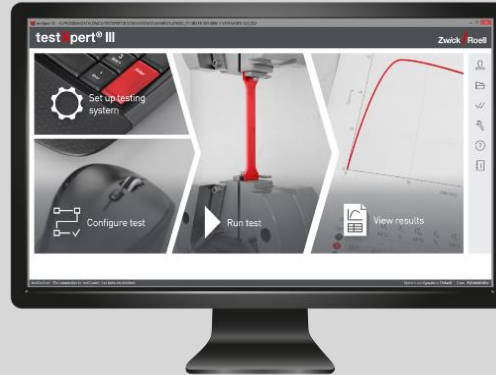


testXpert® III Testing Software

Our **Solutions** for Your Requirements



testXpert® III



...is intuitive and workflow-based

You need

Easy-to-operate testing software
that prevents operator error?

testXpert® III is intuitive & workflow-based

Zwick / Roell

Getting started is easy! Experience a workflow that reflects the work processes used in your lab.

The screenshot displays the testXpert III software interface. The title bar shows the file path: C:\PROGRAMDATA\ZWICK\TESTXPRT III VIDEO\SYSDATA\SAMPLES\XTE051_07 DIN EN ISO 6892-1 VERFAHREN A(1).ZS2. The interface is divided into several sections:

- Top Left:** A gear icon with the text "Set up testing system" overlaid on a close-up image of a keyboard.
- Bottom Left:** A checklist icon with the text "Configure test" overlaid on a close-up image of a mouse.
- Center:** A large red-bordered hexagonal area containing a play button icon and the text "Run test", overlaid on a 3D rendering of a red tensile specimen being held by a testing machine.
- Right Side:** A graph showing a stress-strain curve with a red line. Below the graph, the text "View results" is visible. A vertical toolbar on the far right contains icons for user profile, folder, checkmark, magnifying glass, question mark, and a document icon.

testXpert® III is intuitive & workflow-based

Getting started is easy! Experience a workflow that reflects the work processes used in your lab.

The screenshot displays the testXpert III software interface with a workflow highlighted in red. The workflow consists of three main steps: 'Set up testing system', 'Run test', and 'View results'. The 'View results' step is highlighted with a red border and shows a stress-strain curve and a data table.

testXpert III - C:\PROGRAMDATA\ZWICK\TESTXPRT III VIDEO\SYSDATA\SAMPLES\XTE051_07 DIN EN ISO 6892-1 VERFAHREN A(1).Z52

testXpert® III

Zwick / Roell

Set up testing system

- All series & exports can be viewed in an additional **secure mode** protected from manipulation.

Configure test

Run test

View results

Nr	Serie	ϵ_y	σ_M	ϵ_M	σ_B	ϵ_{IB}
1		%	MPa	%	MPa	%
2	3070					

testXpert® III is intuitive & workflow-based

Zwick / Roell

In testXpert III all test-relevant settings are logically grouped and kept separate from general system settings.

The screenshot displays the testXpert III Administrator software interface. The window title is "testXpert III (Administrator)". The interface features the "testXpert® III" logo on the left and the "Zwick / Roell" logo on the right. The main content area is divided into three sections: "Set up testing system" (with a gear icon and a keyboard image), "Configure test" (with a flowchart icon and a mouse image), and "Run test" (with a play button icon and a mechanical test image). On the right side, there is a sidebar menu with the following items: "Administrator" (with a user icon and a right arrow), "User swap...", "Users...", "User groups...", "Guidelines...", "Load test..." (with a folder icon), "Traceability" (with a checkmark icon), "Settings" (with a wrench icon), "Help" (with a question mark icon), and "System information" (with an information icon). A graph showing a red curve is visible in the background of the "Run test" section.

testXpert® III is intuitive & workflow-based

Zwick / Roell

testXpert III is a role-based software with integrated user management.

The screenshot displays the testXpert III Administrator software interface. The window title is "testXpert III (Administrator)". The interface features the "testXpert® III" logo on the left and the "Zwick / Roell" logo on the right. The main content area is divided into three sections: "Set up testing system" (with a gear icon and keyboard image), "Configure test" (with a flowchart icon and mouse image), and "Run test" (with a play button icon and machine image). A sidebar on the right contains a user management menu with options: Administrator (highlighted with a red box), User swap..., Users..., User groups..., and Guidelines... Below this menu are other options: Load test..., Traceability, Settings, Help, and System information. A graph showing a red curve is visible in the background of the sidebar.

testXpert® III is intuitive & workflow-based

testXpert III is a role-based software with integrated user management. Use of Windows accounts is possible.

The screenshot displays the testXpert III Administrator interface. On the left, there are two panels: 'Set up testing system' with a gear icon and 'Configure test' with a flowchart icon. The main area is titled 'User management guidelines' and contains several sections:

- Password guidelines:**
 - Minimum password length: 7 Character
 - Password expiration time: 45 Days
 - Password chronicle: 3 Passwords
 - Passwords with special characters
- Log in monitoring:**
 - Log in monitoring: 3 Failures
 - Time lag following login errors (Duration 1 minute)
 - Blocking accounts
 - Pass on blocking message
 - Command line for external message: [] [Test] [...]
- Automatic lock of the testXpert III user interface

At the bottom of the 'User management guidelines' window, the option 'Using the Windows user management (LDAP)' is selected and highlighted with a red box.

On the right, a sidebar menu is visible with the Zwick / Roell logo at the top. The menu items are:

- Administrator (highlighted with a red box)
- User swap...
- Users...
- User groups...
- Guidelines...
- Load test...
- Traceability
- Settings
- Help
- System information

testXpert® III is intuitive & workflow-based

Zwick / Roell

Users see only what is important to them and can focus on the task at hand right from the start. This keeps training time to a minimum.

The screenshot displays the testXpert III software interface. The window title is "testXpert III (Tester without configuration access)". The interface features the "testXpert® III" logo on the left and the "Zwick / Roell" logo on the right. The main area is split into two panels: a live video feed of a red tensile specimen being tested in a machine on the left, and a stress-strain graph on the right. The graph shows a red curve peaking at approximately 40 MPa. Below the graph is a data table with columns for various material properties. A "Run test" button with a play icon is overlaid on the video feed. A "View results" button with a document icon is overlaid on the graph. A vertical toolbar on the right contains icons for user profile, folder, checkmark, help, and information. The status bar at the bottom shows "testControl II - The connection to testControl has been established." and "User: Tester Group: Tester without configuration access".

Nr	E _T	σ _y	σ _M	ε _M	σ _B	ε _{all}	b	h	A ₀
Serie	MPa	MPa	MPa	%	MPa	%	mm	mm	mm ²
3070	-	-	-	-	-	-	-	-	-
3071	65,3	7,4	45,2	-	-	-	-	-	-

testXpert® III is intuitive & workflow-based

Navigate through each test in the same straightforward way. Expressive icons make it fast and easy to find what you need.

The screenshot shows the testXpert III software interface. At the top, there is a toolbar with icons for Home, Save, Save as, Zero the force, Start pos., Start, Stop, Back, Evaluate, Print, Lock, and Help. Below this is a larger toolbar with icons for Home, Save, Save as, Set force zero, Start pos., Start, Stop, and Back. A red box highlights the 'EXPORT TEST DATA' button in the top right corner. The main window displays specimen data tables and a stress-strain graph.

Legend

Legend No.	E_t MPa	σ_Y MPa	ϵ_Y %	σ_M MPa	ϵ_M %	σ_B MPa	ϵ_{tB} %	b mm	h mm	A_0 mm ²
1	3110	66,2	7,1	66,2	7,1	52,8	23,1	9,90	3,95	39,11
2	3070	65,3	7,4	65,3	7,4	51,3	26,6	9,90	3,96	39,20
3	3080	66,0	7,1	66,0	7,1	54,0	24,9	9,91	3,95	39,14
4	3040	65,4	7,3	65,4	7,3	52,2	30,3	9,92	3,96	39,28
5	3050	66,0	7,2	66,0	7,2	61,6	14,6	9,92	3,95	39,18

Series

Series	E_t MPa	σ_Y MPa	ϵ_Y %	σ_M MPa	ϵ_M %	σ_B MPa	ϵ_{tB} %	b mm	h mm	A_0 mm ²
n = 5										
x	3070	65,8	7,2	65,8	7,2	54,4	23,9	9,91	3,954	39,18
s	27,9	0,391	0,13	0,391	0,13	4,15	5,85	0,01	0,005477	0,07
v [%]	0,91	0,60	1,76	0,60	1,76	7,64	24,49	0,10	0,14	0,17

Stress in MPa vs Strain in %

Stress in MPa: 0, 20, 30
Strain in %: 0, 10, 20, 30

Current Test Data:

F: 6,02 N Grip to grip separation: 5,000 mm Crosshead absolute: 274,000 mm

System configuration name: Default User: Administrator Group: Administrator

All related information is associated visually.

testXpert III (Administrator) - C:\ProgramData\zwick\testxpert III\V1_1\SysData\Samples\xt051_01 DIN EN ISO 527-1.zs2

Home Save Save as Zero the force Start pos. Start Stop Back Evaluate Print Lock Help Zwick / Roell

SET UP TESTING SYSTEM CONFIGURE TEST **RUN TEST** EXPORT TEST DATA

Series layout Specimen graph Media Video capture ...

Series

- Specimen 1
- Specimen 2
- Specimen 3
- Specimen 4
- Specimen 5
- Specimen 6

Specimen thickness: 3,95 mm

Specimen width: 9,90 mm

Thickness of the specimen

Legend No.	E_t	σ_Y	ϵ_Y	σ_M	ϵ_M	σ_B	ϵ_{IB}	b	h	A_0
	MPa	MPa	%	MPa	%	MPa	%	mm	mm	mm ²
1	3110	66,2	7,1	65,3	7,4	51,3	23,1	9,90	3,95	39,11
2	3070	65,3	7,4	65,3	7,4	51,3	23,1	9,90	3,96	39,20
3	3080	66,0	7,1	66,0	7,1	54,0	24,9	9,91	3,95	39,14
4	3040	65,4	7,3	65,4	7,3	52,2	30,3	9,92	3,96	39,28
5	3050	66,0	7,2	66,0	7,2	61,6	14,6	9,92	3,95	39,18

Series	E_t	σ_Y	ϵ_Y	σ_M	ϵ_M	σ_B	ϵ_{IB}	b	h	A_0
n = 5	MPa	MPa	%	MPa	%	MPa	%	mm	mm	mm ²
x	3070	65,8	7,2	65,8	7,2	54,4	23,9	9,91	3,954	39,18
s	27,9	0,391	0,13	0,391	0,13	4,15	5,85	0,01	0,005477	0,07
v [%]	0,91	0,60	1,76	0,60	1,76	7,64	24,49	0,10	0,14	0,17

Series: Differentiation of specimen by color

Stress in MPa

Specimen 1

Specimen thickness: 3,95 mm

Specimen width: 9,90 mm

6,02 N Grip to grip separation

5,000 mm Crosshead absolute

274,000 mm

System configuration name: Default User: Administrator Group: Administrator

Additional functionalities are available via buttons if needed.

The screenshot displays the testXpert III software interface. At the top, there is a navigation bar with icons for Home, Save, Save as, Zero the force, Start pos., Start, Stop, Back, Evaluate, Print, Lock, and Help. Below this is a menu bar with options: SET UP TESTING SYSTEM, CONFIGURE TEST, **RUN TEST**, and EXPORT TEST DATA. The main workspace is divided into several sections:

- Series layout:** A list of specimens (Specimen 1 to 6) with corresponding colored circles. A context menu is open over this list, showing options like "New specimen", "Invalidate", "Re-evaluate", "Select for testing", "Display data sources...", "Display sensors...", "Delete specimen", "Change designation...", "Measuring graph export...", "Excel export", "Export specimen", "Select field contents...", "Edit current layout...", and "Edit layouts...".
- Specimen graph:** A 3D model of a specimen with a red arrow indicating the direction of force. Below it, a table shows specimen parameters.
- Media / Video capture:** A section for handling media and video capture.
- Series:** A stress-strain graph titled "Differentiation of specimen by color". The y-axis is "Stress in MPa" (0 to 60) and the x-axis is "Strain in %" (0 to 30). Multiple colored curves represent different specimens, showing their mechanical behavior.

At the bottom of the interface, there are three main data fields:

- 6,02 N:** Grip to grip separation.
- 5,000 mm:** Crosshead absolute.
- 274,000 mm:** (This value appears to be a typo for 274,000 N or similar, based on context).

System configuration name: Default | User: Administrator | Group: Administrator

Additional functionalities are available via context menu if needed.

The screenshot displays the testXpert III software interface. At the top, there is a navigation bar with icons for Home, Save, Save as, Zero the force, Start pos., Start, Stop, Back, Evaluate, Print, Lock, and Help. Below this is a menu bar with options: SET UP TESTING SYSTEM, CONFIGURE TEST, RUN TEST (highlighted), and EXPORT TEST DATA. The main workspace is divided into several sections:

- Series layout:** Includes a legend for Specimen 1 through 6 and a 3D model of a specimen with a blue rectangular area highlighted. Below the model are input fields for Specimen thickness (3,95 mm) and Specimen width (9,90 mm).
- Legend Table:** A table listing specimen properties for 5 different series.
- Series Table:** A table showing detailed material properties for a series of 5 specimens.
- Graph:** A stress-strain plot titled "Differentiation of specimen by color". The y-axis is "Stress in MPa" (0 to 60) and the x-axis is "Strain in %" (0 to 30). A context menu is open over the graph, listing actions like "Configure Curve graph...", "Print 'Curve graph'", "Copy to clipboard", "Activate cross-wires", "Set 'Point of break'", "Show lettering", "Select field contents...", "Edit current layout...", and "Edit layouts...".
- Bottom Status Bar:** Displays test results: "6,02 N Grip to grip separation", "5,000 mm Crosshead absolute", and "274,000 mm".

System configuration name: Default User: Administrator Group: Administrator

testXpert® III is intuitive & workflow-based

Zwick / Roell

An intelligent wizard function enables easy and structured input of all test parameters and automatic verification of entries for plausibility.

The screenshot displays the testXpert III software interface in the 'CONFIGURE TEST' step. The top toolbar includes icons for Home, Save, Save as, Zero the force, Start pos., Start, Stop, Back, Evaluate, Print, Lock, and Help. The main window is divided into a left sidebar, a central configuration area, and a right-side diagram.

Left Sidebar (View):

- Pre-test (checked)
- Test parameters
- Results
- Tensile modulus
- Yield strength
- Control parameter
- Parameters for the report
- Reports
- Export interfaces

Central Configuration Area:

- Grip to grip separation at the start position: A, 115.00 mm
- Speed, start position: 200 mm/min
- Approach path: None
- Gage length correction
- Pre-load: 0,1 MPa
- Speed, pre-load: 5 mm/min

Right-side Diagram: A 3D illustration of a tensile test specimen being pulled between two grips. A red double-headed arrow indicates the direction of force. Below the diagram, it states: "The current value of the machine is accepted by activating the action button".

Bottom Status Bar:

- F
- 6,02 N
- Grip to grip separation
- 5,000 mm
- Crosshead absolute
- 274,000 mm
- System configuration name: Default
- User: Administrator
- Group: Administrator

testXpert® III is intuitive & workflow-based

The intelligent wizard guides you systematically through the test configuration.

testXpert III (Administrator) - C:\ProgramData\zwick\testxpert III\V1_1\SysData\Samples\zte051_01 DIN EN ISO 527-1.zs2

Home Save Save as Zero the force Start pos. Start Stop Back Evaluate Print Lock Help Zwick / Roell

SET UP TESTING SYSTEM CONFIGURE TEST RUN TEST EXPORT TEST DATA

View Results and all specimen specific parameters Display activated only

Act...	Abbreviation	Unit	Name
<input type="checkbox"/>	Specimen no.		Specimen number
<input type="checkbox"/>	Date		Date
<input type="checkbox"/>	Clock time		Clock time
<input type="checkbox"/>	Date/Clock time		Date/Clock time
<input type="checkbox"/>	L _{0 CH}	mm	Gage length, crosshead
<input type="checkbox"/>	L ₀	mm	Gage length
<input type="checkbox"/>	σ _{low}	MPa	Tensile modulus, begin
<input type="checkbox"/>	σ _{high}	MPa	Tensile modulus, end
<input checked="" type="checkbox"/>	E _t	MPa	Tensile modulus
<input type="checkbox"/>	R ²		Coefficient of determination R ² of the elastic gradient straight line
<input type="checkbox"/>	S _m	N/mm	Standard deviation of the gradient S _m of the elastic gradient straight line
<input type="checkbox"/>	S _{m(rel)}	%	Relative standard deviation of the gradient S _m of the elastic gradient straight line
<input type="checkbox"/>	N		Number of data points in the evaluation range
<input type="checkbox"/>	σ _{x1}	MPa	Stress at x1% strain
<input checked="" type="checkbox"/>	σ _Y	MPa	Yield strength
<input checked="" type="checkbox"/>	ε _Y	%	Yield strain
<input checked="" type="checkbox"/>	σ _M	MPa	Tensile strength
<input checked="" type="checkbox"/>	ε _M	%	Strain at tensile strength
<input checked="" type="checkbox"/>	σ _B	MPa	Stress at break
<input checked="" type="checkbox"/>	ε _B	%	Nominal strain at break
<input checked="" type="checkbox"/>	b	mm	Specimen width
<input checked="" type="checkbox"/>	h	mm	Specimen thickness
<input checked="" type="checkbox"/>	A ₀	mm ²	Cross-section

6,02 N Grip to grip separation 5,000 mm Crosshead absolute 274,000 mm

testControl II - Drive system - Controlled hold System configuration name: Default User: Administrator Group: Administrator

testXpert® III is intuitive & workflow-based

Once you set all the options and parameters you need for testing and exporting the test data, you're ready to start the test.

testXpert III (Administrator) - C:\ProgramData\zwick\testxpert III\VI_1\SysData\Samples\yte051_01 DIN EN ISO 527-1.zs2

Home Save Save as Zero the force Start pos. Start Stop Back Evaluate Print Lock Help Zwick / Roell

SET UP TESTING SYSTEM **CONFIGURE TEST** RUN TEST EXPORT TEST DATA

View

Name	Type	Moment in time of expo...
ASCII	Results (ASCII)	- None -
Excel default	Excel	- None -
Export to Excel + autom...	Results (ASCII)	At the series end
Measuring graphs (A...	Measuring graphs (A...	- None -
Microsoft Word (.DOC)	Word	- None -
Microsoft Word - short r...	Word	- None -
PDF default (Standard re...	Report	- None -
testXpert default	Measuring graphs (t...	

Available help topics:
[Export interfaces](#)
[FAQ](#)

Default export interface

< Back Next >

F 6,02 N Grip to grip separation 5,000 mm Crosshead absolute 274,000 mm

testControl II - Drive system - Controlled hold System configuration name: Default User: Administrator Group: Administrator

testXpert® III is intuitive & workflow-based

You can use the standard, expanded or even customized intelligent wizard for advanced adjustments.

testXpert III (Administrator) - C:\ProgramData\zwick\testxpert III\V1_1\SysData\Samples\xt051_01 DIN EN ISO 527-1.zs2

Home Save Save as Zero the force Start pos. Start Stop Back Evaluate Print Lock Help Zwick / Roell

SET UP TESTING SYSTEM **CONFIGURE TEST** RUN TEST EXPORT TEST DATA

View [Icons] ...

- Start position ✓
- Pre-load ✓
- Specimen data ✓
- Test ✓
- End of test ✓
- Results ✓
- Tensile modulus ✓
- Yield strength ✓
- Break investigation** ✓
- Actions after the test
- Measurement value storage
- Control parameter
- Parameters for the report
- Reports
- Export interfaces ✓

Number of captures for break investigation: 50

Force transition: 5 %

Negative strain transition: 10 %

Positive strain transition: 10 %

< Back Next >

F 6,02 N Grip to grip separation 5,000 mm Crosshead absolute 274,000 mm

testControl II - Drive system - Controlled hold System configuration name: Default User: Administrator Group: Administrator

testXpert® III



...offers prepared standard tests

You need

Fast performance and documentation of
standardized test methods?

testXpert® III offers prepared standard tests

Zwick / Roell

testXpert III contains over 600 Standard Test Programs, enabling you to find the right test program for almost any standard.

- All parameters, results and the report are already pre-configured and conform to your industry's terminology.



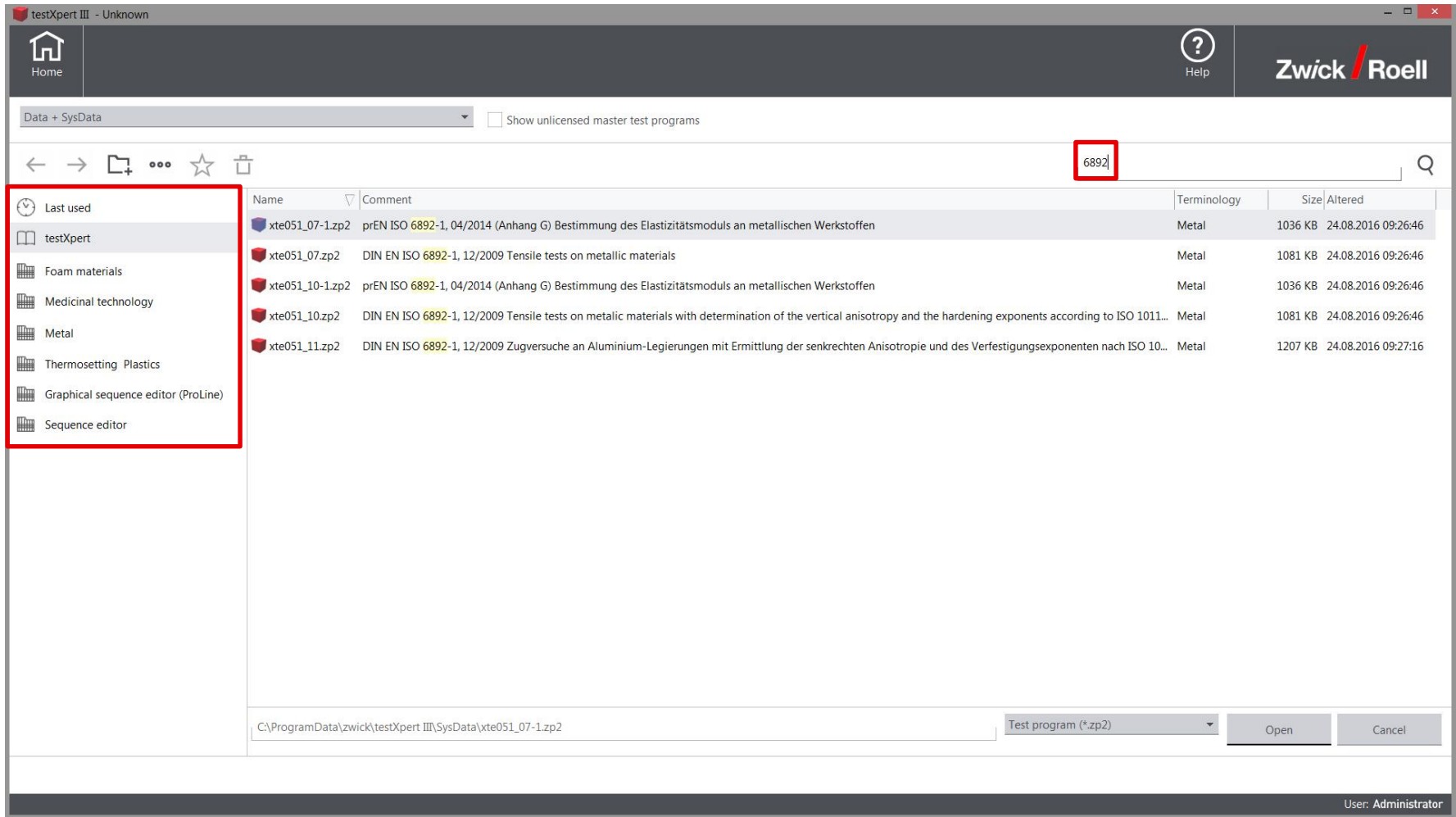
testXpert® III offers prepared standard tests

Zwick / Roell

We understand our customers' industries. Special functions & terminology make testXpert III tests optimized for each industry.

The screenshot displays the testXpert III software interface. At the top, the title bar reads "testXpert III (Administrator) - C:\ProgramData\zwick\testxpert III\V1_1\SysData\Samples\xt051_01 DIN EN ISO 527-1.zs2". The main header features the "testXpert® III" logo on the left and the "Zwick / Roell" logo on the right. The interface is divided into three main sections: 1. "Set up testing system": A gear icon next to a keyboard with the "Enter" key highlighted. 2. "Configure test": A mouse icon with a circuit diagram and a checkmark. 3. "Run test": A play button icon next to a photograph of a red test specimen being held by a testing machine. To the right of these sections is a sidebar menu with the following items: "Administrator" (with a user icon and a right arrow), "Load test..." (highlighted with a red box), "Traceability" (with a checkmark), "Settings" (with a key icon), "Help" (with a question mark icon), and "System information" (with an information icon). In the background, a graph shows a red curve on a coordinate system with "MPa" on the y-axis. At the bottom of the interface, there are three data fields: "6,02 N Grip to grip separation", "5,000 mm Crosshead absolute", and "274,000 mm". A status bar at the very bottom contains the text "testControl II - The connection to testControl has been established." on the left and "System configuration name: Default User: Administrator Group: Administrator" on the right.

You can instantly start a Standard Compliant Test in your application in just a few seconds with the Open & Search dialog.



The View Results mode prevents users from making subsequent modifications to the data and results can be used to verify the test.

Protected view | VIEW RESULTS | **VIEW TEST** | VIEW CONFIGURATION

Series layout | Specimen graph | Media | Video capture | ...

Series: Specimen 1, Specimen 2, Specimen 3, Specimen 4, Specimen 5, Specimen 6

Specimen thickness: 3,95 mm
Specimen width: 9,90 mm

Thickness of the specimen

Legend No.	E_T MPa	σ_Y MPa	ϵ_Y %	σ_M MPa	ϵ_M %	σ_B MPa	ϵ_{tB} %	b mm	h mm	A_0 mm ²
1	3110	66,2	7,1	66,2	7,1	52,8	23,1	9,90	3,95	39,11
2	3070	65,3	7,4	65,3	7,4	51,3	26,6	9,90	3,96	39,20
3	3080	66,0	7,1	66,0	7,1	54,0	24,9	9,91	3,95	39,14
4	3040	65,4	7,3	65,4	7,3	52,2	30,3	9,92	3,96	39,28
5	3050	66,0	7,2	66,0	7,2	61,6	14,6	9,92	3,95	39,18

Series	E_T MPa	σ_Y MPa	ϵ_Y %	σ_M MPa	ϵ_M %	σ_B MPa	ϵ_{tB} %	b mm	h mm	A_0 mm ²
n = 5										
\bar{x}	3070	65,8	7,2	65,8	7,2	54,4	23,9	9,91	3,954	39,18
s	27,9	0,391	0,13	0,391	0,13	4,15	5,85	0,01	0,005477	0,07
V [%]	0,91	0,60	1,76	0,60	1,76	7,64	24,49	0,10	0,14	0,17

Stress in MPa vs. Crosshead absolute (mm)

115,000 mm Crosshead absolute

View results

testXpert® III



...is versatile

You need

A wide range of applications on one machine?

Or the same software for different types of machines?

testXpert® III is versatile

testXpert III is the result of close cooperation with software users in the materials testing industry and the experience of over 30,000 successful testXpert installations.

- The workflow-based philosophy of testXpert III fits to all testing machines & instruments of the Zwick/Roell Group.
- The same software can be used for all applications and test types.



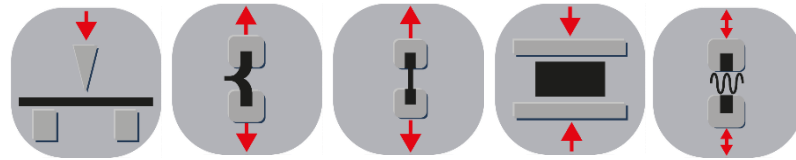
testXpert® III is versatile

testXpert III offers you a superior product portfolio.

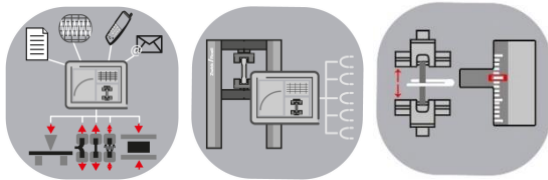
Standard Test Programs



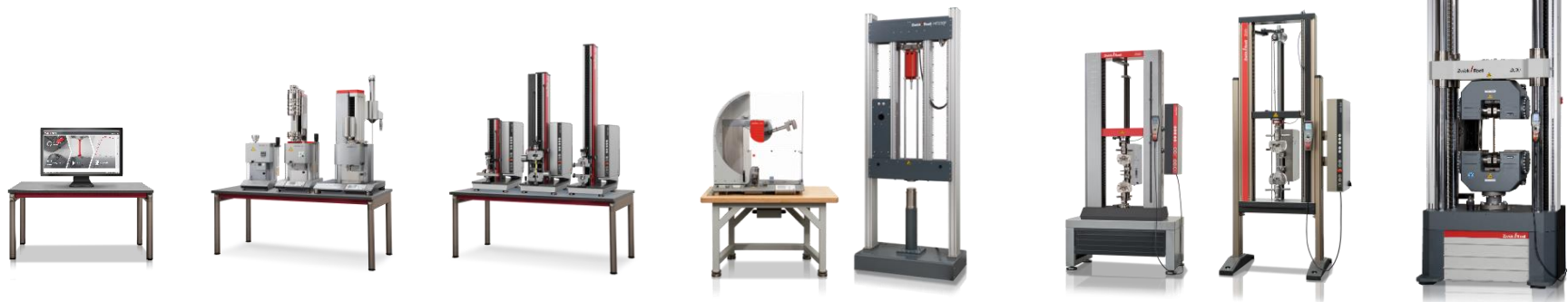
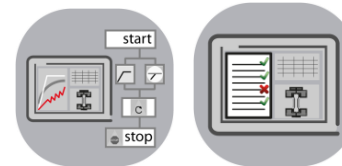
Master Test Programs



Options/Sensors



Graphical Sequence Editor/ Customized Solutions



testXpert® III is versatile

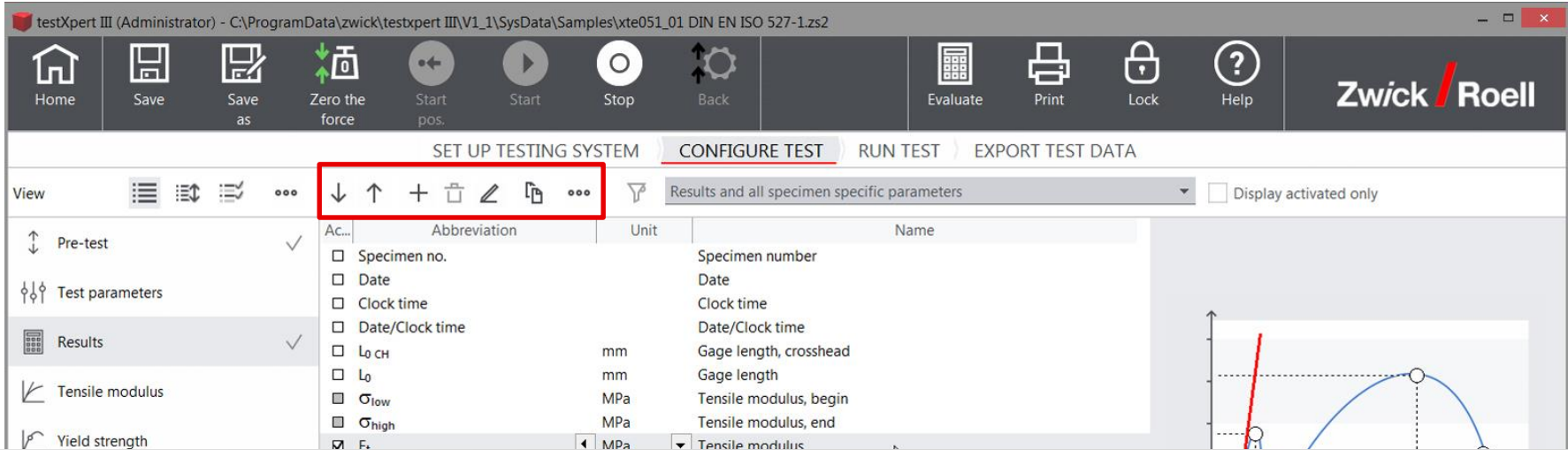
Additional channels can be easily added in testXpert III.

The screenshot displays the testXpert III software interface. At the top, a navigation bar includes icons for Home, Save, Save as, Zero the force, Start pos., Start, Stop, Back, Evaluate, Print, Lock, and Help. The main menu shows 'SET UP TESTING SYSTEM' as the active tab, with other options like 'CONFIGURE TEST', 'RUN TEST', and 'EXPORT TEST DATA'. Below the menu, the 'System configuration' section is visible, with a toolbar containing icons for edit, delete, and refresh. The configuration area is divided into 'Default' and 'testControl II' sections. The 'testControl II' section is highlighted with a red box and contains a 'TEST PROGRAM' table with the following connections:

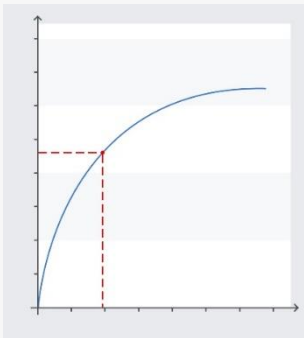
Component	TEST PROGRAM
Control SN: 999700	Machine
Crosshead SN: 999700	Crosshead
makroXtens SN: 161487	Standard extensometer
Travel formula element No. 1	Standard load cell
Force 2.5 kN SN: 999703	Set value
Force formula element No. 1	Act. value
Set value	Control point
Actual value	
Control point	

At the bottom of the configuration area, there are 'Save' and 'Save system configuration, continue' buttons. The status bar at the bottom shows 'F', '6,02 N Grip to grip separation', '5,000 mm Crosshead absolute', and '274,000 mm'. The footer includes 'testControl II - Drive system - Setup', 'System configuration name: Default', 'User: Administrator', and 'Group: Administrator'.

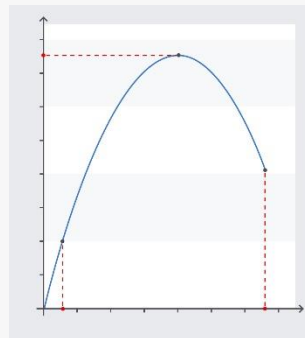
Additional results can be easily added in testXpert III.



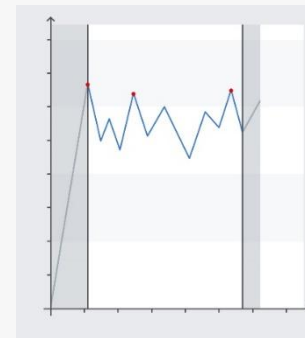
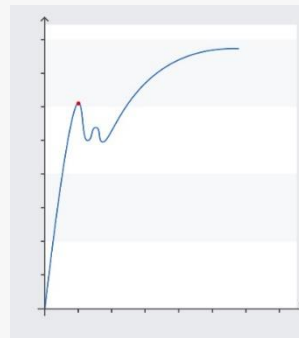
Reference values



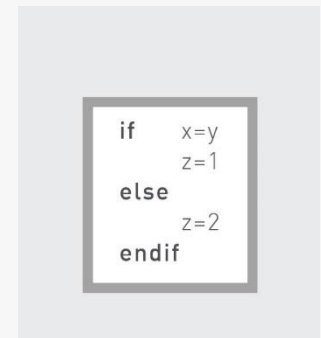
Statistical values



Peaks/Gradients



Complex ZIMT results



testXpert® III



...ensures reliable test results

You need

Accurate, repeatable, reproducible and traceable results?

Zwick, together with its machine and software solutions, stands for accuracy, repeatability and reproducibility and for seamless result traceability.

Our machines operate with precision. The average of the test results obtained is very close to the reference value.

accurate

When tests are repeated under the same conditions, the results obtained are closely grouped.

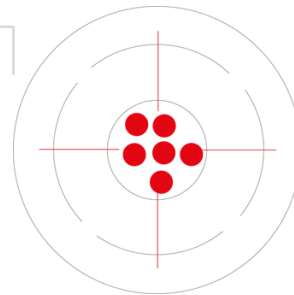
repeatable

When Zwick machines performing the same test are compared, the results are reproducible.

reproducible

The continuous documentation of calibrations and tests makes all results transparent and traceable.

traceable



testXpert® III ensures reliable test results

Zwick / Roell

You can define reproducible test conditions with our unique System Configuration Builder, which guarantees repeatability of the test results.

The screenshot displays the testXpert III software interface. At the top, the title bar reads "testXpert III - C:\PROGRAMDATA\ZWICK\TESTXPRT III VIDEO\SYSDATA\SAMPLES\XTE051_07 DIN EN ISO 6892-1 VERFAHREN A(1).ZS2". The main window features the "testXpert® III" logo on the left and the "Zwick / Roell" logo on the right. The interface is divided into three main sections:

- Set up testing system:** A red-bordered box highlights a keyboard with a gear icon and the text "Set up testing system".
- Run test:** A central image shows a red test specimen being held by a mechanical fixture, with a play button icon and the text "Run test" below it.
- View results:** A graph on the right shows a stress-strain curve with "Spannung" (Stress) on the y-axis and "Dehnung" (Strain) on the x-axis. Below the graph, a table of results is visible, including values for σ_y , ϵ_y , σ_M , ϵ_M , and σ_B .

On the right side of the interface, there is a vertical toolbar with icons for user profile, folder, checkmark, wrench, question mark, and information.

Select the test area you're operating in.

The screenshot shows the 'testXpert III (Administrator)' software interface. The title bar indicates the file path: C:\ProgramData\zwick\testxpert III\V1_1\SysData\Samples\zte051_01 DIN EN ISO 527-1.zs2. The top toolbar contains icons for Home, Save, Save as, Zero the force, Start pos., Start, Stop, Back, Evaluate, Print, Lock, and Help. The main menu includes 'SET UP TESTING SYSTEM' (highlighted), 'CONFIGURE TEST', 'RUN TEST', and 'EXPORT TEST DATA'. On the left, a tree view shows 'System configuration' with sub-items 'Default', 'System configuration 1', and 'System configuration 2'. The main configuration area is titled 'SET UP TESTING SYSTEM' and includes the following options:

- Type of test: Tensile, Compression
- Test area: Top, Bottom (highlighted with a red box)
- Enable start of test with sensors defined in the system configuration only

A diagram shows the connection between 'testControl II' components and the 'TEST PROGRAM' components:

- Control SN: 999700 connects to Machine
- Croshead SN: 999700 connects to Croshead and Standard extensometer
- Travel formula element No. 1 connects to Standard load cell
- Force 250 kN SN: 999701 connects to Standard load cell
- Force formula element No. 1 connects to Standard load cell

At the bottom, there are two buttons: 'Save' and 'Save system configuration, continue'. The status bar at the very bottom displays: 'F 0 N Grip to grip separation 100,000 mm Crosshead absolute 400,000 mm'. The footer text reads: 'testControl II - Drive system - Setup System configuration name: System configuration 1 User: Administrator Group: Administrator'.

Set the start and safety positions of the crosshead.

testXpert III (Administrator) - C:\ProgramData\zwick\testxpert III\V1_1\SysData\Samples\xt051_01 DIN EN ISO 527-1.zs2

Home Save Save as Zero the force Start pos. Start Stop Back Evaluate Print Lock Help Zwick / Roell

SET UP TESTING SYSTEM CONFIGURE TEST RUN TEST EXPORT TEST DATA

System configuration + -

Default

Master 2,5kN foam

Simple tensile test Fmax 100kN

Standard tensile Test Fmax 100kN Metal

Option Crosshead SN: 999700

Enter the data for the crosshead.

Serial number: 999700

End value: 1170,00 mm

Position: 274,000 mm

Slot number: Driveboard INC

Identification: Crosshead SN: 999700

Upper softend A 300,000 mm

Lower softend A 150,000 mm

Current tool separation/Current grip to grip separation 5,000 mm

Integration time 2,000 ms

Correct. curve ---

OK

Cancel

Help

Position

Reference

Determine the upper softend.

Save Save system configuration, continue

F 6,02 N Grip to grip separation 5,000 mm Crosshead absolute 274,000 mm

testControl II - Drive system - Setup System configuration name: Default User: Administrator Group: Administrator

Set the force limits to protect the user and testing system.

testXpert III (Administrator) - C:\ProgramData\zwick\testxpert III\V1_1\SysData\Samples\xt051_01 DIN EN ISO 527-1.zs2

Home Save Save as Zero the force Start pos. Start Stop Back Evaluate Print Lock Help Zwick / Roell

SET UP TESTING SYSTEM CONFIGURE TEST RUN TEST EXPORT TEST DATA

System configuration + -

Default

- Master 2,5kN foam
- Simple tensile test Fmax 100kN
- Standard tensile Test Fmax 100kN Metal

Option Force SN: 999703

Enter the data for the load cell.

Serial number:	999703	OK
Slot number:	Mainboard Slot 1	Cancel
Nominal force (Tensile):	2500,00 N	Help
Total force:	6,02 N	State

Identification: Force 2.5 kN SN: 999703

Upper force limit 2500,000 N

Lower force limit -2500,000 N

Operator and specimen protection function

Integration time 100,000 ms

Determines the highest permissible total force.

Save Save system configuration, continue

F 6,02 N Grip to grip separation 5,000 mm Crosshead absolute 274,000 mm

testControl II - Drive system - Setup System configuration name: Default User: Administrator Group: Administrator

Set up the safety area to protect the tools and extensometers.

testXpert III (Administrator) - C:\ProgramData\zwick\testxpert III\V1_1\SysData\Samples\xt051_01 DIN EN ISO 527-1.zs2

Home Save Save as Zero the force Start pos. Start Stop Back Evaluate Print Lock Help Zwick / Roell

SET UP TESTING SYSTEM CONFIGURE TEST RUN TEST EXPORT TEST DATA

System configuration Option makroXtens SN: 161487

testControl - Extensometer

Serial number: 161487
Slot number: Mainboard Slot 2
Measurement travel (tensile): 1800,00 mm
Measured value: 105,000 mm

Identification: makroXtens SN: 161487

Gage length: 10,000 mm
Integration time: 2,000 ms

Safety area monitoring

Minimum distance to the specimen grips: 5,00 mm
 Crosshead stop at detaching
Correct. curve: ---

OK
Cancel
Help
LO set
Sensor arms...

Enter the sensor's gage length.

274,000 mm

testControl II - Drive system - Setup System configuration name: Default User: Administrator Group: Administrator

Ensure that you have the maximum safety.

The screenshot displays the testXpert III software interface. The title bar reads "testXpert III (Administrator) - C:\ProgramData\Zwick\testXpert III\data\xt051_01 DIN EN ISO 527-1 System Configuration.zs2". The top navigation bar includes icons for Home, Save, Save as, Zero the force, Start pos., Start, Stop, Back, Evaluate, Print, Record, Lock, and Help. The main menu is divided into "SET UP TESTING SYSTEM" (highlighted), "CONFIGURE TEST", "RUN TEST", and "EXPORT TEST DATA".

Under "SET UP TESTING SYSTEM", the "Default" section is expanded to show "Tensile test" (highlighted with a red box). The configuration options are:

- Type of test: Tensile, Compression
- Test area: Top, Bottom
- Enable start of test with sensors defined in the system configuration only

A detailed view of the "Test area" configuration is shown in a red-bordered box, confirming the "Bottom" selection and the checked checkbox.

The hardware configuration section lists:

- Force 100 kN SN: 999702
- Force formula element No. 1
- Standard load cell

At the bottom of the interface, the status bar shows:

- Force: 0 N
- Measurement: Grip to grip separation
- Distance: 100,000 mm
- Position: Crosshead absolute
- Height: 409,510 mm

The footer of the software window displays: "testControl II - Drive system - Setup", "System configuration name: Tensile test", "User: Administrator", and "Group: Administrator".

The information about the connected sensors is saved and traceable for each specimen.

The screenshot displays the testXpert III software interface. On the left, there is a sidebar with navigation icons (Home, Save, Save as, Zero the force) and a list of specimens (Specimen 1 to 6) with a legend. The main area is divided into several sections:

Overview sensors

Channel	Designation	Serial number	Nominal value	
Crosshead travel sensor (40401)	Crosshead	724467	1164 mm	Details
Standard load cell (40402)	Force	766807	20000 N	Details
Standard extensometer (40403)	makroXtens	234277	25 mm	Details

Crosshead

Serial number: 724467
Nominal value: 1164 mm
Calibration date:

Accuracy grades:

Direction of test	Range	Class
Tensile	0% - 100%	-
Tensile	0% - 0%	-
Compression	0% - 100%	-
Compression	0% - 0%	-

[return to overview](#)

Force

Serial number: 766807
Nominal value: 20000 N
Calibration date: 18.05.2016

Accuracy grades:

Direction of test	Range	Class
Tensile	0.2% - 100%	1
Tensile	1% - 100%	0.5
Compression	0.2% - 100%	1
Compression	1% - 100%	0.5

On the right side, there is a graph titled "Evolution of specimen by color" showing multiple curves. The x-axis is labeled "Strain in %" with values 20 and 30. The y-axis is labeled "Force" with a value of 274,000 mm. The Zwick / Roell logo is visible in the top right corner of the software window.

Save the system configuration and link it to the test program.

The screenshot displays the testXpert III software interface. At the top, the title bar shows the file path and name: "testXpert III (Administrator) - C:\ProgramData\Zwick\testXpert III\data\zte051_01\ DIN EN ISO 527-1 System Configuration.zs2". The main toolbar includes icons for Home, Save, Save as, Zero the force, Start pos., Start, Stop, Back, Evaluate, Print, Record, Lock, and Help. The Zwick / Roell logo is in the top right corner.

The main workspace is divided into several sections. On the left, a "System configuration" sidebar shows a tree view with "Default" and "Tensile test" (highlighted with a red box). The central area is titled "SET UP TESTING SYSTEM" and contains the following settings:

- Type of test: Tensile, Compression
- Test area: Top, Bottom
- Enable start of test with sensors defined in the system configuration only

Below these settings is a connection diagram between "testControl II" and "TEST PROGRAM" components:

testControl II	TEST PROGRAM
Control SN: 999700	Machine
Crosshead SN: 999700	Crosshead
Travel formula element No. 1	Standard extensometer
Force 100 kN SN: 999702	Standard load cell
Force formula element No. 1	

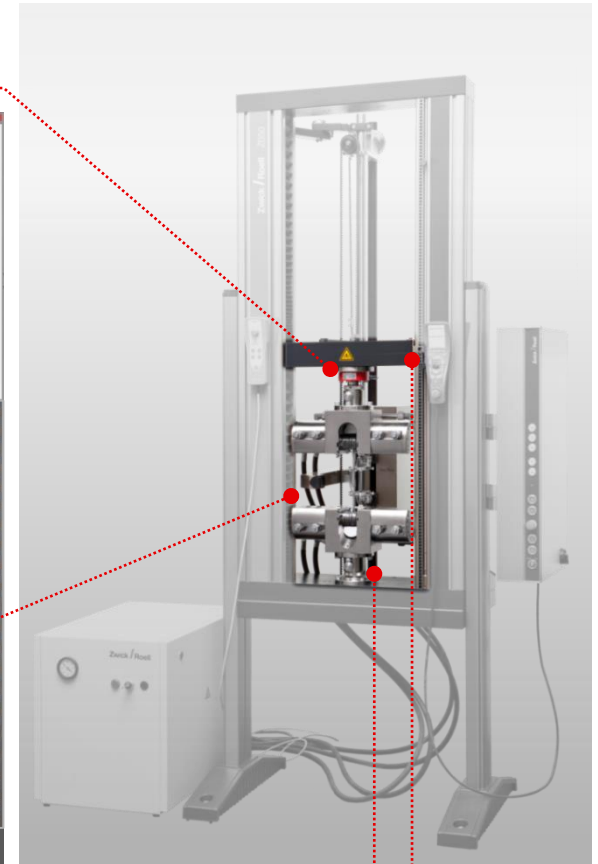
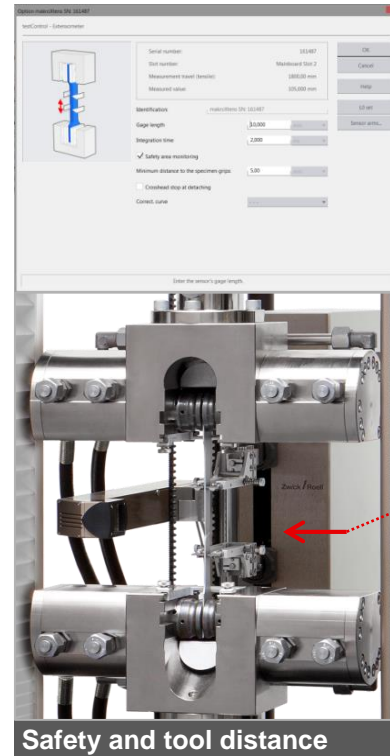
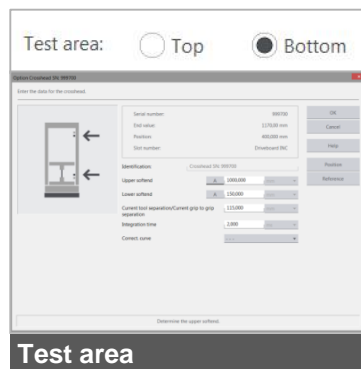
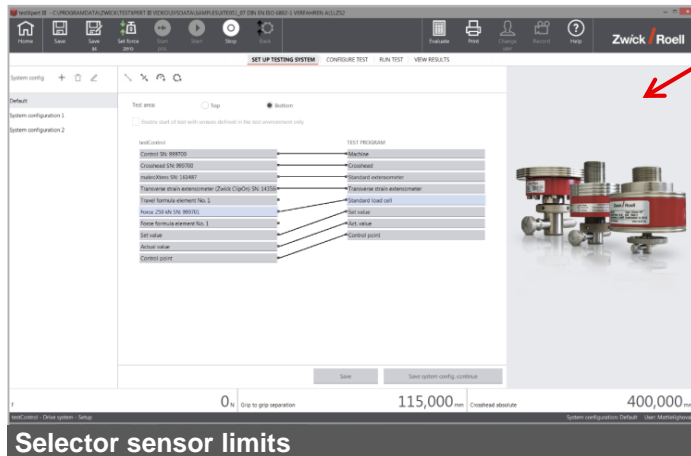
At the bottom right of the main workspace, there is a 3D schematic of a testing machine with a red arrow pointing to the crosshead. Below the main workspace are two buttons: "Save" and "Save system configuration, continue".

The bottom status bar displays the following information:

- Unit: 0_N
- Measurement: Grip to grip separation
- Value: 100,000 mm
- Mode: Crosshead absolute
- Position: 409,510 mm
- System configuration name: Tensile test (highlighted with a red box)
- User: Administrator
- Group: Administrator

testXpert® III ensures reliable test results

testXpert III always knows how, where and with what the test is to be performed and offers maximum safety for the user and testing system.



"When does who, do what, why and who is responsible?"

testXpert III (Administrator)

testXpert® III

Zwick / Roell

Administrator

- Load test...
- Traceability
 - Configure...
 - Export application settings...
 - Export document settings...
 - Show logging...
 - Export logging...
 - Enter reasons...
- Settings
- Help
- System information

testControl II - The connection to testControl has been established.

User: Administrator Group: Administrator

testXpert III logs all test- and system-relevant actions and settings and enables you to trace the reason for a change.

The screenshot displays the testXpert III Administrator interface. The main window title is "testXpert III (Administrator)". The interface features the testXpert III logo and the Zwick / Roell logo. A "Traceability" dialog box is open, showing the following settings:

- Logging for expanded traceability
- Electronic signature
- Scope of logging: Standard
- Scope of reasoging: None
- Enter reasons immediately:

The dialog also includes a table for settings:

Name	Loggl..	Reason
Application		
- Channel zeroing	<input checked="" type="checkbox"/>	<input type="checkbox"/>
- Definition of result values	<input checked="" type="checkbox"/>	<input type="checkbox"/>
- Dialog for confirmation messages	<input checked="" type="checkbox"/>	<input type="checkbox"/>
- Error message	<input checked="" type="checkbox"/>	<input type="checkbox"/>
- Export (General)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
- Export (Report)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
- Export Long term evaluation	<input checked="" type="checkbox"/>	<input type="checkbox"/>
- Group rights in the program	<input checked="" type="checkbox"/>	<input type="checkbox"/>
- Import Long term evaluation	<input checked="" type="checkbox"/>	<input type="checkbox"/>
- Machine emergency message	<input checked="" type="checkbox"/>	<input type="checkbox"/>
- Machine: Sensor adjustment	<input checked="" type="checkbox"/>	<input type="checkbox"/>
- Machine: Setup actions	<input checked="" type="checkbox"/>	<input type="checkbox"/>
- Main window layout	<input checked="" type="checkbox"/>	<input type="checkbox"/>
- Message pane	<input checked="" type="checkbox"/>	<input type="checkbox"/>
- Parameter dialog	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The main menu on the right side of the interface includes the following items:

- Administrator
- Load test...
- Traceability
 - Configure...
 - Export application settings...
 - Export document settings...
 - Show logging...
 - Export logging...
 - Enter reasons...
- Settings
- Help
- System information

Any changes to the test configuration will be documented.

The screenshot shows the testXpert III software interface. At the top, there is a navigation bar with icons for Home, Save, Save as, Zero the force, Start pos., Start, Stop, Back, Evaluate, Print, Lock, and Help. The main window is titled "testXpert III (Administrator) - C:\ProgramData\zwick\testxpert III\V1_1\SysData\Samples\xte051_01 DIN EN ISO 527-1.zs2". The interface is divided into several sections:

- View:** A sidebar on the left with options like Pre-test, Test parameters, Results, Tensile modulus, Yield strength, Control parameters, Parameters for the test, Reports, and Export interfaces.
- Reasons:** A central dialog box titled "Reasons" with the text "A reason is required for these action:". It contains two checked items: "Parameter 'Grip to grip separation at the start position' (ID: 48129): New value: 120 mm | Previous value: 115 mm" and "Parameter 'Grip to grip separation at the start position' (ID: 48129): New value: 150 mm | Previous value: 120 mm". Below these items is an "Invert the selection" button. A text input field is highlighted with a red border, containing the text "We changed the grip to grip separation because of ...".
- Buttons:** On the right side of the dialog, there are buttons for "OK", "Defer", "Help", and "Sign".
- Diagram:** On the far right, there is a 3D diagram of a test specimen being held by a machine. A red double-headed arrow indicates the grip-to-grip separation. Below the diagram, the text reads "the machine is accepted by activating the action button".
- Status Bar:** At the bottom, there is a status bar showing "6,02 N Grip to grip separation 5,000 mm Croshead absolute 274,000 mm".
- Footer:** At the bottom right, it says "System configuration name: Default User: Administrator Group: Administrator".

You can see exactly when who, did what, why and who permitted this action or signed off on it.

Logging display

Document logging xte051_01 DIN EN ISO 527-1.zs2

Moment in time of the output: 28.02.2017 16:03:14

Output by: Administrator

Date	User	Instance	Message	Reason
28.02.2017 09:45:14	Administrator	7968	testXpert file C:\ProgramData\zwick\testxpert III\V1_1\SysData\Samples\xte051_01 DIN EN ISO 527-1.zs2 (Test program & Series not electronically signed) loaded (testXpert V1.1) PC name: ZUE-W-12155 Serial number: 999700 System configuration: Default Organization data configurations: Organization data series protection: Protected	
28.02.2017 11:01:09	Administrator	7968	testXpert error no. 3341: The saved connection in system configuration "Simple tensile test Fmax 100kN" between the machine element Standard load cell and the device with the ID "ForceMeter SN: 999702" could not be established. Because machine element "ForceMeter SN: 999702" is not plugged-in. Please proceed as follows:	
28.02.2017 15:57:24	Administrator	7968	Parameter "Grip to grip separation at the start position" (ID: 48129): New value: 120 mm Previous value: 115 mm Context reference: Series	We changed the grip to grip separation because of ...
28.02.2017 15:57:47	Administrator	7968	Parameter "Grip to grip separation at the start position" (ID: 48129): New value: 150 mm Previous value: 120 mm Context reference: Series	We changed the grip to grip separation because of ...
28.02.2017 16:02:49	Administrator	7968	Parameter dialog "Pre-test" closed	
28.02.2017 16:02:56	Administrator	7968	Parameter dialog "Pre-test" opened	

Zwick / Roell

Administrator

Load test...

Traceability

Configure...

Export application settings...

Export document settings...

Show logging...

Export logging...

Enter reasons...

When **Who** **What** **Why** **Responsibility**

Electronic signature protects from unauthorized changes.

The screenshot displays the testXpert III Administrator interface. The main window title is "testXpert III (Administrator)". The interface features the testXpert III logo on the left and the Zwick / Roell logo on the right. A "Traceability" dialog box is open, showing the following settings:

- Logging for expanded traceability
- Electronic signature (highlighted with a red box)
- Scope of logging: Standard
- Scope of reasoing: None
- Enter reasons immediately:

The dialog also includes a "Settings:" table with columns for "Name", "Loggi...", and "Reason".

Name	Loggi...	Reason
Application	<input checked="" type="checkbox"/>	<input type="checkbox"/>
- Channel zeroing	<input checked="" type="checkbox"/>	<input type="checkbox"/>
- Definition of result values	<input checked="" type="checkbox"/>	<input type="checkbox"/>
- Dialog for confirmation messages	<input checked="" type="checkbox"/>	<input type="checkbox"/>
- Error message	<input checked="" type="checkbox"/>	<input type="checkbox"/>
- Export (General)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
- Export (Report)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
- Export Long term evaluation	<input checked="" type="checkbox"/>	<input type="checkbox"/>
- Group rights in the program	<input checked="" type="checkbox"/>	<input type="checkbox"/>
- Import Long term evaluation	<input checked="" type="checkbox"/>	<input type="checkbox"/>
- Machine emergency message	<input checked="" type="checkbox"/>	<input type="checkbox"/>
- Machine: Sensor adjustment	<input checked="" type="checkbox"/>	<input type="checkbox"/>
- Machine: Setup actions	<input checked="" type="checkbox"/>	<input type="checkbox"/>
- Main window layout	<input checked="" type="checkbox"/>	<input type="checkbox"/>
- Message pane	<input checked="" type="checkbox"/>	<input type="checkbox"/>
- Parameter dialog	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Buttons in the dialog include "OK", "Cancel", "Help", "Export...", "Reset...", "Display...", "Configure...", "Export application settings...", and "Export document settings...".

The main application menu on the right shows the user as "Administrator" and includes options like "Load test...", "Traceability" (with a checkmark and a "Configure..." button highlighted in a red box), "Settings", "Help", and "System information".

At the bottom of the interface, a status bar displays: "testControl II - The connection to testControl has been established." and "User: Administrator Group: Administrator".

The electronic signature protects the test program from manipulation and can be used as paperless documentation.

The screenshot displays the testXpert III software interface. The top toolbar includes icons for Home, Save, Save as, Zero the force, Start pos., Start, Stop, Back, Evaluate, Print, Record, Lock, Help, and Signature. The main window is titled "testXpert III (Administrator) - C:\ProgramData\Zwick\testXpert III\SysData\Samples\xt051_01 DIN EN ISO 527-1.zs2 - (Series not electronically signed)".

The interface is divided into several sections:

- Series layout:** Shows a list of specimens (Specimen 1 to 6) with corresponding colored markers.
- Specimen graph:** Displays specimen dimensions: Specimen thickness (3,96 mm) and Specimen width (9,92 mm). A 3D model of the specimen is shown with a red arrow indicating the thickness measurement.
- Legend Table:**

Legend	No.	E_t MPa	σ_Y MPa	ϵ_Y %	σ_M MPa	ϵ_M %	σ_B MPa	ϵ_{1B} %	b mm	h mm	A_0 mm ²
1	1	3110	66,2	7,1	66,2	7,1	52,8	23,1	9,90	3,95	39,11
2	2	3070	65,3	7,4	65,3	7,4	51,3	26,6	9,90	3,96	39,20
3	3	3080	66,0	7,1	66,0	7,1	54,0	24,9	9,91	3,95	39,14
4	4	3040	65,4	7,3	65,4	7,3	52,2	30,3	9,92	3,96	39,28
5	5	3050	66,0	7,2	66,0	7,2	61,6	14,6	9,92	3,95	39,18
- Series Table:**

Series	E_t MPa	σ_Y MPa	ϵ_Y %	σ_M MPa	ϵ_M %	σ_B MPa	ϵ_{1B} %	b mm	h mm	A_0 mm ²
n = 5	3070	65,8	7,2	65,8	7,2	54,4	23,9	9,91	3,954	39,18
x	27,9	0,391	0,13	0,391	0,13	4,15	5,85	0,01	0,005477	0,07
V [%]	0,91	0,60	1,76	0,60	1,76	7,64	24,49	0,10	0,14	0,17
- Stress-strain graph:** Shows Stress in MPa on the y-axis (0 to 60) and Strain in % on the x-axis (0 to 30). A yellow curve represents the test data.
- Bottom status bar:**
 - Force: 0,000 N
 - Displacement: 100,000 mm
 - Crosshead absolute: 409,510 mm

Two buttons are highlighted with red boxes: "Help" (a question mark icon) and "Signature" (a document with a checkmark icon).

User management allows you to set who or how many people must sign the test program or the report.

The screenshot displays the testXpert III software interface. At the top, a toolbar contains icons for Home, Save, Save as, Zero the force, Start pos., Start, Stop, Back, Evaluate, Print, Record, Lock, Help, and Signature. Below the toolbar are tabs for 'SET UP TESTING SYSTEM', 'CONFIGURE TEST', 'RUN TEST', and 'EXPORT TEST DATA'. The main window shows a stress-strain graph with 'Stress in MPa' on the y-axis (0 to 60) and displacement on the x-axis (0 to 100,000 mm). A blue window titled 'Signature of the series' is open, showing a table of electronic signatures. The table has columns for 'b', 'h', and 'A₀' in mm, mm, and mm² respectively. The first row shows a signature by 'Signatur' on '24.02.2017 16:56:03'. Below the table are buttons for 'Sign...', 'Rescind signature', and 'Rescind all signatures'. A 'Details of signature' window is also open, showing fields for Function, User ID, User group, Detailed name, and Moment in time, all filled with 'Administrator' and '24.02.2017 16:56:03'. At the bottom, a status bar shows 'F 0,000 N Grip to grip separation', '100,000 mm Crosshead absolute', and '409,510 mm'. A message bar at the bottom left says 'testControl II - The connection to testControl has been established.' and the bottom right shows 'System configuration User: Administrator Group: Administrator'.

testXpert® III ensures reliable test results



The test results and test configuration are protected from manipulation at all times and the test results are traceable.

The screenshot displays the testXpert III software interface. At the top, a window title bar shows the file path and a red box highlighting "(Series electronically signed)". The main menu includes "Home", "Print", "Lock", "Help", and "Signature". Below the menu, there are tabs for "SET UP TESTING SYSTEM", "CONFIGURE TEST", "RUN TEST", and "EXPORT TEST DATA". The "RUN TEST" tab is active, showing a "Series layout" and "Specimen graph" section. A "Series" window is open, displaying a "Series graph" and a "Test report" with details such as Customer (Test Company), Job no. (22305), Test standard (DIN EN ISO 527-1), Specimens (Batch 23-12), Pre-treatment (None), Tester (Many Test), Notes (Comparative test to previous delivery, order), and Machine date (Zwick 2006, Machine No. 8). A "Signatur" window is also visible, showing the signature of Administrator on 24.02.2017 at 16:56:03. The "CONFIGURE TEST" window is open, showing test parameters: Grip to grip separation at the start position (115,00 mm), Speed, start position (200 mm/min), Approach path (None), Gage length correction (unchecked), Pre-load (0,1 MPa), and Speed, pre-load (5 mm/min). A diagram of a specimen is shown on the right. At the bottom, a data table shows test results for force (F) and displacement (S).

	0,000 N	Grip to grip separation	100,000 mm	Crosshead absolute	409,510 mm
F	0,000 N	Grip to grip separation	100,000 mm	Crosshead absolute	409,510 mm

Easy traceability of specimen behavior is assured with videos synchronized exactly to the test – Video Capturing Plus.

The screenshot displays the testXpert III software interface. At the top, there is a navigation bar with icons for Home, Save, Save as, Kraft nullen, Start pos., Start, Stop, Back, Evaluate, Print, Record, Lock, and Help. Below this is a menu bar with options: SET UP TESTING SYSTEM, CONFIGURE TEST, RUN TEST (highlighted), and EXPORT TEST DATA. The main interface is divided into several sections:

- Specimen layout:** A list of 10 specimens, each with a unique color and a small icon.
- Media:** A section for managing test programs and specimens, including a 'Live frame' and a 'Test program' field.
- Video capture:** A large window showing a live video feed of a carbon foot prosthesis being tested. Below the video is a playback control bar with a 'Pause' button.
- Graph:** A force-strain graph showing the test results. The x-axis is 'Strain in mm' (0 to 6) and the y-axis is 'Force in N' (0 to 300). The graph shows a blue curve representing the current specimen and a black curve representing the test data line. The current specimen is identified as '6,606 mm 302,909 N Test data line = 1985'.
- Scale:** A section for setting the scale of the video feed, with options for 'x', 'y', and '0 - manually'.

At the bottom of the interface, there is a status bar displaying various test parameters:

- F: 0 N
- Tool separa: 100,000 mm
- Crosshead: 409,510 mm
- Prot 1: 0,000 $\mu\text{m}/\text{m}$
- DMS1 abs.: 0,000 %
- DMS2 abs.: 0,000 %

The status bar also includes system information: 'testControl II - Drive system - Controlled hold', 'System configuration name: Default', 'User: Administrator', and 'Group: Administrator'.

testXpert® III ensures reliable test results



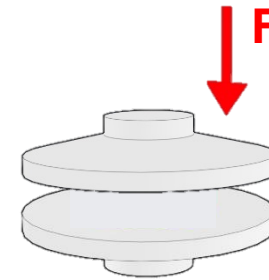
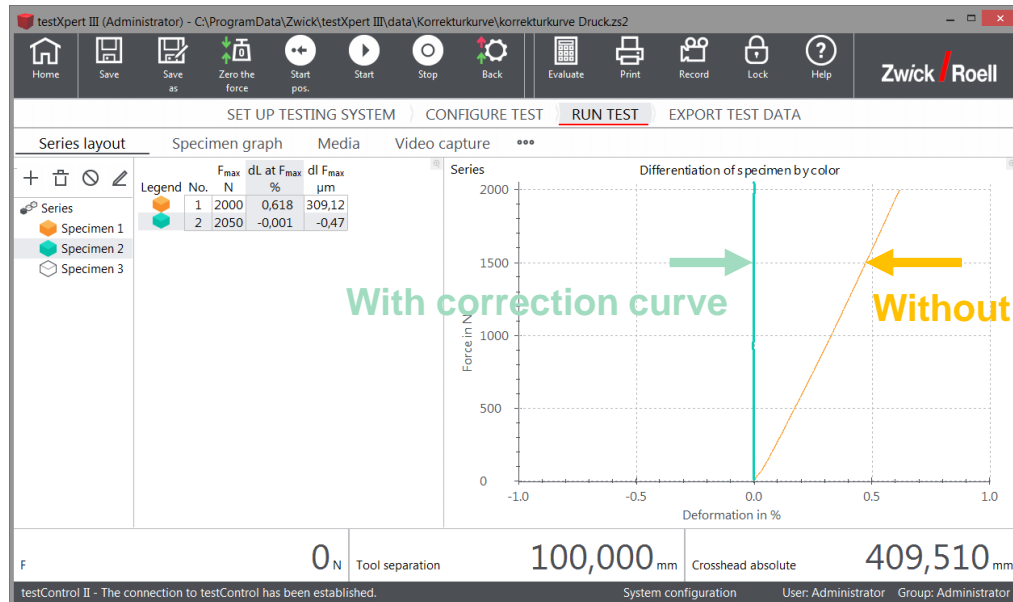
You can visually reconstruct the specimen behavior & generate single frames to view interesting points in the test sequence.

The screenshot displays the testXpert III software interface. The top menu bar includes icons for Home, Save, Save as, Zero the force, Start pos., Start, Stop, Back, Evaluate, Print, Record, Lock, and Help. The main window is titled "testXpert III (Administrator) - C:\ProgramData\Zwick\testXpert III\data\Delfi\zwicki-3-mehrkamera_sync.zs2". The interface is divided into several sections:

- Series layout:** Shows a list of specimens: Specimen 1 (orange), Specimen 2 (green), Specimen 3 (red), and Specimen 4 (grey).
- Media:** Includes a "Live frame" section with a video player showing a close-up of the specimen being tested. Below the video are playback controls (Pause, Play, Stop, etc.) and a "Pause" button.
- Graph:** A line graph showing "Standard force in N" (left y-axis, 0 to 80) and "Kontakt in Digits" (right y-axis, 0.0 to 2.0) versus "Nominal strain in mm" (x-axis, 0 to 6). The graph shows a curve that rises to a peak of approximately 40 N at 4.5 mm strain, then drops sharply. A red box highlights the peak area. The current specimen data is displayed as "2,906 mm 25,243 N Test data line = 940".
- Bottom Status Bar:** Displays test parameters: "F 0 N", "Tool separation 100,000 mm", "Crosshead absolute 409,510 mm", "Kontakt 0,000 Digits".

A circular inset on the left side of the screenshot shows a diagram of the test setup with a red arrow pointing to the software interface.

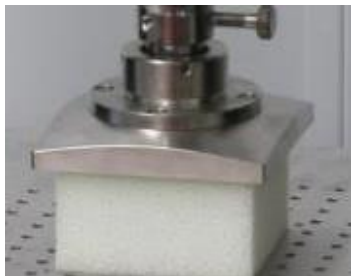
Accurate results for compression tests are ensured by means of automatic real-time correction of machine deformation.



With correction curve

Without correction curve

- Maximum displacement measurement accuracy
 - Control is directly through the corrected channel
- 100mm → Allowing displacement targets to be attained exactly

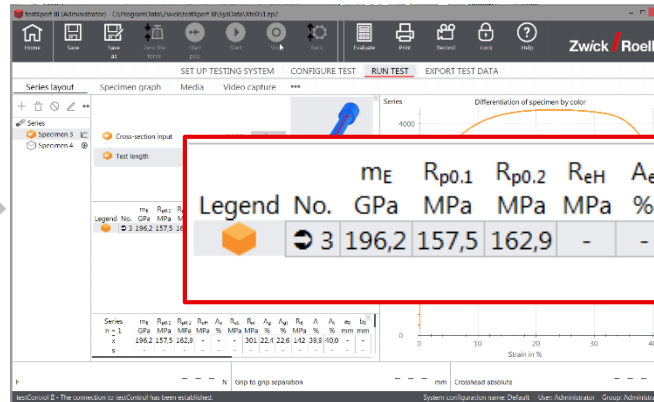
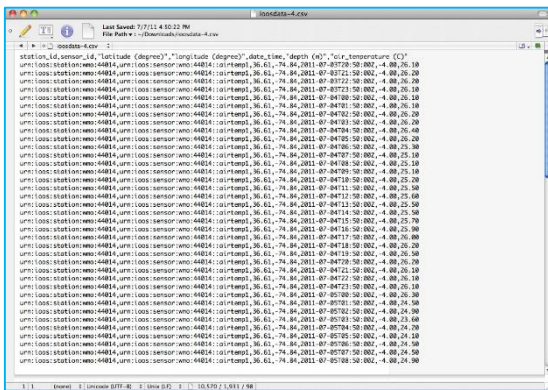


Compare test results with TENSTAND software validation to ensure reproducible test results (Part of ISO 6892-1 2009).



Dataset	Material	Rp0.1 (MPa)	Rp0.2 (MPa)	ReH (MPa)	ReL (MPa)	Rm (MPa)	Fm (N)	A (%)	At (%)	Ag (%)	Agt (%)	Ae (%)	E (GPa)
1	Nimonic 75, CRM 661	303.4 - 304.5	309.6 - 310.1			764.4	59973	41.2	41.5	30.8	31.2		200.8 - 216.5
6	Nimonic 75, CRM 661	300.5 - 301.8	308.0 - 308.6			761.1	59780	41.4	41.7	31.4	31.8		182.7 - 195.8
10	13%Mn Steel	334.5 - 334.9	337.1 - 337.2			937.0	72667	51.4	51.9	49.8	50.4		180.6 - 184.0
13	S355 Structural steel			479.4	431.8	567.2	44503	29.4	29.5	14.5	14.7	1.98 - 2.10	238.8 - 231.0
17	316L Stainless Steel	244.7 - 245.2	261.0 - 261.2			575.7	45278	51.1	51.3	39.3	39.6		193.9 - 202.3
22	Tin Coated packaging steel	525.6 - 530.6	562.5 - 564.6			596.7	2369	0.9	1.2	0.6	0.9		198.7 - 207.3
30	Sheet steel - DX56	157.2 - 157.6	162.7 - 162.9			301.5	4272	39.9 - 40.1	40.1	22.5	22.6		195.0 - 207.4
38	Aluminium Sheet - hard AA5182	385.2 - 388.8	386.4 - 397.1			434.3	2007	4.7	5.4	4.3	4.9		68.1 - 69.3
42	Aluminium Sheet - soft AA1050	26.48 - 26.55	30.01 - 30.05			83.8	1210	44.5	44.6	28.6	28.7		68.7 - 72.0
46	Aluminium Sheet - soft AA5182	133.4 - 133.9	134.5 - 134.8			284.6	8420	22.6 - 22.7	23.2	20.5	20.9		68.7 - 70.0
50	Sheet steel - DX56	158.6 - 158.7	163.9 - 164.0			303.9	2665	43.4 - 43.9	44.2	23.9	24.1		162.2 - 165.3
53	Sheet steel - ZStE			270.1	228.7	318.9	3752	40.3 - 40.8	40.8	19.9	19.1	1.74 - 1.80	198.7 - 208.6
57	Synthetic Digital Curve - zero noise	432.4	434.3			738.5	58000	50.0	50.2	39.6	40.0		207.5 - 208.0
61	Synthetic Digital Curve - 0.5% noise	431.8 - 434.1	438.1 - 441.6			748.1	58754	50.0	50.2	39.2	39.6		201.6 - 211.5
63	Synthetic Digital Curve - 1% noise	429.6 - 432.7	446.6 - 448.2			759.3	59632	50.0	50.2	37.3	37.7		203.0 - 211.6

Check of results



Internationally recognized raw data sets and internationally recognized tensile test results ensure reproducibility in the calculation of characteristic values.

testXpert® III



...can be integrated perfectly

You need

Integration of the testing software into the company's IT landscape?

testXpert® III can be integrated perfectly

Set your requirements using the Structure Editor's wide range of functions and testXpert III will automatically export the data.

The screenshot displays the 'Report editor (expert mode)' interface. The main window shows a preview of a test report with the Zwick / Roell logo and the date 23.02.17. The report content includes:

Test report
Customer : Test Company
Job no. : 12345
Test standard : DIN EN ISO 527-1
Specimen removal : Batch 23-12
Pre-treatment : None
Tester : Mary Test
Notes : Comparative test to yesterday's delivery, order 287
Machine data : Zwick 2005, Machine No.8
Clock time : 14:43:28

Pre-load : 0,1 MPa
Speed, tensile modulus : 1 mm/min
Test speed : 50 mm/min
Grip to grip separation at the start position : 115,00 mm

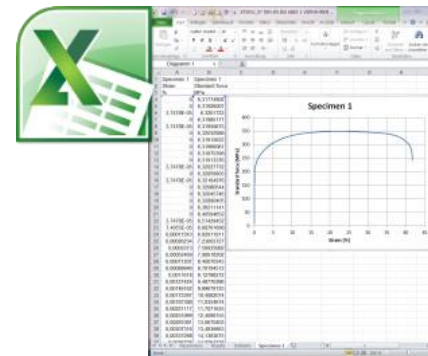
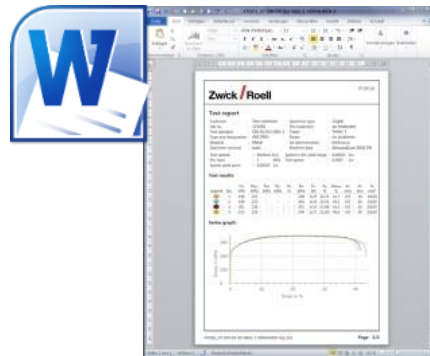
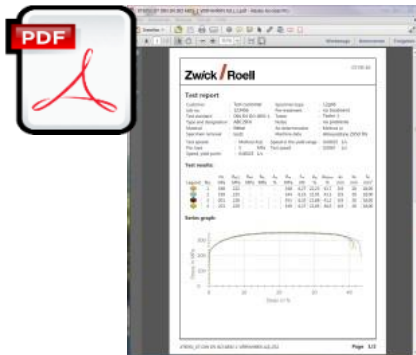
Test results:

Legend	No.	E _t MPa	σ _v MPa	ε _y %	σ _{0.2} MPa	ε _{0.2} %	σ _b MPa	ε _b %	b mm	h mm	A ₀ mm ²
1	3110	66,2	7,1	66,2	7,1	52,8	23,1	9,90	3,95	39,11	
2	3070	65,3	7,4	65,3	7,4	51,3	26,6	9,90	3,96	39,20	
3	3080	66,0	7,1	66,0	7,1	54,0	24,9	9,91	3,95	39,14	
4	3040	65,4	-	65,4	7,3	52,2	30,3	9,92	3,96	39,28	
5	3050	66,0	7,2	66,0	7,2	61,6	14,6	9,92	3,95	39,18	

At the bottom of the report preview, it says 'xte051_01 DIN EN ISO 527-1.zs2' and 'Page1/2'. The right-hand side of the interface is the 'Structure Editor', showing a tree view of the report layout. The tree includes 'Header', 'Body', and 'Footer'. Under 'Body', there are several 'Border' elements and a 'Test' element. A note says 'According to the results selection dialog'. Under 'Footer', there is a 'Line' element with the text 'xte051_01 DIN EN ISO 527-1.zs2' and a 'Page number' element. The right side also features a vertical toolbar with buttons: OK, Cancel, Help, New..., Delete, Settings..., Position..., Up, Down, Page layout..., Printer..., Print, and Preview...

testXpert® III can be integrated perfectly

Export all required test data, to common applications or to your own customized solutions.

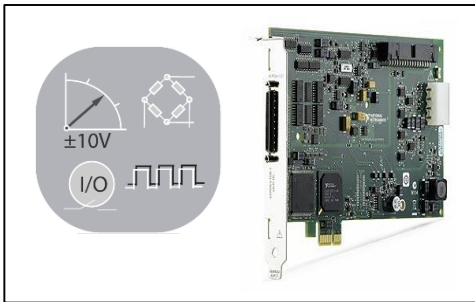


ASCII

testXpert® III can be integrated perfectly

testXpert III integrates data from external sensors, I/Os and external devices or measurement amplifiers.

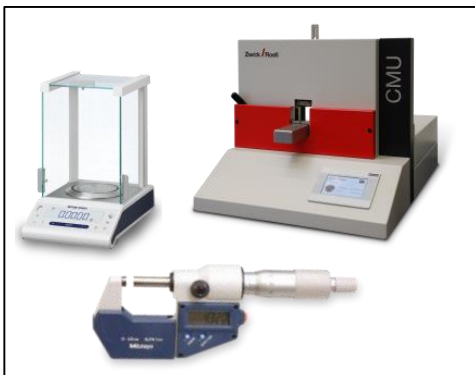
I/O cards & sensors



HBM measurement amplifiers



External devices



testXpert® III



testXpert® III can be integrated perfectly

testXpert III reduces input errors, increases efficiency in the test lab, and communicates with every IT system through automated importing and exporting.

Databases/ERP systems



Read in order, e.g. via barcode



testXpert® III



testXpert® III



...is flexible

You need

Software configurable
to individual and future requirements?

Create test sequences of any type with all the flexibility you need with the Graphical Sequence Editor.

testXpert III - C:\ProgramData\zwick\testXpert III_150\SysData\Xte051.zp2

Home Save Save as Force 0 Start pos. Start Stop Back Evaluate Print User Record Help Zwick / Roell

SET UP TEST SYSTEM CONFIGURE TEST **RUN TEST** VIEW RESULTS

Series layout Specimen graph Media Video capture **Sequence editor**

Test sequence 100%

Positioning
Drive without target input
Hold
Sine
Cycles
Break detection
Limit
Cyclic request
Digital input
Measurement value storage
Sensor control
Specimen grips control
Controller settings
Temperature chamber control
Digital output
IF
ZIMT
Loop
Stop
Waiting time

0 N Tool separation 115,000 mm Crosshead absolute 400,000 mm StrG 1,420 mV/V

System configuration name: Default User: Mattielighoval

testXpert® III is flexible

Freely configurable positioning, limit and logic module blocks enable almost any test sequence imaginable.

The screenshot displays the testXpert III software interface. At the top, there is a toolbar with icons for Home, Save, Save as, Force 0, Start pos., Start, Stop, Back, Evaluate, Print, User, Record, and Help. Below the toolbar, the main window is titled "testXpert III - C:\ProgramData\zwick\testXpert III_150\SysData\Xte051.zp2". The interface is divided into several sections: "Series layout", "Specimen graph", "Media", "Video capture", and "Sequence editor". The "Sequence editor" is the active section, showing a test sequence with a timeline from 73 to 77. A red box highlights a list of modules on the left side of the sequence editor, including Positioning, Drive without target input, Hold, Sine, and Cycles. The main area of the sequence editor shows a flowchart with these modules connected to a central point. At the bottom, there is a status bar with the following information: "F", "0 N Tool separation", "115,000 mm Crosshead absolute", "400,000 mm StrG", and "1,420 mV/V". The system configuration name is "Default" and the user is "Mattielghoval".

testXpert® III is flexible

Freely configurable positioning, limit and logic module blocks enable almost any test sequence imaginable.

testXpert III - C:\ProgramData\zwick\testXpert III_150\SysData\Xte051.zp2

Home Save Save as Force 0 Start pos. Start Stop Back Evaluate Print User Record Help Zwick / Roell

SET UP TEST SYSTEM CONFIGURE TEST **RUN TEST** VIEW RESULTS

Series layout Specimen graph Media Video capture **Sequence editor**

Test sequence 100%

- Positioning
- Drive without target input
- Hold
- Sine
- Cycles
- Break detection**
- Limit**
- Cyclic request**
- Digital input**
- Measurement value storage
- Sensor control
- Specimen grips control
- Controller settings
- Temperature chamber control
- Digital output
- IF
- ZIMT
- Loop
- Stop
- Waiting time

Break detection

Limit

Cyclic request

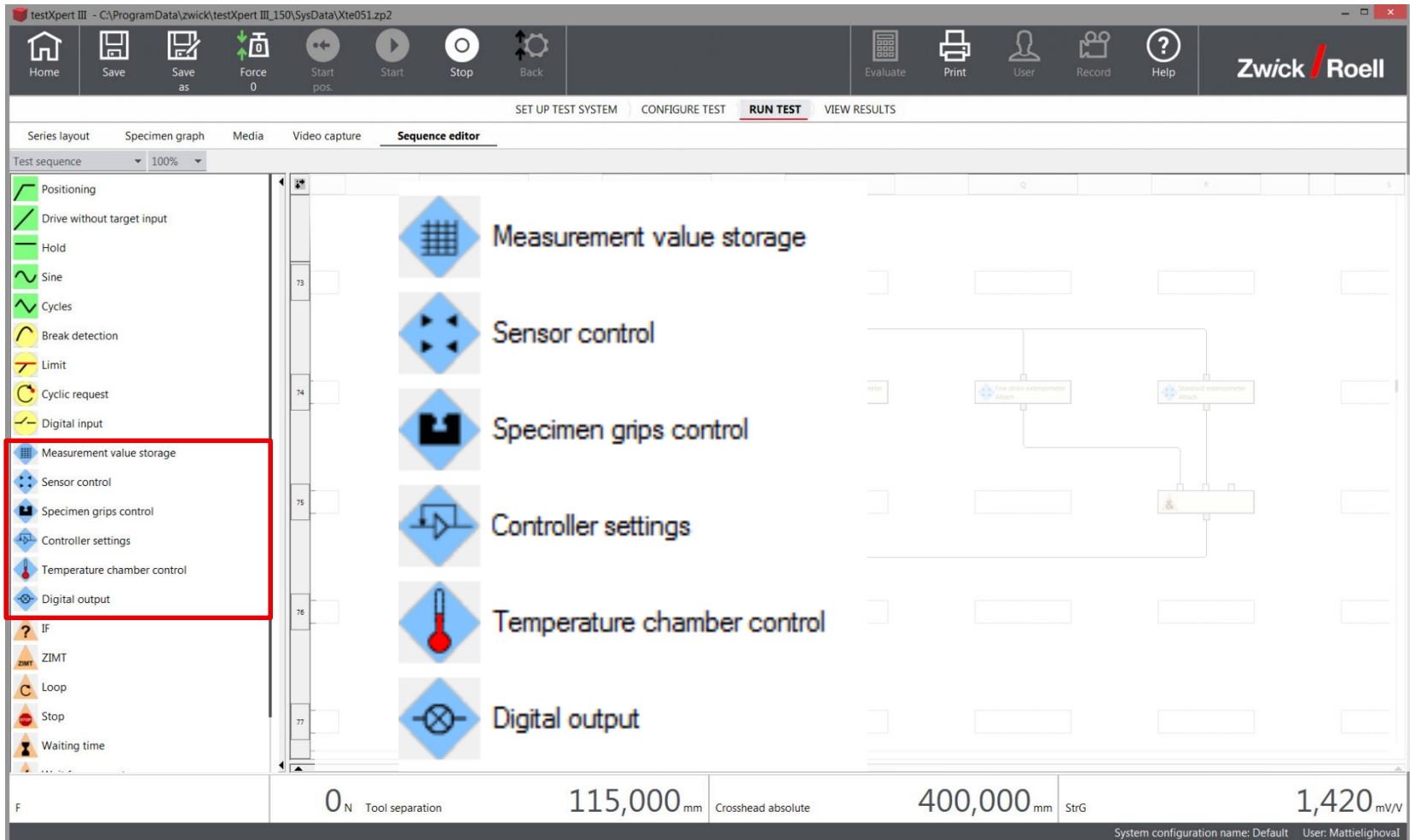
Digital input

0 N Tool separation 115,000 mm Crosshead absolute 400,000 mm StrG 1,420 mV/V

System configuration name: Default User: Mattielghoval

testXpert® III is flexible

Freely configurable positioning, limit and logic module blocks enable almost any test sequence imaginable.



testXpert® III is flexible

Freely configurable positioning, limit and logic module blocks enable almost any test sequence imaginable.

The screenshot displays the testXpert III software interface. The top menu bar includes icons for Home, Save, Save as, Force 0, Start pos., Start, Stop, Back, Evaluate, Print, User, Record, and Help. Below the menu bar, the main workspace is titled "Sequence editor" and shows a test sequence diagram. The diagram consists of a grid with columns labeled N, O, P, Q, R, and S, and rows labeled 73, 74, 75, 76, 77. Various logic blocks are placed on the grid, including "IF", "ZIMT", "Loop", "Stop", "Waiting time", and "AND". A legend on the left side of the interface lists the available blocks: Positioning, Drive without target input, Hold, Sine, Cycles, Break detection, Limit, Cyclic request, Digital input, Measurement value storage, Sensor control, Specimen grips control, Controller settings, Temperature chamber control, Digital output, IF, ZIMT, Loop, Stop, and Waiting time. The "IF" block is highlighted with a red box. The bottom status bar shows "0 N Tool separation", "115,000 mm Crosshead absolute", "400,000 mm StrG", and "1,420 mV/V". The system configuration name is "Default" and the user is "Mattielghoval".

testXpert® III is flexible

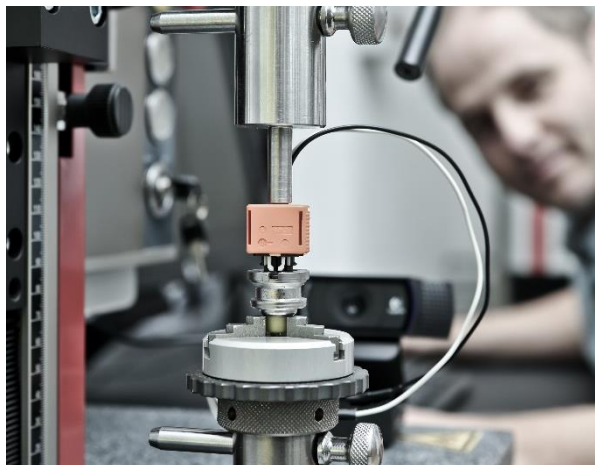
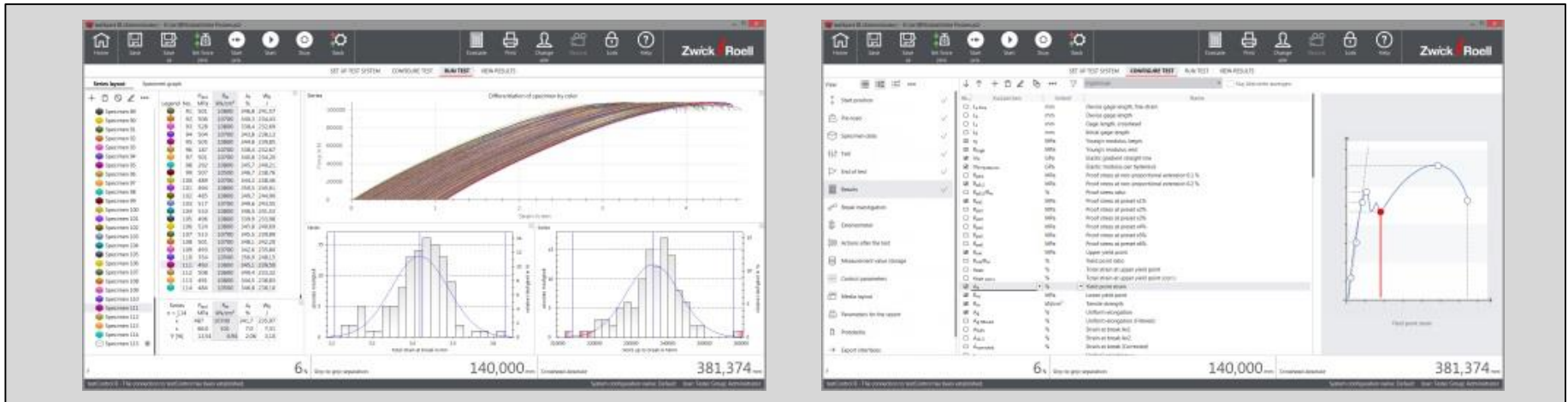
You can combine test events, parameters and results to your requirements easily by drag & drop.

The screenshot displays the testXpert III software interface. The top menu bar includes icons for Home, Save, Save as, Force 0, Start pos., Start, Stop, Back, Evaluate, Print, User, Record, and Help. Below the menu bar, the main workspace is divided into several tabs: Series layout, Specimen graph, Media, Video capture, and Sequence editor. The Sequence editor is active, showing a test sequence diagram with a grid of columns labeled N, O, P, Q, R, and S, and rows labeled 73, 74, 75, and 77. The diagram contains various test events and parameters, such as "0.25s", "Fine strain extensometer Attach", "Standard extensometer Attach", and "ZIMT". A red box highlights the "ZIMT" event in the sequence editor. The bottom status bar displays test parameters: "0 N Tool separation", "115,000 mm Crosshead absolute", "400,000 mm StrG", and "1,420 mV/V". The system configuration name is "Default" and the user is "Mattielighoval".

testXpert® III is flexible



Unique test and evaluation requirements are possible with testXpert III: we get started where the others leave off!



testXpert® III



...is the safest testing system



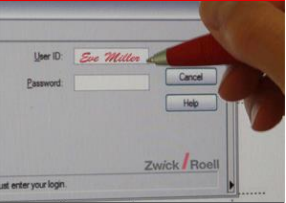




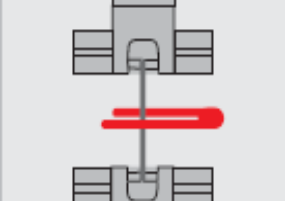




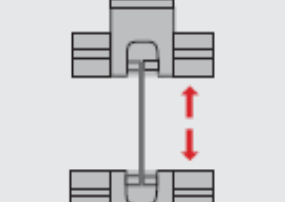

You need

A testing system with the focus
on overall safety?

testXpert® III is the safest testing system

Zwick / Roell

We make no compromises with Zwick safety technology – we use only high-quality, industry-proven safety components in all products.

Mechanics		Electronics		Software	
					
Safety doors	Safety housing	testControl II	Emergency STOP	Safe operation	Traceability
					
Safety devices	Safety enclosures with access control	2-handed operation	Safety interlocks	Safety area monitoring	Crosshead limits for test area
					
Safety devices with interlocks	Pneumatic safety control unit	Limit switches	Mobile emergency STOP	Fixture separation	User management