

MARCH 27, 2013

PRODUCT INFORMATION N°139

SOPHIE CURIEN – PRODUCT MANAGER



## PIPETMAN L Fixed from 1 $\mu$ L to 5000 $\mu$ L

pipetman® 

Comfortable And Secure By Nature!

Enjoy the comfort and ease of use of PIPETMAN L Fixed.



 **GILSON®**



## PIPETMAN L FIXED IDENTITY CARD

**PIPETTE TYPE:** mechanical single channel pipette with fixed volume.

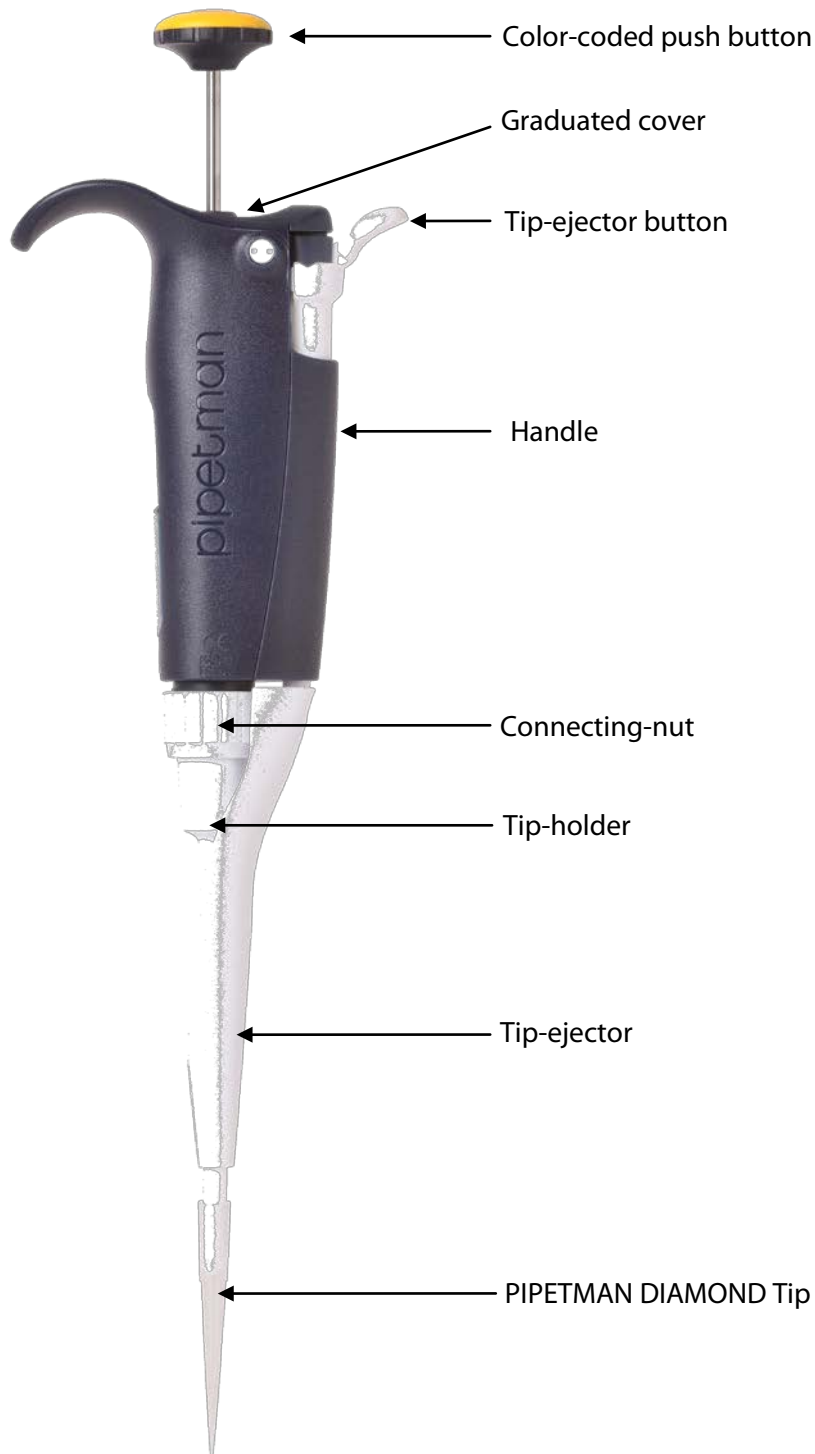
Number of models: 15

Volume range: 1 µL to 5 000 µL

Model	Ordering references	Volume	Color code	Weight	Length
F1L	FA10017	1 µL	Red	69 g	235 mm
F2L	FA10018	2 µL	Red	69 g	243 mm
F5L	FA10019	5 µL	Red	70 g	235.5 mm
F10L	FA10020	10 µL	Red	70 g	245.4 mm
F20L	FA10021	20 µL	Yellow	72 g	259 mm
F25L	FA10022	25 µL	Yellow	72 g	262.9 mm
F50L	FA10023	50 µL	Yellow	73 g	247.4 mm
F100L	FA10024	100 µL	Yellow	73 g	257.2 mm
F200L	FA10025	200 µL	Yellow	81 g	254 mm
F250L	FA10026	250 µL	Green	81 g	257.9 mm
F300L	FA10027	300 µL	Blue	95 g	270.7 mm
F400L	FA10028	400 µL	Blue	95 g	272.6 mm
F500L	FA10029	500 µL	Blue	95 g	274.6 mm
F1000L	FA10030	1000 µL	Blue	95 g	284.5 mm
F5000L	FA10031	5000 µL	Violet	97 g	269.6 mm



## DESCRIPTION





## 1. FEATURES AND BENEFITS

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### 1.1. BODY OF PIPETMAN L

#### 1.1.1 Body shape

Four features have been carefully analysed and designed to offer the best comfort:

- The shape contours to the hand, creating a natural feel while holding the pipette
- The hook reduces tension when user holds the pipette and provides all-day comfort;
- The well balanced body helps prevent injuries to tender parts of the hand.
- The adjustable tip ejector button allows both right and left handed users to eject tips comfortably

#### 1.1.2 Ejection mechanism

The ejection system is designed to be resistant to high forces, and decrease tip ejection forces (see **S1.3**)

#### 1.1.3 Easier Traceability with 2D CODE IDENTIFICATION

For convenient traceability, PIPETMAN L offers 2D code identification (Data Matrix).



This code includes the ordering reference, manufacturing date, serial number, and the nominal volume.





Example:

FA10005 201106 GG70074 200



## 1.2. HIGH QUALITY RAW MATERIAL

**Product features:** All the materials used offer the typical Gilson quality, robustness and chemical resistance

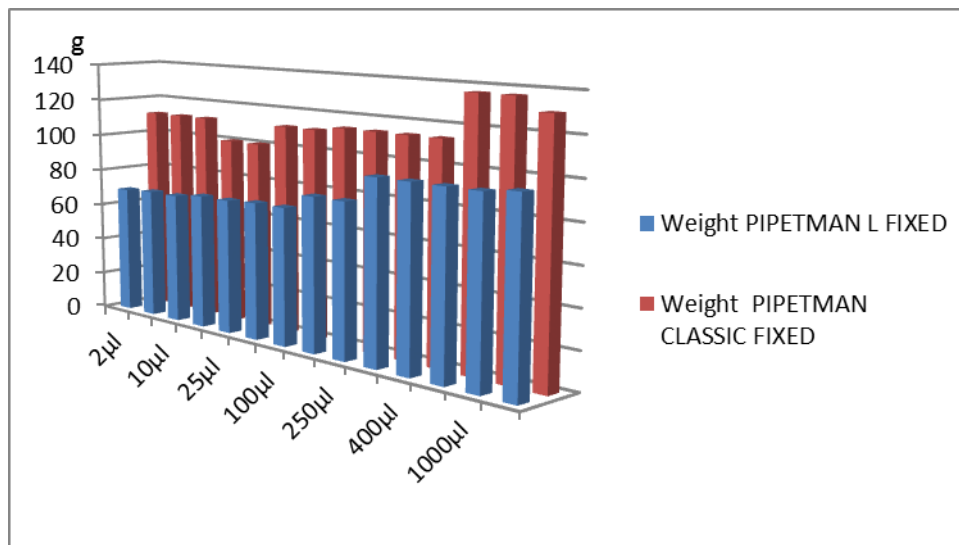
PARTS	FEATURES	BENEFITS
<b>UPPER PARTS</b>		
	<ul style="list-style-type: none"> <li>• Handle made of polypropylene</li> </ul>	<ul style="list-style-type: none"> <li>• Very high chemical resistance for a long use</li> </ul>
	<ul style="list-style-type: none"> <li>• Ejector button, upper cover, graduate cover and button made of PBT</li> </ul>	<ul style="list-style-type: none"> <li>• Resists chemical aggressions</li> <li>• Lighter than PVDF</li> </ul>
<b>LOWER PARTS</b>		
	<ul style="list-style-type: none"> <li>• Tip-holder and cover made of a chemically resistant polymer</li> </ul>	<ul style="list-style-type: none"> <li>• Easily cleaned and decontaminated to guarantee contamination-free experiments</li> </ul>
	<ul style="list-style-type: none"> <li>• Tip-ejector made of PBT</li> </ul>	<ul style="list-style-type: none"> <li>• Long lasting mechanical robustness for untroubled pipetting pleasure</li> </ul>

Thanks to polypropylene used for the body, weight of the PIPETMAN L Fixed is decreased by comparison to PIPETMAN Classic Fixed from 16 % to 36 %.



Volume	Weight PIPETMAN L FIXED	Weight PIPETMAN CLASSIC FIXED	Weight variation L/Classic
1 µL	69g	NA	NA
2 µL	69g	111g	-38%
5 µL	70g	111g	-37%
10 µL	70g	111g	-37%
20 µL	72g	100g	-28%
25 µL	72g	100g	-28%
50 µL	73g	111g	-34%
100 µL	73g	111g	-34%
200 µL	81g	114g	-29%
250 µL	81g	114g	-29%
300 µL	95g	114g	-16%
400 µL	95g	114g	-16%
500 µL	95g	137g	-30%
1000 µL	95g	137g	-30%
5000 µL	97g	130g	-25%

*Evolution of weight of our fixed pipettes*



*Gilson mechanical fixed pipettes: weight comparison*

**User benefit:** Robust, reliable and long lasting fixed pipette.



### 1.3. PUSH BUTTON



Top view

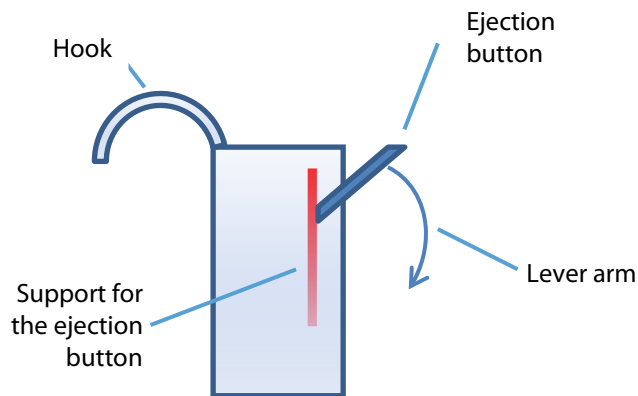


Side view

All push buttons have same information "PIPETMAN L Fixed, and the lower part is blue; (for variable single and multichannel models, lower part is white).

### 1.4. TIP EJECTION FORCES

**Product features:** the specific **tip ejection system** developed on PIPETMAN L body, allow and additional reduction of the forces to apply to eject the tips: the long level arm gives you more strength to push on the button.



PIPETMAN L tip ejection system



**User benefit:** Protection from Repetitive Strain Injuries (RSI) for comfortable work.



## 1.5. ADJUSTMENT

By definition, you cannot change the volume of a fixed pipette; nevertheless, when you handle particular liquid, (viscous or volatile) the actual volume delivered can be slightly different from the displayed one. When high accuracy is requested, an adjustment is unavoidable. Thank to the new graduated cover with an adapted tool, you can perform easily this correction by turning the small key in the slots of the graduated cover.



How to adjust



key

**User benefit:** you can adapt your fixed pipette to any kind of liquid, but remind that for very specific liquid, a positive displacement pipette can be more adapted.

## 2. GILSON VERSUS COMPETITORS

### What are the benefits of PIPETMAN L Fixed compared to the most recent competitors' pipettes?

In the table below are listed the models of competitors pipettes tested. We compare all parameters linked to comfort impact: forces to apply and weight.

Note that each pipette is tested with their respective tips.

Brand	Model compared	Volume
Eppendorf	Reference	250 µL
	Research Plus	200 µL
Fisher Scientific	F1	250 µL
	F2	250 µL
	F3	250 µL
Biohit	Proline Plus	250 µL

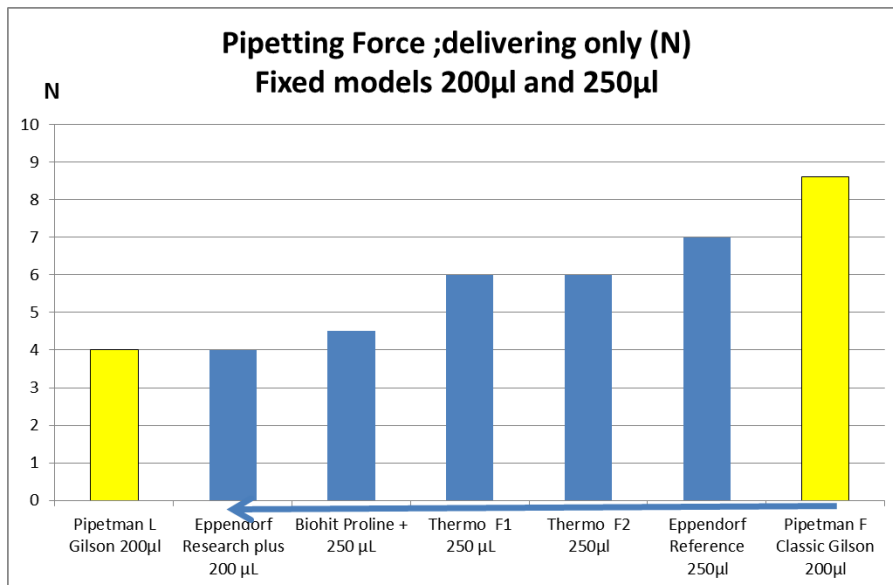
List of tested pipettes



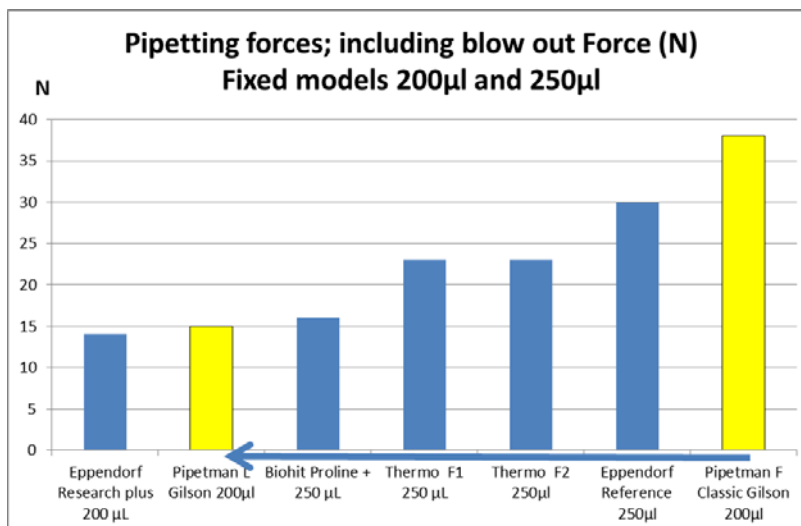


## 2.1. FORCES TO APPLY

**Pipetting forces:** as PIPETMAN L variable models, we are among the best on the market.



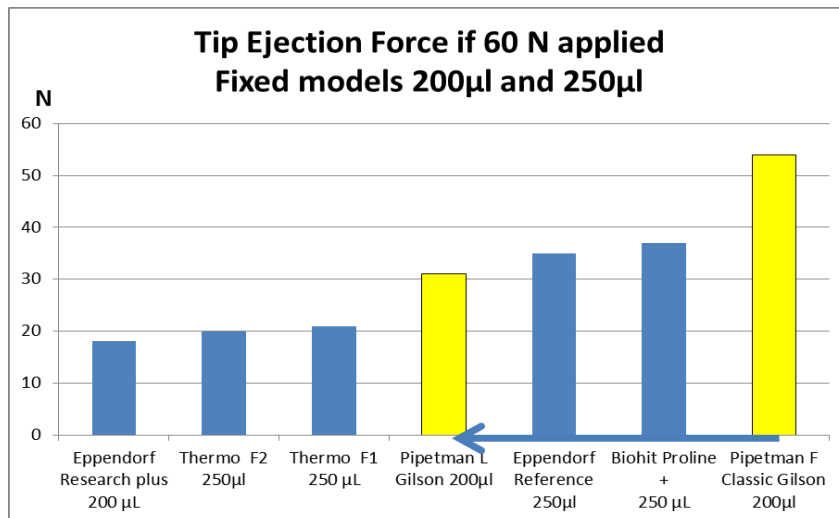
**Blow out forces:** our performances are very good, and even comparable to the best on the market.





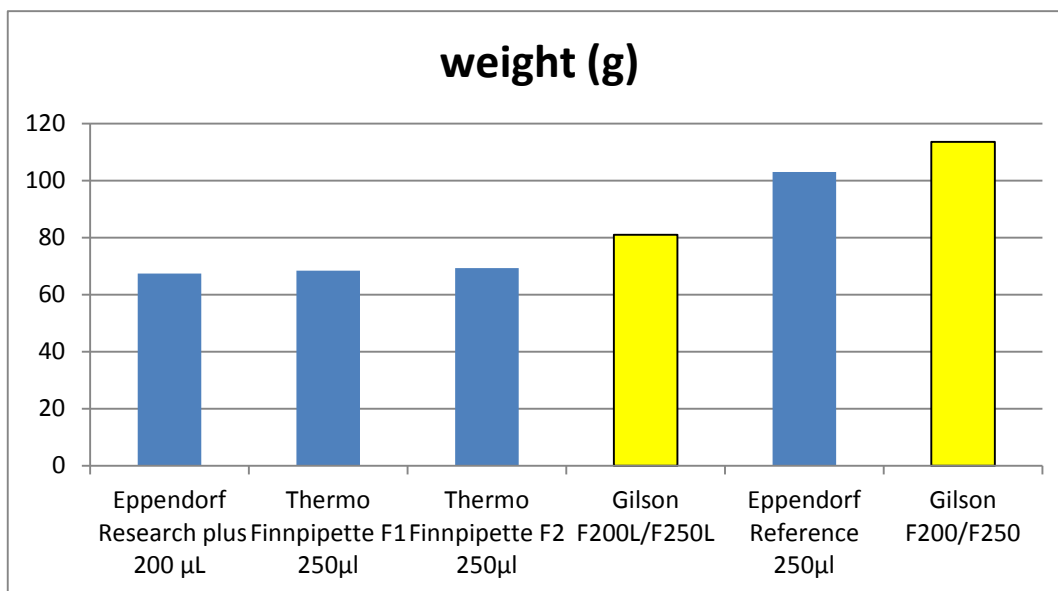
## 2.2. TIP EJECTION FORCES

We have made big progress since PIPETMAN Classic (-40%).



## 2.3. DECREASED WEIGHT

Thanks to light body L, our 200µl fixed pipette is very comfortable; 81g is not the lightest on the market, but do not forget we do not want any compromise regarding robustness, and a very light pipette can be difficult to handle with precision for example on a microplate.



**We can conclude that PIPETMAN L Fixed, as the single variable model, has very good results compared to competitors.**





### 3. SPECIFICATIONS

**Product features:**

In order to make accuracy during pipetting easier, we have improved our specifications from 13% to 50% for accuracy when compared to PIPETMAN Fixed Classic.

Volume (µL)	Systematic error (µL)		Random error (µL)	
	PIPETMAN L Fixed	PIPETMAN Fixed Classic	PIPETMAN L Fixed	PIPETMAN Fixed Classic
1	<b>0.020</b>	NA	<b>0.015</b>	NA
2	<b>0.050</b>	0.08	<b>0.020</b>	0.03
5	<b>0.050</b>	0.10	<b>0.025</b>	0.04
10	<b>0.060</b>	0.10	<b>0.030</b>	0.05
20	<b>0.100</b>	0.20	<b>0.050</b>	0.06
25	<b>0.200</b>	0.25	<b>0.070</b>	0.07
50	<b>0.35</b>	0.40	<b>0.12</b>	0.15
100	<b>0.55</b>	0.80	<b>0.15</b>	0.25
200	<b>1.20</b>	1.60	<b>0.30</b>	0.3
250	<b>1.50</b>	3.0	<b>0.50</b>	0.75
300	<b>2.4</b>	3.5	<b>0.5</b>	0.75
400	<b>2.4</b>	3.6	<b>0.8</b>	0.8
500	<b>3.0</b>	4.0	<b>0.8</b>	1.0
1000	<b>5.0</b>	8.0	<b>1.3</b>	1.3
5000	<b>20.0</b>	30	<b>7.0</b>	8

*PIPETMAN L Fixed specifications compared to PIPETMAN Fixed Classic specifications*

Thanks to our very good results and improvement of our specifications, we have **the same high level** as the model Reference from Eppendorf.

Volume : 1µL	Systematic error	Systematic error %	Random error	Random error %
Gilson PIPETMAN L Fixed	0.020	2.0%	0,015	1,5%
Eppendorf Reference	0,025	2,5%	0,018	1,8%
Thermo Fischer F1, F2 & F3	0,04	4,0%	0,04	4.0%



## 4. TIP COMPATIBILITY

Lower parts are the same as PIPETMAN L with its standard universal compatibility.

PIPETMAN L Fixed		
Model	Tips	Color coding
F1L, F2L, F5L, F10L	D10, DL10, DF10, DFL10	Red
F20L, F25L	DF30, D200	Yellow
F50L, F100L	DF100, D200	Yellow
F200L	D200, DF200	Yellow
F250L	D300, DF300	Green
F300L, F400L, F500L, F1000L	D1000, DF1000	Blue
F5000L	D5000	Purple

## 5. USER MAINTENANCE

### REPLACEMENT PARTS AVAILABLE

The following parts can easily be replaced by the end user.

Many spare parts are similar to PIPETMAN L variable. The differences concern:

- ✓ The push button; the lower part is blue,
- ✓ The tip ejector; only the plastic model is provided.

Note that as for PIPETMAN Classic, Neo and G, only the lower part of PIPETMAN L Fixed (tip ejector, tip holder and connecting nut) is autoclavable

### Spare parts shared with PIPETMAN L variable

<b>Service kit first level:</b> <b>1 tip holder</b> <b>+ 3 piston seals</b> <b>+3 O-rings</b>	Model	Ordering reference
	F1L/F2L	F144501
	F5L/F10L	FA07001
	F20L/F25L	FA07002
	F50L/F100L	FA07003
	F200L/F250L	FA07004
	F300L/F400L /F500L/F1000L	FA07005
	F5000 L	FA07021



Model	Seals + O-ring (set of 5)	Seals guide + O-ring (set of 5)	Tip-ejector adapter	Tip-ejector extension	Lubricant vial
F1L/F2L	F144861	-	F144879	F2070903	5440011070
F5L/F10L	-	FA07012	F144879	F2070903	
F20L/F25L	-	FA07013	-	-	
F50L/F100L	-	FA07014	-	-	
F200L/F250L	-	FA07015	-	-	
F300L/F400L/F500L/F1000L	-	FA07016	-	-	
F5000L	FA07017	-	-	-	

**Spare parts specific to PIPETMAN L Fixed**

	Model	Ordering reference
<b>Service kit second level:            1 push button            +1 connecting nut            +1 plastic tip ejector            +1 tip ejector extension for            F1L, F2L, F5L, F10L</b>	F1L/F2L	FA07067
	F5L/F10L	FA07068
	F20L/F25L	FA07069
	F50L/F100L	FA07070
	F200L	FA07071
	F250L	FA07073
	F300L/F400L/ F500L/F1000L	FA07072



## 6. ACCESSORIES

### TRIO™ PIPETTE STAND:



**Product features:** TRIO holds up to 3 pipettes.

**User benefit:** convenient and secure way to store any models of Gilson pipettes.

### CARROUSEL™ PIPETTE STAND:



**Product features:** CARROUSEL™ PIPETTE STAND holds up to seven Gilson pipettes, all models

**User benefit:** Space saving with easy access to the desired unit.

### YOUR CONTACT

Should you have any questions regarding this Product Information, please contact **Sophie Curien** at [scurien@gilson.com](mailto:scurien@gilson.com)