

Comparison of some features of ELPI[®] and ELPI[®]+

Feature	ELPI [®]	ELPI [®] +
Particle Size range	7 nm -10 µm	6 nm -10 µm
Number of size classes	12	14 with standard ELPI [®] + 100 or 500 with HR-ELPI [®] +
Filter stage	Option	Standard
Sample flow rate	10 or 30 lpm	10 lpm
Unit dimensions	570 x 400 x 230	400 x 420 x 220
Unit weight	35 kg	22 kg
Impactor low pressure	100 mbar	40 mbar
Pump requirements	7m ³ /h @ 100 mbar (10 lpm) 21m ³ /h @ 100 mbar (30 lpm)	16m ³ /h @ 40 mbar
Versions	Standard ELPI [®] 10 or 30 lpm OELPI [®] 10 or 30 lpm	ELPI [®] +, HR-ELPI [®] +, HT-ELPI [®] +, or all combinations; all 10 lpm
Charger type	Diode corona charger, 1 µA, 5 kV. Separate from the impactor.	Diode corona charger, 1 µA, 3.5 kV. Integrated in the uppermost impactor stage.
Impactor insulation	Teflon	PEEK™
Charger insulation	Teflon	PEEK™
Collection foil diameter	25 mm	25 mm
Filter stage filter	47 mm	No additional filter needed
Low pressure control	External valve for pressure adjustment	Integrated valve option for pressure adjustment
Control of the unit	Via ELPI [®] VI	Independent and/or via ELPI [®] VI
Connection to PC	RS-232	RS-232 or Ethernet
Data Output	Via ELPI [®] VI Floppy disk/USB drive in Outdoor Air ELPI [®]	USB port for data saving Analogue outputs, 3pcs Via ELPI [®] VI
Inputs/outputs	Accessory ELPIVOLT for 3 analogue inputs	6 inputs, 3 outputs standard. All 0-10V
Electrometers	12 electrometers operating in four measurement ranges, max 400 pA	7 electrometers boards, 14 channels operating in one measurement range, max 500 pA
Sampling rate	1 Hz	10 Hz
Temperature measurements	RH & T sensor available as accessory	Sample temperature measurement standard
Pressure measurements	Impactor low pressure measurement	Impactor low pressure and sample pressure measurement
Charge measurement	Manual	Automatic function for Q/N measurements
Impactor residence time	Not taken into account in the calculation	Taken into account in the calculation
Power requirements	110/ 220-240 V, 50-60 Hz, 300 W	100-250 V, 50-60 Hz, 200 W
Operating temperature	5-40°C	10-35°C
Operating humidity	0-90% RH Non condensing	0-90% RH Non condensing
Heated set-up	Available as an accessory	Future option
Possibility for collection of particles	Yes	Yes
Sintered collection plates	Available as an accessory	Option between sintered or standard
Internal display	LCD, only current values and instrument status	7" WVGA display with graphic user interface. Data display and instrument controls.
Setup values	Inserted in ELPIVI init.bin file before the measurement	Installed inside ELPI [®] + unit and automatically uploaded to ELPI [®] +VI
Data calculation	ELPI [®] VI	Inside ELPI [®] + and ELPI [®] +VI
Data processing software	ELPI.xls	ELPIPlusCalc.xls
Data format	Text file *.dat	Text file *.dat
Inlet	R3/8"	R3/8"
Outlet	R3/8, NW16 flange connection provided	R1/2", R3/8" or NW16 flange