Technik-Plus

TP-Turbo-Jet Super 8
TP0830IN

OPERATING INSTRUCTION

C E

Translation from original

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Serial no.: _____

_____
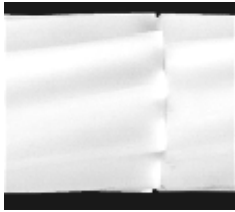
Version 01/11

CONTENTS:

Mounting the suitable seed roll:

There are different seed rolls. The seed rolls can vary depending on the desired application amount in kg/ha, the driven speed or the working width. (Have a look at the chart below!)

Working width	Km/h	Standard seed roll (mustard)		Grass seed roll (wheat)	
		Min. Kg/ha	Max. Kg/ha	Min. Kg/ha	Max. Kg/ha
3m	5	35,00	253,00	35,00	624,00
	10	19,00	126,00	29,00	310,00
	15	12,00	85,00	20,00	208,00
4m	5	20,00	143,00	24,00	469,00
	10	13,00	82,00	20,00	202,00
	15	8,00	42,00	15,00	156,00
6m	5	15,00	126,00	21,00	312,00
	10	9,00	63,00	17,00	155,00
	15	6,00	43,00	13,00	101,00

These are approximate calculated figures and vary due to the different conditions of the seed!
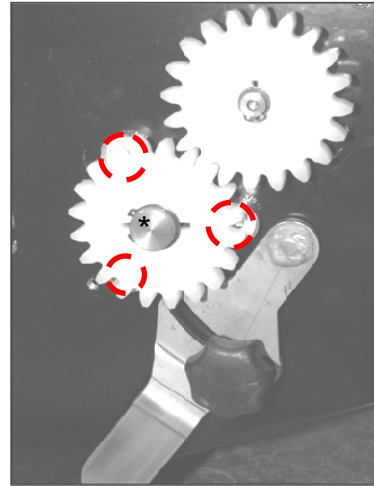
Errors and omissions excepted!
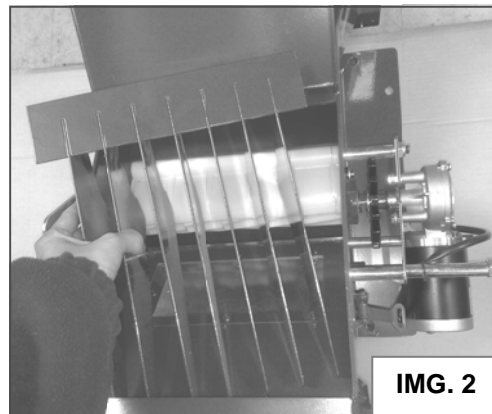
Seed roll change:

- 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 und 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)

0,3mm axial play!
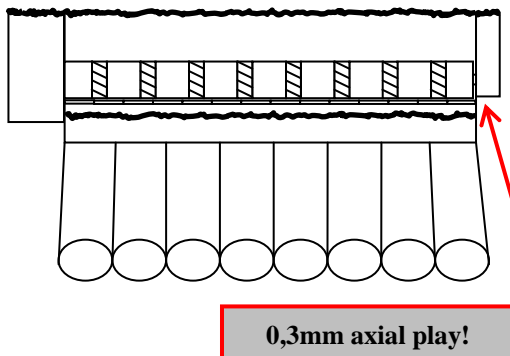
- Tighten the bearing bracket .

- 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!

IMG. 1: Knock out roll pin*!

IMG. 2

IMG. 3

Flaps:

protector for agitator

Bottom flap is closed = **Small seed**:
e.g. grassseed, clover, rape, oilradish, luzerne, etc. ...

For Emptyng: undo the bottom flap!

Undo the bottom flap as marked = **Big seed**:
e.g. vetch, beas, wheat, rye, oat, barley,
beans, buckwheat, sunflower seed, etc. ...

If the bottom flap is closed, there must be min.
0.2 mm distance to seed roll. The flap must not
rub against the seed roll. ⟶

arm

seec roll

bottom flap

Programming of Multifunctional control unit:

1.) There are four values on the control panel to the right of the screen: 1. Kg/ha; 2. kg tot (total quantity in kg.), ha (hectare); km/h.

Programming KG/ha.

2.) .) Programming must be always started from the top line to the down line. The start is from the first line **kg/ha,** here the desired seeding rate must be programmed. Attention shall be paid that LED must light green on this line. Press and hold SET (see on drawing) for 2 seconds. .

3.) Value **kg/ha** shall appear on the screen and start blinking. With the arrows up and down the needed seeding rate can be set (see on the picture). Value 10,0 appeared on the screen, this means ten kg/ha, but we would like to set seeding rate 16 kg/ha. With the arrow up we change this value to 16.

4.) We have set the desired seeding rate value of 16kg/ha. Press **SET** button to fix entered information.   (Figure on the screen **kg/ha** shall stop blinking). We have finished setting the first line. Now with the arrow down get down to the next line. .
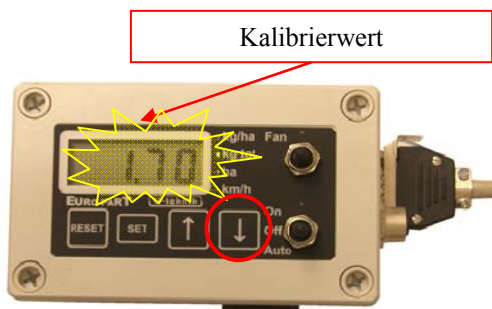
Programmierung Kg total

5.) The next value is **kg total**. We shall calibrate feed shaft motor indicator.
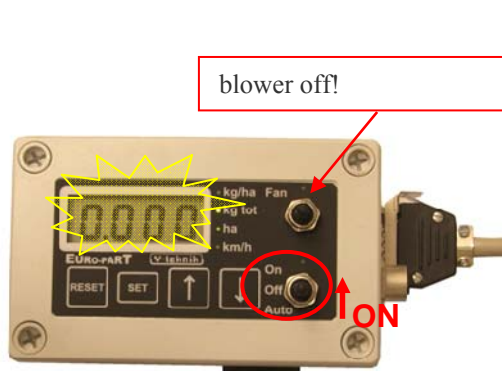
6) The calibrating value shall appear on pressing SET button. .

Kalibrierwert

7.) Figure 1,00 must be always set on the screen!!! Another value appearing on the screen, for example:1,70, it shall be removed with arrows up or down and figure 1,00 shall be set.

8.) Fix the set information (1,00) by pressing SET.

9.) Four zeroes appeared on the screen (0,000). Now seeding box valve shall be opened and bucket be put under the seeder (empty bucket shall be weighed). Now feed shaft motor can be started. Set the lower switch into ON (see the drawing). Upper switch (Fan) controls turbine operation. During the calibration the turbine switch must be switched off. (LED must ne off!). The turbine switch having not been switched off, letter E and combination of figures error notification shall appear on the screen (see operation manual page 11).

10.) After enough seeds have been spattered onto the bucket, set the switch to OFF position (see the drawing).

11.) Weigh the bucket with the innage. A value shall be shown on the screen. This value (figure) must be changed onto the value which you received by the weighing the innage of the bucket. For example, innage weight is 1,28kg. This means that you shall change the figure with the arrows up and down.

12.) Information on the screen shall be shown with three decimals. This means that our bucket weight is 1,28kg, this is 1,280 value. After we have set 1,280 we shall confirm the information by pressing **SET** button.

correct calibration!
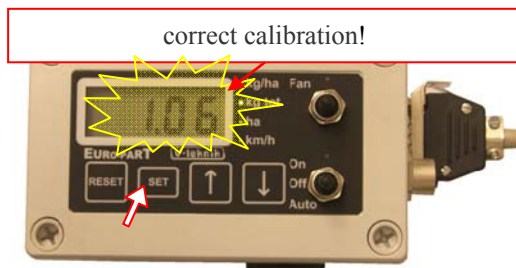
13.) The computer figured out the needed calibrating rate. **Do not change this value!** Confirm this information by pressing **SET!**
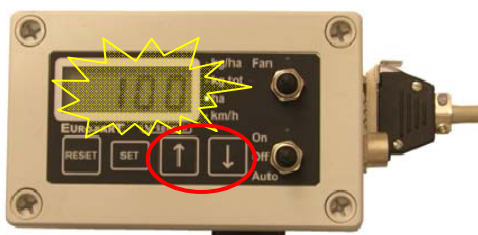
Programming ha.

14.) Now we shall get down to the next setting: for -moving within the lines arrow down shall be used. On the line **ha** (hectare), the LED shall light green. **.**

15.) Here we shall put down coverage information of our machine. Press and hold SET for 2 seconds. The figure shall start blinking.

2 Sek.

16) With arrows down and up you enter machine coverage. For example: youк machine coverage is 6 meters, so you shall enter 600.

17) Press SET to confirm the entered information. **.**

Programming km/ha.

18.) The next line is **km/h**, here we shall program speed indicator.

19.) By pressing and holding **SET** for two seconds, the button on the screen shall start blinking.

20) This value is measured in mm-this is the distance from one signal to another (from one bolt to another). Enter figure 430 mm. **.**

21.) After a short pressing SET, fix the entered information. **.**

22.) Now you shall drive a tractor, for example 100m The distance shown on the screen shall be the way driven. **.**

23) Correct this figure with arrows up and down. In our example we correct this value onto 100 m.

24.) By short pressing SET, fix the entered information.

25.) Now the figure shall appear on the screen, this is the actual distance from signal to signal. Confirm this value by short pressing **SET.** .

26.) The machine's calibration is over and is ready to be started. Now the turbine shall be switched on by the switch, and feed shaft switch shall be set in AUTO position.

6. ERROR MESSAGES:

The display can show different error messages:

---- VCC error. Supply voltage is below 10 voltages.
Check the power-cable.

E00 Calibration value error. One or many calibration values are either zero or greater than 9999.
Pressing RESET button turns this error message off. Check all calibration values and regulator-parameters

E01 Memory error. All saved values in memory is set to default values .
Pressing RESET button turns this error message off. New calibrations has to be done before the unit will work correctly.

E02 Minimum output on motor. With the current kg/ha or the current speed, the motor is going to slow for correct regulation.
Possibilities:
- Select a higher kg/ha-value
- Raise your current speed
- Mount seed roll for small amount (optional)

E03 Maximum output on motor. With the current kg/ha or the current speed, the motor is going to fast for correct regulation. This error can also occur if there's an error on the motor sensor or the motor axle.
- Select a lower kg/ha-value or reduce your current speed.
- Check signal on motor sensor.
- Check the rotation on the motoraxle.

E04 Motor error. The motor is going to fast or is not responding to regulation. This error will occur when the divergence or the kg/ha has been more than 10% for over 5 seconds.
Check power signal to motor.

E05 Fan not activated. The ON/OFF/AUTO switch is in ON or AUTO but the fan is not on.
Activate the fan by pulling the fan-switch to ON.

E06 Tank level too low.
Check tank level, check signal form levelsensor.
Seed shaft do not work for calibration:
Sensor motor plate no contact, wire damaged or no connection in the plug.

Hektarcounter and seedmotor not working:
Groundspeed sensor damaged or no connection to plug.

Note. No errors, apart from VCC error, can deactivate the head-relay. When an error occurs it is up to the user to turn of the motor and the fan. The motor can by turned off by setting the ON/OFF/AUTO switch to OFF position.

Short step programming of multifunctional control unit

Before starting read the whole manual to the multifunctional control unit!

Make sure that the electric power supply is correct and safety before starting with the calibration!

CALIBRATION:

With the arrow key you can choose between kg/ha, kg total, ha, km/h after each calibration

1. programming kg/ha:
The diode **kg/ha** has to flash green.

1.   Press **SET-**button for 2 seconds.
2.   The Kilogram-by-hectare value will be displayed, and the display will start to flash. (e.g. 10 kg = 10,0 enter)
3.   The value can now be changed by pressing up-arrow or down-arrow .
4.   Press SET button to accept the new value (The display will stop flashing).
5.   By pressing RESET button the value is not accepted and you are leaving the setup-routine, the value is not changed .

2. programming of motor-sensor and magnetwheel
The diode **kg total** has to flash green.

1.   Press the SET button for 2 seconds, this will activate the calibration function .
2.   The display is now showing the calibration value (the display is flashing). The calibration value is in gram-by-pulse [set gramm/ motor pulse to 1,00]..

3. Press SET to activate the motor feeding.
   Note! The ON/Auto-switch must be in off-mode when entering this new state, else the ON-led will flash telling you to turn of the switch.
4. The motor can now be turn on by switching the motor-switch to ON .
5. Feed out seed for measurement, the display will show you the value of the outputted seed with the current calibration value in kilograms *[kg]*
6. Measure the seed you have put out, and adjust the value on the display with the up and down button. The value is showed in kilogram, with three decimal .
7. Accept this value by pressing SET button.
8. The now corrected calibration value will be displayed. Press SET to accept this value, this will finish the calibration procedure.
9. You can always abort a current calibration by pressing the RESET button .

3. programming of the working width:
The diode **ha** has to flash green.

1. Press the **SET**-button for 2 seconds.
2. The working-width value will be displayed, and the display will start to flash. (e.g. 6 meter = 600 enter)
3. The value can now be changed by pressing up-arrow or down-arrow.
4. Press SET button to accept the new value (The display will stop flashing).
5. By pressing RESET button the value is not accepted and you are leaving the setup-routine, the value is not changed.

4. programming of speed sensor:
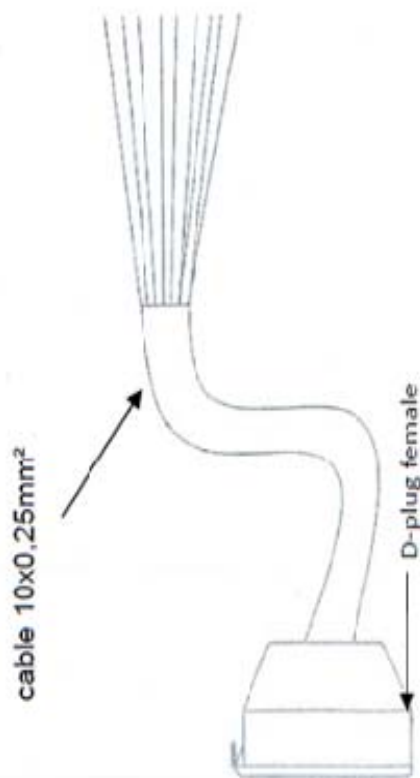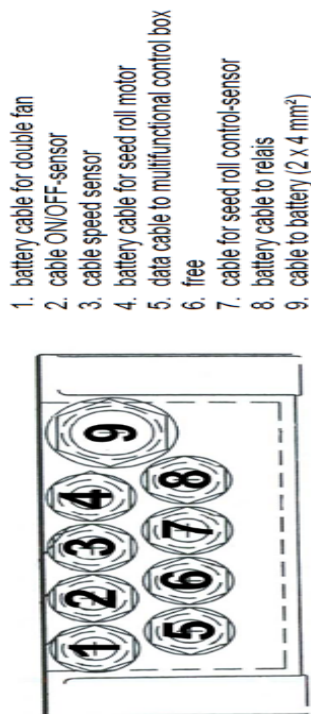The diode **km/h** has to flash green.

1. Press the SET button for 2 seconds, this will activate the calibration function .
3. The display is now showing the calibration value (the display is flashing). The calibration value is millimetre/speed-pulse *[mm/ speed-pulse]* from impulse to impulse or from bolt head to bolt head (e.g. 430mm way = 430 enter; maximum 500mm – but minimally 1 !!).

distance from Impulse to Impulse has to be under 500mm. As a fact of this (6280/500=12,56) you need MINIMUM 13 signals. Better to use about 20 signals. It doesn´t matter if the signals are mounted with a distance of 30mm (near the middle of the wheel) or 300mm (more outside the wheel). You have to mount 20 signals.
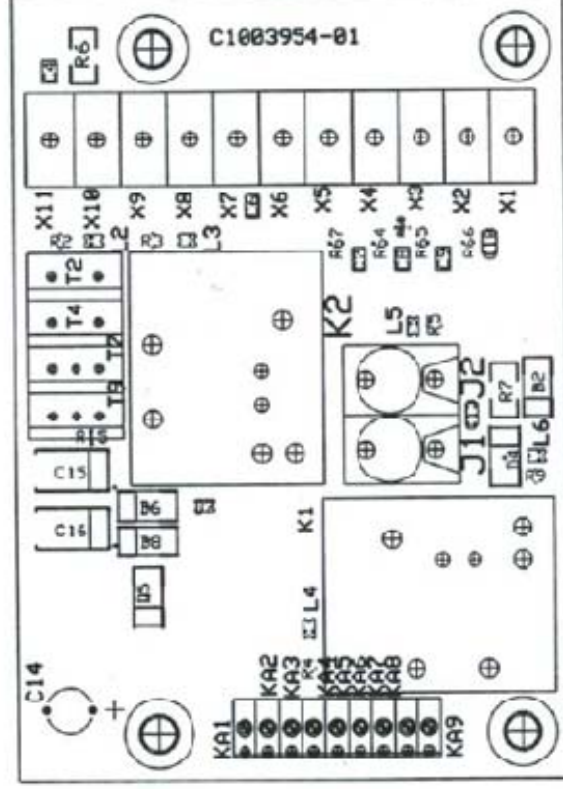The value you put now into the control unit is the estimated driven way from signal to signal. In this case put in (6280/20=314) 314mm=314.

3. Press SET and drive a known length, example 100 metres, the display will show you how far you have driven with the current calibration value in metres *[m]*.

4. If the display is showing you the wrong driven length, change the length by pressing up or down. It will show you the length in metres, with one decimal.
Press SET when the value is the same as the length you have driven.

5. The current and changed calibration value will be displayed .

6. Accept this value by pressing SET button again, this will finish the calibration procedure .

7. You can always abort a current calibration by pressing the RESET button .

Control box:

1. battery cable for double fan
2. cable ON/OFF-sensor
3. cable speed sensor
4. battery cable for seed roll motor
5. data cable to multifunctional control box
6. free
7. cable for seed roll control-sensor
8. battery cable to relais
9. cable to battery (2 x 4 mm²)

cable 10x0,25mm²

D-plug female

X11 seed roll motor -
X10 seed roll motor +
X9 double fan +
X8 double fan −

X7 sensors −
(blue cable from sensor)
X6 sensors +
(brown cable from sensor)
X5 signal: ON/OFF-sensor
(black cable from sensor)
X4 signal: seed roll control-sensor
(black cable from sensor)
X3 speed sensor
(black cable from sensor)
X2 free
X1 sensor- (blue cable from sensor)
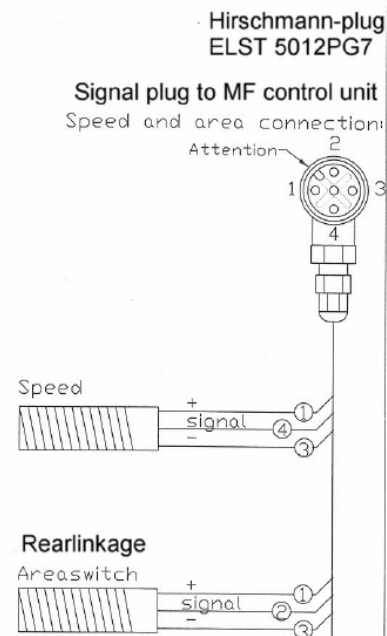
(The negative side (-) from the sensor can be connected by X1 or/and also by X7)

C1003954-01

Ka1 green
Ka2 brown
Ka3 grey
Ka4 blue
Ka5 red
Ka6 pink
Ka7 black
Ka8 white
Ka9 yellow

Fuse 15A

J1 = battery plus +
J2 = battery minus -

Bat.

Connection to tractor unit:

ATTENTION!!!

For tractors with a higher voltage (14V - new large tractors) the control unit can be damaged or may not work exactly any more. In this case it is necessary to install a 12V-relay for voltage limitation.

For new tractors (f.ex. Claas) with 7-pin socket (signal-plugs) no signal is send to number 1 and number 2. According to the speed the voltage is lowered or increased. We recommend for this tractors to connect the speed signal directly at the plug of radar sensor cable or at gearbox sensor cable (see instructions).

Hirschmann-plug
ELST 5012PG7

Signal plug to MF control unit
Speed and area connection:
Attention
2
1   3
4

Speed
signal
+
−
4
1
3

Rearlinkage
Areaswitch
signal
+
−
2
1
3

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 EURO-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 .

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EG-KONFORMITÄTSERKLÄRUNG

im Sinne der EG-Richtlinie Maschinen 2006/42/EG, Anhang II A

Hiermit erklären wir, daß die Bauart von

TP0830IN

in der gelieferten Ausführung folgenden einschlägigen Bestimmungen entspricht:
2006/42/EG

Angewendete harmonisierte Normen, insbesondere:

Angewendete nationale technische Spezifikationen, insbesondere:

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Mureck, 14 01 2010
_____
Ort und Datum der Ausstellung

_____
Unterschrift (Firmenchef Josef Großauer)