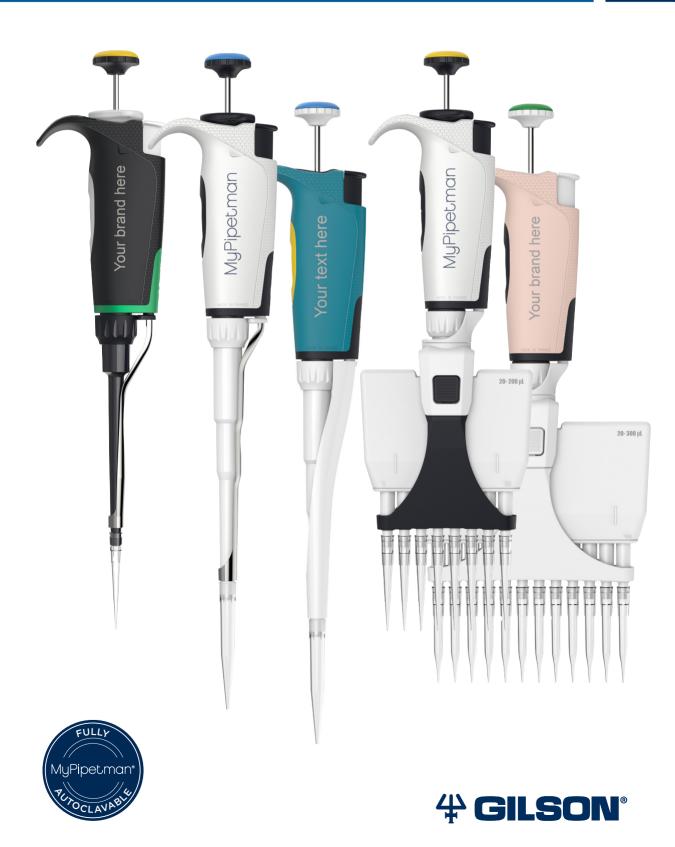
# MyPipetman<sup>®</sup>

# User's Guide





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Chapter 1

# INTRODUCTION

MyPIPETMAN<sup>®</sup> is an air displacement pipette that uses disposable pipette tips. This pipette, depending on the version selected, is customizable to your needs while guaranteeing the Gilson quality standards. It offers both technical and personalization options for optimal use in various workflows.

Lightweight, ergonomic, safe, and easy-to-use, MyPIPETMAN is a reliable, accurate, and precise pipette that provides unique and state-of-the-art features and choices:

- Simple ratchet or 3-position volume locking system including a light click and a free volume selection position
- Reduced or standard pipetting forces
- Considerably reduced or standard tip ejection forces, with a built-in ejection button integrated on top of the pipette handle
- Colors and product personalization options

To meet users' needs, MyPIPETMAN is available in three offers, each with different levels of technical options and product customization, as described in Figure 1 below.

			MyPIPETMAN <sup>®</sup> Select	MyPIPETMAN <sup>®</sup> Enterprise	MyPIPETMAN*
		3-Position Locking System	•	•	•
	Volume Locking	Simple Rachet		•	•
		Reduced	•	•	•
Technical Options	Pipetting Forces	Standard		•	•
Available		Reduced	•	•	•
	Ejection Forces	Standard		•	•
	Tip Ejectors	Metal	•	•	•
	(Single Channel, P2 to P1000 Models)	Plastic		•	•
	Pipette Colors			•	•
Customization Options	Special Text Printing		Possible on Request	•	•
	Special Logo Printing			Possible on Request (Subject to Specific Conditions)	•
Ordering Information	Minimum Order Quantity		1	150 Units (Mix of Different Models)	1
	Available Countries		Worldwide	Worldwide	US Web Sales Only

## Figure 1

MyPIPETMAN® global offer

MyPIPETMAN is available as variable volume in either single or multichannel models.

- Eight single channel models cover a volume range from 0.2  $\mu$ L to 10 mL.
- Eight multichannel models (4 models of 8 and 12 channels) cover a volume range from 0.5 μL to 300 μL.

		MYPIPETMAN SERIES PART N	UMBERS	
Model	MyPIPETMAN* Select	MyPIPETMAN* Select Text Printing On Demand	MyPIPETMAN* Enterprise	MyPIPETMAN* *
MyPIPETMAN* Sing	gle Channel			
P2	FP10001S	FP10001SP	FP10001E	FP10001
P10	FP10002S	FP10002SP	FP10002E	FP10002
P20	FP10003S	FP10003SP	FP10003E	FP10003
P100	FP10004S	FP10004SP	FP10004E	FP10004
P200	FP10005S	FP10005SP	FP10005E	FP10005
P1000	FP10006S	FP10006SP	FP10006E	FP10006
P5000	FP10007S	FP10007SP	FP10007E	FP10007
P10mL	FP10008S	FP10008SP	FP10008E	FP10008
MyPIPETMAN* Mul	tichannel			
P8x10	FP10009S	FP10009SP	FP10009E	FP10009
P12x10	FP10010S	FP10010SP	FP10010E	FP10010
P8x20	FP10011S	FP10011SP	FP10011E	FP10011
P12x20	FP10012S	FP10012SP	FP10012E	FP10012
P8x200	FP10013S	FP10013SP	FP10013E	FP10013
P12x200	FP10014S	FP10014SP	FP10014E	FP10014
P8x300	FP10015S	FP10015SP	FP10015E	FP10015
P12x300	FP10016S	FP10016SP	FP10016E	FP10016

\*US web sales only

## **Parts Checklist**

After unpacking the pipette, verify that the following items were included and remain undamaged:

## Single Channel Models

- MyPIPETMAN pipette
- Quick Guide
- Tip ejector adapter equipped on the P2 and P10 models
- Bag of ten filters (only for P5000 and P10mL models)
- Certificate of Conformity
- Safety bag

## **Multichannel Models**

- MyPIPETMAN pipette
- Quick Guide
- Ejector spacer for D10 tips (only for P10 models)
- Certificate of Conformity
- Safety bag

## **Good Laboratory Practice (GLP) Compliance**

The serial number is engraved on the body of the pipette. It provides unique identification of your pipette and the manufacturing date.



MyPIPETMAN Select and MyPIPETMAN Enterprise serial number type:

A A 50001

MyPIPETMAN serial number type:



YEAR	CODE
2022	Т
2023	U
2024	W
2025	Х
2026	Y
2027	Z

MONTH	CODE
January	А
February	В
March	С
April	D
Мау	E
June	G
July	Н
August	J
September	К
October	L
November	М
December	Ν

## Figure 2

Serial number identification example

The barcode on the box and the Certificate of Conformity provides traceability of your pipette.

## Description

Please refer to the following chapters for a complete description of the different parts and functions of the pipette.



Figure 3 MYPIPETMAN<sup>®</sup> single channel and multichannel model components

## **Specifications**

MyPIPETMAN is a high-quality pipette that has excellent accuracy and precision, especially when used with PIPETMAN® DIAMOND Tips. The data given in the "Gilson Maximum Permissible Errors" table below was obtained using PIPETMAN DIAMOND Tips. These values are guaranteed only when genuine PIPETMAN DIAMOND Tips are used.

Each pipette is inspected and validated by qualified technicians in accordance with the Gilson quality system. Gilson declares that its manufactured pipettes comply with the requirements of the ISO 8655 standard by type testing.

The adjustment is carried out under strictly defined and monitored conditions (ISO 8655-6).

			M	YPIPE	ΕΤΜΑ	N <sup>®</sup> SING	LE CH		10DEL	S			
								Ma	kimum Per	missible Erro	rs		
Model	PIPETMA	N* DIAMOND	Nominal Volume	Vol.	Vol.		Gi	lson			ISO 8655	-2 (Table 1)	
Model	Tips		(μL)	(μL)	(%)	Systematic Error (µL)	Random Error (µL)	Systematic Error (%)	Random Error (CV)*	Systematic Error (µL)	Random Error (µL)	Systematic Error (%)	Random Error (CV)*
MyPIPETMAN P2	D10 DL10	DF10ST DFL10ST	2	0.2 0.5 1 2	10 25 50 100	± 0.024 ± 0.025 ± 0.025 ± 0.030	≤ 0.012 ≤ 0.012 ≤ 0.012 ≤ 0.014	± 12.0 ± 5.0 ± 2.5 ± 1.5	≤ 6.0 ≤ 2.4 ≤ 1.2 ≤ 0.7	± 0.050 ± 0.050 ± 0.050 ± 0.050	≤ 0.040 ≤ 0.040 ≤ 0.040 ≤ 0.040	± 25 ± 10 ± 5.0 ± 2.5	≤ 20 ≤ 8 ≤ 4.0 ≤ 2.0
MyPIPETMAN P10	D10 DL10	DF10ST DFL10ST	10	1 5 10	10 50 100	± 0.025 ± 0.075 ± 0.100	≤ 0.012 ≤ 0.030 ≤ 0.040	± 2.5 ± 1.5 ± 1.0	≤ 1.2 ≤ 0.6 ≤ 0.4	± 0.120 ± 0.120 ± 0.120	≤ 0.080 ≤ 0.080 ≤ 0.080	± 12 ± 2.4 ± 1.2	≤ 8.0 ≤ 1.6 ≤ 0.8
MyPIPETMAN P20	D200	DF30ST	20	2 10 20	10 50 100	± 0.10 ± 0.10 ± 0.20	≤ 0.030 ≤ 0.050 ≤ 0.060	± 5.0 ± 1.0 ± 1.0	≤ 1.5 ≤ 0.5 ≤ 0.3	± 0.20 ± 0.20 ± 0.20	≤ 0.100 ≤ 0.100 ≤ 0.100	± 10 ± 2.0 ± 1.0	≤ 5.0 ≤ 1.0 ≤ 0.5
MyPIPETMAN P100	D200	DF100ST	100	10 50 100	10 50 100	± 0.35 ± 0.40 ± 0.80	≤ 0.10 ≤ 0.12 ≤ 0.15	± 3.5 ± 0.8 ± 0.8	≤ 1.0 ≤ 0.24 ≤ 0.15	± 0.80 ± 0.80 ± 0.80	≤ 0.300 ≤ 0.300 ≤ 0.300	± 8.0 ± 1.6 ± 0.80	≤ 3.0 ≤ 0.60 ≤ 0.30
MyPIPETMAN P200	D200 D300	DF200ST DF300ST	200	20 100 200	10 50 100	± 0.50 ± 0.80 ± 1.60	≤ 0.20 ≤ 0.25 ≤ 0.30	± 2.5 ± 0.8 ± 0.8	≤ 1.0 ≤ 0.25 ≤ 0.15	± 1.60 ± 1.60 ± 1.60	≤ 0.600 ≤ 0.600 ≤ 0.600	± 8.0 ± 1.6 ± 0.80	≤ 3.0 ≤ 0.60 ≤ 0.30
MyPIPETMAN P1000	D1000 D1200	DF1000ST DF1200ST	1000	100 500 1000	10 50 100	± 3.0 ± 4.0 ± 8.0	≤ 0.6 ≤ 1.0 ≤ 1.5	± 3.0 ± 0.8 ± 0.8	≤ 0.6 ≤ 0.2 ≤ 0.15	± 8.0 ± 8.0 ± 8.0	≤ 3.0 ≤ 3.0 ≤ 3.0	± 8.0 ± 1.6 ± 0.80	≤ 3.0 ≤ 0.60 ≤ 0.30
MyPIPETMAN P5000	D5000		5000	500 2500 5000	10 50 100	± 12 ± 15 ± 30	≤ 3 ≤ 5 ≤ 8	± 2.4 ± 0.6 ± 0.6	≤ 0.6 ≤ 0.2 ≤ 0.16	± 40.0 ± 40.0 ± 40.0	≤ 15.0 ≤ 15.0 ≤ 15.0	± 8.0 ± 1.6 ± 0.80	≤ 3.0 ≤ 0.60 ≤ 0.30
MyPIPETMAN P10mL	D10mL		10000	1000 5000 10000	10 50 100	± 30 ± 40 ± 60	≤ 6 ≤ 10 ≤ 16	± 3.0 ± 0.8 ± 0.6	≤ 0.6 ≤ 0.2 ≤ 0.16	± 60.0 ± 60.0 ± 60.0	≤ 30.0 ≤ 30.0 ≤ 30.0	± 6.0 ± 1.2 ± 0.60	≤ 3.0 ≤ 0.60 ≤ 0.30

MYPIPETMAN® MULTICHANNEL MODELS

						Maximum Permissible Errors								
Model	PIPETMAN	DIAMOND	Nominal	Vol.	Vol.		Gi	lson			ISO 8655-	-2 (Table 2)		
model	Tips		Volume (µL)	(μL)	(%)	Systematic Error (µL)	Random Error (µL)	Systematic Error (%)	Random Error (CV)*	Systematic Error (µL)	Random Error (µL)	Systematic Error (%)	Random Error (CV)*	
MyPIPETMAN P8x10	D10	DF10ST	10	0.5 1	5.0 10	± 0.08 ± 0.08	≤ 0.04 ≤ 0.05	± 16.0 ± 8.0	≤ 8.0 ≤ 5.0	N/A ± 0.24	N/A ≤ 0.16	N/A ± 24	N/A ≤ 16	
MyPIPETMAN P12x10	DL10	DFL10ST		5 10	50 100	± 0.20 ± 0.20	≤ 0.10 ≤ 0.10	± 4.0 ± 2.0	≤ 2.0 ≤ 1.0	± 0.24 ± 0.24	≤ 0.16 ≤ 0.16	± 4.8 ± 2.4	≤ 3.2 ≤ 1.6	
MyPIPETMAN P8x20	DL10	DFL10ST	20	2	10 50	± 0.10 ± 0.20	≤ 0.08 ≤ 0.10	± 5.0 ± 2.0	≤ 4.0 ≤ 1.0	± 0.40 ± 0.40	≤ 0.20 ≤ 0.20	± 20 ± 4.0	≤ 10 ≤ 2.0	
MyPIPETMAN P12x20	D200	DF30ST	20	20	100	± 0.40	≤ 0.10 ≤ 0.20	± 2.0	≤ 1.0 ≤ 1.0	± 0.40 ± 0.40	≤ 0.20 ≤ 0.20	± 2.0	≤ 2.0 ≤ 1.0	
MyPIPETMAN P8x200	D200	DF200ST	200	20	10 50	± 0.50 ± 1.00	≤ 0.25 ≤ 0.40	± 2.5 ± 1.0	≤ 1.25 ≤ 0.40	± 3.20 ± 3.20	≤ 1.20 ≤ 1.20	± 16 ± 3.2	≤ 6.0 ≤ 1.2	
MyPIPETMAN P12x200	D300	DF300ST	200	200	100	± 2.00	≤ 0.40 ≤ 0.50	± 1.0 ± 1.0	≤ 0.40 ≤ 0.25	± 3.20 ± 3.20	≤ 1.20 ≤ 1.20	± 1.6	≤ 1.2 ≤ 0.60	
MyPIPETMAN P8x300	D200	DF200ST	300	20 30	6.7 10	± 1.00 ± 1.00	≤ 0.35 ≤ 0.35	± 5.0 ± 3.33	≤ 1.75 ≤ 1.17	N/A ± 4.8	N/A ≤ 1.8	N/A ± 16	N/A ≤ 6.0	
MyPIPETMAN P12x300	D300	DF300ST	300	150 300	50 100	± 1.50 ± 3.00	≤ 0.60 ≤ 1.00	± 1.0 ± 1.0	≤ 0.4 ≤ 0.33	± 4.8 ± 4.8	≤ 1.8 ≤ 1.8	± 3.2 ± 1.6	≤ 1.2 ≤ 0.60	

\*CV means Coefficient of Variation (%)

Gilson maximum permissible errors are guaranteed only when PIPETMAN\* pipettes are used with the recommended PIPETMAN\* DIAMOND Tips.



The data given in this table conform to the ISO 8655-2 standard. With a precise pipetting technique, the P2 model can be used to aspirate volumes as low as 0.1  $\mu$ L and the P10 model as low as 0.5  $\mu$ L.

# SETTING THE VOLUME

The volume of liquid to be aspirated is set using the volume display. The dials are colored either black or red to indicate the position of the decimal point, depending on the model (refer to Figure 4 below). Volume selection differs according to your configuration. To obtain maximum accuracy when setting the

Volume selection differs according to your configuration. To obtain maximum accuracy when setting the volume, proceed as follows:

- When decreasing the volume setting, slowly reach the required setting, making sure not to
  overshoot the volume mark.
- When **increasing** the volume setting, pass the required value by 1/3 of a turn and slowly decrease to reach the volume, making sure not to overshoot the volume mark.

MODEL	COLOR O	F VOLUME	ETER NUMBERS	Single channel Multichannel
MODEL	BLACK	RED	INCREMENT	model model
MyPIPETMAN SINGLE CI	HANNEL			P2 P10 P20 P100 x10 x20
MyPIPETMAN P2	μL	0.01 µL	0.002 μL	$\left  \begin{array}{c} 1 \\ \hline 2 \\ \hline \end{array} \right  \left  \begin{array}{c} 0 \\ \hline 7 \\ \hline \end{array} \right  \left  \begin{array}{c} 0 \\ \hline 7 \\ \hline \end{array} \right  \left  \begin{array}{c} 0 \\ \hline 7 \\ \hline \end{array} \right  \left  \begin{array}{c} 0 \\ \hline 7 \\ \hline \end{array} \right  \left  \begin{array}{c} 1 \\ \hline 2 \\ \hline \end{array} \right $
MyPIPETMAN P10	μL	0.1 μL	0.02 μL	$\left \begin{array}{cccccccccccccccccccccccccccccccccccc$
MyPIPETMAN P20	μL	0.1 μL	0.02 μL	
MyPIPETMAN P100	μL	-	0.2 μL	1.25 μL 7.5 μL 12.5 μL 75 μL 7.5 μL 12.5 μL
MyPIPETMAN P200	μL	-	0.2 μL	
MyPIPETMAN P1000	0.01 mL	mL	0.002 mL	P200 P1000 P5000 P10mL x200 x300
MyPIPETMAN P5000	0.01 mL	mL	0.002 mL	$ \begin{vmatrix} 1 \\ 2 \\ 7 \\ 7 \\ 2 \\ 7 \\ 2 \\ 7 \\ 2 \\ 7 \\ 2 \\ 7 \\ 2 \\ 7 \\ 2 \\ 7 \\ 2 \\ 7 \\ 2 \\ 2$
MyPIPETMAN P10mL	mL	0.1 mL	0.02 mL	$\begin{bmatrix} \frac{2}{5} & \frac{7}{5} & \frac{2}{5} & \frac{7}{5} \\ \frac{1}{5} & \frac{1}{5} & \frac{5}{5} \end{bmatrix}$
MyPIPETMAN MULTICHA	NNEL			
MyPIPETMAN P8x10	μL	0.1 μL	0.02 μL	125 μL 0.75 mL 1.25 mL 7.5 mL 125 μL 125 μL
MyPIPETMAN P12x10	μL	0.1 µL	0.02 μL	
MyPIPETMAN P8x200	μL	-	0.2 μL	Figure 4
MyPIPETMAN P12x200	μL	-	0.2 μL	Dial colors by model
MyPIPETMAN P8x300	μL	-	0.2 μL	

## Simple Ratchet

MyPIPETMAN P12x300 µL

For pipettes mounted with a simple ratchet, select the volume by turning the push button (refer to Figure 5).

0.2 uL

## **3-Position Locking System**

For pipettes equipped with a 3-position locking system, turn the selector to your desired position (refer to Figure 6).

## Free volume selection position

- 1. Turn the selector to the left until the cursor reaches the unlocking **1**.
- 2. Select the volume by turning the push button.

## Light click volume selection position

- 1. Turn the selector until the cursor reaches the middle **2**.
- 2. Select the volume by turning the push button.



When selecting the volume, you will hear click sounds, allowing for more precise settings. Use these sounds for final fine volume selection.

## Secure Pipetting

After selecting your volume, turn the selector to the right until the cursor reaches the locking 3 for secure pipetting.



To ensure good performance, always lock the pipette before pipetting by selecting the locking icon.



Figure 5 Simple ratchet

Figure 6 3-position locking system



# PIPETTING

Chapter 3

## Fitting the Tip Ejector Adapter

## Single Channel Models

A For P2 and P10 pipettes equipped with a **stainless-steel tip ejector**, a dual-position adapter is required to fit and eject DL10 tips (long tips) and D10 tips (short tips).

## To fit the adapter for short and long tips (refer to Figure 7):

- 1. Pull the adapter down from the stainless steel tip ejector.
- 2. Turn the adapter 180°.
- 3. Refit the adapter so that the end of the stainless steel tip ejector engages the shorter or longer slot of the adapter.

# **B** For P2 and P10 pipettes equipped **with a plastic tip ejector**, a dual-position adapter is required to fit and eject D10 tips (short tips).

#### To fit a tip ejector extension (refer to Figure 7):

- 1. Slide the extension over the tip holder.
- 2. Push the extension firmly onto the end of the tip ejector until it clicks into place.

#### To remove a tip ejector extension:

- 1. Gently twist the adapter.
- 2. Pull it away from the pipette.

## **Multichannel Models**

For P8x10 and P12x10 models, according to the tip used, either D10 or DL10, you might have to fit the ejector adapter. Long collar tips can be inserted without it.

- 1. Remove the tip ejector, keep both ejector locks depressed (1), and then pull the tip ejector down (2).
- 2. Fit the ejector adapter 3 and click it to the tip ejector.
- 3. To refit the tip ejector, gently re-insert the tip ejector vertically into the rails of the ejector support 4.

**NOTE** Long tips can be used without tip ejector adapter.



Figure 7

Tip ejector dual position adapter and extension for P2 and P10

## **Fitting the Tips**

It is recommended to use PIPETMAN DIAMOND Tips with MyPIPETMAN for optimum performance. These tips are made from pure polypropylene. Plastic tips are for a single application and should be disposed of after use—please do not clean for reuse.

## Single Channel Models

To fit a new PIPETMAN DIAMOND Tip, push the tip holder into the tip using a slight twisting motion to ensure a firm and airtight seal.

Co	PIPETMAN DIAMOND Tip mpatibility for Single Channel
P2, P10	D10, DL10, DF10ST, DFL10ST
P20	D200, DF30ST
P100	D200, DF100ST
P200	D200, D300, DF200ST, DF300ST
P1000	D1000, D1200, DF1000ST, DF1200ST
P5000	D5000
P10mL	D10mL

D5000 and D10mL PIPETMAN DIAMOND Tips do not have any filter. P5000 and P10mL models are sold with a bag of 10 filters. Bags of filters are also available as accessories. Refer to **ACCESSORIES** page.

The filters, made of polyethylene, offer the same properties as the filters which are inside the PIPETMAN DIAMOND filter tips. They maintain the pipette's original accuracy and precision by creating an efficient barrier to aerosols or corrosive vapors such as acids which could damage mechanical parts.

Insert the filter directly in the pipette tip holder.

Change the filter every day or more frequently depending on the intensity of use and/or concentration of the solution.

Filters are not autoclavable and must be disposed of after use.

## **Multichannel Models**

NOTE

#### PIPETMAN DIAMOND Tips: TIPACK AND TOWERPACK

PIPETMAN DIAMOND tips are best fitted with the ROCKY RACK technique, invented by Gilson, available only in our TIPACK and TOWERPACK.

	MAN DIAMOND Tip y for Multichannel Models
P8x10, P12x10	D10*, DL10, DF10ST, DFL10ST
P8x20, P12x20	DL10, D200, DFL10ST, DF30ST
P8x200, P12x200	D200, D300, DF200ST, DF300ST
P8x300, P12x300	D200, D300, DF200ST, DF300ST

\*Using an ejector adapter, you can adapt a D10 tip (refer to page 7).

## **Pre-Wetting the Tips**

Pre-wetting the tips before pipetting helps prepare the tips for the best pipetting performance. Ideally, the pre-wet includes both immersing the tip in the liquid and performing one pipetting step.

Pre-wetting the tips helps ensure that volumes that you pipette will achieve accuracy and precision within specifications.



Figure 8 ROCKY RACK technique

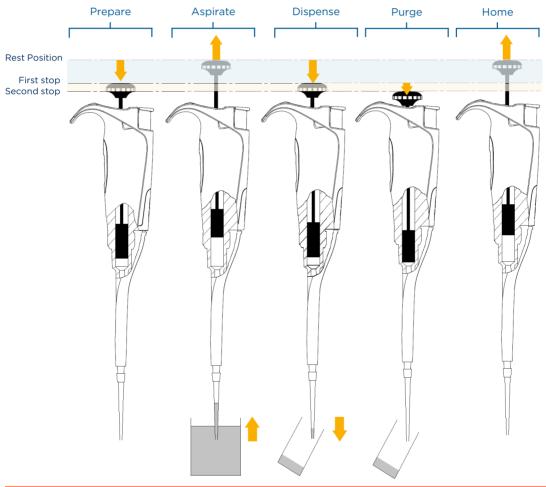
## Aspirating

- 1. Press the push button to the first stop (this corresponds to the set volume of liquid).
- 2. Hold the pipette vertically and immerse the tip in the liquid (refer to **Guidelines for Good Pipetting**).
- 3. Release the push button slowly and smoothly to the top position to aspirate the set volume of liquid.
- 4. Wait one second (refer to <u>Guidelines for Good Pipetting</u>) and then withdraw the pipette tip from the liquid. You may wipe any droplets away from the outside of the tip using a medical wipe. However, if you do so, take care to avoid touching the tip's orifice.

**NOTE** For the multichannel models, use a reagent reservoir.

## Dispensing

- 1. Place the end of the tip against the inside wall of the recipient vessel (at an angle of 10° to 40°).
- 2. Press the push button slowly and smoothly to the first stop.
- 3. Wait for at least a second, then press the push button to the **second stop** to expel any residual liquid from the tip. Keep the push button pressed fully, and while removing the pipette, draw the tip along the inside surface of the vessel.
- 4. Release the push button smoothly. Eject the tip by pressing firmly on the tip ejector button.



## Figure 9

Pipetting motion - aspirate and dispense

## **Ejecting the Tips**

To avoid touching used tips, hold the pipette over the waste container and press the tip ejector push button.



P5000 and P10mL models are not equipped with tip ejectors, and tips must be carefully removed by the user. The use of gloves is recommended for tip removal when pipetting contaminated, toxic, or corrosive liquids.

## **Guidelines for Good Pipetting**

- Make sure that you operate the push button slowly and smoothly.
- When aspirating, keep the tip at a constant depth below the surface of the liquid (refer to the table below).

1
1
1
2-3
4-5
4-5

- Change the tip before aspirating a different liquid, sample, or reagent.
- Change the tip if a droplet remains at the end of the tip from the previous pipetting operation.
- Pre-wet each new tip with the liquid to be pipetted.
- The liquid should never enter the tip holder; to prevent this:
  - Press and release the push button slowly and smoothly.
    - Never turn the pipette upside down.
  - $\circ$   $\quad$  Never lay the pipette on its side when there is liquid in the tip.
- If you use the same tip with a larger volume, pre-wet the tip.
- For volatile solvents, saturate the air cushion in your pipette by aspirating and dispensing the solvent repeatedly before aspirating the sample.
- When the liquid temperature is different from the ambient temperature, pre-wet the tip several times before use.
- You may remove the tip ejector (refer to <u>Fit the Tip Ejector Adapter</u>) to aspirate from very narrow tubes.
- After pipetting acids or other corrosive liquids that emit vapors, remove the tip ejector and tip holder, rinse with distilled water, dry, and lubricate the piston (refer to **MAINTENANCE**). For the P1000L model, use a specific tip holder equipped with a filter to increase the lifetime of the piston (refer to **ACCESSORIES**).
- Do not pipette liquids with temperatures above 70°C or below 4°C. The pipette can be used between +4°C and +40°C, but the gravimetric performance may vary according to the temperature (refer to the ISO 8655-2 standard for conditions of use).

NOTICE

MyPIPETMAN should be held in the vertical position. For detailed information about pipetting techniques, refer to the <u>Gilson Guide to Pipetting</u> available on the Gilson website (<u>www.gilson.com</u>).

Chapter 4

# ACCESSORIES

To make pipetting more comfortable and more secure, Gilson has developed several accessories to assist in your pipetting workflows.

Description	Part Number
CARROUSEL Pipette Stand (7 pipettes)	F161401
TRIO Pipette Stand (3 pipettes)	F161405
Universal Multichannel Stand*	F161417
SINGLE Pipette Holder	F161406

\* Universal multichannel stand is for multichannel models only.

Disposable Reagent Reservoirs are ideal for dispensing reagent with multichannel pipettes.

Description	Part Number
Reagent Reservoir 25 mL, x100	F267660
Reagent Reservoir 50 mL, x100	F267670

With the JIMMY<sup>™</sup> Microtube Opener, a hands-free microtube opener, you can open both snap-cap and screw-cap microtubes.

Description	Part Number
JIMMY Microtube Opener (set of 3)	F144983



For P5000 and P10mL models, disposable filters maintain the pipette's original accuracy and precision by creating an efficient barrier to aerosols or corrosive vapours such as acids which could damage mechanical parts.

Description	Part Number		
Bag of 10 Filters for P5000 /P10mL	F161280		
Bag of 100 Filters for P5000 / P10mL	F161241		



To protect the piston when pipetting corrosive liquids, you can use a specific tip holder and filter for the model P1000.

Description	Part Number
Corrosion Protection Kit (tip holder + a bag of 10 filters)	F144570
Corrosion Protection Kit Filter (Bag of 10)*	F144571
Corrosion Protection Kit Filter (Bag of 50)*	F144572



\*Filters can be inserted in the **specific tip holder** provided in the Corrosion Protection Kit (part Number F144570)

ACCESSORIES

## **MyPIPETMAN Accessories for Extra Personalization**

For identification, extra personalization, or more convenient use, an offer of complementary accessories is available for use with MyPIPETMAN.

COLORED WINDOWS	
Model	Part Number
Window 3digit Dark Blue MyPIPETMAN	FP070101
Window 3digit White MyPIPETMAN	FP070102
Window 3digit Blue MyPIPETMAN	FP070103
Window 3digit Red MyPIPETMAN	FP070104
Window 3digit Yellow MyPIPETMAN	FP070105
Window 3digit Green MyPIPETMAN	FP070106



METAL TIP EJECTORS	
Model	Part Number
Metal Ejector Dark Blue P2/P10 MyPIPETMAN	FP070111
Metal Ejector White P2/P10 MyPIPETMAN	FP070112
Metal Ejector Dark Blue P20 MyPIPETMAN	FP070121
Metal Ejector White P20 MyPIPETMAN	FP070122
Metal Ejector Dark Blue P100 MyPIPETMAN	FP070131
Metal Ejector White P100 MyPIPETMAN	FP070132
Metal Ejector Dark Blue P200 MyPIPETMAN	FP070141
Metal Ejector White P200 MyPIPETMAN	FP070142
Metal Ejector Dark Blue P1000 MyPIPETMAN	FP070151
Metal Ejector White P1000 MyPIPETMAN	FP070152

## PLASTIC TIP EJECTORS

Model	Part Number
Plastic Ejector Dark Blue P2/P10 MYPIPETMAN	FP070161
Plastic Ejector White P2/P10 MYPIPETMAN	FP070162
Plastic Ejector Dark Blue P20 MYPIPETMAN	FP070171
Plastic Ejector White P20 MYPIPETMAN	FP070172
Plastic Ejector Dark Blue P100 MYPIPETMAN	FP070181
Plastic Ejector White P100 MYPIPETMAN	FP070182
Plastic Ejector Dark Blue P200 MYPIPETMAN	FP070191
Plastic Ejector White P200 MYPIPETMAN	FP070192
Plastic Ejector Dark Blue P1000 MYPIPETMAN	FP070201
Plastic Ejector White P1000 MYPIPETMAN	FP070202

EJECTOR ADAPTORS					
Part Number					
Adaptor P2/P10 Translucent FP070210					
Adaptor P2/P10 White FP070212					
Adaptor P2/P10 White FP070222					





Dark blue stainless steel tip ejector

White stainless steel tip ejector



Dark blue plastic tip ejector

White plastic tip . ejector



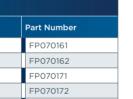




Translucent adaptor for metal ejector

White adaptor for metal ejector

Adaptor for plastic ejector



TIP HOLDERS	
Model	Part Number
Tip Holder Dark Blue P2 MyPIPETMAN	FP070231
Tip Holder White P2 MyPIPETMAN	FP070232
Tip Holder Dark Blue P10 MyPIPETMAN	FP070241
Tip Holder White P10 MyPIPETMAN	FP070242
Tip Holder Dark Blue P20 MyPIPETMAN	FP070251
Tip Holder White P20 MyPIPETMAN	FP070252
Tip Holder Dark Blue P100 MyPIPETMAN	FP070261
Tip Holder White P100 MyPIPETMAN	FP070262
Tip Holder Dark Blue P200 MyPIPETMAN	FP070271
Tip Holder White P200 MyPIPETMAN	FP070272
Tip Holder Dark Blue P1000 MyPIPETMAN	FP070281
Tip Hholder White P1000 MyPIPETMAN	FP070282
Tip Holder Dark Blue P5000 MyPIPETMAN	FP070291
Tip Holder White P5000 MyPIPETMAN	FP070292
Tip Holder Dark Blue P10mL MyPIPETMAN	FP070301
Tip Holder White P10mL MyPIPETMAN	FP070302





Dark blue tip holder

White tip holder

PLASTIC EJECTORS					
Model	Part Number				
Plastic Ejector 8X Dark Blue MyPIPETMAN	FP070311				
Plastic Ejector 8X White MyPIPETMAN	FP070312				
Plastic Ejector 12X Dark Blue MyPIPETMAN	FP070321				
Plastic Ejector 12X White MyPIPETMAN	FP070322				

EJECTOR ADAPTERS				
Part Number				
FG07064				
FG07065				

Dark blue plastic tip ejector



White plastic tip ejector



Ejector adapter

Chapter 5

# TROUBLESHOOTING

A quick inspection of the pipette may help you detect a potential problem.



DECONTAMINATION). Please use the included safety bag to return the pipette to your local Gilson-authorized Service Center (Click here to find your Gilson Service Center).

## **Troubleshooting Table**

The following table may help you identify and correct the potential problem you might encounter.

NOTE Please make sure the tips are correctly fitted. Refer to Fitting the Tips.

#### For single channel and multichannel models

Symptom	Possible Cause	Action	Model*
Pipette is leaking	Damaged tip holder	Replace the tip holder	S
sample	Worn O-ring or seal	Replace both parts and lubricate	S
	Worn O-ring	Replace O-Ring and seal and lubricate	S
	Damaged tip holder	Replace the tip holder	S
Pipette will not aspirate	Connecting nut is loose	Tighten connecting nut	S+M
	Damaged or corroded piston	Return pipette to supplier	S
	Improper repair or assembly	Refer to MAINTENANCE	S
	Improper repair or assembly	Refer to MAINTENANCE	S
Pipetted volume is naccurate	Unscrew tip holder	Tighten connecting nut	S
naccurate	Connecting nut is loose	Tighten connecting nut	S+M
	Tip holder is loose	Tighten connecting nut	S
	Connecting nut is loose	Tighten connecting nut	S+M
	Incorrect operator technique	Operator training	S+M
Pipette is not precise	Damaged or corroded piston(s)	Return pipette to supplier	S
	Damaged tip holder(s)	Replace the tip holder(s)	S
	Worn O-ring or seal	Replace both parts and lubricate	S
	Low quality tips	Use PIPETMAN DIAMOND Tips	S+M
	Damaged tip holder(s)	ed tip holder(s) Replace the tip holder(s) for single channel model. Contact your local Gilson Service Center for multichannel model	
	Damaged tip ejector adapter	Damaged tip ejector adapter	S+M
	Damaged ejector	Replace the tip ejector	S+M
	Dirty tip holder	Clean the tip holder with isopropanol or ethanol	S+M
	The tip ejector is loose	Assemble the tip ejector properly	S
	The ejector lock is misaligned	Align the ejector lock	S
Pipetting seize up	Piston needs lubricant	Lubricate piston assembly	S

S = Single Channel

M = Multichannel

NOTE

If you cannot solve the problem, contact your local Gilson-authorized Service Center.

## Leak Test

This test may be performed at any time to check that the pipette does not leak, especially after performing a maintenance or decontamination procedure. If a pipette fails this test, replace the O-ring and seal. After making sure that the pipette is correctly reassembled, repeat this test.

#### For the P2 to P200 single channel models:

- 1. Fit a PIPETMAN DIAMOND Tip.
- 2. Set the pipette to the maximum volume given in the specifications and pre-wet.
- 3. Aspirate the set volume from a beaker of distilled water.
- 4. Maintain the pipette in the vertical position and wait for 20 seconds:
  - If a water droplet appears at the end of the tip, there is a leak.
  - If you see no droplets, re-immerse the tip below the surface of water. The water level inside the tip should remain constant; if the level goes down, there is a leak.

## For the P1000, P5000, and P10mL single channel models:

- 1. Fit a PIPETMAN DIAMOND tip.
- 2. Set the pipette to the maximum volume given in the specifications.
- 3. Aspirate the set volume from a beaker of distilled water.
- 4. Maintain the pipette in the vertical position and wait for 20 seconds:
  - If a water droplet appears at the end of the tip, there is a leak.

#### For the multichannel models:

- 1. Fit the PIPETMAN DIAMOND tip.
- 2. Set the pipette to the maximum volume given in the specifications, and pre-wet the tips.
- 3. Aspirate the set volume from a reagent reservoir of distilled water.
- 4. Maintain the pipette in the vertical position and wait for 20 seconds:
  - If a water droplet appears at the end of the tip, there is a leak.
  - $\circ~$  If you see no droplets, for volumes below 200  $\mu\text{L},$  re-immerse the tip below the surface of water.
  - The water level inside the tip should remain constant; there is a leak if the level goes down.



**CLEANING AND DECONTAMINATION** 

Figure 10 MyPIPETMAN<sup>®</sup> multichannel leak test

Chapter 6

# **CLEANING AND DECONTAMINATION**

MyPIPETMAN pipettes are fully autoclavable without disassembly for maximum convenience as well as protection from contamination.

NOTICE You may refer to the decontamination procedure available on <u>www.gilson.com</u>.

Liquid must never enter any pipette's upper part (handle).

## **Cleaning for Single Channel Models**

The pipette must be cleaned, as described below, before it is decontaminated. Soap solution is recommended for cleaning MyPIPETMAN.

#### External

- 1. Remove the tip ejector (refer to Changing the Tip Ejector for Single Channel Models).
- 2. Wipe the entire pipette and the tip ejector with a soft-cloth or lint-free tissue soaked with soap solution to remove all dirty spots or marks. If the pipette is very dirty, a brush with soft, plastic bristles may be used.
- 3. Wipe the entire pipette and the tip ejector with a soft cloth or lint-free tissue soaked with distilled water.
- 4. Refit the tip ejector and allow the pipette to dry.

#### Internal

Only the following components can be immersed in a cleaning solution: connecting nut, tip ejector, tip holder, piston assembly, seal, and O-ring.

- 1. Disassemble the pipette (refer to **MAINTENANCE**).
- 2. Set aside the upper part in a clean, dry place.
- 3. Clean the individual components of the lower part of the pipette using an ultrasonic bath (20 minutes at 50°C) or with a soft-cloth and brushes. Note that the piston assembly and seals must be degreased with isopropanol or ethanol before being immersed in another ultra sonic bath. Small round brushes with soft plastic bristles may be used to clean the interior of the tip holder.
- 4. Rinse the individual components with distilled water.
- 5. Leave the parts to dry by evaporation or wipe them with a clean, soft cloth or lint-free tissue.
- 6. Reassemble the pipette (refer to **MAINTENANCE**).

## **Cleaning for Multichannel Models**

Only the following components can be immersed in a cleaning solution: tip ejector (including the ejector locks), and ejector spacer.

- 1. Remove the tip ejector and the ejector spacer.
- 2. Immerse the tip ejector and ejector spacer in the cleaning solution or wipe them with a soft cloth or lint-free tissue soaked with the cleaning solution.
- 3. Rinse the components with distilled water.
- 4. Wipe the entire pipette with a soft cloth or lint-free tissue soaked with the cleaning solution.
- 5. Wipe it with distilled water.
- 6. Leave the parts to dry by evaporation or wipe them with a clean soft-cloth or lint-free tissue.
- 7. Refit the tip ejector (refer to <u>Changing the Tip Ejector for Multichannel</u> <u>Models</u>).



## Autoclaving

MyPIPETMAN pipettes are fully autoclavable without disassembly for maximum convenience and protection from contamination.

#### 1. Before autoclaving

Set the pipette volume to the nominal volume of the model before placing it in the autoclave.

For pipettes equipped with the 3-position locking system, turn the selector to the left until the cursor reaches the autoclaving icon.

#### 2. Procedure

NOTE

MyPIPETMAN can be sterilized by steam autoclaving at 121°C (252°F), 1 bar relative pressure for 20 minutes without disassembly.

When autoclaving, the pipette will dry better and faster without using a bag.

#### 3. After autoclaving

Following the autoclaving cycle, let the pipette cool down overnight to room temperature and dry thoroughly before use. Checking should be carried out according to your standard operating procedure. Leak test may also be performed to ensure that the pipette does not leak, as described in **TROUBLESHOOTING**, part Leak Test.



## **Chemical Decontamination**

You may choose to decontaminate your pipette chemically in accordance with your own procedures. Whatever decontaminant you use, check with the supplier of the decontaminant that it is compatible with stainless steel and the plastics used in the construction of the pipette: PA (Polyamide), PBT (Polybutylene Terephthalate), PC (Polycarbonate), PC/PBT (Polycarbonate/ Polybutylene Terephthalate), POM (Polyoxymethylene), PVDF (Polyvinylidene Fluoride), PP (Polypropylene), PPA (Polyphthalamide), or PPS (Polyphenylene Sulfide).

## Upper Part (Handle)

- 1. Wipe the upper part (handle) of the pipette with a soft cloth or lint-free tissue soaked with the chosen decontaminant.
- 2. Wipe the upper part of the pipette with a soft cloth or lint-free tissue soaked with distilled water or sterile water.

## Lower Part (Volumetric Module)

#### SINGLE CHANNEL MODELS

Only the following components only can be immersed in a decontaminant solution: connecting nut, tip ejector, and tip holder.



The piston assembly and seals must be degreased with isopropanol or ethanol in a separate vessel before being immersed in decontamination solution.

- 1. Disassemble the pipette (refer to **MAINTENANCE**).
- 2. Immerse tip ejector, tip holder, and connecting nut in the decontamination solution.
- 3. Disassemble and degrease the piston assembly (Refer to Servicing Piston Assembly).
- 4. Rinse the connecting nut, tip ejector, and tip holder with distilled water.
- 5. Let the parts dry by evaporation (or wipe the tip ejector, the tip holder, and connecting nut with a soft cloth).
- 6. Lubricate the piston assembly and the seals (Refer to Servicing Piston Assembly).
- 7. Reassemble the piston assembly, the tip holder, and the tip ejector.

#### MULTICHANNEL MODELS

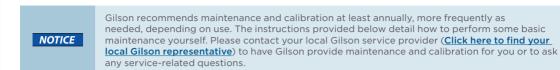
Only the following components only can be immersed in a decontamination solution: tip ejector with ejector locks, and ejector spacer.

- 1. Remove the tip ejector and the ejector spacer.
- 2. Immerse the tip ejector, ejector locks, and ejector adapter in the decontamination solution or wipe them with a soft cloth or lint-free tissue soaked with the decontamination solution.
- 3. Rinse the components with distilled water.
- 4. Wipe the entire pipette with a soft cloth or lint-free tissue soaked with the decontamination solution.
- 5. Wipe it with distilled water.
- 6. Let the parts dry by evaporation or wipe them with a clean soft cloth or lint-free tissue.
- 1. Refit the tip ejector (refer to Fitting the Tip Ejector Adapter).

Chapter 7

# MAINTENANCE

Routine maintenance will help keep your pipette in good condition, ensuring a continued high level of performance.



Maintenance is limited to:

- Cleaning or decontamination (refer to <u>CLEANING AND DECONTAMINATION</u>)
- Replacing spare parts
- Greasing the piston assembly

## Changing the Tip Ejector for Single Channel

#### To remove

- 1. Push the ejection button 1
- 2. Turn the tip ejector clockwise  $\mathbf{2}$ .
- 3. Slide and remove the tip ejector 3.

#### To refit

- 1. Push the ejection button.
- 2. Slide the tip ejector along the tip holder.
- 3. Clip the tip ejector on the body of the pipette.

## Changing the Tip Holder for Single Channel

- 1. Push the ejection button.
- 2. Turn the tip ejector clockwise.
- 3. Slide and remove the tip ejector.
- 4. Unscrew the connecting nut by turning it clockwise.
- 5. Carefully separate the lower and upper parts.
- 6. Reassemble the pipette with the changed tip holder.
- 7. Tighten the connecting nut (turn counterclockwise)

NOTICE

Removing the tip holder could impact pipette performance. Performance should be checked upon refitting the new tip holder. Extra care should be taken with the piston for the P2/P10 volumes, improper installation can cause critical damage to the piston. Users should also keep track of seals/O-rings and make sure they are reinstalled properly. Failure to reinstall correctly can result in a leaking pipette.

## **Changing the Tip Ejector for Multichannel Models**

#### To remove

- 1. Keep both ejector locks depressed 1.
- 2. Pull the tip ejector down 2.

#### To refit

- 1. Gently re-insert the tip ejector vertically into the rails of the ejector support 3
- 2. Pull lightly on the tip ejector to check the position.













#### Figure 11

MyPIPETMAN<sup>®</sup> piston assembly (disassembled)

## Servicing the Piston Assembly

You may remove the piston assembly for cleaning purposes only. If the piston assembly is changed, the pipette must be adjusted and calibrated at an authorized Gilson Service Center.

**NOTE** As models P2 and P10 contain miniaturized parts, it is best not to disassemble these pipettes yourself.

#### Separate the upper part and the lower part

- 1. Push the ejection button 1
- 2. Turn the tip ejector clockwise 2.
- 3. Slide and remove the tip ejector 3.
- 4. Unscrew the connecting nut  $\mathbf{4}$

#### Carefully separate the tip holder from the upper part (refer to Figure 11)

- Remove the piston assembly, O-ring, and the seals (refer to <u>Changing the Tip</u> <u>Ejector for Single Channel</u>).
- 2. Leave the piston exposed, clean it with isopropanol or ethanol, and lubricate lightly (lubricant P/N: 5440011070).
- 3. Clean, autoclave, or replace the tip holder. If necessary, lightly lubricate the piston and its seals.

## NOTE

For P1000 model: lubricate the piston.

For P5000, P10mL models: disassemble the seals, lubricate the internal part of the seal, and then lubricate the useful part of the piston. Do not lubricate the O-ring.

For P20, P100, P200, models: lubricate only the useful part of the piston (25  $\pm$ /-5 mm length) and

- 4. Reassemble the pipette.
- 5. Tighten the connecting nut (turn counterclockwise).

the O-ring (refer to Figure 12).

6. Refit the tip ejector



If the piston assembly is changed, the pipette must be adjusted and calibrated in at an authorized Gilson Service Center.

Figure 12

Lubricate the

internal part of the piston



# SPARE PARTS

The parts listed below include MyPIPETMAN accessories, also mentioned in chapter 4 - <u>ACCESSORIES</u> for extra personalization.

	MyPIPETMAN SINGLE CHANNEL SPARE PARTS								
Model	Seal+ O-ring (5 sets)	Adpator for Metal Ejector	Adapter for Plastic Ejector	White Stainless Steel Tip Ejector	Dark Blue Stainless Steel Tip Ejector	White Plastic Tip Ejector	Dark blue Plastic Tip Ejector	White Tip Holder	Dark Blue Tip Holder
P2	F144861	FP070212 FP070210*	FP070222	FP070112	FP070111	FP070162	FP070161	FP070232	FP070231
P10	FA07012	FP070212 FP070210*	FP070222	FP070112	FP070111	FP070162	FP070161	FP070242	FP070241
P20	FA07013	-	-	FP070122	FP070121	FP070172	FP070171	FP070252	FP070251
P100	FA07014	-	-	FP070132	FP070131	FP070182	FP070181	FP070262	FP070261
P200	FA07015	-	-	FP070142	FP070141	FP070192	FP070191	FP070272	FP070271
P1000	FA07016	-	-	FP070152	FP070151	FP070202	FP070201	FP070282	FP070281
P5000	FA07307	-	-	-	-	-	-	FP070292	FP070291
P10mL	FA07308	-	-	-	-	-	-	FP070302	FP070301

\*Translucent Adapter

MyPIPETMAN MULTICHANNEL SPARE PARTS			
MODEL	DARK BLUE PLASTIC TIP EJECTOR	WHITE PLASTIC TIP EJECTOR	EJECTOR ADAPTER
MyPIPETMAN P8x10	FP070311	FP070312	FG07064
MyPIPETMAN P12x10	FP070321	FP070322	FG07065
MyPIPETMAN P8x20	FP070311	FP070312	-
MyPIPETMAN P12x20	FP070321	FP070322	-
MyPIPETMAN P8x200	FP070311	FP070312	-
MyPIPETMAN P12x200	FP070321	FP070322	-
MyPIPETMAN P8x300	FP070311	FP070312	-
MyPIPETMAN P12x300	FP070321	FP070322	-

SPARE PARTS FOR ALL MODELS			
MODEL	PART NUMBER		
Window 3digit Dark Blue MyPIPETMAN	FP070101		
Window 3digit White MyPIPETMAN	FP070102		
Window 3digit Blue MyPIPETMAN	FP070103		
Window 3digit Red MyPIPETMAN	FP070104		
Window 3digit Yellow MyPIPETMAN	FP070105		
Window 3digit Green MyPIPETMAN	FP070106		
Lubricant Tube for PIPETMAN (1g)	5440011070		

NOTICE

For pipette service and maintenance, or for extra spare parts, please contact your local Gilson Service provider.



# WARRANTY

Gilson warrants this pipette against defects in material under normal use and service for a period of **three years** from the date of purchase.

This warranty shall not apply to pipettes which are subject to abnormal use and/or improper or inadequate maintenance (contrary to the recommendations given in the user's guide), including, but not limited to pipettes which have been subjected to physical damage, improper handling, spillage or exposure to any corrosive environment, abuse misuse or misapplication, or from ordinary wear and tear (including seal and O-rings). This warranty shall also be void in the event pipettes are altered or modified by any party other than Gilson or its designates. Gilson's sole liability under this warranty shall be limited to, at Gilson's sole option, repair or replacement of any defective components of pipettes or refund of the purchase price paid for such pipettes.

Routine cleaning, control, and recalibration are not covered under the warranty. The replacement of wearing parts such as seals, O-rings, broken pistons assembly, and broken tip holders are not covered under the warranty.

NOTICE

Yearly routine maintenance is highly recommended to keep your pipette in good condition, ensuring a continued high level of performance.

THE FOREGOING WARRANTY IS EXCLUSIVE AND GILSON HEREBY DISCLAIMS ALL OTHER WARRANTIES, WHETHER EXPRESS OR IMPLIED, INCLUDING ANY WARRANTIES OF MERCHANTABILITY AND ANY WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE, UNDER NO CIRCUMSTANCES SHALL GILSON BE LIABLE FOR ANY CONSEQUENTIAL, PUNITIVE, INDIRECT OR INCIDENTAL DAMAGES ARISING OUT OF ANY BREACH OF ANY EXPRESS OR IMPLIED WARRANTY.

Specifications subject to change without notification - errors excepted.

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