

Manual Installation Novo Rail 4.00 L1

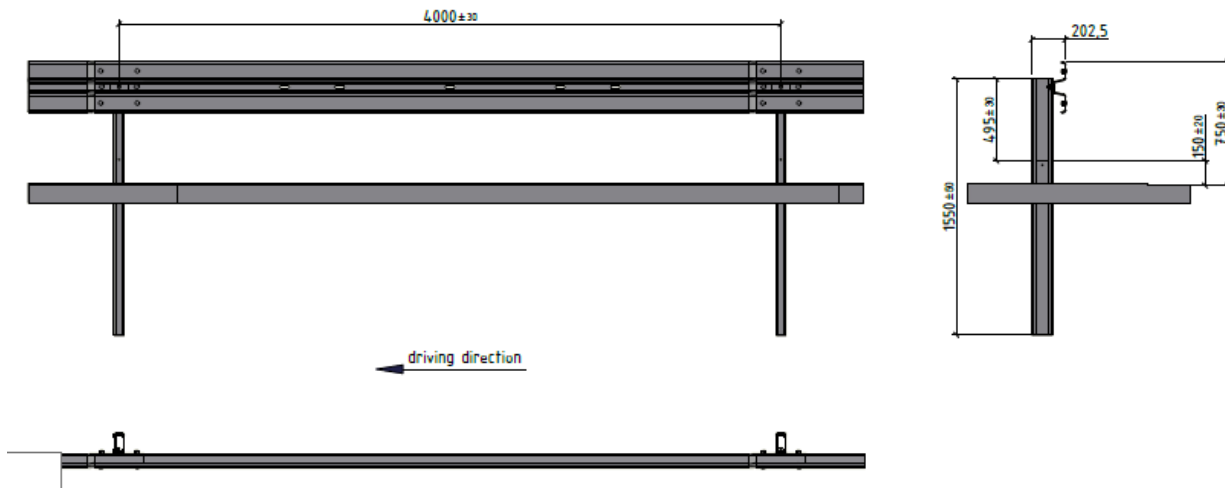
Date: July 2022

REV: 0


Number of page's:
Cover + 9

 MEISER Straßenausstattung	Installation Manual: Novo Rail 4.0 L1	REV: 0	Date of issue: 07/07/2022	Page 1 of 10
--	--	--------	------------------------------	--------------

1. System technical description:



Initial Type Test (ITT)	TB32
Containment Level	N2
Working Width (m)	$0.80 < W \leq 1,00$
Class of Working Width	W3
Acceleration Severity Index (ASI)	A
Characteristic material of the system	S355 JR
Modular system length (m)	4.30
Post distance (m)	4.00
Construction width (m)	0.20
Construction height from road surface (m)	0.75
Test length (m) without Terminal	40.00
Tested system foundation	Rammed
Terminal length (m/section)	16.3

 Straßenausstattung	Installation Manual: Novo Rail 4.0 L1	REV: 0	Date of issue: 07/07/2022	Page 2 of 10
--	--	--------	------------------------------	--------------

2. General Information:

2.1 Requirements of the Assembly Personnel

The installation must only be undertaken by trained and qualified personnel. Installation firms obtain a special technical advisor from the manufacturer to support the project.

2.2 Usage Compliance

The Restraint System is designed for installation on road traffic areas according to national regulations. It is intended to protect occupants of errant vehicles on the roadway, to protect third parties and can be installed in central reserves and side lanes as well as on verges.

3. Technical Information:

3.1 Bolt Connections

Fit nuts manually and then tighten with torque wrench. All fixtures have to be fitted vertically to the connecting parts.

Bolt	Torque Values
M16x27	70 - 120 Nm
M16X45	70 - 120 Nm
M10x45	Hand torque

3.2 Coating Details

The minimum coating thickness for steel parts shall be in accordance with EN ISO 1461 and for screws and nuts shall be in accordance with EN ISO 10684.

 Straßenausstattung	Installation Manual: Novo Rail 4.0 L1	REV: 0	Date of issue: 07/07/2022	Page 3 of 10
--	--	--------	------------------------------	--------------

4. Preparatory measures:

4.1 Work Protection

Provide the required personal protective clothing - which are reflective clothing, head, ear hand and foot protection - and use during installation works.

4.2 Installation Tools

The following tools are required:

- Truck, if necessary with telescope crane
- Pile driver
- Drill with drill bits up to 24 mm
- Torque key up to 160 Nm with sockets
- Plumb rule

The work also can be facilitated by using alternative tools, equipment and machinery as necessary.

4.3 Traffic Management

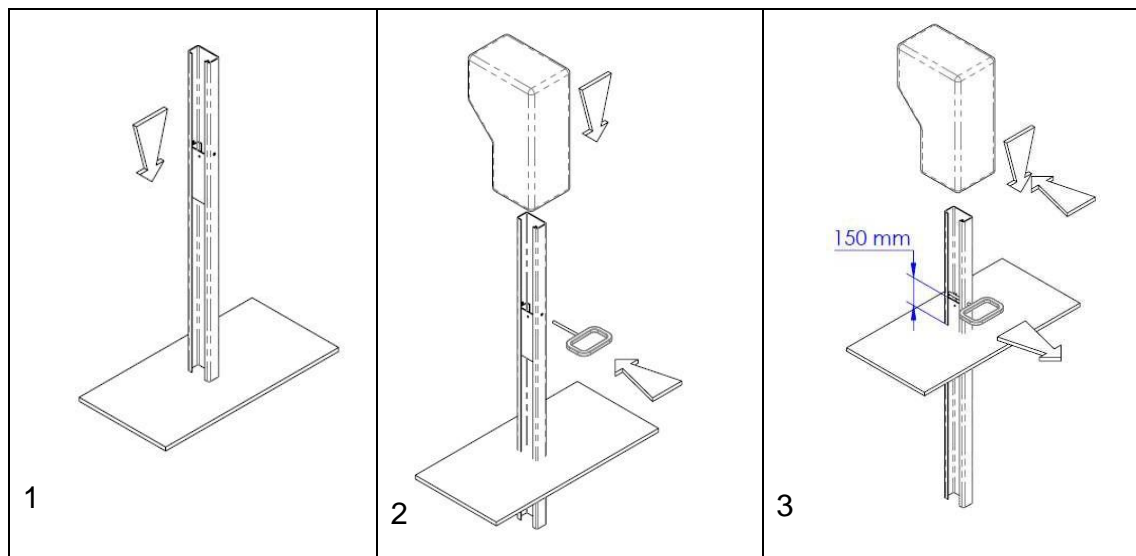
Traffic management measures must be taken in accordance with the national regulations. The construction site must have sufficient space for:

- System components
- Pile driver
- Truck, if necessary with telescope crane
- Wide space for the assembly crew

  Straßenausstattung	Installation Manual: Novo Rail 4.0 L1	REV: 0	Date of issue: 07/07/2022	Page 4 of 10
--	--	--------	------------------------------	--------------

5. Installation:

- 5.1 Before beginning the ramming works, information must be acquired regarding any utility lines (cables, pipelines, etc.). The instructions regarding protection of cables as issued by the utility companies must be adhered to.
- 5.2 Before beginning the ramming of the posts, the beams are placed on the ground in regards to the setting level. The connection holes of the beams should be positioned from round type to drope type on the traffic direction.
- 5.3 The posts are rammed into the ground with the closed side towards the traffic direction and with a distance of 2.66 m and to a depth of 905 mm with the hydraulic ram and the hammer for corresponding post cross section.
- 5.4 The stiffener is palced in the revers way inside the posts until the stiffener top passes the holes of the post (1). The steffener is fixed with a suittable tool such as steel rob or other tool (2). The stiffener is rammed in to the ground together with the post and a length of 150 mm will stay above the ground The fixing tool will be removed after ramming. (3).



- 5.5 Changes in the installations of tested device in relation to the test conditions requires the approval of the contractee, of the manufacturer and of the installation designer.

<p>MEISER  Straßenausstattung</p>	<p>Installation Manual: Novo Rail 4.0 L1</p>	<p>REV: 0</p>	<p>Date of issue: 07/07/2022</p>	<p>Page 5 of 10</p>
---	--	---------------	--------------------------------------	---------------------

6. Inspection:

6.1 Checking the Assembly

The beams must overlap in the direction of driving. The posts are installed with the closed side towards the traffic direction. The bolt fittings must be tight. Ensure that the section corresponds with the system drawing.

6.2 Maintaining the Installation Tolerances

Basically, the system has to be installed in accordance with the technical documentation (post foundation and assembly drawing). The tolerances listed in the Table 2 should be used only for exceptional cases.


Reference measure	Tolerances	Remarks
Top of Beam	± 30 mm	With reference to height from road surface
Post spacing in longitudinal direction	± 30 mm	
Post distance	±43 mm	
Post deviation from alignment	80 mm	On 12 msection
Beam deviation from alinghment	80 mm	On 12 m section

6.3 Clear Building Site

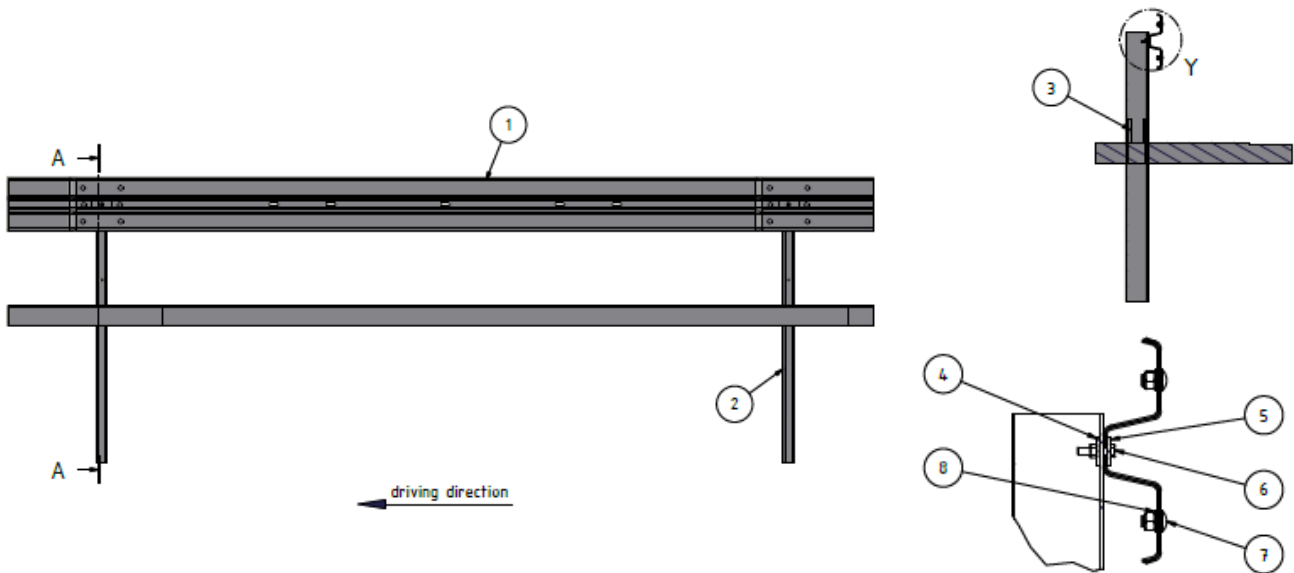
Remove all building material and every piece of refuse. Carry out a visual inspection even if the installation roadway is perfectly free of objects. After the inspection, report completion of the system to the client.

6.4 Other Information

In case the assembly deviates from preceding requirements without consultation of the manufacturer, the liability of the product passes from the manufacturer to the installer.

 <p>MEISER Straßenausstattung</p>	<p>Installation Manual: Novo Rail 4.0 L1</p>	<p>REV: 0</p>	<p>Date of issue: 07/07/2022</p>	<p>Page 6 of 10</p>
---	--	---------------	--------------------------------------	---------------------

7. System Overview:

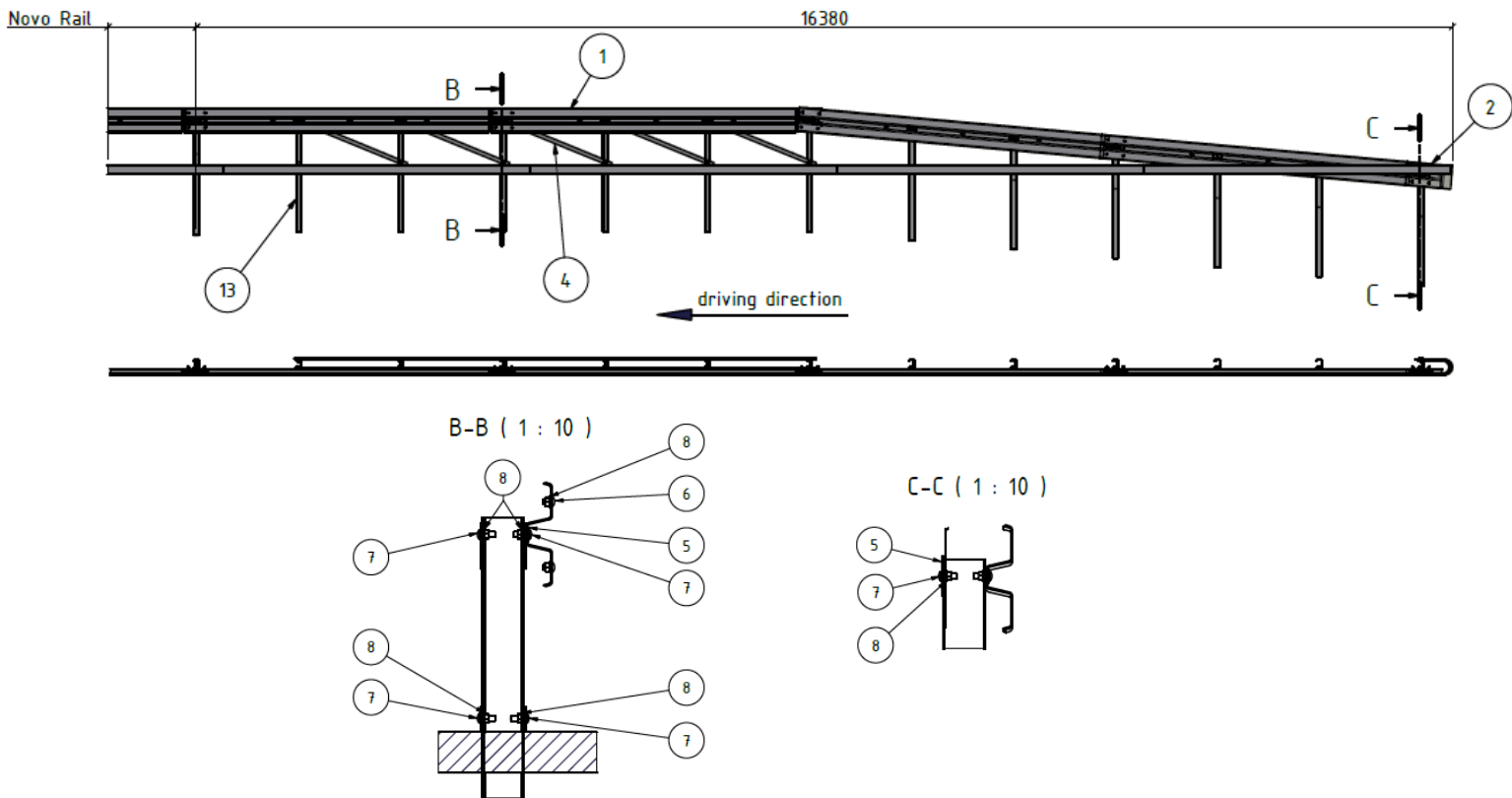


No	Drawing No	Product Description	Grade	Quantity (per 4.00m)
1.	rv000100-2 / rv000200-3	Beam, Profile B/A, 4.300 mm, 2.5 mm/	S355 JR	1.0
2	590002	Post C125x62,5x25,1550mm	S355 JR	1.0
3	rv603407	C125 reinforcement, 250 mm	S355 JR	1.0
4.	590000	Butt plate square M10	S235 JR	1.0
5.	rv001010	Butt plate M10	S235 JR	1.0
6.	rv004054	Hexagon bolt M10x45 with nut	8.8	1.0
7.	rv004000	HRK bolt with nib M16x27, with nut	4.6	6.0 (B) 8.0 (A)
8.	rv004030	Flat washer 16	ISO 7091	6.0 (B) 8.0 (A)

MEISER  Straßenausstattung	Installation Manual: Novo Rail 4.0 L1	REV: 0	Date of issue: 07/07/2022	Page 7 of 10
---	--	--------	------------------------------	--------------

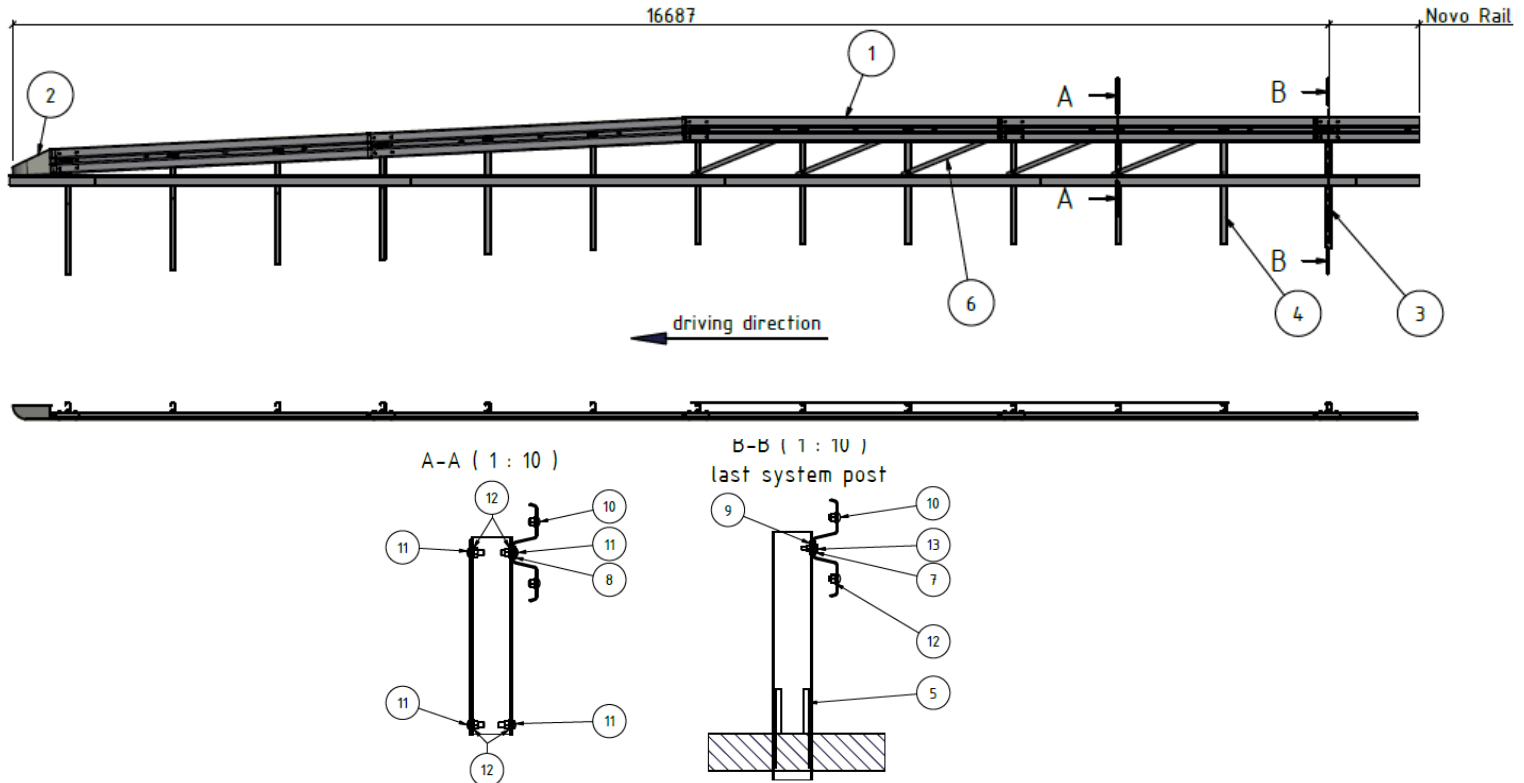
8. Terminal Overview:

Terminal:



No	Drawing No	Product Description	Grade	Quantity (per 16,30 m)
1	rv000100-2 / rv000200-3	Beam, Profile B/A, 4.300 mm, 2.5 mm/	S355 JR	4.0
2	596000 / 596005	Headpeace oval hole profile B/A	S235 JR	1.0
3	590003	Post C125 1500 mm	S355 JR	12.0
4	590001	Diagonal 1570 mm	S235 JR	10.0
5	rv001000	Butt plate M16	S235 JR	13.0
6	rv004000	HRK bolt with nib M16x27, with nut	8.8	30.0 (B) 40.0 (A)
7	rv004004	HRK bolt with hexagon M16x45, with nut	8.8	28.0
8	rv004030	Flat washer 16	ISO 7091	58.0 (B) 68.0 (A)

Flow terminal:



No	Drawing No	Product Description	Grade	Quantity (per 16,30 m)
1	rv000100-2 / rv000200-3	Beam, Profile B/A, 4.300 mm, 2.5 mm/	S355 JR	4.0
2	596003 / 596004	Headpeace round hole profile B/A	S235 JR	1.0
3	590002	Post C125 1550 mm	S355 JR	1.0
4	590003	Post C125 1500 mm	S355 JR	12.0
5	rv603407	C125 reinforcement	S355 JR	1.0
6	590001	Diagonal 1570 mm	S235 JR	10.0
7	rv001010	Butt plate M10	S235 JR	1.0
8	rv001000	Butt plate M16	S235 JR	12.0
9	590000	Butt plate square M10	S235 JR	1.0
10	rv004000	HRK bolt with nib M16x27, with nut	8.8	24.0 (B) 32.0 (A)
11	rv004004	HRK bolt with hexagon M16x45, with nut	8.8	27.0
12	rv004030	Flat washer 16	ISO 7091	51.0 (B) 59.0 (A)
13	rv004054	Hexagon bolt M10x45 with nut	4.6	1.0

9. Maintenance:

The system doesn't require any maintenance.

Repairing after accident:

- Remove all system parts that were involved in the accident.
- Do not reuse screws or any other components that were involved in the accident.
- Re-assemble the removed parts of the system according to new system installation specifications.

 Straßenausstattung	Installation Manual: Novo Rail 4.0 L1	REV: 0	Date of issue: 07/07/2022	Page 10 of 10
--	--	--------	------------------------------	---------------