Product Specifications

Thermo Scientific Matrix® Hybrid Pipette

The Thermo Scientific Matrix Hybrid Pipette combines the lightweight feel and plunger control of a manual pipette with the automatic volume adjustment of an electronic pipette. The Matrix Hybrid pipette works exclusively with Thermo Scientific Matrix ClipTips, providing a unique binary tip interface that locks or "clips" the tip in place to ensure an effective seal with minimal tip application and ejection forces.

Matrix ClipTips Interface. Matrix ClipTips have a clasp or "clip" that locks in place to ensure an effective seal and prevent loose or leaky tips with minimal pressure. This binary tip system, in which Matrix ClipTips are either "on" or "off," provides stable, straight mounting every time and tips will only release when ejected, regardless of application pressure.

Superior Ergonomic Design. Designed for true, single hand operation, the pipette's contoured grip fits naturally and comfortably in the hand. Extremely light plunger force allows superior control when pipetting, while electronic volume adjustment eliminates strenuous knob twisting involved with traditional manual pipettes. Tip application and ejection forces are minimized by the unique Matrix ClipTips design.

Automatic Volume Adjustment. Intelligent processor-controlled volume adjustment mechanisms accurately set each volume range with a precise control algorithm, eliminating tedious manual adjustments.

Volume Scrolling – Incremental adjustment using the + and — Scroll buttons.

QUIK-set Volumes – Toggle between six (6) pre-set volumes that are stored in memory.

Voice Recognition – Speak the amount to the pipette and the volume adjusts accordingly.

Quick and Easy In-lab Calibration. Calibration is simple; Use One-Point calibration when pipetting a specific volume consistently or Two-Point calibration when pipetting throughout the entire volume range of the pipette. The pipette can easily be restored back to its original factory calibration points at any time.

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Operational Characteristics				
	Control Modes	Incremental volume scrolling, six QUICK-set volumes, voice recognition (VR)		
	Voice Recognition Modes	Speaker independent for English; Speaker dependent for training all other languages		
	Calibration Modes	One and two point calibration		
	Piston Control	Manual plunger		
	Tip Interface	Matrix ClipTips binary locking system		
Performance Specifications				
	Speed to Change Volume (Incremental scrolling)		16 sec max.	
	Speed to Change QUIK-set Volume		6 sec max.	
	Speed to Change Volume (VR)			9 sec max.
		Single Channel	8-Channel	12-Channel
	Plunger Force	1.0 lbs/0.45 kg	2.4 lbs/1.09 kg	2.6 lbs/1.18 kg
	Tip Application Force	1.4 lbs/0.64 kg	2.5 lbs/1.13 kg	3.0 lbs/1.36 kg
	Tip Ejection Force	1.1 lbs/0.50kg	2.5 lbs/1.13 kg	2.7 lbs/1.22 kg
Weight				
		Single Channel	8-Channel	12-Channel
	12.5 µl	97 g	180 g	215 g
	30 µl	98 g	180 g	215 g
	125 µl	103 g	N/A	N/A
	300 µl	99 g	180 g	215 g
	1250 µl	99 g	N/A	N/A
Physical Characteristics				
	Chemical Compatibility for Wipe Cleaning		Isopropanol; methanol, ethanol; water; alconox detergent; soap solutions	
	UV Resistance		All materials are UV resistant	
Electrical				
	Battery Type	Lithium ion		
	Charge Length	2 hours for full charge; 1 hour for 80%		
	Single Charger Type	Universal power supply charge clip		
	Multiple Charger Type	Revolving carousel charge stand, 6-position		
	Certifications	TUV, CE, WEEE, RoHS		

Matrix Hybrid Pipette Accuracy and Precision Specifications

Item No.	Channels	Volume Range	Accuracy (%)	Precision (%)	Compatible Matrix ClipTips
1081	Single Channel	0.5-12.5 µl	3.33*-1.00 %	1.80*-0.60 %	7120, 7121, 7122, 7165
1082	Single Channel	2-30 µl	2.80*-1.00 %	1.60*-0.50 %	7120, 7121, 7122, 7175
1083	Single Channel	10-125 µl	2.67*-1.00 %	1.12*-0.40 %	7130, 7131, 7132, 7135
1084	Single Channel	20-300 µl	2.40*-0.90 %	1.00*-0.30 %	7130, 7131, 7132, 7135
1085	Single Channel	100-1250 µl	2.00*-0.80 %	0.64*-0.20 %	7140, 7141, 7142, 7145
2310	8-Channel	0.5-12.5 µl	6.70*-2.00 %	5.00*-1.20 %	7120, 7121, 7122, 7165
2312	8-Channel	2-30 µl	5.60*-2.00 %	3.20*-1.00 %	7120, 7121, 7122, 7175
2315	8-Channel	20-300 µl	4.80*-1.00 %	2.00*-0.30 %	7130, 7131, 7132, 7135
2320	12-Channel	0.5-12.5 µl	6.70*-2.00 %	5.00*-1.20 %	7120, 7121, 7122, 7165
2322	12-Channel	2-30 µl	5.60*-2.00 %	3.20*-1.00 %	7120, 7121, 7122, 7175
2325	12-Channel	20-300 µl	4.80*-1.00 %	2.00*-0.30 %	7130, 7131, 7132, 7135

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