



OPERATING AND MAINTENANCE INSTRUCTIONS

PERMANENT EXTRACT UNITS – DIRECT & BELT DRIVEN

DESCRIPTION – DIRECT DRIVE FANS

The double inlet, direct drive, single phase, centrifugal fan is correctly sized to meet the required performance. The fan is fixed directly to the fan plate located in the main casing.

The casing, internal section and lid are manufactured from 18 or 16 swg zintec steel plate. The unit is finished in a polyester, powder coat paint to RAL 9005, (Satin Black). Pyrosorb-S 25 mm insulation is fitted for sound proofing, anti-condensation and fire retardant purposes. Both ends of the unit are internally flanged and supplied with M4 nutserts as standard. These are for connection to a suitable duct or the optional Puma telescopic wall sleeve and duct and external weather louvre.

DESCRIPTION – BELT DRIVE FANS

The fan is a double inlet, forward or backward curved centrifugal fan, coupled with a single or three phase motor. 2 or 4 pole motors are used, depending upon the speed of the fan. Power transmission drive arrangements are via single or twin vee groove pulleys, with taperlock bushes and appropriate drive belts.

INSTALLATION

All permanent extract units require a 240 V ac 1 phase & neutral 50 Hz supply, or 380/415 V ac 3 Phase & Neutral where specified.

The unit must be installed with sufficient access to the top of the unit, as access to all the units components are via the flat plate lid.

The clearance height is not necessary when the units are located under raised modular floors as it is assumed that the appropriate floor tile/s are accessible and removable. The mains supply to all units must be disconnected at source before removing the lid. Anti-vibration isolators may be fitted to ducted units if required (by others).

All units are fitted with a mains supply isolator and electrical enclosure with mains terminals. An Airflow Failure Switch, (AFS), is provided for remote indication via common, normally open, & normally closed terminals. Please refer to wiring diagram for connection to remote alarm indication.

Speed controllers are available on request.

SERVICE & MAINTENANCE

Permanent extract units are virtually maintenance free.

Fans and motors up to 11kW have 'sealed for life' bearings that require no maintenance.

The Airflow Failure Switch should be checked for free movement and electrical conductance.

Refer to Puma technical sales leaflet for further information regarding dimensions, weight and unit performance etc.

FUSE RATINGS

Check fuse/circuit breaker first in the event of fan failure. Appropriately sized fused switched isolators are still required for main supplies. All single phase units & three phase units up to 3 Amps are fitted with panel mounted fuses, denoted 'FS1' on wiring diagrams. These are located adjacent to the on/off isolator, or in weatherproof units, fitted to the fan plate. Miniature circuit breakers are fitted to all three phase units above 3 amps.

FAULT FINDING

FAN/MOTOR FAILS TO RUN

1. Check the unit is connected correctly, as the wiring diagram supplied.
2. Check the mains supply and On/Off Isolator.
3. Check the fan fuse/s, located below the Isolator.
4. Is there a voltage at the fan? Yes would indicate motor failure or a neutral/phase problem.
5. Three phase fans & motors: check the Miniature Circuit Breaker (MCB) and fan overload by pushing the red button on the fan contactor. Check overload is of the correct size and setting.

Most faults/problems can be resolved by following the above. If the unit still fails to work correctly, please contact Puma Products Ltd for technical assistance.



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