



# OIML Certificate

**OIML Member State**  
The Netherlands

Number R60/2021-A-NL1-24.22 revision 0  
Project number 3774623  
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Issuing authority

NMi Certin B.V.  
Person responsible: M.Ph.D. Schmidt

Applicant and  
Manufacturer

Ningbo Maken Tech Co., Ltd  
No.1-1, Building No.8, VanYang Crowd Innovation Park  
Baifeng Sub-district, Beilun District  
Ningbo, China

Identification of the  
certified type

A **compression load cell**, with strain gauges.  
Registered trade name : Ningbo Maken Tech Co.,Ltd  
Type : BTY

Characteristics

See next page

This OIML Certificate is issued under scheme A.

This Certificate attests the conformity of the above identified Type (represented by the sample(s) identified in the OIML Test Report) with the requirements of the following Recommendation of the International Organization of Legal Metrology (OIML):

**OIML R 60-1:2021** for accuracy class C

This Certificate relates only to the metrological and technical characteristics of the type of measuring instrument covered by the relevant OIML International Recommendation above-identified.  
This Certificate does not bestow any form of legal international approval.

*Important note:* Apart from the mention of the Certificate's reference number and the name of the OIML Member State in which the Certificate was issued, partial quotation of the Certificate and of the associated OIML Test Report(s) is not permitted, although either may be reproduced in full.

Issuing Authority

**NMi Certin B.V., OIML Issuing Authority NL1**  
15 July 2024

Certification Board

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This document is issued under the provision that no liability is accepted and that the applicant shall indemnify third-party liability.

The notification of NMi Certin B.V. as Issuing Authority can be verified at [www.oiml.org](http://www.oiml.org)

This document is digitally signed and sealed. The digital signature can be verified in the blue ribbon on top of the electronic version of this certificate.





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The conformity was established by the results of tests and examinations provided in the associated report:

- No. NMI-3774623-01 dated 15 July 2024 that includes 51 pages.

## Characteristics of the load cell:

Characterization of load cell capabilities	Analog-passive load cell
Maximum capacity ( $E_{\max}$ )	10 t up to and including 50 t
Minimum dead load	0 t
Accuracy Class	C
Rated Output	2 mV/V $\pm$ 2 %
Maximum number of load cell intervals (n) <sup>(1)</sup>	3000
Ratio of minimum LC Verification interval <sup>(1)</sup> $Y = E_{\max} / v_{\min}$	20000
Ratio of minimum dead load output return <sup>(1)</sup> $Z = E_{\max} / (2 * DR)$	7500
Input impedance	775 $\Omega \pm 10 \Omega$
Temperature range	-10 °C / +40°C
Fraction $p_{LC}$	0,7
Humidity Class	CH
Safe overload	150 % of $E_{\max}$
Output impedance	702 $\Omega \pm 5 \Omega$
Recommended excitation	10 V AC / DC
Excitation maximum	18 V AC / DC
Transducer material	Stainless steel
Atmospheric protection	Hermetically welded

## Remarks:

1. The characteristics for  $n_{\max}$ , Y and Z can be reduced separately.

Each load cell produced is provided with an accompanying document with information about its characteristics.

The above identified Type (represented by the sample(s) identified in the OIML Test Report) have been found to comply with the additional national requirements established by the United States of America (NIST Handbook 44 and NCWM Publication 14), included in the Utilizer Declaration:

- R 60 OIML-CS rev.2 Additional requirements from the United States Accuracy class III L;
- R 60 OIML-CS rev.2 Additional requirements from the United States Marking requirements.



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## Revision History

Revision	Date	Change(s)
0	2024-07-15	Initial issue.