



**AUSTRALIAN  
WEIGHING  
EQUIPMENT**  
*Way ahead in Weighing*

PRODUCT GUIDE

# VERTICAL AUGER FILLER

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- For batching most powder and granule products
- Volumetric filling with scale feedback
- Improved accuracy and speed





## ■ THE CHALLENGES OF FILLING DRY PRODUCTS

Packaging powders, even free-flowing ones, may not be as simple as pouring out of a hopper into your bag or container. Traditionally, accuracy is achieved by restricting the hopper opening or feed path, but this can result in product bridging and poor packaging rates.

The AWE Group provides the best solution by using a servo driven screw that draws the product out of the hopper at high speed. Scale feedback allows us to refine our system accuracy, track packaging weight and deliver market leading performance.

Each dry product has its own characteristics that affect the

suitability of this machine for your application including flowability, lumpiness, weight, density variation, dusting and suitability for augering. In general, we recommend:

- If you're filling a consistent powder, an Auger is the best solution.
- If you're filling grain, then gravity would provide the solution.

Filling dry products does not need to be difficult, just talk to packaging experts like Australian Weighing Equipment - trust that we understand how to match your product or container to the right machinery.

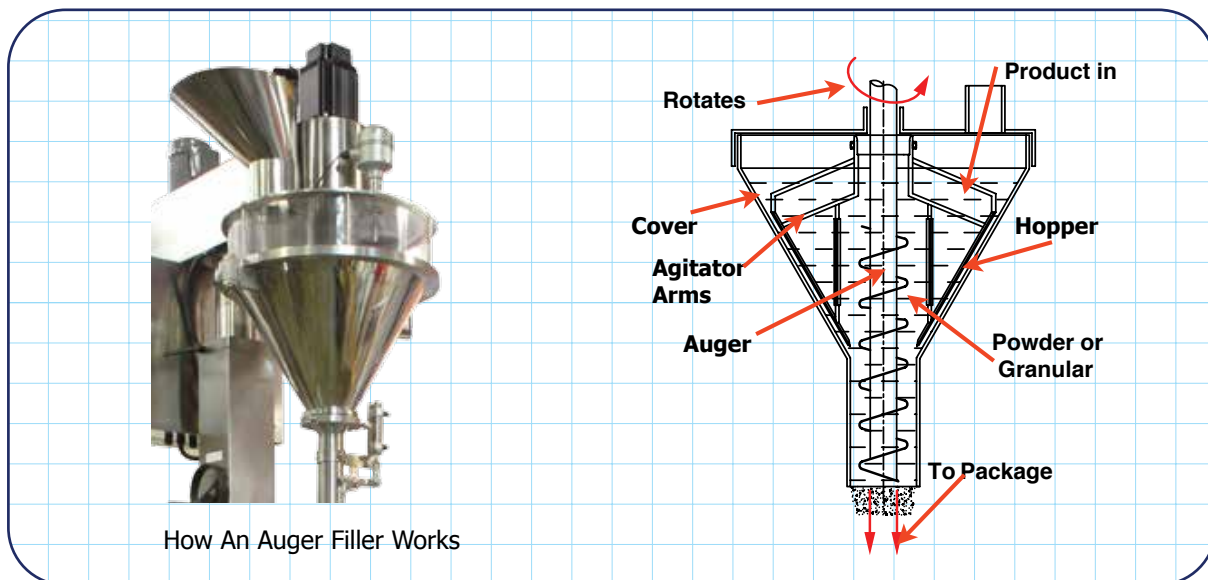
Low 'cost of ownership'  
because it will provide the  
quickest (ROI) return on your  
investment



- AWE guarantees our solutions and products. From our 30 years experience manufacturing Vertical Augers, we're able to draw from our armoury to customise the solutions which suits your process, rather than forcing a process to suit our solutions.
- AWE uses universal and industrial components to give the machinery extra long life cycles - the way machinery should be built (this way you're not locked into expensive proprietary systems)
- Manufactured to comply with Australian and International Machine Safety & Electrical Standards
- AWE prides itself on providing plain English proposals - there are no hidden surprises. You'll know what you're getting.
- AWE manufactures complete lines from filling, sealing through to palletising.



## ■ HOW THE VERTICAL AUGER WORKS



How An Auger Filler Works

A vertical auger looks like a corkscrew, it's long Stainless Steel spiral blade wrapped around a central shaft, it's driven by an electric motor at the top of the auger

1. The screw displaces a certain amount of product each revolution, by precisely controlling the dosage.
2. The auger rotates in the hopper filled with loose powder. As it turns, it drives the powder through the bottom of the hopper into a narrow tube where the powder is drawn down the tube by the turning screw. The auger runs through the narrow tube creating a tight fit, so as the screw turns it pulls the prescribed amount of powder down the tube filling the container.
3. The Agitator keeps the feed to the centre of the auger.
4. As the vertical auger sends measured doses into the packaging container, the closed hopper is topped up with powder to maintain the levels so there is no interruption in production and maintaining a constant head pressure.
5. The PLC sends a signal to the auger drive system which turns the auger a pre-set number of revolutions delivering a measured dose of product. You can control the amount of powder delivered by setting the number of revolution the auger turns. This can be measured and calibrated to deliver a precise amount of powder.

# Control the amount of powder delivered by setting the number of auger revolutions.



## ■ HOW DOES THE VERTICAL AUGER WEIGH YOUR PRODUCT

Our system uses scale feedback to monitor the filler and correct any inaccuracy. You don't want to deliver too much or too little to the consumer, but you will want to pack as fast as possible.

The biggest headaches in packing & filling is the dreaded bottleneck. The speed of your plant is determined by your constraints, which often is the filler and the check weigher.

So you need to match your weighing system to the same speed as a machine can fill. There's no point having super fast filling, if the weighing, becomes a bottleneck.

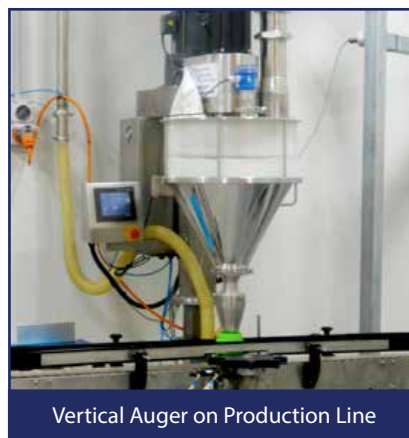
# A weighing solution with the **speed** of a volumetric filler with the **accuracy** of net weighing

- **Volume:** Using a servo-drive to control the acceleration, speed and number of revolutions to dispense the required amount of product. We achieve speeds of up to 5000rpm and stop in 0.2 seconds with this technology. This is the lowest cost and fastest solution with an option to weigh samples and correct fills by weight. Without this scale feedback, you rely on manual adjustment of a product with good volumetric repeatability.
- **Weight:** Using scales to accurately control the servo system to the required fill. The system uses programmable fill points for fast and slow-feed into your container. This method is used for non-homogeneous powders where the repeat accuracy of each volumetrically delivered amount is not consistent and weighing while filling is the best solution.
- **Combination:** Using both Volume & Weigh filling to maximize container capacity. Use volumetric filling to fill your container to 95% of it's final weight and then index to the weigh station to top up precisely. At higher capital cost, this option offers the benefit of filling accurately by weight with high throughput. It suits most auger suitable powders.

Weigh & volumetric can be combined to offer a weighing solution, that allows the speed of volumetric with the accuracy of net weighing filling.



Vertical Auger Filler



Vertical Auger on Production Line

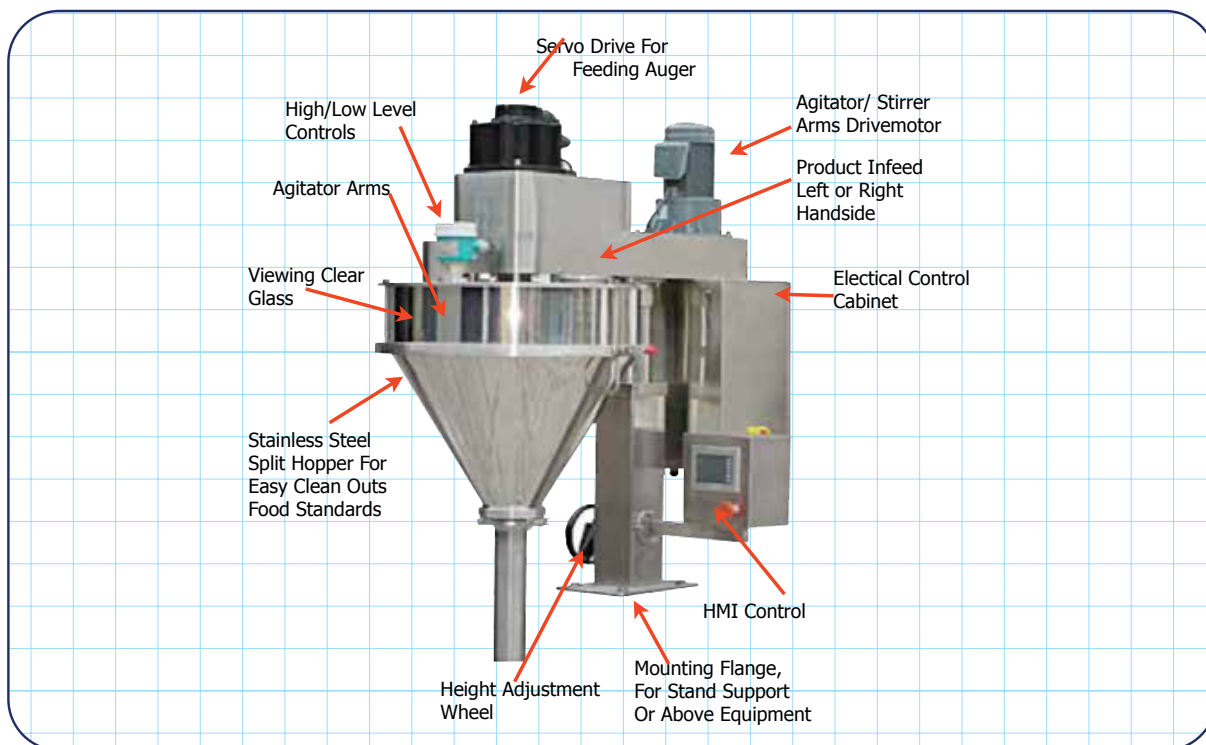


Volumetric Weigher



## ■ FEATURES & BENEFITS OF THE VERTICAL AUGER

- Accepts a wide range of Augers to match your dry powder your filling
- Servo driven motor for accurate control of acceleration speed and revolutions
- Weight feedback
- Hopper level controls for special products
- Vertical Auger Weight Feedback Upgrade to PLC includes a digital scale which feeds weight information back into main PLC & makes adjustments as required to keep filling machine on target weight within tolerances.
- Internal Agitator With Timer Controls To Keep Product Feed
- Stainless steel construction hopper, built to sanitary standards (Mild Steel hidden subframe)
- Hoppers come in 25, 45, 50, and 60 Litres capacity
- Split hopper design for easy unlocking and cleaning hopper and auger tooling
- Adjustment height control - making it easy to fill different sized containers, bags, tubs, etc
- Support column provides mounting flange for floor stand or machine mounting above other equipment
- Standard checkweigh scale with weight feedback for automatic adjustment for product variances
- Program for master/slave chaining of fillers for dosing products in selected ratios.
- Can be mounted on bagmakers, bottle/jar fillers or ground manual mounting







## ■ AUGER SPECIFICATIONS

Each auger needs to be designed to suit the dry product being filled.

The auger in an auger filler is not a dumb screw but a precision engineered component designed to match product characteristics as well as filling speed and volume requirements.

Auger stems & OD flight needs to be exactly concentric to avoid erratic dispensing.

One size does not fit all, even on products that appear similar - so talk to AWE so the correct auger combination can be designed for your product and adapted to match each unique type and container requirement.



# Precision engineered & designed to match product characteristics, filling speed & volume requirements

## ■ DIMENSIONS

Split Hopper for Easy Cleaning

Vertical Auger Filler

Changing The Auger

Varying Lengths To Suit Filling Application

50 L Version Displayed Other Capacities Available in 25L, 45L, 50L & 60L



## ■ **HOW TO ORDER YOUR VERTICAL AUGER FILLER**

When you order your Vertical Auger Filler it comes with:

- Self contained filler with easy clean split hopper and integrated electrical control box. Requires 200-250v ac supply
- A height adjustable floor stand unless a special machine mount was specified
- Footswitch to initiate fill cycle
- Electrical logic interface to upstream product feed system and interface to down stream packaging machine
- Quick change auger assembly to suit your specification
- Quick video tutorial

AWE Vertical Auger Fillers comes with extra options. Before placing your orders, consider the added tooling below that may be a necessary aid to your particular process.

## ■ **VERTICAL AUGER FILLER OPTIONS**

- Scale for weight feedback or control
- Extended tooling
- Bombay doors
- 100% Stainless Steel frames
- Bulk product conveyors
- VASD Vertical Auger Servo Drive Larger Servo drive unit 3Kw as required for difficult to move products such as sugars , glutens and granular products. Upgrade to P.L.C and larger agitator motor to suit.
- Connecting a dust collection vacuum system to reduce dust around the fill nozzle
- Out-feed Conveyor
- Inlet Surge Bins
- Automatic Bag Loader (arm Loader)
- Robot arm and vacuum clamping device
- Pallet jack base to move machine with ease
- Heavy duty agitation change parts, with high speed agitation, medium blade & paste blade

## ■ **OPTIONAL EQUIPMENT TO COMPLETE PACKAGING SYSTEM**

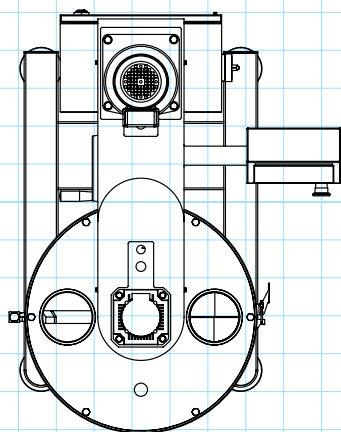
- Vertical auger in production line
- Product infeed conveyors
- Conveyors
- Valve sealers
- Palletisers

If you have any additional questions about Vertical Auger, or your process in general, then please feel free to talk to a AWE Sales Engineer.

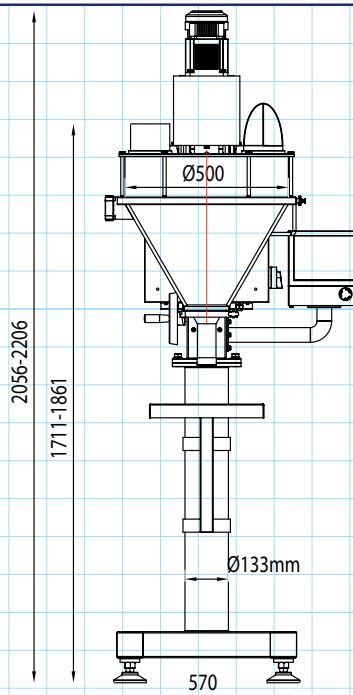


■ **DIMENSIONS**

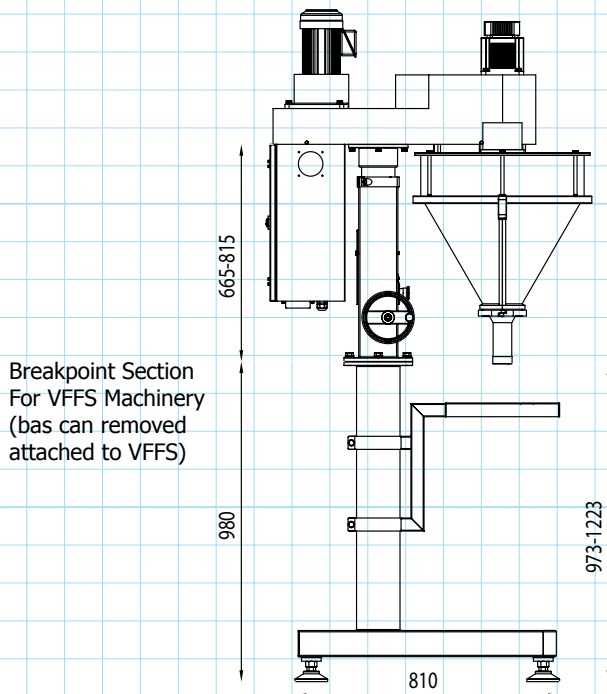
**Vertical Auger filler 50L Version**



**TOP VIEW**

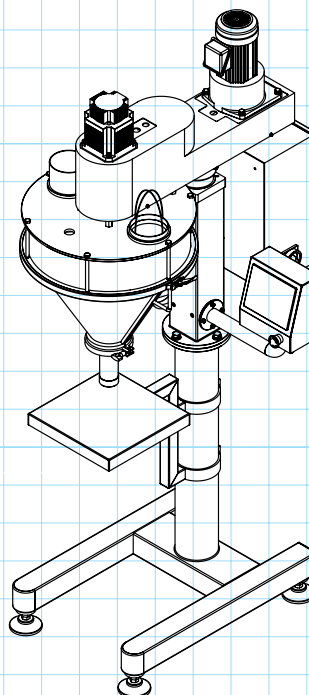


**FRONT VIEW**



Breakpoint Section  
For VFFS Machinery  
(bas can removed  
attached to VFFS)

**SIDE VIEW**



**3D VIEW**





Electrical



Servo



HMI control screen



25L Vertical Auger

50L Vertical Auger

## ■ SPECIFICATIONS

Order Code	VERTICALAUGER25L	VERTICALAUGER50L
Hopper Volume	25 Litres	60 Litres
Filling Accuracy	± 2% of pack < 100g otherwise ± 1%	± 1% for 100-500g packs larger packs ± 0.5%
Filling Weight	1 - 300g	10g - 5kg
Filling Rate*	40 - 120 times/min	40 - 120 times/min
Total Power	1.18KW	2.4KW
Power	240-415v to 380-420v	240-415v to 380-420v
Total Weight	140Kg	250Kg
Overall Dimensions	860×520×880 mm	1125×700×1200 mm

\* Depending on product characteristics, bag size, etc.



■ **AWE - THE BEST IN THE BUSINESS**

AWE has built a reputation in providing world class products and services to customers from a wide range of industries for many unique applications. All the products come with AWE Quality Guarantee- giving you the assurance that they have been tested to meet or exceed the specifications and requirements of your application.

At AWE, it's more than just delivering perfectly-designed equipment, it also requires a team of dedicated people who will back you up with great service and support. Any servicing, installation and technical support issues you encounter can be addressed either onsite or remotely by our engineers and tradesmen who carry qualifications as:

- Licensed Tradesmen
- Mechanical Engineers
- Electrical Engineers
- Structural Engineers
- Draftsmen
- Fitter & Turners
- Boilermakers
- Fully Qualified Scale Makers
- Electronic Technicians
- Instrument Fitters
- Electricians
- Service Technicians
- Project Managers
- Formworkers
- Concreters



Call AWE today. We will find the right solution for your individual needs.

If you have questions about

- **weighing equipment**
- **packaging equipment**
- **bulk materials handling**
- **componentry**

call the sales team at *AWE Group* to find the right solution for your individual needs.

■ **AWE PRODUCT RANGE**



Weighbridges



Load Cells



Scales



Crane Scales



Indicators



Packaging Equipment



Onboard Weighing



Batching Consoles



Test Weight



Maintenance



## ■ WHO IS “AUSTRALIAN WEIGHING EQUIPMENT GROUP”

Jeff & Trevor Baillie started Australian Weighing Equipment (or AWE) in 1981, focusing on weighing solutions based on engineering principles. For nearly 40 years AWE has built its reputation as a leading supplier of robust weighing, packaging & bulk handling equipment. Our innovative engineering and continuous product developments have led to designs that will stand up to the rigours and demands of your applications.

AWE has increased its investment in manufacturing facilities with a new 3,200sq/m factory in Sydney which features;

- A CNC Machine Shop
- Heavy Metal Fabrication Shop
- Larger work areas for our team of qualified tradesman

Acquisitions of Bradwood Packaging and Dendy Packaging and Design Engineering has increased our packaging and engineering experience.

In 2008, AWE established a manufacturing facility in China - AWE Group Packaging and Bulk Materials Handling Equipment, a purpose-built 5,000sq/m factory in Suzhou China (70kms From Shanghai).

All of the products we offer are Australian designed and manufactured under our strict quality control system in our own factories both locally and internationally.

## ■ LOCATIONS OF AUSTRALIAN WEIGHING EQUIPMENT



Australian Weighing  
Equipment - Sydney Office

8 Heald Road  
Ingleburn NSW 2565



Australian Weighing  
Equipment - Melbourne Office

37 Barrie Road  
Tullamarine, VIC, 3043



Australian Weighing  
Equipment - Brisbane Office

7 Darnick Street  
Underwood, QLD 4119

## ■ AUSTRALIAN WEIGHING EQUIPMENT ON SOCIAL MEDIA



@AustralianWeighingEquipment



@australianweighingequipment



/company/awegrouppaustralia



www.youtube.com/AustWeighing



www.awe.com.au

Dealer's Information:

SCAN HERE



www.awe.com.au