FläktWoods

JET FAN SPECIFICATION

1.0 Performance

1.1 All tests shall be performed on complete units with the appropriate silencers or bellmouth(s) fitted.

1.2 The fan shall deliver the volume or velocity specified in accordance with ISO 5801 with a flow measuring inlet fitted in placed of the inlet bellmouth.

1.3 The fan shall give the sound power level specified when tested in accordance with ISO 13350 and ISO 3741. Inlet and outlet sound levels shall be measured and in the case of reversible fans, the sound level shall be measured in both directions of airflow.

1.4 The fan shall give the thrust specified when tested on a test rig which constrains the longitudinal axis of the fan. The test measurements shall be made after the fan has reached steady operating conditions.

2.0 Construction

2.1 The impeller shall have aerofoil section blades fitted to a hub in a manner that allows simple adjustment of blade pitch angle. Blades and hubs will be cast from aluminium-silicon alloy in accordance with EN1676 (similar to ISO 3522 and 7720) Grades EN ABB 44100 or EN AB 42100. The hub shall be fitted with a cast iron or steel insert bored and keywayed.
All cast aluminium impeller components shall be X-rayed to show compliance with the specified grade of ASTM E155. X-ray records shall be traceable to the components and retained for a period of 10 years.

2.2 The fan casing shall manufactured from mild steel to EN10111 (similar to ISO 3574 and 3576) Grade HR14 with integral spun flanges. The casing assembly shall be hot dip galvanised in accordance with ISO 1459, 1460 and/or 1461.

2.3 The silencers shall be standard construction with pre-galvanised steel outer skin fastened to hot dip galvanised ends and bellmouths, fitted with internal galvanised steel perforated liner and galvanised aerodynamic pod.

3.0 Motor

3.1 The motor shall be pad mounted, continuously air stream rated and complying fully with IEC 34-1, with minimal Class F insulation. The fan shall be fitted with an external terminal box connected to the motor via high temperature rated 'Adaptaflex'/'Kopex' flexible conduit suitable for use in fire hazard areas. Both motor and terminal box shall comply with IEC 34-5 Grade IP55. The motor bearings shall have L10 life of not less than 20,000 hours when calculated in accordance with ISO 281. For emergency operation at 250°C for 2 hours the insulation shall be Class H. Bearings shall have a grease suitable for this operation and be fitted with extended lubricators mounted on the fan casing.

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4.0 Fan Balance and Vibration

4.1 The impeller shall be statically balanced to give a fan vibration level of G6.3 in accordance with ISO 1940.

4.2 Vibration at the fan feet shall be in accordance with the requirements of ISO 14694: a test performed with the fan supported on anti-vibration mounts, during which the vibration level shall be measured at rotational frequency in the vertical, horizontal and axial directions at a point on the front and rear feet adjacent to the mounting hole.

5.0 Finish

The fan shall be supplied with the manufacturer's standard finish.

6.0 Quality Assurance

The fan manufacturer shall be certified by an independent authority to be a firm of assessed ability to produce goods and services in accordance with ISO 9001 when the firm has design responsibility for the goods and services and to ISO 9002 when the firm only manufactures to the design of another firm that is of assessed ability to produce goods and services to ISO 9001.

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