

NUAIRE

X-TRACT

fans for window & wall applications

Installation Instructions

NUAIRE

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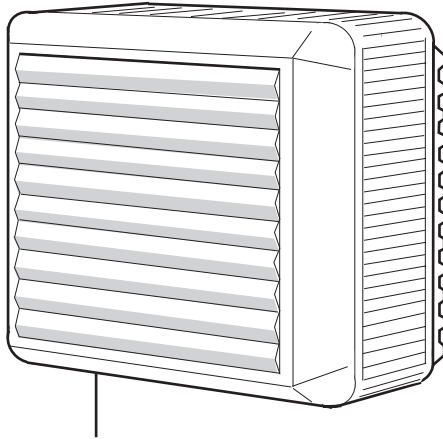


Fig. 1 General view of Fan unit (model XT80M shown).

Precautions.

Remove packing and make sure that the unit is undamaged. In case of doubt, do not install or operate the appliance. Contact the NuAire Service Department on 01222 858271.

Check that your electrical voltage and frequencies correspond to those marked on the rating label.

This appliance must only be used for its intended purpose i.e. air extraction (and input with models 120A & 175A) for domestic or similar applications.

Before carrying out any cleaning or maintenance operations, disconnect the mains electrical supply to the fan by means of a double pole switch or remove main electrical feed connections.

In the event of a breakdown or faulty operation, switch off and do not tamper with the appliance. Apart from safety considerations, this could also invalidate your warranty. If repairs are necessary, contact our Service Department.

Installation must be carried out by qualified personnel according to the instructions supplied with the unit. Incorrect installation can cause damage to people, animals or property for which the manufacturer cannot be considered liable.

The fan is a fixed appliance and the electrical supply must be via a fixed, wired and fused (3 amp) spur incorporating a double pole switch with a contact opening of at least 3mm alternatively a flexible lead terminating in a three pin fused plug.

The maximum room temperature is 40 °C.

When installing the fan in a room containing a combustion device (for heating or cooking etc.) ensure enough air can enter the room to supply both appliances. This is necessary for correct operation of the fuel device and compensate for the air being extracted by the fan.

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Note: This appliance must discharge into a single fume pipe or direct to outside atmosphere.

This appliance conforms to EEC directives N 82/499 of 1984/04/10 for suppression of radio interference.

Introduction

The X-tract range fans are produced in two unit sizes with impeller diameters of 225, 235, 275 and 285mm. The respective fan codes are:

- XT80M** (manual operation only, with pullcord).
- XT100A** (with on/off and 5 speed fan control switch).
- XT120A** (with on/off, 5 speed and reversing fan control switch).
- XT175A** (with on/off, 5 speed and reversing fan control switch).

The basic XT80M model is fitted with a pullcord. Pulling once opens the louvres and starts the fan. Pulling the cord again stops the unit and closes the louvres.

Model XT100A operates via a remote control (supplied with the unit) incorporating a single white louvre switch and 5 speed and standby rotary control. 4 core cable (not supplied) is used to connect the fan to the control. The shutters can be left open to provide natural ventilation.

Models XT120A and XT175A operate via a remote control (supplied with the unit) incorporating an on/off switch, a reversing switch and a 5 speed rotary control.

The on/off switch operates the fan louvres and powers the unit. The shutters can be left open to provide natural ventilation. The second switch reverses the airflow and the 5 speed regulator has a standby (off) setting.

A length of 5 core cable is supplied with the units to connect the control to the fan.

The XT175A model features a 'plug in' power connection on the lower corner of the casing.

Installation

X-TRACT SERIES FAN

Dimensions

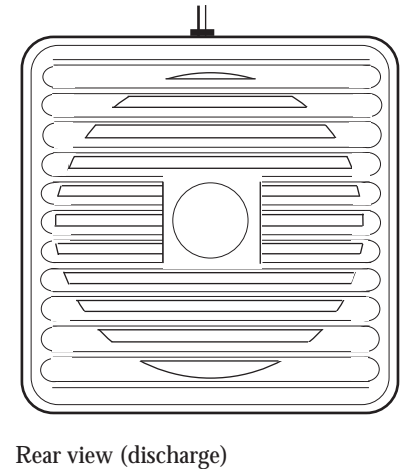
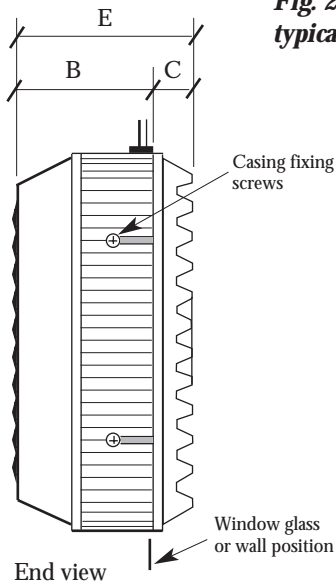
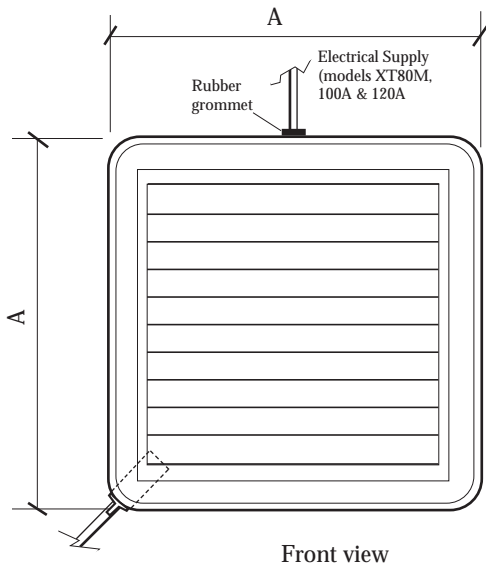
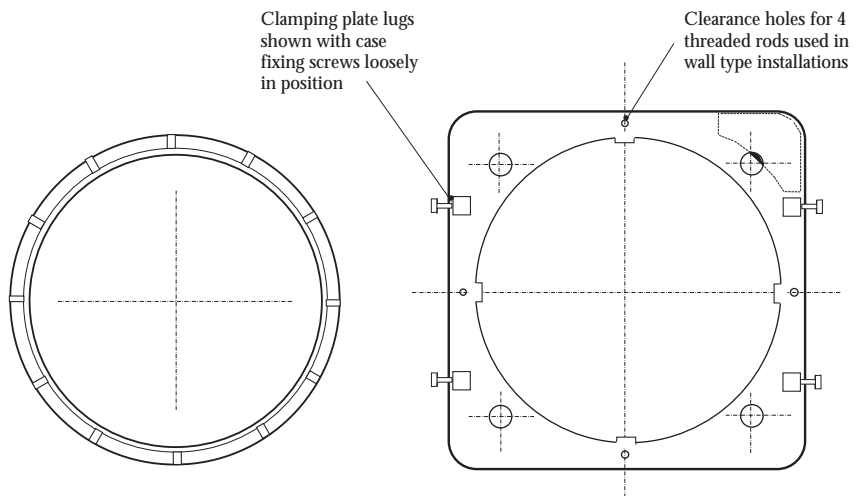


Fig 2 General dimensions of unit and typical wall and window installations

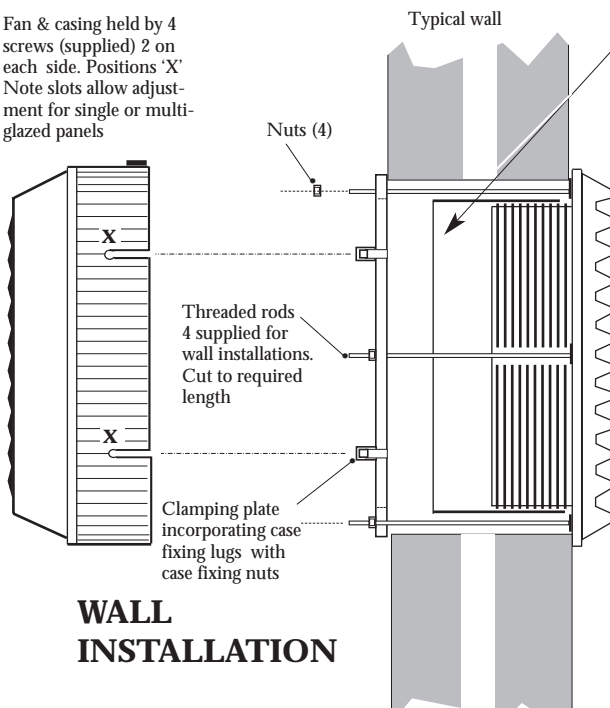
Plug in socket, supply and control cables (model XT175A only).

Table 1 Dimensions

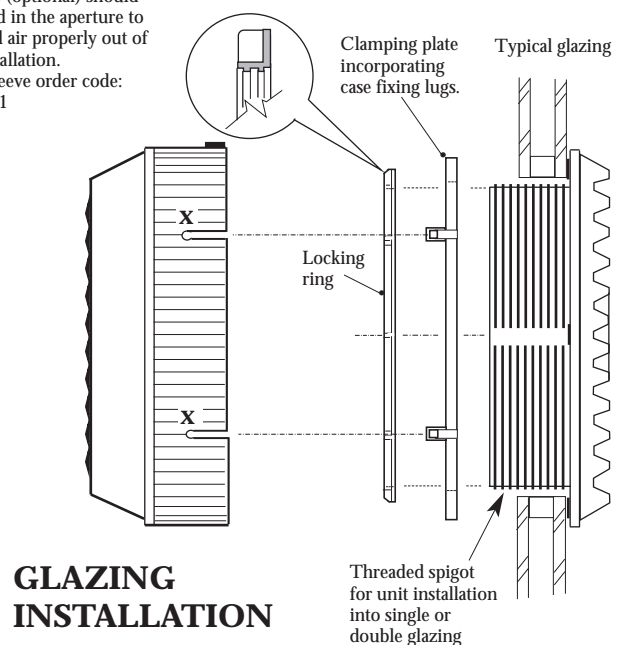
Unit	A	B	C	Clearance Hole dia. 'D'	E
XT80M	280	94	30	225/235	124
XT100A	280	94	30	225/235	124
XT120A	280	94	30	225/235	124
XT175A	335	128	33	275/285	161



Fan & casing held by 4 screws (supplied) 2 on each side. Positions 'X' Note slots allow adjustment for single or multi-glazed panels



NOTE:
For cavity wall installations a sleeve (optional) should be fitted in the aperture to channel air properly out of the installation.
Wall Sleeve order code: XTWK1



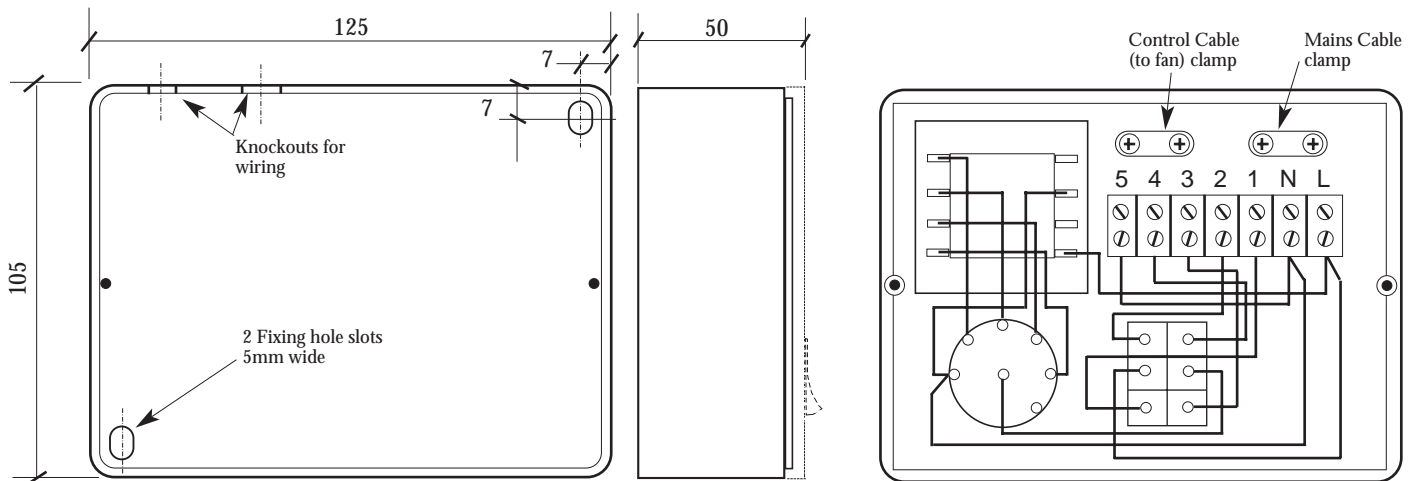


Fig. 3 Control box unit dimensions and inside view of front cover.

Window Installation

Prepare a hole in the glazed panel to the dimension suitable for your particular unit (See table 1 for hole clearance sizes). To open the unit, loosen but do not remove the 4 screws (2 each side) and withdraw the main casing containing the fan assembly. The threaded spigot on the rear cover is a close fit around the fan barrel and the fan may be difficult to withdraw if care is not exercised. The threaded spigot allows adjustment for the unit to be installed into a single pane of glass or into a double glazed panel. Undo the plastic locking ring and withdraw the clamping plate. Working from outside the room, the rear cover is offered up to the glass aperture and the threaded spigot passed through the hole. Inside the room, the clamping plate slips over the threaded spigot, guided by four lugs. On 80, 100 & 120 units note the electrical terminal connection housing is located top left). The assembly is clamped together using the locking ring.

Electrical connection Model XT80M.

Switch off the mains supply and prepare the 2 core electrical mains wiring to the unit which on the XT80M model enters the centre of the casing top panel via a rubber grommet (supplied). Remove the 3 screws and using a small screwdriver lift up and unclip the cover of the black plastic fan terminal box fitted to the top left of the clamping plate. Thread the rubber grommet onto the cable and, ensuring you have enough cable to pass inside the casing, simply connect live and neutral to terminals 2 & 3 inside the fan terminal box. Note: all exposed wiring should be properly fixed to the walls.

- XT80M model has on / off pullcord and the 2 core mains wiring (not supplied) enters through the top grommet.*
- XT100A model has speed control with open/close louvres switch, and the 4 core control cable (not supplied) enters via the top grommet.*
- XT120A model has speed control with open/close louvres switch & reversing switch. The 5 core control cable (supplied) enters via the top grommet.*
- XT175A model has speed control with open/close louvres switch, reversing switch and 5 core control cable (supplied). This model features a 'plug in' wiring socket on the fan casing.*

For XT100A model with regulator control, 4 core cable (not supplied) is used to connect the fan (terminals 1 - 4) to the control and 2 core cable (not supplied) is used to connect the control to the mains supply. Note: all exposed wiring should be properly fixed to the walls.

For XT120A model with regulator control, 5 core cable (supplied) is used to connect the fan (terminals 1 - 5) to the control and 2 core cable (not supplied) is used to connect the control to the supply. Note: all exposed wiring should be properly fixed to the walls.

For XT175A units with regulator control, 5 core cable (supplied) is used to connect the fan (terminals 1 - 5) to the control.

The control cable enters the fan unit by means of a 'plug in' socket located on the bottom corner of the case. 2 core cable (not supplied) is used to connect the control to the mains supply. Note: all exposed wiring should be properly fixed to the walls. There are two fixing lugs on either side of the clamping plate which retain fixing nuts for the main fan assembly. Insert the four fixing screws (supplied) loosely into the nuts in either side of the case. Ensure these nuts and screws are in position before offering up the main fan case to the assembly located in the window. Holding the fan casing in position against the glass, locate the rubber cable grommet in the top slot of the case and tighten the lug screws. Note: do not overtighten the fixings.

The Control regulator (all models except XT80M).

See fig. 3. Remove the two screws on the front panel of the control box and lift off the cover. Prepare a suitable mounting position for the control box. Knock outs are provided on the top of the control box case for cable entry. Open up two of the knockouts. Offer up the case to the wall and mark the position of the fixing holes onto the wall. Using suitable plugs and fixings screw the control box case to the wall. Connect the wiring inside the control, 4 core cable (terminals 1-4) for XT100A unit and 5 core (terminals 1-5) for XT120A & XT175A units. The control terminal numbering should match up with the terminal numbers in the fan. Terminals L and N are used for the 2 core mains supply on all units.

Operating the controller

Model XT100A has a single white switch to operate the louvre

Pressing ☀ opens the louvres.

Pressing ○ closes the louvres

Model XT120A and XT175A have an additional switch to reverse the airflow

Press ↓ for air extract.

Press ↑ for air input

Speed is adjusted using the rotary control which has Off / and five speeds.

Wall Installation

Prepare a hole in the wall to the dimension suitable for your particular unit (See table 1 for hole clearance sizes). If the wall is a cavity wall, use the optional wall sleeve (order No. XTWK1) to bridge the cavity. See following instructions. To open the unit, loosen-do not remove the 4 screws (2 each side) and withdraw the main casing containing the fan assembly.

Table 2 General Information

Unit	Input power	Full load (mA)	Start (mA)	Performance	Sound dBA @3m	Weight
XT80M	63W	380	580	78.5 l/sec	43	2.5 kg
XT100A	35W	157	236	99.5 l/sec	49	2.5 kg
XT120A	54W	280	420	Input: 88 l/sec Extract:120 l/sec	56	2.55 kg
XT175A	63W	290	435	Input: 111 l/sec Extract:175 l/sec	45	5.6 kg

Wall Installation ...continued

The threaded spigot on the rear cover is a close fit around the fan barrel and the fan may be difficult to withdraw if care is not exercised. Undo the plastic locking ring and put to one side as it is not required for a wall installation. Withdraw the clamping plate. The outside discharge cover has 4 integral nuts on the inside face. Insert the four wall installation threaded rods into these nuts. If you are using the wall sleeve it should be carefully assembled for use by removing the appropriate tape cover strip and accurately overlapping the material to the strip edge (both fan diameters can be covered by the sleeve kit). Push the sleeve onto the threaded barrel in the outlet cover. The sleeve can be easily trimmed to butt-up to the fan venturi when the main case is offered up. Working from outside the room, the outlet cover (with sleeve if chosen) is fitted into to the wall aperture. Inside the room, the clamping plate fits over the rod ends and the four brass longnuts supplied are used to clamp the assembly to the wall. Cut off any excess threaded rod not required. Note: on 100 & 120 units note the electrical terminal connection housing is located top left).

Refer to paragraph 'Electrical connection and wire in the unit. The four fixing lugs on the clamping plate sides have captive nuts. Insert the four fixing screws loosely and slide the main fan case assembly onto the lugs and continue installation. **NOTE: The four fixing screws must be fitted loosely in position prior to assembling the fan case to the installed clamping plate. Adding the screws after assembly may dislodge the 'captive' nuts.**

Testing the installation

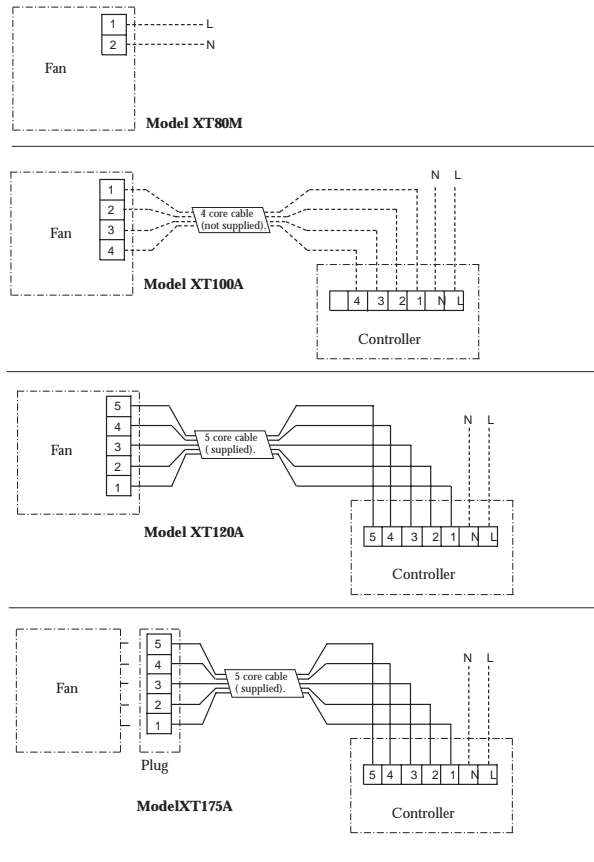
Check all connections are correctly made and that all exposed external wiring is properly fixed to the walls. Switch on the mains supply to the installation.

Model 80M Pull once on the pullcord the louvres should open and the fan should start. Pulling again switches off the fan and closes the louvres.

Model 100A On the controller, set the rotary speed control to a running position (say position 2). Press the white switch to open the louvres, the fan will start. Air should be extracting from the room. Note: with the rotary speed control set to zero pressing the white switch will open the louvres only so that the installation can be used for natural ventilation.

Model 120A and 175A On the controller, set the rotary speed control to a running position (say position 2). Press the white switch to open the louvres, the fan will start. Press the other white switch to check for correct reversing of the airflow. Check the speed adjustment by rotating the rotary speed control. Note: with the rotary speed control set to zero pressing the white switch will open the louvres only so that the installation can be used for natural ventilation.

Electrical wiring diagrams



Maintenance

Maintenance is confined to cleaning the unit. Before carrying out any cleaning isolate the mains supply. Periodically, at least once a year or more frequently in the case of heavy use, remove the dirt and encrustation from the fan and motor casing. Remove the grille/cover and check that the impeller is not deformed or cracked and is able to rotate freely without oscillation. The impeller must be properly fixed to the shaft. Ensure that the case is securely held to the mounting surface or wall. Clean the outer casing and grille/cover with a mild detergent in tepid water. Internally a soft brush can be used taking care not to damage or disturb the electrical wiring. Re-connect the electrical supply.

Service

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.

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