

Product Information

ZHV μ Micro Vickers Hardness Tester - from manual to fully automatic



Range of application

Can be used for the optical hardness test methods Micro Vickers respectively Knoop to the following standards:

- Vickers hardness acc. to EN ISO 6507
- Knoop hardness acc. to EN ISO 4545

Advantages/features

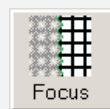
- Load steps with motorized load change: 10, 25, 50, 100, 200, 300, 500, 1000, 2000 (gf)
- Test scale designation on display
- Freely adjustable dwell times 5 ... 60 seconds
- Individual setting of illumination for each objective lens
- Automatic turret allows one touch operation when changing between indenter and lens position
- *testXpert*[®]-controlled versions of turret for two objective lenses and one indenter

The Micro Vickers hardness tester ZHV μ is available in 4 different types:

1. Stand alone model **ZHV μ -m**
2. *testXpert*[®]-controlled versions of semi- to fully automatic hardness testing systems:
 - **ZHV μ -s**, semiautomatic, with manual x-y table and focussing via hand wheel
 - **ZHV μ -a**, automatic, with motorized x-y table and focussing via hand wheel
 - **ZHV μ -af**, fully automatic, with motorized x-y table and *testXpert*[®]-controlled and motorized auto focus

Intelligent testing with *testXpert*[®]

testXpert[®] intelligent testing software underpins this innovative testing system in standard testing situations (such as quality assurance) and provides demanding research and development specialists with a remarkable range of options.



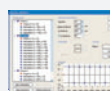
Automatic focusing on the test indentation whenever required via the push of a button or zooming on to the specimen surface via a scroll bar



Fully automatic indentation measurement of single tests and multiple traverse tests, with auto focus if required



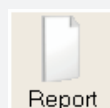
Virtual joystick for x-y table control or positioning via mouse-click on the video image



Easy definition of hardness traverse tests (including multiple traverse tests) and storage of user's own templates



Existing indentations can be re-approached and data evaluation repeated whenever required



Automatic report generation and data export

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ZHV μ Micro Vickers Hardness Tester - from manual to fully automatic

Type	ZHVμ-m manual	ZHVμ-s semiautomatic	ZHVμ-a automatic	ZHVμ-af fully automatic
Item number	032943	042545	035914	035915
Micro Vickers test loads	10 ... 2000 gf	10 ... 2000 gf	10 ... 2000 gf	10 ... 2000 gf
Display	integrated display	PC monitor	PC monitor	PC monitor
Data entry	integrated keyboard	PC keyboard	PC keyboard	PC keyboard
Variant of x-y table	manually ⁽¹⁾	manually ⁽¹⁾	motorized ⁽²⁾	motorized ⁽²⁾
Focussing	via hand wheel	via hand wheel	via hand wheel	motorized
Optics	Measuring microscope	CCD camera with <i>testXpert</i> [®] connection	CCD camera with <i>testXpert</i> [®] connection	CCD camera with <i>testXpert</i> [®] connection
Test area (height x depth)		150 x 150 mm		
Dimensions (H x W x D)		560 x 240 x 430 mm		
Weight		30 kg		
Power supply		3 A single phase, 240/120 V switchable		
Inclusive accessory box, hardness comparison plate and instruction manual				

⁽¹⁾ With manual micrometer screws, travel 25 x 25 mm

⁽²⁾ Not already included in scope of supply, see below accessories.

Accessories

Description	Item number
Indenter, diamond pyramid 136° to Vickers	036111
Indenter, diamond pyramid to Knoop	037644
Additional indenter holder for 2nd indenter ⁽³⁾	039570
Objective lenses 10-times	035907
Objective lenses 20-times	035910
Objective lenses 40-times	035911
Objective lenses 50-times	037645
Objective lenses 100-times	035912
Additional objective lens holder (for the 3rd or 4th objective lens) ⁽³⁾	039569
Specimen clamp for 3 round specimen (Ø 40 mm) incl. centering stop for x-y tables, F _{max} 20 N ⁽⁴⁾	029548
Specimen clamp for 6 round specimen (Ø 30 mm) incl. centering stop for x-y tables, F _{max} 20 N ⁽⁴⁾	029547
Hardness comparison plates on request, e.g. plate with 540 HV 1	

⁽³⁾ Optional available for ZHV μ -m

⁽⁴⁾ Only in combination with motorized x-y table with travel 150 x 50 mm

X-y tables for ZHV μ -a / ZHV μ -af

Description	Item number
Motorized x-y table ⁽⁵⁾ with travel 100 x 50 mm table size: 350 x 192 mm, F _{max} 500 N, controlled by PC via RS232 interface	018141
Motorized x-y table ⁽⁵⁾ with travel 150 x 50 mm table size: 400 x 192 mm, F _{max} 500 N, controlled by PC via RS232 interface	018142

⁽⁵⁾ Inclusive of control of 2 axis (x-y) for semiautomatic, respectively control of 3 axis (x-y-z) for fully automatic tester

testXpert[®] for ZHV μ -s / ZHV μ -a / ZHV μ -af

Description	Item number
<i>testXpert</i> [®] Master test program for optical testing methods	353472
<i>testXpert</i> [®] Option Sequence testing	353475
<i>testXpert</i> [®] Option Auto measurement	353473
<i>testXpert</i> [®] Option Connection of x-y tables	318788
<i>testXpert</i> [®] Option Autofocus (only with ZHV μ -af)	353474