

Instrumentation



Updated instrumentation will give you an early warning and prevent costly breakdowns.

On many fans it is possible to install updated and additional temperature and vibration equipment without changing the existing main bearing assembly. Adding temperature and vibration sensors on your fan provides warning of operational conditions that can cause costly breakdowns.

Since the beginning in the 1950s when the first Howden Axial fans were installed, more than 4,000 fans of this type have been installed world-wide. On many of these fans it is possible to install updated and additional temperature and vibration equipment without changing the existing main bearing assembly (MBA).

Regarding vibration instrumentation for MBAs with roller bearings from 1980s and older, please consult Howden.

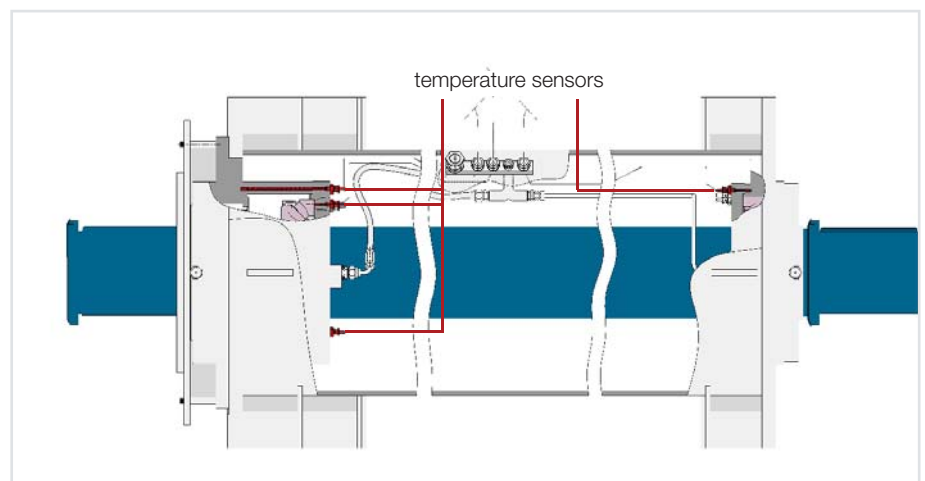


Main bearing assembly - TLT

Main bearing assembly with roller bearings

Since 1970s all Howden Axial Fan MBAs with roller bearings are prepared for or equipped with one Pt100 temperature sensor on both drive and regulating end. Depending on the installation year of MBA you have the possibility to install up to three (dual type) temperature sensors per bearing for added reliability on data input.

Since 1980s all MBAs with roller bearings are prepared for horizontal vibration sensors on both drive and regulating end. Howden typically recommends a minimum of one for single stage (regulating end) and two vibration sensors for two stage (acceleration or velocity) at regulating and drive end in horizontal direction.



Typical prepared locations for Pt100 sensors on MBA with roller bearings (from 1987)



For further information on axial fan retrofit solutions please visit www.howden.com or contact your local Howden company.

Main bearing assembly with sleeve bearings

MBA's with sleeve bearings are from 2009 onwards all prepared for installation of 3 x Pt100 on each radial and axial bearing.

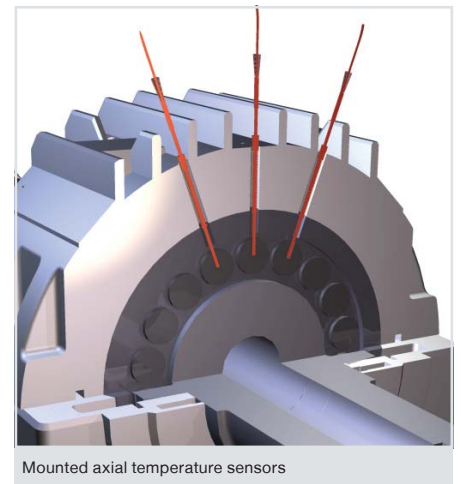
From 2009 onwards all MBA's supplied for VARIAX® fans are prepared for 2 x 2 XY proximity probes on each bearing and the regulating bearing is prepared for 2 x axial proximity probes.

Howden typically recommends vibration sensors (acceleration or velocity) at regulating and drive end in horizontal direction combined with installation of radial proximity probes (XY) and axial (Z) on regulating end.

For upgrading sleeve bearing MBA's from before 2009, please contact Howden.

Conditions for upgrading with additional temperature / vibration sensors

Access to the MBA is a requirement for installation of additional sensors. Typically this will be the case for single stage fans with hub sizes larger than 1.4 meter diameter. For hub diameters smaller than this it is recommended to add new sensors during planned maintenance. Upgrading of two stage fans will normally have to be done during outage, where intermediate piece is dismantled, leaving access to the MBA.



Mounted axial temperature sensors

Temperature and vibration equipment

