ENVIROVENT

VENTILATION DUCT SYSTEMS

Engineered Solutions for Cleaner Industrial Air

DESIGNERS & SUPPLIERS OF COMPLETE PLANTS FOR VENTILATION, DUST AND FUME EXTRACTION.

ENVIROVENT is a leading provider of engineered air pollution control solutions for the mining, mineral processing, bulk materials handling and industrial sectors. We specialise in the design, manufacture, installation and commissioning of complete ventilation, dust and fume extraction systems, supported by experienced engineers, skilled technicians and comprehensive after-sales service.

Our solutions are developed to address a wide range of industrial air pollution challenges, including dust control, fume extraction and product recovery. Every system is engineered to suit the specific application, delivering reliable performance, efficient operation and long-term value for our customers.

VENTILATION DUCT SYSTEMS

Industrial ventilation duct systems are fundamental to the efficient transport of dust-laden air, fumes and process gases. Envirovent engineers custom duct systems that optimise airflow, minimise pressure losses and maintain the transport velocities required for reliable, long-term operation in demanding industrial environments.

DESIGN PRINCIPLE

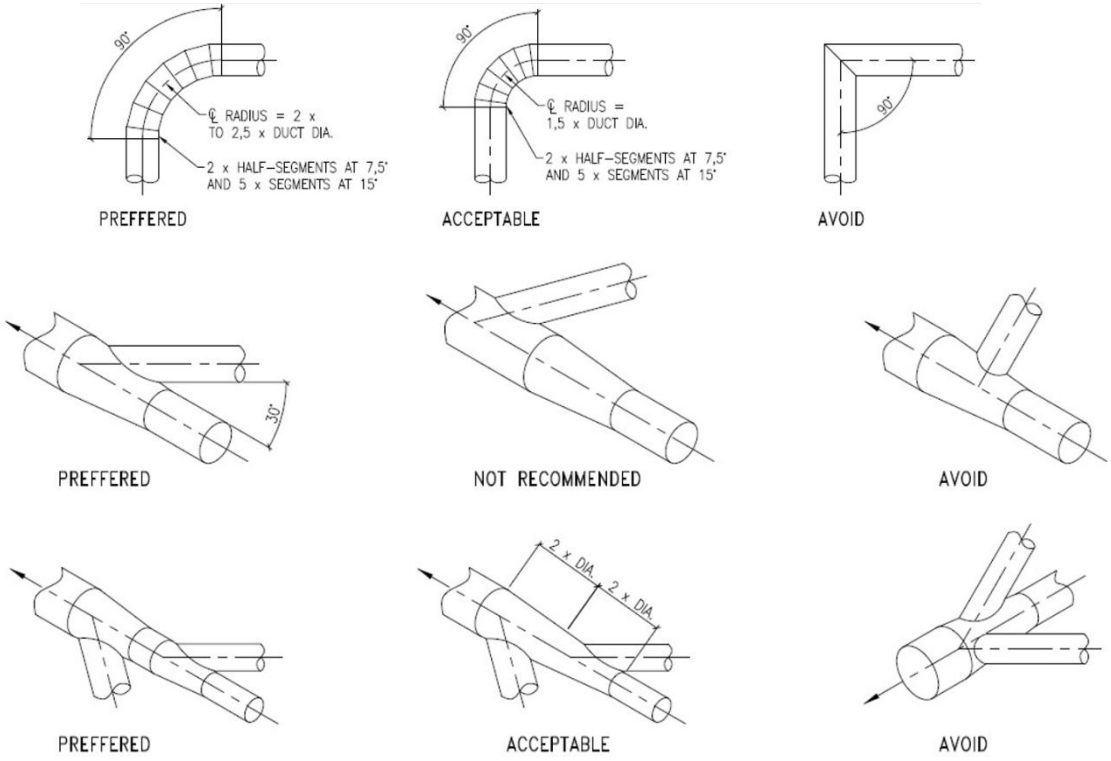
The performance of any industrial ventilation system depends on correct duct sizing, airflow distribution and pressure balancing. Properly engineered duct systems maintain the required transport velocities while minimising pressure losses, ensuring efficient dust and fume extraction with balanced airflow throughout the system. Poorly designed ductwork can result in excessive energy consumption, dust deposition, material build-up and unbalanced airflow, reducing system performance and increasing maintenance requirements.

Design methodologies include:

- ✓ Equal Friction Method.
- ✓ Static Regain Method.
- ✓ Constant Velocity Method.

The selection of the appropriate design methodology depends on the application, required transport velocity, pressure loss limitations and system configuration.

Typical duct design details:

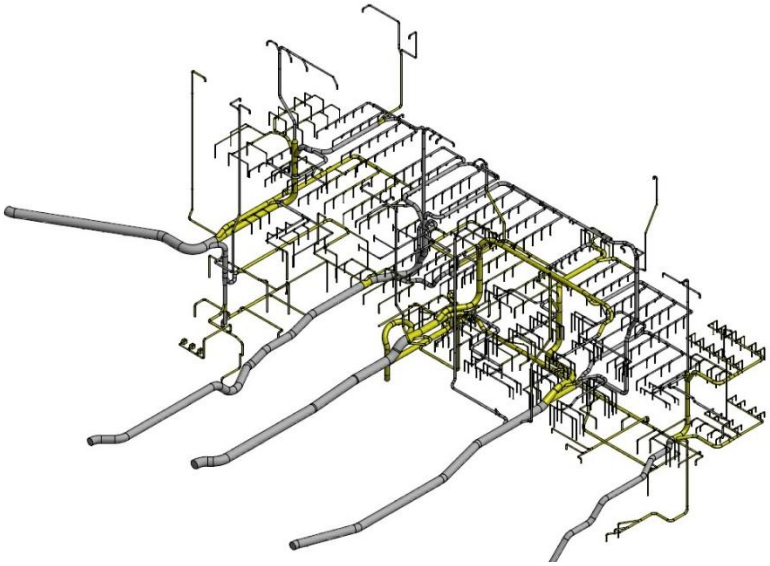


Envirovent typically designs industrial dust extraction, fume extraction and process ventilation duct systems using the Constant Velocity Method. This approach maintains the transport velocity required to keep particulate matter suspended within the airstream while ensuring balanced airflow throughout the system.

In multi-branch duct systems, balanced airflow is achieved by controlling system resistance within individual branches. Where required, balancing devices are incorporated to regulate airflow distribution while maintaining the specified transport velocity throughout the system.

This design philosophy minimises pressure losses, reduces the risk of material settlement and blockages, and delivers reliable long-term system performance with lower operating costs.

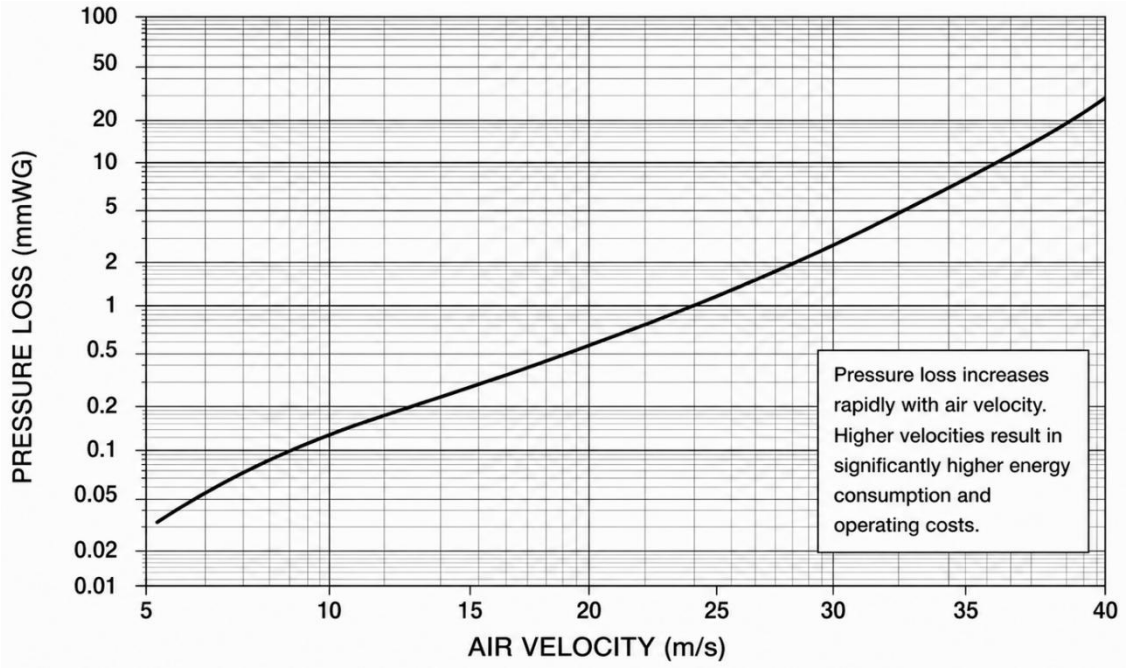
Envirovent designs, manufactures and installs complete industrial duct systems for dust extraction, fume extraction and process ventilation applications, engineered to provide optimum airflow distribution, low pressure losses and dependable operation.



KEY BENEFITS

- ✓ Custom engineered duct layouts
- ✓ Optimised airflow and pressure balancing
- ✓ Low pressure loss design
- ✓ Balanced system performance
- ✓ Robust heavy-duty construction
- ✓ Complete installation and commissioning

TYPICAL DUCT PRESSURE LOSS vs AIR VELOCITY



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At Envirovent, we believe every application deserves the right solution—not simply the biggest solution. We work closely with our clients to develop engineered solutions that deliver cleaner industrial air through practical, reliable and cost-effective air pollution control systems.

Contact our engineering team to discuss an air pollution control solution tailored to your application.

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