

QC-656A Digital H.D.T. Heat Deflection Tester

Standard

ASTM D648 ISO 75-1

Industry

Plastic

Introduction

The specimen is given a flexion stress at the center, and the temperature should increase by 2 degrees Celsius per minute. When the specimen's center undergoes a deflection of 0.254mm, the temperature is determined as the specimen's deflection temperature. The tester is equipped with touch screen that guides users step by step. A user-friendly interface and standardized process are designed to orientate users in the shortest possible and to reduce test errors. The system has built-in calculation function, user can enter the specimen dimension to get the required weight. During the process, the specimen holder and the weight frame automatically rise and descend to facilitate specimen's installment. This tester has 6 test stations, each one can show the independent temperature and displacement on the display. When it reaches deflection value, it will record the temperature and stops and start cooling system. Smart testing process is time-saving and requires only a minimum of testers.

Relative

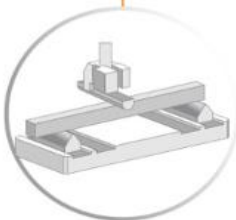
- QC-661 Digital Vicat Heat Deflection Tester
- QC-662 Vicat Heat Deflection Tester
- QC-657B H.D.T. Heat Deflection Tester



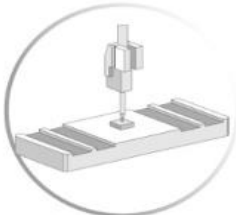
Specimen and weight holder can rise and descend automatically.



Equipped with high accuracy LVDT to measure the displacement.



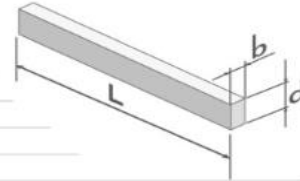
Specimen holder is able to exchange heat or Vicat deformation's type.



Able to store the result and raw data with USB.

Specification

Temperature	Room temperature - 300°C
Temperature Control	2°C increase per minute (adjustable)
Weight	Weight support 2.7 N. Each station has the following weights: 0.1N×1, 0.2N×2, 0.5N×1, 1N×1, 2N×2, 5N×1, 10N×1
Deflection Reading	0.001 ~ 3.000 mm
Flexion Span	100 mm, 64mm (101.6mm for options)
Specimen Support's Surface	R=3.0 mm (able to add the Vicat heat deflection test head)
Specimen Dimension	ASTM L=5"(127 mm), d=1/2 "(12.7 mm), b=1/4"(6.35 mm) ISO edge wise L=120mm, d=10mm, b=4mm ISO flat wise L=80mm, d=10mm, b=4mm ※ Specimen deviation should be ±0.1 mm
Temperature Equalization Method	Circulating flow
Cooling Method	Water cooling
Stations	6 test stations
Oil Chamber Capacity	25 L
Dimension	48×110×125 cm
Weight	230 kg (Empty); 250 kg (oil included)
Power	Single Phase 220VAC



Interface Introduction

Weight Calculation

※ Able to switch test standard ASTM or ISO and enter the specimen dimension for load auto-calculation.

Vicat Heat Deflection

※ Able to switch in to Vicat heat deflection test mode. Test standard can be switch into ASTM or ISO. Support with specimen dimension enter for load auto-calculation.

Standard : ISO 75 A
1.8Mpa

b = 6.35 mm

d = 12.70 mm

L = 64.00 mm

W = 17.6(N)

Standard : ASTM D1525
10N

W = 8.4(N)

Test Setting

※ Built-in standard test condition and standard test process can reduce the test error.
Able to support with special test condition setting.

Test Display

※ Able to test 6 specimen to test at the same time. Each sample holder has its own temperature and displacement measure tool.
Display will show the real-time test situation. When reaching deflection value, it will stop and start cooling system.

Standard: ISO 75 A, 1.8Mpa

Increasing rate: 2.0 (C/min)

Deflection: 0.254 (mm)

Pre-load duration: 00 : 20 (min:sec)

Real-time temperature: 28.8°C

Cooling: OFF

Settings confirmed

Yes

Real-time temperature: 22.0°C

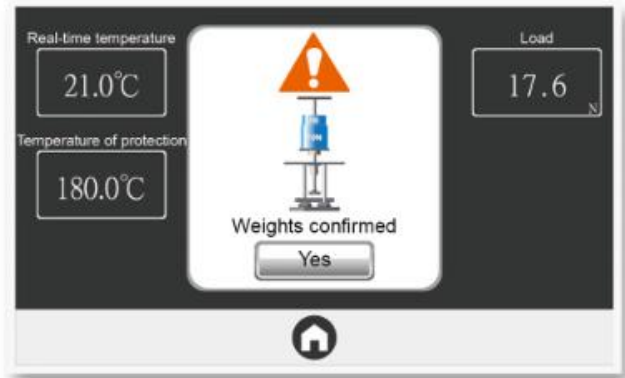
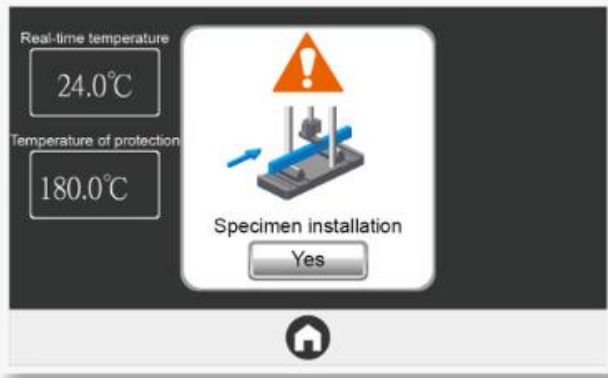
Temperature of protection: 180.0°C

	Displacement	Temperature
1	0.000	23.0
2	0.000	22.8
3	0.000	22.8
4	0.000	23.0
5	0.000	23.0
6	0.000	22.6

Interface Introduction

Test Process

※ Exclusive test operation leading can make it easier to use and help user to reduce the man-made improper operation.



Result Saving

1. Display can store 30 test data and able to save the result with USB.

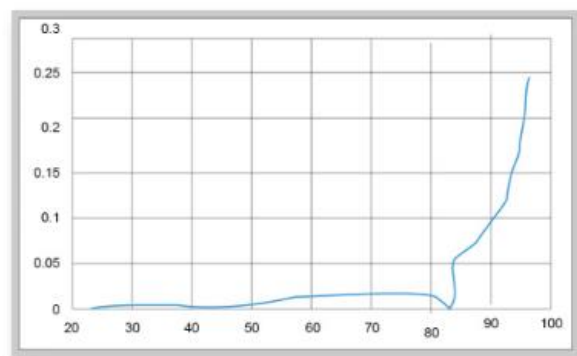
	Displacement	Temperature
1	0.254	120.4
2	0.254	120.8
3	0.254	120.5
4	0.254	120.6
5	0.254	120.8
6	0.254	120.5
Avg	0.254	120.6

Buttons: Delete, Data



2. Plugging in the USB while testing can record the whole test process and save the raw data in CSV format for analysis.

	A	B	C
1	31	0	23.9
2	35	0	23.8
3	40	0	23.8
4	45	0	23.8
5	50	0	23.6
6	55	0	23.6
7	60	0	23.5
8	65	0	23.4
9	70	0	23.4
10	75	0	23.3
11	80	0	23.3
12	85	0	23.3
13	90	0	23.3
14	95	0	23.3
15	100	0.001	23.3
16	105	0.001	23.3
17	110	0.001	23.4
18	115	0.001	23.4
19	120	0.001	23.5
20	125	0.001	23.5
21	130	0.001	23.7
22	135	0.002	23.8
23	140	0.002	23.9
24	145	0.002	24
25	150	0.002	24.1
26	155	0.002	24.2
27	160	0.002	24.3
28	165	0.002	24.5
29	170	0.002	24.7
30	175	0.003	25
31	180	0.003	25.2
32	185	0.003	25.6
33	190	0.003	25.9
34	195	0.003	26.2
35	200	0.003	26.5
36	205	0.003	26.9
37	210	0.003	27.2
38	215	0.003	27.5
39	220	0.003	27.8
40	225	0.003	28.2
41	230	0.003	28.4
42	235	0.004	28.7
43	240	0.004	29.1
44	245	0.004	29.5



*Cometech reserves ultimate modification right of product specification.

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