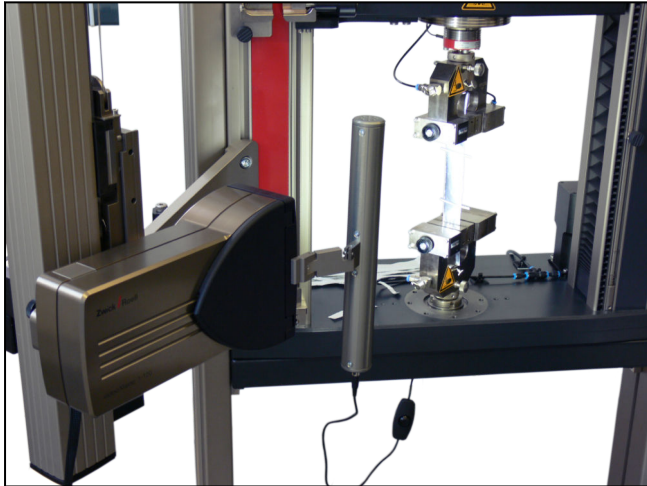


## Product Information

### videoXtens 1-120

CTA: 173710 173580



videoXtens 1-120

The videoXtens 1-120 is a non-contact, camera-based measuring system. It is used for standard specimen with small to medium extension, such as sheet metals to ISO 6892 or plastics to ISO 527.

#### videoXtens 1-120

- Non-contact measuring system: No influence on the material characteristics
- Ideal for brittle-fracturing or whipping specimen - the videoXtens will not be damaged
- No influence on sensitive specimen
- 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.
- Accuracy class 1 to ISO 9513

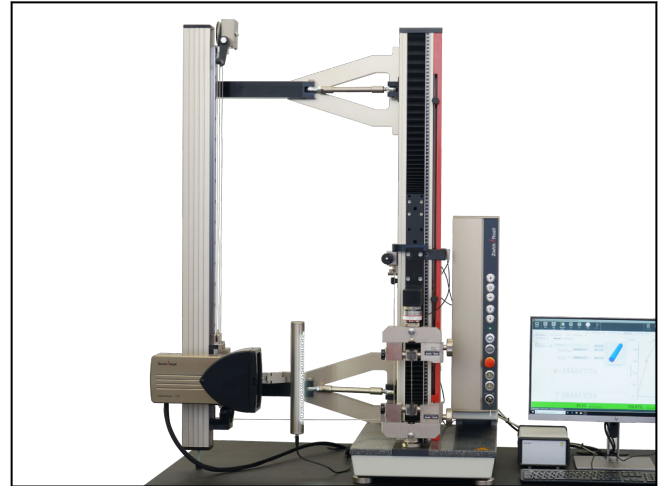
#### Typical application: ISO 527-1 without tensile modulus determination

##### Specific advantages in this application

- Simple, compact system for determination of strain at yield stress (curve types b & c).
- Even brittle-fracturing plastics specimens can be tested without damaging the extensometer.

#### Typical application: testing A50 or A80 metal sheets to ISO 6892

- Method B or A2, without r-value determination
- e.g. for determination of  $R_{p0.2}$ ,  $A_g$ ,  $A$



zwickiLine with videoXtens 1-120

#### Specific advantages in this application

- Compact system for easy testing to standard - with total absence of specimen contact
- No influence on specimens: thin metal sheets or metal foils are sensitive to contact, making the non-contact videoXtens the ideal solution. It has no influence on material characteristic values.

#### Typical application; tensile test on geotextiles / geogrids to EN ISO 10319

- videoXtens can measure extremely wide specimens. As videoXtens is non-contacting specimens width is irrelevant.
- Even specimens prone to whipping can be tested without damaging the extensometer.
- Pattern recognition eliminates the need for specimen marking.
- Modulus values can also be determined in the initial range, e.g. gradient at x% strain.

#### 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.

## Product Information

### videoXtens 1-120

#### Technical data

##### videoXtens 1-120

Can be mounted on an zwickiLine materials testing machine

Can be mounted on an AllroundLine materials testing machine

Type	videoXtens 1-120	
Item No.	1043969	
Field of view (FOV)		
With test area width 440 mm [AllroundLine] and zwickiLine	120 x 95	mm
With test area width 640/1040 mm [AllroundLine]	150 x 120	mm
Initial gauge length		
With test area width 440 mm [AllroundLine] and zwickiLine	5 ... 100	mm
With test area width 640/1040 mm [AllroundLine]	5 ... 120	mm
Measurement travel, max.		
With test area width 440 mm [AllroundLine] and zwickiLine	110	mm - initial gauge length [mm]
With test area width 640/1040 mm [AllroundLine]	140	mm - initial gauge length [mm]
Measurement travel, max. at 50 mm initial gauge length		
With test area width 440 mm [AllroundLine] and zwickiLine	60 (120 % strain)	mm
With test area width 640/1040 mm [AllroundLine]	90 (180 % strain)	mm
Measurement travel, max. at 75 mm initial gauge length		
With test area width 440 mm [AllroundLine] and zwickiLine	35 (45 % strain)	mm
With test area width 640/1040 mm [AllroundLine]	65 (85 % strain)	mm
Measurement travel, max. at 80 mm initial gauge length		
With test area width 440 mm [AllroundLine] and zwickiLine	30 (35 % strain)	mm
With test area width 640/1040 mm [AllroundLine]	60 (75 % strain)	mm
Resolution at ambient temperature		
With test area width 440 mm [AllroundLine] and zwickiLine	0.5	µm
With test area width 640/1040 mm [AllroundLine]	0.6	µm

## Product Information

### videoXtens 1-120

Type	videoXtens 1-120	
Item No.	1043969	
Resolution to ISO 9513 in ZwickRoell temperature chamber		
At -20 ... +250 °C	Max. 0.6	µm
At -40 °C	Max. 0.9	µm
At -55 °C	Max. 1.2	µm
Frame rate / measured-value acquisition-rate, max.	500	fps / Hz
Test speed, max.	1000	mm/min
Dimensions		
Height	175	mm
Width	306	mm
Depth	91	mm
Specimen thickness	0 ... 20	mm
Weight, approx.	7.5	kg
Accuracy class		
To EN ISO 9513	1	
Scope of delivery		
Measuring head with digital camera		
Lens (25 mm)		
Software for image acquisition and evaluation		
Accessory case with alignment and marking aids		
INC module (for tC: RS module)		

#### Function description

videoXtens 1-120 includes a camera plus lens. The lens is supplied security-painted, with the housing screw-assembled to prevent changes to the system.

The system can easily be attached to a ZwickRoell temperature chamber via a tunnel plus adapter. This results in a closed system, minimizing signal interference due to air currents.

#### 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, 23" TFT monitor, graphics card for support of two monitors, USB expansion card, RS232; testXpert III installation incl. software for laserXtens / videoXtens	<b>1097528</b>

## Product Information

### videoXtens 1-120

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

#### Illumination

Description	ArticleNumber
300 mm LED incident light lamp <sup>1)</sup>	<b>1043962</b>

1) No incident light lamp is required when using the temperature chamber or tunnel. Only in the case of strongly reflective specimens is it recommended.

#### 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.	<b>1047283</b>

#### 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	<b>1047285</b>
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	<b>353379</b>
Gauge marks (strips) for temperature range -55 to +250°C, self-adhesive, 100 pieces	<b>077061</b>
Gauge marks (black dot on white background) for temperature range -55 to +250°C, self-adhesive, 100 pieces	<b>1015510</b>
Marker pen for temperature range -40 to +250°C	<b>077062</b>
Stencil for marking plastic specimens	<b>010406</b>

## Product Information

### videoXtens 1-120

Description	ArticleNumber
Stencil for marking metal specimens	<b>010407</b>
Marking spray for applying a pattern to the specimen	<b>057317</b>

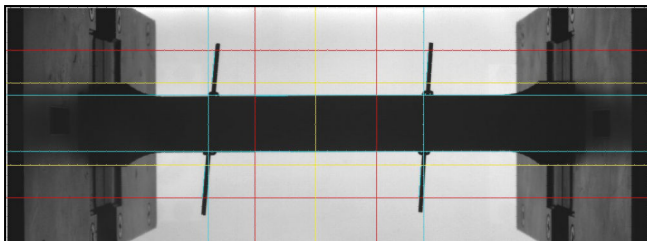
### Measuring plunger for determining deflection

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.	<b>1090625</b>

### Measurement of change in width or transverse strain

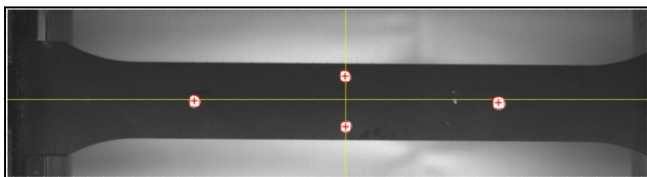
Description	ArticleNumber
Transverse strain software option for acquisition of transverse strain/change in width. If change in width is to be measured on the specimen edges, a backlight is required.	<b>013582</b>

CTA: 44341



Recording change in width at specimen edges using backlight

CTA: 44317



Recording transverse strain with dot marks on the specimen surface.

### 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.	<b>325932</b>
Option 2D DIC - Digital Image Correlation 2D DIC module for display and evaluation of strain conditions, fully integrated in testXpert III	<b>1018509</b>
2D DIC test license, at not cost for a limited time of 6 months	<b>1055361</b>
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.	<b>077059</b>
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.	<b>077060</b>

## Product Information

### videoXtens 1-120

Description	ArticleNumber
Note: For videoXtens systems with various cameras, only one camera is used for this function.	
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	<b>1028367</b>

#### 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	<b>013593</b>

#### Screen / uniform specimen background

- For a uniform specimen background, recommended for disruptive background contrasts or narrow specimens (for example  $\leq 5$  mm with videoXtens or  $\leq 1$  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	<b>086060</b>