



EC type Examination Certificate

0402-MID-SC0986-15

Manual Caliper “Mantax Blue” and “Mantax Black”

Issued to

Haglöf Sweden AB, Box 28, SE-882 30 LÅNGSELE, Sweden

In respect of (type of instrument)

Manual Caliper **Mantax Blue**, diameter caliper for measurement of tree diameter

Manual Caliper **Mantax Black**, foldable diameter caliper for measurement of tree diameter

In accordance with

The Measuring Instruments Regulations STAFS 2006:4 and The Regulations and Guidelines concerning Measures of Length STAFS 2006:12, implementing in the NB's country law the Directive 2004/22/EC of 31 March 2004 on measuring instruments (MID) and the application of Annex B and Annex MI-008.

Harmonised standards and normative documents used

Normative documents have not been published in the Official Journal for Measures of Length, Annex MI-008.

Further applied documents

WELMEC Guide 8.3, Measuring Instruments Directive 2004/22/EC, Application of Module B.

As reference but, not normative, the OIML R 35-1 Edition 2007 (E) including amendment 2014, Material measures of length for general use, has been used. The instruments have however not been evaluated to fully meet the specifications in this document.

Rated operating conditions

Measurand:	Length			Accuracy:	Class III
Climatic environment:	5 to +40 °C Condensing	Electromagnetic environment class:	N/A	Mechanic environment class:	N/A
Measurement range:	Mantax Blue: 0-400 mm, 500 mm, 600 mm, 650 mm, 800 mm, 950 mm, 1000 mm, 1020 mm and 1270 mm Mantax Black: 0-500 mm, 600 mm, 650 mm, 800 mm, 950 mm and 1000 mm				

Miscellaneous

Valid until March 11, 2026. This certificate is the first edition with this number.

The principal characteristics, approval conditions are set out in the appendix hereto, which forms part of the approval documents and consists of 4 pages. All the plans, schematic diagrams and documentations are recorded under reference file 5P08127.

2016-03-31

SP Technical Research Institute of Sweden

Certification - Notified Body No. 0402

Lennart Aronsson
Product Certification Manager

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Certificate issue 1, dated 2016-03-31

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EC Type Examination Certificate

0402-MID-SC0986-15 Appendix

The instruments must correspond with the following specifications:

1 Design of the instrument

1.1 Construction

Product names

Mantax Blue
Mantax Black

Measuring instrument description

Printed aluminium scale with a scale interval of 1mm. The scale is equipped with jaws; one fixed and one moveable, to form a manual caliper function, see point 1.4 below.

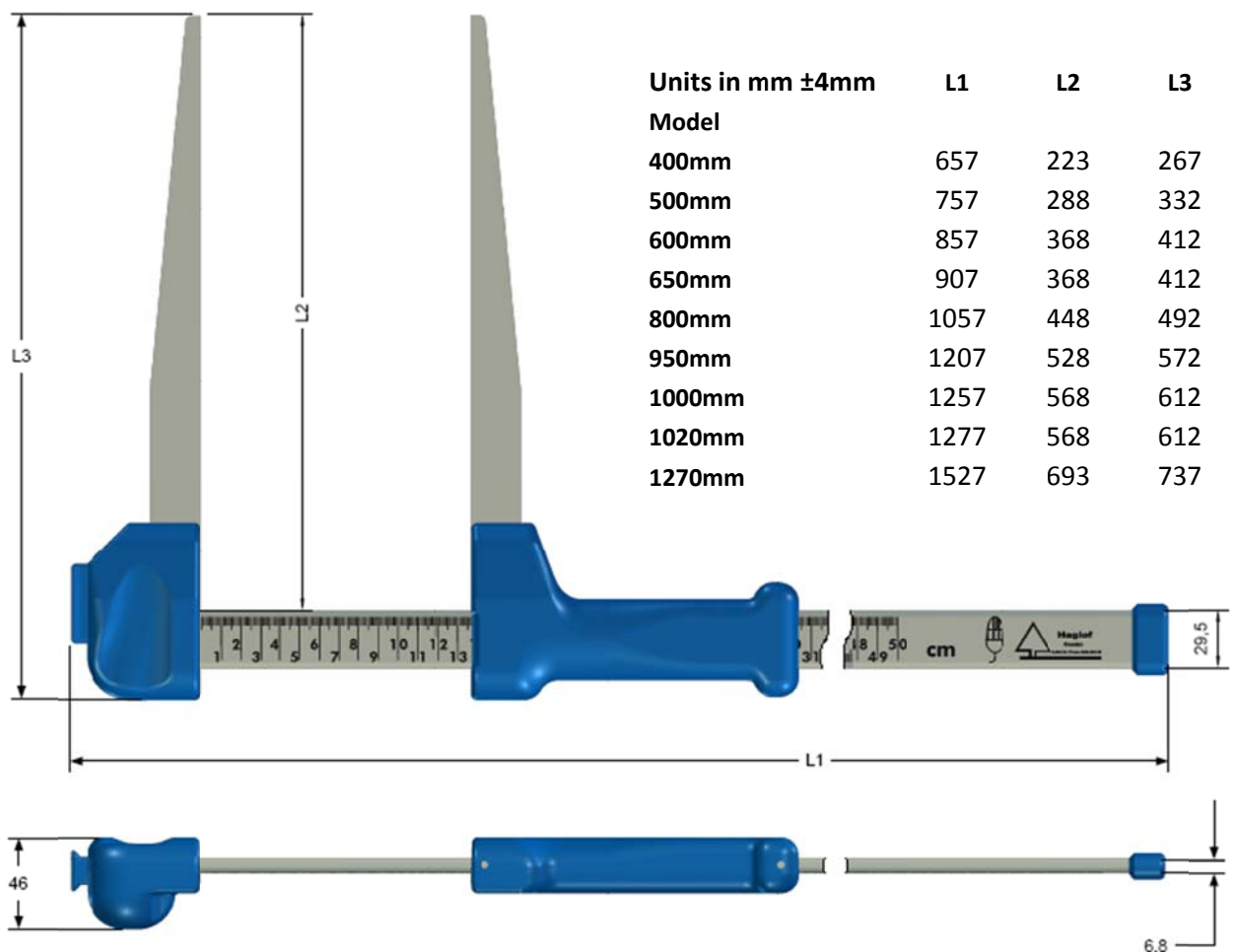


Figure 1: Mantax Blue with fixed jaws

EC Type Examination Certificate

0402-MID-SC0986-15 Appendix

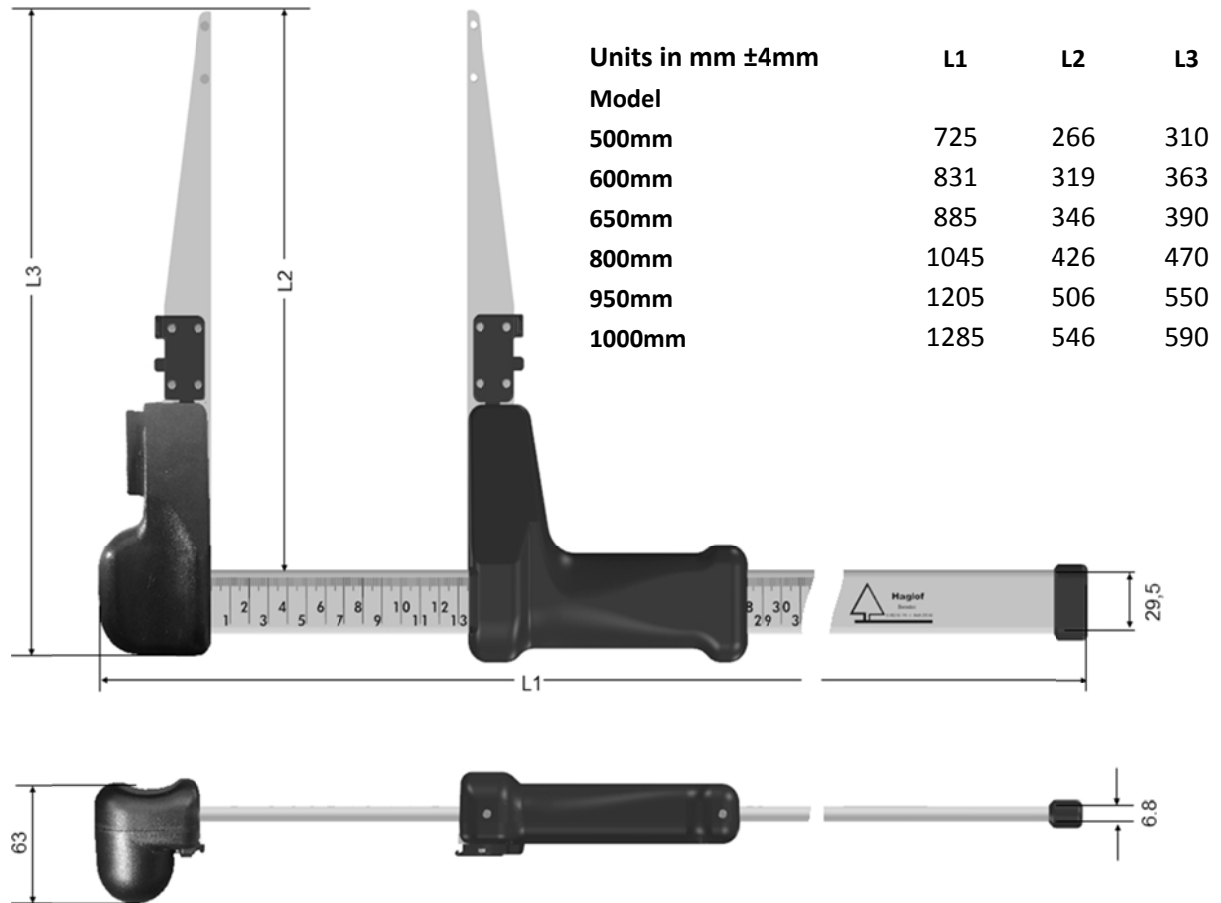


Figure 2: Mantax Black with foldable jaws

1.2 Optional equipment and functions subject to MID requirements

None identified

1.3 Technical documentation

For market surveillance the construction is described in 1.1, where MID is applicable to the scale only.

1.4 Integrated equipment and functions not subject to MID

The printed aluminium scales are equipped with jaws, designed to measure the diameter of trees. The jaws as such are not subject to evaluation according to/covered by MID and the correct dimension read off the scale is subject to the following correct handling of the Caliper:

1. the jaws must be parallel when closed, 0 mm, i.e. with no gap between (jaw angle can be adjusted)
2. no force must be applied when closing the caliper on to the measurand (tree)
3. it must be checked regularly that there is no play of the jaws



EC Type Examination Certificate

0402-MID-SC0986-15 Appendix

2 Technical data

2.1 Rated operating conditions

Measurand

Length

Measurement range

Mantax Blue: 0-400 mm, 0-500 mm, 0-600 mm, 0-650 mm, 0-800 mm, 0-950 mm, 0-1000 mm, 0-1020 mm or 0-1270 mm

Mantax Black: 0-500 mm, 0-600 mm, 0-650 mm, 0-800 mm, 0-950 mm or 0-1000 mm

Accuracy

Class III according to MID Annex MI-008. Reference temperature 20 °C.

Maximum permissible error, MPE, positive or negative in mm, between two non-consecutive scale marks is $(a + bL)$, where "L" is the value of the length rounded up to the next whole metre, "a" is 0,6 mm and "b" is 0,4 mm.

The MPE for length between consecutive scale marks is for

Length $l \leq 1\text{mm}$: 0,3 mm

Length $1\text{ mm} < l \leq 1\text{ cm}$: 0,6 mm

Environments classes / influence quantities

Mechanic: N/A

Electromagnetic: N/A

Ambient temperature limits: 5°C to +40°C

Humidity: condensing

2.2 Other operating conditions

Only just enough force for the jaws to come in to contact with the measurand may be applied.

Excessive force may cause false reading.

3 Control of the measuring tasks of the instrument in use

Documentation of the procedure

The procedure to adjust jaws, clean and the handling when measuring, is described in the user's manual.

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EC Type Examination Certificate

0402-MID-SC0986-15 Appendix

4 Labelling and inscriptions

4.1 Information to be borne by the instrument

The marking on the instrument shall contain the following information:

- the name of the manufacturer
- the designation or type name (according to “**Product names**” Appendix page 1)
- the EC-type examination certificate number, 0402-MID-SC0986-15
- the accuracy class III



Figure 9: Placement of marking. 16 is to be replaced by the year of manufacturing.

4.2 Conformity marking in accordance to MID article 17

The instrument shall be marked in accordance to MID article 17 which e.g. describes the CE-marking together with M, year of marking and the notified body number.

4.3 Further inscriptions, if necessary

Further inscriptions are allowed, but must not interfere with the specified marking.

5 Manuals

The following manuals are to accompany the product in the official language of the country of use (the manufacturer is responsible for the translation of approved documents).

<i>Title of manual</i>	<i>Document version</i>	<i>Language of examined version</i>
Mantax Blue user manual MID	151126	English
Mantax Black user manual MID	151126	English