

**Simple.
Efficient.
Environmentally
conscious.**

Plant protection technology that speaks for itself – VICAR

Multi-purpose

The radial blower means VICAR plant protection technology is suited for use almost everywhere. Depending on the model and turbine configuration, the devices can be adapted to all kinds of needs – from cultivation of one-metre-wide rows of vegetables to rows of trees with a maximum range up to 45 metres.

Efficient and environmentally conscious

Compared to conventional blowers, radial blowers convey lower volumes of air at higher speeds with the same output. Lower volumes of air mean that the air can be directed and the air flow individually targeted. This results in precise, product-saving application. Other important outcomes include higher air speed results in greater penetration of the foliage and thus, better coverage on the underside of the leaves and on the fruit set.

Easy to operate

Each turbine air outlet draws air from a specific part of the turbine wheel. The air intake is automatically adjusted to the required volume – in this case by half – if the outlets are closed on one side, using the hydraulically adjustable air-flow valves. A case in point is a water protection area or on the edge of a forest. This guarantees consistent air flow and symmetry across all outlets. In order to avoid frictional losses between the turbine wheel and the air outlet, curved ducts with special directional fins guide the air flow.

Partial spirals for an even air flow rate and air symmetry at each outlet

Long service life thanks to high-quality materials

The patented partial spiral system from VICAR

Practical tips for use



Directing the air flows

The variable alignment of the air flow on the radial blower enables precise application with minimal drift. This reduces the amount of plant protection product required, which in turn saves you money. The 360-degree rotating nozzles are suited to treating all crops and can be programmed for numerous different applications.

Regardless of the type of crop or setting, all air outlets are always used. For example, if only two nozzles are used to apply plant protection products, all the other air outlets on that side are also directed towards the target area.

Their air flow helps to focus the spray jet of the plant protection product, making it more stable and more uniform. This arrangement requires less speed and power and thus, helps to conserve fuel. So you can benefit from cost savings.



Where to find VICAR

Here at LTS, we have been developing, producing and selling plant protection technology from the VICAR brand for over 40 years. Based in Vogtsburg im Kaiserstuhl, Germany, our company was founded by Peter Sexauer back in 1982 and has been managed by his son, Timo Sexauer, since 2016. "As fruit and wine-growers ourselves, we are all too familiar with the machinery required by the sector and with the challenges brought about by the different



types of farming," says Timo Sexauer. With his extensive technical expertise, Timo has been developing product innovations in crop protection technology for many years. LTS has always kept its focus on our company's greatest strengths: sales, consultancy and service (including the prompt supply of spare parts). After all, as farmers ourselves, we know how getting the crop protection right with the correct products is a vital factor in achieving a good yield.

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Plant protection at the highest level

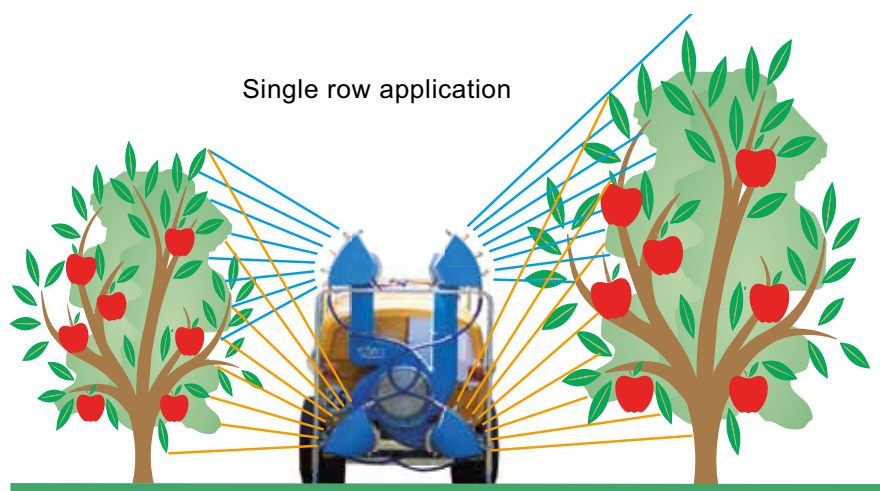
Air flow controls the flight direction of the droplets

With both centrifugal blowers and conventional blowers, the air flow controls the direction of the droplets' flight. The air functions as a carrier, transporting the plant protection product to the application area. The nozzles, on the other hand, are solely responsible for the application rate and the droplet pattern (adjusted by altering the pressure) and do not affect the direction of flight. As such, being able to vary the air flow is vital, as it is largely responsible for the precise application on the plants and thus, for potential savings in plant protection products.

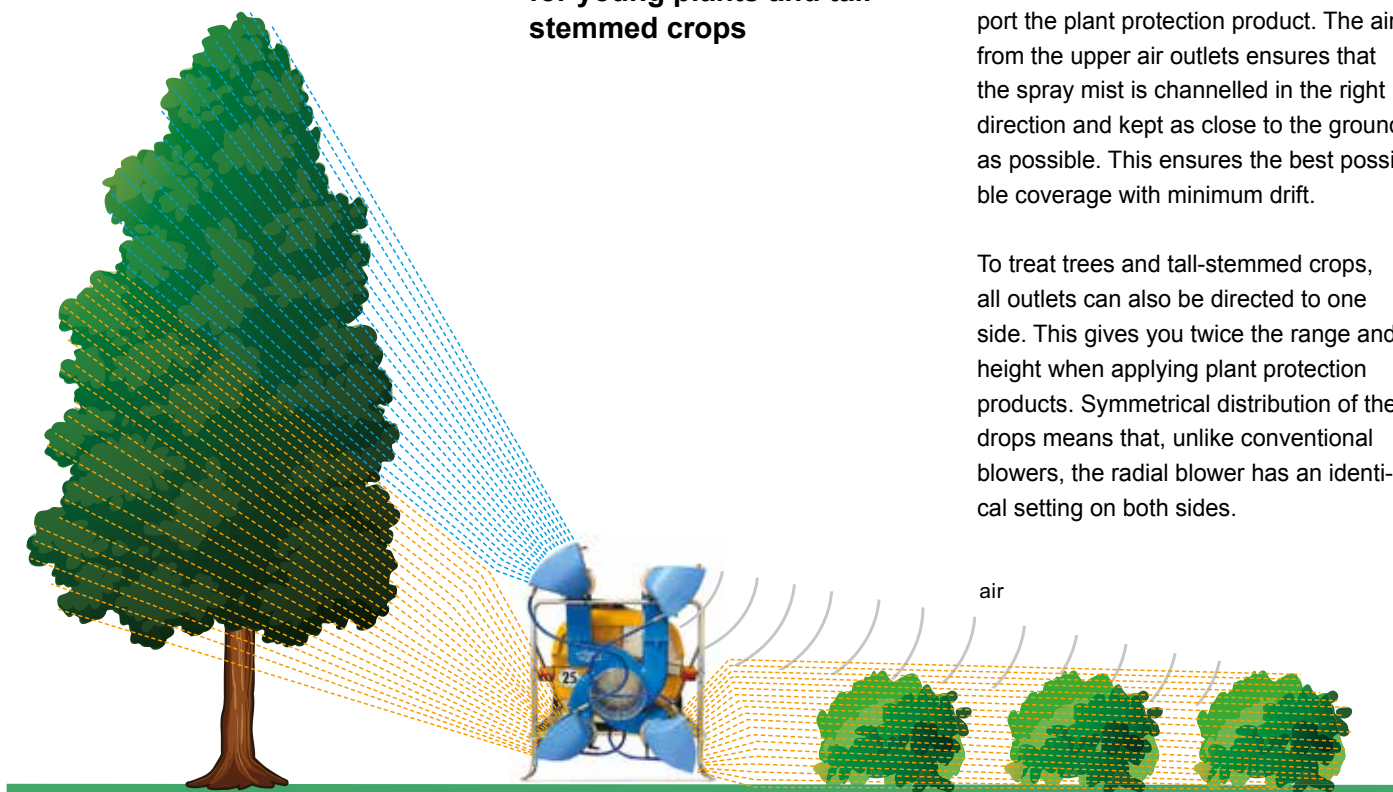
Regardless of the model series, the top nozzle of the top air outlet and the bottom nozzle of the bottom air outlet are always directed within the canopy range

(see diagram). Ensure that the air outlets are only used within the scale range. This prevents the turbine components from getting coated in product and streaks forming on the foliage.

This applies to all models and outlet versions – they only differ in terms of the width of the air outlet and the resulting number of nozzles.

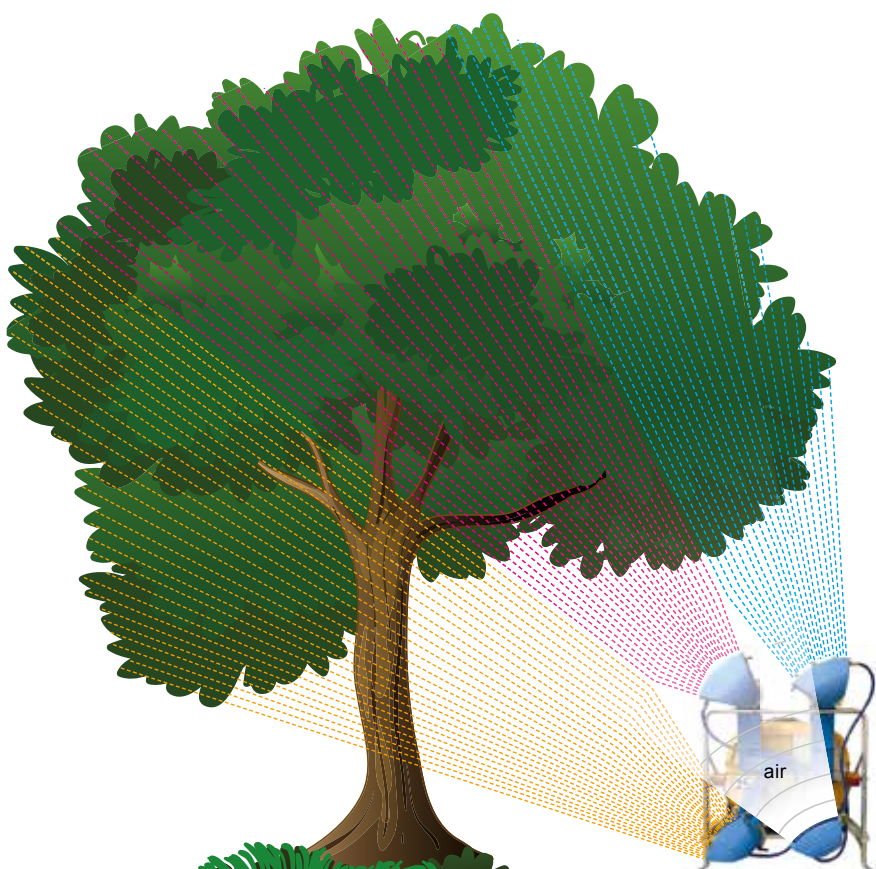


Directing the air flow for young plants and tall- stemmed crops



For young plants or low-growing crops, usually only the lower air outlets transport the plant protection product. The air from the upper air outlets ensures that the spray mist is channelled in the right direction and kept as close to the ground as possible. This ensures the best possible coverage with minimum drift.

To treat trees and tall-stemmed crops, all outlets can also be directed to one side. This gives you twice the range and height when applying plant protection products. Symmetrical distribution of the drops means that, unlike conventional blowers, the radial blower has an identical setting on both sides.



Fewer partial spirals, more power

Radial fans with four partial spirals are recommended for fruit cultivation. Unlike the versions with six partial spirals, the 440, 450 and 540 models offer:

- greater power
- greater range
- greater flexibility

As a result, the turbines can reach a height of up to 25 metres. Their rotating spray nozzles allow for the treatment of both low-lying and taller crops. This means that the turbine can be used for a wide range of crops, including pip fruit, stone fruit, citrus fruit, avocados, cacao and nut trees.

What growers say about VICAR plant
protection technology

