

Cyclone Separators

DT Workshop Equipment Reference — D&T / STEM resource for school workshops | Extraction & Ventilation

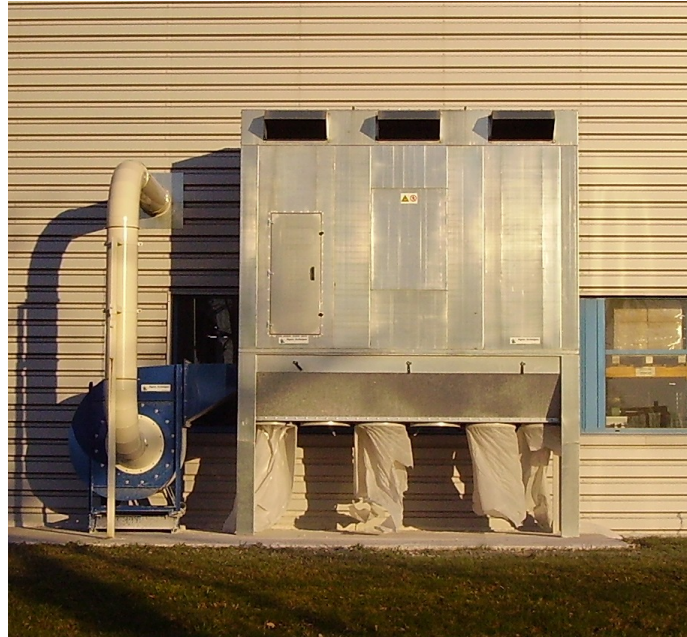


Photo: Cjp24 — CC BY-SA 3.0 — via Wikimedia Commons (Cyclone_separator.jpg)

A cyclone separator spins dust-laden air so that heavy chips and dust fall into a bin while cleaner air passes to the filter. It protects the extractor filter, keeps suction strong and makes emptying quicker and less dusty, and is widely fitted to workshop extraction systems.

Key Features

- Conical body that accelerates air into a vortex
- Drops 90%+ of chips and coarse dust to the bin
- Transparent or solid collection bins with lids
- 60-150 mm inlet connections
- Low pressure drop keeps suction high

Typical Uses in the Workshop

- Pre-separate chips before the extractor filter
- Keep the filter and impeller clean for longer
- Collect shavings for reuse as animal bedding
- Reduce how often filter bags need clearing

Safe Operation

1. Connect the cyclone between machine and extractor
2. Keep the bin lid sealed to maintain the vortex
3. Empty the bin when the flow visibly drops
4. Check the inlet for blockages at joints
5. Run the system a moment after stopping to clear it

SAFETY NOTES

- Open the bin only when the system is off
- Watch for static on plastic cyclones - earth them
- Do not let the bin overfill into the cyclone body
- Keep the area around the cyclone clear
- Wear a mask when emptying the bin

Maintenance & Consumables

- Inspect the cone for wear and punctures
- Clean any sticky dust from the inlet and outlet
- Check seals on the lid so no leakage bypasses
- Tighten hose clamps regularly
- Replace the bin liner when torn

Specification & Buying Notes

A cyclone with a wide bin, sealed lid and the correct inlet size for the extractor transforms an ordinary dust collector. Buy a spare bin liner and hose adaptors with it.