



TECHNICKÝ A ZKUŠEBNÍ ÚSTAV STAVEBNÍ PRAHA, s.p.
Technical and Test Institute for Construction Prague
Akreditovaná zkušební laboratoř, Autorizovaná osoba, Notifikovaná osoba, Oznamovaný subjekt, Subjekt pro technické posuzování, Certifikační orgán, Inspekční orgán / Accredited Testing Laboratory, Authorized Body, Notified Body, Technical Assessment Body, Certification Body, Inspection Body. Prosecká 811/76a, 190 00 Praha 9 - Prosek, Czech Republic

CERTIFICATE OF CONSTANCY OF PERFORMANCE

No. 1020 – CPR – 090-038720

In compliance with Regulation 305/2011/EU of the European Parliament and of the Council of 9 March 2011 (the Construction Products Regulation or CPR), this certificate applies to the construction product:

Product

ROAD RESTRAINT SYSTEM

variant : **Rolling Barrier**

type: **RGS-H2-A**

Level of restraint	H2
Impact intensity	B
Normalised working width	W3
Normalised vehicle intrusion	VI3
Snow removal	NPD

placed on the market under the name or trade mark of

JEONGDO INDUSTRY CO., LTD.

Identification No.: 127-81-30638

Address: 59-38, Donyu 1-ro, Paju-eup, Paju-si, Gyeonggi-do, Korea

and produced in the manufacturing plant:

JEONGDO INDUSTRY CO., LTD.

Identification No.: 127-81-30638

Address: 59-38, Donyu 1-ro, Paju-eup, Paju-si, Gyeonggi-do, Korea

This certificate attests that all provisions concerning the assessment and verification of constancy of performance described in Annex ZA of the standard

EN 1317-5:2007+A2:2012/AC:2012

under system 1 for the performance set out in this certificate are applied and that the factory production control conducted by the manufacturer is assessed to ensure the

constancy of performance of the construction product.

This certificate was first issued on 31.05.2017 and will remain valid as long as neither the harmonised standard, the construction product, the AVCP methods nor the manufacturing conditions in the plant are modified significantly, unless suspended or withdrawn by the notified product certification body.

The stamp of the Notified Body 1020

Prague, 31st May 2017



Ing. Jiří Studnička
Depty Manager of the Notified Body



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Notified Body 1020

Branch 0900 – Technical Engineering Services

REPORT

**on the outcome of the assessment and verification of constancy
of performance of the product**

according to the Regulation (EU) 305/2011 of the European Parliament and of the Council of 9 March 2011
(the Construction Products Regulation or CPR), Art. 1.2 of the Annex V

No. 090-038719

Trade name:

ROAD RESTRAINT SYSTEM

variant : Rolling Barrier

type: RGS-H2-A

Manufacturer:

JEONGDO INDUSTRY CO., LTD.

Identification No.:	127-81-30638
Address:	59-38, Donyu 1-ro, Paju-eup, Paju-si, Gyeonggi-do, Korea
Manufacturer:	JEONGDO INDUSTRY CO., LTD.
Address:	59-38, Donyu 1-ro, Paju-eup, Paju-si, Gyeonggi-do, Korea
Production plants:	JEONGDO INDUSTRY CO., LTD.
Address:	59-38, Donyu 1-ro, Paju-eup, Paju-si, Gyeonggi-do, Korea
Order:	Z090170239

Number of report pages including title-page: 5

Number of Annexes: 0

Stamp of the Notified Body 1020

Prague, 31st May 2017



Roman Ondruška
Head Assessor

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1. General

1.1 Information about the manufacturer

- Manufacturer: JEONGDO INDUSTRY CO., LTD.
59-38, Donyu 1-ro, Paju-eup, Paju-si, Gyeonggi-do, Korea
- Production plant: JEONGDO INDUSTRY CO., LTD.
59-38, Donyu 1-ro, Paju-eup, Paju-si, Gyeonggi-do, Korea

1.2 Information about the product and its intended use

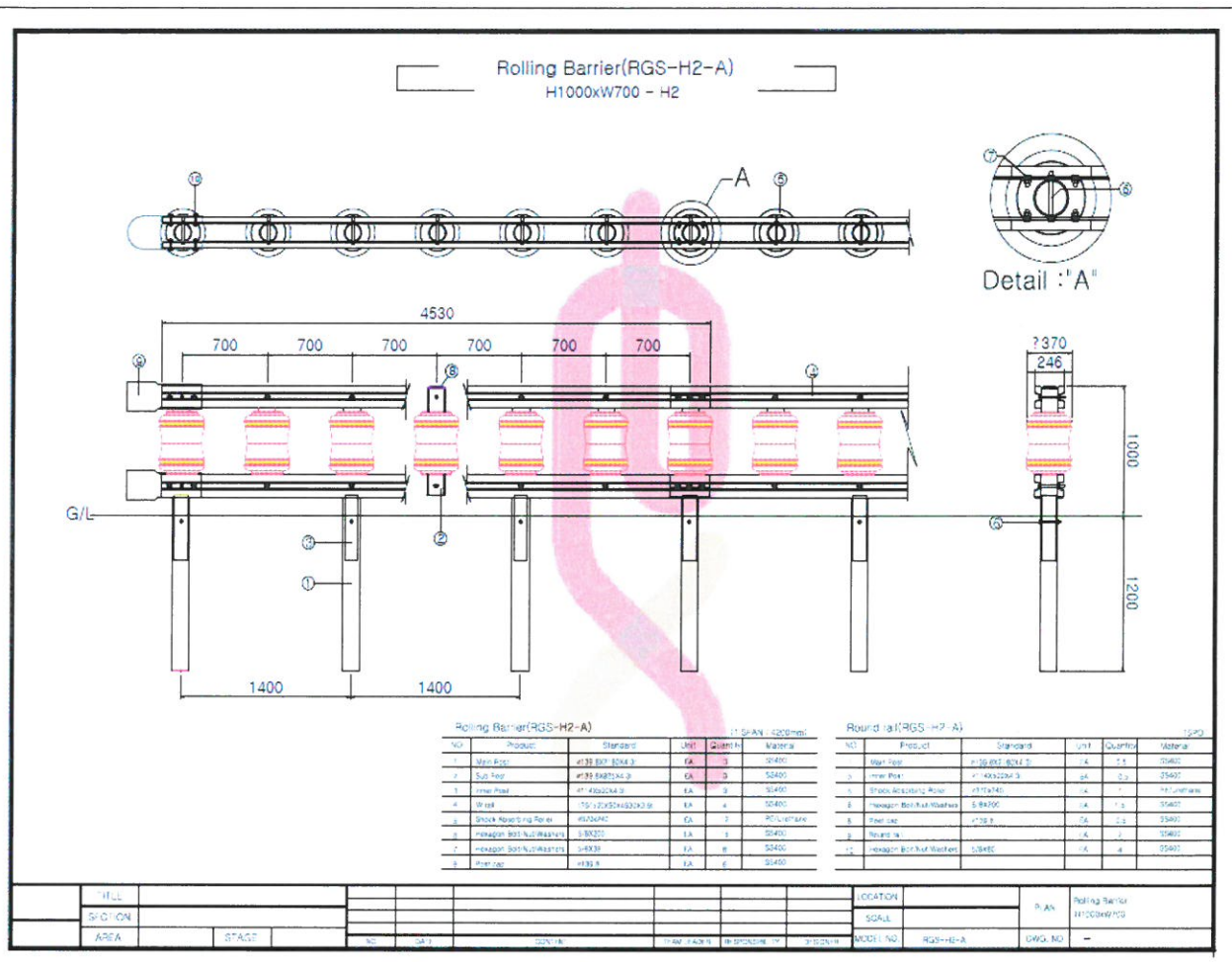
Road restraint system – Rolling barrier, type RGS-H2-A is a system designed for installation on roads to increase traffic safety. The safety barrier was tested pursuant to EN 1317-1 and 2 and this test demonstrated the following basic properties of the test sample.

Level of restraint	H2	
Impact intensity	B	ASI 1,3 THIV 32 km/hod.
Normalized working width	W3	0,9 m
Normalized dynamic deflection		0,7 m
Normalized vehicle intrusion	VI3	1,0 m
Snow removal	NPD	

The test sample was long 40.00 m and installed without front and rear terminal.

The road restraint system – Rolling barrier, type RGS-H2-A are consisting from main posts $\varnothing 139,8$ mm (L-2180) thickness 4,3 mm spaced with an interval of 1.40 m, installed into hardened roads, sub posts $\varnothing 139,8$ mm (L-825) thickness 4,3 mm and inner posts $\varnothing 139,8$ mm (L-500) thickness 4,3 mm. The W rails (L-4530) from sheet 3,9 mm thick are fixed to the main posts, Shock absorbing rollers $\varnothing 370 \times 240$ mm from PE/Urethane, post caps and connection materials. Distance between main posts and short posts is 700 mm. The height of upper edge of the rail is 1000 mm. All steel parts (W rails S235JR (equivalent SS400) and post S235JR (equivalent SS400)) are protected against corrosion by hot dip galvanizing. The system is installed in accordance with the attached drawings and the assembly instructions.





Schematic view of the safety barrier

1.3 List of documentation provided by the manufacturer to the assessment and verification of constancy of performance (AVCP)

- application for performance of activity of notified body – AVCP system1
- Drawings of the elements systems of RGS-H2-A
- Installation manual
- Tolerance & installation manual
- Zinc coating report
- Production Process Flow Chart
- Manufacturing Process Table
- Specific attest of steel
- Certificate ISO 9001:2008

1.4 List of the other documentation used during the product AVCP (as amended)

- none

1.5 Technical specification relating to the AVCP

- EN 1317-5:2007+ A2:2012/AC:2012 Road restraint systems – Part 5: Product requirements and evaluation of conformity for vehicle restraint systems



1.6 Information about previous AVCP

The manufacturer did not demonstrate any previous product certification.

2 Product Assessment

2.1 Technical requirements

The product was assessed under EN 1317-5:2007+ A2:2012/AC:2012 Road restraint systems – Part 5: Product requirements and evaluation of conformity for vehicle restraint systems, with respect to the following monitored properties:

- Level of restraint
- Impact intensity
- Normalized working width
- Normalized dynamic deflection
- Normalized vehicle intrusion
- Durability
- Resistance to snow removal

2.2 List of the Test Reports:

1. Test report of the testing Road Restrain Systems No. 2017-3-0019-002, issued by Korea Expressway Corporation Research Institute on 31 May 2017 (impact test TB-11, TB-51)

2.3 Evaluation of the results of the product tests and assessment

Monitored property	Test Protocol	Test procedure	Test result	Required / declared level	Evaluation
1	2	3	4	5	6
Durability					
– material properties	1.3.2 1.3.4 2.2.3	EN 1317-5+A2:2012 art. 6.2.1.3 EN 10024-1,2 EN 10204	Test Protocol No. 2017-3-0019-002	D: Conformity of attestation with technical document., steel class S235JR under EN 10025-1	conforms
– surface treatment of steel	1.3.2 2.2.1 2.2.2 2.2.3	EN 1317-5+A2:2012 art. 6.2.1.3 EN ISO 2063 EN ISO 1461	Test Protocol No. 2017-3-0019-002	R: composition and thickness of the surface metal	conforms
Level of restraint	2.2.1 2.2.2	EN 1317-1:2010 EN 1317-2:2010	Test Protocol No. 2017-3-0019-002	R: required test TB 11 and TB 51	conforms for level of restraint H2
Impact intensity	2.2.1 2.2.2	EN 1317-1:2010 EN 1317-2:2010	Test Protocol No. 2017-3-0019-002	R: max. ASI $\leq 1,9$ at max. THIV ≤ 33 KM/H	conforms impact intensity B max. ASI = 1,3 at THIV = 32 KM/H
Normalized working width	2.2.1 2.2.2	EN 1317-1:2010 EN 1317-2:2010	Test Protocol No. 2017-3-0019-002	R: W3 = max. 1,0 m	conforms max. W_N = 0,9 m
Normalized dynamic deflection	2.2.1 2.2.2	EN 1317-1:2010 EN 1317-2:2010	Test Protocol No. 2017-3-0019-002	R: determination of value	conforms max. D_N $\leq 0,7$ m
Normalized vehicle intrusion	2.2.1 2.2.2	EN 1317-1:2010 EN 1317-2:2010 Chapt. 3.5	Test Protocol No. 2017-3-0019-002	R: VI3 = max. 1,0 m	conforms max. VI_N = 1,0 m
Resistance to snow removal	2.2.1 2.2.2	EN 1317-5+A2:2012 Annex C		NPD	

Evaluation conclusion: the product confirms to and complies with the declared purpose.



3 Factory Production Control Assessment

The product assessment was performed in the manufacturing plant of JEONGDO INDUSTRY CO., LTD., 59-38, Donyu 1-ro, Paju-eup, Paju-si, Gyeonggi-do, Korea on 18th May 2017.

3.1 Requirement of the technical specification regarding Factory Production Control:

The requirements on the production management system are stipulated in EN 1317–5+A2:2012/AC:2012 Road restraint systems – Part 5: Product requirements and evaluation of conformity for vehicle restraint systems

3.2 Evaluation of the Factory Production Control assessment results:

- The technical documentation of the production plant of JEONGDO INDUSTRY CO., LTD. contains a description of the production management system in the internal document Technological Guideline.
- The production management system complies with the technical documentation and ensures that the marketed products conform to the technical specifications, and is assessed as conforming

4 Conclusion

- The sample of product fulfils the requirements of the technical specification.
- The FPC is in accordance with the harmonised technical specification and ensures that the declared performances are achieved.
- Findings and conclusions mentioned in this Report are valid providing the conditions under which FPC assessment was carried out remain unchanged (e.g. technical regulations, technical specifications, production technology, incoming raw and manufacturing equipment).
- In compliance with provision of the CPR Art. 1.2, Annex V Surveillance Reports containing FPC assessment and evaluation have to be complementary to the technical documentation.

5 Annexes

The documents are not part of this Protocol and are kept by the author.

Prepared by: Roman Ondruška

