

OIML Member State
The Netherlands

Number R60/2000-NL1-16.42 revision 1
Project number 16200531
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Issuing authority	NMi Certin B.V. Person responsible: C. Oosterman
Applicant and Manufacturer	Toledo do Brasil Indústria de Balanças Ltda. Manoel Cremonesi, 1 Sao Bernardo do Campo, SP 09851-900 Brasil
Identification of the certified type	A compression load cell , with strain gauges, equipped with electronics. Type : TBDLC
Characteristics	See next page

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 R60 - Edition 2000 (E) 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.

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Issuing Authority **NMi Certin B.V., OIML Issuing Authority NL1**
9 December 2016



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OIML Certificate of Conformity

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The conformity was established by the results of tests and examinations provided in the associated OIML Test Report(s):

- No. NMI-16200531-01 dated 23 November 2016 that includes 73 pages
- No. NMI-16200531-01 revision 1 dated 7 December 2016 that includes 73 pages.

Characteristics of the load cell:

Maximum capacity (E_{max})	20 t up to and including 100 t
Minimum dead load	0 kg
Accuracy Class	C
Maximum number of load cell intervals (n)	6000
Ratio of minimum LC Verification interval $Y = E_{max} / V_{min}$	20000
Ratio of minimum dead load output return $Z = E_{max} / (2 * DR)$	6000
Temperature range	0 °C / + 40 °C
Fraction p_{LC}	0,7
Humidity Class	CH
Safe overload	150 % of E_{max}
Recommended excitation	17 V DC
Excitation maximum	30 V DC
Transducer material	Alloy steel
Atmospheric protection	IP68/ IP69K
Electromagnetic environment class	E2
Number of counts for E_{max}	$\geq Y * 5 / p_{LC}$
Software identification	Version number: V.5.15

The characteristics for n_{max} and Y can be reduced separately.

Each produced load cell 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 MAA Declaration of Mutual Confidence:

- R 60 DoMC-01 rev.0, Additional requirements from the United States;
- R 60 DoMC-02 rev.0, Additional requirements from the United States.



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Revision History

This revision replaces the previous version.

Revision	Date	Changes
0	1 December 2016	Initial issue
1	9 December 2016	Typing error in company name and error in test report.