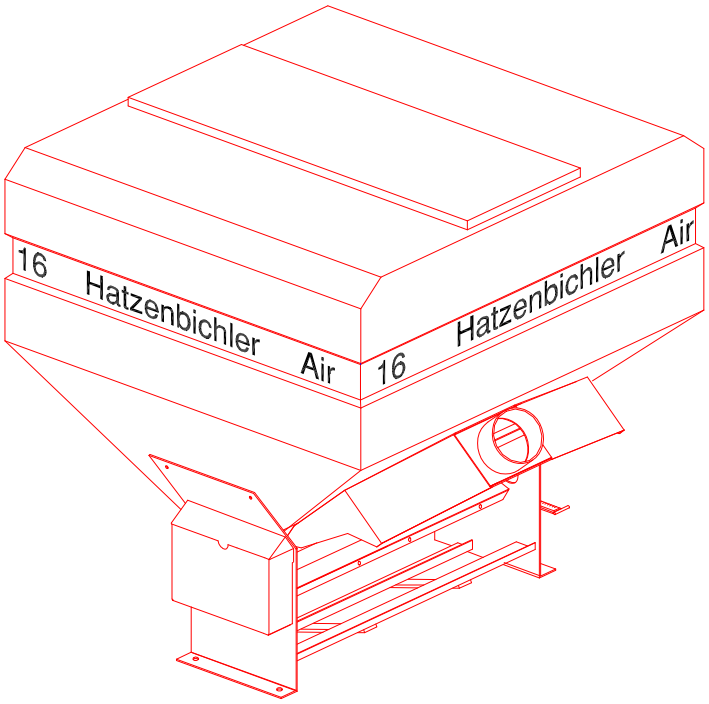
OPICO LIMITED
Cherry Holt Road, Bourne, Lincs, PE10 9LA

T: 01778 421111 F: 01778 425080
E: ask@opico.co.uk W: http://www.opico.co.uk

Operating Instruction

Pneumatic seed box
AIR 16



Quality from OPICO
Profit from our knowledge

2008

OPICO LIMITED
Cherry Holt Road, Bourne, Lincs, PE10 9LA

T: 01778 421111 F: 01778 425080
E: ask@opico.co.uk W: http://www.opico.co.uk

EU-Declaration of Conformity

We, Thomas Hatzenbichler & Sohn
Fischering 2
A-9433 St. Andrä
Austria

Declare that the new machine described hereafter

Make, model: **Pneumatic Seed box "Air 16"**

Serial number: _____

Conforms to the relevant essential health and safety requirements of the Directive 89/392/EEC.

- DIN EN 292-1, Safety of machines, tools and equipment
- DIN EN 292-2, Safety of machines, tools and equipment
- DIN EN 294, Safety of machines, tools and equipment
- DIN EN 708, Safety of agricultural machinery and soil tillage equipment
- ÖNORM V 5223, Safety of agricultural trailers
- _____
- _____

Thomas HATZENBICHLER
Director

Date _____

OPICO LIMITED
Cherry Holt Road, Bourne, Lincs, PE10 9LA

T: 01778 421111 F: 01778 425080
E: ask@opico.co.uk W: http://www.opico.co.uk

Contents for

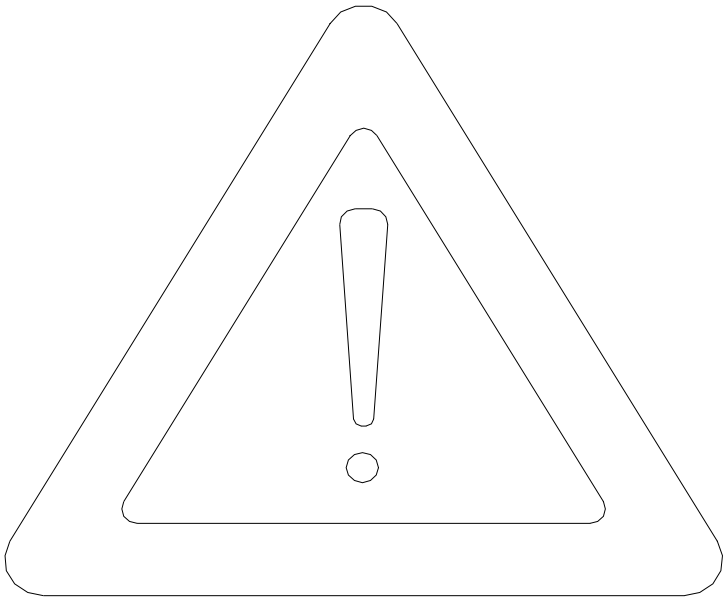
Pneumatic seed box

AIR 16

OPICO LIMITED
Cherry Holt Road, Bourne, Lincs, PE10 9LA

T: 01778 421111 F: 01778 425080
E: ask@opico.co.uk W: http://www.opico.co.uk

ATTENTION!!! very important!!!



Safety instructions

- Do not remain in the working area of the implement
- It is prohibited to remain in the folding area of the implement during the process of folding – danger of being crushed
- Put a mechanical support to prevent the implement from lowering, if you do repair or maintenance work under the implement in the raised position on the tractor
- Riding on the implement is not allowed, either during transport or during work
- Lower the tractor linkage and machine when leaving the tractor seat (either in folded or unfolded position)
- Take extra care when crossing or driving on slopes

OPICO LIMITED
Cherry Holt Road, Bourne, Lincs, PE10 9LA

T: 01778 421111 F: 01778 425080
E: ask@opico.co.uk W: http://www.opico.co.uk

OPICO and Hatzenbichler do not take any responsibility for the **GERMINATION** of seed.

Reason:

We do not know-

1. The condition of the seed
2. The depth which the seed is planted
3. The treatment of the ground before planting
4. On which implement the seeder is mounted

Hints for setting up and oeprating pneumatic seeders "AIR-Control", "AIR8" and "AIR16":

- The calibration test has to be done by the operator in the field.

- With the pneumatic seeder "AIR Control" with **8 outlets**, over-sowing work can be done up to a working width of 6,50m. **Sowing of ploughed land** can be done up to **3,00m**

- With the pneumatic seeder "AIR8" with **8 outlets**, over-sowing work can be done up to a working width of 6,50m. **Sowing of ploughed land** can be done up to **3,00m**

- With the pneumatic seeder "AIR16" with **16 outlets**, oversowing work can be done up to a working width of 12m. **Sowing of ploughed land** can be done up to **6m**.

-

OPICO LIMITED
Cherry Holt Road, Bourne, Lincs, PE10 9LA

T: 01778 421111 F: 01778 425080
E: ask@opico.co.uk W: http://www.opico.co.uk

4. Air 16 Fitting Instructions for Grass Harrow

(12mtr model)

4.1) Seed hopper

The Air 16 seed hopper fits onto the headstock of 12m harrows manufactured from June 1999 onwards. The chassis on these harrows measures 350mm between the two main box sections, the Air 16 will not fit older harrows.

The two headstock mounting brackets fit behind the top link, mounting holes are drilled on all harrows produced 2003-> and require three M12 x 40mm bolts on each side of the headstock. The seeder base plate (two plates) is mounted onto this headstock bracket using four M12 x 40mm bolts. When mounted there should be 160mm clearance between the front of the seed hopper base plate and the center of the top link holes.

OPICO LIMITED
Cherry Holt Road, Bourne, Lincs, PE10 9LA

T: 01778 421111 F: 01778 425080
E: ask@opico.co.uk W: http://www.opico.co.uk

4.2) Platform

The access platform for 12m harrow is mounted on top of the two transport support stands at the rear of the harrow, positioned with the step at the rear. Four U-brackets are provided with M12 x 90mm bolts.

4.3) Sensor drive wheel

Mount the sensor drive wheel onto the rear parking stand bottom hole with locating pin supplied. The speed sensor wire should be routed under the platform and wired into the electric junction box on the seeder (see wiring diagram page 41.)

OPICO LIMITED
Cherry Holt Road, Bourne, Lincs, PE10 9LA

T: 01778 421111 F: 01778 425080
E: ask@opico.co.uk W: http://www.opico.co.uk

Dia. 1 - 12 meter

OPICO Air 16 seeder

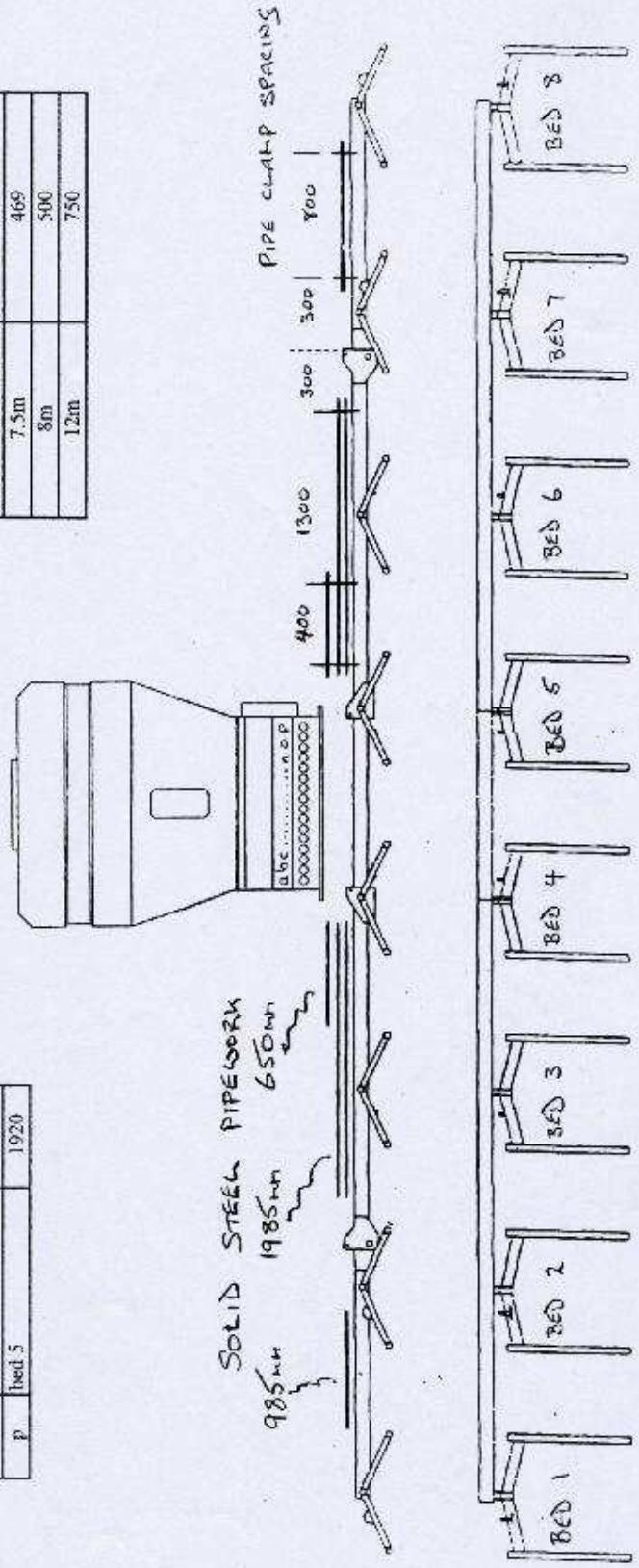
seeder outlet	to	seed pipe length
a	bed 4	1920
b	bed 4	1550
c	steel pipe - 650mm	1620
d	steel pipe - 650mm	1650
e	steel pipe - 1985mm	1610
f	steel pipe - 1985mm	1630
g	steel pipe - 1985mm	1700
h	steel pipe - 1985mm	1730
i	steel pipe - 1985mm	1730
j	steel pipe - 1985mm	1700
k	steel pipe - 1985mm	1630
l	steel pipe - 1985mm	1610
m	steel pipe - 650mm	1650
n	steel pipe - 650mm	1620
o	bed 5	1550
p	bed 5	1920

from	to	seed pipe length
steel pipe - 650mm	bed 3	1580
steel pipe - 650mm	bed 3	1410
steel pipe - 1985mm	bed 2	1580*
steel pipe - 1985mm	bed 2	1460*
steel pipe - 1985mm	steel pipe - 985mm	1020*
steel pipe - 1985mm	steel pipe - 985mm	1020*
steel pipe - 1985mm	steel pipe - 985mm	1020*
steel pipe - 1985mm	steel pipe - 985mm	1020*
steel pipe - 1985mm	bed 7	1460*
steel pipe - 1985mm	bed 7	1580*
steel pipe - 650mm	bed 6	1410
steel pipe - 650mm	bed 6	1580

std seed pipe (ID 25mm, OD 29.5mm)
* steel braided seed pipe (ID 25mm, OD 33.5mm)
solid steel pipe (ID 22mm, OD 25mm)

from	to	seed pipe length
steel pipe - 985mm	bed 1	1580
steel pipe - 985mm	bed 1	1680
steel pipe - 985mm	bed 8	1680
steel pipe - 985mm	bed 8	1580

Working width	Distributor outlet spacing (mm)
6m	375
7.5m	469
8m	500
12m	750

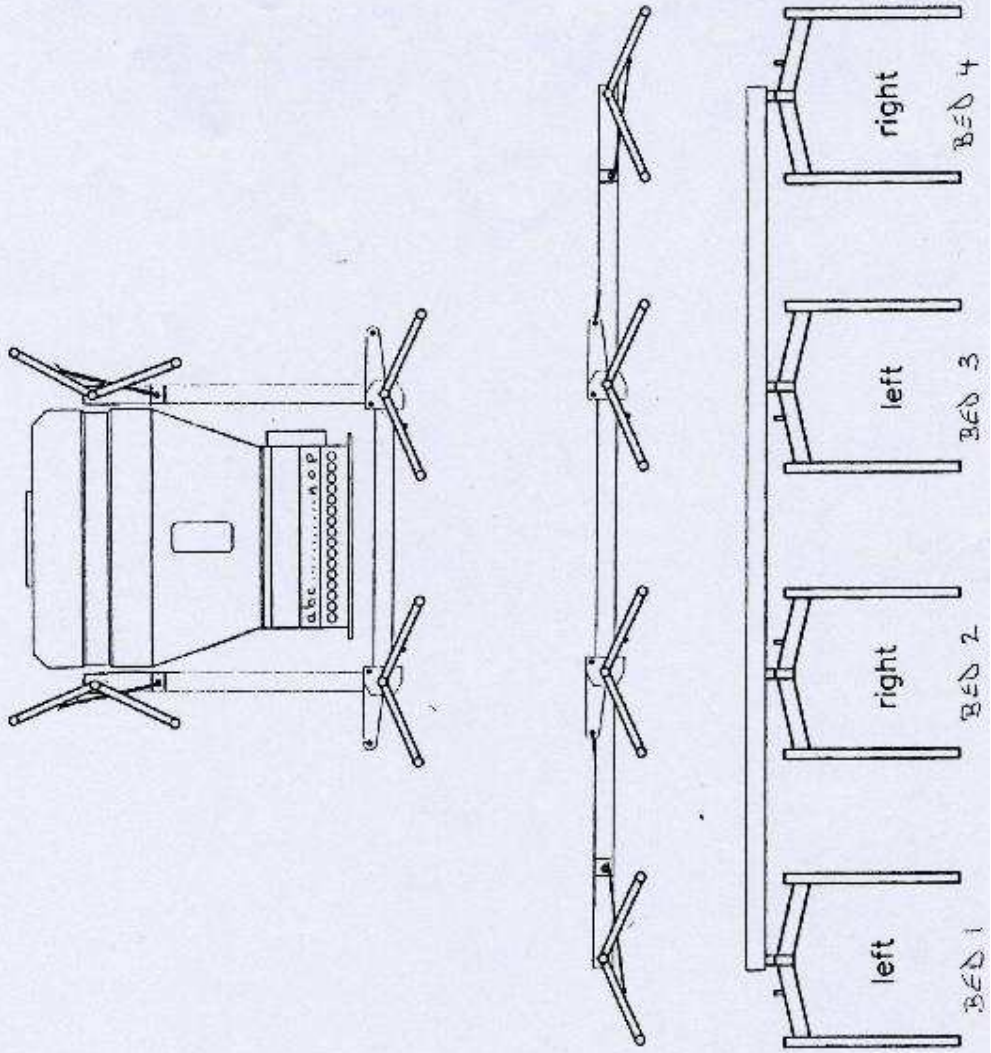


Dia 2 - 6 meter

OPICO Air 16 seeder

seeder outlet	to	seed pipe length (mm)
a	bed 2	900
b	bed 2	1000
c	bed 2	1500
d	bed 2	1800
e	bed 1	2700
f	bed 1	2700
g	bed 1	3000
h	bed 1	3300
I	bed 4	3300
j	bed 4	3000
k	bed 4	2700
l	bed 4	2700
m	bed 3	1800
n	bed 3	1500
o	bed 3	1000
p	bed 3	900

Working width	Distributor outlet spacing (mm)
6m	375
7.5m	469
8m	500
12m	750



OPICO LIMITED
Cherry Holt Road, Bourne, Lincs, PE10 9LA

T: 01778 421111 F: 01778 425080
E: ask@opico.co.uk W: http://www.opico.co.uk

Distributor outlets

1. Remove the plastic end caps from the front of each harrow bed carrier and fit the expand clamp fully into the tube and tighten M12 x 130 hex bolt.
2. Fit the C-section distributor carrier (1.5m section 39101) or (2m section 39102) into the clamp holder and set between 20-40cm above ground level with M12 x 25 grub screw.
3. Place the distributor outlet onto the C-section carrier bar using M8 allen screws supplied, and space evenly to suit the working width e.g. 12m harrow requires 75cm spacing between distributor plates.

4. Mount solid seed pipe (OD 25mm) using pipe clamps on top of the harrows inner and outer wing box section, this requires 5 holes drilled & tapped for M8 bolts on each wing (see pipe diagram)
5. Cut and fit the flexible seed pipe (ID 25mm) between seedbox outlet and distributor plate using the solid pipe for the outer distributors, route the pipe allowing for folding wings (see pipe diagram 2.)

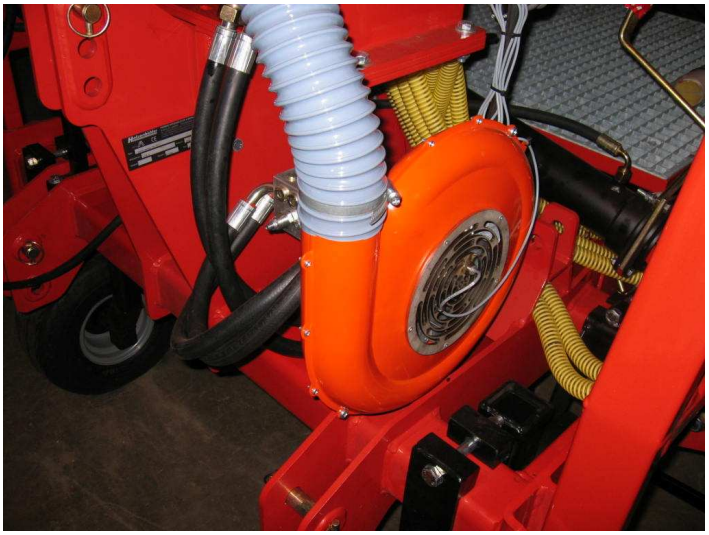
OPICO LIMITED
Cherry Holt Road, Bourne, Lincs, PE10 9LA

T: 01778 421111 F: 01778 425080
E: ask@opico.co.uk W: http://www.opico.co.uk

4.4) Hydraulic fan

The hydraulic fan is mounted at the left hand side of the harrow chassis directly behind the l/h lower hitch point. The air pipe (ID 80mm) connects between the fan and seeder air intake with hose clips provided.
The hydraulic fan requires a pressure free return oil supply of 2-16 ltr/min, the oil flow should be set at the tractors hyd spool valve and **must not exceed 16ltr/min**—to do so may damage the motor oil seal, when connected ensure the fan is running in the correct direction, fan blades turning clockwise as you look at the air intake.

1. The ½" supply hose (marked 'P' on the hyd motor casing to indicate pressure) should connect into the tractor spool which suits hydraulic motor service.
2. The ½" return hose (marked 'T' on the hyd motor casing to indicate tank) from motor should be a pressure free return direct to the tractor hydraulic oil reservoir.



Fan speed adjustment
The fan speed will automatically display on the control box screen, the alarm to indicate the fan is not rotating needs to be activated in the control box menu 140.0. The recommended operating speed for the steel hydraulic fan: min 1600rpm — max 3800rpm. The normal working speed should be set, depending upon working width and seed type. This hydraulic fan is suitable for fine and grass seed types up to 12.5m working width.

Fine seeds: 2000 - 3000 rpm
Grass seeds: 2500 - 3500 rpm

NOTE: It is very important that the seed hopper lid is air tight, properly sealed ensuring air does not flow back through the hopper.

OPICO LIMITED
Cherry Holt Road, Bourne, Lincs, PE10 9LA

T: 01778 421111 F: 01778 425080
E: ask@opico.co.uk W: http://www.opico.co.uk

5. Working instructions - AIR 16

5.1) Basic adjustments

Before filling the hopper, please observe the following points:

1. Is the correct metering roller fitted?

Attention: Choosing the metering roller according to the size of the seed and the quantity to broadcast

Seeds, where the coarse metering roller is used:

Grass-seed mixtures, rye, barley, wheat, oats, game cover mixtures etc.
(normally for large seed rates; 10kg/ha ->)

Seeds, where the micro and fine metering roller is used:

Clover seed, rape seed, stubble turnips, phacelia, granules etc.
(normally for small seed rates; < 15kg/ha)

Seeds, where the dimple metering roller is used:

Clover seed, rape seed, stubble turnips, phacelia, granules etc.
(normally for small seed rates; < 7.5kg/ha)

2. Seed retaining brush adjustment:

The distance of the retaining brush from the metering roller can be adjusted by a lever on the right hand side of the hopper. The brush can be adjusted from 1-7mm

The following rules must be observed:

- The distance between brush and metering roller is approx. half the seed size

i.e.	Oil seed rape	0-1mm
	Grass-mixtures	1-2mm
	Game cover mixtures	2-3mm

- The gap on the lower side of the roller should never be more than 1mm (Factory set)

OPICO LIMITED
Cherry Holt Road, Bourne, Lincs, PE10 9LA

T: 01778 421111 F: 01778 425080
E: ask@opico.co.uk W: http://www.opico.co.uk

5.2) Changing seed metering roller:

Ensure the seed hopper is completely empty of seed and remove the metering roller access panel. To change the metering roller, remove the end cap bearing holder on the right hand side of the machine. Slide out the roller, by turning anti-clockwise and pulling at the same time

When fitting another roller, observe the following:

1. Ensure the drive axle is clean
2. Slide the replacement roller onto the drive axle
3. Replace the bearing holder
4. The spring loaded discs on the ends of the metering roller should take up any gap when the bearing holder has been fitted, the discs should not be tight
5. Rotate the drive wheel and check that the roller turns easily

5.3) Seed roller protection shield

This is mounted inside the hopper to carry the weight of seed in the hopper. It is designed mainly for heavier seeds ie Oil seed rape, slug pellets, etc. When working with lighter seeds ie grass seed be careful to ensure the plate does not encourage bridging in the hopper. If seed bridging is a problem remove the thumb screws and shield from the hopper and work without it fitted.

5.4) Sensor Drive Wheel

Release the drive wheel from transport position onto the ground. Allowing for constant drive wheel contact over undulations, pin under the drive wheel arm to clear ground when harrow is raised out of work

Drive wheel axle should have no side movement to ensure sensor gap is constant. The sensor and drive wheel slots must be clean to provide a good signal to the computer. The gap from sensor to drive wheel should be 5–8mm, this can be adjusted on the sensor mounting nuts.

5.4) Field operation

Over-seeding Grass:
It is possible to upgrade existing pasture by adding new seed. Harrowing old grass pasture to open up the soil surface before broadcasting new seed is cost effective. The combination of grass harrow and pneumatic seed box will help you get the most from your overseeding programme as it improves weed control, airs the soil and improves conditions for grass seed germination.

OPICO LIMITED
Cherry Holt Road, Bourne, Lincs, PE10 9LA

T: 01778 421111 F: 01778 425080
E: ask@opico.co.uk W: http://www.opico.co.uk

Reseeding Grass:

The benefits of increased yield and improved forage quality from reseeding are undoubted. Reseeding into cultivated ground is possible with the harrow and pneumatic seed box, cross drilling in a diamond pattern will ensure good ground cover, but there's several points worth considering to ensure success.

1. Always check pH, phosphate and potash levels prior to sowing (aim for pH 6.5, P2, K2)
2. Make certain the seed bed is fine and firm
3. Roll before as well as after sowing
4. Ensure depth of seed is no more than 15mm
5. Control weeds after establishment
6. Use pesticide control when sowing grass after grass

Before field work check the following:

- Check the fan is working & direction of motion is correct. Run the fan to dry any moisture in the seed pipes before starting work, this will minimise risk of seed blockage in the pipes
- There should be a minimum of 20kg of seed in the hopper
- The lid of the seed hopper must close air tight
- Set the distributor outlet between 20-40 cm above ground. Harrow tine setting, crop foliage height and seed type will determine the height required to ensure an even spread pattern
- Check all outlets to ensure even seed coverage across the working width

5.5) Emptying the seed hopper

1. Remove the metering roller cover plate.
2. Place the calibration tray into the output roller compartment.
3. Set the seed retaining brush at maximum height and set the control monitor to calibrate mode until the hopper is empty.
4. To empty the seed hopper completely, remove the metering roller (Ref. to **5.2**)

OPICO LIMITED
Cherry Holt Road, Bourne, Lincs, PE10 9LA

T: 01778 421111 F: 01778 425080
E: ask@opico.co.uk W: http://www.opico.co.uk

5.6) Maintenance

Daily

1. Ensure the hopper is air tight, lid seal and metering cover plate seal are in good condition
2. Check the flexible seed pipe for damage or blockage
3. Check distributor plates are not damaged
4. Check the metering & agitator drive is clean and working
5. Check metering roller including sponge end caps are clean
6. Clean the fan inlet with compressed air, particularily when working in dusty conditions

Weekly

1. Check transmission drive belt, remove the two M6 nuts and cover to access the drive and tensioner
2. Lubricate the land drive wheel
3. Lubricate the metering roller end cap bearing
4. Check all nuts and bolts are tight
5. Check air manifold between hyd fan and seeder – this has a built in perforated diffuser plate which can build up a blockage in trashy conditions and may need blowing out.
7. Check hydraulic hoses and connections for oil leaks or damage
8. Check mounting nuts and bolts are tight

5.7) Storage

1. Empty seed hopper completely and remove metering roller
2. Clean the unit thoroughly and paint any bare metal
3. Check for any ware or damage and repair as necessary
4. Store the pnumatic seed box under cover to prevent any build-up of moisture in the distributor pipes, seed hopper and metering mechanism.

OPICO LIMITED
Cherry Holt Road, Bourne, Lincs, PE10 9LA

T: 01778 421111 F: 01778 425080
E: ask@opico.co.uk W: http://www.opico.co.uk

6. Conversion chart

kg		lb
0.5	1	2.2
0.9	2	4.4
1.4	3	6.6
1.8	4	8.8
2.3	5	11.0
2.7	6	13.2
3.2	7	15.4
3.6	8	17.6
4.1	9	19.8
4.5	10	22.0
5.0	11	24.3
5.4	12	26.5
5.9	13	28.7
6.4	14	30.9
6.8	15	33.1
7.3	16	35.3
7.7	17	37.5
8.2	18	39.7
8.6	19	41.9
9.1	20	44.1
9.5	21	46.3
10.0	22	48.5
10.4	23	50.7
10.9	24	52.9
11.3	25	55.1
11.8	26	57.3
12.2	27	59.5
12.7	28	61.7
13.2	29	63.9
13.6	30	66.1
14.1	31	68.3
14.5	32	70.5
15.0	33	72.8
15.4	34	75.0
15.9	35	77.2
16.3	36	79.4
16.8	37	81.6
17.2	38	83.8
17.7	39	86.0
18.1	40	88.2
18.6	41	90.4
19.1	42	92.6
19.5	43	94.8
20.0	44	97.0
20.4	45	99.2
20.9	46	101.4
21.3	47	103.6
21.8	48	105.8
22.2	49	108.0
22.7	50	110.2

ac		ha
2.5	1	0.4
4.9	2	0.8
7.4	3	1.2
9.9	4	1.6
12.4	5	2.0
14.8	6	2.4
17.3	7	2.8
19.8	8	3.2
22.2	9	3.6
24.7	10	4.0
27.2	11	4.5
29.7	12	4.9
32.1	13	5.3
34.6	14	5.7
37.1	15	6.1
39.5	16	6.5
42.0	17	6.9
44.5	18	7.3
47.0	19	7.7
49.4	20	8.1
51.9	21	8.5
54.4	22	8.9
56.8	23	9.3
59.3	24	9.7
61.8	25	10.1
64.2	26	10.5
66.7	27	10.9
69.2	28	11.3
71.7	29	11.7
74.1	30	12.1
76.6	31	12.5
79.1	32	12.9
81.5	33	13.4
84.0	34	13.8
86.5	35	14.2
89.0	36	14.6
91.4	37	15.0
93.9	38	15.4
96.4	39	15.8
98.8	40	16.2
101.3	41	16.6
103.8	42	17.0
106.3	43	17.4
108.7	44	17.8
111.2	45	18.2
113.7	46	18.6
116.1	47	19.0
118.6	48	19.4
121.1	49	19.8
123.6	50	20.2

lb/ac		kg/ha
0.9	1	1.1
1.8	2	2.2
2.7	3	3.4
3.6	4	4.5
4.5	5	5.6
5.4	6	6.7
6.2	7	7.8
7.1	8	9.0
8.0	9	10.1
8.9	10	11.2
9.8	11	12.3
10.7	12	13.5
11.6	13	14.6
12.5	14	15.7
13.4	15	16.8
14.3	16	17.9
15.2	17	19.1
16.1	18	20.2
17.0	19	21.3
17.8	20	22.4
18.7	21	23.5
19.6	22	24.7
20.5	23	25.8
21.4	24	26.9
22.3	25	28.0
23.2	26	29.1
24.1	27	30.3
25.0	28	31.4
25.9	29	32.5
26.8	30	33.6
27.7	31	34.7
28.5	32	35.9
29.4	33	37.0
30.3	34	38.1
31.2	35	39.2
32.1	36	40.4
33.0	37	41.5
33.9	38	42.6
34.8	39	43.7
35.7	40	44.8
36.6	41	46.0
37.5	42	47.1
38.4	43	48.2
39.3	44	49.3
40.1	45	50.4
41.0	46	51.6
41.9	47	52.7
42.8	48	53.8
43.7	49	54.9
44.6	50	56.0

kg/ac		kg/ha
0.4	1	2.5
0.8	2	4.9
1.2	3	7.4
1.6	4	9.9
2.0	5	12.4
2.4	6	14.8
2.8	7	17.3
3.2	8	19.8
3.6	9	22.2
4.0	10	24.7
4.5	11	27.2
4.9	12	29.7
5.3	13	32.1
5.7	14	34.6
6.1	15	37.1
6.5	16	39.5
6.9	17	42.0
7.3	18	44.5
7.7	19	47.0
8.1	20	49.4
8.5	21	51.9
8.9	22	54.4
9.3	23	56.8
9.7	24	59.3
10.1	25	61.8
10.5	26	64.2
10.9	27	66.7
11.3	28	69.2
11.7	29	71.7
12.1	30	74.1
12.5	31	76.6
12.9	32	79.1
13.4	33	81.5
13.8	34	84.0
14.2	35	86.5
14.6	36	89.0
15.0	37	91.4
15.4	38	93.9
15.8	39	96.4
16.2	40	98.8
16.6	41	101.3
17.0	42	103.8
17.4	43	106.3
17.8	44	108.7
18.2	45	111.2
18.6	46	113.7
19.0	47	116.1
19.4	48	118.6
19.8	49	121.1
20.2	50	123.6

kg/ha	g/m^2
10	1
20	2
30	3
40	4
50	5
60	6
70	7
80	8
90	9
100	10
110	11
120	12
130	13
140	14
150	15
160	16
170	17
180	18
190	19
200	20
210	21
220	22
230	23
240	24
250	25
260	26
270	27
280	28
290	29
300	30
310	31
320	32
330	33
340	34
350	35
360	36
370	37
380	38
390	39
400	40

OPICO LIMITED
Cherry Holt Road, Bourne, Lincs, PE10 9LA

T: 01778 421111 F: 01778 425080
E: ask@opico.co.uk W: http://www.opico.co.uk

Electronic Control Box – Operators Guide

This section of the Operators Manual deals with the Electronic Control Box which is fitted to Air 8 Electronic and Variocast 8 E machines and all Variocast 16 and Air 16 machines.

The Electronic Control box allows operators to set the seeder up for the job it is doing, calibrate it and then operate it. It provides the operator with a variety of different pieces of information about the seeder whilst it is working and will retain these until the operator chooses to delete them.

Information such as the current seed rate being applied and current forward speed is displayed on the screen whilst in work. The control box can also be set to keep a log of the area covered, distance covered, and time taken as well as monitoring the seed level and the amount of seed used.

There are also a number of warning functions that help keep the operator informed of any potential problems.

- Low hopper level
- No drive from the electronic motor
- No drive to the metering roller
- The forward speed is too low
- The forward speed is too high

The instructions for using the control box that are set out below enable a new operator to maximise the performance of his/her machine, please read through them carefully and take some time to work through them whilst using the control box.

OPICO LIMITED
Cherry Holt Road, Bourne, Lincs, PE10 9LA

T: 01778 421111 F: 01778 425080
E: ask@opico.co.uk W: http://www.opico.co.uk

Contents

OPICO LIMITED
Cherry Holt Road, Bourne, Lincs, PE10 9LA

T: 01778 421111 F: 01778 425080
E: ask@opico.co.uk W: http://www.opico.co.uk

SECTION A

UNDERSTANDING THE CONTROL BOX

A1 THE BUTTONS ON THE CONTROL BOX

What each button does

The F1key lets you enter your desired application rate of seed, in KG per hectare.

The F2 key takes you into CALIBRATION MODE.

The F3 key is used to access background menus.

The F4 key allows you to scroll around the operator information displayed next door to it - HECTARES WORKED, METRES WORKED, HOURS WORKED.

The F5 key allows you to scroll around the operator information displayed next door to it - BATTERY VOLTAGE, TANK CONTENT, QUANTITY OF SEED SPREAD.

The F6 key is used to access background menus.

The UP and DOWN arrows let you alter your application rate on the move, and are also used to scroll up and down menus and enter values.

The across arrow lets you start and stop the hours worked counter and is also used to move the curser across one decimal place when entering values.

The OK button stores any value or alteration made to the control box.

The ESCAPE button will always return you to the WORKING SCREEN (shown above).

The AUTO button starts and stops seeding

OPICO LIMITED
Cherry Holt Road, Bourne, Lincs, PE10 9LA

T: 01778 421111 F: 01778 425080
E: ask@opico.co.uk W: http://www.opico.co.uk

A2 THE DISPLAY


This displays the actual Seed rate in KG per HECTARE, when seeding. When the Seed rate has been temporarily increased or decreased "on the move" this figure will alternate between the actual seed rate and the % it has been changed by.


This displays Forward Speed Km/H


This displays set spread width – NB each symbol represents a different standard width setting.


This indicates which field or job data read-out is selected. There is the possibility to store HECTARES WORKED, METRES TRAVELED, HOURS WORKED and QUANTITY SPREAD for 19 different fields or jobs.

Use the F4 key to toggle between Metres Worked, Hectares Worked and Hours Worked.


This displays "meters worked" – without seeding.


This displays Hours Worked.


This displays Hectares Worked - seeding.

Use the F5 Key to toggle between battery voltage, content of seed in the tank and quantity of seed used.


This displays weight of seed in the tank in kilograms.


This displays Battery Voltage.


This displays weight of seed metered out in kilograms.


(This feature is not used on Air 8 or Variocast 8 machines with electric fans.)
On machines with hydraulic fans the fan rpm is displayed here

OPICO LIMITED
Cherry Holt Road, Bourne, Lincs, PE10 9LA

T: 01778 421111 F: 01778 425080
E: ask@opico.co.uk W: http://www.opico.co.uk

SECTION B

USING THE CONTROL BOX – CALIBRATION AND SETTING

B1 ENTERING DESIRED SEED RATE

To enter desired seed rate (KG/Hectare) :

- PRESS AND HOLD F1 FOR 2 SECONDS

This screen will appear

- ALTER THE FLASHING DIGIT BY PRESSING
- MOVE TO THE NEXT DIGIT BY PRESSING
- USE THIS METHOD TO ATTAIN THE DESIRED KG/HECTARE
- STORE THE VALUE BY PRESSING Ok **(TIP: get the decimal point in the right place)**
- EXIT WORKING SCREEN BY PRESSING Esc

<u>The desired seed rate is now stored in the control box. However, on returning to the working screen the previously entered value will not be displayed. It is only displayed when the seeder is working and a forward speed is being achieved.</u>

The method in which you have entered the seed rate is commonly used through out the control box. Remember ....

- When a digit is flashing it can be altered
- Ok Always stores the entered value
- Esc Always brings you back to the working screen

OPICO LIMITED
Cherry Holt Road, Bourne, Lincs, PE10 9LA

T: 01778 421111 F: 01778 425080
E: ask@opico.co.uk W: http://www.opico.co.uk

B2. CALIBRATING THE SEEDER

OPERATION DEPENDENT SETTINGS!

Your seeder can be used to apply a large variety of seed types at different rates and hugely varying forward speeds. When you calibrate your seeder for the first time or change the operation it is being used for, it is advisable to check the calibration speed (rpm) of the seed roller. If the seed roller is rotating quickly in operation a more accurate calibration will be achieved if a similar rpm is used during calibration.

IMPORTANT – please see page 33 Section F (F2 – Code 82) Menu 150.0 for instructions on setting the meter roller speed for calibration

To calibrate the seeder with the type of seed being applied ...

- PRESS AND HOLD F2 FOR 2 SECONDS

This will take you into **MENU 1.0** which will look like this.

The value next to F4 is how many turns the seed roller will make during the calibration. To alter this figure press F4, the value will start to flash and can then be altered by using the up▲, down ▼ and ► ◄across arrows and set by pressing OK.

When using the coarse metering roller FOR GRASS SEEDS - 30 TURNS IS AMPLE
When using the fine metering roller FOR SMALL SEEDS - 70 TURNS IS ADVISED

The value next to F6 is the weight of seed entered after the previous calibration.

- AT THE BACK OF THE SEEDER – SET THE BRUSH SETTING FOR THE TYPE OF SEED BEING USED (SEE AIR 8/AIR 16 INSTRUCTION MANUAL), REMOVE THE METERING ROLLER COVER AND PLACE THE CALIBRATION TRAY IN THE SEEDER
- TO BEGIN CALIBRATION PRESS F5.

This will take you into **menu 1.1** which will look like this ...

The seed roller will begin to turn and meter seed into the calibration tray.

The display next to F6 will count the seed roller rotations as it turns.

When the set number of rotations has been achieved the seed roller will automatically stop.

- WEIGH THE SEED METERED OUT BY THE ROLLER – **It is important to use a good set of accurate digital scales, any errors will be compounded when working in the field**
- PRESS F5.
- ENTER THE SEED WEIGHT IN KILOGRAMS BY USING ▼ ▲

OPICO LIMITED
Cherry Holt Road, Bourne, Lincs, PE10 9LA

T: 01778 421111 F: 01778 425080
E: ask@opico.co.uk W: http://www.opico.co.uk

- STORE THE VALUE BY PRESSING Ok
- BOX AUTOMATICALLY RETURNS TO THE WORKING SCREEN, YOU CAN CHECK YOUR CAL WEIGHT BY GOING BACK TO MENU 1.0

THE CALIBRATION IS COMPLETE

When operating your seeder on a slow moving soil engaging implement such as a subsoiler and at a low forward speed, the seeder may reach it's minimum metering speed in tough soil conditions. If this happens an alarm will sound and a "tortoise" symbol will appear on the screen. The seeder can be set to stop seeding or to continue seeding at the lowest possible rate when this occurs. Please see Page 34, section F (F2 Code 182) Menu 152.0 to learn how to alter this.

B3. SETTING MACHINE WIDTH

To set a standard working width

- PRESS AND HOLD F2 FOR 2 SECONDS
- SCROLL DOWN TO **MENU 2.0** USING

This screen will appear

Each of the symbols next to F3 represents a different standard working width.

To select the correct width of spread setting for your machine

- PRESS AND HOLD F3 FOR 1 SECOND

The symbols will start flashing and **menu 2.1** will appear

- PRESS TO SELECT DIFFERENT WORKING WIDTHS.
- PRESS Ok TO STORE CORRECT WORKING WIDTH.
- PRESS Esc TO RETURN TO WORKING SCREEN.

When the air seeder is being used as a Variocast for TILLSEEDING the working width required may not be included in the standard working width settings.

To attain the correct working width a background menu needs to be accessed.

This is clearly explained in **SECTION C2.**

OPICO LIMITED
Cherry Holt Road, Bourne, Lincs, PE10 9LA

T: 01778 421111 F: 01778 425080
E: ask@opico.co.uk W: http://www.opico.co.uk

B4. CALIBRATING FORWARD SPEED

This menu lets you calibrate actual forward speed by automatically timing the length in between each sensor pulse on the land wheel or radar if fitted

Landwheel - A standard setting of 4.75 is entered into the box and doesn't need to be altered unless:

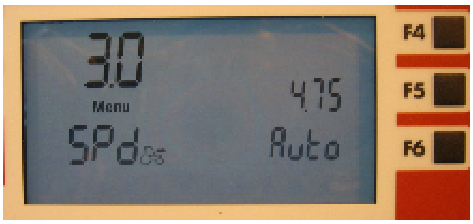
- The land wheel is running into loose, cultivated land
- You notice that you are using too much or too little seed on a certain area

Radar - There is no standard setting for the radar so a calibration must be done before it is used for the first time.

To carry out the calibration:

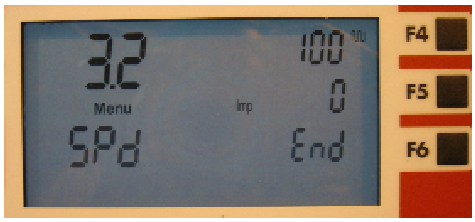
- PRESS AND HOLD F2 FOR 2 SECONDS.
- SCROLL DOWN TO **MENU 3.0** USING ▼ ▲.

This screen will appear



- MEASURE A 100M RUN ON SOME SOIL OR GRASS SIMILAR TO THAT WHICH THE MACHINE WILL BE TRAVELING OVER WHEN SEEDING.
- PRESS F6 TO START CALIBRATION AND IMMEDIATELY START TO TRAVEL THE 100M RUN.

This screen will appear



NEXT TO F5 THE IMPULSES THAT ARE BEING COUNTED AT THE LAND-WHEEL WILL BE DISPLAYED.

- TRAVEL AT A SIMILAR SPEED TO THE SPEED AT WHICH YOU WILL BE DRIVING WHEN SEEDING
- WHEN 100M HAVE BEEN TRAVELED IMMEDIATELY PRESS F6 TO END CALIBRATION.

A new value will appear next to F5

- PRESS Ok TO STORE.
- PRESS Esc TO RETURN TO WORKING SCREEN.

If using the landwheel the value should not be more than 5.00 or less than 4.20

For the most accurate value carry out the calibration 3 times and then use the average value.

THE CALIBRATION IS COMPLETE

OPICO LIMITED
Cherry Holt Road, Bourne, Lincs, PE10 9LA

T: 01778 421111 F: 01778 425080
E: ask@opico.co.uk W: http://www.opico.co.uk

SECTION C

USING THE CONTROL BOX – SETTING THE JOB DATA

Information from19 different "jobs" can be held on the control box, these could apply to different fields on a farm or different customers for a contractor. The control box also stores information about the work done in its total lifetime under Job "0" (this cannot be altered or deleted)

C1 - Setting and altering the Job Number

The Job number 

can be seen in the top centre of the control box display, it can be altered by pressing and holding 

for 1 second, it will then start to flash, use the up▲and down▼arrows to scroll through the job numbers. Press the OK button to select the number desired, it will stop flashing and the control box will then record data under that number until it is changed again.

C2 - Resetting a complete job

All the records for a selected job can be Zero'd whilst it is flashing by pressing the 

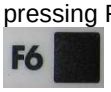
button which has "DEL" next door to it on the display. (Ha, distance, Time and Seed used will all be set to "0") Press OK to accept after delete or press Esc to cancel.

To Reset each of the individual counters for a job first press and hold the 

button for 1 second, the job number will start to flash.

C3 - Resetting the Hectare counter

The Hectare counter 

for the job selected can be shown in the top right hand corner of the display by pressing F4 to scroll round until the symbol above is shown and flashing. To reset the ha figure to Zero press the 

button which has "DEL" next door to it on the display. Then press OK to accept or press Esc to cancel.

C4 - Resetting the Distance counter

The distance counter 

for the job selected can be shown in the top right hand corner of the display by pressing F4 to scroll round until the symbol above is shown and flashing.

To reset the figure to Zero press the 

button which has "DEL" next door to it on the display.
Then press OK to accept or press Esc to cancel

OPICO LIMITED
Cherry Holt Road, Bourne, Lincs, PE10 9LA

T: 01778 421111 F: 01778 425080
E: ask@opico.co.uk W: http://www.opico.co.uk

C5 - Setting the time counter

The clock  for the job selected can be shown in the top right hand corner of the display by pressing F4 to scroll round until the symbol above is shown and flashing.

To reset the time to zero press the 

button which has “DEL” next door to it on the display.
Then press OK to accept or press Esc to cancel

C6 - Setting the Seed used counter

The seed used  for the job selected can be shown in the middle right hand side of the display by pressing F4 to scroll round until the symbol above is shown and flashing.

To reset the weight to Zero press the 

button which has “DEL” next door to it on the display.
Then press OK to accept or press Esc to cancel

ALL JOB DATA HAS NOW BEEN RESET

C7 - Tank Filling

The amount of seed in the tank shown in the middle right hand side of the display,  can be altered by pressing and holding 

for 1 second.

Then Press 

which will have FILL next door to it on the display, this will refill the full tank capacity.
Press “OK” to accept or press “Esc” to cancel.

It is also possible to enter a specific amount of seed, press 

and the figure will flash, then use the up▲ and down▼ arrows to enter the correct amount and press “OK” to accept or “ESC” to cancel

OPICO LIMITED
Cherry Holt Road, Bourne, Lincs, PE10 9LA

T: 01778 421111 F: 01778 425080
E: ask@opico.co.uk W: http://www.opico.co.uk

SECTION D

D - Alarm Functions (See symbol diagram page 12)

There are both optical and acoustic alarms to warn the operator when –

- The Seed in the tank is below the sensor position.
- No impulse is coming from the Electric drive motor.
- No impulse is coming from the metering roller.
- The forward speed is too low (The metering roller cannot be turned slowly enough to attain the required seedrate at such a slow speed)
- The forward speed is too high (The metering roller cannot be turned quickly enough to attain the required seedrate at such a fast forward)
- The fan is not running (possible disconnection – Menu No. 140.0)

D1 - Descriptions Of The Alarm Functions

LOW HOPPER LEVEL ALARM

On the display both the symbols for the tank and the number of kg in the tank flash and the acoustic alarm emits a beep every second for the first 20 seconds, after that emits 2 beeps with an interval of 1 second every 20 seconds.

The following alarms are activated only when seeding is in operation.

THE ELECTRIC MOTOR IS NOT WORKING
The symbols "?" and “Metering sensor” will flash on the display and the acoustic alarm will sound 3 beeps per second constantly.

THE METERING ROLLER IS NOT TURNING
The symbols "?" and “Metering sensor” will flash on the display and the acoustic alarm will sound 2 beeps per second constantly.

THE FORWARD SPEED IS TOO SLOW
The symbols "?" and "Tortoise" will flash on the display and the acoustic alarm will sound 3 beeps per second constantly – **refer to note in B2.**

THE FORWARD SPEED IS TOO HIGH
The symbols "?" and "Hare" will flash on the display and the acoustic alarm will sound 2 beeps per second constantly.

FAN SPEED ALARM – (IF ACTIVATED)
The symbols "Shaft" and "RPM" will flash on the display and the acoustic alarm will sound 3 beeps per second constantly.

OPICO LIMITED
Cherry Holt Road, Bourne, Lincs, PE10 9LA

T: 01778 421111 F: 01778 425080
E: ask@opico.co.uk W: http://www.opico.co.uk

Seeder Electronic Control Box Display Symbols

Printer	GPS	Menu Menu adjustment	<I/O>
Drive too fast	Mod.	Drive too slow	% Seed rate correction increase/decrease
Working width		Metering roller + agitator sensor	Sown quantity per ha
Land wheel sensor	Seeder on		
? Fault	P1	Forward speed	Auto
Man	Test	Min	Imp Counting pulse
Max	Distance - mtr	Work time - hr	Area sown - ha
Tank content - kg + sensor	Battery amps	Sown quantity - kg	
	Rpm Fan speed		

OPICO LIMITED
Cherry Holt Road, Bourne, Lincs, PE10 9LA

T: 01778 421111 F: 01778 425080
E: ask@opico.co.uk W: http://www.opico.co.uk

SECTION E

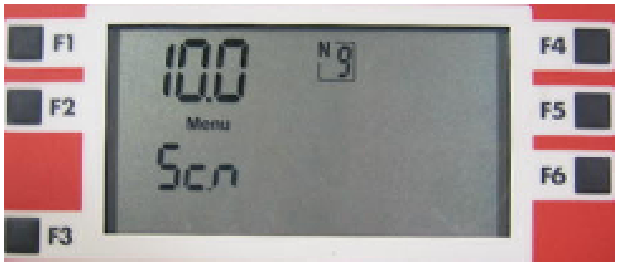
E - ACCESSING BACKGROUND MENUS - THE USER MENU

E1 Altering the number of standard working widths – 10.0

To access the user background menu:

PRESS Ok AND F2 TOGETHER FOR 2 SECONDS.

Menu 10.0 will appear which will look like this



This menu lets you alter the number of pre-set standard working widths.
If you are keeping the seeder on the same machine at all times, you only need one working width.

This display indicates how many standard working widths are stored in the box 1-9

To alter the number of pre-set standard working widths:

- PRESS F4 UNTILL THE DISPLAY STARTS TO FLASH
- USE ▼ ▲ TO ALTER NUMBER OF PRE-SET STANDARD WORKING WIDTHS TO DESIRED AMOUNT.
- PRESS Ok TO STORE.
- PRESS Esc TO RETURN TO WORKING SCREEN.

OPICO LIMITED
Cherry Holt Road, Bourne, Lincs, PE10 9LA

T: 01778 421111 F: 01778 425080
E: ask@opico.co.uk W: http://www.opico.co.uk

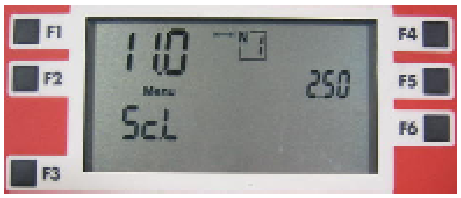
E2. - HOW TO ALTER A PRE-SET STANDARD WORKING WIDTH - 11.0

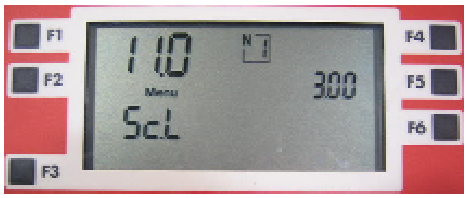
If your desired working width is not one of the preset working widths then you need to manually change one of the pre-sets.

To alter pre-set standard working width to desired working width

- PRESS Ok AND F2 TOGETHER FOR 2 SECONDS.
- SCROLL DOWN TO **MENU 11.0** USING ▼ ▲.

Menu 11.0 looks like this - This is an example of changing pre-set 2.5m working width to 3.0m working width





The value shown next to F5 is the working width in metres. The value in the square box is the pre-set number N1.

To alter the pre-set working width (N1):

- PRESS F5 UNTILL THE VALUE STARTS FLASHING
- ALTER THE VALUE TO YOUR DESIRED WORKING WIDTH USING ▼ ▲
- PRESS Ok TO STORE.
- PRESS Esc TO RETURN TO WORKING SCREEN.

PLEASE NOTE

Now you have altered the pre-set working width you need to select it in MENU 2.0 (See below and section B3)
To do this:

- STARTING AT THE NORMAL WORKING SCREEN PRESS AND HOLD F2 FOR 2 SECONDS
- SCROLL DOWN TO **MENU 2.0** USING ▼ ▲.

- PRESS F3 UNTILL THE SYMBOL STARTS FLASHING
- USE ▼ ▲ TO FIND YOUR ALTERED WOKING WIDTH
- PRESS Ok TO STORE.
- PRESS Esc TO RETURN TO WORKING SCREEN.

YOUR WORKING WIDTH IS NOW SET

OPICO LIMITED
Cherry Holt Road, Bourne, Lincs, PE10 9LA

T: 01778 421111 F: 01778 425080
E: ask@opico.co.uk W: http://www.opico.co.uk

E3 - HOW TO ALTER THE CAPACITY OF THE TANK – 20.0

To alter the pre-set Tank Capacity

- PRESS Ok AND F2 TOGETHER FOR 2 SECONDS.
- SCROLL DOWN TO **MENU 20.0** USING ▼ ▲.

Menu 20.0 looks like this

The value shown next to F5 is the Tank Capacity in Kg's.

To alter the pre-set Tank Capacity

- PRESS F5 UNTIL THE VALUE STARTS FLASHING
- ALTER THE VALUE TO YOUR DESIRED CAPACITY USING ▼ ▲
- PRESS Ok TO STORE.
- PRESS Esc TO RETURN TO WORKING SCREEN.

OPICO LIMITED
Cherry Holt Road, Bourne, Lincs, PE10 9LA

T: 01778 421111 F: 01778 425080
E: ask@opico.co.uk W: http://www.opico.co.uk

E4 . HOW TO ALTER THE RELATIONSHIP BETWEEN THE MOTOR AND METERING ROLLER – 30.0

To alter the pre-set Number of impulses

- PRESS Ok AND F2 TOGETHER FOR 2 SECONDS.
- SCROLL DOWN TO **MENU 30.0** USING ▼ ▲.

Menu 30.0 looks like this

The value shown next to F5 is the number of impulses. **Standard Setting is 750 - DO NOT ALTER THIS SETTING.**

To alter the pre-set Number of Impulses

- PRESS F5 UNTIL THE VALUE STARTS FLASHING
- ALTER THE VALUE TO YOUR DESIRED CAPACITY USING ▼ ▲
- PRESS Ok TO STORE.
- PRESS Esc TO RETURN TO WORKING SCREEN.

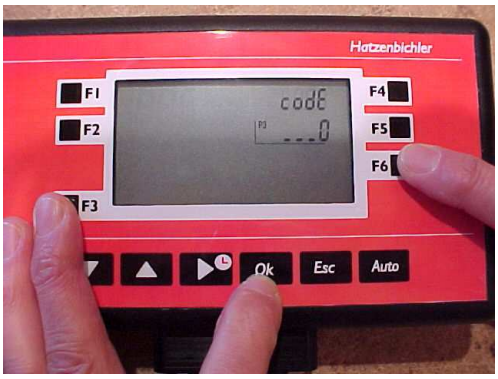
OPICO LIMITED
Cherry Holt Road, Bourne, Lincs, PE10 9LA

T: 01778 421111 F: 01778 425080
E: ask@opico.co.uk W: http://www.opico.co.uk

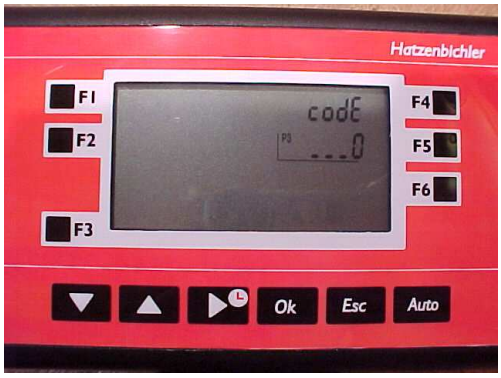
SECTION F

SERVICE FUNCTIONS

To access further special functions press keys “F3, OK AND F6” all at the same time for 2 seconds



The screen below will appear and a code needs to be entered to access the different functions.



The Codes below can then be used to access the different menu’s –

F1) CODE 50 – How to alter the lighting on the display – 191.0

Key F4 – (Factory Setting - 0) Light Sensor not fitted
Key F5 – (Factory Setting - 10) Display lighting activation – not in use
Key F6 – (Factory Setting - Yes) Lighting in the display – Yes / No

OPICO LIMITED
Cherry Holt Road, Bourne, Lincs, PE10 9LA

T: 01778 421111 F: 01778 425080
E: ask@opico.co.uk W: http://www.opico.co.uk

F2) CODE 82 – Settings for the Motor and Metering Roller –

Scroll around the Menus using the up and down arrows -

Menu No. 150.0: (Factory Setting – 35), The setting will be displayed beside the F5 Key, it is the rotation speed of the metering roller during calibration (RPM).

For the most accurate calibration the speed of the seed roller in calibration should be as close to its speed in work. The working width and type of seed roller being used will obviously influence this rpm so there are some guide settings below.

a)	Grass seeding at 10 kph	-	35 rpm
b)	OSR seeding at 10 kph	-	25 rpm
c)	OSR seeding at 5 kph	-	15 rpm

Menu No. 151.0: (Factory Setting – 5), the setting will be displayed beside the F5 Key, it is the percentage change increment that seed rate is increased or decreased when the up and down arrows are used in seeding mode.

Menu No. 152.0: (Factory setting – No), the setting will be displayed beside the F5 Key – It determines what happens to the metering Roller when the forward speed is too low and the alarm is sounding. When driving too slowly the metering roller axle can be set to stop or drive at minimum speed.

No = Metering Roller stops.
Yes = Metering Roller drives at minimum speed – advisable in most circumstances with OSR

Menu No. 153.0: (Factory setting – 30), the setting will be displayed beside the F5 Key – It represents the minimum number of motor pulses the control box can receive per second. (Range = 10 to 99)

Menu No. 153.1: (Factory setting – 100), the setting will be displayed beside the F5 Key – It represents the maximum number of rotations per minute of the metering roller. (Range = 50 to 250)

Menu No. 153.2: (Factory setting – 5), the setting will be displayed beside the F5 Key – It represents the number of pulses taken for the average calculation of RPM. (Range = 2 to 10)

Menu No. 153.3 (Factory setting – 5), the setting will be displayed beside the F5 Key – It represents the regulation factor. (Range = 1 to 9)

Menu No. 154.0: (Factory setting – 5), the setting will be displayed beside the F5 Key – It represents the minimum number of boost pulses at the start. (Range = 0 to 250)

Menu No. 154.1: (Factory setting – 50), the setting will be displayed beside the F5 Key – It represents the minimum number of pulses after the start boost. (Range = 0 to 250)

Menu No. 154.2: (Factory setting – 50), the setting will be displayed beside the F5 Key – It represents the boost power %. (Range = 1 to 99)

Menu No. 154.3: (Factory setting – 10), the setting will be displayed beside the F5 Key – It represents time in 10ths of a second between the end of the boost and the start of normal metering. (Range = 1 to 50)

Menu No. 155.0: (Factory setting – 17000), the setting will be displayed beside the F5 Key – It represents the PWM frequency. (Range = 5000 to 20000)

OPICO LIMITED
Cherry Holt Road, Bourne, Lincs, PE10 9LA

T: 01778 421111 F: 01778 425080
E: ask@opico.co.uk W: http://www.opico.co.uk

F3) CODE 166 – Resetting all the Jobs to 0

This is used to reset all the job data including Job No. 0. - (Ha, Distance, Quantity spread, Start/stop time, Travel time and Work time).

Press OK once the code has been entered

F4) CODE 169 – Resetting all the Jobs to 0

This is used to reset all the job data but **without including Job No. 0**. - (Ha, Distance, Quantity spread, Start/stop time, Travel time and Work time).

Press OK once the code has been entered

F5) CODE 183 – Resetting the Control Box – Type 1

This is used to reset the Control Box to Standard Settings.

Press OK once the code has been entered

F6) CODE 321 – Switching the Fan Alarm on and off – 140.0

Key F5 - Yes / No – to switch the acoustic alarm for the fan on and off (only on hydraulic fan units – where sensor is fitted)

OPICO LIMITED
Cherry Holt Road, Bourne, Lincs, PE10 9LA

T: 01778 421111 F: 01778 425080
E: ask@opico.co.uk W: http://www.opico.co.uk

SECTION G

TEST FUNCTIONS

There is a test menu to enable the operator to simulate working the machine and check sensors and control box functions. To access this menu press keys “F3 and F4” at the same time for 2 seconds.

The screen below will appear once the buttons above have been pressed. Menu 190 is the test menu and the up and down arrows can be used to scroll around the different menu numbers.

G1 – Forward speed simulation – 190.0

When static a forward speed impulse can be simulated so that the seeder works as if driving along the field. This is useful when first learning to use the control box and as a check if there is a problem.

The screen above shows a preset forward speed of 6km/h and the **’no’** in the right hand corner shows that the forward speed test function is not working. Press F6 twice to select yes. Whilst the forward speed is flashing it is possible to alter the forward speed used in the simulation. Press OK to confirm and Esc to go back to the main working screen. The forward speed will now be displayed on the main screen with a flashing **“Test”** symbol to show that the control box is in Test mode. Operation of the Seeder can now be simulated by pressing the **Auto** mode. To exit test mode reverse the process used to enter it.

Whilst in Test Mode and on the normal front screen it is possible to change the simulated forward speed by pressing the “ESC” Key and the up or down arrow at the same time.

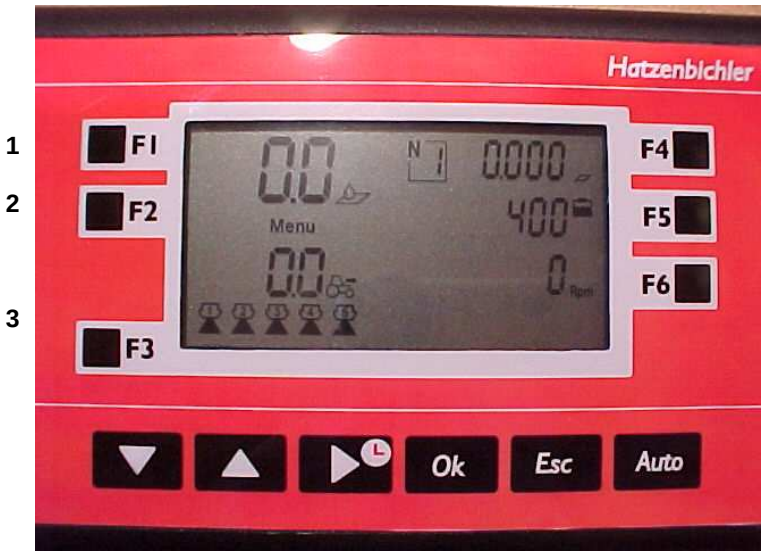
OPICO LIMITED
Cherry Holt Road, Bourne, Lincs, PE10 9LA

T: 01778 421111 F: 01778 425080
E: ask@opico.co.uk W: http://www.opico.co.uk

G2 – Testing the Keys – 190.1

By entering the test menu and selecting Menu 190.1 the operation of the keys can be checked.

When a key is pressed the number of the key will appear in the top right hand corner of the display near the F4 button. The numbers around the picture below indicate the Number of each Key



OPICO LIMITED
Cherry Holt Road, Bourne, Lincs, PE10 9LA

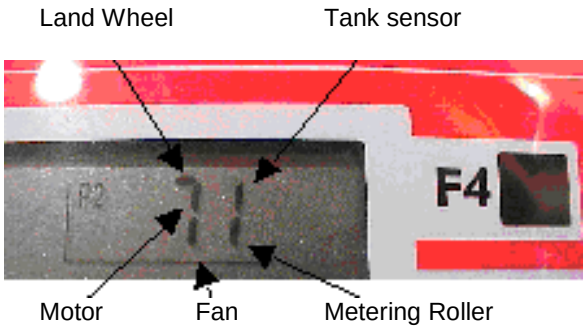
T: 01778 421111 F: 01778 425080
E: ask@opico.co.uk W: http://www.opico.co.uk

G3 – Testing the Sensors – 190.2

By entering the test menu and selecting Menu 190.2 the operation of the sensors can be checked.

Each sensor is represented on the display in the top right hand corner by a line. When the sensor is activated the line will appear and when it is deactivated the line will disappear.

The picture below shows the lines and what they represent.



G4 – Testing the Battery Volts – 190.3

By entering the test menu and selecting menu 190.3 the volts being supplied to the control box can be seen.

OPICO LIMITED
Cherry Holt Road, Bourne, Lincs, PE10 9LA

T: 01778 421111 F: 01778 425080
E: ask@opico.co.uk W: http://www.opico.co.uk

G5 – Testing the Motor – 190.4

By entering the test menu and selecting Menu 190.4 you can check the number of impulses coming from the motor per rotation of the metering roller.

When the F6 key is pressed it activates the motor and the pulses will be counted in the top right hand corner next to the F4 button. The number of pulses per revolution should equal the number of pulses set in Menu 30.0 see section E

OPICO LIMITED
Cherry Holt Road, Bourne, Lincs, PE10 9LA

T: 01778 421111 F: 01778 425080
E: ask@opico.co.uk W: http://www.opico.co.uk

SECTION H – OPERATING THE SEEDER IN THE FIELD

Once the seeder has been calibrated and the correct settings for the machine it is mounted on entered in the control box you are ready to go seeding.

The Control Box should be set on the standard working screen, if it is not press the ESC button to return to this screen.

Remember to switch the hydraulic or electric fans on before you start seeding !!!!

Once the hopper is filled with seed and the fans are switched on you are ready to go seeding. Press the **Auto** button so that the drill symbol appears in the middle of the display. As soon as the machine is in work and the land wheel starts to turn the seeder will start to operate.

In operation the current seed rate will be displayed in the top left hand corner and the forward speed in Km/h will be displayed in the bottom left. The Area, Distance Travelled, Time Taken, and Seed Used will also begin to count up. At the same time the amount of seed left in the hopper will begin to count down

During operation the up and down arrows can be used to increase and decrease the seed rate being applied in 5% increments.

To stop the seeding operation press the Auto button once more, the drill symbol will disappear from the screen and the seeder will stop seeding.

I) Weights and Measures

The control box works in metric and the ranges below show the maximum and minimum figures used by the box.

Kg/Ha	Seed output	0.0	- 199.9 Kg/Ha
Km/h	Speed	0.0	- 99.9 Km/h
Distance	Distance without dosage	0.000	- 9999 Km
Ha	Surface (worked over)	0.000	- 9999 Hectares
Work time	Start/stop Time	0.00 h/min	- 9999 hours
Tank content	Quantity in tank	0.0	- 9999.9 Kg
Battery tension	Battery tension measured during control	0.0	- 30.0 volt
Kg spread	Quantity spread	0.0	- 9999.9 Kg
Rpm	Current number of revolutions per minute (fan)	0	- 9999 rpm

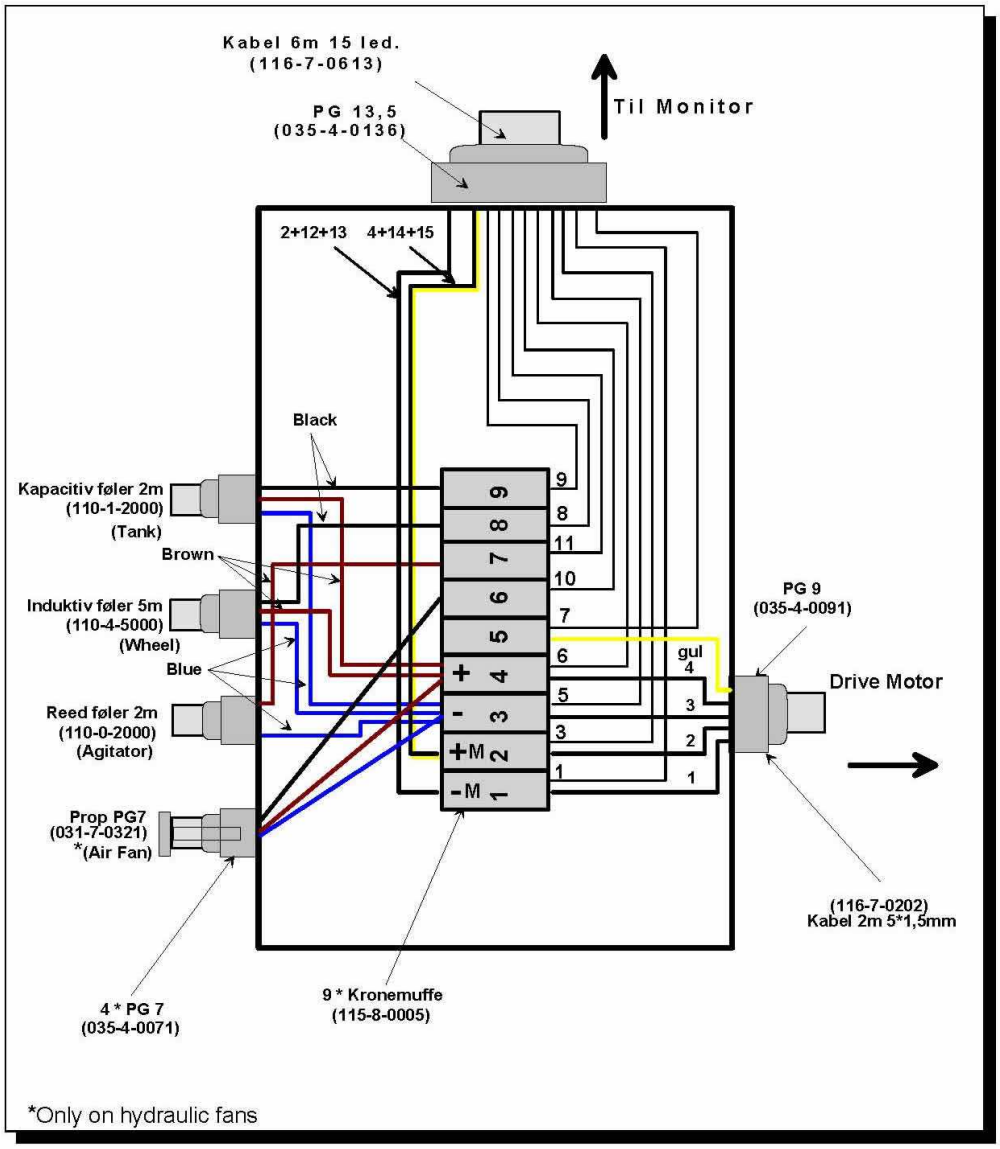
OPICO LIMITED
Cherry Holt Road, Bourne, Lincs, PE10 9LA

T: 01778 421111 F: 01778 425080
E: ask@opico.co.uk W: http://www.opico.co.uk

Air 8/16 Electronic Drive Wiring Diagram

Dokumenthåndbog	Wiring Diagram	Afsnit:	DH 82_03
		Side:	1 af 1
		Udgave:	v-01
Fil: ISO 9004-1	Niveau 3	Effektiv dato:	1998/03/10

Produkt: 012-3-0100	**Samlingsbox**
Tegning nr.: 1.	**Beskrivelse: Diagram til montering af kabel**
Tegning nr.: 2 - 4	**Beskrivelse: Montage**
Flow diagram nr.:	**Beskrivelse:**



OPICO LIMITED
Cherry Holt Road, Bourne, Lincs, PE10 9LA

T: 01778 421111 F: 01778 425080
E: ask@opico.co.uk W: http://www.opico.co.uk

Spare part list

for

Pneumatic seeder

AIR 16

OPICO LIMITED
Cherry Holt Road, Bourne, Lincs, PE10 9LA

T: 01778 421111 F: 01778 425080
E: ask@opico.co.uk W: http://www.opico.co.uk

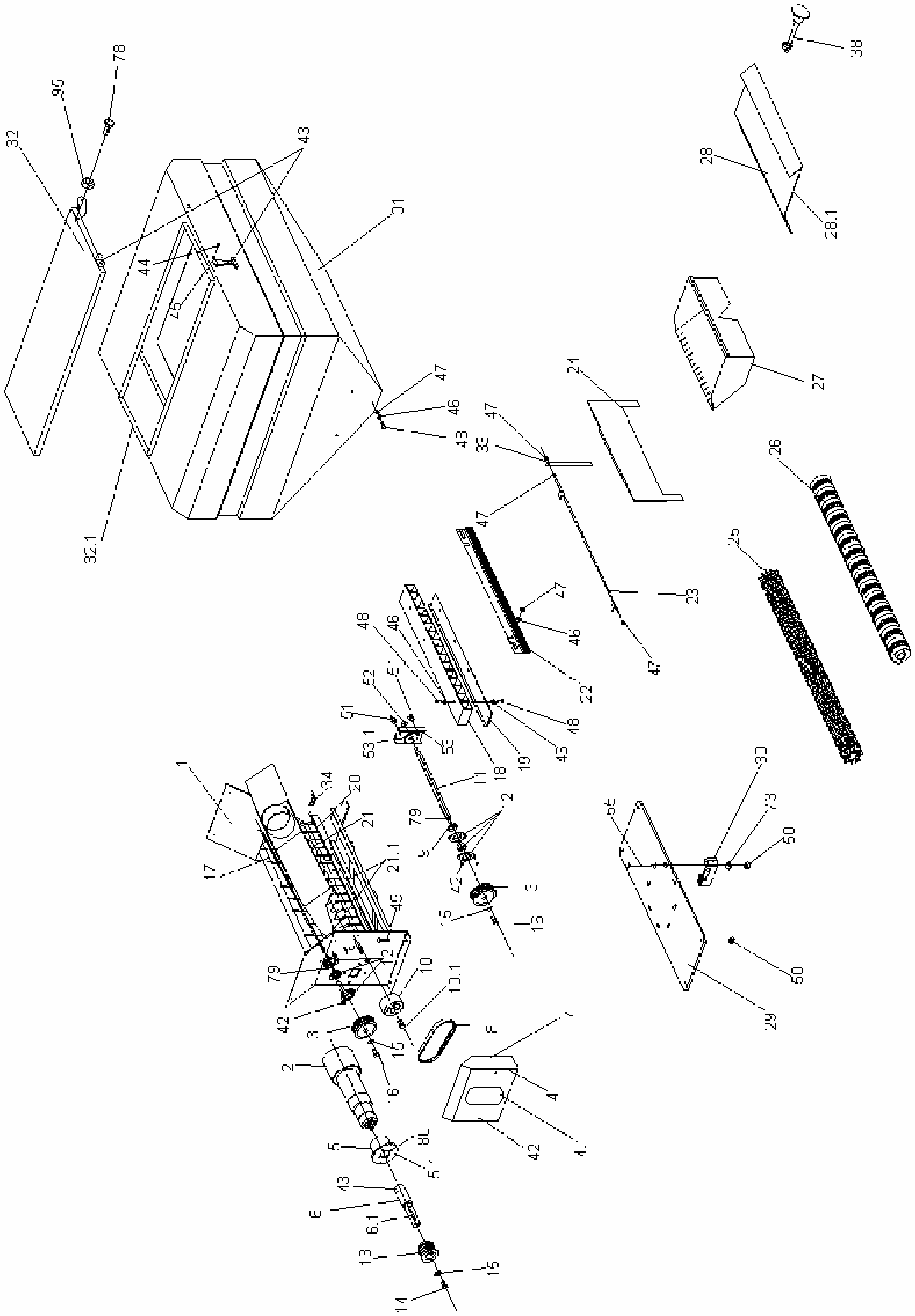
SPARE PARTS LIST FOR PNEUMATIC SEEDER AIR 16

Pos.no.:	*Order nr.:*	
1	931001	Seeder base "Air 16"
2	931187	E-Motor
3	9300141	Toothed-belt roller 36z, Drilling hole 15mm
4	930004	Transmission protection
4.1	9300041	Rubber gasket f. transm. protection, straight 700mm
5	930194	Motor attachment
5.1	9300051	Socket screw M6 x 16
6	931199	Adapter for e-motor
6.1	930096	Fitting key 4 x 4 x 20mm
8	~~930015~~	Toothed belt AT5-500
10	9300101	Tensioner pulley
10.1	9300091	Socket screw M10 x 55
11	931011	Hex. axle
12	930012	Bearing
13	9300031	Toothed-belt roller 18z, Drilling hole 12mm
14	930196	Socket screw M5 x 10
15	930043	Washer M6
16	9300161	Socket screw M6 x 10
17	930017	Agitator
18	930018	PVC piece with 8 holes
19	930019	Hose clamp
21	9300212	Cleaner rubber seal (5 x 20 x 600mm)
21.1	9300213	Lid rubber seal, 90° 300mm long
22	931022	Brush "Air 16"
23	931023	Rods for brush adjustment
24	931024	Flat iron piece "Air 16"
25	931025	Dosage roller rough "Air 16"
26	9310251	Dosage roller fine "Air 16"
27	934820	Calibration tray "Air 16"
28	931027	Cover
28.1	9300271	Rubber seal for cover, straight 160mm long
29	931028	Mounting plate "Air 16"
30	94937	Mounting clamp
31	931030	Seed hopper, "Air 16"
32	39005	Hopper lid "Air 16"
32.1	390051	Rubber seal for hopper lid, 2100mm
33	9300321	Lever short "Air 16"
34	930033	Adjusting notches small
35	930037	Plastic piece 1, size 2
36	930038	Plastic piece 2, size 2
37	930039	Socket screw, M6 x 30
38	930034	Lock complete

FOR TOOTHED BELT USE
679300082 SHORT BELT USED WITHOUT AGITATOR
679300081 LONG BELT USED WITH AGITATOR

OPICO LIMITED
Cherry Holt Road, Bourne, Lincs, PE10 9LA

T: 01778 421111 F: 01778 425080



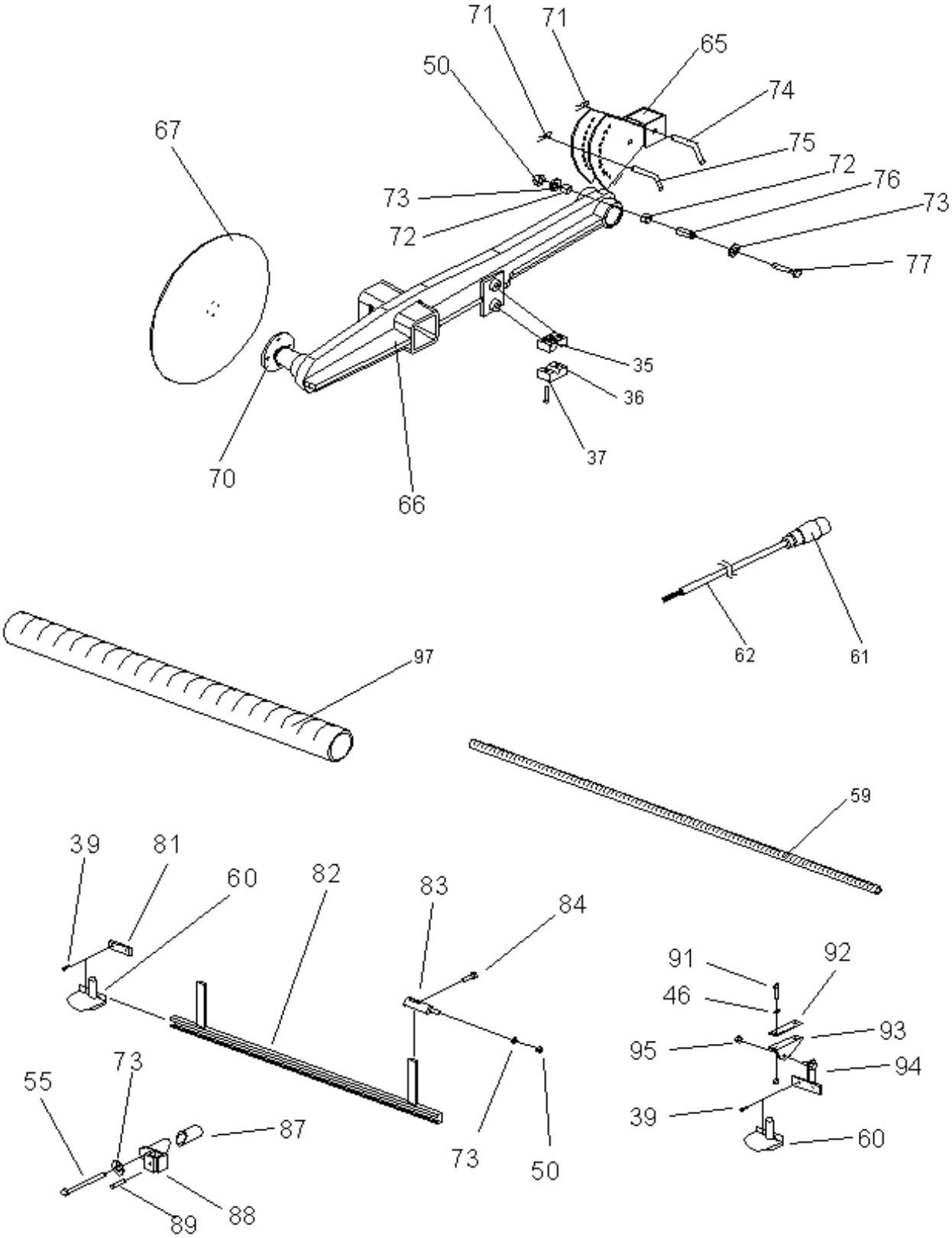
OPICO LIMITED
Cherry Holt Road, Bourne, Lincs, PE10 9LA

T: 01778 421111 F: 01778 425080
E: ask@opico.co.uk W: http://www.opico.co.uk

39	930041	Threaded pin M6 x 12
42	930044	Stop nut M6
43	9300861	Hopper lid lock
44	930196	Hex bolt M5 x 10
45	9300571	Stop nut M5
46	930230	Washer M8
47	70012	Stop nut M8
48	930050	Hex bolt M8 x 16
49	930051	Hex bolt M12 x 30
50	70013	Stop nut M12
51	930053	Nut M6
52	930054	Bearing
53	930055	Bearing zinc coated
53.1	9300551	Plastic disc for bearing zinc coated
55	9300572	Hex bolt M12x130
59	930059	Hose
60	949832	Distributer
65	930065	Hole plate
66	930066	Holder for drive wheel
67	930067	Drive wheel
71	930224	Spring locking pin d=4mm
72	9414	Bush 23/20/15
73	412124	Washer M12
74	930074	Pin d=14
75	930075	Pin d=10
76	930076	Distance tube l=46
77	93225	Hex bolt M12x70
78	93229	Hex bolt M10x35
79	930090	Fitting key 5 x 5 x 20mm
80	930193	Socket screw M5 x 16
81	949831	Bracket 25 x 70 x 6
82	39111	C-profile / m
82.1	391011	C-profile l=1,50m
82.2	391022	C-profile l=2,00m
83	80272	Holder for c-profile;V6
84	930214	Hex bolt M12 x 20
87	93935	Expand bracket 1
88	93934	Expand bracket 2
89	930220	Allen screw M12 x 20
91	9316S	Hex bolt M8 x 30 with nut
92	949833	Bracket 90 x 25 x 6
93	949834	Bracket to fit distributor in bed, part 1
94	949835	Bracket for distributor in bed
95	70017	Stop nut M10

OPICO LIMITED
Cherry Holt Road, Bourne, Lincs, PE10 9LA

T: 01778 421111 F: 01778 425080
E: ask@opico.co.uk W: http://www.opico.co.uk



OPICO LIMITED
Cherry Holt Road, Bourne, Lincs, PE10 9LA

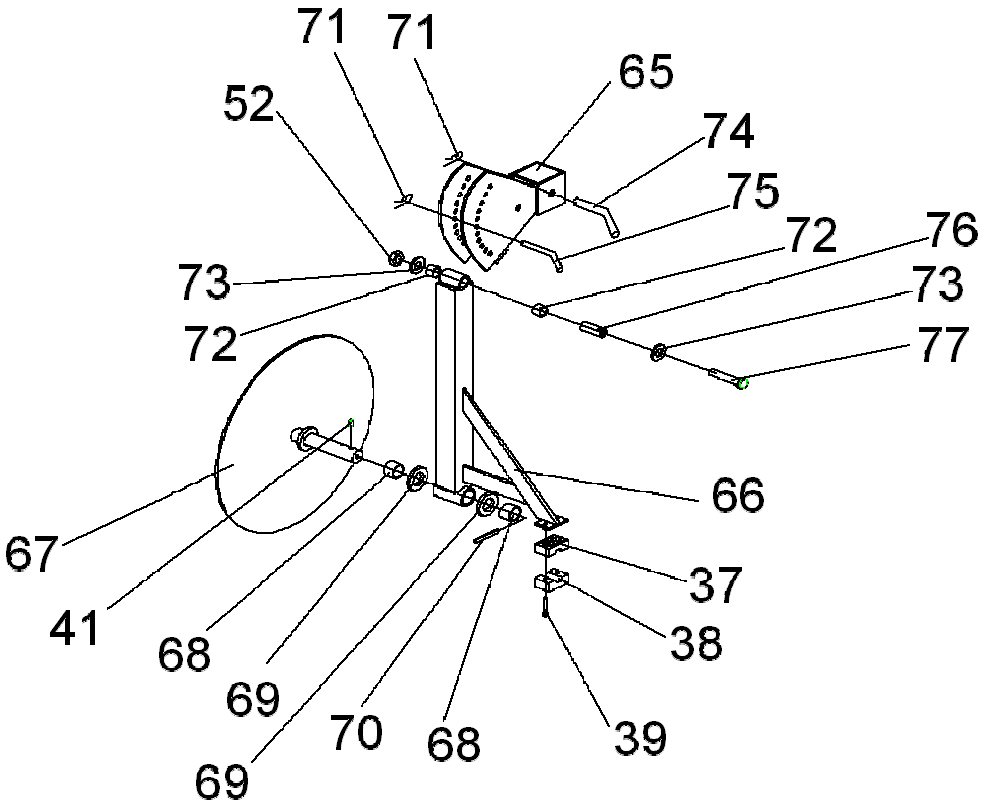
T: 01778 421111 F: 01778 425080
E: ask@opico.co.uk W: http://www.opico.co.uk

YEAR OF MANUFACTURE BEFORE 2004

Pos.no.:	Order no.	
37	930037	Pipe clamp part 1
38	930038	Pipe clamp part 2
39	930039	Allen bolt M6 x 25 plated
41	930041	Threaded shaft M8 x 10
52	70013	Nut M12
61	67931188	Land-wheel sensor
65	930065	Hole plate for ground wheel
66	930066	Holder for drive wheel
67	930067	Drive wheel
68	9348	Glacier bush 32/28/20
69	930069	Distance ring
70	95128	Roll pin 8 x 40
71	930224	Spring pin d = 4mm
72	9414	Glacier bush 23/20/15
73	412124	Washer A12
74	930074	Pin d = 14
75	930075	Pin d = 10
76	930076	Distance tube l = 46
77	93225	Screw M12 x 70

OPICO LIMITED
Cherry Holt Road, Bourne, Lincs, PE10 9LA

T: 01778 421111 F: 01778 425080
E: ask@opico.co.uk W: http://www.opico.co.uk

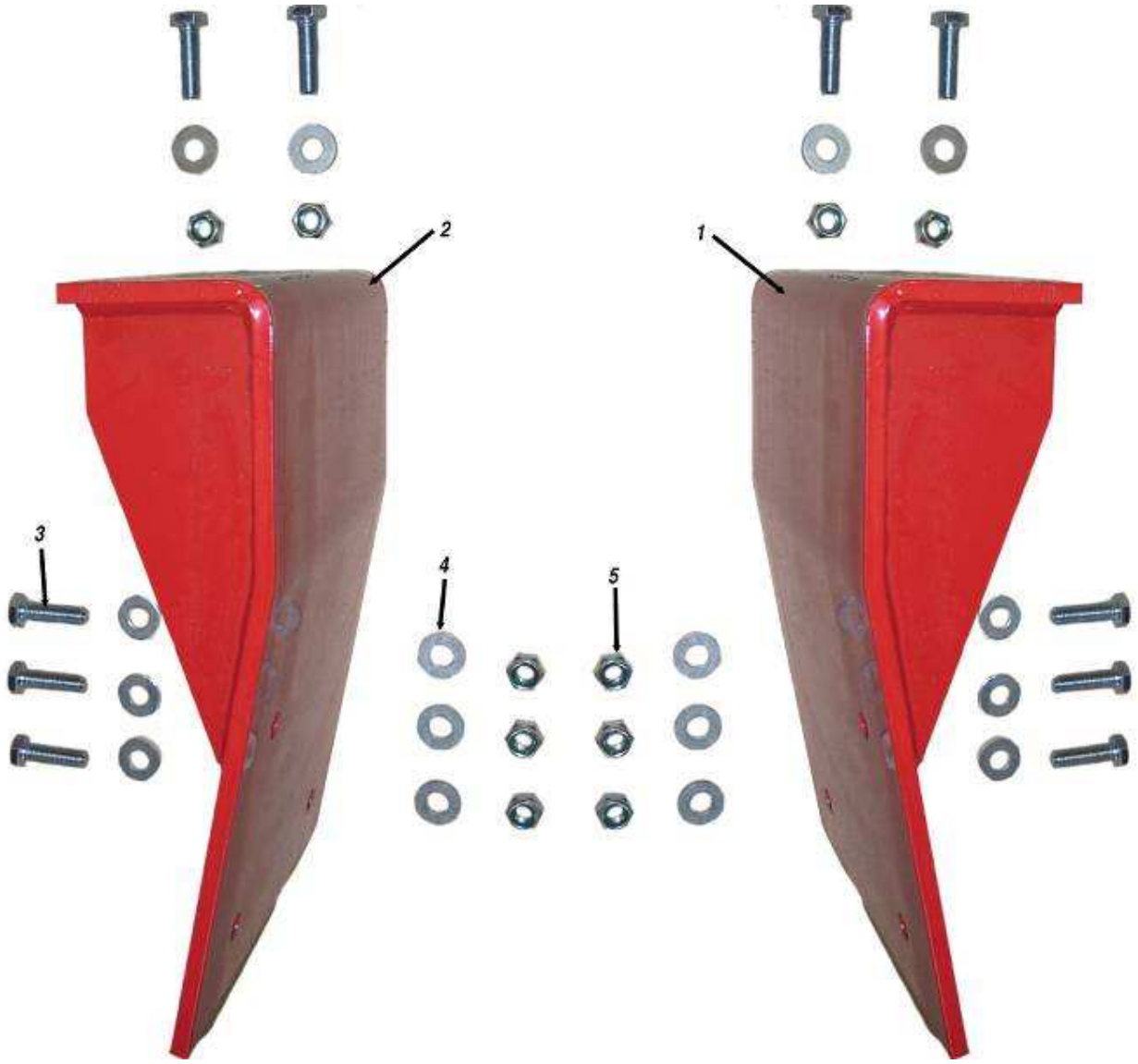


OPICO LIMITED
Cherry Holt Road, Bourne, Lincs, PE10 9LA

T: 01778 421111 F: 01778 425080
E: ask@opico.co.uk W: http://www.opico.co.uk

MOUNTING BRACKET FOR AIR 16

Pos.no:	*Order nr:*	
1	930185	Mounting bracket – right part
2	930186	Mounting bracket – left part
3	930058	Hex bolt M12 x 40
4	412124	Washer M12
5	70018	Nut M12



OPICO LIMITED
Cherry Holt Road, Bourne, Lincs, PE10 9LA

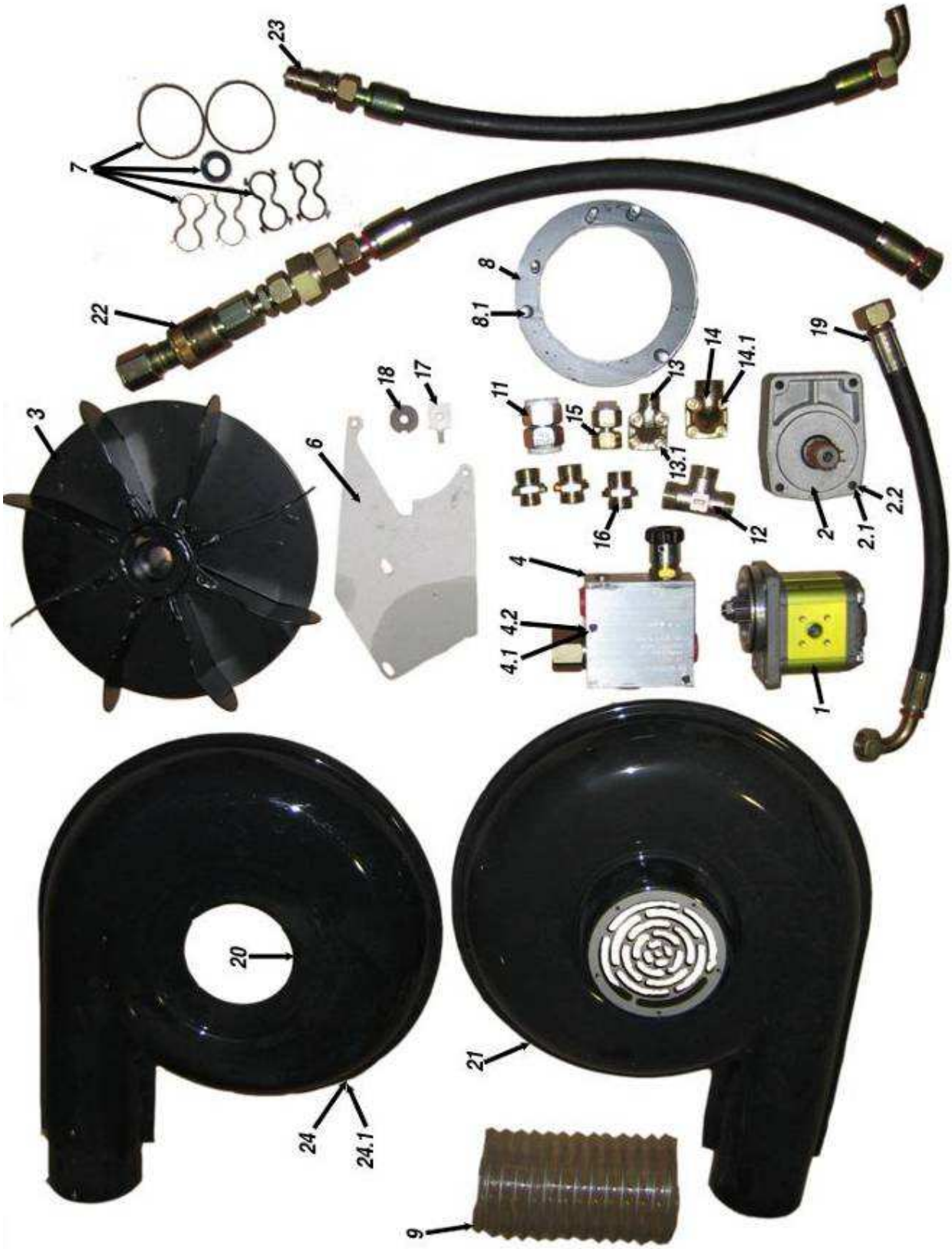
T: 01778 421111 F: 01778 425080
E: ask@opico.co.uk W: http://www.opico.co.uk

SPARE PARTS LIST FOR HYDRAULIC FAN – PLASTIC VERSION (-> END 2005)

Pos.no.:	*Order nr.:*	
1	930084	Oil motor
2	930162	Gear box
2.1	931094	Hex bolt M8 x 90
2.2	70036	Nut M8
3	930163	Rotor
4	930164	Valve unit
4.1	931095	Hex bolt M8 x 70
4.2	70036	Nut M8
5	930165	Flange d = 250mm
6	930166	Mounting bracket for valve unit
7	912007	Sealing kit for hydraulic oil motor
8	930167	Ring for fitting housing complete
8.1	70017	Nut M10
9	931081	Air hose l = 1140mm, ID = 115mm
10	930169	Rubber hose pipe reduction
10.1	930170	Hose clamp d = 160mm
10.2	930171	Hose clamp d = 140mm
11	930172	Intermediate piece large
12	930173	T-piece T22L
13	930174	Pipe flange small
13.1	930175	Allen bolt M6 x 20
14	930176	Pipe flange big
14.1	930177	Allen bolt M6 x 40
15	930178	Intermediate piece small
16	930179	Hydraulic pipe fitting for Air 16
17	930180	Safety lock
18	930181	Washer
19	930182	Pressure pipe short
20	9300871	Fan box for hydraulic fan PVC – Part 1
21	9300872	Fan box for hydraulic fan PVC – Part 2
22	930183	Return pipe
23	930184	Pressure pipe
24	930042	Hex bolt M6 x20
25	930044	Nut M6

OPICO LIMITED
Cherry Holt Road, Bourne, Lincs, PE10 9LA

T: 01778 421111 F: 01778 425080
E: ask@opico.co.uk W: http://www.opico.co.uk



OPICO LIMITED
Cherry Holt Road, Bourne, Lincs, PE10 9LA

T: 01778 421111 F: 01778 425080
E: ask@opico.co.uk W: http://www.opico.co.uk

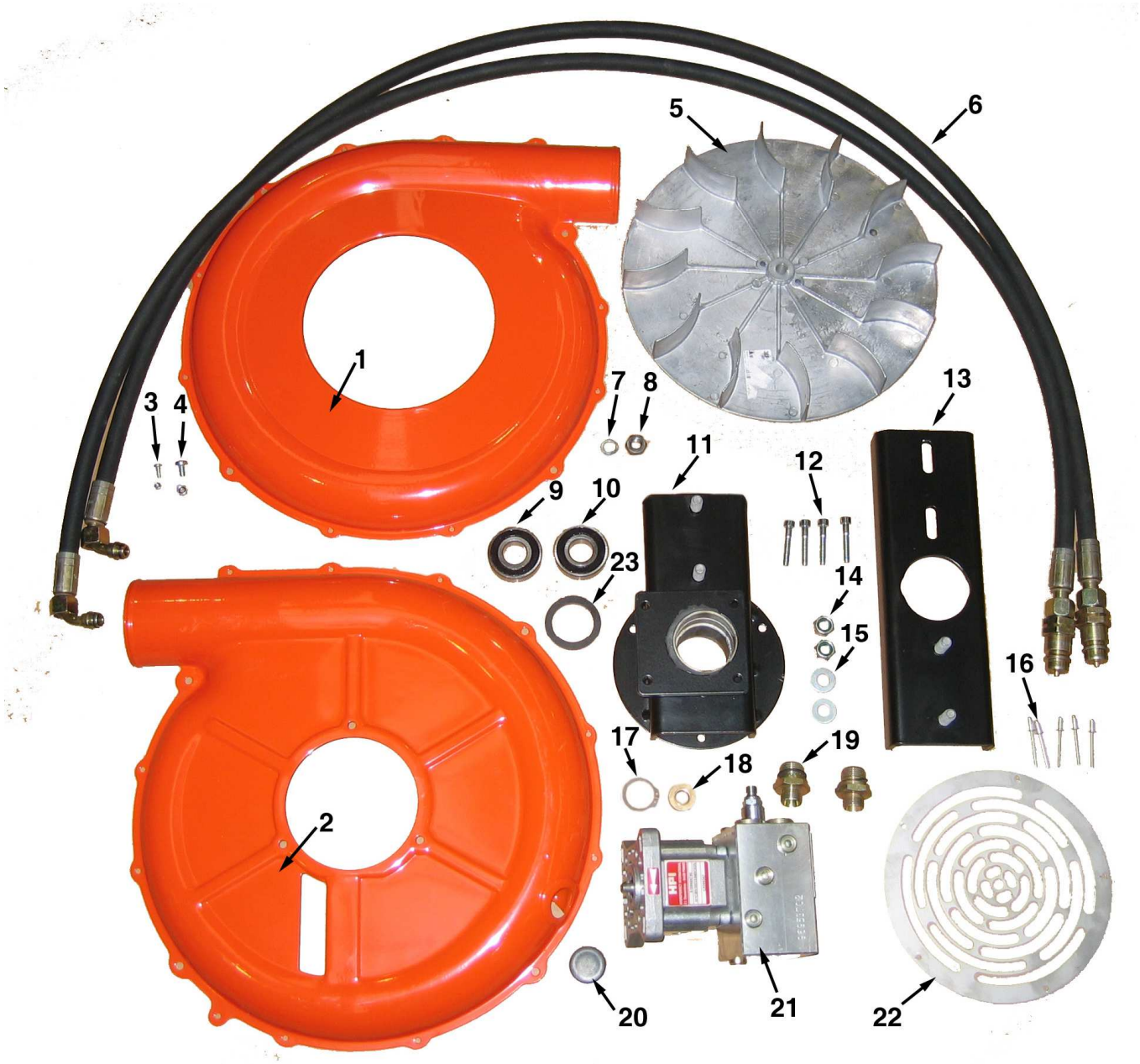
SPARE PARTS LIST FOR HYDRAULIC FAN – STEEL VERSION (2006->)

Pos.no.:	*Order nr.:*	Description
1	9300874	Fan cowling, front (air intake)
2	9300873	Fan cowling, back
3	#	Setscrew, M4 x 10
4	#	Setscrew, M6 x 10
5	9301631	Fan impellar
5a	9614	Fan shaft (uses item 7 & 8)
6	9300406	Hyd pipes
7	#	Spring washer, M10
8	#	Nut, M10 (left hand thread)
9	946204	Bearing
10	946204	Bearing
11	9300404	Bearing housing
12	#	Socket Cap Screw, M6 x 30
13	9300403	Mounting bracket
14	#	Nut, M10
15	#	Flat washer, M10
16	#	Rivet
17	93004	Circlip
18	9120071	Hyd motor seal
19	9300405	Hyd fitting
20	9300402	Plastic plug
21a	930084M	Hydraulic motor
21b	9300841	Diverter valve
22	9300310	Intake guard
22a	9311891	Fan speed sensor
23	9300401	Shim
#	9300407	Bolt & rivet set

OPICO LIMITED
Cherry Holt Road, Bourne, Lincs, PE10 9LA

T: 01778 421111 F: 01778 425080
E: ask@opico.co.uk W: http://www.opico.co.uk

HYDRAULIC FAN 2006 -> STEEL MODEL



OPICO LIMITED
Cherry Holt Road, Bourne, Lincs, PE10 9LA

T: 01778 421111 F: 01778 425080
E: ask@opico.co.uk W: http://www.opico.co.uk

SPARE PARTS LIST FOR ELECTRIC DRIVE AIR 16

Pos.no:	*Order nr*	
1	931186	Bordcomputer
2	931187	E-Motor
2.1	930193	Cylinder head screw M5 x 16
3	9300141	Toothed belt roller 36z, drilling hole d=15mm
4	9300031	Toothed belt roller 18z, drilling hole d=12mm
5	931199	Adapter for e-motor
5.1	930041	Grub-screw M8 x 10
6	930062	Cable harness
	931188	Land wheel sensor
	931189	Hopper sensor
	9120870	Driveline sensor
	9311891	Hyd fan sensor
7	930194	Motor plate with welded pipe
7.1	930042	Hex bolt M6 x 20
7.2	930044	Nut M6
8	930195	Adapter plate for e-motor
9	9300081	Toothed belt, long AT5-500
10	930168	Holder for board computer
11	931190	Printer for board computer
12	9300101	Tensioner pulley
9#	930016	Toothed belt, short AT5-375

OPICO LIMITED
Cherry Holt Road, Bourne, Lincs, PE10 9LA

T: 01778 421111 F: 01778 425080
E: ask@opico.co.uk W: http://www.opico.co.uk

OPICO LIMITED
Cherry Holt Road, Bourne, Lincs, PE10 9LA

T: 01778 421111 F: 01778 425080
E: ask@opico.co.uk W: http://www.opico.co.uk

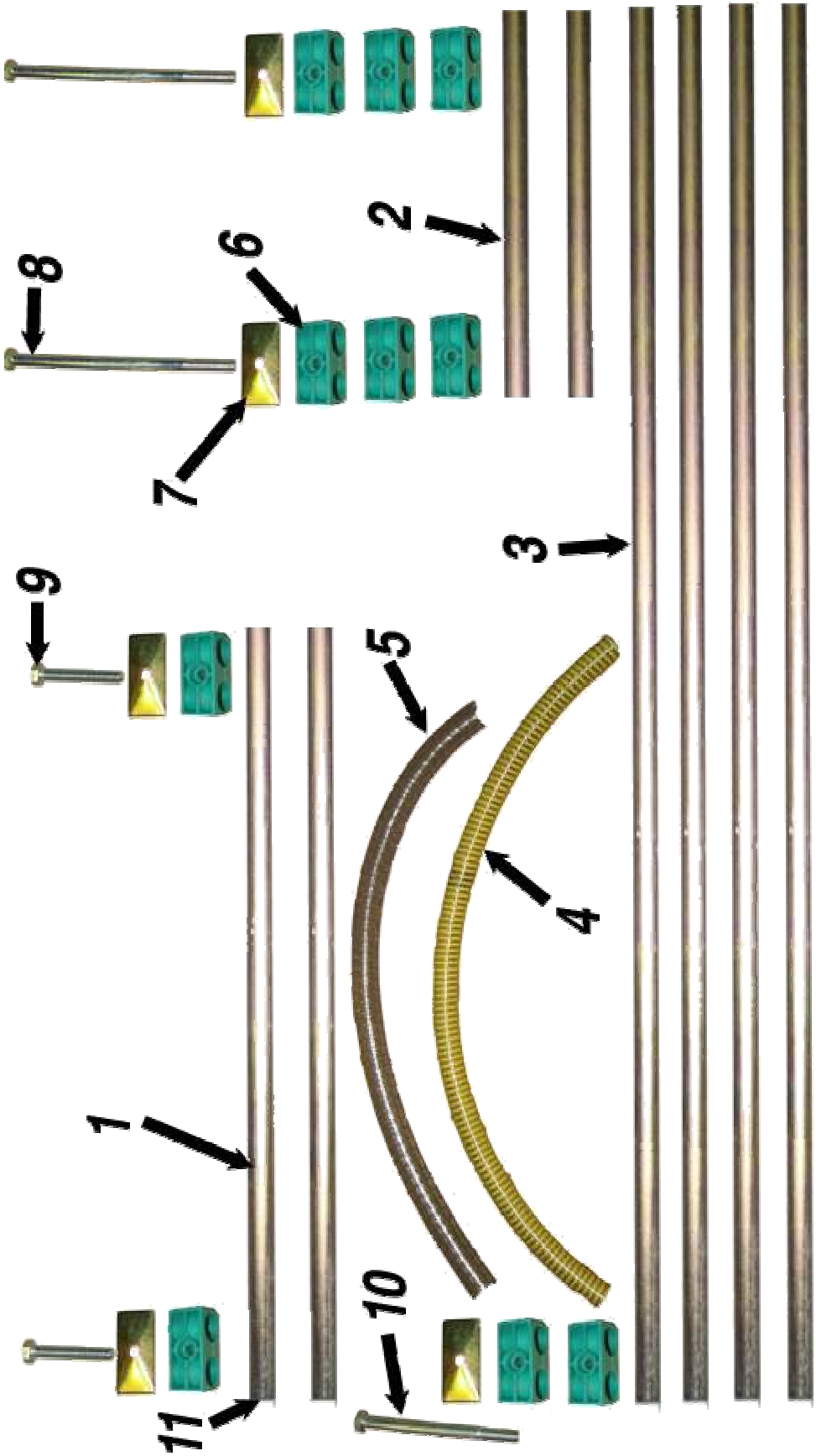
HOSE PIPES FOR AIR 16 – 12m

Pos.no.:	*Order nr.:*	
1	930187	Galvanised steel pipe, d = 25mm; l=1000mm*
2	930188	Galvanised steel pipe, d = 25mm; l=650mm*
3	930189	Galvanised steel pipe, d = 25mm; l=2000mm*
4	930068	Seed pipe (PVC) reinforced*
5	930059	Seed hose for Air seeders*
6	930190	Hose clamp double, size 3
7	930191	Cover for hose clamp double, size 3
8	931093	Hex bolt M8 x 140
9	931097	Hex bolt M8 x 60
10	9310931	Hex bolt M8 x 100
11	94568	Hose clamp d = 25mm

With * marked positions please indicate the length

OPICO LIMITED
Cherry Holt Road, Bourne, Lincs, PE10 9LA

T: 01778 421111 F: 01778 425080
E: ask@opico.co.uk W: http://www.opico.co.uk



OPICO LIMITED
Cherry Holt Road, Bourne, Lincs, PE10 9LA

T: 01778 421111 F: 01778 425080
E: ask@opico.co.uk W: http://www.opico.co.uk

Pos.no.:	***Order nr.:***	
	930093	2 x L-part f. seed roller protection shield, 4 x toggle screws M8
	930100	Protection plate for metering roller Air 16 without attachments