

# Universal Leak Calibrator Variable Leak Master

通用型泄漏校正器  
可调泄漏基准

**ULC-101** 系列  
Series

用来确认检测仪器精度的校正器  
Useful Tool for Checking Tester Accuracy



- 压力校准点可调节，适用范围广  
variable pressure setting point with a wide adaptability range
- 使用新型流量阀，可设定任意漏率  
newly developed flow valve unit freely creates any discretionary leak rate
- 三种流量检测范围，可满足多种需求  
Three flow measuring laminar range meet various requirements
- 专业校准用层流管，进一步保证检测精度  
separately available verification laminar to confirm further accuracy
- 机身小巧，可用电池，操作简单  
compact body and battery system allow easy operation at anywhere



# 使用精密流量阀，可设定任意所需漏率

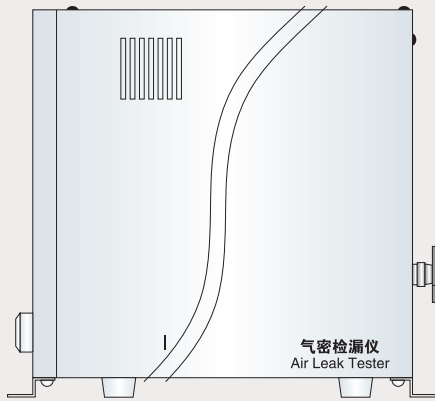
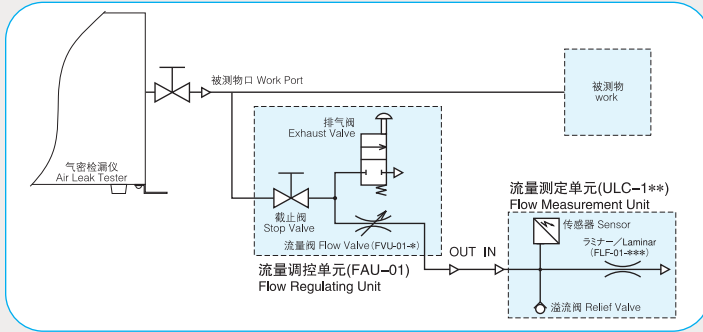
Precision flow valve freely creates any desirable leak rate component

## ■ 连接示意图 Connection & Name

※ 下列数字与型号的序号对应

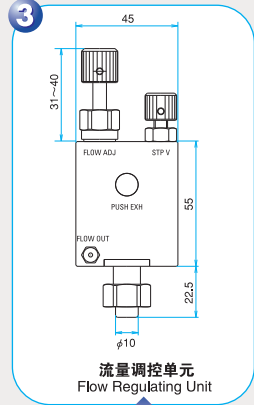
The following numbers correspond to the model number

### ■ 气动回路 Pneumatic Circuit



4 流量阀:可任意调整漏率  
Flow Valve: A valve to optionally adjust leak rate

截止阀:开始和终止气流  
Stop valve: A valve to start and to stop bubble formation

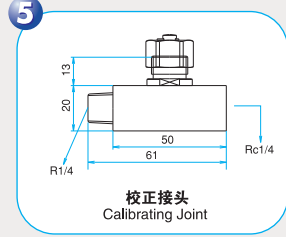


排气阀:将泄漏测试回路接通大气  
Exhaust valve: A valve to release the leak measurement circuit to the atmosphere

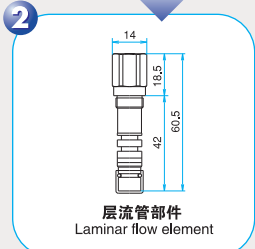
3 流量调控单元:用于产生或停止泄漏,或者是改变漏率  
Flow regulating unit: A unit to generate and to stop leakage, or to change a leak rate

聚氨酯透明管  
Clear poly-urethane tubing

5 校正接头  
Calibrating Joint



2 层流管部件:将漏率转换为差压  
Laminar flow element: An element to convert a leak rate to the differential pressure



软管接头  
Hose Nipple

电量指示器  
Battery Indicator

检测状态显示  
Tester Conditions Indicator

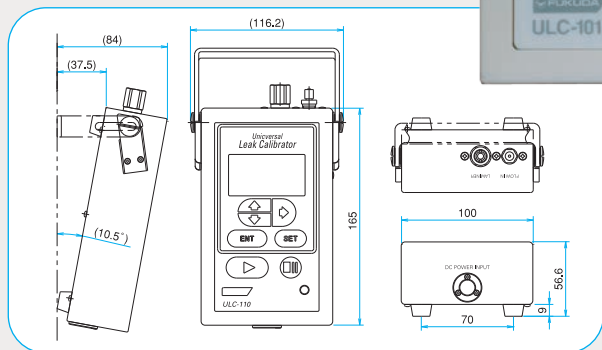
流量检测范围指示  
Laminar F.S. Classification Indicator

光标移动键, 数值更改键:  
用于修改设定参数  
Cursor shifting key,  
numerical values increment key: used for changing setting items

确认键  
Enter Key

测定开始键  
Measurement Start Key

### 1 外部尺寸 External Dimensions



## ULC series

设定键: 用来选择规格或设定数值  
Set key: Used for selecting specifications or setting numerical values

暂停/复位键  
Temporary Stop/ Re-set Key

电源  
Power supply

# 速率机身小巧，可用电池，操作简单

## Compact body and battery system allow easy operation at anywhere

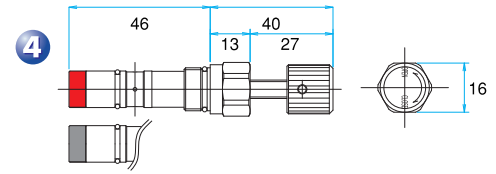
### 流量调控单元选择标准 / Flow Regulating Unit Selection Criteria

颜色	调整范围	标准
红色	区域B+ 区域C (流量可以调整到零)	用于0到区域B之间的流量范围
银色	区域A+ 区域B (不能调整到区域C, 或区域C以下范围)	用于区域A但不用于区域C

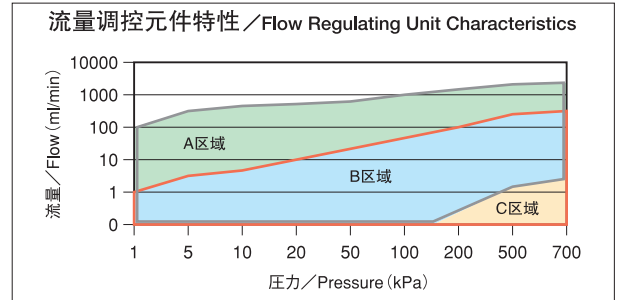
流量调控单元根据颜色不同分为两种：红色为标准型，银色为可选型。每个单元可调控的流量范围如右图所示

Unit Color	Adjustment Range	Criteria
Red	Graph B & C (able to adjust to zero flow)	When used for the flow rate between zero to Graph B area
Silver	Graph A & B (unable to adjust Graph C and flow rate below)	Use for Graph A area but not used for Graph C area

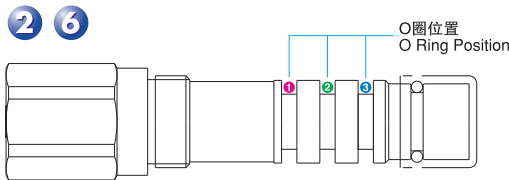
There are two types of flow regulating unit distinguished by red (Standard) and silver colors (Option). Each unit's flow regulating range is indicated in the graph on the right:



流量阀组件 / Flow Valve Unit



### 层流管分类 / Laminar Classification



组1 / Group1			组2 / Group2		
层流管编号 Laminar No.	O圈位置 O Ring Position	层流管满流量(ml/min) Laminar F.S. Flow Rate	层流管编号 Laminar No.	O圈位置 O Ring Position	层流管满流量(ml/min) Laminar F.S. Flow Rate
1	1	1ml/min	1	1, 3	1ml/min
2	2	10ml/min	2	2, 3	10ml/min
3	1, 2	100ml/min	3	1, 2, 3	100ml/min

- 通过与层流管相连接的O型圈的位置，ULC主机可以自动读取并显示压力范围和满度值
- 组1标明了常规用层流管的设置，组2标明了精度确认用层流管的设置。如果客户同时订购ULC本体和精度确认用层流管，那么厂商将会对其进行默认设置。如果客户为ULC本体配置一个新的精度确认用层流管，那么就需要根据新的层流管重新修订ULC的设置。
- 组号设置与满度值参考上面的表
- 上面列出了每个分组编号和对应的O圈位置

- The ULC body reads and indicates the group classifications and full scale values automatically based on the position of O ring that is connected to the laminar
- Group-1 contains the setting of the routine use laminar and group-2 contains the setting of the accuracy verification laminar. If accuracy verification laminar is ordered with ULC main unit, the manufacturer will program its setting as default setting. When additionally ordering a verification laminar for an existing ULC unit, it is necessary to modify the settings to correspond with the new laminar figure details.
- Group settings and full scale values are indicated as above
- Each group classification number and O ring position is listed above

### 型号 / Model Number

ULC-①-②-③-④-⑤-⑥

#### 1 主体 / Main Body Category

型号	式样	备注
101	正压10~700kPa, 流量量程1种专用	1ml, 10ml, 100ml根据1种选择
111	正压10~700kPa, 流量量程3种专用	1ml, 10ml, 100ml标准式样

Number	Specification	Remarks
101	1Flow Range	Select from 1ml/min, 10ml/min, 100ml/min
111	3Flow Range	Laminar elements for 3 different flow rates (1ml/min, 10ml/min, 100ml/min) are equipped as standard

#### 2 层流管部件 / Laminar Flow Element

ULC型号	标号	流量部件 (ml/min)	备注
101	1	1	可从1ml/min, 10ml/min, 100ml/min中选择
	10	10	
	100	100	
111	0	1, 10, 100	标准式样

ULC Cat.	Number	Laminar Element (ml/min)	Remarks
101	1	1	Select from 1ml/min, 10ml/min, 100ml/min
	10	10	
	100	100	
111	0	1, 10, 100	Standard

#### 3 流量调整装置 / Flow Regulating Unit

型号	规格	备注
0	不附带	特殊规格
1	内部容积为0.1ml	预计销售中
2	内部容积为2ml	标准式样

Number	Specification	Remarks
0	N/A	Special Specification
1	Internal Volume 0.1ml	Not yet released
2	Internal Volume 2ml	Standard

#### 4 流量调节阀 / Flow Valve

型号	颜色	类别	备注
0	N/A		可选
1	红色	小流量	标准
2	银色	中流量	可选
3	红色+银色	小流量+中流量	可选

Number	Color	Category	Remarks
0	N/A		Option
1	Red	Minute Flow	Standard
2	Silver	Middle Flow	Option
3	Red+Silver	Minute Flow+Middle Flow	Option

#### 5 校正接口 / Calibration Joint

型号	尺寸	备注
0	不附带	可选
1	In R 1/4 Out Rc 1/4	标准式样
2	In R 1/8 Out Rc 1/8	可选

Number	Size	Remarks
0	N/A	Option
1	In R 1/4 Out Rc 1/4	Standard
2	In R 1/8 Out Rc 1/8	Option

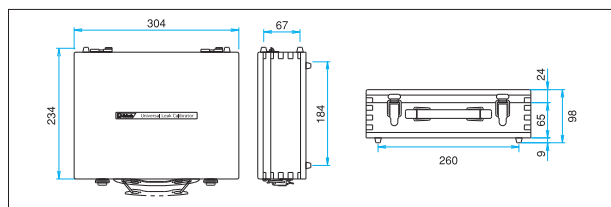
#### 6 确认用层流管 / Verification Laminar

型号	范围 (ml/min)	备注
0	不附带	标准式样
1	1	可选
2	10	可选
3	100	可选
4	1+10	可选
5	1+100	可选
6	10+100	可选
7	1+10+100	可选

Number	Laminar Range (ml/min)	Remarks
0	N/A	Standard
1	1	Option
2	10	Option
3	100	Option
4	1+10	Option
5	1+100	Option
6	10+100	Option
7	1+10+100	Option

注：以上配件可以单独订购  
Note: We offer the above listed options separately.

### 包装箱 / Wood Carry Case



- 用于本机和附件的包装。
- For the unit body and options.

# Universal Leak Calibrator ULC-101/111 series

## 性能规格

精 度	2% F.S.	所有型号适用
流 量 范 围	1ml/min, 10ml/min, 100ml/min	ULC-101(选择一种流量范围) ULC-111(包括所有流量范围)
流量状态显示	标准状态 20°C 1Atm 正常状态 0°C 1Atm	根据型号选择 根据应用情况选择
流 量 单 位	ml	所有型号适用
时 间 单 位	min	所有型号适用
应 用 介 质	空气 氦气 二氧化碳 氮气	所有型号适用 根据应用情况选择 其他介质的转换率
大气压力单位	hPa PSI mbr	所有型号适用根据应用情况选择
温 度 单 位	°C.K	所有型号适用根据应用情况选择
使用压力范围	10kpa~700kpa	所有型号适用
使用温度范围	0~40°C	所有型号适用
显 示 器	LCD显示, 黑白显示 (绿色背光, 128x64)	所有型号适用
流 量 显 示	4位数字	所有型号适用
电 源	AC100V~AC240V (50/60HZ) 变压器: DC12V 1A 主体: 电池	所有型号适用
电 池	4节AA (LR6) 碱性电池, 连续使用8小时	所有型号适用

## Performance Specification

Accuracy	2%F.S.	Common to All Models
Flow Range	1ml/ min 10ml/ min 100ml/ min	Select ULC-101 (Select One Range) ULC-111 (All Included)
Flow Status Indication	S: Standard Condition 20°C 1 Atm N: Normal Condition 0°C 1 Atm	Depending on Model Depending on Application
Unit (Flow Rate)	ml	Common to All Models
Unit (Time)	min	Common to All Models
Applicable Medium	Air·He·CO <sub>2</sub> ·N <sub>2</sub>	Common to All Models Depending on Application Traceability for AIR only Converted Rate for Other Medium
Unit (Pressure)	hPa·PSI·mbr	Common to All Models Depending on Application
Unit (Temperature)	°C·K	Common to All Models Depending on Application
Applicable Pressure Range	10kPa~700kPa	Common to All Models
Applicable Temp. Range	0~40°C	Common to All Models
Indication	LCD w/ No Back Light Black and White (Background:Green) (128X64 Characters)	Common to All Models
Flow Rate Indication	Full 4 digits	Common to All Models
Power Source	AC100V~AC240V (50Hz/ 60Hz) AC Adaptor: DC12V 1A Main Body: Battery	Common to All Models
Battery	Ni-MH battery (AA Size) 4 units parallel Max Continuance Use: 8 hours	Common to All Models

## 功能规格

型 号	流量范围	精度确认用层流管
ULC-101	可从1ml/min、10ml/min、100ml/min中选择一种流量 只能使用选择的流量	提供满足所选流量范围的确认用层流管
ULC-111	1ml/min、10ml/min、100ml/min 3种流量都可使用	提供3种流量中的一种或者全部流量的确认用层流管

## Function Specifications

Model	Flow Range	Accuracy Verification Laminar
ULC-101	Select from 1ml/ min, 10ml/ min, 100ml/ min. Able to Operate only in Selected Flow Range	A laminar with full scale of the selected flow rate will be supplied.
ULC-111	1ml/ min, 10ml/ min, 100ml/ min. Able to Operate at 3 Different Flow Rates (3 Different Laminar Element Supplied as Standard)	A laminar element with one selected flow rate or all three flow rates will be supplied. (Optional Verification Laminar)

## 附件

型号/No	产品名称/Product Name	数量/Quantity
1	流量调整装置/Flow Regulating Unit	1/1 set数量/Quantity
2	流量调节阀/Flow Valve Unit	1/1 set
3	连接件/Hose Connection	1/1 unit
4	校正接口/Calibration Joint	1/1 unit
5	层流管部件/Laminar Flow Element	1或3/1 or 3 sets

## Accessory Classifications

型号/No	品名/Product Name	付属数量/Quantity
6	密封盖/Seal Cap	1/1 unit
7	聚氨酯透明管/Clear Poly-Urethane Tubing	70cm/70cm
8	变压器/AC Adaptor	1/1 set
9	AA (LR6) 碱性电池/ Battery (Ni-MH Battery: AA Size)	4/4 units
10	包装箱 (木制)/Wood Carry Case	1/1 set

主要产品

● 气密检漏仪

● 数字压力表

● 流量计

● 自动压力、流量控制器

● 密封性能检测专用设备



长野福田(天津)仪器仪表有限公司  
天津博益气动股份有限公司



株式会社FUKUDA

地址: 日本东京都练马区贯井3-16-5  
Add.: 3-16-5, Nukui, Nerima-ku, Tokyo, Japan  
电话: (81) 33577-1111  
传真: (81) 33577-1002

公司·工厂: 天津开发区泰丰路80号

邮编: 300457

电话: (86)22-59810966

传真: (86)22-59810963

营销中心: 北京市丰台区角门18号名流未来大厦801-805室 邮编: 100068

电话: (86)10-87582461

传真: (86)10-87582462

网址: www.boyiqd.com

邮箱: sales@boyiqd.com



扫一扫, 查看  
办事处地址

代理商:

公司在深圳、顺德、杭州、上海、苏州、长沙、武汉、重庆、西安、青岛、沈阳设有分支机构。

C-FB-0ULC101-X-05

Printed in China