

## STANDARD: EN 12697-22

The rutting test of asphalt mixture measures the rut deformation rate formed by the test wheel traveling back and forth on the mixture specimen under the specified temperature and load conditions. It is expressed by the number of walks per 1mm of deformation, that is, the dynamic stability.

During the test, the motor and reducer output power to make the rotating arm rotate. The connecting rod drives the connecting plate to make the test wheel reciprocate. The displacement distance is  $230 \pm 10$ mm, and the speed is  $42 \pm 1$  times/min. The contact pressure between the test wheel and the specimen is  $0.7 \pm 0.05$ Mpa. The manual air valve controls the lifting and lowering of the test wheel.

The displacement transducer is used to measure the displacement when the test wheel presses the specimen, that is, the deformation of the rut. This deformation is collected by the computer system in real time, and after data processing, the numerical value and time-displacement curve are displayed, and it can also be printed out.

The temperature sensor measures the surface temperature of the specimen, and the measured value is sent to the temperature controller of the control box to control the heater. The vortex fan makes the temperature in the calorstat uniform through the heating cylinder and the air duct, and the temperature of the calorstat is controlled within the range of  $60 \pm 1$ °C. The test time can be set arbitrarily and is automatically controlled by the computer system. Usually, the test time is 60 minutes.



## SOFTWARE FEATURES

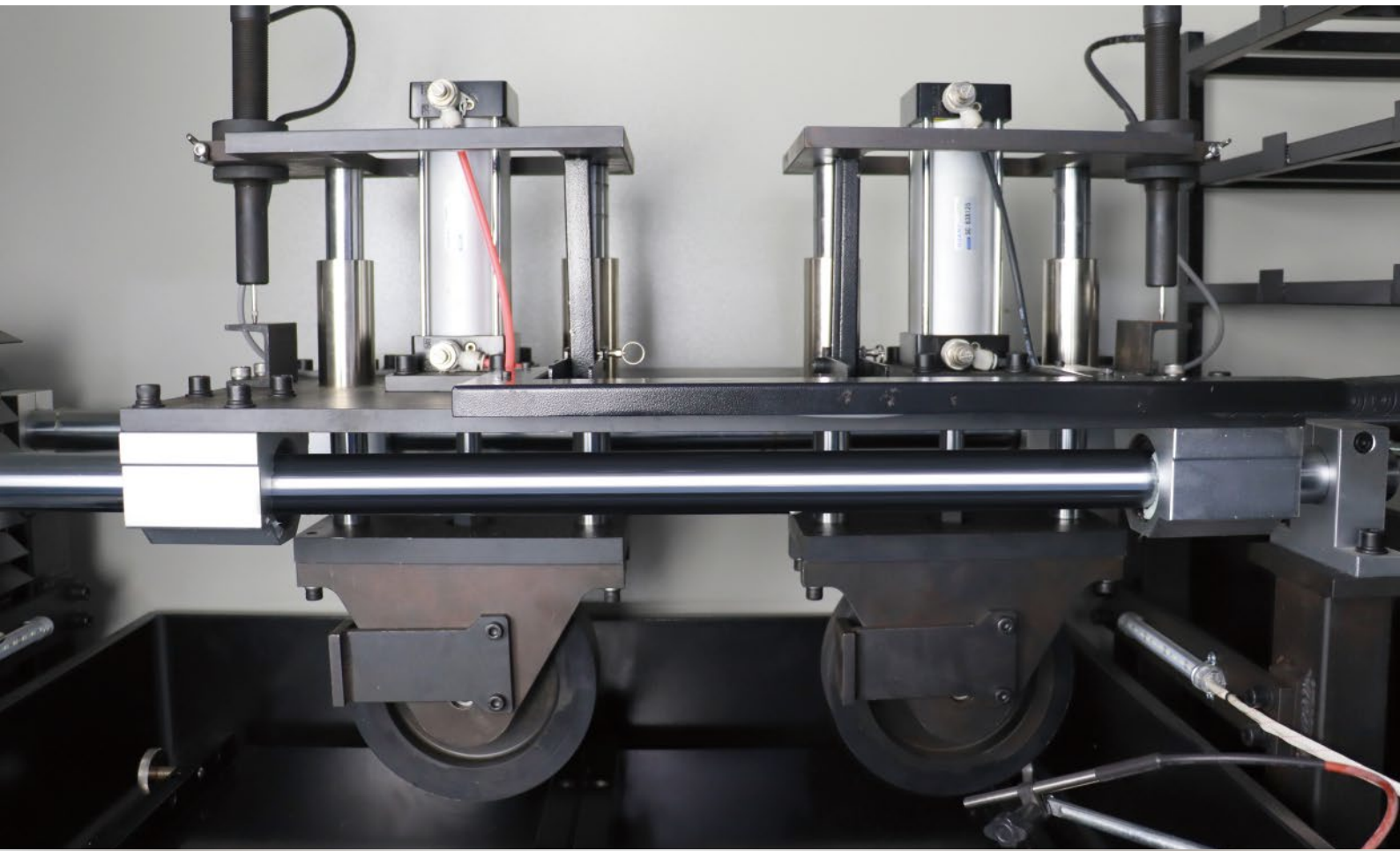
- It can be set arbitrary time and temperature.
- Real-time display time, temperature-displacement deformation and time-temperature curve.
- It can display rolling time and rolling cycles of test wheel.
- Automatically calculate and print the rut dynamic stability.
- The accuracy of the displacement sensor and temperature sensor can be calibrated in the software.
- Self-diagnosis function. The equipment can display the fault code, to ensure reliable operation.
- Multipoint sampling on the deformation and improve the consistency of the experimental results.



## FEATURES

- It can be used as water immersion test.
- It can test 2 specimens at the same time.
- Automatic temperature control, automatic generation and save the test results, Convenient call history data, output test report.
- Point to point data collection: the position of the upper and lower machine control system to ensure the deformation repetitive gathering space.
- High resolution data acquisition, high speed.
- Wide temperature range, high precision, good stability, PWM modulation method is adopted to improve the temperature PID control, to ensure that the temperature without overshoot.
- Using temperature sensor to collect temperature, test without temperature drift for a long time (to eliminate the general thermocouple temperature sensor working temperature drift for a long time).
- Air circulation in the oven, high temperature control precision.
- Displacement sensor with high precision, under the big range accuracy is less than  $\pm 0.01$  mm.
- Equipped with constant temperature box integration structure, easy to move.
- Smooth operation, noiseless.
- It can be independently controlled by computer or touch screen (optional).
- Can preheat 6 specimens at the same time.
- Small volume, covers an area of only  $1.52 \text{ m} \times 1.1 \text{ m}$ .





## TECHNICAL PARAMETERS

Power supply	380V 50Hz, 5KW
Specimen size	300x300x(50-100)mm or other require dimension
Range of rut depth measurement	0-30mm
Accuracy of rut depth measurement	± 0.01 mm
Rubber wheel hardness	78±2(60 °C) international standard
Wheel moving distance	230±10mm
Wheel speed	42±1 cycles/min
Wheel pressure	0.7±0.05Mpa
Temperature control range	from ambient up to 70 °C
Temperature control accuracy	±1 °C
Dimensions	1520×1100×1450mm(L×W×H)
Weight	400Kg