

Ductilometer

to determine the force ductility and the elastic resilience of bitumen.



For determining the elastic recovery of bitumen.

EN 13398 / ASTM D 113 / AASHTO T 51 / GOST 11505-75

Stainless steel housing with an insulated water bath and a stepper motor-driven pulling device with a constant feed rate as well as a digital distance measuring device.

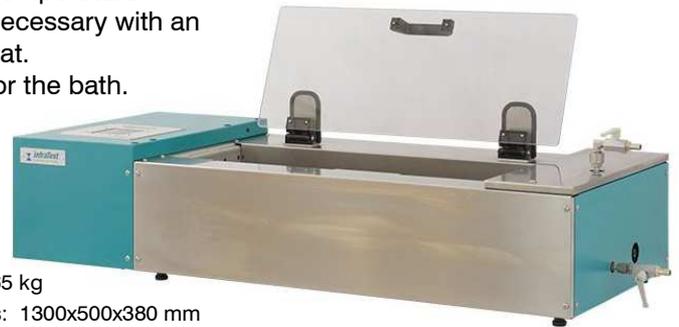
- Simultaneous testing of up to four samples
 - Complete with integrated control unit on the left side of the device
- Thermometers are installed in the water bath to check the bath temperature. The temperature of the bath can be controlled either via a temperature control device with an immersion thermostat (20-2370), if necessary with an additional cooler (20-2375) or an external cooling thermostat. Without moulds, without bath temperature control device for the bath.

Feed rate: 1 to 50 mm/min.
Electrical data 230V, 50/60Hz, 0.5kW

Item number:

20-2331 Ductilometer 400 mm

Weight: 65 kg
Dimensions: 1300x500x380 mm



20-2341 Ductilometer 1000 mm

Weight: 85 kg
Dimensions: 1900x500x380 mm

20-2351 Ductilometer 1500 mm

Weight: 100 kg
Dimensions: 2400x500x380 mm

Advantage:

- ▶ Self-explanatory display
- ▶ Userfriendly operation
- ▶ Short-term memory for current measurements
- ▶ Up to 4 test results measurable

Stake for Hinged Cover

Drain Valve

Water Bath

Control Unit



Accessories: 20-2359 / 20-2360 / 20-2361 / 20-2370 / 20-2377

Ductilometer

to determine the force ductility and the elastic resilience of bitumen.



DIGITAL - For determining the force ductility and elastic recovery of bitumen.

EN 13398 / EN 13587 / EN 13589 / ASTM D 113 / AASHTO T 51 / GOST 11505-75

Stainless steel housing with insulated water bath, hinged lid with glass cut-out and stepper motor-driven pulling device with constant feed speed and digital distance measuring device. The included software allows user-oriented sequence programming and controls the test procedure with online output of force and displacement and test evaluation with calculation of planimetry.

- * Simultaneous testing of up to four samples
- * Electronic version for PC operation with software under Windows 10 and higher
- * To determine the force ductility, a measuring point is equipped with a 500 N force transducer, resolution 0.1 N (special version 100 N, resolution 0.01 N). Three additional force transducers can also be connected
- * Storage of the tests in a database in dBase format

Thermometers are installed in the water bath to check the bath temperature. The temperature can be controlled either via a temperature control device with an immersion thermostat (20-2370), if necessary with an additional cooler (20-2375) or an external cooling thermostat.

A PC with screen and keyboard is required for operation.

Feed speed: 1 to 50 mm/min.

Electrical data 230V, 50/60Hz, 0.5kW



Item number:

20-2336 Ductilometer 400 mm digital Weight: 90 kg
Dimensions: 1300x500x380 mm

20-2345 Ductilometer 1000 mm digital Weight: 85 kg
Dimensions: 1900x500x380 mm

20-2356 Ductilometer 1500 mm digital Weight: 95 kg
Dimensions: 2300x500x380 mm

Advantage:

- ▶ Display of the test graph and current test data in real time
- ▶ Automatic test execution with windows based software
- ▶ Quick calibration option
- ▶ Up to 4 measuring stations that can be equipped
- ▶ Test protocol



Evaluation Software

Load Cell 500 N

Drain Valve

Accessories: 20-2357 / 20-2359 / 20-2360 / 20-2361 / 20-2362 / 20-2364 / 20-2370 / 20-2377



**20-2357 Load transducer 500 N**

Resolution 0.1 N (optionally 100 x 0.01 N) additionally installed in 20-2336/46/56.

Weight 2 kg

**Ductilometer Forms**

Made of brass. Complete with stainless steel base plate.

Force ductility EN 13589 / ASTM D 6084-04.

As an accessory only with the digital devices 20-2336 / 20-2346 / 20-2356 (corresponding load cell!)

20-2362 EN 13589

20-2364 ASTM D 6084-04.

**Elastic recovery**

Made of brass. Complete with stainless steel base plate.

20-2360 AASHTO T 51 - ASTM D 113

20-2361 EN 13398



20-2361E10 Base plate ductilometer form cpl.

20-2361E20 Ductilometer form without base plate EN 13398 0.35kg

20-2362E20 Ductilometer form without base plate EN 13589 0.35kg

20-2370 Temperature control device ductilometer

Installed in the ductilometer bath of 20-2331... with circulation pump for experiments from room temperature (from +5°C in connection with 20-2377) to +95°C. Complete with digital temperature display and overtemperature limiter.

20-2359 Temperature sensor ductilometer bath

For continuous recording of the bath temperature from 20-2336...

One sensor permanently installed and one sensor mounted on the movable traverse.

Weight 4.30 kg

electrical data 230 V, 50/60 Hz, 2 kW

**Through-flow cooler** for ductilometer 400/1000/1500 mm

20-2377 Room temperature from +5° to +95°C

20-2378 Room temperature from -5°C to +50°C

Through-flow cooler for carrying out ductilometer tests in connection with 20-2370. The continuous-flow cooler is placed behind or below the ductilometer, the power supply is provided via the immersion thermostat including connecting hoses with a length of 1.5m Cooling capacity: 395W.

Dimension 330x440x448mm

Weight 18.00 kg

Electrical data 230 V, 50 Hz, 0.45 kW

