

# APV PNEUMATIC SEEDERS

FERTILIZER EDITION



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AMBITION. PASSION. VISION.





# GROWTH IS THE WAY.

## GROWING SINCE 1997

Jürgen Schöls is an agriculturalist at heart. In 1997, the passionate farmer and inventor built his first machine, a spreader. Ever since, he has been developing agricultural equipment "for professionals, by professionals". Jürgen Schöls, himself a Demeter-certified farmer, develops each machine in a lively exchange with users, before it is professionally enhanced by the design department.

As an innovative company, naturally APV desires to play an important role on the market with its products. Together with customers around the world, APV refines its products on an ongoing basis.



At the Dallein site in Waldviertel in Lower Austria, approximately 170 employees make a significant contribution towards preserving the environment



and improving cultivation and soil tillage. At APV job security is a high priority.



All activities are aligned to economic success and growth.

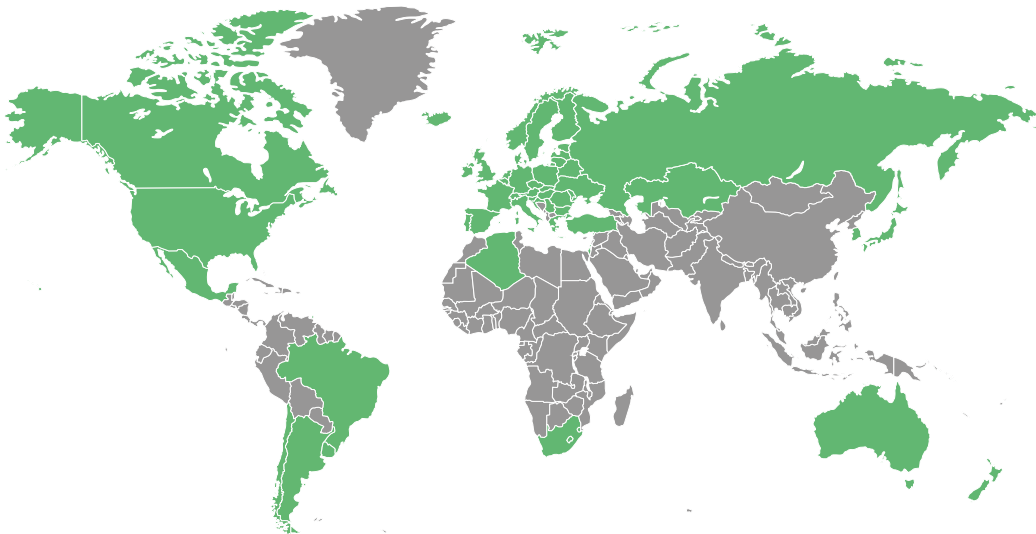


# AND THE GOAL.

## GROWTH KNOWS NO LIMITS

Over the years, the APV Team has fostered a consistent, unbroken drive for achievement; today the enterprise is a presence on the international market. There are APV locations and own sales subsidiaries in Poland, Romania, Russia, Germany, Brazil, Turkey

and the USA. Our network of APV contract partners in over 50 countries assures that our customers enjoy the highest level of service competence.



## A PASSION FOR GROWTH

Today APV is an agile family-owned company that is proud of its employees. Many of our employees have been involved with agriculture since their infancy and know precisely what matters and what's important for farmers when it comes to modern implements. An abundance of positive feedback from many, many satisfied customers confirms this approach.





# THE APV FERTILIZER EXPERTS

The Pneumatic Seeders of the Fertilizer Edition leave nothing to be desired, because you can put together your professional equipment according to your individual requirements. With our wide range of hopper sizes, seeding shafts and fan types, we deliver solutions to suit your needs and budget. Our seeding shafts are also available in a special version, suitable for spreading fertilizer. Due to their non-corrosive design, you also benefit during fertilizer distribution from the advantages and the easy handling of our PS units.

## PS 120-300 M1 D/PS 500 M2 D

These non-corrosive "tiny models" are professional seeders to be used in small and medium enterprises. They essentially differ from each other in terms of hopper size.

This makes them ideal for use in confined spaces. Due to their compactness, they also have a lighter weight effect on soil cultivation equipment and seeders. The bigger the hopper,

the greater the time saving, as it does not need to be refilled so often. The devices are versatile and equipped for almost any application.

## PS 800 M1 D

The implement features an enormous hopper volume. All components are perfectly adapted for intensive use. This type of seeder is equipped with 16 outlets, a strong hydraulic fan and a steel hopper, as well as many other extras. This also enables you to apply high

seed rates per hectare. The spreading material passes from the seed hopper into the air duct via the electrically controlled seeding shaft. This is where the spreading material is conveyed to the baffle plates via plastic hoses with the aid of the fan and distributed evenly and close

to the ground. This enables precise spreading even in windy conditions.

## PS 300 M1 D TWIN

The PS 300 M1 D TWIN makes it possible to spread two entirely different seed types/seeds with one implement. The 300 L hopper is divided in the middle by a partition wall to form two chambers of 150 L each. Control Box 5.7 controls each seeding shaft side separately, which means the spread rate is kept constant.

The PS contains a split seeding shaft, which is driven by two independent gearbox motors. It is possible to equip one half of the seeding shaft with fine seed wheels and the other half with coarse seed wheels. This allows two seeds of different sizes to be precisely applied in different quantities. The air valves make it possible to adjust the air volume

to the different seeds. Control Box 5.7 allows each half of the seeding shaft to be controlled separately. This also allows for a calibration test for one half of each seeding shaft.





	PS 120 D	PS 200 D	PS 300 D	PS 500 D	PS 800 D	PS 300 D TWIN
Working width	up to 6 m	up to 12 m*	up to 12 m*	up to 12 m*	up to 12 m	up to 12 m*
Outlets freely selectable up to	16	16 <sup>1</sup>	16 <sup>1</sup>	16 <sup>1</sup>	32 <sup>2</sup>	16
Electr. / electr. PLUS / hydraulic fan	x / x / -	x / x / x	x / x / x	x / x / x	- / - / x	x / x / x
Electr. / electr. PLUS / hydr. dimensions (height / width / depth in cm)	90 x 60 x 80 90 x 60 x 86 -	100 x 70 x 90 100 x 70 x 90 100 / 70 / 110	110 x 80 x 100 110 x 80 x 100 110 / 80 / 115	125 x 80 x 120 125 x 80 x 120 125 / 80 / 125	- - 125 / 100 / 170	105 x 75 x 100 105 x 75 x 100 105 / 70 / 115
Hopper (in liters)	120	200	300	500	800	300
Net weight, electr. / electr. PLUS / hydr. (in kg)	45 / 53 / -	60 / 68 / 83	70 / 78 / 93	100 / 108 / 123	- / - / 250	100 / 108 / 123
Power data	12 V / 25 A	12 V / 25 A	12 V / 25 A	12 V / 25 A	12 V / 25 A	12 V / 40 A
Power data electr. fan PLUS	12 V / 40 A (excl. seeding shaft motor) 12 V / 10 A (for seeding shaft motor)					Fan: 12 V / 40 A Seed shaft drive: 12 V / 15 A
Max. required pressure	-	180 bar	180 bar	180 bar	180 bar	180 bar
Max. required oil quantity	-	38 l / min	38 l / min	38 l / min	38 l / min	38 l / min
Complete corrosion-resistant seeder with hose system (25 m / 75 m)	x / -	x / -	x / -	x / -	- / x	x / -
Seeding shaft for fine seed / coarse seed	x / x	x / x	x / x	x / x	x / x	x / x
6 m cable from the seeder to the Control Box	x	x	x	x	x	x
Corrosion resistant calibration slide, calibration bag, contra plate (galvanized), seed scale	x	x	x	x	x	x
Stainless steel agitator	x	x	x	x	x	x
Display and monitoring of the fan speed on the hydr. fan		x	x	x	x	x
Non-corrosive dispersion plates	x	x	x	x	x	x
Galvanized hexagonal bars, 4 units / 8 units	x / -	x / -	x / -	x / -	- / x	x / -
Fill level sensor	optional (x)	optional (x)	optional (x)	x	x	x
Foreign object sieve					x	
Crane straps for easier handling when mounting					x	
Calibration button, optional	x	x	x	x	x	x
Extension cable PS MX 2 m / 5 m / 14 m, optional	x / x / x	x / x / x	x / x / x	x / x / x	x / x / x	
Mounting kit for top link, optional	x	x	x	x		
Sensor system <sup>3</sup> , optional	x	x	x	x	x	x

\* When using the electr. fan PLUS and the hydr. fan

<sup>1</sup> optional (8 outlets with 8 Y-dividers (see page 14) or doubling pieces (see page 12) available as accessories)

<sup>2</sup> optional (16 outlets with 16 Y-dividers (see page 14) or doubling pieces (see page 12) available as accessories)

<sup>3</sup> For use with Control Box 5.2, 5.7, 6.2, and ISOBUS

# CONTROL BOXES

## CONTROL BOX 1.2: A SOLID BASE

Control Box 1.2 is the ideal starter module and stands out for its compactness. It controls the fundamental seeding functions and is also compatible with selected machine sensors. Adjustment of the speed of the seeding shaft and fan is easy, quick and straightforward.



## CONTROL BOX 5.2: THE BESTSELLING CONTROL BOX

Control Box 5.2 is the most popular version of the APV control boxes and includes extensive functions. Such functions as adjusting the spread rate to the travel speed, the automatic switch-off on headland, the ability to precisely regulate the electric fan or the automatic execution of the calibration test simplify work enormously.



## CONTROL BOX 6.2: THE TOUCH CONTROL BOX

Control Box 6.2 impresses with even more functionality for the professional farmer and contractor. The large touch display shows all key machine processes at one glance. The menu is designed for intuitive operation with self-explanatory symbols. Due to the additional functions, such as the automatic pre-metering of the seeds and the creation of a seed library, you are able to configure the use of your seeder even more efficiently.



## CONTROL BOX 5.7: THE TWIN CONTROL BOX

Control Box 5.7 completes the PS 300 M1 D TWIN and allows the separate control of two seeding shafts. With the same type of functioning, Control Box 5.7 also offers the possibility to operate up to two APV seeders in parallel and independently of each other with an additional adapter cable. In order to complete the package of the multitasking control box, the control is compatible and can be combined with any sensors.<sup>1</sup>

When jointly using two PS with electric fan or two MDP, pay attention to a possible reduction of the ventilation system performance due to the greater power consumption.



## ISOBUS M2

All Pneumatic Seeders from APV can be controlled via the tractor's own terminal using the ISOBUS function. Only one ISOBUS connection needs to be available on the tractor. This enables even more professional operation and efficient use of the PS. You do not need an additional monitor in the cab and thus have a better overview. There is only one cable from the seeder to the tractor. The Section-Control enables automatic seeding wave shut-off depending on the GPS position. You can name your seed individually in the seed library. All functions of the Control Box 6.2 are available to you.



CONTROL BOX	1.2	5.2	6.2	5.7	ISOBUS <sup>1</sup>
FUNCTIONS					
Electronic control and monitoring of the entire electronic system	x	x	x	x	x
Adjustment of the spread rate during operation	x	x	x	x	x
Automatic discharge function	x	x	x	x	x
Performance of a calibration test	x	x	x	x	x
Possibility of fill level alert (in combination with implement sensors. Example: fill level sensor)	x	x	x	x	x
Calibration test: Display in kg/ha and grains/m²		x	x	x	x
Headland management (in combination with linkage sensor)		x	x	x	x
Control box is equipped with sensor technology	x	x	x	x	x
Pre-metering		x	x	x	x
Total hour and hectare counter		x	x	x	x
Choice of different languages and units of measurement (metric, imperial)		x	x	x	x
Seed library: Store your regular seeds and switch the application by pressing a button (without a new calibration test)			x		x
Remaining quantity indicator (surface & route)			x		x
Speed indicator with hydraulic fan (optional fan speed sensor)		x	x	x	x
Automatic pre-metering			x		x
Operation via the touch color display			x		x
Update option via USB flashdrive			x		x
Robust aluminum casing			x	x	
Independent control of up to two seeding shafts and one electric fan (PS 300 M1 D TWIN)				x	x
Parallel operation of up to two APV seeders independently of each other with an electric or hydraulic fan				x	x
Section Control: Automatic seeding shaft shut-off depending on the GPS position²					x
Variable Rate Control: Spread rate is regulated according to an application map					x
LIEFERUMFANG MIT ZUBEHÖRKIT					
Control Box	1.2	5.2	6.2	5.7	ISOBUS M2¹
Cable for power supply from the 3-pin plug to the control box	1,5 m			8 m	
Control box bracket	X				
OPTIMIZED FOR USE WITH THE FOLLOWING IMPLEMENTS					
PS 120 M1 D	x				
PS 200 M1 D	x				
PS 300 M1 D	x				
PS 500 M2 D	x				
PS 800 M1 D	x				
PS 300 M1 D TWIN				x	x

<sup>1</sup>Display is not included in the scope of delivery!



<sup>2</sup>Depending on the tractor equipment

# SEEDING SHAFTS

## PS FERTILIZER EDITION






### STANDARD FEATURES

The following seeding shafts are included in the scope of delivery of all Pneumatic Seeders of the fertilizer edition.

TYPE	IMAGE	RELIABLE METERING OF THE FOLLOWING SEEDS		
THE FINE-BLIND fb-f-fb-fb		• White mustard	• Phacelia	• Micro granule
THE FLEX 20 fb-Flex20-fb		• Peas	• Beans	• Fertilizer

### ACCESSORIES



You can purchase the following seeding shafts as accessories.

TYPE	IMAGE	RELIABLE METERING OF THE FOLLOWING SEEDS		
THE FINE-FULL fb-fv-fv-fb		• Clover	• Cress	• Micro granule
THE EXTRA FINE-FULL fb-efv-efv-fb		• Canola		
THE FINE f-f-f-f		• Grass	• White mustard	• Cress
THE FLEX 10 fb-fb-Flex10-fb		• Micro granule • Fertilizer	• Buckwheat	• Vetch
THE FLEX 40 Flex40		• Fertilizer	• Cereals	• Peas

## TWIN-PS


### STANDARD FEATURES

The following seeding shafts are included in the scope of delivery of the Pneumatic Seeder TWIN.

TYPE	IMAGE	RELIABLE METERING OF THE FOLLOWING SEEDS		
THE FINE-BLIND fb-f		• White mustard • Clover	• Phacelia	• Micro granule
THE FLEX 20 Flex20		• Cereals	• Beans	• Buckwheat

### ACCESSORIES

You can purchase the following seeding shafts as accessories.

TYPE	IMAGE	RELIABLE METERING OF THE FOLLOWING SEEDS		
THE FINE f-f		• Grass	• Cereals	• Cress

# FAN

We recommend different types of fans for different applications. The fans differ in air output and connection requirements (electrical system or hydraulic system).

- The PS 120–500 can always be equipped with all three types of fans - the electric fan, the electric fan PLUS and the hydraulic fan. We recommend that you consult with our sales staff or sales partners to determine suitability of the specific fans for your applications.
- For the PS 800 we offer an even more powerful hydraulic fan as standard equipment.<sup>1</sup>

Below you will find an overview of the functions of individual fans.

## ELECTRIC FAN<sup>2</sup>

The electric fan is the basic version. It is suitable for spreading over small working widths. The advantage of the electric fan is that it does not require any hydraulic connection and the seed drill has a lower net weight, therefore making it easier to install.  
Electric fan: up to 3,5 kg/min<sup>3</sup>



## ELECTRIC FAN PLUS

The electric fan PLUS was developed to make the Pneumatic Seeders even more powerful and yet compact. In terms of performance, it is more than twice as powerful as the electric fan. This makes it possible, for example, to apply fine seeds (mustard, phacelia, oil radish, grass, ...) over a working width of up to 12 m.  
Electric fan PLUS: up to 8 kg/min<sup>3</sup>



## HYDRAULIC FAN

If the ventilation system performance of the electric fan is too low, then the hydraulic fan is the right choice. It is recommended for spreading on large working widths or for large spread rates.

**Max. required pressure:** 180 bar

**Max. required oil quantity:** 38 l / min

Hydraulic fan (PS 200–500): up to 14 kg/min<sup>3</sup>

Hydraulic fan (PS 800): up to 30 kg/min<sup>3</sup>



## CHOOSING THE RIGHT FAN

Calculate the application rate per minute and use the calculated value to find out whether you need a Pneumatic Seeder with electric or hydraulic fan.<sup>4</sup>

$$\frac{\text{Working width m} \times \text{speed km/h} \times \text{seeding rate kg/ha}}{600} = \text{kg/min}$$

<sup>1</sup> Due to the special requirements of the PS 800 M1 D, only the hydraulic fan can be used here.

<sup>2</sup> The electric fan is a powerful double fan.

<sup>3</sup> Maximum values for standard applications and proper mounting

<sup>4</sup> For heavy seeds (beans, peas, wheat, fertiliser) always use a hydraulic fan!



# PS FOR SPECIAL APPLICATIONS

The "PS for special applications" expands the hose outlets of your PS. Users can only get it when purchasing a new PS, as the entire seeder is adapted to the extension of the outlets. This is how we guarantee exact metering and best lateral distribution.

## YOUR BENEFITS

- The PS 120-500 is available with 9 - 16 outlets
- With the PS 800 we offer doubling from 16 to 32 outlets
- Precise seed lateral distribution on large working widths
- Precise placement of the seed
- Direct metering of the seed in up to 16 seeding blades<sup>1</sup> (PS 120-500) and up to 32 seeding blades (PS 800)
- Individual adjustment: All PS components are adjusted for the extended outflows in the APV factory
- Easy hose system
- All quality standards remain in place

## NOTE

Pneumatic Seeders for special applications

- are not suitable for large and heavy seeds (e.g. peas, beans).
- can only be acquired when purchasing a new seeder, as the configuration is directly adjusted in the APV factory.

When buying, ask for advice regarding the other planned applications.



# SENSORS

So that you can fully harness the entire functions of your Pneumatic Seeder, we offer a wide range of sensors as accessories. Choosing the right sensor depends on various factors. Allow our experts to guide you in the selection of a matching sensor.

## SPEED SENSORS

Speed sensors transmit your travel speed to the control box<sup>1</sup>. Based on this information, the control box adjusts the spread rate automatically to the travel speed.

Depending on your needs, you may choose from the following sensors:

- GPSa sensor
- Radar sensor MX 35
- Wheel sensor
- 7-pin signal cable

## SENSORS FOR HEADLAND MANAGEMENT

When you lift your machine, this sensor automatically transmits this information to the control box<sup>1</sup>. The seeding shaft stops and starts automatically when the machine is ready for operation again.

Depending on your needs, you may choose from the following sensors:

- Linkage sensor top link
- Linkage sensor chassis
- Linkage sensor pull switch
- Linkage sensor hydraulic
- Linkage sensor inductive

## SENSORS FOR IMPLEMENT MONITORING

We offer implement sensors, such as the fill level sensor and the fan speed sensor. These allow you to work more comfortably.

- The **fill level sensor** tells you when the seed hopper is running empty.
- The **fan speed sensor for hydraulic fans** continuously checks the right speed of the hydraulic fan for your application.



7-pin signal cable



GPSa sensor



Linkage sensor top link



Wheel sensor

# ADDITIONAL ACCESSORIES

## CALIBRATION BUTTON<sup>1</sup>

Affix the calibration button with the integrated magnet in your desired position. **Your benefit:** Execute the calibration test and the hopper discharge directly on the machine. With the calibration button you can decide the duration of the calibration test.



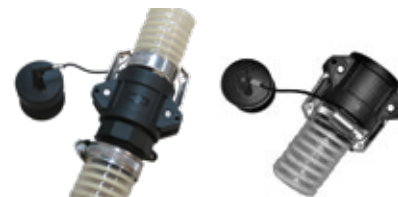
## FILL LEVEL SENSOR FOR PS<sup>2</sup>

The fill level sensor triggers an alarm on the control box if there are too few seeds or if there is too little fertilizer in the hopper. **Your benefit:** You will be alerted in a timely manner that the seed / fertilizer needs to be refilled.



## HOSE COUPLER

Our quick connection system is used in order to switch the PS between several soil tillage implements. **Your benefit:** The separation process can be done without tools.



## AIR SEPARATOR AIR GUARD

This adjustable air separator makes sure that the air flow is separated and fertilizer / micro granules are securely placed in the desired location and also stay there (they are no longer blown out of the channel). **Your benefit:** Safe and careful placement of your fertilizer.



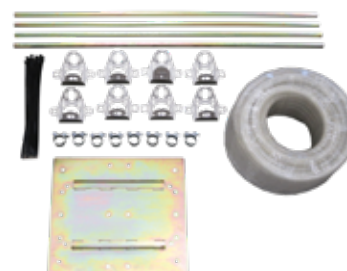
## Y-DIVIDER SMOOTH

The Y-divider is installed in order to split a hose. It provides a homogeneous mix of the seed and an optimal distribution on the two other hoses. **Your benefit:** Obtain precise lateral distribution despite the splitting of the hoses.



## ACCESSORIES KIT FOR PS

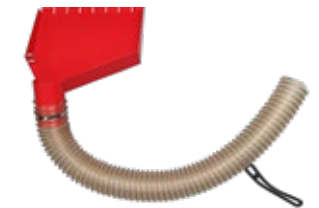
The accessories kit contains the key parts for mounting the PS 120 - 500 on a second soil tillage implement. **Your benefit:** This means that these parts do not need to be dismantled and assembled.



# ADDITIONAL ACCESSORIES

## CALIBRATION SLIDE

The calibration slide with hose simplifies the calibration test and the residual evacuation of the PS hopper in places that are difficult to access. **Your benefit:** Simple calibration test



## SUBSEQUENT INSTALLATION OF THE 3-PIN STANDARD PLUG<sup>1</sup>

The 8 m cable is screwed on the battery side directly with the battery poles and a 3-pin standard plug is mounted on the tractor at the other end, which can be installed permanently in the tractor. **Your benefit:** This simplifies the dismantling and assembly of implements with a 3-pin standard plug.



## PLATFORM KIT MODULAR

This kit allows you to retrofit a platform including a ladder on your soil tillage implement. **Your benefit:** You can conveniently access your seeder.



## MOUNTING AND PLATFORM KIT UNIVERSAL

This bracket for Disc Spreaders, Multi-Metering Systems and Pneumatic Seeders is mounted on the rearmost crossbar of the soil tillage implement so that the spreader can be assembled. The mounting kit includes a platform with access ladder and an angle-adjustable bracket for mounting a Disc Spreader, a Multi-Metering System or a Pneumatic Seeder PS 120 - 500 (with electric or hydraulic fan). **Your benefit:** Use your spreader even if there is no space to mount it on the soil tillage implement.



## CONTROL BOX BRACKET

The control box bracket can be mounted on an already existing Müller bracket (pipe). **Your benefit:** Optimal fixing of the control box on your tractor.







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**AMBITION. PASSION. VISION.**

