ADVANCED ASPHALT SLAB ROLLER COMPACTOR

The slab compactors can compact asphalt slabs to a target density applying specific loads corresponding to those of pavements rollers used in the highway construction. The slab can be used for:

- Wheel tracking test down to 38 mm thickness
- Cored to provide specimens for indirect tensile, static and dynamic creep tests
- Cut into beams for benfing fatigue tests

The slab compactors are proposed in two versions:

- Standard models
- Advanced models, which also satisfy the compaction procedure of the brand new EN 12697-33 method 7.3 and include other important features.

Electromechanical slab compactors feature a compacting system by roller segment head radius 535 mm. The roller segment freely moves by simple friction for better compaction uniformity. A brushless motor (standard models), or stepper motor (advanced models) moves vertically the roller segment under displacement control. the vertical load is applied orthogonally to the axis of the travel motion. the mould carriage moves back and forth by linear movement. The longitudinal (major) mould dimension correspond to the compaction direction so it is possible to obtain specimens of the proper lenght conforming to Standards. The lifting machine cover permit an easy access to the mould area. In the "rest" position, the mould is close to the operator for easy positioning while the roller segment is lifted and positioned at the back of the machine.

The Electromechanical slab compactor can be used as part of your **Superpave performance based testing** program.

ADVANCED ASPHALT SLAB ROLLER COMPACTOR

SPECIFICATION

Models	**77-PV41C05** **77-PV41C06**
Machine control	- Vertical load and/or displacement control of the roller segment by stepper motor, measured directly by linear transducer to verify in real time the specimen thickness for more accuracy - Real time measurement and control with a closed loop logic of compaction load by two precision strain gauge load cells. This system permits to verify possible discrepancies of the compaction due to the wrong distribution of asphalt in the mould and to any other unexpected malfunctions, with warning to the operator - Machine fitted with sensors to confirm the mould in position and for the automatic set-up of the horizontal travel
Software	- 21'' Touchscreen integrated PC - Fully programmable PC software operating in Windows® - Set up of customized compaction sequence as free combination of load/displacement controlled cycles - Selection, customization and storing of test parameters - Customization of the compacting sequence to be saved and recalled from the database - Graphic display of displacement / force vs. number of passes or load vs. displacement
Max. vertical force	30 kN
Load measurement	By two precision load cell
Compacting device	Roller segment, radius 535 mm
Back and forth horizontal travel	Adjustable: 300/320 mm 400 mm 500 mm By software
Trolley speed	Adjustable up to 300 mm/s Adjustable pause at inversion point
Mould dimensions*	320 x 260 x 195 mm 300 x 300 x 195 mm 400 x 300 x 195 mm 500 x 300 x 195 mm 500 x 400 x 195 mm
Roller vibration	Yes, adjustable frequency from 10 to 50 Hz (optional)
Heated foot	Yes (optional)
Heated base	Yes (optional)
Electrical supply	380 V, 50 Hz, 3 ph, or 220 V, 60 Hz, 3 ph
Power rating	3000 W

*To produce slabs down to 38 mm thickness. Maximum slab thickness varies with bitumen mixes composition

STANDARDS

- EN 12697-33
- ASTM D8079

FEATURES

- Completely electromechanically operated
- Possibility to program user defined procedures as free combination of load and displacement (or combined) controlled cycles
- Completely electromechanically operated
- Conforming to EN 12697-33, 5.2 method and ASTM D8079
- 21” All-in-one touchscreen PC controlled , PC and software included
- Includes the compaction procedure defined in the brand new EN 12697-33 method 7.3, providing at the beginning a controlled displacement compaction which can grant a flat surface followed by a load compaction phase , which can replicate the real compaction on the road surface
- Base and foot adjustable heating system available as option
- Mould dimensions: 500 x 400, 500 x 300, 400 x 300, 300 x 300 and 320 x 260 mm, 195 mm height
- Compaction direction in the longest (major) mould dimension to obtain specimens of the proper length conforming to Standard
- Vertical balanced of sliding cover for easy access and complete three side view
- Maximum compaction load 30 kN
- User defined controlled linear speed up to 300 mm/sec and adjustable pause at the mould inversion point
- Ideal for producing test beams for 4-Point bending (EN 12697-24, EN 12697-26, AASHTO T321) and slabs down to 38 mm
- Vibrating roller option, adjustable from 10 to 50 Hz
- PRO-COMPACT* closed loop control slabs
- Customization of compacting cycle which can be saved and recalled from the database

PRO-COMPACT closed-loop is an innovative mechanical and electronic control that combines orthogonality of the load, pendulum motion of the head and sinusoidal non-friction forward-reverse carriage movement. This results in an optimally compacted sample that features **P**lanarity **R**egularity and h**O**mogeneity (PRO). The combined load/displacement compaction procedure provides at the beginning of the test a controlled displacement compaction, which can grant a flat surface of the compacted slab, followed by a load compaction phase, which can replicate the real compaction on the road surface.

ACCESSORIES

77-PV41C00/UP

Upgrade of 77-PV41C0X with heating system inbuild in mould base support

77-PV42001

Interchangeable sector head to produce slabs 320 mm long x 260 mm wide

77-PV42011

Interchangeable sector head to produce slabs 320 mm long x 260 mm wide. Complete with heating system

77-PV42102

Steel mould 320x260 mm, 195 mm high, to be filled at 155 mm max, for PV41XXX electromechanical slab compactor

77-PV43001

Interchangeable sector head to produce slabs 300 mm long x 300 mm wide

77-PV43011

Interchangeable sector head to produce slabs 300 mm long x 300 mm wide. Complete with heating system

77-PV43012

Compaction sector head heating system for 77-PV41C0x and 77-PV41A0x series

77-PV43042

Motor vibrator roller option. For 380V/50Hz/3ph, 220V/60Hz/3ph, 110-230V/50-60Hz/1ph models.

77-PV43102

Steel mould 300x300 mm, 195 mm high, to be filled at 155 mm max, for PV41XXX electromechanical slab compactor

77-PV44001

Interchangeable sector head to produce slabs 400 mm long x 300 mm wide

77-PV44011

Interchangeable sector head to produce slabs 400 mm long x 300 mm wide. Complete with heating system

77-PV44102

Steel mould 400x300 mm, 195 mm high, to be filled at 155 mm max, for PV41XXX electromechanical slab compactor

77-PV45001

Interchangeable sector head to produce slabs 500 mm long x 300 mm wide

77-PV45011

Interchangeable sector head to produce slabs 500 mm long x 300 mm wide. Complete with heating system

77-PV45102

Steel mould 500x300 mm, 195 mm high, to be filled at 155 mm max, for PV41XXX electromechanical slab compactor

77-PV46001

Interchangeable sector head to produce slabs 500 mm long x 400 mm wide

77-PV46011

Interchangeable sector head to produce slabs 500 mm long x 400 mm wide. Complete with heating system

77-PV46102

Steel mould 500x400 mm, 195 mm high, to be filled at 155 mm max, for PV41XXX electromechanical slab compactor

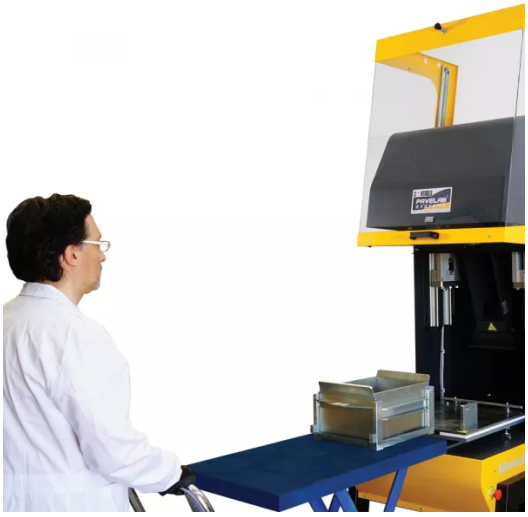
ORDERING CODE

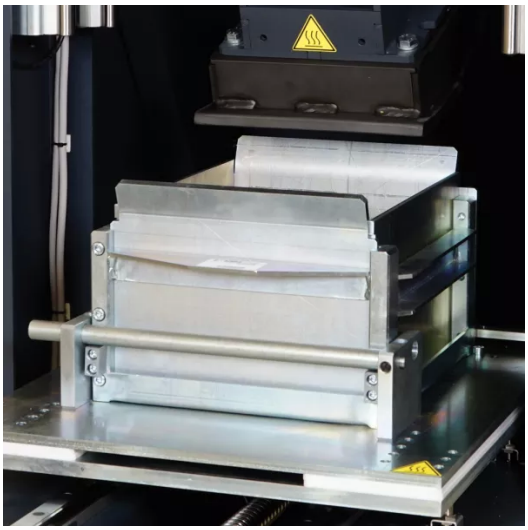
77-PV41C05

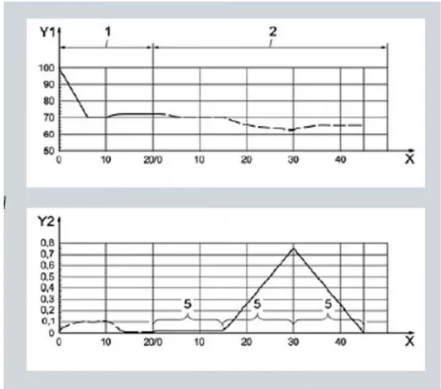
Advanced multi-size electromechanical slab compactor. 380V/50Hz/3ph+N

77-PV41C06

Advanced multi-size electromechanical slab compactor. 220V/60Hz/3ph+N






Y1
1
2
100
90
80
70
60
50
0
10
20/0
10
20
30
40
X
Y2
0,8
0,7
0,6
0,5
0,4
0,3
0,2
0,1
0
5
5
5
0
10
20/0
10
20
30
40
X