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No. 259 Creep Tester



6 stations model



3 stations model

APPLICATION

When plastics are left applied with a constant load, they deform increasingly as time goes by. This phenomenon is referred to as "creep".

This machine evaluates the creep characteristics of plastics conforming to JIS K 7115 (ISO 899-1).

Though it is designed especially for a tensile creep test, it can be used also for compression and bending tests of small test specimens including rubber specimens by attaching a basket jig.

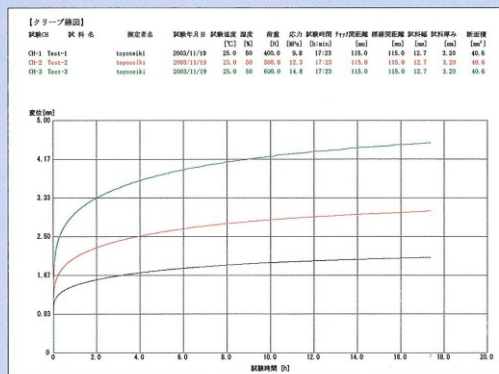
Conventional creep testers have required complicated efforts to attach and detach the weights. This machine automatically moves the weights on the lever through a motor-driven mechanism. As a natural next step, the manual operation of moving the weights is negated.

FEATURES (Patented)

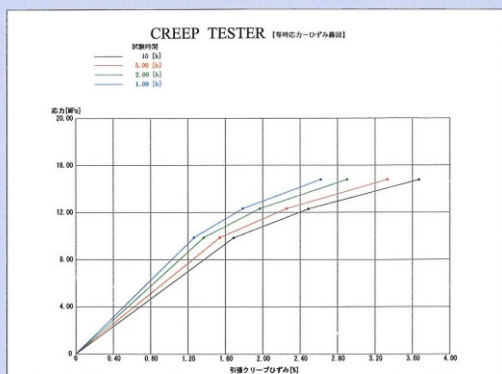
- Manual operation of moving the weights is unnecessary. Load setting is easily made by moving the weights on the lever through a motor-driven mechanism.
- High resolution of load setting (1N) makes it possible to set the load per cross-sectional area of the test specimen precisely.
- In addition to a constant load test, a constant stress test is available in which the change in the cross-sectional area of the specimen is corrected as appropriate. (Chuck interval correction system for strip specimens). Furthermore, a constant stress test is also available for irregular-shaped specimens such as dumbbell ones by using the optional reference line tracking device.
- Automatic control of the interval between the load lever and the lever shock mount can minimize the load shock when a test specimen ruptures.
- Data of high accuracy can be obtained by the extensometer mounted on the fixed-side chuck base.
- The touch panel allows you to set and operate the test parameters easily.



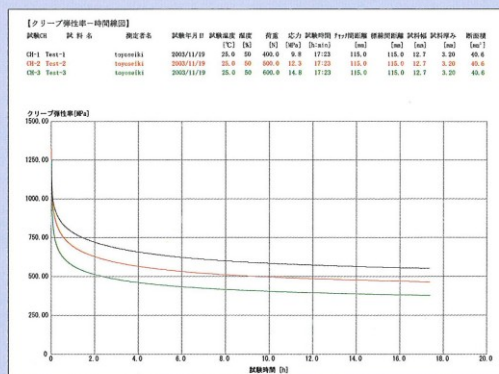
制御タッチパネル
Touch Panel



クリープ線図
Creep diagram



等時応力-ひずみ線図
Stress-Strain diagram



クリープ弾性率-時間線図
Creep elastic modulus-Time diagram

■ SPECIFICATIONS

Model	C100-3 C100-5 C100-6	C200-3 C200-5 C200-6	C300-3 C300-5 C300-6	C10003 C10006* ¹
Loading system	Lever weight moving system			
Test specimen	JIS K 7162 (ISO 527-2) type 1A and 1B JIS K 7115 (ISO 899-1) special specimen type No.1, No.2, No.4 and No.5			
Load range	10 to 1000N	20 to 2000N	30 to 3000N	100 to 10000N
Number of test specimens	C100-3: 3 stations C100-5: 5 stations C100-6: 6 stations	C200-3: 3 stations C200-5: 5 stations C200-6: 6 stations	C300-3: 3 stations C300-5: 5 stations C300-6: 6 stations	C10003: 3 stations C10006: 6 stations
Load steps	1N			10N
Chuck to chuck distance	60 to 180mm (Chuck opening: 8mm)			
Elongation range	0 to 50mm	0 to 30mm	0 to 25mm	0 to 50mm
Displacement measurement (Gauge length)	Rotary encoder (Resolution 0.01mm)			
Test mode	Constant load test, constant stress test (chuck to chuck system)* ²			
Temp. range	Room temp. + approx.20 to 200°C			
Temp. distribution	±1% or less (50 to 200°C, vicinity of specimen)			
Power requirement	Three-phase, AC200V, 50/60Hz, 10.4kVA (C100-3) (17.3kVA with optional temp. bath) Three-phase, AC200V, 50/60Hz, 20.8kVA (C1000-6) (34.6kVA with optional temp. bath)			
Dimensions				
Main unit	W1470 x D1730 x H1860mm			W1400 x D2600 x H2060mm* ³
Control panel	W570 x D530 x H1600mm			W570 x D530 x H1600mm
Weight	Approx. 1200kg			Approx. 2000kg
Related standards	ISO 899-1 (JIS K 7115) ASTM D 2990			

*1: In model C1000, 6 test specimens can be tested by connecting two C1000 units (with 3 test specimens respectively).

*2: Constant stress test

(1) Chuck to chuck system:

A test for a test specimen of which the cross-sectional area is constant between the chucks (such as a strip specimen). The test is conducted with a constant stress while correcting the cross-sectional area according to the displacement between the chucks.

(2) Gauge length system:

A test for irregular-shaped test specimens such as a dumbbell specimen. The test is conducted with a constant stress while correcting the cross-sectional area according to the displacement of gauge length. It needs the optional extensometer (Model IM).

*3: Dimensions of model C10003 (3 stations model)

■ OPTIONS

Name	Model	Description
Compression chuck	CC-1	Cage type, specimen diameter up to 40mm
Flexural chuck	CB-1	Cage type, specimen width up to 400mm, span up to 100mm
Thermostatic chamber	HT1	Room temp. + Approx. 20 to 250°C
	LHT1	-50 to 250°C
	LHT2	-30 to 200°C
Humidity chamber	M1	Humidity 25%RH to 95%RH Possible to combine together with HT1, LHT1 and LHT2
Extensometer	IM	Contact type
Data processing unit	DATA-K	Conforms to ISO 899-1 (JIS K 7115)
Stress relaxation device	SR	Only for model C1000

Specifications are subject to change without notice.



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