



VERTICAL FEEDER

BROCHURE



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HiSpec Engineering

About

Established in 1988, HiSpec Engineering Ltd is a family owned company based in Co. Carlow, Ireland. Since the company's inception we have grown progressively and established a solid reputation throughout the agricultural industry as a manufacturer and supplier of high quality machinery. Our core activity is design, manufacturing and maintenance of high quality, innovative and reliable machinery for use throughout the agricultural industry.

We are proud of the dependable and honest reputation we have built and continue to grow a sustainable business benefitting the national and international communities.

A key ingredient to our success is the family run, hands on approach, working with valuable staff, who bring a vast amount of experience and skill, many of whom are with HiSpec since our establishment. Our staff remain committed to ensuring you always receive the best quality and service from HiSpec. This hard work and dedication helps us manufacture in excess of 1,000 machines per year.

Investment

HiSpec has invested heavily in our production facilities in order to provide our customers with the highest quality products. We have established a strong core dealer network throughout Ireland and the UK. We also manufacture and distribute agricultural machines to various countries around the world.

We are focused on improving our products and are always looking to establish greater efficiencies to ensure HiSpec maintains its reputation as a market leader in manufacturing high quality products.

V Series







V Series

Single Auger

Our **V Series** vertical feeders range in size from 7 to 16m³ with a single auger. A single discharge door is standard. The **V Series** can feed from 50-112 cows or 70-160 cattle.

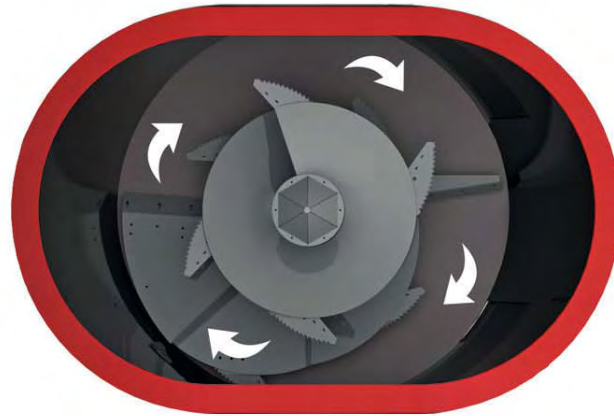
The strength and quality of workmanship is easy to see on the **V Series**. An independent reinforced chassis and a single axle provide a solid base for the feeder body. There is a choice of tyre options to vary either the overall height or feedout height. The independent chassis features four Digi-Star weigh-cells as standard; one on each corner and these weigh-cells provide an accurate indicator of feed weight.

All **V Series** feeders feature an extremely robust 20mm floor. HiSpec also incorporates vertical reinforcement to the underside of the feeder floor. This strengthens the floor against the vertical forces of feed being loaded into the machine. This feature and strength is unique to HiSpec.

The **V Series** feeder body is made from 8mm high-grade steel. The body is tapered outwards to allow efficient mixing and also maximise volume. The 8mm body is very resistant to wear and the top of the body is tapered inwards complete with an anti-spillage ring to help contain the feed. The tapered top of the feeder also helps to brace the feeder and to retain its natural inherent strength.

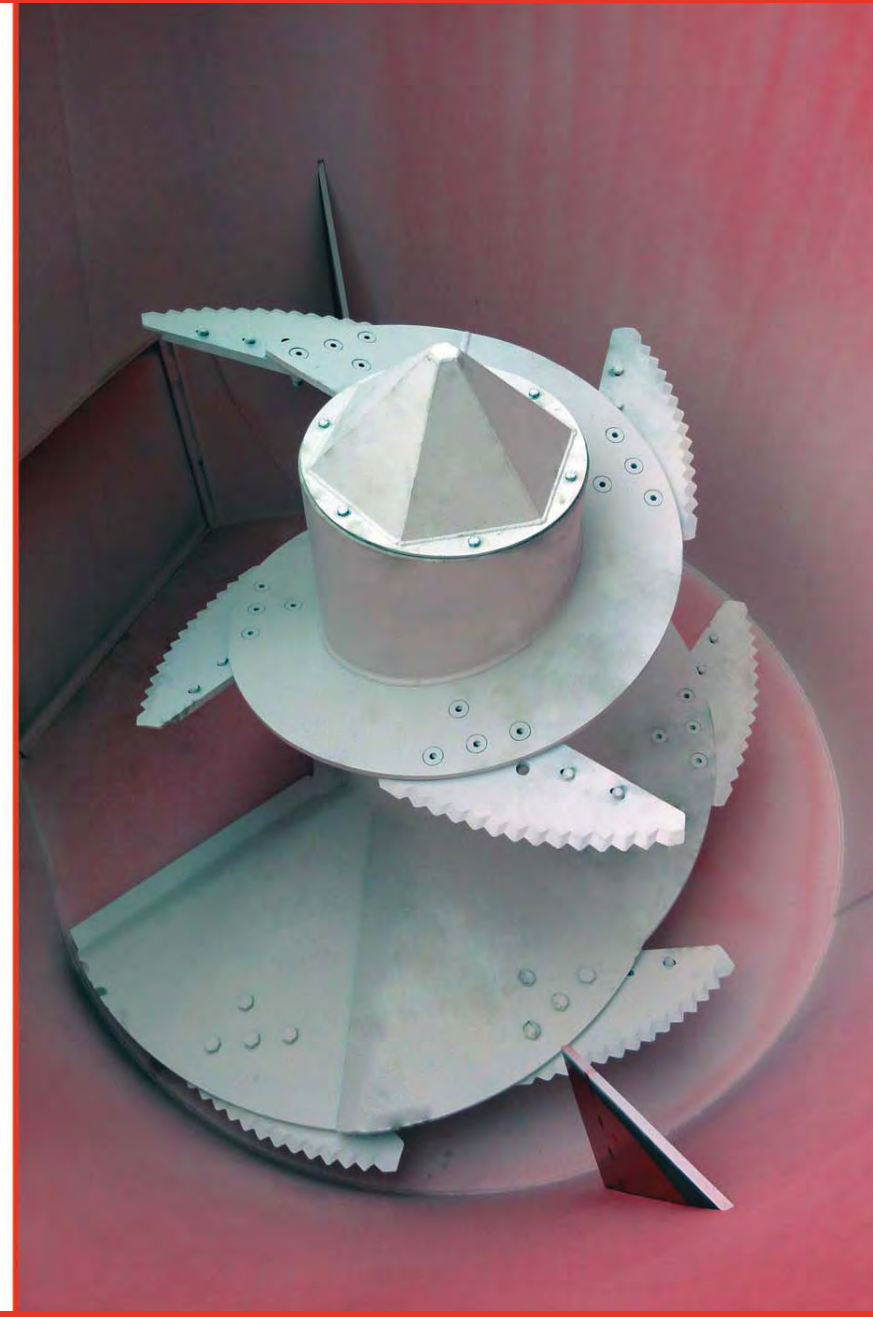






Auger Mixing

The auger inside the **V Series** features a gradual flighting to control the mixing of the feed. The auger also extends close to the feeder body to ensure that all of the feed is drawn through the mixing cycle. The serrated cutting blades are constantly cutting the long fibres to ensure a consistent mix.



T Series





T Series

Twin Auger

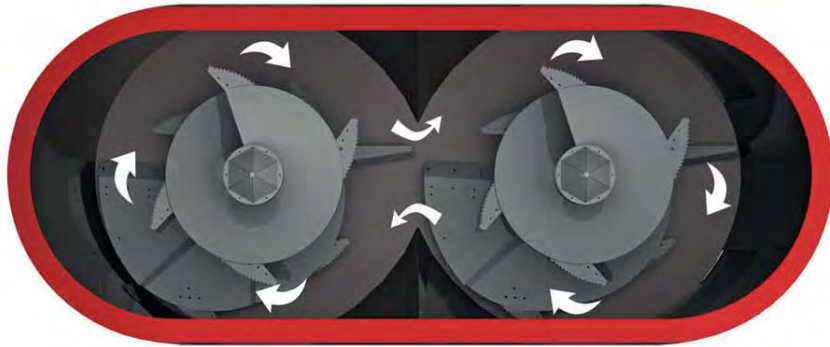
The T Series vertical feeders range in size from 14 to 32m³ with two vertical augers. A single discharge door is standard. The larger capacity T Series can produce feed loads for 98 - 224 cows (140 - 320 cattle).

The T Series is built with the same strength in depth as all HiSpec products. The heavy duty 20mm floor is complete with unique vertical reinforcement as standard across the T Series.

The T Series is ideal for operators where higher work rates and large capacity mixes are required.

The T Series is fitted as standard with a heavy duty chassis. A tandem axle can be fitted for improved manoeuvrability and for travelling on roads.





Feed Motion

The movement of the ration inside the feeder is critical to the final mix quality. To produce a smooth mixing process, HiSpec has developed a unique 'Feed Motion' for our augers

The augers in the **T Series** are moving the feed in both a vertical and horizontal motion. This 'Feed Motion' helps to mix in a figure 8 motion to create an even and homogeneous feed.

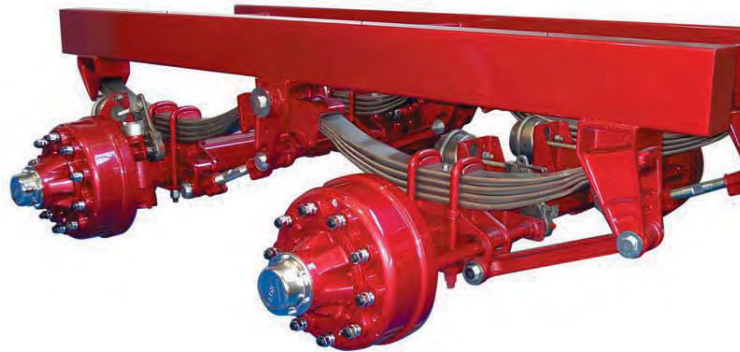
The unique auger design allows any material to be added to the mix. The auger also lifts the ration up from the floor ensuring that the feed is in constant motion and mixed thoroughly.





Tandem Axle

Travelling on the road...



With increased land and time restraints, farmers want to complete their feeding in as short a time as possible. To enable shorter travel times between farms and less wear on the feeder, a tandem axle can be fitted.

Tandem axles provide greater comfort and less stress when travelling with a load. Options are available in rear steering and non-steering. Rear steering axles provide extra manoeuvrability around your yard. Non-steering axles ensure tyres are spaced closer together to reduce tyre wear and axle strain.





comer industries

Gearboxes

Comer industries is a global leader in the design and production of advanced power transmissions and gearboxes. Comer Industries supply major OEMs of agricultural machinery worldwide including: AGCO, Caterpillar, CLAAS, CNH, JCB, John Deere, Krone, Lely, Pottinger, TEREX and Volvo.

Established in Italy in the beginning of the 1970s, Comer Industries has grown organically and through acquisitions to become a major supplier to over 60 countries worldwide including Ireland. Comer Industries is a reliable partner for HiSpec through their continuous improvement and continual pursuit of excellence.



Comer Industries

We use Comer gearboxes as standard on our Vertical Feeder range. A robust PGA gearbox is provided as standard for auger rotation across the HiSpec Vertical Feeder range.

PGA 1602

PGA 1602 gearboxes are fitted to smaller **V** (single, V7-V12) and smaller **T** (twin, T14-T27) auger mixers as standard. PGA gearboxes possess strong torque characteristics to ensure that the mixers cope with chopping and mixing effortlessly.

PGA 2502

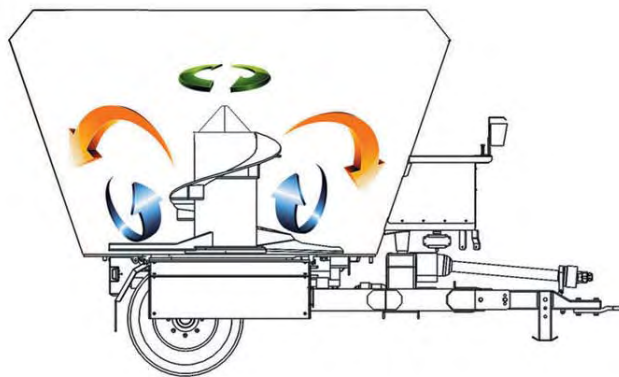
Fitted as standard to larger **V** (single, V14-V16) and larger **T** (twin, T32) auger mixers. The PGA 2502 provides greater torque to deal with increased payloads. Each gearbox is supplied with an independent oil reservoir, and service is quick and convenient through an inspection hatch on each auger.

C3A – Two Speed Gearbox

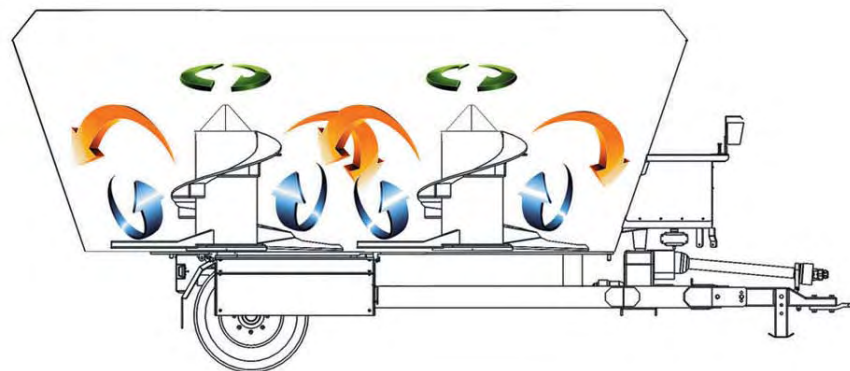
Fitted on sizes greater than 12m³ as standard, the C3A allows the auger to rotate at multiple speeds. The low speed setting allows smaller HP tractors to operate the mixers and also to restart the mixer after settling. Operators can choose a high speed setting to provide complete and rapid emptying of the mixer. Optional extra on sizes 12m³ or smaller.



V Series
Single Auger

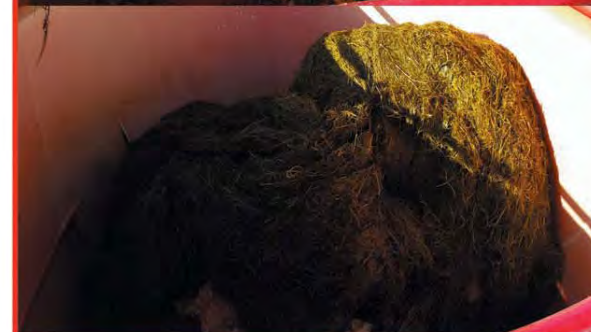


T Series
Twin Auger



Advantages

- Faster cutting of feed
- Reduced mixing time
- Larger payloads
- Self sharpening knives
- Reliable robust construction
- Minimal maintenance
- High quality gearbox





Mixing Principles

The HiSpec **V** and **T** Series feeders work by using a central auger (**V** Series – one auger and **T** Series – two augers) to carry out both the chopping and mixing functions. The auger does this in a very simple cycle action. Firstly it draws the feed up the central flighting allowing it to fall down the tapered sides to repeat the cycle. All the while, the auger is also rotating the feed around the body of the feeder.

For chopping, the augers are fitted with self-sharpening blades. These blades are supported on the auger via a 15mm reinforcement plate for increased strength. The chopping blades are adjustable through three different positions for increased or decreased cutting.

Two counter blades positioned on the feeder body hold the feed or bale in-situ and allow the rotating auger to chop the feed before mixing. These two counter blades are also adjustable for increased flexibility.





DIGI★STAR

PRECISELY



Four Digi-star weigh-cells and an EZ3410 display as standard provide you with an accurate feed weight.

The EZ3410 indicator comes with a fast micro-processor and the easy to read white back light.

The EZ3410 allows you to:

- Build a number of recipes for multiple pens.
- Choose 1 ingredient with 98 pens to 98 ingredients for 1 pen, or any combination between.
- Enter ration by: animal, percentage or load.
- Utilise basic recipe and batching capabilities.
- Eliminate feed sheets.



Digi-Star Cab Control is Ration Loaded...Precisely...

Reduce overloading with information at your fingertips. Cab Control is a wireless remote display and control system installed in the loader, the Cab Control works seamlessly with the mixer scale indicator. There is no need to leave the loader during loading.

You can view Recipe, Re-size and control the standard scale functions. The system gives direct access to basic loading settings, loaded weights and ingredients. It allows re-sizing of head numbers or total weights and it is easy to navigate through the rations.

TMR Tracker™



TMR Tracker is a full feature Windows based feed management system. TMR tracker also offers operators additional management tools including operator control, pen review, online feed data exchange, ingredient tracking and numerous reports.

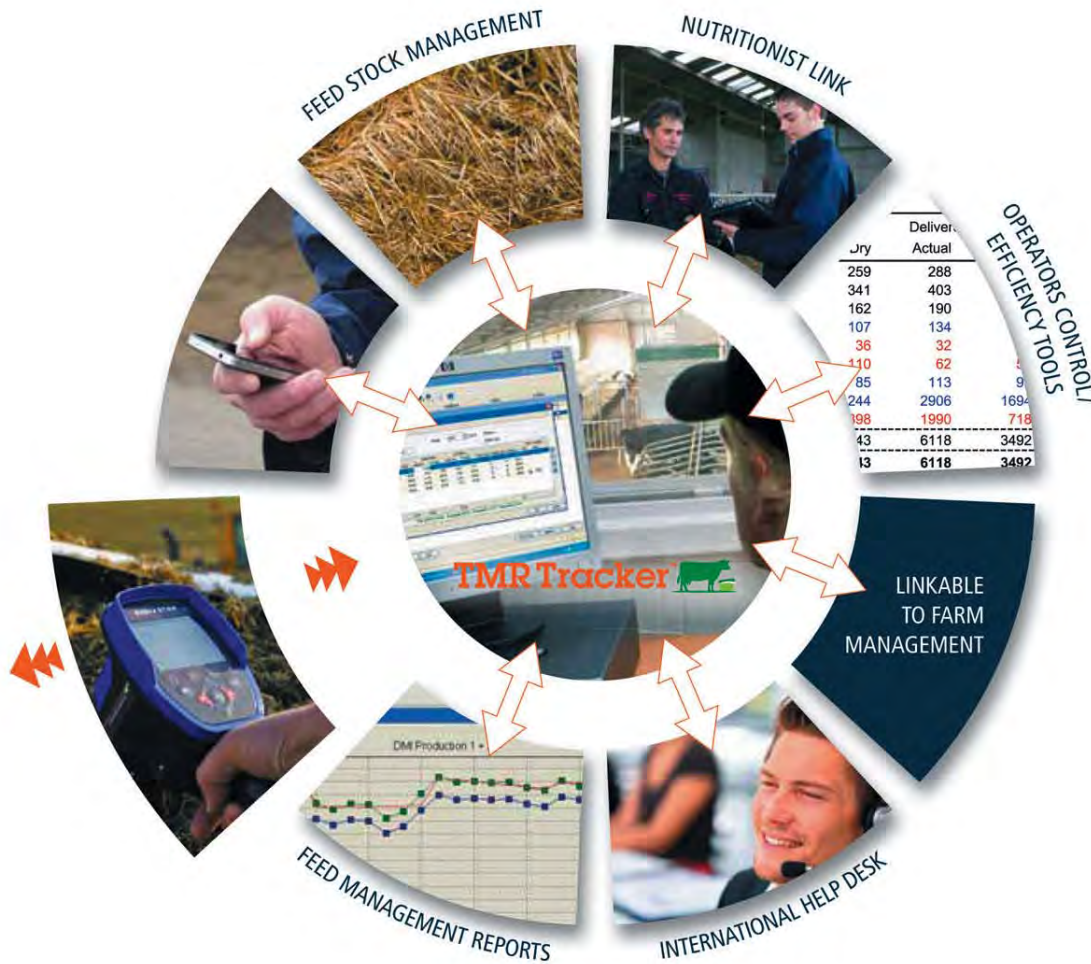
Simply enter your feed ingredient ration, groups and mixer information in your TMR software. RF Datalink (wireless) or USB (memory device) is used to transfer feeding instructions to the indicator on the TMR feeder. The indicator displays the ingredients to be loaded. During feeding the actual weights loaded and fed are saved and sent back to the PC.



ADVANTAGES

- Feed Cost Management
- Consistent Feeding
- Management Tools
- Promote Efficiency
- Service Support





TMR Tracker™ Functionality by Levels

TMR Tracker Function	LITE	PRO	PRO +
Easy to use Windows® based program	x	x	x
Communicates with EZ3600V, 4600V, 3610 & 4610 Indicators and the TST 7600	x	x	x
Input ingredients and track costs	x	x	x
Input recipes and monitor feed costs	x	x	x
Easy adjustment of Dry Matter values	x	x	x
Calculates Dry Matter Intake	x	x	x
Create recipes on a lb/load, lb/animal or percentage bases	x	x	x
Automated Report Export	x	x	x
Change "Pen Call Weight" and "Head Count" at indicator	x	x	x
Compatible with consultant & online versions	x	x	x
Ingredient usage report	x	x	x
Total # of reports	10+	15+	25+
Operator accuracy monitoring	Limited	x	x
Flexible workday definitions		x	x
Mixer rotation counter & mix time monitoring		x	x
Feed refusal/weighback tracking		x	x
Report writer offers report customization		x	x
Graphical reports			x
Interface with most herd management programs		x	x
Inventory monitoring & forecasting		Limited	x
Predicts feed reorder dates			x
Milk production tracking			x
Calculate Income over feed costs			x
Premix options		x	x
Upgradable to next program level	x	x	
Interface with the Moisture Tracker			x

DIGI★STAR

P R E C I S E L Y

FEATURES



CHUTE

Standard chute discharge height is controlled via chain link to the door. As the door rises the chute is elevated to your desired height.

HYDRAULIC CHUTE

Option of hydraulic chute is available for independent control of chute.



DISCHARGE DOOR

Fitted as standard with single discharge door. Additional doors can be added in multiple positions to suit your needs.



TEASER ROLLER

The feed is teased out in a more consistent fashion via a hydraulic spinning teaser roller.

Reduces the likelihood of an amount of large feed exiting the door at one time.



COUNTER BLADE

The counter blades are used to hold a bale in position while the rotating auger cuts the bale.

These blades can be hydraulically operated so that they can be withdrawn during feedout.

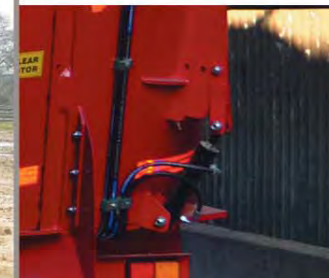


LADDER

A folding ladder is provided for viewing of the mixing process.

BEET KNIVES

Beet knives can be fitted to the auger base for chopping beet. Beet is loaded into the feeder and left to chop for a few minutes.



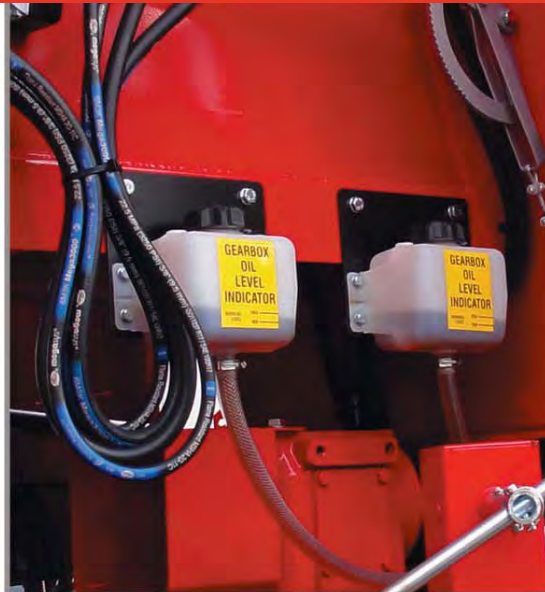
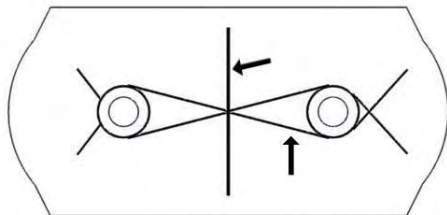


SPILLAGE RING

The tapered body and pivoting ring ensure that the feed does not spill over the feeder and that bales are held in position during the early stages of chopping.

FLOOR REINFORCEMENT

A unique feature of our feeders is the addition of reinforcement to the underside of the floor. This helps to protect the feeder from shock forces during loading.



GEARBOX OIL RESERVOIR

Each auger gearbox has an independent oil reservoir located at the front of the feeder for easy maintenance.

ADJUSTABLE SELF-SHARPENING KNIVES

Serrated knives can be adjusted for increased or decreased cutting. Supported on a 15mm plate for additional strength.



ELECTRIC HAND CONTROLS

Ensure all controls are at your fingertips with in-cab electric controls.

Standard for straw-blower and VHD models.



BODY MAGNET

Ultra strong magnet designed to extract dangerous metal objects from the feed mix. Hinged for easy cleaning.





Folding Elevator

Fold in after feeding

We have developed a patented feed elevator that folds neatly to the front of a feeder for transport position. The overall width of the feeder is not affected. The elevator glides from the transport position to the discharge door. The height of the elevator can then be adjusted to suit the trough.

It is a chain and slat elevator which discharges feed evenly once the feed-out door is opened. The speed of the chain and slat is controlled on the feeder. A belt option in lieu of chain and slat is available. Elevators over 48" require fixing on the feed-out door, instead of moving forward for folding to transport position.



Transport position

End Conveyor

An end conveyor can also be added to the flat conveyor for those particularly hard to reach places. It is a great solution to feeding under roofs with very low eaves height.



Flat Conveyor

Feed to either side quickly and easily

Our flat conveyor feeds to either side quickly and easily. The front door discharges the feed onto the flat conveyor belt. The belt conveyor then takes the feed to either the left or right side; The direction of the belt can be changed in the cab. The speed of the belt can also be adjusted from the machine.

There is also an option for 125mm side movement on the conveyor to both sides. For transport the conveyor is within the overall width of the feeder.



Working position

VHD Conveyor

Variable Height Discharge

HiSpec's VHD conveyor is a feed-out solution for every farm. The VHD comprises of a hardened plastic belt with raised sections to quickly discharge the feed.

The VHD conveyor is designed to extend 350mm beyond each side of the feeder. From there, the VHD can elevate on either side to feed into even the highest trough. Afterwards it folds back neatly to the width of the feeder for transport.

All functions on the VHD are controlled from the cab via an electric controller. The conveyor speed is controlled via a flow restrictor on the feeder.





Chop Chop Chop

Chop root crops easily and mix instantly with your ration. The hydraulically driven chopper chops approximately 500kgs of roots in 90 seconds.

A special cleaning chain removes soil from the roots. The chain then transports roots to the cutting chamber where a spring-loaded bar and chopping rotor chop roots to nugget size.

The nuggets are then fed into the vertical auger via a feed auger and blended to produce a mix that livestock cannot selectively eat.

Stones are easily removed from the cutting chamber through the inspection lid.

Feeding and bedding with one machine



The HiSpec Straw Blower attachment is used for bedding loose and cubicle sheds. It can be used on any size vertical auger machine and will blow straw up to 20 metres to the right hand side of the feeder. You have instant control at your fingertips with all functions operated via an electric controller. Accurate spreading is achieved via adjustment in the two stage chute which will rotate laterally through 30°.

Upon loading of the straw bale, the vertical auger begins cutting the bale and passes it to the high speed flywheel. The design of the flywheel produces a powerful blow and an efficient clean out of the blower housing. All shapes and sizes of straw bales can be used.

The blower can also be used for feeding into high troughs, round feeders or over high walls. It is fitted with a two speed gearbox, low speed for feeding and high speed for straw blowing.



TYRE CHOICE

V Series Single Auger

Model	Standard Tyres
V7	380/55 R16.5
V10	435/50 R19.5
V12	435/50 R19.5
V14	435/50 R19.5
V16	435/50 R19.5



380/55 R16.5	435/50 R19.5
380 (15") 810 (32")	435 (17") 930 (37")

Tyres for V Series

The V7 is fitted as standard with 380/55 R16.5 tyres to keep the overall height low for this feeder. All other single auger feeders are fitted as standard on 435/50 R19.5 wheels. Any wheel choice is possible under the feeders with the 235/75 R17.5 twin wheels being a popular choice to lower (125mm) the overall height of the machine.

T Series Twin Auger

Model	Standard Tyres
T14	435/50 R19.5
T16	435/50 R19.5
T18	435/50 R19.5
T20	435/50 R19.5
T24	435/50 R19.5
T27	435/50 R19.5 tandem
T32	435/50 R19.5 tandem



435/50 R19.5
435 (17") 930 (37")

Tyres for T Series

Twin auger models up to and including 24m³ come as standard on a single axle. Models 27m³ and greater come as standard on tandem axles complete with rear steering to aid manoeuvrability and carrying capacities.

FEEDOUT OPTIONS

V Series

Single Auger

1 discharge door as standard



**Left
1.3
Side
Door**



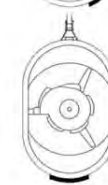
**Right
1.4
Side
Door**



**Rear
1.5
Left
Door**



**Rear
1.6
Right
Door**

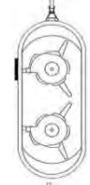


**Rear
1.7
Centre
Door**

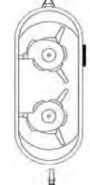
T Series

Twin Auger

1 discharge door as standard



**Left
2.3
Front
Door**



**Right
2.4
Front
Door**



**Left
2.5
Rear
Door**



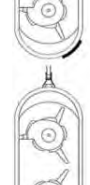
**Right
2.6
Rear
Door**



**Rear
2.7
Left
Door**



**Rear
2.8
Right
Door**



**Rear
2.9
Centre
Door**

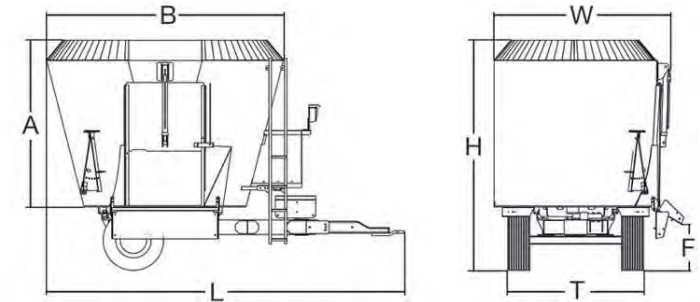
A major advantage of vertical auger feeders is their ability to feed into any feed space. Any number of discharge doors are possible.

Conveyors are fitted with a front centre door for easy operation from the cab. Side mounted doors are the most popular with feeding left and right or both. Rear corner doors can be fitted for narrow passageways, and a rear centre door is ideal for mixing meal.

All feeders come with one discharge door as standard.

V Series Single Auger

- 540-1000 rpm PTO drive
- Heavy duty Comer PGA gearbox
- 4 x Digistar weigh-cells c/w programmable EZ3410 readout display
- Side feedout door (x1) c/w adjustable chute
- Manual adjustable restrictor plates (x2)
- Independent gearbox oiler c/w reservoir
- Adjustable serrated forage blades
- Reinforced 20mm floor
- 15mm auger flighting
- 8mm body
- Auger kicker plate
- Viewing platform c/w ladder
- Spillage ring
- Drawbar stand
- Parking brake
- Ring hitch
- Hydraulic brakes
- LED lights
- HiSpec red paint finish

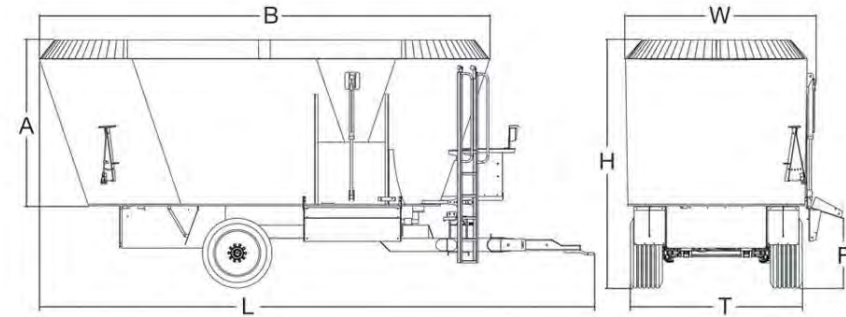


Model	Tyres	M³	Gearbox	2 Speed	Height H	Width W	Length L	Feedout F	Body A	Body B	Track T	Weight
					mm	mm	mm	mm	mm	mm	mm	kgs
V7	380/55 R16.5	7m³	PGA 1602	✗	2660	2220	4280	610	2050	2940	1685	3600
V10	435/50 R19.5	10m³	PGA 1602	✗	2960	2620	5110	850	1850	3500	2190	4700
V12	435/50 R19.5	12m³	PGA 1602	✗	3120	2620	5160	850	2000	3600	2190	5000
V14	435/50 R19.5	14m³	PGA 2502	✓	2960	3020	5550	850	1850	3900	2540	5900
V16	435/50 R19.5	16m³	PGA 2502	✓	3160	3020	5600	850	2050	4000	2540	6400

3 x Digistar weigh-cells c/w programmable EZ3400 readout display and reinforced 15mm floor on V7

T Series Twin Auger

- 540-1000 rpm PTO drive
- Heavy duty Comer PGA gearbox
- 2 speed reduction gearbox
- 4 x Digistar weigh-cells c/w programmable EZ3410 readout display
- Side feedout door (x1) c/w adjustable chute
- Manual adjustable restrictor plates (x2)
- Independent gearbox oiler c/w reservoir
- Adjustable serrated forage blades
- Reinforced 20mm floor
- 15mm auger flighting
- 8mm body
- Auger kicker plate
- Viewing platform c/w ladder
- Spillage ring
- Drawbar stand
- Parking brake
- Ring hitch
- Hydraulic brakes
- LED lights
- HiSpec red paint finish



Model	Tyres	M³	Gearbox	2 Speed	Height H	Width W	Length L	Feedout F	Body A	Body B	Track T	Weight
					Mm	mm	mm	mm	mm	mm	mm	kgs
T14	435/50 R19.5	14m³	PGA 1602	✓	2750	2220	6520	850	2110	5070	1910	6000
T16	435/50 R19.5	16m³	PGA 1602	✓	3025	2220	6570	850	2360	5210	1910	6500
T18	435/50 R19.5	18m³	PGA 2502	✓	2620	2620	7330	850	1900	5850	2340	7060
T20	435/50 R19.5	20m³	PGA 2502	✓	2870	2620	7330	850	2160	5850	2340	7260
T24	435/50 R19.5	24m³	PGA 2502	✓	3070	2620	7530	850	2310	6050	2340	7660
T27*	435/50 R19.5	27m³	PGA 2502	✓	3400	2620	7640	925	2540	6130	2350	8660
T32*	435/50 R19.5	32m³	PGA 2502	✓	3290	3020	8240	925	2360	6820	2690	10450
T35*	435/50 R19.5	35m³	PGA 2502	✓	3440	3020	8260	925	2540	6900	2690	11150

*Tandem only



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