

## Pipetter Leak Testing Unit, PLT Unit 피펫 리크 테스터

Cat. No.	Model	Description	EA Price ₩
P09-59-001	703970	PLT Unit	3,178,800

- 1 ul ~ 10 ml 까지의 Single 또는 Multichannel Pipet의 Leak Testing용 (Air-displacement Pipettes)
- 피펫 내부 Piston Seal 또는 Tip Cone의 Damage를 점검 할 수 있음
- Regular Gravimetric Calibration 사이의 Safeguard로서 Daily Pipette Check용
- Brand만의 특허 기술로 얻을 수 있는 결과를 보여줌
- Testing With and Without Tips
- Test Result in Seconds
- 구성 : 1 Channel Pipet Adapter (With Tip Mounted, without Tip 각 1개), 2 Plugs, 3 PE Filter for Pipet Adapters, AC Adapter, Quality Certificate Manual
- Brand GmBH

### 1-Channel Pipet Adapter

Cat. No.	Model	Description	EA Price ₩
P09-59-003	703975	For Pipet with Tip ①	85,900
P09-59-005	703976	For Pipet without Tip ②	85,900

- 1 Plug 포함

### 4-Channel Pipet Adapter

Cat. No.	Model	Description	EA Price ₩
P09-59-009	703977	For Multichannel Pipet ③	277,600

- For 4 channel Pipette With and Without Tip
- 4 Plugs 포함

### Filter for Pipette Adapter

Cat. No.	Model	Description	EA Price ₩
P09-59-012	703978	PE Filter ④	14,800

### Universal AC Adapter

Cat. No.	Model	Description	EA Price ₩
P09-59-015	703979	Universal AC Adapter ⑤	134,600

- AC 100V ~ 240V, 50/60 Hz

## Leak Rate and Their Detection

The leak rate is a measure of the quantity of material that flows through a leak per time unit. For air-displacement pipettes the PLT unit determines the rate through a differential pressure measurement, i.e., after creating a negative pressure, the pressure rise over a given time is measured.

### • Complex Determinations

The leak rate is determined by considering complex physical relationships.

Calculation of the limit values resident in the PLT must include factors such as the dead volume of the pipette/tip system, flow cross-section of the pipette tip, pressure rise per time unit, pipette volume and type, etc.

### • The pV Value

The pV value is the product of the pressure and the volume of a certain quantity of a gas at the prevailing temperature. This is a measure of the quantity of material or the mass of the gas.

### • The Leak Rate $Q_L$

The leak rate  $Q_L$  is the ratio of the pV value and the period of time during which the gas flows through a path cross-section.

### • The volume loss

For the pipette test, hPa ml/s is a suitable unit for the leak rate. A leak rate of e.g., 1 hPa ml/s at an air pressure of 1000 hPa means a volume loss of about 1 ul/s.

