
HST-W600K4L Vertical Four-Station Thermo-Mechanical Tensile Testing Machine



(Picture just for reference)

Introduction:

1.1 Our company adopts an oil cylinder straight-pull structure: equipped with a special composite mandrel calibration tool (rated tensile strength 550kN), which is light in weight and easy to hang. The vertical type does not require climbing, and the horizontal type heat engine can complete the calibration work without a huge workload. .

1.2 The reason why the cylinder straight pull structure is used instead of the reaction frame structure is that the reaction frame structure has the following three disadvantages:

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Firstly, calibration is inconvenient and it is necessary to carry a heavy calibration sensor and climb to a height of 4~5

meters for calibration itself. Even if there are maintenance platform protection arrangement, there are still certain safety risks; Secondly, the reaction frame structure is at the top of the equipment, making the equipment to be heavy, which inevitably requires higher foundation production;

The last and most important point is that the product under test has physical properties of thermal expansion and contraction in the environmental chamber. These physical properties change extremely slowly, which requires the loading mechanism to be "sensitive" enough, especially when faced with sudden unloading requirements. : Frequent and timely correction of force changes caused by thermal expansion and contraction is required.

The extra burden brought by the structural weight of the reaction frame structure allows the loading mechanism to pack lightly and focus more on the stability of load retention and the accuracy of sudden unloading. At present, most manufacturers are unable to overcome the difficulty of frequently and timely correcting the force value changes caused by thermal expansion and contraction, resulting in poor load holding accuracy and sudden unloading accuracy.

1.3 The unique servo control hydraulic technology patent makes it the most stable manufacturer in the industry in terms of load holding accuracy and sudden unloading accuracy in the field of thermal performance mechanical testing.

1.4 The hydraulic system uses servo motor control instead of hydraulic valve control, which can save 99% of energy when maintaining load. The hydraulic system does not start when the force value remains unchanged. The equipment operates without noise or heat, which greatly extends the use of each component of the hydraulic system. Precision time over lifetime.

1.5 The program perfectly solves the load-holding accuracy requirements for force value caused by thermal expansion and contraction, and completes the sudden unloading function through program control. This function has been promoted under the leadership of China Electric Power Research Institute, Wuhan High Voltage Research Institute and other institutions.

1.6 It has a power-off battery life function, and the test can be continued without restarting after a call is received.

1.7 Air-cooled binary cascade refrigeration method (taking into account the high operating temperature in hot
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areas, our company can configure a chiller unit to meet the operating temperature above 35°C without the need to arrange cooling water lines)

1. Main Parameter on Main Host

Model	HST-W600K4L
Load number of workstations	4 (number of stations can be customized such as single)
Tensile test force of single cylinder	600kN
Force range and accuracy of each set of loading	3-600kN, accuracy better than 0.5%
loading speed	No-load 0-120mm/min steplessly adjustable, automatic
Environmental chamber test space	1700mm*800mm*3000mm
Displacement (deformation) range and	300mm, accuracy better than ± 0.01 mm
Control mode	Constant test force fully automatic control
Test force holding point and holding time	Meet the pressure holding requirements of more than
Energy consumption	Servo motor control, energy saving more than 95%, and no noise
Preload method	Cylinder preload
Connection Type	Mark 16-32 ball head ball socket
Frame form	welded steel structure
Protective function	Cylinder limit protection
	Hydraulic system overload overflow protection
	Test force overload protection
	Overcurrent and overvoltage protection
	Automatic shutdown protection at the end of test

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