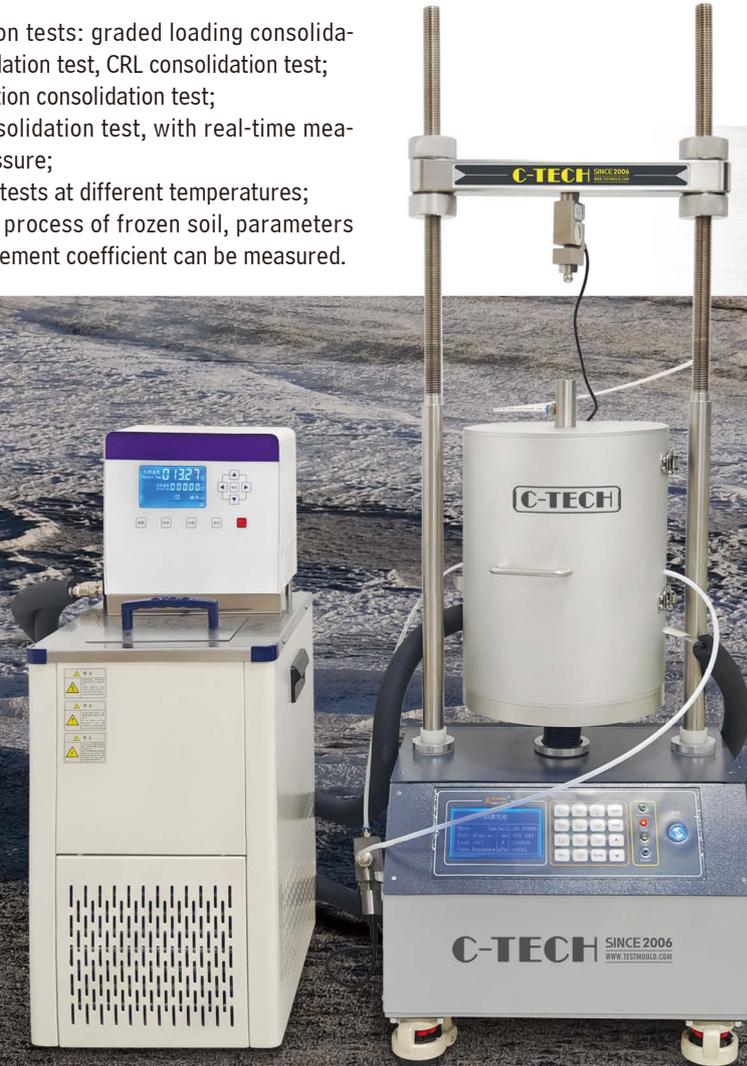


# AUTOMATIC FROZEN SOIL OEDOMETER STC-1TF

## APPLICATIONS

- ⊙ Standard consolidation tests: graded loading consolidation test, CRS consolidation test, CRL consolidation test;
- ⊙ Back pressure saturation consolidation test;
- ⊙ Long-term creep consolidation test, with real-time measurement of pore pressure;
- ⊙ Various consolidation tests at different temperatures;
- ⊙ Tests on the thawing process of frozen soil, parameters such as the thaw settlement coefficient can be measured.



## LOAD FRAME

The load frame has a built-in multi-channel data acquisition system capable of acquiring data from various sensors such as pore pressure, LVDT, and load. The control panel has an embedded 16-bit membrane keypad. The load frame can continuously apply consolidation stress of 0-3.2MPa and is equipped with 4 sets of LED status indicators to display the working status of the instrument.

Display	LCD screen, resolution 240×128
Shear rate	0.00001~9.99999 mm/min
Maximum axial force (load sensor)	10kN, accuracy +/-0.1%F.S
Pore pressure sensor	0-3MPa, accuracy +/-0.1%F.S
Consolidation stress	0-3.2MPa

## 3MPa/200CC PRESSURE VOLUME CONTROLLER

- Used to apply back pressure, maximum pressure 3MPa;
- A closed-loop microprocessor controls water pressure with an accuracy of 1 kPa.
- LCD screen, resolution 240×128;
- The control panel has a built-in 20-key membrane keypad with functions including pressure control, volume control, and linear loading.
- The volume capacity is 200cc, and the volume change is measured and displayed to 1mm<sup>3</sup> (0.001cc), with an accuracy of +/-0.01ml;
- Lightweight and small in size;
- Equipped with a USB 3.0 high-speed communication port for computer control and for collecting pressure and volume changes.



## FROZEN SOIL CONSOLIDATION CELL

Size	Ø61.8mm×40mm (standard) Ø50mm×25mm (optional)
Pore pressure port	√
Seepage port	√
Dimensions	Ø270×520mm
Weight	30kg



## WATER BATH

Temperature control range	-20~100 °C
Temperature fluctuation	±0.05 °C (inner tank)
Resolution	0.01 °C
Inner tank dimensions	300×250×270mm
Opening	235×160mm
Pump flow rate	13L/min
Heating power	2000W
Cooling capacity (pure water at 20 °C)	2700W
Total power	2400W
Circulation method	Internal/external circulation



## SOFTWARE

It can perform back pressure saturation tests, graded loading consolidation tests, CRS consolidation tests, CRL consolidation tests, and long-term creep consolidation tests under different temperature control conditions, and can measure pore pressure in real time. It can also measure the thaw settlement coefficient.

The post-processing module can obtain consolidation test parameters such as soil compressibility coefficient  $a_v$ , resilient modulus  $E_S$ , consolidation coefficient  $C_v$ , and preconsolidation pressure  $P_c$  through tests. The post-processing function can obtain time square root curves, time logarithmic curves, e-p curves, e-lgp curves, CV-P(T90) curves, CV-P(T50) curves, H-P curves, etc.