Mining Auxiliary Fans

Quiet. Efficient. Durable.

a company of POWERCHINA

TLT MechCaL

Substantially Reduce Operating Cost.

(It's That Simple.)

Longer reach.

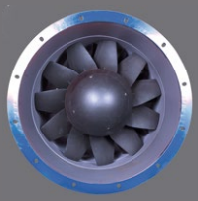
In short, TLT MechCaL fans have a higher efficiency. This means that for a given power, you get a higher static pressure, and thus longer reach. Or, for a given ducting distance, you need less power. With the variable-pitch (VP) option, fan blades can be adjusted to your specific optimal pressure-flow point requirement, maintaining maximum efficiency.

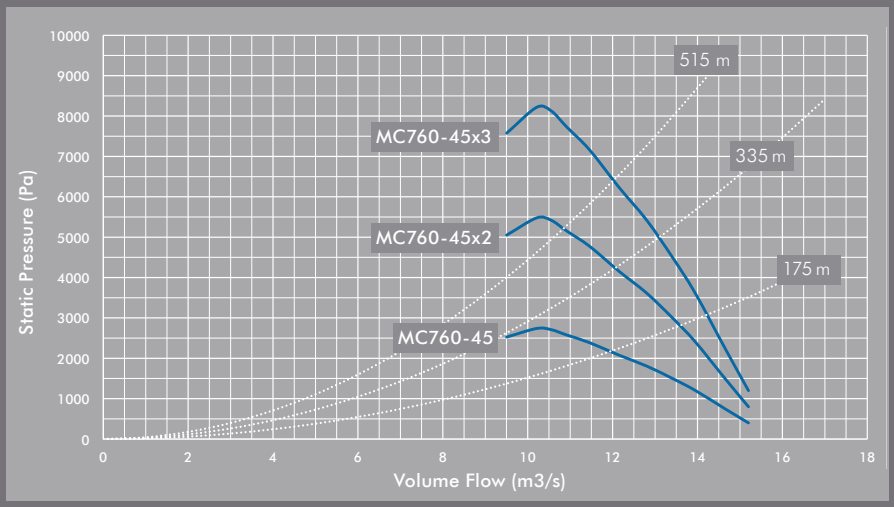
Higher MTBF.

A patented anti-vibration motor mounting system increases operating life and mean time between failures. Our design allows easy motor replacement all reducing repair costs.
In other words: You save operating cost. It's that simple.

MC760

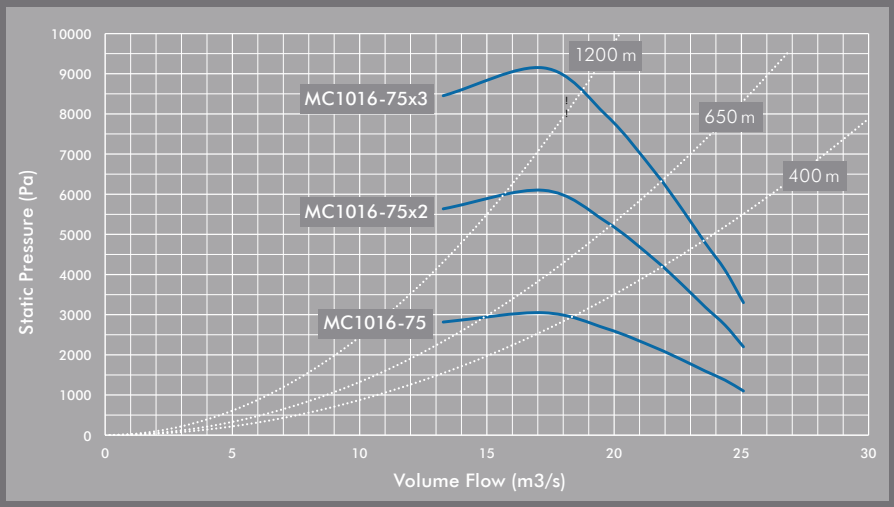
- Diameter 760 mm / 30 in.
- Power from 22 to 45 kW
- Up to 7,500 Pa static pressure @ 3-stage 45 kW
- See page 6 & 7 for details





MC1016

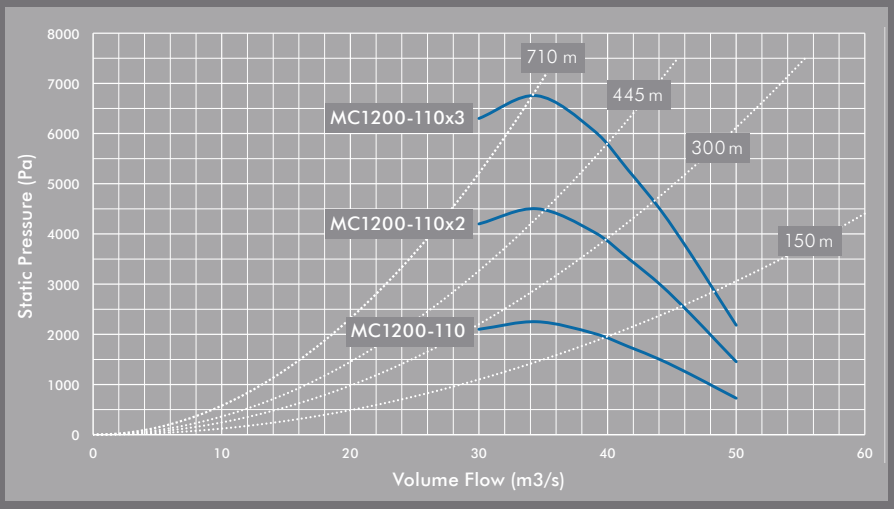
- Diameter 1016 mm / 40"
- Power from 37 to 110 kW
- Up to 8,500 Pa static pressure @ 3-stage 75 kW



All duct diameters = fan diameter; Duct Length Resistance Curves using K-factor of 0.0034 and air density @ 1.2 kg/m^3 and no leakage

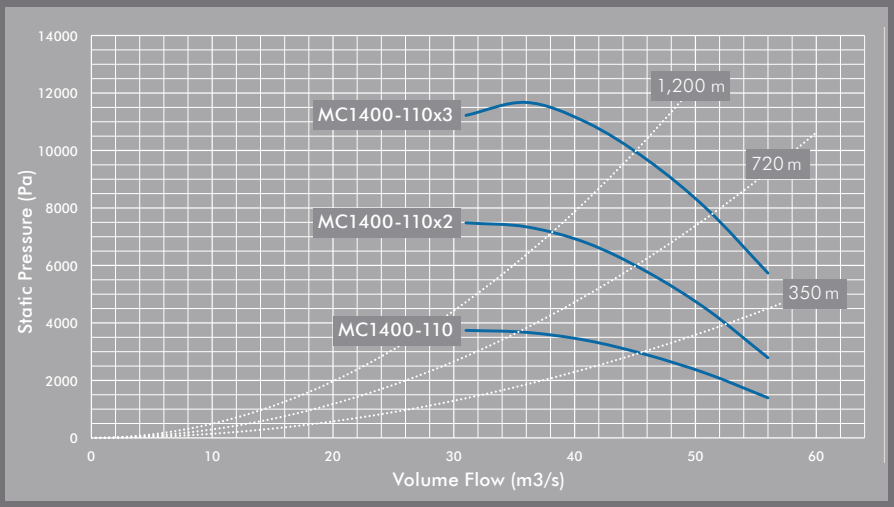
MC1200

- Diameter 1220 mm / 48″
- Power from 55 to 110 kW
- Up to 6,500 Pa static pressure @ 3-stage 110 kW



MC1400

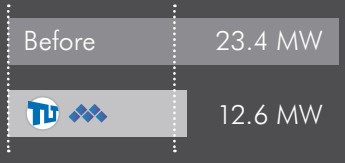
- Diameter 1400 mm / 55″
- Power from 75 to 185 kW
- Up to 10,500 Pa



This is what actual customers actually saved.

Many of our customers turn to our fans specifically to reduce their operating cost – and succeed. Here are just three examples out of many, as certified by independent measurement and verification experts. Contact us for more references and figures.

Gold Mine

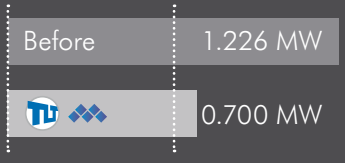


- 872 fans: 760 mm/45 kW
- Savings: 10.8 MW (46%)

Platinum Mine

- 140 fans: 760 mm/45 kW
- Savings: 1.41 MW (39%)

Platinum Mine



- 36 fans: 760mm/45 kW
- Savings: 526 kW (43%)

Why Are Our Fans More Efficient?

Simple Answer, Complex Endeavor: High-precision Manufacturing.

Our manufacturing process involves several innovations and patented procedures. These enable us to not only easily adapt the design to individual customer needs, but also to achieve a higher grade of manufacturing precision – the precondition for efficient operation even under toughest conditions underground.

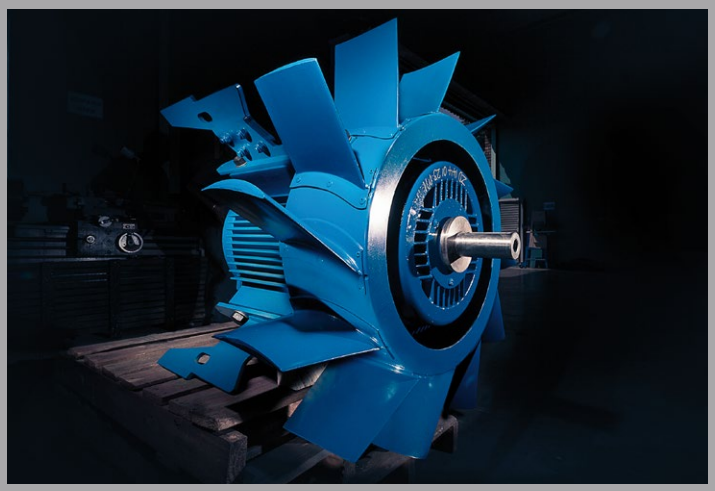
Multiple barrel sections enable modular design to meet customers' individual needs, while keeping assembly time and cost low.

Impeller track machined close to 100% circularity – a key process for high efficiency

The moulding and fine-tuning of our composite parts (stators, impellers and cones) involves meticulous manual procedures.

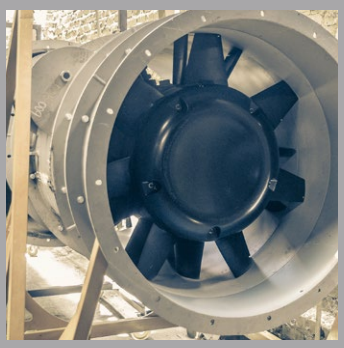
A freshly-painted MC1016 housing is leaving the paint booth.

The motor mounting is welded into the fan motor barrel.



A naked MC760 unit without impeller, ready to be mounted into the housing

After final assembly, fans are tested according to the ISO 5801 testing standard.



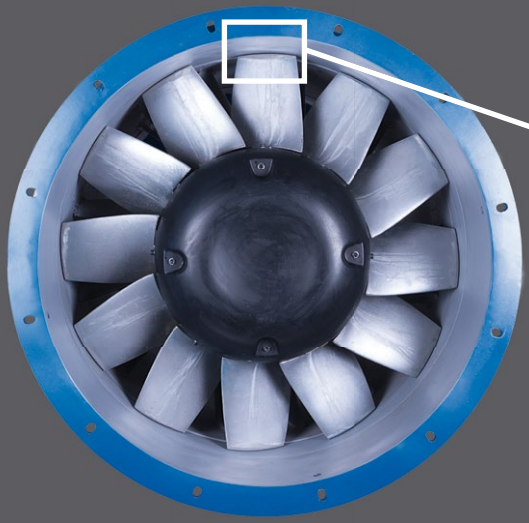
An MC1016 prior to mounting into the testing station.

A 1220mm high-pressure variable-pitch impeller on the balancing station

All tests successfully passed and ready to ship: Three MC760 fans before transport.

The Result: High Quality & Efficiency. Low Operating Cost.

The final result of our advanced engineering and manufacturing process: Unsurpassed quality that translates not only to substantially extended mean time between failure, but also to one of the highest efficiencies in the industry.



The high-precision manufacturing process allows for the ultra-low tip clearance of TLT MechCaL fans. Contributing to making ours one of the most efficient fans on the market.

Let Us Customize It For You.

Take Us Underground to Get Your Efficiency Up.

One of our experts during on-site measurements for a system optimization

Our slogan "A Passion for Solutions" is not merely a slogan. It's what actually drives us. We are passionate about solving your specific challenges on-site. And we are experts in measuring and optimizing your ventilation systems. Take us underground!

This is what we have in mind: Our fans are engineered to work in rough environments

An unorthodox setup, but the best solution to this customer's short-term challenges: MC1200 in a surface installation

Get it There, Make it Fit, Make it Quiet: Our Accessories

With our extensive accessory range, customzing our fans to your exact needs is a breeze. Naturally, all fan auxiliaries can be engineered to meet individual requirements.

Skids

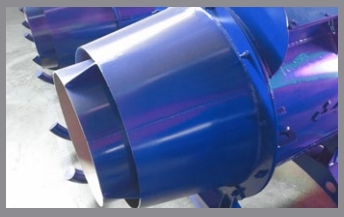
- Standard Skid
- Modular Rail Skid →
- Roller Skid

Silencers

- Broad Band Silencer
- Tuned Resonant Silencer

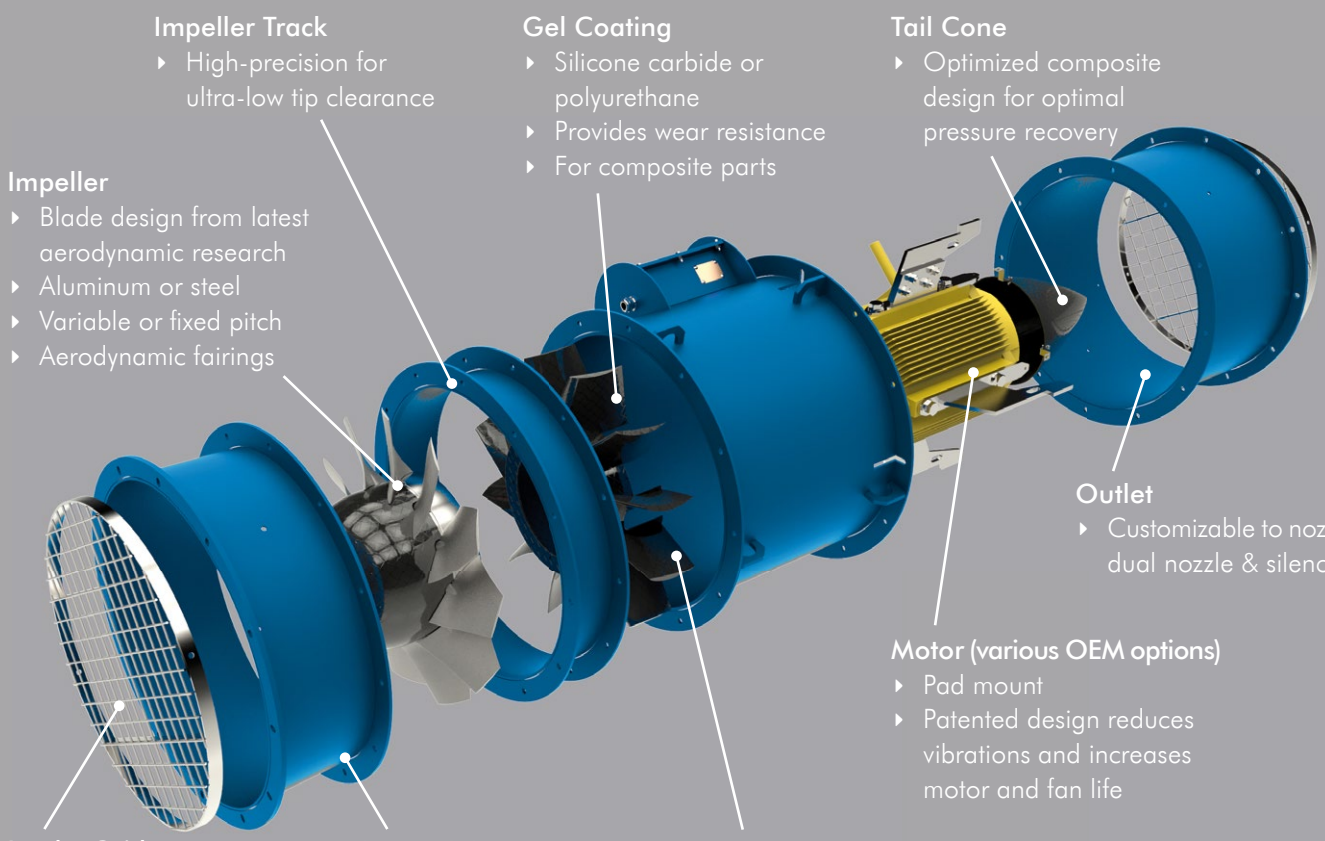
Adaptors

- Conical Inlet →
- Bell mouth Inlet
- Ducted Inlet
- Flexible Ducting Inlet
- Ducted Outlet
- Flexible Ducting Outlet
- Access Panel
- Nozzle
- Dual Nozzle →
- Inlet Transition
- Outlet Transition



The Details.

Exploded View of an MC760 System



Impeller Track
- High-precision for ultra-low tip clearance

Gel Coating
- Silicone carbide or polyurethane
- Provides wear resistance
- For composite parts

Tail Cone
- Optimized composite design for optimal pressure recovery

Impeller
- Blade design from latest aerodynamic research
- Aluminum or steel
- Variable or fixed pitch
- Aerodynamic fairings

Outlet
- Customizable to nozzle, dual nozzle & silencers

Motor (various OEM options)
- Pad mount
- Patented design reduces vibrations and increases motor and fan life

Intake Grid
- Reinforced steel mesh

Inlet Module
- Modular; different types and silencers available

Stator
- Profiled stator blades for optimal aero-dynamic and noise performance

Fan Data Chart (Examples)

- Silencing option available for all fans
- Other sizes/motor powers and individually designed fans on request
- Fan pressure can be increased by adding up to four stages
- Jet fan configurations with various skid types

Model	Size	Power	Flow Rate	Static Pressure	Max. Efficiency
MC760	30″ 760 mm	60 hp 45 kW	25,400 cfm 12 m^3/s	8.41 inWG 2,200 Pa	81 %
MC915	36″ 915 mm	100 hp 75 kW	31,800 cfm 15 m^3/s	9.6 inWG 2,400 Pa	80 %
MC1016	40″ 1016 mm	100 hp 75 kW	36,000 cfm 22 m^3/s	8.43 inWG 2,100 Pa	81 %
MC1200	48″ 1200 mm	100 hp 75 kW	63,600 cfm 30 m^3/s	7.0 inWG 1,750 Pa	81 %
MC1200	48″ 1200 mm	150 hp 110 kW	84,750 cfm 40 m^3/s	7.8 inWG 1,950 Pa	82 %
MC1400	55″ 1400 mm	250 hp 185 kW	95,350 cfm 45 m^3/s	11.65 inWG 2,900 Pa	83 %

A Passion for Solutions.

Germany . Austria . Russia . China . USA . South Africa . South Korea . Chile . India

Business Location w/ Manufacturing and Service Workshop

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TLT-Turbo Inc. . USA

TLT-Turbo Rep. Office . Austria
TLT-Turbo South America SpA . Chile
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TLT-Turbo Rep. Office . Russia
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