



Operating Instructions

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PowerFlex Battery Charging System



Small and lightweight, the SKC PowerFlex[®] is an advanced charging system designed for optimal charging of NiCad and NiMH battery packs for most SKC personal air sampling pumps.

Pump-specific cables are used to connect battery packs to the PowerFlex so that only one charger is needed for most SKC personal sample pumps (excluding Ex and ATEX models and models with lithium-ion [Li-Ion] batteries). PowerFlex fully charges battery packs in 6 to 8.5 hours, and then automatically switches to a safe pulse trickle charge. An LED indicates battery charge status. Battery packs can be charged attached to or detached from the pump.

Performance Profile*

Dimensions:	1.2 x 2.3 x 4.6 in (3.0 x 5.8 x 11.7 cm)
Weight:	4 oz (0.1 kg)
Charging time[‡]:	6 to 8.5 hrs
Status LED:	Steady Red = Charging Steady Green = Trickle charge
Input voltage:	223-2000: 100-240 V
Intrinsic safety:	Not intended for use in explosive or hazardous locations
Approvals:	Power supply is cUL [®] US LISTED for electrical safety and is CE marked.

* For U.S.-produced pump models only. Not compatible with Ex or ATEX-approved models.

‡ Typical charging times vary with model, battery capacity, and level of discharge.

Operation



Caution



- PowerFlex line source is UL Listed for electrical safety, but the low-voltage charger unit is not. Do not use PowerFlex in hazardous locations, in rain, or in standing water. For indoor use only.
- **Remove pump-specific cable from the charger when not in use to avoid shorting.**

Procedure for PowerFlex Activation

1. Plug the power cable into the power jack on the back of the PowerFlex. Plug the wall cube into a power outlet (100-240 V).



If the LED lights red or green upon plugging the charger into the wall outlet (no pump attached), discontinue use of the charger and return it to SKC for repair.

Procedure for Charging AirChek 2000 Pumps

Attention AirChek 2000 Users: To prevent battery damage, follow the steps below in the order indicated.

1. Ensure the sample pump is off.
2. Open the protective cover on the pump charging port by turning the cover 90 degrees counter-clockwise.
3. Connect the charging plug end of the charging cable to the charging jack on the AirChek 2000 with the keyed edge facing down. **Caution:** Forcing the plug into the pack with the keyed edge facing up will cause damage to the battery pack.
4. Insert RJ-45 connector on the charging cable into the PowerFlex charging port.
5. Allow up to 60 seconds for the LED indicator to light red. If it does not light, see *Troubleshooting, Step 1*.
6. The battery is fully charged when the LED indicator lights green.
7. Disconnect the RJ-45 connector on the charging cable from the PowerFlex charging port.
8. Disconnect the charging plug end of the cable from the charging jack on the AirChek 2000 battery.
9. Close the protective cover on the pump charging port.



Procedure for Charging Other SKC Pump Models

1. Ensure the sample pump is off.
2. Select the appropriate pump-specific cable.
3. Insert the RJ-45 connector into the charging port on the PowerFlex. The connector should slide easily into the port.
4. Insert the charging plug end of the cable into the charging jack on the appropriate sample pump.

AirChek 52 Note: Plug the charging plug end of the cable into the jack on the back of the battery pack.

5. The LED at the port will light a steady red to indicate that a charge sequence has been initiated.

! If the LED does not light red within 60 seconds, see *Troubleshooting, Step 1*.



6. Once the battery pack is fully charged, the LED at the port will change to a steady green to indicate that PowerFlex has switched to a trickle charge to keep the battery at full charge.

7. The battery can be removed at any time after the LED turns green. Detach the battery from the cable and remove the cable from the charger.

Important Note: Pumps may remain connected to the charger indefinitely (without causing damage to the pump or charger).

Important Note: Remove pump-specific cable from charger when not in use to avoid shorting.

Troubleshooting

If the LED does not light when a battery pack is plugged into the port or the LED does not turn off after a battery pack is unplugged, follow the steps in the table.

Step	Action	No result, Action	Yes result, Action
1	Keep the unit powered on. If the battery is deeply discharged, the LED may take up to 30 minutes to light or turn off.	Go to Step 2	Proceed with operation
2	Move unit to a different wall outlet	Go to Step 3	Proceed with operation
3	Unplug charger from its power source for 20 seconds. Plug it back into power source.	Go to Step 4	Proceed with operation
4	Replace pump-specific cable	Go to Step 5	Proceed with operation
5	Try a different battery pack	Call SKC	Proceed with operation — previous battery pack may be damaged, call SKC.

PowerFlex Technology

Charging NiCad/NiMH batteries is generally accomplished by applying constant current to the battery. SKC PowerFlex Chargers use a technology that is new to industrial hygiene equipment batteries. Reflex charging[†] delivers pulses of current instead of constant current to charge batteries. In between pulses, PowerFlex applies short reverse pulses that discharge the battery slightly and short pauses. This eases the battery into a full and uniform charge. It helps to prevent dramatic increases in internal temperature and pressure that can damage the battery and shorten its life.

[†] Patented by Galaxy Power, Inc.

Note: Discharging the pump battery before charging is not necessary with this system because the charging technology does not promote memory. However, if the user desires to discharge before charging, simply run the pump until it stops, then charge the battery.

PowerFlex Charging System	Cat. No.
PowerFlex Single Charger[†] includes power supply. <i>Purchase pump-specific cables separately; choose from list below.</i>	100-240 V 223-2000
PowerFlex 5-station Charger[†] includes power supply and cord. <i>Purchase pump-specific cables separately; choose from list below.</i>	100-240 V 223-1000

PowerFlex Pump-specific Cables [†]	Cat. No.
AirChek[®] 2000	223-1001
Universal XR Series (5 cell)	223-1002
Universal XR Series (4 cell, MSHA)	223-1003
AirChek 52	223-1004

[†] For U.S.-produced pump models only. Not compatible with Ex or ATEX-approved models.

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SKC Limited Warranty and Return Policy

SKC products are subject to the SKC Limited Warranty and Return Policy, which provides SKC's sole liability and the buyer's exclusive remedy. To view the complete SKC Limited Warranty and Return Policy, go to <http://www.skcinc.com/warranty.asp>.

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