

# MULTISPEED automatic universal tester with touch screen digital speed control and data acquisition

suitable for CBR, Marshall, indirect tensile, unconfined compression and many other displacement controlled tests

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EN 12697-34 | ASTM D1559 | ASTM D5581 | AASHTO T245 | EN 12697-12 | EN 12697-23 | AASHTO T193 | ASTM D6927

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## MAIN FEATURES

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- ◊ Stand-alone automatic digital load frame
- ◊ Closed-loop speed control
- ◊ Automatic execution of CBR and Marshall tests
- ◊ Four channel onboard data acquisition
- ◊ Integrated transducer calibration facility
- ◊ Infinitely variable speed from 0.05 to 51 mm/min
- ◊ Large touch screen display for viewing real-time graph and test data
- ◊ Rapid approach and return functions ensure test time saving
- ◊ CE emergency stop button
- ◊ Supplied with load cell and displacement transducer

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## GENERAL DESCRIPTION

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### Introduction:

The new automatic **MULTISPEED 34-V1172** is a versatile stand-alone machine; an ideal solution for road testing laboratories and generally for any test that requires displacement/speed control. The 50kN capacity and fully variable speed of 0.05 to 51 mm/min make it possible to perform not only CBR and Marshall tests, but also many other applications such as indirect tensile, quick undrained triaxial and unconfined/uniaxial soil tests.

### Description:

The **MULTISPEED** tester features a rigid two-column structure with an upper crossbeam which can be set at various heights. The load jack, DC motor and controls are housed in an ergonomic cabinet. Automatic control of the test speed/travel is ensured by the microprocessor. Prior to the test, the operator can impose travel limits for automatically ending the test. No external transducer is required for displacement measurement. The firmware allows performance of transducer calibrations and setting of up to 10 test profiles, saving data onboard. A real-time test graph and transducer data are displayed on the touchscreen. The machine has built-in data acquisition with four channels dedicated to two strain gauge load cells and two potentiometric linear transducers; one of each can be used during the test. An important feature is provided by the processing unit that controls the speed in a **closed-loop mode**, avoiding speed calibrations and tension fluctuation effects. The user-interface is a large touchscreen graphic display supplied with a stylus pen. The front panel is fitted with an emergency button for prompt stopping of the machine.

Test data can be stored on a USB pen drive or downloaded through a LAN communication port in

Controls, txt or ASCII format. All the accessories have to be ordered separately.

## TECHNICAL SPECIFICATIONS

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**Maximum capacity:** 50 kN  
**Infinitely variable test speed** from 0.05 to 51 mm/min  
**Power:** DC motor 750 W  
**Data download:** using LAN port (ASCII, TXT or Controls format)  
**USB port** for USB memory stick data storage  
**Resolution:** 132000 divisions  
**Sampling frequency:** 50 Hz  
**Horizontal clearance** (distance between columns): 270 mm  
**Maximum vertical clearance** (without accessories): 730 mm  
**Platen travel:** 100mm  
**Overall dimensions** (l x w x h): 392x495x1213 mm  
**Net weight approx.:** 65 kg  
**Touchscreen graphic display:** 240 x 128 pixel  
Large memory **data storage** in USB pen drive

## ORDERING INFO

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**34-V1172 MULTISPEED** automatic compression tester, 50 kN capacity, 4 channel built-in data acquisition and variable speed from 0.05 to 51 mm/min. 230V, 50-60Hz, 1 ph

**34-V1174 MULTISPEED** automatic compression tester, 50 kN capacity, 4 channel built-in data acquisition and variable speed from 0.05 to 51 mm/min. 110V, 60Hz, 1 ph

## ACCESSORIES

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Very often this machine is used for both CBR and Marshall tests. In order to avoid duplication we offer a kit of accessories specifically for each type of test.

If further test have to be performed, please refer to the web page [universal tester accessories](#).

### **CBR test to EN 13286-47, ASTM D1883, AASHTO T193**

#### **34-V0107/CBR**

Test set to perform the CBR test in the digital mode, including:

82-F0375 Load cell 50 kN capacity  
82-F0375/C Adapter to fit load cell (two pieces)  
82-F0322 Displacement transducer, 25 mm travel  
34-T0104/81 Adjustable transducer holder  
34-T0103/1 Adjustable CBR penetration piston

All above items can be ordered individually.

### **Marshall test to EN 12697-34, ASTM D1559, ASTM D6927**

#### **34-V0107/MAR**

Test set to perform the Marshall test in the digital mode, including:

82-F0375 Load cell 50 kN capacity  
82-F0375/C Adapter to fit load cell (two pieces)  
82-F0322 Displacement transducer, 25 mm travel  
34-T0104/81 Adjustable transducer holder  
34-T0104/13 Compression device extension  
34-T0104/10 Compression device  
76-B0033 Stability mould

All above items can be ordered individually.

**82-SW/CMU PC** softw are for CBR, Marshall, Indirect tensile and general tests.



34-V1172 Multispeed tester



34-V1172 Multispeed tester  
equipped with CBR digital testing  
accessories



34-V1172 Multispeed tester  
equipped with Marshall digital  
testing accessories