

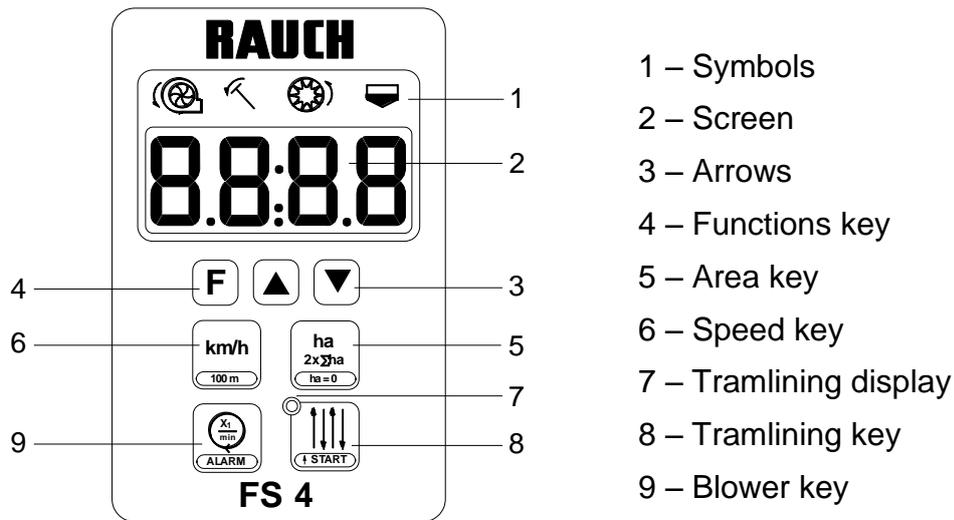
# INSTRUCTION MANUAL

## RAUCH FS4

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## A Description



### 1 Symbols

	Blower
	Markers
	Distribution
	Seed level

### 3 Arrows

### 4 Functions key

- Option selection.
- Set system by activating this key when switching on.
- Second function of keys pressing this key simultaneously.
- Store the selected function by pressing and holding.

### 5 Area key

- Day and total recorder display.
- Clear counters (Dual function).
- Programme working width by pressing and holding.

### 6 Speed key

- Speed display.
- Store speed (Dual function).

### 7 Marking display

- LED lights while cutting rows.

## **8 Marking key**

- Display rhythm and current counter position.
- Stop counting by pressing this key again.
- Program rhythm by pressing and holding the key.
- Start marking at the start of the field (Dual function).

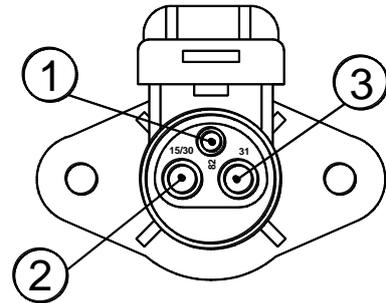
## **9 Blower key**

- Blower rpm display.
- Program nominal blower rpm by pressing and holding this key.
- Set alarm function (Dual function)

**B Detailed description**

**B 1 Electrical power supply**

The power supply to the HECTOR 3000 unit is via a cable to the tractor 3 pin plug (DIN 9680, ISO 12369).

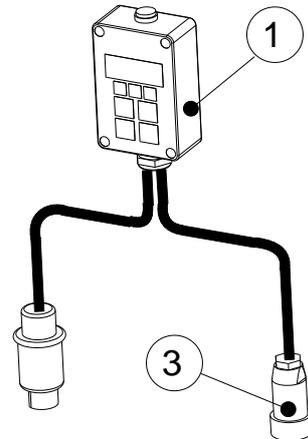


Pin	Wire colour	Function
15 / 30	Brown	+ 12 Volt
31	Blue	Earth
81	-	not used

**B 2 VENTA**

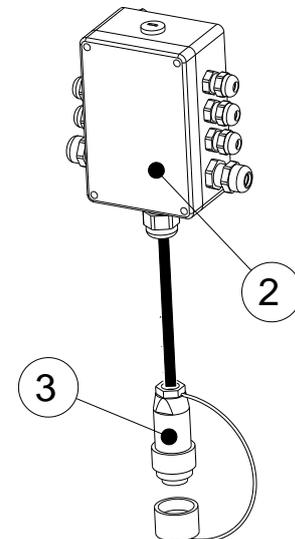
On the VENTA seed drills, the FS4 computer circuit consists of the control unit (1), the junction box (2), sensors and one or two control actuators.

The control unit connects to the junction box via the 7 pin plug (3). The connection diagrams are shown on the following pages.



**Sensor gaps (distance from metal or magnet)**

Sensor	Gap
Blower	1 – 2 mm
Metering unit	0.4 – 0.8 mm
Markers	3 – 5 mm
Hopper sensor	---



## C System configuration

This is carried out by pressing the **F** key and switching on the 12 volt power to the control unit simultaneously. The following settings may be changed or checked:

- 1) Type of seed drill (VENTA, BS, GC, Integra, etc.)
- 2) Number of tramlining control linear actuators
- 3) Checking screen
- 4) Checking sensors

	Settings are stored by pressing the <b>F</b> key for 3 seconds until the display flashes briefly!
---	---

The next parameter is configured by pressing the **F** key.

To exit the configuration menu, press one of the other keys.

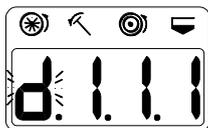
### **C 1 Configuration of the type of seed drill**

The  and  keys enable screen data to be changed:

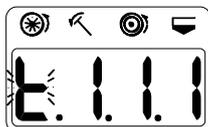
 to go to the next digit (the one selected flashes)

 to alter the configuration value

Different machine configurations:



BS GC LOGISEME INTEGRA  
mechanical seed drills



**VENTA pneumatic seed drills**



Precision seed drills PLANTER2,  
MAXIMA

The digits displayed below the symbols mean the following:

	<p><b>t = Blower sensor (VENTA)</b>  d = Distribution sensor (mechanical seed drills: BS, GC, Integra)  E = Single seed drills (Planter, Maxima)</p>
	<p>Side markers  1 = Present  0 = Absent</p>
	<p>Speed sensor  1 = Present  0 = Absent</p>
	<p>Level sensor  1 = Present  0 = Absent</p>

	Settings are stored by pressing the <b>F</b> key for 3 seconds until the display flashes briefly!
--	---

To input the next setting, press the **F** key briefly.

To exit the configuration menu, press one of the other keys.

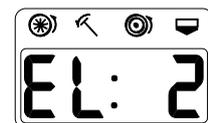
## C 2 Configuring the number of actuators

The number of linear actuators required to control tramlining needs to be stored in the memory (standard = 1; for special rhythms (option) = 2).

The screen can be tailored to the number of actuators fitted to the machine using the

 and  keys:

- EL: 1      One actuator
- EL: 2      Two actuators



	Settings are stored by pressing the <b>F</b> key for 3 seconds until the display flashes briefly!
---	---

To configure the next parameter, press the **F** key briefly.

To exit the configuration menu, press one of the other keys.

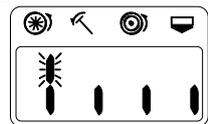
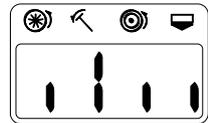
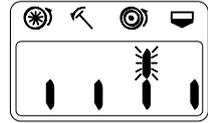
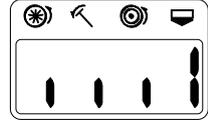
### C 3 Checking the screen

By pressing the **F** key after configuring the actuators, the screen can be checked for 2 seconds. The screen then changes automatically to sensor tests.



### C 4 Checking sensors

This menu appears automatically after the screen test. The various seeder functions are to be checked and confirmed.

Machine function	Screen display
Switch on the blower	The top segment of the 1 <sup>st</sup> digit flashes. 
Set the markers VENTA to the raised position	The top segment of the 2 <sup>nd</sup> digit flashes. 
Rotate the wheel	The top segment of the 3 <sup>rd</sup> digit flashes. 
Cover the hopper sensor	The top segment of the 4 <sup>th</sup> digit flashes. 

To configure the next parameter, press the **F** key briefly.

To exit the configuration menu, press one of the other keys.

## **D Setting the seed drill parameters**

The following settings which are specific to the machine are to be carried out:

- 1) Working width
- 2) Wheel revolutions
- 3) Tramlining rhythm
- 4) Nominal blower rpm
- 5) Activate/cancel alarms

### **D 1 Width setting**

In order to set the width, the  key should be pressed for approximately 3 seconds until the initial value stored flashes.

The desired width can be set by configuring the screen using the  and  keys.

	The setting is stored by pressing the  key for 3 seconds until the display flashes briefly!
--	---

### **D 2 Storing travel pulses**

In order to display the correct speed and for the hectares recorder to calculate correctly, it is necessary to program the number of pulses for a 100 m run. Two methods may be used: storing an average number of pulses in the memory or field calibration. If it is performed correctly, field calibration provides increased accuracy, since it allows for various soil types.

#### **1) Programming the recommended number of pulses**

The current stored value for a 100 m run can be displayed by pressing the  and  keys and may then be changed using the  or  arrows to set the value to the required number as indicated in the table:

## VENTA

Width	Value / 100 m
2.5 m	660
3.0 m	780
3.5 m	920
4.0 m	1050
4.5 m	1200
5.0 m	1300
6.0 m	1580



Settings are stored by pressing the **F** key for 3 seconds until the display flashes briefly!

### 2) Field calibrating a 100 m run

The current stored value for a 100 m run can be displayed by pressing the **F** and  keys simultaneously. By then pressing the  and  keys simultaneously, the count calibration mode (CAL) for the number of pulses for a 100 m run will be activated.

To **start** the count at the marker for the start of the 100 m run, press the  key

To **stop** the count at the marker for the end of the 100 m run, press the  key



Settings are stored by pressing the **F** key for 3 seconds until the display flashes briefly!

### D 3 Setting the tramlining rhythm

Before starting sowing, the tramlining rhythm needs to be programmed in accordance with the table below. This rhythm will depend on the widths of the seed drill and on the machine.

Rhythm	Treatment width						
Seed drill width	12 m	15 m	16 m	18 m	20 m	21 m	24 m
2.5 m		SY6/AS6			SY8/AS8		
3.0 m	SY4/AS4	5	62	SY6/AS6		7	SY8/AS8
3.5 m						SY/AS6	
4.0 m	3		SY/AS4	52	5		SY/AS6
4.5 m	58	54		SY/AS4		60	62
5.0 m		3			SY/AS4		
6.0 m	SY/AS2	50	58	3	54	56	SY/AS4

Rhythm	Treatment width						
Seed drill width	27 m	28 m	30 m	32 m	33 m	36 m	40 m
2.5 m			SY/AS1 2				
3.0 m	9		SY/AS1 0		11	SY/AS1 2	
3.5 m		SY/AS8					
4.0 m		7		SY/AS8		9	SY/AS1 0
4.5 m	SY/AS 6					SY/AS8	
5.0 m			SY/AS6				SY/AS8
6.0 m	52	60	5	62		SY/AS6	

Special rhythms 50 to 62 require 2 control actuators (optional).

In symmetrical rhythms (SY) wheel track marking will be done in a single sowing strip. Rhythms SY 2, SY 4, SY 6, to SY 12 require a half working width shut-off control (optional) in order to start along the edge with one half of the seed drill off. If this is not fitted, it will be necessary to pass over the first strip sown again by half a width. Asymmetrical rhythms (AS) perform the wheel track marking over 2 consecutive sowing strips. By so doing, part shut-off can be avoided.

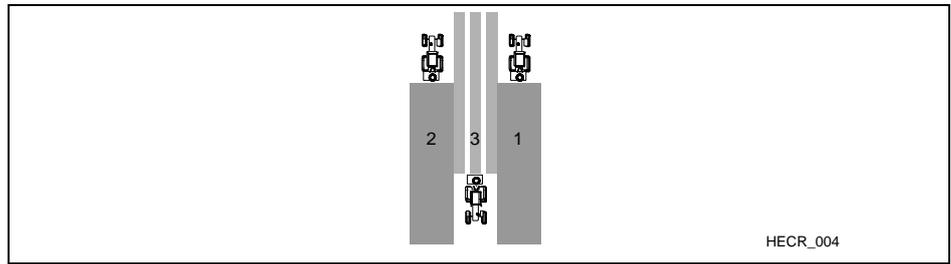
**See rhythm programming on page 32!**

### Rhythm 3, symmetrical

**Start of sowing:** Edge on the left or right

Example:

5 m Sowing  
15 m Treatment



Programming:

**54: 3**  
Rhythm SY 3

Display at start of job:

**nnnn**  
Full seed drill

Wheel tracks:

Control actuator: 1  
**3: 3**  
Rhythm 3 / Position 3

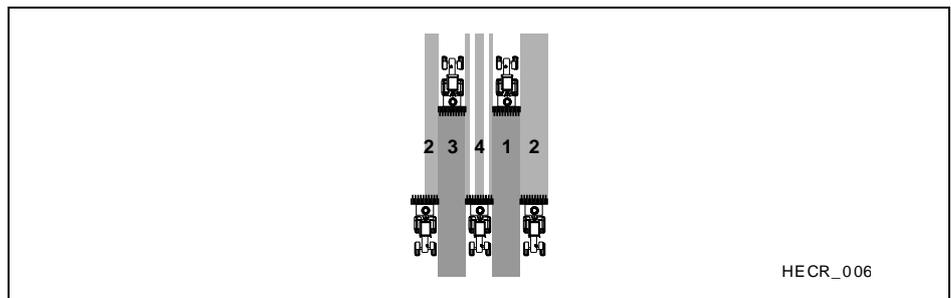
Control actuators: 2  
**3:00**  
Position 3: Both sides

### Rhythm 4, symmetrical

**Start of sowing:** Edge on the left or right

Example:

3 m Sowing  
12 m Treatment



Programming:

**54: 4**  
Rhythm SY 4

Display at start of job:

**nn--**  
Half seed drill

Wheel tracks:

Control actuator: 1  
**4: 4**  
Rhythm 4 / Position 4

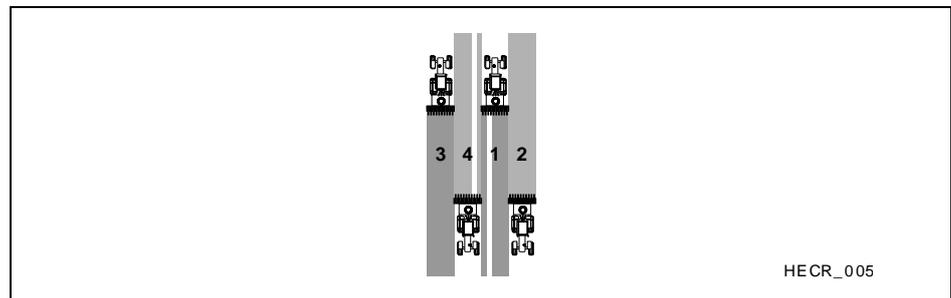
Control actuators: 2  
**4:00**  
Position 4: Both sides

## Rhythm 4, asymmetrical

**Start of sowing:** Edge on the left

Example:

3 m Sowing  
12 m Treatment



Programming:

**RS. 4**  
Rhythm AS 4

**LG. 4**  
Start left

Display at start of job:

**LG. 3**  
Start left, position 3

**nnnn**  
Full seed drill

Wheel tracks:

Control actuator: 1  
**4: 4**  
Rhythm 4 / Position 4

Control actuators: 2  
**4.0**  
Position 4 / 1: Left hand side

**Start of sowing:** Edge on the right

Programming:

**RS. 4**  
Rhythm AS 4

**r.d. 4**  
Start right

Display at start of job:

**r.d. 3**  
Start right, position 3

**nnnn**  
Full seed drill

Wheel tracks:

Control actuator: 1  
**4: 4**  
Rhythm 4 / Position 4

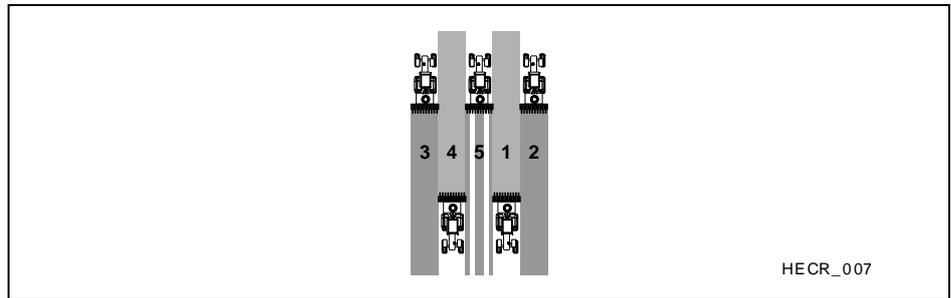
Control actuators: 2  
**4.0**  
Position 4 / 1: Right hand side

## Rhythm 5, symmetrical

**Start of sowing:** Edge on the left or right

Example:

3 m Sowing  
15 m Treatment



Programming:

**54: 5**  
Rhythm SY 5

Display at start of job:

**nnnn**  
Full seed drill

Wheel tracks:

Control actuator: 1  
**5: 5**  
Rhythm 5 / Position 5

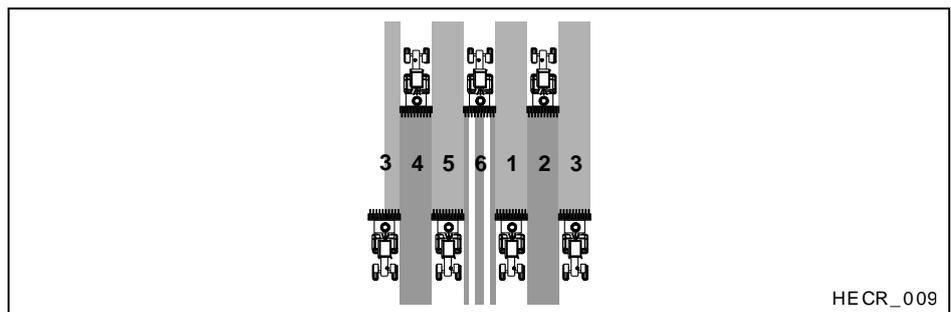
Control actuators: 2  
**5:00**  
Position 5 : Both sides

## Rhythm 6, symmetrical

**Start of sowing:** Edge on the left or right

Example:

3 m Sowing  
18 m Treatment



Programming:

**54: 6**  
Rhythm SY 6

Display at start of job:

**nn--**  
Half seed drill

Wheel tracks:

Control actuator: 1  
**6: 6**  
Rhythm 6 / Position 6

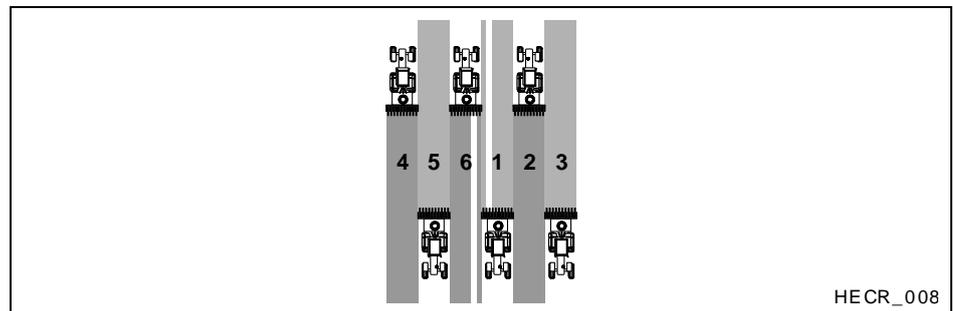
Control actuators: 2  
**6:00**  
Position 6 : Both sides

## Rhythm 6, asymmetrical

**Start of sowing:** Edge on the left

Example:

3 m Sowing  
18 m Treatment



Programming:

**RS. 6**  
Rhythm AS 6

**LG. 6**  
Start left

Display at start of job:

**LG. 4**  
Start left, position 4

**nnnn**  
Full seed drill

Wheel tracks:

Control actuator: 1  
**6: 6**  
Rhythm 6 / Position 6

Control actuators: 2  
**6. 0**  
Position 6 / 1 : Right hand side

**Start of sowing:** Edge on the right

Programming:

**RS. 6**  
Rhythm AS 6

**r.d. 6**  
Start right

Display at start of job:

**r.d. 4**  
Start right, position 4

**nnnn**  
Full seed drill

Wheel tracks:

Control actuator: 1  
**6: 6**  
Rhythm 6 / Position 6

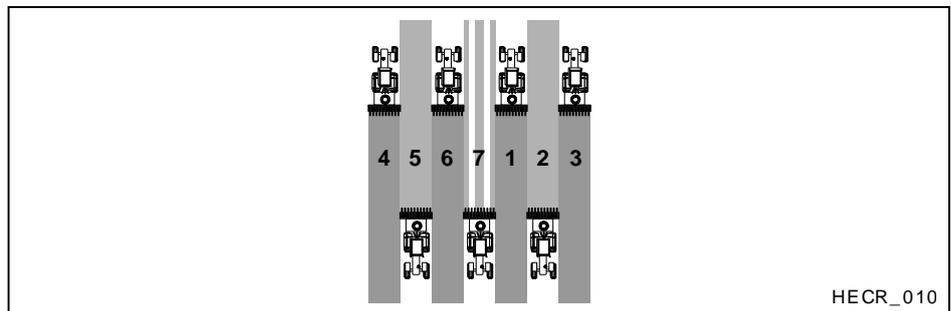
Control actuators: 2  
**6.0**  
Position 6 / 1 : Left hand side

## Rhythm 7, symmetrical

**Start of sowing:** Edge on the left or right

Example:

3 m Sowing  
21m Treatment



Programming:

**54: 7**  
Rhythm SY 7

Display at start of job:

**nnnn**  
Full seed drill

Wheel tracks:

Control actuator: 1  
**7: 7**  
Rhythm 7 / Position 7

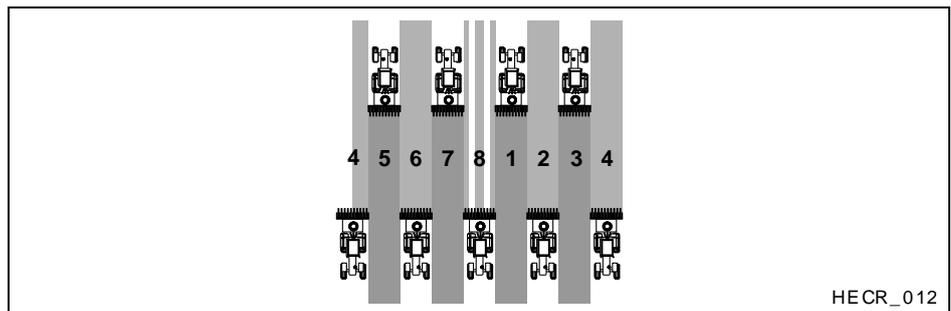
Control actuators: 2  
**7:00**  
Position 7 : Both sides

## Rhythm 8, symmetrical

**Start of sowing:** Edge on the left or right

Example:

3 m Sowing  
24 m Treatment



Programming:

**54: 8**  
Rhythm SY 8

Display at start of job:

**nn--**  
Half seed drill

Wheel tracks:

Control actuator: 1  
**8: 8**  
Rhythm 8 / Position 8

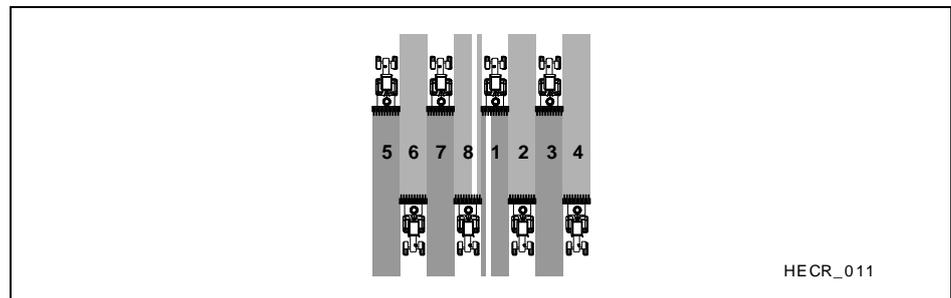
Control actuators: 2  
**8:00**  
Position 8: Both sides

## Rhythm 8, asymmetrical

**Start of sowing:** Edge on the left

Example:

3 m Sowing  
24 m Treatment



HECR\_011

Programming:

RS. 8

Rhythm 8

LG. 8

Start left

Display at start of job:

LG. 5

Start left, position 5

nnnn

Full seed drill

Control actuator: 1

Control actuators: 2

Wheel tracks:

8: 8

Rhythm 8 / Position 8

8.0

Position 8 / 1: Left hand side

**Start of sowing:** Edge on the right

Programming:

RS. 8

Rhythm AS 8

r.d. 8

Start right

Display at start of job:

r.d. 5

Start right, position 5

nnnn

Full seed drill

Control actuator: 1

Control actuators: 2

Wheel tracks:

8: 8

Rhythm 8 / Position 8

8.0

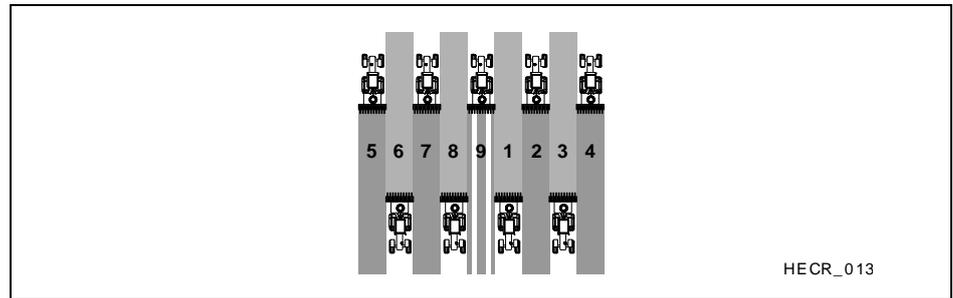
Position 8 / 1: Right hand side

## Rhythm 9, symmetrical

**Start of sowing:** Edge on the left or right

Example:

3 m Sowing  
27 m Treatment



Programming:

**54: 9**  
Rhythm SY 9

Display at start of job:

**nnnn**  
Full seed drill

Wheel tracks:

Control actuator: 1  
**9: 9**  
Rhythm 9 / Position 9

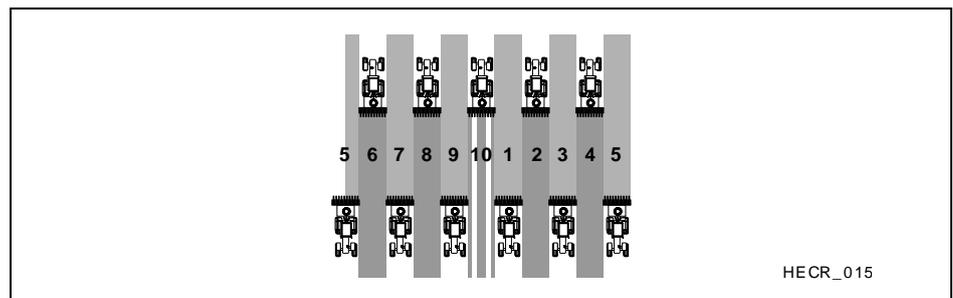
Control actuator: 2  
**9:00**  
Position 9: Both sides

## Rhythm 10, symmetrical

**Start of sowing:** Edge on the left or right

Example:

3 m Sowing  
30 m Treatment



Programming:

**54: 10**  
Rhythm SY 10

Display at start of job:

**nn--**  
Half seed drill

Wheel tracks:

Control actuator: 1  
**10: 10**  
Rhythm 10 / Position 10

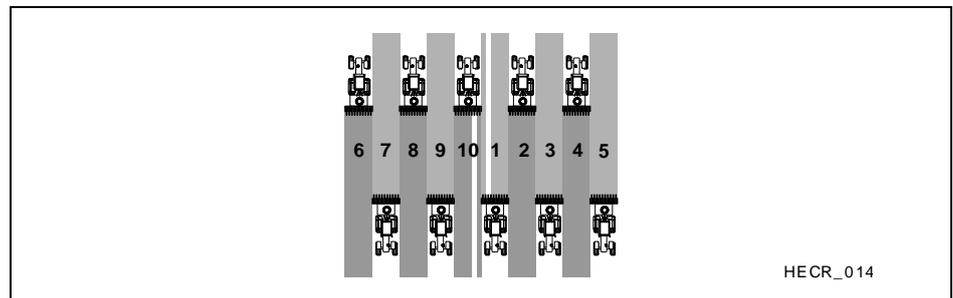
Control actuators: 2  
**10:00**  
Position 10: Both sides

## Rhythm 10, asymmetrical

**Start of sowing:** Edge on the left

Example:

3 m Sowing  
30 m Treatment



Programming:

RS. 10

Rhythm AS 10

LG. 10

Start left

Display at start of job:

LG. 6

Start left, position 6

nnnn

Full seed drill

Wheel tracks:

Control actuator: 1

10: 10

Rhythm 10 / Position 10

Control actuators: 2

10. 0

Position 10 / 1: Right hand side

**Start of sowing:** Edge on the right

Programming:

RS. 10

Rhythm AS 10

r.d. 10

Start right

Display at start of job:

r.d. 6

Start right, position 6

nnnn

Full seed drill

Wheel tracks:

Control actuator: 1

10: 10

Rhythm 10 / Position 10

Control actuators: 2

10. 0

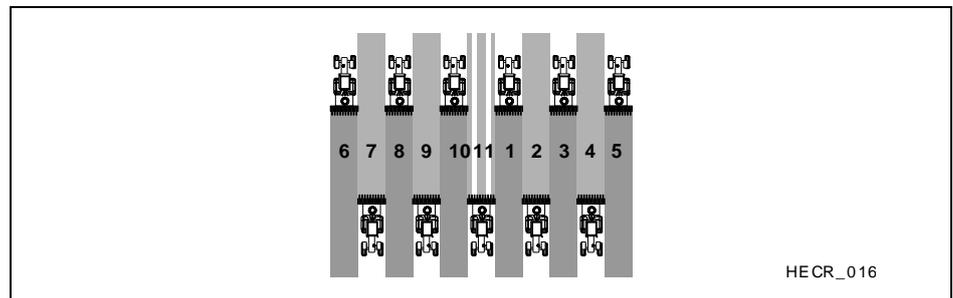
Position 10 / 1: Left hand side

## Rhythm 11, symmetrical

**Start of sowing:** Edge on the left or right

Example:

3 m Sowing  
33 m Treatment



Programming:

54:11

Rhythm SY 11

Display at start of job:

nnnn

Full seed drill

Wheel tracks:

Control actuator: 1

1:11

Rhythm 11 / Position 11

Control actuators: 2

1:00

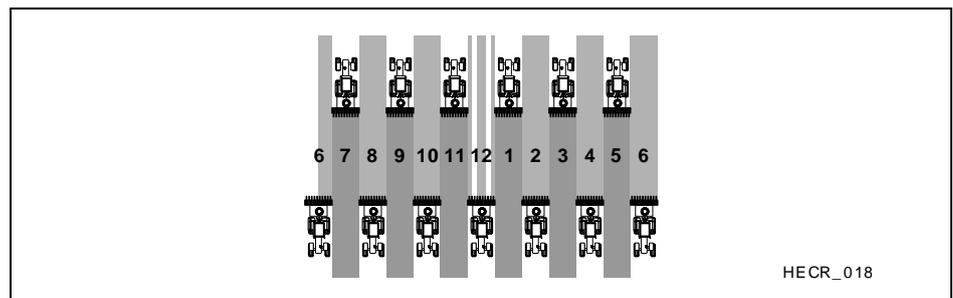
Position 11: Both sides

## Rhythm 12, symmetrical

**Start of sowing:** Edge on the left or right

Example:

3 m Sowing  
36 m Treatment



Programming:

54:12

Rhythm SY 12

Display at start of job:

nn--

Half seed drill

Wheel tracks:

Control actuator: 1

12:12

Rhythm 12 / Position 12

Control actuators: 2

12:00

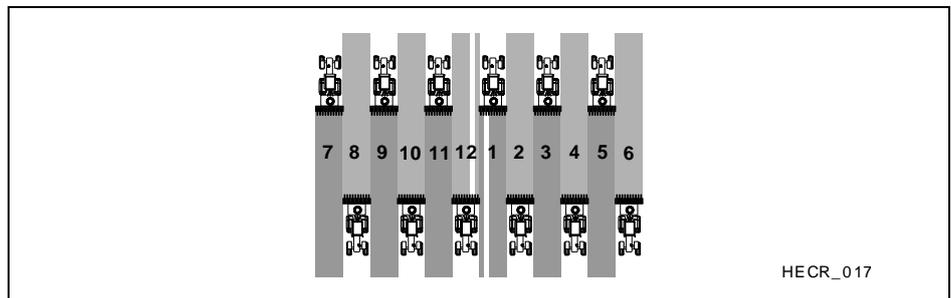
Position 12: Both sides

## Rhythm 12, asymmetrical

**Start of sowing:** Edge on the left

Example:

3 m Sowing  
36 m Treatment



Programming:

RS. 12

Rhythm AS 12

LG. 12

Start left

Display at start of job:

LG. 7

Start left, position 7

nnnn

Full seed drill

Wheel tracks:

Control actuator: 1

12: 12

Rhythm 12 / Position 12

Control actuators: 2

12.0

Position 12 / 1: Left hand side

**Start of sowing:** Edge on the right

Programming:

RS. 12

Rhythm AS 12

r.d. 12

Start right

Display at start of job:

r.d. 7

Start right, position 7

nnnn

Full seed drill

Wheel tracks:

Control actuator: 1

12: 12

Rhythm 12 / Position 12

Control actuators: 2

12.0

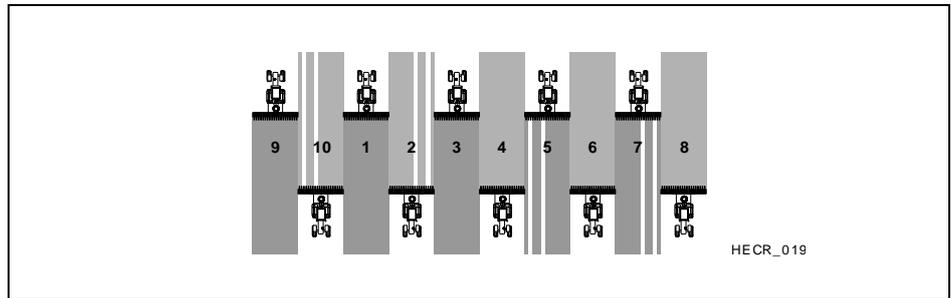
Position 12 / 1: Right hand side

## Rhythm 50

**Start of sowing:** Edge on the left

Example:

6 m Sowing  
15 m Treatment



Programming:

r.t.50

Rhythm 50

L.G.50

Start left

Display at start of job:

L.G. 9

Start left, position 9

nnnn

Full seed drill

Wheel tracks:

50.0

Position 2 / 5: Left hand side

50.0

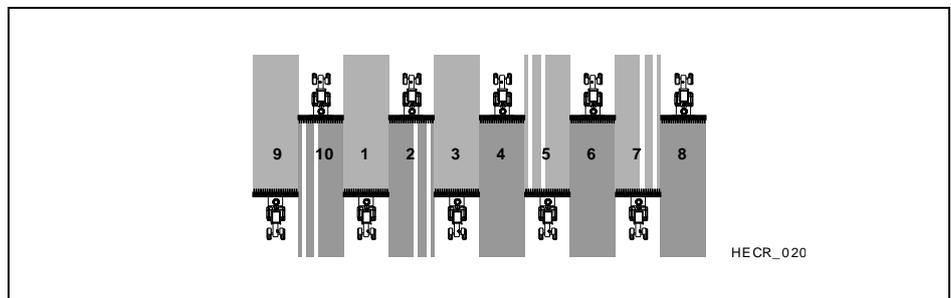
Position 10 / 7: Right hand side

**Start of sowing:**

Edge on the right

Example:

6 m Sowing  
15 m Treatment



Programming:

r.d.50

Rhythm 52

r.d.50

Start right

Display at start of job:

r.d. 9

Start right, position 16

nnnn

Full seed drill

Wheel tracks:

50.0

Position 5 / 2: Right hand side

50.0

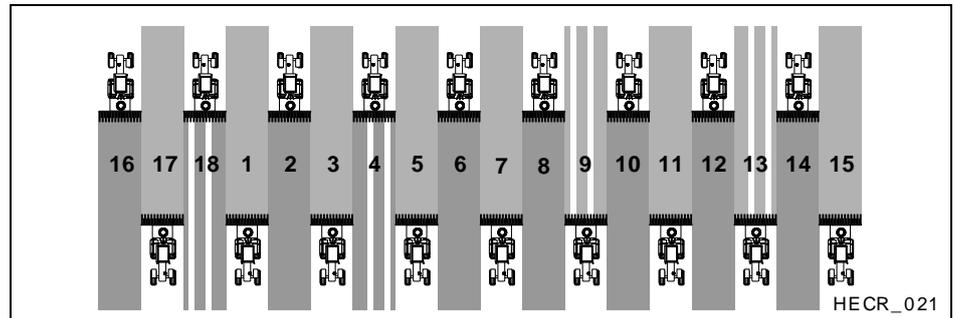
Position 7 / 10: Left hand side

## Rhythm 52

**Start of sowing:** Edge on the left

Example:

4 m Sowing  
18 m Treatment



**Programming:**

**r.t.52**

Rhythm 52

**L.G.52**

Start left

**Display at start of job:**

**L.G.16**

Start left, position 16

**nnnn**

Full seed drill

**Wheel tracks:**

**52.o**

Position 18 / 13: Left hand side

**52. o**

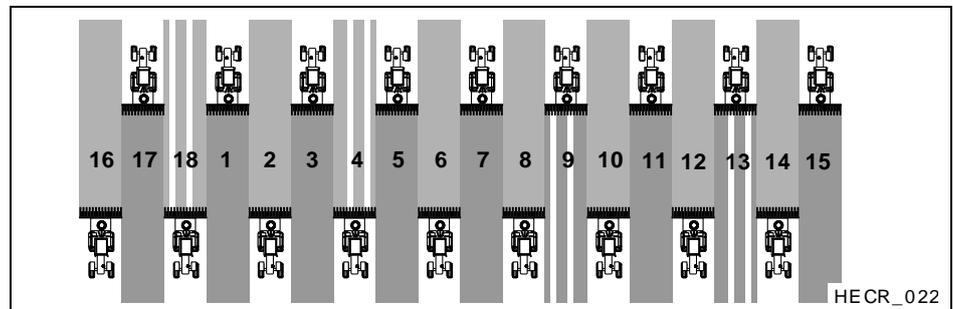
Position 4 / 9: Right hand side

**Start of sowing:**

Edge on the right

Example:

4 m Sowing  
18 m Treatment



**Programming:**

**r.t.52**

Rhythm 52

**r.d.52**

Start right

**Display at start of job:**

**r.d.16**

Start right, position 16

**nnnn**

Full seed drill

**Wheel tracks:**

**52. o**

Position 18 / 13: Right hand side

**52.o**

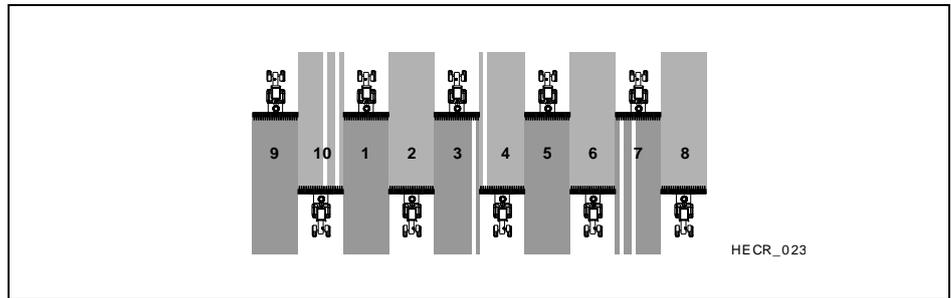
Position 4 / 9: Left hand side

## Rhythm 54

**Start of sowing:** Edge on the left

Example:

6 m Sowing  
20 m Treatment



Programming:

r.t.54

Rhythm 54

L.G.54

Start left

Display at start of job:

L.G. 9

Start left, position 9

nnnn

Full seed drill

Wheel tracks:

54.0

Position 7 / 10: Left hand side

54.0

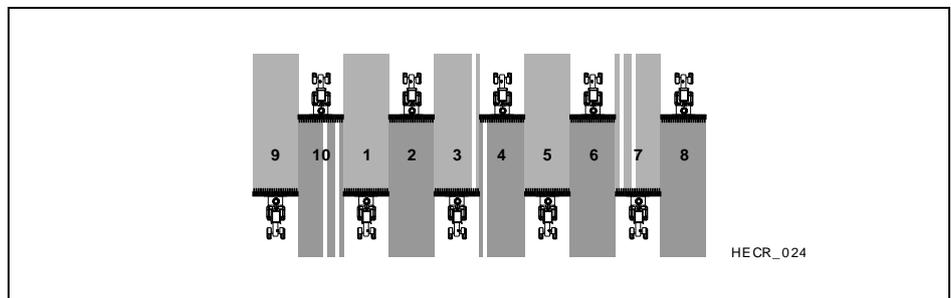
Position 3 / 4: Right hand side

**Start of sowing:**

Edge on the right

Example:

6 m Sowing  
20 m Treatment



Programming:

r.t.54

Rhythm 54

r.d.54

Start right

Display at start of job:

r.d. 9

Start right, position 9

nnnn

Full seed drill

Wheel tracks:

54.0

Position 10 / 7: Right hand side

54.0

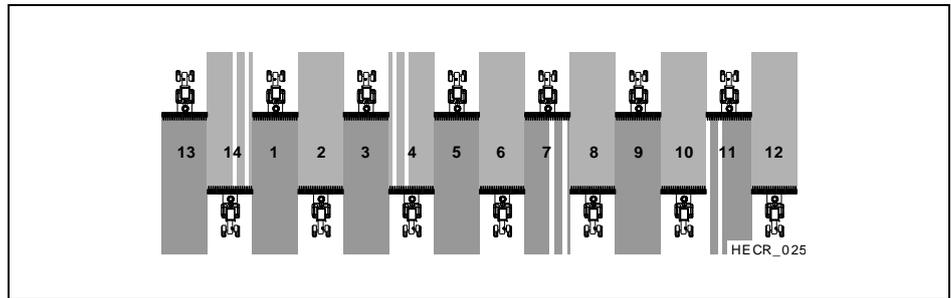
Position 3 / 4: Left hand side

## Rhythm 56

**Start of sowing:** Edge on the left

Example:

6 m Sowing  
21 m Treatment



Programming:

**r.t.56**  
Rhythm 56

**L.G.56**  
Start left

Display at start of job:

**L.G.13**  
Start left, position 13

**nnnn**  
Full seed drill

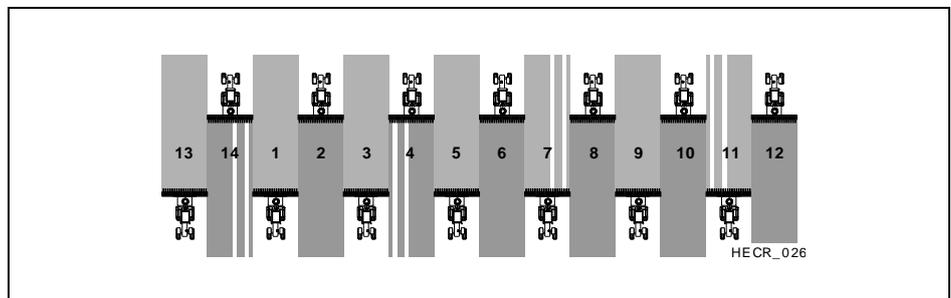
Wheel tracks:

**56.0**      Position 11 / 14: Left hand side      **56.0**      Position 4 / 7: Right hand side

**Start of sowing:** Edge on the right

Example:

6 m Sowing  
21 m Treatment



Programming:

**r.t.56**  
Rhythm 56

**r.d.56**  
Start right

Display at start of job:

**r.d.13**  
Start right, position 13

**nnnn**  
Full seed drill

Wheel tracks:

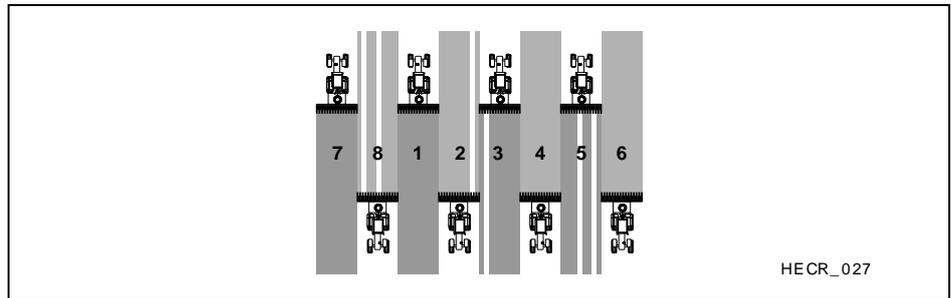
**56.0**      Position 11 / 14: Right hand side      **56.0**      Position 4 / 7: Left hand side

## Rhythm 58

**Start of sowing:** Edge on the left

Example:

4.5 m Sowing  
12 m Treatment



Programming:

**r.t.58**  
Rhythm 58

**L.G.58**  
Start left

Display at start of job:

**L.G. 7**  
Start left, position 7

**nnnn**  
Full seed drill

Wheel tracks:

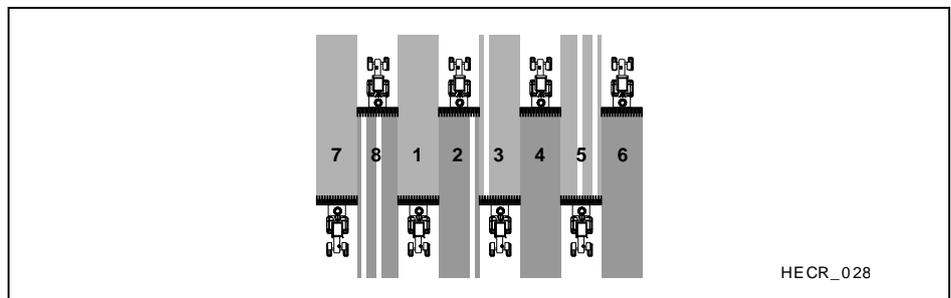
**58.0**  
Position 2 / 3: Left hand side

**58. 0**  
Position 8 / 5: Right hand side

**Start of sowing:** Edge on the right

Example:

4.5 m Sowing  
12 m Treatment



Programming:

**r.t.58**  
Rhythm 58

**r.d.58**  
Start right

Display at start of job:

**r.d. 7**  
Start right, position 7

**nnnn**  
Full seed drill

Wheel tracks:

**58. 0**  
Position 2 / 3: Right hand side

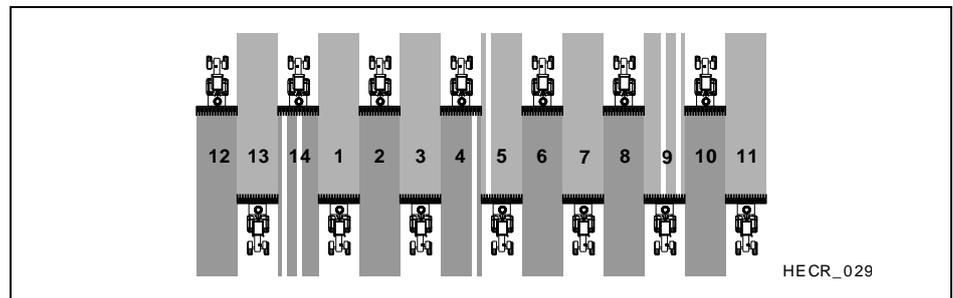
**58.0**  
Position 8 / 5: Left hand side

## Rhythm 60

**Start of sowing:** Edge on the left

Example:

4.5 m Sowing  
21 m Treatment



Programming:

**r.t.60**  
Rhythm 60

**L.G.60**  
Start left

Display at start of job:

**L.G.12**  
Start left, position 12

**nnnn**  
Full seed drill

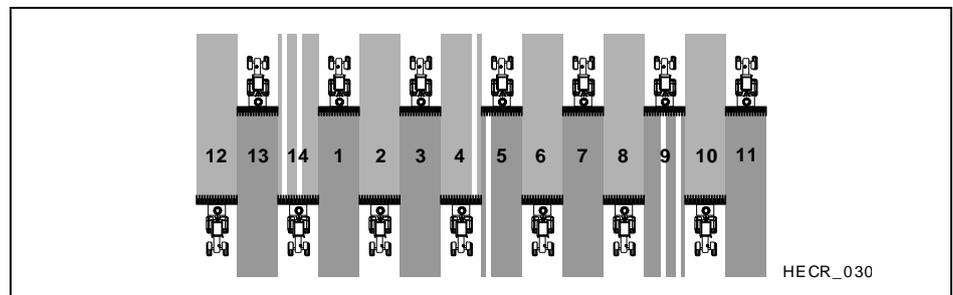
Wheel tracks:

**60.0**      Position 14 / 9: Left hand side      **60.0**      Position 4 / 5: Right hand side

**Start of sowing:** Edge on the right

Example:

4.5 m Sowing  
21 m Treatment



Programming:

**r.t.60**  
Rhythm 60

**r.d.60**  
Start right

Display at start of job:

**r.d.12**  
Start right, position 12

**nnnn**  
Full seed drill

Wheel tracks:

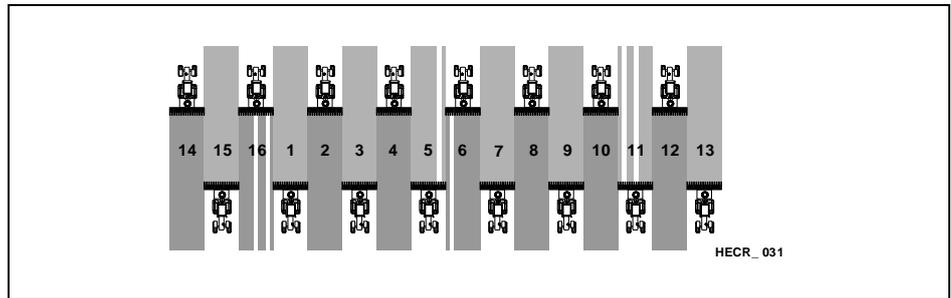
**60.0**      Position 14 / 9: Right hand side      **60.0**      Position 4 / 5: Left hand side

## Rhythm 62

**Start of sowing:** Edge on the left

Example:

4.5 m Sowing  
24 m Treatment



Programming:

**r.t.62**  
Rhythm 62

**L.G.62**  
Start left

Display at start of job:

**L.G.14**  
Start left, position 14

**nnnn**  
Full seed drill

Wheel tracks:

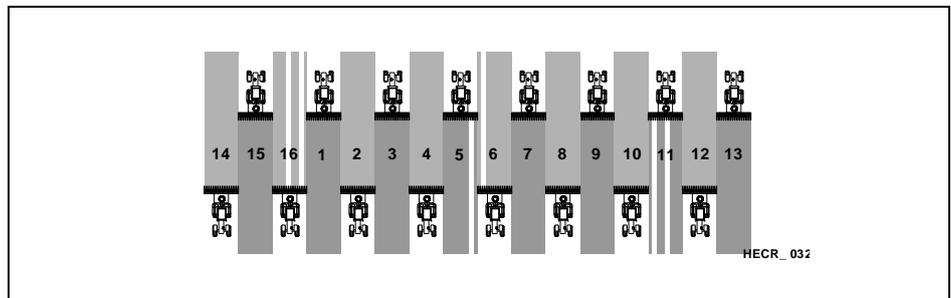
**62.0**  
Position 5 / 6: Left hand side

**62.0**  
Position 16 / 11: Right hand side

**Start of sowing:** Edge on the right

Example:

4.5 m Sowing  
24 m Treatment



Programming:

**r.t.62**  
Rhythm 62

**r.d.62**  
Start right

Display at start of job:

**r.d.14**  
Start right, position 14

**nnnn**  
Full seeder

Wheel tracks:

**62.0**      **62.0**  
Position 5 / 6: Right hand side      Position 16 / 11: Left hand side

To set the rhythm required, press key  for approximately 3 seconds until the stored rhythm flashes.

The list of rhythms can now be scrolled up and down using the  or  key until the desired list is reached.

	The setting is stored by pressing the  key for 3 seconds until the display flashes briefly!
---	--

Once this setting has been stored and depending on the rhythm chosen, the side on which the sowing job is to be started will be selected by pressing the  key. This selection of side is to be set with the  or  key.

	The setting is stored by pressing the  key for 3 seconds until the display flashes briefly!
--	--

#### D 4 Setting nominal blower rpm

In order to set nominal rpm, key  must be pressed for approximately 3 seconds until the screen displays the currently stored rpm. After approximately 3 seconds the control unit changes automatically to setting mode.

Run the blower at nominal rpm, the screen displays actual rpm. Once the required rotational speed is attained, it has to be stored.

	The setting is stored by pressing the  key for 3 seconds until the display flashes briefly!
---	--

Nominal speed of blower:  
VENTA: 2900 rpm

## D 5 Activating or cancelling alarms

The various alarms may be activated or cancelled separately. Press the **F** and  keys simultaneously: the current configuration will be displayed. Use the  or  keys to change the configuration.

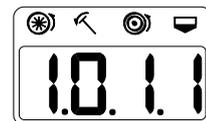
 to go to the next function (the activated one flashes)

 to change the activation of an alarm (go from 0 to 1 or vice versa)

The screen displays the current parameter settings of each alarm under the 4 symbols.

SYMBOL	FUNCTION	ALARM SIGNAL	
		Activated	Cancelled
	Blower		0
	Markers / wheel arms		0
	Metering unit		0
	Seed level		0

The following parameter setting is recommended for VENTA seed drills:



## **E Displays and settings while running**

The following settings and displays are accessible while running:

- 1) Daily hectare recorder display
- 2) Total hectare recorder display
- 3) Zeroing area recorders
- 4) Travel speed display
- 5) Display of the side on which the sowing job is to start
- 6) Tramlining rhythm display
- 7) Stop tramlining recording
- 8) Blower rpm display
- 9) Alarms

### **E 1 Daily hectare recorder display**

Press  once to display the daily or plot area recorder. This value remains stored even if the 12 volt supply is cut.

### **E 2 Total hectare recorder display**

Press  twice to display the total area recorder. This value remains stored even if the 12 volt supply is cut.

### **E 3 Zeroing the area recorders**

If the display is showing the daily recorder, press  and  together to zero it.

If the display is showing the total recorder, press  and  together to zero it.

Zeroing this recorder automatically zeroes the daily recorder.

### **E 4 Travel speed display**

This is displayed by pressing the  key

## E 5 Starting tramlining

The  and  keys need to be pressed in order to start a sowing job on a plot. The screen will then display the side on which the job is to start (left or right) alternately and whether a full seed drill or half a width is to be used to start up.

The tramlining recording mode will be activated by pressing either of the  and  keys, or by manipulating the markers.

## E 6 Tramlining display

On pressing the  key, the screen will display the programmed rhythm and the position in this rhythm.

The recording position will scroll by manipulating the markers or by pressing either the  or  key.

When the position coincides with a wheel track set-up, the screen will display alternately the tramlining position and the side on which tramlining is taking place (in the case of two linear actuators being fitted to the machine).

## E 7 Stopping tramlining temporarily

In order to stop recording temporarily (e.g. manipulating markers when negotiating an

obstacle), pressing the  key suspends progress of the rhythm. The  and  keys are also deactivated. The screen displays the word **STOP**. In order to

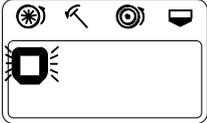
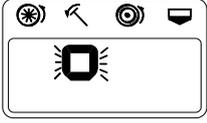
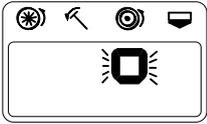
reactivate automatic recording, press the  key again.

## E 8 Blower rpm display

Pressing the  key displays actual blower rpm.

## E 9 Alarm messages

Depending on alarm configuration, the following messages may appear in the event of a fault.

Alarms	Display
<p><b>Blower alarm</b></p> <ul style="list-style-type: none"> <li>- The alarm is activated in the event of variation from the stored nominal rpm:           <ul style="list-style-type: none"> <li>- at +/- 200 rpm if memorised blower speed is less than 3400 rpm</li> <li>- at +/- 400 rpm if memorised blower speed exceeds 3400 rpm</li> </ul> </li> <li>- Alarm is not activated when drill is off.</li> </ul>	
<p><b>Marker or wheel arm alarm (TF702)</b></p> <ul style="list-style-type: none"> <li>- This is displayed if the wheel has been turning for 10 seconds and the marker is not lowered.</li> </ul>	
<p><b>Metering unit alarm</b></p> <ul style="list-style-type: none"> <li>- This is displayed if the marker (or the TF702 wheel arm) is lowered and the metering unit is not turning since 10 seconds.</li> </ul>	
<p><b>Seed level alarm</b></p> <ul style="list-style-type: none"> <li>- This is displayed as soon as the sensor is not covered with seed. Alarm is non activated when drill is off.</li> </ul>	

By pressing the  or  or  or  key the alarm message can be cancelled temporarily (for 20 seconds).

When performing 180° turns, alarm messages are inoperative if the wheel or the markers are raised.