ČESKÝ METROLOGICKÝ INSTITUT

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PUBLIC DECREE

As the authority with substantive and territorial jurisdiction in the matter of laying down metrological and technical requirements for specified measuring instruments and stipulating test methods for type approval and verification of specified measuring instruments pursuant to § 14(1) of Act No 505/1990 on metrology, as amended (hereinafter the 'Metrology Act'), and in accordance with the provisions of § 172
et seq. of Act No 500/2004, the Administrative Code, as amended (hereinafter the 'AC'), the Czech Metrology Institute (hereinafter the 'CMI') commenced ex officio proceedings on 1 July 2024 pursuant to § 46 AC, and, based on supporting documents, issues the following:

I.

GENERAL MEASURE

number: 0111-OOP-C102-26

laying down metrological and technical requirements for specified measuring instruments, including test methods for type approval, verification and testing of specified measuring instruments:

'material measures of length'

1 Definitions

For the purposes of this Measure of a General Nature, the terms and definitions pursuant to VIM and VIML[1] and the following apply:

1.1
material measure of length

a measuring instrument with permanent and indelible scale gradations, the separation of which is given in statutory units of length

2 Metrological requirements

The metrological requirements laid down in special legislation[2] apply to measuring instruments, in particular:

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[1] TNI 01 0115 International Vocabulary of Metrology – Basic and General Concepts and Associated Terms (VIM) and International Vocabulary of Terms in Legal Metrology (VIML) are part of the technical harmonisation compendium 'Terminology in the Area of Metrology', which is publicly accessible at www.unmz.cz.

[2] Government Regulation No 120/2016 stipulating technical requirements for measuring instruments (hereinafter the 'Government Regulation'), and implementing Directive 2014/32/EU of the European Parliament and of the Council of 26 February 2014 on measuring instruments (MID)

2.1 Maximum permissible errors (MPE)

The MPE, positive or negative, expressed in millimetres, for the distance between two non-consecutive scale marks is as follows:

$$(a + b \cdot L) \quad (1)$$

where: .....*L* is the numerical value of the given length, rounded up to the nearest whole metre,

a, *b* ..... are given in Table 1 for each accuracy class.

Table 1

Accuracy class	*a* (mm)	*b* (mm)
I	0.1	0.1
II	0.3	0.2
III	0.6	0.4
D – special class for submersible tape measures[1]. Up to and including 30 m[2]. [1] Applies to tape measure/dip weight combinations. [2] If the nominal length is greater than 30 m, an additional MPE increment of 0.75 mm is allowed for each 30 m of length.	1.5	zero
S – special class for tape measures used for measuring tanks (by girding) For every 30 m of length, if the tape measure is supported (held) on a flat surface.	1.5	zero

Submersible tape measures may also be manufactured in accuracy class 'I' or 'II', in which case the MPE is ±0.6 mm for each length between two scale marks, one on the dip weight and the other on the tape measure, if a value of less than 0.6 mm is calculated in accordance with Formula (1).

If the end interval is restricted by a flat surface, the maximum permissible error is increased by the value given in Table 2 for any distance starting at that start point.

Table 2

Value for individual accuracy classes (mm)				
I	**II**	**III**	**D**	**S**
0.1	0.2	0.3	zero	zero

The MPE for the length between two consecutive scale marks and the maximum permissible difference between the lengths of two consecutive scale divisions are given in Table 3.

In the case of folding gauges, the joints must be such that, apart from the errors specified in Table 3, they do not cause any further errors greater than 0.3 mm for accuracy class 'II' and 0.5 mm for accuracy class 'III'.

Table 3

Division length *i*	**Maximum permissible errors or difference for accuracy classes** (mm)		
	I	**II**	**III**
$i \leq 1$ mm	0.1	0.2	0.3
1 mm < $i \leq 1$ cm	0.2	0.4	0.6

During subsequent verification, the measuring instruments are subject to the metrological requirements that were decisive for their placing on the market.

3 Technical requirements

Measuring instruments are subject to technical requirements laid down in special legislation[2].

During subsequent verification, the measuring instruments are subject to the technical requirements that were decisive for their placing on the market.

4 Measuring instrument markings

The marking of measuring instruments is subject to the requirements set out in special legislation[2].

During subsequent verification, the marking of measuring instruments is subject to the requirements that were decisive for their placing on the market.

5 Measuring instrument type approval

Measuring instruments are placed on the market with a conformity assessment in accordance with special legislation[2]. The provisions on type approval pursuant to § 24b of Act No 505/1990 on metrology do not apply.

6 Initial verification

Measuring instruments are placed on the market with a conformity assessment in accordance with special legislation[2]. The provision on initial verification under § 24b of Act No 505/1990 on metrology does not apply.

7 Subsequent verification

During verification, the following actions and tests are performed:

a) visual inspection;
b) functional test (where relevant from the point of view of the design of the measuring instrument);
c) accuracy test.

7.1 Visual inspection

The following are determined during the visual inspection:

- the measuring instrument submitted for verification conforms to the approved type;

- the measuring instrument is not mechanically damaged;
- the measuring instrument has the appropriate markings;

Material measures of length that have not passed visual inspection are excluded from further testing.

7.2 Functional test

The functional test verifies whether connections perform their function in such a way as to ensure the accuracy of the measuring instrument within the limits of MPE (see Article 2.1).

7.3 Accuracy test

7.3.1 Reference conditions

Unless otherwise specified by the manufacturer and unless otherwise appropriately marked on the material measure of length, the reference temperature is 20°C.

7.3.2 Other conditions

Measures (e.g. tape measures; separate measuring tapes) with a length of five metres or more must comply with the requirement for maximum permissible errors if a tensioning force of 50 N or other force value specified by the manufacturer and appropriately marked on the measuring tape is applied. In the case of rigid or semi-rigid gauges (e.g. retractable tape measures), no tensioning force is applied.

7.3.3 Accuracy test

The accuracy of the scale, i.e. the distance between two non-adjacent marks, one of which is always zero, is tested at a minimum of four different locations randomly spaced over the entire measuring length, including the nominal length.

In the case of gauges with a free start of the scale (e.g. retractable tape measures), a test of the start of the scale, i.e. the measurement of the distance between ‘zero’ and ‘0.1 m’, or the first marked line of the scale, is also carried out. For retractable tape measures, this test is carried out both for measurement of outer and inner dimensions.

In the case of length measures for goods sold by length, a test of accuracy is performed only for the nominal length, i.e. the distance between the beginning and the end of the scale.

For double-sided measures, both scales are tested.

The determined errors of the tested measuring instrument must not exceed the applicable maximum permissible error (MPE) values specified in Article 2.1.

8 Measuring instrument examination

When testing measuring instruments pursuant to § 11a of the Metrology Act at the request of a person who may be affected by incorrect measurement, the procedure under Chapter 7 is followed, except for the last sentence of Article 7.1.

The test is carried out on the disputed length, if known, and proceeds as described in Chapter 7. If the disputed length is not known, the procedure laid down in Chapter 7 is followed. The maximum permissible error is twice the maximum permissible error specified in Article 2.1.

The accuracy test is always be performed if the integrity of the measuring instrument and its metrological properties are ensured and if it is technically feasible.

9 Notified standards

For the purposes of specifying the metrological and technical requirements for measuring instruments and specifying the testing methods for their type approval and verification arising from this General Measure, the CMI shall notify Czech technical standards, other technical standards or technical documents of international or foreign organisations, or other technical documents containing more detailed technical requirements (hereinafter 'notified standards'). The CMI shall publish a list of these notified standards associated with the relevant measure, together with the measure of a general nature, in a manner accessible to the public (at www.cmi.cz).

Compliance with notified standards or parts thereof is considered, to the extent and under the conditions stipulated by a general measure, to be compliance with the requirements stipulated by this measure to which these standards or parts thereof apply.

Compliance with a notified standard is one of the ways to demonstrate compliance. These requirements may also be met by using another technical solution guaranteeing an equivalent or higher level of protection of legitimate interests.

II.

GROUNDS

Pursuant to § 14(1)(j) of the Metrology Act, the CMI has issued this Measure of a General Nature toward the implementation of § 6(2), § 9(1) and (9), and § 11a(3) of the Metrology Act, laying down metrological and technical requirements for specified measuring instruments and tests for type approval and verification of specified measuring instruments – 'material measures of length'.

Decree No 345/2002 laying down measuring instruments for mandatory verification and measuring instruments subject to type approval, as amended, classifies the given measuring instruments under item 1.1.1 in the Annex 'Type list of specified measuring instruments' as measuring instruments subject to type approval and verification.

This legislation (Measure of a General Nature) was notified in accordance with Directive (EU) 2015/1535 of the European Parliament and of the Council of 9 September 2015 laying down a procedure for the provision of information in the field of technical regulations and of rules on information society services.

III.

INSTRUCTIONS

In accordance with § 173(2) AC, no remedy may be submitted against a measure of a general nature.

Pursuant to § 172(5) AC, a decision on objections cannot be appealed or reviewed.

Compliance of this Measure of a General Nature with legislation can be assessed in review proceedings pursuant to § 94 to § 96 AC. A party to the proceedings may initiate review proceedings to be conducted by the administrative authority that issued the measure of a general nature. If the administrative authority finds no reason to commence the review proceedings, it shall communicate and provide grounds for this within 30 days. Pursuant to Article 174(2) AC, a ruling on the commencement of review proceedings may be issued within three years of the effective date of the measure of a general nature.

IV.

EFFECTIVE DATE

This Measure of a General Nature comes into effect on the fifteenth day following the date of posting it on the official notice board (§ 24d of the Metrology Act).

Director-General

Effective date: 11. 4. 2026