

NUAIRE

QTE QUIETWIN Belt Drive Twinfans Single & three phase

Installation and Maintenance

NUAIRE

NuAire Limited
Western Industrial Estate
Caerphilly,
Mid Glamorgan CF83 1XH
Telephone: 029 2088 5911
Facsimile: 029 2088 7033
Email: info@nuaire.co.uk

Leaflet 670921

APRIL 2001

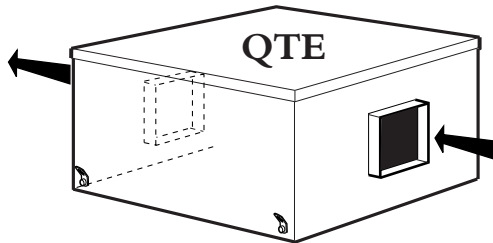


Fig. 1. General view of a typical unit (QTE model illustrated).

IMPORTANT

The installation must be carried out by qualified personnel in accordance with the appropriate authority and conforming to all statutory and governing regulations.

ISOLATION

Note that the unit must be provided with a means of isolation (by others) for maintenance purposes etc. A suitable isolator can be supplied by NuAire on request as a separate item.

Introduction

The NuAire QUIETWIN Twinfan Belt Drive range consists of 4 basic designs with duties up to a maximum of 9m³/s.

The 4 models are coded as follows:

QTE (External or internal duct mounted) in line unit

QTR (Roof Mounted, end inlet) side discharge unit.

QTRB (Roof Mounted bottom inlet) side discharge unit.

QTRD (Roof Mounted, bottom/end inlet) end discharge unit.

QTE Quietwin models

Units are rectangular in section and have circular or square* rigid spigots at each end. The casing is manufactured from heavy gauge natural aluminium alloy.

A full size internally lined access panel is fitted to the top face. The panel is fully detachable for inspection purposes.

The motor plate and frames are supported on the base by resilient mountings allowing the fan unit to be operated without the need for separate anti vibration fan case mountings.

The units incorporate two independent motors with high efficiency, forward curved centrifugal impellers running in metal scrolls. Taperlocked pulleys and wedge drive belts are employed. The fans discharge into a common outlet chamber through a shutter system that prevents 'blowback through the standby fan. The motors are manufactured to BS 5000 and are suitable for three phase supply**.

Airflow and failure monitors are standard as is Class B insulation. Suitable for operation in ambient temperatures up to 40°C.

* Case size D has rectangular spigots.

** Case size A available in single phase

Handling

Always handle the units carefully to avoid damage and distortion. Eyebolts are provided at the lower corners for lifting purposes. If mechanical aids are used to lift the unit, spreaders should be employed and positioned so as to prevent the slings, webbing etc. making contact with the casing.

Contents

Page

Introduction	1
Handling	1
Installation	1
Dimensions	2
Motor information	2
Prefabricated curb	5
Control Option 'M'	6
Control Option 'C'	8
Maintenance	10
Certification	13

Coding

QTE = Quietwin, duct mounted, external / internal use.

C = Circular spigots.

S = Square spigots.

A = Case size A,B,C & D

1 = Fan performance curve number.

3 or 1 = 3: 3ph 400v, 1: 1 ph 230v

M = Microsave integral fan control.

C = Mains fan control.

QTE C B 1 3 M = Quietwin, duct mounted, circular spigots, case size B, 3 phase and Microsave control.

Controls

Two methods of control are available:

- MICROSAVE (M) control.
- MAINS (C) control.

Note: When a Microsave option is supplied, the user control is included inside the fan case for delivery.

Details of control installations are given in relevant separate leaflets which deal with each control type.

Installation

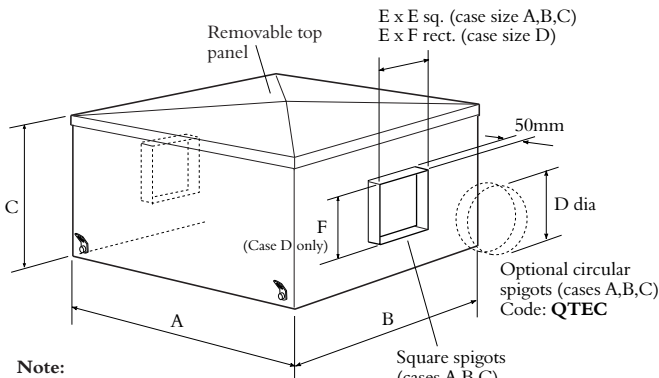
The QTE units are suitable for external or internal use for in-line ductwork applications. **UNITS MUST NOT BE INSTALLED AT AN ANGLE OVER 5° FROM THE HORIZONTAL** (to ensure the backdraught shutters operate satisfactorily). Ductwork connections must be airtight to prevent loss of performance. The method of mounting used is the total responsibility of the installer. The lower edge of the casing has an internal skirt allowing the unit to be located on an upstand or prefabricated curb if desired. See page 5.

The QTE unit has an internal connection box and is supplied ready for wiring to the electrical supply via the control chosen. It is the installers responsibility to drill the case to provide access for the electrical cables. Care should be taken not to damage internal components and the cable entry must be properly sealed.

Units should always be positioned with sufficient space to allow removal of the access covers and subsequent removal of fan and motor assemblies etc.

QTE Duct Mounted Belt Drive Twinfans

Dimensions



Note:
Case sizes A,B,C available with circular or square spigots.
Case D has rectangular spigots only.

Square spigots (cases A,B,C) Code: **QTES**
Rectangular spigots (case D only) Code: **QTER**

Fig. 2.

For unit weights see tables

Table 1. DIMENSIONS (mm)

Unit	A	B	C	QTE C D dia	QTE S E sq
QTE A	974	974	622	400	305
QTE B	1233	1233	701	500	457
QTE C	1430	1635	796	630	610

NOTE: Circular or Square Spigots.

Unit	A	B	C	E	F
QTE D	2315	2500	1230	1200	700

NOTE: Rectangular Spigots only.

NOTE: Unit weights shown in tables 2-5.

Electrical Note

If a NuAire control has been supplied, wire the control to the Fan unit and also to the mains supply.
Refer to the control options section 3

How to read the codes in unit size tables A B C & D

CODING EXAMPLE

QTE = Quietwin, duct mounted, external use.
C = Circular spigots.
S = Square spigots.
A = Case size (A,B,C & D)
1 = Fan Performance curve.
3 or 1 = 3: 3 Phase 400v, 1: 1 Phase 230v.
M = Microsave control option.
C = Mains control option.

QTE C A 1-3 M = Quietwin duct mounted, circular spigots, case size A, 3 phase and Microsave control.

Electrical Details (See tables 2-5).

Because the run and start currents depend upon the duty and associated ductwork of an individual unit, the values quoted in the table are nominal.

Run currents will be exceeded if the unit is operated with its cover removed. It is therefore recommended that the unit is not run for prolonged periods in this condition.

Table 2. Start & Run currents etc. **CASE SIZE 'A'**

General Unit Code*	Electrical				Weight kg
	1 Phase (230v)	3 Phase (400V) (nominal)			
	Speed rpm	Power (kW)	flc (amps)	sc (amps)	
QTE*A 1-3*	535	0.18	0.75	2.3	73
QTE*A 2-3*	705	0.18	0.75	2.3	73
QTE*A 3-1*	835	0.25	2.1	5.3	75.4
QTE*A 3-3*	835	0.25	0.95	3.0	75.4
QTE*A 4-1*	835	0.37	2.9	7.3	77.5
QTE*A 4-3*	835	0.37	1.3	4.6	77.5
QTE*A 5-1*	935	0.25	2.1	5.3	75.4
QTE*A 5-3*	935	0.25	0.95	3.0	75.4
QTE*A 6-1*	935	0.37	2.9	7.3	77.5
QTE*A 6-3*	935	0.37	1.3	4.6	77.5
QTE*A 7-1*	1045	0.25	2.1	5.3	75.4
QTE*A 7-3*	1045	0.25	0.95	3.0	75.4
QTE*A 8-1*	1045	0.37	2.9	7.3	77.5
QTE*A 8-3*	1045	0.37	1.3	4.6	77.5
QTE*A 9-1*	1045	0.55	3.4	9.3	84.4
QTE*A 9-3*	1045	0.55	1.7	6.8	84.4
QTE*A 10-1*	1125	0.37	2.9	7.3	77.5
QTE*A 10-3*	1125	0.37	1.3	4.6	77.5
QTE*A 11-1*	1125	0.55	3.4	9.3	82.4
QTE*A 11-3*	1125	0.55	1.7	6.8	82.4
QTE*A 12-3*	1125	0.75	2.1	9.5	84.4
QTE*A 13-1*	1225	0.37	2.9	7.3	77.5
QTE*A 13-3*	1225	0.37	1.3	4.6	77.5
QTE*A 14-1*	1225	0.55	3.4	9.3	82.4
QTE*A 14-3*	1225	0.55	1.7	6.8	82.4
QTE*A 15-3*	1225	0.75	2.1	9.5	84.4
QTE*A 16-3*	1225	1.1	2.9	13.0	90.4
QTE*A 17-1*	1335	0.55	3.4	9.3	82.4
QTE*A 17-3*	1335	0.55	1.7	6.8	82.4
QTE*A 18-3*	1335	0.75	2.1	9.5	84.4
QTE*A 19-3*	1335	1.1	2.9	13.0	90.4
QTE*A 20-1*	1400	0.55	3.4	9.3	82.4
QTE*A 20-3*	1400	0.55	1.7	6.8	82.4
QTE*A 21-3*	1400	0.75	2.1	9.5	84.4
QTE*A 22-3*	1400	1.1	2.9	13.0	90.4
QTE*A 23-3*	1400	1.5	3.7	18.5	96.4

QTE Duct Mounted Belt Drive Twinfans (continued)

Table 3. Start & Run currents etc. **CASE SIZE 'B'**

General Unit Code	Electrical 3 Phase (400V) ONLY (nominal)				Weight (kg)
	Speed rpm	Power (kw)	flc (amps)	sc (amps)	
QTE*B 1-3*	875	1.1	2.9	13.0	116
QTE*B 2-3*	1005	1.1	2.9	13.0	116
QTE*B 3-3*	1005	1.5	3.7	18.5	125
QTE*B 4-3*	1085	1.1	2.9	13.0	116
QTE*B 5-3*	1085	1.5	3.7	18.5	125
QTE*B 6-3*	1165	0.75	2.1	9.5	113
QTE*B 7-3*	1165	1.1	2.9	13.0	116
QTE*B 8-3*	1165	1.5	3.7	18.5	125
QTE*B 9-3*	1165	2.2	5.4	27.0	134
QTE*B 10-3*	1225	1.1	2.9	13.0	116
QTE*B 11-3*	1225	1.5	3.7	18.5	125
QTE*B 12-3*	1225	2.2	5.4	27.0	134
QTE*B 13-3*	1225	3.0	6.9	38.0	140

Table 4. Start & Run currents etc. **CASE SIZE 'C'**

General Unit Code	Electrical 3 Phase (400V) ONLY (nominal)				Weight (kg)
	Speed rpm	Power (kw)	flc (amps)	sc (amps)	
QTE*C 1-3*	820	2.2	5.4	27.0	168.7
QTE*C 2-3*	925	2.2	5.4	27.0	168.7
QTE*C 3-3*	925	3.0	6.9	38.0	174.6
QTE*C 4-3*	1040	1.5	3.7	18.5	159.6
QTE*C 5-3*	1040	2.2	5.4	27.0	168.7
QTE*C 6-3*	1040	3.0	6.9	38.0	174.6
QTE*C 7-3*	1040	4.0	10.0	60.0	193.6
QTE*C 8-3*	1160	2.2	5.4	27.0	168.7
QTE*C 9-3*	1160	3.0	6.9	38.0	174.6
QTE*C 10-3*	1160	4.0	10.0	60.0	193.6
QTE*C 11-3*	1160	5.5	12.0	75.0	231.6
QTE*C 13-3*	1260	3.0	6.9	38.0	174.6
QTE*C 14-3*	1260	4.0	10.0	60.0	193.6
QTE*C 15-3*	1260	5.5	12.0	75.0	231.6
QTE*C 16-3*	1360	3.0	6.9	38.0	174.6
QTE*C 17-3*	1360	4.0	10.0	60.0	193.6
QTE*C 18-3*	1360	5.5	12.0	75.0	231.6
QTE*C 19-3*	1440	3.0	6.9	38.0	174.6
QTE*C 20-3*	1440	4.0	10.0	60.0	193.6
QTE*C 21-3*	1440	5.5	12.0	75.0	231.6

Table 5. Start & Run currents etc. **CASE SIZE 'D'**

General Unit Code	Electrical 3 Phase (400V) ONLY (nominal)				Weight kg
	Speed rpm	Power (kw)	flc (amps)	sc (amps)	
QTE*D 1-3*	700	1.5	3.7	18.5	682
QTE*D 2-3*	700	2.2	5.4	27.0	691
QTE*D 3-3*	700	3.0	6.9	38.0	697
QTE*D 4-3*	700	4.0	10.0	60.0	716
QTE*D 5-3*	700	5.5	12.0	75.0	730
QTE*D 6-3*	700	7.5	16.0	98.0	750
QTE*D 7-3*	800	1.5	3.7	18.5	682
QTE*D 8-3*	800	2.2	5.4	27.0	691
QTE*D 9-3*	800	3.0	6.9	38.0	697
QTE*D 10-3*	800	4.0	10.0	60.0	716
QTE*D 11-3*	800	5.5	12.0	75.0	730
QTE*D 12-3*	800	7.5	16.0	98.0	750
QTE*D 13-3*	800	11.0	23.0	154.0	794
QTE*D 14-3*	900	3.0	6.9	38.0	697
QTE*D 15-3*	900	4.0	10.0	60.0	716
QTE*D 16-3*	900	5.5	12.0	75.0	730
QTE*D 17-3*	900	7.5	16.0	98.0	750
QTE*D 18-3*	900	11.0	23.0	154.0	794
QTE*D 19-3*	900	15.0	30.0	225.0	824
QTE*D 20-3*	1000	4.0	10.0	60.0	716
QTE*D 21-3*	1000	5.5	12.0	75.0	730
QTE*D 22-3*	1000	7.5	16.0	98.0	750
QTE*D 23-3*	1000	11.0	23.0	154.0	794
QTE*D 24-3*	1000	15.0	30.0	225.0	824
QTE*D 25-3*	1000	18.5	38.0	266.0	910
QTE*D 26-3*	1100	5.5	12.0	75.0	730
QTE*D 27-3*	1100	7.5	16.0	98.0	750
QTE*D 28-3*	1100	11.0	23.0	154.0	794
QTE*D 29-3*	1100	15.0	30.0	225.0	824
QTE*D 30-3*	1100	18.5	38.0	266.0	910
QTE*D 31-3*	1100	22.0	44.0	308.0	940
QTE*D 32-3*	1200	7.5	16.0	98.0	750
QTE*D 34-3*	1200	15.0	30.0	225.0	824
QTE*D 35-3*	1200	18.5	38.0	266.0	910
QTE*D 36-3*	1200	22.0	44.0	308.0	940
QTE*D 37-3*	1200	30.0	59.0	413.0	1030

Installation

Quietwin belt drive units may be specified with either Mains control(C) or Microsave control(M). Units are available for single or three phase connection.

The location of the control system and supply wiring connections is shown in figure 3a-3d below.

Figure 3a See also page 7 for refs A & B in drg

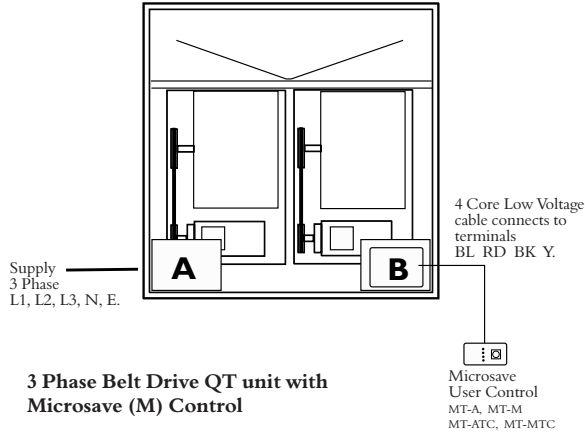


Figure 3b

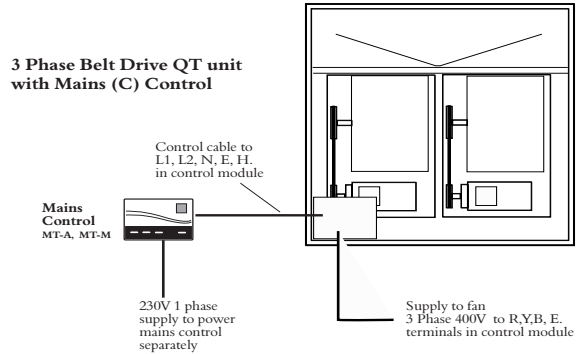


Figure 3c See also page 7 for ref B in drg

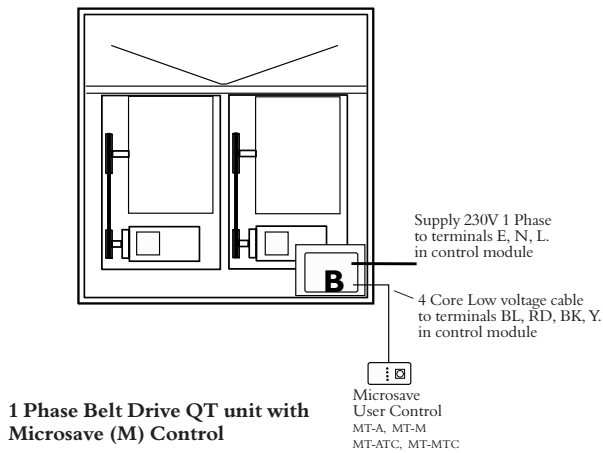
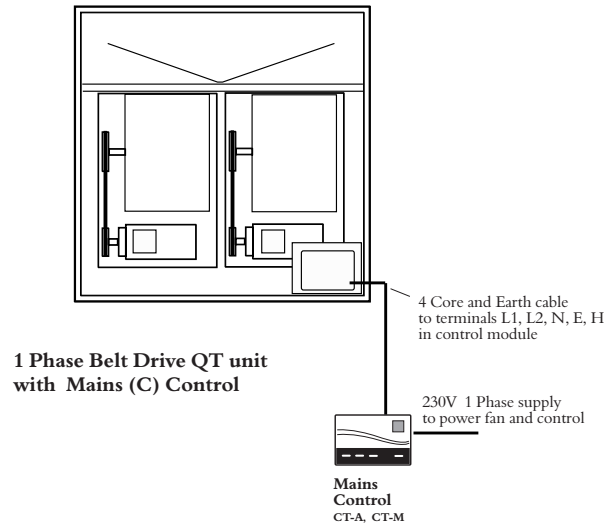


Figure 3d



Testing after Installation

Ensure that the Fan unit and Control and particular control ancillary if specified eg PIR, Run/Fail indicators, timeclock etc. are fitted.

Switch on and check that the fan unit runs satisfactorily.

Using your chosen control, switch over to the standby fan by means of the control's fan selection switch.

Check that the change-over occurs.

Switch off. If a Run-on Timer is fitted, check that the fan continues to run.

Time the run-on period, which is adjustable between 5 and 60 minutes nominal.

Timer controls are set at the works to the shortest period.

For speed controls follow the installation set-up procedure provided with the control.

Prefabricated Curb

Manufactured in aluminium alloy these curbs will reduce design work and guarantee correct unit mounting when on site.
 Note: Upper faces of curb are fitted with robust sealing strip.

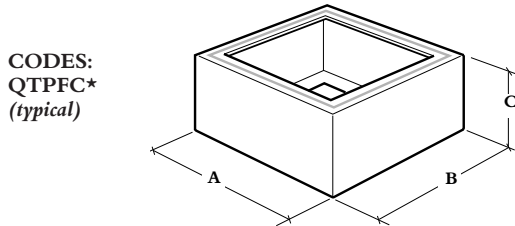


Figure 4. Prefabricated curb details

Dimensions (mm)

Table 6.

Unit Code	Prefab Code	A	B	C
QTE*A	QTPFC4B	934	934	305
QTE*B	QTPFC5B	1233	1233	305
QTE*C	QTPFC6B	1374	1580	305

Note:

Prefabricated curbs can be used to support ducted or roof units.

Typical roof upstand dimensions (Case size A,B & C)

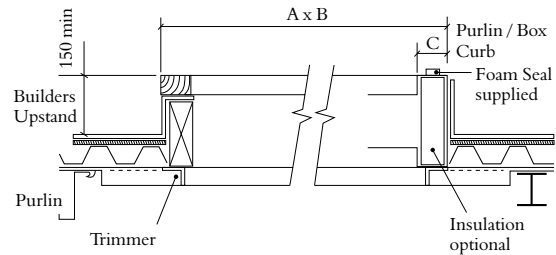
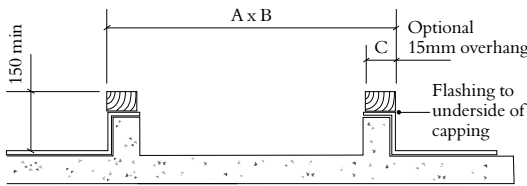


Figure 5. Roof upstand details

Unit Code	Dimensions (mm)		
	A	B	C
QTE A	947	947	75
QTE B	1203	1203	100
QTE C	1399	1605	100

Table 7.

Note:

These Builders Work Details are for guidance only.

Typical roof upstand dimensions (Case size D)

Unit Weight and Fixing Size D units
 For unit weights see electrical information tables.
 Substantial support and fixings are important due to the units weight and to avoid the motor start torque damaging the support base.

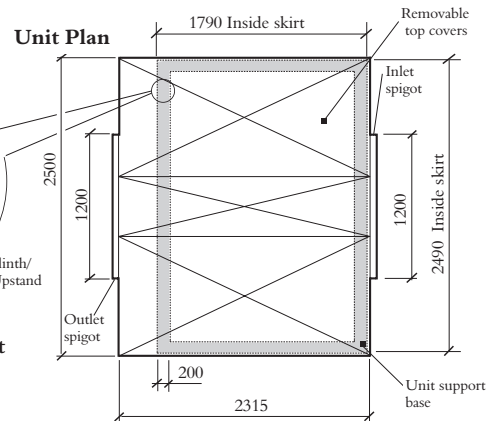
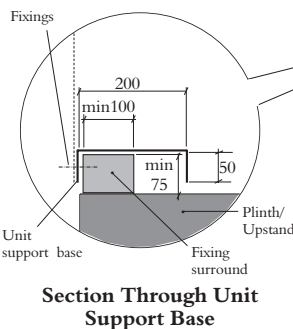
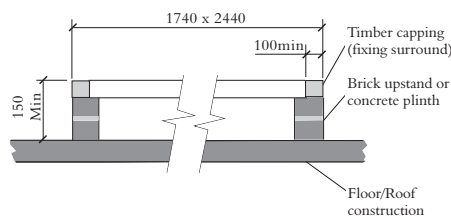
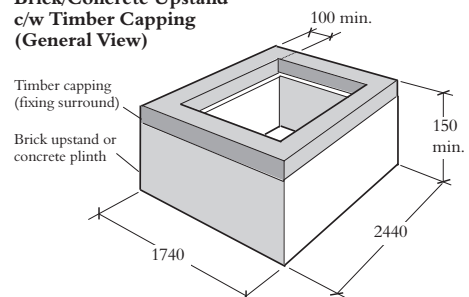


Figure 6. Roof upstand details

Brick/Concrete Upstand (Section)



Brick/Concrete Upstand c/w Timber Capping (General View)



Control Options

Twinfan Control 'Option 1' Microsave 'M'

Wiring Connections

Notes:

1. Only one Microsave User Control can be connected to each Microsave (M) 'Quietwin'.
2. Terminals are provided within the Microsave Twinfan Control Box for the following:-
 - BMS (Building Management System) override control (on/off and system status).
3. Note that when a Microsave controlled unit is supplied, the User Control is included inside the fan unit for delivery to site. Take care not to misplace the item before installation.

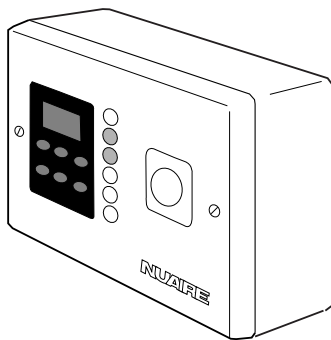


Figure 7.

Microsave User Control Options

Code	Description
MT-A	Auto duty sharing
MT-M	Manual duty sharing
MT-ATC	Auto duty sharing with timeclock
MT-MTC	Manual duty sharing with timeclock

NOTE

See relevant Installation & Maintenance

instructions for your chosen NuAire Control.

Microsave (M) Twinfan Control: Leaflet No: 670915

Copies are available from the NuAire Technical Library
(029 2085 8231)

Control Options

Twinfan Control 'Option 1' Microsave 'M' continued.

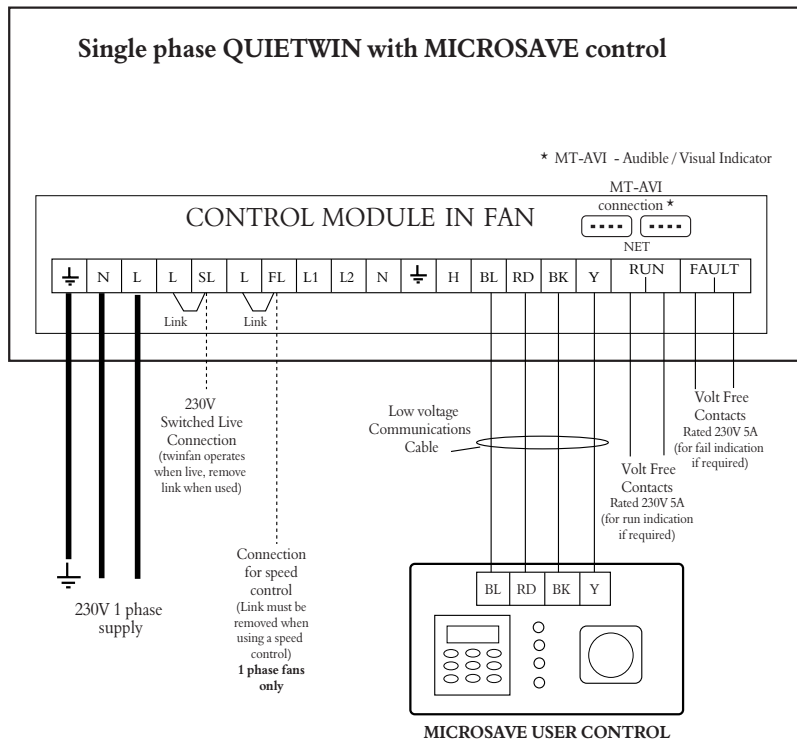


Figure 8a.

1 Phase Fan

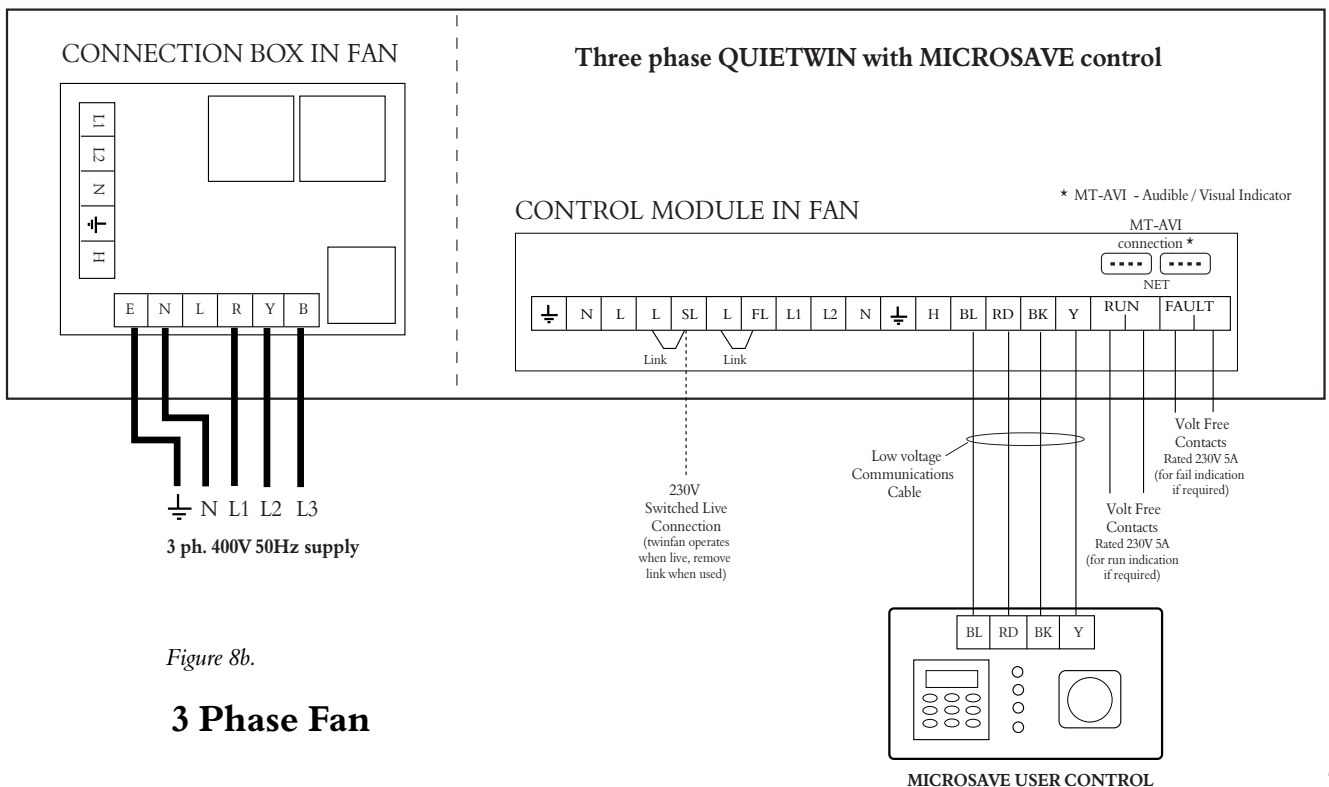


Figure 8b.

3 Phase Fan

Control Options

Twinfan Control 'Option 2' Mains 'C'

Notes:

1. Only one Mains User Control can be connected to each Mains (C) 'Quietwin'.
2. Mains power for fan can be via the Mains Control or direct to the fan (on 1 phase only).
3. Terminals are provided within the Mains Control for the following:-
 - BMS (Building Management System) override control (on/off and system status).

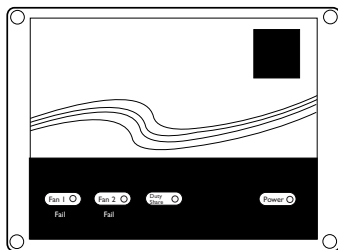


Figure 9.

Mains Control Options

Code	Description
CT-A	Auto duty sharing
CT-M	Manual duty sharing

NOTE

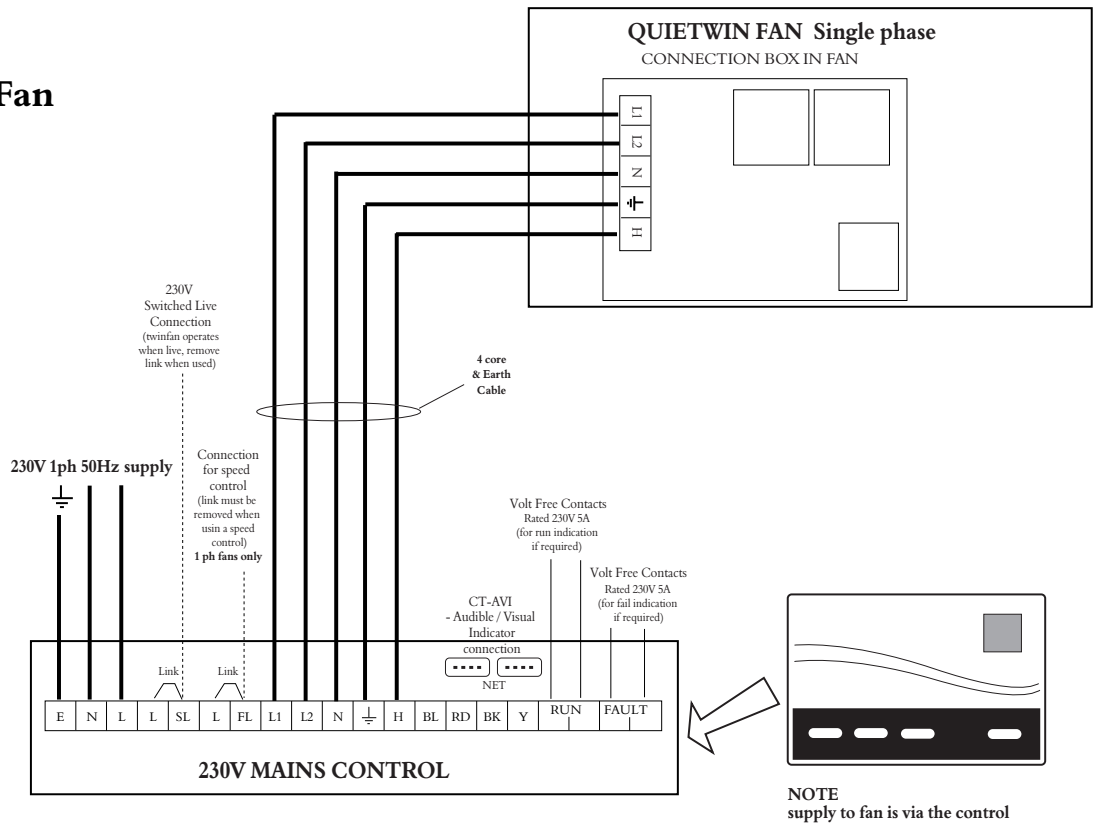
See relevant **Installation & Maintenance instructions** for your chosen NuAire Control. **Mains (C) Twinfan Control. Leaflet No: 670912** Copies are available from the NuAire Technical Library (029 2085 8231)

Control Options

Twinfan Control 'Option 2' Mains 'C' continued.

1 Phase Fan

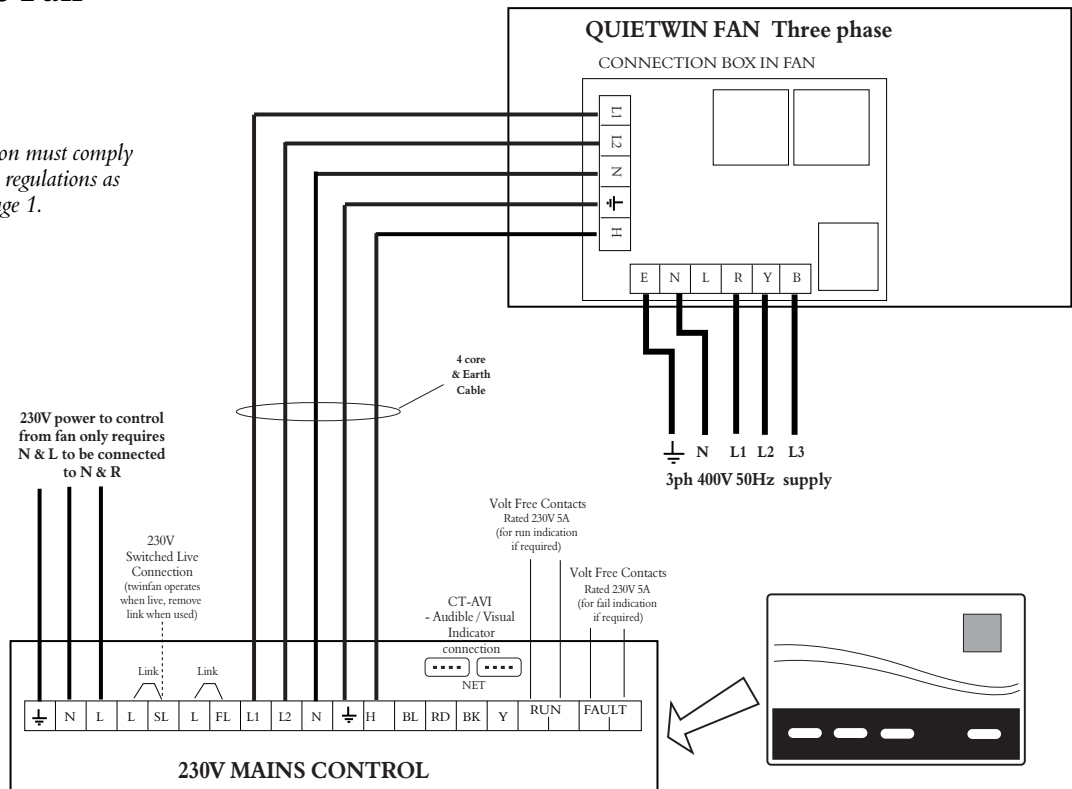
Figure 9a.



3 Phase Fan

Figure 9b.

NOTE:
The installation must comply with electrical regulations as detailed on page 1.



NOTE: Diagrams shown are for fans up to and including 5.5kW motors for larger 'D' size case units and 7.5kW motors refer to NuAire

Maintenance General

CASE SIZE 'A' 'B' 'C' UNITS

ISOLATION

BEFORE COMMENCING WORK MAKE SURE THAT THE UNIT AND NUAIRE CONTROL, IF FITTED, ARE ELECTRICALLY ISOLATED FROM THE MAINS SUPPLY.

Access to the unit internals is gained by removing the top cover(s) Isolate the unit and inspect the following items three months after commissioning and then once per year.

Maintenance Intervals

The first maintenance should be carried out three months after commissioning and thereafter at twelve monthly intervals. These intervals may need to be shortened if the unit is operating in adverse environmental conditions, or in heavily polluted air.

Motors

Brush away any dust or dirt from the motor housings and ensure that the motor vents are unblocked.

Bearings

Lubrication is unnecessary as the motors are fitted with sealed for life bearings.

Impellers

Remove any dust and check that the impellers are securely fixed to the motor shafts. Take care not to disturb any balance weights fitted. Check sealed for life bearings for excessive wear.

Shutter Assembly

Remove any dust and check that the shutters operate freely. and that they seal the appropriate fan outlet effectively.

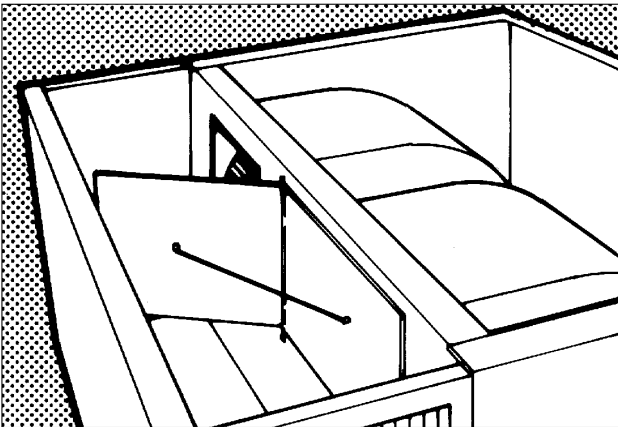


Fig. 10. Quietwin shutter detail.

Anti-vibration mountings

Four resilient mountings support each fan tray. Check that the mountings are secure and in good condition.

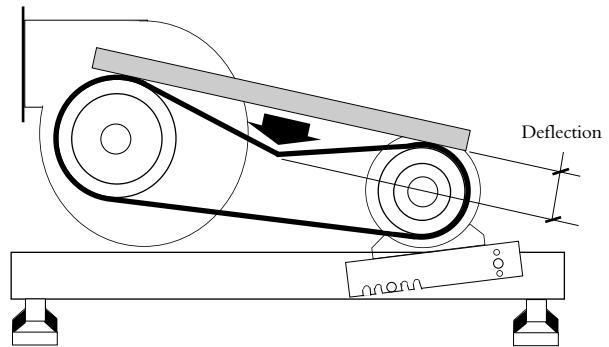


Fig.11 Adjusting the drive belt (A, B, C units).

Changing a drive belt.

To replace a belt, remove the two bolts from the motor mounting furthest from the fan and slacken the remaining two bolts. Lift the motor plate and remove the belt. Replacing the belt is the reverse of this procedure.

Adjusting drive belt tension.

To check the correct tension of a drive belt, apply a force at right angles to the centre of the belt span sufficient to deflect the belt 16mm for every metre of span length (see fig. 11). The force required to deflect the 'V' belt should be from 0.5kg to 0.8kg. The tension of the belt should be checked after 24hrs of continuous running and adjusted as necessary.

General Cleaning and Inspection

Clean and inspect the exterior of the fan unit and associated controls etc.

Remove the access panel from the fan unit. Inspect and, if necessary, clean the fan and motor assemblies and the interior of the case. If the unit is heavily soiled it may be more convenient to remove the fan / motor assemblies.

If NuAire controls and or remote indicators are fitted, remove the covers and carefully clean out the interiors as necessary. Check for damage.

Check security of components. Refit the access covers.

General

1. Check that all fixings are tight.
2. Check sealing strips around the fan outlets are tight up against the bulkhead.
3. Check that duct connections are not leaking.

Maintenance (continued).

CASE SIZE 'D' UNITS

ISOLATION

BEFORE COMMENCING WORK MAKE SURE THAT THE UNIT AND NUAIRE CONTROL, IF FITTED, ARE ELECTRICALLY ISOLATED FROM THE MAINS SUPPLY.

Access to the unit internals is gained by removing the top cover(s). Isolate the unit and inspect the following items three months after commissioning and then once per year.

Maintenance Intervals

The first maintenance should be carried out three months after commissioning and thereafter at twelve monthly intervals. These intervals may need to be shortened if the unit is operating in adverse environmental conditions, or in heavily polluted air.

Motors

Brush away any dust or dirt from the motor housings and ensure that the motor vents are unblocked.

Bearings

Lubrication is unnecessary as the motors are fitted with sealed for life bearings.

Impellers

Remove any dust and check that the impellers are securely fixed to the motor shafts. Take care not to disturb any balance weights fitted. Check sealed for life bearings for excessive wear.

Shutter Assembly

Remove any dust and check that the shutters operate freely and that they seal the appropriate fan outlet effectively.

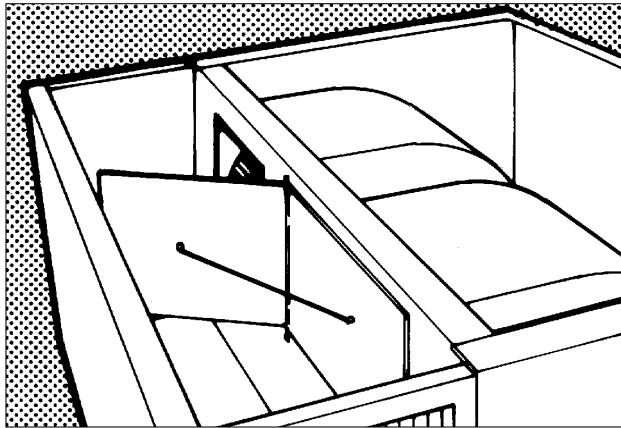


Fig. 12. Quietwin shutter detail.

Anti Vibration motor plate mountings

Each motor plate is supported on ten individual resilient mountings. Check that all the mountings are secure and in good condition.

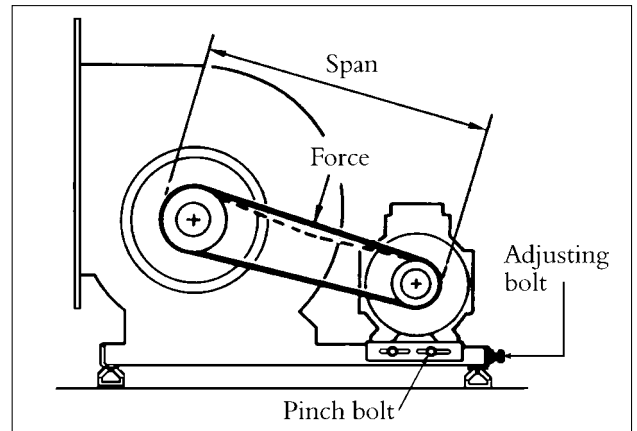


Fig. 13 Tensioning the drive belts on size 'D' units.

Belts

All belt drive units incorporate belt tensioning devices. To adjust the belt tension, slacken the pinch bolt on the sides of the motor plate. Turn the adjusting bolt clockwise to tighten the belt and counter clockwise to loosen it.

The drive should be tensioned until a slight bow appears in the slack side of the 'V' belt when running under load. To check for correct tension, proceed as follows.

1. Measure the span length (See fig. 13).
2. At the centre of the span, apply a force at right angles to the belt sufficient to deflect one belt 16mm for every metre of span length (see fig. 14). The force required to deflect the 'V' belt should be from 0.5kg to 0.8kg.

General Cleaning and Inspection

Clean and inspect the exterior of the fan unit and associated controls etc.

Remove the access panel from the fan unit. Inspect and, if necessary, clean the fan and motor assemblies and the interior of the case. If the unit is heavily soiled it may be more convenient to remove the fan / motor assemblies.

If NuAire controls and or remote indicators are fitted, remove the covers and carefully clean out the interiors as necessary. Check for damage.

Check security of components. Refit the access covers.

General

1. Check that all fixings are tight.
2. Check sealing strips around the fan outlets are tight up against the bulkhead.
3. Check that duct connections are not leaking.

Installation and Maintenance QUIETWIN QTE BELT DRIVE TWINFAN

Replacement of Parts

The only item of the fan units unit likely to require replacement are the fan/motor assemblies due to a failed motor or damaged impeller. In either eventuality the complete fan/motor assembly must be removed from the unit case.

NOTE:
BEFORE COMMENCING WORK, ELECTRICALLY ISOLATE THE FAN UNIT AND / OR THE ASSOCIATED NUAIRE CONTROL, IF FITTED, FROM THE MAINS SUPPLY.

Remove the access cover. Disconnect the incoming wiring from the motor connection box on the particular fan/motor assembly to be removed. Support the weight of the fan/motor assembly and remove the mounting screws and washers. Lift the assembly out of the case.

After replacing the faulty item, refit the fan/motor assembly and reconnect the incoming wiring to the fan motor connection box. Replace the access cover.

Schedule of Parts

When ordering spares please quote the serial number of the unit together with the part number if. If the part number is not known please give a full description of the part required. The serial number will be found on the identification plate attached to the unit casing

SPARES

QTE *Table 8a.* Case size A

Unit code	Motor.
QTE 1	530371
QTE 2	530371
QTE 3	530372
QTE 3*1	530364
QTE 4	530373
QTE 4*1	530368
QTE 5	530372
QTE 5*1	530367
QTE 6	530373
QTE 6*1	530368
QTE 7	530372
QTE 7*1	530367
QTE 8	530373
QTE 8*1	530368
QTE 9	530374
QTE 9*1	530369
QTE 10	530373
QTE 10*1	530368
QTE 11	530374
QTE 11*1	530369
QTE 12	530375
QTE 13	530373
QTE 13*1	530368
QTE 14	530374
QTE 15	530375
QTE 16	530376
QTE 17	530374
QTE 17*1	530369
QTE 18	530375
QTE 19	530376
QTE 20	530374
QTE 20*1	530369
QTE 21	530375
QTE 22	530376
QTE 23	530320

QTE *Table 8b.* Case size B

Unit code	Motor.
QTE 1	530376
QTE 2	530376
QTE 3	530320
QTE 4	530376
QTE 5	530320
QTE 6	530375
QTE 7	530376
QTE 8	530320
QTE 9	530376
QTE 10	530376
QTE 11	530320
QTE 12	530321
QTE 13	530322

QTE *Table 8c.* Case size C

Unit code	Motor.
QTE 1	530321
QTE 2	530321
QTE 3	530322
QTE 4	530320
QTE 5	530321
QTE 6	530322
QTE 7	530323
QTE 8	530321
QTE 9	530322
QTE 10	530323
QTE 11	530324
QTE 12	530321
QTE 13	530322
QTE 14	530323
QTE 15	530324
QTE 16	530322
QTE 17	530323
QTE 18	530324
QTE 19	530322
QTE 20	530323
QTE 21	530324

QTE *Table 8d.* Case size D

Unit code	Motor.
QTE 1	530320
QTE 2	530321
QTE 3	530322
QTE 4	530323
QTE 5	530324
QTE 6	530325
QTE 7	530320
QTE 8	530321
QTE 9	530322
QTE 10	530323
QTE 11	530324
QTE 12	530325
QTE 13	531110
QTE 14	530322
QTE 15	530323
QTE 16	530324
QTE 17	530325
QTE 18	531110
QTE 19	531109
QTE 20	530323
QTE 21	530324
QTE 22	530325
QTE 23	531110
QTE 24	531109
QTE 25	531108
QTE 26	530324
QTE 27	530325
QTE 28	531110
QTE 29	531109
QTE 30	531108
QTE 31	531107
QTE 32	530325
QTE 33	531110
QTE 34	530109
QTE 35	531108
QTE 36	531107
QTE 37	531106

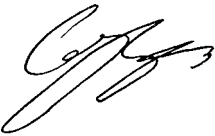

QTE Quietwins *Table 8e.* Blower Assemblies

Case Size	Part No.
A	770572
B	770573
C	770574
D	770988

*We declare that the machine named below
conforms to the requirements of EC Council Directives
relating to Electromagnetic Compatibility and
Safety of Electrical Equipment.*

Designation of machinery :-	QUIETWIN BELT DRIVE
Machinery Types :-	QTE
Relevant EC Council Directives :-	89/336/EEC, 92/31/EEC (EMC) 73/23/EEC, 93/68/EEC (Low Voltage Directive)
Applied Harmonised Standards :-	E55014-1, EN55014-2, EN60204-1 EN60335-2-80
Basis of Self Attestation :-	Quality Assurance to BS EN ISO 9001 BSI Registered Firm Certificate No. FM 149

Signature of manufacture representatives :-

	Name:	Position:	Date:
1)	 J. Biggs	Technical Director	2. 10. 00
2)	 W. Glover	Manufacturing Director	2. 10. 00



DECLARATION OF INCORPORATION & INFORMATION FOR SAFE INSTALLATION, OPERATION & MAINTENANCE

We declare that the machinery named below is intended to be assembled with other components to constitute a system of machinery.

The machinery shall not be put into service until the system has been declared to be in conformity with the provisions of the EC Council Machinery Directive.

Designation of machinery :-	QUIETWIN BELT DRIVE
Machinery Types :-	QTE
Relevant EC Council Directives :-	98/37/EC (Machinery Directive) 93/44/EEC (Amendment to the Machinery Directive)
Applied Harmonised Standards :-	EN292-1, EN292-2, EN294, EN29001
Applied National Standards :-	BS848 Parts One, Two and Five

Signature of manufacture representatives :-

	Name:	Position:	Date:
1)	 C. Biggs	Technical Director	3.10.00
2)	 W. Glover	Manufacturing Director	3.10.00

INFORMATION FOR SAFE INSTALLATION, OPERATION AND MAINTENANCE OF NUAIRE VENTILATION EQUIPMENT

To comply with EC Council Directives 98/37/EC Machinery Directive

To be read in conjunction with the relevant Product Documentation (see 2.1)

1.0 GENERAL

- 1.1 The equipment referred to in this **Declaration of Incorporation** is supplied by NuAire to be assembled into a ventilation system which may or may not include additional components.
The entire system must be considered for safety purposes and it is the responsibility of the installer to ensure that all of the equipment is installed in compliance with the manufacturers recommendations and with due regard to current legislation and codes of practice.

2.0 INFORMATION SUPPLIED WITH THE EQUIPMENT

- 2.1 Each item of equipment is supplied with a set of documentation which provides the information required for the safe installation and maintenance of the equipment. This may be in the form of a Data sheet and/or Installation and Maintenance instruction.
- 2.2 Each unit has a rating plate attached to its outer casing. The rating plate provides essential data relating to the equipment such as serial number, unit code and electrical data. Any further data that may be required will be found in the documentation. If any item is unclear or more information is required, please contact NuAire.
- 2.3 Where warning labels or notices are attached to the unit the instructions given must be adhered to.

3.0 TRANSPORTATION, HANDLING AND STORAGE

- 3.1 Care must be taken at all times to prevent damage to the equipment. Note in particular that shock to the unit may result in the balance of the impeller being affected.
- 3.2 When handling the equipment, care should be taken with corners and edges and that the weight distribution within the unit is considered. Lifting gear such as slings or ropes must be arranged so as not to bear on the casing.
- 3.3 Equipment stored on site prior to installation should be protected from the weather and steps taken to prevent ingress of contaminants.

4.0 OPERATIONAL LIMITS

- 4.1 It is important that the specified operational limits for the equipment are adhered to *e.g. operational air temperature, air borne contaminants and unit orientation.*
- 4.2 Where installation accessories are supplied with the specified equipment eg. wall mounting brackets. They are to be used to support the equipment only. Other system components must have separate provision for support.
- 4.3 Flanges and connection spigots are provided for the purpose of joining to ductwork systems. They must not be used to support the ductwork.

5.0 INSTALLATION REQUIREMENTS

- In addition to the particular requirements given for the individual product, the following general requirements should be noted.*
- 5.1 Where access to any part of equipment which **moves**, or can become **electrically live** are not prevented by the equipment panels or by fixed installation detail (eg ducting), then guarding to the appropriate standard must be fitted.
- 5.2 The electrical installation of the equipment must comply with the requirements of the relevant local electrical safety regulations.

6.0 COMMISSIONING REQUIREMENTS

- 6.1 General pre-commissioning checks relevant to safe operation consist of the following -
Ensure that no foreign bodies are present within the fan or casing
Check electrical safety. *e.g. Insulation and earthing.*
Check guarding of system.
Check operation of Isolators/Controls.
Check fastenings for security.
- 6.2 Other commissioning requirements are given in the relevant product documentation.

7.0 OPERATIONAL REQUIREMENTS

- 7.1 Equipment access panels must be in place at all times during operation of the unit, and must be secured with the original fastenings.
- 7.2 If failure of the equipment occurs or is suspected then it should be taken out of service until a competent person can effect repair or examination. (Note that certain ranges of equipment are designed to detect and compensate for fan failure).

8.0 MAINTENANCE REQUIREMENTS

- 8.1 Specific maintenance requirements are given in the relevant product documentation.
- 8.2 It is important that the correct tools are used for the various tasks required.
- 8.3 If the access panels are to be removed for any reason the electrical supply to the unit must be isolated.
- 8.4 A minimum period of two minutes should be allowed after electrical disconnection before access panels are removed. This will allow the impeller to come to rest.
NB: *Care should still be taken however since airflow generated at some other point in the system can cause the impeller to "windmill" even when power is not present.*
- 8.5 Care should be taken when removing and storing access panels in windy conditions.

Service

As a manufacturer NuAire can provide you with factory trained Service Engineers.

Our Engineers are supported by a comprehensive range of spare parts 'off the shelf'.

If you are an industrial or commercial user, you may be interested in details of NuAire's regular maintenance Service Contracts. This is a worthwhile service that helps you get the most from our products.

Our Service Department will be happy to give you more information.

Please telephone: **029 2085 8585**

Controls Application Service (CAS)

A team of Engineers and technicians is available to provide pre and post order support.

We are on hand to provide help and advice from the most basic use of any NuAire equipment to the more complex applications, maximising on the versatility of our SMART and NetLink control products.

Telephone: **029 2085 8585**

Facsimile: **029 2085 8586**

3 YEAR WARRANTY

The three year warranty starts from the date of delivery and includes parts and labour for the first year.

The labour element is subject to full, free and safe access to the equipment as recommended by the CDM regulations.

The remaining two years covers replacement parts only.

NOTE:

Installation & Maintenance of the equipment must be as directed in the instructions provided with the unit.

Technical or commercial considerations may, from time to time, make it necessary to alter the design, performance and dimensions of equipment and the right is reserved to make such changes without prior notice.

NUAIRE

**Western Industrial Estate,
Caerphilly, Mid Glam CF83 1XH
United Kingdom.**

Telephone: 01222 885911

Facsimile: 01222 887033,

Email: info@nuaire.co.uk

www.nuaire.co.uk

Leaflet No. 670921