

**Micropipette**

**manual**

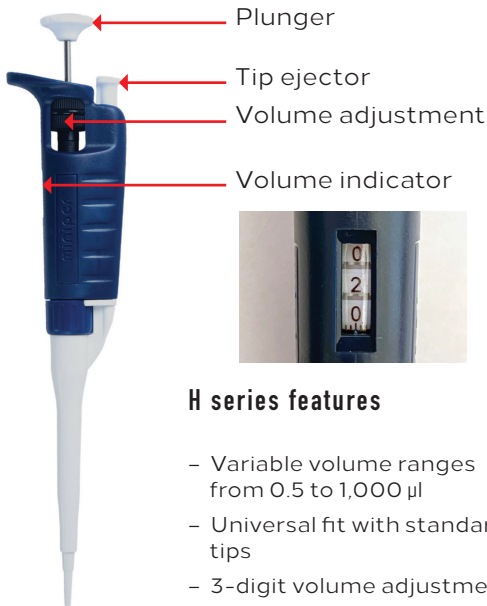
minipcr bio<sup>®</sup>

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## FEATURES

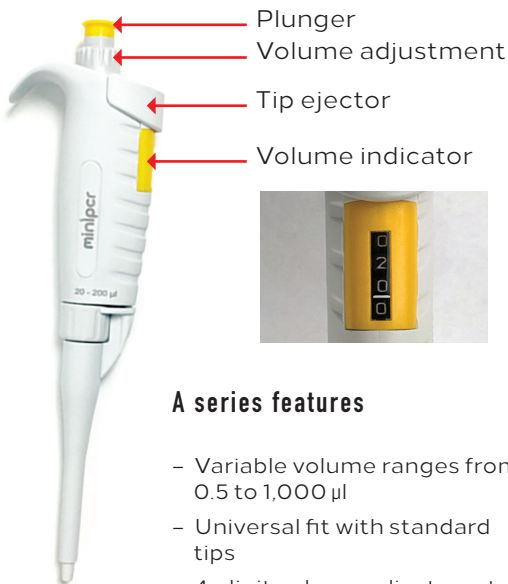
### H series



### H series features

- Variable volume ranges from 0.5 to 1,000  $\mu$ l
- Universal fit with standard tips
- 3-digit volume adjustment
- Ergonomic design
- Very low operating force
- Bottom half autoclavable (121°C) up to six times

## A series



### A series features

- Variable volume ranges from 0.5 to 1,000  $\mu$ l
- Universal fit with standard tips
- 4-digit volume adjustment
- High accuracy and precision
- Enhanced ergonomic design
- Autoclavable (121°C) up to six times

## MODELS

	Model	Volume Range ( $\mu\text{L}$ )	Increment ( $\mu\text{L}$ )
H series	H10	0.5 – 10	0.1
	H20	2 – 20	0.2
	H200	20 – 200	1
	H1000	100 – 1000	2
A series	A10	0.5 – 10	0.01
	A20	2 – 20	0.02
	A200	20 – 200	0.2
	A1000	100 – 1000	1

## SETTING THE VOLUME

Turn the volume adjustment dial counterclockwise to increase the volume and clockwise to decrease the volume.

### CAUTION:

Setting the volume outside of the recommended range may result in permanent damage.

H series			
H10	H20	H200	H1000
0	1	1	0
7	2	2	7
5	5	5	5
7.5 $\mu$ L	12.5 $\mu$ L	125 $\mu$ L	750 $\mu$ L (.75 mL)

A series			
A10	A20	A200	A1000
0	1	1	0
7	2	2	7
5	5	5	5
0	0	0	0
7.50 $\mu$ L	12.50 $\mu$ L	125.0 $\mu$ L	750 $\mu$ L (.75 mL)

## TYPICAL SPECIFICATIONS

Model	Volume ( $\mu\text{L}$ )	Accuracy		Precision	
		$\pm\%$	$\pm\mu\text{l}$	$\leq\%$	$\leq\mu\text{l}$
H10	1	3	0.03	1.50	0.015
	5	2	0.1	0.80	0.04
	10	1.2	0.12	0.50	0.05
H20	2	6	0.12	2.00	0.04
	10	1.5	0.15	0.60	0.06
	20	1.2	0.24	0.40	0.08
H200	20	2	0.4	0.60	0.12
	100	0.8	0.8	0.30	0.3
	200	0.8	1.6	0.20	0.4
H1000	100	1.8	1.8	0.40	0.4
	500	0.8	4	0.30	1.5
	1000	0.8	6	0.20	2

H series

Model	Volume ( $\mu\text{L}$ )	Accuracy		Precision	
		$\pm\%$	$\pm\mu\text{l}$	$\leq\%$	$\leq\mu\text{l}$
A10	1	2.5	0.025	1.25	0.0125
	5	1.5	0.075	0.60	0.03
	10	1	0.1	0.40	0.04
A20	2	5	0.1	1.50	0.03
	10	1	0.1	0.50	0.05
	20	1	0.2	0.30	0.6
A200	20	1.5	0.3	0.50	0.1
	100	0.8	0.8	0.25	0.25
	200	0.6	1.2	0.15	0.3
A1000	100	1.8	1.8	0.40	0.4
	500	0.8	4	0.25	1.25
	1000	0.6	6	0.15	1.5

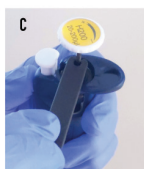
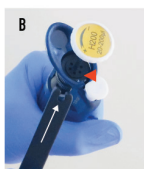


## CALIBRATION PROCEDURE

Use these volumes when calibrating your pipettes

Model	Lower calibration volume ( $\mu\text{L}$ )	Upper calibration volume ( $\mu\text{L}$ )
H10/A10	1	10
H20/A20	2	20
H200/A200	20	200
H1000/A1000	100	1000

### TO CALIBRATE H SERIES PIPETTES:

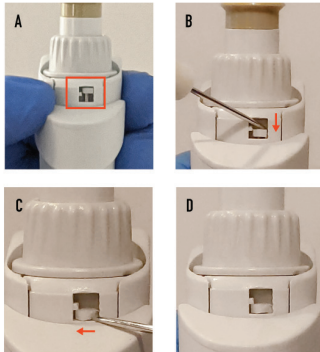


Insert the calibration wrench (A) into the notches found on top of the volume adjustment dial (red arrowhead in B). The wrench contains a notch (white arrow in B) that allows it to be inserted around the plunger. Turn the wrench to calibrate the pipette. Rotate the wrench clockwise/ counterclockwise if the pipette is picking up less/ more than shown by the volume indicator (C).

## TO CALIBRATE A SERIES PIPETTES:



Calibration  
tool



Push down the tip ejector button (A). This will reveal a small window (red box in A). Inside, you will find a teardrop-shaped plastic latch attached to the top of a metal rod. Use the calibration tool to press the latch down (B), then rotate it to the left (C). The pointed tip of the plastic latch should catch under the notch of the left side of the window\*. Now, the pipette is in calibration mode and you can turn the volume adjustment dial to calibrate the pipette (D). Rotate the volume adjuster dial clockwise/counterclockwise if the pipette is picking up less/more than shown by the volume indicator. To take the pipette out of calibration mode, use the calibration tool to release the plastic latch.

\* If the latch doesn't catch, check to ensure that you have successfully rotated the pointed tip of the latch all the way to the left.