Product Information
roboTest R robotic testing system (Polar) for metals

'roboTest R' robotic testing system

Range of application
The system is used for the following fully automatic tests:
- tensile tests on metal specimens (e.g. to EN 10002-1, ISO 6892, ASTM E8, JIS Z2201)
- pendulum impact tests, hardness tests, roughness tests

System configuration
- 5kN to 2000kN materials testing machine with symmetrically closing pneumatic or hydraulic grips and optional extensometer
- Specimen magazine for up to 400 specimens (depending on specimen dimensions)
- roboTest R automatic specimen feed system wth 6-axis industrial robot
- Industrial controller with testXpert testing software and autoEdition3 automation software

Advantages
- ZwickRoell has over 35 years of experience and expertise, gained while supplying more than 700 automated testing systems worldwide.
- 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, making them available for more complex tasks.
- The machine can be used during idle times (lunch breaks, night shifts, weekends), which increases capacity and produces faster results.
- To increase specimen throughput, multiple materials testing machines can be integrated into the system.
- The testing system reduces the testing costs per specimen and typically pays for itself within one to two years.
- For manual tests by the operator, the robot arm can be put into park position.

Test sequence
- The operator fills the specimen magazine in the safety area of the system. Filling can also be performed during testing mode.
- Specimen data (identification number, width, thickness, etc.) are entered on the PC. This step can be omitted when using barcodes.
- Once the system has been started, specimen feed, tensile testing and disposal of specimen remains are performed automatically. The testing order for the specimens can be specified by the operator at any time. Disposal of specimen remains via good/bad sorting is possible using appropriate tolerance criteria.

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Technical data

Type	roboTest R	
Mechanics		
Dimensions (H x W x D)	Dependent upon the equipment	
Weight	Dependent upon the equipment	
Power specifications		
Electrical connection	230/400	V
Power consumption, up to	80	kVA[1]
Power frequency	50/60	Hz
Compressed air	6	bar
Compressed air requirement, from	10	l/min
Controller		
Automation	autoEdition3	
Peripheral connection	*Profinet*	

[1] Dependent on the version

Test	Metals
Type of test	Tensile tests
Specimens	
Specimen shape	Upon request
Magazine locations	Dependent upon specimen dimensions
Material	Dimensionally stable, not adhesive

Robot

Description	GU item	Accessory item
'roboTest R' 6-axis industrial robot **KR6** agilus (R700)	1100121	1050307
'roboTest R' 6-axis industrial robot **KR6** agilus (R900)	1100122	1050309
'roboTest R' 6-axis industrial robot **KR6** Cybertech Nano (R1820)	3013374	1050171
'roboTest R' 6-axis industrial robot **KR8** Cybertech Nano (R1620)	1100124	1050171
'roboTest R' 6-axis industrial robot **KR10** agilus (R1100)	1100123	1050313
'roboTest R' 6-axis industrial robot **KR16** Cybertech Nano (R1610)	1100125	1050171
'roboTest R' 6-axis industrial robot **KR22** Cybertech Nano (R1610)	1100126	1050171
'roboTest R' 6-axis industrial robot **KR30** Jontec (R2100)	1100127	1049566
'roboTest R' 6-axis industrial robot **KR70** Jontec (R2100)	1100128	1050222

! NOTE
The accessory item have to be ordered together with the respective roboTest item.

All data at ambient temperature.

Subject to change in the course of further development.

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Optionen
- Specimen identification
- Cross-section measurement No. measurements/specimen: 1/3
- Coating thickness measurement
- Roughness measurement
- Hardness measurement
- Spectral analysis
- Balance
- Temperature chamber
- Specimen disposal
- Good/bad sorter
- Data exchange: Higher-level computer system (e.g. LIMS) via upload/download of ASCII filesor ODBC
- Visual status display: 3-aspect lights (running, refill magazine/finished, error)