



# Vege-Polisher™ V2B

Rinses, washes, scrubs, and brushes vegetables in one unique machine.

Potatoes • Carrots • Parsnips • Swedes • Sugar Beets • Beetroots and more



- ✓ 4 sizes from 5 to 35 tph (11,000 to 77,000 lbs/hr).
- ✓ Range of brush types and custom brush designs to suit all applications.
- ✓ Custom built water recycling system.
- ✓ Automated water management.
- ✓ Side removable brush shafts.
- ✓ Durable and robust construction to withstand forces and vibration from heavy rotating machinery.
- ✓ Safety door sensors & locks, cleaning mode and maintenance mode.

The Vege-Polisher™ technology, invented by Wyma, provides its unique cleaning and polishing using a drum formed by a series of rotating brush shafts around the circumference.

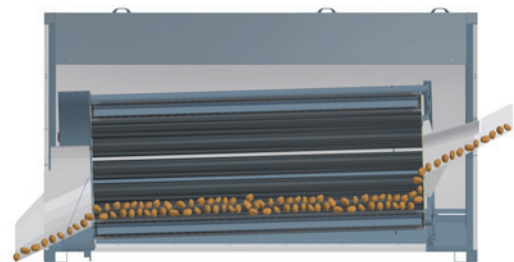
Produce can be fed into the Vege-Polisher™ either wet or dry often from preceding equipment such as Wet Hopper, Destoner, Hedgehog, Flume, Conveyor/ Elevator, Dirt Remover or Barrel Washer.

Produce enters the in-feed end of the Vege-Polisher™ and travels through the sloped inner drum. The individual brush shafts rotating at high-speed provide a gentle scrubbing/brushing action while the overall drum rotates slowly in the opposite direction ensuring mixing of the produce and an even polish as it passes through the machine.

The Vege-Polisher™ is renowned for the appearance lift on produce. For carrots, it removes the dull silvery finish common on non-polished carrots. For potatoes, it can help remove surface rhizoctonia, excessive “netting” and lifts dull potato finish. The outcome is that more premium produce is packed out, and there is “an increased presence” on retailers’ shelves.

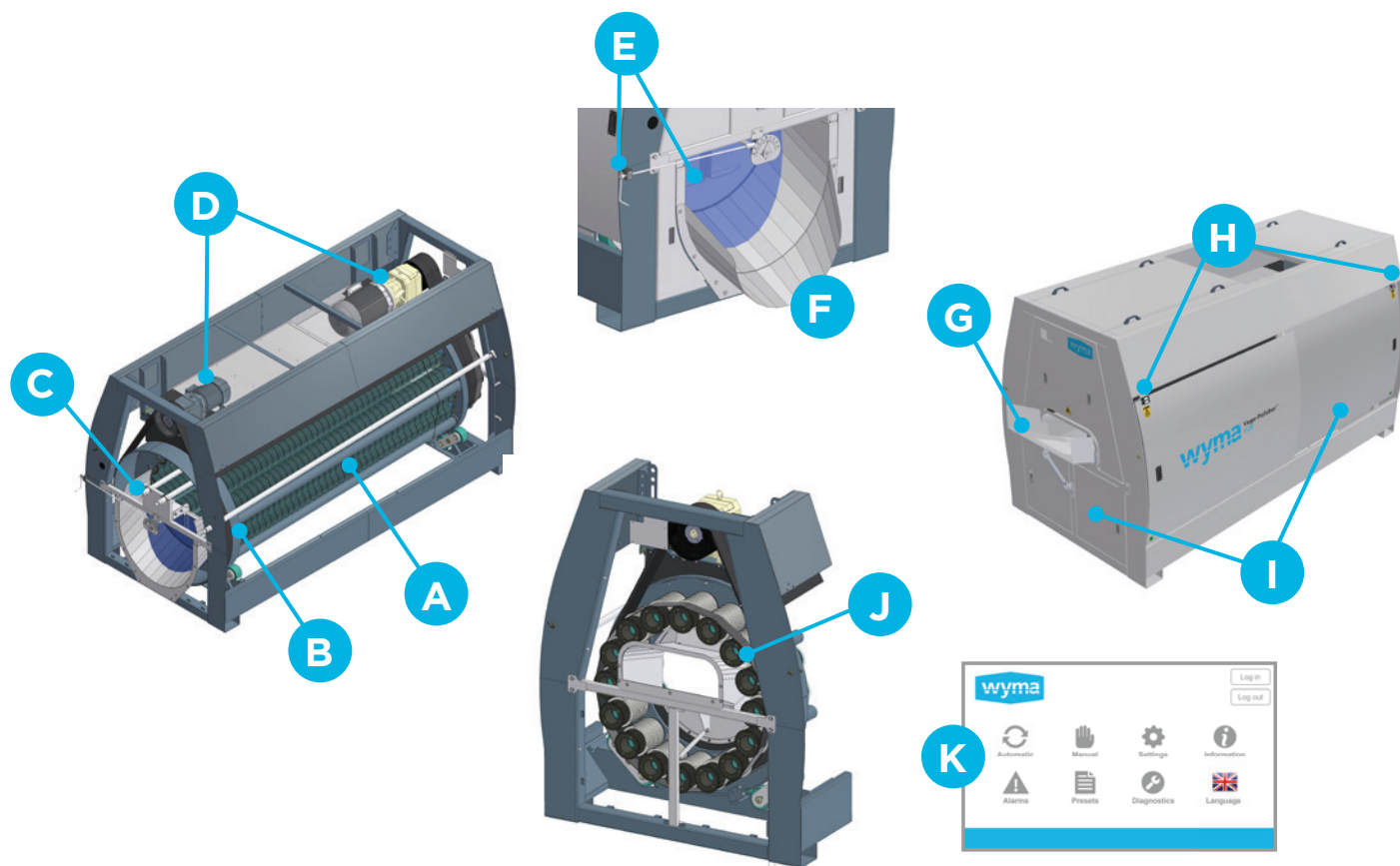
Wyma’s experience with rotary brush drum technology and brush specification means vegetables are washed and polished to the highest retailing standards.

Typically produce is fed to the polisher by belt conveyors but conveying by flumes is also common where the produce and water can both enter the machine simultaneously.



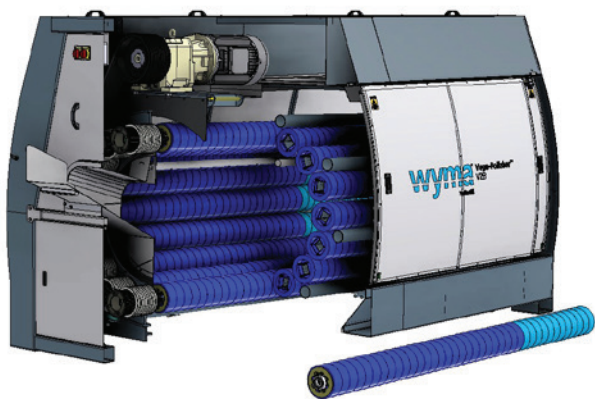
Recycled water is generally utilised for water conservation. Please see the Polisher Water Recycling System which is a complimentary product with the polisher.

*Wyma also produces a WP6016.V2B Mega polisher, effectively two WP3016.V2B polishers joined end to end, specifically for carrots. This configuration provides significantly increased polishing within a smaller machine footprint. Ask our team for a brochure or PID.*



- |                                  |  |
|----------------------------------|--|
| <b>A Brush rollers</b>           | Shafts of brushes forming the enclosed washing drum. Ability to configure the bristle in the brush shafts to suit the product and finish required  |
| <b>B Drum</b>                    | The drum holds the brush shafts and is supported on specifically designed wheels to take the weight and ensure smooth rolling action.  |
| <b>C Rinsing pipes</b>           | Fresh water and recycled water are provided to the machine to ensure the produce is lubricated during washing and debris is washed off the produce.  |
| <b>D Drive Gearmotors</b>        | Gearmotors rotate the drum & synchronized brush shafts.  |
| <b>E Outfeed gate</b>            | Manual or automated outfeed gate to adjust produce depth, dwell time and washing intensity. The manual gate winder has a mechanical position gauge. The optional automated gate has additional control functionality such as auto machine empty, and quick product change over.  |
| <b>F Extended Outfeed Chute</b>  | Provides easy transition of produce to following process. Can be removed providing necessary space for servicing of belts etc  |
| <b>G Extended Infeed Chute</b>   | Provides easy transition of produce from conveying system. Can be removed providing necessary space for servicing of belts etc   |
| <b>H Door Sensors</b>            | Door Sensors ensure machine stops if doors are opened during operation   |
| <b>I Access doors and panels</b> | Easy access for cleaning and maintenance via sliding doors, and lightweight quick-release panels.  |
| <b>J Brush Drive</b>             | Exclusive Wyma drive system using combinations of V and synchronous belts to provide a robust and positive drive to rollers and drums. A unique bearing arrangement prevents water or dirt ingress into bearings. Suitable for the extreme wet and dirty conditions. Both drum and brushes are driven independently with individual speed control to adjust polishing intensity. |
| <b>K Control</b>                 | Stand alone or integrated in line panel. Touch screen. Variable speed control of brush and drum. Automated outfeed gate* with auto empty and quick change over menus and automated water control   |

\*Optional



## What does a Vege-Polisher™ do?

Vege-Polishers™ are designed to wash and polish fresh produce to the highest retailing standards. Levels of cleaning can be achieved by control of the brush used, from basic dirt removal to peeling. Your sales representative can advise on the correct brush for the desired finish.



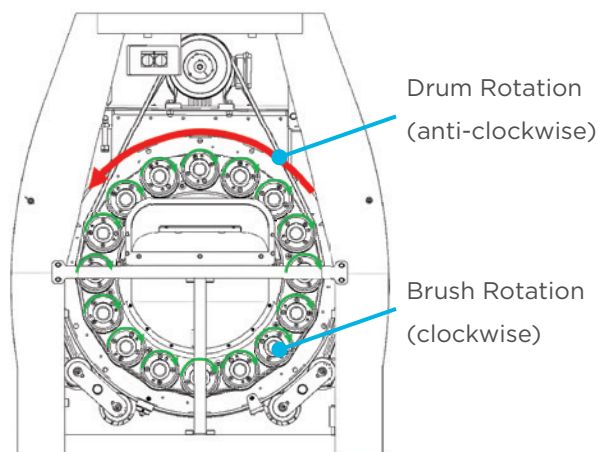
## How does the Vege-Polisher™ work?

The Vege-Polisher™ design uses the traditional produce agitation of barrel washing and combines it with rotating brush technology. Produce can be fed into the Vege-Polisher™ either wet or dry.

Produce enters the in-feed end of the Vege-Polisher™ and travels through the sloped inner barrel. This inner barrel is made up of rotating brush rollers. The barrel itself also rotates. As the produce makes its way through the machine, it is polished gently and effectively.

The barrel rotates in the opposite direction to the brushes. This helps agitate/mix the produce within the barrel and allows a consistent cleaning/polishing result on all produce.

E.g. Looking from the in-feed end, the drum rotates anticlockwise, and the brushes rotate clockwise.



**Brush speed:** A higher brush speed results in more aggressive scrubbing and polishing.

**Drum speed:** This affects the amount of mixing of the produce in the drum. A faster drum speed results in more agitation, and a greater rubbing action of produce on produce. It also increases the produce flow slightly.

**Brush options:** Each row of brushes within the barrel can be set up with a customised brush configuration. Stiffer brushes are often used at the in-feed, with softer brushes at the outfeed.

There are different brush types available to suit different produce and conditions. Our team can advise on your specific needs.

**Water Spray:** The water spray is provided for lubrication and flushing away of dirt and debris. The flow rate depends on produce type, soil condition and the soil burden on the produce. Wyma can advise on the optimum flow rates to be used.

- Lower water volume generates a greater scrubbing effect, but lower lubrication.
- Greater water volume allows a better polish due to the extra water lubrication combined with the brush action. Also, the brushes are likely to stay cleaner with more water

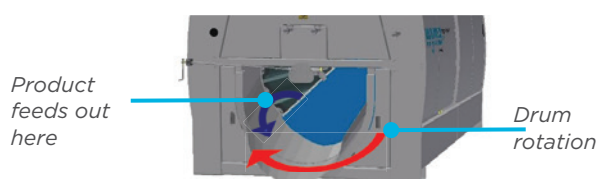


**Out-feed gate position:** The out-feed gate governs the level of the produce in the machine and ultimately the total mass of produce in the machine at any given time.

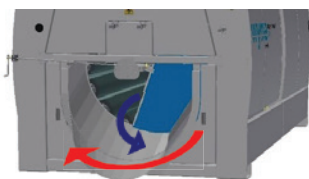
The out-feed gate position should be adjusted to suit the required produce depth. The higher the out-feed gate is set, the deeper the produce depth will be inside the machine. The deeper the produce level is in the machine, the greater the scrubbing action achieved will be. The heavier produce mass has the effect of pressing the lower vegetables harder against the brushes.

Care needs to be taken with depth for softer skinned produce, as they can be easily damaged.

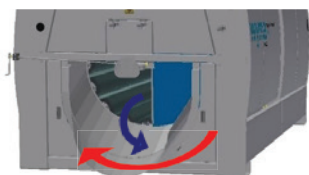
#### Some possible out-feed gate positions:



Ideal out-feed gate position for running the machine full of produce (feed out on low end of gate).



Ideal out-feed gate position for running the machine half full of produce (feed out on low end of gate).



Out-feed gate position for emptying the machine.

**Vege-Polisher™ Reversibility:** When full electrics are purchased, the Vege-Polisher™ is fully reversible (except for model WP3518.V2B which requires the belt tensioner side changed). When electrics are not purchased, a qualified electrician should reverse motor rotation.

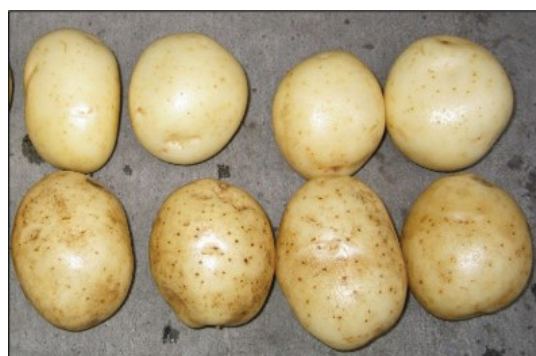
This feature is helpful in extending the life of the brushes. When the machine has been running in the same direction for a while, the bristles start to 'bend' in the running direction. Reversing the direction will increase the time you can use those brushes.

## Sampling Produce

We recommend that for the first few weeks or when brushes are changed, sampling of produce is conducted regularly – at least every hour or two. Once the brushes have bedded in and you become familiar with the process and the effect that the various adjustments make to the wash quality, this inspection can then be reduced to just once or twice a day.

Produce samples are best inspected when dry. Firstly, take control samples of produce from just before the Vege-Polisher™ in-feed. Then remove four or five produce samples, taken randomly from the end of the machine. Make sure that the surface of the sample is fully dry before inspecting.

To check produce dwell time in the polisher, drill a hole through the sample produce to mark it. Place it in the infeed and time how long it takes to transit the drum. This way you can accurately assess how long the sample is in the machine verses how clean it comes out.



The best way to get familiar with the machine is to sample frequently, vary the machine settings - from one extreme to the other - and compare the result on the produce. You will find the optimum setting fairly quickly.

Washing/polishing performance is directly affected by:

- The condition of the produce as it enters the Vege-Polisher™.
- The amount of time the produce spends travelling the length of the barrel.
- The depth of the produce in the machine.
- The speed of the drum and the speed of the brushes.
- Brush type/ bristle stiffness
- Water quantity applied

## How do I select the right size Vege-Polisher™?

- The size of Vege-Polisher™ required is dependant on the expected throughput of the customer's line and the level of polish required.
- Capacities range from 5 to 35 t/hr, depending on conditions/produce.

## Why use a Vege-Polisher™?

- To clean/polish produce ready for retail shelves
- To handle large volumes of produce in a continuous process.

## What produce types are suitable?

Vege-Polishers™ are suitable for many types of fresh produce including potatoes, carrots, beetroot (beet), parsnips, turnips and swede.

## When should a Vege-Polisher™ be used?

Vege-Polishers™ can be used as an independent unit or as part of a washline system.

## What products should be placed before Vege-Polishers™?

- Wet Hopper
- Destoner
- Hedgehog
- Flume
- Conveyor/Elevator
- Dirt Remover
- Barrel Washer

## What products should be placed after Vege-Polisher™?

- Inspection Table - if manually inspecting
- Hydro-Cooler
- Optical Grader - less dirt on the produce surface results in improved optical grading accuracy
- Sizing Equipment
- Absorbent Drying Rollers
- Drying Tunnel
- Baggers and storage - to maintain shelf-life

## What other equipment might be required?

Conveyors can be used to feed produce to and from the machine. The out-feed conveyor can convey the produce to either another machine in the line, or to storage etc.

As an option, Wyma offers a Water Recycling Base to go underneath the Vege-Polisher™. This provides a great way to re-use the water that is used in the Vege-Polisher™ and significantly reduce the freshwater consumption.