

CERTIFIED TRANSLATION FROM SWEDISH

*[The document consists of seven pages, the header of each page contains the RISE logo and the name of the document: TYPE TEST CERTIFICATE. The footer of each page provides information regarding the document "Certificate SC0152-13 issue 2 2023-12-20 RISE Research Institutes of Sweden AB Certifying. This certificate is the property of RISE and may only be reproduced in its entirety unless RISE Certification has given its prior written consent" and the sequential page number. The translator's comments are placed in square supports and highlighted in italics].*

*[Logo] RISE*

**TYPE EXAMINATION CERTIFICATE**

SC0152-13

**Frame scaffolding**

**Issued for/manufacture**

Altrad-Mostostal Spółka z o.o.  
ul. Starzyńskiego 1, 08-110 Siedlce,  
Poland

Place of manufacture  
**as above**

Dealer  
Ställning Karlskoga AB, Gösta Berlingsväg 55, 691 38 Karlskoga

Product name  
Mostostal Plus

**Product description**

In accordance with pages 2-7 of this type examination certificate. Technical documentation consistent with the documentation for RISE, no. P119255.

**Type examination certificate**

RISE certifies that the product in accordance with this type examination certificate meets the requirements set out in the Swedish Working Environment Authority AFS 2013:4 Ställningar, § 10, (RISE Certification Rules SPCR 064 of 2021-10-25) and SS-EN 12810- 1:2004 with related standards.

**Evaluated system configurations**

Load class 2 — 3 (1,5 — 2,0 kN/m<sup>2</sup>), with prerequisites consistent with the product description.

**Marking**

All main elements must be permanently marked with the letter A75 RRM in accordance with the code, where RR means the year of production 01=1995, 02=1996 etc. and M is the month code A=January, B=February etc. Some elements have different markings, which are described mentioned in the assembly instructions. Products may also be equipped with the RISE type test mark (example below).



### Validity period

The type examination certificate is valid until 2033-12-20 at the latest. The validity of this type examination certificate can be checked on the RISE website.

### Other

RISE carries out an annual inspection of type-tested scaffolding components in accordance with Chapter 5 of SPCR 064. This type-examination certificate replaces previous issues of the same number. The type examination certificate was originally issued on 2013-12-20.

Martin Tillander (-) [illegible signature]

RISE Research Institutes of Sweden AB | Certifying  
Box 857, 501 15 Borås  
+46 10 516 50 00 | certifying@ri.se | www.ri.se  
P119255  
2023-05-16

[Logo] SWEDAC ACKREDITERING  
Accreditation No. 1002  
Product certification  
ISO/IEC 17065

[Logo] RI.SE

Type tested according to the requirements of the Swedish Working Environment Authority AFS 2013:4

### Mostostal Plus scaffolding product description

#### Construction

Mostostal Plus frame scaffolding consists of vertical frames, horizontal ties, handrails, diagonal ties, platforms, supports, etc. in accordance with the list of elements below. Access is provided by stairs installed in the staircase adjacent to the scaffolding. The scaffolding is 0.73 m wide. The elements included in the set are shown in the list below

Item name	Dimensions [m]	Index
Vertical steel frame	2,0, 1,5, 1,0, 0,6	e20202 202029
Vertical frame, aluminum	2,0	e203012
Bypass frame	2,0	e202019
Vertical frame, steel	0,36x2,0	e202018
Transition frame	1,5x2,0	e202195
Steel platform 0.32 m - U	0,73, 1,09, 1,57, 2,07, 2,57, 3,07	e491307 491330
Steel platform, oval perforation 0.32 m - U	0,73, 1,09, 1,57, 2,07, 2,57, 3,07	e491307c—e491330c
Steel platform with a crossbar 0.32 m - U	1,57, 2,07, 2,57, 3,07	e491415—e491430
Steel platform with a crossbar 0.32 m - U - ECO	0,73, 1,09, 1,57, 2,07, 2,57, 3,07	e491607—e491630
Steel platform with crossbar 0.19 m - U - ECO	0,73, 1,09, 1,57, 2,07, 2,57, 3,07	e491807—e491830
Aluminum deck	1,09, 1,57, 2,07, 2,57, 3,07	e49191 491930
Alu transition platform - U	2,57, 3,07	e492125, e492130
Alu transition platform - U	1,57, 2,07, 2,57, 3,07	e492515—e492530
Alu transition platform - O	2,07, 2,57, 3,07	e49262 492630
Ladder for aluminum platform (e492lxx)		e492100



Ladder	0,32x2,14	e511600
Steel rack		e511200
Adjustable rack	0,4, 0,6, 0,8, 1,5	e51120 511208, e511313
Adjustable, tilting rack	0,8	e511408
Front railing	0,73	e283907
Front rail with wedge	0,73	e283007
Single railing	0,73, 1,09, 1,57, 2,07, 2,57, 3,07	e283607—e283630
Double steel handrail	1,57, 2,07, 2,57, 3,07	e284215—e284230
Double aluminum handrail	1,09, 1,57, 2,07, 2,57, 3,07	e28431 284330
Plus ring post, steel	1,0	e202085
Plus railing post, steel with protection	0,73	e202091
Aluminum railing post with protection	0,73	e202083
Aluminum railing post	1,0	e203084
Front frame, steel	0,73	e202023
Front frame, aluminum	0,73	e203080

Item name	Dimensions [m]	Index
Diagonal tie 2.0	1,57, 2,07, 2,57, 3,07	e284715—e284730
2.0 diagonal tie with wedge	1,57, 2,07, 2,57, 3,07	e284815—e284830
Transverse curb	0,73	e286807
Longitudinal curb	1,09, 1,57, 2,07, 2,57, 3,07	e2g68i3 286830
Horizontal tie	2,07, 2,57, 3,07	e283820—e283830
Mesh protection	1,57, 2,07, 2,57, 3,07	e285015—e285030
Aluminum girder 0.4 m	3,0, 4,0, 5,24, 6,0, 6,24, 8,0	e501230—e501280
Aluminum girder 0.5 m	3,24, 4,24, 5,24, 6,24,	e50133 501360
Steel girder 0.4 m	2,0, 3,0, 4,0, 6,0	e50332 503360
	3,24, 4,24, 5,24, 6,24,	e50323 503260
	5,14, 6,14, 6,14 transitional	e287754, e287761, e287762
Girder connector	0,4	e502000
Aluminum traverse	0,6, 0,9, 1,2, 1,6, 1,9, 3,0, 4,0, 5,0, 6,0	e50100 501060
Girder bolt	0,73	e503573
Transition girder bolt	0,73	e503407
Aluminum stairs	2,57, 3,07	e286225, e286230
Initial U-bolt	0,73	e286207
Rygiel after the river	0,73	e285379
External stair railing	2,57, 3,07	e286325, e283330
Internal stair railing	2,0x3,0	e286300
Anchor connector	0,4, 0,8, 1,3, 1,5	e28650 286515
Anchor connector with hook	0,6	e286606
Support with clamp	0,36, 0,73,	e285539, e285579
Support with clamp, high	0,73	e285589
Cross bracing	1,77, 1,95	e285179, e285119
Securing platforms for consoles	0,36, 0,73, 1,09	e285403—e285410
Mounting post		e206600
Telescopic handrail	1,5 — 2,07, 2,07 - 3,7	e206800, e206700

Other accessories: mounting with a pin



## Dimensions

Item name	Dimensions [mm]	Material
Vertical steel frame - side profile - upper section	Ø 48,3x2,7 U profile 53x 48x2,5	Steel
Vertical frame, aluminum - side profile - upper section	Ø 48,3x4 U profile 53x48x5	Aluminum
Double handrail, - upper and lower profile - vertical profile	Ø 40x2,5 40x20x2	Aluminum
Transverse tie	Ø 42,4x2	Steel
Single handrail	Ø 38x1,8	Steel
Horizontal tie	Ø 48,3x2,7	Steel
Steel base (round thread)	Ø 38,0x5,6 mm	Steel

## Assessed system configurations

1. The assessed system configurations are shown in the table below.

Load class	3
Usable load [kN/m <sup>2</sup> ]	2,0
Field length [m]	3,07
Field width [m]	0,73
Scaffolding level <sup>1)</sup>	at all levels
Height between levels [m]	2,0
Construction height [m]	
-without supports	24,5
-with 0.36 support on all levels	24,5
-with girder <sup>2)</sup>	24,5

Reference. Each individual load-bearing element must meet at least the load class shown above for the appropriate system configuration.

- 1) In the calculations, the weight of the scaffolding level was assumed to be 20 kg/m<sup>2</sup>.  
2) Version with beam, see drawing on page 5

2. When assessing the system configuration, the maximum load-bearing capacity of the scaffolding was determined, i.e. the load-bearing capacity at a construction height of 24.5 m or more and at the moment of scaffolding breakage. This assessment gives rack loads that can be used in simplified calculations, see Conditions of Use, point 1.
3. The scaffolding is anchored to the wall in accordance with the Conditions of Application p. 6.

The maximum design anchoring force perpendicular to the façade is 3.0 kN.

The maximum design anchorage forces in anchors that can transfer horizontal forces (V-shaped anchorage) are 5.0 kN and 3.0 kN parallel and perpendicular to the facade, respectively.

4. The maximum design force acting on the ground is 15 kN/rack.
5. The calculations were carried out assuming that work is carried out only on one level.
6. During the type testing, the assembly instructions for Mostostal Plus frame scaffolding, edition 12/2023 in Swedish were used.



## 24 m system configurations

[Sketch]

[Sketch]

Scaffolding without/with supports in accordance with the table below in point 1.

Scaffolding with girders according to the table in point 1. Additional wall supports are placed as shown in the drawing above, where the wall supports around the opening are anchored in both the internal and external racks. Otherwise, wall supports according to point 3. Additional diagonal ties are placed around the opening. Otherwise, diagonal ties in accordance with point 4 of the Terms of Use.

### Terms of use

1. In the case of simplified dimensioning, the permissible load of the rack may be applied in accordance with the table below, provided that the remaining conditions below are met. In the case of simplified dimensioning according to the partial factor method, the dimensional load capacity is calculated by multiplying the permissible load of the rack by 1.5.

	Permissible load on the rack
Without supports	2,9
With 0.36 supports on all levels	5,1

2. The height of the clearance between the working areas should correspond to the H2 height class, which means the height of the clearance between the working field and the transverse transom of at least 1.90 m, or alternatively between the working area and the longitudinal transom when widening the scaffolding with supports. The clearance height between the working area and any horizontal bracing must be at least 1.90 m, regardless of the height class.
3. Each working area must be equipped with platforms. The lowest layer of the working area must always be placed at the lowest possible level.
4. The working area lined with platforms should be equipped with two-piece handrails or guardrail frames and curbs if the fall height is two meters or more.
5. Vertical diagonal ties, parallel to the façade, must be placed at least in every 5th field and always in the external fields.
6. The scaffolding should be anchored to the wall at distances of 4 meters vertically to the internal stand at the point where the rack is connected to the transverse bolt. The lowest anchorage can be placed at a maximum height of approximately 4.5 m above ground level.

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Anchorage that can absorb horizontal forces should be used at least every 5 racks in a row at each anchor level.

For scaffolding covered and/or at a height greater than 24 m, higher wind loads and therefore higher anchoring forces may occur.

7. If supports are used, the space between the main plane and the support plane should be covered, usually with a longitudinal bolt or other means.
8. The maximum length of the unscrewed stand is 0.5 m.
9. The communication consists of stairs mounted on two additional frames outside the scaffolding, together with the elements intended for this purpose. The passage should be equipped with a two-piece stair railing on the outside, two-piece handrails on the front surfaces and a curb on the lower front surface. The top level should be equipped with a shorter stair handrail. On planes where there are no adjacent platforms, resting gates should be supplemented with two-piece safety rails for the scaffolding.
10. System-independent components used, such as beams, stairs and pipe connections, must be type tested.

### Installation instructions

Assembly instructions must be attached to the scaffolding when it is handed over to the user.

### Application

The type examination certificate applies to scaffoldings manufactured by manufacturers in accordance with the type examination certificate and whose materials, dimensions and structure correspond to the type examination standard.

You must not build a scaffolding using elements from another scaffolding without carrying out a detailed load-bearing test.

### Load capacity of elements

Platforms

The following load classes and permissible loads with evenly distributed loads apply to platforms.

Platform	Width [m]	Length [m]	Permissible load	Load class
Steel deck 0.32 m - U Steel platform, oval perforation 0.32 m - U Steel platform with a crossbar 0.32 m - U	0,32	3,07	3,0	4
		2,57	4,5	5
		≤2,07	6,0	6
Steel platform with a crossbar 0.32 m - U - ECO	0,32	3,07	2,0	3
		2,57	3,0	4
		2,07	4,5	5



		≤1,57	6	6
Steel platform with a crossbar 0.19 m - U - ECO	0,19	≤3,07	6,0	6
Aluminum platform	0,61	3,07	2,0	3
		2,57	3,0	4
		≤2,07	6,0	6
Alu transition platform - U	0,61	3,07	2,0	3
		2,57	3,0	4
Alu transition platform - U/O	0,61	3,07	2,0	3
		2,57	2,0	3
		≤2,07	3,0	4

### Supports

When using supports, the following load classes apply.

Support	Load class for a field length of 3.07 m
0,36	3
0,73	3

### Input values for dimensioning

Input values, design values, Rd., obtained from component tests that can be used when dimensioning the scaffolding load capacity in accordance with the SS-EN 12811-1 standard, are provided by the certificate holder.

I hereby certify that the above translation is consistent with the scan of the document in Swedish.

Izabela Zajac, sworn translator of Swedish, number on the list (of the Minister of Justice of the Republic of Poland) TP/14/23.

Ponice, Poland 14/05/2024

Number in the repertory: 44/24.

[at the bottom of each page there is a round stamp reading]:

Izabela Zajac, sworn translator of Swedish

No. TP/14/23

[and signature of Izabela Zajac]

*I, Małgorzata Kostrowska, Sworn English Translator, entered into the list of sworn translators kept by the Minister of Justice Entry No. TP/313/07, do hereby certify that the above document is a true and lawful translation of the original document prepared in Polish.*

*Translation No. 1686/2024*

*Date: 16.05.2024*

*Mas*

