

To : Vysoká škola polytechnická Jihlava

Date : úterý 3. dubna 2018
 Quotation No : [REDACTED]

Your Ref :

For the Attention of :

Qty	Cat No	Description	Price
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Two axis electrodynamic test instrument

1 ID-E10KNB ElectroPuls E10000 Linear-Torsion All-Electric Test Instrument
 Linear Dynamic Capacity: ±10 kN (±2250 lbf)
 Linear Static Capacity: ±7.1 kN (±1600 lbf)
 Linear Stroke: 60mm (2.36 in)
 Torque Capacity: ±100 Nm (±880 in-lb)
 Torsion Stroke: ±135° standard configuration. Alternative configuration available with ±16 revolutions.

Daylight Opening: 887mm (35in) maximum with actuator at mid stroke
 Configuration: Twin-column with actuator in upper crosshead
 Orientation: Vertical, Floor Standing
 Lift & Locks: Electrically powered crosshead lifts with manual lever clamps
 Load Cell: ±10 kN ±100 Nm Dynacell load cell mounted to base
 Services required: Single phase 220 to 240 VAC 32A mains supply only
 The ElectroPuls E10000 Linear-Torsion Test Instrument includes load frame, combined linear-torsion motor, displacement, rotation, force and torque transducer sets, advanced digital controller and Console software. See technical specification sheets for further details.

Requires PC & GPIB card, accessories and attachment kits.

1 ID-E10KNB-S3 Supplied with Advanced Data Acquisition Module
 - Controller board configured with 6 sensor conditioners for position, load and digital position control for both Linear and Torsional Axis
 - Includes 2 additional controllable sensor conditioning modules (e.g. for strain)
 - Includes 2 analogue inputs and 4 analogue outputs
 - Includes 8 digital inputs and 8 digital outputs
 Controllable sensor conditioning module :
 Supports closed-loop control and data acquisition for only one transducer (strain gage bridge, LVDT, or +/-10V BNC input).
 Includes:
 - Transducer excitation.
 - Data resolution up to 24 bits across the entire span of the transducer.
 - Automatic transducer recognition and calibration for transducers fitted with

Qty	Cat No	Description	Price
		Instron connector. - Data acquisition rates up to 5kHz for AC Conditioned transducers and up to 40kHz for DC transducers. - User selectable signal filters from 100Hz to 1kHz in increments of 1/1000Hz.	
1	ID-E10KNB-A1	Fully integrated system, designed to operate as a stand-alone Test Instrument Temperature chamber with Accy	
1	3119-605	Instron Environmental Chamber. Temperature range: Ambient to +350 °C (+660 °F). Includes: - Digital temperature controller - Internal light - Removable wedge-ports with instrumentation cut-out - Left-hand hinged door with optical-quality heated glass window for use with Instron video extensometers. Note: Cooling options available for testing below ambient temperatures. Dimensions: Internal - Height: 485 mm (19.1in) - Width: 240 mm (9.4in) - Depth: 230 mm (9.0 in) External - Height: 635 mm (25.0 in) - Width: 350 mm (13.8 in) - Depth: 590 mm (23.3 in)	
1	3119-605A2	Temperature Controller including: - USB interface and 5m cable for connection to a PC - Manually programmable 8 segment ramp/dwell function - 0-10V Analog output (non-scalable) with 5m cable (9 pin to 25 pin) to connect to an SCM	
1	3119-605D1	English language manual set	
1	3119-605C3	IEC 200-240 V AC mains cable (EU), length 2.7m, single phase, 50/60 Hz, fitted with blue IEC60309, 16 amp power plug.	
1	3119-104	LN2 Coolant Hose Set (European), 2 meters (6.5 ft) 1/2 in BSP female on both ends.	
1	3119-102	Automatic self pressurizing Dewar Flask for LN2 Coolant. 120 litres capacity. Supplied empty. LN2 not included. European fittings (1/2" BSP male), compatible with hose 3119-104 only	
1	3119-605B2	LN2 cooling option. Minimum temperature: -100 °C (-150 °F) Cryogenic fittings: Liquid Nitrogen (LN2) - Pipe thread 1/2 inch BSP male. Note: This unit requires the (customer) supply of Liquid LN2 coolant and hoses. Prolonged use at sub-ambient temperatures can result in icing around the pullrod ports, door seal and window. Amount of icing is dependant on test duration, ambient humidity and the frequency of door opening/closure.	

Qty	Cat No	Description	Price
		Door window incorporates dual heaters to reduce condensation/frosting during low temperature testing although complete window clarity cannot be guaranteed below -30°C (-22°F). It may be possible to achieve adequate clarity at lower temperatures depending on test conditions.	
1	3119-230	Roller Carriage Brackets for use with 3119-606 Chamber.	
1	3119-230A1	Chamber Roller Bracket For use with 3119-005, -006, -009, -405, -406, -409, -505, -506, -605, -606, -609 Chambers.	
1	3119-230B2	Frame Mounting Bracket Requires 3119-230A1 option For use with: 336X, 446X, 556X, 586X and 596X table top systems 338X floor model systems 448X, 558X, 588X and 598X floor model systems. 4201, 4202 and 4204 table top systems (metric versions only) 4501 and 4502 table top systems 4206, 4208 and 4210 floor standing systems (metric versions only) 8871, 8872 and 8874 systems 4505 systems (mounting under fixed upper crosshead with 2518-8XX or 2525-8XX load cell). E10KNL and E10KNB E3000 (requires 1300-311 ElectroPuls support table) Frame mounting height: 86 mm and 124 mm	
1	3119-230C1	Support Leg - Table models, 33/55/58/596X, 338Xs, 55/58/598X with base extensions For use with: 336X, 446X, 556X, 586X and 596X table top systems 338X floor model systems 448X, 558X, 588X and 598X floor model systems with base extensions 4201, 4202 and 4204 table top systems (metric versions only) 4501 and 4502 table top systems 4204, 4206, 4208 and 4210 floor standing systems (metric versions only) 8871, 8872, 8874 and 8516 systems E10KNL and E10KNB E3000 (requires 1300-311 ElectroPuls support table) Leg height, adjustable: 790 - 1390 mm. Grips	
1	2742-315	±10 kN ±100 Nm Linear-Torsion Pneumatic Wedge-Action Grips - Features side-entry design for easy specimen insertion - Suitable for tension, compression and torsion, including full reverse-stress dynamic testing - Dynamic Linear Capacity: ±10 kN (±2250 lbf) - Dynamic Torque Capacity: Up to ±100 Nm (±880 lbf.in) - Temperature Range: Ambient only - Mechanical Interface: Flange Mount (6 x M8 clearance holes on 75 mm PCD) - Dimensions: 230 mm high x 210 mm wide (excluding air hose)	

Qty	Cat No	Description	Price
1	2742-306	<ul style="list-style-type: none"> - Grip Mass: 10.5 kg (23.14 lbs) approximately per grip (including jaw faces) - No adapters required to mount to E10000 test instruments - Quantity: 2 grips Requires: Suitable jaw faces and 2718-013 pneumatic air kit ±10 kN ±100 Nm Linear-Torsion Mechanical Wedge-Action Grips <ul style="list-style-type: none"> - Features side-entry design for easy specimen insertion from the side - Suitable for tension, compression and torsion, including full reverse-stress dynamic testing - Dynamic Linear Capacity: ±10 kN (±2250 lbf) - Dynamic Torque Capacity: Up to ±100 Nm (±880 in-lb) - Operating temperature of grips: -70 to +350°C - Compatible with 2527-202 (10kN) Biaxial Load cells - Short lower grip pullrod for ambient use to suit use on E10000 with load cell on base. - Requires: Jaw faces 2703-801 - 2703-807 Notes: <ul style="list-style-type: none"> - The upper grip mounts directly to the actuator output flange - If used with 3119-605 chamber then 2742-308 pullrods must be supplied 	
1	2718-013	Pneumatic Air Kit For ElectroPuls Test Instruments <p>Air manifold, hoses and cables required to control pneumatic grips on ElectroPuls test instruments featuring grip control buttons on jog handset.</p> Includes: Manifold, cables to interface with controller, and hoses between manifold and grips. <p>Requires: Compressed 6 bar air supply</p> Note: Compatible with 8800 Tower AND 8800MT Controller	
1	2742-308	Flange mounted pullrods for use with 2742-306 10kN/100Nm biaxial mechanical grips and 3119-505 chamber on an E10000 (load cell on base). <p>Specification:</p> <ul style="list-style-type: none"> - Includes 1 upper and 2 lower pullrods to optimise grip travel within the chamber - Operating temperature of pullrods: -70 to +350°C - Includes 1 pair of port reducing plugs for the temperature chamber Requires: <ul style="list-style-type: none"> - 2742-306: 10kN / 100Nm biaxial mechanical grips for E10000 Note: <ul style="list-style-type: none"> - Not suitable for 1kN/25Nm loadcell 2527-203 	
1	2703-801	Flat serrated jaw faces 25mm (1 in) wide for gripping flat specimens 0 to 6.3mm (0 to 0.25 in) thick. Quantity of 4 faces.	
1	2703-802	Flat serrated jaw faces 25mm (1 in) wide for gripping flat specimens 6.3 to 12.7mm (0.25 to 0.50 in) thick. Quantity of 4 faces.	

Qty	Cat No	Description	Price
1	2703-803	Vee jaw faces for gripping round specimens 3.0 to 7.8mm (0.12 to 0.31 in) diameter. Quantity of 4 faces.	
1	2703-804	Vee jaw faces for gripping round specimens 7.1 to 12.7mm (0.28 to 0.50 in) diameter. Quantity of 4 faces.	
1	2703-807	Vee jaw faces for gripping round specimens 12.0mm to 18.0 mm (0.48 to 0.71 in) diameter. Rated to 10kN Axial force and 100Nm torsional capacity. Quantity of 4 faces.	

Extensometers

1	2620-602	Dynamic Extensometer for direct strain measurement and closed loop strain control. suitable for tensile, compressive & fatigue testing, the extensometer has a 12.5mm gauge length with a travel of +/-2.5mm giving +/-20% strain. It includes a 12.5mm extender to give a gauge length of 25mm and +/- 10% strain and a 37.5mm extender to give a gauge length of 50mm and strain of +/-5% strain. Temperature range: -80C to +200C. Compatible with 8800 and 8500Plus controllers. May be immersed in acetone, silicone or alcohol.	
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Non-contact extensometer

1	2663-901	Advanced Video Extensometer 2 (AVE 2) Includes the extensometer, electronics, 2D calibration fixture, gauge mark template, and marker pens. Requires the selection of one mounting, one system interface, one or more lenses, one illumination bar, and one DIC option.	
1	2663-901T3	Transverse and Dynamic Strain Measurement Option Includes the static transverse measurement option for use with Bluehill and as analog output signal. When purchased with the Dynamic Strain Measurement option, cyclic transverse measurements can also be acquired with your WaveMatrix test data. The dynamic axial strain measurement and control option is used for both cyclic tests and fast ramp tests using WaveMatrix software. It is compatible with the 16mm focal length lens and WaveMatrix, including the WaveMatrix calculations module. Note: The Dynamic Strain Measurement option requires an 8800MT controller with Console V8.11, Firmware V12.15 and WaveMatrix V1.9 or later.	
1	2663-901R3	Licensed copy of DIC Replay Note: Requires the use of BH3.62 or higher on an Instron frame. Not for use on non-Instron test frames. Instron strongly recommends either: 1) a PC mouse (not included) when used with Bluehill Universal Operator Dashboard or 2) a separate PC for DIC data analysis.	
1	2663-901P3	Continental Europe, Korea - Euro CEE7/7 (Hybrid Type E/F)	
1	2663-901J1	Standard - Illumination kit for FOVs less than or equal to 250 mm	
1	2663-901E1	Standard Field of View Lens - 16 mm Focal Length 240 mm FOV on Table (standard width) models, Single columns, ElectroPuls & 8800 310 mm FOV on standard width floor models	

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Qty	Cat No	Description	Price
		400 mm FOV on heavyweight frames (5988 & 5989)	
1	2663-901C5	Interface and cables for 8800MT systems - axial & transverse strain. Includes quantity 2 digital encoder data acquisition channels. Note: Requires Console V8.9 and Firmware V12.14 or later.	
1	2663-901BDIG	ElectroPuls - E3000, E10000 & Servohydraulic - 8870 - WITH Chamber - Mounting Mounts directly to the base and test frame column. Extensometer is positioned at 30 degrees to the loadstring for ambient testing. Suitable for both static and dynamic testing.	
1	2663-901AB	Czech language option	
		Bend Fatigue fixture	
1	CP113329	Fatigue Rated 3 Point Bend Fixture, 10 kN Dynamic Capacity, With 10mm Diameter Anvils. - Adjustable lower span from 10 to 170 mm (0.4 to 6.7 in) - Temperature range: -100 to +350 °C (-150 to 660 °F) - Mechanical interface: M6x1 RH female thread (upper) and M20x1.5 RH male thread (lower) Upper and Lower Anvils: 10 mm Diameter Notes: Loadcell should always be base mounted Compatible with 2810-403 E10000 Linear-Torsion requires 8000-101 attachment kit	
1	CP113331	Bend Fixture Conversion Kit, 3 Point To 4 Point, for CP113329 Fixture. - Converts CP113329 3 point bend fixture to 4 point - Upper span is adjustable from 40 to 90mm (1.6 to 3.5 in) - Supplied complete with 10mm diameter anvils - Temperature range: -100 to +350 °C (-150 to 660 °F) Requires: CP113329 bend fixture	
1	2810-403	Deflectometer for 2810-400. Requires suitable extensometer (2630-107 or 2630-110). Limits the lower support anvil span to a minimum of 23 mm (0.9") plus the lower anvil diameter. Temperature range: -100 °C to +260 °C	
1	2630-107	Strain Gauge Extensometer, 25 mm gauge length, +100% -10% maximum strain. Static-rated with patented cross-braced design and cone-latch gauge length setting. Metric Calibration. Self-identifying only with 3300, 4200, 4300, 4400, 4500, 5500, 5800, 5900, 8500 and 8800 Series Systems. Operating temperature range -100 °C to +200 °C. Note: Not suitable for use in 3119-406/409/506 & CP100557 Chambers due to size.	

Qty	Cat No	Description	Price
		Accy for CT Samples	
1	2670-130	Crack Opening Displacement (COD) Gauge 5/2 - Gauge Length: 5mm (0.197inches) - Travel: 2mm (0.079inches) - Temperature range: -200°C to +200°C (-328°F to +392°F) - Complies to the requirements of ASTM E399-09	
1	2501-132	Adapters kit for 2750-118, 2750-119, clevis grips. Upper and lower fitting: M30x2 threaded accessory female end fitting. Requires appropriate adaptors for load cell and crosshead adaptor.	
1	2750-118	Fracture Mechanics Grips for 6.5 mm and 13 mm thick specimen. Rated capacity: ±10kN Dynamic, 20 kN Static. Temperature Range: 0 to 100°C Requires 2501-132. adapter kit (1 pair)	
		<u>ISO 7206-4 Femoral Fatigue Fixture + ISO14801 Dental fixture</u>	
1	CP3653K	Hip Femoral Fatigue System Femoral Fatigue Fixture to meet ISO 7206-4. Designed to meet most test criteria for femoral stem components of hip replacements. Consists of:- - Maximum Dynamic Load: 3kN - Two stem potting base fixtures - Adapter to suit fitting to 8870 and Electropuls machine platen. - Perspex saline bath and seals - Upper compression fixture with plain bearing and adaptor to fit to 8870/E10000 machine. Embedding fixture to allow position and angles of femoral stem to be set whilst being potted. Allows accurate positioning of stem and readouts of angle.	
1	CP103056	Temperature Recirculator System Temperature Controlled Fluid Recirculator designed for connection to saline bath/tank. - Pump Type: Peristaltic. - Temperature Range: 30 to 50°C. - Heating Rate: 0.5°C / litre / minute. - Tuning Temperature (default): 37°C. - Selectable Input Voltage: 115V 60Hz or 230V 50Hz. - Fluid Volume: 0.12 litre. - Fluid Compatibility: Mains Water, Saline Solution, Distilled Water and De-ionised Water. Note: Electrical supply cable is country dependent and is not included. The correct mains cable will need to be selected and added as a line item to the order.	
1	CP114376	Variable Angle Fixture Straight and Pre-Angled Implants Compression Angle - 0 - 45° Adjustable Angle with Precision Markings T-Slot Table Adjustment mm	

Qty	Cat No	Description	Price
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-20 to +40
Precision Markings for
Accurate Setup
-5 to +5
Slots Allow for Adjustment
No Markings
Dimensions (HxWxD) mm 99 x 130 x 100 60 x 116 x 70
Specimen Interface - R 15 x 19 Deep Recess for Specimen
Potted in Dental Cement
R 15 x 19 Deep Recess for Specimen
Potted in Dental Cement
Upper Platen Interface - M6 Female Thread (Requires 8000 - 126/127
Attachment Kit) M6 Thread (Requires 8000 - 126/127 Attachment Kit)
Lower Base Interface - 4 x M6 4 x M10
Maximum Force N 3000

Biomaterial Applications

1 3130-100

BioPuls Bath

Standard features include:

- Bath designed for use with distilled water or saline solution for testing biomedical test specimens
- Bath includes an upper and lower pull rod for mounting of grips or testing fixtures
- Pneumatically powered lifting mechanism smoothly raises and lowers the bath, preventing spillage
- Allows accurate close loop control of bath temperature at 37 °C ±1 °C
- Upper pull-rod designed to minimize buoyancy changes during low force testing
- Pull rods have M6 female connections with two 3 mm pins for fixture mounting and alignment
- Compatible with Standard Video Extensometer (SVE) for axial strain measurements
- Strain measurement verification possible for axial strain only
- Maximum travel with SVE: 100 mm
- Vertical bath travel: 200 mm
- Bath volume: 3.1 L
- Bath inner diameter: 140 mm
- Easy drainage through one-way tubing
- Temperature range: Ambient to 40 °C
- Protective cover provided to shield machine from fluid spillage
- Controller supply power: 120 VAC to 240 VAC 50/60Hz
- Mounts to base holes in test frame

1 3130-100B4

Mounting for ElectroPuls

1 3130-100D2

Voltage option 240 V.
PLUG 250V NEMA L6-15 WATERTIGHT, 15 AMP

1 2752-005

BioPuls Submersible Pneumatic Side Action Grips

Standard features include:

- Designed specifically for use with BioPuls bath
- Rated capacity: 250 N (25 kg, 50 lb)
- Maximum jaw face opening: 10mm
- Manufactured out of Teflon sealed, hard-coated aluminum to prevent corrosion

Qty	Cat No	Description	Price
		<ul style="list-style-type: none"> - Extremely light-weight for compatibility with 5.0 N load cell - Open front design to facilitate specimen loading - Single cylinder pneumatic clamping with follow-up action to reduce specimen slippage - Interchangeable faces to accommodate a variety of faces - Adjustable gripping force when used with pressure gage - Upper and lower fittings: M6 screw (Type Om optional) - Catalog number includes set of two grips - Requires 2701-004 pneumatic footswitch or 2701-065 grip control for operation of grips 	
1	2702-209	25 mm x 25 mm serrated faces. For use with 2752-005 BioPuls Submersible Pneumatic Grips only. Minimum grip separation: 14 mm	
1	CP100918	Lightweight upper and lower compression platens for use in 3130-100 Biopuls Bath. Diameter: 50 mm (2 in) Material: Stainless Steel Capacity: 250 N Upper and Lower Interface: M6(m) (mounts directly to Biopuls Bath pullrods)	
1	2527-131	Dynacell, Dynamic Load Cell. ± 250 N (± 56 lb). The fatigue life of the unit is $10E9$ full stress reversed cycles at the capacity of the cell. Overload capability is 300% of the capacity before mechanical failure of the cell. Dynacell is a unique load measurement device that automatically compensates for load errors induced through inertia of the load string components. A method of dynamic inertia compensation is essential for all forms of dynamic testing. Mechanical Interfaces: Cell to Machine: 3 off M6 clearance holes on 57.15 PCD Cell to Accessories: Central M6 x 1 right hand female thread Overall Dimensions: 40mm high by 75mm diameter. NOTE: When this Dynacell is mounted to an actuator piston, it is recommended that the maximum grip mass should be below 125g for dynamic applications.	
1	8000-101	Attachment kit to provide M20x1.5 female thread on 8874 actuator / loadcell. Converts 6xM8 on 75PCD bolt pattern to M20x1.5 central female thread. For attaching single-axis grips and fixtures to 8874 machine. Quantity : one attachment kit.	
1	8000-128	1 Set (Pair) of Fatigue Rated Adaptors for attaching accessories with M6 RH female thread to E10000 linear and 887X machines. For use with accessories with a central M6x1 RH female thread and a system with M20x1.5 RH female thread in both loadcell and actuator. Note for 8872 only: If the loadcell is mounted on the actuator, 8000-050 must be provided for the base. Quantity: 2 attachment kits, one for upper and one for lower accessory.	

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Qty	Cat No	Description	Price
1	2663-848	<p>BioPuls Video Extensometer Kit Required for use of the BioPuls bath with a video extensometer</p> <p>Includes:</p> <ul style="list-style-type: none"> - Modified video calibration bar mounting for submersion of calibration bar into the bath - Alignment rings required for mounting bath and SVE together <p>Other Accy</p>	
1	2840-030	<p>Fixed Compression platens incorporating mounting for 2601 series LVDTs.</p> <ul style="list-style-type: none"> - Maximum load rating: $\pm 10\text{kN}$ (2248 lbs). - Maximum Torque: $\pm 25\text{Nm}$ (221 lbs.in) on M6 mount $\pm 100\text{Nm}$ (885 lbs.in) on M8 mount (Subject to specimen adhesion to platen surface) - Platen diameter: 100mm (3.94 in) - Mechanical Interface (upper and lower): Flange Mount to suit 3xM6 or 3xM8 on 75mm diameter PCD - LVDT interface: 2 off M5 female threads - Material: Stainless Steel, with a hardness of 56 to 58 HRC. - Temperature Range: -70°C to $+350^{\circ}\text{C}$ (-112F to 662F) - Supplied with pushrods to ensure platens can come together and touch - Mounts directly on all E3000 (V1.3 or later) and E10000. - Not compatible with E1000 <p>If platen displacement measurement required, use 2601-071 LVDT Platen Displacement Indicator and appropriate LVDT. Select from 2601-091/2/3 (excluded).</p>	
1	2527-302	<p>Biaxial Dynacell, Dynamic Load Cell. $\pm 1\text{ kN}$ ($\pm 225\text{ lbf}$), $\pm 25\text{ Nm}$ ($\pm 220\text{ in-lb}$)</p> <p>Dynacell is a unique load measurement device which automatically compensates for load errors induced through inertia of the load string components. A method of dynamic inertia compensation is essential for all forms of dynamic testing</p> <p>The fatigue life of the unit is $10\text{E}9$ full stress reversed cycles at the capacity of the cell. Overload capability is 300% of the capacity before mechanical failure of the cell. Side load resistance is 40% of the capacity.</p> <p>Overall Dimensions: 68 mm (high) by 94 mm (diameter) Transducer Mass: 1.3 kg</p> <p>Mechanical Interfaces: Cell to Machine: 3x M6 on 75 PCD Cell to Accessories: 3x M6 on 75 PCD and 3x M6 on 57 PCD</p> <p>Note: care should be taken not to overload either the axial or torsional channels.</p> <p>Note: In order to fit directly to an 8874 actuator flange please consult factory.</p> <p>Application Software</p>	

Qty	Cat No	Description	Price
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1 2495-915

WaveMatrix Dynamic Testing Software for Instron 8800 systems, ElectroPuls and Extend Upgrades

WaveMatrix Dynamic Testing Software provides users the ability to define and run tests, and to acquire data for a wide range of dynamic and quasi-static applications. Tests can range from simple single-axis ramps and repetitive waveforms, to more complex multi-axis and multi-step tests.

Test methods are quickly and easily constructed using a series of steps within a matrix structure, allowing the user full control over waveform shape, control mode, data logging and test progress. Completely independent waveforms can be performed on each axis for systems with multiple axes of control. During the test method construction the user is presented with a clear graphical preview of how the test will run.

During the test a range of comprehensive data logging and data reduction tools enable the user to acquire the required data and at the same time minimise data file size through intelligent data reduction features. The user can configure the Live Test Workspace to show up to four real time graphs and add progress or status indicators.

Test results are automatically grouped together within a logical project structure allowing quick access to the data files and batch transfer of results. To aid results tracking a read-only copy of the test method is always stored with the test results.

Features include:

- Support for up to six 8800 Integrated Axis Cards (or a combination of IAC cards and 8800-103 data acquisition boards)
- Up to a maximum of 24 channels of control or acquisition
- Control or acquisition of temperature from a Eurotherm 2408CC or 3200CC device
- Capable of 1ms interblock transfer time from one step in the sequence to the next
- Trend monitoring function - a change in max, min, mean or amplitude from a user defined reference cycle can be used to control test flow or end test
- Amplitude control to correct for peak errors in a cyclic waveform
- Supported waveform types: sine, triangle, square, holds, ramps, trapezoidal, user defined turn points files, and sample data playback
- Mixed mode control on cyclic waveforms
- User defined events to control test progress
- The ability to automatically balance extensometers and derived position channels at any stage of the test
- Up to four real time graphs; X-Y, Double Y, Trend, Multi channel, chart recorder
- Single and nested looping of steps
- Advanced Data Reduction; either on time basis or change in channel value.
- Extensive data logging; per cycle data (max /min /amplitude /mean level), full hysteresis data, or both combined; at linear, logarithmic, change in value or user defined intervals
- Data storage to computer disk in ASCII format at rates up to 5kHz synchronous on up to 24 channels
- Ability to pause and resume a test, either immediately or at some point in the future
- Control of digital and analogue outputs

Qty	Cat No	Description	Price
		<ul style="list-style-type: none"> - Waveform start and stop enveloping - Tracking and Peak & Trend Live Displays - Can be expanded with Calculations (D1) or Advanced Control (E1) modules - Set of Electronic Manuals in PDF Format - Available in English, French, German or Japanese 	
1	2495-915D1	<p>WaveMatrix Calculation Module</p> <p>WaveMatrix's Calculation Module is an option that enables a user to set up and perform various real-time calculations as part of a test. Calculations can be added to a test method as either tracking channels (providing continuous data) or peak & trend channels (providing one data value per cycle) and permits:</p> <ul style="list-style-type: none"> * Saving of calculated values into the results files as selected by a user * Displaying of calculated values on graphs found on the Live Test Workspace * Calculated values to be used as data processing or trend monitoring criteria <p>WaveMatrix supports the following standard calculation types:</p> <ul style="list-style-type: none"> * Acceleration * Dynamic Mechanical Analysis (DMA) Calculations [Loss Angle, Tan Delta, E*, E', E'', Energy, Energy Loss, K* and Frequency] to be used in combination with a fatigue or durability test * Elastic Stiffness Calculations [Elastic Stiffness, Compliance and Force Intercept] * Energy Calculations [Total Energy, Cycle Energy, Cycle Energy Range, Max Cycle Energy, Min Cycle Energy, Residual Cycle Energy, Total Cycle Energy] * Frame Compliance Correction * Velocity * Young's Modulus * User Defined (for experienced C# programmers only) <p>See data sheet for further information.</p>	
1	2495-915F1	<p>WaveMatrix Specimen Self-Heating Control Module</p> <p>WaveMatrix's Specimen Self-Heating Control Module automatically adjusts test frequency to maintain specimen temperature at or below a user specified value.</p> <p>This module enables the user to enter an initial and maximum test frequency and maximum specimen temperature. The specimen surface temperature is then constantly monitored throughout the cyclic test and the machine test frequency optimised to minimise test time whilst keeping specimen temperature within the specified maximum.</p> <p>This control method is particularly relevant to the cyclic testing of fibre reinforced polymers, where specimen temperature typically rises significantly during the course of a single test depending on material and loading conditions.</p> <p>This module is compatible with (but does not require) both Calculations and Advanced Control modules. It is also relevant for cyclic testing of other materials prone to self-heating effects.</p> <p>Requires temperature input either via National Instrument USB thermocouple input or using external 0 - 10V into 8800 controller strain channel.</p>	

Qty	Cat No	Description	Price
		See data sheet or contact Instron for further information.	
1	2495-915E1	WaveMatrix Advanced Control Module WaveMatrix's Advanced Control Module is an option that enables extended control functionality from within WaveMatrix. This includes: * Advanced Amplitude Control - permitting peak and mean level controls on sampled data waveforms or on cyclic waveforms using calculated peak & trend channels as targets (requires 2495-915D1 Calculations Module) * Frequency Sweeps on cyclic waveforms * Automatic Phase Compensation - compensating for phase lag within the system See data sheet for further information.	
1	2490-909B1	Executable Versions	
1	2490-909	Instron Fracture Mechanics Combination Package For 8800 Series Controllers. Compatible with Instron 8800 systems, ElectroPuls and Extend Upgrades. Requires Console Software, Windows 7 (32/64bit), a 1GHz Pentium with 256Mb RAM minimum and a PCI-GPIB board (8800 Tower). Includes: - DA/DN (2490-906) - K1C and CTOD (2490-907) - J1C (2490-908) - Crack Propagation (da/dN) software provides machine control and data acquisition for tests to ASTM E647-08. Crack length is measured using compliance, ACPD or DCPD techniques. - Fracture toughness software performs K1C tests in accordance with the relevant sections of ASTM E399-09, ASTM B645-07, ISO 12737:2005, ASTM E1290-08 (CTOD) and BS7448-1991 part 1 (K, CTOD and J). - Unloading Compliance (J1C) software performs J1C testing to ASTM E813-89. For more information please visit GO.INSTRON.COM/FRACTURE	
1	2450-700G1	TestCam Video Recording and Playback Module The TestCam Video Recording & Playback option provides engineers and quality professionals with a video record of how the test was conducted and how the specimen failed, by recording the test from start to finish using almost any USB video recording device. After testing, the user can replay the test or use a scanning cursor to select particular points of interest while viewing of the associated test video frame. The video can be stored and sent electronically. Requires DirectX compatible video capture system (such as a webcam) with USB cable and camera mounting.	
1	2450-700F1	TestProfiler TestProfiler allows you to create custom test control sequences (profiles) with a simple, user friendly interface. Complex cyclic test sequences are readily created by using TestProfiler's waveform	

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building steps (triangles, ramps and holds). Your test method is graphically displayed as you create it and standard Windows tools (cut, paste, copy, delete, etc.) can be used to quickly create or modify virtually any complex test sequence. Test results can be independently assigned to individual test steps and the graphical display of test results can be filtered to show only the steps (cycles) of interest.

A completely redesigned TestProfiler was introduced with Bluehill 3.61 with enhanced usability and test control flexibility. Examples of the enhanced test control include ability to

- Change temperatures of select chamber or furnace models in the middle of a test
- Change the data acquisition frequency for each individual segment of the test (called step)
- Allow rapid changes to profile parameters between tests using operator inputs

1 2450-700C7

For ElectroPuls controller series.

1 2450-700AB

Czech language option.

1 2450-700

Bluehill Universal Testing Software for NEW 3300, 5900, 59 Series, 8800, and New EXTEND Retrofits

Bluehill Universal is Instron's premier materials and components testing software package meeting the needs of a wide variety of applications including plastics, composites, metals, elastomers, biomedical, adhesives, textiles, components and others. Each application module provides the capability for tension, compression, flexure, stress-relaxation, creep, peel, tear and friction testing and test control based off of displacement, force, or strain. Also included is Instron's complete calculation library with hundreds of different calculations such as modulus and ultimate tensile strength, as well as user-defined calculations. Bluehill's one-of-a-kind report generator allows users to create customized report templates that can be linked with test methods and used to export test results via email or save as HTML, Word or PDF. Raw data and result export files are completely customizable for enhanced compatibility with Laboratory Information Management Systems. Options for advanced test control, such as block loading, and data analysis, such as web camera recording, are also available.

For Windows 7 Professional (32 or 64 Bit) or Windows 10 Professional (64 Bit only) operating systems (Win 10 recommended).

Running SubTotal

10 131 136,00

TOTAL DAP: 10.843.250,- Kč

Sleva Všpj -443.250,-Kč

TOTAL DAP: 10.400.000,- Kč

(Prices are without VAT)

TERMS AND CONDITIONS

VALIDITY OF QUOTE

90 days

DELIVERY

03/04/18

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up to 24 weeks from purchase order

INSTALLATION

Igitur's engineer will then complete the connection of the services to the system, check that the system is working to specification and that all the components that make up the system order have been delivered and are in full working order. Training is at the price at required length.

SERVICE & SUPPORT

Igitur's office will provide service.

FAST SPARES

Igitur has an agreement with Instron and DHL Courier for the fast delivery of spare parts.

WARRANTY

24 months after installation and acceptance protocol.

PAYMENT TERMS

100% Within 30days after installation

Vítězslav Hajný
IGITUR s. r. o.