

FALCON 600

Micro Hardness Tester | Vickers, Knoop, Brinell

FULLY **AUTOMATED**



FALCON 600

Our vision, your future...

The FALCON 600 Automated Hardness Testing System provides a fully integrated platform for your complete Vickers, Knoop & Low Force Brinell hardness testing needs.

Coming from a leading edge of mechanical design, with a range of CNC stages and best in class optics, 18 Megapixels, 4K, full color image technology, to a fully featured, easy to use, User Interface. A standard force range of 1gf to 62.5kgf, optional going down to forces as low as 0.1gf, to be used in combination with any thinkable software application, provides a micro hardness testing machine for today, tomorrow and better... for the future.



HARDNESS SCALES



VICKERS 0.1gf - 50kgf *



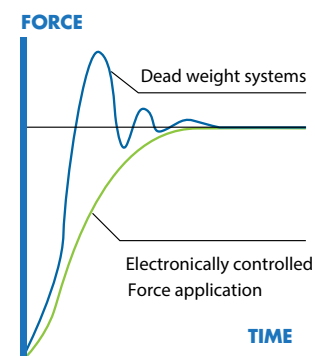
KNOOP 1gf - 2kgf *



BRINELL 1kgf - 62.5kgf *

* All scales

TECHNOLOGY OF TODAY



Load cell, closed loop, force feedback system

A FORCE RANGE, THAT SETS NEW STANDARDS!

| | | |
|-------|--------------|------------|
| 0.1gf | 10gf 10kgf | FALCON 603 |
| 0.1gf | 1gf 31.25kgf | FALCON 608 |
| 0.1gf | 1gf 62.5kgf | FALCON 611 |

** Extended range*

HIGHLIGHTS

- 1 Multi Load Cell, Closed Loop force application system, error <0,25%
- 2 6 position turret, 2 indenter positions, 4 LWD objectives installed (included)
- 3 Turret collision detection and workpiece retraction safety system
- 4 18 Mega Pixel, 4K, full color integrated camera system
- 5 Full X-Y stage overview camera, optical zoom system, variable field of view
- 6 TTL power LED with color filter, Dual bank power LED stage illumination
- 7 Large CNC X-Y stage 300 x 225mm, Z-axis with ball bearing spindle (standard)
- 8 Integrated system controller, i7 processor, Dual MSSD Raid system storage
- 9 Industrial 15" touch screen, option for second screen 15", to 55" or projector
- 10 Top-class replaceable body parts, shock proof ABS covers

BOUNDLESS INNOVATION



Observe, Think, Try, Change...

Rigidity and perpendicular indenter positioning are crucial to obtain Vickers indents with a perfect geometry. Re-invented, adjustable indenter actuators provide maintenance free, smooth force application, easy to access and easy to replace indenters. Standard integrated XY-stage overview camera, with optical zoom, reduces application set up time dramatically.

Changing the game...

1 6 POSITION PRECISION TURRET & OPTICAL SYSTEM

The 6 position turret is supplied as a standard feature on all 600 models and allows to install indenters for Vickers, Knoop and Brinell (balls 1mm & 2.5mm) testing. Factory installed, the FALCON 600 has four objectives 2.5X, 10X, 20X, 50X that, in combination with the 18 Megapixel camera, with 4X digital zoom, supersede the need to buy larger magnification objectives.

2 STAGE OVERVIEW CAMERA

Create magnified sample overview with the standard on-board, auto focus, optical & digital zoom, overview camera. The field of view of this sophisticated full color camera system does not limit you to one field of view, but gives a ZOOM range of 50 x 35mm up to 200 x 180mm without the need to use time consuming scan and stitch functions.

Once the viewing area needs to be larger than the zoom range, scanning and stitching can be selected to create full stage overview. Click and go is one of the standard testing features of the overview camera. Just click randomly on designated area's and push "start". All tests run automatically. The pattern video overlay function eases positioning of multiple test rows or patterns across the specimen. The pattern video overlay scales automatically with every magnification, stepless, while the zoom camera decreases or enlarges the overview.

3 DYNAMIC Z-AXIS CONTROL & COLLISION DETECTION

A high end ball bearing Z-axis spindle is one of the very unique functions. Z-axis displacement at an accuracy of micron's supports ultra-fast auto focus. Z-axis controls are nearly limitless; CNC as a result from a test program, by touch screen indicators, from the built in joy stick, by the scroll wheel of the mouse, by fast up and down buttons or from a scroll wheel on the front of the machine. Positioning has never been this easy. Speed control related to your own movement; (0.01 up to 20 mm/s).

To avoid any collision between the work piece and the turret, the Z-axis is controlled by a flawless collision detection and Z-axis retraction system. So neither the tester nor the workpiece are exposed to any damage.

4 HIGH SPEED CNC MOTORIZED XY-STAGE

Save time and improve efficiency with one of the high speed, highly accurate motorized XY-stages. Available in variable sizes from standard, to large and extra-large. Enable automated sequencing of multiple samples. The ultra-high accuracy and repeatability guarantee precise positioning of indents and allow re-evaluation of any measurement points in batch or single view. Repeatability within 3 micron.



CONNECTIVITY, CONTROL & QUALITY ASSURANCE

The system has bi-directional in and output channels. Tester control can be conducted remotely and supports for instance, but not limited to robotic systems. Test values can be exported as single values or as string of data to be handled by 3rd party quality evaluation software.

Q-DAS certified. (Optional)

5 15" HD TOUCH SCREEN OPERATOR INTERFACE

All machine control and process workflow can easily be operated from the 15" industrial capacitive touch screen. At choice a second 15" or larger screen can be connected.

6 SHOCK RESISTANT ABS MACHINE COVERS

The tester is fitted with a high-end external shell structure. All in a unique design with high-end aluminium panels. The shock proof and damage resistant ABS machine covers can withstand the harshest environment.

Science fiction?... No, just reality ahead of schedule

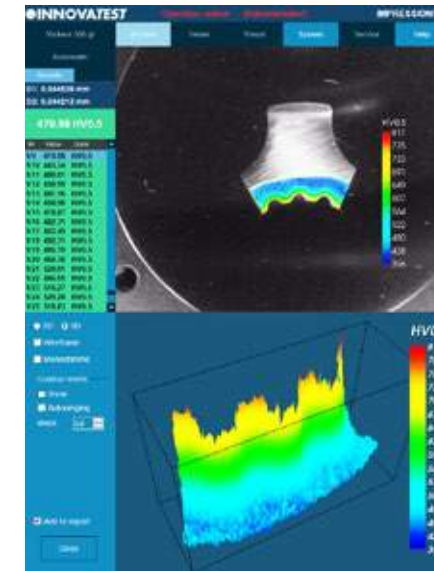
The Graphical User interface (GUI), contains Industry preferred applications, and offers easy to learn, advanced workflow control. A simple test can be set up and conducted in about 3 seconds... IMPRESSIONS® layout & functions will match not only your particular application requirements, but also meet the needs and preferences of your operators. A user level management system maximizes their comfort and efficiency.

The unique in the industry, 15" portrait mode, capacitive touch screen, gives room to all possible applications. Dual screen: For demanding users, a second vertical 15" or 24" landscape screen can be connected. For educational purposes, schools, universities, a full HD projector (beamer) can be connected to the HDMI supported outlet. With this many options in Hardware and Software configuration, yearly updates and on demand upgrades, IMPRESSIONS® is truly the leading software in the industry.



FEATURED BY IMPRESSIONS v2

ADVANCED SOFTWARE APPLICATIONS



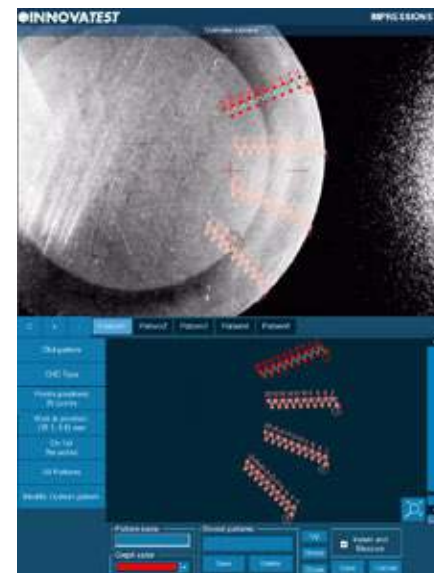


1 VIDEO OVERLAY GRAPHIC PATTERN EDITOR

The IMPRESSIONS® pattern editor allows the user to create any number of test patterns with a large number of variable settings. Create test patterns with great precision and freedom. Verify the settings in the preview mode. Drag & drop patterns from one test sample to another sample. Live vision technique over zoom overview camera, no image stitching required. Combine different patterns and even different test forces in one program, and run them fully automatically. All test points can be identified individually or to customer specifications. The label is shown in the test result list and in the test results overview and print out. An important function for later sample analyses.

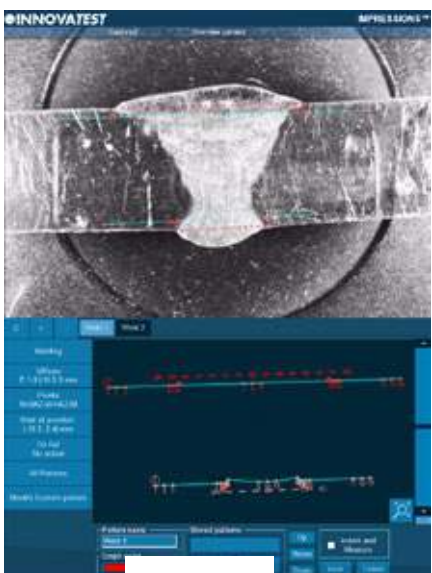
2 CHD, SHD, NHD

For the performance of test series for CHD/SHD/NHD data of specimens according to standard. The test can be started directly from the surface view or from the overview. Additional core points of hardness can be defined separately for NHD measurements. The distances of test points are automatically set to a minimum distance, following the standard, to assure correct testing is conducted. Time saving test mode "complete all indentations – then evaluate" and "auto-stop" to complete test series as soon as the lower hardness limit has been reached.



3 WELD INSPECTION (ISO 9015)

This especially developed tool enables you to conduct hardness testing on welded parts or segments according to ISO standard. Setting up the pattern according to the requirements becomes "easy-to-do", due to pre-set test points in the different zones of the weld and automatic correlation between test points. The system will run a fully automatic test procedure and displays and records the results accordingly.



Easy to operate, time reducing solutions...



4 HARDNESS OF SCREW THREAD DECARBONIZED ZONE (ISO-898-1)

A specialized software tool of IMPRESSIONS® allows you to set up and conduct fully automatic testing as per ISO 898-1 for screw thread measurement of (de)-carbonized part.



5 AUTOMATIC EDGE DETECTION

Technology that automatically or at a mouse click recognizes the edge of your sample. This helps to determine and fix the desired starting position for CHD or other pattern testing jobs



6 AUTOMATIC CONTOUR SCANNING

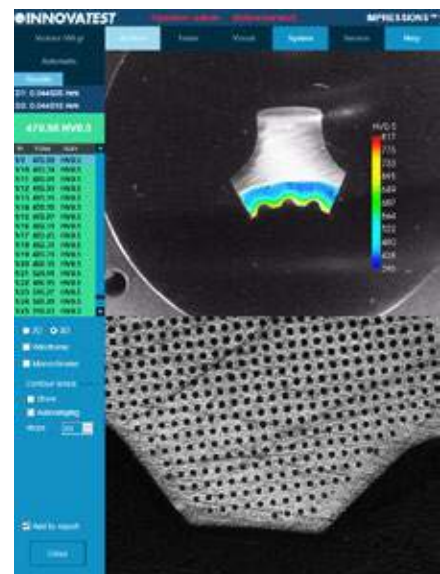
This application scans the entire outline (or partial) area of a sample. The function can be used with an objective or, ultra fast, by using the overview zoom camera. The system scans the entire outline defined and stores all relevant data in the test program. Subsequently, a chosen number of test points can be programmed into the particular program, or be conducted at selected distances, relative to the edge. This advanced feature enables the hardness testing procedure to be performed completely automatic. An excellent feature to combine with 2D or 3D hardness mapping, also known as "plane hardness chart".

Yes, we can...



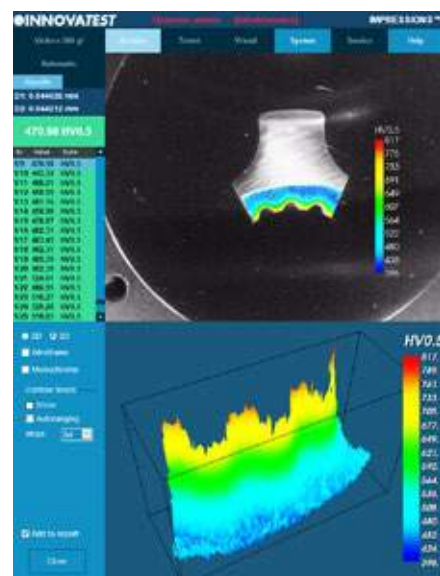
7 Kic CRACK MEASUREMENT

For those requiring more in depth knowledge on materials behavior, and wish to study on fracture and fatigue, crack growth can be predicted (and measured) by using the Kic application. The software supports Kic crack detection under load. At choice, one of both methods, Palmqvist or Median / Radial fracture toughness can be selected.



8 2D HARDNESS CHART

The optional application „Plane hardness chart“, also referred to as Color Mapping, is the perfect tool for securing the detail of the hardness distribution over the total cross section, especially of heat treated samples. An important feature in material exploration, weld testing or in damage analysis.



9 3D HARDNESS CHART

Besides the option to display a 2D graphic diagram, the software can generate a 3D visual. 2D and 3D hardness chart are one application.

10 SNAPSHOT FUNCTION

This handy function in IMPRESSIONS® allows you to make screen captures of the viewing area. It gives the opportunity to store such images with comments or to paste them into the report generator for further processing.



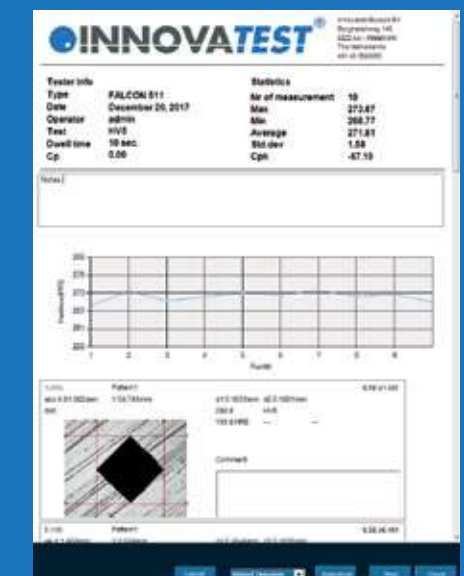
11 USER DEFINED PROGRAMS

For repeating jobs, IMPRESSIONS® utilizes the option of setting up and storing custom test programs. For each task, a „job“ can be created. All application specific parameters, like hardness scale, force, dwell-time, pattern, conversion and the report template are stored in the same program.



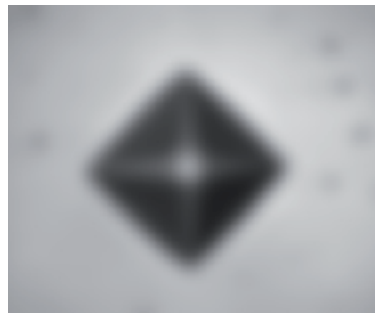
12 REPORT GENERATOR

The report generator offers to design customized testing reports, including your company's details and logo and include testing results, graphics and pictures of indentations in an easy to edit environment. The file can be printed straight to a connected laser printer for further distribution. Alternatively the file can be exported as a CSV file, to be used in MS Office applications or 3rd party quality assurance software.



AUTOMATIC IMAGE

EVALUATION



1

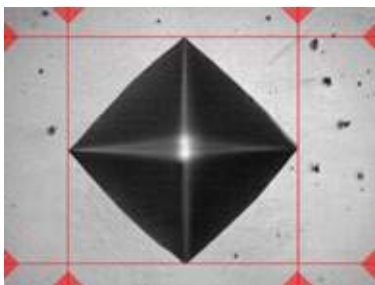
1 AUTO FOCUS

Fast & precise, observe how IMPRESSIONS® finds focus from a large distance, as far as the travel of the Z-axis allows. Algorithms used for close distance autofocusing set new standards in AF speed.



2 AUTOMATIC MEASUREMENT

Manual positioning of filar lines is no longer required. IMPRESSIONS® refined measurement algorithms detect indents even on very poor or scratched surfaces and measure the relevant indent dimensions according to standards. Stay in control by switching to manual measure mode and have the option of adjusting measurements by touching the screen or using the mouse. Filar lines can be colored to give the best contrast against the specimen's surface. To assure that measurements meet relevant standards on symmetry, enable the automatic indent check. All hardness values can be converted to other scales according to ISO 18265, ISO 50150, ASTM E140.



2

Evaluate whatever you want, --
because what gets measured, gets produced...

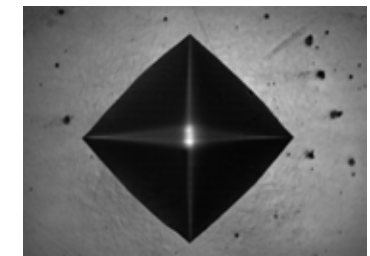
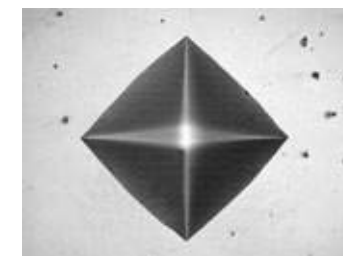
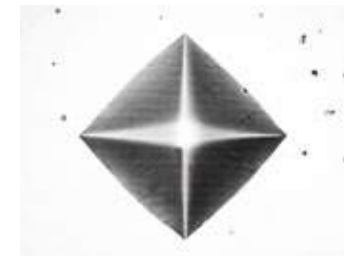
3 ILLUMINATION SETTINGS

IMPRESSIONS® software automatic illumination system adapts to the correct illumination regardless of the sample surface quality, wherever on the sample, independent from material (steel, carbide, coated or ceramic). Contrast, Brightness and Program, can be set automatically for each measurement or controlled manually. Sharpness can be stored with the pre-determined test.

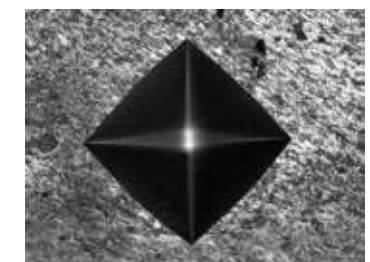
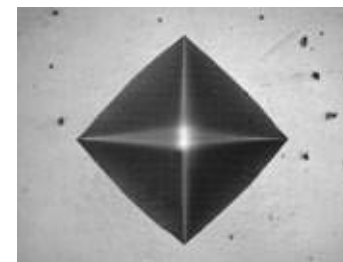
Too bright

OK

Too dark



3



4

Irregular surface

Regular surface

Poor surface

4 REFINED IMAGE DETECTION

Complex, refined algorithms ensure reproducible measurements on different materials and even on scratched and damaged surfaces.



LIMITLESS POSSIBILITIES

The FALCON 600 is designed in such a way that for the large selection of fixtures and specimen holders can be used on the CNC XY-stage. The frame size allows a large workspace accommodation. Regardless of the shape of a particular workpiece, the accessories list and corresponding software applications enable to test almost any component and part.

AMMUNITION TESTING PATTERN CONFIGURATOR & REPORTING

This application is developed in close cooperation with special manufacturers of ammunition shells and casings. It allows single and multiple shell/casing testing according to the requirements in the industry. The fully automatic test procedure generates a detailed report, providing single readings and statistics with Go/No indication. This further includes sophisticated settings for remeasurement. For particular details please contact our sales department.

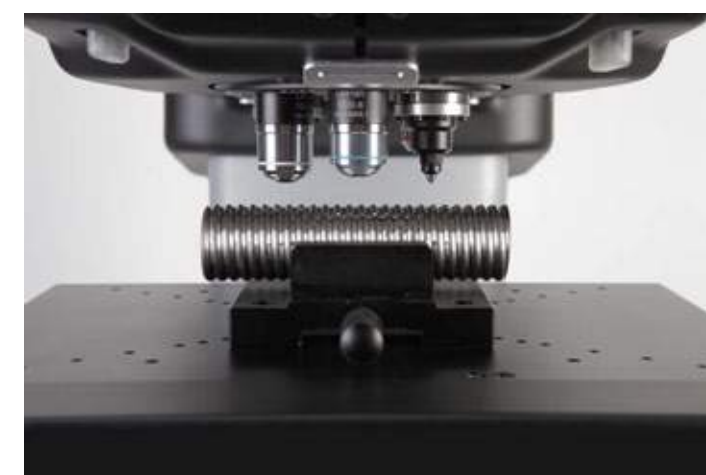
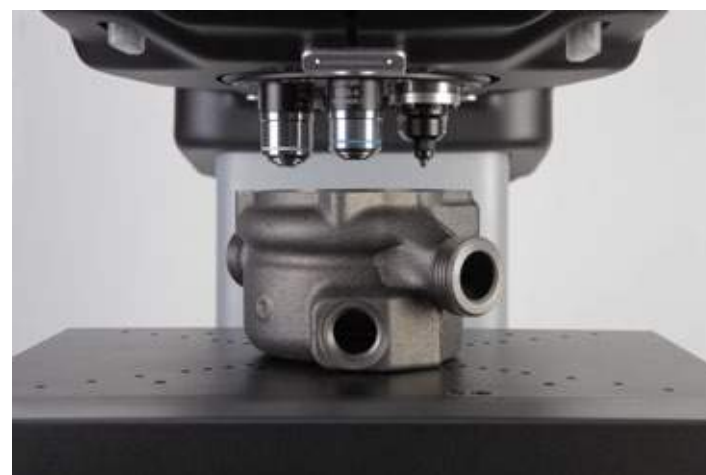
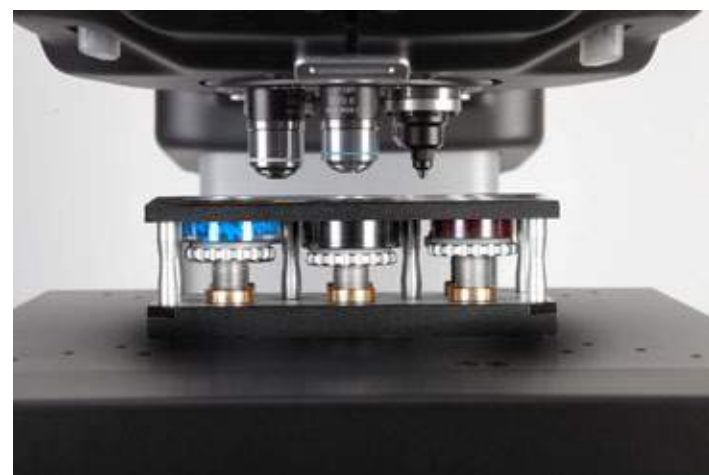
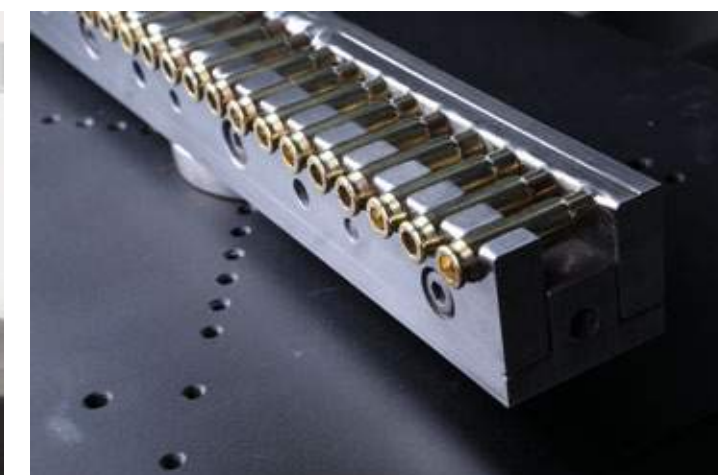
INNOVATEST
 ASSOCIATED SUPPLIERS
 For information call
 0222-AM-MASSON (F&L)
 Phone +31 40 502060
 info@innovatest.com

| Tester info: | | Statistics: | |
|--------------|-------------------------------------|--------------------|--------|
| Type | FALCON 600 | Nr of measurement | 40 |
| Date | 24-1-2018 | Max | 156.78 |
| Operator | Admin | Min | 110.86 |
| Dwelltime | 10 sec. | Average | 133.12 |
| Test | HVS | Standard Deviation | 13.01 |
| Program | 5 shells Op5/7 12.7x99 courbes FN14 | Range | 45.93 |

Gemmette: 19097-104
 four
 4

HARDNESS DIAGRAM

| Min | Max | Total | Avg | Point | 1 | 2 | 3 | 4 | 5 | |
|-----|-----|-------|-----|-------|---|--------|--------|--------|--------|--------|
| 126 | 123 | 188 | 187 | 10.0 | 1 | 126.21 | 123.03 | 143.36 | 137.62 | 141.99 |
| 123 | 121 | 125 | 122 | 17.0 | 2 | 122.24 | 118.71 | 110.77 | 118.04 | 115.28 |
| 120 | 88 | 120 | 122 | 20.0 | 3 | 118.4 | 116.73 | 111.13 | 119.94 | 117.11 |
| 122 | 120 | 120 | 122 | 23.0 | 4 | 117.07 | 126.07 | 111.13 | 122.96 | 118.71 |
| 120 | 122 | 120 | 122 | 26.0 | 5 | 120.65 | 120.71 | 121.95 | 121.58 | 124.58 |
| 118 | 118 | 148 | 147 | 45.0 | 6 | 120.88 | 128.08 | 143.07 | 143.32 | 138.11 |
| 120 | 122 | 160 | 162 | 60.0 | 7 | 146.00 | 149.00 | 126.14 | 147.87 | 142.20 |





SUPPORT YOUR BEST TESTING RESULTS

With our rigid designed Bench stands

- Rock solid bench stands
- 100% retractable drawer, bearing guidance, max 100kg load. Rubber anti slip bottom
- Lockable cabinet, 300mm high
- Adjustable feet, (+/- 50mm height adjustable to reach ergonomic working position)
- Made of corrosion resistant zinc plated steel with RAL powder coating
- Carrying capacity of 400kg
- Top surface made of 50mm Plywood with 1.5mm chemical resistant plastic plating, edges made of shock resistant 3mm ABS side liner
- Industrial quality, for workshop or laboratory

Designed for hardness testing instruments, painted in INNOVATEST® RAL colors matching our testers.



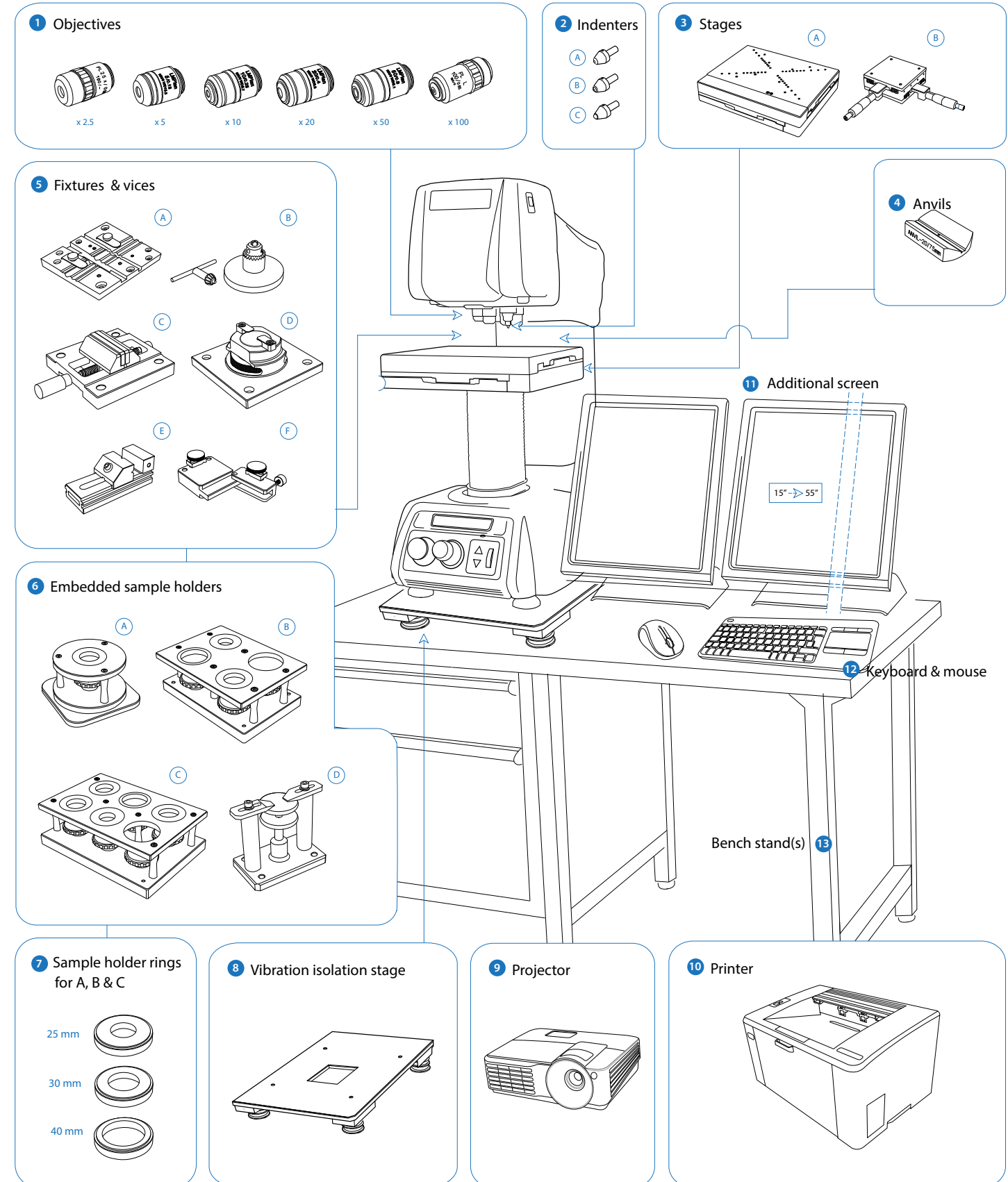
UN-STAND/960 71 x 75 x 80 cm



UN-STAND/965 150 x 75 x 80 cm

ACCESSORIES FALCON 600

Schematic overview of the configuration options, standard and optional accessories



Not all accessories are displayed on this page. Full details can be found on the Order details page.

ORDER DETAILS

FALCON 600



| | | |
|--|------------|--|
| FALCON 603 Micro hardness tester, 10gf - 10kgf | FALCON 603 | |
| FALCON 608 Micro hardness tester, 1gf - 31.25kgf | FALCON 608 | |
| FALCON 611 Micro hardness tester, 1gf - 62.5kgf | FALCON 611 | |
| Force extension 0.1gf - 0.99gf, for models 608/611 | F600/FE01 | |

ACCESSORIES

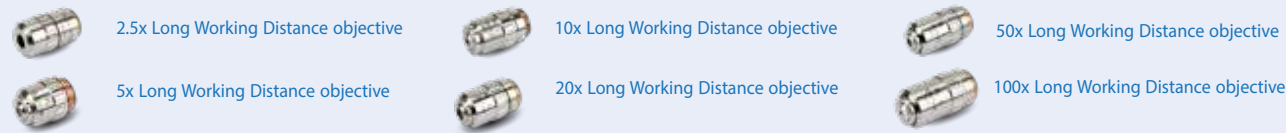
| | | | | | |
|---|---|--|--|---|----------|
| 1 | Objectives | 2.5 x Objective FOV 2000 µm | ASSUN-OBJ2.5X | STANDARD | |
| | | 5 x Objective FOV 1000 µm | BM-05-0001 | | |
| | | 10 x Objective FOV 500 µm | BM-05-0002 | STANDARD | |
| | | 20 x Objective FOV 250 µm | BM-05-0003 | STANDARD | |
| | | 50 x Objective FOV 125 µm | BM-05-0004 | STANDARD | |
| | | 100 x Objective FOV 75 µm | BM-05-0005 | | |
| | | Stage overview camera, high resolution, HD, full color | UN-OVCAM2C | STANDARD | |
| 2 | Indenters | Second indenter position. Factory installed | | | STANDARD |
| | | A | Vickers Indenter ISO/ASTM certified | IN-8105 | |
| | | B | Knoop Indenter ISO/ASTM certified | IN-8205 | |
| | | C | Brinell Indenter 1 mm, includes 1 carbide ball, ISO/ASTM certified | IN-7001 | |
| | | | Brinell Indenter 2.5 mm, includes 1 carbide ball, ISO/ASTM certified | IN-7006 | |
| 3 | Stages | Brinell Indenter 5 mm, includes 1 carbide ball, ISO/ASTM certified | | | |
| | | A | Motorized CNC X-Y stage, 250x205mm Displacement: 120x100mm, Motorized CNC X-Y stage, 300x225mm, Displacement: 170x120mm, Motorized CNC X-Y stage, 350x225mm, Displacement: 220x120mm. Repeatability +/-0.003mm; requires: cable set, CE-99-0002, no extra fixture required | UN-XY571210 UN-XY571712 UN-XY572212 | STANDARD |
| | | | Cable connecting to CNC stage to embedded driver (X-Y set) | CE-99-0002 | STANDARD |
| | | B | Manual X-Y stage with analogue metric micrometers, 100x100mm, Displacement: 25x25mm, scale 0.01mm, max load 100kg, Requires: AS500XL-450-02 Mounting plate | UN-XYSTAGE/120 | |
| | | | Digital micrometer head, Displacement: 25mm, res. 0.001mm | IMP-DIGMIC | |
| 4 | Anvils | Small V-anvil 3-20 mm, requires base plate | UN-ANVILSV/105 | | |
| | | Large V-anvil 20-75 mm, requires base plate | UN-ANVILLV/106 | | |
| | | Base plate for V-anvils UN-ANVILLV-105/106 | UN-VANVILBASEPL | | |
| 5 | Fixtures and vices | A | V Groove clamp for small round parts dia. 0.8-5 mm | UN-VGROOVECLAMP | |
| | | B | Axle chuck | UN-AXLECHUCK | |
| | | C | Small parts vice jaw; width 55mm; open 50 mm; self-centering | UN-VICE/115 | |
| | | D | Thin metal clamp | UN-CLAMP/115 | |
| | | E | Polished precision vice lock down system ; jaw 25 mm, depth 20 mm | UN-VICE/210 | |
| | | | Polished precision vice lock down system ; jaw 36 mm, depth 42 mm | UN-VICE/215 | |
| | Polished precision vice lock down system ; jaw 48 mm, depth 75 mm | UN-VICE/220 | | | |

| | | | | |
|----|---------------------------|---|--|-------------|
| | | Polished precision vice lock down system ; jaw 75 mm, depth 100 mm | UN-VICE/230 | |
| 6 | Embedded sample holders | F | Wire testing fixture | UN-WIRE/105 |
| | | A | Sample holder for 1 sample, 50mm/2" | UN-ESH1 |
| | | B | Sample holder for 4 samples, 50mm/2" | UN-ESH4 |
| | | C | Sample holder for 6 samples, 50mm/2" | UN-ESH6 |
| | | D | Insert 25mm, for sample holders | UN-ESHI25 |
| | | Insert 30mm, for sample holders | UN-ESHI30 | |
| | | Insert 40mm, for sample holders | UN-ESHI40 | |
| 7 | Sample holder | Universal clamp and levelling device | UN-CLAMP/105 | |
| 8 | Vibration isolation stage | Passive vibration isolation stage, clamping of vibration for low force testing. | UN-AVS-150 | |
| 9 | Projector | On request, any brand of your choice | UN-PROJECTOR | |
| 10 | Printer | Laser printer | UN-PRINT | |
| 11 | LCD screen | Portrait mode 15" capacitive touch screen | UN-SCREEN1 | STANDARD |
| 12 | Keyboard and mouse | Logitech keyboard and mouse | UN-SKBSET | STANDARD |
| | | Joystick | 3 axis joystick with fine adjustment for X-Y-Z operation | UN-JSTICK |
| 13 | Bench stands | Cabinet test table with drawer 71x75x80cm | UN-STAND/960 | |
| | | Cabinet test table with drawer 150x75x80cm | UN-STAND/965 | |
| | | Pre installation, calibration, handling and standard packing (for sea and airworthy transportation) | SEAPACK/032 | |

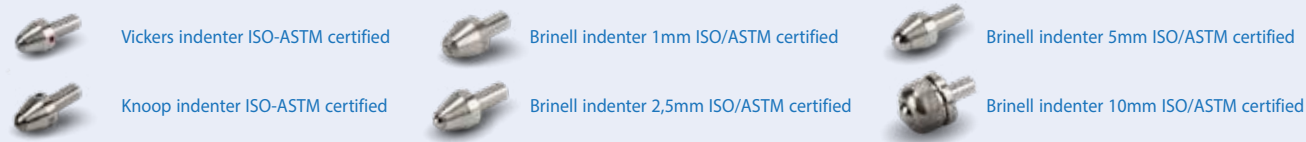


ACCESSORIES

OBJECTIVES



INDENTERS



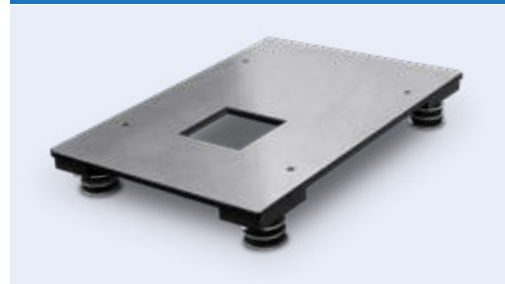
STAGES



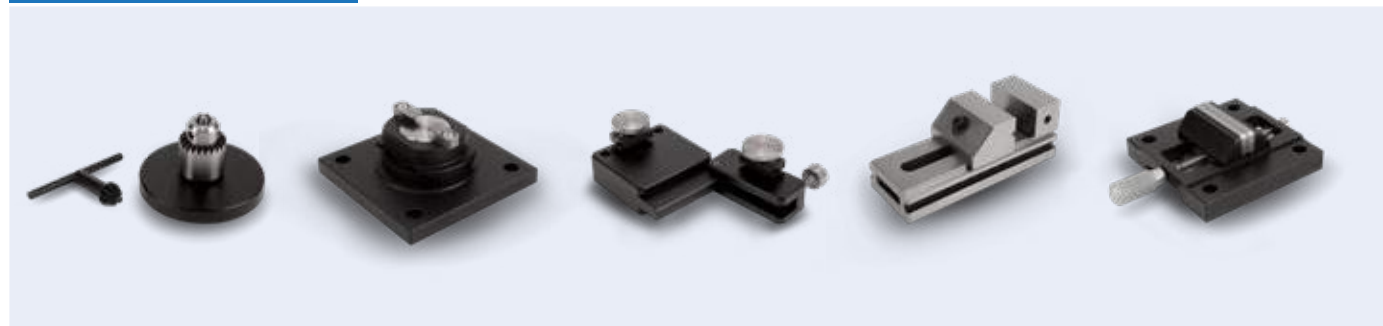
CLAMP



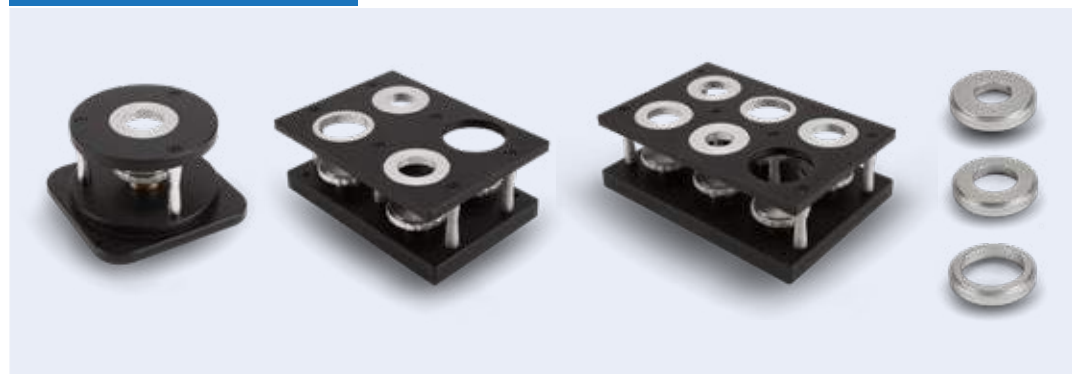
VIBRATION ISOLATION STAGE



FIXTURES & VICES



SAMPLE HOLDERS



V-ANVILS



ORDER DETAILS

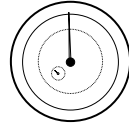
SOFTWARE

| | | |
|--|--------------|----------|
| Manual on-screen measurement | UN-MANM | STANDARD |
| Automatic measurement | UN-AUTOM | STANDARD |
| Automatic focussing | UN-AUTOFOC | STANDARD |
| Report configurator | UN-REPORTA | STANDARD |
| User level management | UN-LEVMAN | STANDARD |
| Overview / Full view zoom camera + software functionality, field of view 50x35mm up to 200x180mm | UN-OVCAM2C | STANDARD |
| CHD, SHD, NHD configurator & graphic interface. Requires: indent pattern configurator (TESTPAT01) | UN-PATCHD | STANDARD |
| Video overlay graphic pattern editor | UN-TESTPAT01 | STANDARD |
| Weld inspection (ISO 9015) | UN-WELDPAT | |
| Ammunition testing pattern configurator & reporting | UN-SHELLCONF | |
| Hardness of screw thread decarbonized zone ISO 898-1 | UN-ISO898/1 | |
| Automatic edge detection | UN-EDGEDTC | |
| Automatic contour scanning | UN-CSCAN | |
| Drawing & measuring application | UN-DRMEAS | |
| Snapshot function | UN-SNAPSH | STANDARD |
| Full stage view scanning | UN-STAGESC | STANDARD |
| KIc crack measurement under load. Palmqvist & Median / Radial fracture toughness | UN-CRKPAP | |
| 2D / 3D hardness chart (scanning/mapping, includes automatic contour scanning) | UN-CSCAN2D3D | |
| DualView Technology, 2 viewing screens software ; screen, cables, European and US power cables included* | UN-DVTECHSET | |
| Virtual joystick, on-screen | | STANDARD |
| Advanced 3-axis communication protocol for robotic systems | UN-REMC | |
| Q-DAS Certified connectivity protocol | UN-QDAS | |

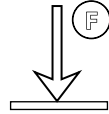


SPECIFICATIONS

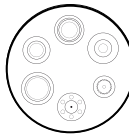
HARDNESS SCALES

| | | |
|---|--|---|
|  | VICKERS ISO 6507 ASTM E384, E92 JIS B 7725 *Extended range | HV0.001, HV0.002, HV0.003, HV0.004, HV0.005, HV0.006, HV0.007, HV0.008, HV0.009, HV0.010, HV0.015, HV0.020, HV0.025, HV0.050, HV0.1, HV0.2, HV0.3, HV0.5, HV1, HV2, HV2.5, HV3, HV4, HV5, HV10, HV20, HV25, HV30, HV40, HV50 *(HV0.0001 - HV0.0009 increases with steps of HV 0.00005) |
| | K1c Fracture toughness | All Vickers forces & scales |
| | KNOOP ISO 4545 ASTM E92 JIS Z 2251 | HK0.001, HK0.003, HK0.005, HK0.015, HK0.01, HK0.02, HK0.025, HK0.05, HK0.1, HK0.2, HK0.3, HK0.5, HK1, HK2, HK5 |
| | BRINELL ISO 6506, ASTM E10 JIS Z 2243 | HB1/1kgf, HB1/1.25kgf, HB1/2.5kgf, HB1/5kgf, HB1/10kgf, HB1/30kgf; HB2.5/6.25kgf, HB2.5/7.8125kgf, HB2.5/15.625kgf, HB2.5/31.25kgf, HB2.5/62.5kgf, HB5/25kgf, HB5/62.5kgf |
| CONVERSIONS | Conversion to other hardness scales according to ASTM E140, ISO 18265, GB/T 1172 | |

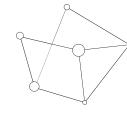
TEST FORCE

| | | |
|---|------------------------------|---|
|  | Force application | Multi-load cell, closed loop, force feedback system |
| | Test forces | 0.0001kgf – 62.5kgf |
| | Force range per model | FALCON 603 0.010kgf – 10kgf FALCON 608 0.001kgf – 31.25kgf FALCON 611 0.001kgf – 62.5kgf |
| | Test force tolerance | < 0.25% for test force 100 gf to 62.5kgf < 0.5% for test force below 100gf |
| | Dwell time settings | Default 10 seconds, user defined. Up to 999 seconds |
| | | |

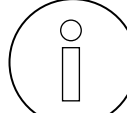
TURRET

| | | |
|---|-----------------------------|--|
|  | Motorized turret | Ultra-fast, 6 position turret, 2 indenter positions, 4 objective positions |
| | Objectives | Long working distance 2.5x, 5x, 10x, 20x, 50x, 100x |
| | Indenters | Certified indenters (ISO/ASTM) available at choice |
| | Camera 1 (objective) | 18 Mpx, HD, 4K+, Machine vision system |
| | Camera 2 (overview) | Full HD, Optical zoom system, variable FOV 50 x 35mm - 200 x 180mm |

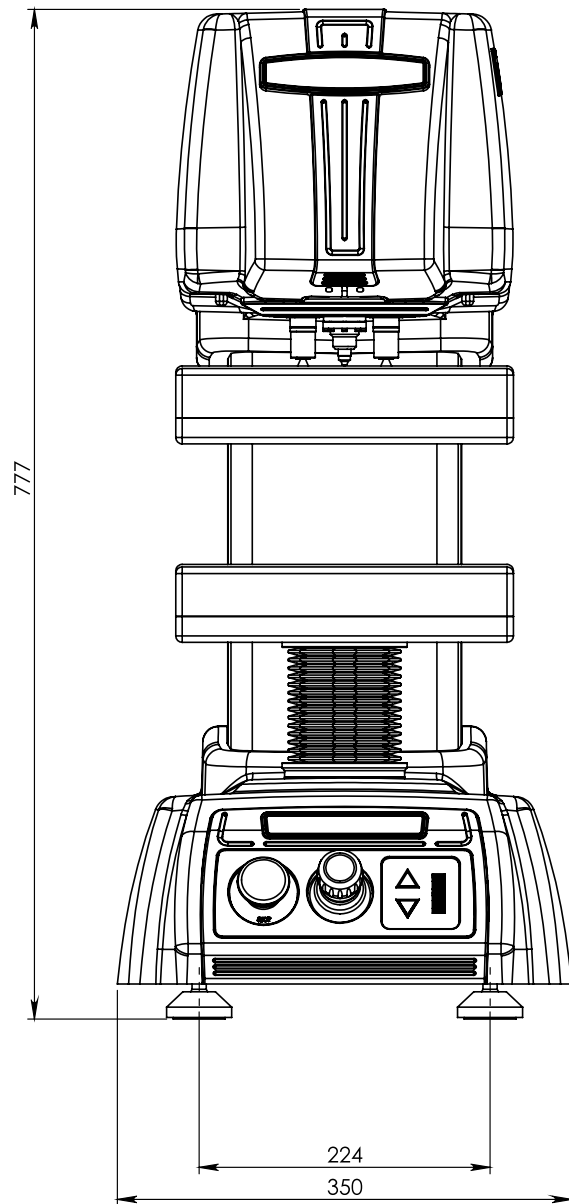
SYSTEM

| | | |
|---|--|--|
|  | Electronic system | High performance embedded controller, i7, mSSD 120 GB, MS Windows® 10 operated |
| | CNC support | 5 Axis CNC controller (for motorized stages) or stage accessories |
| | Screen(s) | 15" portrait mode capacitive touch screen, second screen option |
| | Display resolution | 0.01 HV, HK, HB |
| | Statistics | Total test, max, min, average, range, standard deviation, All in real time after each test |
| | Hardness conversion | Rockwell, Rockwell Superficial, Vickers, Brinell, Knoop, Leeb & Tensile |
| | Software | IMPRESSIONS™ V2, work flow system & tester control |
| | Data storage capacity | Internal and external mSSD, SSD or HDD |
| | Data output | XML, CSV, Certified for Q-DAS (optional) |
| | Connectivity | 5 USB ports, RJ45 Ethernet LAN, W-LAN, RS-232, Blue Tooth, 5 Axis CNC & motorized X-Y stage connector, Dual HDMI screen connectors |
| Printer | A4, A3 full color laser printer (optional) | |

GENERAL

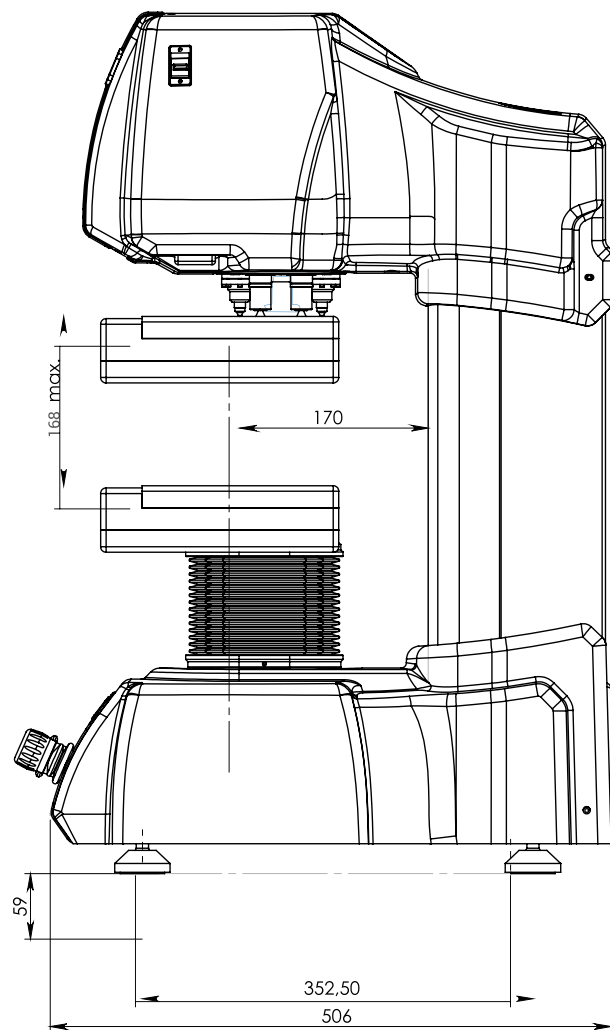
| | | |
|--|------------------------------|---|
|  | Machine dimension | 777 mm x 350 mm x 506 mm |
| | Machine weight | 80 kg |
| | Power supply | 100VAC to 240VAC, 50/60Hz, single phase |
| | Operating temperature | 10°C to 35°C, non-condensing |
| | Power consumption | 100W |
| | Humidity | 10% to 90%, non-condensing |

TECHNICAL DRAWINGS



All dimensions in these drawings are in mm, approximate. Working heights and or workpiece accommodation varies depending on the stages and stage accessories used.

Please contact our sales department for more details.



OTHER MODELS IN THE FALCON RANGE



FALCON 400

Load Cell, closed loop
Micro/Macro Vickers, Knoop
& Brinell Hardness testers
With fine adjustable Z-axis
side handwheel
See brochure B18F400/XX



FALCON 450

Load Cell, closed loop
Macro/Micro Vickers, Knoop
& Brinell Hardness tester
With Z-axis handwheel
See brochure B18F450/XX



FALCON 500

Multi Load Cell, Closed loop
Fully automatic, free to
configure Micro/Macro Vickers,
Knoop & Brinell Hardness
testers. With ball bearing
motorized Z-axis
See brochure B18F500/XX



FALCON 5000

Multi Load Cell, Closed loop
Fully automatic, 8 position
turret, laser positioning.
Micro/Macro Vickers, Knoop
& Brinell Hardness testers.
Descending test head, fixed
work piece position
See brochure B18F5000/XX



FALCON 5003XL

Multi Load Cell, Closed loop
Fully automatic, 8 position
turret, laser positioning.
Micro/Macro Vickers, Knoop
& Brinell Hardness testers
Descending test head,
fixed work piece position
See brochure B18F5003XL/XX

Changes in products and/or product specifications can emerge due to new technologies and continuous development.

We reserve the right to change or modify specifications of the products without prior notice. We recommend you to contact our sales office for up-to-date information.

Brochure B18F600/06/EN

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