



CROP HANDLING EQUIPMENT



YOUR PARTNER IN CROP HANDLING

Pushing innovation in technology and machinery to the limit so that your crop can be handled in a fast and effective, as well as a potato-friendly manner, that is the goal of AVR. The AVR crop handling range includes receiving hoppers, store loaders, (twin) conveyors, crate fillers and stone & clod separators.

CSKS | STONE AND CLOD SEPARATOR

Using the AVR CSKS, your crops are cleaned very efficiently. In less than no time, stones and clods are mechanically removed, saving you a lot of manual labor.

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PYTHON | CONVEYOR

The AVR conveyors offer a high capacity without product damage. Easy to move and extremely user-friendly.

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COBRA | STORE LOADER

The Cobra store loader has all the features you need: it offers both capacity and intelligence.

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MAMBA | CONVEYOR

The Mamba transporter can be used for numerous operations and its high capacity and length make it perfectly suitable for swiftly and efficiently loading trucks.

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FALCON | RECEIVING HOPPER

The Falcon receiving hopper is available in several versions and with different roller variations, so that the user can virtually custom-tailor his machine.

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SCORPIO | CRATE FILLER

The AVR Scorpio crate filler completes the AVR crop handling range and reflects its identity by combining user-friendliness with capacity and gentleness in product handling.

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AVR LINE CONTROL

The installation of AVR Line Control software allows AVR storage equipment to communicate with each other. All machines in the crop handling line start up one by one at the push of one button.

The entire line comes to a halt, for example, when both crates at the AVR Scorpio are full, and will automatically restart as soon as an empty crate is put in position.

Thanks to the AVR Line Control it is also possible to create a buffer effect. If one crate is full and the other is empty, the crate filler will stop while the rest of the line and the AVR Line Control remains active. At that point in time, the crate filler will buffer some product on the belt and switch to the empty crate. This allows smooth switching from one crate to another, without impacting the capacity of the crop handling line. The buffer effect can also be expanded to the Mamba conveyor via AVR Line Control, for example, in order to optimize capacity.

FALCON | RECEIVING HOPPER

The Falcon receiving hopper is available in several versions and with different roller variations, so that the user can virtually custom-tailor his machine.

Extremely gentle handling of your crop

- 100% gentle handling of the crop, because all steel parts of the hopper floor are covered with soft rubber.
- The drop height between the bunker floor and the roller set can be adjusted from 16.5 to 21.5 cm.
- The drop height of the roller set to the product transport belt can be set from 25 to 35 cm and with the fall breaker fingers option ca. 10 cm.
- The diameter of the cleaning rollers is 90 mm. These small rollers ensure that the product is easily transported over the roller set to the end, thus ensuring a potato-friendly flow.
- The intake height is hydraulically adjustable.

Technically powerful

- Thanks to the capacity control, one can regulate a constant flow to the roller set.
- The floor chain has 19.2 tonnes of tractive power per chain.
- The speed can be adjusted from 0.5 (0.2 as an option) to 6.5 m/min.
- Thanks to the hydraulic drive, plenty of torque is available at low floor speed as well.
- Thanks to the way the shearing elements were designed, the rollers can be quickly exchanged. So the suitable roller (or a combination thereof) can be used for each type of crop.
- The receiving hopper is controlled via a touch screen and a numerical keypad.



	24-45	24-60	1800
Tyre size	12.5/80-15.3 14 PLY	12.5/80-15.3 14 PLY	0.0/75-15.3 18PR 6/161/205
Entry width (m)	3.30	3.30	3.18
Floor length (m)	4.50	6.00	4.00
Capacity (tons/hour)	120-150	120-150	80
Floor speed (m/min)	0.50 (0.20 optional) - 6.50	0.50 (0.20 optional) - 6.50	0.50 - 6.50
Width of roller set (m)	2.40	2.40	1.85
Number of rollers	8 (+1) or 15 (+1)	8 (+1) or 15 (+1)	6
Roller distance cleaning (mm)	5-55	5-55	5-45
Roller distance 2nd roller set (mm)	5-65	5-65	12-65
Diabolo rollers (pre-sorting) (mm)	35-65	35-65	n/a
Roller speed (continuous) (rpm)	60-160	60-160	30-180
Power voltage	400 V	400 V	400 V
Frequency	50 Hz	50 Hz	50 Hz
Hydro-unit bunker floor + roller sets	11 kW	11 kW	75 kW
Standard transport belts	3.00 x 0.80	3.00 x 0.80	3.00 x 0.65

HIGH CAPACITY AND SCREENING INTENSITY



Flat inclination angle

Thanks to the flat inclination angle of the bunker floor, the product is easily transported upwards in a thick layer.

Constant flow

The bunker floor is standard with a kink on the back so that the product is separated for a constant flow to the roller set. This increases the sieving capacity.

PU spiral roller set

The PU spiral roller set guarantees, in addition to an excellent screen capacity, a soft roller bed for the potatoes. The boost function allows the roller set to clean itself.

Transport belt

The product transport belt is height adjustable and can also be slanted for more capacity.

Scrapers

Thanks to the particular design of the shearing elements, the scrapers (in the case of smooth steel rollers) in every position are located vertically right below the roller, thus preventing build-ups.

Two roller sets

In the event of two roller sets, a simply-designed lift set ensures that the pre-sorter unit can be disconnected.

CSKS | STONE AND CLOD SEPARATOR

Using the AVR CSKS, your crops are cleaned very efficiently. In less than no time, stones and clods are mechanically removed, saving you a lot of manual labor!

Operation

The machines use special separating rollers to separate the potatoes from the stones and clods. The transported product (including stones and clods) lands on a rotating roller. Thanks to their elasticity, the potatoes jump over the adjustable separation plate, while the clods and stones drop in front of this plate, providing a clean product.

80 to 95% elimination

The AVR system for mechanical separation of stones and clods ensures efficient results. Under optimal conditions elimination percentages of up to 80% can be achieved. If you opt for the machine with double rollers, a maximum of 95% is possible. The system guarantees an efficient crop cleaning.

Optimal result

- Patented separating rollers
- The separating rollers are adjustable
- Central supply by means of coated rod sieving chain

Robust construction

- Robust, self-supporting frame
- Shot-blast machine components with 2-component polyurethane finish for increased durability

User-friendly

- Available by default with 0.80, 1.60 and 2.00 m roller widths
- Equipped with individually driven (transversal) discharge belts
- Electrically driven separating rollers and feeding conveyors

You can choose from two systems:

CSKS 800

For a simple but effective stone and clod separation, AVR offers the CSKS 800. The CSKS 800 has a low purchase price and saves you a lot of manual labor. The main difference between the CSKS 1600 - 2000 and the CSKS 800 is that the latter comes equipped with one roller instead.

CSKS 1600 & CSKS 2000

The AVR CSKS 1600 & 2000 are equipped with double separating rollers and sieving belts for extra cleaning power. The machine is available in different widths.



	CSKS 800	CSKS 1600	CSKS 2200
Roller width (m)	0.80	1.60	2.00
Product cross conveyor (m)	n/a	3.00 x 0.60	3.00 x 0.60
Soil cross conveyor (m)	n/a	3.00 x 0.40	3.00 x 0.40
Weight (kg)	+/- 600	+/- 1.500	+/- 1.700
Tons/hour	approx. 8	approx. 18	approx. 22

SCORPIO | CRATE FILLER

The AVR Scorpio crate filler completes the AVR crop handling range and reflects its identity by combining user-friendliness with capacity and gentleness in product handling.

Potato-friendly

The moving main belt is composed of two elements, with an inflection point in the middle. As a result, the separate elements are longer than that of most other models on the market. This guarantees low drop heights while ensuring that the potatoes are gently guided into the crate via a gradient that is not too steep. The limited inclination renders a belt with a profile superfluous, while the simple addition of a scraper is enough to prevent the accumulation of dirt.

The main belt is driven on both sides by a drum motor for optimal and equal traction in both directions. This allows drum motors that are quite small in diameter to be used - which minimizes drop heights - while ensuring a large enough contact surface to prevent slipping.

Looking for even more protection? The rubber flaps on the main belt curb the speed at which the flow of potatoes slides downwards.

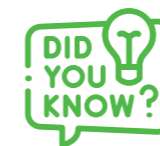
User-friendly & pleasant to use

The crate filler is very easy to operate via the buttons on the electrical control box and the intuitive 7" touchscreen. Thanks to the fully electrical control system, the Scorpio is energy-efficient and remarkably quiet, and can be operated very smoothly.

Thanks to the various sensors - including the sensors that determine the position of the belt and a laser sensor that continuously monitors the product level in the crate - crates are automatically filled from the bottom to the top, with minimal drop heights during the entire process.

Flexibility

The Scorpio can fill crates in just about all conventional dimensions. This is because the frame height and the crate position are adjustable. The indicator light allows the forklift driver to easily see if the crate has been positioned correctly.



The capacity offered by Scorpio equals that of one experienced forklift driver. In other words: it delivers one filled crate every minute.

Length transport mode - max. in work mode (m)	4.41 - 6.33
Height transport mode - max. in work mode (m)	2.60 - 3.48
Width transport mode (with supply belt) - max. in work mode (m)	1.57 (2.40) - 2.61
Crate width (m)	min. 0.90*
Crate length (m)	1.60 - 2.40*
Capacity	60 crates/hour** or 75 tons/hour

* Interior dimensions

** For crates 1.60 m wide



PYTHON | CONVEYOR

The AVR Python is the indispensable, flexible link in your crop handling line and is available in both a single belt and a twin belt version.

Solid base and easy maneuverability

One of the typifying features of the AVR conveyor is a stable and robust frame that also offers a high degree of maneuverability.

Thanks to the independent height adjustment of the product intake and discharge outlets and the electronic length adjustment, the Python can be installed in every position on the line. Moreover, the twin conveyor has been designed to allow both belts to be positioned at all possible angles relative to each other.

A tandem construction with four casters and the 360° rotatable main wheels allow the machine to be moved by only one person.

Ease of use

AVR conveyors are designed to relieve the user's work. The extensive features with which they are equipped as a standard include a frequency converter, infinite speed adjustment, electronic length adjustment, and a belt control system that makes readjustments completely unnecessary. Additionally, the installation of AVR Line Control software allows the Python to communicate with all other AVR machines in the line.

Capacity combined with quality

The clever design of the conveyor belts with raised edges ensures that the product never comes into contact with the metal frame parts, thus guaranteeing an extremely soft product flow. The combination of a fully adjustable transition between the first and second conveyor belt and a drum measuring no more than 160 mm in diameter ensures that drop heights are reduced to an absolute minimum. All of this results in an extremely product-friendly conveyor system.

In addition, the raised edges create a trough to accommodate the secure conveyance of large volumes. As the section at the center of this trough remains entirely flat, the Python also lends itself perfectly to the manual inspection of your crop.

Convenient add-ons

Convenient add-ons include an extra power outlet, a lighting set for product inspection, connecting frames at the product intake and discharge points, and rubber protective elements that ensure an even more gentle transition to the next machine in the line.



	80-7-S	80-9-S	80-11-S	80-14-T	80-18-T
Conveyor belt length (m)	7	9	11.5	2 x 7	2 x 9
Minimum entry height (m)	0.76	0.80	0.75	0.75	0.75
Maximum entry height (m)	1.74	1.72	1.75	1.28	1.28
Minimum delivery height (m)	0.42	0.50	0.40	0.92	0.92
Maximum delivery height (m)	1.50	1.41	1.54	1.51	1.48
Conveyor width (m)	0.80	0.80	0.80	0.80	0.80
Capacity* (tons/hr.)	340	340	340	340	340
Speed(m/min.)	24-84	24-84	24-84	24-84	24-84

*Theoretical calculation - depending on the shape, size and specific weight of the potatoes

AVR Line Control

Just like the other machines in the AVR crop handling range, the Mamba can be connected to the AVR Line Control circuit. This guarantees the optimum linkage of the various machines in the crop handling line.

Infinitely adjustable speed

The Mamba is frequency-controlled as a standard: the speed can be adjusted infinitely. A second speed can also be set if desired, which is extremely convenient in combination with the AVR Scorpio crate filler if a heightened buffer capacity is desired when switching from one crate to another.



Protective cover available

V-shaped conveyor belt

High capacity and product-friendly.

(Hydraulic) height adjustment: delivery and intake

The dosing and intake height can both be easily adjusted with a hydraulic pump. Thanks to its low intake height, the Mamba can easily be placed underneath the Falcon reception hopper.

Electrically switched power outlets

Caster wheels

The Mamba can be fitted with caster wheels. The wheels can be positioned transversally, and thanks to the rotatable support point at the intake side, the Mamba can effortlessly be transported by just one person.

MAMBA | CONVEYOR

The AVR Mamba conveyor can be used for a wide array of tasks. This is partly because it is available in two different belt lengths: 6.5 or 10.5 meters. Due to its high capacity and considerable length, the Mamba 80-10 (10.5 meters) is the perfect conveyor for swiftly and efficiently loading trucks, while the Mamba 80-6 (6.5 meters) can be used seamlessly for the intake and delivery of potatoes or other bulk goods in a crop handling line.

Maximum capacity, no damage

The V-shaped belt guarantees a high capacity plus optimum product protection. The wide angle of the V-shape maximizes the capacity, while the product cannot come into contact with the frame thanks to the considerable width of the belt. The belt is fitted with a profile - which makes it particularly suitable for the upwards transport of rolling products - as a standard. However, in circumstances where a scraper is required, a belt without a profile that is fitted with a scraper is available.

Basic version

Is the basic version adequate for your product? The Mamba can be fitted with a hand pump to adjust the product discharge and intake heights through a simple electronic on/off control system without additional functions, with one basic speed.

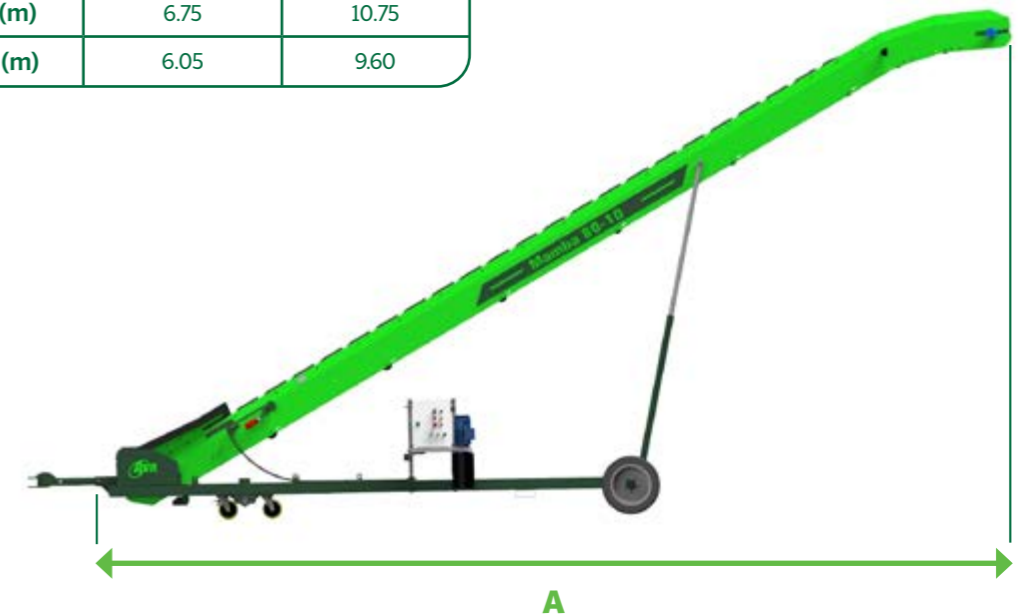
Convenient add-ons

Convenient add-ons include extra power outlets, LED working lights and a protective cover for the conveyor belt.

Solid frame

Thanks to its sturdy monobody frame, the Mamba guarantees the reliable transfer of bulk products in all possible transport applications. The belt drive, by means of a drum motor, is located in the machine's head. This pulling drive prevents the belt from slipping.

A	Mamba 80-6	Mamba 80-10
Min delivery height (m)	6.75	10.75
Max delivery height (m)	6.05	9.60



	Mamba 80-6	Mamba 80-10
Entry height (min - max) (m)	0.75 - 0.95 *	0.75 - 1.20 *
Delivery height (min - max) (m)	0.75 - 3.15 *	0.80 - 4.90 *
Clearance (at min - max delivery height) (m)	2.95 - 2.30	4.75 - 3.65
Conveyor width (m)	0.80	0.80
Infinite belt speed (1-speed)	24 - 84 m/min (60 m/min)	24 - 84 m/min (60 m/min)

* Depending on the adjustable (or non-adjustable) entry and delivery height

COBRA | STORE LOADER

The cobra store loader features you need.

Capacity and intelligence

The 80 cm belt width, the wide flight and the extra deep trough (trough angle 24°) offer a very high capacity potential. The drum motor being configured in traction mode (the 17 and 19 m are even equipped with a double drum motor), and the snub idlers at the drum motors providing a wide contact surface between the rubber belt and drum, it is very easy for the Cobra store loaders to process high tonnages without slip. This allows the belt to run smoothly, even at large volume flows, which benefits potato-friendliness.

Well thought-out details

- **Accessibility:** the machine is easily accessible for maintenance and inspection.
- **Open chassis:** the counterweights are mounted on the side. As such, the open chassis (at the bottom) will prevent any annoying waste build-up below the conveyer belt.
- **Low drop height:** the twin filling hopper guarantees a good connection and a low drop height from the feeding machine even at the maximum inclination angle. The angled section is adjustable (5 positions between 0 and 20°) in order to limit the drop height. The small diameter of the top roller also contributes a low drop height.
- **Optimal flow:** the flow of potatoes in the storage unit can be optimally adjusted thanks to the variable speed of the hydraulically-driven wheels.
- **Foldable drawbar:** easy to use.
- **Little power required:** the conveyer belt is electrically-powered, so that less power is necessary for the same load.
- **Stable machine:** thanks to the monobody frame, the large main wheels and the counterweights.
- **Unique belt speed:** 32-126 m/min
- **Automatic belt control**

	8015	8017	8019
Conveyor belt width (m)	0.80	0.80	0.80
Length (m)	15.00	17.00	19.00
Power voltage	400 V	400 V	400 V
Frequency	50 Hz	50 Hz	50 Hz
Power belt drive	1 x 5.5 kW	2 x 4.0 kW	2 x 4.0 kW
Tyre size main wheels	285/17 R19.5	285/17 R19.5	285/17 R19.5
Belt speed (m/min)	32-126	32-216	32-216

SOME USEFUL EXTRAS



Feeding conveyor belt

A 1250 mm speed adjustable feeding conveyor belt (speed +/-15% compared to the Cobra belt speed) ensures a constant low drop height, regardless of the angle, and a final flow optimization.

Coupling bridge

The coupling bridge makes sure the twin conveyor belt is perfectly positioned above the store loader in any position. Both machines can be easily moved.

Scraper set

When storing under harsh conditions, an additional scraper set, on top of the standard V-shaped scraper in the belt and the scrapers on the snub idlers, is available to prevent waste build-up on the support rollers. Alternatively, rubber rings that shake the belt on its way back to get rid of any waste build-up can be added on the support rollers.

Folding wheel protection

The removable/folding wheel protection prevents any rolling back potatoes from getting under the wheels.



AVR Line Control

All machines start up one by one at the push of 1 button. The machine is always equipped with AVR Line Control contact. As such, the machine can be linked to all other machines in the storage line. The Cobra store loader acts as the leading machine.

Control

The machine is operated by default from a 5" touch display and a wired remote control. All sensors and steps can be followed on the display, so that adjustments can be made quickly if necessary. Optionally, a radio remote control can be added. Wall and product sensors are optionally available on the head section.





SOIL CULTIVATORS



POTATO PLANTERS



HAULM TOPPERS



HARVESTERS



CROP HANDLING