

ZwickMaterials Testing

Product Information

Zwick 5113 Pendulum Impact Tester





Range of application

Zwick 5113 Pendulum impact testers are designed to determine the impact energy, impact strength, and notched impact strength of standardised plastic, metal and metal alloys, wood, glass, and similar specimen. They cover the energy range from 0.5 up to 50 Joule.

The devices enable tests to the following standards:

- Tests to Charpy: DIN EN ISO 179, DIN 50115, DIN 50116, DIN 53453, DIN 53753, ASTM D 6110-97
- Tests to IZOD: similar to DIN EN ISO 180, ASTM D 256-97
- Impact tensile test: DIN EN ISO 8256, ISO 8256

Features/Advantages

- Solid cast frame up to 50 Joule impact energy
- Low-friction pendulum bearing for interchangeable pendulums
- Mounting surfaces for fixing supports and the clamping device
- Mechanical pendulum brake for the pendulum following impact
- Two-hand release device for releasing the pendulum vibration. The release device is mounted corresponding to the required angle of deflection rsp. converted for the other angle of deflection. An additional release device (Option) enables both angles of deflection to be used without conversion.

Zwick 5113 pendulum testers are available in four different versions:

• With analogue display Zwick 5113.301

• As "economy" version

with digital display

With digital display

Zwick 5113 E

Zwick 5113.300

Equipped for

instrumented tests Zwick 5113.303



Product Information

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Basic models

Description	Order item
Zwick 5113 Pendulum impact tester (basic model with analogue display and 160° deflection)	5113.301
Note: not to be used for tests with impact velocities of v=3,4 m/s, e.g. DIN EN ISO 180 and	
ASTM D 6110-97 (previously ASTM D 256-97)	
Zwick 5113 E Pendulum impact tester (basic model with digital display, "economy" version)	5113 E
only for Charpy tests	
Zwick 5113 Pendulum impact tester (basic model with digital display)	5113.300
Zwick 5113 Pendulum impact tester equipped for instrumented tests (basic model without	5113.303
analogue display). A PC from the Zwick delivery program and a standard or master test program	
testXpert® are necessary for use with the device.	

Included in each basic model are a setting gauge for 40 mm support separation, screwdriver and an instruction manual (English or German).

Connection units for 5113.300 und 5113 E

Description	Order item
Power supply, 230 V, 50/60 Hz	5113.195
Power supply, 115 V, 50/60 Hz	5113.196

Automatic pendulum detection, additional release device for 5113.300 und 5113.303

Description	Order item
Automatic pendulum detection (required once off), sensor for automatic detection of type	5113.104
of test and the pendulum's capacity in conjunction with correspondingly coded pendulums	
(5113.305 also required)	
Pendulum coding (required once per pendulum), fixing a coding for automatic pendulum value	5113.305
detection (in conjunction with 5113.104)	
Additional release device, and two-hand release. It is recommended when using pendulums with	5113.106
angles of deflection 160° and 124.4° on one device, thus avoiding dismantling and re-mounting	

Test programs testXpert®

For the 5113.303 pendulum impact tester various Standard and Master test programs for instrumented and non-instrumented tests are available. For 5113.300 and 5113E pendulum impact testers a Standard or Master test program for accepting test data from different devices is offered optionally.

Further options

A mounting base as well as CE konform safety devices are available for all pendulum impact testers.

Furthermore following supplementary units are available:

For tests to Charpy: Exchangeable pendulums:

0.5 up to 5 Joule, 225 mm length, for 160° angle of deflection and impact velocity v=2.93 m/s 7.5 up to 50 Joule, 390 mm length, for 160° angle of deflection and impact velocity v=3.85 m/s 2.7 up to 21.6 Joule, 390 mm length, for 124.4° angle of defl. and impact velocity v=3.46 m/s

Instrumented pendulums for 7,5 up to 50 Joule

Abutments with supports, specimen centring device, setting gauge

For tests to IZOD: Exchangeable pendulums (1.0 up to 22 Joule and 2.7 up to 21.6 Joule,

instrumented: 5.5 up to 22 Joule)

Specimen clamp and inserts for different specimen dimensions

For impact tensile tests: Exchangeable pendulums (7.5 up to 50 Joule and 2.7 up to 21.6 Joule)

Clamping device and yokes (30/60/120 g)