



Features and Benefits

- Integrated internal bypass for precise low-flow control and measurement
- 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
- Intrinsically safe (CSA) for use in hazardous environments (see model and battery specific information)
- Available in single-, 3-, and 5-unit kits

SidePAK™ Personal Sampling Pump Model SP730

The SidePAK™ Model SP730 personal sampling pump offers integrated internal low-flow bypass for precise low-flow control and measurement. The advanced internal flowmeter continuously integrates and controls flow rate over time for precise sample flow rate and volume measurement. The SidePAK™ SP730 pump also features multi-mode operation, data logging 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 SP730

SIDEPAK™ Personal Sampling Pump

Flow Range

Constant Flow†	800 to 3,000 cc/min
Integrated Bypass	
Position#1	200 to 1,000 cc/min
Position#2	175 to 350 cc/min
Position#3	75 to 250 cc/min
Position#3	20 to 175 cc/min (with fine control adjust)

Flow Control

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

<1,000 cc/min @ NA in. H ₂ O	
Flow vs. Max.	1,000 cc/min @ 37 in. H ₂ O
Vacuum Pressure	1,500 cc/min @ 27 in. H ₂ O
	2,000 cc/min @ 19 in. H ₂ O
	2,500 cc/min @ 11 in. H ₂ O
	2,950 cc/min @ 0 in. H ₂ 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 20 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 Logged, 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	2 line x 12 character LCD
Tripod Socket	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
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Communications Interface

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

Minimum Computer Requirements for TRAKPRO™ Data Analysis Software

Communications Port	Universal Serial Bus (USB) v 1.1 or higher
Operating System	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	No
1650 mAh NiMH Pack (P/N 801724 or 801729)	3.5 hours	CSA**
2700 mAh NiMH Pack (P/N 801722 or 801728)	5.5 hours	No
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 ₂ 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 (only)

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

CE 0344

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





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Contact your local TSI Distributor or visit our website www.tsi.com for more detailed specifications.

