

 **FROSTFANS.EU**

- **FROST PROTECTION**
- **DRYING**
- **VENTILATION**
- **COOLING**



650i

USABILITY

EFFICIENT AND AFFORDABLE WIND MACHINE

The unique design of this fan can provide effective frost protection for all crops, even when grown in valleys or on hills. The ability to angle the Tow and Blow impeller and horizontally oscillate the fan head for these applications allows for exceptional versatility and completely sets this machine apart from traditional fans.

Tow and Blow machines have the ability for you to select the tower to either rotate 360°; or preset the tower rotation degrees to rotate through any angle of your choice. With the speed of rotation also adjustable, this ensures that you target the protection to only the desired area, whatever shape your site may be. Tow and Blow requires no concrete foundations, no building permit or consent (some councils may stipulate a consent), is incredibly quiet, and the low fuel consumption ensures low emissions. Easily transported from site to site behind a vehicle or tractor, the Tow and Blow is outstanding in terms of maneuverability, flexibility, and affordability.

FROST PROTECTION SOLUTION

A wind machine that brings efficiency, affordability and mobility to frost protection.

Frost protection is suitable for vineyards, apples, kiwifruit, cherries, citrus, blueberries, avocados, flower bulbs, vegetables in open ground and many more...

The 650i is also available with a telemetry system. This system allows you to monitor your wind machine remotely from your computer or phone.



OTHER APPLICATIONS

- Can be fitted with an evaporative water mist system for **cooling** livestock or people.
- **Portability** is second to none. Easily transported behind a tractor or vehicle. Stabiliser support feet are lowered to a secure position and the machine leveled for operation.
- **Servicing** is simple. The boom is lowered to ground level to service the engine and impeller.

COMPONENTS

01 . SHROUD

02 . ENGINE

03 . FAN

06 . TRANSPORTATION

04 . TOWER

05 . CONTROLS



AERODYNAMIC DESIGN

Aerodynamically designed **shroud** maximises the air flow capacity. This effectively turbo charges the thrust of the air like a jet engine.



DIRECT POWER TO FAN

65.2 hp four cylinder diesel **engine** delivers direct power to the fan eliminating lost power through angle drive gearboxes and long shafts.



FIVE BLADE IMPELLER FAN

Unique five bladed **fan** manufactured from glass reinforced polyamide. Performance tested to recognised world standards.



HYDRAULIC LIFT

The **tower** has three height positions to enable operation at lower heights if required.



USER FRIENDLY CONTROLS

Auto start functionality enables temperature triggered power start up and shut down. Both the fan and tower oscillation of the machine start operating once the preset low temperature is detected and automatically shuts down once the upper temperature setting is reached.



EASILY TRANSPORTED

The Tow and Blow is easy to **transport**. Once in position the stabiliser legs are lowered and the machine set level for operation. Max towing speed of 30km/h.

FUNCTIONALITY

AUTO START

Auto start functionality enables temperature triggered power start up and shut down. Both the fan and tower oscillation of the machine start operating once the preset low temperature is detected and automatically shuts down once the upper temperature setting is reached.

ROTATION & OSCILLATION

The tower and fan-head can oscillate through any angle or rotate a full 360 degrees. The hydraulic functions of the Tow and Blow are driven by a DC hydraulic power pack. The oscillation angle is easily adjusted using limit switches. A solar panel provides backup charging to the battery when the fan is on stand by.

NEW FEATURES

All new diesel models are fitted with a robust gearbox connected to the impeller. All machines are now standard with an extendable draw bar and have three different boom heights. Stabiliser support feet are removable for ease of setup, this allows for positioning the machine in vineyards with narrow rows.

FUNCTIONALITY

IMPELLER

Five blade impeller made of glass reinforced polyamide. Performance tested to recognised approved world industry standards. The unique design of the airfoil saves power while reducing noise and providing a highly efficient air flow. Unobstructed air flow away from the tower means there is no hindrance to the air momentum or direction.

ENGINE

Reliable Kubota diesel engine. Fuel tanks are connected to a level gauge which displays the fuel level on the control screen.

SHROUD

Aerodynamically designed to maximise airflow. Having a shroud around the fan is like turbo charging the capacity of air flow.

STRAIGHTENING VANES

Air exits a fan in a spiral motion which causes the airstream to lose energy. The straightening vanes on the Tow and Blow take this spiral motion and maximise the energy in the airstream.



TECHNICAL SPEC.

OPERATING SPECIFICATIONS

MACHINE MASS	1,900kg
MAXIMUM SIDE SLOPE SETUP ANGLE	6°
MAXIMUM FORE-AFT SLOPE SETUP ANGLE	6°
WHEELBASE	1690 mm (Width)
ELECTRIC SYSTEM VOLTAGE	12 V
MAXIMUM WIND CONDITIONS	(35 kmph) (22 mph)
LEVELLING JACK PONT LOADING PRESSURE	218 kpa (without soft ground pads)

DIMENSIONAL DATA

MACHINE HEIGHT (FAN IN OPERATING POSITION)	7800 mm
MACHINE HEIGHT (FAN IN TRANSPORT POSITION)	2745 mm
MACHINE WIDTH (STABILISER LEGS RETRACTED)	2315mm
MACHINE LENGTH	6160 mm

CAPACITIES

HYDRAULIC TANK	5 L
FUEL TANK	200 L

TYRES

TYRES	185R14LT Pneumatic
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ENGINE - KUBOTA V2403

FUEL	Diesel
ENGINE DESCRIPTION	4 Cylinder; Turbo charged.
FAN ENGINE POWER (MAXIMUM)	48.6 Kw (65.2 HP)
EMISSIONS COMPLIANCE	Tier 4, Stage 5
COOLING SYSTEM	Water cooled
IGNITION SYSTEM	12 V Electric Starter with 45 Amp External Alternator
MAXIMUM ANGLE OF FAN HEAD AND ENGINE	20°

HYDRAULIC OIL

HYDRAULIC OIL	Hydraulic Oil ISO VG 46 (-15°C and above) Hydraulic Oil ISO VG HVI (-20°C and above)
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LUBRICATION

LUBRICATION GREASE	Lithium EP2 Grease
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AIR SPEED

AIR SPEED AT FULL OPERATING POWER	36 m/s (130 kmph) (80 mph)
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