

UNIVERSAL HARDNESS TESTERS

VERZUS 700AS

Heavy duty,
load cell,
closed loop,
force feedback system,
no weights,
automatic load setting

Microscope with
high resolution
CCD camera

Specimen lighting
with adjustable
illumination levels

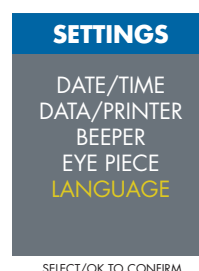
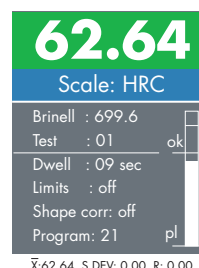
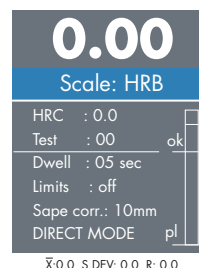
Adjustable workpiece
clamping attachment,
indenter protection

Precision elevator spindle allows
large workpiece accommodation
(vertical capacity 300mm,
horizontal capacity 200mm)

Heavy duty spindle cover

Ergonomic handwheel
operation (Motorized spindle
optional)

Full color multi-function
OLED display



Connectivity: USB-2
ABS shockproof
machinecovers,
available in multi-colors

VERZUS 700AS

1KGF/9.8N TO 250KGF/2.45KN, BUILT-ON MICROSCOPE

The VERZUS 700 series are a new generation of hardness testing instruments. The testers are constructed around a rock solid C-frame with unparalleled rigidity. The closed loop system based on a load cell and precision force actuator guarantees the best GR & R results ever seen on Rockwell hardness testers. The tester meets or exceeds the ISO, ASTM and JIS standards and conforms to Nadcap auditing.

Test forces range from 1kgf/9.8N to 250kgf/2.45kN, Advanced algorithms, digital filter technology and state of the art electronics provide unmatched force control. The test cycle can be as little as 13 seconds (at a dwell time of 10 seconds).

Depth measurement via an optical system with a direct reading of **0.1 micron**.

VERZUS stands for versatile. Even the most basic model is equipped with Rockwell, Superficial Rockwell, HVT, HBT and Depth ball measurement. All models include plastic testing scales according to ISO 2039.

For demanding users the VERZUS can be equipped with a motorized spindle that lifts your work piece, without any effort, to the required testing position.

Models **AS** have a built on electronic microscope with various objectives and a work piece sliding table. This combination allows full scale testing, as it adds not only Brinell, but also Vickers scales to the field of application.

Ideal for smaller workshops, educational purposes and for those who want to be versatile in hardness measurement.

The outer skin of the tester is made of recyclable top class materials. The base is covered by a ABS shell that can withstand the harshest environments. No damage from falling testblocks or workpieces.

VERZUS if being certain is your priority!

FEATURES

- Load cell, force feedback, closed loop system
- Unparalleled rigidity
- Unmatched GR & R results
- Load range 1kgf/9.8N up to 250kgf/2.45kN
- Fully automatic operation
- Meets or exceeds ISO, ASTM and JIS standards
- Shape correction settings for curved surfaces
- Optical depth measuring system (Rockwell, HBT, HVT, Ball indentation for plastic ISO 2039/1)
- OLED full color user-friendly interface, easy to operate
- Go/No Go function with visual and acoustic warning
- Large memory for measurements with statistic results
- Easy calibration function
- Testing program storage
- Standard nose cone clamping attachment
- Printer & USB-2 output
- Built on Vickers/Brinell microscope with LED ring light (Optional)
- Work piece sliding table
- Large work piece accommodation
- Motorized spindle (Optional)

TECHNICAL SPECIFICATIONS

Hardness scales	Rockwell, Superficial Rockwell, Brinell, Vickers, HVT, HBT and Ball indentation for plastic ISO 2039/1	
Load application	Load cell, force feedback, closed loop system	
Load range	1kgf/9.8N to 250kgf/2.45kN	
Test loads	1kgf/9.8N, 2kgf/19.6N, 2.5kgf/24.5N, 3kgf/29.4N, 4kgf/39.2N, 5kgf/49N, 6.25kgf/61.29N, 10kgf/98N, 15kgf/147N, 15.625kgf/153.2N, 20kgf/196.13N, 25kgf/245.16N, 30kgf/294.19N, 31.25kgf/306.45N, 45kgf/411.29N, 50kgf/490N, 60kgf/588.4N, 62.5kgf/612N, 100kgf/980.7N, 120kgf/1176.79N, 125kgf/1225N, 150kgf/1471N, 187.5kgf/1838N, 250kgf/2.45kN	
Vickers test range	HV:	1kgf/9.8N, 2kgf/19.6N, 3kgf/29.4N, 4kgf/39.2N, 5kgf/49N, 10kgf/98N, 20kgf/196.13N, 30kgf/294.19N, 50kgf/490N, 100kgf/980.7N, 120kgf/1176.79N
	HVT:	50kgf/490N, 100kgf/980.7N
Brinell test range	HB1:	1kgf/9.8N, 2.5kgf/24.5N, 5kgf/49N, 10kgf/98N, 30kgf/294.19N
	HB2.5:	6.25kgf/61.29N, 15.625kgf/153.2N, 31.25kgf/306.45N, 62.5kgf/612N, 187.5kgf/1838N
	HB5:	25kgf/245.16N, 62.5kgf/612N, 125kgf/1225N, 250kgf/2.45kN
	HB10:	100kgf/980.7N, 250kgf/2.45kN
	HBT2.5:	62.5kgf/612N, 187.5kgf/1838N
	HBT:	5kgf/49N, 250kgf/2.45kN
Rockwell test scales	A, B, C, D, E, F, G, H, K, L, M, P, R, S, V, 15N, 30N, 45N, 15T, 30T, 45T, 15W, 30W, 45W, 15X, 30X, 45X, 15Y, 30Y, 45Y	
Plastic Ball indentation	According to ISO 2039/1	
Optical system	Built on electronic microscope with 3 objectives and LED ring light (optional)	
Objectives	Interchangeable 2.5x, 5x and 15x magnification	
Eyepiece	15x magnification	
Scale resolution (depth)	0.1 micron	
Display	Full color OLED display, testing results, statistics, built-in hardness calculator, program overview, settings, calibration, and many more	
Standards	Meets or exceeds, ISO, ASTM, JIS (Nadcap) standards	
Test cycles	Fully automatic, Load, Dwell, Unload	
Indentors (optional)	Rockwell Diamond Cone:	120°
	Rockwell balls:	1/16", 1/8", 1/4", 1/2"
	Vickers Diamond:	136°
	Brinell/Balls:	1 mm, 2.5mm, 5mm, 10mm
	Some are optional	
Dwell time	1 - 99 seconds	
Connectivity	USB-2 (RS-232)	
Workpiece accommodation	Vertical capacity	300mm (260mm with sliding table),
	Horizontal capacity	200mm (from center-line)
Operating temperature	10°C to 35°C, non-condensing	
Machine dimensions	290mm x 588mm x 845mm (WxDxH)	
Machine weight	96kg	
Power supply	100V AC to 240V AC, 50Hz/60Hz, single phase	

STANDARD DELIVERY

- Flat anvil, hardened, $\varnothing 60\text{mm}$
- V-anvil, hardened, $\varnothing 80\text{mm}$
- Sliding testing table
- Fuse 3A slow (2 pcs)
- Power cable
- Objectives 2.5x, 5x and 15x
- Four adjustable feet
- Built on microscope
- INNOVATEST® certificate
- Installation and user manual

OPTIONAL ACCESSORIES

- Factory indentors
- Certified indentors (UKAS, DKD, ASTM)
- Factory reference hardness blocks
- Certified reference hardness blocks (UKAS, DKD, ASTM)
- LED ring light for dark field illumination
- Testing table, hardened, $\varnothing 180\text{mm}$
- Large testing table 350mm x 250mm with T-slot and spindle adapter
- Custom testing tables
- Goose neck indenter holder
- Precision vice for small parts, jaw width 36mm
- Precision vice for small parts, jaw width 42mm
- Precision vice for small parts, jaw width 75mm
- V-blocks and special clamps
- Manual X-Y stage 100mm x 60mm, micrometer travel 25mm x 25mm
- Manual X-Y stage with micrometers 25mm x 25mm, mounted on sliding table
- Motorized spindle operation
- Solid tester table and storage cabinet
- 700STARTKIT/1:
Testing table, hardened, $\varnothing 180\text{mm}$
set of factory reference hardness test blocks,
set of factory indentors



Round test table



Motorized stage



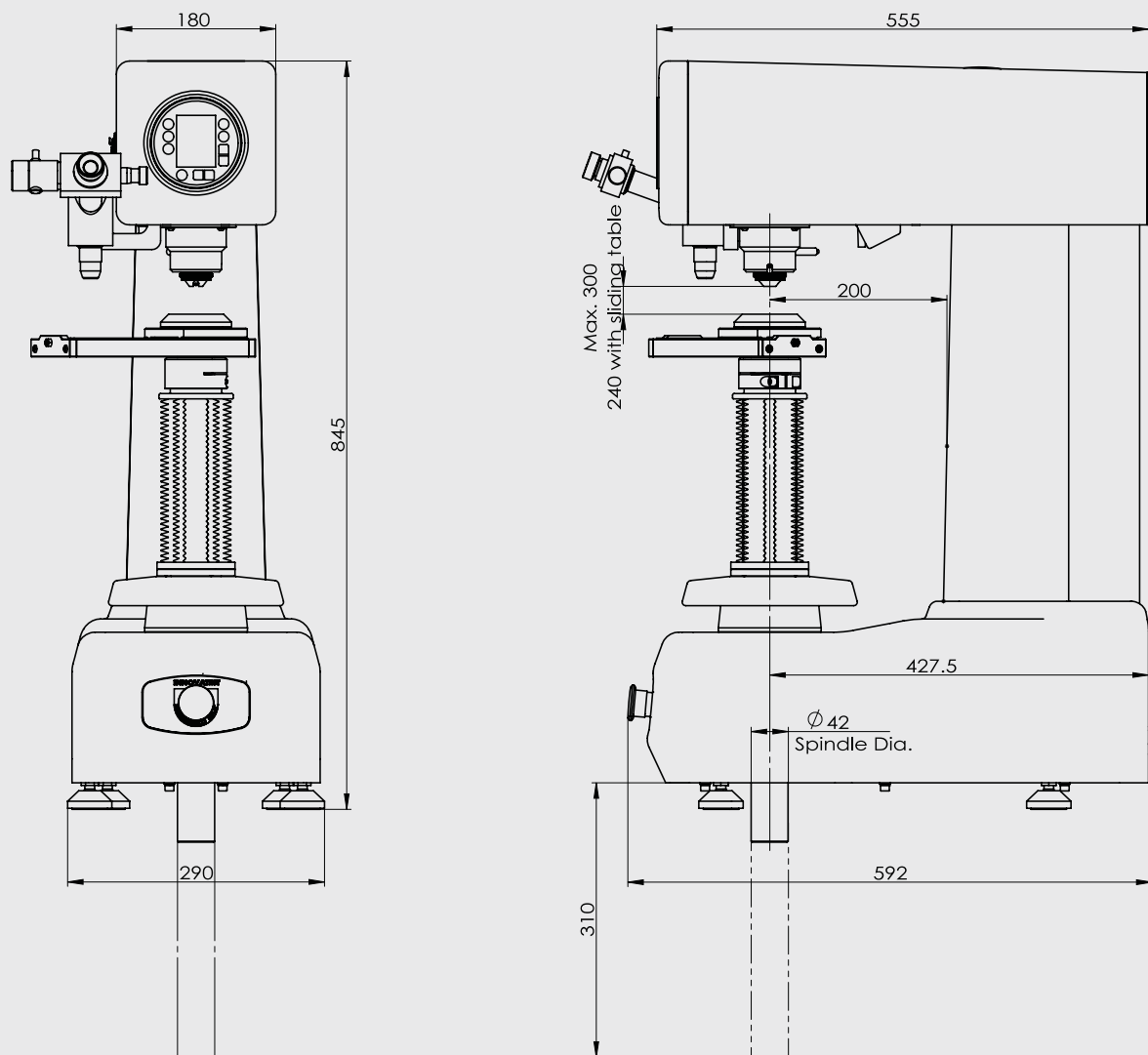
Extra large working table

ORDER DETAILS

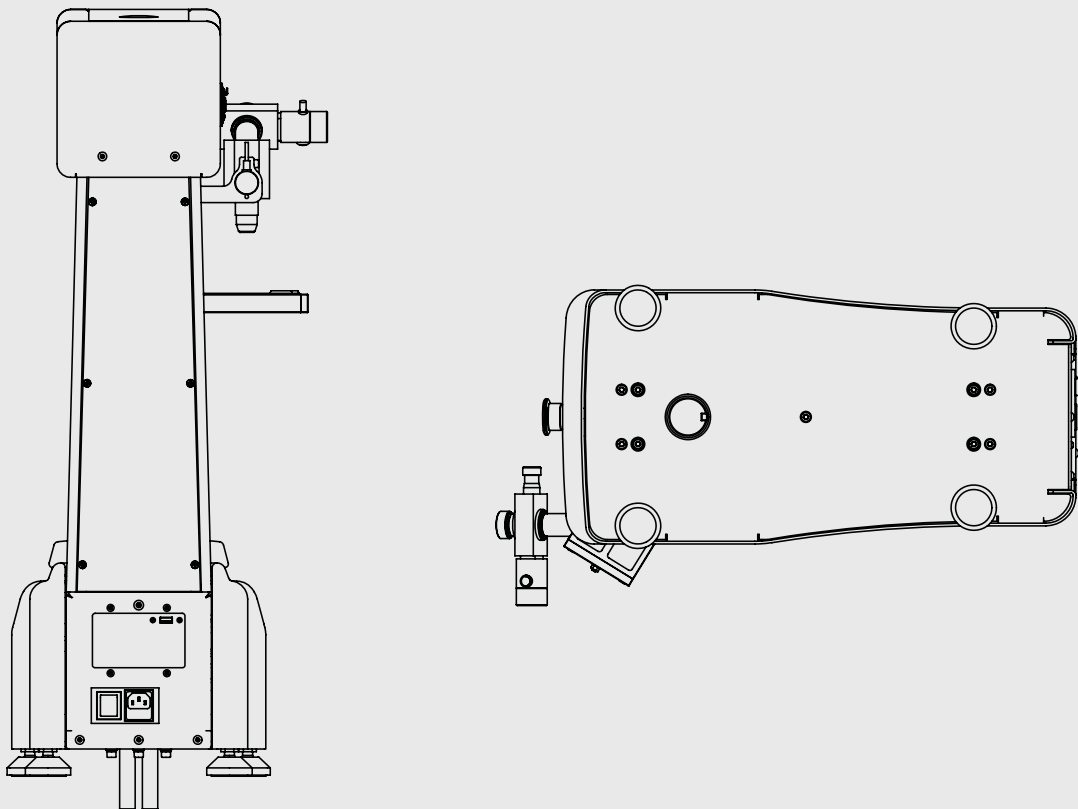
VERZUS 700AS

Rockwell, Superficial Rockwell, Brinell, Vickers, HVT, HBT,
Ball indentation for plastic ISO 2039/1,
test forces 1kgf/9.8N to 250kgf/2.45kN

TECHNICAL DRAWING



All dimensions are in mm

TECHNICAL DRAWING

All dimensions are in mm



VERZUS 750CCD
1 KGF/9.8N TO 250KGF/2.45KN, BUILT-ON CAMERA

The VERZUS 750 series are a new generation of hardness testing instruments. The testers are constructed around a rock solid C-frame with unparalleled rigidity. The closed loop system based on a load cell and precision force actuator guarantees the best GR & R results ever seen on Rockwell hardness testers. The tester meets or exceeds the ISO, ASTM and JIS standards and conforms to Nadcap auditing.

Test forces range from 1kgf/9.8N to 250kgf/2.45kN, Advanced algorithms, digital filter technology and state of the art electronics provide unmatched force control. The test cycle can be as little as 13 seconds (at a dwell time of 10 seconds).

Depth measurement via an optical system with a direct reading of **0.1 micron**.

VERZUS stands for versatile. The 750CCD is equipped with Rockwell, Superficial Rockwell, Vickers, Brinell, HVT, HBT and Depth ball measurement. All models also include Plastic testing scales according to ISO 2039/1.

The VERZUS **750CCD** offers more ...

An embedded powerful PC runs the hardness testing software IMPRESSIONS™. This allows you to mount the optional Y-axis motorized Jominy stage or coordinate testing table (X-Y stage) for pattern testing. Also suitable for Eht. A CCD camera system with LED ring light recording all Brinell and Vickers indentations and measuring the results automatically. At a finger touch you store all results on the systems hard disk database. Automatic measurement, indent ZOOM function, conversions to other scales, other standards and many additional functions are part of the standard delivery.

At your convenience the VERZUS 750 models can be equipped with a motorized spindle that lifts your work piece, without any effort, to the required testing or measuring position. Ideal for smaller workshops, educational purposes and for those who want to be versatile in hardness measurement with a larger scale of automation.

The outer skin of the tester is made of recyclable top class materials. The base is covered by a ABS shell that can withstand the harshest environments. No damage from falling testblocks or workpieces.

VERZUS if being certain is your priority!

FEATURES

- Load cell, force feedback, closed loop system
- Unparalleled rigidity
- Unmatched GR & R results
- Load range 1kgf/9.8N up to 250kgf/2.45kN I
- Fully automatic operation
- Rockwell, Superficial Rockwell, Vickers, Brinell, HVT, HBT, Ball indentation for plastic ISO 2039/1
- Meets or exceeds ISO, ASTM and JIS standards
- Shape correction settings for curved surfaces
- Optical depth measuring system (Rockwell, HBT, HVT, Ball indentation for plastic ISO 2039/1)
- Powerful Embedded PC with 2 hard disks and HD industrial touch screen
- IMPRESSIONS™ high end video based hardness testing firmware including CCD camera, automatic indent measurement, indent ZOOM system, conversion to other hardness scales, test data & image storage, statistic results storage, Jominy stage operation, X-Y stage operation.
- Password and user level access system
- Easy calibration function
- Standard workpiece clamping attachment
- Workpiece sliding table
- Large work piece accommodation
- Motorized spindle (Optional)

TECHNICAL SPECIFICATIONS

Hardness scales	Rockwell, Superficial Rockwell, Brinell, Vickers, HVT, HBT and Ball indentation for plastic ISO 2039/1	
Load application	Load cell, force feedback, closed loop system	
Load range	1kgf/9.8N to 250kgf/2.45kN	
Test loads	1kgf/9.8N, 2kgf/19.6N, 2.5kgf/24.5N, 3kgf/29.4N, 4kgf/39.2N, 5kgf/49N, 6.25kgf/61.29N, 10kgf/98N, 15kgf/147N, 15.625kgf/153.2N, 20kgf/196.13N, 25kgf/245.16N, 30kgf/294.19N, 31.25kgf/306.45N, 45kgf/411.29N, 50kgf/490N, 60kgf/588.4N, 62.5kgf/612N, 100kgf/980.7N, 120kgf/1176.79N, 125kgf/1225N, 150kgf/1471N, 187.5kgf/1838N, 250kgf/2.45kN	
Vickers test range	HV:	1kgf/9.8N, 2kgf/19.6N, 3kgf/29.4N, 4kgf/39.2N, 5kgf/49N, 10kgf/98N, 20kgf/196.13N, 30kgf/294.19N, 50kgf/490N, 100kgf/980.7N, 120kgf/1176.79N
	HVT:	50kgf/490N, 100kgf/980.7N
Brinell test range	HB1:	1kgf/9.8N, 2.5kgf/24.5N, 5kgf/49N, 10kgf/98N, 30kgf/294.19N
	HB2.5:	6.25kgf/61.29N, 15.625kgf/153.2N, 31.25kgf/306.45N, 62.5kgf/612N, 187.5kgf/1838N
	HB5:	25kgf/245.16N, 62.5kgf/612N, 125kgf/1225N, 250kgf/2.45kN
	HB10:	100kgf/980.7N, 250kgf/2.45kN
	HBT2.5:	62.5kgf/612N, 187.5kgf/1838N
	HBT:	5kgf/49N, 250kgf/2.45kN
Rockwell test scales	A, B, C, D, E, F, G, H, K, L, M, P, R, S, V 15N, 30N, 45N, 15T, 30T, 45T, 15W, 30W, 45W, 15X, 30X, 45X, 15Y, 30Y, 45Y	
Plastic Ball indentation	According to ISO 2039/1	
Optical system	High resolution video camera mounted on build on microscope	
Objectives	Interchangeable 2.5x, 5x and 10x magnification, with LED ring light (optional)	
Eyepiece	10x magnification (15x optional)	
Scale resolution (depth)	0.1 micron	
Display	Large high definition industrial 8.4" touch screen can also be operated by mouse and keyboard	
Service connection	Firmware service over internet "INNOVATEST team viewer" pre-installed	
Standards	Meets or exceeds, ISO, ASTM, JIS (Nadcap) standards	
Test cycles	Fully automatic, Load, Dwell, Unload	
Indentors (optional)	Rockwell Diamond Cone:	120°
	Rockwell balls:	1/16", 1/8", 1/4", 1/2"
	Vickers Diamond:	136°
	Brinell/Balls:	1mm, 2.5mm, 5mm, 10mm
	Some are optional	
Dwell time	1 - 99 seconds	
Connectivity	USB-2 (6) RJ-45 LAN, W-LAN, (RS-232)	
Workpiece accommodation	Vertical capacity	300mm (260mm with sliding table),
	Horizontal capacity	200mm (from center-line)
Operating temperature	10°C to 35°C, non-condensing	
Machine dimensions	290mm x 588mm x 895mm (WxDxH)	
Machine weight	109kg	
Power supply	100V AC to 240V AC, 50Hz/60Hz, single phase	

STANDARD DELIVERY

- Flat anvil, hardened, $\varnothing 60\text{mm}$
- V-anvil, hardened, $\varnothing 80\text{mm}$
- Sliding testing table
- Build on microscope with HD CCD camera
- Objectives 2.5x, 5x and 10x
- Fuse 3A slow (2 pcs)
- Power cable
- Four adjustable feet
- INNOVATEST® certificate
- Installation and user manual

OPTIONAL ACCESSORIES

- Factory indentors
- Certified indentors (UKAS, DKD, ASTM)
- Factory reference hardness blocks
- Certified reference hardness blocks (UKAS, DKD, ASTM)
- Testing table, hardened, $\varnothing 180\text{mm}$
- Large testing table 350mm x 250mm with T-slot and spindle adapter
- Custom testing tables
- Goose neck indenter holder
- Precision vice for small parts, jaw width 36mm
- Precision vice for small parts, jaw width 42mm
- Precision vice for small parts, jaw width 75mm
- V-blocks and special clamps
- Manual X-Y stage 100mm x 60mm, micrometer travel 25mm x 25mm
- Motorized Y-stage for jominy testing
- Motorized X-Y stage for pattern testing
- Motorized spindle operation
- LED ring light for dark field illumination
- Knoop hardness testing scale
- Solid tester table and storage cabinet
- 700STARTKIT/1:
Testing table, hardened, $\varnothing 180\text{mm}$
set of factory reference hardness test blocks,
set of factory indentors



Round test table



Motorized stage



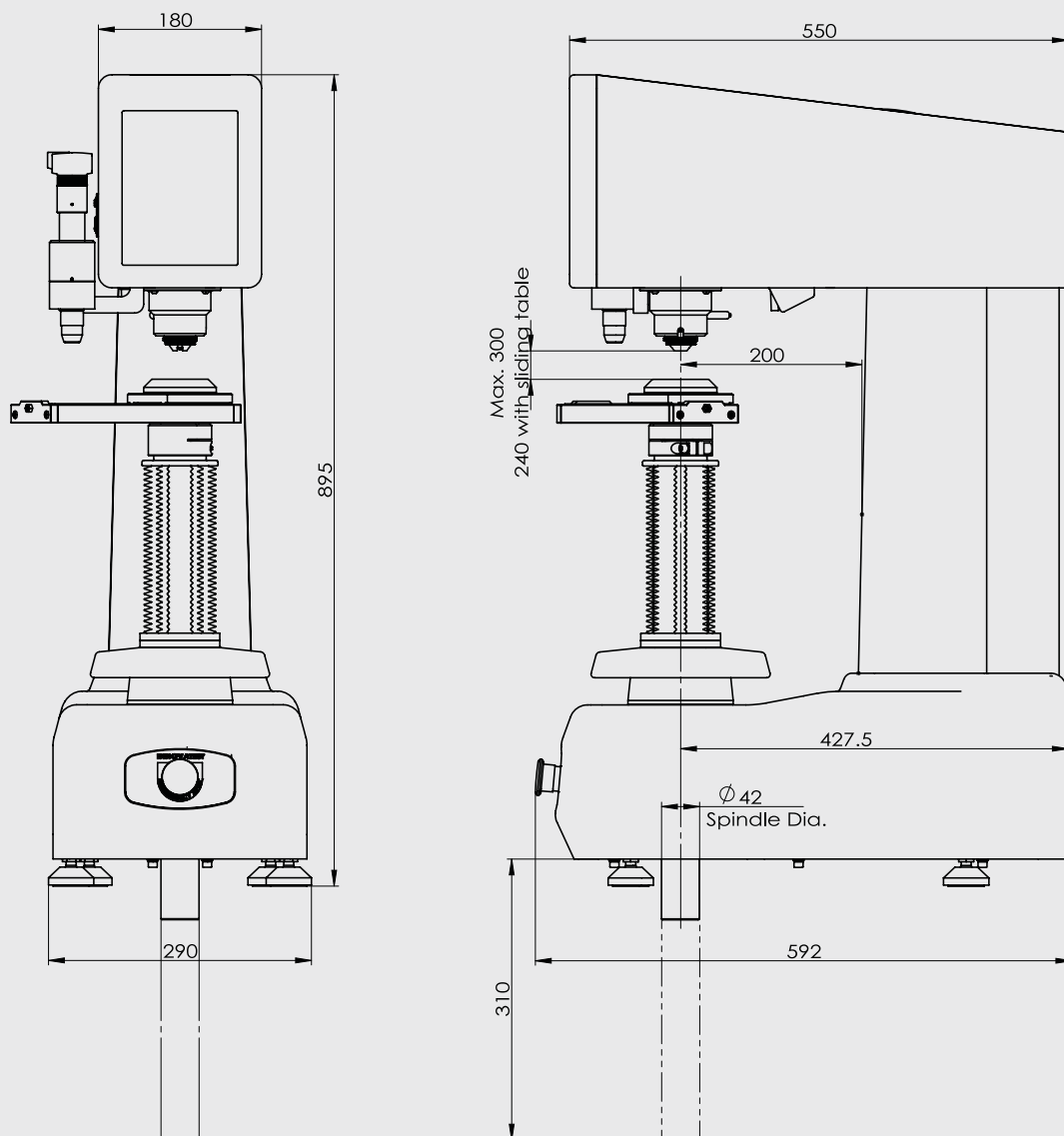
Extra large working table

ORDER DETAILS

VERZUS 750 CCD

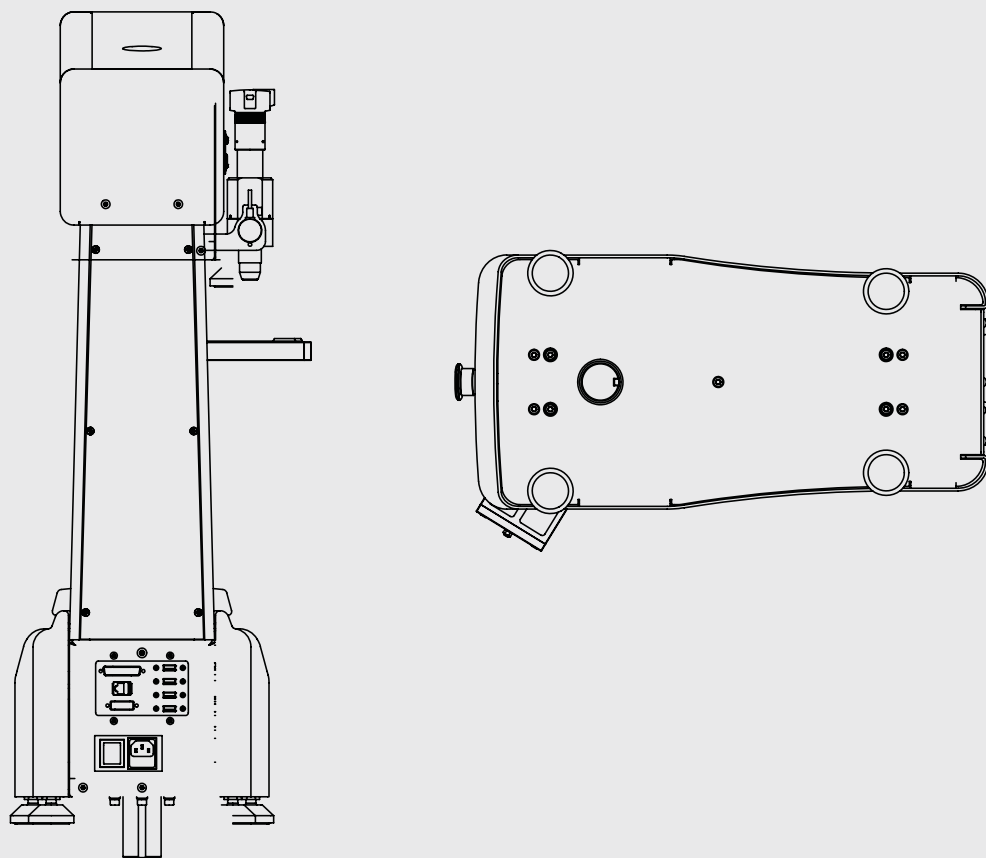
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All dimensions are in mm

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