

Translation of the original operating manual

MT 2 M1

Read carefully before initial operation!

Version: 02/2016, V2.0



CE

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Bezeichnung:
Modell:
Prod.Nr.:
Gewicht:
Baujahr:

CE

Order no.: 00600-3-947

It should NOT be

an inconvenience or a luxury to read and comply with the operating instructions; you cannot simply experience from others that something is a good product, then make the purchase and assume everything will be self explanatory. Those who go down this route not only inflict damage on their own property, but make the mistake of attributing the cause of any failure to the machine, and not to themselves. In order to be sure of success you must get into the spirit of the thing, by learning about the purpose of each individual device on the machine and by gaining experience in how to use it. Only then will you be satisfied both with the machine and with yourself. These operating instructions are intended to help you achieve this.

Leipzig-Plagwitz 1872

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1 EC Declaration of Conformity

in accordance with Directive 2006/42/EC

The manufacturer APV - Technische Produkte, Dallein 62 AT-3753 Hötzelsdorf hereby declares that the product

Implement carrier "MT 2 M1"

Machine type designation / Product No. (see delivery declaration and title page)

to which this declaration of conformity refers, complies with all relevant basic health and safety requirements specified in the EC Directive 2006/42/EC as well as with the requirements specified in the other relevant EC Directives

2006/42/EC

If applicable: title / number / version of other EC directives

.

The following standards and/or technical specifications have been drawn upon to properly implement the health and safety provisions stipulated by the EU Directives:

EN 12100/1; EN 1200100/2

If applicable: title / number / version

Your contact on CE matters at APV is Ing. Jürgen Schöls.
He can be reached by telephone at +43 (0) 2913-8001.

Dallein, 02/2016
Location, date



Signature

Ing. Jürgen Schöls
Managing Director

2 Provisions

Dear customer!

Congratulations! We are pleased you have purchased our product and wish you much enjoyment and success working with it!

Please read all instructions contained in this operating manual before using the device!

3 Guarantee

On acceptance, please immediately check for any damage incurred to the device during transport. Claims made for transport-related damage at a later date cannot be accepted.
We provide a six month factory warranty from the date of delivery (your invoice or delivery note serves as the warranty card).
This guarantee is limited to faults in material or design/construction and does not extend to parts that are damaged by normal or excessive wear and tear.

The guarantee is voided if:

- the damage is caused by external forces
- operator error is at issue
- the stipulated kW/HP limitation is exceeded
- the device is modified, augmented, or fitted with third-party replacement parts without our consent.

4 Accident prevention

The generally applicable accident prevention regulations of the respective country in which the device is used must be observed.
Always secure the device against rolling away accidentally when parked.
The device may only be used by persons who have been informed of the possible dangers and who know the regulations for transportation on public highways.

5 Transport on public roads (most important specifications)

The axle load and the total weight of the towing vehicle may not be exceeded.
The mounted implement must be identified with warning signs or stickers with red and white slanted lines (according to DIN, ÖNORM or respective STANDARDS).
Any part posing a traffic hazard or dangerous parts must be covered and additionally identified with warning signs or stickers. Warning signs or stickers should be visible at a height of max. 150 cm above the road when driving.
Lighting equipment of the towing vehicle may not be hidden by the implement, otherwise they must be replicated on the mounted implement.
The steering capacity of the tractor must not be impeded or reduced by the mounted implement!

6 Initial operation

6.1 Stability Sticker

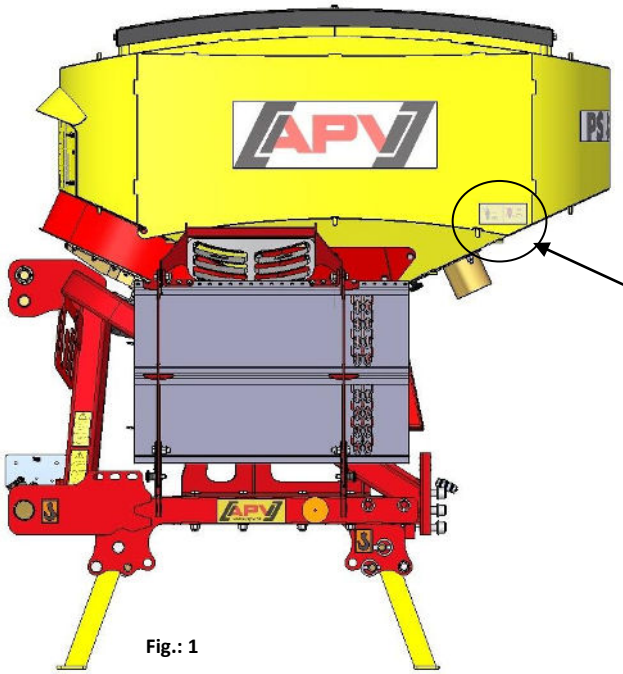


Fig.: 1



Fig.: 2

Correct position for the sticker (on both sides)

For single deliveries of implement carriers (MT) and pneumatic seed drills (PS), the "Stability" sticker (Fig.:2) must be applied on both sides of the PS hopper at eye level.

CAUTION! Only climb onto the filling steps when the implement is attached to the tractor!
Tipping over of the MT can cause serious injury or even death.



Fig.: 3

The lower link mountings can be changed from CAT II to CAT III. Depending on the CAT, they must be dismounted and adjusted to the correct width. The bolts must be fixed with a tightening torque of 400 Nm.

6.2 Mounting on the tractor


Fig.: 4


Fig.: 5

- The air pressure in the rear tractor tyres should be of 0.8 bar during operation. If the tyres have a lower load capacity, increase the pressure.
- Under difficult operating conditions, additional wheel weights can be useful. Please also refer to the operating manual from the tractor manufacturer.
- The tractor should be equipped with sufficient ballast weight at the front to ensure the steering and braking capacity. At least 20 % of the empty vehicle weight is required on the front axle.
- The lifting struts must be adjusted to the same height and locked on the left and on the right.
- The implement must be mounted on the standard lower link or towing hitch.
- The following mounting categories are possible: CAT II / CAT III, CAT IV pins
- Also refer to the sticker on the implement (observe the specifications of the tractor manufacturer).
- After coupling the lower link, fold up the parking supports by pulling out the pins and then reinserting the pins and locking them (Fig. 6, 7 and 8).


Fig.: 6


Fig.: 7

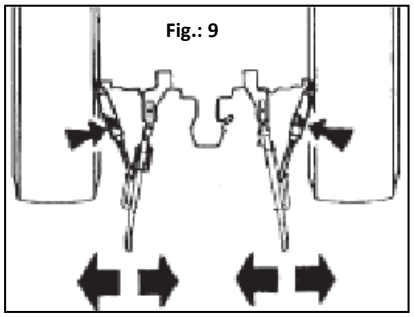

Fig.: 8

Special care must be taken when driving the tractor in reverse. It is forbidden to stand between the tractor and the implement.

- The implement should only be parked on level and solid ground. Before uncoupling, the implement should be lowered onto the ground.

6.3 Coupling the MT 2 M1

- Lock the tractor lower link against lateral movement so that it does not start swinging while driving.
- Connect the MT2 to the tractor's lower links, these are standardised according to CAT 2 and 3. This means that the balls have a lateral distance of 870 mm for CAT 2 and 1010 mm for CAT 3. The balls are 45 mm wide.
- Lift and secure the parking supports of the implement.


Fig.: 9

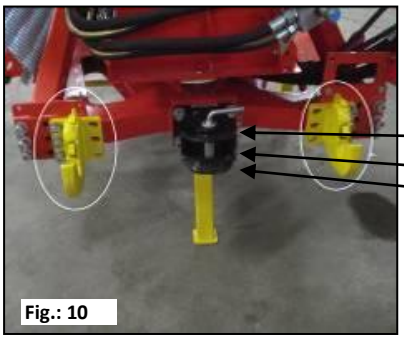
6.4 Uncoupling the MT 2 M1

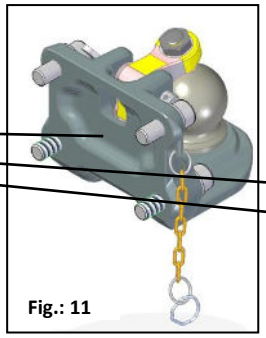
- Uncoupling and lowering the implement onto the ground must always take place on a level and solid surface.
- Lower and secure the parking supports of the implement.
- Make sure that the parking supports are standing on solid ground.
- Uncouple the MT 2 M1 from the lower links as well as the top link.

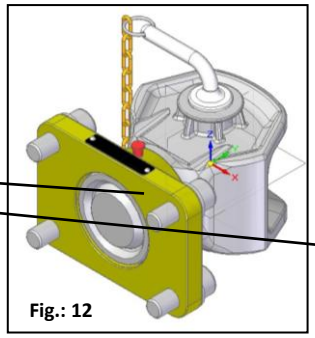
6.5 Coupling/uncoupling soil tillage implements

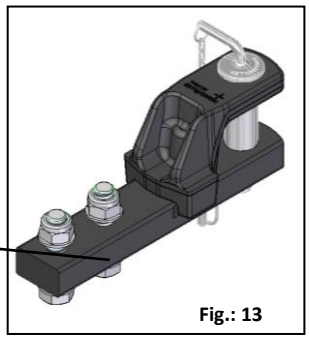
The different soil tillage implements can be coupled to the MT 2 M1 using the

- lower link mounting (Fig.: 10)
- ball head hitch (optional) (Fig.: 11)
- drawbar eye (optional) (Fig.: 12)
- drawbar hitch (optional) (Fig.: 13).


Fig.: 10


Fig.: 11


Fig.: 12


Fig.: 13

The bolts must be fixed with a tightening torque of 400 Nm.
If the lower link hooks are not required, they can be stowed on the side of the MT2.

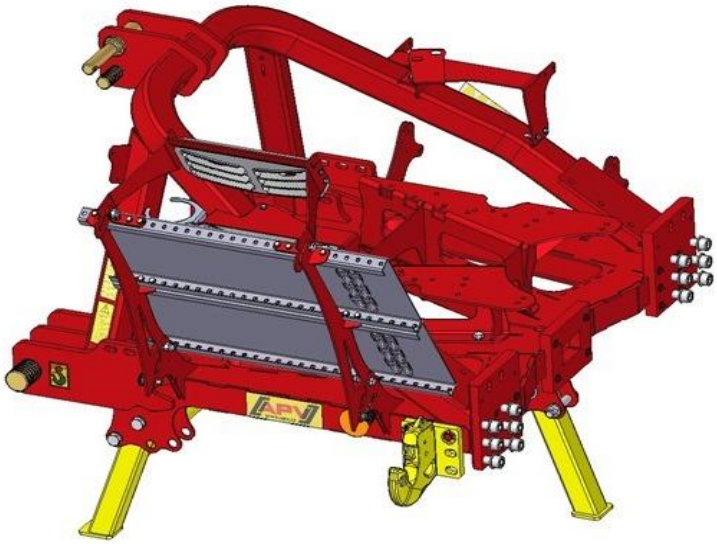


Fig.: 14

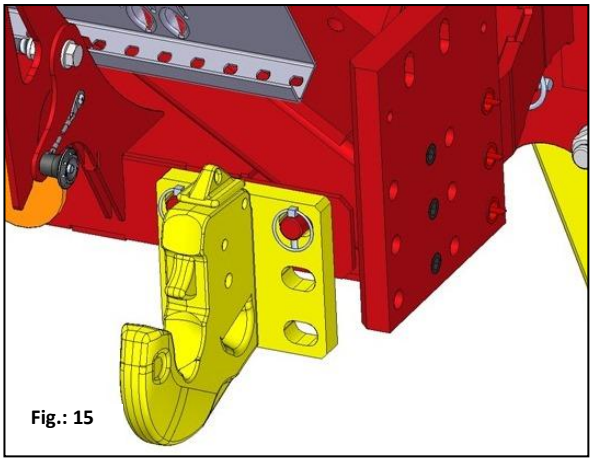


Fig.: 15

6.6 Changing the lower link mountings from CAT 2 to CAT 3

The lower link mountings can be changed from CAT 2 to CAT 3. To do so, you must remove the lower link catch hooks that do not fit from the MT 2 M1 and replace them by the corresponding fitting lower link catch hooks. The distance between the two lower links can also be adjusted in the process (see Fig.: 16 & 17). The bolts must be fixed to a tightening torque of 400 Nm.



Fig.: 16



Fig.: 17

6.7 Mounting the PTO shaft blower fan on the MT 2 M1

If you need a PTO shaft blower fan (optional) for your PS120 - PS500 seed drill, it is mounted on the MT 2 M1 implement carrier as follows.


Fig.: 18


Fig.: 19

The blower fan is previously bolted onto a galvanised plate with two M10 bolts, and then this plate with the blower fan is mounted onto the implement carrier with four M10 bolts.
If necessary the air outlet of the blower fan can be turned.

6.8 Layout and mode of operation

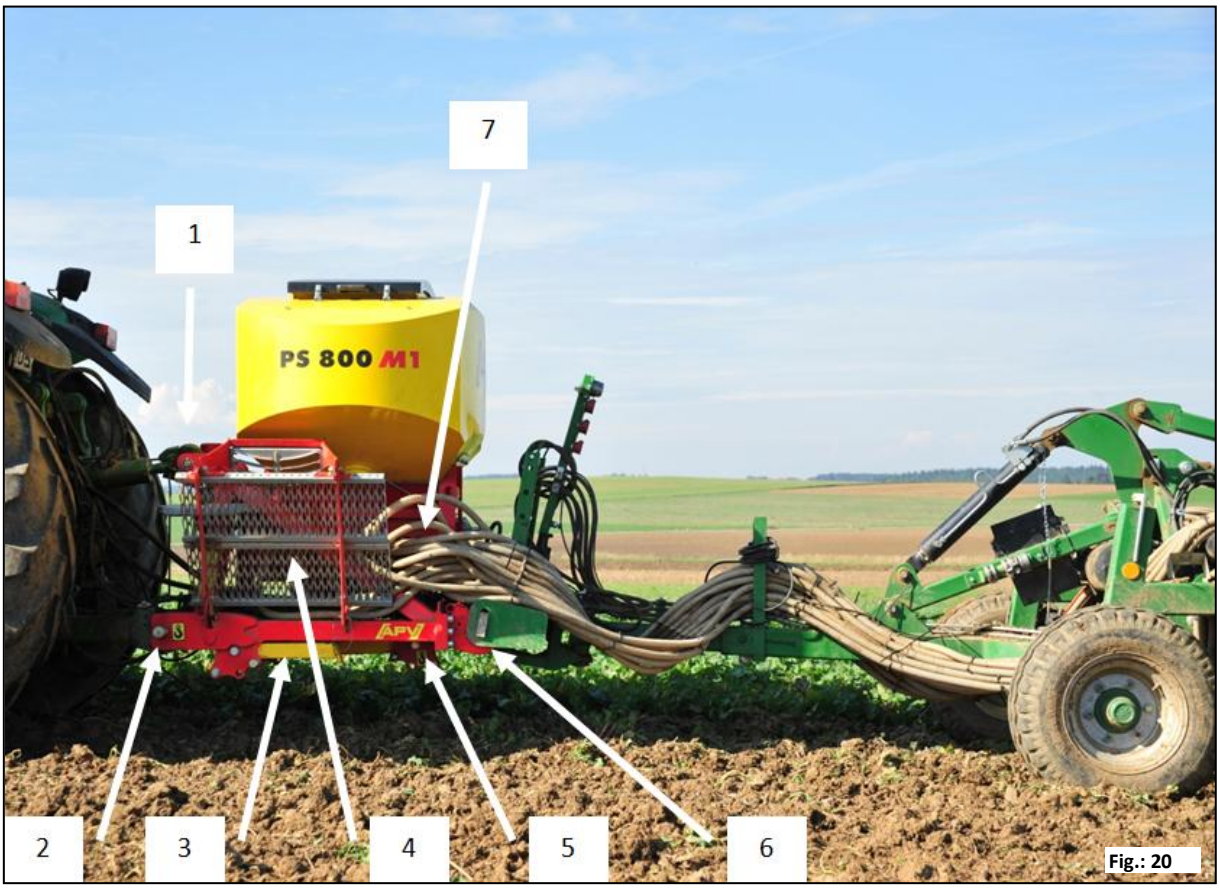


Fig.: 20

1. Top link mounting for the MT 2 M1
2. Lower link mountings for the MT 2 M1
3. Parking supports (front)
4. Filling steps
5. Parking support (rear)
6. Lower link mounting for the soil tillage implement
7. Mounting platform for the seed drill

The implement carrier MT 2 M1 was developed so that the reseeding and/or seeding implements no longer have to be mounted on the soil tillage implements.
Since the reseeding implement no longer needs to be mounted on the soil tillage implement, it is no longer subject to high strain. This reduces the axle loads of the soil tillage implement. At the same time, the implement carrier provides great advantages when it comes to space requirements for folding implements.
Furthermore, the weight load on the tractor rear axle is increased, which has a positive effect on the tractor's pulling force.


Fig.: 21


Fig.: 22

The mounting platform can be used to mount a PS120 - PS500 or a PS800 seed drill, e.g. to save time by fertilising or reseeding in combination with soil tillage in one field pass.
Depending on the space requirements, it is possible to mount the reseeding implement transverse or parallel to the direction of travel.
If the soil tillage implement is used without the reseeding implement, it must not be carried along uselessly. Similarly, the mounted reseeding implement can be more rapidly combined with other tillage implements.

6.9 Folding down the filling steps


Fig.: 23


Fig.: 24


Fig.: 25

- Pull out the two lock pins by pressing in the red button (Fig.: 24)
- Fold down the filling steps (Fig.: 25)
- First pull the small step upwards, and then fold it down
- To fold the steps up again, follow the same procedure in reverse sequence


Fig.: 26


Fig.: 27

6.10 Converting the filling steps

Depending on your preference, the filling steps can be installed on the left or right in the direction of travel.
Upon delivery, the filling steps are installed on the left in the direction of travel, however, it can be easily converted, as shown in Fig.: 28.

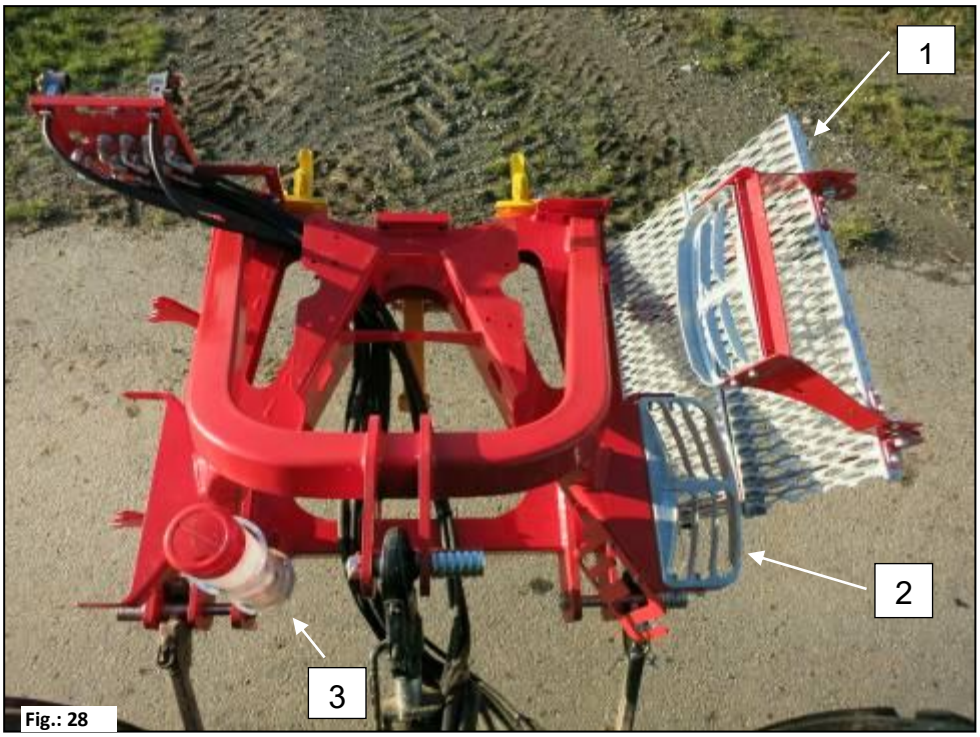


Fig.: 28

The filling steps (1), the stairs (2) and the holder for the accessories tube (3) can all be installed on the other side.

7 Maintenance and care

7.1 General instructions

To maintain the device in good condition after many hours of operation, please always observe the following instructions:

- Basic safety instructions for maintenance are included in the “For your safety…” enclosure.
- Original parts and accessories have been specially designed for the machines or devices.
- We draw express attention to the fact that original parts and accessories that we have not delivered have not been checked and approved for use by us.
- Under certain circumstances, the installation and/or use of such products may therefore negatively change or impact on the stipulated design characteristics of your device. The manufacturer is not liable for damage caused by use of non-original parts and accessories.
- Unauthorised modifications, as well as the use of parts and attachments on the machines, void the liability of the manufacturer.
- Re-tighten all screw connections at the latest after 3 operating hours and again after approx. 20 operating hours, and check them regularly thereafter. (Loose screws may result in serious damage which is not covered by warranty.)
- Grease the lubrication points on the linkage and bearings regularly. (Approx. every 10 operating hours with universal grease)
- Also grease the guide slots on devices with quick-release couplers.
- Check the hydraulic power units, hydraulic hoses and hydraulic couplings for leaks and tighten screwed connections if necessary after the first 10 operating hours and then every 50 operating hours.
- The wheel nuts must be tightened or checked every 50 km.
- Check the hydraulic hoses for wear every time before starting operations.
- Attention!!! Liquids under high pressure can penetrate the skin. So, seek medical attention immediately in the event of an accident!!!
- After cleaning, grease all lubrication points and spread the lubricant evenly on the bearing surfaces. (e.g. carry out a short test run)
- Do not use high pressure washers for cleaning bearings and hydraulic parts.
- Paint damage may occur when cleaning at too high a pressure.
- During winter, protect the device from rust using an environmentally-friendly agent.
- Park the device in a weather-proof area.
- Park the device such that the tines will not be unnecessarily stressed. (Rollers completely down, use front parking support)

8 Location of the type plate

The type plate is located on the left-hand side of the centre frame.

When asking questions or for guarantee claims, please always specify your machine's production number.



Fig.: 29

9 Technical data

Type designation:	MT 2 M1
Transport width:	1.95 m
Dimensions (H x W x D):	1.35 x 1.95 x 1.45 m (without seed drill)
Net weight:	300 kg (without seed drill)
Mounting/hitch:	
Tractor side:	Mounting – Cat II/Cat III, incl. Cat IV pins
Implement side:	Mounting – Cat II/Cat III
Minimum tractor performance:	Varies depending on the implement

Special features:

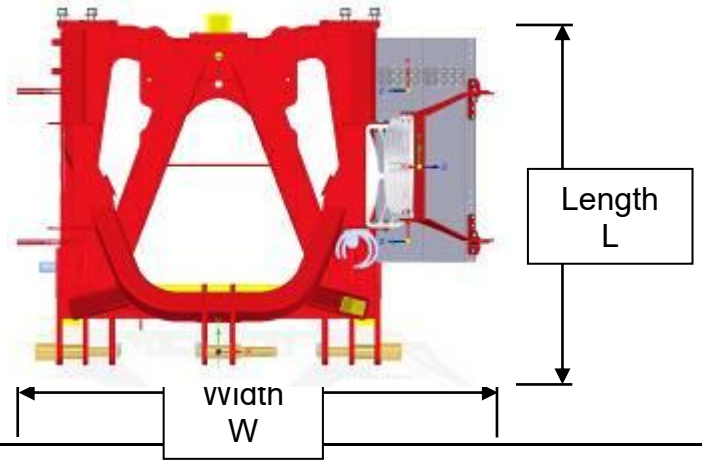
- No mounting on the implement necessary
- Axle loads and weights on the soil tillage implement are reduced
- Pulling force enhancement for the towing vehicle
- Implements can also be driven solo in a short time
- Seeding combinations with different mounted implements (cultivator, disc harrow, roller, ...)

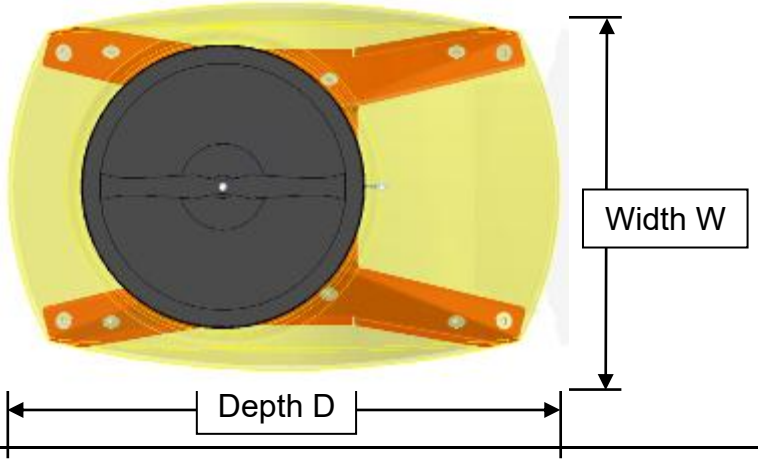
Special accessories:

- Ball head hitch accessories kit
- Drawbar eye accessories kit
- Drawbar hitch accessories kit
- Cable and hose extension accessories kit
- Hose extension accessories kit for 4th control unit
- Hose extension accessories kit for load sensing (LS) line
- Hose extension accessories kit for return line
- Quick coupling accessories kit for 8 outlets

TD combination options MT – PS

					PS120 E	PS120 H	PS200 E	PS200 H	PS300 E	PS300 H	PS500 E	PS500 H	PS800	Parts for mounting
MT 2 M1	Dimension (delivery) LxWxH [m]	Dimension (road transport) LxWxH [m]	Dimension (road transport) LxWxH [m]	MT1 weight [kg]	Dimension HxWxD[cm]	Dimension HxWxD[cm]	Dimension HxWxD[cm]	Dimension HxWxD[cm]	Dimension HxWxD[cm]	Dimension HxWxD[cm]	Dimension HxWxD[cm]	Dimension HxWxD[cm]	Dimension HxWxD[cm]	
	Without PS	Without PS	With PS500	Without PS	88x60x79	88x60x105	100x70x88	100x70x110	110x77x100	110x77x150	117x80x122	117x80x125	127x105x170	
MT 2 M1	1.45x1.95x1.35	1.45x1.95x1.35	1.75x1.95x2	~ 300	YES	YES	YES	YES	YES	YES	YES	YES	YES	





10 Road transport of the MT 2 M1

- When using public roads, comply with the respective national road traffic regulations.
- Make sure than none of the safety splints or similar were lost during operation.
- Before road transport, check that the hydraulic and brake system are properly connected and also that the parking brake is released before starting to drive. Check the braking effect before departing.
- Check for proper function of the lighting as well as good visibility of the warning signs with lighting (on the respective implements).
- Adapt your driving speed to the current conditions.

10.1 Calculation of the weight proportions

If you wish to drive with a device that is fastened onto the 3-point linkage then you must ensure that you do not exceed the highest permissible total weight, the permissible axle loads and the tyre load bearing capacity of the tractor with the attachment.
The front axle of the tractor must be loaded with at least 20% of the tractor's net weight.
All these values can be determined with this calculation:

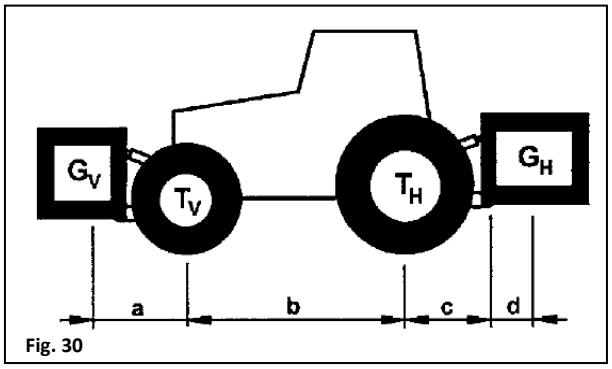


Fig. 30

Information:

T_L	Net weight of the tractor
T_V	Front axle load of the empty tractor
T_H	Rear axle load of the empty tractor
G_H	Total weight of rear attachment
G_V	Total weight of front attachment

a	Distance from centre of gravity of the front attachment to centre of front axle
b	Wheelbase of the tractor
c	Distance from the centre of the rear axle to the centre of the lower link ball
d	Distance from the centre of the lower link ball to the centre of gravity of the rear attachment

Weight calculations

1. Calculation of the minimum front ballast with rear attachments $G_{V\ min}$:

$$G_{V\ min} = \frac{G_H \bullet (c+d) - T_V \bullet b + 0{,}2 \bullet T_L \bullet b}{a+b}$$

Enter this result in the table on the next page.

2. Calculation of the minimum rear ballast with front attachments $G_{H\ min}$:

$$G_{H\ min} = \frac{G_V \bullet a - T_H \bullet b + 0{,}45 \bullet T_L \bullet b}{b+c+d}$$

Enter this result in the table too.

3. Calculation of the actual front axle load $T_{v\ tat}$:

If the required minimum front ballast ($G_{V\ min}$) is not reached with the front attachment (G_V) then the weight of the front attachment must be increased to the weight of the minimum front ballast!

$$T_{V\ tat} = \frac{G_V \bullet (a+b) + T_V \bullet b - G_H \bullet (c+d)}{b}$$

Now enter permissible rear axle load stipulated in the tractor's operating instructions and the actual front axle load calculated, in the table.

4. Calculation of the actual total weight G_{tat}:

If the required minimum rear ballast (GH min) is not reached with the rear attachment (GH) then the weight of the rear attachment must be increased to the weight of the minimum rear ballast!

$$G_{tat} = G_V + T_L + G_H$$

Now enter the calculated total weight and the permissible weight stated in the operating instructions of the tractor, in the table.

5. Calculation of the actual rear axle load $T_{H\ tat}$:

$$T_{H\ tat} = G_{tat} - T_{V\ tat}$$

Now enter permissible rear axle load stipulated in the tractor's operating instructions and the actual rear axle load calculated, in the table.

6. Tyre load bearing capacity:

Enter the doubled value (two tyres) of the permissible tyre load bearing capacity (see the tyre manufacturer's documentation for example) into the table.

CAUTION!

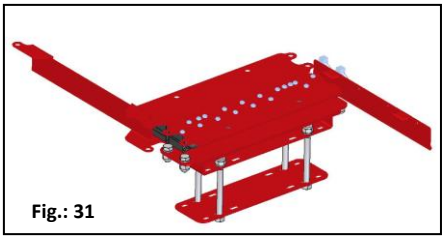
- The forward speed with a soil tillage implement may not exceed 25 km/h.
- The soil tillage implement, when required, must be equipped with a sufficiently dimensioned inertia or pneumatic brake system.
- It is only permitted to carry a soil tillage implement when the total weight of the soil tillage implement does not exceed the total weight of the towing vehicle
- The permissible values for axle loads, permissible total weight, drawbar load of the towing vehicle may not be exceeded, and the minimum front axle load may not be undercut.
- The MT2 must be equipped in compliance with "Identification of implements".
- The towing vehicle must be equipped and operated with a yellow beacon.
- Max. weight of the mounted implement 400 kg
- Distance to the centre of gravity of the mounted implement max. 600 mm behind the end of the lower links
- Height/lateral play max. 10 mm
- Drawbar load limit on the towing vehicle or minimum load 20 % of the permissible total weight on the front axle required for sufficient steering capacity

11 Accessories

The following parts are available as accessories:

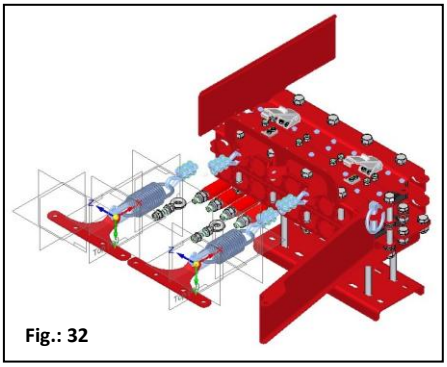
- **Quick coupling accessories kit for 8 outlets**

  (Item no.: 04000-2-185)


Fig.: 31

- **Quick coupling accessories kit for 16 outlets**

  (Item no.: 04000-2-233)


Fig.: 32

- **Operating hours counter**
  (A vibration sensor detects the vibrations of the implement and starts the operating hours counter.)

  (Item no.: 00410-2-084)



Fig.: 33

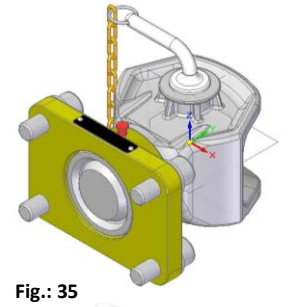
- **Ball head hitch accessories kit**
  (for the attachment of the implement)

  (Item no.: 09001-2-002)


Fig.: 34

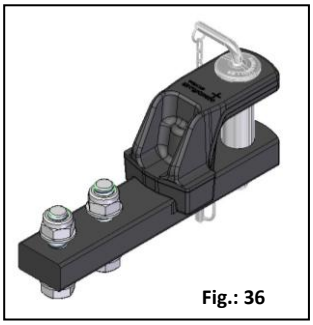
- **Drawbar eye accessories kit**
  (for the attachment of the implement)

  (Item no.: 09001-2-003)


Fig.: 35

- **Drawbar hitch accessories kit**
  (for the attachment of the implement)

  (Item no.: 09002-2-012)

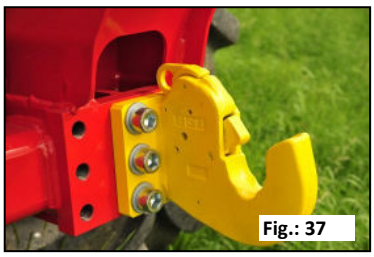

Fig.: 36

- **CAT II lower link catch hooks accessories kit**
  (for the attachment of the implement)

  (Item no.: 09001-2-001)

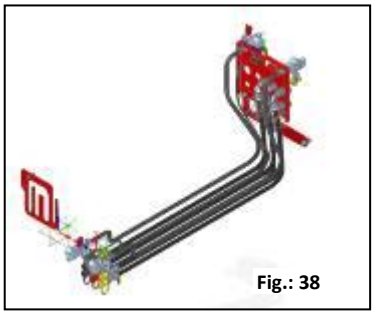
- **CAT III lower link catch hooks accessories kit**
  (for the attachment of the implement)

  (Item no.: 09001-2-005)


Fig.: 37

- **Cable and hose extension accessories kit**

  (Item no.: 09002-2-007)


Fig.: 38

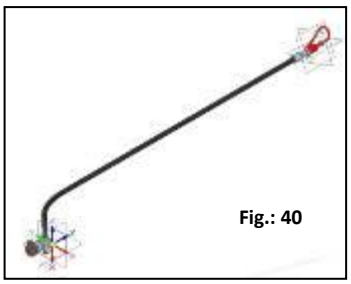
- **Hose extension accessories kit for 4th control unit**

  (Item no.: 09002-2-009)


Fig.: 39

- **Hose extension accessories kit for LS line**

  (Item no.: 0900-2-010)


Fig.: 40

- **Hose extension accessories kit for return line**

  (Item no.: 09002-2-011)


Fig.: 41

12 My idea

The GS 300 M1 / GS 600 M1 has been developed and tested for a long time. A lot of time passed between the initial concept and series production. This required a lot of commitment from individual staff and the whole of the development team.
We cooperated with universities and specialists from the farming industry, and commissioned research projects.

Nevertheless, practice is the most valuable experience. Our motto is:

“Inspired by farmers & realised by professionals.”

This means that YOU are also the most important person in the development of an agricultural machine that is to be used in practical applications.
Without responding to your opinions, experiences, enthusiasm, wishes and even your frustrations, and then taking them seriously, it would not be possible to continue to develop and improve our machines.

We would like to give you the opportunity right here to take an active part in the development and improvement of our machines.

Write to us telling us about the positive and negative experiences you have had with the machine.
Write to us with your suggestions for improvements and with your requests!
Take photos or make drawings - we are open to all information and appreciate any submission, no matter what form it comes in.
Please send this information to meineidee@apv.at, fax us at +43/2913 8002, or send a letter to our address. Heading/subject: My idea.
The information is passed on directly to our design department, where it will be discussed and taken into consideration. Please do not forget to indicate the serial number of your machine.

Please understand that we cannot accept suggestions for improvements on the telephone because of how costly and time-consuming this is to arrange. However, if you still wish to talk to someone face-to-face then you can discuss your experiences with our sales staff at trade fairs and field days. If there are urgent problems then of course we will be right there for you. Please call us or address your query to our sales partner.

Good ideas are important to us – and they will therefore be rewarded. If one of your ideas is implemented than you will receive a practical gift as a thank-you for this.

Thank you in advance for your constructive suggestions.

Kind regards,



Ing. Gregor Witzmann, MSc
Development/Engineering

13 Safety instructions



For your safety…

This enclosure to the operating instructions contains general rules of conduct on the correct use of the device as well as safety instructions which you must always observe for your own safety.

The list is quite exhaustive, so some of the instructions do not exclusively refer to the delivered device. However, the summarised instructions can often remind you of safety regulations that you have unintentionally forgotten in your daily work with such machinery.

13.1 Intended use

The device has been built exclusively for its customary use in agricultural work (the intended use).

Any other use of the device is deemed to be not as intended. The manufacturer is not liable for any damage occurring therefrom; the user alone assumes this risk.

Intended use also entails observance of the operating, maintenance and repair requirements stipulated by the manufacturer.

The device may only be used, maintained and repaired by persons who are acquainted with it and who have been informed of the dangers and risks. All safety instructions must be passed on to any and all other users.

The relevant accident-prevention regulations as well as other generally-recognised safety, occupational health and road traffic regulations must be observed. Unauthorised modifications to the device preclude the manufacturer from liability for any damage resulting therefrom.

13.2 General safety instructions and accident-prevention regulations

- Every time before starting up the device and the tractor, check that they are roadworthy and safe for operation!
- Observe the generally applicable safety and accident-prevention regulations!
- Warning and instruction plates/signs attached to the device provide important instructions on safe operation; observe them for your own safety!
- Observe all appropriate regulations when using public roads!
- Before starting work, familiarise yourself with all equipment and control elements as well as with their functions. It is too late to do this when you are already using the machine/device!
- The user must wear tight-fitting clothes! Avoid loose clothing!
- Keep machines clean to avoid the risk of fire!
- Before starting up and commissioning, check the vicinity! (Children!) Make sure you have a sufficient field of view!
- Passengers are not allowed during work and the working tool should not be used for transport!
- Connect the device in accordance with the instructions and only attach it to the prescribed equipment!
- Special care must be taken when connecting and disconnecting devices to or from the tractor!
- Position the support equipment correctly for mounting and dismounting! (Firm footing)
- Always attach weights in accordance with the instructions, at the prescribed fixing points!
- Observe the permitted axle load, overall weight and transport dimensions!
- Check and attach any transport equipment such as, e.g. lighting, warning equipment and any protective equipment!
- Release parts for quick-release couplings must hang loosely and must not self-actuate if positioned low down!
- Never leave the driver's cab when driving!
- Driving performance, steering and braking are also affected by devices and ballast attached or hitched to the device. Therefore, make sure that there is sufficient steering and braking ability!
- When cornering, take into account the width of the overhang and/or the centrifugal mass of the device!
- Only put the machine into operation after all protective equipment has been attached and is in its protective position!
- It is forbidden to remain within the working area!
- Do not linger within the swivel and rotating area of the device!
- Folding hydraulic frames may only be actuated when there are no persons within the swivel area.
- There are crushing and cutting zones on power-operated parts (e.g. hydraulics)!
- Make sure you have a firm footing when operating manual folding devices!
- For fast-driven devices with ground-driven tools - Danger after digging from residual inertial forces! Only approach the device after all parts are at standstill!

- Before leaving the tractor, set the device down on the ground, switch off the engine and remove the ignition key!
- No-one should be located between the tractor and the device without first having secured the vehicle against rolling with the handbrake and/or with chocks!
- Secure folded frames and digging equipment in transport position!
- Swivel in and lock grabber arms before road transport!
- Lock track marker in transport position!

13.3 Attached devices

- Before attaching and removing devices to the three-point support, put operating equipment into a position in which unintentional lifting or lowering is excluded!
- In order to use the three-point attachment, the attachment categories of the tractor and the device must be identical or must be adapted to each other!
- There is a hazard posed by cutting and crushing zones in the area of the three-point linkage!
- When using the external controls for the three-point attachment, do not step between the tractor and the device!
- When the device is in transport position, always make sure there is sufficient side-locking of the tractor three-point linkage!
- When driving on the road with the device lifted, the operating lever must be locked to prevent lowering!

13.4 Hydraulic system

- The hydraulic system is under high pressure!
- Observe the specified connection for the hydraulic hoses when connecting hydraulic cylinders and motors!
- When connecting the hydraulic hoses to the tractor's hydraulic system, make sure that the hydraulics on both the side of the tractor and of the device is pressureless!
- When establishing functional hydraulic connections between the tractor and the device, coupling sleeves and connectors must be labelled in order to prevent any operating errors! Reversing the connections results in reverse function! (e.g. lifting/lowering) – accident hazard!
- Regularly check hydraulic hose lines and replace them if they are damaged or old/worn! The replacement lines must comply with the technical requirements specified by the device manufacturer!
- To prevent accidents, use suitable equipment when looking for leaks!
- Fluids escaping under high pressure (hydraulic oil) can penetrate your skin and cause serious injuries! Consult a doctor immediately in case of injury! (risk of infection!)
- Before working on the hydraulics system, set down the device, depressurise the system and turn off the motor!
- Only hang the safety chains once loosened! (Cylinders must be filled with oil)

13.5 Maintenance

- Repairs, maintenance and cleaning work, as well as remedying of malfunctions must always be carried out after the drive has been switched off and the engine has reached a standstill! – Remove the ignition key!
- Regularly check nuts and bolts for tight seating and retighten if necessary!
- During maintenance work when a device is lifted, always secure using suitable supporting elements!
- When replacing blades in working tools, use suitable tools and gloves!
- Dispose of oils, greases and filters correctly!
- Always disconnect the power before working on electrical systems!
- When carrying out electrical welding on the tractor and its attached devices, disconnect the cable on the generator and the battery!
- Spare parts must comply at the very least to the technical requirements stipulated by the device manufacturer! This is guaranteed by using original spare parts!

13.6 Tyres

- When working on the tyres it must be ensured that the device is securely parked and has been secured against rolling away (wheel chocks).
- Appropriate skills and the prescribed tools are required for the mounting of wheels and tyres!
- Repair work on the tyres may only be performed by qualified experts with the appropriate assembly tool for this purpose!
- Check the air pressure regularly! Observe the prescribed air pressure!



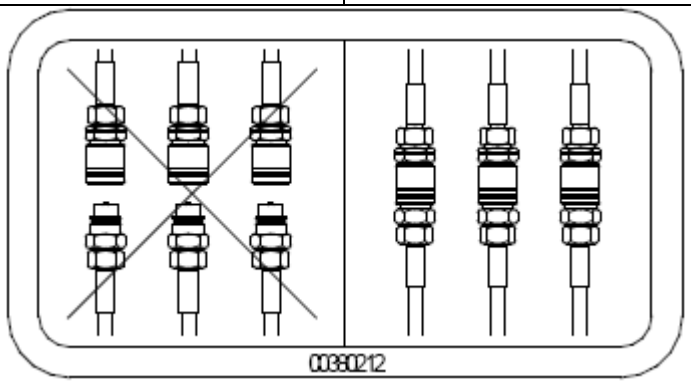
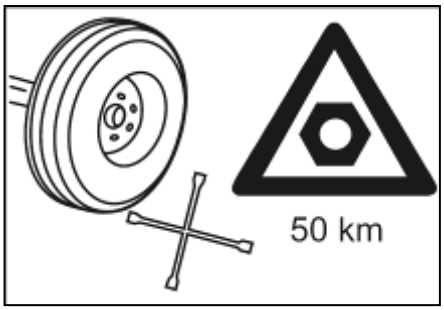
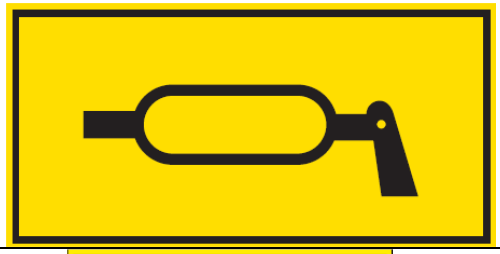
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13.7 Safety signs

Pay special attention to these stickers on the implement, as they warn you of specific dangers!

Read and comply with the operating instructions before operating!		Do not stand on the machine if it is moving!	
The motor must be switched off and the key must be removed from the ignition before starting maintenance tasks!		Never reach into places where there is a risk of being crushed if the parts there can move!	
No one is to stand between the machines when attaching the MT2 M1 or actuating the hydraulics!		Beware of liquids escaping under high pressure. Comply with the instructions provided in the operating manual!	

Do not stand or remain in the pivoting area of folding machine parts!		Presence in the danger zone is only permitted with the lift cylinder safeguard mounted.	
Do not climb on moving parts; use the climbing aids provided!		Rapidly ejected objects can pose a hazard; stay at the required safety distance!	
Presence in the danger zone is only permitted with the safety support fitted.		Never reach into places where there is a risk of being crushed if the parts there can move!	

In order to prevent eye injury, do not look directly into the radiation area of the radar sensor when it is switched on!			
Always connect all hydraulic lines. Otherwise, components could be damaged due torelated hydraulic functions.			
 Tighten the wheel nuts / bolts after 50km or 50hours.		Loading hook; attach the ropes or chains to these positions when loading the machine!	
This sticker indicates lubrication points. They must be lubricated with universal grease approximately every 10 operating hours.			
This sticker informs you of the tyre pressure.			

14 Notes

Quality for professionals

Inspired by farmers & realised by professionals

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