GILSON PIPETTE SPECIFICATIONS

SYSTEMATIC ERROR = ACCURACY
RANDOM ERROR = REPEATABILITY

PIPETMAN® M CONNECTED SINGLE CHANNEL

| Model | PIPETMAN® DIAMOND Tips | | Part Number | Gilson Specifications | | | | | | ISO 8655-2 | | | | |
| | | | | Standard PIPET Mode | | | | | | REPETITIVE Mode | | | | |
				Volume Range	Volume (µL)	Systematic Error (µL)	Random Error (µL)	Systematic Error (%)	Random Error (CV*)	Volume Range	Systematic Error (µL)	Random Error (µL)	Systematic Error (%)	Random Error (CV*)
P10M	D10 DL10	DF10ST DFL10ST	F81040	0.5–10 µL	0.5 1 5 10	± 0.040 ± 0.025 ± 0.060 ± 0.080	≤ 0.013 ≤ 0.012 ≤ 0.020 ≤ 0.025	± 8.0 ± 2.5 ± 1.2 ± 0.8	≤ 2.6 ≤ 1.2 ≤ 0.4 ≤ 0.3	0.5–10 µL	± 0.12 ± 0.12 ± 0.12 ± 0.12	≤ 0.08 ≤ 0.08 ≤ 0.08 ≤ 0.08	± 24.00 ± 12.0 ± 2.4 ± 1.2	≤ 16.0 ≤ 8.0 ≤ 1.6 ≤ 0.8
P20M	D200	DF30ST	F81041	2–20 µL	2 10 20	± 0.075 ± 0.100 ± 0.150	≤ 0.025 ≤ 0.035 ≤ 0.050	± 3.8 ± 1.0 ± 0.8	≤ 1.3 ≤ 0.4 ≤ 0.3	2–20 µL	± 0.2 ± 0.2 ± 0.2	≤ 0.1 ≤ 0.1 ≤ 0.1	± 10.0 ± 2.0 ± 1.0	≤ 5.0 ≤ 1.0 ≤ 0.5
P100M	D200	DF100ST	F81042	5–100 µL	5 10 50 100	± 0.35 ± 0.30 ± 0.38 ± 0.40	≤ 0.10 ≤ 0.10 ≤ 0.12 ≤ 0.15	± 7.0 ± 3.0 ± 0.8 ± 0.4	≤ 2.0 ≤ 1.0 ≤ 0.2 ≤ 0.2	5–100 µL	± 0.8 ± 0.8 ± 0.8 ± 0.8	≤ 0.3 ≤ 0.3 ≤ 0.3 ≤ 0.3	± 16.0 ± 8.0 ± 1.6 ± 0.3	≤ 6.0 ≤ 3.0 0.6 0.3
P200M	D200 D300	DF200ST DF300ST	F81043	20–200 µL	20 100 200	± 0.40 ± 0.80 ± 1.00	≤ 0.15 ≤ 0.22 ≤ 0.26	± 2.0 ± 0.8 ± 0.5	≤ 0.8 ≤ 0.2 ≤ 0.1	5–200 µL	± 1.6 ± 1.6 ± 1.6	≤ 0.6 ≤ 0.6 ≤ 0.6	± 8.0 ± 1.6 ± 0.8	≤ 3.0 ≤ 0.6 ≤ 0.3
P300M	D200 D300	DF200ST DF300ST	F81044	20–300 µL	20 30 150 300	± 0.80 ± 0.70 ± 0.90 ± 1.05	≤ 0.16 ≤ 0.20 ≤ 0.23 ≤ 0.30	± 4.0 ± 2.3 ± 0.6 ± 0.4	≤ 0.8 ≤ 0.7 ≤ 0.2 ≤ 0.1	10–300 µL	± 4.0 ± 4.0 ± 4.0 ± 4.0	≤ 1.5 ≤ 1.5 ≤ 1.5 ≤ 1.5	± 20.0 ± 13.33 ± 2.67 ± 1.33	≤ 7.5 ≤ 5.0 ≤ 1.0 ≤ 0.5
P1200M	D1000 D1200	DF1000ST DF1200ST	F81045	100–1200 µL	100 120 600 1200	± 2.5 ± 2.4 ± 3.6 ± 6.0	≤ 0.4 ≤ 0.4 ≤ 0.8 ≤ 1.2	± 2.5 ± 2.0 ± 0.6 ± 0.5	≤ 0.4 ≤ 0.3 ≤ 0.1 ≤ 0.1	20–1200 µL	± 16 ± 16 ± 16 ± 16	≤ 6.0 ≤ 6.0 ≤ 6.0 ≤ 6.0	± 16.0 ± 13.33 ± 2.67 ± 1.33	≤ 0.6 ≤ 0.5 ≤ 0.1 ≤ 0.1
P5000M	D5000		F81046	500–5000 µL	500 2500 5000	± 10 ± 15 ± 25	≤ 2 ≤ 4 ≤ 7	± 2.0 ± 0.6 ± 0.5	≤ 0.4 ≤ 0.2 ≤ 0.1	100–5000 µL	± 40 ± 40 ± 40	≤ 15.0 ≤ 15.0 ≤ 15.0	± 8.0 ± 1.6 ± 0.8	≤ 3.0 ≤ 0.6 ≤ 0.3
P10mLM	D10mL		F81047	1–10 mL	1 mL 5 mL 10 mL	± 25 ± 30 ± 50	≤ 4 ≤ 8 ≤ 12	± 2.5 ± 0.6 ± 0.5	0.4 0.2 0.1	200 µL–10 mL	± 60 ± 60 ± 60	≤ 30.0 ≤ 30.0 ≤ 30.0	± 6.0 ± 1.2 ± 0.6	≤ 3.0 ≤ 0.6 ≤ 0.3

PIPETMAN® M CONNECTED MULTICHANNEL

Model	PIPETMAN® DIAMOND Tips		Part Number	Volume Range	Volume (µL)	Systematic Error (µL)	Random Error (µL)	Systematic Error (%)	Random Error (CV*)	Volume Range	Systematic Error (µL)	Random Error (µL)	Systematic Error (%)	Random Error (CV*)
P8x10M	D10 DL10	DF10ST DFL10ST	F81048	0.5–10 µL	0.5 1 5 10	± 0.05 ± 0.04 ± 0.08 ± 0.10	≤ 0.02 ≤ 0.02 ≤ 0.04 ≤ 0.06	± 10.0 ± 4.0 ± 1.6 ± 1.0	≤ 4.0 ≤ 2.0 ≤ 0.8 ≤ 0.6	0.5–10 µL	± 0.24 ± 0.24 ± 0.24 ± 0.24	≤ 0.16 ≤ 0.16 ≤ 0.16 ≤ 0.16	± 48.0 ± 24.0 ± 4.8 ± 2.4	≤ 32.0 ≤ 16.0 ≤ 3.2 ≤ 1.6
P12x10M			F81049											
P8x20M	DL10 D200	DFL10ST DF30ST	F81050	1–20 µL	1 2 10 20	± 0.08 ± 0.09 ± 0.15 ± 0.25	≤ 0.05 ≤ 0.06 ≤ 0.10 ≤ 0.12	± 8.0 ± 4.5 ± 1.5 ± 1.3	≤ 5.0 ≤ 3.0 ≤ 1.0 ≤ 0.6	1–20 µL	± 0.4 ± 0.4 ± 0.4 ± 0.4	≤ 0.2 ≤ 0.2 ≤ 0.2 ≤ 0.2	± 40.0 ± 20.0 ± 4.0 ± 2.0	≤ 20.0 ≤ 10.0 ≤ 2.0 ≤ 1.0
P12x20M			F81051											
P8x100M	D200	DF100ST	F81052	10–100 µL	10 50 100	± 0.25 ± 0.50 ± 0.80	≤ 0.14 ≤ 0.20 ≤ 0.25	± 2.5 ± 1.0 ± 0.8	≤ 1.4 ≤ 0.4 ≤ 0.3	5–100 µL	± 1.6 ± 1.6 ± 1.6	≤ 0.6 ≤ 0.6 ≤ 0.6	± 16.0 ± 3.2 ± 1.6	≤ 6.0 ≤ 1.2 ≤ 0.6
P12x100M			F81053											
P8x200M	D200 D300	DF100ST DF200ST DF300T	F81054	20–200 µL	20 100 200	± 0.50 ± 1.00 ± 2.00	≤ 0.16 ≤ 0.30 ≤ 0.50	± 2.5 ± 1.0 ± 1.0	≤ 0.8 ≤ 0.3 ≤ 0.3	5–200 µL	± 3.2 ± 3.2 ± 3.2	≤ 1.2 ≤ 1.2 ≤ 1.2	± 16.0 ± 3.2 ± 1.6	≤ 6.0 ≤ 1.2 ≤ 0.6
P12x200M			F81055											
P8x300M	D200 D300	DF200ST DF300ST	F81056	10–300 µL	10 30 150 300	± 1.00 ± 1.00 ± 1.50 ± 2.40	≤ 0.18 ≤ 0.18 ≤ 0.375 ≤ 0.45	± 10.0 ± 3.3 ± 1.0 ± 0.8	≤ 1.8 ≤ 0.6 ≤ 0.3 ≤ 0.2	10–300 µL	± 8.0 ± 8.0 ± 8.0 ± 8.0	≤ 3.0 ≤ 3.0 ≤ 3.0 ≤ 3.0	± 80.0 ± 26.7 ± 5.3 ± 2.7	≤ 30.0 ≤ 10.0 ≤ 2.0 ≤ 1.0
P12x300M			F81057											
P8x1200M	D1200	DF1200ST	F81058	50–1200 µL	50 120 600 1200	± 4.0 ± 4.0 ± 6.0 ± 9.6	≤ 0.7 ≤ 0.7 ≤ 1.5 ≤ 1.8	± 8.0 ± 3.3 ± 1.0 ± 0.8	≤ 1.4 ≤ 0.6 ≤ 0.3 ≤ 0.2	50–1200 µL	± 32 ± 32 ± 32 ± 32	≤ 12 ≤ 12 ≤ 12 ≤ 12	± 64.0 ± 26.7 ± 5.3 ± 2.7	≤ 24.0 ≤ 10.0 ≤ 2.0 ≤ 1.0
P12x1200M			F81059											

*CV means Coefficient of Variation

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

Under these conditions. Gilson volumetric specifications in standard pipetting (PIPET Mode) are guaranteed with a performance exceeding ISO 8655-2 recommendations for this Mode. In the absence of ISO recommendations for repetitive pipetting Mode for air displacement pipettes. Gilson volumetric specifications for repetitive pipetting (REPETITIVE Mode) are guaranteed within ISO 8655-2 recommendations for standard pipetting (Cf. ISO 8655-2 table 1).

GILSON®

GILSON PIPETTE SPECIFICATIONS

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PIPETMAN® L SINGLE CHANNEL—VARIABLE VOLUME MODELS

Model	PIPETMAN® DIAMOND Tips		Part Number With Stainless Steel Ejector	With Plastic Ejector	Volume (µL)	Gilson				ISO 8655			
						Systematic Error (µL)	Random Error (µL)	Systematic Error (%)	Random Error (CV*)	Systematic Error (µL)	Random Error (µL)	Systematic Error (%)	Random Error (CV*)
P2L	D10 DL10	DF10ST DFL10ST	FA10001M	FA10001P	0.2 0.5 1 2	± 0.024 ± 0.025 ± 0.027 ± 0.030	≤ 0.012 ≤ 0.012 ≤ 0.013 ≤ 0.014	± 12.0 ± 5.0 ± 2.7 ± 1.5	≤ 6.0 ≤ 2.4 ≤ 1.3 ≤ 0.7	± 0.08 ± 0.08 ± 0.08 ± 0.08	≤ 0.04 ≤ 0.04 ≤ 0.04 ≤ 0.04	± 40.0 ± 16.0 ± 8.0 ± 4.0	≤ 20.0 ≤ 8.0 ≤ 4.0 ≤ 2.0
P10L**	D10 DL10	DF10ST DFL10ST	FA10002M	FA10002P	1 5 10	± 0.025 ± 0.075 ± 0.100	≤ 0.012 ≤ 0.030 ≤ 0.040	± 2.5 ± 1.5 ± 1.0	≤ 1.2 ≤ 0.6 ≤ 0.4	± 0.12 ± 0.12 ± 0.12	≤ 0.08 ≤ 0.08 ≤ 0.08	± 12.0 ± 2.4 ± 1.2	≤ 8.0 ≤ 1.6 ≤ 0.8
P20L	D200	DF30ST	FA10003M	FA10003P	2 10 20	± 0.10 ± 0.10 ± 0.20	≤ 0.030 ≤ 0.050 ≤ 0.060	± 5.0 ± 1.0 ± 1.0	≤ 1.5 ≤ 0.5 ≤ 0.3	± 0.2 ± 0.2 ± 0.2	≤ 0.1 ≤ 0.1 ≤ 0.1	± 10.0 ± 2.0 ± 1.0	≤ 5.0 ≤ 1.0 ≤ 0.5
P100L	D200	DF100ST	FA10004M	FA10004P	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	± 0.8 ± 0.8 ± 0.8	≤ 0.3 ≤ 0.3 ≤ 0.3	± 8.0 ± 1.6 ± 0.8	≤ 3.0 ≤ 0.6 ≤ 0.3
P200L	D200 D300	DF200ST DF300ST	FA10005M	FA10005P	20 100 200	± 0.50 ± 0.80 ± 1.60	≤ 0.20 ≤ 0.25 ≤ 0.30	± 2.5 ± 0.8 ± 0.8	≤ 1.0 ≤ 0.25 ≤ 0.15	± 1.6 ± 1.6 ± 1.6	≤ 0.6 ≤ 0.6 ≤ 0.6	± 8.0 ± 1.6 ± 0.8	≤ 3.0 ≤ 0.6 ≤ 0.3
P1000L	D1000 D1200	DF1000ST DF1200ST	FA10006M	FA10006P	100 500 1000	± 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 ± 0.8	≤ 3.0 ≤ 0.6 ≤ 0.3
P5000L***	D5000		FA10007		500 2500 5000	± 12 ± 15 ± 30	≤ 3 ≤ 5 ≤ 8	± 2.4 ± 0.6 ± 0.6	≤ 0.6 ≤ 0.2 ≤ 0.16	± 40 ± 40 ± 40	≤ 15.0 ≤ 15.0 ≤ 15.0	± 8.0 ± 1.6 ± 0.8	≤ 3.0 ≤ 0.6 ≤ 0.3
P10mLL***	D10mL		FA10008		1000 5000 10000	± 30 ± 40 ± 60	≤ 6 ≤ 10 ≤ 16	± 3.0 ± 0.8 ± 0.6	≤ 0.6 ≤ 0.2 ≤ 0.2	± 60 ± 60 ± 60	≤ 30.0 ≤ 30.0 ≤ 30.0	± 6.0 ± 1.2 ± 0.6	≤ 3.0 ≤ 0.6 ≤ 0.3

PIPETMAN® L MULTICHANNEL

Model	PIPETMAN® DIAMOND Tips		Part Number		Volume (µL)	Gilson				ISO 8655			
P8x10L	D10 DL10	DF10ST DFL10ST	FA10013		0.5 1 5 10	± 0.08 ± 0.08 ± 0.20 ± 0.20	≤ 0.04 ≤ 0.05 ≤ 0.10 ≤ 0.10	± 16.0 ± 8.0 ± 4.0 ± 2.0	≤ 8.0 ≤ 5.0 ≤ 2.0 ≤ 1.0	± 0.24 ± 0.24 ± 0.24 ± 0.24	≤ 0.16 ≤ 0.16 ≤ 0.16 ≤ 0.16	± 48.0 ± 24.0 ± 4.8 ± 2.4	≤ 32.0 ≤ 16.0 ≤ 3.2 ≤ 1.6
P12x10L			FA10014										
P8x20L	DL10 D200	DFL10ST DF30ST	FA10009		2 10 20	± 0.10 ± 0.20 ± 0.40	≤ 0.08 ≤ 0.10 ≤ 0.15	± 5.0 ± 2.0 ± 2.0	≤ 4.0 ≤ 1.0 ≤ 1.0	± 0.4 ± 0.4 ± 0.4	≤ 0.20 ≤ 0.20 ≤ 0.20	± 20.0 ± 4.0 ± 2.0	≤ 10.0 ≤ 2.0 ≤ 1.0
P12x20L			FA10010										
P8x200L	D200 D300	DF200ST DF300ST	FA10011		20 100 200	± 0.50 ± 1.00 ± 2.00	≤ 0.25 ≤ 0.40 ≤ 0.50	± 2.5 ± 1.0 ± 1.0	≤ 1.25 ≤ 0.4 ≤ 0.25	± 3.2 ± 3.2 ± 3.2	≤ 1.2 ≤ 1.2 ≤ 1.2	± 16.0 ± 3.2 ± 1.6	≤ 6.0 ≤ 1.2 ≤ 0.6
P12x200L			FA10012										
P8x300L	D200 D300	DF200ST DF300ST	FA10015		20 30 150 300	± 1.00 ± 1.00 ± 1.50 ± 3.00	≤ 0.35 ≤ 0.35 ≤ 0.60 ≤ 1.00	± 5.0 ± 3.33 ± 1.0 ± 1.0	≤ 1.75 ≤ 1.17 ≤ 0.4 ≤ 0.33	± 8.0 ± 8.0 ± 8.0 ± 8.0	≤ 3.0 ≤ 3.0 ≤ 3.0 ≤ 3.0	± 40.0 ± 26.67 ± 5.33 ± 2.67	≤ 15.0 ≤ 10.0 ≤ 2.0 ≤ 1.0
P12x300L			FA10016										

*CV means Coefficient of Variation

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

** P10L Model can be used up to 0.5 µL.

*** P5000L and P10mLL do not have tip ejectors.

For a pipette with a plastic tip ejector. the part number ends with the letter P.

For a pipette with a stainless steel tip ejector, the part number ends with the letter M.

GILSON®

GILSON PIPETTE SPECIFICATIONS

SYSTEMATIC ERROR = ACCURACY
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PIPETMAN® L Fixed Models

Model	PIPETMAN® DIAMOND Tips		Part Number	Volume (µL)	Gilson				ISO 8655			
					Systematic Error (µL)	Random Error (µL)	Systematic Error (%)	Random Error (CV*)	Systematic Error (µL)	Random Error (µL)	Systematic Error (%)	Random Error (CV*)
F1L	D10 DL10	DF10ST DFL10ST	**FA10017**	1	± 0.02	≤ 0.015	± 2.0	≤ 1.50	± 0.05	≤ 0.05	± 5.0	≤ 5.0
F2L	D10 DL10	DF10ST DFL10ST	**FA10018**	2	± 0.05	≤ 0.02	± 2.5	≤ 1.0	± 0.08	≤ 0.04	± 4.0	≤ 2.0
F5L	D10 DL10	DF10ST DFL10ST	**FA10019**	5	± 0.05	≤ 0.025	± 1.0	≤ 0.5	± 0.13	≤ 0.08	± 2.5	≤ 1.5
F10L	D10 DL10	DF10ST DFL10ST	**FA10020**	10	± 0.06	≤ 0.03	± 0.6	≤ 0.3	± 0.12	≤ 0.08	± 1.2	≤ 0.8
F20L	D200	DF30ST	**FA10021**	20	± 0.10	≤ 0.05	± 0.5	≤ 0.25	± 0.20	≤ 0.10	± 1.0	≤ 0.5
F25L	D200	DF30ST	**FA10022**	25	± 0.20	≤ 0.07	± 0.8	≤ 0.28	± 0.50	≤ 0.20	± 2.0	≤ 0.8
F50L	D200	DF100ST	**FA10023**	50	± 0.35	≤ 0.12	± 0.7	≤ 0.24	± 0.50	≤ 0.20	± 1.0	≤ 0.4
F100L	D200	DF100ST	**FA10024**	100	± 0.55	≤ 0.15	± 0.6	≤ 0.15	± 0.80	≤ 0.30	± 0.8	≤ 0.3
F200L	D200	DF200ST	**FA10025**	200	± 1.2	≤ 0.30	± 0.6	≤ 0.15	± 1.60	≤ 0.60	± 0.8	≤ 0.3
F250L	D300	DF300ST	**FA10026**	250	± 1.50	≤ 0.75	± 0.6	≤ 0.3	± 4.00	≤ 1.50	± 1.6	≤ 0.6
F300L	D1000	DF1000ST	**FA10027**	300	± 2.4	≤ 0.50	± 0.8	≤ 0.17	± 4.00	≤ 1.50	± 1.33	≤ 0.5
F400L	D1000	DF1000ST	**FA10028**	400	± 2.4	≤ 0.80	± 0.6	≤ 0.2	± 4.00	≤ 1.50	± 1.0	≤ 0.4
F500L	D1000	DF1000ST	**FA10029**	500	± 3.0	≤ 0.80	± 0.6	≤ 0.16	± 4.00	≤ 1.50	± 0.8	≤ 0.3
F1000L	D1000	DF1000ST	**FA10030**	1000	± 5.0	≤ 1.3	± 0.5	≤ 0.13	± 8.00	≤ 3.00	± 0.8	≤ 0.3
F5000L	D5000		**FA10031**	5000	± 20.0	≤ 7.0	± 0.4	≤ 0.14	± 40.00	≤ 15.00	± 0.8	≤ 0.3

*CV means Coefficient of Variation

GILSON®

GILSON PIPETTE SPECIFICATIONS

SYSTEMATIC ERROR = ACCURACY
RANDOM ERROR = REPEATABILITY

PIPETMAN® G SINGLE CHANNEL

Model	PIPETMAN® DIAMOND Tips		Part Number	Volume (µL)	Maximum Permissible Errors							
					Gilson				ISO 8655			
					Systematic Error (µL)	Random Error (µL)	Systematic Error (%)	Random Error (CV*)	Systematic Error (µL)	Random Error (µL)	Systematic Error (%)	Random Error (CV*)
P2G	D10 DL10	DF10ST DFL10ST	F144054M	0.2 0.5 1 2	± 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	± 0.08 ± 0.08 ± 0.08 ± 0.08	≤ 0.04 ≤ 0.04 ≤ 0.04 ≤ 0.04	± 40.0 ± 16.0 ± 8.0 ± 4.0	≤ 20.0 ≤ 8.0 ≤ 4.0 ≤ 2.0
P10G**	D10 DL10	DF10ST DFL10ST	F144055M	1 5 10	± 0.025 ± 0.075 ± 0.100	≤ 0.012 ≤ 0.030 ≤ 0.040	± 2.5 ± 1.5 ± 1.0	≤ 1.2 ≤ 0.6 ≤ 0.4	± 0.12 ± 0.12 ± 0.12	≤ 0.08 ≤ 0.08 ≤ 0.08	± 12.0 ± 2.4 ± 1.2	≤ 8.0 ≤ 1.6 ≤ 0.8
P20G	D200	DF30ST	F144056M	2 10 20	± 0.10 ± 0.10 ± 0.20	≤ 0.030 ≤ 0.050 ≤ 0.060	± 5.0 ± 1.0 ± 1.0	≤ 1.5 ≤ 0.5 ≤ 0.3	± 0.2 ± 0.2 ± 0.2	≤ 0.1 ≤ 0.1 ≤ 0.1	± 10.0 ± 2.0 ± 1.0	≤ 5.0 ≤ 1.0 ≤ 0.5
P100G	D200	DF100ST	F144057M	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	± 0.8 ± 0.8 ± 0.8	≤ 0.3 ≤ 0.3 ≤ 0.3	± 8.0 ± 1.6 ± 0.8	≤ 3.0 ≤ 0.6 ≤ 0.3
P200G	D200 D300	DF200ST DF300ST	F144058M	20 100 200	± 0.50 ± 0.80 ± 1.60	≤ 0.20 ≤ 0.25 ≤ 0.30	± 2.5 ± 0.8 ± 0.8	≤ 1.0 ≤ 0.25 ≤ 0.15	± 1.6 ± 1.6 ± 1.6	≤ 0.6 ≤ 0.6 ≤ 0.6	± 8.0 ± 1.6 ± 0.8	≤ 3.0 ≤ 0.6 ≤ 0.3
P1000G	D1000 D1200	DF1000ST DF1200ST	F144059M	100 500 1000	± 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 ± 0.8	≤ 3.0 ≤ 0.6 ≤ 0.3
P5000G***	D5000		F144066	500 2500 5000	± 12 ± 15 ± 30	≤ 3 ≤ 5 ≤ 8	± 2.4 ± 0.6 ± 0.6	≤ 0.6 ≤ 0.2 ≤ 0.16	± 40 ± 40 ± 40	≤ 15.0 ≤ 15.0 ≤ 15.0	± 8.0 ± 1.6 ± 0.8	≤ 3.0 ≤ 0.6 ≤ 0.3
P10mLG***	D10mL		F144067	1000 5000 10000	± 30 ± 40 ± 60	≤ 6 ≤ 10 ≤ 16	± 3.0 ± 0.8 ± 0.6	≤ 0.6 ≤ 0.2 ≤0.16	± 60 ± 60 ± 60	≤ 30.0 ≤ 30.0 ≤ 30.0	± 6.0 ± 1.2 ± 0.6	≤ 3.0 ≤ 0.6 ≤ 0.3

PIPETMAN® G MULTICHANNEL

Model	PIPETMAN® DIAMOND Tips		Part Number	Volume (µL)	Systematic Error (µL)	Random Error (µL)	Systematic Error (%)	Random Error (CV*)	Systematic Error (µL)	Random Error (µL)	Systematic Error (%)	Random Error (CV*)
P8x10G P12x10G	D10 DL10	DF10ST DFL10ST	F144068 F144069	1 5 10	± 0.08 ± 0.20 ± 0.20	≤ 0.05 ≤ 0.10 ≤ 0.10	± 8.0 ± 4.0 ± 2.0	≤ 5.0 ≤ 2.0 ≤ 1.0	± 0.24 ± 0.24 ± 0.24	≤ 0.16 ≤ 0.16 ≤ 0.16	± 24.0 ± 4.8 ± 2.4	≤ 16.0 ≤ 3.2 ≤ 1.6
P8x20G P12x20G	DL10 D200	DFL10ST DF30ST	F144070 F144071	2 10 20	± 0.10 ± 0.20 ± 0.40	≤ 0.08 ≤ 0.10 ≤ 0.20	± 5.0 ± 2.0 ± 2.0	≤ 4.0 ≤ 1.0 ≤ 1.0	± 0.4 ± 0.4 ± 0.4	≤ 0.20 ≤ 0.20 ≤ 0.20	± 20.0 ± 4.0 ± 2.0	≤ 10.0 ≤ 2.0 ≤ 1.0
P8x200G P12x200G	D200 D300	DF200ST DF300ST	F144072 F144073	20 100 200	± 0.50 ± 1.00 ± 2.00	≤ 0.25 ≤ 0.40 ≤ 0.50	± 2.5 ± 1.0 ± 1.0	≤ 1.25 ≤ 0.4 ≤ 0.25	± 3.2 ± 3.2 ± 3.2	≤ 1.2 ≤ 1.2 ≤ 1.2	± 16.0 ± 3.2 ± 1.6	≤ 6.0 ≤ 1.2 ≤ 0.6
P8x300G P12x300G	D200 D300	DF200ST DF300ST	F144074 F144075	30 150 300	± 1.00 ± 1.50 ± 3.00	≤ 0.35 ≤ 0.60 ≤ 1.00	± 3.33 ± 1.0 ± 1.0	≤ 1.17 ≤ 0.4 ≤ 0.33	± 8.0 ± 8.0 ± 8.0	≤ 3.0 ≤ 3.0 ≤ 3.0	± 26.67 ± 5.33 ± 2.67	≤ 10.0 ≤ 2.0 ≤ 1.0

*CV means Coefficient of Variation

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

**P10G Model can be used up to 0.5 µL.

***P5000G and P10mLG do not have tip ejectors.

GILSON®

GILSON PIPETTE SPECIFICATIONS

SYSTEMATIC ERROR = ACCURACY
RANDOM ERROR = REPEATABILITY

| | | | | | Maximum Permissible Errors | | | | | | | |
| | | | | | Gilson | | | | ISO 8655 | | | |
Model	PIPETMAN® DIAMOND Tips		Part Number	Volume (µL)	Systematic Error (µL)	Random Error (µL)	Systematic Error (%)	Random Error (CV*)	Systematic Error (µL)	Random Error (µL)	Systematic Error (%)	Random Error (CV*)
P2	D10 DL10	DF10ST DFL10ST	F144801	0.2 0.5 1 2	± 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	± 0.08 ± 0.08 ± 0.08 ± 0.08	≤ 0.04 ≤ 0.04 ≤ 0.04 ≤ 0.04	± 40.0 ± 16.0 ± 8.0 ± 4.0	≤ 20.0 ≤ 8.0 ≤ 4.0 ≤ 2.0
P10	D10 DL10	DF10ST DFL10ST	F144802	1 5 10	± 0.025 ± 0.075 ± 0.100	≤ 0.012 ≤ 0.030 ≤ 0.040	± 2.5 ± 1.5 ± 1.0	≤ 1.2 ≤ 0.6 ≤ 0.4	± 0.12 ± 0.12 ± 0.12	≤ 0.08 ≤ 0.08 ≤ 0.08	± 12.0 ± 2.4 ± 1.2	≤ 8.0 ≤ 1.6 ≤ 0.8
P20	D200	DF30ST	F123600	2 5 10 20	± 0.10 ± 0.10 ± 0.10 ± 0.20	≤ 0.030 ≤ 0.040 ≤ 0.050 ≤ 0.060	± 5.0 ± 2.0 ± 1.0 ± 1.0	≤ 1.5 ≤ 0.8 ≤ 0.5 ≤ 0.3	± 0.2 ± 0.2 ± 0.2 ± 0.2	≤ 0.1 ≤ 0.1 ≤ 0.1 ≤ 0.1	± 10.0 ± 4.0 ± 2.0 ± 1.0	≤ 5.0 ≤ 2.0 ≤ 1.0 ≤ 0.5
P100	D200	DF100ST	F123615	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	± 0.8 ± 0.8 ± 0.8	≤ 0.3 ≤ 0.3 ≤ 0.3	± 8.0 ± 1.6 ± 0.8	≤ 3.0 ≤ 0.6 ≤ 0.3
P200	D200 D300	DF200ST DF300ST	F123601	20 100 200	± 0.50 ± 0.80 ± 1.60	≤ 0.20 ≤ 0.25 ≤ 0.30	± 2.5 ± 0.8 ± 0.8	≤ 1.0 ≤ 0.25 ≤ 0.15	± 1.6 ± 1.6 ± 1.6	≤ 0.6 ≤ 0.6 ≤ 0.6	± 8.0 ± 1.6 ± 0.8	≤ 3.0 ≤ 0.6 ≤ 0.3
P1000	D1000 D1200	DF1000ST DF1200ST	F123602	100 500 1000	± 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 ± 0.8	≤ 3.0 ≤ 0.6 ≤ 0.3
P5000**	D5000		F123603	500 2500 5000	± 12 ± 15 ± 30	≤ 3 ≤ 5 ≤ 8	± 2.4 ± 0.6 ± 0.6	≤ 0.6 ≤ 0.2 ≤ 0.16	± 40 ± 40 ± 40	≤ 15.0 ≤ 15.0 ≤ 15.0	± 8.0 ± 1.6 ± 0.8	≤ 3.0 ≤ 0.6 ≤ 0.3
P10mL**	D10mL		F161201	1000 5000 10000	± 30 ± 40 ± 60	≤ 6 ≤ 10 ≤ 16	± 3.0 ± 0.8 ± 0.6	≤ 0.6 ≤ 0.2 ≤ 0.16	± 60 ± 60 ± 60	≤ 30.0 ≤ 30.0 ≤ 30.0	± 6.0 ± 1.2 ± 0.6	≤ 3.0 ≤ 0.6 ≤ 0.3

PIPETMAN® CLASSIC SINGLE CHANNEL—VARIABLE VOLUME MODELS

*CV means Coefficient of Variation

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

**P5000 and P10mL do not have tip ejectors.

GILSON®

MICROMAN® E

Model	Capillary Piston	Part Number	Volume (µL)	Maximum Permissible Errors							
				Gilson				ISO 8655			
				Systematic Error (µL)	Random Error (µL)	Systematic Error (%)	Random Error (CV*)	Systematic Error (µL)	Random Error (µL)	Systematic Error (%)	Random Error (CV*)
M10E	CP10 CP10ST	**FD10001**	1 5 10	± 0.09 ± 0.10 ± 0.15	≤ 0.03 ≤ 0.03 ≤ 0.06	± 9.0 ± 2.0 ± 1.5	≤ 3.0 ≤ 0.6 ≤ 0.6	± 0.2 ± 0.2 ± 0.2	≤ 0.1 ≤ 0.1 ≤ 0.1	± 20.0 ± 4.0 ± 2.0	≤ 10.0 ≤ 2.0 ≤ 1.0
M25E	CP25 CP25ST	**FD10002**	3 10 25	± 0.25 ± 0.27 ± 0.30	≤ 0.08 ≤ 0.08 ≤ 0.10	± 8.3 ± 2.7 ± 1.2	≤ 2.7 ≤ 0.8 ≤ 0.4	± 0.7 ± 0.7 ± 0.7	≤ 0.3 ≤ 0.3 ≤ 0.3	± 23.33 ± 7.0 ± 2.8	≤ 10.0 ≤ 3.0 ≤ 1.2
M50E	CP50 CP50ST	**FD10003**	20 50	± 0.34 ± 0.70	≤ 0.20 ≤ 0.30	± 1.7 ± 1.4	≤ 1.0 ≤ 0.6	± 0.7 ± 0.7	≤ 0.3 ≤ 0.3	± 3.5 ± 1.4	≤ 1.5 ≤ 0.6
M100E	CP100 CP100ST	**FD10004**	10 50 100	± 0.50 ± 0.75 ± 1.00	≤ 0.20 ≤ 0.30 ≤ 0.40	± 5.0 ± 1.5 ± 1.0	≤ 2.0 ≤ 0.6 ≤ 0.4	±1.5 ±1.5 ±1.5	≤ 0.6 ≤ 0.6 ≤ 0.6	± 15.0 ± 3.0 ± 1.5	≤ 6.0 ≤ 1.2 ≤ 0.6
M250E	CP250 CP250ST	**FD10005**	50 100 250	± 1.50 ± 1.70 ± 2.50	≤ 0.30 ≤ 0.30 ≤ 0.50	± 3.0 ± 1.7 ± 1.0	≤ 0.6 ≤ 0.3 ≤ 0.2	± 6 ± 6 ± 6	≤ 2.0 ≤ 2.0 ≤ 2.0	± 12.0 ± 6.0 ± 2.4	≤ 4.0 ≤ 2.0 ≤ 0.8
M1000E	CP1000 CP1000ST	**FD10006**	100 500 1000	± 3.0 ± 5.0 ± 8.0	≤ 1.6 ≤ 2.5 ≤ 4.0	± 3.0 ± 1.0 ± 0.8	≤ 1.6 ≤ 0.5 ≤ 0.4	± 12 ± 12 ± 12	≤ 4.0 ≤ 4.0 ≤ 4.0	± 12.0 ± 2.4 ± 1.2	≤ 4.0 ≤ 0.8 ≤ 0.4

*CV means Coefficient of Variation

DISTRIMAN®

Description	Part Number
DISTRIMAN (1 µL to 1.25 mL)	**F164001**

DISTRITIPS®

DISTRITIPS (Pack of 50)	Aliquot Range	Part Number	Volume (µL)	Maximum Permissible Errors							
				Gilson				ISO 8655			
				Systematic Error (µL)	Random Error (µL)	Systematic Error (%)	Random Error (CV*)	Systematic Error (µL)	Random Error (µL)	Systematic Error (%)	Random Error (CV*)
125 µL Micro Micro ST**	1–12.5 µL	F164100 F164130	2 5 10	± 0.100 ± 0.125 ± 0.200	≤ 0.080 ≤ 0.075 ≤ 0.100	± 5.0 ± 2.5 ± 2.0	≤ 4.0 ≤ 1.5 ≤ 1.0	± 0.2 ± 0.2 ± 0.2	≤ 0.1 ≤ 0.1 ≤ 0.1	± 10.0 ± 4.0 ± 2.0	≤ 5.0 ≤ 2.0 ≤ 1.0
1250 µL Mini Mini ST**	10–125 µL	F164110 F164140	20 50 100	± 0.80 ± 1.00 ± 1.00	≤ 0.20 ≤ 0.40 ≤ 0.60	± 4.0 ± 2.0 ± 1.0	≤ 1.0 ≤ 0.8 ≤ 0.6	± 1.5 ± 1.5 ± 1.5	≤ 0.6 ≤ 0.6 ≤ 0.6	± 7.5 ± 3.0 ± 1.5	≤ 3.0 ≤ 1.2 ≤ 0.6
12.5 mL Maxi Maxi ST**	0.1–1.25 mL	F164120 F164150	200 500 1000	± 6.0 ± 7.5 ± 10.0	≤ 1.0 ≤ 1.5 ≤ 2.5	± 3.0 ± 1.5 ± 1.0	≤ 0.5 ≤ 0.3 ≤ 0.25	± 12.0 ± 12.0 ± 12.0	≤ 4.0 ≤ 4.0 ≤ 4.0	± 6.0 ± 2.4 ± 1.2	≤ 2.0 ≤ 0.8 ≤ 0.4

*CV means Coefficient of Variation

**ST means sterlized syringes (individually wrapped)

GILSON®

GILSON PIPETTE SPECIFICATIONS

SYSTEMATIC ERROR = ACCURACY
RANDOM ERROR = REPEATABILITY

PIPETMAN® Fixed Volume

Model	PIPETMAN® DIAMOND Tips		Part Number	Volume (µL)	Maximum Permissible Errors							
					Gilson				ISO 8655			
					Systematic Error (µL)	Random Error (µL)	Systematic Error (%)	Random Error (CV*)	Systematic Error (µL)	Random Error (µL)	Systematic Error (%)	Random Error (CV*)
F2	D200	DF30ST	F123770	2	± 0.08	≤ 0.03	± 4.0	≤ 1.5	± 0.08	≤ 0.04	± 4.0	≤ 2.0
F5	D200	DF30ST	F123771	5	± 0.10	≤ 0.04	± 2.0	≤ 0.8	± 0.125	≤ 0.075	± 2.5	≤ 1.5
F10	D200	DF30ST	F123772	10	± 0.10	≤ 0.05	± 1.0	≤ 0.5	± 0.12	≤ 0.08	± 1.2	≤ 0.8
F20	D200	DF30ST	F123604	20	± 0.20	≤ 0.06	± 1.0	≤ 0.3	± 0.2	≤ 0.1	± 1.0	≤ 0.5
F25	D200	DF30ST	F123775	25	± 0.25	≤ 0.07	± 1.0	≤ 0.3	± 0.5	≤ 0.2	± 2.0	≤ 0.8
F50	D200	DF100ST	F123778	50	± 0.40	≤ 0.15	± 0.8	≤ 0.3	± 0.5	≤ 0.2	± 1.0	≤ 0.4
F100	D200	DF100ST	F123784	100	± 0.80	≤ 0.25	± 0.8	≤ 0.3	± 0.8	≤ 0.3	± 0.8	≤ 0.3
F200	D200 D300	DF200ST DF300ST	F123605	200	± 1.6	≤ 0.30	± 0.8	≤ 0.2	± 1.6	≤ 0.6	± 0.8	≤ 0.3
F250	D1000	DF1000ST	F123787	250	± 3.0	≤ 0.75	± 1.2	≤ 0.3	± 4	≤ 1.5	± 1.6	≤ 0.6
F300	D1000	DF1000ST	F123788	300	± 3.5	≤ 0.75	± 1.2	≤ 0.3	± 4	≤ 1.5	± 1.3	≤ 0.5
F400	D1000	DF1000ST	F123789	400	± 3.6	≤ 0.80	± 0.9	≤ 0.2	± 4	≤ 1.5	± 1.0	≤ 0.4
F500	D1000	DF1000ST	F123790	500	± 4.0	≤ 1.0	± 0.8	≤ 0.2	± 4	≤ 1.5	± 0.8	≤ 0.3
F1000	D1000	DF1000ST	F123606	1000	± 8.0	≤ 1.3	± 0.8	≤ 0.1	± 8	≤ 3	± 0.8	≤ 0.3
F5000	D5000		F123607	5000	± 30.0	≤ 8.0	± 0.6	≤ 0.2	± 40	≤ 15	± 0.8	≤ 0.3

*CV means Coefficient of Variation

PLATEMASTER®

Model	PIPETMAN® DIAMOND Tips			Part Number	Volume (µL)	Maximum Permissible Errors							
						Gilson				ISO 8655			
						Systematic Error (µL)	Random Error (µL)	Systematic Error (%)	Random Error (CV*)	Systematic Error (µL)	Random Error (µL)	Systematic Error (%)	Random Error (CV*)
P20	D200 DS200**	D200ST DS200ST**	DF100ST DF200ST DFS200ST**	F110761	0.5 10 20	± 0.12 ± 0.12 ± 0.20	≤ 0.10 ≤ 0.10 ≤ 0.18	± 24.0 ± 1.2 ± 1.0	≤ 20.00 ≤ 1.0 ≤ 0.9	± 0.40 ± 0.40 ± 0.40	≤ 0.20 ≤ 0.20 ≤ 0.20	± 80.00 ± 4.0 ± 2.0	≤ 40.0 ≤ 2.0 ≤ 1.0
P220	D200 DS200* D300	D200ST DS200ST** D300ST	DF200ST DFS200ST** DF300ST	F110762	2 5 20 100 200 220	± 0.12 ± 0.25 ± 0.40 ± 1.00 ± 1.60 ± 1.80	≤ 0.15 ≤ 0.18 ≤ 0.30 ≤ 0.80 ≤ 0.80 ≤ 0.80	± 6.0 ± 5.0 ± 2.0 ± 1.0 ± 0.8 ± 0.8	≤ 7.5 ≤ 3.5 ≤ 1.5 ≤ 0.8 ≤ 0.4 ≤ 0.36	± 8.00 ± 8.00 ± 8.00 ± 8.00 ± 8.00 ± 8.00	≤ 3.00 ≤ 3.00 ≤ 3.00 ≤ 3.00 ≤ 3.00 ≤ 3.00	± 400.0 ± 160.0 ± 40.0 ± 8.0 ± 4.0 ± 3.64	≤ 150.0 ≤ 60.0 ≤ 15.0 ≤ 3.0 ≤ 1.5 ≤ 1.4

*CV means Coefficient of Variation

*Validated for use with 384-well plates.

GILSON®

GILSON PIPETTE SPECIFICATIONS

SYSTEMATIC ERROR = ACCURACY
RANDOM ERROR = REPEATABILITY

				DISPENSMAN®								
				Maximum Permissible Errors								
				Gilson				ISO 8655				
Model	Part Number	Volume Range	Scaling (mL)	Systematic Error (mL)	Random Error (mL)	Systematic Error (%)	Random Error (CV*)	Systematic Error (mL)	Random Error (mL)	Systematic Error (%)	Random Error (CV*)
DISPENSMAN 2.5 mL	F110101	0.25–2.5 mL	0.05	± 0.012 ± 0.012 ± 0.012	≤ 0.002 ≤ 0.002 ≤ 0.002	± 4.800 ± 0.960 ± 0.480	≤ 0.800 ≤ 0.160 ≤ 0.080	± 0.030 ± 0.030 ± 0.030	≤ 0.010 ≤ 0.010 ≤ 0.010	± 12.000 ± 2.400 ± 1.200	≤ 4.000 ≤ 0.800 ≤ 0.400
DISPENSMAN 5.0 mL	F110102	0.5–5 mL	0.10	± 0.030 ± 0.030 ± 0.030	≤ 0.005 ≤ 0.005 ≤ 0.005	± 6.000 ± 1.200 ± 0.600	≤ 1.000 ≤ 0.200 ≤ 0.100	± 0.030 ± 0.030 ± 0.030	≤ 0.010 ≤ 0.010 ≤ 0.010	± 6.000 ± 1.200 ± 0.600	≤ 2.000 ≤ 0.400 ≤ 0.200
DISPENSMAN 10 mL	F110103	1–10 mL	0.20	± 0.060 ± 0.060 ± 0.060	≤ 0.010 ≤ 0.010 ≤ 0.010	± 6.000 ± 1.200 ± 0.600	≤ 1.000 ≤ 0.200 ≤ 0.100	± 0.060 ± 0.060 ± 0.060	≤ 0.020 ≤ 0.020 ≤ 0.020	± 6.000 ± 1.200 ± 0.600	≤ 2.000 ≤ 0.400 ≤ 0.200
DISPENSMAN 25 mL	F110104	2.5–25 mL	0.50	± 0.150 ± 0.150 ± 0.150	≤ 0.025 ≤ 0.025 ≤ 0.025	± 6.000 ± 1.200 ± 0.600	≤ 1.000 ≤ 0.200 ≤ 0.100	± 0.150 ± 0.150 ± 0.150	≤ 0.050 ≤ 0.050 ≤ 0.050	± 0.588 ± 1.200 ± 0.600	≤ 2.000 ≤ 0.400 ≤ 0.200
DISPENSMAN 50 mL	F110105	5–50 mL	1.00	± 0.300 ± 0.300 ± 0.300	≤ 0.050 ≤ 0.050 ≤ 0.050	± 6.000 ± 1.200 ± 0.600	≤ 1.000 ≤ 0.200 ≤ 0.100	± 0.300 ± 0.300 ± 0.300	≤ 0.100 ≤ 0.100 ≤ 0.100	± 6.000 ± 1.200 ± 0.600	≤ 2.000 ≤ 0.400 ≤ 0.200

*CV means Coefficient of Variation

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