MORRIS

QUANTUM

AIR DRILL

WE GROW BETTER CROPS

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TAKE YOUR OPERATION TO THE NEXT LEVEL.

FARMERS WHO OWN MORRIS EQUIPMENT BELIEVE THEY GROW BETTER CROPS.

Farmers #1 challenge today is getting their crop planted on time. They are achieving this with larger, more reliable machines and more hours in the paddock.

The Quantum Drill has been designed to make those long hours more productive with automated features like ICT sectional control, Auto-Lift headland management and Auto-Pack packing control.

The fully engineered frame built with Duraloc™ welding joints, heavy duty cast row units and the extensive use of stainless steel demonstrate our commitment to building quality equipment that passes the test of time.

CUSTOMERS TELL US THEY GROW BETTER CROPS WITH MORRIS EQUIPMENT.

Seeded with MORRIS

Why settle for a good crop when you can grow a great crop?

Agronomically Superior by Design

Accurate depth control:

Morris introduced a 1:1 contour ratio with the Contour drill in 2008. This design set a new standard in depth control accuracy for independent opener drills.

These same principles are utilised today in the class leading Quantum.

A testimate to the success of the design is that other competitors have followed suit.

Durability

From the front hitch to the back, and every millimetre in-between, the Quantum is completely redesigned from the ground up for exceptional strength, durability, and longevity.

TIGHT TURNS WITH EASE

Industry-leading manoeuvrability.

Even with a 24-metre Quantum, tight headland turns are a breeze.

TRASH FLOW

The trash flow characteristics of the Quantum have been adapted from the C2 Contour, a design that has been unsurpassed in the industry.

The success of this design comes from:

- Maximising the lowest catch point on the opener,
- Maintaining a true, uninterrupted tine pattern throughout the width of the drill; and
- Reclining the opener shank 12 degrees.

This design allows you to plant into taller stubble and create a more fluid flow of crop residue around the opener and shank.

Eliminating bunching and piles of crop residue collecting on the shank of the opener is especially important during shallow seeding.

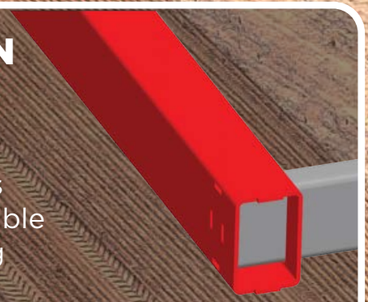
These residue bunches interfere with the flow of soil around the opener, filling the furrow before packing, resulting in uncovered seed and a staggered germination.

DURALOC™ FRAME DESIGN

The Quantum frame is 154% stronger than previous drills.

The 4x6 tubular steel frame features innovative joint welding, made possible by Morris proprietary manufacturing technology.

The Quantum is the strongest, most durable air drill from Morris, ever.



INDUSTRY LEADING FLOTATION

Float through wet spots with 15% more tyre area on the ground.

HEAVY DUTY HITCH

The new hitch has a low pull point design to reduce draft load on the front tyres.

A new greaseable articulating hitch clevis, with excellent wear life, is used on the quad hitch at the rear of the Quantum to attach tow-behind carts.

INCREASED DEPTH RANGE

The Quantum opener utilises the proven cam-and-pin system.

The notched cam-and-pin system adjusts depth at 6mm intervals. Rotate the cam by hand and insert the pin to lock in the desired seeding depth. This unique design eliminates wear points traditionally associated with pin depth control systems

The Quantum row unit features a depth shim system to allow for deeper digging and/or seeding. There is a removable shim under the depth cam and removing the shim results in an increase of 25mm seeding depth.

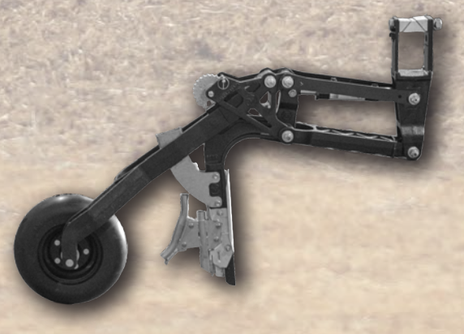
UPGRADED ROW UNIT FEATURES

The shank holder has been extended to improve the trip action for faster release off rocks.

The linkage pivots are all 1" chrome pins inside hardened plastic vesconite bushings that eliminate steel-on-steel wear and negate the need for greasing.

A double acting hydraulic cylinder raises and lowers the opener from working to transport position.

An enclosed shield and seal protects the hub bearings from mud and debris.



LARGE SINGLE CASTOR TYRES

The Quantum uses a 600/50-22.5 tyre across the machine, on 12m to 21m models, and wing frames on the 24m model.
This large single wheel castor improves the stability of the Quantum drill during operation in the field and during transport. The larger diameter tyre smooths the passage of the machine through field ruts and washouts.

24m models use a dual castor 445/50R 22.5 on the centreframe.

Tyres and hubs are fully interchangeable from wings to mainframe if rotation is desired to maximise tyre life.

PACKER WHEEL OPTIONS

4.50" x 16"
Semi-Pneumatic tyre

5.50" x 16"
Semi-Pneumatic tyre

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UPRIGHT AIR KITS

STAUFF CLAMPS

Eliminates hose sagging on secondary hose routed to the fourth row

RUBBER HEAD CAPS

Allows for easy inspection of risers without the need for special tools or clamps to remove

RED & BLACK COLOUR-CODED HOSE FOR SEED & FERTILISER

Minimises the risk of incorrect product placement

STAINLESS STEEL MANDREL BENDS

Reduces hose-wear and increases product flow efficiency

UPRIGHT AIR KITS

The Australian designed upright Air Kit is standard on all Quantum units, engineerd and manufactured by McIntosh Distribution.

Kits are available using 32mm hose, or optional 25mm hose.

Stainless steel construction ensures long life and consistent product delivery.

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The Morris Quantum row unit is the STRONGEST BUILT in the market.

Our rugged and ultra-durable cast row unit is designed for years of trouble-free service on your farm.

3 **1" chrome pins** at all connections.

4 **Cast packer arm**

Built heavy duty with left and right versions to eliminate skewing.

5 **Depth Cam**

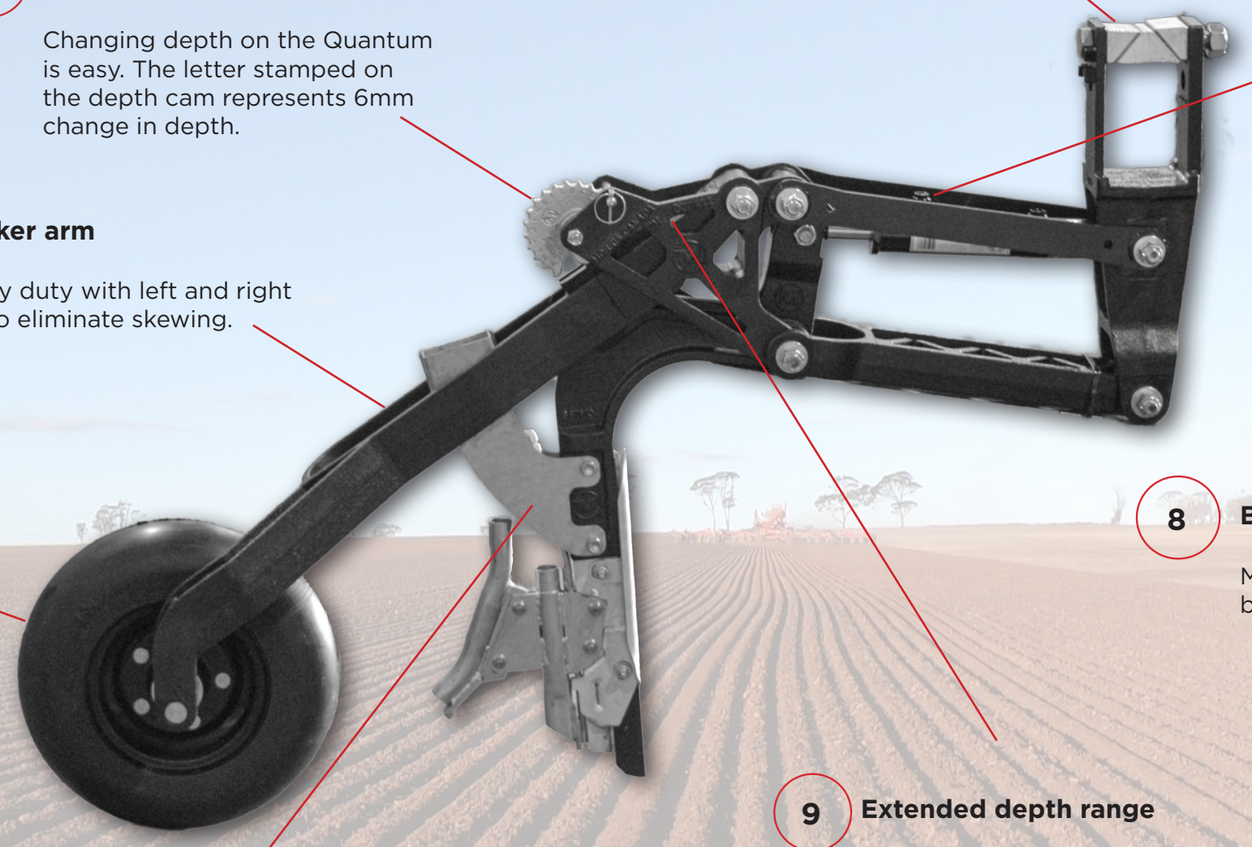
Changing depth on the Quantum is easy. The letter stamped on the depth cam represents 6mm change in depth.

6 **Patented frame mounting system**

This mounting system lifts and tightens the row unit square to the frame, allowing a greater choice of row spacings.

7 **Hydraulic cylinder**

Our hydraulic ram is designed for years of trouble-free use.
Our 1" cylinder rod has an over-sized piston that keeps the shaft centered throughout the range of travel.



8 **Bushings**

Morris uses extended wear vesconite bushings for its greaseless pivot points.

2 **Press wheel options**

a. 5.5" x 16" semi-pneumatic
b. 4.5" x 16" semi-pneumatic

9 **Extended depth range**

A removable shim below the depth cam can increase seeding depth by 25mm.

1 **Hose holder**

An optional hose holder eliminates the need for hose clamps to fasten the secondary hoses to the boot.

1:1 contour ratio. Why settle for less than the best?

This parallel linkage system has 16" of vertical travel where the depth control and penetration angle of the opener does not change. **This means superior crop emergence on the crowns of hills and through crab holes and washouts.**

BROADEST RANGE OF ROW UNIT SPACING

The Quantum has a wide range of row unit spacing options.

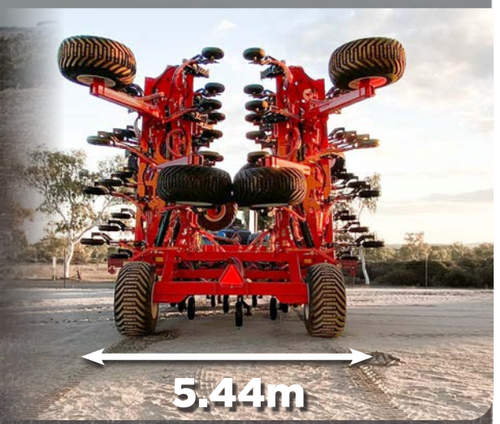
The design of the frame allows either imperial or metric spacing.

IMPERIAL 12-21M: 10, 12 and 15" spacing all at the exact working width of the drill.

Available in 40, 50, 60 and 70 feet.

24m models offer 250mm, 300mm and 380mm spacings.

METRIC: 250mm, 300mm and 380mm spacing available on all models



CONTROLLED TRAFFIC FARMING

The Quantum has main frame tyres on 3m centres, an important consideration for standardising wheel-based soil compaction in controlled traffic fields.

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BLOCKAGE MONITORING OPTION

Morris blockage monitoring kits alert the operator to blocked runs or sections, preventing costly gaps in emerging crops.

TOPCON SENSORS;

Mounted on the secondary lines of the air seeder kit, sensors see product traveling through the lines. If the sensor does not detect product movement for a given length of time, a warning is sent to the monitor.

SECTION AWARE;

Our system is aware when sections are switched off for overlaps and will not send unnecessary alarms when using Morris ICT (input Control Technology) Air Carts.

Morris utilises Topcon Optical Blockage Sensors which don't have a pin protruding into the stream, eliminating the possibility of product lodging at the sensors.

INTEGRATION;

Our system is fully integrated with the Topcon X35 screen so a stand alone monitoring screen is not needed.

Blockage kits can be installed to monitor either single or multiple outlets on each head.

ACTIVE OPENER HYDRAULICS

The Quantum uses the proven active hydraulic system developed to control opener pressure. It features a reducing system to minimise hydraulic flow requirements during operation.

The new JEM controller has several user-friendly options such as single touch opener lift and lower as well as being able to adjust the opener pressure from the tractor.

LIQUID OPTION

A full liquid kit including manifolds, friction tubing, mounting brackets and delivery to the boot can be supplied.

All final delivery liquid hoses contain a non-drip valve to prevent liquid fertiliser leaking onto the frame during folding.

This non-drip valve is rigidly mounted to the frame with a stainless steel metal bracket and U-bolt to prevent corrosion and to make it easier to change the friction tube and is secured in place with line clips that attach directly to secondary seed hose.

Years of testing and development has led to a well-refined, simple and effective liquid kit.

AUTO-LIFT & AUTO PACK OPTION

The new active opener hydraulic system is compatible with the Topcon X35 control system.

Topcon X35 users can benefit from:

- **Auto-Lift,** automatically lifts and lowers openers at headlands; and
- **Auto-Pack,** automatically maintains opener packing pressure via the X35 monitor. This allows better soil-seed contact and seeding depth control.

Auto-Lift & Auto-Pack comes standard with a Topcon X35 controlled Morris Air Cart. They can also be added as a stand-alone option.

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What is **Auto-Pack** or variable pressure packing and why is it important?

Correct packing pressure is critical for effective soil-seed contact and establishing capillary action to draw moisture from lower in the soil profile up to the seed bed. Different packing pressures are required in different soil conditions to achieve this.

TOO MUCH packing pressure in dry sands or wet clays can result in surface sealing, inhibiting germination.

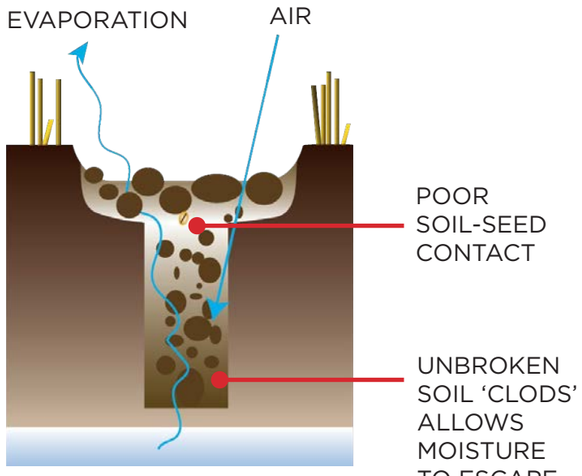
TOO LITTLE packing pressure in dry clays or loams will not press out the "clods" sufficiently to close the furrow, exposing the available soil moisture to evaporation. Not pressing out the "clods" also reduces soil-seed contact and inhibits the establishment of capillary action.

This is where the Morris Auto-Pack function excels.

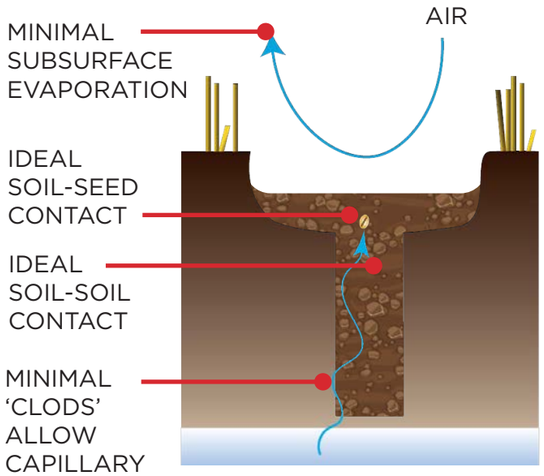
To meet varying pressure requirements and achieve ideal packing, Auto-Pack allows the operator to set the desired packing pressure on the press wheel.

Auto-Pack will then maintain that desired pressure constantly by varying the hydraulic pressure on the opener assembly as conditions change across the paddock.

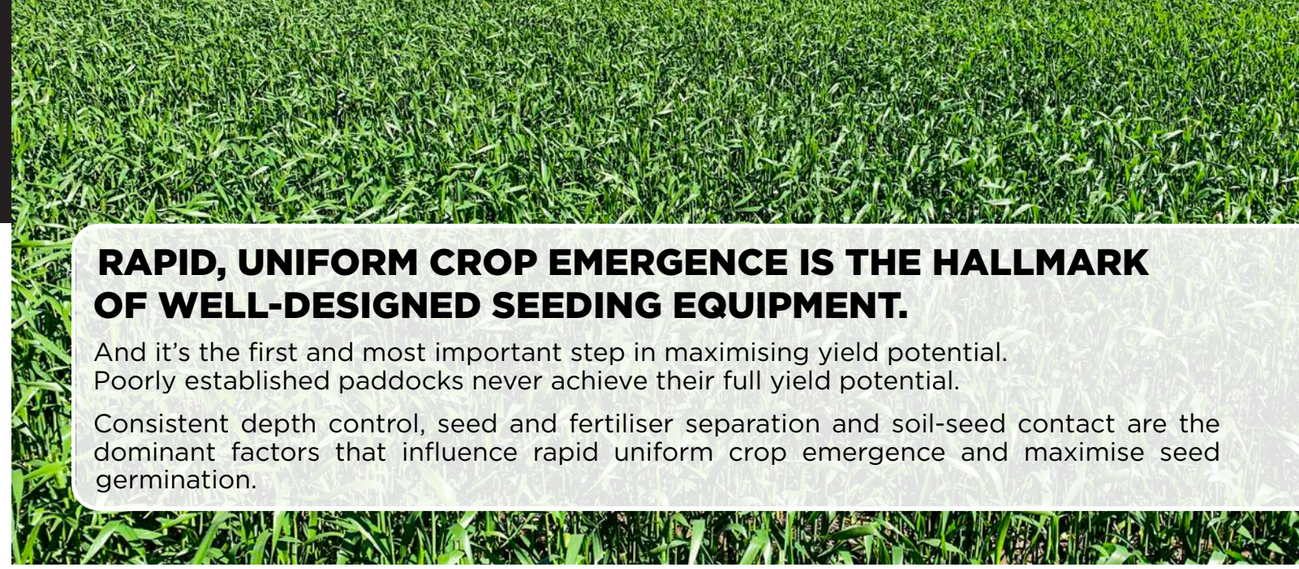
The resulting correctly closed and packed furrows reduce the risk of the available moisture bank evaporating.
This creates the ideal seed environment for seed germination.



TOO LITTLE PRESSURE



AUTO-PACK PRESSURE



RAPID, UNIFORM CROP EMERGENCE IS THE HALLMARK OF WELL-DESIGNED SEEDING EQUIPMENT.

And it's the first and most important step in maximising yield potential.
Poorly established paddocks never achieve their full yield potential.

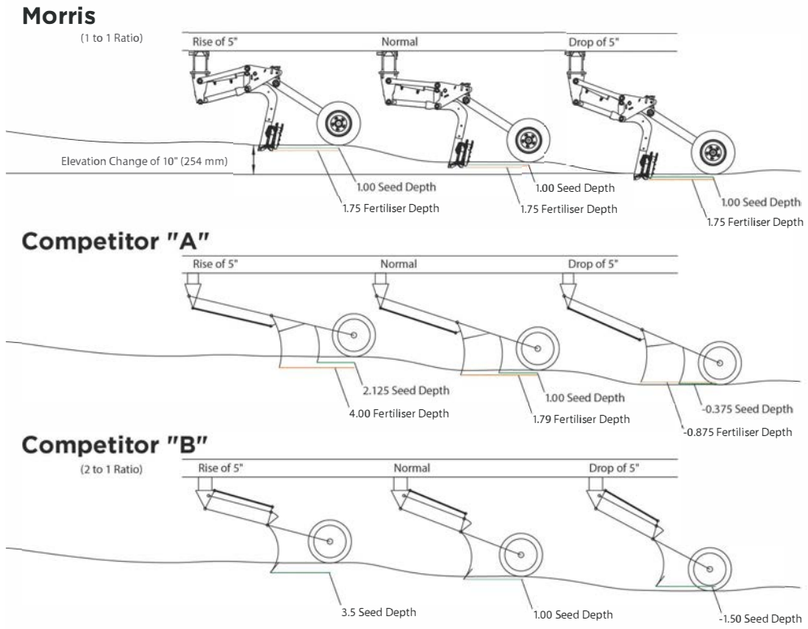
Consistent depth control, seed and fertiliser separation and soil-seed contact are the dominant factors that influence rapid uniform crop emergence and maximise seed germination.

DEPTH CONTROL

The Quantum row unit utilises a parallel linkage with a 1:1 opener to packer ratio. Morris was the first company to introduce a parallel link independent opener with a 1:1 opener to packer movement.

This superior design results in the most precise depth control and ground following among independent opener drills.

It also maintains precise under-seed cultivation on each opener, minimising the risk of fertiliser toxicity.



HOW IT WORKS

The packer tyre regulates the working depth that the opener moves through the soil. This is achieved by the adjustment of the depth cam against the rear packer arm.

The parallel linkage feature ensures that the depth control and the seed opener angle of entry into the soil is exact over a range of travel of 16".

The practical significance of this during field operation is that the opener will not carve deeper into the soil profile when travelling over the crowns of hills and is much less prone to losing seed placement when running through shallow depressions like crab holes.

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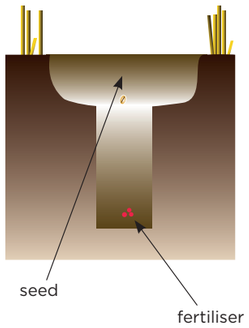
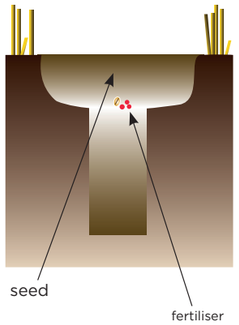
OPENER OPTIONS



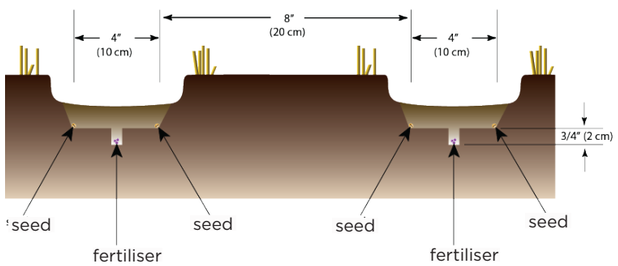
The **IN-LINE DUAL SHOOT OPENER** places fertiliser below the seed and leaves a narrow trench to maximise water harvesting. This option also has the greatest potential to utilise sub soil moisture through capillary action.

SUITED FOR The in-line opener is available to use with all spacing options and is the most durable in rocky conditions.



The **NARROW KNIFE SINGLE-SHOOT OPENER** is a single-shoot opener that places a narrow 12.5 mm (0.5”) ribbon of seed in each seed row. This opener cuts a smooth narrow channel for seed to be placed, and has the lowest soil disturbance of the openers available.

SUITED FOR The narrow knife opener has proven to be a popular choice with growers with sticky, high clay content soils.



The **PATENTED PAIRED ROW DOUBLE-SHOOT OPENER** places two distinct rows of seeds 100 mm (4”) apart with fertiliser placed centrally and 20 mm (¾”) below the seed rows.

The 300 mm (12”) shank spacing, paired row opener combination provides alternate 200 mm (8”) and 100 mm (4”) seed row spacing.

Narrow row spacing closes the crop canopy more rapidly setting the stage for improved sunlight capture, water use efficiency and crop competition. Angled tungsten faces on the opener minimise soil fracturing for excellent seed bed consistency and outstanding seed to fertiliser separation.

SUITED FOR This opener is only available on 12” and 15” spacings and is particularly suitable for non-wetting sands.

SPECIFICATIONS AND OPTIONS

QUANTUM

BASE SIZE		MODELS - All bars supplied as metric unless specified				
		12 m or 40’	15 m or 50’	18 m or 60’	21 m or 70’	24 m
WEIGHT (Includes double shoot distribution)	-250 mm Spacing	12,549 kg	14,501 kg	18,500 kg	21,065 kg	24,948 Kg
	10” Spacing	27,665 lb	31,970 lb	40,785 lb	46,427 lb	55,000 lb
	-300 mm Spacing	11,832 kg	13,621 kg	17,388 kg	19,758 kg	23,600 kg
	12” Spacing	26,085 lb	30,030 lb	38,335 lb	43,546 lb	52,029 lb
	15” Spacing	11,138 kg 24,555 lb	12,723 kg 28,050 lb	16,341 kg 36,025 lb	18,542 kg 40,869 lb	22,498 kg 49,600 lb
WORKING WIDTH	-10” (250 mm)	12m or (40’)	15m or (50’)	18m or (60’)	21m or (70’)	24m
	-12” (300 mm)	12m or (40’)	15m or (50’)	18m or (60’)	21m or (70’)	24m
	-15”	40’	50’	60’	70’	24m
NUMBER OF SHANKS	-10” (250 mm)	48	60	72	84	95
	-12” (300 mm)	40	50	60	70	80
	-15”	32	40	48	56	63
FRAME WIDTH	- Main	4.37m (14.35’)	4.37m (14.35’)	4.37m (14.35’)	4.37m (14.35’)	5.87m (19.25’)
	- Wing Inner	4.15m (13.60’)	4.15m (13.60’)	4.16m (13.65’)	4.77m (15.65’)	4.22m (13.83’)
	- Wing Outer	N/A	1.53m (5.03’)	3.09m (10.15’)	4.01m (13.16’)	3.28m (10.75’)
	- Flip	N/A	N/A	N/A	N/A	1.83m (6.00’)
TRANSPORT POSITION	- Width	5.44m (17’ 10”)	5.44m (17’ 10”)	5.44m (17’ 10”)	5.44m (17’ 10”)	7.62m (25”)
	- Height	5.13m (16’ 10”)	5.13m (16’ 10”)	5.13m (16’ 10”)	5.82m (19’ 1”)	5.59m (18’4”)
	- Length	10.31m (33’ 10”)	10.31m (33’ 10”)	10.31m (33’ 10”)	10.31m (33’ 10”)	10.62m (34’ 10”)
TYRES	- Main Frame Wheels (Front)	(4) 600/50-22.5	(4) 600/50-22.5	(4) 600/50-22.5	(2) 600/50-22.5 AGRITERRA	(4) Dual Castor VF 445/50R 22.5 Alliance 167D Agriflex 381
	- Main Frame Wheels (Rear)				(2) 600/50-22.5 AGRITERRA	(2) Fixed Single 650/55R 26.5 AGRITERRA 02 169D
	- Wing Frame	Single Castor (2)	Single Castor (2)	Single Castor (4)	Single Castor (4)	Single Castor (4)
	Front Castor Wheels	600/50-22.5	600/50-22.5	600/50-22.5	600/50-22.5	600/50-22.5
	- Wing Frame	(1 per wing)	(1 per wing)	(1 per wing)	(1 per wing)	(1 per wing)
	Rear Wheels	(2) 600/50-22.5	(2) 600/50-22.5	(4) 600/50-22.5	(4) 600/50-22.5	(4) 600/50-22.5
OPENER	- Trip Out Force	Maximum 800 lbs (363 kg) at 1200 psi (8274 kPa)				
	- Packer Wheel	4.50” x 16” Semi Pneumatic tyre 5.50” x 16” Semi-Pneumatic tyre				
OPENER TO GROUND CLEARANCE		30.5 cm (12”)				
FRAME TO GROUND CLEARANCE		91.4 cm (36”)				
FRAME DEPTH		213.4 cm (84”) center to center				
RANK TO RANK SPACING		106.7 cm (42”) center to center				
NUMBER OF RANKS		4 as standard				
SHANK TO SHANK SPACING		750mm (30”) on 250mm (10”) Spacing 900mm (36”) on 300mm (12”) Spacing 1140mm (45”) on 15” Spacing				
WEIGHT KIT		Optional			Standard	
SAFETY LIGHTS		Standard				
HITCH CLEVIS		Standard - Category 4		Optional - Category 5		Cat 5
SAFETY CHAIN		Standard				

Specifications are estimates and subject to change.

We grow
better crops

MORRIS SUPERIOR FARMS

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Call us on: (02) 6752 4082
E: paul@mhvp.com.au

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