

# Product manual, Monzon couplers

Version 1.1

## accessories

06/12/2021

Monzon Development AB



*Swivel coupler/rotatable coupler*



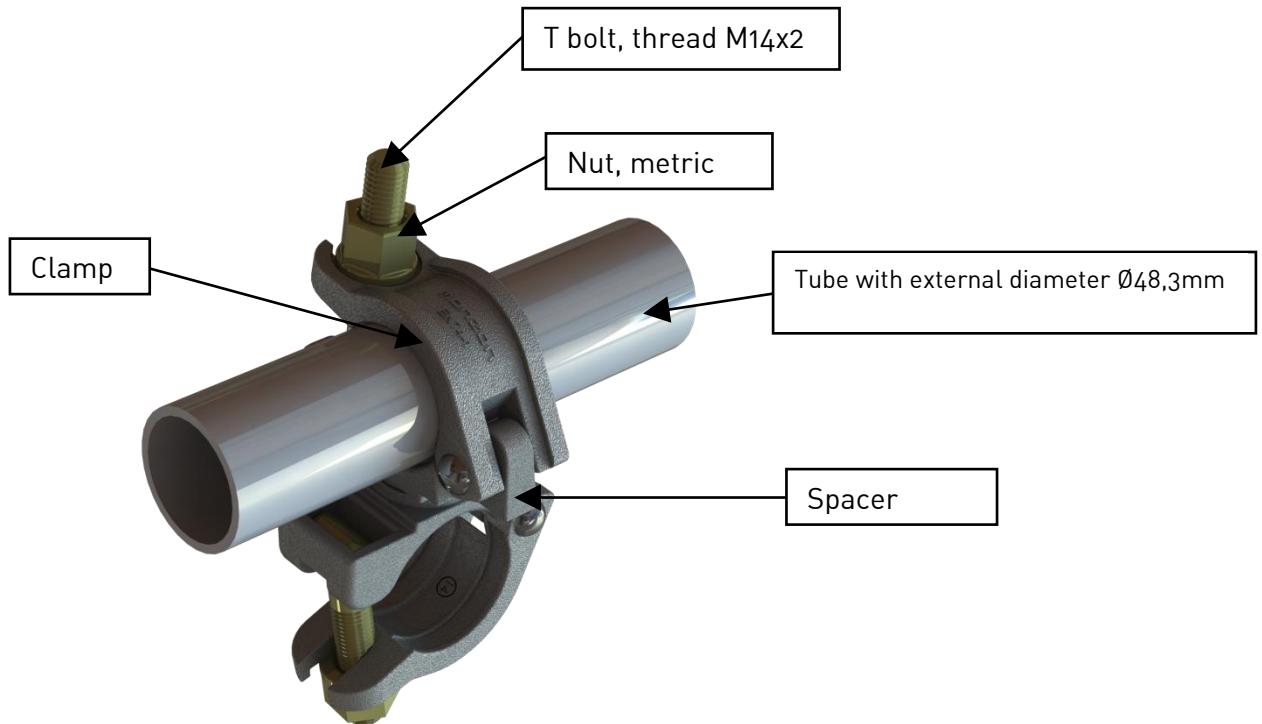
*Right angle/Fixed coupler/perpendicular*

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## 1. General information about the product

Monzon couplers are made up of forged clamps and spacers that are hot-dip galvanised. T bolt with M14x2 thread.

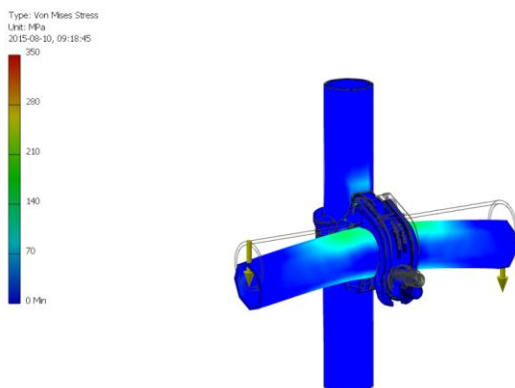
Used for steel tubing or aluminium tubing with an external diameter of Ø48.3mm.



### 1.1. Safety

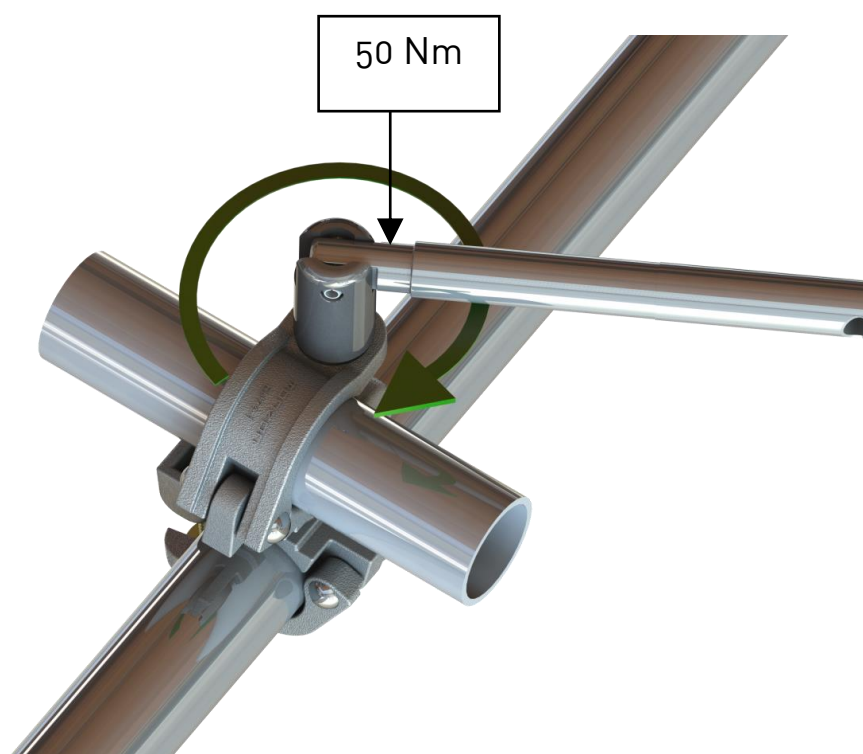
Modular couplers are type examined by the Technical Research Institute of Sweden in accordance with the requirements in Swedish Work Environment Authority regulation AFS 2013:4 Scaffolding and are compliant with the requirements of SS-EN 74-1.

The couplers have been developed using the latest 3D-CAD tools, and FE analyses have been carried out in connection with product development.

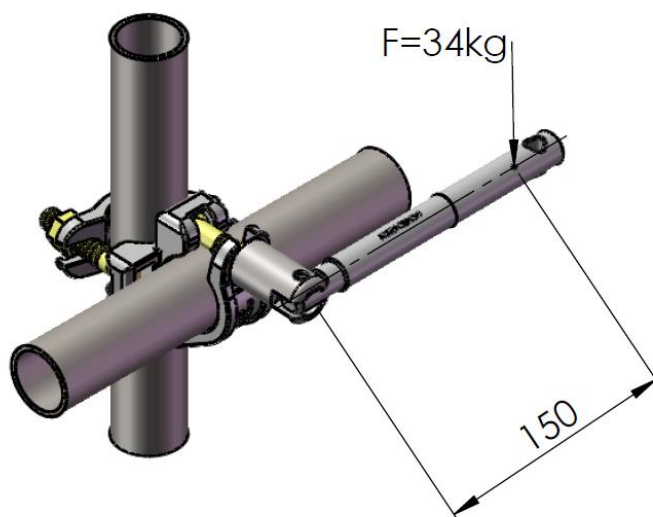


## 1.2. Tightening torque

All Monzon couplers must be tightened to a torque of 50 Nm.



50 Nm is equivalent to 34 kg with a 0.15 m lever



### 1.3. Coupler class

The coupler class is class B for both right angle couplers and swivel couplers.

### 1.4. Swivel coupler/Rotary coupler/rotatable coupler

Monzon swivel couplers are used for installation where torque transmission is not desirable/required.



### 1.5. Right angle/Fixed coupler/perpendicular coupler

Monzon right angle couplers are used for installation where torque transmission is desirable/required.



## 1.6. Maintenance

Before and after installation, check that the couplers and their component parts are not damaged. Defects such as cracks and gashes have a dramatic impact on strength. If a coupler is damaged in this way, it must not be used and must be discarded. Opponents must be handled carefully during erection/dismantling. Lubricate nuts and bolts with grease prior to use.

## 1.7. Labelling

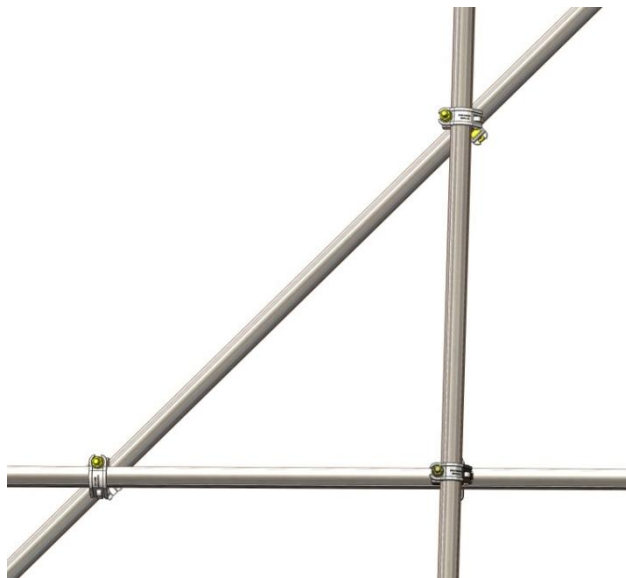
Coupler clamps are labelled with Monzon and EN 74-1 B XX on the upper side, where XX represents the year of manufacture.

## 1.8. Tube dimensions

The couplers sit scaffold tubes made of aluminium or steel with an external diameter of Ø48.3mm.

## 1.9. Example

2x swivel couplers and one right angle coupler, or alternatively 3x swivel couplers.

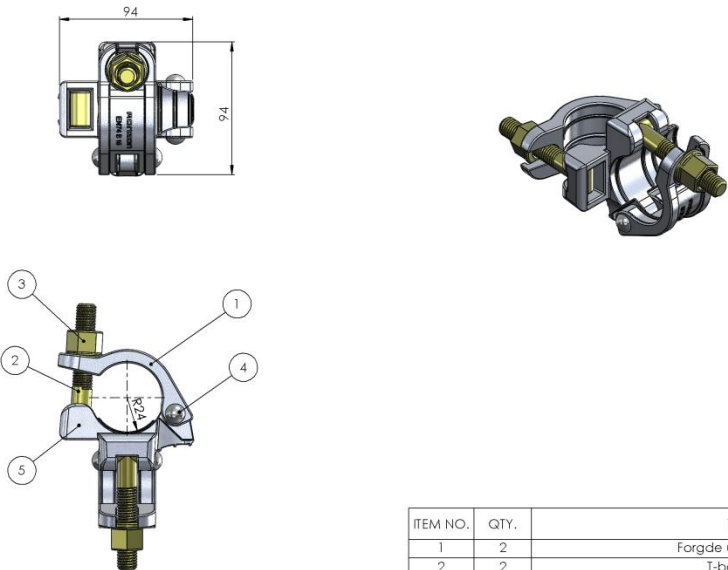


Right angle coupler to wall tie.



1.10. Product description

Right angle coupler: Weight 1.4 kg, tolerance  $\pm 0.13\text{kg}$



ITEM NO.	QTY.	Title
1	2	Forgde upper body
2	2	T-bolt M14
3	2	Nut M14 WS22
4	2	Rivet Ø8
5	1	Forged Lower Body Double Coupler

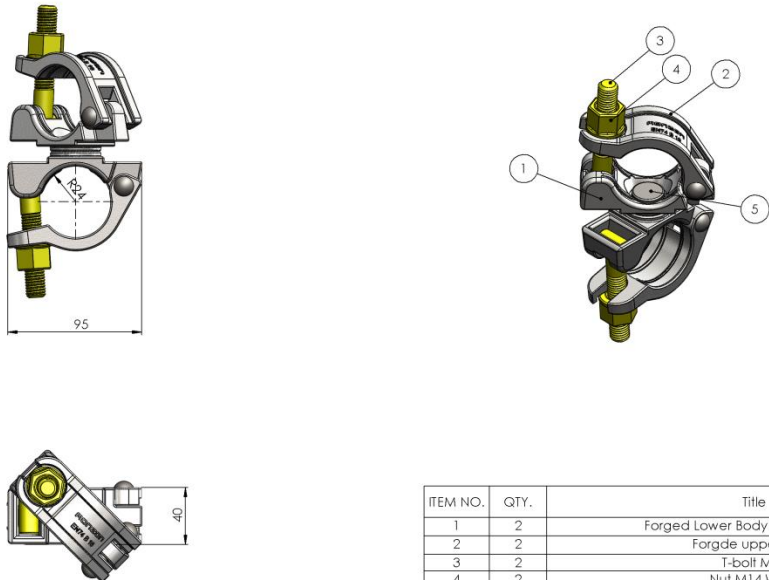
**PROPRIETARY AND CONFIDENTIAL**  
All information contained herein is the property of Monzon and shall not be disclosed to any third party without the written consent of Monzon.

APPROVED BY: DATE: SURFACE TREATMENT: **ACCESSORIES** A3

**monzon** Double Coupler  
Enjoy Unlimited Scaffolding Solutions

Fast koppling

Swivel coupler: Weight 1.5 kg, tolerance  $\pm 0.13\text{kg}$



ITEM NO.	QTY.	Title
1	2	Forged Lower Body Swivel Coupler
2	2	Forgde upper body
3	2	T-bolt M14
4	2	Nut M14 WS23
5	1	Rivet Ø23/Ø16
6	2	Rivet Ø8

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APPROVED BY: DATE: SURFACE TREATMENT: **ACCESSORIES** A3

**monzon** Swivel coupler, WS 23 mm (steel)  
Enjoy Unlimited Scaffolding Solutions

Vridkoppling

## 2. Type inspection certificate



# TYPE EXAMINATION CERTIFICATE

39 44 01

## Right angle and swivel coupler

**Holder/Manufacturer/Supplier**

Mon.Zon Development AB, Box 5238, SE-402 24 Göteborg

**Product name**

Monzon right angle coupler and swivel coupler.

**Product description**

According to pages 2–4 in this type examination certificate. Technical documentation according to the documentation for SP, no. 4P06701.

**Requirements**

The Swedish Work Environment Authority's Statute Book AFS 2013:4 Scaffolding, 10 § (SP's certification regulations SPCR 064) and SS-EN 74-1.

**Permitted Load**

Class B with conditions according to the product description.

**Marking**

The couplers must have stamped markings with EN 74-1, Monzon, year of manufacture (2 digits) and B (coupler class).

**Validity**

This type examination certificate is valid until not later than 9<sup>th</sup> March 2027.

**Miscellaneous**

SP carries out an annual verification of conformity of the couplers according to section 4 of SPCR 064.

This type examination certificate replaces the certificate of the same number dated 18<sup>th</sup> April 2013 and originally issued on 7<sup>th</sup> October 2004.

**SP Technical Research Institute of Sweden****Certification**

Lennart Aronsson

Kristina Follin



Type examination certificate no. 394401 issue 6, 2017-03-09

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Swedish accredited certification bodies are appointed by SWEDAC, the Swedish Board for Accreditation and Conformity Assessment, under the terms of the Act.

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The type examination certificate consists of 4 pages, this being page 1.



# TYPE EXAMINATION CERTIFICATE

Appendix

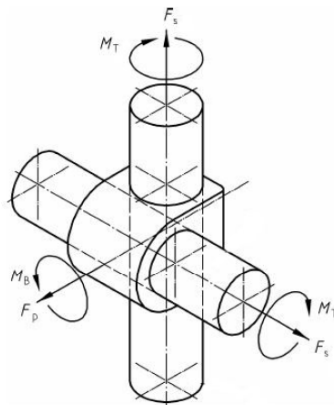
## Product description for Monzon right angle and swivel couplers

### Design

Monzon couplers are primarily intended for securing constructions of scaffolding tubes with a diameter 48.3 mm. The values for the construction parameters according to SS-EN 74-1 and SS-EN 12810-1, appendix C and the corresponding permitted values for estimates are stated in the following tables. The permitted values are calculated using  $\gamma_F = 1.5$  and  $\gamma_m = 1.1$ .

### Load capacity

Construction parameters	Designation		Characteristic value	Permitted value
Coupler class			B	
Right angle coupler				
Slipping resistance	$F_s$	(kN)	15.0	9.1
Bending resistance	$M_B$	(kNm)	0.8	0.48
Pull apart resistance	$F_p$	(kN)	30.0	18.2
Rotational moment, max	$M_T$	(kNm)	0.13	0.079
Swivel coupler				
Slipping resistance	$F_s$	(kN)	15.0	9.1



Type examination certificate no. 394401 issue 6, 2017-03-09 *Kristina Fellen*

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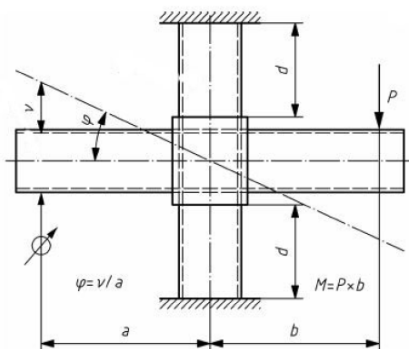


# TYPE EXAMINATION CERTIFICATE

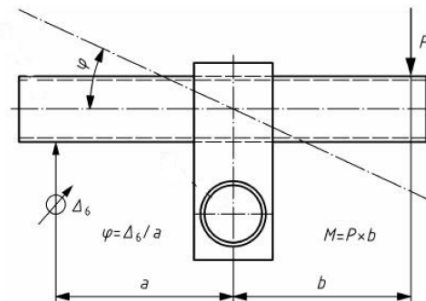
## Appendix

### Designed stiffness values for right angle coupler

Construction parameters	Cruciform bending stiffness	Bending resistance	Cruciform bending stiffness	Cruciform ultimate bending moment
Designation	$c_{\varphi 1}$	$M_{B1}$	$c_{\varphi 2}$	$M_{B2}$
	(kNm/rad)	(kNm)	(kNm/rad)	(kNm)
Steel tube	15.0	0.48	6.0	0.8
Aluminium tube	13.0	0.48	5.0	0.8



Construction parameters	Rotational stiffness	Rotational moment
Designation	$c_{\varphi}$	$M_T$
	(kNm/rad)	(kNm)
	7.5	0.13



### Surface treatment

Hot zinc galvanized 75 μm.



Type examination certificate no. 394401 issue 6, 2017-03-09 *Kristina Fellen*

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# TYPE EXAMINATION CERTIFICATE

## Appendix

### Conditions for use

1. The couplers must be installed with a tightening torque of 50 Nm.
2. The couplers are intended for installation on steel or aluminium tubes with a diameter of 48.3 mm.

### Instruction manual

An instruction manual must be provided with the couplers when supplied to the user.

### Application

The type examination certificate is valid for couplers made and supplied by the manufacturer as stated on the certificate and of which materials, dimensions and design correspond with the type examined example.

This is a translation from the Swedish original document. In the event of any dispute as to the content of the document, the Swedish text shall take precedence.

Type examination certificate no. 394401 issue 6, 2017-03-09

*Kristina Fallin*

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