

# Technik-Plus

**TP-Turbo-Jet Super  
„FRONTTURBO“  
Type: TP01100**



## **OPERATING- & MOUNTING- INSTRUCTION**

\*Translation from original\*



Symbol Image

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Serial no.:

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Version 01/2012

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### **Warranty:**

The manufacturer warranty is 1 year and includes the following points:

- Parts damaged as a result false fitting or material defect within this time.
- If you use original spare parts.

Warranty expires in following cases:

- Spare parts, which have to be changed regularly during normal operation (connecting parts).
- Spare parts damaged because of breakdowns, carelessness, misuses and faulty use or installation.
- If you use analogy parts or spare parts from other manufacturers.
- If you do not follow operating and mounting instructions.
- Damages of transport must be announced immediately, at least within 8 days after delivery, through a registered letter.

### **Product liability:**

The product liability covers only corresponding operation. If the seeder is not maintained correctly (eg regulary control of scatter diagram and functionality of particular parts...) the manufacturer assumes no liability.

### **Description:**

#### **TP-Turbo-Jet Super "FRONTTURBO" (TP01100)**

- Painting red;
- 1 outlet-tube (diameter 100mm);
- 1 tower with 1 inlet-tube (diameter 100mm) and 8 outlet-tubes (diameter 40mm);
- seedroll motor with one speed;
- Hydraulic driven fan with 1 turbine (diameter 395mm);
- includes agitator;
- Hopper with 2000lit volume, inclusive cover and level-sensor;
- standard seed roll - mounted, grass seed roll;
- Profi control unit with seed shaft control sensor and ON/OFF-sensor;

## **MOUNTING INSTRUCTION:**

**Technical details:** Please see data sheet and operating instruction!

### **Transport information:**

The TP-TURBO-JET SUPER can be lifted on the 4 butt straps. Please note that all 4 butt straps have to be of the same length and strength when lifting the planting attachment (min. load 200 kg). On various lengths the spreader may tilt over.

You can also use the framework for lifting the spreader. Please note here again that all 4 butt straps have to be of the same length and strength when lifting the planting attachment (min. 120 kg). If you use just 2 carrying straps for lifting the spreader the points at which the spreader on the frame will be lifted have to be located exactly in the middle.

### **General mounting information:**

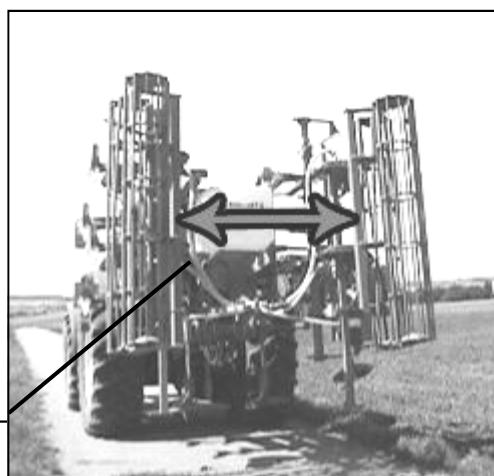
Please study this mounting instruction carefully before fitting to the devices. With TP-TURBO-JET SUPER it is possible to spread a high number of seeds and granulates in combination with fitting of a great number of devices. It is useful to develop special fitting parts for any device. The advantage of a special fitting is the adequate assembling to each requirement.

The installation of plastic hopper, spreader plates and hoses depends upon the design and type of the device. Some ideas for correct working with TP-TURBO-JET SUPER are given below.

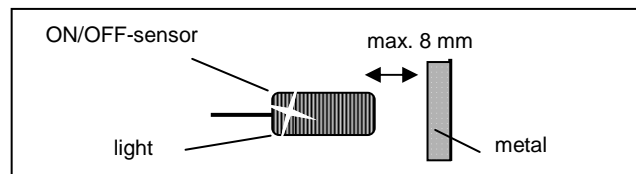
Each implement needs a special fitted frame. When constructing the frame take care of following points:

1. The frame must carry **min. 300kg**.
2. If you fit the machine on a folded implement, take care that there is enough space.

Enough space!

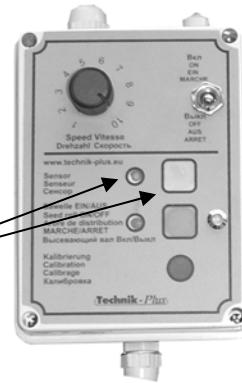


**The ON/OFF-sensor** stops the seed roll, when it has no contact with the metal. When it is in contact with the metal the seed roll is on! The diameter of the sensor is 18mm; The space between the metal and the sensor must be max. 8 mm. You can check if the sensor has a contact. Is the sensor in contact with the metal, the light is on! Is there no contact with the metal, the light is off!

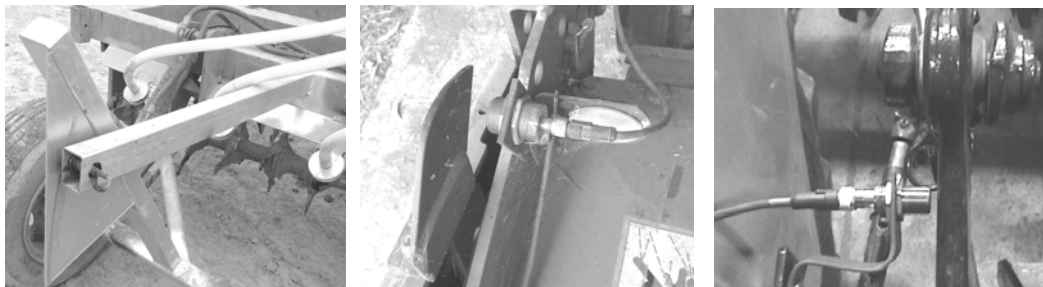


### Switch sensor ON/OFF:

Switch of the control unit with the toggle switch. Wait for about 2 seconds. Switch on the control unit again. Then hold the yellow button for about 2 to 3 seconds. If the yellow LED is ON, the sensor is activ. If the yello LED is OFF, the sensor is inactiv.



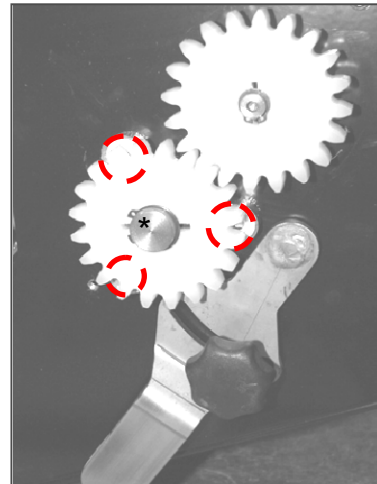
### Mounting possibilities of ON/OFF-sensor:



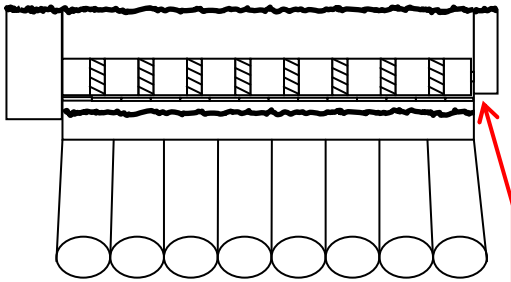
## OPERATING INSTRUCTION:

### Seed roll change:

- Disconnect the power supply and put on your personal safety clothes
- Remove the protector for agitator!
- Knock out the roll pin of the seed roll gear and remove the gear wheel! (IMG. 1)
- Remove the bearing bracket.
- Remove the 3 screws (as marked on IMG.1)!
- Open the flaps and put out the lamella (IMG.2)!
- Pull out the seed wheel/metal seed roll from underneath and put in the desired seed wheel/metal seed roll from outside.
- Please note that you have an axial play of 0,3mm, especially when you mount the seed roll for small amounts: (IMG.3)

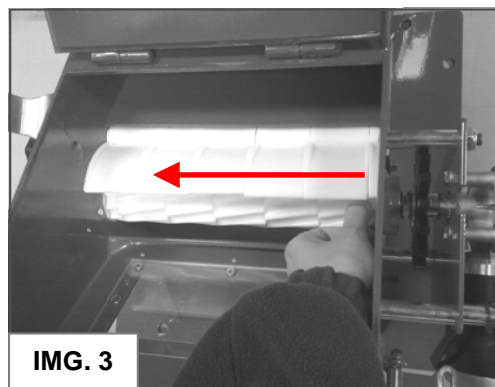
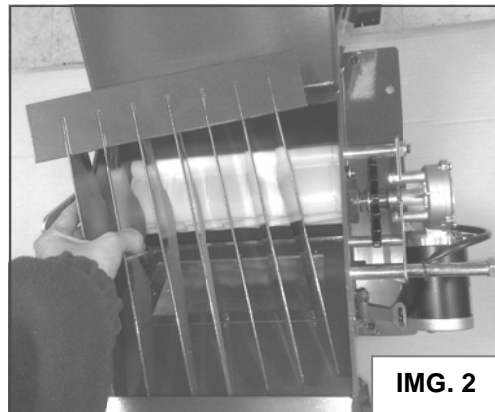


**IMG. 1:** Knock out roll pin\*!



**0,3mm axial play!**

- Tighten the bearing bracket .
- Put on the gear wheel and knock in the spin ring of seed roll gear.
- Mount the protector for agitator
- Check the screws and the spin ring after a short time!



## Adjustable Flaps:



## **Programming and connection of Profi-Control-unit:**

Potentiometer: With this button you can adjust the speed of the seed roll.

You can also change the speed stepless, to get the right output-amount.

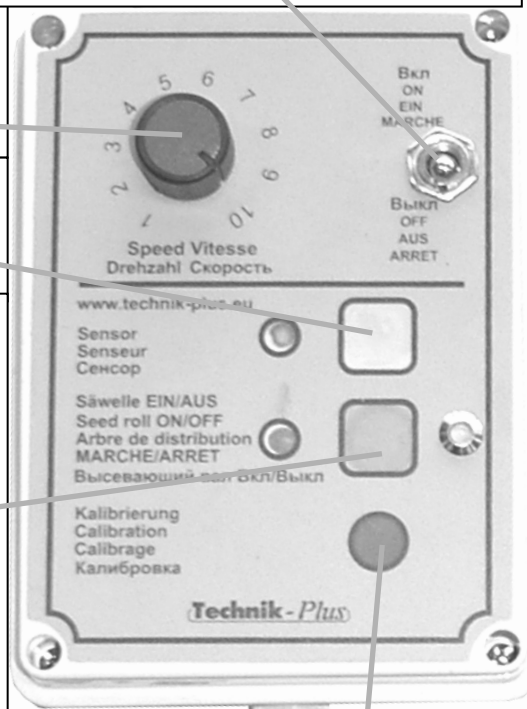
This button activates the ON/OFF-sensor (optional). The LED flashes = sensor is activated!

For turning ON/OFF the seed roll and the fan drive: If you press this button, first the fan drive is turned on and after a few seconds also the seed roll is turned on. For turning off again: Push this button! Now, first the seed roll is turned off and after a few seconds the fan drive is turned off. With this method the plugging of the hoses is avoided.

Left LED flashes = seed roll and fan drive ON.

Right LED flashes = seed roll runs.

Main switch: With this switch the functions of the control unit are released. **FOR WORKING ON THE MACHINE, PLEASE DISCONNECT BATTERY CABLE!!!**



### Calibration:

This button only turns the seed roll ON/OFF. Only to use with calibration! Not to use in regular working operations, because the hoses can be plugged!

The control unit shall be fitted in the cab. Velcro fastening must be used for fixing it and it must be stuck on a smooth surface. The console can also be bolted to a place. The cable must be connected direct to the battery. This is important for a good and stable electrical supply. Use a 15A-fuse on the plus pole.



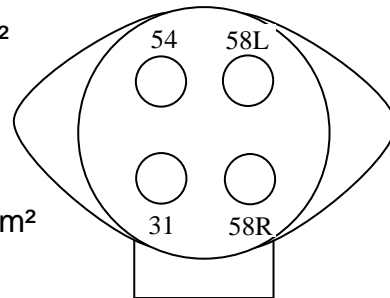
At the model with 2 x double fan blower a provided socket is to mount on the tractor. Please connect it as follows.

no. 54 minus  
**no. 58 L plus** use cross section 4 mm<sup>2</sup>

On Plus – use fuse 30A.

no. 31 minus  
**no. 58 R plus** use cross section 2,5 mm<sup>2</sup>

On Plus – use fuse 15A

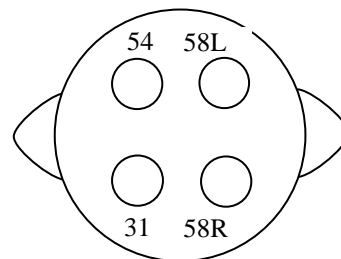


Connections have to be clean!  
**(NO PROTRUDING WIRES!!!!) !**

If wires are project to other poles, this can result in damages on the electroic system. The planting attachment is often exposed under difficult conditions. (dust formation)

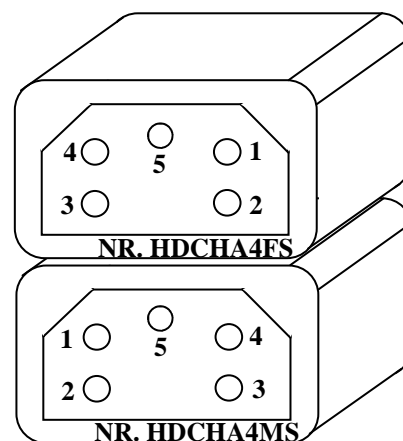
Connection to a battery (plug):

no. 54: blue cable (– from relay)  
 no. 58L: brown cable (+ from relay)  
 no. 31: cable no. 1 (– from control unit)  
 no. 58R: cable no. 2 (+ from control unit)



*Socket and plug (Connection seeder - control unit)*

Nr. 1: – sensor signal  
 Nr. 2: + motor seed roll  
 Nr. 3: – motor seed roll  
 Nr. 4: + fan  
 Nr. 5: – fan



The seed output can be adjusted with the rpm on the seed shaft motor (10-70U/min). The higher the rpm is, the bigger the output amount is. The speed can be adjusted with the poty on the control unit. 1 is the lowest speed 10 the highest. We offer for different operations special seed rolls. For seeding grassed respectively voluminous seed or big output amount we advise to mount

the delivered grass seed roll. For mustard, oilradish, clover, Phacelia you can use the standard seed shaft and for small seed we have a special seed shaft with different breadth 5mm, 10mm or 15mm (optional). It is necessary to make a calibration to get the right adjustment.

### **Calibration of machine:**

Before starting to work, it is most important to calibrate the machine. Notice all details for future and all driven speed for the setting. Switch OFF the Fan on calibrate switch (no control light). Open the bottom cover by the two latches. Let the cover hang down and put a box underneath (weigh before and notice). Fill some seeds into the hopper and close plastic cover. Now you can put main switch to spread. Collect the seed for one minute and take precise weight. Adjust the flap under seed shaft by the side lever. Small seed upwards, large seeds a little downwards (Beans, oat, ...). Now calculate the amount with following formula:

$$\frac{\text{Working width} \times \text{Speed} \times \text{Output amount/Ha}}{600}$$

z.B.:

$$\frac{6\text{m} \times 7\text{km/H} \times 20\text{kg/ha}}{600}$$

$6 \times 7 = 4,2 \text{ ha/h} \times 20 \text{ kg/ha} = 84 \text{ kg output amount/h} : 60 \text{ min} = 1,4 \text{ kg seed to be collected in the box underneath.}$

Example: You know the spreading width, the driven speed and the required seed quantity. As per above sample the figures can be changed and correct setting is achieved.

When machine is calibrated make sure, that engine motor speed is the same as work condition. The plastic cover has to be always closed. When calibration is finished close bottom latch and secure with pins. Put switch fan to ON, that blower is working and control light is ON and about 10sec. later turn on the seed shaft motor. Check after short time, if the distribution of seed you think is correct and seed quantity is good. Now work on a smaller area and than compare with the seed used. Check again the hand nut on the flap to be tight.

When you stop seeding at end of the field only stop seed supply (blower remains working) at end of work stop seed shafts and after 20-30 sec. switch off blower (to clean plastic hoses).

*Spreading depends particularly on different factors:*

Running of seed in the hopper, vibration during working, electr. supply. Use is following seeding table only approximate value and cannot take as exact adjusting.

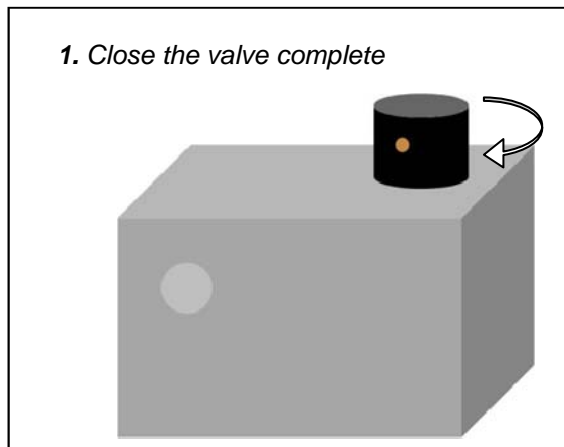
**ATTENTION:**

To get an optimised spreader breadth mix bad running seed with better running seed. Or use seed mixtures which are more efficient for harvest and soil.

## **Hydraulic system:**

### **(CAP Hydraulic 6)**

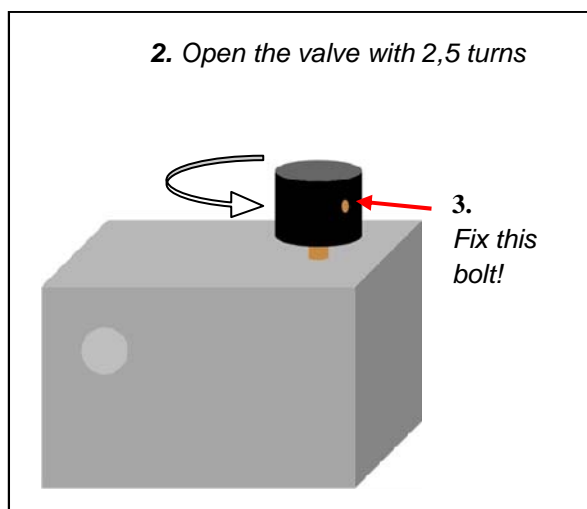
For the oil-pressure-transfer use only single-acting control unit (system max. 50lit./min., motor max. 15lit./min.). Return absolutely free into The hydraulic system (Not on double-acting-control-unit)



**Attention!!** The hydraulic motor provides 4000 rpm, when valve is fully opened (may damage fan-wheel!!).

The motor also has enough strength in a lower speed to bring enough air power. Please open the valve 1,5 - 2 turns on the adjusting knob (ca. 2000 rpm when oil has an operation-temperature from 50°-60°). Otherwise they may be damaged.

**Attention!!** The screw has to be tightened close to avoid a self-adjusting of the oil amount.



### **ATTENTION!!!**

**Input pressure control valve: The input-pressure control valve is needed, that the motor won't start abruptly. With a high working temperature it may be, that the valve loses a little bit of pressure. This can be remedied, if the pressure at the valve is set a little bit higher.**

## **Working on the field:**

### **Before you begin to work:**

Please take the effort to calibrate the machine. Make notes of all the details for future. Notice the driven speed for the positioning if you work with Profi-control unit. When start working, make sure that the correct speed is driven.

After the calibration drive a short way and – **STOP**

### **CONTROL ...**

- ... that seed or granule is distributed even.
- ... that seed quantity seems to be correct.
- ... that the required quantity has left the hopper.

### **REPEAT ...**

- ... the above checks in certain intervals until you are sure the job is correct .

### **PLEASE ...**

- ... clean the machine every day after finishing work. The bottom of the machine must be cleaned by a brush (not hands). Wear your personal safety clothes (gloves, ...). Don't spray wash with water !

### **ATTENTION ...**

The seed shaft can catch fingers, hair and loose clothes. The motor has so much power, that it cannot be stopped. (only switched OFF).

### **NOTE ...**

In the process of operation the fan wheel should always run. Switch only the seed roll motor on or off! Otherwise the hoses can be blocked .

## **Cleaning and service:**

All details, for hydraulic systems only apply to TP-TURBO-JET SUPER with hydraulic fan drive:

- Before every service: pull down the basic unit, disconnect the seeder from the battery, make hydraulic system unpressurised, disconnect mechanical connections (f.e.: Power take off, ...), take off ignition key from tractor respectively separate the basic unit from the tractor.
- Use only original spare parts. We cannot prevent the machine from occurring damages or errors because of reproduction parts.
- Clean the fan daily respectively after every operation with compressed air (The wheel can get unbalanced because of dust and can get damaged).
- Control every 40 operation hours that bolts and fittings are tight fixed, hydraulic hoses and cables are not rubbed through, hydraulic system is leak proof, machine has no rust damages (especially the fitting flaps on the machine and the spreader plates), seeding hoses have no gap and are fitted thigh, the electrical connection is okay (no distant wires, a proper isolation).
- Don't clean the machine with the high-pressure-cleaner and don't clean with too much water. The electric system, hydraulic system and bearings can get damaged after some time (oxidation, rusting, and friction).
- Defect hydraulic hoses or cables (f.e.: rubbed, leaked) have to be replaced immediately .



