

## CYCLIC SIMPLE SHEAR TESTER

(Electro-Pneumatic Servo Control Type)

P. No. 1/2

### Model No. DTA-136

THE MOST ADVANCED PNEUMATIC SINE WAVE SIMPLE SHEAR APPARATUS.

IT IS VERSATILE AND HAS CAPABILITIES BEYOND OTHER SIMPLE SHEAR EQUIPMENT.



Reference Photograph

#### ESSENTIAL POINTS:

1. 2-ways of Specimen Confining Methods
2. Specimen Size:  
Dia. 70mm X 20mm
3. Horizontal Load: 2kN, Electro-Pneumatic Servo Control
4. Vertical Load: 2kN, Pneumatic Confining Pressure 600kPa
5. Cyclic Frequency: 0.001-1Hz

#### APPLICATION:

**Dynamic simple shear test for cohesive & cohesionless soils (Shear strength, Liquefaction, Shear modulus and Damping properties)**

#### SPECIFICATIONS:

##### 1. Confining Chamber

1 SET

3-Stress (Horizontal, Vertical & Confining pressure) Independent loading type, With clear plastic cylinder, Horizontal load: 2kN, Vertical load: 2kN, Confining pressure: 600kPa, Displacement: Horizontal +/- 25mm, Vertical 20mm, Specimen size: Dia. 70 x 20mm, Side confining methods: ① Combination of Plain membrane & Multi layered ring, ② Wire reinforced membrane



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## 2. Loading Unit

**1SET**

Horizontal load, Capacity: Static 2kN, Cyclic: +/-1kN, Vertical load: Manual pneumatic loading system, Capacity: 2kN, Special equipment: Air – Oil hoist for Chamber assembly

## 3. Pneumatic Sine Loader

**1SET**

- 1) Electric-Pneumatic servo control type
- 2) Range of Vibration: 0.001 - 1 Hz
- 3) Loading Wave: Sine wave
- 4) Loading number of times: Preset type with 6 Figures Digital Counter

## 4. Air-Water Unit

**1SET**

Air & Water pressure system controlled by precision air regulators  
Controls: Vertical pressure, Back pressure and Confining pressure  
Measurement: Combination of Master gauge (Dia.200mm, 1MPa, 1/500 divisions) and Slave gauge (Dia.100mm) 1MPa, Volume Change: Double Tube Type Volumenometer (25ml), Special equipment: Vacuum type De-Aired water system (5L, Dual reservoir type)

## 5. Electric Measuring Unit

**1SET**

- 1) Transducers (1 SET)  
Horizontal load (2kN), Vertical load (2kN), Horizontal displacement, ( 1 Large, +/-25mm, 2 Small, +/-1mm), Vertical Displacement (20mm), Pore Water Pressure (1MPa), Confining Pressure (1MPa), Volume Change (25ml)
- 2) Amplifiers (1SET)  
Unit Type with Digital Volt Meter, 2 units (FOR Feedback control & Horizontal displacement, each 1 unit)
- 3) Data Acquisition System (1SET)  
8ch. type  
Combination of sensor interface type (PCD-300A) (PCD-320A) and voltage input type, Max. sampling frequency: 5kHz  
Connectable to a PC via USB Interface
- 4) Cabinet (1SET)  
Standard floor type with casters, cooling fan, main switch

**1SET**

## 6. Accessories

Fittings for positioning of Specimen cap (1), Specimen leveler (1), Membrane suction mould for cohesive soil (1), Ring cutter for cohesive soil with plunger (1), Membrane jacket (1), Miter box with straight edge and wire saw (1), Wire reinforced membrane (10), Plain membrane (10), Split mould for cohesionless soil (1)