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Aluminum Cyclone

25 mm - Cat. No. 225-01-01

37 mm – Cat. No. 225-01-02

Operating Instructions

The SKC Aluminum Cyclone

The SKC Aluminum Cyclone is a lightweight respirable dust sampler that is used with a filter loaded into a three-piece 25 or 37-mm filter cassette.

Flow rate: 2.5 L/min to conform to the ISO 7708/CEN criteria included in the OSHA and MSHA silica rules

Other flow rates may be used to achieve cut-points for alternate applications.

Operation

Assembly

1. Disassemble a three-piece cassette and set aside inlet section (usually marked "inlet"). Remove plug from cassette outlet.
2. Select a filter and support pad as specified in sampling method. Insert cassette ring (middle) section into cassette outlet. *See Figure 1.*
3. Insert cyclone into cassette ring and press firmly. **Leave grit pot in place during flow rate verification and sampling.**
4. Insert cyclone/cassette assembly through large opening of filter cassette holder (see *Figure 3*). Ensure assembly is seated firmly in holder by inserting cyclone's side pin (small round nodule on rim of cyclone) into notch in filter cassette holder.
5. Secure assembly in holder by stretching spring-loaded hold-down plate over cassette. Insert Luer adapter (located in end of rubber tubing) into cassette outlet.

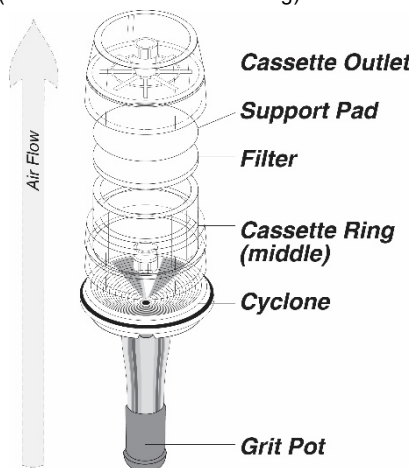


Figure 1. Exploded view of cyclone filter cassette assembly

Flow Rate Verification

1. Prepare a cyclone/filter cassette assembly. *See Assembly.*
Verify flow rate with grit pot in place on cyclone.
2. Moisten O-ring inside large end of calibration adapter (Cat. No. 225-01-03, *see Figure 2*) and push adapter over cyclone stem until it fits snugly.
3. Connect the Tygon® tubing attached to the filter cassette holder to the inlet of a sample pump. Using flexible tubing, connect the calibration adapter to a flowmeter.
4. Verify flow rate as directed in the pump and flowmeter operating instructions. *See reverse side.*
5. Disconnect flowmeter and replace filter used to set flow with a fresh weighed filter (unused) for sample collection.

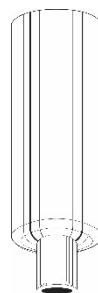


Figure 2.
Calibration Adapter

Sampling

1. Ensure flow rate has been verified. *See Flow Rate Verification.*
Warning: Leave grit pot in place during flow rate verification and sampling.
2. Connect Tygon tubing attached to filter cassette holder to inlet of sample pump.
3. Clip cyclone/filter cassette assembly onto worker's collar or pocket near breathing zone.
4. Start pump and record pertinent details.
5. At end of sampling period, stop pump and record finish time. Remove cyclone/filter cassette assembly from cassette holder. Separate cyclone from cassette. Reassemble inlet section of cassette, ensuring that inlet and outlet are sealed with plugs. Send cassette and all data to a laboratory for analysis. **Note:** *Particles collected in grit pot do not represent any part of respirable dust sample and should be discarded.*

6. Prior to further sampling, clean all parts of cyclone, including interior of grit pot, with mild soapy water. Cyclone may be wiped with a clean dust-free tissue, air dried, blown dry, or wiped with isopropyl alcohol.

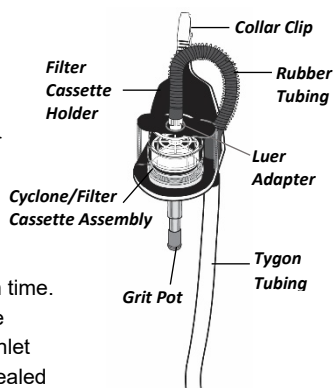


Figure 3.
Cyclone with filter cassette in holder

Accessories

Three-piece Filter Cassette Blanks	25 mm	Cat. No. 225-3-25LF
	37 mm	225-3LF
Filter Cassette Holder	25 or 37 mm	225-1
Calibration Adapter	25 or 37 mm	225-01-03

References

SKC Respirable Dust Cyclone Performance Guide at www.skcinc.com/knowledgecenter.
OSHA Final Rule on Respirable Crystalline Silica, www.osha.gov/silica/
MSHA Final Rule on Respirable Crystalline Silica, www.msha.gov/silica/

SKC Limited Warranty and Return Policy

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