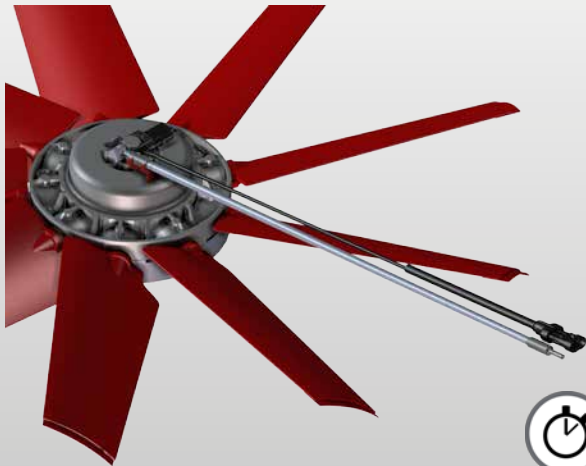


CLEAN RADIATORS SAVE FUEL

CLEANFIX[®]

Reversible Fans For Radiator Cleaning



More Power



Less Noise

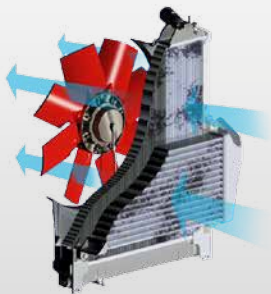


Saves Fuel

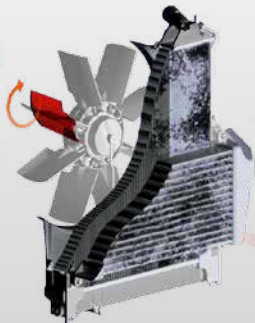


Less Downtime

THE BEST PROFILE IN BOTH DIRECTIONS.



COOLING



REVERSE THROUGH THE
CROSS POSITION



THIS GUARANTEES
PRESSURE CLEANING!

A CLEAN RADIATOR SAVES FUEL, TIME AND PROTECTS FROM OVERHEATING.

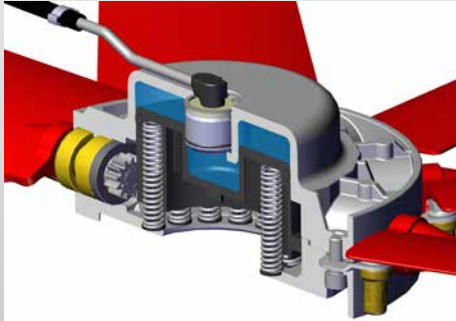
More and More radiators and coolers are being installed in modern industrial machinery. The problem: your fans are in tough continuous use. Like vacuum cleaners that quickly plug the coolers and grill screens. This results in additional cost of several thousand dollars per year through increased fuel consumption and downtime. The solution: Our innovative reversible cooling fans reverse the airflow to also **powerfully clean out radiators** and screens at the operators' convenience. CLEANFIX fan blades are always optimally aligned to create the maximum cooling and airflow. To guarantee always proper blade alignment in both modes, the blades must **rotate**

through the cross position. Other reversing fan systems rely on changing the rotational direction of the fan while the blade profile remains the same. This results in low pressure, low airflow, and highly turbulent reverse flow conditions.

EXPERIENCE the power of clean! CLEANFIX increases reliability, productivity, and fuel efficiency of your machine. What this means to you: Using CLEANFIX ensures a relaxed and comfortable work environment. You will never need to exit the cab to clean the cooling package or be inconvenienced by a reduced air-conditioning performance, simultaneously you will be more productive due to less downtime.

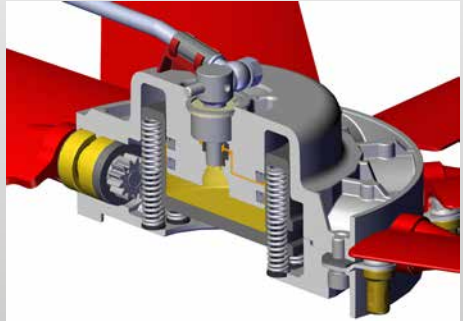
WE CAN MEET YOUR NEEDS.

PNEUMATIC VERSION



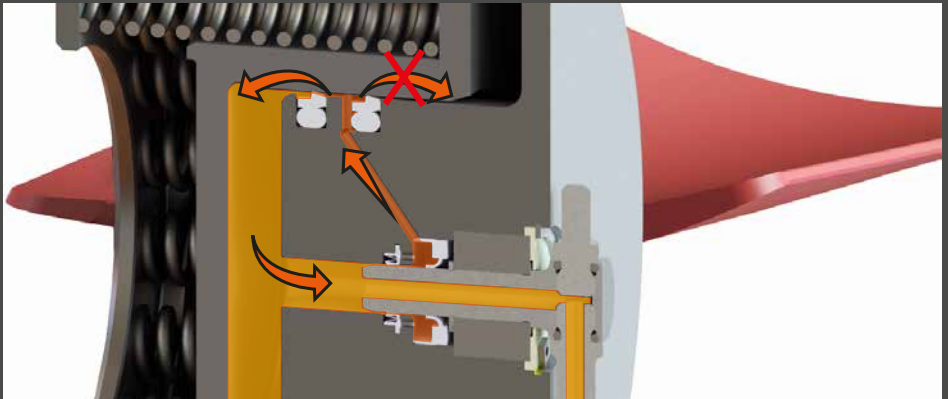
HYDRAULIC VERSION

with patented Cleanfix Smart-Seal-System



WE LEAVE NO TRACKS! **CLEANFIX SMART-SEAL-SYSTEM** (PATENTED)

This smart-seal-system ensures maximum operating safety and reliability through the new integrated leakage oil recirculation - both for the piston seal as well as for the rotary intake.



1.400 l

FUEL SAVINGS FOR 1.000
OPERATING HOURS*

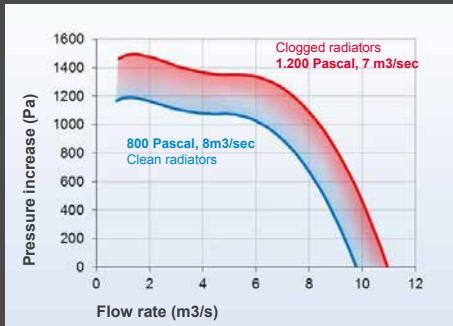
2.250 €

SAVINGS ON THE CLEANING WITHIN
90 DAYS*

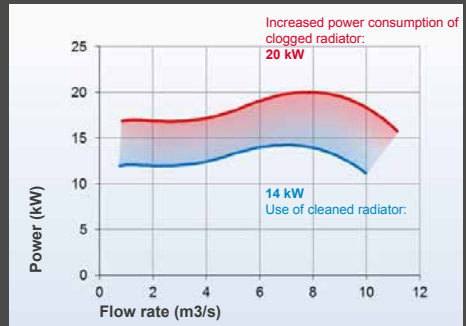
*See opposite page.

IMPRESSIVE DATA:

Clogged radiators
require higher speeds ...



... and thus more power
for the same effect.



If we add 0.5 hours/day for radiator cleaning
(50 €/hour), this results in 90 days of cleaning costs

2.250 €

Fuel savings of 1.000 operating hours
(at 1.4 l/hr at 4 kW and 1.30 €/l)

1.820 €

Total savings per year

4.070 €

CONSTRUCTION



FORESTRY



AGRICULTURE



CLEANFIX: USED IN WIDE RANGE OF APPLICATIONS.

CLEANFIX provides powerful reversible fans for all commercial vehicles that often work in dusty or dirty environments.

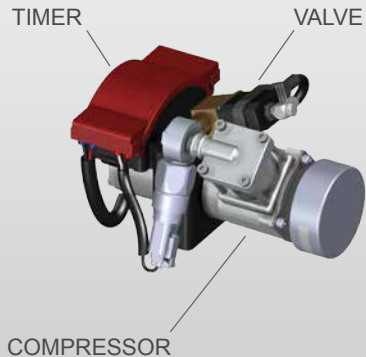
They reliably blow radiators free of chaff, debris, grass, dirt, corn residue, leaves, cotton, wood chips, sawdust, gypsum, lime and just about anything else that can clog your radiator. They can even clear frozen screens.

Where CLEANFIX is used:

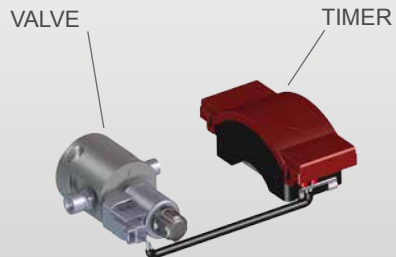
- Construction machines
- Municipality machines
- Agricultural machines, tractors
- Recycling machines
- Handling machines
- Forestry machines

WE HAVE YOUR COMPLETE SOLUTION READY:

PNEUMATIC ACTUATION



HYDRAULIC ACTUATION

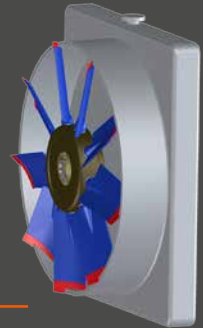


CLEANFIX: STANDARD (SC) - SIMPLY CLEAN!

With the Standard Control (SC) reversible fan, the blades are reversed either by compressed air or by hydraulic oil. The blades return to normal operation by spring force. If desired the cleaning procedure can be automated using an electronic timer.

Cleanfix Flex-Tips are semi-rigid tips affixed to the ends of the fan blades. They decrease the gap between the fan blades and the shroud while airflow increases between 8% to 15%. This allows the fan speed to be reduced resulting in additional fuel and horsepower savings.

CLEANFIX fans may be mounted aftermarket using our installation kits custom designed for each application. Additionally, we are ready to help solve your specific cooling needs.



All about tips:
[CLEANFIX Flex-Tips.](#)

BUILT ON YEARS OF SUCCESS:

PNEUMATIC ACTUATION

with variable blade angle adjustment



HYDRAULIC ACTUATION

with variable blade angle adjustment



THERMAL ACTUATOR



CLEANFIX: VARIABLE PITCH (VP) - QUIETER RIDE

In addition to the reversing function for cooling and cleaning, this fan series offers a variable blade angle adjustment – according to the cooling requirements of the machine.

All this is achieved by the CLEANFIX fan itself, without intervention from the engine electronics.

The benefits: Quieter operation, increased fuel savings and reduced fan horse power consumption up to 60%.

CLEANFIX flexible Flex-Tips on the fan blades allow the reduction of fan speed attaining even more fuel savings.

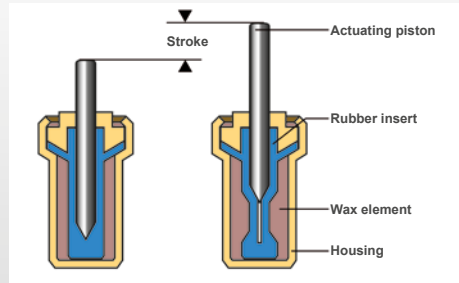
Tailored solutions are possible as well.

The variable pitch control is completely reliable.

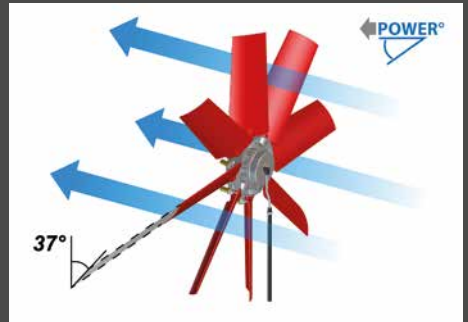
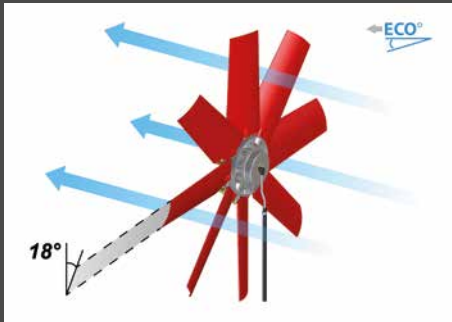
CLEANFIX uses thermal actuators for the adjustment of the blade angles. These wax driven devices have proven reliability.

In a defined temperature range, the wax expands and moves a small piston incrementally, which adjusts the angle of the blades from a low to a steep angle. Since all the blades are connected via a piston, the synchronization of their movement is ensured. **This gives our system the highest possible level of reliability.**

Thermal actuators with elastomer insert



An additional benefit: **Less power consumption.**



The power consumption of a fan depends on the angle of its blades. As CLEANFIX VP automatically adjusts its blades depending on the cooling requirements, it also automatically adjusts its power consumption. By using a low blade angle, savings of up to 60% in horse power consumption is possible.

CLEANFIX PULSTRONIC

PNEUMATIC CONTROL

CLEANFIX HYTRONIC

HYDRAULIC CONTROL



CLOSED LOOP FEED-BACK
CONTROL

CLEANFIX: PULSTRONIC / HYTRONIC

Features:

- Integrated vehicle closed loop control
- Exact blade angle feed-back
- Wide blade angle range

Only clean radiators guarantee:

- Optimum cooling performance and efficiency
- More power to the wheels
- Reduced fuel consumption
- Less noise

TESTED AND VERIFIED.

UP TO 30% MORE EFFICIENT

Cleanfix Pulstronic/Hytronic compared to electronically controlled viscous fans.
(Karlsruhe Institute of Technology, 2013)

EXPERIENCE THE POWER OF CLEAN!

CLEANFIX AWARDS.

In acknowledgement of its notable strides in innovation, CLEANFIX received the distinguished Agritechnica Gold Medal in 1999 and the Silver Medal in 2009.

CLEANFIX continues to pursue the limits of technology to provide unparalleled cooling and cleaning solutions.



THE BEST IDEA: TALK TO US.

Not only innovative products but also open-mindedness and customer satisfaction are part of the CLEANFIX concept. Let us convince you.

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