Even the little ones appreciate our grassland PRO harrow GP 300 M1 very much!

GRASSLAND

Professional cultivation with APV products

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Innovations for the future

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BETTER SOWING, SPREADING & CULTIVATING

Index:

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GRASSLAND TREATMENT

Why should grassland be maintained?

Due to poor cultivation many grassland areas show bare patches and produce lesser fodder. Therefore it is necessary to optimize or renew the grassland by seeding or reseeding. When the grass is cut very often, it is essential to maintain the grassland, aerate it and sow fresh seeds.

Reasons for deterioration of the sward:

- Driving and / or grazing the lea while too damp
- Temporary adverse water conditions
- Infrequent cutting and/or use combined with insufficient nitrites yields bare patches
- Organic fertilizer unevenly distributed
- Neglected maintenance (rolling, levelling, cutting)
- Cut too deep
- Extreme weather conditions (long harsh winters, wet or dry damage)
- Disproportionate grass density
- Incomplete harvesting
- Insufficient phosphorus-potassium fertilisation
- Pest infestation

What is your achievement when using APV machines? What is our approach?

Advantages of cultivation without tilling grassland

Cultivation without tilling grassland is the simplest and most cost efficient approach for healthier meadows. This is an ecological, as well as economical alternative, to till patchy grassland due to inferior vegetation.

Grassland field fodder is an inexpensive source and staple in cattle raising. Therefore, to assure optimum productivity from your grassland, it's time to employ our tate-of-the-art expertise today!

APV machines provide you with the latest agricultural technology for reseeding and grassland renewal. You will be fully equipped for major improvement of your fields and thus improving the quality of your grassland.

APPLICATION PURPOSE

- Decimation of unwanted weeds
- Increasing the potential of the soil
- Soil cultivation
- Soil stimulation
- Meadow aeration

GRASSLAND HARROW GS

BENEFITS VERSUS THE COMPETITION

- Spring-borne levelling plate (optional), in order to level out molehills or unevennesses.
- Followed by two beds with cranked tines that are made in different strengths. This is a unique combination that has been proven to provide excellent results.
- Each tine row can be used in variable sizes together in order to achieve optimum ground tracking.
- Tines of 3rd and 4th row are easy adjustable.
- They can also be used for tilling the soil!

APPLICATION WITH

- Pneumatic seeders PS 120 M1 - PS 300 M1

TECHNICAL PROCEDURE

- see pages 8 & 9

GRASSLAND HARROW

The grassland harrow levels molehills and cattle manure; the combing tines take care of distributing the organic material. In addition, it aerates the sward, tears up tangles and by combing out weeds it provides new space that can be filled with grass seeds.

Grassland maintenance increases yields and nutrients of forage. It also prevents gaps in the sward and reduces the growth of weeds, because there is no space for them to take root.

The grassland harrows GS 300 M1 and GS 600 M1 are ideal for grassland maintenance and re-seeding. The unique combination of strong 10mm or 12mm tines and 8mm tines, provides optimum results when treating the sward. The strong rows of tine frames tear up tangles and grass weeds, such as the rough meadow grass, whereas the 8mm tines separate the soil from the removed tangles and grass weeds and work the grass seeds into the ground. This combination enhances the proportion of soil in the sward significantly (compared to other re-seeding machines). Grass seeds germinate much more easily, when the pneumatic seeders PS 120 M1, PS 200 M1 or PS 300 M1 are used for sowing.

The levelling plate ensures the optimum distribution of molehills, dung, liquid and cattle manure. The pneumatic rubber support wheels provide the optimal guidance for the grassland harrow. Swing mounting of the tine rows allows the best possible adjustment to uneven soil.

The grassland harrows GS 300 M1 and GS 600 M1 use a separate roller for sward reconsolidation; the grassland PRO harrows GP 300 M1 and GP 600 M1 already integrate the reconsolidation roller in the machine.

The grassland harrows GS 300 M1 and GS 600 M1 with mounted pneumatic seeders are preferably used for intercrops distribution.

GS 300 M1

TECHNICAL DATA

Working width . . . . . 3 m
Transport dimensions (without PS) in m L 1,85 x W 3,0 x H 1,30
Transport dimensions (with PS 300 M1) in m . . . . . .L 1,85 x W 3,0 x H 1,95
Tines . . . . . .60 pcs. (8 mm), 40 pcs. (10 mm or 12 mm)
Weight Full Edition . . . . . 530 kg
Support wheels (16.0/6,5-8" tyres) . . . . . .2 pcs.
Mounting category . . . . . CAT 2/CAT 2N
Tractor performance . . . . . .from 20 kW/ 27 HP
Beds. . . . . 2 x 1,5 m (1 bed = approx. 72,5 kg)

Full Edition = GS 300 M1 (10 mm) incl. warning signs + lights, heavy levelling plates, filling step, mounting kit, PS 200 M1 electr. + control box 5.2 and set of sensors: wheel + tractor linkage upper bar sensor

STANDARD SCOPE OF DELIVERY

- Frontside 2 rows cranked 10 mm or 12 mm tines
- Rear side 2 rows cranked 8 mm tines
- 2 pcs. support wheels

ACCESSORIES

- Spring-borne levelling plates heavy (approx. 100 kg)
- Warning signs + lights GS (approx. 5 kg)
- Operating hour counter
- Mounting kit for PS 120 - PS 300 on GS 300
- Set of sensors - wheel + tractor linkage upper bar sensor GS
- Filling step for GS (approx. 10 kg)
- Accessory kit adjustment spindle GS 300
- Front mounting bracket GS 300 * (incl. mounting kit for PS 120-300)
- Warning signs + lights GS front mounting bracket
- Filling step for GS 300 front mounting bracket

* Anything obstructing the field of vision must be corrected using suitable measures!
Front axle loads may be exceeded!

Usable with pneumatic seeders with electrical/hydraulic/ PTO fan PS 120 M1, PS 200 M1 and PS 300 M1:
see page 25.

TECHNICAL PROCEDURE

see pages 8 & 9

BENEFITS VERSUS THE COMPETITION

- Spring-borne levelling plate (available as accessories), in order to level out molehills or unevennesses.
- Followed by two beds with cranked tines that are made in different strengths. This is a unique combination that has been proven to provide excellent results.
- Each tine section can be used in variable sizes together. This allows optimum ground tracking.
  Tines of 3rd and 4th row are easy adjustable.
- They can also be used for tilling the soil!

The grassland harrow GS 300 M1 is available with **FRONT MOUNTING BRACKET** too!

GS 600 M1

TECHNICAL DATA

Working width . . . . . 6 m
Transport dimensions (without PS) in m . . . . . .L 2,0 x W 3,0 x H 2,94
Transport dimensions (with PS 300 M1) in m . . . . . .L 2,0 x W 3,0 x H 2,94
Tines . . . . . 120 pcs. (8 mm), 80 pcs. (10 mm or 12 mm)
Weight Full Edition . . . . . .1.050 kg
Support wheels (16.0/6,5-8" tyres) . . . . . 4 pcs.
Mounting category . . . . . .CAT 2
Tractor performance . . . . . from 50 kW/ 70 HP
Tractor performance GS 600 M1 front * . . from 75 kW/100 HP
Beds. . . . . .4 x 1,5 m (1 bed = approx. 72,5 kg)
1 single acting control device for folding necessary

Full Edition = GS 600 M1 (10 mm) incl. warning signs + lights, heavy levelling plates, filling step, mounting kit, PS 300 M1 electr. + control box 5.2 and set of sensors: wheel + tractor linkage upper bar sensor

STANDARD SCOPE OF DELIVERY

- Frontside 2 rows cranked 10 mm or 12 mm tines
- Rear side 2 rows cranked 8 mm tines
- 4 pcs. support wheels
- Preparation for mounting hoses
- Parking support legs (3 pcs.)

ACCESSORIES

- Spring-borne levelling plates heavy (approx. 220 kg)
- Warning signs + lights GS (approx. 5 kg)
- Operating hour counter
- Set of sensors - wheel + tractor linkage upper bar sensor GS
- Filling step for GS (approx. 10 kg)
- Accessory kit adjustment spindle GS 600
- Front mounting bracket GS 600 * (incl. mounting kit for PS 120-300) (approx. 350 kg)
- Warning signs + lights GS front mounting bracket
- Filling step for GS 600 front mounting bracket

* Anything obstructing the field of vision must be corrected using suitable measures!
Front axle loads may be exceeded!

Usable with pneumatic seeders with electrical/hydraulic/ PTO fan PS 120 M1, PS 200 M1 and PS 300 M1:
see page 25.

TECHNICAL PROCEDURE

see pages 8 & 9

BENEFITS VERSUS THE COMPETITION

- Spring-borne levelling plate (available as accessories), in order to level out molehills or unevennesses.
- Followed by two beds with cranked tines that are made in different strengths. This is a unique combination that has been proven to provide excellent results.
- Each tine section can be used in variable sizes together. This allows optimum ground tracking.
  Tines of 3rd and 4th row are easy adjustable.
- They can also be used for tilling the soil!

The grassland harrow GS 600 M1 is available with **FRONT MOUNTING BRACKET** too!

TECHNICAL PROCEDURE GRASSLAND HARROW

Fig. 1&2 Levelling plate
Due to the height-adjustable spring-borne levelling plate rough unevenness in the grassland is eliminated and the tines are not stressed unnecessarily. The levelling plate runs in front of the support wheels so that a lift off of the machine is prevented (available as an accessory).

GS 300 M1:
By means of the adjustment spindle (accessories), the height of the levelling plate can be adjusted. (Fig. 2a)

GS 600 M1:
By means of the adjustment spindle (accessories), the middle levelling plate can be adjusted.. (Fig. 2a)
The height of the outer levelling plates can be adjusted through the hole grid via bolts. (Fig. 2b)


Fig. 2a

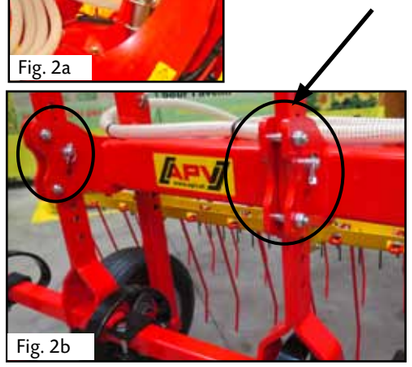


Fig. 2b


Fig. 4

Fig. 4: Warning signs
For safe travel illuminated warning signs are available as accessories.


Fig. 1

Fig. 1: Depth adjustment of the front rows of tines
The working depth adjustment of the 10 mm tines (red) is carried out via the support wheels.

Fig. 1: Tine bed
The tine frame consists of 2 rows of 10 mm tines (front) and 2 rows of 8 mm tines (rear).

Cranked tines generate an elliptical movement on the field. The sharper the position of the tines, the smaller the elliptical movement will be. The flatter the position of the tines, the larger the movement will be.


Fig. 3

Fig. 3: Adjustment of the rear rows of tines
The aggressiveness of the 8mm tines can be adjusted by means of levers. The locking mechanism is executed via bolt and clip pin.


Fig. 5

Fig. 6

Fig. 5 & 6: Mounting of PS on GS 300 M1
Our grassland harrow, GS 300 M1 can be combined with our pneumatic seeders PS 120 M1 – PS 300 M1 (electr. fan). Mounting kit for PS required. Available as an accessory.
The PS will be fitted on the mounting bracket and fixed together with the counter plate.


Fig. 7


Fig. 8

Fig. 7 & 8: Mounting of PS on GS 600 M1
Our GS 600 M1 grassland harrow can be combined with our pneumatic seeders PS 120 M1 - PS 300 M1 (electric/hydraulic fan, PTO fan). For the fitting of the PS on the GS 600 M1, the PS is placed on the pre-equipping and fixed together with the counter plate.


Fig. 9

Fig. 9 & 10: Installation of the dispersion plates
As standard equipment the dispersion plates are fastened on the third row of tines.
These can be shifted as required because fitting holes are provided in each row of tines. Fastening is executed as shown in Fig. 9 and 10, via hose clamp, screws and cable ties.


Fig. 10


Fig. 11

Fig. 11: Filling step
A filling step (accessories) shall ensure save filling of the pneumatic seeder tank.

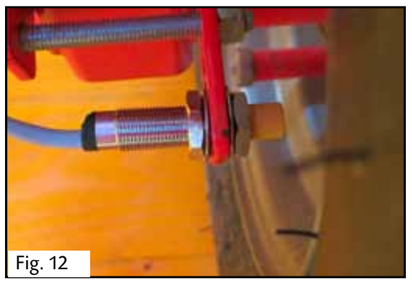


Fig. 12

Fig. 12: Wheel sensor
For automatic adjustment of the sowing shaft speed to the actual drive speed a sensor set is available as an accessory, that contains wheel sensor and tractor linkage upper bar sensor.


Fig. 13

Fig. 13: Tractor linkage upper bar sensor
For tapping the tractor linkage signal for automatic stopping and turning off the sowing shaft we offer a tractor linkage upper bar sensor (optional), which is mounted on one of the two top link holes of the GS 300 M1/GS 600 M1.

APPLICATION PURPOSE

- Decimation of unwanted weeds
- Soil cultivation
- Soil stimulation
- Meadow aeration
- Optimal yield of new grass
- Re-consolidating of soil

GRASSLAND PRO HARROW GP

BENEFITS VERSUS THE COMPETITION

- The grassland PRO harrow provides a spring-borne levelling plate, in order to level out molehills or unevennesses.
- Followed by two beds with cranked tines that are made in different strengths. This is a unique combination that has been proven to provide excellent results.
- Depending on the application, the working tools can be used as a single unit (e.g. only roller) or in combination with other working tools.

APPLICATION WITH

- Pneumatic seeders PS 120 M1 - PS 500 M2 (PS 120 M1 only with GP 300 M1)

TECHNICAL PROCEDURE

- see pages 14 & 15

INTENSE GRASSLAND MAINTENANCE

Due to increased appearance of unwanted grass weeds in local meadows, APV developed a machine offering a wide range of applications for grass sowing, re-seeding and aeration.

The grassland PRO harrow is absolutely essential and efficient to control weeds like the common panicle (Poa Trivialis) in meadows where grassland is used intensely.

Crop protection and economic success!

The strong rows of tine frames tear up tangles and grass weeds, such as the rough meadow grass and prepare the seed bed, whereas the 8mm tines separate the soil from the removed tangles and grass weeds and work the distributed grass seeds into the ground. This combination enhances the proportion of soil in the sward significantly. The distributed grass seeds germinate much more easily.

The output of seeds can be adjusted to the driving speed and an even sowing pattern over the whole grassland area can be fulfilled. Another great advantage is the adjustment of the seed amount while driving. This allows responding specific to pest infestation or partial boar damage.

The spring-borne levelling plate ensures optimum distribution and levelling of molehills, dung, liquid and cattle manure. The guidance of depth and pressure can be adjusted with hydraulic cylinder via the solidification roller. With the hydraulic cylinder the roller can be lifted up completely off the ground. It's another further advantage while weeding out the entanglements and bad weeds.

The GP series can be equipped with various rollers (Cambridge roller or toothed roller); this allows the device to be perfectly adapted to the requirements. The working intensity of every single unit of the grassland PRO harrow can be separately adjusted (levelling plate, 12mm tines, 8mm tines or roller). This way each step of procedure in grassland renewal (weeding and reseeding) can be carried out optimally. Seeds are placed in broadcast sowing. Working depth of tines is 0 to 4cm. All components of the grassland PRO harrow can be separately adjusted.

The GP series of grassland PRO harrows are preferably used for intercrops distribution.

Cambridge roller Ø 390 mm

Cambridge roller Ø 530 mm

Toothed ring roller Ø 410 mm

GP 300 M1

TECHNICAL DATA

Working width . . . . . 3 m
Transport dimensions (without PS) in m . L 2,45 x W 3,0 x H 1,3
Transport dimensions (with PS 500 M2) in m. . . . . .
. . . . . L 2,45 x W 3,0 x H 2,3
Weight (Cambridge roller 390 mm) Full Edition . . . . . 1.355 kg
Weight (Cambridge roller 530 mm) Full Edition . . . . . 1.765 kg
Weight (Toothed ring roller 410 mm) Full Edition . . . . . 1.765 kg
Mounting category . . . . . CAT 2 (mast height CAT 3)
Tractor performance . . . . . from 65 kW / 90 HP
Working capacity. . . . . 2 to 2,5 ha per hour
. 1 double-acting control device for roller adjustment necessary

Full Edition = GP 300 M1 (with Cambridge- or toothed ring roller) warning signs + lights, filling step, PS 300 M1 electr. + control box 5.2 and set of sensors: radar + tractor linkage upper bar sensor

STANDARD SCOPE OF DELIVERY

- Complete unit with two beds of tines and roller
- Spring-borne levelling plates
- Beds with cranked 12 mm tines (40 pcs.), 8 mm tines (56 pcs.)
- Heavy grassland Cambridge roller (Ø 390 mm or Ø 530 mm) or toothed ring roller (Ø 410 mm)

ACCESSORIES

- Warning signs + lights GP 300 (approx. 5 kg)
- Operating hour counter
- Set of sensors - radar + tractor linkage upper bar sensor GP300
- Filling step for GP 300 M1 (approx. 45 kg)
- Accessory kit toolbox
- Accessory kit mounting of dispersion plates GP 300

Usable with pneumatic seeders with electrical fan PS 120 M1, PS 200 M1, PS 300 M1 and PS 500 M2: see pages 25 - 26.

TECHNICAL PROCEDURE

see pages 14 & 15

BENEFITS VERSUS THE COMPETITION

- The grassland PRO harrow has spring-borne levelling plates to even out mole hills and unevennesses.
- Followed by two beds with cranked tines that are made in different strengths.
  This is a unique combination that has been proven to provide excellent results.
- Every working tool can be used as a single unit (e.g. roller) or in combination with other working tools.

GP 600 M1

TECHNICAL DATA

Working width . . . . . 6 m
Transport dimensions (without PS) in m . L 5,5 x W 3,0 x H 3,1
Transport dimensions (with PS 500 M2) in m. . . . . .
. . . . . L 5,5 x W 3,0 x H 3,1
Weight (Cambridge roller 530 mm) (without PS) . . . . 3.800 kg
Weight (Toothed ring roller 410 mm) (without PS) . . 3.800 kg
Tyres (400/60-15.5“) . . . . . 2 pcs.
Mounting category . . . . . CAT 3N
Tractor performance . . . . . from 100 kW / 140 HP
Working capacity. . . . . 4 - 6 to 6 ha per hour
. . . . . 3 double-acting control devices
for chassis, folding and adjustment of roller necessary

STANDARD SCOPE OF DELIVERY

- Complete unit with three beds of tines and roller
- Spring-borne levelling plates
- Beds with cranked 12 mm tines (78 pcs.)
- Beds with cranked 8 mm tines (114 pcs.)
- Heavy grassland Cambridge roller (Ø 530 mm) or toothed ring roller (Ø 410 mm)
- 25 km/h version

ACCESSORIES

- Air brake (available only by order with machine)
- Warning signs + lights GP 600 (approx. 30 kg)
- Operating hour counter
- Mountig kit for PS 120-500
- Set of sensors - radar + tractor linkage lower bar sensor GP 600
- Filling step GP 600 (approx. 80 kg)
- Electric hydraulic system (only with 1 double-acting control device with electric control)
- 40 km/h version with MOT
- Accessory kit 500/50-17“ tyres
- Accessory kit toolbox

Usable ONLY with pneumatic seeders with HYDRAULIC fan PS 200 M1, PS 300 M1, PS 500 M2: see pages 25 - 26.

TECHNICAL PROCEDURE

see pages 14 & 15

BENEFITS VERSUS THE COMPETITION

- The grassland PRO harrow has spring-borne levelling plates to even out mole hills and unevennesses.
- Followed by two beds with cranked tines that are made in different strengths.
  This is a unique combination that has been proven to provide excellent results.
- Every working tool can be used as a single unit (e.g. roller) or in combination with other working tools.

TECHNICAL PROCEDURE GRASSLAND PRO HARROW

Fig. 1

Fig. 1: Tine bed
The tine bed consists of a spring levelling plate, 2 rows of 12 mm tines (front) and 2 rows of 8 mm tines (rear).

Cranked tines generate an elliptical movement on the soil. The sharper the position of the tines, the smaller the elliptical movement. The flatter the position of the tines the larger the movement will be.


Fig. 2

Fig. 2: Levelling plate
Thanks to the height-adjustable spring-borne levelling plate rough unevenness in the grassland is eliminated and the tines are not stressed unnecessarily.
The height is adjustable through the bolt on the hole grid.


Fig. 3

Fig. 3: Levelling plate
For easy handling a hook for adjusting the levelling plate is included as standard.

Fig. 4

Fig. 4: Height of the tine frame
In addition to the depth, for the GP-series, the aggressivity of the tines can also be changed relative to each other. To do this you merely need to insert the bolts of the tine frames into a higher or lower hole as desired.


Fig. 5

Fig. 5: Adjustment of the roller
The depth of the overall machine is adjusted by removing or inserting the hydroclips. If all hydroclips are removed, the roller can be lifted from the ground.


Fig. 6

Fig. 6: Adjusting the depth of the 8 mm tines
In addition you can also adjust the work pattern of the two rear rows of tines by selecting the 4 different stages (can be selected with the bolts).


Fig. 7

Fig. 7: Warning signs
For safe travel illuminated warning signs are available as accessories.

Fig. 8

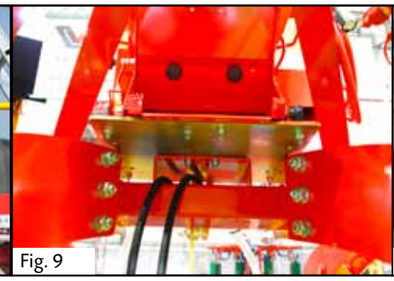


Fig. 9


Fig. 10

Fig. 8, 9 & 10: PS installation on GS 300 M1
Our grassland PRO harrow GP 300 M1 can be combined with our pneumatic seeders PS 120 M1 - PS 500 M2 (electric fan). The PS is mounted on the pre-equipping and fixed together with the counter plate.

Fig. 11

Fig. 11: PS installation on GP 600 M1
Our grassland PRO harrow GP 600 M1 can be combined with our pneumatic seeders PS 200 M1 - PS 500 M2 (hydraulic fan). The PS is mounted on the pre-equipping (available as accessories) of the GP 600 M1and fixed together with the counter plate.


Fig. 12

Fig. 12&13: Installation of the dispersion plates
The dispersion plates are installed via a mounting bracket on the hollow profile of the tine frame, provided for this purpose and fixed in place with hose clamp, screws and cable ties. The dispersion plates are standard mounted between the 2nd and 3rd row.

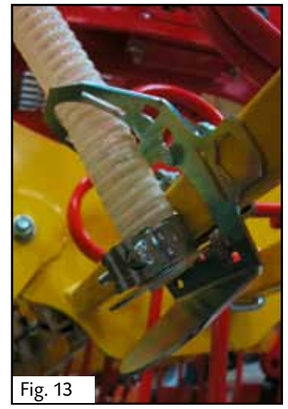


Fig. 13


Fig. 14

Fig. 14: Tractor linkage upper bar sensor (GP 300 M1)
For automatically stopping and rotating the sowing shaft, we offer the top link linkage sensor as accessory, which can be mounted on one of the two top link holes of the GP 300 M1.

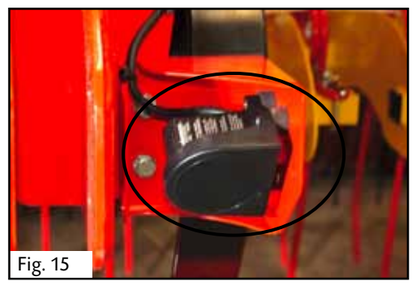


Fig. 15

Fig. 15: Radar sensor (GP 300 M1)
For automatically adjusting the sowing shaft speed to the actual driving speed, a sensor set is available as accessory.


Fig. 16

Fig. 16: Filling step
A filling step (accessories) shall ensure save filling of the pneumatic seeder tank.

FIELD AND GRASSLAND ROLLERS AW

APV ROLLERS HEAVY, TRAILED

TECHNICAL DATA AW 630 SG

Working width ..... 6,3 m
Tyres ..... 400/60-15,5 14 PR
Coupling device ..... Draw bar eye hitch
Power requirement ..... 70 kW/95 HP
Weight with Cambridge roller or
toothed ring roller (without accessories) ..... 4.200 kg
Transport speed ..... 25 km/h
..... min. 2 double-acting control devices necessary

TECHNICAL DATA AW 830 SG

Working width ..... 8,3 m
Tyres ..... 19/45-17 14 PR
Coupling device ..... Draw bar eye hitch
Power requirement ..... 110 kW/150 HP
Weight with Cambridge roller or
toothed ring roller (without accessories) ..... 5.190 kg
Transport speed ..... 25 km/h
..... min. 3 double-acting control devices necessary (with switch between leveling bar/weeder and parking support)

STANDARD SCOPE OF DELIVERY

- Lights
- Mudguard
- Hydraulic weight-loading

Usable with pneumatic seeders PS 120 M1 - PS 800 M1 + radar sensor + 7-pin signal cable.
Leveling bar, harrow: 1 double-acting control device necessary

ACCESSORIES

- Pressurised air braked axle for AW 630 SG/AW 830 SG
- Harrow (hydraulically adjustable) AW 630 SG/AW 830 SG
- Leveling bar AW 630 SG/AW 830 SG
- Leveling bar with dual blade AW 630 SG/AW 830 SG
- K80 Drawbar eye AW 630 SG/AW 830 SG
- Mounting kit PS120-800 for AW 630/830 SG
- Filling step for AW 630/830 SG

AREAS OF APPLICATION

- Seed bed preparation
- Stimulation of the rootstock
- Eradication of unevenness
- Re-compacting of the ground
- Crust breaking
- Reduction of erosion
- Shortening of inter-cropping
- Combating slugs and snails

Every APV field- and grassland roller is available with two different ring elements:

CAMBRIDGE RINGS

The smooth rings ensure very good rolling. The moving intermediate rings provide optimum ground tracking and cleaning of the rollers.

Your advantages with a Cambridge roller

- Proven to be impervious to stones
- Gentle blade treatment compared to other profiles when rolling in the spring
- No burying of seed during rerolling

Cambridge roller

TOOTHED RINGS

The toothed ring roller is ground tracking and self-cleaning due to the different ring diameters.

Your advantages with a toothed ring roller

- No soil deposits on the roller
- Provides a fine crumbed ground structure
- Interrupts the capillary action in the ground (improving the water supply)
- No muddying of the ground

Toothed ring roller

APV field- and grassland rollers are available with different working widths and mounting options:

APV ROLLERS 3-POINT LINKAGE AND FRONT

- AW 300 3P Cambridge roller
- AW 300 3P Toothed ring roller
- AW 300 F Cambridge roller
- AW 300 F Toothed ring roller

Usable with electric pneumatic seeders PS 120 M1 - PS 300 M1 (except AW 300 F)!

APV ROLLERS TRAILED

- AW 630 G Cambridge roller
- AW 630 G Toothed ring roller

Usable with electric pneumatic seeders PS 120 M1 - PS 300 M1

- AW 920 G Cambridge roller
- AW 920 G Toothed ring roller

Not usable with pneumatic seeders.

APPLICATION PURPOSE

- Decimation of unwanted weeds
- Increasing the potential of the soil
- Soil cultivation
- Soil stimulation
- Meadow aeration

GRASSLAND AND TINED WEEDER

BENEFITS VERSUS THE COMPETITION

- Flexible weeder bed
- Weeder bed guided by the frame
- Simple tine adjustment
- Adjustable rubber support wheels

APPLICATION WITH

- Pneumatic seeders PS 120 M1 - PS 300 M1

ROBUST CULTIVATION EQUIPMENT

The tined weeder is a soil care device which is essential in modern agriculture due to its robust construction and its versatile application.

As an alternative to chemical weed control, the weeder makes a valuable contribution to the tilling process.

The APV tined weeder has proven itself over many years as an alternative to chemical weed control and mechanical crop cultivation for a whole multitude of plants.

The APV tined weeder is used for soil care purposes and applies on cereals, maize, turnips, rape, potatoes, vegetables, soy, potatoes, field beans, peas and grassland.

In order to prevent plant cultivations from qualitative and quantitative damage, the tined weeder aims at keeping the weeds down to a minimum. The application of the tined weeder does however not strive for a completely weed-free area, as there are also positive effects on plant cultivations and soil conditions, which are achieved through moderate presence of various types of weeds.
Other reasons to use an APV tined weeder are to encourage the rootstock, aerate the soil and to regulate the water supply by interrupting capillary action. This factors make an important contribution to producing a good crop of useful plants.
For optimum results, alongside the weeder settings such as depth setting and tine adjustment, driving speed, the properties of soil, and weather conditions at a point of use must also be taken into consideration.

In combination with the pneumatic seeders PS 120 M1 to PS 300 M1, the tined weeder is particularly appropriate to be used for distributing intercrops.

GRASSLAND AND TINED WEEDER

TECHNICAL DATA

Types/Working width in cm	Beds	Support wheels	Tines	HP	kW	kg (approx.)	Mounting category
APV 150 – rigid (non folding)	1 x 1,5	2	48	8	6	140	Cat. 1
APV 200 – rigid (non folding)	1 x 2,0	2	66	20	15	160	Cat. 1
APV 300 – rigid (non folding)	2 x 1,5	2	96	15	11	250	Cat. 2N
Hydraulic folding							
APV 450	3 x 1,5	2	144	20	15	380	Cat. 2N
APV 500	1 x 2 / 2 x 1,5	2	162	30	22	410	Cat. 2N
APV 600	4 x 1,5	2	192	40	29	500	Cat. 2
APV 600 reinforced	4 x 1,5	4	192	50	37	700	Cat. 2
APV 750	5 x 1,5	4	240	50	37	650	Cat. 2
APV 900 contractable to 600 cm	6 x 1,5	4	288	60	44	880	Cat. 2
APV* 900 scissor fold., extendable to 1200 cm	6 x 1,5	4	288	65	48	1.050	Cat. 2
APV* 1200 scissor fold., contractable to 900 cm	8 x 1,5	4	384	70	51	1.260	Cat. 2
APV* 1500 scissor fold., contractable to 1200 cm	10 x 1,5	4	480	80	59	1.500	Cat. 2

* no rapid coupling bar - 2 middle stabilisers, (Dim. 18*8.50-8“)

We recommend a 2nd pair of support wheels, if the 6 m weeder is in use with front levelling plates!

Usable with pneumatic seeders PS 120 M1-PS 300 M1 (see page 25).

STANDARD SCOPE OF DELIVERY

- Tines Ø 7 mm 450 mm long
- Line spacing 3,1 cm
- Parking legs with folding machines
- Requirement by weeders with scissor folding - 2 double-acting control devices necessary
- Transport width 1,5 - 3 m
- Gauge of the track: 1,36 - 1,40 m
- Automatic pivoting in of the side beds by parallel guidance

ACCESSORIES

- Tines: 450 mm long, Ø 8 mm
- Hydraulic tine adjustment per field (not in connection with front levelling plate)
- Spring-borne levelling plates adjustable
- 2nd pair of support wheels with bracket
- Control valve, if there is only 1 double-acting control device on the tractor (for machines with scissor folding)
- Track gauge variation 1,36-1,8 m
- Swing limiter
- Warning signs + lights rear
- Warning signs + lights rear and front
- Mounting kit PS 120 M1 - PS 300 M1
- Filling step
- Set of sensors - wheel + tractor linkage upper bar sensor
- Pneumatic seeders PS 120 - 300 M1 (see page 25)

Grass-sowing & -reseeding

ES 100 M1 CLASSIC - SINGLE DISC SPREADER

The single disc spreader is ideal for the distribution of rotations and continuous fallows, intercrops, grass seeds, slug pellets and similar granulates. The spreading and dosage range can be continuously adjusted according to any requirements. The sowing rate is adjustable through the metering shutter opening.

TECHNICAL DATA

Working width ..... 2 - 24 m
Dimensions ..... H 90 cm, W 52 cm, D 60 cm
Seed tank ..... Plastic tank with 105 l capacity
Net weight ..... 29 kg
Power data ..... 12 V / 25 A

STANDARD SCOPE OF DELIVERY

- Electric control box 2.1 (transition over the course of the year 2016 to control box 2.10 with identical functions) with steel bracket, mountable in the driver's cab
- Complete spreader with electrically driven spreader disc with adjustable throw blades
- Adaptor sleeves to extend the agitator for grasses
- 3 guide plates, upper linkage mounting mechanism and counter plate
- All required cables: 3 m cable to supply power from the battery to the control unit, 6 m cable from the control unit to the spreading unit

ACCESSORIES

- Truck bed mounting bracket
- Mounting kit tow-bar
- Mounting kit quad bracket
- Mounting kit quad bracket height adjustable
- Cable extension ES SS 5 m
- Precision dispersion plate 1 - 4 m working width
- Calibration box

BENEFITS VERSUS THE COMPETITION

- High quality control box (RPM control and measurement and control)
- Automatic starter for compacted scatter material
- Large refill opening, hopper discharge point
- Varied mounting options
- Large scope of delivery as standard. All necessary mounting parts included!

FEATURES OF CONTROL BOX 2.1

- RPM control and measurement
- Monitoring of the spreader disc
- Automatic start-up control if material becomes compressed
- Easy regulation of the spreading width

ES 100 M3 SPECIAL - SINGLE DISC SPREADER

The single disc spreader is ideal for the distribution of rotations and continuous fallows, intercrops, grass seeds, slug pellets and similar granulates. The spreading and dosage range can be continuously adjusted according to any requirements. The sowing rate is adjustable through the metering shutter opening that closes automatically during lifting when a linkage sensor is used. Standard equipped with the control point adjustment ensures an optimal spreading pattern.

TECHNICAL DATA

Working width ..... 1-28 m with variation (VK) <12% (tested by IRSTEA with „Metarex" by De Sangosse)
Dimensions ..... H 90 cm, W 52 cm, D 60 cm
Seed tank ..... Plastic tank with 105 l capacity
Net weight ..... 30 kg
Power data ..... 12 V / 25 A

STANDARD SCOPE OF DELIVERY

- Electric control box 3.5 with steel bracket, mountable in the driver's cab
- Complete spreader with electrically driven spreader disc with throw blades
- Adaptor sleeves to extend the agitator for grasses
- Upper linkage mounting mechanism and counter plate
- All required cables: 1,5 m cable to supply power from the 3-pin connector to the control unit, 6 m cable from the control unit to the spreading unit

ACCESSORIES

- Truck bed mounting bracket
- Mounting kit tow-bar
- Mounting kit quad bracket
- Mounting kit quad bracket height adjustable
- Cable extension SP MX 5 m
- Precision dispersion plate 1-4 m working width
- Set of adapter cables for cars 3 m
- Set of adapter cables for tractors 8 m

BENEFITS VERSUS THE COMPETITION

- 15° inclined spreader disc with 2 throw blades
- Control point adjustment for homogenization of scatter distribution
- Control box with electrical connection via 3-pin socket
- Front grasp in steel frame for easy transportation
- High quality control box (RPM control and measurement and control)
- Automatic starter for compacted scatter material
- Large refill opening, hopper discharge point
- Varied mounting options
- Large scope of delivery as standard. All necessary mounting parts included!
- Automatic slide-valve (different sensors are possible) - *Please order your desired sensor according to the list*

FEATURES OF CONTROL BOX 3.5

- RPM control and measurement
- Hectare and hour counter; operating voltage display
- Automatic start-up control if material becomes compressed
- Choice of different languages
- Automatic slide-valve sensor (optional)

SENSORS (optional)

- 7-pin signal cable (only linkage signal)
- Accessory kit tractor linkage upper bar sensor
- Accessory kit tractor linkage lower bar sensor
- Accessory kit tractor linkage pull switch sensor

CONTROL BOX FOR PS-SERIES (PNEUMATIC SEEDERS)

Our pneutmatic seeders can only be operated with the control box 3.2 or 5.2!

Please choose your control box and order it with the machine!

CONTROL BOX 3.2 (Accessory kit)

SCOPE OF DELIVERY
- Control box 3.2
- Control box bracket/angle
- Power supply 5.X
- Operating instruction

CONTROL BOX FUNCTIONS
- Controlling the sowing shaft
- Electronic volume adjustment
- Electronic sowing monitoring
- Discharge function
- Calibration-test function
- Monitoring the fan

CONTROL BOX 5.2 (Accessory kit)

SCOPE OF DELIVERY
- Control box 5.2
- Control box bracket/angle
- Power supply 5.X
- Operating instruction

CONTROL BOX FUNCTIONS
- Regulation & controlling the sowing shaft via the electronics
- Electronic volume adjustment (during operation)
- Discharge function
- Automatic calibration-test function (only weighing!)
- Total hour counter and day's hour counter
- Total hectare counter and day's hectare counter
- Choice of different languages
- Choice of different measurement units (metric, imperial)
- Calibration test & display in kg/ha and grains/m²
- Speed calibration
- Headland management (in combination with linkage sensor)
- Usage with different speed sensors (optional)
- Possibility for machine sensors (pressure monitor, fill level sensor)
- Pre-dosaging function
- Option for calibration button
- Option for regulating the electrical fan
- Display of the operating voltage and current

PS 120 M1 / PS 200 M1 / PS 300 M1

The seeds are delivered via the electric-driven metering rollers into the air channel and blown down the seed tubes by the electric/hydraulic fan or PTO shaft fan to the dispersion plates, where they are distributed evenly and closely to the ground. A precise distribution of seeds is thus possible, even in windy conditions.

TECHNICAL DATA
Working width ..... 1 - 6 m with double electric fan, 8 outlets
..... 1 - 7 m with hydraulic fan, 8 outlets
..... 1 - 12 m with hydraulic fan, 16 outlets (optional)
(8 outlets with 8 Y-dividers (s. p. 32) or doubling pieces (s. p. 31) as accessories available)
Dimensions ..... H 80 cm, W 60 cm, D 88 cm (PS 120 M1)
..... H 100 cm, W 70 cm, D 88 cm (PS 200 M1)
..... H 110 cm, W 77 cm, D 100 cm (PS 300 M1)
Seed tank ..... Plastic tank with 120 or 200 or 300 l capacity
Net weight electr. /hydr ..... 45 kg (PS 120 M1)
..... 60 kg / 83 kg (PS 200 M1)
..... 70 kg / 93 kg (PS 300 M1)
Power data ..... 12 V / 25 A
If equipped with hydraulic fan ..... 1 single acting valve (coupling size 3) + 1 pressure-less return (coupling size 4) necessary; max. required pressure: 180 bar, max. required oil amount: 38 l/min

STANDARD SCOPE OF DELIVERY
- Complete seeder with hoses (25 m)
- Sowing shaft for fine seed, sowing shaft for coarse seed (crop, grass)
- Agitator
- All required cables: 1,5 m cable to supply power from the 3-pin connector to the control unit, 6 m cable from the control unit to the spreading unit
- Calibration slide, counter plate, calibration bag
- 8 dispersion plates & 4 pcs. hexagonal bars (for the mounting of the dispersion plates)

ACCESSORIES
- Cable extension PS MX 5 m
- Mounting kit PS 120-500 3-point
- Set of adapter cables for tractors 8 m
- Conversion kit fill level sensor *
- Calibration button *
- Conversion kit pressure monitor *
- Sensors (optional, see pages 34-35)*

* only with control box 5.2

BENEFITS VERSUS THE COMPETITION
- Different sowing shafts (fine seed and coarse seed)
- Accurate & wind independent seed dispersion
- Monitoring and controlling of the sowing shaft speed
- Precise lateral distribution over the whole working width
- Discharge function
- Speed independent dispersion & headland management (with sensors, see pages 34-35; only with control box 5.2)
- Hectare counter, automatic calibration-test function (only with control box 5.2)

PS 500 M2

TECHNICAL DATA

Working width
1 - 6 m with double electric fan, 8 outlets
1 - 7 m with hydraulic fan, 8 outlets
1 - 12 m with hydraulic fan, 16 outlets (optional)
(8 outlets with 8 Y-dividers (s. p. 32) or
doubling pieces (s. p. 31) as accessories available)
Dimensions H 125 cm, W 80 cm, D 125 cm
Seed tank Plastic tank with 500 l capacity
Net weight electr. / hydr. 93 kg / 116 kg
Power data 12 V / 25 A
If equipped with hydraulic fan
1 single acting valve (coupling size 3) + 1 pressure-less return
(coupling size 4) necessary; max. required pressure: 180 bar,
max. required oil amount: 38 l/min

STANDARD SCOPE OF DELIVERY

- Complete seeder with hoses (25 m)
- Sowing shaft for fine seed, sowing shaft for coarse seed (crop, grass)
- Agitator
- All required cables: 1,5 m cable to supply power from the 3-pin connector to the control unit, 6 m cable from the control unit to the spreading unit
- Calibration slide, counter plate, calibration bag, scale for seed
- 8 dispersion plates & 4 pcs. hexagonal bars (for the mounting of the dispersion plates)
- Fill level sensor (works only with control box 5.2)

ACCESSORIES

- Cable extension PS MX 5 m
- Mounting kit PS 120-500 3-point
- Set of adapter cables for tractors 8 m
- Calibration button *
- Conversion kit pressure monitor *
- Sensors (optional, see pages 34-35)*

* only with control box 5.2

BENEFITS VERSUS THE COMPETITION

- Different sowing shafts (fine seed and coarse seed)
- Accurate & wind independent seed dispersion
- Monitoring and controlling of the sowing shaft speed
- Precise lateral distribution over the whole working width
- Discharge function
- Speed independent dispersion & headland management (with sensors, see pages 34-35; only with control box 5.2)
- Hectare counter, automatic calibration-test function (only with control box 5.2)
- Long living and stable hopper support

PS 800 M1

TECHNICAL DATA

Working width
3 - 12 m with hydraulic fan, 16 outlets
3 - 12 m with hydraulic fan, 32 outlets (optional)
(16 outlets with 16 Y-dividers (s. S. 32) or
doubling pieces (s. p. 31) as accessories available)
Dimensions H 127 cm, W 105 cm, D 170 cm
Seed tank Steel tank with 800 l capacity
Net weight hydr. 250 kg
Power data 12 V / 25 A
1 single acting valve (coupling size 3) + 1 pressure-less return
(coupling size 4) necessary; max. required pressure: 180 bar,
max. required oil amount: 38 l/min

STANDARD SCOPE OF DELIVERY

- Complete seeder with hoses (75 m)
- Sowing shaft for fine seed, sowing shaft for coarse seed (crop, grass)
- Agitator
- All required cables: 1,5 m cable to supply power from the 3-pin connector to the control unit, 6 m cable from the control unit to the spreading unit
- Calibration slide, calibration bag, scale for seed
- 16 dispersion plates & 8 pcs. hexagonal bars (for the mounting of the dispersion plates)
- Fill level sensor & surveillance of fan (pressure monitor)
- Crane lashes for assembly

ACCESSORIES

- Cable extension PS MX 5 m
- Set of adapter cables for tractors 8 m
- Calibration button
- Refilling grid (2 pieces required for each PS)
- Sensors (optional, see pages 34-35)

BENEFITS VERSUS THE COMPETITION

- Different sowing shafts (fine seed and coarse seed)
- Accurate & wind independent seed dispersion
- Monitoring and controlling of the sowing shaft speed
- Precise lateral distribution over the whole working width
- Discharge function
- Large opening for big bag filling
- Tank cover reversible
- Hopper discharge point
- Sealed hopper discharge point
- Speed independent dispersion & headland management (with sensors, see pages 34-35)
- Hectare counter, automatic calibration-test function
- Parking position for second sowing shaft

PS Fertiliser Edition – 120 l, 200 l and 300 l

Our pneumatic seeders are also available in a special edition for distributing fertiliser. Due to the corrosion-resistant fabrication, you can benefit from the advantages and the easy handling of our pneumatic seeders when distributing fertiliser.

TECHNICAL DATA

Working width . . . . . 1 - 6 m with double electric fan, 8 outlets
. . . . . .1 - 7 m with hydraulic fan, 8 outlets
. . . . . 1 - 12 m with hydraulic fan, 16 outlets (optional)
(8 outlets with 8 Y-dividers (s. p. 32) or
doubling pieces (s. p. 31) as accessories available)
Tank. . . . . Plastic tank with 120/200/300 l capacity
Dimensions and weight . . . . . see PS 120/200/300 on page 25
Power data . . . . . 12 V / 25 A
If equipped with hydraulic fan . . . . . 1 single acting valve (coupling size 3) + 1 pressure-less return (coupling size 4) necessary;
max. required pressure: 180 bar, max. required oil amount: 38 l/min

STANDARD SCOPE OF DELIVERY

- Complete corrosion-resistant seeder with hoses (25 m)
- Sowing shaft for fine seed (fine seeds, micro-granules, etc.)
- Sowing shaft Flex20 for coarse seed (fertiliser, crop, etc.)
- Stainless steel agitator
- All required cables: 1,5 m cable to supply power from the 3-pin connector to the control unit, 6 m cable from the control unit to the spreading unit
- Corrosion-resistant calibration slide, calibration bag
- Counter plate (galvanised)
- 8 stainless steel dispersion plates & 4 pcs. galvanised hexagonal bars (for the mounting of the dispersion plates)

ACCESSORY

see „standard“ PS-series (p. 25)

Sowing shaft fine

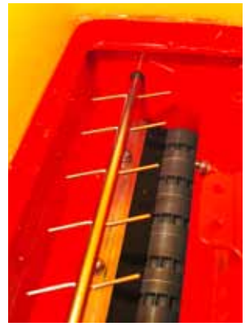
Sowing shaft Flex20

BENEFITS VERSUS THE STANDARD - PS-SERIES

- All powder-coated parts (except for hydraulic fan) with **cataphoretic painting** (automotive standard)
- Standardised parts (bolts, washers, nuts, etc.), mixer, sweeper adjustment are manufactured from stainless steel
- Sowing shaft cover with polyurethane (airtight and corrosion-resistant)
- Sealed outlets to the hoses
- Sealed bearing flange (cover plate for sowing shaft)
- Sowing shaft sealed on side of motor
- Terminal strip for easy cabling (motors, sensors, etc.)
- Sealed container lid
- Coated aluminum sowing shaft
- **Option for spreading fertiliser, micro-granules, pesticides and intercrops**

DETAILS PS FERTILISER EDITION

Sealed outlets



Stainless steel agitator

Sealed sowing shaft cover plate

Sowing shaft cover with polyurethane

PS FERTILISER EDITION – 500 l

TECHNICAL DATA

Working width . . . . . 1 - 6 m with double electric fan, 8 outlets
. . . . . .1 - 7 m with hydraulic fan, 8 outlets
. . . . . 1 - 12 m with hydraulic fan, 16 outlets (optional)
(8 outlets with 8 Y-dividers (s. p. 32) or
doubling pieces (s. p. 31) as accessories available)
Tank. . . . . Plastic tank with 500 l capacity
Dimensions and weight . . . . . see PS 500 on page 26
Power data . . . . . 12 V / 25 A
If equipped with hydraulic fan . . 1 single acting valve (coupling size 3) + 1 pressure-less return (coupling size 4) necessary; max. required pressure: 180 bar, max. required oil amount: 38 l/min

STANDARD SCOPE OF DELIVERY

- Complete corrosion-resistant seeder with hoses (25 m)
- Sowing shaft for fine seed (fine seeds, micro-granules, etc.)
- Sowing shaft Flex20 for coarse seed (fertiliser, crop, etc.)
- Stainless steel agitator
- All required cables: 1,5 m cable to supply power from the 3-pin connector to the control unit, 6 m cable from the control unit to the spreading unit
- Corrosion-resistant calibration slide, calibration bag, scale for seed
- Counter plate (galvanised)
- 8 stainless steel dispersion plates & 4 pcs. galvanised hexagonal bars (for the mounting of the dispersion plates)
- Fill level sensor (works only with control box 5.2)

ACCESSORIES

see PS 500 (p. 26)

BENEFITS VERSUS THE STANDARD - PS-SERIES

- All powder-coated parts (except for hydraulic fan) with **cataphoretic painting** (automotive standard)
- Standardised parts (bolts, washers, nuts, etc.), mixer, sweeper adjustment are manufactured from stainless steel
- Sowing shaft cover with polyurethane (airtight and corrosion-resistant)
- Sealed outlets to the hoses
- Sealed bearing flange (cover plate for sowing shaft)
- Sowing shaft sealed on side of motor
- Terminal strip for easy cabling (motors, sensors, etc.)
- Sealed container lid
- Coated aluminum sowing shaft
- **Option for spreading fertiliser, micro-granules, pesticides and intercrops**

Sowing shaft fine

Sowing shaft Flex20

PS-series for special applications: 16 or 32 outlets

The pneumatic seeders offer the possibility to double the number of hose outlets. This option is ideal, if you want to work row-dependent, for example when dosing micro-granulate-fertiliser directly in 16 sowing coulters. This system increases the precision of the lateral distribution of the seed when it comes to huge working widths, for example by over-sowing clover nurse crops with a 12m harrow. This can be done without Y-dividers.
The conversion kits can only be ordered when ordering a pneumatic seeder of the “standard” or the fertiliser series.
Installation is carried out directly in the APV factory!

DOUBLING OF THE OUTLETS (16 OR 32 OUTLETS):

Ideal for:

- Row-dependent sowing with 16 outlets with PS 120-500
- Row-dependent sowing with 32 outlets with PS 800
- Ideal for PS 200-500 with hydr. fan with a working width of 7-12 m for grass seed, clover and other small seed varieties, in small quantities (instead of Y-dividers)

Not suitable for:

- Large and heavy seeds (e.g. beans, peas, etc.)

16 (PS 120-500) OR 32 (PS 800) OUTLETS:

- Conversion kit PS 120-500 16 outlets
- Conversion kit PS 120-500 fertiliser 16 outlets
- Conversion kit PS 800 32 outlets

STANDARD SCOPE OF DELIVERY (in addition to the scope of delivery of the pneumatic seeder you have selected)

- Adapters (1 to 2)
- Sowing shafts (fb-f and Flex20) (instead of standard sowing shafts)
- Sealing lips, clamping plate
- 8 pcs. (PS 120-500) or 16 pcs. (PS 800) dispersion plates
- 1 roll of hose (25 m) (PS 120-500) or 3 rolls of hose (75 m) (PS 800)

ACCESSORIES

(see accessories for the pneumatic seeder you have selected)

Through this dosing system, an exact lateral dispersion is ensured even with 16 outlets.

Micro-granulate is dosed in 32 sowing coulters.


Electric fan


Hydraulic fan


PTO fan

ACCESSORIES FOR „STANDARD“ PS-SERIES AND FERTILISER EDITION

Y-DIVIDERS

For doubling the number of outlets from 8 to 16 or from 16 to 32 outlets.

- Mounting kit P8 Y-dividers:
  1 role hoses (25 m), 8 pcs. dispersion plates, 4 pcs. hexagonal bars (for the mounting of the dispersion plates), 8 pcs. Y-dividers

- Mounting kit P16 Y-dividers:
  3 role hoses (75 m), 16 pcs. dispersion plates, 8 pcs. hexagonal bars (for the mounting of the dispersion plates), 16 pcs. Y-dividers

CONVERSION FROM ELECTRIC TO HYDRAULIC FAN

- Retrokit HG 300 for PS 120 M1 - PS 500 M2

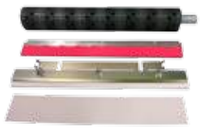
MODIFICATION TO PTO FAN

- Modification kit PTO FAN
- PTO shaft BG2 610 mm, with freewheel

CONTROL BOX BRACKET

- Mounting kit universal control box bracket

The following options are available:
- APV control box on Müller bracket (tube)
- APV control box on RAM-C ball (separately available)
- Müller tube on RAM-C ball (separately available)



CONVERSION KIT FOR OIL SEED RAPE

In order to achieve optimum results with small seeds (e.g. rape).

- Conversion kit for oil seed rape (sowing shaft fb-efv-efv-fb, PU brush, Sylodyn strips)

FAST COUPLER FOR 8 AND FOR 16 OUTLETS

In order to change attachment of the pneumatic seeder to several soil tilling machines. Separation is possible without tools.

- Accessory kit fast coupler for 8 outlets
- Additional module for fast coupler 8 outlets
- Accessory kit fast coupler for 16 outlets
- Additional module for fast coupler 16 outlets

CALIBRATION SLIDE WITH HOSE

SURE FILL ADAPTER

fill granulate safely and contact-free

AIR SEPARATOR AIR GUARD

The cyclone form allows optimum ventilation of the seed.

FILLING STEP KIT MODULAR

- Basic steps, filling step kit modular
- Expansion - filling step kit, modular (prerequisite: basic steps present, any number of expansions possible)

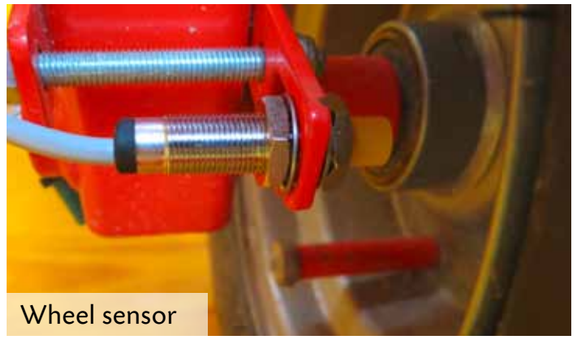
UPGRADE 3-PIN NORM POWER SOCKET ON TRACTOR

- Set of adapter cables for tractors 8 m

The 8 m long cable is screwed right onto the battery terminals, and at the other end is a standard three-pin socket, which is permanently mounted in the tractor.


Control box 5.2


Radar sensor


Wheel sensor


Tractor linkage upper bar sensor

SENSORS FOR ALL PNEUMATIC SEEDERS WITH CONTROL BOX 5.2

These sensors can be used only with control box 5.2.

Sensor GPSa (Accessory kit)

The GPSa sensor transmits the current vehicle driving speed to the control box. The current speed is measured by the combination of a GPS unit and a 3D acceleration sensor. Attention: The sensor does not function if the GPS unit is in a blind spot. Cable length: 5 m

This sensor can be combined with the following linkage sensors:
- Tractor linkage upper bar sensor
- Tractor linkage lower bar sensor
- Tractor linkage pull switch sensor

This set includes a splitter cable for combined use.

Wheel sensor (Accessory kit)

The wheel sensor detects the driving speed. The sensor is fixed rigidly to the frame and can thus detect both the magnets provided and the screw heads, wheel bolts, etc. on the rim of the wheel. Example installation locations: spur wheel on sowing machines, deep guide wheels, tractor wheels.
Cable length: 5 m

This sensor can be combined with the following linkage sensors:
- Tractor linkage upper bar sensor
- Tractor linkage lower bar sensor
- Tractor linkage pull switch sensor

This set includes a splitter cable for combined use.

Tractor linkage pull switch sensor (Accessory kit)

For installation on the 3-point or moving parts in the headland.
Method of operation: actuation by pulling by means of a spring. The sowing shaft of the PS is thus automatically released or stopped (invertible). Cable length: 5 m

Calibration button

The calibration button significantly facilitates the calibration test and can be fastened with the integrated magnets virtually anywhere on the device. The emptying of residues from the device can also be carried out via the calibration button.
Cable length: 1 m

Radar sensor MX 35 (Accessory kit)

The radar sensor supplies information to the control box on the speed of the vehicle. The control box then automatically regulates the RPM of the sowing shaft and the volume of seed.
Cable length: 5 m
Not approved for sale in Great Britain!

This sensor can be combined with the following linkage sensors:
- Tractor linkage upper bar sensor
- Tractor linkage lower bar sensor
- Tractor linkage pull switch sensor

This set includes a splitter cable for combined use.

Tractor linkage upper bar sensor (Accessory kit)

for three point mounting mechanism
For installation in a second top link slot.
Method of operation: mechanical actuation of a spring rod. The sowing shaft of the PS is thus automatically released or stopped (invertible). Cable length: 3 m

Tractor linkage lower bar sensor (Accessory kit)

For installation on moving parts in the headland.
Method of operation: contactless, through a magnet (reed switch). The sowing shaft of the PS is thus automatically released or stopped (invertible). Cable length: 5 m

7-pin signal cable

The driving speed of the tractor is transferred by the 7-pole signal cable and displayed on the control box. On our homepage you can find a list of all tractors that are equipped with this standard 7-pin socket.
(NOT for John Deere tractors) Cable length: 1,5 m

This sensor can be combined with the following linkage sensors:
- Tractor linkage upper bar sensor
- Tractor linkage lower bar sensor
- Tractor linkage pull switch sensor

This set includes a splitter cable for combined use.

Cable extension for sensors MX

Cable length: 5 m

Splitter cable

for combined use of speed sensor and linkage sensor necessary! Cable length: 1 m

Fill level sensor

The fill level sensor measures how much seed is still in the hopper and triggers an alarm in the control box if there is too little seed in the tank. Cable length: 2 m
- Conversion kit fill level sensor model 2013 and up
- Conversion kit fill level sensor up to model end of 2012

Seed flow monitoring

For permanently monitoring the seed flow of each individual outflow/hose. Hose blockages are immediately detected and unsown strips are avoided when sowing. The unit can be fitted and operated fully independent of all other control boxes.

Control box 1.6 (Accessory kit)

plus optional
- Distribution box 1-8 outputs (distribution box + device cable 10 m)
- Distribution box 1-24 outputs (distribution box + device cable 10 m)

plus the required number of
- Seed flow sensor kit 1" (sensor + connection cable 10 m + 2 hose clamps)
- Seed flow sensor kit 1 1/4" (sensor + connection cable 10 m + 2 hose clamps)