

# Fabric Filter Services



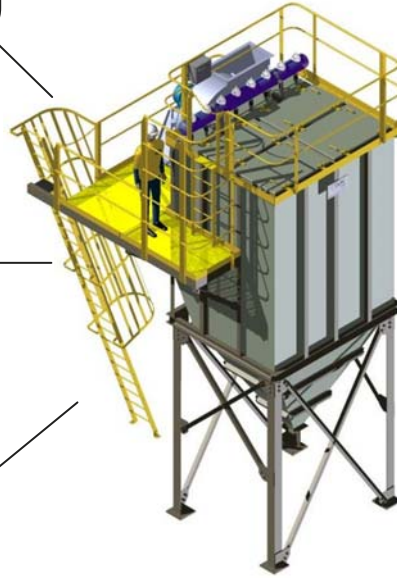
Service and Maintenance



Inspections and Audits



Refurbishment and Upgrades



New Installations



Replacement Parts



Upgrade Parts



**We're there to help when you need us.**

No matter what industry you're in, your filtration system can be one of the most critical pieces of equipment in your plant with the potential to halt or limit production due to poor performance.

TAPC's Filtration division has one goal....to help you keep your filtration system working well so that you can maintain or increase production levels. To achieve this goal, TAPC has assembled a skilled team of knowledgeable professionals in all disciplines related to fabric filter maintenance and upgrading. When you contact TAPC, you have instant access to the best engineers, construction managers, site engineers, and inspection service experts in the industry.

No other air pollution control company has this depth of expertise.

Over the past decade, TAPC has become widely known for innovative, imaginative solutions to the air pollution problems encountered by companies in this region. We specialize in customized remedies for the emission control challenges faced by our customers, regardless of the pollutant that they have.

**Total Air Pollution Control Pty. Ltd.**

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# Service and Maintenance



## Experienced, Professional, Safe, and Reliable

TAPC have an expert crew of skilled site managers and tradesmen with many years of detailed experience in all types of fabric filters. Behind our service crews are a full team of project managers and engineers who can determine and resolve any issue that you may be having.

Currently TAPC services and maintains many filtration systems across Australia and SE Asia - many under long term maintenance contracts with the region's largest customers. If we're not currently servicing your filtration equipment, why not give us a call and give yourself peace of mind.



### Professional Planning



### Expert Project Management

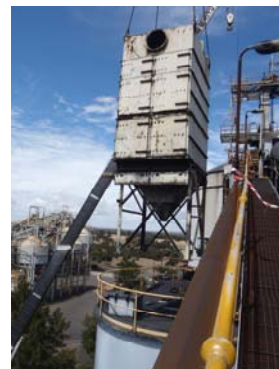


### Site Works completed timely and with uncompromising Safety and Quality.



### TAPC Advantages

- ✓ Hundreds of completed projects
- ✓ Specialised tooling and jigs for fast and accurate installation of all types of filter bags and elements.
- ✓ Highly experienced service personnel
- ✓ Service vehicles stocked with specialised tools, jigs, safety equipment, and fasteners.



### Partial Reference List

- Adelaide Brighton Cement
- Alcan
- Alcoa
- Bakels
- Barrick
- BHP Billiton
- Boral
- BlueScope Steel
- Carter Holt Harvey
- Cement Australia
- Cockburn Cement
- Continental Carbon
- CSR
- Dairy Farmers
- Doral
- Dulux
- Golden Bay Cement
- Harsco
- Holcim
- Iluka
- Incitec
- Kimberly Clarke
- Lycopodium
- Manildra
- Metal Manufacturers
- NRG
- Nyrstar
- Onesteel
- Orica
- QAL
- QCL
- QNI
- Rio Tinto
- Simcoa
- Temco
- Tiwist
- Vesuvius
- Visy Paper
- White Energy
- Worsley
- Xstrata



# Service and Maintenance



## Inspections and Audits

Many of our clients need assistance to evaluate their Fabric Filter performance, to identify issues and to provide recommendations for maintenance and performance improvements.

TAPC have un-matched specialist expertise and knowledge to assist in these areas and have undertaken hundreds of Fabric Filter inspections and audits over the years throughout Australia, New Zealand and SE Asia.

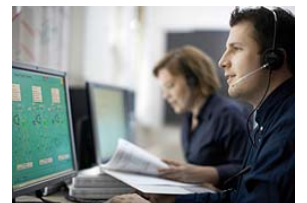
A thorough inspection is the first essential step in maximising fabric filter performance. TAPC inspection personnel are trained to examine your unit and report their findings using comprehensive guidelines. After the inspection of your filter, our representative will discuss with you their initial findings. The report is then subjected to a thorough TAPC engineering review to ensure that our final written recommendations are in line with your long term objectives and meet your satisfaction.

We have designed our inspection report to specifically identify those areas which are reducing the operational efficiency of your filter. Conditions requiring immediate repair are identified, along with identification of future issues and upgrade options for improved performance.



## Remote Troubleshooting

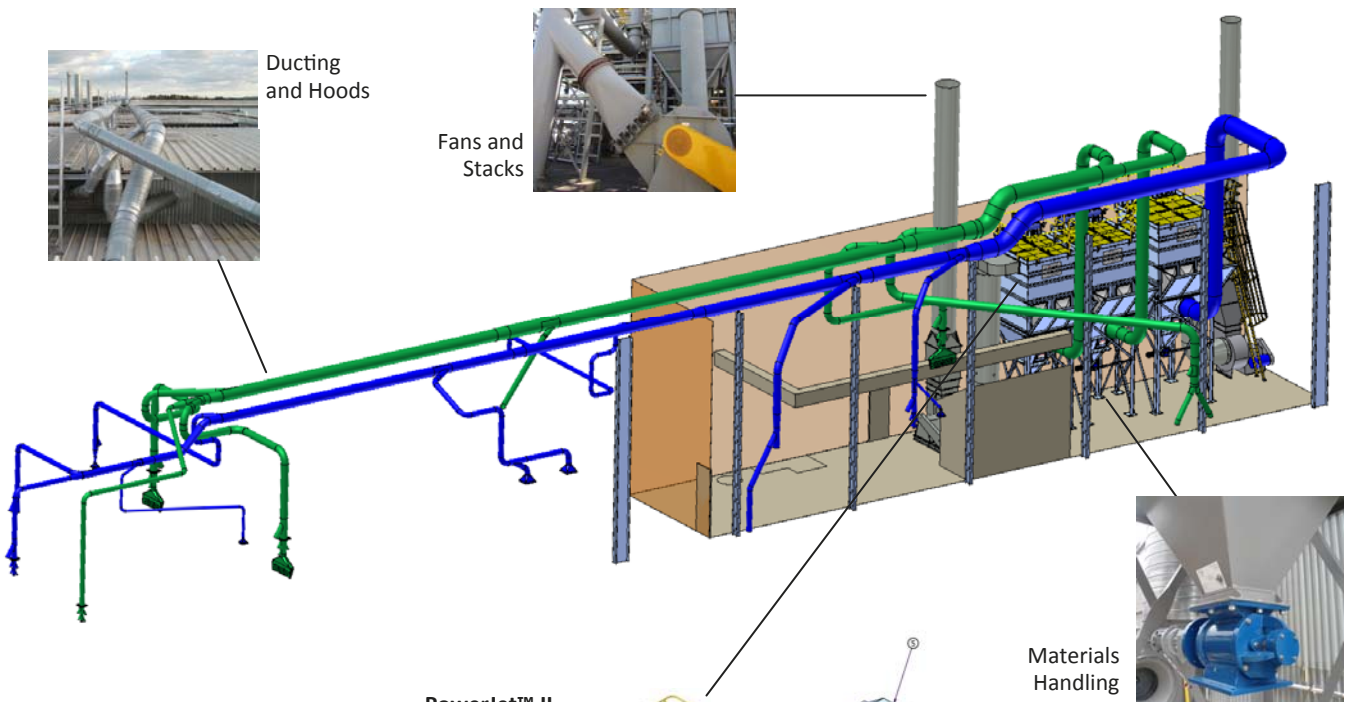
TAPC Engineers are available to assist either online or via phone free of charge. Please email us at [help@tapc.com.au](mailto:help@tapc.com.au) or call us on the numbers on the back of this brochure. Also, you can visit the troubleshooting area of our web site 24 hours a day - the answers you're after may already be there.



# TAPC PowerJet™ Filtration Systems



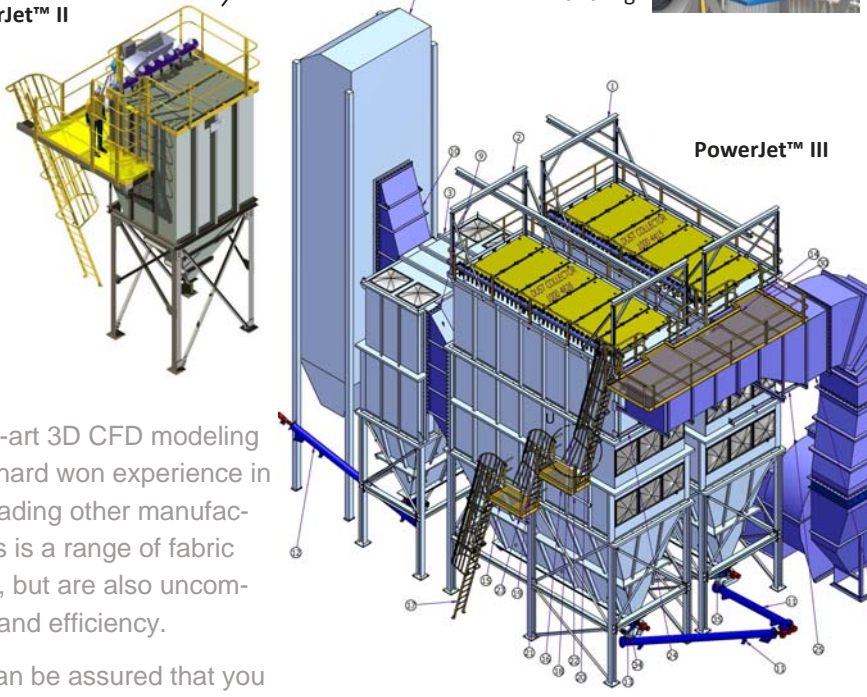
Complete end-to-end services



## TAPC PowerJet™ Fabric Filters

Many years of experience have provided the basis for our latest generation PowerJet™ fabric filters, creating what we believe is the best industrial filtration system available anywhere in the world today. In designing our latest generation units we have combined state-of-the-art 3D CFD modeling with real world field testing and years of hard won experience in building, repairing, redesigning and upgrading other manufacturer's bag filters. The culmination of this is a range of fabric filters that are not only economic to build, but are also uncompromising in engineering design, quality and efficiency.

When you buy a TAPC fabric filter you can be assured that you are buying the best, most robust, industrial filter on the market today.





# Case Histories



Is your plant failing to meet higher production targets due to emissions from your process?

Has the performance of your existing filtration system deteriorated over time?

Maybe we can help in one of the following ways:

- **Repairing and refurbishing** your unit to bring it back to its original performance.
- **Upgrading** your unit with modern technology including advanced TAPC PowerJet™ Pulsing Systems and performance filters.
- **Installing** a new TAPC PowerJet™ fabric filter to improve performance.

At TAPC we have multiple options to help you achieve your production and emission goals.



## Case History - Refurbish

**Processing Plant, Australia** - Plant refurbishment.

**Background:**

This customer shifted their entire process lines from one location to another. In doing so they were keen to improve their production and environmental performance.

**Outcomes:**

TAPC designed and installed multiple new efficient ducting and hooding systems to vastly improve fugitive dust emissions. All existing filters were completely refurbished.



## Case History - Upgrade

**Steel Manufacturer, Australia** - Lime Kiln Vent filter (2002)

**Background:**

Poor air extraction and poor reliability led this customer to require a complete upgrade of their aging shaker unit. TAPC installed a new fan, ducting, hoods, pulse-jet system and PulsePleat™ filters.

**Outcomes:**

The performance increase was substantial with emissions below 10mg/Nm<sup>3</sup> (well below EPA requirements). More importantly, the lime discharge area was free of air born dust for the first time in many years allowing safe access for personnel.



## Case History - New PowerJet™ Fabric Filters

**Paint Manufacturer, Australia** - Pigment mixing lines (2013)

**Background:**

This customer had poor air and dust extraction around their existing mixing areas. Following a complete examination of the site, TAPC designed an entire new ducting system and hoods venting through three TAPC PowerJet™ fabric filters. The filters included explosion panels and the latest technology PulsePleats™ with Prevail™ ePTFE membrane to account for the ultrafine and potentially explosive dust. This was a complex turn-key project including full installation and commissioning during a very brief plant shut down over Christmas.

**Outcomes:**

A glowing report of the project was written in the company's internal newsletter;

*"A major upgrade of the dust extraction system has proven to be a great success with improvements to dust extraction, energy efficiency and the working environment. Feedback from the plant has been overwhelmingly positive as airborne dust is now under control"*

TAPC was subsequently awarded a further filtration system upgrade at another of the company's sites.



## Spare Parts - Direct Replacement



### Filter Bags

We manufacture virtually any type of filter bag or cage. Typical fabric filters (or baghouses) have cylindrical bags hanging vertically in the unit, representing a critical component of operation. Bag fabric and design should be designed for maximum filtration efficiency, dustcake release, and durability. Our engineers can help you select the appropriate fabric and design of bag to suit your collector - call us for help.



Our fabrics and construction meet or exceed the requirements of any OEM specification for quality and design.

| FABRIC GUIDE   | Poly-propylene | Polyester | Acrylic   | PPS        | Aramid    | Fiberglass | P84          | PTFE (Teflon) |
|----------------|----------------|-----------|-----------|------------|-----------|------------|--------------|---------------|
| Max. Temp.     | 77° C          | 135° C    | 130° C    | 190° C     | 204° C    | 260° C     | 260° C       | 260° C        |
| Water Vapour   | Excellent      | Poor      | Excellent | Good       | Good      | Excellent  | Good         | Excellent     |
| Alkaline gases | Excellent      | Fair      | Fair      | Excellent  | Good      | Fair       | Fair         | Excellent     |
| Acid gases     | Excellent      | Fair      | Good      | Excellent  | Fair      | Poor       | Good         | Excellent     |
| Oxygen (> 15%) | Excellent      | Excellent | Excellent | Poor       | Excellent | Excellent  | Excellent    | Excellent     |
| Relative Cost  | \$             | \$        | \$\$      | \$\$\$\$\$ | \$\$\$    | \$\$\$     | \$\$\$\$\$\$ | \$\$\$\$\$\$  |

### Cages, Venturis, Clamps

TAPC manufactures cages for use in most fabric filters. Properly designed cages serve as critical components for optimum bag performance and durability.

Cages are traditionally constructed of one of the following:

- Low carbon steel (bright basic wire)
- Galvanized low carbon steel
- 304 stainless steel
- 316 stainless steel
- Other specialty materials
- Teflon® and epoxy finishes to prevent chemical attack



TAPC offers a full range of replacement filter cages for all OEMs. Our materials and construction meet or exceed the requirements of any OEM specification for quality and design.

In addition to cages, we also supply all types of venturis such as Mikropul, Filtaire, FLS and Redecam, as well as many more.

### Pulsing System Components

TAPC supplies all the components associated with the pulse cleaning systems on reverse jet fabric filters. These systems are typically made up of a number of components:

- Diaphragm pulse valves, replacement diaphragms and springs (including Goyen, Asco, Autel and others)
- Solenoid valves
- Header tanks
- Electronic Timer
- Pressure regulator and gauges

TAPC also supplies upgrades from standard pulsing systems to our PowerJet™ system.

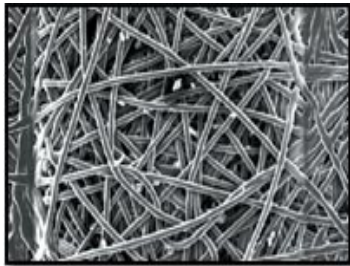


## Spare Parts - Fine Filtration Upgrades

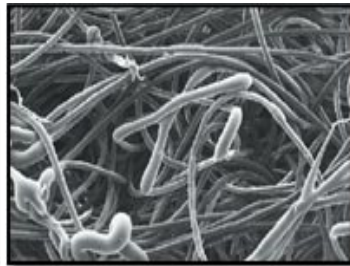


### PulsePleat®

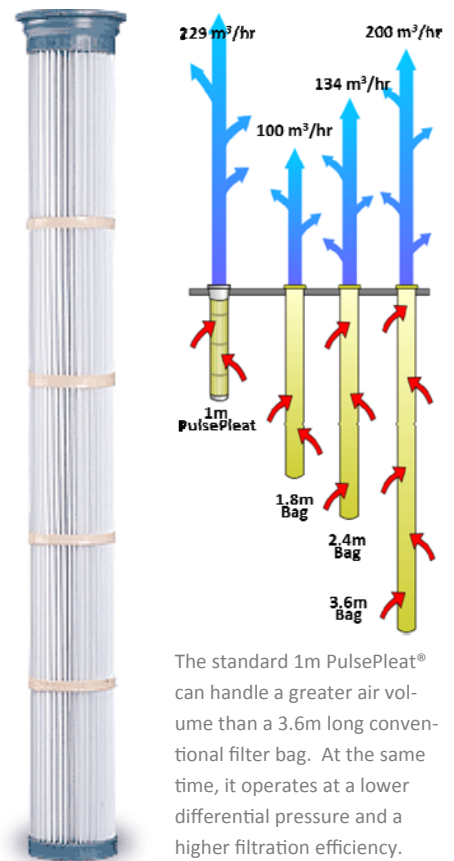
The unique PulsePleat® media is unlike traditional felt or woven fabrics in that it has a tight pore structure which resists penetration of particulate and has rigid physical properties that allow it to hold a pleat without the need for supporting backing material. The media is pleated and moulded into a filter element that can increase filtration surface area 2 to 3 times compared to conventional filter bags, dramatically increasing filtration efficiency while operating at significantly lower differential pressures. Spun bond media is manufactured by layering fine denier fibres from multiple spinning heads onto a moving mat. This depth of fibres is then calendered under heat and pressure. Spun bond media can withstand temperatures up to 135°C.



Face view of spun bond polyester (100x)



Face view of conventional needlefelt polyester (100x)



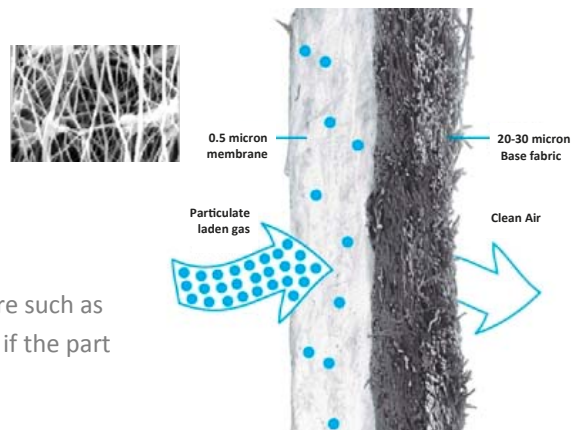
The standard 1m PulsePleat® can handle a greater air volume than a 3.6m long conventional filter bag. At the same time, it operates at a lower differential pressure and a higher filtration efficiency.

### Preveil™ ePTFE Membrane Fabrics

Preveil™ membrane is an expanded microporous PTFE membrane (ePTFE) that is bonded to the surface of conventional filter media, including felts and woven fabrics.

Made from virgin PTFE resin, Preveil membrane is manufactured in climate-controlled cleanroom environment, which allows a membrane with exceptional lamination strength and controlled specifications. Preveil membrane filter media is tested and inspected to assure the filter bags are the highest quality.

- Highest filtration efficiencies (99.99+%) for lowest possible emissions, even at sub-micron levels
- Excellent dustcake release on cleaning helps keep pressure drop low and maintain stable system operation
- Reduced agglomeration for hassle-free baghouse operation
- Greater airflow and/or lower energy consumption helps provide quick return on investment

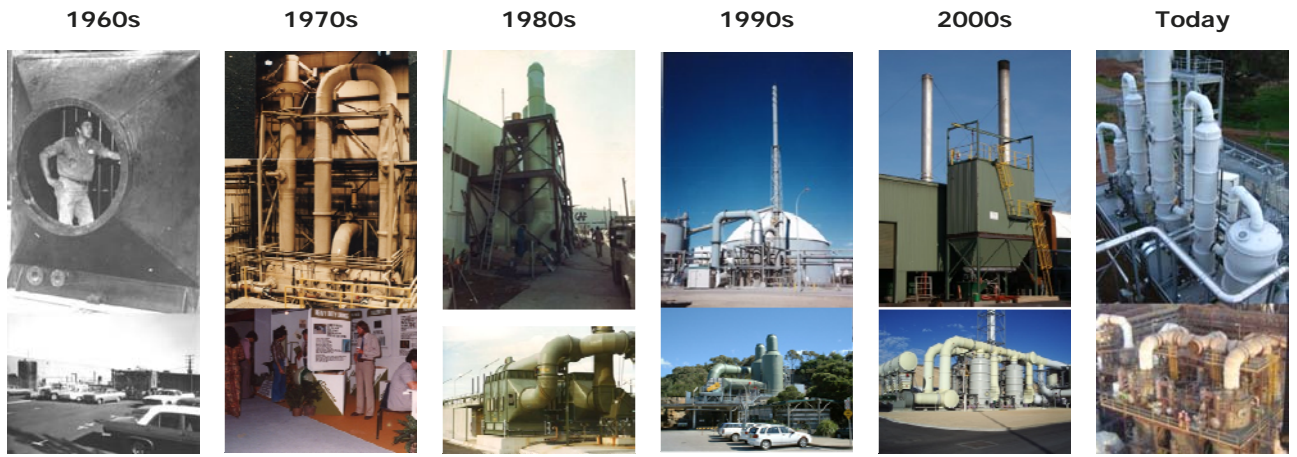


### Other Parts

We also supply many parts for filtration systems that are not listed here such as materials handling, fans, dampers, instrumentation etc. Please call us if the part you require is not listed here.



## Air Pollution Control Experts since 1968



### History

In 1968 Ceilcote Tasmania was formed as a specialist producer of fibreglass packed bed scrubbers based on Tellerette packing. Ceilcote became Transfield RPC in the 1980s and Horizon APC in the 1990s. In 1998 the Environmental Group (EGL) acquired Horizon APC to augment its existing air pollution control business that included activated carbon systems and flares. From 1998 until 2012, the business grew to become the largest in Australia at removing gaseous pollutants from industrial processes.

In 2001 TAPC was formed as the Australasian representative for BHA Group Inc. TAPC quickly established itself as one of the region's leading industrial air pollution control companies in the field of particulate capture using electrostatic precipitators and fabric filters.

In 2007 the Environmental Group (EGL) acquired TAPC to add particulate capture technologies to its already substantial gaseous pollutant technologies. In 2012 it was decided to merge the two business units into one entity; Total Air Pollution Control (TAPC). In so doing, forming Australia's largest and most comprehensive air pollution control company. No matter what the pollutant, TAPC has the technology, experience and capability to capture it.

EGL is listed on the Australian stock exchange under the code "EGL". TAPC is a wholly owned subsidiary of EGL.



### Australia's Leading Air Pollution Control Company.



Gas Scrubbing



Fabric Filters



Electrostatic Precipitators

#### Total Air Pollution Control Pty. Ltd.

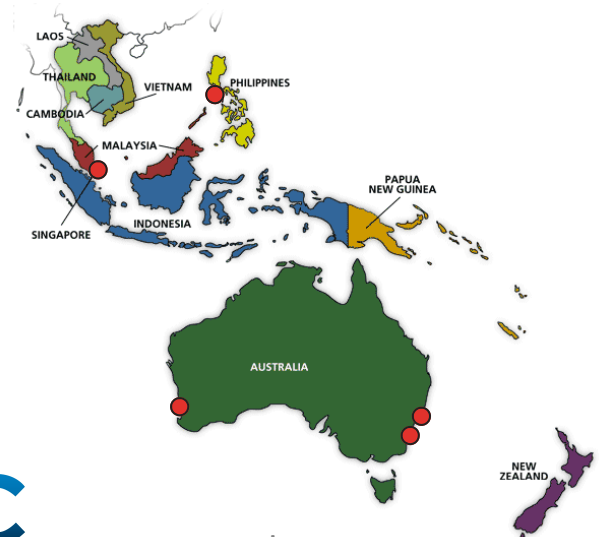
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