

# Servo-hydraulic Universal Testing Machine | HUT Type C

## Load Frame Configuration:

6 columns, servo-controlled hydraulic

## Capacity:

1000kN

## Test Space:

Dual zone (tension on top, compression on bottom)

## Typical specimens:

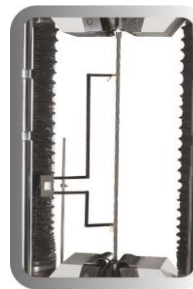
Fasteners, rebar, chain, welds, castings, **stranded steel wire**



**Test standards:** ASTM A370, ASTM A416, ISO6934.4, ISO6892, ASTM E8

## Load frame

- Specially designed longer jaw face for tensile test of stranded steel wire
- Lead screw driven crosshead to adjust the test space
- High-Stiffness 6-column load frame design incorporates 3-position crosshead, adjustable specimen positioning, precision guide columns, thick crosshead and base beam minimizes load frame stored energy while producing reliable, stable, accurate load, strain and modulus values.
- Ergonomically designed load frames ensure safety, reduce operator fatigue, and provide the highest level of flexibility.
- Standard Dual Zone Test Space for reducing setup time
- "Quick Return" hydraulic valve for higher throughput
- Automatic limit checking for crosshead position, overload, over temperature, over voltage, etc.
- The system can return automatically, the oil cylinder can return the original position via manual or automatically after finishing testing
- Positive specimen holding is ensured by the wedge action of hydraulic operated grips
- Imported encoder mounted on the seat is for position measurement of crosshead with high accuracy
- Imported servo valve provides high stability and reliability



Extensometer



Broken specimen



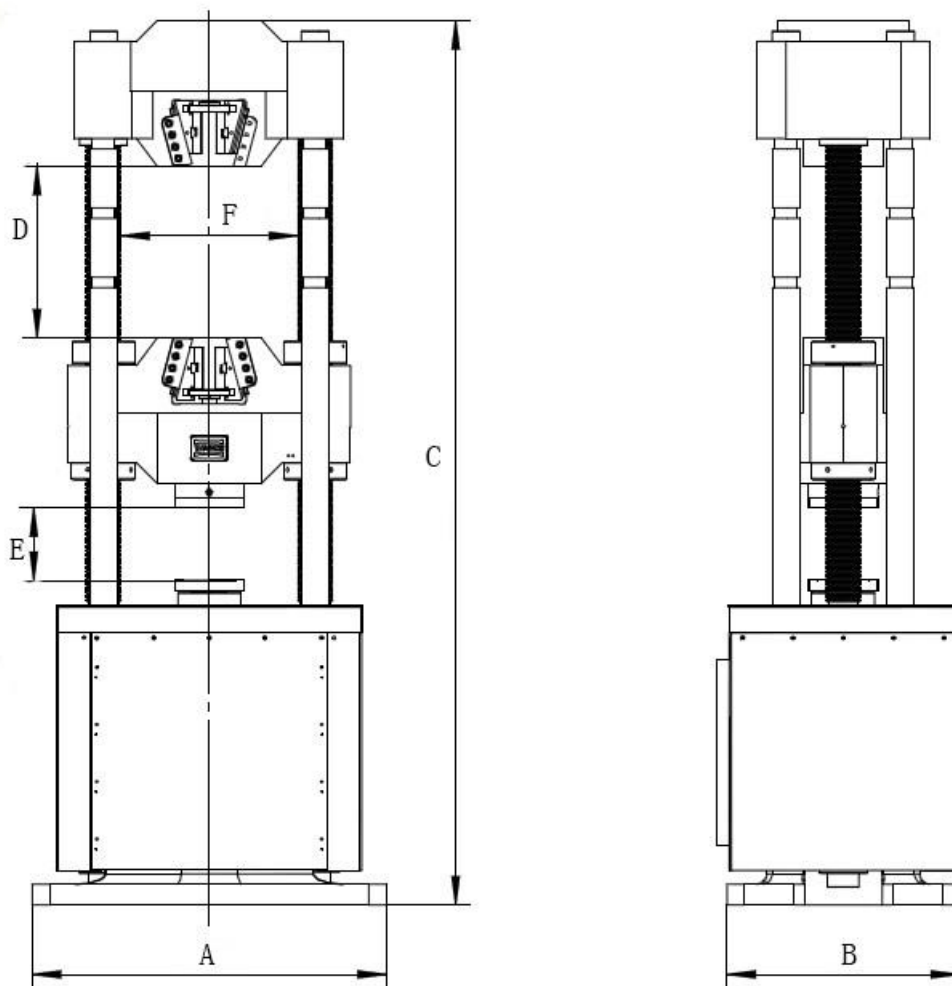
### Load cell

1. Use strain gauge load cell technology to measure the force being applied to specimen. The load cell is located in the lower grip and is used to directly measure tensile force.
2. High precise load cell measures and captures sensitively tension and compression force, high accuracy load measurement resolution reaches 1/500000 with no steps.
3. Famous brand load cell ensures high precision and repeatability.

### Specifications:

Model	HUT106
Type	C
Capacity (kN)	1000
Calibration accuracy	Class 1 / Class 0.5
Force accuracy	Better than $\pm 1\% / \pm 0.5\%$
Force range	1% ~ 100%FS
Extension range	1% ~ 100%FS
Extension accuracy	Better than $\pm 1\% / \pm 0.5\%$
Extension resolution	1/500000 of max extension
Actuator (piston) speed (mm/min)	0 ~ 90
Middle crosshead speed (mm/min)	310
Force loading speed	0.02% ~ 2% FS /s
Column number	6
Column spacing (test space width) (mm)	450
Maximum tension space (mm)	1000
Maximum compression space (mm)	900
Diameter of stranded steel wire (mm)	$\Phi 9.5 \sim \Phi 12.7, \Phi 12.7 \sim \Phi 15.2$ $\Phi 15.2 \sim \Phi 18$
Diameter of round specimens (mm)	$\Phi 10 \sim \Phi 18\text{mm}, \Phi 18 \sim \Phi 28\text{mm}$ $\Phi 28 \sim \Phi 45\text{mm}$
Thickness of flat specimens (mm)	2 ~ 20, 20 ~ 40
Compression platens (mm)	200×200
Actuator (piston) stroke (mm)	250
Hydraulic Power Unit dimension (LxWxH) (mm)	1150×600×900
Hydraulic Power Unit weight (kg)	340
Oil tank volume (L)	75
Flow rate (L/min)	5
Frame dimension (LxWxH) (mm)	1020×670×3050
Machine weight (kg)	4200
Power requirement	Three-phase, 5-line, 380 ± 10% VAC, 50Hz
Power consumption (kW)	4
Main cylinder hose length	2.6m x 1
Upper cylinder hose length	4.2m x 2
Lower grip hose length	3.55m x 2

Model	Dimension (AxBxC) (mm)	Tensile space (mm)	Compression space (mm)	Distance between columns (mm)	Piston travel (mm)
HUT106C	1020×670×3050	1000	900	450	250



## Standard accessories

Name		Description	Quantity
Main machine	Load frame	Dual space	1 set
	Load cell	built-in the load frame	1 set
	Displacement encoder		1 set
	Motor and speed reducer		1 set
HPU	Oil tank	Volume: 75L	1 set
	Pump		1 set
	Servo Valve		1 set
	Valve manifold		1 set
	Cooling fan		1 set
	High pressure oil hoses		4 sets
Grips & Fixtures	Hydraulic tensile grip	Jaws for stranded wire diameter: Φ9.5~Φ18mm	1 pair
		Jaws for round specimen: Φ10~Φ45mm	1 pair
		Jaws for flat specimen: 2-40mm	1 pair
	Compression fixture		1 pair
Controller		Model: DTC-500	1 set
Software		Testpilot, English version	1 set
Extensometer	Used for stranded wire	Gauge length: 600mm Extension: 25mm	1 set
Accessories	Maintenance tools		1 set
	Operation & Maintenance manual		1 set
	Software manual		1 set
	Warranty card		1 set
	Quality Certificate		1 set

### Prepared by customer:

- The anti-wear hydraulic oil (N46, 75L) shall be purchased by customer at local market.
- The foundation work must be finished before UTM delivered 14 days.
- Computer and printer should be prepared by customer



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