HIGH & LOW-TEMPERATURE UNIVERSAL TESTING MACHINE

Class 0.5

We offer UTM class 1 and class 2 at a lower price. Please contact our sales team for consultation.

DESCRIPTION

- The high and low temperature testing machine is mainly suitable for rubber, plastic profiles, plastic pipes, plates, sheets, films, wires and cables, waterproof membranes, metal wires, metal rods, metal plates and other material products.
- It can be used at high, low and ultra-high temperatures. Comprehensive mechanical testing under medium conditions such as vacuum and inert atmosphere. It can also perform tensile, compressive, bending and other strength tests on metal materials at room temperature.
- Adding a material testing fixture can perform corresponding strength tests on materials or finished products.

FEATURES

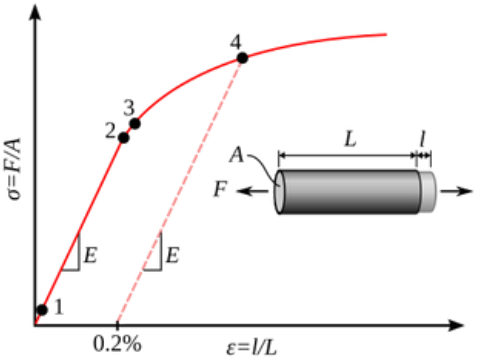
- The high and low temperature testing machine consists of a main body, a fixture and a movable environmental box.
- The main body of the tensile machine adopts a complete set of imported digital AC servo systems and a high-rigidity frame structure.
- The high and low temperature test chamber uses double-layer insulated glass doors to facilitate users to observe the test conditions, and uses an all-stainless steel frame and liner, which is not only beautiful but also highly corrosion-resistant.
- The overall shape is novel, high precision, low noise and easy to operate.

Temperature controller

SPECIFICATIONS

Model	HTUM-5/10/20H	HTUM-50H	HTUM-100H
Maximum test force	5/10/20kN	50kN	100kN
Force measurement range	0.4%～100%FS without binning throughout the process		
Test force indication accuracy	Better than ±1% of the indication value (precision level can reach ±0.5%)		
Test force classification	Stepless speed regulation, four gears: ×1, ×2, ×5, /10		
Control stability	±2.5%RH, ±1℃		
Temperature range	(-196~+1800℃) (can be customized according to user requirements) including environmental chambers/furnaces of various specifications		
Temperature fluctuation	±1℃		
High and low temperature chamber working test chamber dimensions	200mm×300mm×400mm (can be customized)		
In-box studio dimensions	270 (W) * 270 (D) * 600 (H) mm (can be customized according to user requirements)		
Displacement rate adjustment range	(0.001-500) mm/min can be set arbitrarily. Higher speed can be customized.		
Displacement rate spatial accuracy	≤±1%		
Test stroke (mm)	400, 500, 600 (can be increased according to customer requirements)		
Test width (mm)	400 (can be increased according to customer requirements)		
Completeness	meet the standards		
Testing machine weight (kg)	about 150	about 450	about 600
Testing machine size (L×W×H) (mm)	640×330×155	855×400×1980	905×500×2000
Protective function	Overload protection, limit protection, electronic control system overcurrent, overvoltage, overheating and overtemperature protection		
Power supply	220V 50～60Hz		

The fixture can customized, please see opition of universal testing machine



Stress–strain curve showing typical yield behavior for nonferrous alloys (stress, σ, shown as a function of strain, ϵ):

- *True elastic limit*
- *Proportionality limit*
- *Elastic limit*
- *Offset yield strength*