

# IDA 4 Plus

## Multi-Channel Infusion Device Analyzer



N10140

IDA 4 Plus Multi-Channel Infusion Device Analyzer maximizes productivity with multiple, independent channels for testing up to four infusion pumps at once.

The device measures instantaneous flow, average flow, occlusion pressure, and analyzes patient-control analgesia (PCA) units. An optional PCA trigger box provides automated PCA pump control, allowing technicians to set up tests and walk away.

An autostart feature simplifies syringe pump testing or other tests that have long startup times.

With built-in memory, the IDA 4 Plus records test results internally and provides easy-to-read test-result graphs right on the analyzer's screen. The display is so large numbers can

be read from across the room

Additionally, the IDA 4 Plus comes with Hydrograph PC software for creating full-color graphs and reports. For automated testing, the IDA 4 Plus is compatible with Fluke Biomedical's medTester 5000C (US only).

### Key features

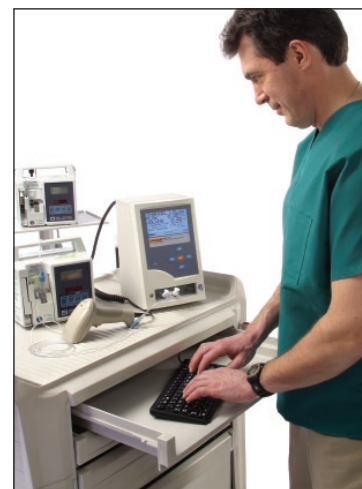
- Tests up to four infusion pumps simultaneously
- Compatible with virtually any type of infusion device
- Instantaneous and average flow measurement
- Occlusion pressure measurements to 45 psi
- Single- and dual-flow (piggyback) testing
- Full PCA testing (bolus volume, lockout time, and automated external triggering)
- Autostart mode enables unit to begin testing only when fluid is detected
- On-board graphing of pressure and flow
- Built-in memory to save test results for printing or downloading to computer
- Hydrograph graphical software to control unit and display results via PC
- Automated testing through Fluke Biomedical medTester 5000C (US only)
- RS-232 ports
- Optional keyboard, printer, and alarm/PCA

## Specifications

Flow-rate measurement	
Technique	Calculated by measuring a volume over time
Range	0.5 ml/hr to 1000 ml/hr
Accuracy	1 % of reading $\pm$ 1 LSD for flows of 16 ml/hr to 200 ml/hr for volumes over 20 ml; otherwise, 2 % of reading $\pm$ 1 LSD after delivery of 10 ml
Volume measurement	
Technique	Volume measured directly by the transducer in minimum sample sizes of 60 $\mu$ l
Range	0.06 ml to 9999 ml
Accuracy	1 % of reading $\pm$ 1 LSD for flows of 16 ml/hr to 200 ml/hr for volumes over 20 ml; otherwise, 2 % of reading $\pm$ 1 LSD after delivery of 10 ml
PCA bolus measurement	
Technique	Volume is measured directly by the transducer in minimum bolus volumes of 0.5 ml. The measurement is made with a continuous rate between 0 ml/hr and 30 ml/hr. The bolus flow rate should be at least four times the basal flow rate for reliable detection of boluses
Minimum bolus volume	0.5 ml
Accuracy	See volume measurement
Pressure measurement	
Technique	Direct occlusion of the infusion line and measurement of pressure prior to the glass transducer
Range	0 psi to 45 psi and equivalents in mmHg and kPa
Accuracy	1 % of full scale $\pm$ 1 LSD
Back pressure	-100 mmHg to 300 mmHg



Optional PCA Trigger Box



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### Specifications

Electrical specifications	
Supply voltage	Autoswitching 90 V ac to 260 V ac
Supply frequency	50 Hz to 60 Hz
Supply power	< 30 VA
Fuse	20 mm 250 V, 1 A (T) (slow blow)
Earth leakage current	< 1 mA in single fault condition
Environmental conditions	
Operating temperature	15 °C to 30 °C (59 °F to 86 °F)
Storage temperature	0 °C to 40 °C (32 °F to 104 °F) at 85 % RH or less for storage (Do not leave for more than 48 hours at -20 °C/-4 °F)
General information	
Dimensions (LxWxH)	19.05 cm x 18.11 cm x 30.18 cm (7.5 in x 7.2 in x 11.9 in)
Weight	5 kg (11 lb)



### HydroGraph™ Graphics Software

Use the moving color visual advantage of HydroGraph to troubleshoot up to four infusion pumps at once. Data is taken directly off the transducer and transmitted to HydroGraph. The flowing graphs provide an electronic means to display, store, and recall flow patterns for comparison at a later date. Each test window can display instantaneous and average flow rates, cumulative, and bolus volumes; and occlusion pressure.

### Optional accessories

**2245061** External mini-keyboard, 83-key with PS/2 connector and AT adapter  
**2238072** Parallel Printer Cable (D25M-36M)  
**2209703** PCA Trigger/Nurse Call Box  
**2248899** Printer, Seiko DPU-414-30B (120 V power supply) (additional purchase required: parallel printer cable, p/n 2238072)  
**2399531** Printer, Seiko DPU-414-30B (220 V power supply) (additional purchase required: parallel printer cable, p/n 2238072)  
**2235375** Printer (120 V power supply)  
**2235382** Printer (220 V power supply)  
**2200102** Interface Cable, medTester to IDA 4 Plus (without wedge adapter) (RS-232; female DB25 to female DB9)  
**2201042** Interface Cable, medTester to IDA 4 Plus (with or without wedge adapter) (RS-232; female DB9 to female DB25)  
**2245092** Barcode Scanner (with long-reach coil cable with Y connector for keyboard attachment)  
**2238626** Null Modem Cable (female DB9 to female DB9)

### Included accessories

**2213506** Electronic Users Manual and HydroGraph software  
**2217231** 20 ml Priming Syringe  
**2391750** Luerlock-3 way (one for each channel)  
**2238909** 5-foot Plastic Drain Line  
**2238626** Null Modem Cable (female DB9 to female DB9)  
**XXXXXXX** Detachable Power Cord (country specific)

### Ordering information

#### IDA 4 Plus One-Channel Infusion Device Analyzer

**2250063** United States, 120 V  
**2394575** Australia, 250 V  
**2394582** Denmark, 250 V  
**2394594** Shuko, 250 V  
**2394608** Israel, 250 V  
**2394613** Italy, 250 V  
**2394624** India, 250 V  
**2394636** Switzerland, 250 V  
**2394649** United Kingdom, 250 V

#### IDA 4 Plus Two-Channel Infusion Device Analyzer

##### Full testing for up to two infusion pumps simultaneously

**2250088** United States, 120 V  
**2394651** Australia, 250 V  
**2394660** Denmark, 250 V  
**2394672** Shuko, 250 V  
**2394685** Israel, 250 V  
**2394697** Italy, 250 V  
**2394703** India, 250 V  
**2394715** Switzerland, 250 V  
**2394726** United Kingdom, 250 V

#### IDA 4 Plus Three-Channel Infusion Device Analyzer

##### Full testing capability for up to three infusion pumps simultaneously

**2250109** United States, 120 V  
**2394732** Australia, 250 V  
**2394744** Denmark, 250 V  
**2394759** Shuko, 250 V  
**2394767** Israel, 250 V  
**2394771** Italy, 250 V  
**2394780** India, 250 V  
**2394798** Switzerland, 250 V  
**2394800** United Kingdom, 250 V

#### IDA 4 Plus Four-Channel Infusion Device Analyzer

##### Full testing capability for up to four infusion pumps simultaneously

**2250127** United States, 120 V  
**2394817** Australia, 250 V  
**2394821** Denmark, 250 V  
**2394839** Shuko, 250 V  
**2394842** Israel, 250 V  
**2394856** Italy, 250 V  
**2394863** India, 250 V  
**2394874** Switzerland, 250 V  
**2394888** United Kingdom, 250 V