



POLITECNICO
MILANO 1863

Laboratorio Prove Materiali - NB 1777 CPR

Notified Body 1777 - CPR

**CERTIFICATE OF CONSTANCY OF PERFORMANCE
1777 - CPR - 18.01**

In compliance with Regulation (EU) No. 305/2011 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

Displacement Dependent Devices with Non Linear Response

with trade names

EDIL TP-N and EDIL TT-N

hysteretic energy dissipating devices, to use in building and civil engineering works where requirements on individual devices are critical,

placed on the market under the name or trade mark of

EDILMATIC S.P.A.

Via Gonzaga, 11 - 46020 Pegognaga (MN) – Italy

and produced in the manufacturing plant

Paluan SRL, Via Aldo Moro, 14 - 46020 Pegognaga (MN) – Italy

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

EN 15129:2009

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 13 April 2018 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product, the AVCP methods nor the manufacturing conditions in the plant are modified significantly, unless suspended or withdrawn by the notified product certification body.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 main characteristics of the product are reported in the Annex to this certificate.

Milan, 15 December 2022

Revision n. 1

The present revision of the certificate no. 1777-CPR-18.01 cancels and replaces the previous revision no. 0 dated 13 April 2018

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Head of Certification Body



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**Annex to Certificate of Constancy of Performance
no. 1777 – CPR – 18.01**

Displacement Dependent Devices with Non Linear Response

with trade name

EDIL TP-N and EDIL TT-N

Description of the product

EDIL TP-N, version 1 and 2 and EDIL TT-N version 1 and 2 are energy dissipating devices relying on the hysteretic behavior of 4 steel elements deformed in tension and compression beyond their elastic limit. The devices are not designed to carry vertical loads and are classified as a Displacement Dependent Device with Non Linear Response in accordance with Table 1 of hEN 15129:2009.

The material of the deforming elements is Alloy A*

The temperature range is from +5° C to +40° C.

The intended use is in buildings and civil engineering works.

* appropriate certificates reporting the identification characteristics of the alloy are deposited at the notified body involved in the attestation of constancy of performance procedure

Metallic parts are manufactured, manufacturing processes are carried out and Corrosion protection system is applied in the factory of:

PALUAN SRL, Pegognaga (MN) - Italy

Factory Production Control tests are carried out in the laboratory of:

UNIVERSITÀ DEGLI STUDI DI BERGAMO - CONSTRUCTION MATERIALS TESTING LAB, Dalmine (BG) – Italy

Performance characteristics

EDIL TP-N, version 1 and 2 and EDIL TT-N version 1 and 2 products meet the following requirements in accordance with hEN 15129:2009:

- evaluation of the force-displacement cycle, clause 6.4.4 a
- ramp test for the static evaluation of the failure displacement, clause 6.4.4 b



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Type, identification and use

EDIL TP-N version 1 product type is evaluated on the basis of the results reported below

EDIL TP-N version 1		
<i>Deforming element diameter</i>	14	mm
<i>Deforming element length</i>	230	mm
<i>Deforming element central radius</i>	70	mm
<i>Deforming element side radius</i>	43	mm
<i>Essential characteristics</i>	<i>Design value</i>	<i>Unit</i>
Load bearing capacity	Not applicable	==
Resistance to seismic loads	Conforming	==
Stiffness		==
K_1	14.8	kN/mm
K_2	1.36	kN/mm
K_{eff}	5.76	kN/mm
Energy dissipation capability	29	%
Horizontal distortion capability	± 12.5	mm
Durability	Conforming	==

According to Test Report no. 2017/1566

EDIL TP-N version 2 product type is evaluated on the basis of the results reported below

EDIL TP-N version 2		
<i>Deforming element diameter</i>	14	mm
<i>Deforming element length</i>	230	mm
<i>Deforming element central radius</i>	70	mm
<i>Deforming element side radius</i>	43	mm
<i>Essential characteristics</i>	<i>Design value</i>	<i>Unit</i>
Load bearing capacity	Not applicable	==
Resistance to seismic loads	Conforming	==
Stiffness		==
K_1	7.08	kN/mm
K_2	0.949	kN/mm
K_{eff}	5.48	kN/mm
Energy dissipation capability	33	%
Horizontal distortion capability	± 12.5	mm
Durability	Conforming	==

According to Test Report no. 2019/0846



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EDIL TT-N version 1 product type is evaluated on the basis of the results reported below

EDIL TT-N version 1		
Deforming element diameter	10	mm
Deforming element length	230	mm
Deforming element central radius	92	mm
Deforming element side radius	30	mm
Essential characteristics	Design value	Unit
Load bearing capacity	Not applicable	==
Resistance to seismic loads	Conforming	==
Stiffness		==
K_1	7.20	kN/mm
K_2	0.48	kN/mm
K_{eff}	1.60	kN/mm
Energy dissipation capability	37	%
Horizontal distortion capability	± 12.5	mm
Durability	Conforming	==

According to Test Report no. 2017/0567

EDIL TT-N version 2 product type is evaluated on the basis of the results reported below

EDIL TT-N version 2		
Deforming element diameter	10	mm
Deforming element length	230	mm
Deforming element central radius	92	mm
Deforming element side radius	30	mm
Essential characteristics	Design value	Unit
Load bearing capacity	Not applicable	==
Resistance to seismic loads	Conforming	==
Stiffness		==
K_1	7.60	kN/mm
K_2	0.546	kN/mm
K_{eff}	2.02	kN/mm
Energy dissipation capability	36	%
Horizontal distortion capability	± 12.5	mm
Durability	Conforming	==

According to Test Report no. 2019/1596



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EDIL TP-N, version 1 and 2, and EDIL TT-N, version 1 and 2, products (types and sizes) covered by the present Certificate of Constancy of Performance are manufactured in accordance with the same design and with the same parametric technical solutions.

The used materials are the same for all types and sizes.

The dimensions of the products covered by the present Certificate of Constancy of Performance can vary in the dimensional range defined below in accordance with clause 6.4.4 of hEN 15129:2009.

<i>EDIL TP_N version 1 and 2</i>		
<i>Deforming element</i>	<i>Linear difference</i>	<i>Test Report</i>
Diameter	11.2 to 16.8 mm	2017/0566
Length	178 to 282 mm	2017/0566
Central radius	56 to 84 mm	2017/0566
Side radius	34.6 to 51.6 mm	2017/0566
<i>EDIL TT_N version 1 and 2</i>		
<i>Deforming element</i>	<i>Linear difference</i>	<i>Test Report</i>
Diameter	8 to 12 mm	2017/0567
Length	178 to 282 mm	2017/0567
Central radius	73.6 to 110.4 mm	2017/0567
Side radius	24 to 36 mm	2017/0567

Milan, 15 December 2022

Prof. Ing. Carlo Poggi
Head of Certification Body

**The present Annex is only valid together with the
Certificate of Constancy of Performance no. 1777 – CPR – 18.01
rev.1 dated 15 December 2022**

**The present Annex cancels and replaces the previous Annex rev. 1
dated 23 July 2019**