



It keeps going and going and going: Piller-fans and the Petrochemicals.

Did you know that a refinery line of average size produces lead-free petrol for about 3,000 tank-fillings every hour? Piller Regeneration Blowers make sure that the production processes continue uninterrupted.

Three years without shut down, bearing heat loads of 600 °C and operating pressures of 4 bar. These are the characteristics of Piller radial fans for the petrochemical industry which gained prestige all over the world. Piller uses heat and corrosion resistant materials like INCONEL™ and INCOLOY™ as well as the know-how and innovation of Piller's technicians and engineers.

The production of modern petrol utilises worldwide "cutting-edge"-technology. Piller fans contribute to a smooth process during production phases of this process (CCR-Platforming in Oleflex®, Cyclar™ and MTBE Production).

In order to provide our challenging customers in the oil industry with the certainty that Piller fans are exceptional athletes, Piller has utilized an in-house test run to the performance prior to installation.

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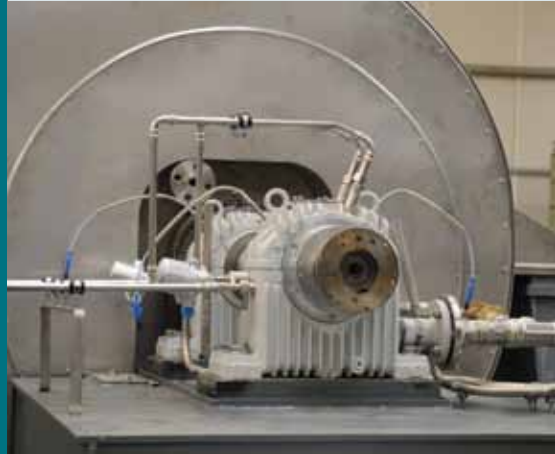
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Regeneration Blower with bearings

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Responsibility – down to the last detail.

Petrochemical plants take care of the mobility of the human race and produce intermediate products for plastics which are now an essential part of our daily lives. A reliable and continuous supply is important for our economy, as production shortages would have incalculable consequences and would bring our economic system to a grinding halt in a matter of days.

Therefore the requirements on system engineering are even higher. Extensive specifications and demanding standards such as the API shall make this extremely sensitive area a safe and reliable place.

The capacity and type of production processes in a refinery are mainly depending on composition of the crude oil to be processed and the requirements of the target markets. Complex refineries with many conversion plants can manufacture finished products from all types of crude oil.

Pillar fans are used in all the essential processes in an oil refinery:

crude oil distillation

vacuum distillation

hydrodesulphurisation

gas post-processing

sulphur recovery

reformers (platformers)

isomerising and hydroisomerising

alkylation, dimerising and etherifying (MTBE)

catalytic cracking processes such as Fluid Catalytic Cracking (FCC) and hydrocracking

thermal cracking processes such as visbreaker and steamcracker

residue conversion processes from Cocker through to gasification

On top of it, there are also processes for the production of process materials such as process steam, electricity and cooling water.



High efficiency

Refinery processes like crude oil distillation, endothermic processes and cracker have a high energy consumption. Fans and blowers from Piller contribute with optimum efficiency levels to an economical method of operation.





Long production runs

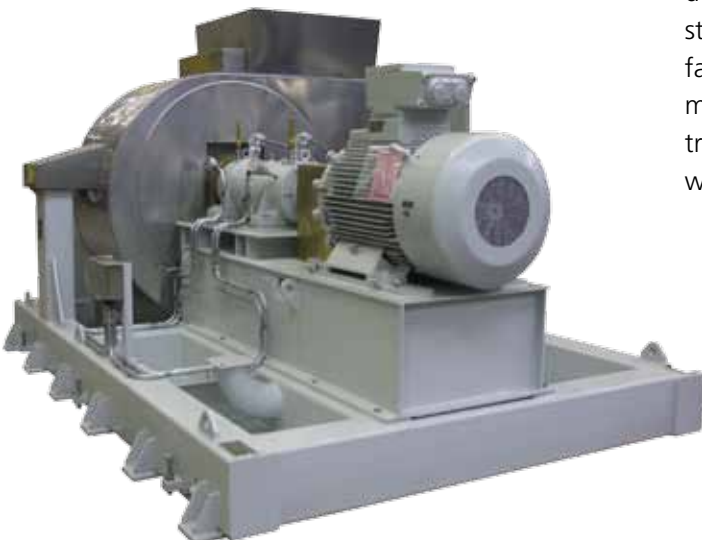
For the CCR platforming process, Piller has developed the Regeneration Blower, Regeneration Cooler Blower and Fines Removal Blower which are installed in refineries all over the world. For the regeneration blower, materials such as Inconel 600/617, Incoloy 800H or AISI 316 are used. Continuous operational temperatures of up to 600 °C, operating pressures of 4 bar (gauge) and uninterrupted service of 3 years represent the standard. The special design of the Piller Regeneration Blower permits, in case of an emergency, the exchange of all revolving parts (spare-plug design) in very few hours, without interrupting the production process.

Bearing engineering

Long-life shaft seals with low levels of seal-gas help to keep operating costs low and the oil-lubricated bearings can be equipped with oil-feed systems, oil-spray lubrication or oil-bath systems. Here, the standard service life of the bearings is reckoned as 100,000 h. Special hot gas impellers have been working trouble-free for over 25 years. By carrying out numerous quality controls and test runs at operating temperatures on a special-design built hot gas test-rig, we can guarantee our customers optimum levels of reliability. Well over 100 refineries across the world have been relying for many years past on Piller fans.

New materials

In the sulphur-recovery (Clausplant) regeneration, sulphur-contaminated gases have to be transported. For this purpose, there are specially-designed Piller fans used which have a so-called steam-jacket housing to avoid the temperature falling below the acid condensation point. Even moisturized chlorine gas, roaster gas etc. are transported by the specially-designed Piller fans without problems.





Regeneration Blower for CCR process with oil-mist lubrication



Regeneration Blower for CCR



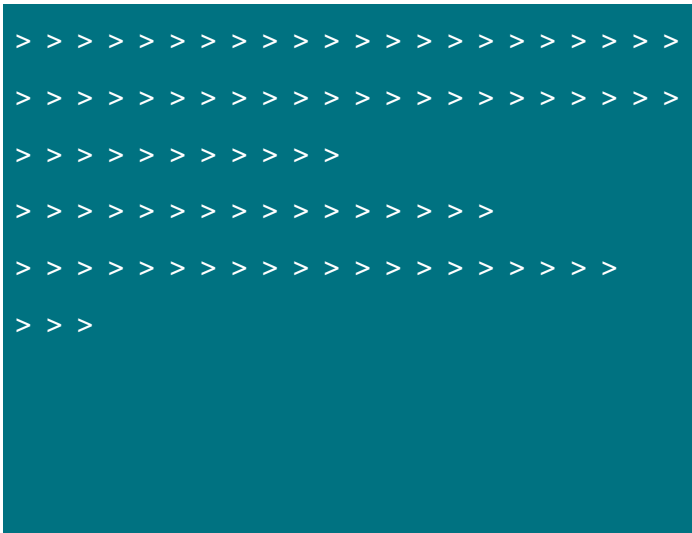
Fully equipped spare plug



Fines Removal for CCR



Regeneration Cooler Blower for CCR



Maintenance, Service

Via a microprocessor-controlled remote monitoring system developed by Piller, it is possible to have all important machine parameters monitored 24 hours a day by experts in our offices at very reasonable rates. This allows a preventive maintenance avoiding unexpected failure of the fan, often a key component of the whole plant, and thus expensive interruptions in the production process.

Our service department will be pleased to answer any further questions you may have.



Steam Jacket Blower

Piller Industrieventilatoren GmbH is represented throughout the world:



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