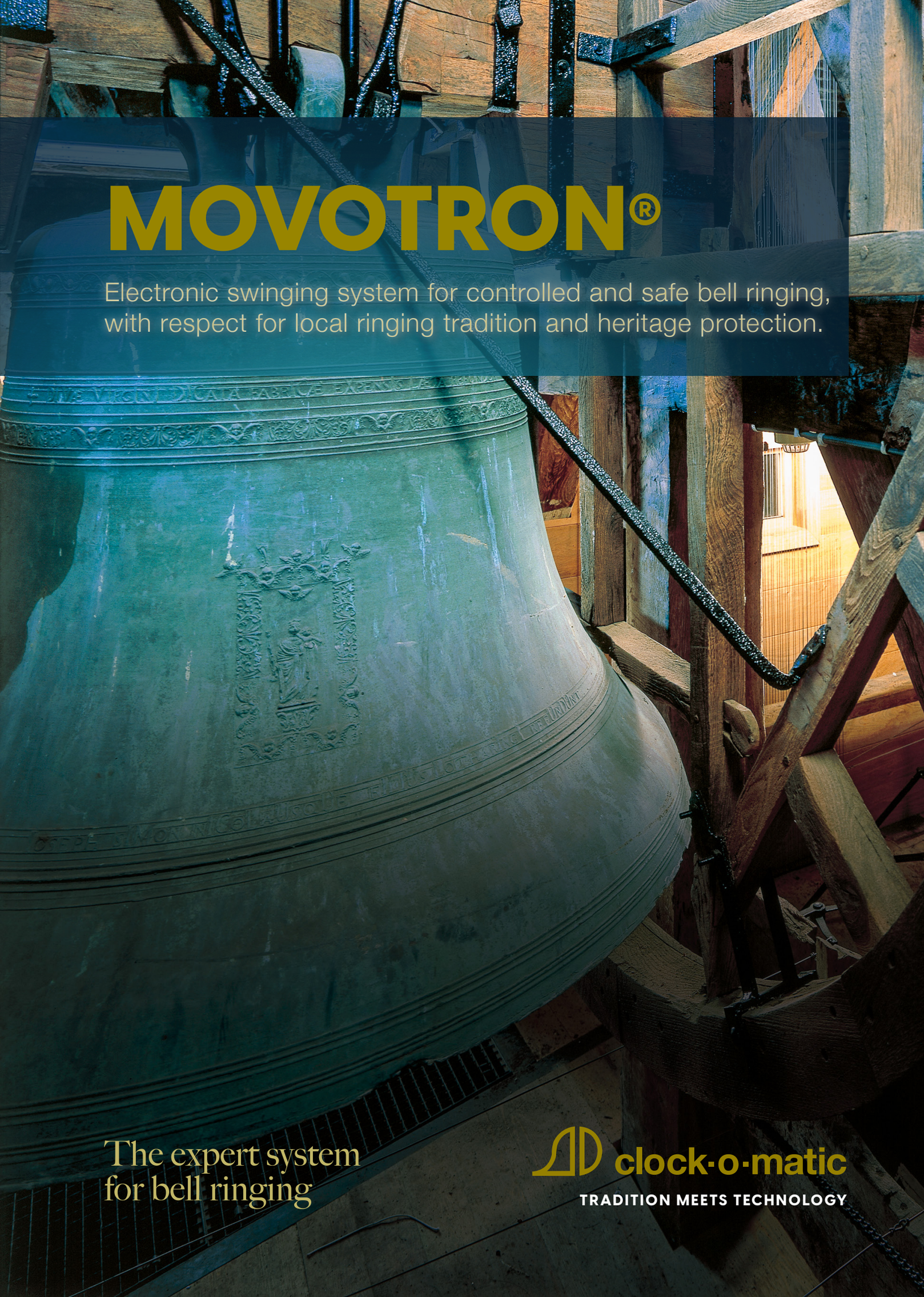


MOVOTRON®

Electronic swinging system for controlled and safe bell ringing, with respect for local ringing tradition and heritage protection.

The expert system for bell ringing

clock-o-matic

TRADITION MEETS TECHNOLOGY

MOVOTRON®

BACK TO THE SOUND OF MANUALLY RUNG BELLS

PROTECTS THE BELL TOWER

PROTECTS THE BELL

A safe, electronic control system for bell ringing

Since 1988, MOVOTRON is the leading electronic bell swinging system known for its unique digital control technology.

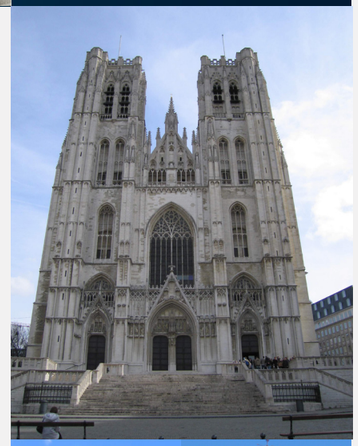
- The electronic swinging system MOVOTRON is able to start swinging any bell, very heavy as well as very small bells, immediately and in the correct way.
- At the heart of the MOVOTRON bell swinging system is the microcontroller that controls the bells. Each bell is equipped with a sensor that registers the position of the bell and relays it to the microcontroller.
- The swing angle is maintained stable thanks to the feedback system, regardless of external mechanical influences.
- The system performs a test before each start to detect any electrical or mechanical malfunctions, such as a broken chain or a blocked bell. In case of any potential danger, the system automatically shuts itself off.
- The MOVOTRON system offers extensive options for adjusting the ringing, so that the forces on the bell tower and the building are kept to a minimum.
- It prevents uncontrolled, strong strokes that could damage the bell. A well-dosed clapper stroke ensures beautiful bell sounds.

Soft control avoids mechanical shocks and noise

MOVOTRON bell swinging systems are equipped with soft control as a standard feature. This system reduces shocks during starting, swinging, and braking by gradually building up the power of the motor when it is turned on.
This results in silent operation and better preservation of the mechanical components of your bell swinging installation.
Soft control prevents peak currents on the electrical network (in compliance with CE regulations).

Special software with respect to all local ringing traditions

Numerous local ringing traditions are made possible through the use of customized software versions. For example: synchronous ringing, full circle ringing - volteo (Spain), concerto and ambrosiano/veronese ringing (Italy), clapper catcher (Austria), Roman funeral (France).



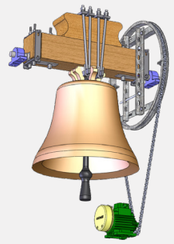
SOME REFERENCES

cathedral of Antwerp, Brussels, Doornik, Mechelen - **basilica** of Tongeren, Scherpenheuvel - **abbey** of Averbode, Leuven St.-Peter - **cathedral** of Freiburg, Dresden, Würzburg - Riverside **Church** New York (18 ton bell) - **cathedral** of Burgos, Murcia, Sevilla, Jaén, Santander, Malaga, Granada, Barcelona - **cathedral** of Lourdes, Bordeaux, Montauban,...

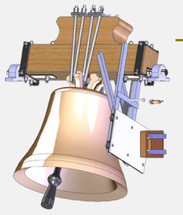
THE MOVOTRON BELL SWINGING SYSTEM IS COMPATIBLE WITH EVERY EXISTING BELL RINGING INSTALLATION.

Rotating or linear motors

The MOVOTRON bell swinging system is suitable for both rotating motors and linear motors.



ROTATING MOTORS
With a rotating motor the motor movement is transmitted to the bell by a chain or a cable.



LINEAR MOTOR
With a linear motor the bell is set into motion by a magnetic field. No mechanical friction is involved.

Flying or falling clapper

The MOVOTRON bell swinging system ensures each bell rings correctly and regularly. Rotating motors and linear motors can be used for all types of swinging systems, both for falling clapper and flying clapper.

Extensive range of settings for bell ringing

The MOVOTRON bell swinging system is provided with various parameters (e.g. swing angle, starting speed, braking speed). These help to regulate each bell in all circumstances. With a programming terminal, the installer introduces the ideal ringing characteristics of each bell into the system.

Serial data communication

In combination with the latest generation APOLLO III master clocks, digital information exchange is possible with the MOVOTRON electronic swinging system. This allows the technician to remotely monitor and control the swinging bell installation.
When expanding the bell installation with additional strikers, a tower clock, or carillon, the existing wires available in the bell tower can be reused.

APOLLO III

MOVOTRON®

TECHNICAL DATA

Housing

- Lockable powder coated metal housing IP 66.
- The control system has compact dimensions.
- Custom made solutions in function of number of bells.

Reliability

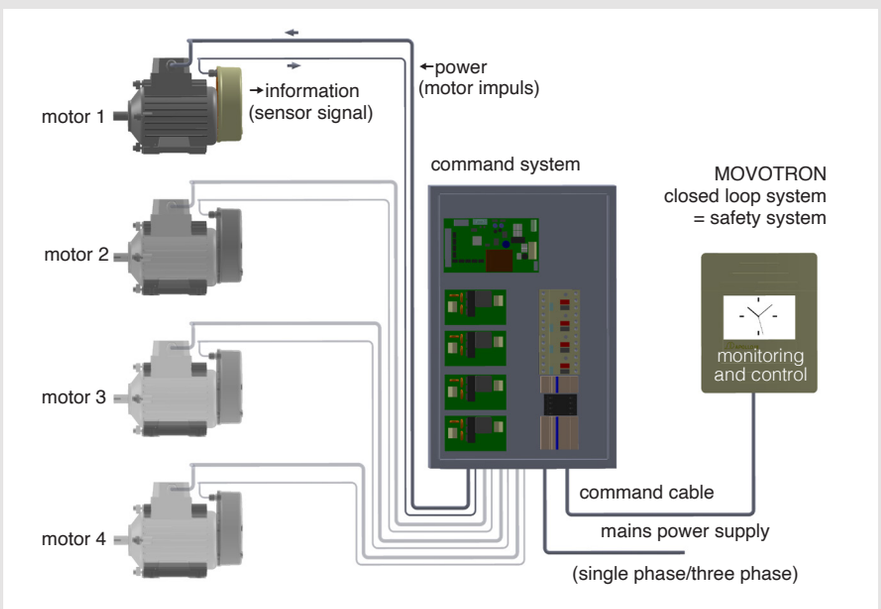
Tested and in compliance with CE standards IEC 61000-6-3 / IEC 61000-6-1 / IEC 60204-1

Electrical characteristics

- radio interference according to CE rules - all switching is solid state - wear-free and noiseless due to the absence of mechanical contacts
- thermal overload protection is part of every system
- all motors are IP 55
- usable on single-phase and three-phase net (50/60Hz)
- lightning arrestor
- use of halogen-free electrical wiring (LS0H - SA and SD)

Adjustable digital parameters

motor force I gradually adjustable motor power during starting and braking. This allows any disturbing shocks or secondary noises to be reduced.
brake force I micro-processor controlled electric braking avoids erratic motion of the bell clapper, avoids shocks and optimizes braking speed (no uncontrolled clapper strokes)
swing angle I adjustable to 0.1 degree resolution. Therefore, the forces on the bell frame are controllable and adjusted to be minimal
starting speed I adjustable, progressive starting of the bell swing. This means minimal load on the building. This also reduces the disturbing secondary noises during ringing.
symmetry I the motor power may be distributed between left and right so that the clapper strikes with equal force on each side of the bell.



DO YOU HAVE A QUESTION ABOUT HOW TO PROTECT YOUR BELLS AND BELL TOWER?
WE ARE HERE TO ASSIST YOU.

A regional partner at your service.

clock-o-matic

Products of outstanding quality, service available in your area

We develop our electronic, electromechanical, and mechanical systems in-house. We have a team of dedicated, skilled partners who closely monitor your installation of bells, tower clocks, and carillons with the aim of maintaining them in good technical condition.