

## SIDEPAK™ SP530 Personal Sampling Pump

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 flowrate over a very wide range to provide precise control and accurate total sample volume and average flowrate information. The SIDEPAK SP530 pump also features multi-mode operation and precise run time information in minutes remaining.



### Specifications

<b>Flow Range</b>		<b>User Adjustable Values</b>	Sample Run Time	Delayed Start
Constant Flow	500 to 3,000 cc/min		Total Sample Volume	Key Pad Lock
Constant Pressure†	20 to 800 cc/min		Flow Setpoint	Run Program
			Time/Date	
<b>Flow Control</b>		<b>Recorded Values</b>	Start Date/Time	Flow Rate
Hybrid Control	Thin-film flowmeter and back EMF ±3% of constant flow setpoint		Stop Date/Time	Temperature
			Total Sample Time	Pressure
			Total Volume Sampled	
<b>Thin-Film Flowmeter</b>		<b>Temperature Range</b>		
Flow Range	50 to 3,000 cc/min	Operating Range	0 to 45°C (32 to 112°F)	
Flow Resolution	1 cc/min	Storage Range	-20 to 60°C (-4 to 140°F)	
Operating Pressure Range	12 to 17 psia			
Operating Temp. Range	0 to 45°C (32 to 112°F)	<b>Physical</b>		
<b>Flow Performance</b>	500 cc/min @ NA in. H <sub>2</sub> O	External	106 mm × 92 mm × 70 mm	
Flow vs. Max.	1,000 cc/min @ 50 in. H <sub>2</sub> O	Dimensions	(4.2 in. × 3.7 in. × 2.8 in.)	
Vacuum Pressure	1,500 cc/min @ 36 in. H <sub>2</sub> O		with 801723, 801724 or 801729 battery	
	2,000 cc/min @ 22 in. H <sub>2</sub> O		130 mm × 92 mm × 70 mm	
	2,500 cc/min @ 11 in. H <sub>2</sub> O		(5.1 in. × 3.7 in. × 2.8 in.)	
	3,000 cc/min @ 0 in. H <sub>2</sub> O		with 801708, 801722, 801728 or 801736 battery	
<b>Flow Fault</b>	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.	Weight	0.46 kg (16 oz) with 801723, 801724 or 801729 battery	
			0.54 kg (19 oz) with 801708, 801722, 801728 or 801736 battery	
<b>Flow Indicator</b>	Adjust Flow Menu Screen, range 500 to 3,000 cc/min	Display	2 line × 12 character LCD	
LCD		Tripod Socket	1/4–20 female thread	
<b>Inlet Pulsation Ratio</b>	4% @ 2.0 lpm w/GF filter	<b>Power Supply/Charger (P/N 2613210)</b>		
		Input Voltage Range	100 to 240 VAC, 50 to 60 Hz	
<b>Data Logging</b>		Output Voltage	9 VDC @ 1.0 A	
Data Points	Approx. 31,000 data points			
Logging Interval	Non-adjustable, 1-minute only			



## Battery Information

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

## Battery Level Indicator

The Smart Battery Management System™ 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	NA
	15	9.5	8.5	7.5	NA
1650 mAH	5	13	12	11.5	11
	10	11	9.5	9	NA
	15	10	9	8	NA
2700 mAH	5	23	20.5	18	17.5
	10	17.5	16.5	15	NA
	15	14.5	13	12.5	NA
AA-size battery pack***	5	35	31	28.5	27
	10	25.5	24	21.5	NA
	15	23.5	21.5	20.5	NA

## Maintenance

User flow calibrations: Before and after each use

Specifications are subject to change without notice.  
Windows is a registered trademark of Microsoft Corporation.  
Energizer is a registered trademark of Eveready Battery Company, Inc.

† Requires Low Flow Adapter. \*\* All dust plugs and dust gaskets must be installed.  
\* Of a fully depleted battery. \*\*\* Using Energizer® AA-size, E91 alkaline batteries.

## Typical Collection Media Back Pressures

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

## Software/Hardware Specifications

Communications Interface

Type USB 1.1  
Connector, Instrument USB Mini-B (socket)

Minimum Computer Requirements for TRAKPRO™ Software

Communications Port Universal Serial Bus (USB) v 1.1 or higher  
Operating System Microsoft Windows® 98, ME, 2000, XP  
(USB not supported in Windows® 95 or NT)

## Approvals

Intrinsic Safety Rating Information\*\*

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

TSI Battery Pack P/N: 801708 or 801736

NOT INTRINSICALLY SAFE

TSI Incorporated  
500 Cardigan Road  
Shoreview, MN 55126-3996  
Made in USA

Type: SP530/SP730  
This instrument with TSI  
Battery Pack PN 801723

**CE** 0344

**II 1 G**  
EEx ia IIC T2  
LCIE 05 ATEX 6133

DO NOT REMOVE BATTERY  
IN A POTENTIALLY  
EXPLOSIVE ATMOSPHERE

**CE** 0344

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



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