TECHNICAL DATA SHEET

Polytevo Series HDT and Vicat Softening Temperature Tester

Three-station HDT and Vicat softening temperature tester · RT to 300℃ · two heating rates · computer-controlled



Polytevo Series HDT and Vicat Softening Temperature Tester (ACS-5006-TC3) — representative configuration

The Polytevo Series HDT and Vicat Softening Temperature Tester (ACS-5006-TC3) is a three-station tester with computer control and report printing. Image shown for reference; final configuration is confirmed in the quotation.

CONTENTS

01 Product Overview
02 Core Advantages
03 Specifications
04 Applications

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SECTION I

Product Overview

Polytevo Series HDT and Vicat Softening Temperature Tester (ACS-5006-TC3) is a three-station heat deflection temperature (HDT) and Vicat softening temperature (VST) tester with a temperature range of RT to 300°C, two selectable heating rates, a 25 L oil bath and computer-controlled operation.

The ACS-5006-TC3 measures the heat deflection temperature and Vicat softening point of non-metallic materials such as plastics, rubber, nylon and electrical insulating materials. A PLC programmable controller regulates the temperature and a computer displays and operates the test; temperature and deformation are monitored in real time, heating stops automatically at the end of the test, and the test report and curves can be printed. It can run heat deflection and Vicat tests on various standard specimens, also at the same time.

SECTION II

Core Advantages

— **Three stations** Three sample frames; HDT and Vicat tests can be run separately or at the same time.

— **PID temperature control** Intelligent PID regulation with a heating rate that stays accurate; temperature control accuracy ±0.5°C.

— **Lifting sample rack** The sample rack can be raised or lowered at the start or end of the test.

— **Dual over-temperature protection** Software over-temperature protection plus an external mechanical over-temperature protection; heating and the instrument shut down automatically at the end of the test or when the limit is exceeded.

— **RT to 300°C with two heating rates** (120 ± 10)°C/h and (50 ± 5)°C/h, selectable and switchable freely.

— **Automatic load calculation** The required load is calculated from the test standard and the specimen size.

— **Multi-specimen curves** Test curves are color-separated so each group of specimens can be followed.

— **Report printing** Diversified report settings and complete report printing.

SECTION III

Specifications

Technical data — ACS-5006-TC3

Specifications	
Parameter	**Specification**
Brand	Polytevo Series by ACS Material
Product Name	Polytevo Series HDT and Vicat Softening Temperature Tester
Model	ACS-5006-TC3
SKU #	ERP7HVT1
Product type	Three-station HDT and Vicat softening temperature tester
Temperature range	RT to 300°C
Heating rate	(120 ± 10)°C/h [(12 ± 1)°C/6 min]; (50 ± 5)°C/h [(5 ± 0.5)°C/6 min]
Temperature indication deviation	0.1°C
Temperature control accuracy	±0.5°C
Deformation measurement range	0–2 mm
Sample frames	3 pcs
Weight of load beam and pallet	68 g
Sample support span	64 mm or 100 mm (as set by the test standard)
Oil tank capacity	Approx. 25 L
Heating medium	Methyl silicone oil or transformer oil (supplied by the customer)
Cooling	Natural cooling above 150°C; water cooling or natural cooling below 150°C
Heating power	AC 220 V ±10%, 4 kW
Instrument dimensions	545 × 520 × 970 mm

Test method references

Test method references	
Parameter	**Specification**
Vicat softening temperature (VST)	ASTM D1525
Heat deflection temperature, general test method	ISO 75-1; ASTM D648
HDT of plastics, ebonite and long-fibre-reinforced composites	ISO 75-2; ASTM D648
HDT of high-strength thermosetting laminates	ISO 75-3; ASTM D648
Vicat softening temperature of thermoplastic pipes and fittings	ISO 2507

Weight set

Weight set	
Parameter	**Specification**
1000 g	12 pcs
932 g	3 pcs
500 g	3 pcs
200 g	6 pcs
100 g	3 pcs
50 g	3 pcs
20 g	6 pcs
10 g	3 pcs
5 g	3 pcs
2 g	3 pcs
1 g	3 pcs
68 g (load rod)	3 pcs

Scope of delivery

— **Standard configuration:** computer, electrical control box, main frame, 3 sample frames, 3 HDT press heads, 3 Vicat needles, 3 weight sets and instruction manual.

— **Scope of supply** — the heating medium (methyl silicone oil or transformer oil) is supplied by the customer; final configuration is confirmed in the quotation.

SECTION IV

Applications

For measuring the heat deflection temperature and Vicat softening point of plastics, rubber, nylon and electrical insulating materials.

Product value: three stations for HDT and Vicat testing, RT to 300℃, two heating rates, dual over-temperature protection and printed reports with curves.

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