

**TruForce**

## Hydraulic Universal Testing Machine | TF-LH5000P



### **Load Frame Configuration:**

4 columns compact structural design with bidirectional hydraulic actuator

### **Capacity:**

600kN, 1000kN, 2000kN

### **Typical applications:**

Slip & Tensile Strength test, Permanent Elongation & Tensile Strength, Static Tension & Compression, Low frequency Cyclic Tension and compression test on metal specimens, such as Fasteners, rebar, chain, welds, castings, etc.

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### Typical Test Standards :

- AC 133: 2010: 4.1
- BS 8110: PART 1: 1997 3.12.8.16.2
- BS4482
- BS4483
- BS4449
- ISO 6892
- ASTM A 1034: 10.5, 10.7
- Other international test standards

### Description

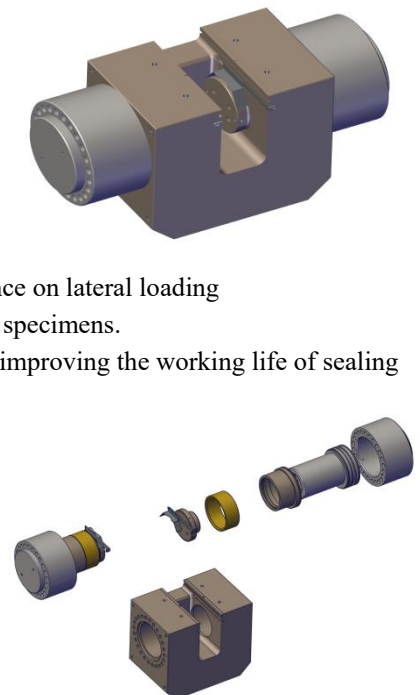
TruForce TF-LH5000P series Static-Hydraulic Universal Testing Machine comes with crosshead mounted double acting hydraulic actuator to perform both tension and compression tests in the same test space. Advanced side action hydraulic tensile grips provide high gripping performance for high strength and high hardness materials without any initial gripping force

Compact four columns structure provides high frame stiffness and easy operation. This machine is mainly used for tensile and compression tests of metallic materials. The high performance controller and intuitive professional test software to provide closed loop control of constant force, constant displacement and constant extension with smooth switching between different control modes.



### Key features

- Ergonomic and compact structural design to provide high effectively
- Higher frame stiffness and excellent alignment to achieve higher accuracy
- At test specimen break energy is released and absorbed by the load frame and hydraulic actuator to reduce shock to laboratory floor and foundation
- All tests are performed in an easy to access test space
- Advanced side force hydraulic tensile grips provide high gripping performance for high strength and high hardness materials.
- Side force hydraulic grips adapts eccentric cylinder design to provide high resistance on lateral loading
- Long stroke double-acting hydraulic actuator accommodates wide range sized test specimens.
- Robust and high-accuracy guidance protects hydraulic actuator from lateral force, improving the working life of sealing components.
- "I" shape force transducer features excellent linearity and stability with ultra measurement accuracy.
- High performance servo valve offers fast response and high-accuracy control, and easy to maintain.
- Low noise hydraulic pumping system features reliable pressure output.
- Equipped brand motor features high efficiency, energy-saving, high start-torque, good performance, low noise, low shaking, high reliability and easy to maintain.
- Low frequency cyclic tensile and compression tests



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### Controller

High performance Doli Controller with handset offers the high accuracy testing results

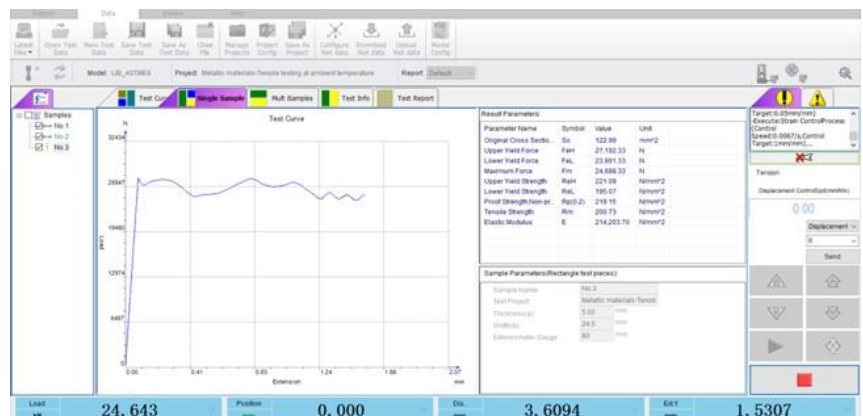
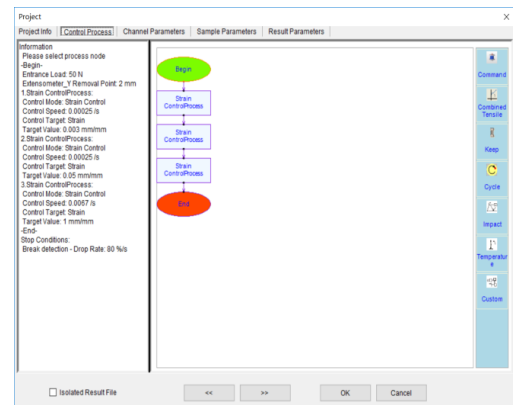
- High Universal digital measurement and control electronics for testing machines
- Expansion option up to 3 iSI modules
- Data acquisition up to 2500Hz
- Automatic sensor identification by intelligent sensor plug SGS
- X7 interface for incremental sensors for position measurement
- X14 analog measurement amplifier for DMS with DC excitation
- X5 interface for display and remote unit RMCi with E-Stop option
- X4 machine control interface, command output  $\pm 10V$  or A/B pulse train for controlling drive and machine electronics
- Communication to PC: Ethernet RJ45 plug or USB B 2.0



### TestMaster Software

Professional and Intuitive Testmaster Software provides the easiest way to set up and run tests:

- TestMaster is the result of close cooperation with a large number of users in material testing industry.
- Easy to create new templates
- Multi Language
- Fully library of international testing standards are available
- Intuitive test flow edit
- It fully supports tensile, compression, bending, tearing, peeling, shearing, pendulum impact, drop weight impact tests, etc.
- Support logical channel, physical channel association mapping, and multi-channel combination
- Support a variety of automatic extensometer equipment
- Supports multiple expansion devices
- Powerful and easy-to-use test data analysis function
- Custom the layout of test results table
- Reports can be created in the precise format you desire.
- Data can be exported to a variety of different formats.
- Customize the test setup using a standard as a template
- Multiple graph types can be used for each test
- Recall function enabling users to add key data perhaps not available, or missed, pre-test.



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**Specifications:**

Model	TF-LH5605P	TF-LH5106P	TF-LH5206P
Capacity (kN)	600	1000	2000
Calibration accuracy		Class 1 / Class 0.5	
Force accuracy		Better than $\pm 1\% / \pm 0.5\%$	
Force range		1% ~ 100% FS	
Actuator up speed (mm/min)	0 ~ 320	0 ~ 350	0 ~ 300
Actuator down speed (mm/min)	0 ~ 600	0 ~ 550	0 ~ 600
Force loading speed		0.02% ~ 2% FS /s	
Column number	4	4	4
Column spacing (test space width) (mm)	500 x 350	660 x 400	800 x 460
Maximum tension space (mm)	600	670	780
Diameter of round specimens (mm)	$\Phi 10 \sim \Phi 45$	$\Phi 15 \sim \Phi 60$	$\Phi 15 \sim \Phi 100$
Thickness of flat specimens (mm)	2 ~ 45	2 ~ 60	20 ~ 80
Compression platens (mm)	140 x 140	200x200	$\Phi 240$
Actuator (piston) stroke (mm)	560	650	750
Frame dimension (length $\times$ width $\times$ height) (mm)	860x600x2900	980x720x3540	1140x800x3900
Hydraulic Power Unit dimension (length $\times$ width $\times$ height) (mm)		1100x870x1280	
Power consumption (kw)	14	14	18
Power supply		3-phase, AC415V, 50Hz	
Frame weight (kg)	2500	5000	8600