



### 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. Two 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. The 80G is ideal for application over the pickup, delivering product evenly via 3 narrow tubes. The RL80 delivers product directly into the chopping box or air intake via a single wide tube.

### 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 reinforced PVC tubing (int. Ø 40mm)  
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

## 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 hose to the base of the applicator using the coupler, cut the tubing to the required length. Attach the tubing 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
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. Connect the other end to a fused 12 volt DC supply (red to positive, black to negative).

### For triple outlet option



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

**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

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) = weight of grass (tonnes) divided by 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. Change the wiring inside the motor housing for Low or High motor speed

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.

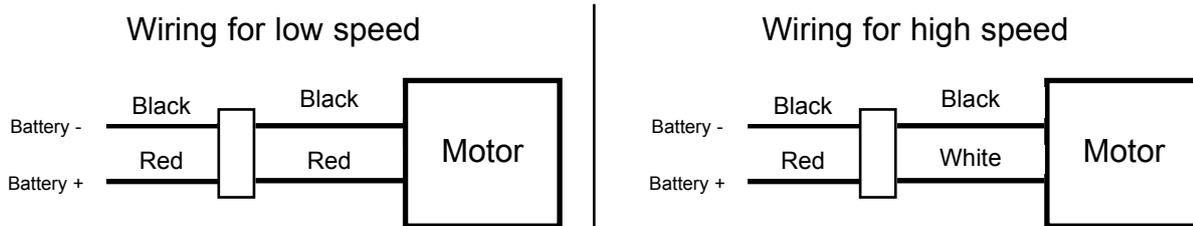
Control Box Setting	Ecosyl (g/min)		Double Action (g/min)	
	Low	High	Low	High
1	200	300	150	225
2	400	600	400	600
3	600	900	500	750
4	1000	1500	800	1200
5	1200	1800	1000	1500
6	1300	1950	1100	1650
7	1400	2100	1150	1800
8	1500	2250	1250	1875
9	1600	2400	1300	1950
10	1700	2550	1400	2100

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

### How to increase the factory set output range of the applicator: -

By connecting the white wire in place of the red from the motor to the red wire on the power cable as shown below will increase the speed of the feed rotor by approximately 50%

### FEED MOTOR SPEED CHANGE

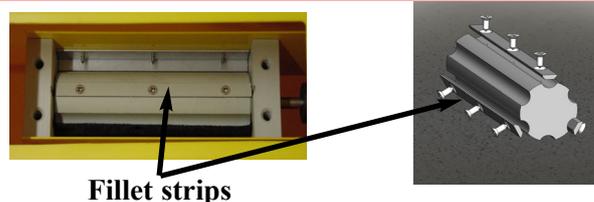


### How to reduce the factory set output range of the applicator: -

By fitting the set of Fillet strips in normal speed the output is reduced by approximately 50%

#### To fit

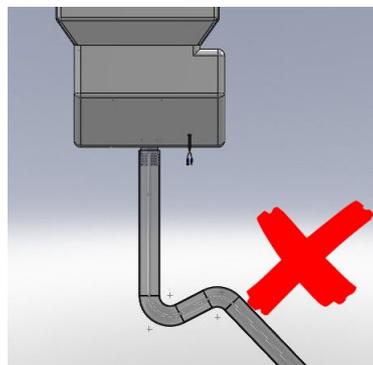
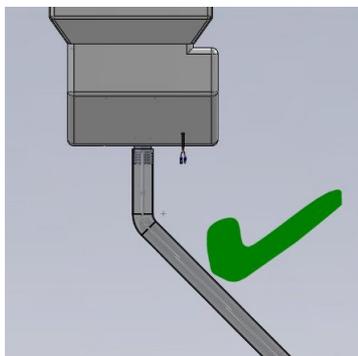
1. Remove the hose tail block.
2. Screw strips into position in flutes with pre-drilled holes.
3. Use control box to rotate rotor into position to expose holes.
4. Re-fit the hose block.



## 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.

The additive is gravity fed down the tubing. DO NOT kink or dress up hill



## TROUBLESHOOTING

Fault	Possible Causes	Remedy
Motor does not run	Wires incorrectly connected or damaged.	Check that the power cable is soundly attached to a fused 12volt DC supply and the fuse is not blown. Check condition of wires. Check wires are connected to all terminals.
	Fuse blown.	Replace fuse, check reason for blown fuse before restarting.
	Defective motor.	Contact representative.
Motor runs but no output	Leads to applicator incorrectly connected.	Transpose bullet connectors on motor.
	Pipes blocked or kinked.	Remove kink and clean pipe work.
	Applicator malfunctioning.	Contact representative.
Motor runs but poor output	Kink in delivery pipes.	Remove kink.
	Empty hopper.	Fill hopper.
Wrong application rate	Incorrect setting.	Consult flow chart.
	Control box malfunctioning.	Consult representative.

## 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.

## TECHNICAL DATA

Supply Voltage	12V/DC (10.6V DC to 16.4V/DC)
Current consumption	2.8A
Fuse rating	15A
Dimensions (without tubes)	H.80cm W. 53cm D.33cm
Weight	15kg un-laden

## REPAIRS AND SPARES

Selmech Supplies Ltd, 19 Norton Enterprise Park, Whittle Road, Churchfields, Salisbury, Wiltshie, SP2 7YS.

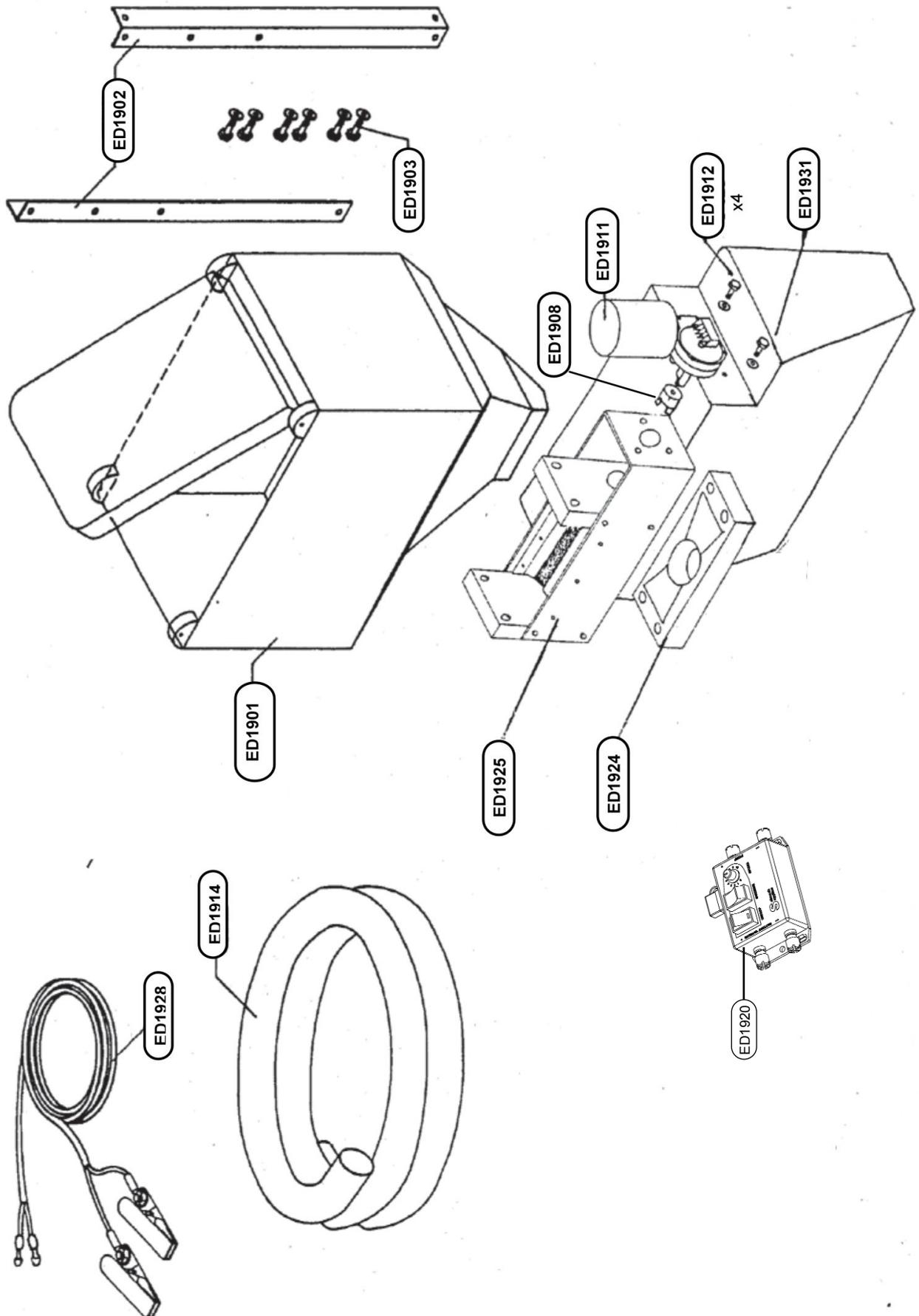
Tel: +44 (0) 1722 413 440. Email: [admin@selmechsupplies.co.uk](mailto:admin@selmechsupplies.co.uk). Web: [www.selmechsupplies.co.uk](http://www.selmechsupplies.co.uk)

For more information on 'Eco' Applicators contact:



Freephone | 0800 919808 Email | [info@ecosyl.com](mailto:info@ecosyl.com) Visit | [www.ecosyl.com](http://www.ecosyl.com)

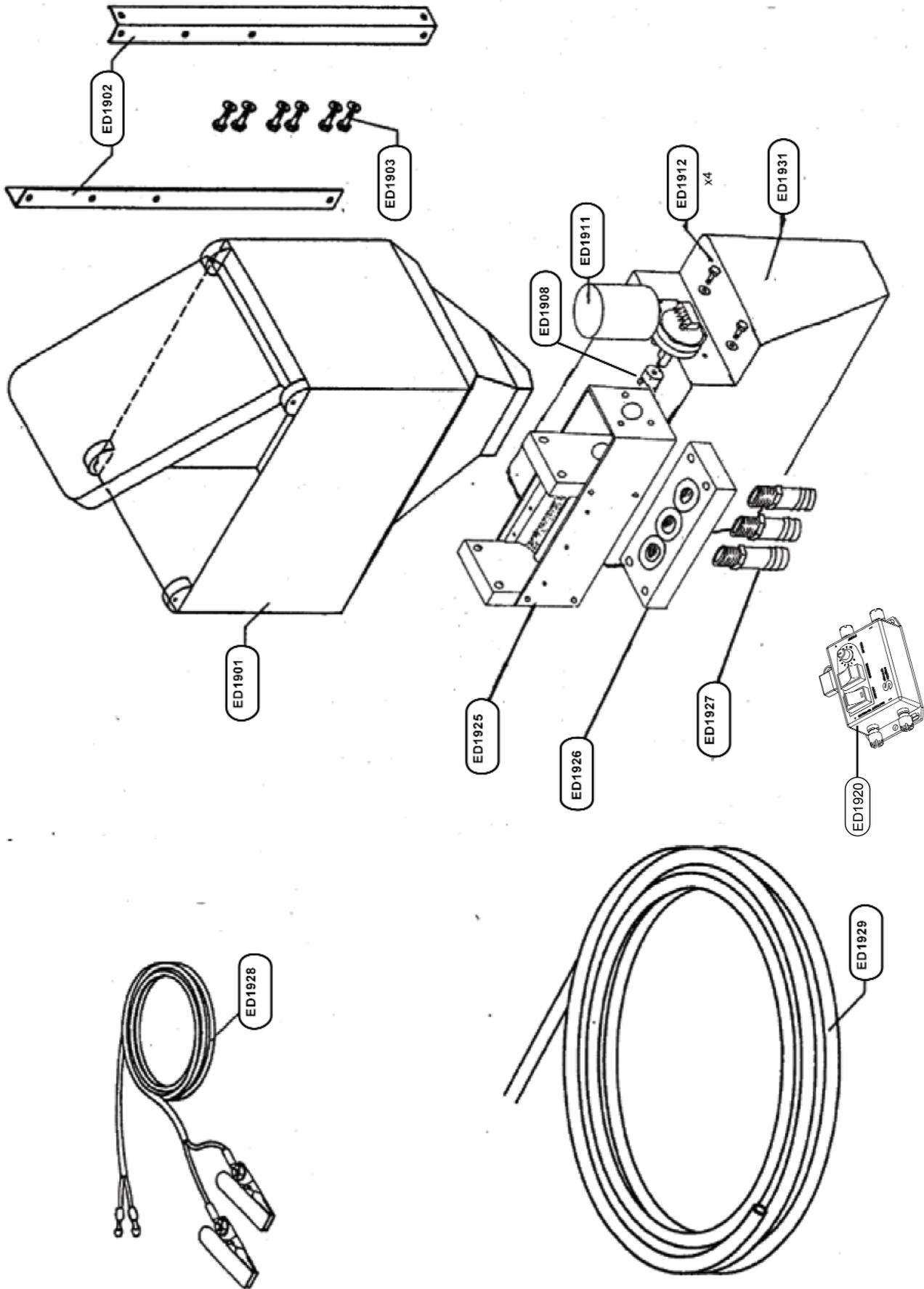
**POWDER RL80 APPLICATOR PARTS LIST**



**SPARE PARTS AVAILABLE FROM:**

Selmech Supplies Ltd - Tel: +44 (0)1722 413440, Fax: +44 (0)1722 413466. Email: [admin@selmechsupplies.co.uk](mailto:admin@selmechsupplies.co.uk).

**POWDER 80G APPLICATOR PARTS LIST**



**SPARE PARTS AVAILABLE FROM:**

Selmech Supplies Ltd - Tel: +44 (0)1722 413440, Fax: +44 (0)1722 413466. Email: [admin@selmechsupplies.co.uk](mailto:admin@selmechsupplies.co.uk).