



INDUSTRIAL PROCESS AND
COMMERCIAL VENTILATION SYSTEMS

TCF INTERNATIONAL

CAPABILITIES BROCHURE



GLOBAL LEADERSHIP

Twin City Fan & Blower is a leading worldwide force in fans and blowers, delivering probably the widest range of air handling solutions for all types of applications. We are the preferred partner of many global manufacturers, a position earned by deep knowledge, excellence in design and a commitment to quality and service.

The international expansion of Twin City Fan Companies is a key part of our globalisation of manufacturing, service and support to broaden service to customers in European markets. Experienced local teams are backed by an unrivalled depth of design, application and manufacturing capability.

Our ability to respond rapidly to your requirements is based on our proven approach, which we call 'mass customisation.' We have the flexibility to tailor a huge range of well-tested standard designs to meet your precise needs. So you can have a solution that precisely matches your specification with the reliability, cost-efficiency and speed of delivery of large-scale production.

The teams in TCF International are well placed to assist with your design requirements, provide detailed drawings and costings, ensure efficient manufacture and provide all the support you need to deliver a successful project.



THE TEAM

TCF EUROPE – TCF Europe offers expanded manufacturing operations, certified in accordance with ISO9001; ISO14001 and ISO18001, strategically located in the Czech Republic. TCF Europe has a wide European sales network with headquarters in the UK, well positioned to offer industry-leading service and support throughout the entire region.

With extensive and unique fan design experience, our team can advise and assist on all aspects of fan selection and application.

TCF AZEN – To better serve the markets in the Asia Pacific Region, TCF Azen's products have been providing years of reliable ventilation on board oil rigs and vessels, and in pharmaceutical, power, water treatment and incineration plants. TCF Azen is adept at blending technical sophistication and best engineering practices to develop practical air moving solutions for a wide range of applications.

TCF CHINA – TCF China was formed to bring TCF's unmatched product offerings and services to China's booming industrial and export markets including the automotive, chemical, petrochemical, air pollution control, food processing, power generation and marine industries.

TCF INDIA – With highly skilled fan engineers and 3D designers, this branch office has developed into a highly dependable and knowledgeable engineering resource centre for the entire corporation. TCF India provides local manufacturing of the entire gamut of TCF's high quality air moving products and offers services for new installations, aftermarket retrofits, as well as consulting services.

ENERGY TWIN CITY – Twin City Fan Companies signed an agreement with our partner Energy Industrial Company to form Energy Twin City, a joint venture (JV) manufacturing company in United Arab Emirates (UAE). The company is located in Sharjah, next to Dubai, and will be producing a complete range of Twin City Fan products, servicing the entire Middle East region.

GLOBAL SALES – To complete our truly global footprint, TCF also has a localised selling operation in South America.



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INDUSTRIAL DRYER/OVENS

Whatever the form of heating used, TCF can supply low-maintenance, long-life fans to maximise the efficiency of a wide range of industrial processes.

TCF fans are incorporated into standard industrial ovens and are also custom-designed for specific applications. Working from a standardised platform gives a rapid and cost-effective way of delivering fans tailored to the precise requirement.

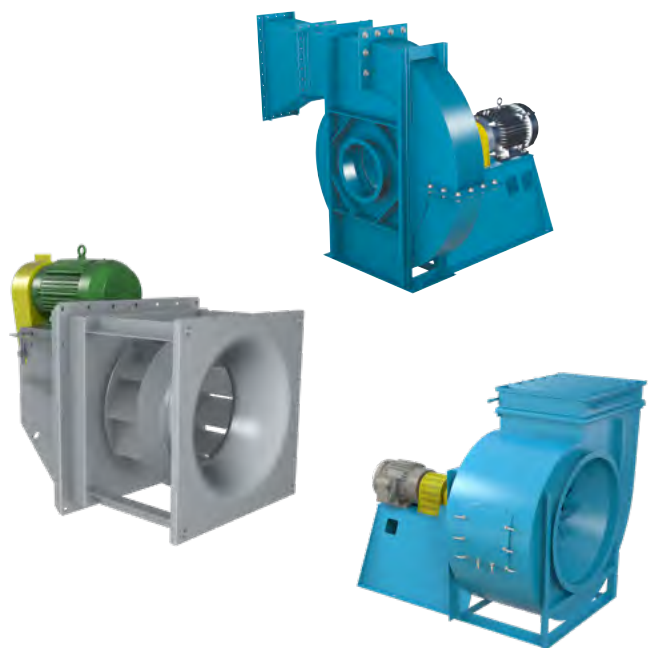
Applications range from manufacture of paper and building products, through high performance air floatation for glass manufacture to the special hygiene requirements.





FANS OFFERED CAN BE USED ON:

- Dryers
- Provers
- Coolers
- Oxidisers
- Curing Ovens
- Baking Ovens
- Chemical Coat Ovens



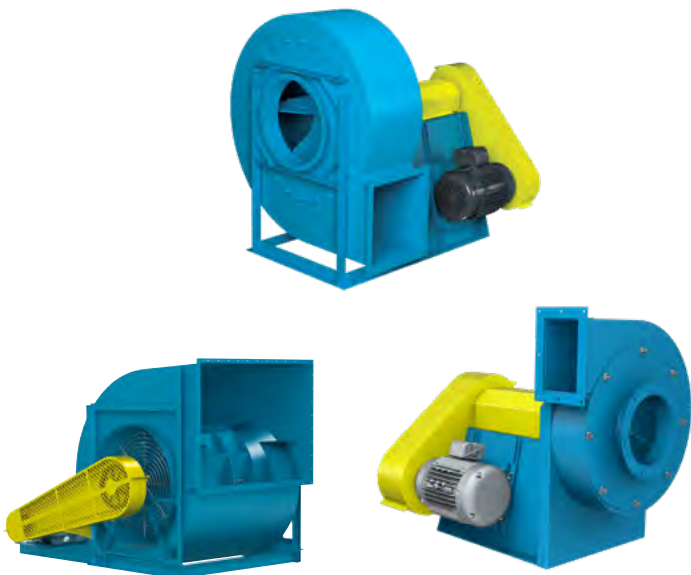
DUST CONTROL

TCF is a leading manufacturer of industrial fans and blowers for pneumatic conveying, materials handling and dust extraction and collection.

Fans are configured for a wide variety of applications based on extensive experience and deep understanding of gas stream characteristics.

Temperature, moisture and filter choice are frequently critical factors, along with the chemistry of the process. TCF applications cover a multitude of contaminants, including acid gases, hydrocarbons and condensable compounds.

TCF works in partnership with many global manufacturers of dust collection products to deliver efficient and effective solutions to support key processes.





APPLICATIONS

Abrasive Blasting and Shot Blast
Cement and Minerals
Chemicals and Plastics
Food Processing
Foundry
Glass
Grain, Agriculture and Feed
Laser Cutting
Metalworking
Mining and Mineral Products
Pharmaceutical
Plasma Cutting
Thermal Spray
Weld Fume
Wet Machining (Mist Collection)
Woodworking
Custom OEM Applications





AUTOMOTIVE

TCF works closely with many of the world's leading automotive manufacturers to provide fans for a wide range of processes.

Our fans are used in paint finishing processes, including spray booths and baking ovens, contributing to safe and efficient use in potentially hazardous operations.

Elsewhere we design and manufacture fans for use in engine manufacturing, foundries, research facilities and general assembly plants, helping to ensure safe and comfortable working environments.

Particular requirements include heavy-duty construction features such as swing out fans for rapid cleaning, pivot motor bases for quick access when making belt adjustments and spark resistant construction.





Our products play a key role in the wide array of processes and general ventilation for the automotive industry including:

PAINT FINISHING SYSTEMS

- Air Supply & Filter Houses (OEM and Field Build-Up)
- Spray Booth Exhaust
- Enclosures & Decks, Manual Booth and Tack Off Booth
- Baking Ovens / Heater Boxes
- Heated Flash
- Forced Air Coolers
- Phosphate & ELPO (Electrodeposition Primer)
- RTO for Abatement Systems

ENGINE MANUFACTURING AND FOUNDRIES

- Dust Collection
- Welding, Fume and Smoke Removal
- Pollution Control
- Furnace and Oven Recirculation
- Cupola Exhaust

GENERAL HVAC FOR PLANT VENTILATION AND HUMAN COMFORT

- Rooftop Exhaust
- Sidewall Exhaust and Supply
- Emergency Smoke Control Systems
- Energy Recovery
- Make-Up Air and OEM AHUs
- Office and R&D Facilities

SERVICE AND REPAIR FACILITIES

- General HVAC
- Vehicle Exhaust Systems



AIR POLLUTION CONTROL

TCF offers a comprehensive choice of fans that meet the stringent requirements of air pollution control.

Our fans contribute to key processes that destroy contaminants or remove them from airstreams before they are released into the atmosphere.

Special features can include leak-tight design and special sealing characteristics. Construction materials take account of process temperatures and potential contaminants within the airstream including spark resistant construction (ATEX where required).

With wide knowledge of the technical requirements of pollution control and a vast range of design options, TCF can contribute to safe and efficient processes for any industry or utility.





DUST CONTROL

- Dust Collection Systems
- Baghouses
- Cyclone Collectors

SCRUBBERS

- Baffle Spray Scrubbers
- Cyclonic Spray Scrubbers
- Ejector Venturi Scrubbers
- Mechanically Aided Scrubbers
- Spray Towers
- Wet Scrubbers

NOx CONTROL

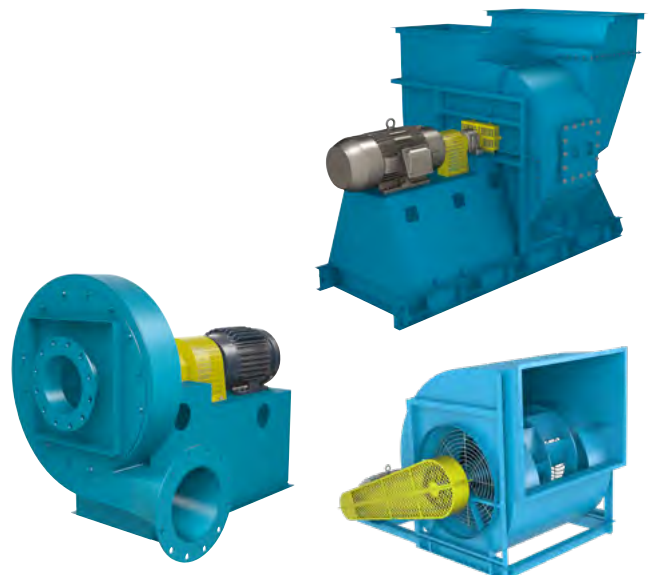
- Low NOx Burners
- Selective Catalytic Reduction (SCR)
- Selective Non-Catalytic Reduction (SNCR)
- NOx Scrubbers
- Exhaust Gas Recirculation
- Catalytic Converter (also for VOC control)

VOC ABATEMENT

- Adsorption Systems
- Flares
- Thermal Oxidizers
- Catalytic Converters
- Biofilters
- Absorption (Scrubbing)
- Cryogenic Condensers
- Vapor Recovery Systems

ACID GAS/SO2 CONTROL

- Wet Scrubbers
- Dry Scrubbers
- Flue Gas Desulfurization



AGRICULTURE

TCF designs and manufactures fans for a wide variety of agricultural applications, meeting the needs of farmers, feed manufacturers, cooperatives and processors.

From harvest, through drying, storing, processing and packaging, TCF fans are used in all types of agricultural applications.

Specially designed fans are supplied for meeting the hygiene and comfort requirements involved in ventilating housing for animals, including cattle, pigs and poultry.

From the spark resistance (ATEX) required for grain handling, to the precise climate control involved in freezing and packaging produce, TCF has all the options required by the agricultural business.





GRAIN DRYING, CONVEYING AND STORAGE

- Seed Corn Dryers
- Grain Dryers
- Dust Collection and Separation
- Pneumatic Conveying
- Grain Storage Ventilation

FRUIT AND VEGETABLE STORAGE

- Blast Freezing
- Precise Climate Control
- Packaging Plants
- Freezers and Refrigeration

LIVESTOCK VENTILATION

- Cattle and Pig Housing
- Dairies
- Poultry Buildings

AGRIBUSINESS

- Seed Genetics
- Research Lab Exhaust
- Animal Feed Production
- Material Handling



POWER GENERATION

TCF fans are key components of power generation systems of all types around the world.

With our expertise in air moving equipment, we are a major supplier for plants using coal, oil and gas, hydroelectricity and biomass.

Our full line of fans for boiler systems cover Selective Catalytic Reduction (SCR), desulphurisation and dust collection, turbine cooling and exhaust, bus cooling, mist collection and enclosure ventilation. TCF fans are also used in combined cycle gas turbines including the HRSG.

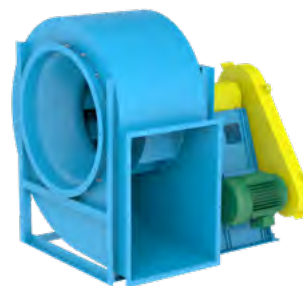
With robust design and high reliability, TCF fans are specified in power generation systems across the globe. In addition we repair and provide retrofit parts for fans from a variety of other manufacturers.





TYPICAL APPLICATIONS

- Forced Draft
- Induced Draft
- Bus Cooling
- Dust Collection
- HSRG / SCR Processes
- Enclosure Ventilation
- Mist Collection
- Turbine Cooling and Exhaust



OIL & GAS/ PETROCHEMICAL

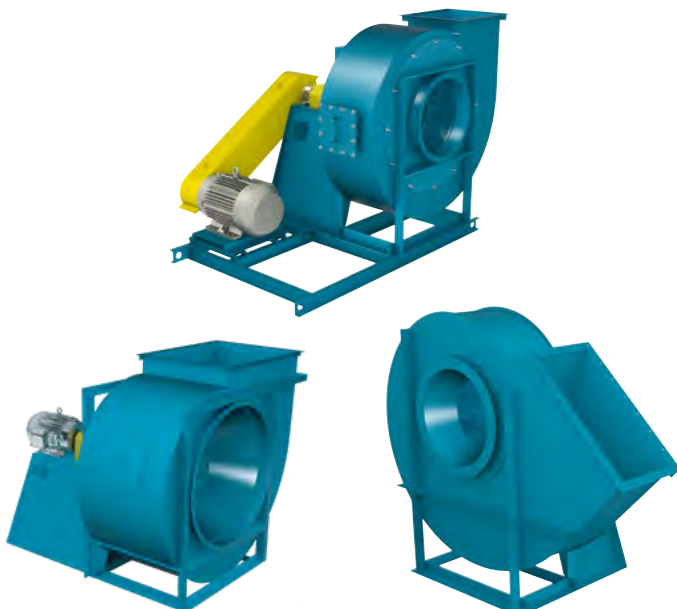
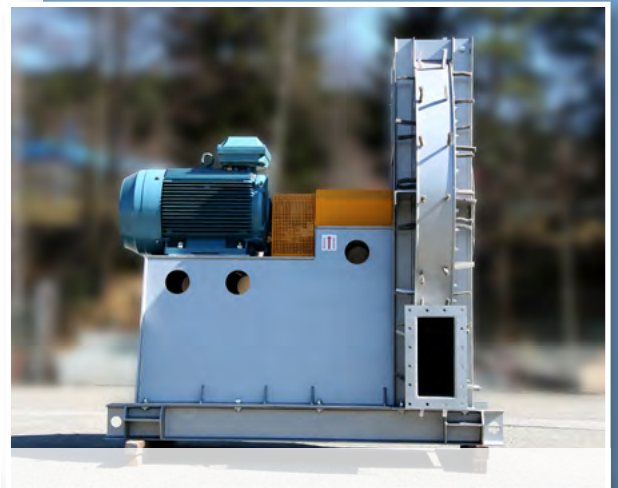
TCF fans have a long history of meeting the challenging requirements of petroleum refining and the production of chemicals and plastics.

Our heavy-duty industrial fans are customised for virtually any application, including:

- Flare Stacks
- Thermal Oxidisers
- Heating (Fired Heaters) Combustion Air
- Desulphurisation
- Dryers
- Pollution Control
- Material Handling
- Steam Generation

To meet the harsh environments encountered with many processes, a wide range of options include special bearings, disc couplings and mechanical shaft seals and speciality coatings.

TCF fans comply with industry standards including:
ATEX (Atmosphères Explosives) Directive 94/9/EC
API (American Petroleum Institute) Standards 560 and 673
AWS (American Welding Society) D1.1 & D14.6
AMCA
(PIP) Process Industry Practices
ASME (American Standards of Mechanical Engineers)





PHARMACEUTICAL

The close control required in the development and manufacture of pharmaceuticals is well met by the innovative solutions and rigorous quality supplied by TCF.

Our ground-breaking designs for fume hoods and lab exhaust applications have made us a preferred supplier of fans to pharmaceutical manufacturers around the world.

With an extensive product line we can meet the specialists' air moving requirements of the industry. TCF continues to develop new techniques and investigate new materials to increase the options available.

TYPICAL APPLICATIONS

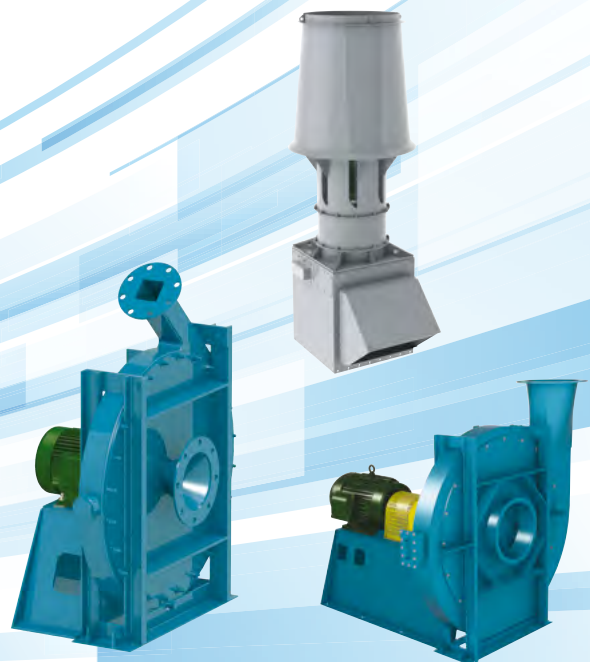
Dust Collection

Laboratory & Fume Exhaust

General HVAC

Clean Room Exhaust

Gas Tight Processes



HVAC

TCF offers the most comprehensive range of fans for heating and ventilating in all types of buildings.

Our proven designs are an integral part of the climate control systems of offices, residential blocks, shopping malls, airports and stadiums.

In addition to providing packaged air handlers and roof-top units, we can supply exhaust for garages, kitchens, elevator shafts, stairwells and jet bridges.

Our philosophy of 'mass customisation' ensures that a proven design can be applied with confidence to meet the needs of any building.





OEM

A wide variety of manufacturers rely on TCF fans as key components in their manufacture. Our ability to customise fans to precise requirements and deliver consistent high quality in volume is recognised around the world.

Examples include:

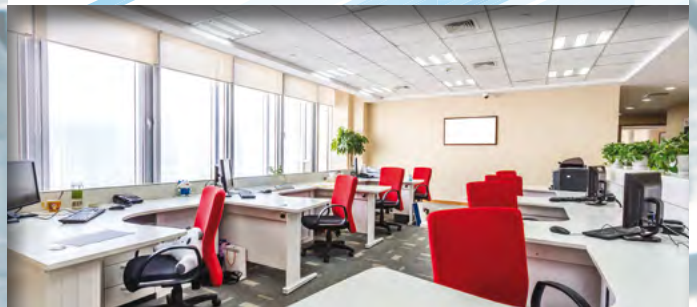
- HVAC and Air Handling Units
- Custom Air Handling
- Packaged Units
- Make-Up Air
- Energy Recovery Units
- Lab Exhaust

EQUIPMENT FOR PROCESS AND MANUFACTURING

- Dryers
- Ovens
- Freezers
- Welding Exhaust
- Spray Booths
- Dust Collection
- Environmental Pollution Control

SPECIFIC INDUSTRIES

- Paper
- Grain Drying
- Milling
- Road Sweepers
- Engine/Motor Cooling



TCF INTERNATIONAL

Industrial Air Movement

TWIN CITY FAN EUROPE

(Sales, Engineering & Manufacturing)

TCF Vzduchotechnika s.r.o
Průmyslová 920
38301 Prachatice, CZ

Tel: (+420)-388-317-302

Email: sales@tcf.cz

TWIN CITY FAN SOUTHEAST ASIA

(Sales, Engineering & Manufacturing)

TCF Azen PTE Ltd.
No. 8 Tuas Link 1, Singapore 638593

Tel: (65)-6261-0277

Email: inquiry@azen.com.sg

TWIN CITY FAN CHINA

(Sales, Engineering & Manufacturing)

TCF Shanghai Ltd. Co.
No 359, Fengjin Road, Xidu Industry Park
Fengxian District
Shanghai, 201401

Tel: (86)-21-67107525

Email: sales@tcf-china.com

TWIN CITY FAN INDIA

(Sales & Engineering)

TCF India Pvt Ltd.
New No 60 PMS Towers 1st Floor
Kundrathur Road
Porur, Chennai 600116

Tel: (91)-44-24829912

Email: salesindia@tcf.com

TWIN CITY FAN MIDDLE EAST

(Sales, Engineering & Manufacturing)

Energy Twin City
PO Box 24021, Sharjah Industrial Area
United Arab Emirates

Tel: 971-6534-3488

Email: energyco@energyind.ae

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