

## DATA SHEET

# Servo-Hydraulic Universal Testing Machines UTM, 130 kN cap.



Universal Testing Machine UTM-130

## General description

Universal Testing Machines (UTMs), Servo-hydraulic, equipped with high performances environmental chambers and extensive suite of accessories offer the greatest flexibility to perform all advanced pavement materials tests, ideal for Research purposes, featuring higher loads from 30 to 250 kN, lower temperatures -25°C, -50°C. Compatible and in compliant with larger range of accessories and Standards.

The heart of all these products is the IMACS2, 3rd Generation Multi-Axis Digital Controller and Data Acquisition System which delivers leading edge performance, unparalleled real time computer control and flexible data acquisition, together with the powerful and professional UTS Neutron suite draws upon over 30 years of advanced materials testing experience. Used and relied upon by hundreds of researchers, you can buy with confidence knowing your test results having immediate credibility.

IPC Global's Hydraulic Power Supply (HPS), part of the machine, has been designed with integrated VFD (variable speed) technology assuring energy saving and noise reduction. HPS features return line filtration, remote starting and control via virtual pendant, air cooling and indication for low oil, over temperature and dirty filter. The system provides electronically adjustable oil pressure allowing greater control and safety. Oil accumulators further improve control accuracy while the high performance filters ensure long life system protection and reduced maintenance costs.

Extra-large version UTM-130XL has been designed and engineered specifically to accommodate the Extra Large Four Point Bend Jig and Extra Large UTM-130 Environmental chamber.

Based on our world renowned UTM-130, the UTM-130XL allows you to perform the four point bend test on asphalt specimen, up to 160x200 mm (h x w) and a minimum length of 790 mm, at non-ambient temperatures.

UTM-130XL delivers superior reliability and accuracy with proficient performance of tension, compression and dynamic loading analyses on all types of materials.

This unique testing system can be used with our full range of test accessories.

UTM-250 Servo-Hydraulic Universal Testing Machine is available on request.

Designed and built to IPC Global's highest standard for Civil Engineering laboratories, IPC Global's UTM-250 delivers superior reliability and accuracy with proficient performance of tension, compression and dynamic loading analysis on high strength materials.

The **UTM-130 Servo-pneumatic testing systems** can be used as part of your **Superpave performance based testing** program.

## Main features

- Rigid two column load frame

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- Precision engineered for high stiffness and alignment
- Double acting high precision actuator
- High performance servo valve allows sinusoidal loading frequencies up to 70 Hz
- Motorized crosshead positioning
- Hydraulic crosshead clamping
- Fully customizable to suit a large range of testing applications
- Independent environmental chamber eliminating the transfer to mechanical vibrations to testing machine
- Extra large version UTM-130XL available, designed to accommodate the Extra Large Four Point Bend Jig
- Supplied complete with high quality pre-filtered oil for longer life

## Specifications

| Models                          | 79-PV70C05/12<br>79-PV70C06/12   | 79-PV70C15/12<br>79-PV70C16/12 |
|---------------------------------|--|--------------------------------|
| <b>FRAME</b>                    |  |                                |
| Load capacity                   | +/- 100 kN dynamic<br>+/- 130 kN static  |                                |
| Frequency                       | Up to 70 Hz  |                                |
| Actuator type                   | Tie rod sealed<br>Optional labyrinth bearing   |                                |
| Stroke                          | 100 mm (+/- 50 mm)   |                                |
| Inbuilt displacement transducer | 100 mm   |                                |
| Adjustable crosshead            | Hydraulic  |                                |
| Crosshead clamping              | Hydraulic  |                                |
| Maximum vertical daylight       | 1015 mm  |                                |
| Space between columns           | 600 mm   | 770 mm                         |
| <b>HYDRAULIC POWER PACK</b>     |  |                                |
| Remote starting                 | available  |                                |
| High pressure                   | 210 bar  |                                |
| Low pressure                    | 100 bar  |                                |
| Flow rate                       | 18 l/min   |                                |
| Mains power                     | 7.5 kW<br>208 V, 60 Hz, 3ph (models 79-PV70C06/12 and PV70C16/12)<br>or 380-415 V, 50 Hz, 3 ph (models 79-PV70C05/12 and PV70C15/12) |                                |
| Cooling system                  | Water/oil heat exchanger<br>Optional water chiller<br>Optional air-cooling   |                                |
| Oil tank capacity               | 220 l  |                                |
| Size (h x w x d)                | 1220x730x1260 mm   |                                |
| Weight approx.                  | 630 kg (without oil)   |                                |
| Frame dimensions (w x d x h)    | 1000x1000x3000 mm  | 1250x1000x3000 mm              |
| Approximate total weight        | 775 kg   | 920 kg                         |

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Universal Testing Machine UTM-130XL



HPS for UTM-130

## Products

### 79-PV70C05/I2

IPC Global UTM-130 130kN Servo-Hydraulic Universal Testing Machine, complete with IMACS2 controller. 400V/50Hz/3ph

### 79-PV70C06/I2

IPC Global UTM-130 130kN Servo-Hydraulic Universal Testing Machine, complete with IMACS2 controller. 220V/60Hz/3ph

### 79-PV70C15/I2

IPC Global UTM-130XL 130kN Servo-Hydraulic Universal Testing Machine for XL4PtB, complete with IMACS2 controller. 400V/50Hz/3ph

### 79-PV70C16/I2

IPC Global UTM-130XL 130kN Servo-Hydraulic Universal Testing Machine for XL4PtB, complete with IMACS2 controller. 220V/60Hz/3ph

## Accessories and consumables

### 79-PV70E32

High performance environmental chamber for UTM-130servo-hydraulic machine, -50°C to +100°C. 400V/50Hz/3ph, 208-240V/60Hz/3ph

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### 79-PV70E42

Environmental chamber for UTM-130, -25 to +60°C. 110-240V/50-60Hz/1ph

### 79-PV70E52

High performance environmental chamber for UTM- 130XL servo-hydraulic machine, -50°C to +100°C. 400V/50Hz/3ph, 208-240V/60Hz/3ph

### 79-PV70116

Temperature measuring kit (-50 +100°C), including two probes