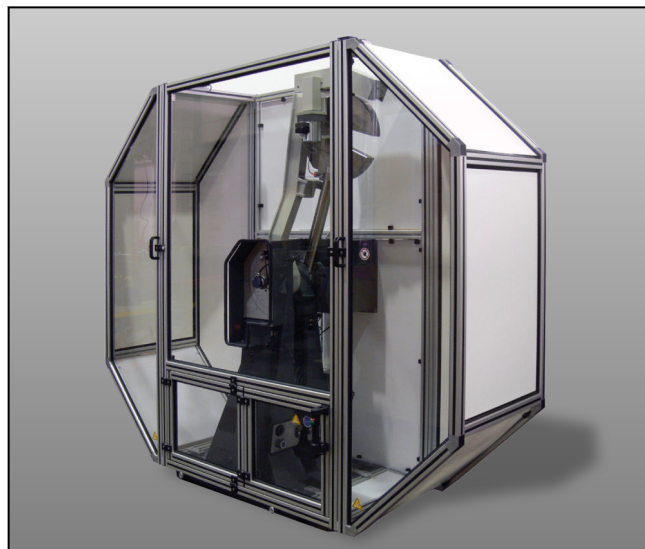


Product Information

Pendulum impact tester PSW 750

CTA: 59294 45797



Range of application

The PSW 750 can be used for tests to the following standards (among others): ISO 148-1, ISO 14556, ASTM E23, JIS Z 2242, GOST 9454-78, DIN 50115 (withdrawn).

- Impact bending tests on metals (Charpy, Izod – conventional and instrumented).
- Impact tensile tests on metals.

An operational instrument comprises:

- basic unit, electro-magnetic pendulum hammer release, electrically operated pendulum lift, electrical safety device and safety housing
- grout and heavy-duty screw anchors
- steel reinforcement or concrete base
- test-specific accessories such as Charpy fixture, support, pendulum rod with hammer, tongs for Charpy specimens
- wear parts such as anvils and tups
- optional accessories, e.g. PC equipment, temperature-conditioning devices.

Safety device

ZwickRoell pendulum impact testers in the RKP 300 / RKP 450 / PSW 750 ranges satisfy the requirements of EG Machinery Directive 2006/42/EG and of EN ISO 12100 and EN ISO 13849-1/2. This also means that the failure of an individual safety control element will not result in the loss of overall instrument safety.

ifies the requirements of national and international standards.

During design of the safety housing a primary consideration was ease of operation, whether during the test, during re-equipping for different specimens or types of test, or during maintenance and calibration. Centrally located controls, which (with the exception of simple visual confirmation of the function selected) also indicate operating errors, make working with these pendulum impact testers safe, simple and fast.

Front door, side door and housing recess enable:

- easy specimen insertion
- fast fixture and pendulum changes
- easy access for maintenance, inspection and calibration
- straightforward removal of specimen remains.

Safety device features and functions

- The device is equipped with certified safety controls. These are duplicated in accordance with standards and monitor the pendulum impact tester independently of each other.
- The device monitors and safeguards the pendulum impact tester according to the current operating mode (e.g. testing mode, setup mode).

The pendulum impact testers as a whole have been revised in this respect. The resulting safety device satis-

PI 474 1118

Product Information

Pendulum impact tester PSW 750

- It detects operating errors and indicates these via a flashing control button.
- It enables pendulum release via a release button incorporated into the door handle, allowing the test to start immediately after the safety door is closed. This is important for tests to ISO 148 and ASTM E23 with temperature-conditioned specimens, as the specimens must be impacted 5 seconds after removal from the temperature-conditioning area.

Basic units and their installation and assembly

The basic unit features mechanically stiff design and vibration-damping cast steel construction. It is leveled on a foundation using three alignment faces, grouted and anchored via four holes.

Technical data for basic units

Type Item No.	PSW 750 AR (analog display) 003620	PSW 750 GE (dig- ital and analog display) 003618	PSW 750 IR GE (instrumented tests, digital and analog display) 027180	
Potential energy	750	750	750	J
Impact velocity	5,42	5,42	5,42	m/s
Weight				
depending on pendulum hammer used, approx.	1200	1200	1200	kg
concrete base, approx.	2200	2200	2200	kg
safety device, approx.	130	130	130	kg
Dimensions, with base				
height	2734	2734	2734	mm
width	2500	2500	2500	mm
depth	1300	1300	1300	mm
Interfaces	USB, RS 232	USB, RS 232	USB, RS 232	
Test results, numerical	Impact energy [%], impact energy [J]	impact energy [%], impact energy [J], impact strength [kJ/m ²]	impact energy [%], impact energy [J], impact strength [kJ/m ²]	
Output units	Analog dial display	instrument electron- ics digital display, analog dial, PC ¹⁾	instrument electron- ics digital display, analog dial, PC ¹⁾	
Control functions	Friction correction, pendulum vertical position, oscillation period, device data display			
Correction functions	None	Air and bearing fric- tion, kinetic yoke energy (tensile impact testing)	Air and bearing fric- tion, kinetic yoke energy (tensile impact testing)	
Pulse resolution	0,036	0,036	0,036	°

¹⁾ If a PC with testXpert testing software is connected. The specimen dimensions are input via the PC or, for example, imported via calipers and testXpert.

Product Information

Pendulum impact tester PSW 750

Accessories required

Concrete base

Pendulum impact testers require a strong, permanent floor anchorage to enable standard-compliant testing. This can be achieved in one of two ways.

- Via **steel-reinforced foundation**. The foundation is the customer's responsibility.
- By means of a **pre-cast concrete base** with >40x maximum pendulum mass and steel reinforcement. The base is provided with lugs for removable floor fastenings. The bottom face of the concrete base must be in full contact with the ground to ensure that the pendulum impact tester operates correctly.

Included in delivery for both types of fastening are heavy-duty screw anchors and 75 kg of non-shrink grout.

CTA: 45860



Pendulum impact tester with concrete base

Description	Item number
Steel reinforcement for foundation. For in-house foundation construction.	940417
Pre-cast concrete base with steel reinforcement and lugs for (removable) attachment to the floor. The base must be bolted to the floor via the four lugs. Dimensions (length x width x height): 2000 x 1300 x 500 mm, weight: 2091 kg	370326

Pendulum heads (1x required)

All pendulum heads are easily interchangeable with no need for additional adjustment. They are suitable for screw-fit, non-instrumented and instrumented Charpy tups.

Description	Item number
Pendulum head, 300 J	004929
Pendulum head, 450 J	004930
Pendulum head, 600 J	004932
Pendulum head, 750 J	004933

Pendulum heads can be interchanged quickly and safely thanks to precision-fit mechanical connections. Each pendulum head is factory-tested in the customer's impact tester.

Supports, anvils (1 of each required)

Anvils are supplied in various hardnesses. Anvil inserts are symmetrical in form and can be used on both sides.

Description	Item number
Support for 55 x 10 x 10 mm specimens	940402
Support for 55 x 7.5 x 10 mm specimens	940403
Support for 55 x 5 x 10 mm specimens	940404
Support for 55 x 2.5 x 10 mm specimens	940405
Support and anvil for 44 x 6 x 6 mm DVMK specimens	940407
Anvil mountings	026217

Product Information

Pendulum impact tester PSW 750

Description	Item number
as per ASTM E23 and ISO 148-1 and for DVM/DVMK specimens in conjunction with anvil inserts	
Anvil inserts tool steel (TS), for anvil mountings	026218
Anvil inserts high-speed steel (HSS), for anvil mountings	026221
Anvil inserts Powder metal steel (PM), for anvil mountings	026222

Tups (1x required)

Description	Item number
Tup, 2 mm, for Charpy tests as per ISO 148-1 Suitable for 300, 450, 600 and 750J pendulum heads	920966
Tup, 8 mm, for Charpy tests as per ASTM E23 and ISO 148-1 Suitable for 300, 450, 600 and 750J pendulum heads	920968
Tup, 2 mm, for Charpy tests as per ISO 148-1, instrumented Suitable for 300, 450, 600 and 750J pendulum heads	920962
Tup, 8 mm, for Charpy tests as per ASTM E23 and ISO 148-1, instrumented Suitable for 300, 450, 600 and 750J pendulum heads	920964

Equipment for impact tensile tests (1x required)

This test can only be performed with threaded-end specimens. The specimen is screwed into the impact tensile pendulum head. The free end of the specimen is bolted to the yoke. During the test the yoke impacts the impact tensile anvil.

Description	Item number
Equipment for impact tensile tests Consists of 300-joule impact tensile pendulum head and installation accessories.	940418