



mastap

*a non-destructive
stability test*

*For a reliable & objective appraisal
of the current stability of columns*


more than masts



a non-destructive stability test

For a reliable and objective appraisal of the current stability of columns.

Just like you, we are committed to work to a safe, sustainable and better living environment.

In order to make the living environment as safe and sustainable as possible, it is also important to obtain an understanding of the current status of (catenary) masts in public spaces. Columns that have exceeded their economic lifetimes can still be in good condition. In order to make sure about this, it is now possible to carry out a non-destructive test that shows whether a column is technically suitable to remain in use.

Testing columns at the location

As part of our sustainability policy, our range of services has been extended to include a new aspect: testing columns at the location. Using the Mastap method we can, for example, determine the current condition of catenary columns and formulate expectations about the future.

In this way we can help you to get the most out of your columns!

The know-how portfolio is completed by the launch of the Mastap test method. Kaal Masten can now provide the entire process a column goes through from A to Z. With our knowledge, we are very willing to help answer all your questions regarding the test results of Mastap.



Mastap, a pioneering measuring instrument

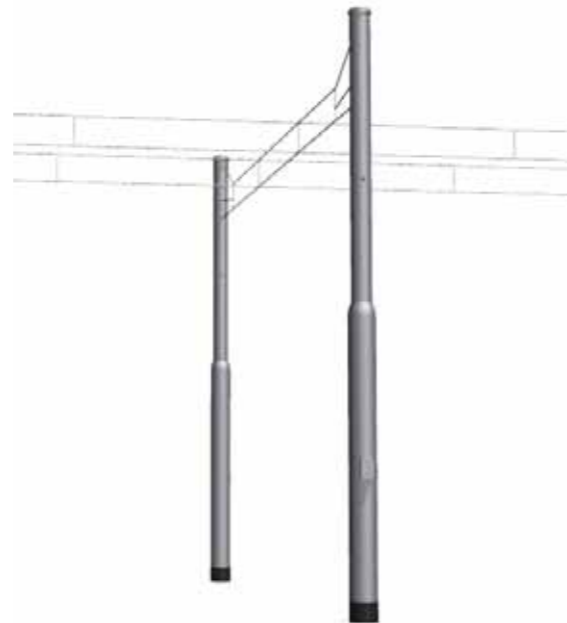
Mastap is a new pioneering measuring instrument that is used to objectively appraise the current stability and the remaining operational lifetime of columns.

The test gives an appraisal about the condition of the mast and the foundation. Mastap immediately indicates whether the column is still suitable to remain and Mastap recommends the period after which the column needs to be inspected again.

A dynamic test

This revolutionary test method is based on the relationship between the theoretical and measured natural frequency of the column. Mastap is 'smart'! The static and dynamic tests have been integrated, so only one test needs to be carried out. The behaviour of any overhead lines, outreach brackets or light fittings is by definition also incorporated in the measurements.

The appraisals of columns using the Mastap measuring system are made on the basis of the currently applicable guidelines and standards. The revolutionary Mastap method has a scientific basis and is already being frequently used.



Which results does Mastap provide?

The test results reported by Mastap include:

1. Assessing the presence of foundation damage

The foundation is checked for the presence of damage. The chance of foundation damage is broken down into four classes:

- Very high
- High
- Average
- Small

2. Assessing the stability

Mastap also appraises the overall stability of the column. The presence of foundation damage is included as a matter of course. The measured stability is accompanied by a recommendation about the period (number of years) after which the column needs to be inspected again. A tested column is classified in one of the following categories:

◀ **0 years**; the column is not stable, immediate action needed.

◀ **1 year**; the column will be stable for one year.

This column must be tested and appraised again within one year.

◀ **4 years**; the column will be stable for four years.

This column must be tested and appraised again within four years.

◀ **6 years** the column will be stable for six years.

This column must be tested and appraised again within six years.

3. Lifetime forecast

Based on the results, Mastap moreover determines the expected remaining lifetime of the column. You are provided with the findings and the test data per column in Excel. You are also supplied with a digital map that gives you an immediate overview of the status of your columns.

The added value of Mastap

Absolute non-destructive test

The test is completely non-destructive. The column is not subjected to external forces. Only the Mastap measuring instrument is connected to the catenary column. We get the column to move slightly by hand without extra aids. As a consequence there is no change of shape whatsoever above or below ground level and only the natural movement of the column is simulated.



- *As opposed to conventional test methods, Mastap guarantees a natural movement of the column above and below ground level. No extra forces are used, therefore the column and the foundation cannot be damaged.*

Test of column load-bearing capacity

Mastap incorporates the load-bearing capacity of the column in the calculations. Mastap assesses whether the column is suitable now and in the future to support an advertising sign, traffic lights or an aerial for example.

Can be used in places that are difficult to reach

The test can be carried out in places that are difficult to reach because the measuring method is easy to use. Traffic is also not subjected to any hindrance worth mentioning because of the fast and convenient procedure. This means that there is no damage to planting, pavements, fences etc.

All types of columns can be inspected with Mastap

Mastap has a programme of measurements for different applications. All types of columns can be inspected using Mastap, irrespective of the shape of the cross-section. Tensioning poles, lighting poles and road sign poles in particular are eligible for such a test. High columns, irrespective of height or diameter, can also be tested as a matter of course. Kaal Masten can test wooden, steel, aluminium and concrete columns. Columns made from a combination of materials are also eligible for a stability test.

Safety, responsibility and TCO

Why do public transport companies or semi-state bodies incorporate testing of columns in their policy? The following fundamental reasons are on the basis of this decision:

Sustainability and certainty

Stability testing is a suitable solution for a sustainable policy. By means of testing early and unnecessary replacement of columns is reduced to the minimum and the highest possible lifetime of a column can be obtained.



Moreover, the test results give you a reliable and objective understanding of your columns. This way, public transport companies can still carry their responsibility for the stability of columns and a safe environment. After all, Mastap reports the period after which the column needs to be inspected again.

Budgeting & economise

The results of such a test have positive outcomes for your policy. Beside saving, a longer remaining lifespan of columns, can lead to an optimal reconsideration of the budget.



- *With the Mastap method, Kaal Masten is able to carry out the test without damaging trees and shrubs.*

Mastap can easily test a column that is placed in a foundation tube.



Kaal Masten

Kaal Masten is committed to sustainable, safe and attractive public areas. Our mission is aimed to provide customers with high-quality masts and to help them at all times by providing services and custom solutions. Active in many areas, such as mobility, lighting, communication, sustainability and security, Kaal Masten are all-rounders!

Services from A to Z

We offer a complete range of quality columns and can take care of the entire process from design through to installation. Inspections and testing of columns are also possible. With over 125 specialists, Kaal Masten is able to carry out both domestic and international contracts.

Kaal Masten is characterized by a sustainable, solution-oriented and cost-conscious way of working, with the principle being the provision of service at each level in the process. Kaal Masten is ISO 9001, ISO 14001 and OHSAS 18001 certified. Moreover, Kaal Masten is CO2 Neutral and we encourage the choice for our Solar Powered Lighting Columns.

The logo for mastap, featuring a stylized white mast icon on the left and the word "mastap" in a bold, lowercase, sans-serif font to its right, all set against a red background.The logo for kaal masten, featuring a stylized white mast icon on the left and the words "kaal masten" in a bold, lowercase, sans-serif font to its right, all set against a white background.

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