

## Product Information

### Robotic Testing System 'roboTest H' for Pendulum Impact Tester HIT25/50P



Fig. 1: Robotic testing system 'roboTest H' with pendulum impact tester HIT25P

#### Application

The robotic testing system 'roboTest H' is used for automatic impact tests at ambient temperature or on temperature-conditioned Charpy or Izod specimens.

#### System configurations

- HIT25P (25 J) or HIT50P (50 J) pendulum impact tester with motorized pendulum return and safety housing
- Instrumented or non-instrumented pendulums according to the standard with nominal energy from 0.5 Joule up to 50 Joule
- 'roboTest H' robotic testing system with tempering magazine for up to typically 20 specimens
- Industrial controller with *testXpert*<sup>®</sup> testing software and autoEdition2 automation software

#### Advantages of the 'roboTest H' testing system

- Specimen gripper ensures the specimen is transported securely and reliably to the pendulum impact tester support within 5 seconds.
- Alignment of specimens on the support and initiation of the test are always performed automatically.
- With instrumented testing the fracture mode (complete, partial, hinged and non-break) can be detected automatically as an option.
- Manual tests are still possible by simply removing the robotic testing system.
- Optional accurate specimen temperature measurement via thermo-couple
- Simple, convenient operation of the robotic testing system via *testXpert*<sup>®</sup> testing software is unaffected by automation.
- Safe operation of the testing system via 100% CE-compliant construction is guaranteed in accordance with the latest machinery directive.
- Adding this roboTest H-system to an existing HIT25/50P with pendulum repositioning is possible without problems.

#### Advantages of a robotic testing system

- 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.).
- Qualified laboratory staff is relieved of routine jobs and is thus available for more complex activities.
- The machine can be used during idle times (e.g. breaks) thus increasing the rate of utilization and

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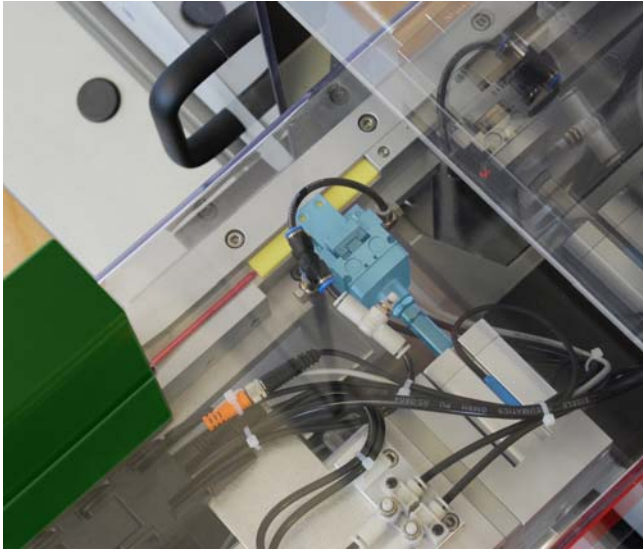


Fig 2: 'roboTest H' test area viewed from above

allowing „quicker“ results.

#### Test sequence

##### Manual preparation

- Manual measurement of the specimen dimensions and the remaining width in the notch.
- Up to 20 specimens are inserted in a magazine slide-carrier into the tempering magazine. The tempering magazine and the specimens are cooled to the required temperature in a separately available bath.
- After the predetermined temperature has been achieved, the tempering magazine (fig. 2: green) is then positioned in the robotic testing system.

##### Automatic sequence

- The specimen (fig. 2: yellow) is transferred from the tempering magazine to the specimen gripper via a pusher arm (fig. 2: red).
- The specimen gripper (fig. 2: blue) then transports the specimen to the test area, where it is centered on the

support and pressed against the anvil. The impact test is then carried out.

#### Technical data

##### Mechanical

Magazine capacity	20 specimens (with 4 mm specimen height; stacking height: 80 mm)
Dimensions (H x W x D) <sup>1</sup>	310 x 240 x 590 mm
Weight <sup>1</sup>	approx. 15 kg

<sup>1</sup> without pendulum impact tester, without table

##### Supply requirements

Electrical supply	100 - 240 V
Power consumption	150 VA
Mains frequency	50/60 Hz
Compressed air	5-7 bar, filtered
Compr. air requirement	12 l/min

##### Control

Automation	autoEdition2 on industry controller
Peripheral connection	PROFIBUS

##### Test

Type of test	Impact test on Charpy or Izod specimens
Loading time	≤ 5 seconds

##### Specimens

Charpy specimens	according to ISO 179-1
• Length	80 mm
• Width	10 mm
• Height	4 mm
Izod specimens	acc. to ISO 180 / ASTM D 256
• Length	80 mm / 63.5 mm (2.5 ")
• Width	10 mm / 12.7 mm (1 ")
• Height	4 mm / 3...12.7 mm (0.125...1 ")

##### Options

- Data exchange via *testXpert*<sup>®</sup> / RS232
- Tempering box for conditioning specimens
- Instrumentation
- Temperature sensor
- Height adjustment for Charpy up to 5 Joule
- Instrument table (low-vibration)
- Increased magazine capacity (on enquiry)
- Magazine with active temperature conditioning (on enquiry)