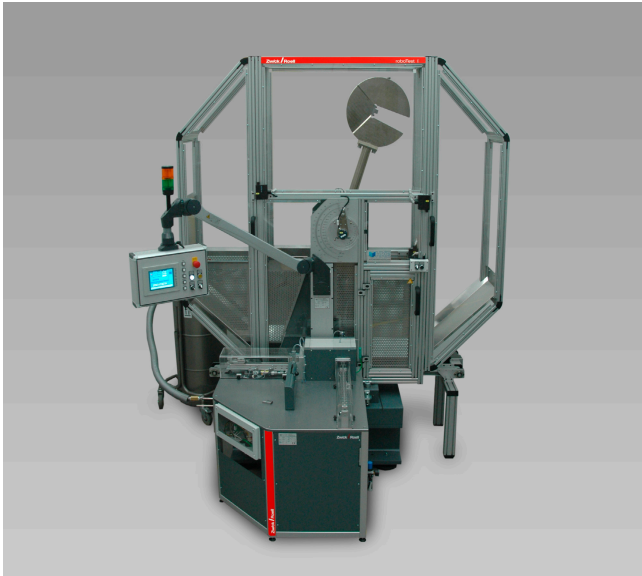


## Product Information

### Robotic Testing System 'roboTest I' (Impact) for pendulum impact testers



Robotic testing system 'roboTest I' for pendulum impact tester RKP 450 or PSW 750

#### Application

The robotic testing system is used for semi or fully automatic tempering, feeding and testing of Charpy specimen according to EN10 045 or ASTM E23 at temperatures -180°C up to +300°C

#### System configuration

- Pendulum impact tester 450 J (semi automatic) or 750 J (semi or fully automatic)
- Semi automatic tempering and feeding unit 'roboTest I' (Impact) with a capacity of 10 specimens (optional 21 specimens) in the tempering unit
- Fully automatic tempering and feeding unit 'roboTest I' (Impact) with a capacity of 10 specimens (optional 21 specimens) in the tempering unit and an integrated magazine for typically 90 specimens

#### Characteristics

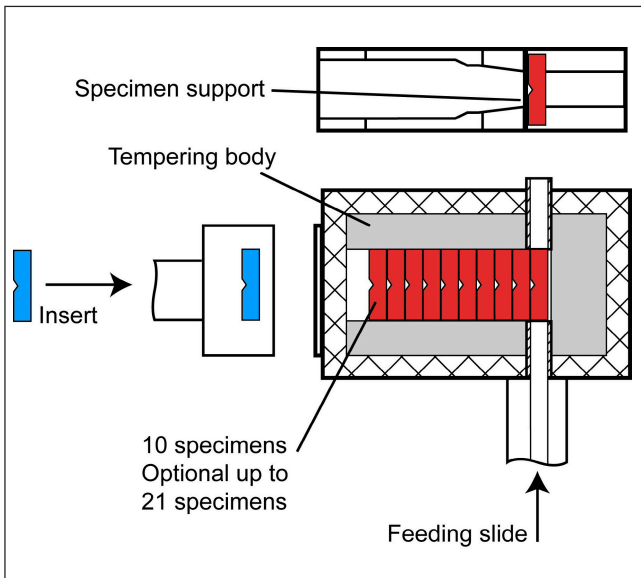
- The cooling of the specimen will be done via liquid nitrogen, the heating electrically. The heat transmission between the specimen and the tempering frame is via direct conductive contact.
- Slides will do the specimen handling inside the temperature unit. The slides are manual (semi-automatic) or automatic (fully automatic) operated.
- A PLC controls the temperature unit and the test process.

#### Advantages of the robotic testing system 'roboTest I'

- A high reproducibility of the test results is obtained because operator influences are excluded (hand temperature, moist hands, eccentric or inclined insertion of specimens etc.).
- The alignment of the specimen at the specimen support and the start of the test are done automatically.
- Enclosed system, no manual handling inside the liquid tank
- A massive and isolated tempering frame guarantees a homogenous and exact specimen temperature.
- The specimen temperature is measured by a thermo elements.
- Only one temperature unit is necessary for all temperatures
- The system reduces the testing costs per specimen and usually pays off within one to two years.
- The machine can be used during idle times (break, night shift) thus increasing the rate of utilization and allowing „quicker“ results.

## Product Information

Robotic Testing System 'roboTest I' (Impact)  
for pendulum impact testers



### Test sequence

- All specimens have to be filled manually or automatically into the tempering unit.
- The tempering unit will heat up or cool down the specimens to the determined temperature.
- After all specimens reached the necessary temperature, the first specimen will be brought in the pendulum and will be aligned and tested automatically. The test is done during 5 seconds after taking the specimen out of the tempering unit.
- After the pendulum reached its start position, the next test can be performed.

### Technical Data

#### Tests

- Test type Notched bar impact test

#### Specimens

- Specimen dimensions 10 x 5...10 x 55 mm
- Material dimensionally stable
- Length tolerance  $\pm 0.5$  mm
- Height / width tolerance  $\pm 0.2$  mm

#### Tempering

Temperature range	-180°C ... +300°C
Cooling	liquid nitrogen
Heating	electric
Control precision	$\pm 1^\circ\text{C}$
Cycle time	$\leq 1.5$ minutes
Feeding time	$\leq 5$ seconds
Heating conductor	approx. 13-16 Ohm
Liquid nitrogen pressure	approx. 0.5 ... 1 bar
Thermo elements	Typ K
Power consumption	max. 2500 Watt

#### Options

- Specimen identification (Datamatrix)
- Specimen removal belt (only PSW)
- Data exchange with *testXpert*® / RS232
- Increase temperature up to +600 °C
- Increasing the capacity of the furnace up to max. 21 specimens
- Increasing the capacity of the magazine up to max. 450 specimens

#### Mechanics

Capacity magazine (standard)	
• Semi automatic	10 specimens (only in tempering unit)
• Fully automatic	90 specimens
Capacity tempering unit	10 specimens
Dimensions (H x W x T)	2700 x 2207 x 1739 mm
Weight (without base)	approx. 800 kg

#### Connected values

Electrical connection	400/230 V - 3 PNE/PNE
Output	2700 VA
Mains frequency	50/60 Hz
Compressed air	5-7 bar, filtered
Required compressed air	2 lpm