



# simplifying **AFC Cleaning**

## SERVICES AVAILABLE

- **Air Fin Cooler cleaning (online)**  
Mechanical cleaning with semi automatic system
- **Internal cleaning of condensers**  
Mechanically with special bullets propelled by water
- **Design & manufacturing of custom build cleaning systems for ACC's & AFC's**
- **Air Fin Cooler (AFC) AUDIT**  
Professional assessment of the site and bring ideas for improvement of the plant to the clients attention
- **Air Fin Cooler re-tubing**  
Professional assessment and re-tubing of the Air Fin Cooler (AFC) to the required industry standards

## TECHNOLOGY THAT WORKS FOR YOU

Over the years it was proven to keep your Air Fin Coolers (AFC) clean to upkeep its performance. AFC Cleaning has a semi-automatic cleaning system which is designed to the high German standards and manufactured 100% in South Africa. Their specially trained teams are providing the customer with an excellent service in keeping the Air Fin Coolers (AFC) clean by removing with their semi-automatic cleaning system the buildup contamination by the enormous air flow, which will result in a substantial increase of heat transfer resistance and loss of performance.

The cleaning process is environmentally friendly, during the process there are NO additives added; only the supplied water is used.

The result of a regular service of the AFC:

Professional service of the AFC extends the life span, increase productivity and is saving the environment.

By achieving increased productivity with the mechanical cleaning the Return On Investment (ROI) is achieved in a short time period.



## Internal Tube Cleaning (ITC)

### How does it work?

Through the water flushing action, all soft and hard deposits are shot out ahead of the cleaners, leaving the tubes in an as-new condition.



### 'A Whole New Game Plan'

#### The Pro's of using the "bullets" for internal cleaning:



- Effective at all kinds of deposits
- Effective cleaning of all tubes
- Spring loaded "bullets" for uniform cleaning
- Improves tube surface, by removing pitting & other deposits
- Possibility of taking selective deposit samples
- Longer operating life of tubes when done regularly
- Quick performance (3-6m/sec)



#### The ITC cleaning process:





## Semi-automatic cleaning system for Air Fin Coolers (AFC)

With the cleaning system of the company AFC Cleaning (Pty) Ltd it is possible to wash out the known fouling which occurs in AFC's (like leaves, insects, dust, sand etc.).

Our cleaning systems constitute the following components:

1. Chassis for cleaning system:
  - a. A chassis which can be used as a ladder can be designed to customer specification
  - b. Material: aluminium and stainless steel
    - i. The Chassis is guided in a rail below the steam ducts.
    - ii. The rails are mounted without any welding or drilling.
    - iii. The horizontal movement of the cleaning system is manual (standard option), if required by client a fully automated system can be designed.
    - iv. The chassis is the base for the drive unit and the nozzle beam.
2. The drive unit:
  - a. Geared motor unit with special pulleys which drive the nozzle beam vertically along the chassis.
3. Nozzle beam:
  - a. Have two rows of nozzles.
  - b. The configuration of the nozzles depends on the type of air fin cooler and the amount of water availability, to achieve the best washing of the AFC.
4. Control Unit:
  - a. It Controls the drive unit and the speed of the nozzle beam.
  - b. It can be designed to control the High pressure pump (HP pump) as well.
  - c. It is equipped with all required safety controls (e.g. emergency stop).
5. High Pressure Pump:
  - a. The HP-pump supplies the nozzle beam with the required water and set pressure through connected HP-hoses.
  - b. It can be controlled form the control unit (design permitting) or directly at the HP-pump.
  - c. The HP-pump can be installed to be stationary or movable.

**THE MANUFACTURING OF THE PATENTED CLEANINGSYSTEM IS  
100% MADE IN SOUTH AFRICA.**

**It is a perfect combination of German engineering and South African manufacturing.**

## COMPANY PROFILE

The key personnel of the company are Mr Günter Rehkamp (since 1992 involved in development and auditing of AFC cleaning equipment), the technical expert, who is in charge of the design of the permanent installed cleaning system and the service cleaning systems, Tassilo Matthiessen (since 2005 involved in the AFC cleaning market), the Managing Director, whose expertise is the day to day running of the company, overseeing production, marketing and devising new strategies, and Johan Wehmayer, who is the financial director.

The company AFC Cleaning (Pty) Ltd is based in Gauteng, the economic heart of South Africa.

The company works closely together with Kelvion (formerly known as GEA Air-cooled Systems and GEA-Nilenca).

AFC specialises in custom designed cleaning systems for air fin coolers (AFC). In South Africa it is only marketing permanently installed cleaning systems (see Cleaning Systems) and providing cleaning services to the industry.

AFC Cleaning (Pty) Ltd services refineries, steel plants, power stations, chemical plants, and paper/pulp processing plants.

AFC would like to expand its footprint to the rest of the world by engaging well established service companies who will utilise our products in their relevant markets.



### 'A Whole New Game Plan'

Today's competitive and evolving markets require service providers to be progressive and dynamic in their thinking, with visions far greater than their surroundings, which are able to set aside things of the past and to building the future with enthusiasm. At AFC Cleaning (Pty) Ltd we aim to shift all paradigms and ensure sustainable development of our business, products, services and employees, to the mutual benefit of both us and our customers.