

Product Information

videoXtens 1-270

CTA: 148041 147790



videoXtens 1-270

The videoXtens 1-270 covers a wide measurement range and is therefore excellent for high-extension materials.

- Non-contact measurement system: No influence on the material characteristics
- No influence on sensitive specimen
- Ideal for whipping specimen - the videoXtens will not be damaged
- Through connection to the crosshead, the gauge marks are always automatically centered in the field of view (FOV)—the measurement range is optimally utilized.
- Mounting with low-vibration, stable support brackets. Easy alignment with the measurement range through the ergonomic height adjustability on the mounting.

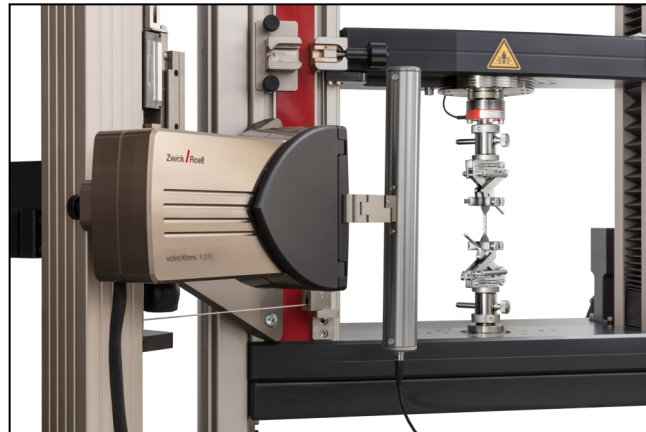
Application examples:

Elastomer testing to ISO 37, ASTM D412 or DIN 53504

- Unobstructed view of the specimen: no blind spot from the specimen grip, due to the videoXtens central alignment and tracking
- High accuracy, even at temperature with ZwickRoell temperature chamber in the range of -55 to +250 °C

Rope testing

- Compensation of the mark movement during the clamping process: Ropes run out of the specimen grip during clamping. Through the connection to the crosshead the videoXtens is always centered; a larger field of view must be taken into account; the measurement range is optimally utilized.



videoXtens 1-270, detail view

Film testing to ISO 527-3

- No influence on sensitive specimen from knife edges — testing is non-contact
- Pattern recognition: Through dotting or stamping, a pattern is easily and quickly placed on the entire specimen.
- With the test re-run option and pattern recognition L_0 can be moved retrospectively and the test can be recalculated, whereby the break then lies within the L_0 —this way no specimen is wasted.
- The high extension of film specimen outside the L_0 does not limit the measurement range during the test, and therefore does not have to be taken into account (due to connection to the crosshead).
- High accuracy even at temperature with ZwickRoell temperature chamber in the range of -55 to +250 °C.

Comprehensive range of functions

- Automatic gauge-mark recognition and acquisition of initial gauge-length L_0 .
- Exact synchronization of all measurement channels.
- Specimens with structured surfaces can be measured via pattern recognition with no need for additional marks.
- The entire test sequence can be followed on-screen.
- Video capturing: Test recording synchronized with the measured curve for retrospective viewing of the test.
- Wear-free, and therefore low-maintenance system.

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Technical data

Type Item No.	videoXtens 1-270 1043968	
Field of view (FOV)		
with test area width 440 mm [AllroundLine] and zwickiLine	270 x 215	mm
with test area width 640 / 1040 mm [AllroundLine]	330 x 260	mm
Initialgauge length		
with test area width 440 mm [AllroundLine] and zwickiLine	5 to 220	mm
with test area width 640 / 1040 mm [AllroundLine]	5 to 260	mm
Measurement travel, max.		
with test area width 440 mm [AllroundLine] and zwickiLine	260	mm - initial gauge length [mm]
with test area width 640 / 1040 mm [AllroundLine]	320	mm - initial gauge length [mm]
Measurement travel, max, with initial gauge length 10 mm		
with test area width 440 mm [AllroundLine] and zwickiLine	250 (2500 % elongation)	mm
with test area width 640 / 1040 mm [AllroundLine]	310 (3100 % elongation)	mm
Measurement travel, max, with initial gauge length 20 mm		
with test area width 440 mm [AllroundLine] and zwickiLine	240 (1200 % elongation)	mm
with test area width 640 / 1040 mm [AllroundLine]	300 (1500 % elongation)	mm
Measurement travel, max, with initial gauge length 25 mm		
with test area width 440 mm [AllroundLine] and zwickiLine	235 (940 % elongation)	mm
with test area width 640 / 1040 mm [AllroundLine]	295 (1180 % elongation)	mm
Resolution at room temperature		
with test area width 440 mm [AllroundLine] and zwickiLine	0.9	µm
with test area width 640 / 1040 mm [AllroundLine]	1.2	µm
Resolution to ISO 9513 in ZwickRoell temperature chamber		
at -20 to +250 °C	max. 1.0	µm
at -40 °C	max. 1.3	µm
at -55 °C	max. 1.5	µm
Image rate / measured-value acquisition rate, max.	500	fps / Hz
Max. test speed	1000	mm/min
Dimensions		
Height	175	mm
Width	306	mm
Depth	91	mm
Specimen thickness	0 to 20	mm
Weight, approx.	7.5	kg
Accuracy class		
with test area width 440 mm [AllroundLine] and zwickiLine to EN ISO 9513.	1	
with test area width 640 / 1040 mm [AllroundLine] to EN ISO 9513.	1 from measurement travel 0.24 mm	

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Type	videoXtens 1-270	
Item No.	1043968	
Scope of delivery		
Measuring head with digital camera		
Lens (12 mm)		
Lens correction target	12 x 12	mm
Software for image acquisition and evaluation		
Accessory case with alignment and marking aids		
INC module (RS module for tC)		

Accessories required

Basic packages (1x required)

A basic package is required for the installation of testXpert III and operation of the laserXtens or videoXtens. When working with testXpert III, we recommend a second monitor.

Description	ArticleNumber
Basic package Windows 10 / 64 bit quad-core, includes multilingual PC workstation with Windows 10 / 64 bit quad-core processor, 24" TFT monitor, graphics card for support of two monitors, USB expansion card, RS232; testXpert III installation incl. software for laserXtens / videoXtens	1097528

Mounting (1x required)

Mounting involves connection to the crosshead. This allows videoXtens to track at half crosshead speed, keeping the testing operation automatically in focus and making optimum use of the measuring range.

Description	ArticleNumber
videoXtens mounting on AllroundLine testing machine	
Rigid mounting kit at <u>45° front left</u> on AllroundLine table-top & floor-standing testing machines with connection to crosshead	1032724
Rigid mounting kit at <u>45° rear left</u> on AllroundLine table-top & floor-standing testing machines with connection to crosshead Required for mounting with temperature chamber	1032726
videoXtens mounting on zwickiLine testing machine	
Rigid mounting kit at 90° left on zwickiLine, <u>with support on table</u> and connection to crosshead	1047180
Rigid mounting kit at 90° left on zwickiLine, <u>with support on floor</u> and connection to crosshead	1071005

Illumination (1x required)

Description	ArticleNumber
LED incident light lamp, 500 mm. ¹⁾	1047264

1) When using the TEE or the tunnel an incident light lamp IS NOT required.

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Optional accessories

Tunnel

Description	ArticleNumber
Bellows tunnel, small, minimizes environmental influences (e.g. air currents, variations in light). With integrated LED lighting for optimum specimen illumination. Min./max. tunnel length 70 to 320 mm.	1047283

Testing in temperature chamber

Can only be used with the current temperature chamber for AllroundLine testing machines from the Series portfolio Tunnel plus tunnel adapter required for tests in the ZwickRoell temperature chamber.

Description	ArticleNumber
Tunnel adapter for attaching videoXtens to ZwickRoell temperature chamber	1047285
Magnetic tunnel adapter with sealing lip for attaching videoXtens to the temperature chamber glass module (viewing port).	

Accessories for specimen marking

Description	ArticleNumber
Gauge marks (strips) for room temperature (+10 to +35°C), self-adhesive, 100 pieces	353379
Gauge marks (strips) for temperature range -55 to +250°C), self-adhesive, 100 pieces	077061
Gauge marks (black dot on white background) for temperature range -55 to +250°C), self-adhesive, 100 pieces	1015510
Marker pen for temperature range -40 to +250°C	077062
Stencil for marking plastic specimens	010406
Stencil for marking metal specimens	010407
Marking spray for applying a pattern to the specimen	057317

Measurement of change in width or transverse strain

Description	ArticleNumber
Transverse strain software option for acquisition of transverse strain/change in width. If change in width is to be measured on the specimen edges, a backlight is required.	013582

Backlight

The backlight is required for flexure tests or for measurement of the change in width directly at the specimen edge.

Description	ArticleNumber
Backlight 420 x 190 mm, incl. mounting arm, required for measurement at specimen edge	013593

Measuring plunger for determining deflection

Description	ArticleNumber
Measuring plunger for videoXtens for determining deflection, i.e. on plastics, fiber-reinforced composites, wood. Installation in ZwickRoell flexure test kit; measurement of deflection by adhering strip gauge marks; maximum height from upper edge of flexure table 99 mm; maximum measurement displacement 25 mm; temperature range -70 ... +200 °C. For this flexure test, we recommend a FOV of at least 30 mm and deactivation of the connection to the crosshead. Additional information in PI 395.	1090625

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Software options

Description	ArticleNumber
Test re-run and strain distribution testXpert II Version 3.4 or higher is required, for which a testXpert II Master Test Program or the option Export Editor (Item No. 374042) is needed.	325932
Option 2D DIC - Digital Image Correlation 2D DIC module for display and evaluation of strain conditions, fully integrated in testXpert III	1018509
2D DIC test license, at not cost for a limited time of 6 months	1055361
Software option 2D dot matrix, for determination of local strains and inhomogeneities of a level specimen surface in 2 axes (2D), requires testXpert II Version 3.5 or higher. Note: For videoXtens systems with various cameras, only one camera is used for this function.	077059
Flexure test software option: Measurement of deflection with 3- and 4-point flexure tests, requires testXpert II Version 3.4 or higher. If deflection is to be measured on the specimen edges, a backlight is required. Note: For videoXtens systems with various cameras, only one camera is used for this function.	077060
videoXtens software package; applicable with videoXtens, not with ProLine videoXtens. Includes the software options: transverse strain software option, test re-run and strain distribution, 2D dot matrix, flexure test	1028367

Screen / uniform specimen background

- For a uniform specimen background, recommended for disruptive background contrasts or narrow specimens (for example ≤ 5 mm with videoXtens or ≤ 1 mm with laserXtens)
- Screen to shield eyes from incident light or laser light
- Two colors: white on front for dark specimens, black on back for light specimens
- Mounting directly into T-slot of the table-top or floor-standing testing machine profile

Description	ArticleNumber
Screen/uniform specimen background, swivelable, white on front and black on back, dimensions 420 x 190 mm	086060