Leopard Fan Coil Units
End User Instructions

Product Data Sheet - Applications Department
Dunham-Bush Ltd, Downley Road, Havant, Hants, PO9 2JD
Tel. 023 9247 7700 Fax. 023 9245 0396
Email. Info@dunham-bush.co.uk

DUNHAM-BUSH®

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Part No. 129-000-002

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INSTALLER : Please leave these instructions, other relevant literature and any controls/accessories with the user

INTRODUCTION

This booklet provides guidance for operating and maintaining Dunham Bush Leopard fan coil units. The instructions apply to units from the standard range only. Please study the instructions carefully before operating or working the unit.

IDENTIFICATION

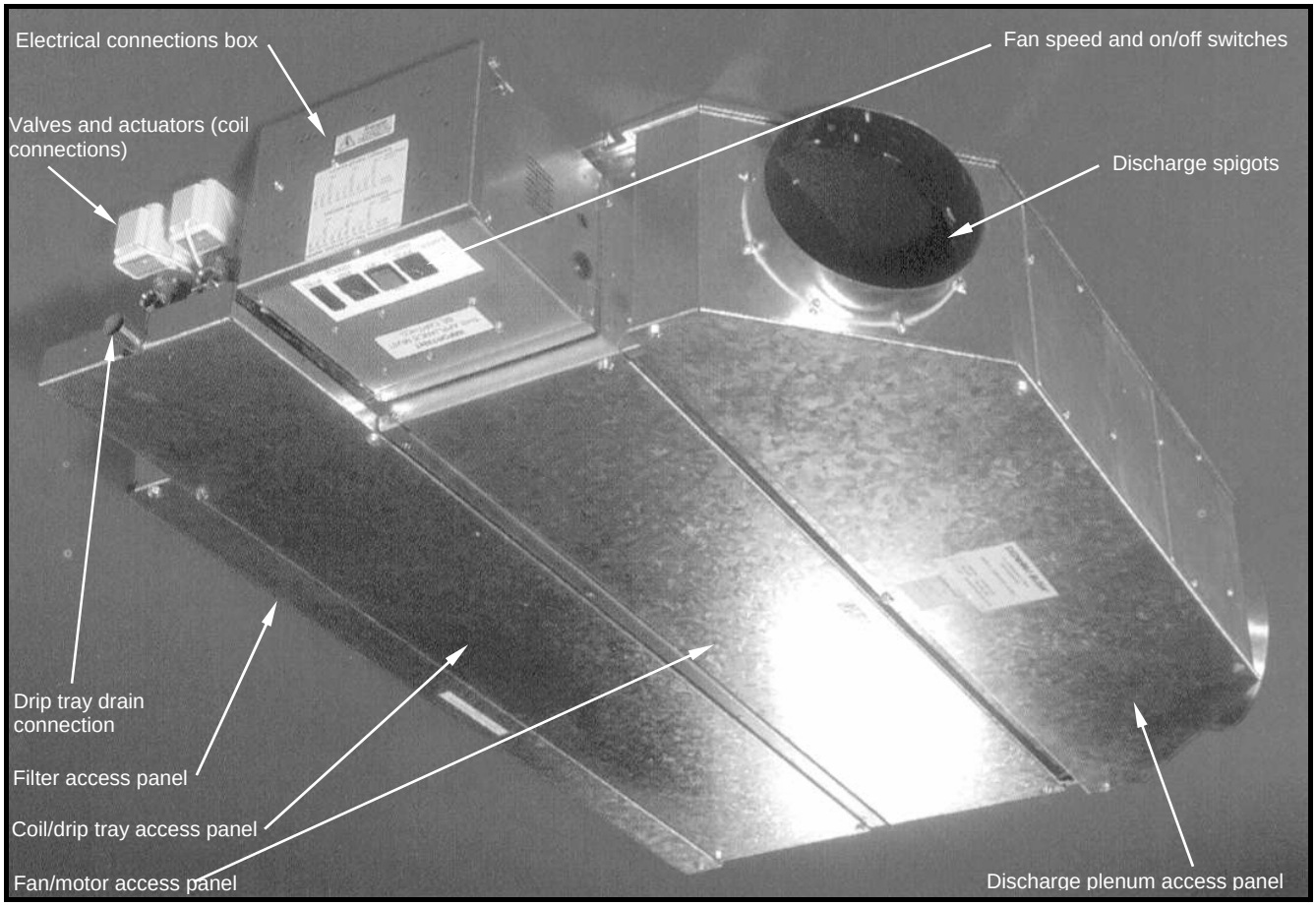
The fan coil unit serial number, description, figure number (size) are displayed on a label found on the fan coil access panel. If specified, a stencil reference may also be marked on the heater access panel for on-site identification.

DESCRIPTION

Dunham Bush Leopard fan coil unit comprises a basic galvanised sheet steel casing with multiple access panels to each part of the unit, fan/motor assemblies, air filter, dual purpose heating/cooling coil and electrical connections box. Fan coil units are designed for up to nine fan speed operation, with fan control provided by means of an autotransformer with fan speed switches

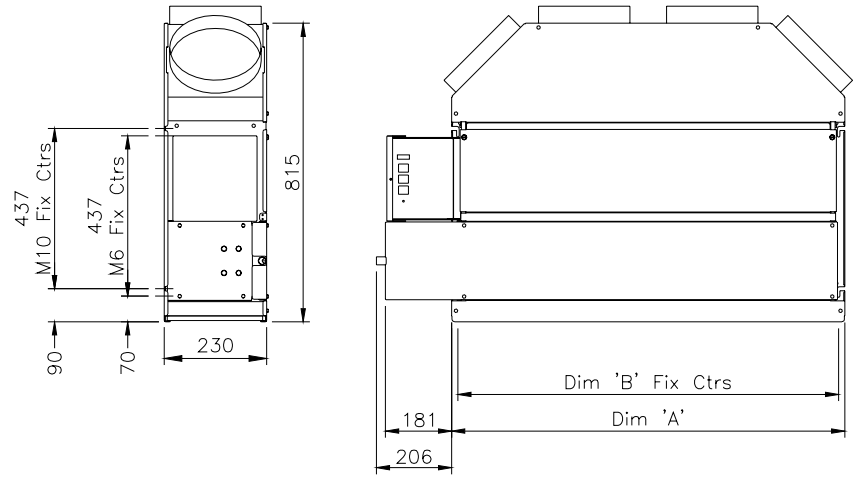
STANDARD RANGE MODELS & SIZES

Leopard is a horizontal basic chassis fan coil unit, available in seven sizes, figs 1 to 7 inclusive. Each size is available with octagonal or rectangular discharge plenums, as well as optional inlet spigot plenums.



Frame 1 : Leopard Fig 3 LH connections with octagonal discharge plenum

Size	Dim 'A'	Dim 'B'	No. of spigots
1	675	641.2	3
2	1075	1041.2	4
3	1075	1041.2	4
4	1475	1441.2	5
5	1475	1441.2	5
6	1875	1841.2	6
7	1875	1841.2	6



Frame 2 : Range of standard sizes with octagonal discharge plenum

OPERATION

Leopard fan coil unit provide cooling and heating of air when used in conjunction with chilled water and/or low temperature hot water systems. They are designed for mounting in a ceiling or roof void, connected to ductwork.

When running, the fan draws air from the room and/or primary source, through an inlet filter and passing it over a finned tubes of a heating/cooling coil. The air is then discharged through spigots, along ductwork and through grilles or diffusers to the room space.

Alternative options include chilled water cooling only, discharging to the ceiling/roof void and intake through ductwork and spigots.

Fans normally run continuously, with control provided an automatic control system varying the flow rates of chilled water and hot water through the coil (waterside control), thus varying the cooling and heating outputs. Depending upon the particular type of controls fitted, user control is provided by fan speed switches and/or temperature control.
Fan speed switch settings are shown on a label affixed to the electrical connection box/access panel.

CONTROLS

Leopard fan coil units are fitted with a waterside control system, which typically comprises the following elements :-

Fitted fan on/off and speed change switches
Fan coil controller
Return air sensor
Valve actuators
Two or four port valves

Additional optional accessories include :-

Remote room air sensor
Remote setpoint adjuster
Remote fan on/off and speed switches
Fitted relays for master/slave or BMS control

CLEANING AND MAINTENANCE

Cleaning and maintenance must be carried out by competent persons

WARNING

1. Prior to undertaking any cleaning or maintenance, ensure that the fan coil unit and any controls are disconnected from the electrical supply at the local isolator.

2. Some internal components may have sharp edges. Care must be taken when working on the fan coil unit, and protective gloves should be worn.

Inspection

The frequency of cleaning and inspection depends upon the conditions in which the fan coil unit operates. Initially, it is suggested that the air filter is inspected after 6-8 weeks normal operation, and cleaned as required at regular intervals. Cleaning the air filter ensures that the unit delivers the required air flow rate, enabling the coil to be effective. The fan should not be operated without a filter, since the coil fins will become clogged with fluff and dust particles, resulting in reduced performance.

Access

1. There are four access panels - filter, drip tray/coil, fans/motors and discharge plemum. All access panels can be opened by removing screws and turning quarter-turn fasteners.
2. The filter can be removed by sliding out from its mounting on the fan coil inlet, or from below by removing its access panel.

Cleaning

1. Air filters can be cleaned by tapping out excess dust and washing in warm water (up to 40°C), using detergent if necessary. The filter must be rinsed and allow to dry naturally before replacing. Do not use a vacuum cleaner, as it can damage the filter media. Filters should be replaced after approximately 20 washes.
2. The drip tray can be cleaned with warm, soapy water. Ensure the drip tray drains freely.
3. If a condensate pump is fitted, check any sensors are clean and wiped dry. Test the operation of the pump by pouring clean water into the drip tray.
4. Because the air filter retains most of the dusty particles, it will only be necessary to clean the fans, motors and coil annually. An industrial vacuum cleaner can used to clean the inside of the fan coil, in particular the coil and fans, with the air being sucked through the coil in the opposite direction to normal air flow. All accessible surfaces can be cleaned with a cloth.

Frame 3 : Inlet and filter

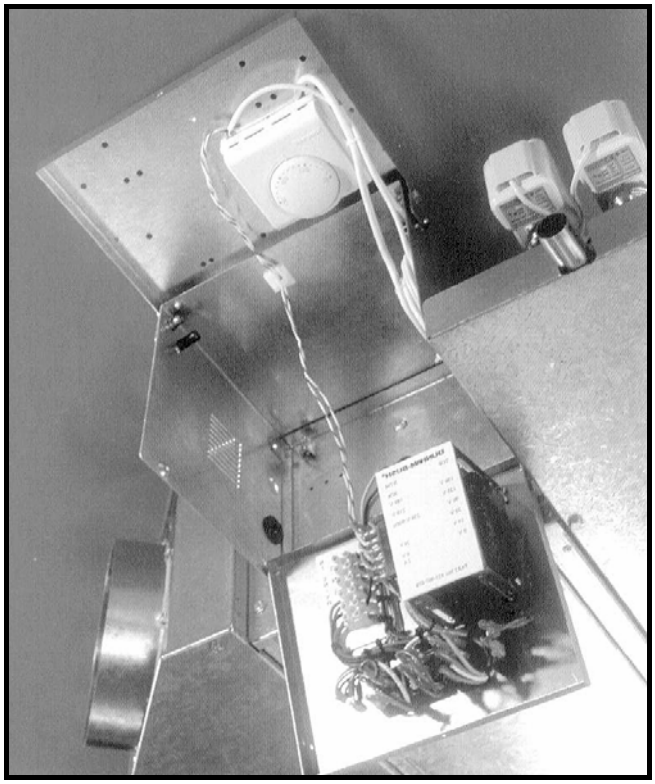
Frame 4 : Fan access panel

Maintenance

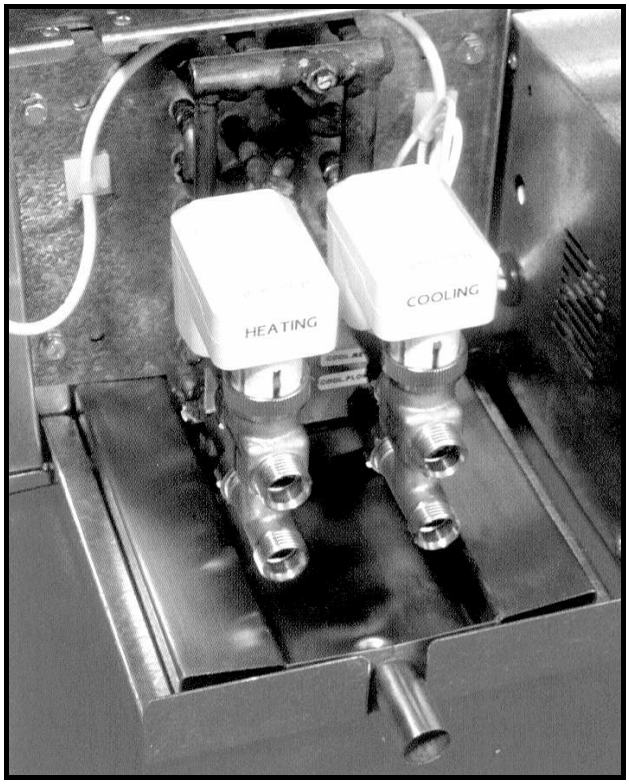
1. Purge any air from both cooling and heating sections of the coil using the manual air vents (using a suitable key).
2. The fan motor has 'sealed for life' bearings which do not require any maintenance, other than visual inspection
3. The electrical connections box incorporates a 5A fuse.
4. Refer to page 2. Each fan coil unit is supplied with a wiring diagram applicable for the particular controls and accessories. Further copies are available on request. Please quote the serial number on the label on the main access panel.
5. Check the operation of all controls by varying their settings to achieve the desired effect on the fan.
6. Check the operation of the condensate pump (if fitted) by pouring water into the drip tray.

SPARES

Most major items such as coils, fans, motors, controls and autotransformers are available as spare items. Please contact our Spares Department, quoting the serial number, model and size (figure number).



Frame 5 : Electrical connections box



Frame 6 : Valves, actuators and drip tray

Dunham-Bush Ltd, Downley Road,
Havant, Hants, PO9 2JD
Sales and Technical Support
Tel. 023 9247 7700
Fax. 023 9245 0396
email info@dunham-bush.co.uk
Spare Parts and Service
Tel. 023 9248 8745
Fax. 023 9248 8769
email spares@dunham-bush.co.uk

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Manufacturer reserves the right to change any product specification without notice

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