



## FrostBoss® is the most popular Frost Fan in New Zealand and Australia.

FrostBoss® Frost Fans have been manufactured in New Zealand since the 1990s. New Zealand Frost Fans has a significant research and development programme focused on improving the efficiency and reliability of the FrostBoss® range and the FrostSmart® monitoring web app. This includes comparative testing and the use of Computational Fluid Dynamics (CFD) analysis to understand exactly how our FrostBoss® machines perform.

### Cabinet + engine features:

- Designed and built from powder coated aluminum alloy
- Fully enclosed and lockable making it pest and rodent proof
- Louvres for noise attenuation and cooling
- Easy access for maintenance and servicing
- 490 litre integral fuel tank (lockable)
- Self contained engine assembly, simple removal for ancillary use
- Rubber isolation mounts
- External engine air intake for peak performance
- Centrifugal clutch with torsional isolation coupling

## Our blades set us apart™.

When we set out to design the FrostBoss® composite fan blade we had three goals – low noise, excellent coverage and fuel efficiency. FrostBoss® composite fan blades are incredibly strong with an aerodynamic design, which makes the entire blade length from hub to tip produce a uniform wind momentum. This optimises the coverage area at an efficient low engine speed of 1760 – 1800rpm at which the maximum torque of the engine is generated.

### FrostBoss® C49 (4-blade composite) and FrostBoss® C59 (5-blade composite):

- CNC machined taper locked hub (no welding)
- The composite blades are an advanced technology composite structure
- An optimised pitch from hub to tip
- Optimised blade area to improve inboard wind momentum
- Significantly thinner tips to reduce noise
- Optimal structural detailing for improved fatigue strength
- Statically balanced for smooth running
- Manufactured utilising the latest Resin Transfer Moulding (RTM) technology
- An uncompromised aerodynamic design engineered for low operating engine speeds of 1760 – 1800rpm
- Available with fixed tower & lay-down tower options

### Noise.

The advantage of the FrostBoss® blades is that the more efficient blade shape works to increase the airflow of the fan, at a lower speed and reduced noise level. The blade design and operating speed have been optimised to provide maximum coverage and minimum noise.

### Performance.

The coverage, or effectiveness, of a Frost Fan depends not only on the machine's ability to move air, but also the warmth of the inversion temperature and the degree of frost that is present. Coverage is typically 6–8 hectares depending on the conditions.





## Controller.

### FrostBoss® Auto Start/Stop:

- Intelligent controller to Auto Start/Stop at operator-selected temperatures
- Wireless temperature sensor (i.e. no cable to get damaged)
- Anemometer stops the fan in winds above 10kph, then restarts the fan when the wind drops below 8kph
- Engine protection shutdown for over speed, low oil pressure, high temperature and low fuel level
- LCD display for operating status, warnings and faults
- Regulated solar panel for prolonged battery life
- Simple, single switch operator control
- Tower mounted instruments and warning light
- In the unlikely event of controller damage a separate key start is fitted as standard

### Installation + Maintenance.

We offer a complete siting and turnkey installation package, backed up by ongoing servicing over the life of the fan. FrostBoss® Fans are guaranteed against defects in materials and workmanship for a period of four years from the date of installation when operated under normal operating conditions, provided annual maintenance has been carried out by an authorised FrostBoss® service agent. We recommend annual servicing even on low hour machines, as lack of use can cause a number of minor issues which may eventually cause unreliable operation.



Fan Assembly	C49 4-blade composite	C59 5-blade composite
Operating speed	1760rpm	1800rpm
Fan speed	418rpm	365rpm
Coverage	6–8ha	6–8ha
Noise Levels (LAeq)		
Distance for 55dB	240m	180m
Noise level at 300m	51dB	50dB
Gear Box (AH or Amarillo)		
Overall drive ratio	4.19	4.91
Fuel consumption	21 litres per hour	20 litres per hour
Engines		
Model	John Deere 6068T Diesel	
Maximum rating	170Hp @ 2500rpm	
Type	6 cylinder turbo	
Engine management	Mechanical	
Model	Perkins 1106D-70TA	
Maximum rating	150Hp @ 2200rpm	
Type	6 cylinder turbo	
Engine management	Mechanical tier 3	
Engine enclosure		
Type	Powder coated aluminium, fully enclosed with integral fuel tank	
Fuel capacity	490 litres approx	
Controller		
	FrostBoss® Auto Start/Stop or FrostBoss® Manual Start/ Stop wireless temperature sensor or option of cable temperature sensor	
Remote monitoring		
	Frost Fans with wireless temperature sensor are monitored (annual monitoring fees apply)	
Tower (Fixed or Lay-down tower)		
Dimensions	508mm diameter, 6.4mm seamless smooth wall pipe with 32mm base plate and stiffening gussets	
Height	10.38m	
Finish	Hot dipped galvanised	
Drive line assembly		
Drive shaft	Balanced three piece drive shaft with industrial universal joints	
Clutch	Industrial 10" centrifugal clutch and torsional isolation coupling	