

Product Catalogue

Clemcorp
Mining Ventilation


Clemcorp

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About Clemcorp

Company overview

Founded in 1993, Clemcorp Australia supplies underground mining ventilation equipment, solutions, service and expertise in Australia and internationally.

Our head office, engineering and manufacturing facility is located in Perth, Western Australia. Our 20,000 sq m facility brings together fan design, manufacture, assembly, testing and engineering support.

We specialise in the design, manufacture, hire and supply of high-efficiency fans, ventilation control devices and flexible ventilation ducting for demanding mining applications.

Capabilities & Services

Our core competencies

Our engineers and tradespeople bring extensive mining ventilation experience to the supply and installation of turnkey ventilation solutions, supported by a commitment to quality, reliability and workmanship.

Products and engineering

Design and manufacture of axial, centrifugal and mixed-flow fans; ventilation control devices; flexible ducting; and Ventilation on Demand systems and application engineering support.

Installation and lifecycle support

Site installation, commissioning and troubleshooting, together with overhauls, servicing, rebuilding and testing of fan equipment.

Manufacturing and testing

A 20,000 sq m engineering and manufacturing facility with sandblasting, painting, dynamic balancing and rapid prototyping capability. Industrial testing is also available to third-party clients.

Testing Capabilities

High-power electrical infrastructure, instrumentation and engineering support for motors and rotating equipment. See the following page for the latest testing setup.

Primary Fans

Primary and booster fans designed, manufactured and tested in Perth for surface and underground installations. Adjustable blade pitch and a choice of configurations let the fan selection match the duty and installation.

CC3080 • CC2650 • CC2400 • CC2200 • CC1800

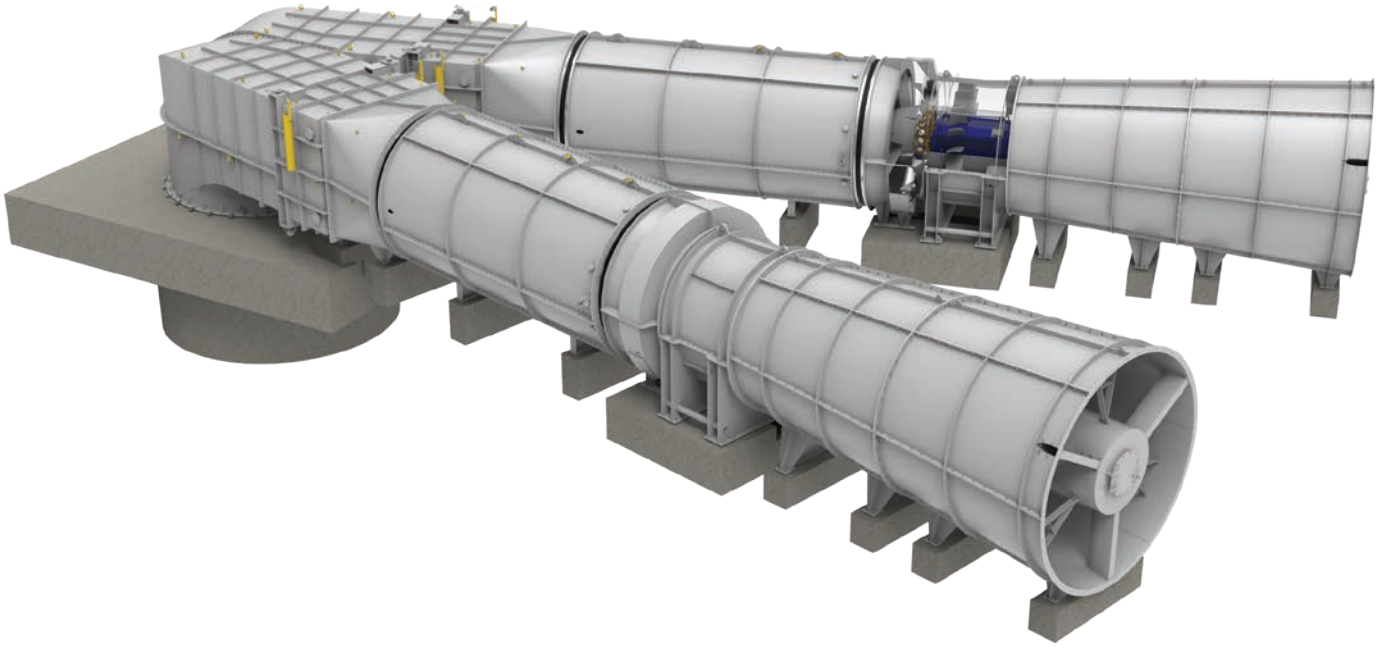


CC3080

IN BRIEF

The CC3080 Axial Fan model is currently the largest diameter axial fan manufactured by Clemcorp.

Designed specifically to suit the unique rigours of underground metalliferous mine ventilation, we have attained market leading fan efficiencies in the most robust fan structure available anywhere in the industry. The CC3080 can safely operate at up to 745 RPM operating speed, allowing the fan to generate high pressures and volumes with a variety of hub sizes.



KEY POINTS

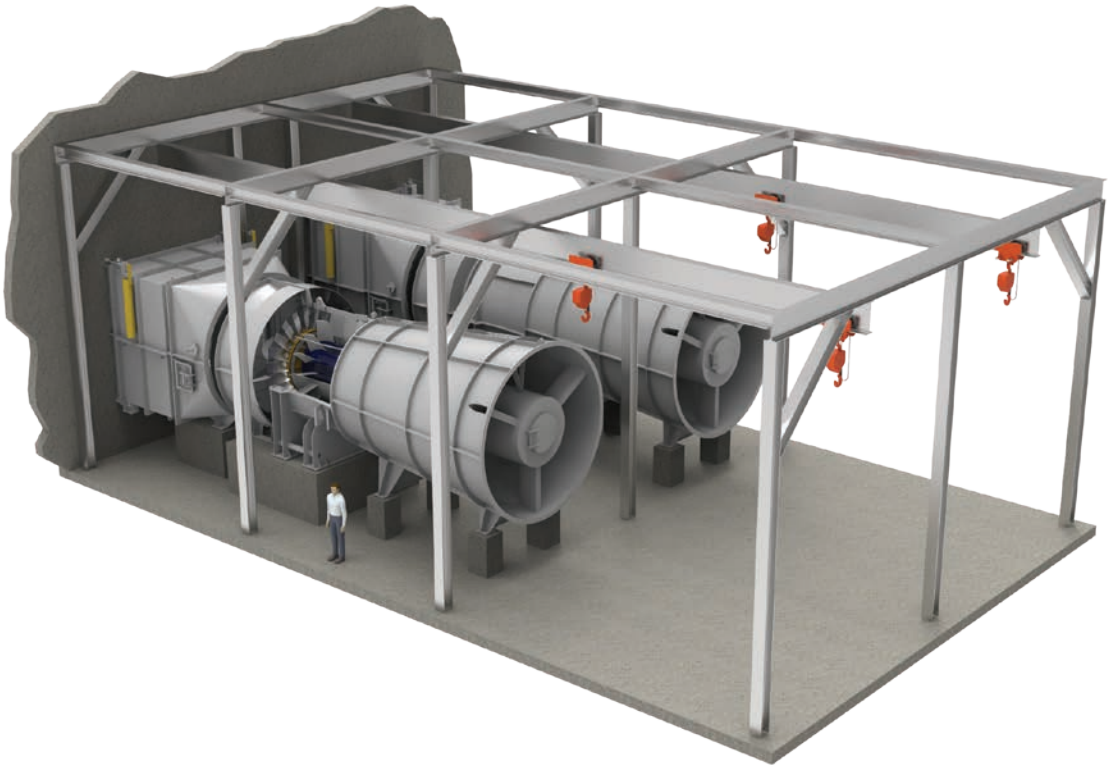
- Suitable for Horizontal or Vertical Applications
- Fully supported swing away inspection hatches, nose and diffuser fairings
- Adjustable blade pitch and blade solidity to suit a wide range of duties
- Fan Total Efficiency up to 88%
- Flow rates from 200 m^3/s to 400 m^3/s
- Single stage pressures up to 4 kPa

CC2650

IN BRIEF

The CC2650 Axial Fan model is one of the largest diameter axial fans manufactured by Clemcorp.

Designed specifically to suit the unique rigours of underground metalliferous mine ventilation, we have attained market leading fan efficiencies in the most robust fan structure available anywhere in the industry. The CC2650 can safely run at up to 990 RPM operating speed, allowing the fan to generate high pressures and volumes with a variety of hub sizes.



KEY POINTS

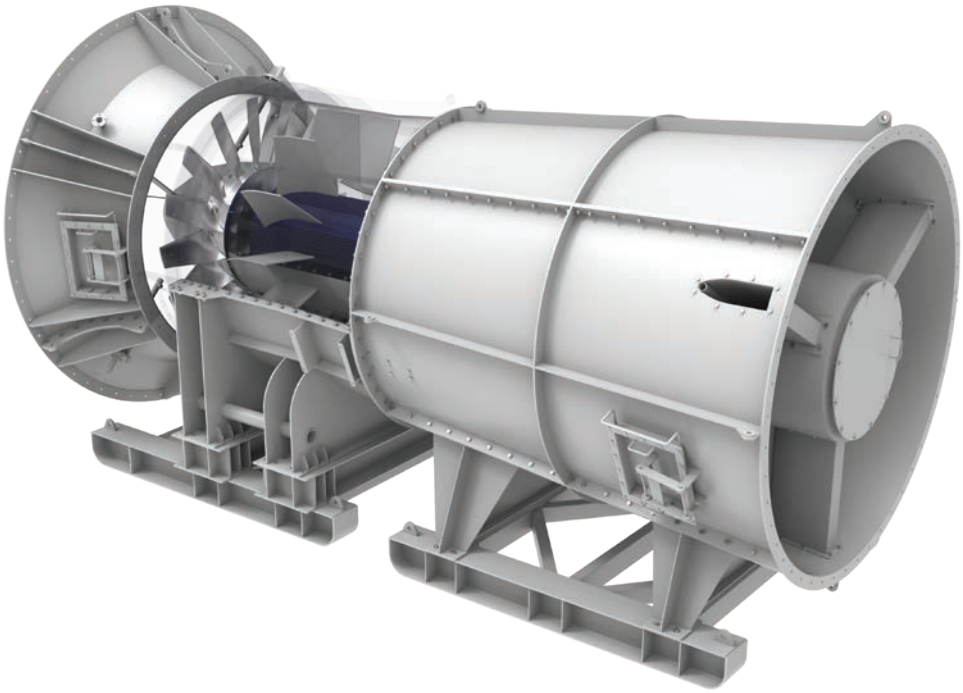
- Suitable for Horizontal or Vertical Applications
- Fully supported swing away inspection hatches, nose and diffuser fairings
- Adjustable blade pitch and blade solidity to suit a wide range of duties
- Fan Total Efficiency up to 88%
- Flow rates from 100 m^3/s to 210 m^3/s
- Single stage pressures up to 7.5 kPa

CC2400

IN BRIEF

The CC2400 Axial Fan model is a versatile compact primary ventilation fan suitable for a wide variety of applications. Readily deployable in a sea container loaded solution.

The CC2400 is perfect for remote overseas mining operations. Widely deployed and extremely reliable in Australian and overseas conditions, the CC2400 represents an excellent investment for any mining operation.



KEY POINTS

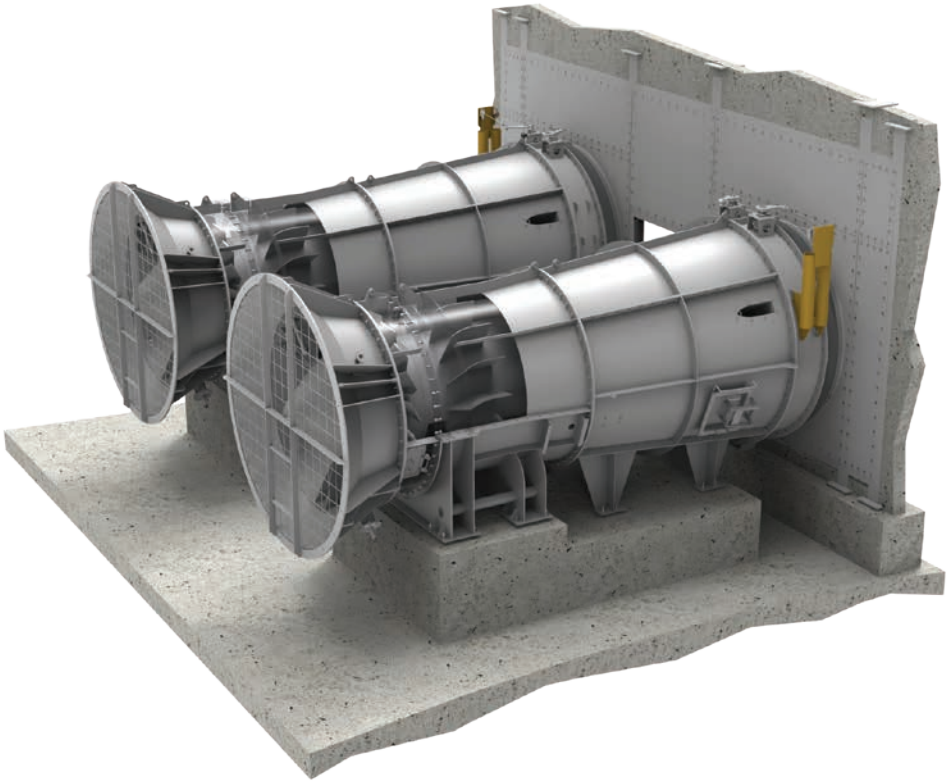
- Suitable for Horizontal or Vertical Applications
- Fully supported swing away inspection hatches, nose and diffuser fairings
- Adjustable blade pitch and blade solidity to suit a wide range of duties
- Fan Total Efficiency up to 88%
- Flow rates from 100 m^3/s to 210 m^3/s
- Pressures from 500 Pa to 3400 Pa

CC2200

IN BRIEF

The CC2200 Axial Fan model is a versatile compact primary ventilation fan suitable for a wide variety of applications. Readily deployable in a sea container loaded solution.

The CC2200 is perfect for remote overseas mining operations. Widely deployed and ultra reliable the CC2200 represents a sound investment for any mining operation.



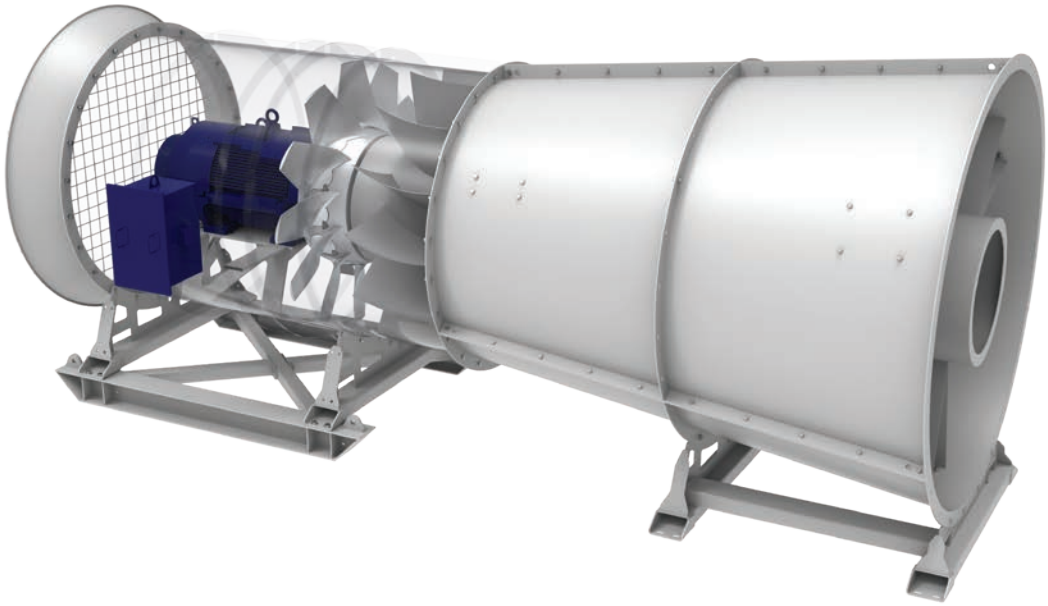
KEY POINTS

- Suitable for Horizontal or Vertical Applications
- Fully supported swing away inspection hatches, nose and diffuser fairings
- Adjustable blade pitch and blade solidity to suit a wide range of duties
- Fan Total Efficiency up to 88%
- Flow rates from 100 m^3/s to 210 m^3/s
- Pressures from 500 Pa to 3400 Pa

CC1800

IN BRIEF

The newly designed CC1800 Axial Fans are designed specifically for booster applications. Available as single or twin stage configurations with flow rates up to 105 m^3/s and pressures up to 4 kPa per stage. The CC1800 is a variable pitch design capable of a wide range of duties and applications.



KEY POINTS

- Co-Rotating Design
- Booster Fan Applications
- Variable Pitch Blade Adjustment
- Machined Impeller Track
- Modular Single or Twin Stage Configurations
- Flow Rates from 35 m^3/s to 105 m^3/s
- Pressures from 500 Pa to 4000 Pa per Stage



Sunrise Dam

Mine Primary Ventilation System

Clemcorp Designed and Supplied two CC2650 (1 x 950 kW) 3300 V Booster Fans complete with U/G Wheel Mounted MCC Switchroom with VVVF Drives for use at AngloGold Ashanti's Sunrise Dam Project.

The system includes dual 20t Overhead Monorail Installations, Counterweighted Isolation Dampers and a Maestro Digital Mine Monitoring System.

Products and services

- Ventilation Fans
- Switchroom
- Environmental Telemetry







Boston Shaker

Mine Primary Ventilation System

Clemcorp designed, supplied and installed a future proof primary ventilation system for AngloGold Tropicana.

Complete with 20t twin monorail beams and currently fitted with a CC2400 (1 x 560 kW) Booster Fan.

Products and services

- Ventilation Fans
- Site Installation







Lake Cowal

Supply of Butterfly Dampers, Louvers & Control Stations

Clemcorp supplied vent control devices to be used underground at the Lake Cowal Gold Mine.

This system included 28 automated butterfly dampers with in-duct ultrasonic airflow sensors and 14 automated louver regulators. 14 custom control stations were also designed, programmed and supplied by Clemcorp.

The system included integrating sensors from Maestro Digital Mine including real time gas and ultrasonic airflow sensors.

Products and services

- Ventilation Fans
- Environmental Telemetry



Secondary Fans

Ducted and booster ventilation for demanding underground applications. Select from co-rotating, contra-rotating and tube axial designs, with configurations tailored to the mine's airflow needs.

CC1600 • CC1524 • CC1400 • CC1254 • CC1070
CC925 • CC850 • CC760 • CC610 • CC20

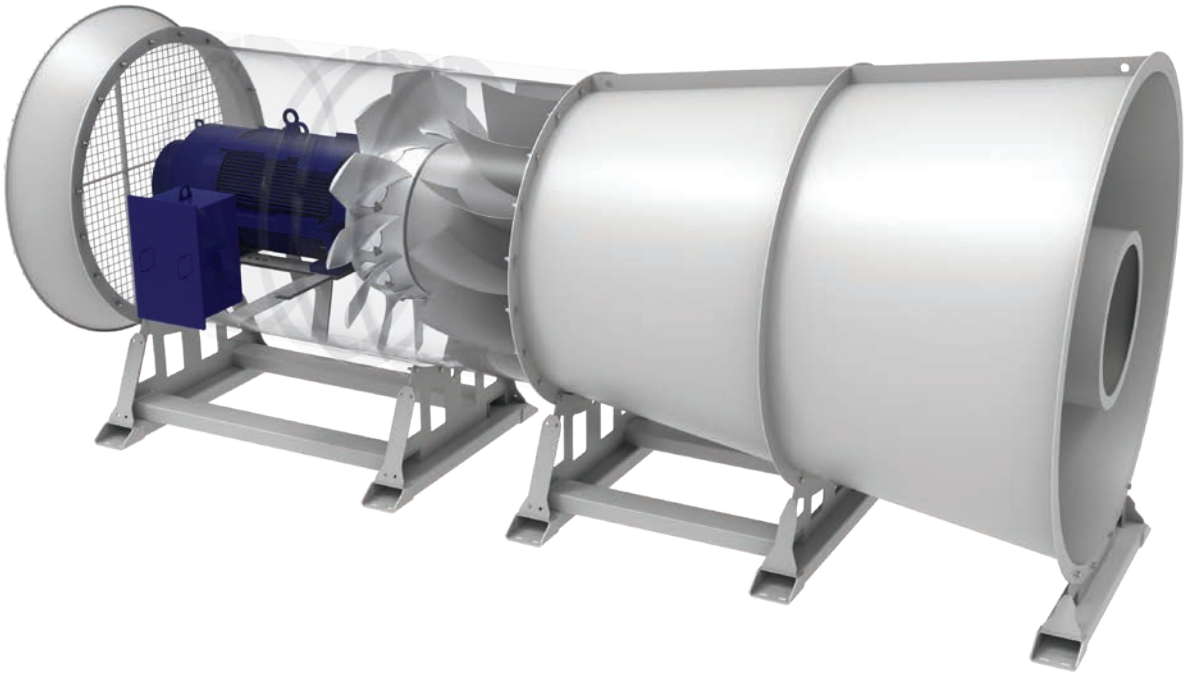


CC1600

IN BRIEF

The newly designed CC1600 Axial Fans are designed specifically for ducted applications and booster applications.

Available as single or twin stage configurations with flow rates up to 75 m^3/s and pressures up to 4 kPa per stage. The CC1600 is a variable pitch design capable of a wide range of duties and applications.



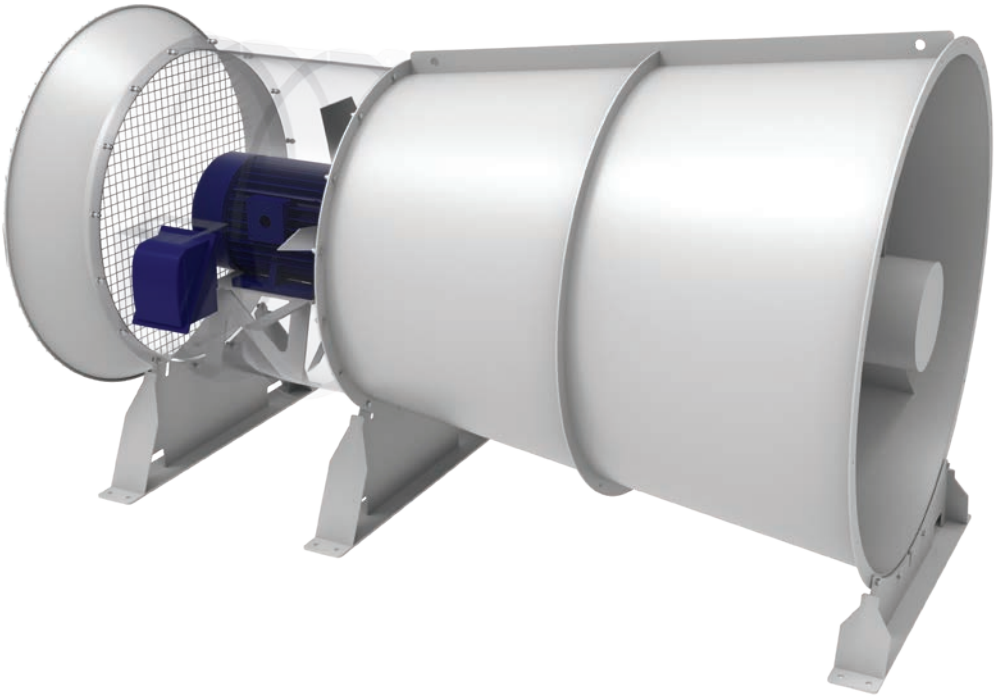
KEY POINTS

- Co-Rotating Design
- Ducted and Booster Applications
- Variable Pitch Blade Adjustment
- Modular Single or Twin Stage Configurations
- Flow Rates from 30 m^3/s to 75 m^3/s
- Pressures from 400 Pa to 4000 Pa per Stage

CC1524

IN BRIEF

The CC1524 Series of Axial Fans are designed for low pressure booster applications. Utilising a high efficiency variable pitch impeller the CC1524 is available in a variety of sizes to match the desired duty. Available only as single stage fans.



KEY POINTS

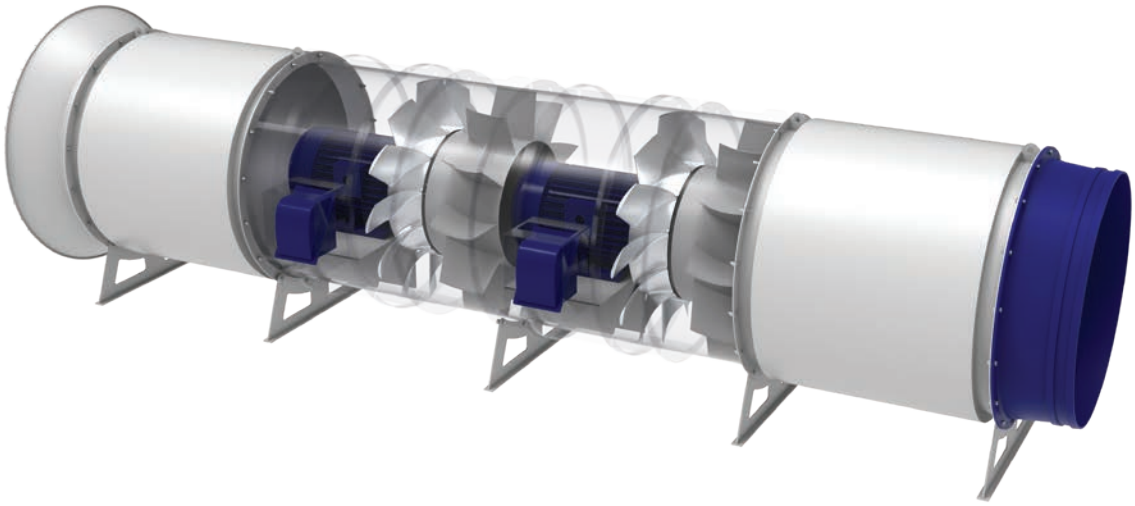
- Tube Axial Fan Design
- Booster Applications Only
- Variable Pitch Impeller
- Single Stage Configurations
- 1495 RPM, 990 RPM or 785 RPM
- Flow Rates from 10 m^3/s to 60 m^3/s
- Pressures from 50 Pa to 1300 Pa

CC1400

IN BRIEF

The CC1400Mk4 Series of Axial Fans have been a staple of the mining industry for the past 20 years. Designed specifically for demanding underground conditions the CC1400Mk4 has been used in mechanised mines worldwide.

Available as single, twin or triple stage configurations with flow rates up to 57 m^3/s and pressures up to 2.7 kPa per stage. The CC1400Mk4 uses fixed pitch vacuum cast impellers for increased efficiency and longevity.



KEY POINTS

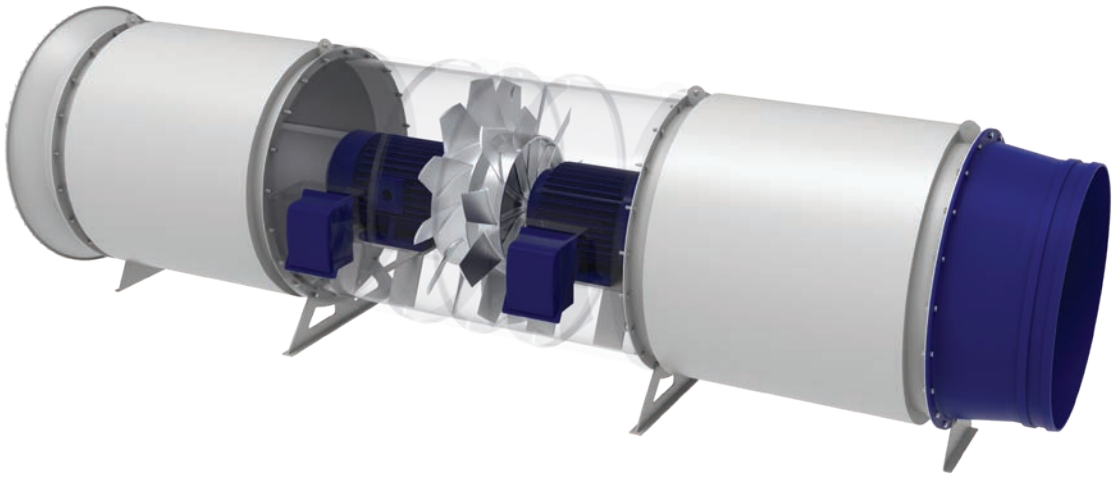
- Co-Rotating Design
- Ducted and Booster Applications
- Fixed Pitch One Piece Castings
- Modular Single or Twin Stage Configurations
- Flow Rates from 30 m^3/s to 57 m^3/s
- Pressures from 250 Pa to 2700 Pa per Stage

CC1254

IN BRIEF

The CC1254Mk3 Series of Axial Fans have been used in the mining industry for the past 25 years. Designed specifically for demanding underground conditions the CC1254Mk3 has been used in mechanised mines worldwide.

Available as single or twin stage with flow rates up to 35 m^3/s and pressures up to 1.6 kPa per stage. The CC1254Mk3 uses fixed pitch vacuum cast impellers for increased efficiency and longevity.



KEY POINTS

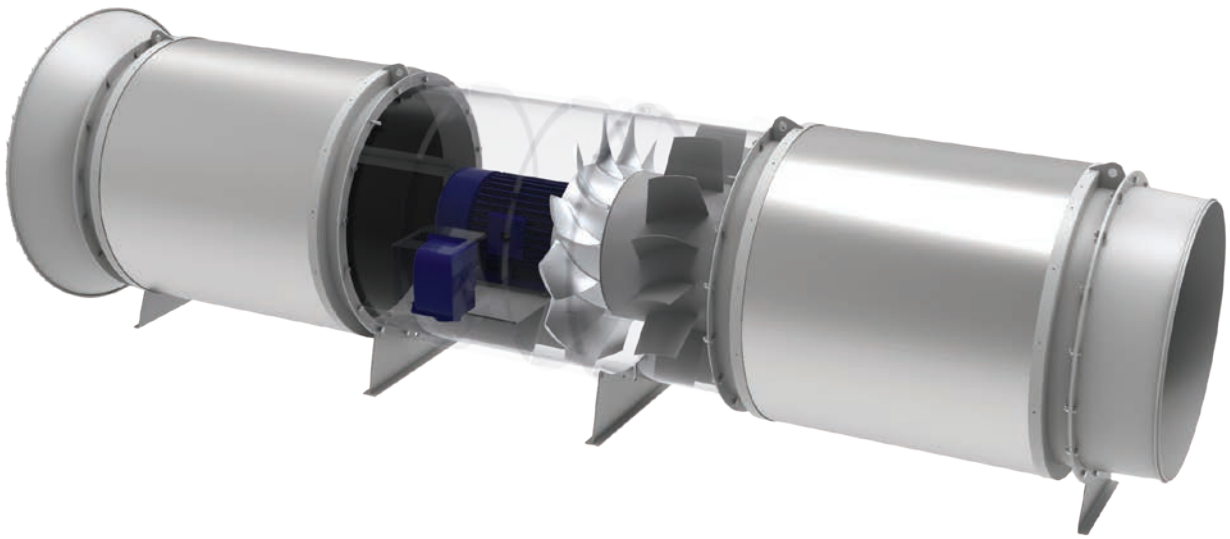
- Contra Rotating Design
- Ducted Applications
- Fixed Pitch One Piece Castings
- Single or Twin Stage Configurations
- Flow Rates from 22 m^3/s to 42 m^3/s
- Pressures from 150 Pa to 1600 Pa per Stage

CC1070

IN BRIEF

The CC1070Mk2 is a newly designed series of vane Axial Fans. Designed specifically for demanding underground conditions the CC1070Mk2 is tailored for ducted applications and long pushes.

Available as single or twin stage with flow rates up to 32 m^3/s and pressures up to 2 kPa per stage. The CC1070 uses fixed pitch cast impellers for increased efficiency and longevity.



KEY POINTS

- Co-Rotating High Efficiency Design
- High Pressure Applications
- Fixed Pitch One Piece Castings
- Single or Twin Stage Configurations
- Flow Rates from 13 m^3/s to 32 m^3/s
- Pressures from 200 Pa to 2000 Pa per Stage



Byrnecut - Syama

Portal Development

Clemcorp designed and supplied an initial single CC1400Mk4 (2 x 90 kW) Fan for the portal development at Syama Gold Mine.

This was later upgraded to a twin fan installation as the development progressed.

Products and services

- Ventilation Fans







Indonesia

Portal Development

Clemcorp designed and supplied a twin fan parallel mounted portal development solution for a new client in Indonesia.

Supply included 2 x CC1400Mk4 (2 x 110 kW) Fans and Electrical Starters.

Products and services

- Ventilation Fans
- Electrical Switchgear



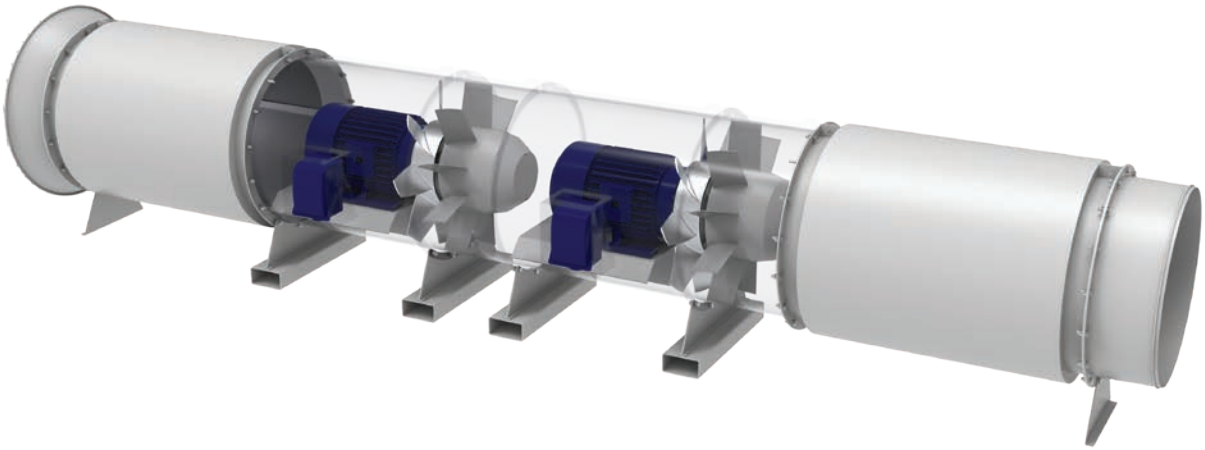


CC925

IN BRIEF

The CC925 Series of High Pressure Axial Fans have been used in the mining industry for the past 15 years.

Designed specifically for high pressure applications the CC925 is tailored towards areas with low clearances and small duct diameter. Available as single, twin or Triple stage with flow rates up to 18 m^3/s and pressures up to 3.6 kPa per stage. The CC925 uses fixed pitch sand cast one piece impellers for increased efficiency and longevity.



KEY POINTS

- Co-Rotating Design
- Ducted Applications
- Fixed Pitch One Piece Castings
- Single or Twin Stage Operation
- Flow Rates from 4 m^3/s to 17 m^3/s
- Pressures from 1000 Pa to 3600 Pa per Stage

CC850

IN BRIEF

The CC850 Series of Low Pressure Axial Fans have been developed to provide large volume of air for workshop environments.

The CC850 utilises low speed motors for quieter operation. Available as single stage tube axial fans with flow rates up to 11 m^3/s and pressures up to 200 Pa. The CC850 is only available in a 4 kW version.



KEY POINTS

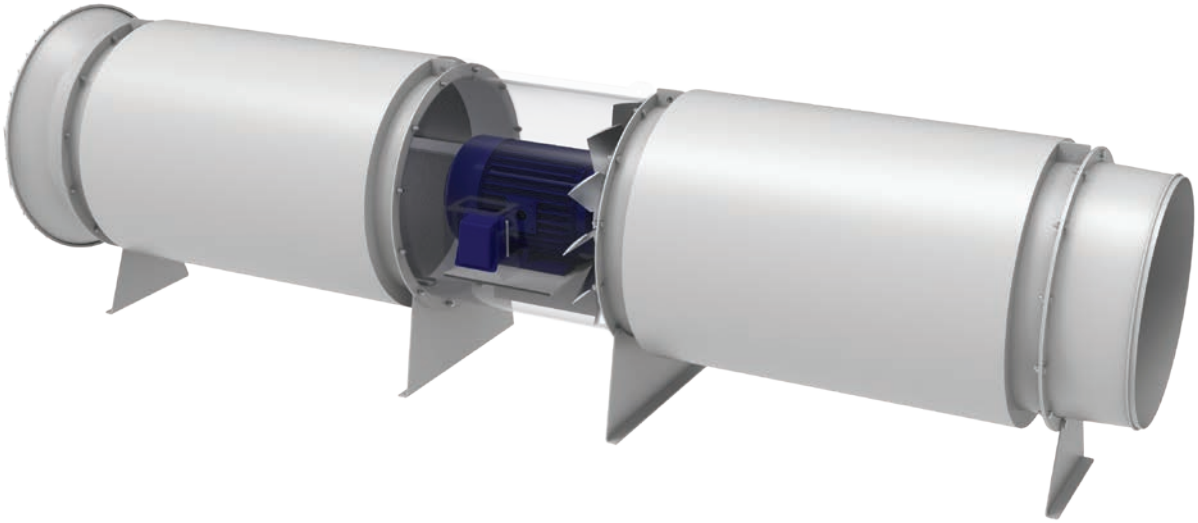
- Tube Axial Single Stage Design
- Non - Ducted Applications
- Variable Pitch Impellers
- Single Stage Operation
- 11 m^3/s Flow Rate
- High Flow Rate, Low Power, Workshop Cooling

CC760

IN BRIEF

The CC760 Series of Medium Pressure Axial Fans have been developed to ventilate tight small headings.

Available as single stage tube axial fans with flow rates up to 18 m^3/s and pressures up to 2.1 kPa. The CC760 is completely customisable to meet a range of duties as required. Various impeller designs are available to meet your application.



KEY POINTS

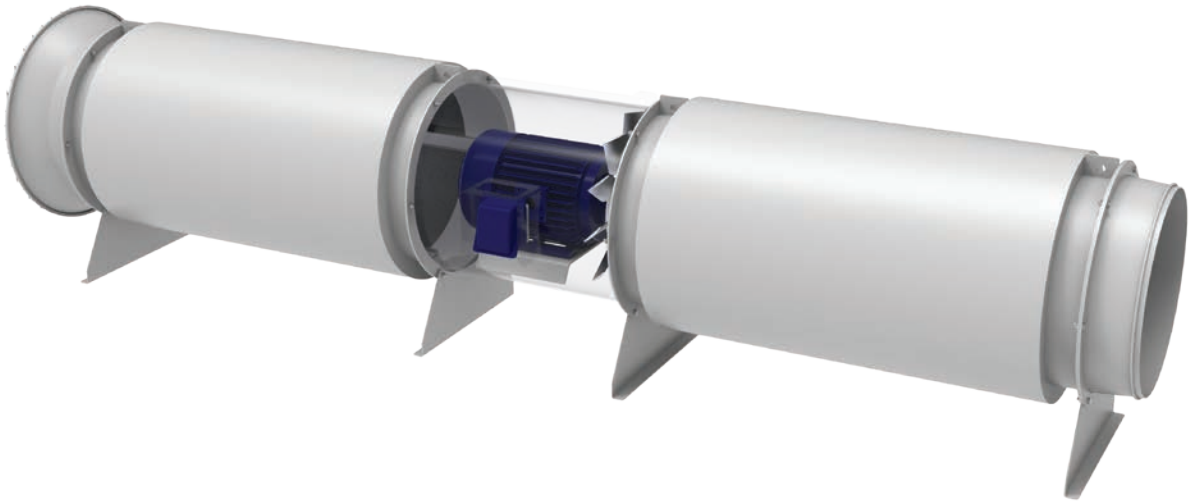
- Tube Axial Single Stage Design
- Ducted Applications
- Variable Pitch Impellers
- Single Stage Operation
- Flow Rates from 5 m^3/s to 18 m^3/s
- Pressures from 200 Pa to 2100 Pa per Stage
- Flexible to meet a range of duties

CC610

IN BRIEF

The CC610 Series of Medium Pressure Axial Fans have been developed to ventilate tight small headings.

Available as single stage tube axial fans with flow rates up to 11 m^3/s and pressures up to 1.4 kPa. The CC610 is completely customisable to meet a range of duties as required. Various impeller designs are available to meet your application.



KEY POINTS

- Tube Axial Single Stage Design
- Ducted Applications
- Variable Pitch Impellers
- Single Stage Operation
- Flow Rates from 5 m^3/s to 18 m^3/s
- Pressures from 200 Pa to 2100 Pa per Stage
- Flexible to meet a range of duties

CC20

IN BRIEF

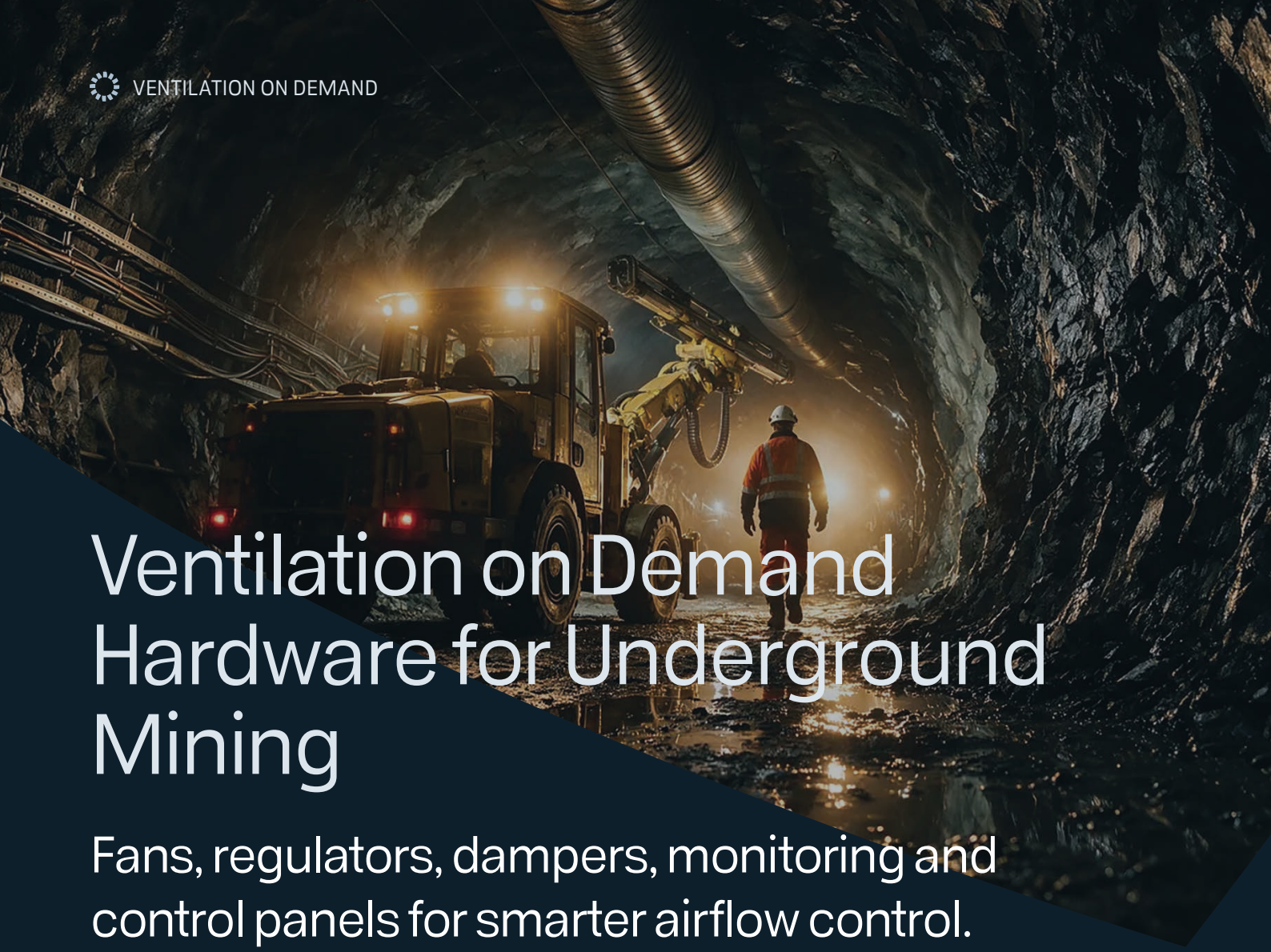
The CC20 is an air driven fan developed for use in a variety of applications.

The CC20 can be fitted with optional misting arrangements to suit any application.



KEY POINTS

- Air Driven Axial Fan Design
- Can be used for misting/dust suppression applications
- Fixed Pitch Cast Impellers
- Single Stage Operation
- Flow Rates from 0.7 m^3/s to 6 m^3/s
- Pressures from 500 Pa to 1.7 kPa
- Air Consumption 154 CFM @ 70 PSI Max



Ventilation on Demand Hardware for Underground Mining

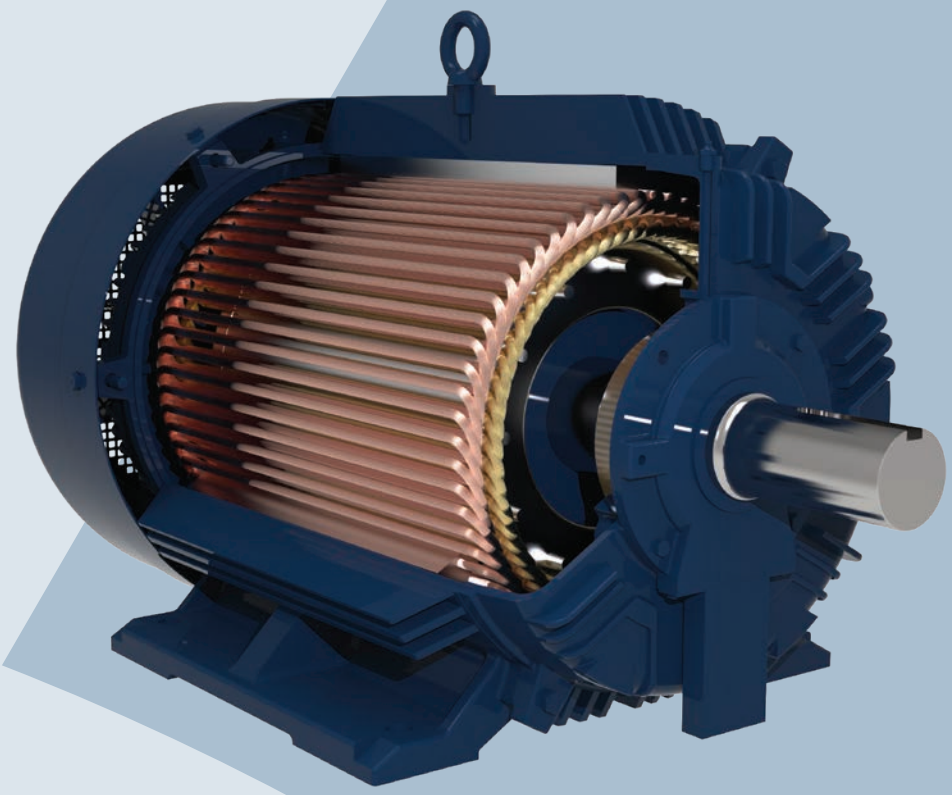
Fans, regulators, dampers, monitoring and control panels for smarter airflow control.

Ventilation on Demand starts with connected hardware

Software can only optimise what underground hardware can measure and control.

Clemcorp supplies the VOD-ready hardware layer that helps mines regulate airflow, verify conditions and respond to changing underground demand.

01	02	03	04	05
Dual speed axial fans	Automated louvre regulators	Automated butterfly dampers	Maestro monitoring	VOD control panels



High airflow when required. Lower speed when demand drops.

- Dual-speed axial fans allow sites to operate at either high or low speed to match airflow demand, with a 33% reduction in fan speed delivering up to a 70% reduction in power consumption.
- Designed for mines seeking simple practical fan control with low risk proven technology.
- Allows control of fan speed and air flow without the use of a VSD.
- Suitable for single or multi-stage configurations.
- Can be paired with custom PLC / HMI starter panels.
- Designed for local or remote operation.
- Supports staged VOD implementation.

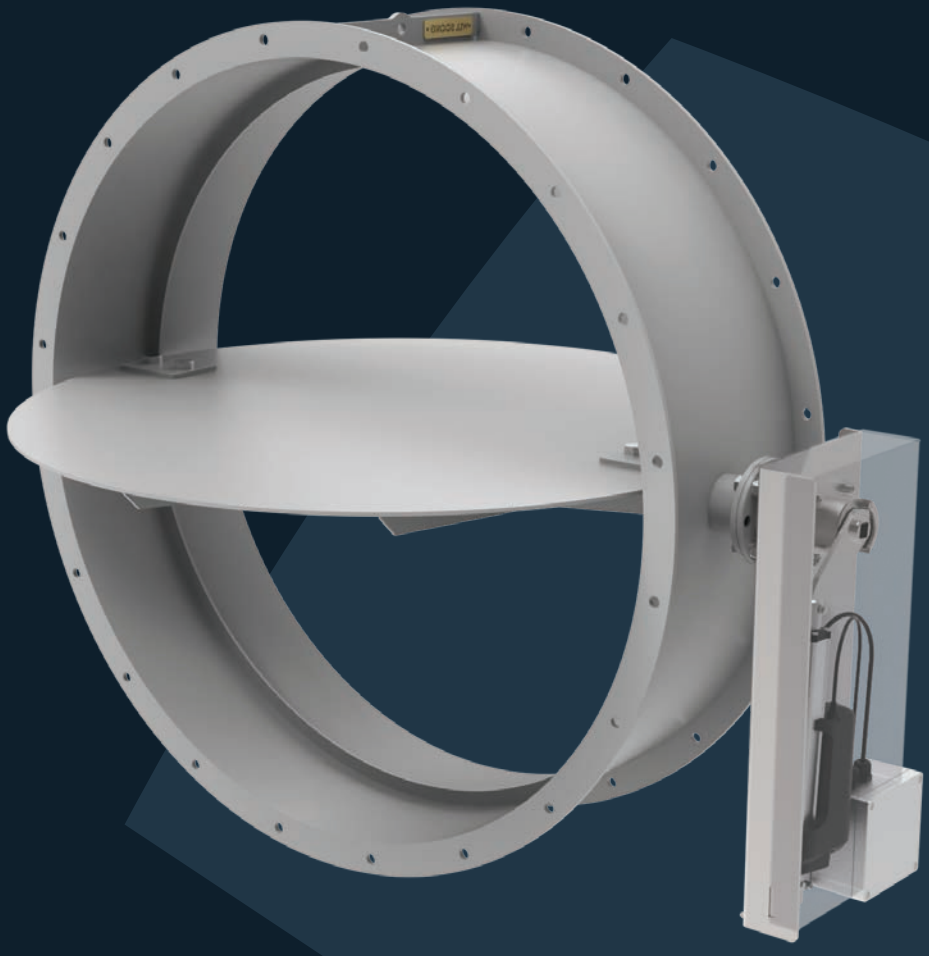
Primary airflow control without manual drop-board regulation



- Automates ventilation flows on levels.
- Helps regulate return-air and exhaust pathways.
- Supports Rotary or Linear Actuators.
- Stainless Steel and Galvanised Design for demanding underground application.
- Zero Maintenance Custom Bearing Design.
- Labyrinth seal low leakage blade design.
- Suitable for integration into site-specific VOD control architectures.
- Integrates with site air flow and pressure monitoring for automated vent on demand.

Secondary ventilation control on demand

- Designed for secondary ventilation control.
- Regulates airflow through ducted ventilation systems.
- Can support partial positioning, feedback and automated control logic.
- Can be paired with airflow monitoring for verification.
- Useful where mines need to distribute air between headings, cross-cuts or production areas.



Real-time monitoring for safer, smarter airflow decisions

- Environmental monitoring is the data layer of VOD.
- Monitors airflow, air direction, gases and climate conditions depending on sensor configuration.
- Supports alarms, TARPs, operational visibility and automated response strategies.
- Can be used with dashboards, local displays and connected mine networks.

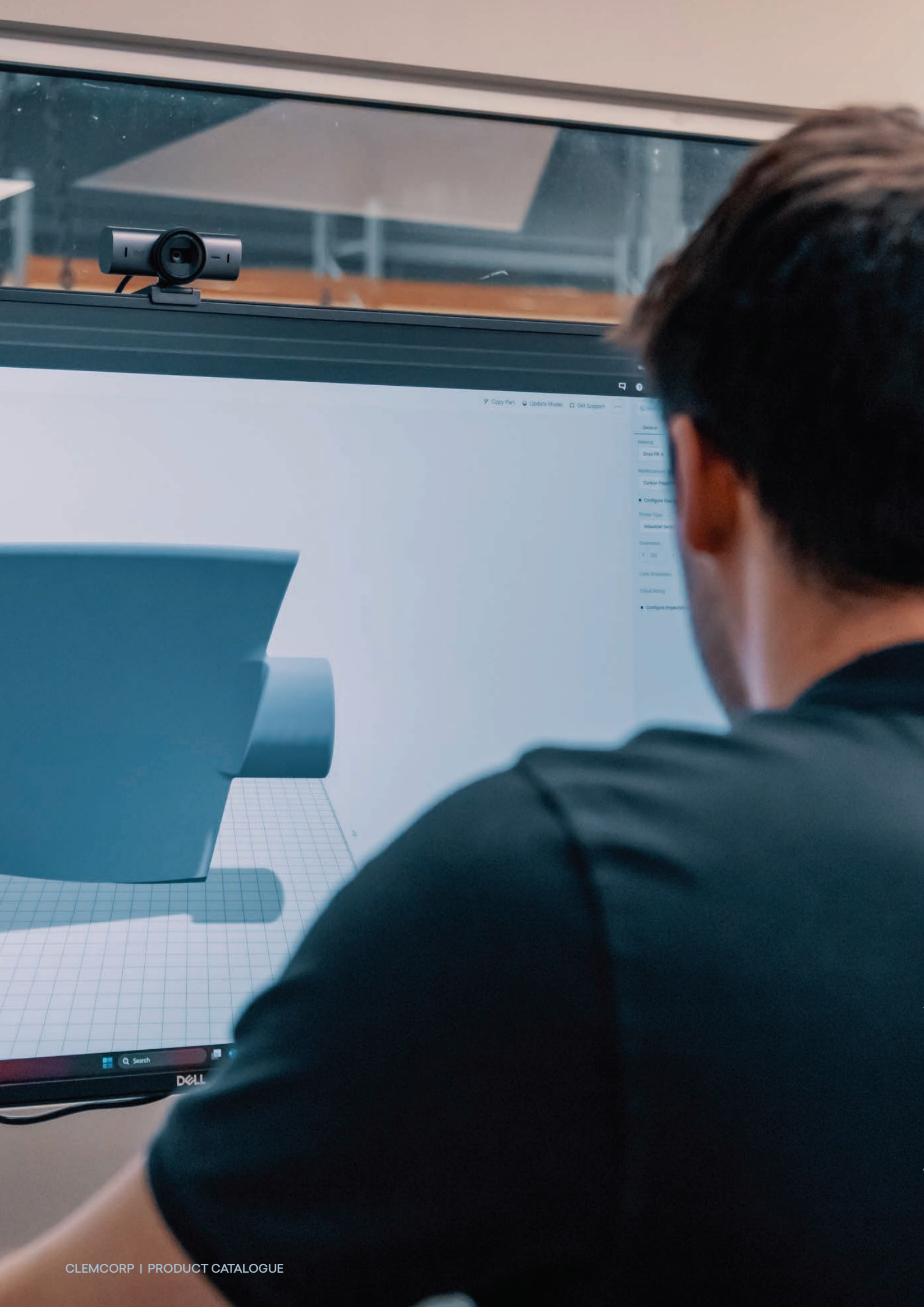






Local control for connected ventilation hardware

- VOD Control Panels connect compatible underground ventilation devices to the site control architecture.
- Provide local HMI access for operation, commissioning and troubleshooting.
- Can connect louvres, dampers and monitoring devices.
- Support local visibility of device status and environmental readings.
- Help create a practical control layer between underground hardware and site automation platforms.
- Platform agnostic and site configurable, can be operated via site SCADA or Ventsim Control.


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DELL

Fan Accessories

Silencers, self-closing doors and hanging brackets designed to fit Clemcorp fans. Reduce noise, manage parallel-fan isolation and provide accessible suspension points for underground installations.

Silencers • Self-Closing Doors
Side Hanging Brackets • Top Lifting Brackets



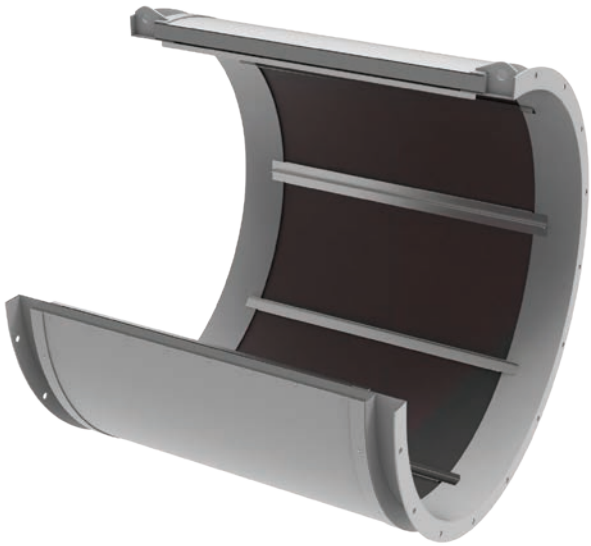
Low Profile Silencers

IN BRIEF

Clemcorp offers a range of low profile Silencers to suit our fans, as well as other standard fan sizes and bolting patterns. Clemcorp silencers achieve a significant reduction in noise, using acoustic foam technology to reduce decibel levels as much as possible.

Clemcorp low profile silencers are 35% lighter, have up to 200 mm increased diameter clearance and retain virtually identical attenuation characteristics in comparison to the existing standard designs.

In situations where additional noise reduction is required Clemcorp also offers double length silencers and podded silencers for applications where maximum noise reduction is required due to proximity to workers or residences.



KEY POINTS

- Low profile design reducing the chance of mobile plant strikes
- Hydrophobic Closed Cell Acoustic Foam Insert, easy to replace and will not suffer performance degradation when wet. Fire retardant and UV resistant
- Noise reduction of up to 5dB per standard length low profile silencer (Based on CC1400Mk4 90 kW fan)

Self-Closing Doors

Isolation solutions for parallel fan installations

Clemcorp self-closing doors and dampers help prevent recirculation through a stopped fan in parallel ventilation installations. Gravity-assisted and counterweighted designs suit different fan arrangements and maintenance requirements.





Horizontal gravity assist

For bulkhead isolation, parallel fan operation, safety and maintenance applications. Suits smaller fans below 1.6 m in diameter.

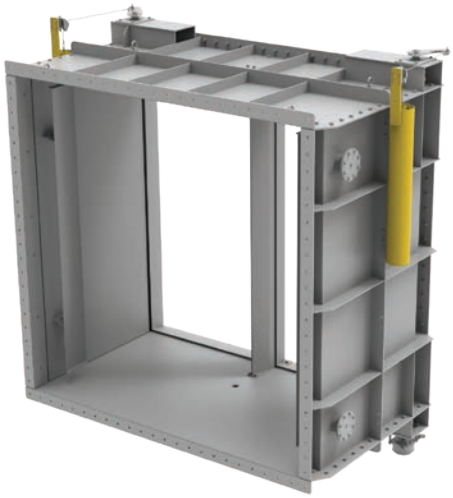
Vertical isolation

Counterweighted doors for shaft-top fan isolation and parallel vertical fan installations. Suits fans below 1.6 m in diameter.

Primary Fan Isolation

Counterweighted and actuated door options





Butterfly counterweighted

Typically installed on the discharge side due to the large wake. Helps prevent reverse rotation during startup and rotation during fan access and maintenance.

Square counterweighted

Installed on the inlet side due to minimal wake. Helps prevent reverse rotation during startup and rotation during fan access and maintenance.

Square louvre style actuated

Electrically operated with rotary actuators for primary fan applications. Installed on the inlet side due to the uniform wake; helps prevent reverse rotation and rotation during access and maintenance.



Havieron Gold Mine

Supply of Parallel Fan Bulkhead System

Clemcorp designed and supplied a parallel fan set up and associated bulkhead framework. Bulkhead fitted with 3 off CC1400 Mk4 (2x110 kW) with accommodation for a fourth to be added if required.

An airlock door was also supplied to allow personnel access.

Products and services

- Ventilation Fans

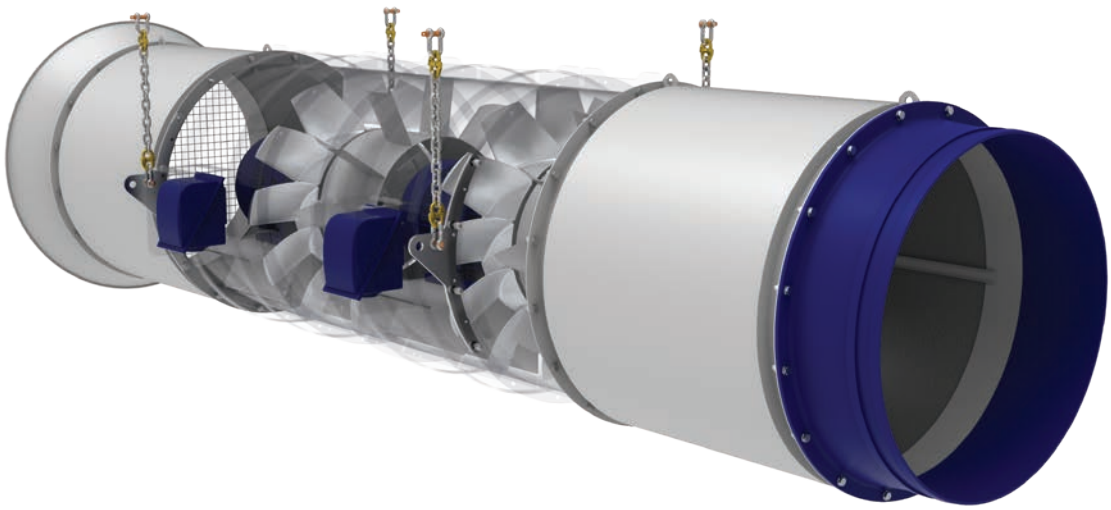


Side Hanging Brackets

IN BRIEF

Clemcorp have developed a range of side mounted “Fan Wings” for the complete range of Clemcorp Axial Fans. These rated hanging brackets provide an alternative suspension method from the traditional top-hanging fin. Utilising side mounting brackets permit the fan to be mounted much closer to the backs increasing clearances to underground traffic.

Lowering the suspension point provides an easier access point for operators removing the need to reach outside of the hanging basket.



KEY POINTS

- Rated side mounted suspension brackets
- Designed to allow fans to be mounted closer to the backs by lowering the suspension point
- Dual suspension holes for hanging and winching
- Allows operator to access suspension point while still in the man cage/basket
- Supplied with grade 8.8 fasteners
- A safer hanging method



Ventilation Control Devices

Control airflow with doors, airlocks, regulators, dampers and actuator control. Clemcorp designs and manufactures ventilation control equipment for demanding underground mining conditions.

Personnel Access Doors & Airlocks • Drop Board Regulators
Automated Butterfly Dampers • Mine Ventilation Louvers
ModuDrive Actuator Control



Access & Airlock Doors

IN BRIEF

The Clemcorp range of Access Doors and Airlocks are heavily engineered and constructed to withstand the rigours of Underground Mining.

Our modular designs, with a bolt on door section, allow for multiple configurations utilising the same door assembly. Our pressure equalisation system using ball valves is unique, extremely reliable and most importantly able to be actuated from either side of the door.



KEY POINTS

- Modular Bolt on Door Design Supports Multiple Configurations
- Unique Ball Valve Pressure Equalisation able to be Actuated From Both Sides of the Door
- Forklift Tubes and Rated Lifting Points for Transportation
- Steel Construction With Interzone 954 Epoxy Finish @ 200 Microns
- Rated for use to 5 kPa
- Doors are Removable and Swappable Between High and Low Pressure Sides

Drop Board Regulators



IN BRIEF

Clemcorp Drop Board Regulators (DBR's) are the most technologically advanced and feature rich board-type ventilation control device on the market. Our proprietary interlocking rotational moulded HDPE boards provide virtually perfect sealing, and as such our design is the lowest leakage DBR available. Being constructed purely from virgin HDPE they are durable and robust, impervious to corrosion and water.

Furthermore they are light, easy to handle and contain no sharp edges - which is a vast safety improvement over traditional wooden or steel boards. We have modular designs in multiple size configurations.

KEY POINTS

- HDPE Rotational Moulded Proprietary Board Design
- Locking pin and padlock arrangement to prevent unauthorised regulator changes.
- Captive Nuts for Threaded Rod Inserts
- Modular Galvanised Frames
- Low Leakage DBR
- C-Section Frame and Base Cutouts for Hold Down Bolts Enables Excellent Keying into the Structural Wall
- Rated Lifting Lugs

Automated Butterfly Dampers

IN BRIEF

The Clemcorp range of butterfly dampers are specifically designed for secondary ventilation control.

All our butterfly dampers can be automated to enable complete control of your secondary ventilation system. Regulate flow on demand to manage ventilation flows and reduce costs.



KEY POINTS

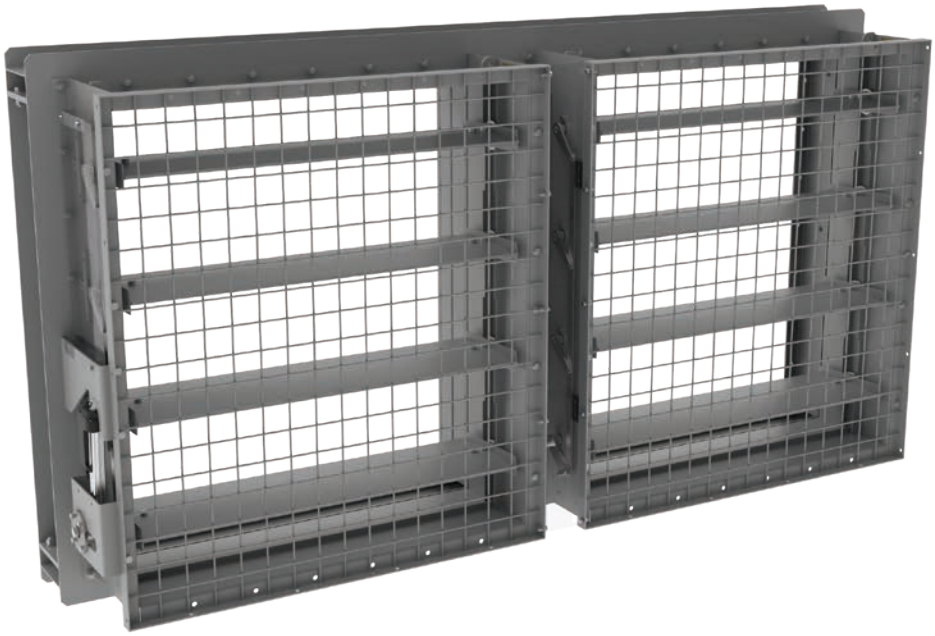
- Rated for 50 m^3/s Airflow and 6 kPa Pressure
- Maintenance Free PTFE Lined Bearings
- Linear Actuator with 24VDC Supply
- Integrated Controller with Feedback
- ISO F10/F12 Interface supports multiple Actuator options

Available range includes the 1,600 mm butterfly damper. Contact Clemcorp for the configuration to suit your ventilation system.

Mine Ventilation Louvers

IN BRIEF

The Clemcorp range of louvers are designed for demanding underground mining applications. Automated louvers enable operators to automate ventilation flows on levels without utilising manual drop board regulators. Individual blades can be locked to fixed positions via a simple disconnect system. Multiple Louvers can be fitted to cover a complete range of airflow duties.



KEY POINTS

- Automation Enabled Mining Ventilation Louver
- Maintenance Free Design
- Flow Rates from 0 m^3/s to 100 m^3/s Per Louver Panel
- HD Galvanised Finish
- Low Leakage Labyrinth Seal Blades
- ISO F10 / F12 Interface for Linear or Rotary Actuator
- Range of Actuator Options

Air Quality Stations

Real-time monitoring for underground ventilation





Maestro Vigilante AQS

A rugged, customisable station for continuous airflow, gas and climate monitoring. Up to eight sensors support environmental measurements including pressure and differential pressure.

Maestro Zephyr AQS

A compact air quality station providing real-time monitoring with up to three customisable sensors. Bring airflow, gas, climate and pressure data to the control room.

Discuss sensor selection and monitoring requirements with Clemcorp.

Displays & Dust Monitoring





Maestro SuperBrite

Display real-time alerts, instructions and safety updates underground. Integrates with PLC, HMI and SCADA systems to show air-quality data and custom text.

Maestro DustMon

Continuous particulate monitoring for underground dust management.

Designed to minimise false signals caused by fog and mist, with feedback for dust-suppression and ventilation systems.

Duetto Analytics

Bring underground data to the surface



One monitoring interface

Connect Maestro devices across the mine for real-time air-quality monitoring, alarms, diagnostics and maintenance data. Duetto brings Vigilante, Zephyr, ModuDrive and other Maestro equipment together on a single screen.

Diagnostics and maintenance

Review device information down to sensor level, support calibration and identify abnormal readings or sensors approaching expiry.

Duetto can forecast routine maintenance and provide plain-English maintenance suggestions when issues arise.

ModuDrive

Actuator control for Ventilation on Demand



Responsive airflow control

Maestro ModuDrive provides actuator control for louvers and butterfly dampers to optimise airflow in real time. Integrate it with your Ventilation on Demand system to manage airflow as underground requirements change.

Automated and manual operation

ModuDrive provides its own HMI and connects directly to the mine's SCADA system, supporting automated and manual control from the selected operating interface.



Big Bell South Project (Horizontal Fans)

Supply of CC2400 560KW Twin Surface Mounted Fans Including Dual Soft Starter

Clemcorp Australia designed, supplied and delivered a turnkey installation of a surface ventilation system for Big Bell Gold Operations, operated by Westgold Resources Limited.

The ventilation system comprised twin parallel CC2400 axial fans, each rated at 560 kW.

The scope also included electrical switch rooms, and civil and electrical installation in partnership with Quattro and MIE. Clemcorp concluded this project in 2026

Products and services

- Primary Fans
- Soft Starters
- Mechanical and Electrical Install





Big Bell North Project (Vertical Fans)

Supply of 4 Single Stage Vertically Mounted Fans

Clemcorp Australia designed, supplied and delivered a surface ventilation system for Big Bell Gold Operations, operated by Westgold Resources Limited.

The ventilation system comprised four parallel CCI400Mk4 axial fans, each rated at 132 kW. These fans were to be installed vertically on a collar to exhaust air from an existing shaft.

Clemcorp partnered with Quattro to facilitate the install and the removal of the old fan set up, this project concluded in 2026.

Products and services

- Vertical Surface Fans
- Mechanical Install



Electrical Fan Starters

IN BRIEF

Clemcorp design and manufacture a range of electrical fan starters for a wide range of applications. Our starter range has been developed over years of field experience and feedback from clients.

Our 1000 V starters typically cover a range of motor sizes providing flexibility to utilise one starter across multiple fan types. Our team are able to design custom systems including complete switchrooms for large fan applications.



KEY POINTS

- Mining Specific Features such as Pulse Timers and Delay Starts
- ABB and NHP SwitchGear
- ABB UMC 1000 V Universal Motor Controller
- 6 mm Aluminium Cable Entry Gland
- Copper Incoming BusBar
- Supplied with 32 V Burnbrite Area Lighting
- Supplied with USB Flash Drive with MDR
- Custom Designs to Client Specifications Available including Soft Starters and VVVF Drives
- Alternate Voltages Available on Request

High-power industrial testing facility

Motor, rotating equipment and industrial machinery testing with multi-megawatt supply capability

20,000	24 t	~4 MW	11 kV	600 kW
m^2 engineering and manufacturing facility	Dual-lift overhead crane capacity	Aggregate supply capacity with generators	Mains test supply available	Variable-speed test capability

Testing and validation

Clemcorp Australia's dedicated industrial testing facility is available for third-party testing, validation and development work.

Our 20,000 m^2 engineering and manufacturing facility incorporates substantial electrical, mechanical and instrumentation infrastructure developed for the testing and validation of large industrial ventilation equipment.

While the facility is primarily used for Clemcorp's own production testing, quality assurance and research and development programs, this capability is also available to clients requiring controlled testing of electric motors, rotating equipment and associated industrial machinery.

Handling and engineering

The test area is serviced by dual-lift 16 t overhead gantry cranes, providing substantial handling capacity for large equipment. Access is provided through a roller door approximately 5.76 m wide × 5.5 m high, and our mechanical and electrical engineering teams are available to assist with installation, electrical connection, instrumentation and test configuration.

Our combination of high-power electrical infrastructure, heavy lifting capability, instrumentation and on-site engineering support allows equipment to be tested under representative operating conditions without many of the logistical constraints associated with field testing.

Discuss your test program

For specialised motor, rotating equipment or industrial machinery testing requirements, contact Clemcorp Australia to discuss the equipment, power requirements and proposed test program.

Electrical, instrumentation & engineering support

Electrical test capability

The facility is supplied by dedicated 415 V, 2 × 1,000 kVA distribution transformers, fed from the local 22 kV Western Power network.

Our low-voltage infrastructure provides:

- Direct-on-line motor starting at 415 V, 690 V and 1,000 V, subject to motor size and starting requirements
- DOL testing of motors up to approximately 110 kW
- Variable-frequency operation using an ABB ACS800 variable speed drive
- Variable-voltage testing at 415 V, 690 V and 1,000 V through a purpose-built VSD output transformer
- Variable-speed testing of loads up to approximately 600 kW

For larger machines, our site substation can provide an 11 kV mains supply, supporting test loads of up to approximately 1.5 MW.

Where additional power is required, the facility can be supplemented with temporary generator capacity. Depending on the test configuration, this can increase the aggregate available electrical supply capacity to approximately 4 MW.

The maximum permissible individual test load depends on the electrical configuration, starting method, voltage, protection settings and equipment characteristics.

The ~4 MW aggregate supply capacity is not a single-machine test rating.



Electrical, instrumentation & engineering support

Instrumentation and data acquisition

A comprehensive range of electrical and condition-monitoring instrumentation is available, allowing operating parameters to be continuously logged and analysed throughout a test.

Typical measurements include:

- Motor speed and variable-speed control
- Voltage
- Current
- Real and apparent power
- Power factor
- Motor and bearing temperatures
- Bearing and machine vibration
- Full vibration spectrum analysis
- Rotational frequency and harmonic analysis
- Operating trends over the duration of the test

Additional instrumentation can be incorporated to suit specific test requirements.

Engineering support

Testing can be supported by Clemcorp's mechanical and electrical engineering teams, including assistance with:

- Test methodology and test planning
- Equipment installation and alignment
- Electrical connection and commissioning
- Instrumentation selection and placement
- Data acquisition
- Vibration analysis
- Performance evaluation
- Fault investigation
- Test reporting



Mine Ventilation Ducting

Flexible and rigid ducting for underground service

Typhoon flexible ducting

Woven polyethylene ducting developed for mining applications, combining light weight with high strength for harsh environments. A hybrid weave provides strength while low frictional resistance supports the ventilation system.

Fittings and installation

A complete range of fittings and colour-coded diameters supports duct selection and installation. Large-diameter steel eyelets provide joining points, with a reinforced hanging arrangement for suspension.

Rigid steel ducting

Clemcorp can also supply steel ducting to suit the required size and length. Contact our team to discuss your ventilation duty, installation and product selection.
typhoonducting.com.au



St Barbara Mines

Environmental Telemetry System for Primary Ventilation Fans

A Vigilante AQS Environmental Telemetry package from Maestro Mine Ventilation in Canada was supplied and retrofitted by Clemcorp to the twin centrifugal primary fans at a St Barbara Mine. The system uses advanced ultrasonic airflow sensors to accurately and reliably measure the fan volume outputs and thus fulfil the obligation to regularly measure fan output in accordance with mines regulations

Products and services

- Environmental Telemetry
- Ventilation Fans
- Site Installation



Kathleen Valley

Turnkey primary surface ventilation

Clemcorp designed, supplied and delivered the primary surface ventilation system for Liontown Resources' Kathleen Valley project.

Two CC3080/1680 fans were installed at separate return-air raise locations, together with electrical switchrooms, HMI and Maestro Vigilante airflow and pressure monitoring. Clemcorp partnered with Quattro and MIE; the project concluded in September 2025.

Products and services

- Primary fans
- Electrical switchrooms
- HMI
- Environmental monitoring

Clemcorp
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