



# DRYFLOW C220 SERIES AUTOMATIC HUMIDITY CONTROL UNITS FOR KITCHENS

## Installation and Maintenance Instructions

Publication No. ZZ 893/2  
December 2000

- DRYFLOW C220 - Standard.
- DRYFLOW C220 T – Overrun timer.
- DRYFLOW C220 2P - Two speeds with pull cord.
- DRYFLOW C220 3P – Two speed with pull cord & three position switch.
- DRYFLOW C220 HPT –Humidistat , pull cord and overrun timer.
- DRYFLOW C220 H2P – Humidistat, two speed and pull cord.

**Before commencing any part of the installation you should READ ALL THE INSTRUCTIONS CAREFULLY and ensure that the electricity supply matches the specification marked on the rating plate of the appliance.**

### 1.0 COMPONENTS CHECK:

1 x DRYFLOW fan; 4 x fixing screws; 4 x wall plugs

### 2.0 DETAILS:

- 2.1 The **DRYFLOW C220 T** is for use in conjunction with a light switch. When the light is switched on, the fan will operate. When the light is switched off the fan will continue to run for the pre-set length of time (adjustable between 5 and 20 minutes).
- 2.2 The **DRYFLOW C220 2P** has a fan which runs permanently at the lower speed, but can be boosted to maximum speed by means of the pull cord. Pulling the cord again returns the fan to its lower speed.
- 2.3 The **DRYFLOW C220 3P** has a fan that runs at low speed, but which can be boosted to maximum speed by means of the pull cord. Pulling the cord a second time turns the fan off, whilst pulling the cord a third time restarts the operation sequence.
- 2.4 The **DRYFLOW C220 HPT** has an internal, adjustable electronic humidistat which is sensitive to the level of moisture (relative humidity) in the air. The humidistat is pre-set at the factory to operate the fan automatically when the humidity level reaches 75 %. The fan can be manually operated by a remote (light) switch or the pull cord override (regardless of the humidity level). The fan has a neon indicator which shows when it is in override mode. Pulling the cord again, or switching off by the remote switch, will make the fan revert to automatic operation by the humidistat and/or the overrun timer. The fan will continue to operate until the humidity has fallen below the pre-set level and the timer has completed the overrun period.
- 2.5 The **DRYFLOW C220 H2P** is a two-speed model with integral adjustable electronic humidistat which is sensitive to the level of moisture (relative humidity) in the air. The humidistat is pre-set at the factory to operate the fan when the humidity level reaches 75%. The pull cord override allows the fan to be operated manually regardless of the humidity level. The fan can be manually operated by a remote (light) switch or the pull cord override (regardless

of the humidity level). The fan has a neon indicator which shows when it is in override mode. Pulling the pull cord override will either boost the fan to its maximum speed if it is already running, or ensure that it operates at that speed. Pulling the cord again will cause the fan to revert to automatic operation controlled by the humidistat and/or the overrun timer. The fan will continue to operate at its lower speed, therefore, until the humidity has fallen below the pre-set level and the timer has completed the overrun period.

- 2.6 NOTE: Both the humidistat and the timer may be adjusted by following the instructions on the cover of the printed circuit board. Turn the timer trimmer to the “+” sign to increase the overrun period, and turn the humidistat trimmer to a higher number to lessen sensitivity. The humidistat is a dynamic type that is temperature compensated, thus avoiding unnecessary switching of the fan at night.
- 2.7 Extract capacities of all models are:
  - Max: 220m<sup>3</sup>/h, 611/s.
  - Min: 124m<sup>3</sup>/h, 341/s.
- 2.8 The fans comply with the current standards regarding electrical equipment, conforming to BS3456, EC Directive EMC 89/336 for the suppression of radio interference and are CE marked.
- 2.9 Noise emission (all models) - 48dB(A) maximum, 38dB(A) minimum at 3 metres

### 3.0 POSITIONING:

- 3.1 The fans are suitable for installation in walls or ceilings in internal rooms where long lengths of ducting to the outside wall are required. For wall mounting they should be installed at least 2.3m above floor level.
- 3.2 The fans must not be used in an ambient temperature higher than 40°C (104°F).
- 3.3 If the fan is sited in a room containing a fuel-burning appliance, the installer must ensure that air replacement is adequate for both the fan and the fuel-burning appliance.

3.4 Installation must be carried out by a qualified person. Incorrect installation can cause damage to people or property, for which the manufacturer cannot be held liable.

**4.0 ELECTRICAL:**

4.1 All wiring and electrical installation shall be carried out by a competent person in accordance with I.E.E Regulations 16th Edition (BS7671). The installer's attention is drawn to the following sections therein: 130-05-02; 461-01-01 to 461-01-03; 463-01-01; 476-02-01; 530; 537-01; 600-01; 600-02; 601-01; 60102 to 601-08 and 60 1 - I 0.

4.2 Whilst making the recommendations given in Section 4 of these instructions, Johnson & Starley Ltd. accept no liability in respect of any installation failing to comply with the I.E.E. Regulations 16<sup>th</sup> Edition (BS7671).

4.3 All DRYFLOW units are double insulated.

**5. INSTALLATION:**

5.1 Remove all packing material and check that the fan has not been damaged in transit.

5.2 Check that the electrical supply voltage and frequency correspond with those marked on the rating label.

5.3 Check the location of existing wiring for ease of connection, and make the electrical connections as in the following instructions.

**6. FIXING:**

6.1 For wall or ceiling installation cut a 10cm (4in) diameter hole (when deciding where to install, note that the outlet is offset on the back of the fan). This hole size is for fan installation only and does not take into account variations in the thickness of ducting.

6.2 Loosen the single screw located in the lower edge of the casing and remove the front cover by pulling forwards and upwards.

6.3 Using the body of the fan as a template, mark where the four fixing holes need to be drilled. Drill four 5mm diameter holes and fit wall plugs. Fix the main body of the fan to the wall/ceiling, using four screws located through the holes at each corner. Ensure that the fixing surface is flat in order to avoid distortion of the casing when the fixing crews are tightened.

**7. WIRING:**

7.1 Ensure that the mains electrical supply is switched off during the installation of the fixed wiring spur.

7.2 The installation must conform to current Building Regulations and I.E.E. Wiring Regulations.

7.3 The fan is a fixed appliance, and the electrical supply must therefore be by a fixed, wired and fused (3 amp) spur contact incorporating, a double pole switch with contact opening of at least 3mm.

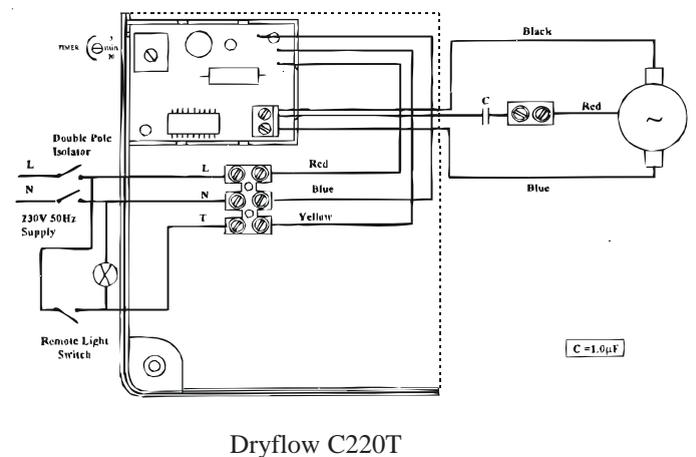
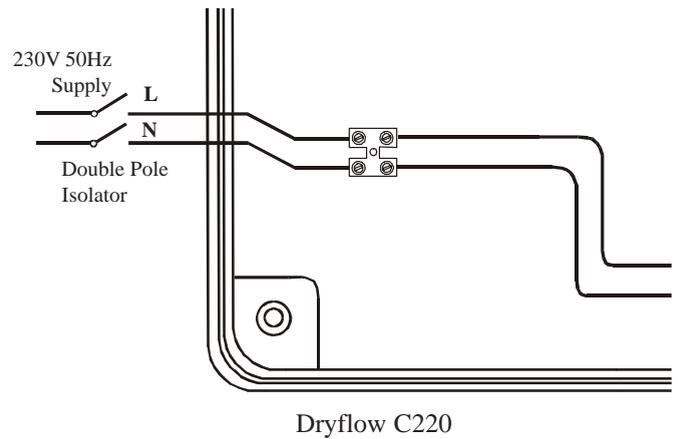
**8. CLEANING AND MAINTENANCE:**

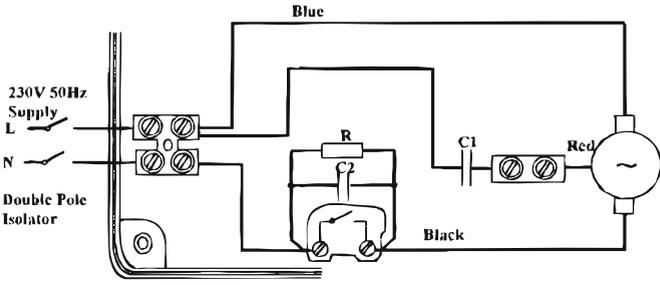
8.1 Disconnect the mains electrical supply at the double pole switch.

8.2 Remove the front grille as described above and wash with mild detergent.

8.3 To clean the inside of the fan, use a soft brush, taking care not to cause any damage or disturb the electrical wiring.

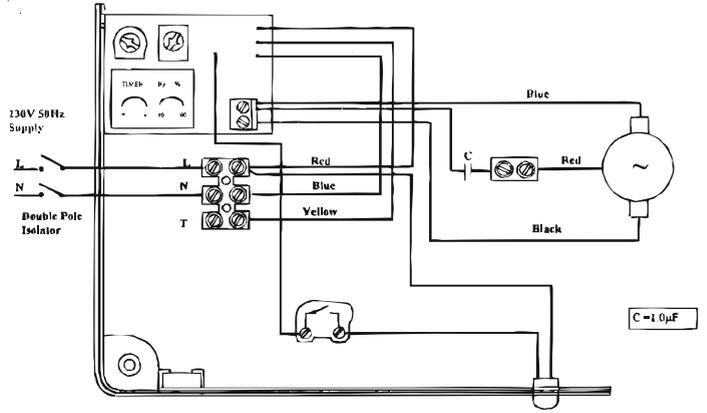
**9. WIRING DIAGRAMS:**



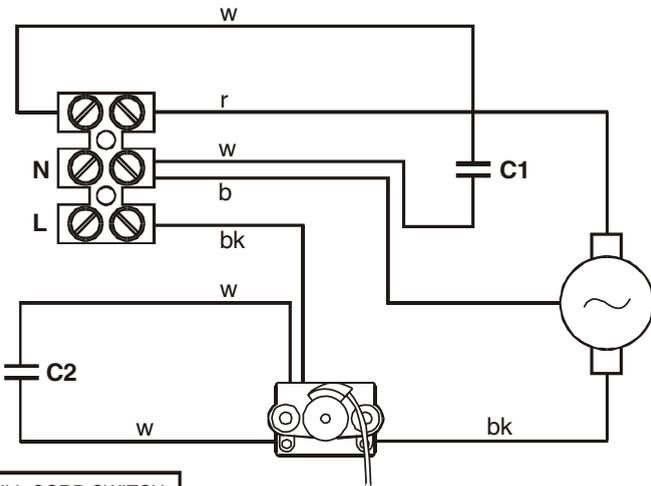


C1=1 $\mu$ F  
C2=2 $\mu$ F  
R=220Kohm

Dryflow C220 2P



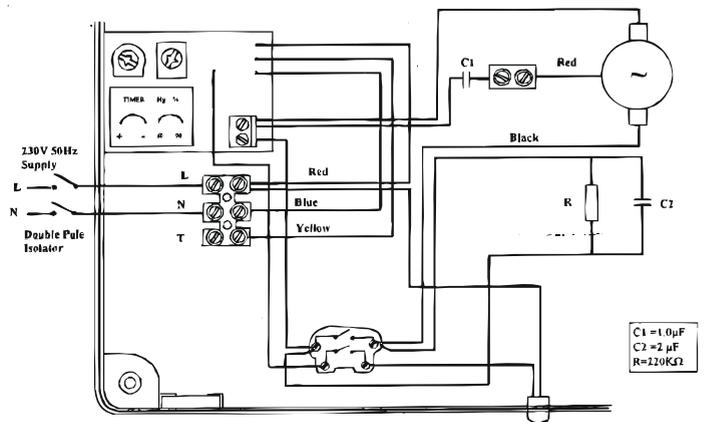
Dryflow C220 HPT



PULL CORD SWITCH:  
0 = OFF  
1 = MIN. SPEED  
2 = MAX. SPEED  
0 = OFF

C1 = 2 $\mu$ F  
C2 = 2.5 $\mu$ F

Dryflow C220 3P



Dryflow C220 H2P

C1 = 1.0 $\mu$ F  
C2 = 2  $\mu$ F  
R = 120K $\Omega$

A full range of accessories is available with this range, including: ducting; grilles and an aluminium grease filter.

**Johnson and Starley prides itself on its ability to supply spare parts quickly and efficiently. If your service engineer indicates a problem in obtaining a spare part, advise him to contact Johnson and Starley Spares Department at the address below.**

Telephone: 01604 762881

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