

Choose Total Airflow Control by Flexxaire and enjoy the benefits

Works smarter

TACfan systems work smarter than traditional fans because the smart fan system functions automatically to:

- Precisely regulate airflow so the engine operates at the optimum temperature
- reduce parasitic losses (the fan is the largest contributor to parasitic loss)
- eliminate power surges and maintenance found with clutches

Saves money

Because TACfan systems work smarter, they use less fuel, providing enormous savings to clients over the lifetime of a fan. Additional savings are realized by clients for a variety of reasons, whether you are using the TACfans as a designer, manufacturer or operator.

Cleans radiator

Flexxaire's TACfan systems easily allow TACfans to change direction to purge debris from the radiator. In fact, the smart systems can be programmed to purge at automatic intervals or purging can be done manually with the touch of a button.

Versatile

Flexxaire engineers are experts at integrating the TACfan systems to suit a variety of applications. See pages 2 & 3 of this document to find out more.

Robust

The robust TACfans and TACcontrols are virtually indestructible and will operate in the harshest conditions thanks to the superior engineered design.

- TACfan assembly is sealed-for-life so no maintenance is required
- superior materials make for a robust product:
 - high quality synthetic oil lubricates all internal components,
 - O-ring seals on all crucial surfaces keeps lubricant in, dirt and contaminants out
 - high quality alloys used for all fan components, high-strength composite used for blade material.

Reduces emissions

Flexxaire's smart fan systems allow your engine to burn cleaner while minimizing parasitic losses due to engine cooling. This optimal cooling means the engine is functioning at superior efficiency saving fuel and reducing emissions.

Flexxaire Robust Intelligence/Engine Cooling Systems

Flexxaire is a privately held Canadian company based in Edmonton, Canada. For 20 years, the company has been optimizing cooling systems for heavy equipment diesel engines in forestry, agriculture, mining, construction, recycling, power generation and waste handling industries.

Produced at the company's world class Canadian facility, Flexxaire's innovative engineers use state-of-the-art modeling and simulation tools to ensure an elevated quality of design and execution.

Flexxaire.com



FLEXXAIRE

Robust Intelligence | Engine Cooling Systems



engineered.
Total Airflow Control

Flexxaire engineers the only smart fan in the world through Total Airflow Control (TAC). Flexxaire's TACfan systems are a revolutionary cooling system so intelligent they reduce emissions, and save money while increasing power. And yes, they clean your radiator too.



Total Airflow Control [FAQ](#)

What can be accomplished by implementing a TACfan system into a design?

Flexxaire TACfan systems can be configured to provide many benefits:

- Radiator Cleaning
- Fuel Savings
- Reduction of Parasitic Power Losses
- Overcooling
- Reducing Emissions

Do Flexxaire fans use pneumatic or hydraulic pressure to adjust the blades?

Flexxaire's TACfans use either pneumatic or hydraulic pressure to adjust the blade orientation.

Contact us to speak with an application engineer about what design best suits your application.

Does Flexxaire use the J1939 network protocol?

Yes. Flexxaire's TACfan systems communicate with your engine's control unit via the J1939 protocol.

This ensures that our TACcontrols are always in sync with the real-time cooling requirements of your application. However, if you are not using the J1939 protocol, we can design a control system to make use of stand-alone sensors to accomplish the same task.

Can Flexxaire work with control system platforms such as Plus+1 or IQAN?

Yes. Flexxaire works with either Plus+1 or IQAN. Flexxaire's control system designers often work with clients to write software for existing control platforms to control our fans. Contact us to for access to our database of control platform algorithms.

For End-Users and Operators: Please contact us for access to our database of existing design.

Flexxaire's engineers expertly integrate TACfan systems into a variety of applications.

We follow a standard process to ensure quality while providing customized service to all our clients:

Flexxaire's TACfan System Design Process

Verify adequate space

- We begin the process by exchanging information with our clients regarding physical fan dimensions and application layout
- Our engineers use 3D modeling software and can provide accurate fan system data in various formats

Optimize cooling performance

- After reviewing the specific cooling needs of a client, our engineers optimize fan blade pitch and rpm
- We often test competing fans in our wind tunnel to fine tune the TACfan's performance for existing applications
- For maximum value, our engineers will collaborate with your cooling package designers to optimize your whole cooling system

Design adapter plate

- Unless we're replacing the entire fan drive, we mount our fans to the existing drive using custom adapter plates
- This allows us to optimize our fan's placement relative to the radiator and fan shroud

Design a customized TACcontrol

- Flexxaire's engineers custom design every TACcontrol to suit each client's needs
- We can provide a stand alone controller or work with the client to select one of their preference
- We have software available for a number of industry-standard controllers, and this list is growing. We often help our clients develop their own control software