

# MORRIS

## QUANTUM

AIR DRILL



# PRECISION SEEDING

[morris-industries.com](http://morris-industries.com)



## TRASH FLOW

The trash flow characteristics of the Quantum have been adapted from the C2 Contour, the best trash flow design 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.



## 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.



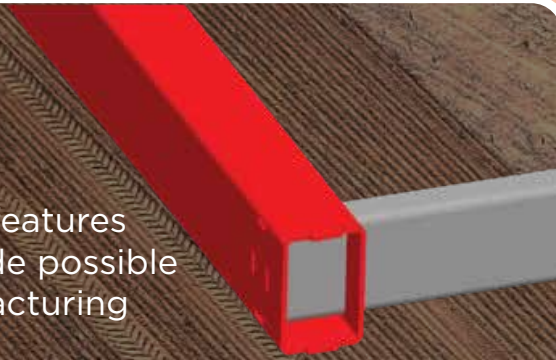


## FRAME DESIGN

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, with approximately 12lb drill weight/in<sup>2</sup> of tyre footprint.

## HEAVY DUTY HITCH

The pulling hitch has been completely redesigned for the Quantum.

Using 20% more steel, 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.

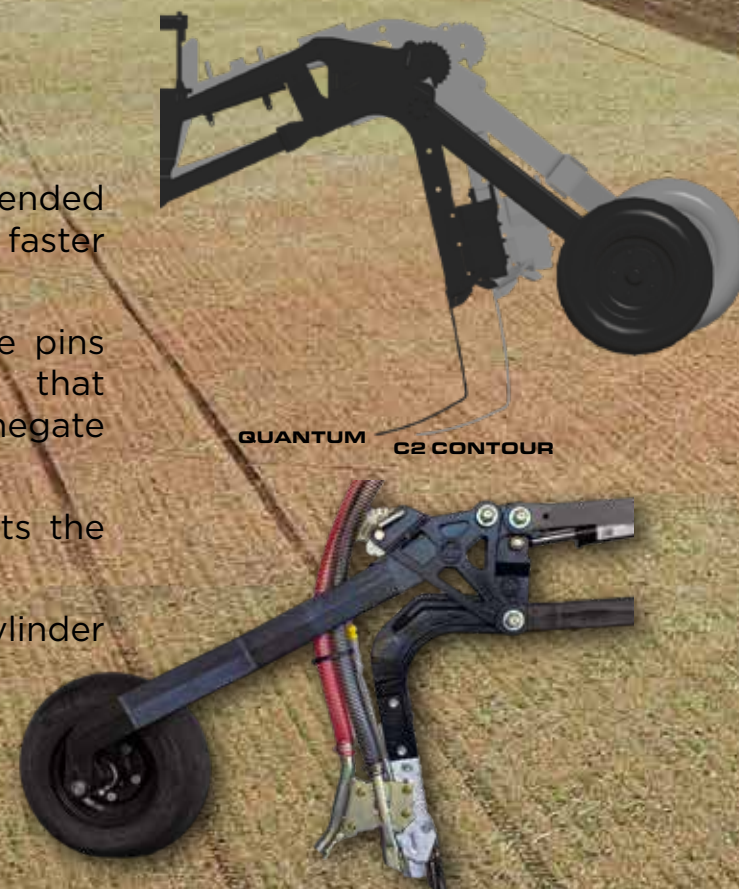
## UPGRADED ROW UNIT FEATURES

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 bushings that eliminate steel-on-steel wear and negate the need for greasing.

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

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



## UPRIGHT AIR KITS

The Australian designed and manufactured upright Air Kit is standard on all Quantum units.

Stainless steel construction ensures long life and consistent product delivery.

To minimise the risk of cross-contamination, red air-seeder hose is used for seed delivery and black for fertiliser delivery.





## LARGE SINGLE CASTOR TYRES

The Quantum uses a 600/50-22.5 tyre across the machine. 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.

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

**MAIN CASTORS:** 4.5" diameter, greaseable pivot bushing, 7000kg hub

**WING CASTORS:** 3" diameter, greaseable pivot bushing, 7000kg hub



## PACKER WHEEL OPTIONS



4.50" x 16"  
Semi-Pneumatic  
tyre



5.50" x 16"  
Semi-Pneumatic  
tyre

## BROADEST RANGE OF ROW UNIT SPACING

The Quantum has a wide range of row unit spacing options. The design of the frame adapts to imperial and metric spacing.

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

Available in 40, 50, 60 and 70 feet.

**METRIC:** 250 mm, 300 mm and 381 mm spacing on 12, 15, 18, and 21 m width drills.





## 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 into 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 line meters.

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 maintain opener packing pressure via the X35 monitor. This allows better soil-seed contact and seeding depth control.

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





## 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.

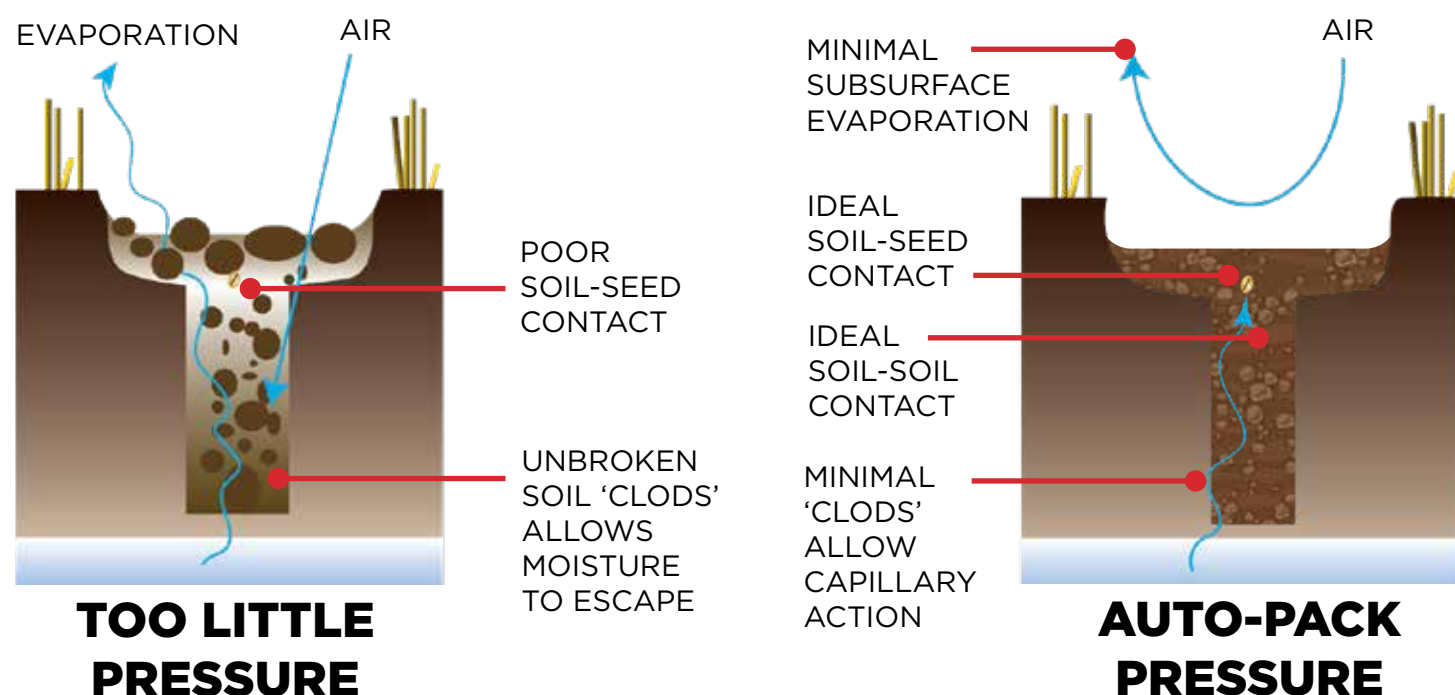
**This is where the Morris Auto-Pack function excels.**

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.



## 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.

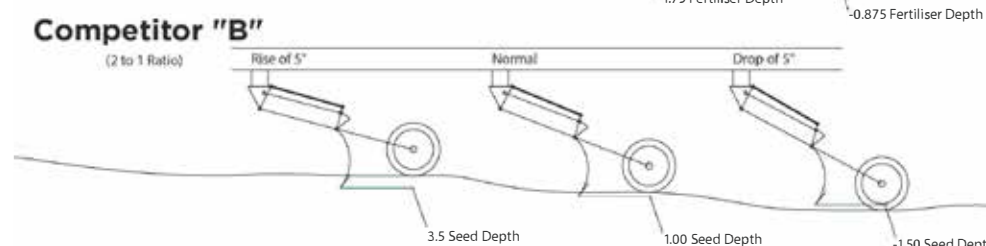
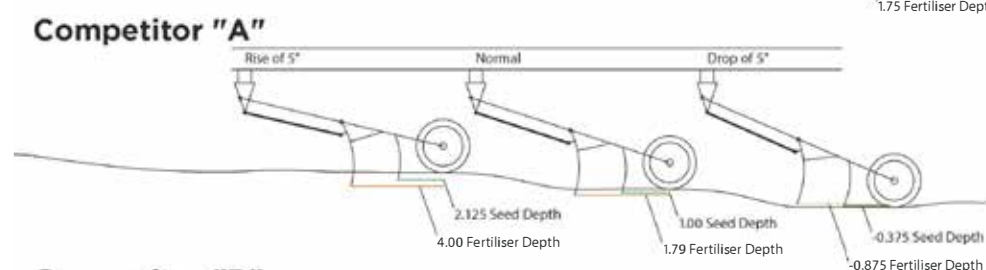
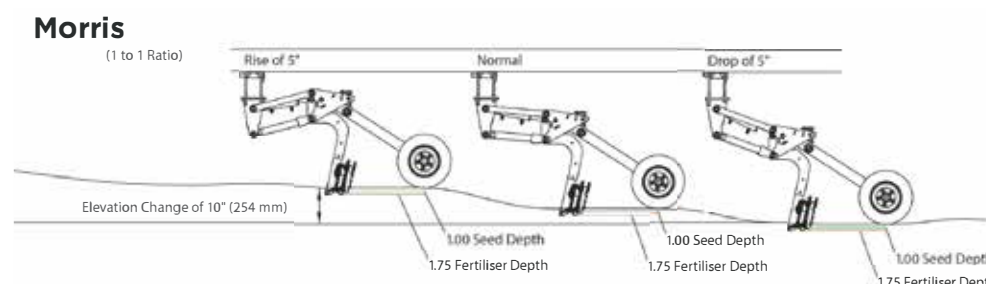
Consistent depth control, seed and fertiliser separation and soil-seed contact are the dominant factors that influence rapid uniform crop emergence and maximise seed germination.

## DEPTH CONTROL

The C3 Contour and Quantum row unit utilise 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, minimises the risk of fertiliser toxicity.



## HOW IT WORKS

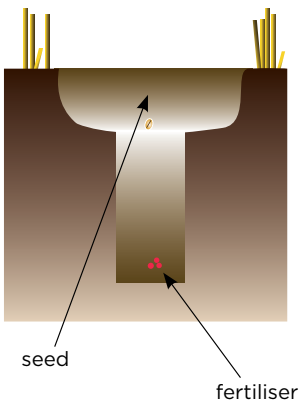
The packer tyre regulates the working depth that the opener moves through the soil.

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 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.

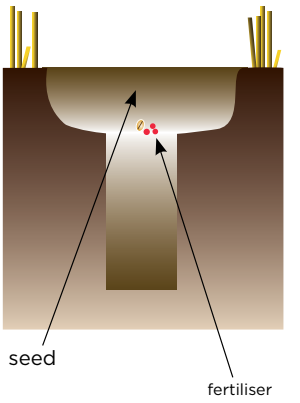


OPENER OPTIONS



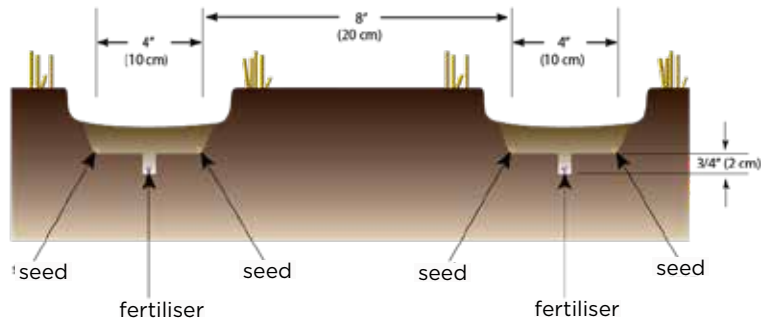
The **IN-LINE DUAL SHOOT OPENER** places fertiliser below the seed and leaves a narrow trench to maximise water harvesting. This option also has the greatest potential to utilise sub soil moisture through capillary action.

**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.

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'
WEIGHT <small>(Includes double shoot distribution)</small>	250 mm Spacing	12,549 kg	14,501 kg	18,500 kg	19,999 kg
	10" Spacing	27,665 lb	31,970 lb	40,785 lb	44,090 lb
	300 mm Spacing	11,832 kg	13,621 kg	17,388 kg	18,692 kg
	12" Spacing	26,085 lb	30,030 lb	38,335 lb	41,210 lb
	381 mm spacing 15" Spacing	11,138 kg 24,555 lb	12,723 kg 28,049 lb	16,341 kg 36,025 lb	17,477 kg 38,530 lb
WORKING WIDTH	250 mm (10")	12m or (40')	15m or (50')	18m or (60')	21m or (70')
	300 mm (12")	12m or (40')	15m or (50')	18m or (60')	21m or (70')
	381 mm (15")	12m or (40')	15m or (50')	18m or (60')	21m or (70')
NUMBER OF SHANKS	250 mm (10")	48	60	72	84
	300 mm (12")	40	50	60	70
	381 mm (15")	32	40	48	56
FRAME WIDTH	Main	4.37m (14.35')	4.37m (14.35')	4.37m (14.35')	4.37m (14.35')
	Wing Inner	4.15m (13.60')	4.15m (13.60')	4.16m (13.65')	4.77m (15.65')
	Wing Outer	N/A	1.53m (5.03')	3.09m (10.15')	4.01m (13.16')
TRANSPORT POSITION	Width	5.44m (17' 10")	5.44m (17' 10")	5.44m (17' 10")	5.44m (17' 10")
	Height	5.13m (16' 10")	5.13m (16' 10")	5.13m (16' 10")	5.82m (19' 1")
	Length	10.31m (33' 10")	10.31m (33' 10")	10.31m (33' 10")	10.31m (33' 10")
TYRES	Main Frame Wheels	(4) 600/50-22.5	(4) 600/50-22.5	(4) 600/50-22.5	(4) 600/50-22.5
	Wing Frame	Single Castor (2)	Single Castor (2)	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
	Wing Frame	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
OPENER	Trip Out Force	Maximum 360 kg (800 lbs) 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		305 mm (12")			
FRAME TO GROUND CLEARANCE		914 mm (36")			
FRAME DEPTH		2134 mm (84") centre to centre			
RANK TO RANK SPACING		1067 mm (42") centre to centre			
NUMBER OF RANKS		3 rows (Optional 4th row)			
SHANK TO SHANK SPACING		750mm (30") on 250 mm (10") spacing 900mm (36") on 300 mm (12") spacing 1140mm (45") on 381 mm (15") spacing			
WEIGHT KIT		Optional - recommended for undulating terrain and/or difficult digging conditions			Standard
SAFETY LIGHTS		Standard			
HITCH CLEVIS		Standard - Category 4		Optional - Category 5	
SAFETY CHAIN		Standard			



# MORRIS

**CORPORATE OFFICE & TRAINING CENTRE**  
**2131 Airport Drive, Saskatoon, SK Canada S7L 7E1**  
**Tel: 306.933.8585 Fax: 306.933.8626**  
**Questions? email: [info@morris-industries.com](mailto:info@morris-industries.com)**  
**[www.morris-industries.com](http://www.morris-industries.com)**

The policy of MORRIS INDUSTRIES LTD. is one of continuing improvement; therefore, the company reserves the right to change any specification without notice.