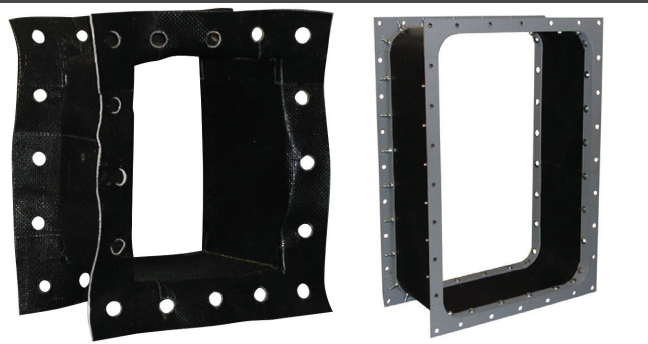


# FAN MAINTENANCE MADE EASY

While each of our fans comes with an Installation and Maintenance guide, there are several accessories and modifications that can make operating and servicing a fan easier. The benefits to using these include increased reliability and performance, decreased downtime and the ability to assess irregularities and determine the cause easier and faster.

## ACCELEROMETERS

Accelerometers are used to monitor fan vibration levels and alert plant personnel of excessive vibration. Vibration is a common cause of premature impeller and bearing failure. Early detection of changes to vibration levels allows for proactive troubleshooting and maintenance, decreasing the likelihood of equipment failure. Accelerometers are typically installed on bearing housings.



## FLEXIBLE CONNECTORS

Flexible connectors, also referred to as expansion joints, isolate a fan's inlet and/or outlet flange from connecting ductwork. This isolation helps lessen vibration transmitted between the fan and system and compensate for misalignment between the fan and connecting ductwork. nyb offers a wide variety of flexible connector construction options allowing for optimal design based on a system's gas-stream composition, velocity, and temperature.

## BEARING RTD'S/THERMOCOUPLE'S

Bearing RTD's (Resistance Temperature Detectors) are used to monitor bearing temperatures. Bearing temperature is a key indicator of bearing health. Identifying temperature increases at the time they occur allows plant maintenance personnel to address potential issues before costly damage is done to bearings. RTD's are typically compact, and install directly on bearings.



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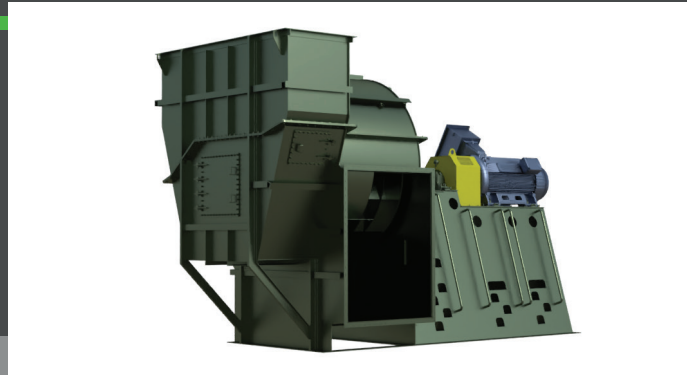


## FLOW METERS

Flow meters can be used to measure air velocity, air volume and temperature to better understand performance metrics or how performance changes based on different operating conditions.

## INLET BOX

Properly designed inlet boxes offer predictable entry losses associated with a 90° turn at the fan inlet. These entry losses are accounted for during the fan sizing process. Inlet boxes are also used on fan arrangements with a center-hung impeller (arrangements 3 & 7) to isolate the bearings from an airstream that may be high in temperature, or laden with contaminants. Common inlet box accessories include drains, bolted cleanout doors, and parallel-blade dampers.



## DAMPERS

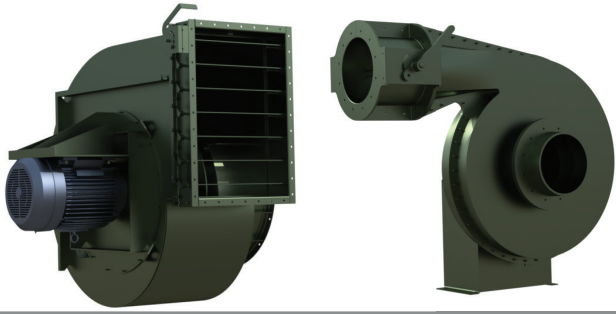
**INLET BOX DAMPERS**- Parallel-blade inlet box dampers control airflow by spinning air entering the fan in the same direction as the impeller rotation. Controlling airflow by means of an inlet box damper offers greater efficiency than flow control by means of an outlet damper. These dampers are offered with options for manual or actuator-controlled modulation.

**VARIABLE INLET VANE DAMPERS**- Two standard types of variable inlet vane dampers are available. Both operate on the same principal of pre-spinning air entering the fan inlet, allowing for efficient control of fan performance. Internal inlet-vane dampers are integral to the fan inlet cone. They are a compact, low cost solution for less demanding applications. Quick-opening cleanout doors are typically furnished to provide easy access to linkage components. External variable inlet vane dampers typically bolt to the fan inlet flange. They are of more robust construction than internal inlet vane dampers, allowing for use in demanding applications. These dampers are offered with options for manual or actuator-controlled modulation.

## MOTOR DISCONNECT SWITCH

Motor disconnect switches are an easy way to ensure the motor is de-energized, and can be used when maintenance or service work needs to be performed. It can allow for the fan to be turned off while energy is still supplied to other components surrounding the unit.



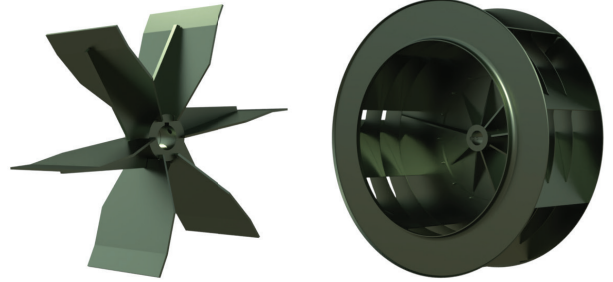


## OUTLET DAMPERS

Outlet dampers work on the principle of adding resistance to airflow. They are available in parallel, butterfly, and opposed blade construction to best suit dampering requirements. There is removable linkage and removable casing side to allow replacement of bearings and vanes. The stuffing-box option is also available for minimal leakage through casing.

## REPLACEMENT PARTS

Replacement parts are available for all fans, and include housings, wheels, shafts, bearings, motors, drives, inlet cone and assembly, safety equipment and more. For nyb fans received after 2000, parts can be ordered online at [www.nyb.com](http://www.nyb.com). All parts can be ordered through your local representative or by contacting the parts department.

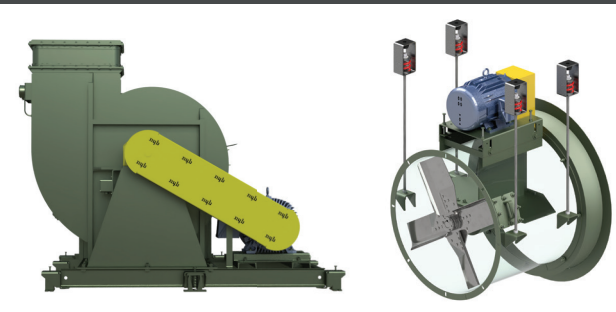
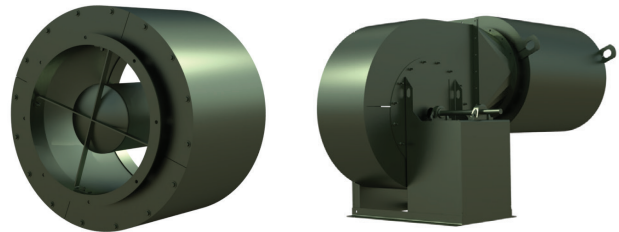


## SAFETY EQUIPMENT

Belt guards, shaft and bearing guards, coupling guards, inlet guards, and outlet guards are available. Guards can offer protection from all exposed moving parts and high-velocity airstreams.

## SILENCERS

Silencers have been designed for mounting on the inlet or outlet of the fan, but may also be used elsewhere in the duct to decrease the sound levels. They are available for rectangular or circular discharge for both centrifugal and axial fans.



## VIBRATION CONTROL

Issues with vibration can be properly managed through additional accessories. Vibration switches are designed for monitoring bearing vibration for early detection of a problem that might lead to potential bearing failure. Unitary bases, rubber-in-shear and spring isolation can also be used to help reduce or limit vibration transference from the fan to the supporting structure.

New York Blower offers a variety of fan accessories to help increase reliability, decrease downtime, and make maintenance an easier and more manageable process. In addition to these, custom fan solutions are also available to meet specific performance requirements.



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