

Product Information

roboTest H (HIT) robotic testing system

CTA: 97928



Range of application

The roboTest H robotic testing system is used for automated Charpy or Izod impact tests at room temperature and on cooled specimens.

System configuration

- HIT25P (25J) or HIT50P (50J) pendulum impact tester with motorized pendulum return and safety guard
- Conventional or instrumented pendulums according to method, nominal energy 0.5 joules to 50 joules
- roboTest H robotic testing system with temperature-conditioning magazine for up to 20 specimens
- Industrial controller with testXpert testing software for data acquisition and evaluation and autoEdition3 automation software for test sequence control

Test sequence

Manual preparation

- Manual measurement of specimen dimensions and remaining width
- Up to 20 specimens in a magazine carriage are inserted into the temperature-conditioning magazine outside the system. The temperature-conditioning magazine and specimens are cooled to the required temperature in an optionally available cool box.
- Following attainment of the specified temperature the temperature-conditioning magazine is positioned in the robotic testing system.

Automatic sequence

- The specimen is transferred from the temperature-conditioning magazine to the specimen gripper by a pusher.
- The specimen gripper takes the specimen and transports it to the test area. The specimen is centered on the specimen support and placed against the anvil. The impact test is then carried out.

Benefits

- ZwickRoell has over 35 years of experience and expertise, gained while supplying more than 700 automated testing systems worldwide.
- The specimen gripper provides safe transport of the specimen to the pendulum impact tester's support within 5 seconds.
- Alignment of the specimens on the support and initiation of the test are always automatic.
- For instrumented pendulums, automatic detection of the type of break is optional.
- Manual tests can be performed whenever required—the specimen feeder is simply removed for access.
- Optional control of the specimen temperature on the magazine output ensures constant specimen temperatures and results.
- Easy and convenient operation of the robotic testing system via the testXpert testing software is also available, unchanged, with automation.

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- Safe operation of the testing system through 100% CE compliant system design is guaranteed in accordance with the latest Machinery Directive.
 - A roboTest H system can be easily retrofitted to an existing HIT25/50P pendulum impact tester with pendulum lifting.
 - Machine can be used during idle times (lunch breaks and night shifts), increasing utilization and enabling “faster” results.
 - Testing system reduces the testing costs per specimen and typically pays for itself within one to two years
 - Manual tests can be performed whenever required.
 - System allows for secure, reliable documentation and statistical long-term monitoring
- More advantages**
- Operator influences (hand temperature/moisture, off-center or angled specimen insertion etc.) are eliminated for high test-result reproducibility
 - Qualified laboratory staff are relieved of routine activities, leaving them available for more complex tasks.

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Technical data

Type	roboTest H	
Mechanics		
Magazine slots (for 4 mm specimen thickness, 80 mm stacking height)	20	
Dimensions (H x W x D) ¹⁾	310 x 240 x 590	mm
Weight, approx.	35	kg
Power specifications		
Electrical connection	100 - 240	V
Power consumption (handling system + pendulum impact tester)	1	kVA
Power frequency	50/60	Hz
Compressed air, filtered, not oiled	5 ... 6	bar
Compressed air consumption, approx.	10	l/min
Controller		
Automation	autoEdition3	
Peripheral connection	Profinet	
Test		
Type of test	Impact test on Charpy or Izod specimens	
Feed time	≤ 5	seconds
Specimens		
Charpy specimens	To ISO 179-1	
Length	80	mm
Width	10	mm
Height	3 / 4	mm
Charpy specimens	To ASTM D6110	
Length	127	mm
Width	12.7	mm
Height	3.17 / 6.35	mm
Izod specimens	To ISO 180	
Length	80	mm
Width	10	mm
Height	3 / 4	mm
Izod specimens	To ASTM D256	
Length	63.5	mm
Width	12.7	mm
Height	3.17 / 6.35	mm

1) Without pendulum impact tester, without table

Description	ArticleNumber
roboTest H automatic testing testing system for ZwickRoell HIT25/50P pendulum impact testers. For Charpy tests to:	046919
• EN ISO 179, specimens 10 x 4 x 80 mm (specimen capacity 20 specimens)	

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Description	ArticleNumber
<ul style="list-style-type: none">• ASTM D6110, specimens 12.7 x (3.17)(6.35)(12.7) x 127 mm (specimen capacity 20 specimens) For Izod tests to: <ul style="list-style-type: none">• EN ISO 180, specimens 10 x (3)(4) x 80 mm (specimen capacity 20 specimens)• ASTM D256, specimens 12.7 x (3.17)(6.35)(12.7) x 63.5 mm (specimen capacity 20 specimens)	

Description	ArticleNumber
roboTest H robotic testing system for ZwickRoell HIT450P pendulum impact tester <ul style="list-style-type: none">• For specimen geometry 10 x 5 to 10 x 55 with constant support height.• Each specimen must be started individually by pressing a button.• Conversion to straight manual operation simply requires the removal of two screws.	076904

Options

- Cool box for conditioning specimens
- Instrumentation
- Height adjustment for Charpy up to 5 joules
- Equipment table (low-vibration)
- Increased magazine capacity (please inquire)
- Magazine with active temperature conditioning (please inquire)