



### Features and Benefits

- Built-in precision volumetric flowmeter for advanced flow control
- Continuous volumetric flow rate measurement and logging
- Pre-program pumps with five custom sampling programs
- TRAKPRO™ Data Analysis Software for multimode pump operation and report generation
- Multiple battery options: 1650 mAh, 2700 mAh NiMH battery packs or a 6-cell, AA-size battery pack
- Precise run time information in minutes remaining
- Flow block detection with auto-restart
- Intrinsically safe (CSA and ATEX) for use in hazardous environments (see model and battery specific information)
- Available in single-, 3-, and 5-unit kits

### SIDEPAK™ Personal Sampling Pump Model SP530

The SIDEPAK™ Model SP530 personal sampling pump offers an internal precision flowmeter that acts as a secondary flow measurement standard. Unlike conventional pumps, Model SP530 pump continuously measures and data logs flow rate over a very wide range to provide precise control and accurate total sample volume and average flow rate information. The SIDEPAK™ SP530 pump also features multi-mode operation and precise run time information in minutes remaining.

### Applications

- Personal exposure monitoring/IH studies
- Ambient/work area monitoring
- Environmental sampling
- Epidemiology health studies
- Engineering studies





## Specifications

### Model SP530

### SIDEPAK™ Personal Sampling Pump

#### Flow Range

Constant Flow 500 to 3,000 cc/min  
Constant Pressure† 20 to 800 cc/min

#### Flow Control

Hybrid Control Thin-film flowmeter and back EMF  
±3% of constant flow setpoint

#### Thin-Film Flowmeter

Flow Range 50 to 3,000 cc/min  
Flow Resolution 1 cc/min  
Operating Pressure Range 12 to 17 psia  
Operating Temp. Range 0 to 45°C (32 to 112°F)

#### Flow Performance

500 cc/min @ NA in. H<sub>2</sub>O  
Flow vs. Max. 1,000 cc/min @ 50 in. H<sub>2</sub>O  
Vacuum Pressure 1,500 cc/min @ 36 in. H<sub>2</sub>O  
2,000 cc/min @ 22 in. H<sub>2</sub>O  
2,500 cc/min @ 11 in. H<sub>2</sub>O  
3,000 cc/min @ 0 in. H<sub>2</sub>O

#### Flow Fault

If flow is blocked and drops by more than 3% for more than 20 seconds, the pump stops and retains all sample data. Auto-restart is attempted after 40 seconds up to 10 times.

#### Flow Indicator LCD

Adjust Flow Menu Screen, range 500 to 3,000 cc/min

#### Inlet Pulsation Ratio

4% @ 2.0 L/min w/GF filter

#### Data Logging

Data Points Approx. 16,000 data points  
Logging Interval Non-adjustable, 1-minute only

#### User Adjustable Values

Sample Run Time, Delayed Start, Total Sample Volume, Key Pad Lock, Flow Setpoint, Run Program, Time/Date

#### Recorded Values

Start Date/Time, Flow Rate, Stop Date/Time, Temperature, Total Sample Time, Pressure, Total Volume Sampled

#### Temperature Range

Operating Range 0 to 45°C (32 to 112°F)  
Storage Range -20 to 60°C (-4 to 140°F)

#### Physical

##### External Dimensions

106 x 92 x 70 mm (4.2 x 3.7 x 2.8 in.)  
with 801723, 801724 or 801729 battery  
130 x 92 x 70 mm (5.1 x 3.7 x 2.8 in.)  
with 801708, 801722, 801728, 801735,  
or 801736 battery

##### Weight

0.46 kg (16 oz) with 801723, 801724  
or 801729 battery  
0.54 kg (19 oz) with 801708, 801722,  
801728, 801735, or 801736 battery

##### Display

##### Tripod Socket

2 line x 12 character LCD  
1/4–20 female thread

#### Power Supply/Charger (P/N 2613210)

Input Voltage Range 100 to 240 VAC, 50 to 60 Hz  
Output Voltage 9 VDC @ 1.0 A

#### Maintenance

##### User Flow Calibrations

Before and after each use

#### Communications Interface

##### Type

USB 1.1

##### Connector, Instrument

USB Mini-B (socket)

#### Minimum Computer Requirements for TRAKPro™ Data Analysis Software

##### Communications Port Operating System

Universal Serial Bus (USB) v 1.1 or higher  
Microsoft Windows® XP or Vista®

†Requires Low Flow Adapter.

## Battery Information

Battery Option	Charge Time*	Intrinsic Safety Rating
1600 mAH NiMH Pack (P/N 801723)	3.0 hours	ATEX**
1650 mAH NiMH Pack (P/N 801724 or 801729)	3.5 hours	CSA** ATEX**
2700 mAH NiMH Pack (P/N 801722 or 801728)	5.5 hours	CSA** ATEX**
2700 mAH NiMH Pack (P/N 801735)	5.5 hours	No
6-Cell AA-size Pack*** (P/N 801708 or 801736)	N/A	No

\*Of a fully depleted battery

\*\*All dust plugs and dust gaskets must be installed.

\*\*\*Using Energizer AA-size, E91 alkaline batteries.

## Battery Level Indicator

The Smart Battery Management System™ technology utilizes a built-in “gauge” in the SidePAK™ battery packs. The gauge monitors battery capacity and calculates run time information by dividing capacity of the battery (mAH) by the instantaneous current consumed by the instrument (mA). This calculation is correct for current operating conditions and can change due to current (mA) consumption or changes in battery capacity.

## Battery Life Performance (estimated hours)

Battery Option	Back Pressure (inches H <sub>2</sub> O)	Flow Rate cc/minute (Constant Flow Mode)			
		1000	2000	2500	3000
1600 mAH	5	12.5	11.5	11	10.5
	10	10.5	9	8.5	N/A
	15	9.5	8.5	7.5	N/A
1650 mAH	5	13	12	11.5	11
	10	11	9.5	9	N/A
	15	10	9	8	N/A
2700 mAH	5	23	20.5	18	17.5
	10	17.5	16.5	15	N/A
	15	14.5	13	12.5	N/A
AA-size battery pack***	5	35	31	28.5	27
	10	25.5	24	21.5	N/A
	15	23.5	21.5	20.5	N/A

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## Typical Collection Media Back Pressure

Typical Collection Media	Flow Rate cc/minute (Constant Flow Mode)			
	1000	2000	3000	4000
13 mm GF	8.25	17.25	27.2	37.3
13 mm PTFE, 1.0 μ	7.0	16.0	30.0	40.0
25 mm GF	1.75	3.75	5.25	9.2
25 mm PVC, 0.5 μ	1.0	2.25	5.75	8.0
25 mm MCE, 0.8 μ	1.0	2.75	5.0	7.5
37 mm GF	1.6	3.2	4.75	6.5
37 mm Cellulose	2.0	4.3	6.75	9.25
37 mm Quartz	1.5	2.75	4.0	5.5
37 mm PVC, 0.5 μ	0.6	1.4	2.25	3.0
37 mm PTFE, 2.0 μ	1.0	2.0	3.5	4.75
37 mm MCE, 0.8 μ	2.0	4.25	7.0	10.5
37 mm MCE, 0.45 μ	3.0	6.0	9.0	12.5

\*Of a fully depleted battery

\*\*All dust plugs and dust gaskets must be installed.

\*\*\*Using Energizer AA-size, E91 alkaline batteries.

## Approvals

### Intrinsic Safety Rating Information

(all dust plugs and dust gaskets must be installed)

TSI Battery Pack P/Ns: 801722, 801724, 801728 or 801729

INTRINSICALLY SAFE CSA

Exia

Class I Groups A, B, C, D

Class II Groups E, F, G

Class III

T2A with 801724 or 801729

T2C with 801722 or 801728

File: 200507



**Immunity** EN61326-1:1997 + A11998 Clause 6  
**Emissions** EN61326:1997 + Amendment A1:1998





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