

# Emergency Extract Ventilation



# Product Overview

Our standard range can operate as part of the main extract system, or as dedicated fans for emergency clearance in hazardous fire, smoke and fume conditions. With four facilities certified to EN12101-3 Manufacturing Facilities for Smoke Ventilation, M&Y can supply units tailored to regional and project specifications as required.

Single or two stage	<b>Single</b> or <b>two speed</b> operation	<b>Short Cased &amp; Long Cased</b>
<b>315mm - 2000mm</b> diameters	<b>F200, F300 &amp; F400</b> available	A range of motor mounting arrangements
Available for both 50Hz & 60Hz	Available with Down Stream Guidevanes ( <b>DSGV</b> )	Available as Contra-rotating

## Unique Design

**M&Y high efficiency adjustable pitch aerofoil impellers have been developed in line with the latest ErP legislation to deliver outstanding efficiency capabilities for overall lower running costs.**

Blades are made from high quality pressure die cast aluminum (LM6) with natural finish. The use of an increased blade root reduces stress levels which make our range of impellers ideal for arduous smoke and emergency applications.

The wide range of impeller solidity options and configurations in our products help to achieve reliable, precise performance. Additionally, the integral spun flanges allow for smoother airflow and added efficiency.

## Quality Assured

Every smoke fan we manufacture is tested individually in our on-site test bay to ensure its electrical loading and vibrations are in normal operating limits before undergoing visual inspection and tip-clearance checks in our dedicated Quality Assurance department. Additionally, all products within our range are independently tested to certify their capabilities under EN12101-3. All M&Y SmokeVent products are included on EC Certificate of Constancy of Performance 0086-CPR-493001.





## Cost Effective

Our highly efficient impellers provide an economic way of moving high volumes of air at low to medium pressures in standard operation mode. Improved impeller geometry including increased blade chord and twist provides 7% higher efficiency reducing overall energy consumption.

## Safety & Control

A mechanical smoke extract system that is independent from external conditions allows emergency control of the situation by the fire services. The removal of smoke assists the safety of the occupants in the event of a fire.

## Accessories

Selected in advance to avoid any on-site installation and fitting problems, for a complete solution, we provide a full range of accessories, including anti-vibration mounts, matching flanges, flexible connectors, silencers, bell mount inlets, non-return dampers and wire guards.

# Specification

## Casing

All casing parts are heavy gauge mild steel sheet, roll formed and welded, then hot dip galvanised to BS EN ISO 1461 after fabrication to provide a long lasting and robust construction. Flanges are roll formed as part of the casing. Motors and axial impellers are mounted within the length of the unit casing.

## Motors

Motors are totally enclosed metric type to IP55, with sealed for life bearings below 160 frame. Standard industrial paint finish and Class H insulation to EN 60034-5, suitable for use at normal continuous duty and a once only use under smoke operation at 200°C, 300°C or 400°C for 2 hours. Flying leads are brought out via a temperature resistant conduit system, to an external IP55 terminal box for customer cabling interface.

## Impeller

Adjustable pitch aerofoil impellers are provided with blades made from high quality aluminium (LM6) natural finish. Impellers are factory set at an angle to exact customer requirement. The hubs are manufactured from die cast aluminium alloy (LM6 or LM24). Assembled impellers are dynamically balanced to ISO 14694.

## Quality Management

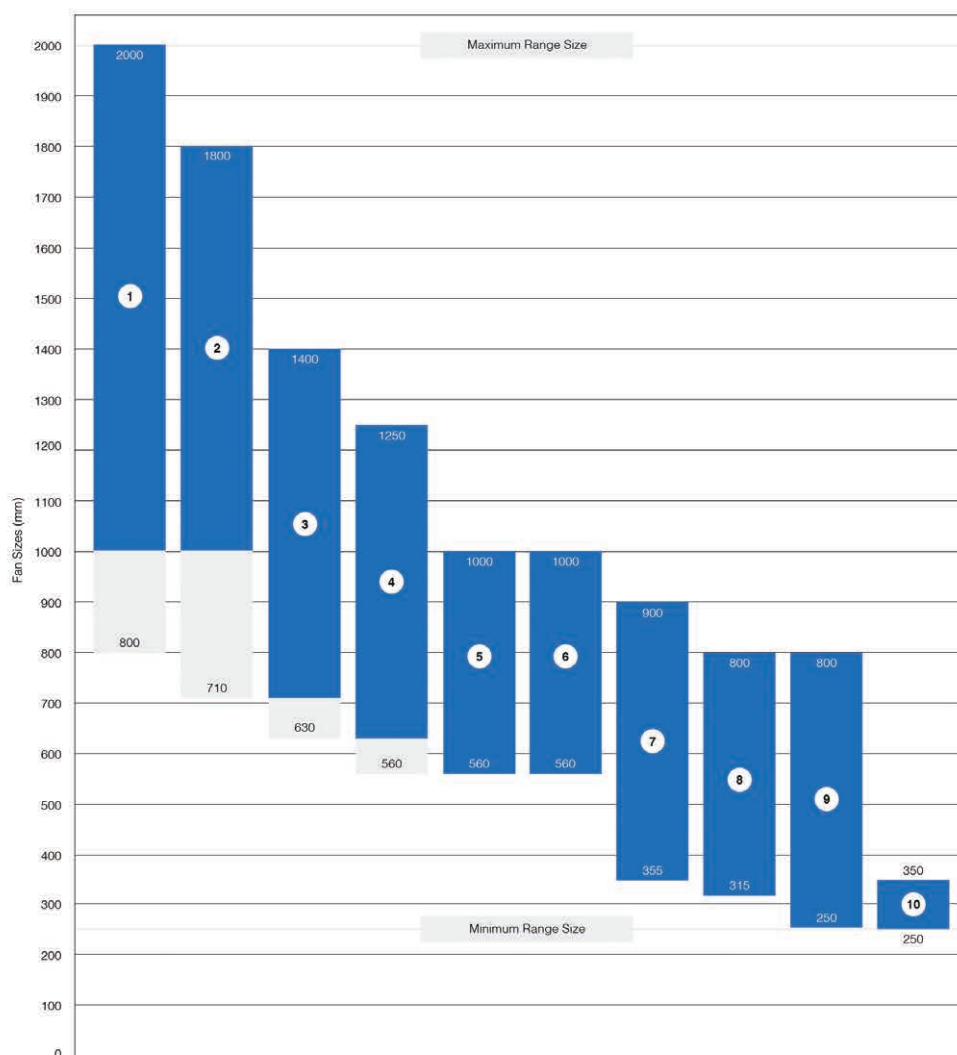
Units are certified to EN12101-3 and LPCB third party certified. Units are designed and manufactured with procedures as defined in BS EN ISO 9001. Units are tested to ISO 5801:2007 (airside performance) and BS 848 Part 2:1985 (sound performance).

M&Y has a policy of continuous product development and improvement and therefore reserves the right to supply products which may differ from those illustrated and described in this publication. Confirmation of dimensions and data will be supplied on request.



# Size Range Charts

## SmokeVent Axial Fan Range



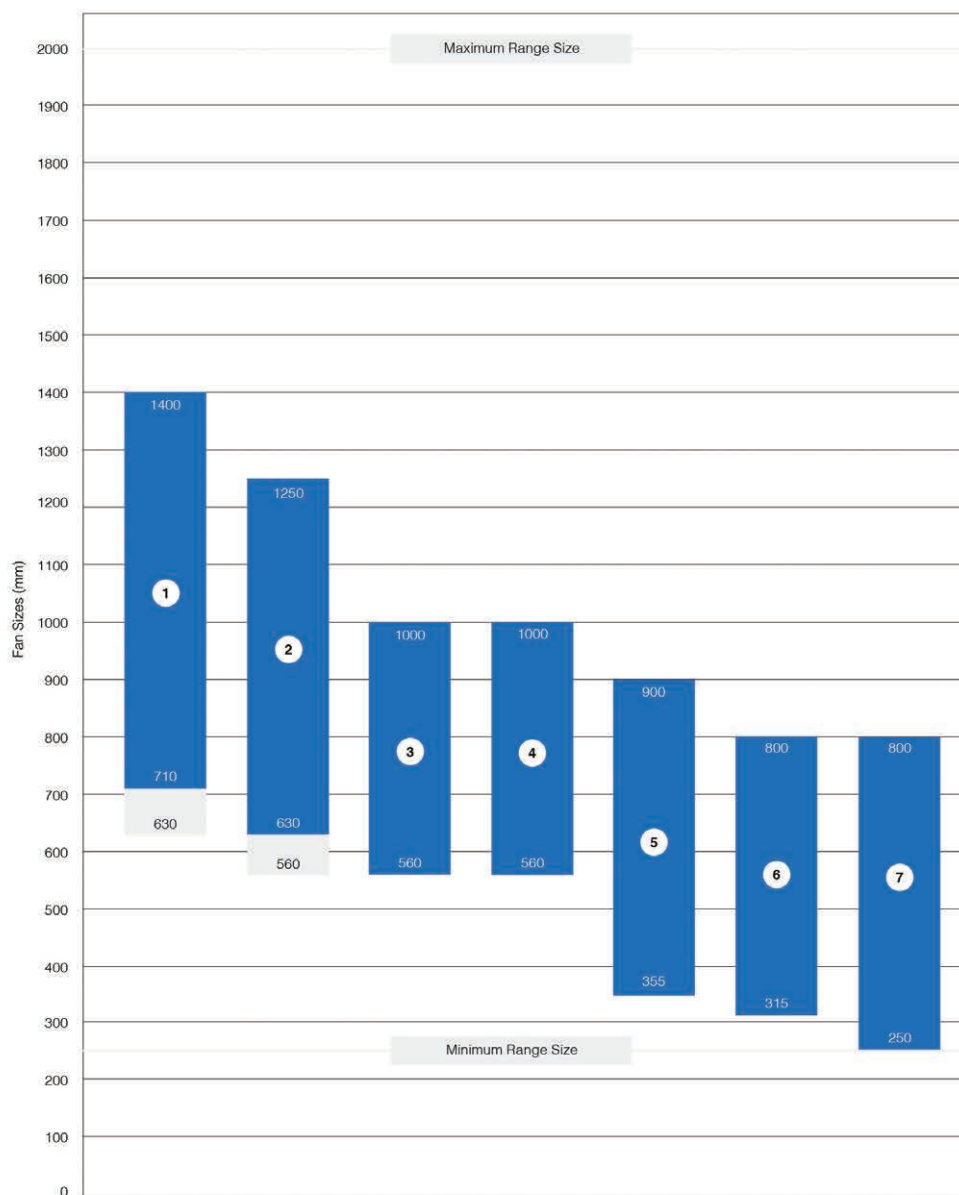
For up to 300°C applications

### Aluminium Impellers, Adjustable Pitch, Non-Geometric Series

■ M&Y Standard Sizes

■ M&Y Reduced Sizes

- |                            |                            |
|----------------------------|----------------------------|
| 1 550 Hub / 725 Blade      | 6 250 Hub / 375 Blade      |
| 2 400 Hub / 725 Blade      | 7 181 Hub / 1 Series Blade |
| 3 350 Hub / 575 Blade      | 8 150 Hub / 375 Blade      |
| 4 255 Hub / 575 Blade      | 9 131 Hub / 1 Series Blade |
| 5 251 Hub / 1 Series Blade | 10 100 Hub / 125 Blade     |



### For up to 400°C applications

#### Aluminium Impellers, Adjustable Pitch, Non-Geometric Series

■ M&Y Standard Sizes

■ M&Y Reduced Sizes

① 350 Hub / 575 Blade

⑤ 181 Hub / 1 Series Blade

② 225 Hub / 575 Blade

⑥ 150 Hub / 375 Blade

③ 251 Hub / 1 Series Blade

⑦ 131 Hub / 1 Series Blade

④ 250 Hub / 375 Blade



# Applications

M&Y SmokeVent products are suitable to satisfy the requirements for both general ventilation and smoke control. Operating in general mode fans deliver the required air changes of the application to ensure a provision of fresh air and dilution of everyday air contaminants.

M&Y provide a wide range of smoke ventilation fans that have been specifically developed to satisfy the demands of emergency ventilation. If allowed to spread, fire, smoke and other noxious fumes can endanger safe means of escape, whilst causing widespread damage to buildings. By removing these and other harmful fumes, SmokeVent assists firefighters in more readily identifying the fire source, enabling location of potential casualties and occupants still within the building for prompt escape, whilst also minimising smoke and fume accumulation.

Our SmokeVent range is designed in accordance with ErP 327/2011 of the European Parliament when intended for both ventilation under normal conditions and emergency use, at short-time duty. Products designed for emergency use only, at short-time duty with regard to fire safety requirements, are exempt from ErP 327/2011.

Typical applications include:

- Atrium smoke extract
- Car park ventilation and smoke extract systems
- Emergency stairwell pressurisation
- Marine and offshore living quarters emergency smoke extract
- Office ventilation and emergency smoke extract systems
- Roof smoke extract exhaust cowl
- Shopping precinct smoke exhaust systems
- Sports hall smoke extract

In emergency mode our SmokeVent range is designed to:

Keep access & escape routes  
**clear of smoke**

**Aid  
firefighting  
operations**

Prevent or delay flashover

**Reduce  
damage to  
the building  
structure and  
its contents**



# Car Park Ventilation

**Ventilation of covered car parks is essential for removing harmful vehicle exhaust fumes and providing assistance to firefighters by clearing smoke in the event of a fire.**

The most significant development to the car park industry has been the introduction of proven tunnel ventilation fan principles in the form of impulse and induction fans. This innovative approach provides major benefits in terms of smoke control as well as reduced capital and installation costs.

The system is based on a number of small high velocity fans carefully positioned in place of the distribution ductwork to direct the airflow towards the main extract fan intake points. The fans produce a high velocity jet which thrusts against the air in front of the fan imparting momentum to all the surrounding air through entrainment as it diffuses. The volume of entrained air is significantly greater than the air quantity passing through the fan.

Car park ventilation fans eliminate the need for distribution ductwork with resultant lower extract system resistance and reduced power consumption by the fans, resulting in savings in system running costs.

Extract smoke ventilation fans are sized to provide the required flow rates, but given the reduced need, or complete elimination, of ducting within the car park area, do not have to overcome the system resistance inherent in a fully ducted ventilation system.

## JetVent Car Park Fans

**M&Y manufacture a range of fans including axial and centrifugal variants for both general ventilation and emergency situations in car park applications.**

Our JetVent range includes induction and impulse ventilation models specifically developed to operate as both general ventilation and in once-only, emergency extract mode at temperatures of up to 400°C.

The JetVent product range has been designed to provide the specifier and client a high quality, efficient and cost effective range of car park ventilation products that are easily installed and provide the clean, uncongested lines required in underground car parks to provide safer, lighter environments.

**Model sizes: from 20N to 100N  
Temperature ranges: 300°C and  
400°C for 2 hours.**

For more information contact  
M&Y on 0844 576 0202 or visit  
[www.airhandlingunits.co.uk](http://www.airhandlingunits.co.uk)

# Fan Selection Program

The M&Y Fan Selection Program has been designed to make fan selection faster and more efficient.

Developed from the ground up, the selection program makes it quicker and easier for you to select fans from our expansive range of products. Whether you've used the program previously or this is your first time, you will find this program a helpful part of your processes.

## Navigating the Program

To navigate between the main areas of the program, simply use the main navigation buttons at the top. The program highlights the button to show which area of the program you are in. A dedicated Help source is available with the ability to define common default settings.

## Selecting a Fan

**Basic mode:** allows you to use a 5 step process to determine suitable fans, or alternatively, use a single product code.

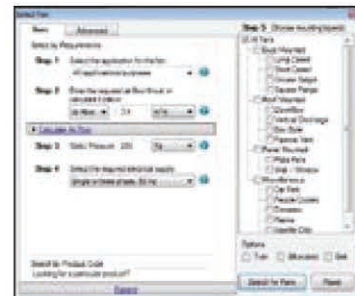
**Advanced mode:** gives you complete control over the criteria for selecting your fan.

## Silencers & Acoustic Analysis

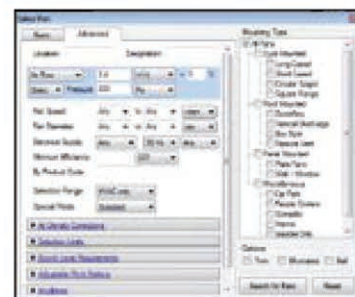
Silencer selection is available in both basic and advanced modes allowing a simple 5 step process to determine a suitable silencer or complete control over the criteria of the silencer type required.

The acoustic analysis tool allows calculations on simple systems to be made to provide a rough approximation of what noise level can be expected.

**Our Fan Selection Program has become the essential software for consultants and contractors who want fast and accurate fan and silencer selections.**



Basic Mode



Advanced Mode

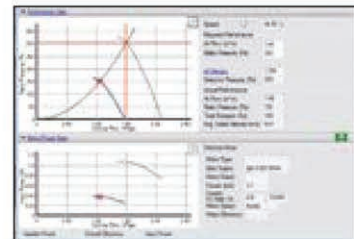




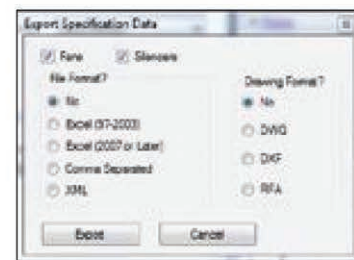
## Key Features

The latest version has been designed to make it easier for you to select, compare and schedule fans and silencers with a number of powerful new features that will help you save time.

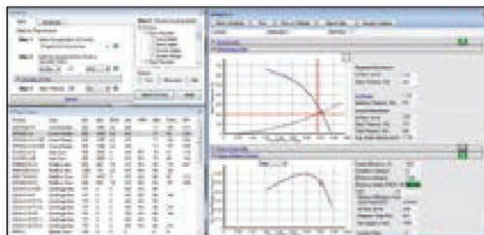
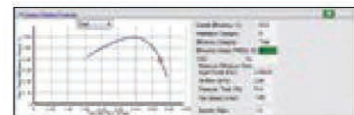
- ✓ **A more user-friendly interface**  
Easier to find what you need based on a wide choice of criteria
- ✓ **Basic and advanced user modes**  
With guidance, use the program at the level that suits you
- ✓ **Revolutionary support for variable speed fans**  
Helps you design more energy efficient systems
- ✓ **Store all 2D .dwg and .dxf**  
For a project in a folder in one quick step
- ✓ **Conveniently view technical data**  
In a single screen and recall it at any time
- ✓ **Easily select energy efficient fans**  
And calculate running costs
- ✓ **Fully integrated PDF and Excel output**  
Promoting the efficient electronic flow of data and further compliment paperless offices



Revolutionary Support



Store All Files



Convenient Data View



PDF Output

Model	Type	Flow (m³/s)	Pressure (Pa)	Power (kW)	Efficiency (%)	Cost (£)	Notes
LC2000A-P10-01	Long Case A	0.01	1000	0.1	100	10	
LC2000A-P10-02	Long Case A	0.02	1000	0.2	100	20	
LC2000A-P10-03	Long Case A	0.03	1000	0.3	100	30	
LC2000A-P10-04	Long Case A	0.04	1000	0.4	100	40	
LC2000A-P10-05	Long Case A	0.05	1000	0.5	100	50	
LC2000A-P10-06	Long Case A	0.06	1000	0.6	100	60	
LC2000A-P10-07	Long Case A	0.07	1000	0.7	100	70	
LC2000A-P10-08	Long Case A	0.08	1000	0.8	100	80	
LC2000A-P10-09	Long Case A	0.09	1000	0.9	100	90	
LC2000A-P10-10	Long Case A	0.10	1000	1.0	100	100	

Select Efficient Fans

## Customer Service

**At M&Y, we pride ourselves on our integrity and reliability as a supplier. We respect that this is your project. To ensure that your project is the best it can be, when working with us, you get a partnership with as much or as little involvement from us as you need.**

We have a dedicated sales team with individuals who are specifically trained to be experts in their individual market. When you place an order with us, you are allocated a direct point of contact to ensure consistency throughout the sales process. Our dedicated projects team constantly monitor projects, giving customers updates on their order as often as they need them.

From order processing to manufacture and all the way through to delivery, our dedicated aftersales team follow an established process to ensure we don't lose visibility of the project at any stage.





## Certifications

M&Y are committed to conforming to the highest standards. We hold a number of internationally recognised accreditations and certifications, in accordance with EN12103-3, including:

**Kite Mark KM613754**

**LPCB C937a-05**

**Certificate of Conformance of Performance 0086-CPR-493001**

LPCB third party product certification schemes are quality assurance schemes comprised of full testing of a manufacturer's quality system and production procedures, regular audit testing, labelling and listing. LPCB certified products are accepted throughout the UK and around the world.

We are also active members of professional organisations that help to shape and direct the research, legislation, trends and issues of the present and future including:

**FETA**

**FMA**

**EVIA**

**CIBSE Patrons**

**HEVAC Association**

**BSRIA**

**AMCA**

**Smoke Control Association**

### **Smoke Control Association**

The Smoke Control Association (SCA) is an independent body of experts all involved in various aspects of the smoke control sector. The association works in many fields including the publication of guides related to smoke control systems and products.

During the past 10 years, these guides have included methods for testing smoke extract fans, natural ventilators and smoke curtains which were subsequently adopted by BSI in the BS 7346 range of standards, ultimately being embraced in the EN12101 European Standards series.

All M&Y welders involved in the manufacture of SmokeVent products are coded to:

**ASME Boiler & Pressure Vessel Code**

Section IX (welding procedure qualification records & individual welder performance qualifications).

**BS ISO 15614-1:2004 A2:2012**

Welding procedure qualifications records.

**ISO 9606-1:2013**

Individual welder performance qualifications.



Ventilation Equipment Ltd

**T: 0844 756 0202**

**F: 0844 756 0203**

**E: [sales@myventilation.co.uk](mailto:sales@myventilation.co.uk)**

**W: [airhandlingunits.co.uk](http://airhandlingunits.co.uk)**

**W: [ahurefurbishment.co.uk](http://ahurefurbishment.co.uk)**

M&Y Ventilation Equipment Ltd , 104 Franklynn Road,  
Haywards Heath, West Sussex RH16 4DN