

Product Information

testXpert hardness edition



testXpert concept

One basic software for all applications

testXpert employs with one basic software system for all applications. It is responsible for data, user and test program management as well as communication with the testing machine or testing device and with other peripheral systems.

Master test programs

cover the test categories which are predestined for frequently changing or complex test requirements. With a minimum of effort and previous knowledge it is possible to

- create and alter test programs
- configure screen views according to your individual needs and
- create task specific test protocols.

Intelligent software wizards guide you rapidly through all menus, running consistency checks at the same time.

Two master programs are available for hardness testing machines and devices:

- Optical hardness testing methods (Vickers, Knoop, Brinell)
- Instrumented indentation test and hardness testing method with indentation depth measurement

Customized test programs

are customized solutions for special test tasks, the functions and sequences of which have been specified by the user. These programs can be created in either of two ways:

- Zwick supplies the appropriate master test program and the user creates his specific test programs himself, with the aid of a software wizard
- Zwick creates these test programs for the customer in accordance with the latter's specifications

Software tools

(wizards, editors, macro language) support the user in a variety of ways

- in adapting test programs to given test tasks,
- in configuring screen displays and reports,
- in managing test series with sub-series and in managing test results,
- in managing users and data,
- in programming the user's own results and access to actions (ZIMT),
- in creating user groups and defining access rights.

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Common testing software

testXpert employs a standard user interface to support various types of hardness testers with a standard user interface. The application range covered by the hardness tester in terms of test methods, force range, properties and options is configured automatically in testXpert.

Application ranges

ZHU/zwickiLine+:

- For universal hardness tests in the range from 2 N to 2500 N
- Instrumented indentation test, Rockwell, ball indentation, Vickers, Knoop and Brinell
- For automated serial and hardness traverse tests
- The force/indentation depth curve is recorded and displayed independently of any specific method

ZHV30/zwickiLine:

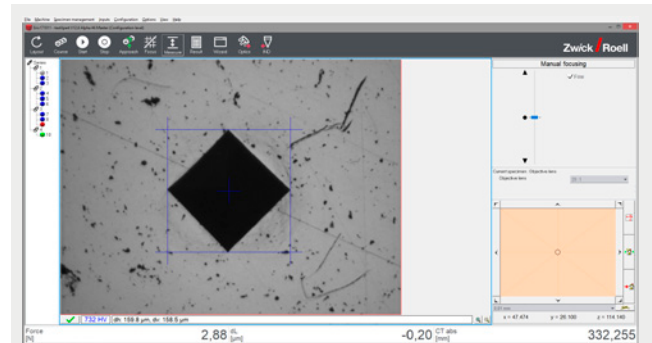
- For Vickers, Knoop and Brinell hardness tests in the range from HV0.1 to HBW2.5/31.25
- For automated serial and hardness traverse tests
- Flexible test room height, as the hardness testing unit traverses in a vertical direction
- With 5-lens turret (motorized or manual) and motorized X-Y tables

ZHV10/PC:

- For Vickers, Knoop and Brinell hardness tests in the range from HV0.2 to HBW1/30
- For manual serial and hardness traverse tests
- With swivel loading device for testing larger components and a comprehensive range of standard accessories


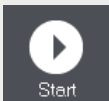
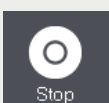

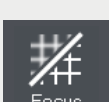



Standard user interface

The user interface is made up of modular screen layouts. The layouts incorporate the functions and relevant buttons, the camera image, virtual control elements for the x-y-z axes, curve graphics and tables of results and statistics. testXpert completely controls the hardness tester and the test sequence.



The menu bar appears at the top of the user interface in all layout windows, with the toolbar underneath and the serial tree on the left.


Functions of the toolbar

	Starts a hardness traverse test
	Starts a single test
	Stops a single or traverse test
	Moves the X-Y table to the position of the marked indentation
	Starts automatic focusing
	Starts automatic measurement of the indentation shown in the video image
	Re-evaluates the data of all marked indentations
	The test settings are carried out in the wizard

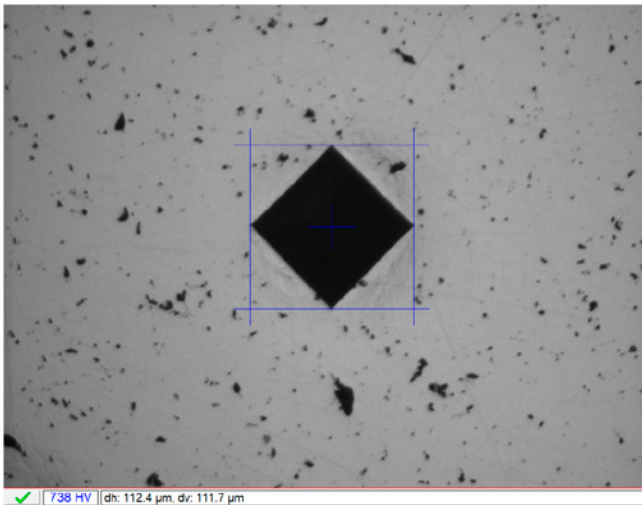
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Video image showing measured values

The status bar of the video image screen incorporates a button for confirming the measured lines. The hardness value and the gage lengths are displayed automatically and accepted as results by pressing the  button. Digital zooming of the video image is carried out with the magnifier.

A motorized X-Y table is moved in the video image by a click of the mouse. The increment is calibrated according to the magnification level.

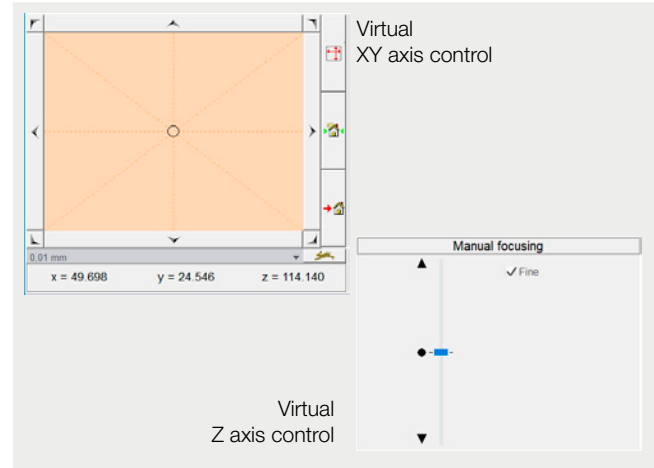


Virtual XY axis control

The motorized X-Y table is moved in the „X-Y table control“ window in steps by means of the „arrow“ buttons or continuously by displacing the circle (while holding the mouse key). The degree of displacement determines the traversing speed. The traversing speed can be altered simply by pressing the corresponding button. The home position is set within the traversing range of the X-Y table by means of the „Set home position“ buttons and approached via „Approach home position“.

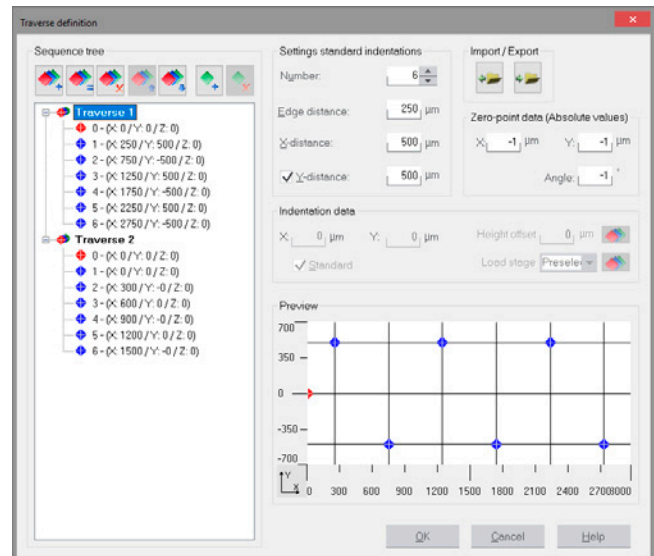
Virtual Z axis control

The motorized Z axis of the hardness tester is moved via the software in the „Manual focusing“ window by means of a virtual slider, using the mouse. The traversing movement is proportional to the extent of displacement from zero position (black dot).

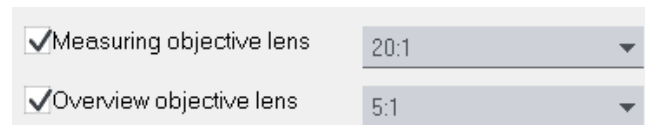


Definition of hardness gradients

Simple configuration, copying, shifting and modification of hardness traverse tests take place in the „Traverse test definition“ mask. Existing samples can be stored and exported or imported.



Overview and measuring lens for hardness traverse tests

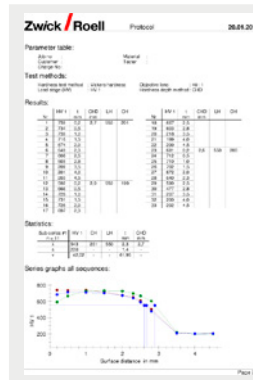


Two different lenses can be used in hardness traverse tests: an overview lens for checking the indentation position and a measuring lens for measuring the indentation size.

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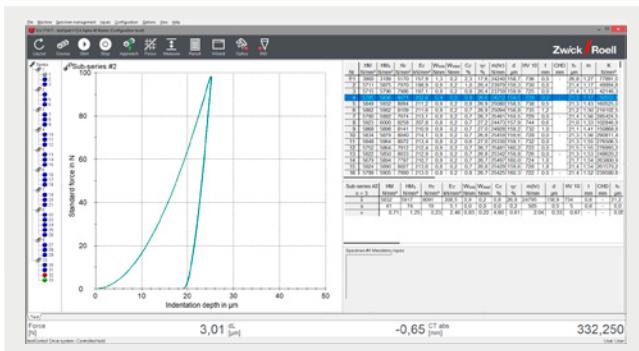
Simple configuration of the test sequence

<input type="checkbox"/> Freeze the video frame during measurement?	The test sequence is simple to adjust with regard to checking of the indentation position, autofocussing prior to indentation measurement and automatic indentation measurement.
<input type="checkbox"/> Focus before each measurement for single tests?	
<input checked="" type="checkbox"/> Focusing in small drive range?	
<input type="checkbox"/> Correct automatic measurements at traverse testing?	
<input checked="" type="checkbox"/> Focus before each measurement for traverse testing?	
<input checked="" type="checkbox"/> Check the sequence positions beforehand	



The results are inserted automatically in the standard test report. The standard test report already incorporates the parameter data, the results, the statistics and the graphic representation of results. The report is exported in PDF or RTF file format.

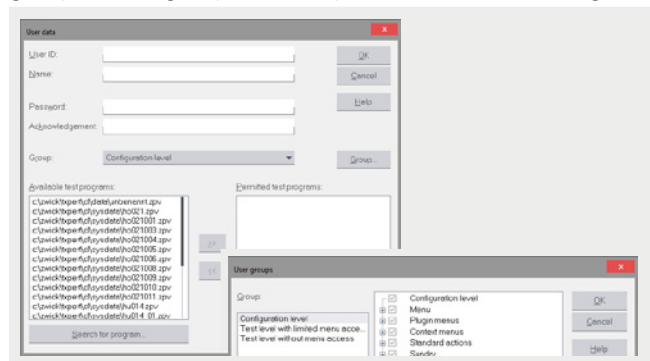
Presentation of test results and test report



In testXpert the test results are displayed automatically in graphic and tabular form and statistically evaluated. The user interface and the standard report are simple to adapt according to the user's requirements.

User management

testXpert incorporates a user management system with different access options available to defined user groups. New groups are simple to define and configure.



Software testXpert for ZHU/zwickiLine+

Description	Item number:	German	English
testXpert Master test program for ZHU/zwickiLine+ hardness tester Hardness methods with depth measurement and optics (incl. all options, see below)		319222	319224

Software testXpert for ZHV30/zwickiLine

Description	Item number:	German	English
testXpert Master test program for ZHV30/zwickiLine hardness tester for optical hardness test methods (incl. all options, see below)		353451	353472

Software testXpert for ZHV10/PC

Description	Item number:	German	English
testXpert Master test program for ZHV10 hardness tester for optical hardness test methods (incl. options 1+2+4, see below)		1002310	1002312

testXpert options

Description	Item number:	German	English
testXpert Option Traverse testing		353453	353475
testXpert Option Auto measurement		353455	353473
testXpert Option Auto focussing		353454	353474
testXpert Option Connection of x-y tables		353456	318788