

B039N

ARC

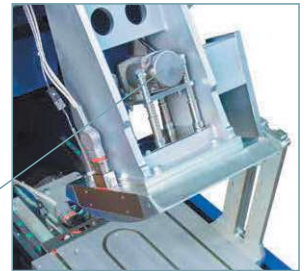
ASPHALT ROLLER COMPACTOR

ADVANCED ELECTROMECHANICAL SYSTEM, HIGH LOAD, HOT ROLL, MULTI SIZE

STANDARDS: EN 12697-33 method 5.2 and EN 12697-33 annex A | ASTM D8079 | TP-Asphalt StB 33

GERMAN PROCEDURE TP-ASPHALT StB 33 APPROVED

POLYCARBONATE SAFETY
SYSTEM CONFORMING TO
CE STANDARDS



Detail of the rolling vibrating device + heated roller + heated sliding cart

EASY MOULD
HANDLING



Detail of mould and roller

B039N
with open guard



Detail of the INTEGRATED
control panel

MAIN FEATURES

- 40 kN vertical force.
- Sturdy frame made of steel.
- Alternating displacement system, for table displacement and vertical load pressure.
- Integrated touch screen control unit.
- Easy management and analysis of data, test results, graphs.
- Touch-screen icon for an easy parameters set up and an immediate test execution.
- Unlimited memory storage with: 2 USB ports, 1 SD card slot.
- Direct Internet and Intranet (LAN) connection for remote technical assistance and for software updates.
- Heating of the segment roller and sliding cart (optional).
- Simple and quick roller and mould positioning.
- Perfect horizontal flatness of the slab surface.
- Uniform density and dimensions of the slabs.
- Energy controlled compaction procedure.
- Silent compaction.

B039N

Asphalt Roller Compactor is entirely developed and manufactured by Matest. The machine works with an **electromechanical system, and therefore it does not require any air source (compressor) or hydraulic pressure.**

It is used to produce representative sample slabs of several dimensions of bituminous mixtures laid and compacted on site.

The compaction is performed through a segmented roller with alternated operated rotation which simulates the on-site action of a street roller.

Three transducers are installed to manage the roller and table displacements and vertical load pressure.

These samples are compatible for rut test with Matest Smartracker B038AM (see p. 112). The sample slabs can be also cored or cut off to obtain cylinders and beams for bending fatigue, indirect tensile, static and dynamic creep, stiffness, and 4-point tests.



TECHNICAL SPECIFICATIONS

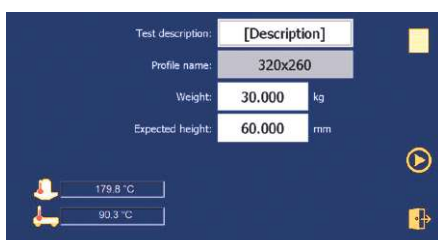
- Possibility to use **standard or heated segment rollers of different sizes** (see accessories): radius 490 mm, width up to 400 mm and length up to 500 mm to obtain slabs of
 - 500x400 mm, thick up to 180 mm
 - 400x305x50 to 180 mm thick
 - 320 x260x50 to 180 mm thick
 - 305x305x50 to 120 mm thick
 - Vertical force selectable up to max. 40 kN (for all machine)
 - **Programmable density target compaction**
 - Polycarbonate safety guard as requested by CE Directive
 - Possibility to **perform the two-phase procedure (Pre-compaction and Compaction)** as specified by TP Asphalt-StB 33 and EN 12697-33 annex A
 - Possibility to set and control the test by n° passes
 - **Sliding carriage speed adjustable** between 3 m/min and 12 m/min
 - **Detailed output file** listing each pass and displaying duration, sample height, applied load and eventual roller and cart temperature
 - Longitudinal compaction
- Power supply:** 230 V 50-60 Hz 1ph 2100 W
(3100W with the heated segment roller)
- Dimensions:** 2200x1030x1880 mm
(2410 mm with opened guard)
- Weight:** 1300 kg approx.

The compaction cycle can be programmed up to a certain load or deformation value. When deformation value is programmed, the system automatically programs the suitable loads to obtain the selected final thickness.

The flexibility of the program grants the production of samples with uniform density and dimensions, fully meeting Standards Spec. and Research requirements.

A friendly and easy to use interface allows an immediate and fully automatic test execution, data acquisition and processing, test report and file.

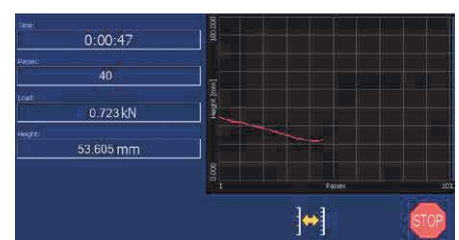
The Roller Compactor is supplied **without** roller segment, slab mould, centering plate, that must be ordered separately (see accessories).



Compactor test configuration



Parameter customization



Test execution

ACCESSORIES

STANDARD SEGMENT ROLLER, available models:

Code	Mould dimensions
B039-04	320x260 mm
B039-05	500x400 mm
B039-06N	400x305 mm
B039-07	305x305 mm

STANDARD CENTERING PLATE, available models:

Code	Mould dimensions
B039-21N	400x305 mm
B039-22	305x305 mm
B039-23	320x260 mm
B039-24	300x300 mm

B039-15 ROLLING VIBRATING DEVICE, reproducing street-roller vibrations during asphalt laying off.



B039-06N

B039-07



B039-22



B038-09

B038-18

B038-13

B038-10

B039-04R

B039-05R

B039-06NR

B039-07R

MOULD to prepare asphalt slabs. Complete with handles.

Code	Dimensions
B038-09	320x260x180 mm
B038-10	305x305x50 mm
B038-11	305x305x100 mm
B038-11H	305x305x120 mm
B038-12	400x305x50 mm
B038-13	400x305x100 mm
B038-15	400x305x180 mm
B038-18	500x400x180 mm
B038-19	400x305x120 mm
B038-20	320x260x50 mm
B038-21	500x305x120 mm
B038-22	300x300x120 mm
B038-23	320x260x100 mm
B038-24	400x500x100 mm

HEATING OF SEGMENT ROLLER AND SLIDING CART

Possibility to heat and control temperature of the Segment Roller mounted on the Compactor and Sliding Carriage to keep the mould warm and avoid thermal shocks the might affect specimen's workability.

The equipment is composed of:

B039-02 CONTROL UNIT

Mounted in the Roller Compactor, it foresees a thermoregulator circuit, complete with probe to measure and to adjust the temperature from room up to 180 °C.

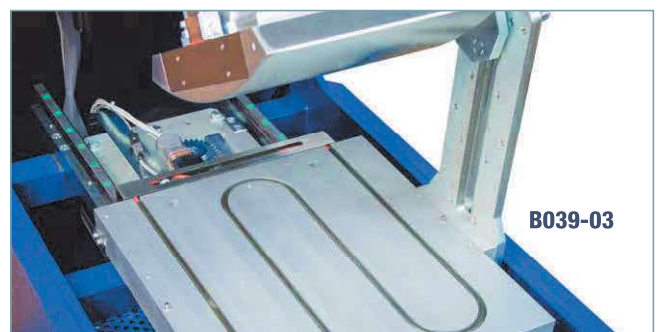
It is connected to the segment roller equipped with heating resistances, to be connected to the control unit B039-02.

HEATED SEGMENT ROLLER, complete with heating resistances. Available dimensions:

B039-04R	ROLLER for 320x260 mm mould
B039-05R	ROLLER for 500x400 mm mould
B039-06NR	ROLLER for 400x305 mm mould
B039-07R	ROLLER for 305x305 mm mould
B039-08R	ROLLER for 500x305 mm mould
B039-09R	ROLLER for 300x300 mm mould

B039-03 SLIDING CART HEATING OPTION

Thermoregulated circuit with temperature probe to set and control cart temperature and keep mould hot. The temperature is adjustable from ambient up to 180 °C.



B039-03