



TOW AND BLOW

PORTABLE

/ Frost protection

/ Drying

/ Ventilation

/ Cooling



EFFICIENT AND AFFORDABLE WIND MACHINE FOR FROST PROTECTION.

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.

We have confirmed reports from growers that have protected five plus hectares in severe frost conditions. Tow and Blow requires no concrete foundations, no building permit or consent, is incredibly quiet, and the low fuel consumption ensures low emissions.

Easily transported from block to block behind a vehicle or tractor the Tow and Blow raises the bar in terms of manoeuvrability, flexibility, and affordability.

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

OTHER APPLICATIONS

- /// **Also used** for drying fruit pre-harvest and before pruning.
- /// Can be fitted with an evaporative water mist system for cooling livestock or people.
- /// **Quiet with a noise** level of only 45-50 decibels at 300m.
- /// **Portability** is second to none. Easily transported behind a tractor or vehicle. Stabiliser support feet are lowered to a secure position and the machine levelled for operation.
- /// **Servicing** is simple. The boom is lowered to ground level to service the engine and impeller.
- /// **Extended fuel lines** available for remote fuel tank set up.



TECHNICAL SPECIFICATIONS

/ ENGINE

Diesel Kohler KDW1003. Fuel tanks made of translucent polymer enabling fuel level to be readily seen and reducing risk of condensation.

/ 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. Fan head is easily angled for protecting crops growing on hills or in valleys. Air velocity of 23 m/s. Fan head can be preset to automatically oscillate horizontally.

/ SHROUD

Aerodynamically designed with a bell mouth 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.



TOWER

Hydraulic lift.

The tower has three height positions to enable operation at lower heights if required. Suitable for valleys and hills.



FAN

Five blade impeller fan.

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



SHROUD

Aerodynamic design.

Aerodynamically designed with bell shaped shroud maximising air flow capacity. This effectively turbo charges the thrust of the air like a jet engine.

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 AND OSCILLATION

The tower and fan-head can oscillate through any angle or rotate a full 360°. The hydraulic functions of the Tow and Blow are driven by a DC hydraulic power pack.

Rotation and oscillation functions are controlled by a DC electric drive. A solar panel provides backup charging to the battery when the fan is not in use.

NEW FEATURES

All new diesel models come with a gearbox utilising planetary rotating gears.

All new diesel models come with quality centrifugal clutch.

All machines come supplied with weather proof engine and gearbox cover.

All machines are now standard with an extendable draw bar.

All machines now have three different boom height settings to enable operation at a lower height if required.

Stabiliser support feet are removable for ease of setup.

This allows for positioning the machine in vineyards with narrow rows.



ENGINE



CONTROLS



TRANSPORTATION

Direct power to fan.

24 hp three cylinder diesel engine delivers direct power to the fan eliminating lost power through drive shafts.

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.

/ OPERATING SPECIFICATIONS

MACHINE MASS	1,340 kg
FAN NORMAL OPERATING SPEED	606 RPM
HYDRAULIC SYSTEM PRESSURE	2500psi / 172 BAR
MAXIMUM BOOM ELEVATION TIME	15 seconds
MAXIMUM SIDE SLOPE SETUP ANGLE	10°
MAXIMUM FORE-AFT SLOPE SETUP ANGLE	12°
WHEELBASE	1600 mm Standard
ELECTRIC SYSTEM VOLTAGE	12 V
MAXIMUM WIND CONDITIONS	40 mph (18 m / s)
LEVELLING JACK BEARING PRESSURE	161 kpa (without soft ground pads)

/ DIMENSIONAL DATA

MACHINE HEIGHT (FAN IN OPERATING POSITION)	8500 mm
MACHINE HEIGHT (FAN IN TRANSPORT POSITION)	2775 mm
MACHINE WIDTH (STABILISER LEGS RETRACTED)	2315 mm
MACHINE LENGTH	6090 mm

/ CAPACITIES

HYDRAULIC TANK	5 L
FAN ENGINE FUEL TANK	60 L (2 x 30 L)

/ TYRES

TYRES	185R14LT Pneumatic
INFLATION PRESSURE	50 PSI

/ ENGINE - KOHLER KDW1003 EPA RATED MODEL

FUEL	Diesel
ENGINE DESCRIPTION	3 Cylinder, 4 stroke indirect injection, overhead cam with intergrated fuel injection system.
FAN ENGINE POWER (MAXIMUM)	17.6 kw (23.7 HP) @ 3,600 RPM
FAN ENGINE NORMAL OPERATING SPEED	3,000 RPM
COOLING SYSTEM	Water cooled naturally aspirated
IGNITION SYSTEM	12 V Electric Starter with 45 Amp External Alternator
PTO SHAFT ROTATION	Counter-Clockwise
MAXIMUM ANGLE OF FAN HEAD AND ENGINE	25°

/ 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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/ AIRSPEED

AIRSPEED AT FULL OPERATING POWER	23 m/s (50 mph)
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