

## TORSIONAL CYCLIC TRIAXIAL APPARATUS (Electro-Pneumatic Servo Control type) Model No. DTC-262



(Actual product differs from the above.)

**PNEUMATIC SERVO  
CONTROL TYPE**

**SIMPLE OPERATION &  
EASY MAINTENANCE**

### **APPLICATION:**

**Torsional cyclic triaxial tests of hollow cylindrical cohesive & cohesionless soils for Dynamic shearing strength, Deformation, Liquefaction, Shear modulus & Damping properties.**

### **FEATURE**

1. Torsional by Pneumatic Servo Control: Cyclic Load 1Hz
2. Hollow Specimen: Dia.100mm X Dia.60mm X 100mmH  
Hollow Specimen: Dia.70mm X Dia.30mm X 100mmH (Option)  
Solid Specimen: Dia.70mm X 100mmH (Option)
3. Strain Level:  $10^{-2}$  –  $10^{-4}$
4. Torque: 2kN-cm
5. Confining Pressure: 1MPa

### **SPECIFICATION**

#### **1. Triaxial Cell 1 SET**

- Vertical load (Max.): 5kN (Transducer capacity: 2kN)
- Torque (Max.): 5kN-cm (Transducer capacity: 2kN-cm)
- Confining pressure (Max.): 1MPa (Normal operation: 0.8MPa)
- Specimen size: Dia.100mm X Dia.60mm X 100mmH



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## 2. Loading Unit 1 SET

Torque load: Rack & Pinion type loading unit, Capacity 5kN-cm (Measuring capacity: 2kN-cm)

Vertical load: Manual pneumatic control system Capacity: 2kN

Dynamic wave: Sine, Frequency: 0.001 to 1Hz

Setting of load: Static bias & Dynamic loading: 1000-divisions potentiometer type

## 3. Air-Water Unit 1 SET

Precision air pressure regulator, Conversion of air pressure to water pressure, Separated type

Capacity: Both confining pressure & back pressure: 0.8MPa, Measuring: Master gauges system (Dia.200mm, 1000kPa, 1/500 divisions), Pressure gauge for each function unit (Dia.100mm), Volume changes: Double tube type volume meter (50ml) with electric measurement, Special equipment: Vacuum type De-aired water system (5L, Dual reservoir type), Water supply system for Triaxial cell (10L, 300kPa)

## 4. Measuring & Control Unit 1 SET

### 1) Transducers

Torque & Vertical Load (Dual purpose construction, 2kN-cm & 2kN), Angular displacement (Large: +/-20deg. 1pc., Small: +/-1deg., 1pc.), Vertical displacement (20mm), Pore water pressure (1MPa), Confining pressure (1MPa), Volume change (50ml)

### 2) Amplifiers

Amplifier suitable for the above transducer: 4ch.

Torque, Angle displacement (Large & Small) and Volume change

The remaining 4ch. data among total 8ch. put in the following Data acquisition system

### 3) Pneumatic servo controller (1PC.)

FB: Torque & Angle displacement, Dynamic frequency: 0.001 to 1Hz

### 4) Data acquisition system (1SET)

2units (4ch.X2)

Combination of sensor interface type & voltage input type, Max. sampling frequency: 5kHz,

Connectable to a PC via USB Interface

### 5) Cabinet (1PC.)

Standard floor type with casters, cooling fan & main switch

## 5. Accessories 1 SET

Hollow specimen former for cohesionless soils (Dia.100mmXDia.60mmX100mmH, 1pc.)

Rubber membrane (Dia.100mm & Dia.60mm, 10pcs. for each). Necessary tool

## 6. Option

Hollow specimen former for cohesionless soils (Dia.70mmXDia.30mmX100mmH, 1pc.)

Hollow specimen former for cohesive soils (Dia.70mmXDia.30mmX100mmH, 1pc.)

Rubber membrane (Dia.70mm & Dia.30mm, each 10pcs.)

Membrane jacket (Dia.70mm, 1pc., Dia.100mm 1pc.)