Powder RL80 SP/TA & 80G Applicators

DESCRIPTION

The Powder applicator is purpose-built for application of silage additives and has proved to be thoroughly reliable in use. The highest standards of engineering have been used in its design and manufacture and it is capable of applying additive accurately and efficiently over a wide range of forage harvesting conditions. A number of different options are available:

1. Application via a single wide-bore tube (RL) or 3 narrow tubes (G). The single and triple tube delivery systems are interchangeable – a conversion kit is available from Selmech Supplies.
2. For single-tube application, the granules can be applied via a spread plate (SP) over the pickup or using a tubing adapter (TA) for application directly into the chopping box or air intake system.

RL80

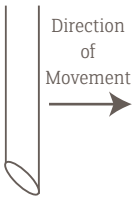
80G

SP

TA

SUPPLIED

1. Motor unit (12v DC supply, fused) with 80 kg capacity PVC hopper and rotor delivery
2. RL80 - Hosetail block with single wide outlet
   80G - Hosetail block with three narrow outlets
3. Fully variable electronic Control Box (15 amp fuse)
4. RL80 - 2.5 metres clear, reinforced PVC tubing (int. Ø 50mm)
   80G - 5 metres clear PVC tubing (int. Ø 25mm)
5. 10 metres electric cable - supplied in one length to be cut as required
6. Set of 3 fillit strips
7. RL80 - 45° coupler/hosetail with lock nut
8. RL80 - Spreadplate or tubing adapter



Cut the ends of the tubing at a 45° angle with the long side facing forward into the direction of travel.

FITTING

The applicator operates from the tractor electrical system, which must have a 12v DC supply. It is important to ensure that maximum output is being produced by the tractor, otherwise applicator output will be reduced and damage to the applicator may result.

1. Mount the hopper in a convenient position on the harvester. As additives are gravity fed, for single tube application (RL80) the angle of the tubing from the hopper to the application site should be at least 45°; for triple tube application (80G),the hopper should ideally be immediately above the application site.
2. Fit the control box in an easily accessible place in the tractor cab.
3. RL80 - Fit the hosetail to the base of the applicator using the coupler, attach the tubing and cut it to the required length. Attach the spread plate or tubing adapter to the delivery end.
   80G - Cut the tubing into three equal lengths and attach to the outlets at the base of the applicator – cut the tubing ends at an angle to help prevent moisture from the forage getting into the ends of the tubing – see diagram above
4. Connect the bullet connectors to the applicator motor (red to red and black to black).
5. Measure the distance from the applicator to the control box and cut the electric cable to the required length. Attach the bare ends of the cable to the 'pump' end of the control box (red to red +ve, black to black -ve).
6. Connect the remaining length of cable to the 'battery' end of the control box (red to red +ve, black to black -ve).
7. Fasten the crocodile clips to the battery (red to positive, black to negative).

WARNING: IT IS ESSENTIAL TO ENSURE THAT THE BATTERY LEADS ARE CONNECTED TO THE END OF THE CONTROL BOX MARKED 'BATTERY' AS WRONG CONNECTION WILL CAUSE DAMAGE.

CONTROL BOX

CONTROL BOX

The applicator is controlled from the tractor cab using the control box. Switch the unit ON then use the variable SPEED knob to control the throughput of powder (see Calibration Chart). The OVERRIDE switch gives instant maximum flow to cope with a sudden increase in the forage throughput.

The control box is protected from overload by a 15 amp fuse. This fuse must never be replaced by any other size or type of fuse or serious damage could occur, either to the applicator or to the tractor's electrical circuits.

OPERATION

1. Check the PVC tubing for damage and kinks and that the connections are secure and the right way round **(never run the motor in reverse).**
2. Make sure there is some additive in the hopper.
3. Switch the motor to ON on the control box and adjust the variable SPEED knob to give the required flow rate (see Calibration Chart). For instant maximum flow, switch to OVERRIDE.

OUTPUT

The output will depend on the characteristics of the silage additive, the motor speed and the control box setting (see calibration chart).

CALCULATING THE FLOW RATE REQUIRED

Measure the time taken to fill a trailer. **Only include actual pick-up time, not time taken turning, etc.**

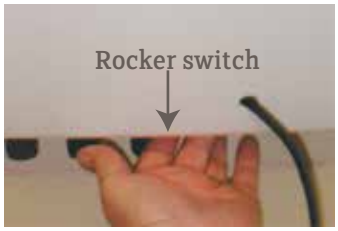
Calculate the flow rate required as follows:

1. Harvest rate (tonnes/min) = $\frac{\text{weight of grass (tonnes)}}{\text{time to fill trailer (mins)}}$

2. Flow rate (grams/min) = harvest rate (tonnes/min) x required application rate (grams/tonne)

CALIBRATION

The table below gives **approximate** flow rates for Ecosyl and the Double Action (DA) range of additives. The switch for selecting the Low or High motor speed is inside the motor housing at the base of the hopper, near the outlets. Press the rocker switch on the left for Low and right for High.

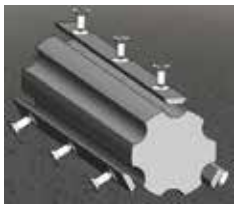


Use the figures in the table as a starting point and **carry out a more accurate calibration** by measuring the output over a set period of time and adjusting the Control Box setting up or down as required.

Control Box Setting	Ecosyl (g/min)		Double Action (g/min)	
	Low	High	Low	High
1	200	300	150	225
2	400	600	400	600
3	600	900	500	750
4	1000	1500	800	1200
5	1200	1800	1000	1500
6	1300	1950	1100	1650
7	1400	2100	1150	1800
8	1500	2250	1250	1875
9	1600	2400	1300	1950
10	1700	2550	1400	2100

Note: These optimum rates can be affected by a poor power supply, an overlong power supply cable or a dirty or kinked delivery tube.

A set of 3 fillit strips is also supplied. These can be used to block off rotor flutes completely, giving further flexibility within any one wiring and/or control box setting. Using all 3 fillit strips would halve the output for any one setting above as there are 6 flutes on the feed roller.



To fit the fillit strips:

1. Undo the 4 bolts and remove the hosetail block
2. Screw the strips into position using the pre-drilled holes
3. Use the control box to position the rotor into the best position
4. Refit the hosetail block

MAINTENANCE

1. During the season, after each use, clean out any powder left in the hopper, rotor and tubing.
2. At the end of the season wash out the hopper and run clean water through the system to make sure any residual additive is removed. Undo the 4 bolts holding on the hosetail unit then clean the rotor and delivery system. Dry before reassembling the unit. Store in a clean, dry place.
3. Never allow the hopper to stand for long storage periods while filled with additive.
4. Never use a higher rated fuse.
5. Do not allow the delivery tubes to become kinked.

TROUBLESHOOTING

Fault	Possible causes	Remedy
Motor not running	Wires incorrectly connected or damaged	Check crocodile clips attached properly to the battery. Check control box wires
	Fuse blown	Replace fuse. Check for reasons blown before restarting
	Defective motor	Contact Selmech
Motor runs but no output	Motor leads wrongly connected	Swop bullet connectors
	Tube kinked	Remove kink & re-route tubing
	Applicator malfunctioning	Contact Selmech
Motor runs/ poor output	Tubing kinked	Remove kink & re-route tubing
	Tubing split	Replace tubing
	Hopper empty	Fill hopper
Wrong application rate	Wrong motor and/or control box setting	Consult calibration chart – NB. Calibration chart gives approximate flowrates only - carry out proper calibration
	Control box malfunctioning	Contact Selmech

WARRANTY

The Powder applicator is guaranteed against failure that can be attributed to faulty workmanship for a period of 12 months from the date of delivery provided that only recommended products are being applied and the recommended installation and maintenance instructions have been observed. Tampering with the components of the Powder applicator will invalidate this guarantee. The applicator manufacturer, Selmech Supplies, reserves the right to change the applicator specification at any time without notice to allow for improvements or modifications to its design.

REPAIRS & SPARES

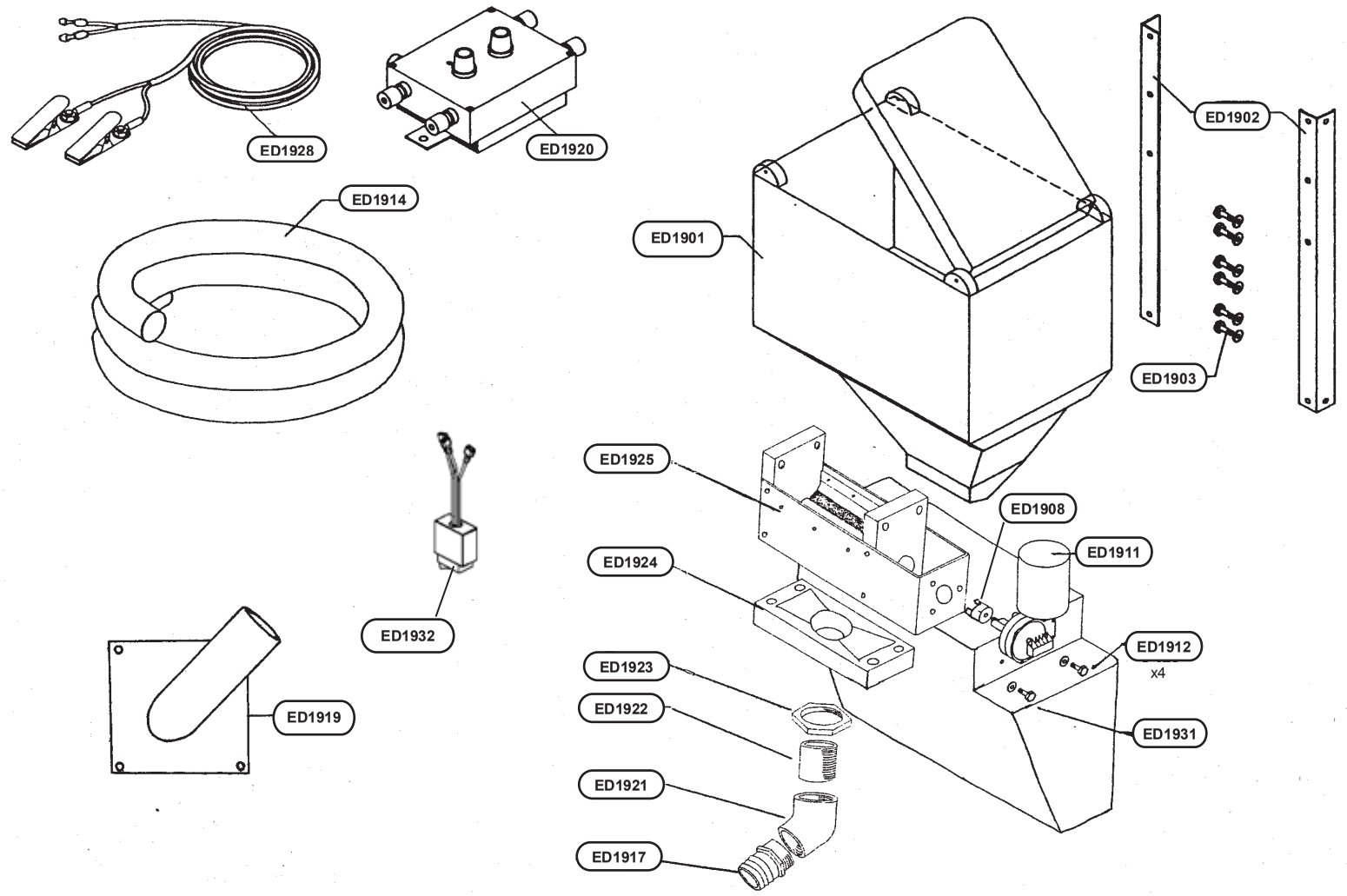
SELMECH SUPPLIES, 19 Norton Enterprise Park, Whittle Road, Churchfield Industrial Estate, Salisbury, Wilts, SP2 7YS, UK. Tel: +44 (0)1722 413440. Fax: +44 (0)1722 413466. Email: admin@selmechsupplies.co.uk.

For more information on 'Eco' Applicators contact:

ECOSYL™

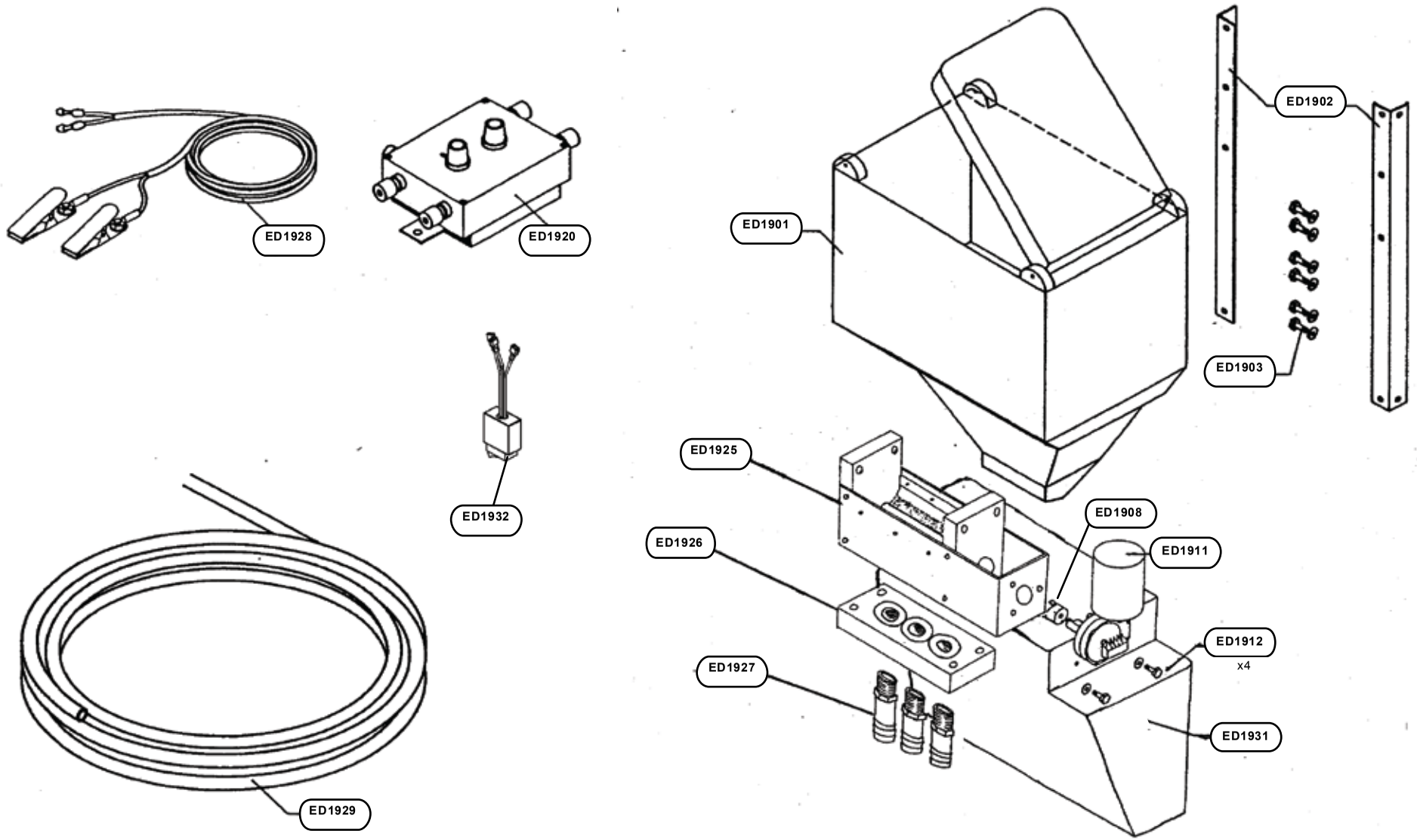
Freephone | 0800 919808 Email | info@ecosyl.com Visit | www.ecosyl.com

RL80 SP/TA Applicator



Selmech Supplies, 19 Norton Enterprise Park, Whittle Road, Churchfield Industrial Estate, Salisbury, Wilts, SP2 7YS, UK.
Tel: +44 (0)1722 413440, Fax: +44 (0)1722 413466. Email: admin@selmechsupplies.co.uk.

Powder 80G Applicator



Spare parts available from:

Selmech Supplies, 19 Norton Enterprise Park, Whittle Road, Churchfield Industrial Estate, Salisbury, Wilts, SP2 7YS, UK.
Tel: +44 (0)1722 413440, Fax: +44 (0)1722 413466. Email: admin@selmechsupplies.co.uk.