

150 series DC powered oem peristaltic pumps

Specification Sheet 1 (last updated Jun 2011)

- Easy tube change
- Continuous or fixed tube length
- Accurate dispense
- 3 roller system
- Planetary gearbox
- Integrated positional encoder (optional)
- Choice of 2 different tube diameters
- Suitable for continuous operation
- Panel mounting
- No lubrication—no service
- Self priming
- CE marked



DC Motor: 6V/12V /24V DC
 Current at full speed250mA
 Max ambient operational temperature 50°C
 Material wetted partsSantoprene or Silicone
 Port connectors (optional)for IDØ2.0mm tubing
 Max pressure1 bar

Weight 125g
 Life expectancy >1000 hours
 Optional back shaft motor encoder 160 pulses per rotor rev
 ID Ø1.0mm tubeup to 12ml/min
 ID Ø2.0mm tubeup to 40ml/min
 ID Ø3.0mm tube up to 90 ml/min

Choice of various tube sizes in Santoprene and Silicone. Continuous tubing and fitted version available. Standard gear box ratio is 1:22.5, 245rpm @ 12V DC. Alternative gear box ratios available upon request subject to order quantities.

Pumps supplied without tube, tube clamps or tube connectors

| | |
|-----------------|--|
| 150-245-012-3-1 | Pump 12VDC 245RPM 3 rollers w/o tubing |
| 150-245-012-3-2 | Pump 12VDC 245RPM encoder 3 rollers w/o tubing |
| 150-800-012-3 | Pump Stepper motor 3 rollers w/o tubing |

Pumps supplied with Silicone tubing, tube clamps and tube connectors

| | |
|-----------------------|---|
| 150-245-012-201-3 | Pump 12VDC 245RPM 3 rollers 1mm sil |
| 150-245-012-201-3-298 | Pump 12VDC 245RPM encoder 3 rollers 1mm sil |
| 150-800-012-201-3 | Pump Stepper motor 3 rollers 1mm sil |
| 150-245-012-202-3 | Pump 12VDC 245RPM 3 rollers 2mm sil |
| 150-245-012-202-3-298 | Pump 12VDC 245RPM encoder 3 rollers 2mm sil |
| 150-800-012-202-3 | Pump Stepper motor 3 rollers 2mm sil |
| 150-245-012-203-3 | Pump 12VDC 245RPM 3 rollers 3mm sil |
| 150-245-012-203-3-298 | Pump 12VDC 245RPM encoder 3 rollers 3mm sil |
| 150-800-012-203-3 | Pump Stepper motor 3 rollers c/w tube clamps w/o tubing |

Pumps supplied with Phar Med tubing, tube clamps and tube connectors

| | |
|-----------------------|---|
| 153-245-012-201-3 | Pump 12VDC 245RPM 3 rollers 1mm PharMed |
| 153-245-012-201-3-298 | Pump 12VDC 245RPM encoder 3 rollers 1mm PharMed |
| 153-800-012-201-3 | Pump Stepper motor 3 rollers 1mm PharMed |

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Specification Sheet 2 (last updated Jun 2011)

Pumps supplied with Santoprene tubing, tube clamps and tube connectors

| | |
|-----------------------|---|
| 151-245-012-202-3 | Pump 12VDC 245RPM 3 rollers 2mm sant |
| 151-245-012-202-3-298 | Pump 12VDC 245RPM encoder 3 rollers 2mm sant |
| 151-800-012-202 | Pump Stepper motor 3 rollers 3mm food sant |
| 151-245-012-203-3 | Pump 12VDC 245RPM 3 rollers 3mm food sant |
| 151-245-012-203-3-298 | Pump 12VDC 245RPM encoder 3 rollers 3mm food sant |
| 151-800-012-203-3 | Pump Stepper motor 3 rollers 3mm food sant |

Silicone tube Set (75mm long) with pp connector

| | |
|-----------|---|
| 150-01-01 | Silicone tube (plat cured) 1mm ID x 1mm WT N420/410 |
| 150-02-01 | Silicone tube (plat cured) 2mm ID x 1mm WT N220-6 |
| 150-03-01 | Silicone tube (plat cured) 3mm ID x 1mm WT N230-6 |

Norprene/Santoprene tube Set (75mm long) with pp connector

| | |
|-----------|--|
| 151-02-01 | Santoprene tubing 2mm ID x 1mm WT N220 |
| 151-03-01 | Norprene tubing 3mm ID x 1mm WT N230 |

PharMed tube Set (75mm long) with pp connector

| | |
|-----------|---|
| 153-01-01 | Pharmed tubing 1mm ID x 1mm WT N420/410 |
|-----------|---|

Tube Clamp (for use with continuous tube)

| | |
|-----------|--------------------------------------|
| 150-TC-01 | Tube clamp for 1mm tube (set of two) |
| 150-TC-02 | Tube clamp for 2mm tube (set of two) |
| 150-TC-03 | Tube clamp for 2mm tube (set of two) |

Silicone tubing (per metre)

| | |
|--------------|---|
| 150-01-01-1M | Silicone tubing 1mm ID x 1mm WT per metre |
| 150-02-01-1M | Silicone tubing 2mm ID x 1mm WT per metre |
| 150-03-01-1M | Silicone tubing 3mm ID x 1mm WT per metre |

Norprene/Santoprene tubing (per metre)

| | |
|--------------|---|
| 151-02-01-1M | Santoprene tubing 2mm ID x 1mm WT per metre |
| 151-03-01-1M | Norprene tubing 3mm ID x 1mm WT per metre |

PharMed tubing (per metre)

| | |
|--------------|---|
| 153-01-01-1M | Phar Med tubing 1mm ID x 1mm WT per metre |
|--------------|---|

Hose Connectors (as used in tube sets)

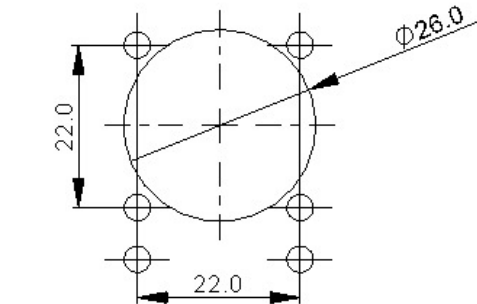
| | |
|---------|---------------------------------------|
| Micro 1 | 1mm barbed connector pp N420/410 pair |
| Micro 2 | 2mm barbed connector pp N220-6 pair |
| Micro 3 | 3mm barbed connector pp N230-6 pair |

The easiest way to place an order or check prices is via our online shop at <http://www.williamson-shop.co.uk>

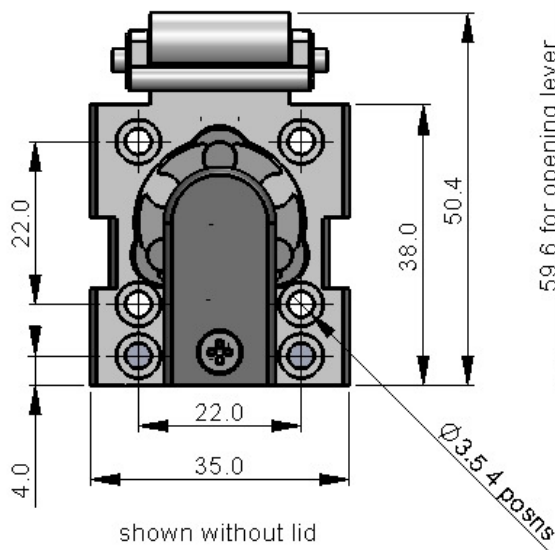
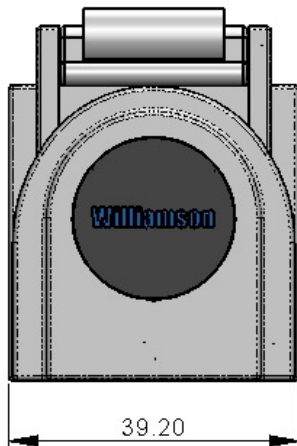
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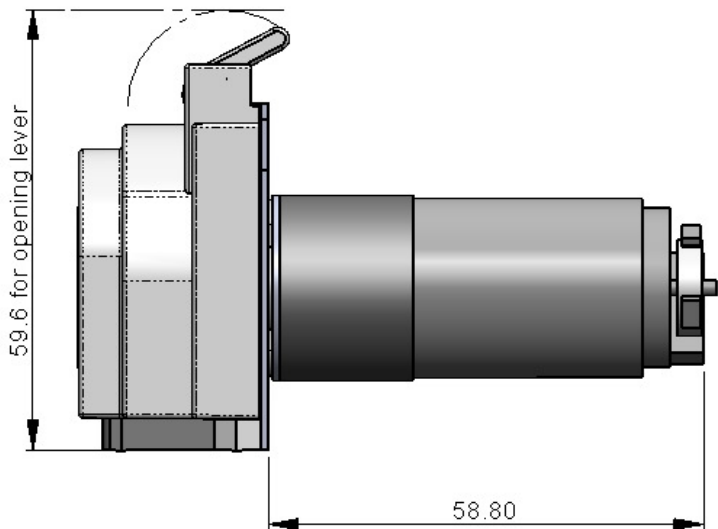
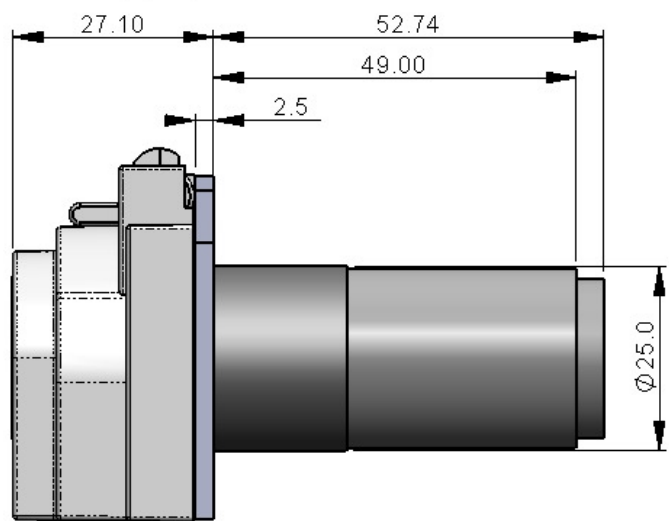
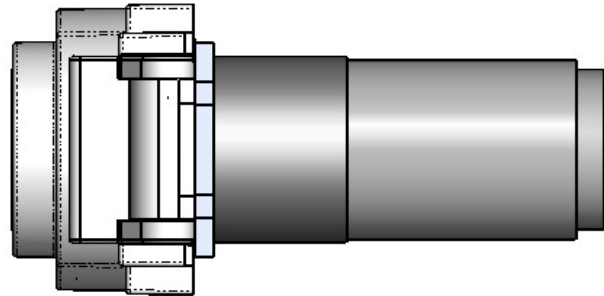
Specification Sheet 3 (last updated Jun 2011)



Panel cut out
fixing with
No 3 self tappers



shown without lid



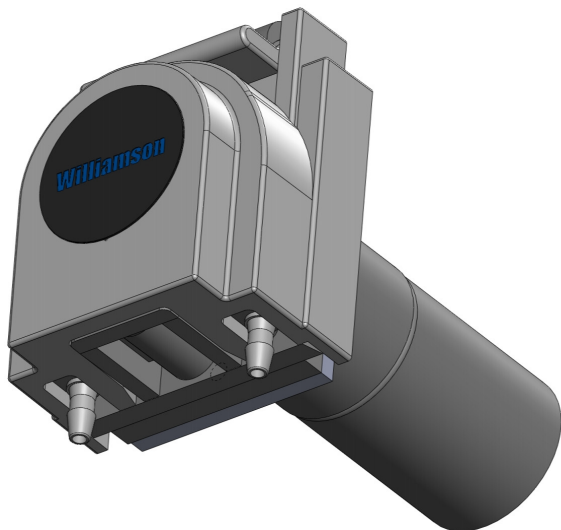
shown with optional back shaft encoder

Please contact us for any requirements not listed or to place an order over the phone.

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Specification Sheet 4 (last updated Jun 2011)



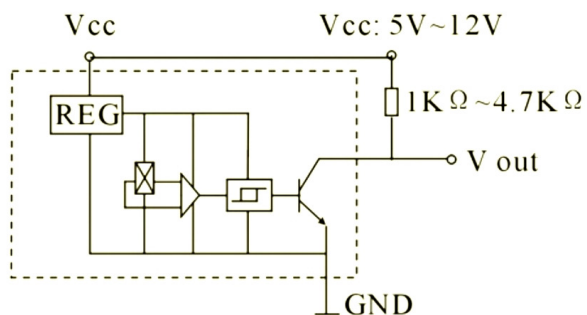
150 series with back shaft encoder

For pumps which are equipped with an encoder please follow the pin instructions below.

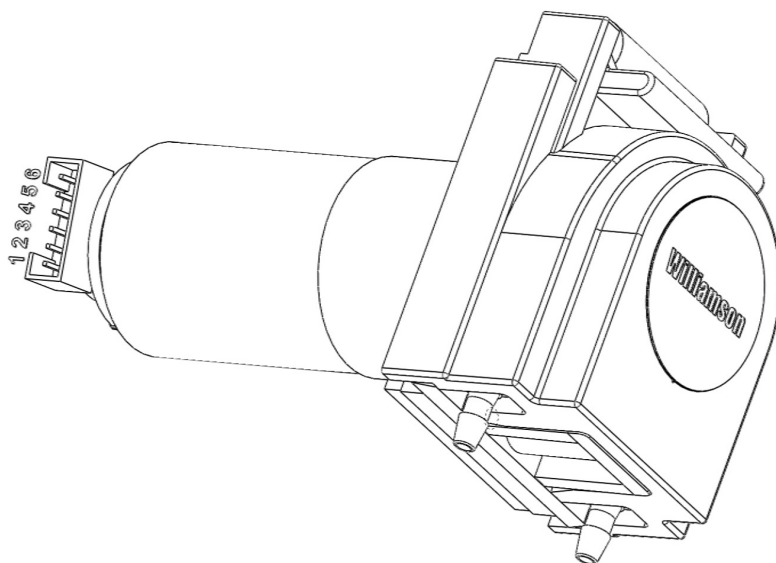
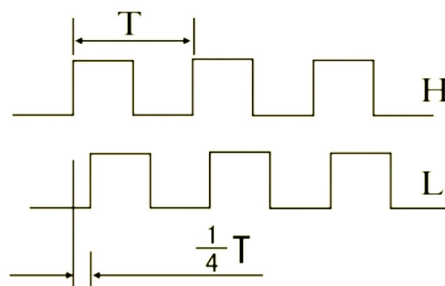
Magnet wheel has 10PPR
Cable connector socket required:
JST (Japan Solder less Terminals) PHR-6 P=2.0-6P

1. MOTOR-
2. MOTOR+
3. HALL SENSOR Vcc
4. HALL SENSOR GND
5. HALL SENSOR A V OUT
6. HALL SENSOR B V OUT

Output Circuit



Output Wave



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Specification Sheet 5 (last updated Jun 2011)

The permissible temp on metal surface of motor at constant operation must be below 60C.

You can fix the pump onto a panel using screws with max dia of Ø3.2mm in any of the 4 assigned positions.

The motor will work equally in CW as CCW direction.

The tube saddles are needed to hold the tubes in the clamp. Two tube saddles are required per clamp.

There are three sizes of tube saddles:

No. 1 for continuous tubing IDØ1.0mm

No. 2 for continuous tubing IDØ2.0mm

No. 3 for continuous tubing IDØ3.0mm

All fitted tubing is supplied using tube saddle no. 2 or 3.

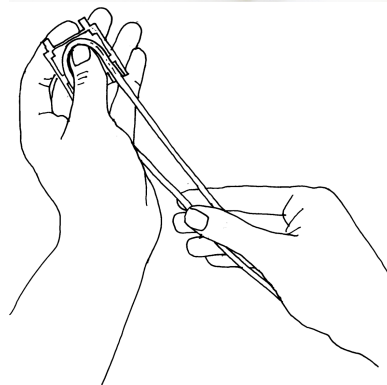
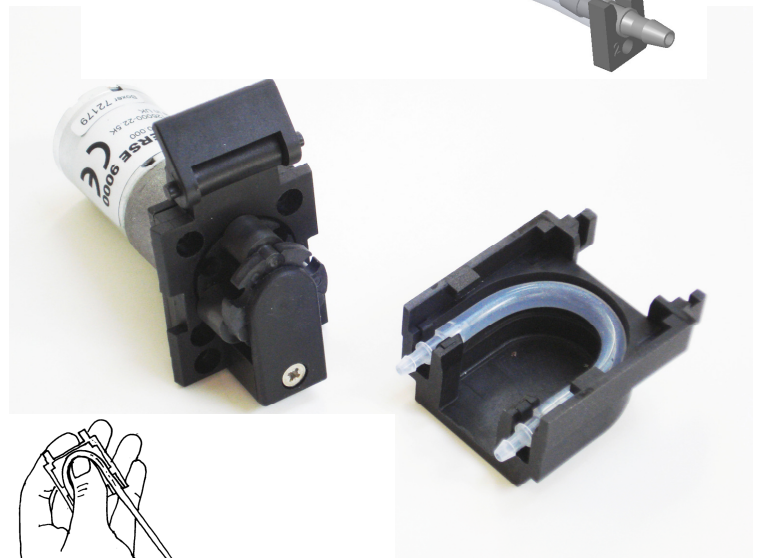
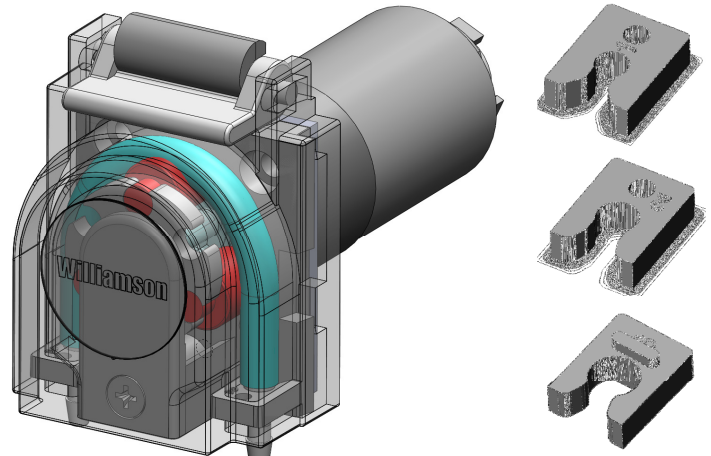
The tube with the saddles can be easily pushed into the tube clamp. To facilitate extraction of the tube from the clamp you can use a round pin to engage into the hole provided in the tube saddles and push them out.

Assembly of tube clamp onto the pump is easiest and most secure – in particular with the 2 & 3mm tubing – when the roller rotor is rotated to the Mercedes star shape. Before attempting to mount the clamp onto the pump, rotate the roller rotor with your fingers until one of the rollers is at the 12 o'clock position.

New tubing is stiff and causes high load on the motor. After the insertion of new tubing into the pump, lower the clamp lever gradually whilst the motor is running. This will ensure that the tube is located properly and that the motor does not stall due to excessive load.

The easiest roller position for tube replacement is when one roller is at the top of the pump ('Mercedes star'). You can turn the roller wheel with your fingers until you reach this position.

When using continuous tubing, make sure that the tube is fitted so that it is in contact with the inner surface of the tube clamp.



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