

**Model:** PIT204, PIT304, PIT404, PIT105

**Type:** Type E

**Impact energy:** 20000J, 30000J, 40000J, 100000J

### Functions:

This type of machine is used for the DWTT test on the ferrite steel, pipeline steel and other metallic materials. DWTT impact energy is measured under dynamic loading, to judge impact-resistance performance of the specimen, and to observe the specimen fracture surface in their temperature transition region from non-ductility to ductility. It is widely used in research and development of high specification thick pipeline steel and ferrite steel.

### Standards:

ASTM E436, GB/T 8363, API RP 5L3

### Features:

1. Heavy duty seat and frame ensures stiffness and accuracy, reducing shock after impact.
2. High strength pendulum body ensures stiffness in axial and transverse direction.
3. Three types of pendulum raising device provides three types of impact energy without changing pendulum.
4. Automatic control: specimen feeding, impacting, pendulum raising and specimen collecting can be fully automatically operated.
5. Apply servo motor as the power to raise pendulum with constant torque output and precise raising. Cycloidal-pin gear speed reducer directly drives clutch with more advantages of simple structure, high speed-reduction ratio, high overload resistance, high efficiency, and small size and easy to maintain.
6. Equipped with specimen feeding and positioning device provides rapid feeding, precise positioning, high efficiency and safety, and reducing labor intensity.
7. Equipped with pneumatic braking device avoids clutch working at high speed, reduces clutch impact abrasion, and extend its life.
8. Equipped with multiple energy display device showing test results at the same time.
9. Equipped with specimen collecting device, bring the tested specimen out of the machine. It allows operator to collect specimen without going inside, greatly improving efficiency and working safety.
10. Full-closed safety shield prevents splitting of cracked specimen. Limit switch on the door ensures operator's safety.



11. Apply German Siemens S7-200 series PLC as controller. Full-automatic operation reduces labor intensity, and improves working efficiency and safety.

**Parameters:**

Item	Parameters	
Model	PIT404E	PIT105E
Maximum impact energy	20000J,30000J,40000J	100000J
Angle of striking	81.6°,106.3°,135°	135°~63°
Distance from the axis of support to the center of percussion	2000mm	2400mm
Velocity of striking	5.788m/s,7.088m/s,8.183m/s	5.07~8.96m/s
Support span	254±0.8mm	
Radius of curvature of supports	14.3±0.5mm	
Angle of taper of supports	11°	
Radius of striking edge	25.4±0.4mm	
Thickness of striking tip	50.8±0.8mm	
Specimen dimension	305 x 76.2 x (3~40) mm	
Weight	40000kg	
Power requirements	3-phase, 5-line, AC 380V±10% 50Hz	

**Standard Accessories:**

Name	Quantity (set)
Main frame	1
Pendulum	1
Specimen feeding system	1
Specimen support	1
Digital display	1
Specimen collection device	1
Jaws	4
Protection shield	1
Control electronics (SIMENS PLC)	1
Maintenance tools	1
Anchor bolt	1

Optional cooling chamber



LTC801C-1 (used separately)  
LTC801C-2 (used with specimen feeding system)



LTC102D

Model No.	LTC801C-1 (-2)	LTC102D
Temperature(°C)	-80~ambient	-100~ambient
Cooling method	Compressor	Liquid nitrogen
Cooling media	Absolute ethyl alcohol (purity>99.7%) 60L needed	Absolute ethyl alcohol (purity>99.7%) 100L needed
Temperature accuracy	±0.5°C	±1°C
Effective inside space (L x W x D)	690×380×200mm	690×380×198mm
Specimen size	360×75×(3~40)mm	305 x 75 x 40mm
Specimen containing capacity	≥8 pieces	≥8 pieces
Power supply	380V±10% 50Hz 15A	220V±10% 50Hz
Power consumption	8kW	1kW
Dimension	1350mm×950mm×1220mm	1255mm×1040mm×705mm
Net weight	250kg	100kg



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