
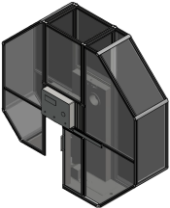
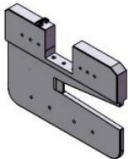

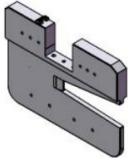
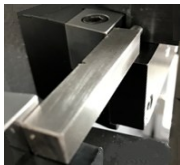




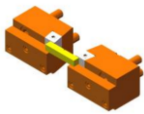
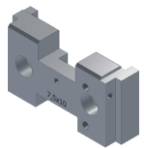



Item	Qty	Description	
06-3217-000 	1	<p><b>Charpy Impact Tester Series PH-750 Version CHV</b></p> <p>Sophisticated series of modular impact testers expandable with instrumented strain gauged striking edge with high-speed data acquisition system, patented laser opto-electronic measuring system for deflection (bending) and crack opening measurement for the experimental determination of the intensity of stress, KID/KIC-factor with ultra-high speed ADC board for data acquisition or robot for fully-automatic testing in combination with pre-conditioning chambers or without.</p> <p>Conform to ISO 148-1, EN 10045-2 &amp; ASTM E23 suitable for impact bending tests to CHARPY and with accessories to IZOD, Impact Tensile and Brugger tests, sub-sized &amp; DVMK specimens.</p> <p>The impact tester is composed of a sturdy, vibration-damping steel cast iron metallic frame with high stiffness on a lower massive structure able to ensure a steady base.</p> <p>The unit is designed as symmetric U-Frame and provides easy excess for sample loading.</p> <p>Ergonomically integrated digital display and operating elements for status and error messages.</p> <p>Simple, fast and safe operation provided through slid able front door, easy sample centring and safe two hand release buttons. The pendulum is automatically returned after it swung back close to its release position to safe time.</p> <p>Optionally automatic pendulum release mode is available when door is closed preferable ordered when tests according to ISO 148 or ASTM E23 on temperature conditioned specimens are performed which must be tested within 5 seconds since removing them from the temperature unit.</p> <p>The unit can be changed rapidly from one energy range to another. To change between 600 and 750 Joule impact energy, add-on weights can easily be mounted or removed.</p> <p>The unit can be operated as stand-alone unit with safe two hand operation or in connection with <b>DION IMPACT</b> application software package.</p>	Included

Item	Qty	Description	
		<p>Features:</p> <ul style="list-style-type: none"> <li>• U (Box) Frame</li> <li>• Charpy pendulum hammer for 600 and 750 Joule potential energy and optional for 300 and 450 Joule</li> <li>• Step-less setting of drop height through digital display with automatic drop-height adjustment</li> <li>• Low-friction bearings</li> <li>• C-shaped hammer(s) with low air resistance</li> <li>• Motorised hammer lifting system including electro-magnetic release</li> <li>• Electronic high-resolution angle-transducer (encoder), amplifier and interface board for PC with connecting cable</li> <li>• Electro-magnetic brake for the pendulum</li> <li>• Electro-mechanical safety release mechanism of the pendulum</li> <li>• Centring device for correct positioning of CHARPY V or U-notch specimens</li> <li>• Stops for fast and repeatable exchange of anvil block</li> <li>• Exchangeable anvil inserts can be used up to four times by turning them in case of wear-out</li> <li>• Set of anvil blocks with supports to ISO EN, ASTM, DIN, ISO-V and ISO-U specimens 55x10x10 mm</li> <li>• Three modes selectable: <ul style="list-style-type: none"> <li>- Automatic operation for productive testing</li> <li>- Manual mode</li> <li>- Service and calibration mode</li> </ul> </li> <li>• Collecting tray for tested samples</li> <li>• Lifting bolts for easy transport and easy installation</li> <li>• Reference base for easy and accurate installation of the unit.</li> <li>• Including accessories to bolt the impact tester on the foundation</li> <li>• The impact tester shall be fixed on suitable foundation.</li> <li>• Included operating manual</li> </ul>	

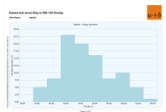
Item	Qty	Description	
		<p>Safety guard with acryl-glass with safety interlock-switch according to the safety regulations. Small slidable front door for convenient sample insert and right / left side can be hinged open for easy access to change impact hammer, clean the unit, maintenance work or inspection and calibration works.</p> <p>The unit confirms the requirements of EC Machinery Directive 2006/42/EC and EN ISO 12100 and EN ISO 13849-1/2.</p> <p>Technical data:</p> <ul style="list-style-type: none"> <li>• Impact work max. 750 Joule</li> <li>• Drop angle steplessly adjustable 52°19' to 160°</li> <li>• Impact velocity 2.6 to 5.5 m/s</li> <li>• Increment of reading on PC-monitor 0.01 Joule</li> <li>• Distance between anvils 40 mm</li> <li>• Power requirements 230 V, 50 Hz, 1 kW</li> <li>• Dimensions WxDxH 2180x 930x 2245 mm</li> <li>• Net weight 1780 kg</li> <li>• Scope 1 pc.</li> </ul> <p><u>Note:</u> safety guard, pendulum hammer, support Charpy, striking edge and anvils are not in the scope of PH-750, and have to be ordered separately.</p>	
06-3249-000 	1	<p><b>Safety Guard with Acrylic Glass</b></p> <p>for PH-750 and 900 impact tester, with safety interlock-switch according to the safety regulations. Small slidable front door for convenient sample insert and right / left side can be hinged open for easy access to change impact hammer, clean the unit, maintenance work or inspection and calibration works. The unit confirms the requirements of EC Machinery Directive 2006/42/EC and EN ISO 12100 and EN ISO 13849-1/2.</p> <ul style="list-style-type: none"> <li>• Dimensions WxDxH 2180 x 930 x 2245 mm</li> <li>• Dimensions WxDxH (open state) 2808 x 2100 x 2245 mm</li> <li>• Net weight 200 kg</li> <li>• Scope 1 pc.</li> </ul>	Included
ASD.PH-750	1	<p><b>Automatic Start after Closing Door</b></p> <p>for PH-750 and 900 impact tester, allows fast testing, especially for tempered (cold) specimens and big amount of tests recommended.</p>	Included



Item	Qty	Description	Price CHF
06-3557-000 	1	<b>Pendulum Hammer 600 Joule</b> The C-shape pendulum hammer consists of a monolithic hammer plate with possibility of attaching additional weights. The striker is installed the way that it is impossible to mount it incorrectly. <ul style="list-style-type: none"> <li>Weight 39.928 kg</li> <li>Drop angle continuously adjustable 52°19' – 160°</li> <li>Working range continuously adjustable 120 – 600 Joule</li> <li>Impact velocity 2.6 to 5.5 m/s</li> <li>Distance from turning axis to specimen 790 mm</li> <li>Scope 1 pc.</li> </ul> <u>Note:</u> Delivered without striker.	Included
06-3218-000 	1	<b>Additional Weights for 750 Joule</b> The weights consist of side plates that are to be screwed and pinned on hammer of 600 J from both sides. <ul style="list-style-type: none"> <li>Weight (total) 49.909 kg</li> <li>Drop angle continuously adjustable 52°19' – 160°</li> <li>Working range continuously adjustable 150 – 750 Joule</li> <li>Impact velocity 2.6 to 5.5 m/s</li> <li>Distance from turning axis to specimen 790 mm</li> <li>Scope 1 pc.</li> </ul> <u>Note:</u> Delivered without striker.	Included
450.PH-900 	1	<b>Pendulum Hammer 450 Joule</b> The C-shape pendulum hammer consists of a monolithic hammer plate with possibility of attaching additional weights. The striker is installed the way that it is impossible to mount it incorrectly. <ul style="list-style-type: none"> <li>Drop angle continuously adjustable 52°19' – 160°</li> <li>Working range continuously adjustable 90 – 450 Joule</li> <li>Impact velocity 2.6 to 5.5 m/s</li> <li>Distance from turning axis to specimen 790 mm</li> <li>Scope 1 pc.</li> </ul> <u>Note:</u> Delivered without striker.	Included

Item	Qty	Description	Price CHF
06-3686-000 	1	<b>Automatic Sample Centring Device</b> for PH-750 and 900 impact tester. The sample is positioned on the support plate and pushed against the stop lug, what is an electromagnetic operated pin for a correct sample centring. Before the hammer is released, the lowered pin is retracted automatically. This solution guarantees accurate sample centring and minimizes operating errors and provides quick and productive testing.	Included
43-4555-000 	1	<b>Self-Centring Tongs</b> for centering Charpy V-notched specimens of 10 x 10mm cross-section between anvil inserts. <ul style="list-style-type: none"> <li>• Scope 1 pc</li> </ul>	Included
06-3220-000 	1	<b>Striker Charpy 2 mm According to ISO 148-2</b> for PH-750 impact tester <ul style="list-style-type: none"> <li>• Thickness within the specimen area 14 mm</li> <li>• Edge angle <math>30^{\circ} \pm 1^{\circ}</math></li> <li>• Radius of curvature 2 mm</li> <li>• Scope 1 pc.</li> </ul>	Included
06-3221-000	1	<b>Striker Charpy 8 mm According to ASTM E23</b> for PH-750 impact tester <ul style="list-style-type: none"> <li>• Thickness within the specimen area <math>14 \pm 4</math> mm</li> <li>• Edge angle <math>30^{\circ} \pm 1^{\circ}</math></li> <li>• Radius of curvature <math>8 \pm 0.05</math> mm</li> <li>• Scope 1 pc.</li> </ul>	Included


Item	Qty	Description	Price CHF
06-4381-000 	1	<b>Support Charpy according to ISO 148-2 / ASTM E23</b> for PH-750 and 900 impact tester. On the support block, suitable to fix devices for Charpy and Izod tests, the Charpy support is fixed. Exchangeable anvil inserts are fastened in the support. <ul style="list-style-type: none"> <li>• Cross section of the specimen 10 x 10 mm</li> <li>• Specimen length 55 mm</li> <li>• Distance between anvil inserts 40 mm</li> <li>• Scope 2 pcs.</li> </ul> <u>Note:</u> The seating can be repositioned and reused.	Included
06-1970-000 	1	<b>Charpy Support Plate 7.5 mm</b> <ul style="list-style-type: none"> <li>• For undersize specimens 7.5 x 10 x 55 mm according to DIN EN ISO 148-2 / ASTM E23</li> <li>• The support for a specimen with cross-section 10 x 10 mm and with 40 mm distance between the anvil inserts is precondition.</li> </ul>	Included
06-1971-000 	1	<b>Charpy Support Plate 5 mm</b> <ul style="list-style-type: none"> <li>• For undersize specimens 5 x 10 x 55 mm according to DIN EN ISO 148-2 / ASTM E23</li> <li>• The support for a specimen with cross-section 10 x 10 mm and with 40 mm distance between the anvil inserts is precondition.</li> </ul>	Included
06-1972-000 	1	<b>Charpy Support Plate 2.5 mm</b> <ul style="list-style-type: none"> <li>• For undersize specimens 2.5 x 10 x 55 mm according to DIN EN ISO 148-2 / ASTM E23</li> <li>• The support for a specimen with cross-section 10 x 10 mm and with 40 mm distance between the anvil inserts is precondition.</li> </ul>	Included
06-2326-000 	1	<b>Set of Anvil Inserts Charpy according to ISO 148-2/ASTM E23</b> The exchangeable anvil inserts can be used up to four times by turning them in case of wear-out. <ul style="list-style-type: none"> <li>• Free angle 0°</li> <li>• Relieve cut 11°</li> <li>• Radius of curvature 1 mm</li> <li>• Scope 2 pcs.</li> </ul>	Included

Item	Qty	Description	Price CHF
49-3006-000	1	<p><b>Software packages</b></p> <p><b>DION<sup>IMPACT</sup> Application Software Package for Impact Testing</b></p> <ul style="list-style-type: none"> <li>• Software Package <b>DION<sup>IMPACT</sup></b> for rapid and productive testing and specialised evaluation</li> <li>• Intuitive software for easy operation</li> <li>• Initialization procedure to compensate friction and windage</li> <li>• Creation of test series</li> <li>• Data management through database</li> <li>• Data acquisition via angle encoder</li> <li>• Automatic data storage</li> <li>• <b>Calculation of absorbed energy (J) in Joule, Impact Strength (J/mm<sup>2</sup>)</b> and statistical evaluation of minimum / maximum / average value and standard deviation</li> <li>• Data export and test report are provided with graphics like absorbed energy and energy allocation</li> <li>• Software available in English, German, French, Czech, Italian and Russian</li> </ul>	Included






Item	Qty	Description	Price CHF
98-0041-010 	1	<b>Desktop PC, Windows 11</b> for operation with W + B digital controllers and video extensometers. <ul style="list-style-type: none"> <li>• Model HP EliteDesk 800 G6-Tower</li> <li>• Processor Intel Core i7-10800</li> <li>• Base frequency 2.9 GHz</li> <li>• RAM 8 GB DDR4</li> <li>• SSD hard drive 256 GB M.2 2280 PCIe</li> <li>• SATA hard drive 1TB 7200RPM</li> <li>• Graphic card integrated Intel UHD Graphics 630</li> <li>• Optical drive DVD-RW</li> <li>• Form factor Tower</li> <li>• Operating system Windows 11 Pro 64 Bit</li> <li>• Included accessories keyboard, optical mouse</li> <li>• Electrical power 230V, 50 Hz, 0.26 kW</li> <li>• Dimensions WxDxH 370 x 308 x 168 mm</li> <li>• Weight 9.9 kg</li> </ul>	Included
98-0053-002 	1	<b>27" Monitor G5</b> with remarkable colour accuracy in precise quad HD resolution. <ul style="list-style-type: none"> <li>• Model HP Z27q G5 QHD</li> <li>• Display size 27"</li> <li>• Display type IPS</li> <li>• Display area 597 x 336 mm</li> <li>• Resolution QHD 2560 x 1440</li> <li>• Electrical power 230V, 50 Hz, 0.069 kW</li> <li>• Dimensions WxDxH 612 x 39 x 356 mm</li> <li>• Weight 5.8 kg</li> </ul>	Included





Item	Qty	Description	Price CHF
06-3211-000 	1	<b>Steel Reinforcement Frame Foundation</b> for PH-750 impact tester with reinforcing steel bars to be concreted by the customer. <ul style="list-style-type: none"> <li>• Dimensions WxDxH 990 x 620 x 320 mm</li> <li>• Weight 130 kg</li> <li>• Scope 1 pc.</li> </ul>	Included
SM	1	<b>Service and Maintenance of Testing Equipment min. 10 years</b> through the engineers and specialists of our representatives located in your region.	Included
SUP	1	<b>Complete Materials Testing Software Update During 12 Months After Installation</b>	Included
69-3022-000	1	<b>Complete Set of Operating Manuals and Documentation in English – Soft Copy (Link)</b> as a PDF-file via a provided link, contains the following: <ul style="list-style-type: none"> <li>• Full operating and maintenance instructions and technical description</li> <li>• Operation and maintenance instructions</li> <li>• General arrangement drawings</li> <li>• Circuit diagrams and tool kits</li> <li>• Main parts of the manual, as electric drawings, maintenance handbook, safety handbook, controller and software manual.</li> </ul>	Included

Item	Qty	Description	Price CHF
06-4196-000	1	<b>In-House Calibration of Impact Tester</b> with a calibration certificate in accordance with ISO 148-2 and ASTM E23 international standards, from our laboratory certified according to international standard ISO/IEC 17025 recognised through multilateral agreements of the European co-operation for Accreditation (EA) for the fields of testing, calibration, inspection and certification of management systems, certification of personnel and certification of products, processes and services, of the International Accreditation Forum (IAF) for the fields of certification of management systems and certification of products, processes and services and of the International Laboratory Accreditation Cooperation (ILAC) for the fields of testing and calibration. Official Calibration Certificate (Direct Verification) <ul style="list-style-type: none"> <li>• Calibration type direct verification</li> <li>• Calibration range 100%</li> <li>• Scope 1 pc.</li> </ul> <b>Certified test specimens for Charpy pendulum impact test for indirect verification according to EN ISO 148-2 / ASTM E23 (Charpy V-notch, 2 mm and 8 mm).</b> *Remark: two sets required for each energy range and striker radius.	Included
06-4382-000	2	<b>Set of Certified Specimens Low Energy, 2 mm Striker</b> <ul style="list-style-type: none"> <li>• Striker radius 2 mm (KV2)</li> <li>• Energy 15 – 39 Joule</li> <li>• No. of specimen per set 5</li> </ul>	Included
06-4383-000	2	<b>Set of Certified Specimens Medium Energy, 2 mm Striker</b> <ul style="list-style-type: none"> <li>• Striker radius 2 mm (KV2)</li> <li>• Energy 40 – 99 Joule</li> <li>• No. of specimen per set 5</li> </ul>	Included
06-4384-000	2	<b>Set of Certified Specimens High Energy, 2 mm Striker</b> <ul style="list-style-type: none"> <li>• Striker radius 2 mm (KV2)</li> <li>• Energy 100 – 159 Joule</li> <li>• No. of specimen per set 5</li> </ul>	Included
06-4385-000	2	<b>Set of Certified Specimens Super High Energy, 2 mm Striker</b> <ul style="list-style-type: none"> <li>• Striker radius 2 mm (KV2)</li> <li>• Energy 160 – 200+ Joule</li> <li>• No. of specimen per set 5</li> </ul>	Included

Item	Qty	Description	Price CHF
06-5094-000	2	<b>Set of Certified Specimens Low Energy, 8 mm Striker</b> <ul style="list-style-type: none"> <li>Striker radius 8 mm (KV8)</li> <li>Energy 15 – 39 Joule</li> <li>No. of specimen per set 5</li> </ul>	Included
06-5095-000	2	<b>Set of Certified Specimens Medium Energy, 8 mm Striker</b> <ul style="list-style-type: none"> <li>Striker radius 8 mm (KV8)</li> <li>Energy 40 – 99 Joule</li> <li>No. of specimen per set 5</li> </ul>	Included
06-5096-000	2	<b>Set of Certified Specimens High Energy, 8 mm Striker</b> <ul style="list-style-type: none"> <li>Striker radius 8 mm (KV8)</li> <li>Energy 100 – 159 Joule</li> <li>No. of specimen per set 5</li> </ul>	Included
06-5097-000	2	<b>Set of Certified Specimens Super High Energy, 8 mm Striker</b> <ul style="list-style-type: none"> <li>Striker radius 8 mm (KV8)</li> <li>Energy 160 – 200+ Joule</li> <li>No. of specimen per set 5</li> </ul>	Included

Item	Qty	Description	Price CHF
43-4547-000 	1	<p><b>Temperature Chamber Charpy-Temp</b>  is a mechanically refrigerated bench top bath that eliminates the need for costly consumables such as liquid nitrogen or dry ice. Compact and completely self-contained, the CharpyTemp offers up to 8 liters of working fluid volume enabling up to 91 Charpy impact test specimens to be accommodated at temperatures between -80°C and +30°C. A powerful variable speed magnetic stirrer and vortex breaker provide excellent temperature uniformity and stability enabling superior results. PID control enables the CharpyTemp to sustain precise temperature control to within <math>\pm 0.1^{\circ}\text{C}</math>. The CharpyTemp includes a digital temperature display and a Charpy Rack which allows multiple-specimen loading and easy access to monitor your testing.</p> <p><b>Temperature Chamber CharpyTemp 480</b>  for Charpy impact specimens including sample rack for specimens</p> <ul style="list-style-type: none"> <li>• Temperature Range -80°C to +30°C</li> <li>• Temperature Control Stability <math>\pm 0.1^{\circ}\text{C}</math></li> <li>• Bath Volume 4 litres</li> <li>• Sample Rack for 65 samples (stacked)</li> <li>• Cooling Liquid Included</li> <li>• Dimensions (WxDxH) 330 x 650 x 490 mm</li> <li>• Chamber <math>\varnothing</math> x H 165 x 184 mm</li> <li>• Weight 42 kg</li> <li>• Cooling liquid not included</li> </ul>	Included
		<p><b>Special Fixture for Sample Holders</b>  designed for accommodating 6 holders of Charpy impact specimen. The unit is replaceable with the set of Charpy Rack Accessory.</p>	
		<p><b>Sample Holder (1 pc.)</b>  for Charpy Impact Specimens 10x10x55 mm.  The sample holders are used to cool down the specimens in the Cryostat and center them in the impact tester.</p>	
06-2023-001	1		Included
06-2444-000	6		Included

Item	Qty	Description	Price CHF
<b><u>SPARE PARTS:</u></b>			
06-3220-000 	1	<b>Striker Charpy 2 mm According to ISO 148-2</b> for PH-750 impact tester <ul style="list-style-type: none"> <li>Thickness within the specimen area 14 mm</li> <li>Edge angle <math>30^{\circ} \pm 1^{\circ}</math></li> <li>Radius of curvature 2 mm</li> <li>Scope 1 pc.</li> </ul>	Included
06-3221-000	1	<b>Striker Charpy 8 mm According to ASTM E23</b> for PH-750 impact tester <ul style="list-style-type: none"> <li>Thickness within the specimen area <math>14 \pm 4</math> mm</li> <li>Edge angle <math>30^{\circ} \pm 1^{\circ}</math></li> <li>Radius of curvature <math>8 \pm 0.05</math> mm</li> <li>Scope 1 pc.</li> </ul>	Included
06-2326-000 	1	<b>Set of Anvil Inserts Charpy according to ISO 148-2/ASTM E23</b> The exchangeable anvil inserts can be used up to four times by turning them in case of wear-out. <ul style="list-style-type: none"> <li>Free angle <math>0^{\circ}</math></li> <li>Relieve cut <math>11^{\circ}</math></li> <li>Radius of curvature 1 mm</li> <li>Scope 2 pcs.</li> </ul>	Included
87-3027-000	1	<b>Packing for Export for PH-750 Joule</b>	Included
87-3018-000	1	<b>Transport CPT Tehran, excl. VAT</b>	Included
87-3000-000	1	<b>Factory Acceptance Test (FAT), Instruction and Training (3 Days)</b> for one of customer engineer for 3 days, including board, lodging and transfer from Zurich Airport and back, <b>air tickets are not included.</b>	Included
87-3001-000	1	<b>Site Acceptance Tests (SAT), Commissioning and 1-day Training</b> By our service engineers from walter + bai AG and TOPCO (our exclusive representative in Iran)., including general understanding of the system, training of the material testing software (if ordered) etc. <u>Note:</u> The Impact Tester must be installed on its foundation according to the requirements before the arrival of our engineers. Electrical connections must be established Specimens for testing for training must be available. <b>Including Direct and Indirect Calibration</b> according to standard. Specimens for the indirect verification needs to be ordered separately.	Included

