	—	—	
	1,00	0,96	0,96	0,96	1,72	1,72	1,72	1,72	1,72	—	—	
	1,13	0,96	0,96	0,96	1,72	1,72	1,72	1,72	1,72	—	—	
	1,25	0,96	0,96	0,96	1,72	1,72	1,72	1,72	1,72	—	—	
	1,50	—	—	—	—	—	—	—	—	—	—	
	1,75	—	—	—	—	—	—	—	—	—	—	
	2,00	—	—	—	—	—	—	—	—	—	—	
$N_{R,k}$ [kN] for $t_{N,I}$ [mm]	0,40	0,48	0,48	0,48	0,72	0,75	0,75	0,75	0,75	—	—	*bearing resistance of component II **bearing resistance of component I
	0,50	0,48	0,48	0,48	0,72	0,75	0,75	0,75	0,75	—	—	
	0,55	0,48	0,48	0,48	0,72	0,75	0,75	0,75	0,75	—	—	
	0,63	0,48	0,48	0,48	0,72	0,75	0,75	0,75	0,75	—	—	
	0,75	0,48	0,48	0,48	0,72	0,75	0,75	0,75	0,75	—	—	
	0,88	0,48	0,48	0,48	0,72	0,75	0,75	0,75	0,75	—	—	
	1,00	0,48	0,48	0,48	0,72	0,75	0,75	0,75	0,75	—	—	
	1,13	0,48	0,48	0,48	0,72	0,75	0,75	0,75	0,75	—	—	
	1,25	0,48	0,48	0,48	0,72	0,75	0,75	0,75	0,75	—	—	
	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%

MPZ02-P fastening screws for metal members and sheeting

MPZ02-P 4,8 × L + A12 or 14

with pan head and sealing washer ø12 or 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.

Signed by:

Chwaszczyno, 14.01.2022

R&D Director

Janusz Kabała

Dyrektor Działu Rozwoju Produktów

Janusz Kabała