



Code	Description
742030200	<p style="text-align: center;">AUTOMATIC MICRO-HARDNESS TESTER MICROSCAN AC</p> <p>Automatic optical-digital system for Vickers micro-hardness testing from HV0,01 to HV1 (up to HV5 with optional loads) according to ISO 6507-2 Standards.</p> <p>Compliance with ASTM E384 available upon request. Determines Knoop hardness by using the relevant indenter.</p> <p>The system consists of:</p>
	<p style="text-align: center;">BASIC STRUCTURE consisting of:</p> <ul style="list-style-type: none"> • Sturdy cast iron stand • Main body pivoting on a cylinder rod, fitted with macro/micrometric focusing device. Suitable for testing large sized work pieces. • Microscope fitted with 10X and 50X objectives (other magnification objectives can be ordered separately) • 20W halogen illuminator with adjustable intensity • Load application speed adjustable by means of a dashpot • Standard loads to be selected manually: 10 – 15 – 25 – 50 – 100 – 200 – 300 – 500 - 1000 gf (0,098 - 0,147 - 0,245 - 0,490 - 0,980 - 1,961 - 2,942 - 4,903 - 9,807 N) (optional loads up to 5000 gf / 49,03 N) • Manual X-Y stage 125 x 125 mm, travel range 25x25 mm, with micrometers 0.01 mm resolution. • Accessory case including: <ul style="list-style-type: none"> – 136° diamond pyramid indenter for Vickers microhardness testing – HV 1 test block – Instruction manual – Dust cover – Small bottle of oil for dash-pot – Screw driver



Code	Description
	<p style="text-align: center;">AUTOMATIC COMPUTERIZED READOUT SYSTEM consisting of:</p> <p>◆ HARDWARE</p> <ul style="list-style-type: none"> • Entry Level PC: <ul style="list-style-type: none"> * High resolution flat LCD 19" screen to visualize and analyze images of the indentations detected by the camera * Keyboard and mouse * High resolution CCD camera <p>◆ SOFTWARE</p> <ul style="list-style-type: none"> • Windows environment • OEM license for Microsoft WORD® • Generation of single indentations and programmable load dwell time • Measuring software for Vickers micro-hardness testing, according to ISO 6507/2 standards, featuring two levels of automation: <ul style="list-style-type: none"> – Automatic mode: the system automatically detects the indentation and carries out the measurements (the sample surface must be properly prepared) – Manual mode: the operator moves a light reference onto the four vertices of the indentation displayed on the monitor (digital zoom); the system measures the diagonals and calculates the relevant micro-hardness value • User's friendly interface • Statistical processing of the results (Average, maximal, minimal values, and standard deviation) • Determination of the distance between two points • Automatic control of light intensity and manual focusing adjustment • Processing of the measurement results by means of: <ul style="list-style-type: none"> – Screen display of the measured or calculated numerical data – Automatic output of the results and relevant charts to Microsoft WORD® Template or RTF format – Storage of parameters and results of the test cycle on hard disk or external devices – Storage of the images on hard disk in BMP, TIFF, PNG format and possibility to review them – Creation and processing of certificates (logo and company data, measurement conditions, performed measurements) • Maximal and minimal hardness control • Conversion of hardness scales • Calibration of optical objectives • Multi - language support and access level control (three operative levels by password) • System set-up



Code	Description
	TRAINING AND ACCESSORIES FOR MODELS ISOSCAN, VICKERS and MICROSCAN
742042202	<p style="text-align: center;">TRAINING COURSE for AC models</p> <ul style="list-style-type: none"> • Training course at our premises providing instructions how to use the chosen instrument (file management, execution of test batches, programming and execution of hardness profiles). Duration of the course: 8 hours • Board and lodging near our location as well as travel expenses are not included in the a.m. price and can be quoted upon request.
742EV2590	Integrated PLUS optional system for microhardness testers models AC consisting of:
	<ul style="list-style-type: none"> • Electronic digital micrometer head featuring 0.001 mm resolution mounted on the X axis, provided with relevant connection cables to interface with the central unit (optional on Y axis) • Generation and handling of hardness profile (traverses) patterns as well as hardness arrays(1) • Synoptic control of the progress in the execution of hardness profiles and arrays (1) • Software to generate hardness profiles (traverses) on the basis of a pattern. Available profile (traverse) patterns: linear, zigzag, array (1) (hardness maps) on the basis of the coordinates acquired automatically by the digital micrometer head and the measured hardness values. • Graphic visualization (2D and 3D (1)) of the profile on the screen. The results and the profile can be automatically transferred to Microsoft WORD® Template. • Repetition of single indentations and / or single measurements • Automatic determination of a hardness value at a given distance from edge • Given a hardness value, calculation of the distance from edge • Given a hardness value, calculation of the effective case depth • Automatic calculation of the effective case depth
	NOTE (1) : Array functions can be carried out only if the digital micrometer head is mounted on the Y axis.
742EV2591	<p style="text-align: center;">MICROMETER HEAD for Y axis (available only for PLUS SYSTEM)</p> <ul style="list-style-type: none"> • Digital micrometer head featuring 0,001 mm resolution complete with electronic interface.
742EV2594	<p style="text-align: center;">MICROMETRIC eyepiece (Optional for new Micro hardness tester AC series)</p> <ul style="list-style-type: none"> • 10x magnification micrometric eyepiece to view indentations and work pieces



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	ACCESSORIES FOR ISOSCAN SERIES
742EV2592	<ul style="list-style-type: none"> Dual indenter kit (Optional, to be supplied only upon order of a new hardness testers mod. Isoscan) consisting of: One Knoop indenter, one 40x objective, software for automatic indentation reading and result handling
742EV7001	<ul style="list-style-type: none"> USB CCD B/W Camera, high resolution, sensitivity and speed
742EV7002	<ul style="list-style-type: none"> Photo-tube with C-mount (for CCD camera)
742EV7003	<ul style="list-style-type: none"> Universal tilting vice
742EV7004	<ul style="list-style-type: none"> Specimen holder for prepared work pieces \varnothing 25 mm
742EV7005	<ul style="list-style-type: none"> Specimen holder for prepared work pieces \varnothing 30mm
742EV7006	<ul style="list-style-type: none"> Specimen holder for prepared work pieces \varnothing 40mm
742EV7007	<ul style="list-style-type: none"> Specimen holder for prepared work pieces \varnothing 1.25"
742EV7008	<ul style="list-style-type: none"> Specimen holder for prepared work pieces \varnothing 1.5"
742EV7009	<ul style="list-style-type: none"> Specimen precision holder (Vertical type)
742EV7010	<ul style="list-style-type: none"> Specimen precision holder (Horizontal type)
742EV7011	<ul style="list-style-type: none"> Thin specimen holding device
742EV7012	<ul style="list-style-type: none"> Precision vise (jaw opening 50 mm)
742EV7013	<ul style="list-style-type: none"> Precision vise (jaw opening 80 mm)
742EV7014	<ul style="list-style-type: none"> 5x Objective
742EV7015	<ul style="list-style-type: none"> 10x Objective
742EV7016	<ul style="list-style-type: none"> 20x Objective
742EV7017	<ul style="list-style-type: none"> 40x Objective
742EV7018	<ul style="list-style-type: none"> 80x Objective
742EV7019	<ul style="list-style-type: none"> Additional built-in 5X objective complete with optical kit (supplied only upon order of a new hardness testers mod. Isoscan)
742EV7020	<ul style="list-style-type: none"> Additional built-in 10X objective complete with optical kit (supplied only upon order of a new hardness testers mod. Isoscan)
742EV7021	<ul style="list-style-type: none"> Additional built-in 20X objective complete with optical kit (supplied only upon order of a new hardness testers mod. Isoscan)
742EV7022	<ul style="list-style-type: none"> Additional built-in 40X objective complete with optical kit (supplied only upon order of a new hardness testers mod. Isoscan)
742EV7023	<ul style="list-style-type: none"> Additional built-in 80X objective complete with optical kit (supplied only upon order of a new hardness testers mod. Isoscan)
742EV7024	<ul style="list-style-type: none"> Flat Anvil \varnothing 80 mm
742EV7025	<ul style="list-style-type: none"> Large Flat Anvil \varnothing 180 mm
742EV7026	<ul style="list-style-type: none"> Large Flat Anvil \varnothing 200 mm
742EV7027	<ul style="list-style-type: none"> Small V-Shape Anvil \varnothing 80 mm
742EV7028	<ul style="list-style-type: none"> Deep V-Shape Anvil \varnothing 80 mm
742EV7029	<ul style="list-style-type: none"> Vickers Diamond indenter for Isoscan series
742EV7030	<ul style="list-style-type: none"> Vickers Diamond indenter for ISOSCAN HV 50 hardness tester
742EV7031	<ul style="list-style-type: none"> Knoop diamond indenter for Isoscan series



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742EV7033	• X-Y Manual stage for Isoscan series (110 x 110mm / Travel 25 x 25 mm)
742EV7034	• X-Y Manual stage for ISOSCAN HV 50 hardness tester (110 x 110mm / Travel 25 x 25 mm)
742EV7035	• X-Y Manual stage for Vickers hardness tester (110 x 110mm / Travel 50 x 50 mm)
742EV7036	• X-Y Manual stage for ISOSCAN HV 50 hardness tester (180 x 180mm / Travel 25 x 25 mm)
742EV7037	• X-Y Manual stage for ISOSCAN HV 50 hardness tester (180 x 180mm / Travel 50 x 50 mm)
742EV7038	• X-Y Manual stage for ISOSCAN HV 50 hardness tester (200 x 200mm / Travel 25 x 25 mm)
742EV7039	• X-Y Manual stage for ISOSCAN HV 50 hardness tester (200 x 200mm / Travel 50 x 50 mm)
742EV7041	• Calibration glass scale for microhardness testers
ACCESSORIES FOR MODELS MICROSCAN OD – AC	
742020100	• Test block 100-225 HV1 (*)
742020200	• Test block 300-600 HV1 (*)
742020300	• Test block 700-900 HV1 (*)
742022000	• Special "V shaped" vice for wires
742021000	• Revolving specimen holding vice
742032622	• Chuck vise
742032623	• Universal vise
742032624	• Thin specimen holding device
742023000	• KNOOP indenter with MPA certification
742024000	• Micro - Vickers indenter for Microscan model
742032285	• 12V 20W halogen bulb for microscope
742032616	• Test block for low hardness range HV 0,2 (*)
742032617	• Test block for medium hardness range HV 0,2 (*)
742032618	• Test block for high hardness range HV 0,2 (*)
742035000	• 2000 gf load for Microscan model
742036000	• 3000 gf load for Microscan model
742038000	• 5000 gf load for Microscan model
742039000	• 2500 gf load for Microscan model
742000288	• 20x Objective
742000289	• 5x Objective