



## Tilting Mechanism Upgrade

R-V's enhanced tilting mechanism design for tangential furnaces minimizes binding and thus provides smoother operation and reduced maintenance. At the heart of the design are self-lubricating graphite bearings located in the indirect and direct levers as well as the bearing housings.



Internal View of Tilt Mechanism



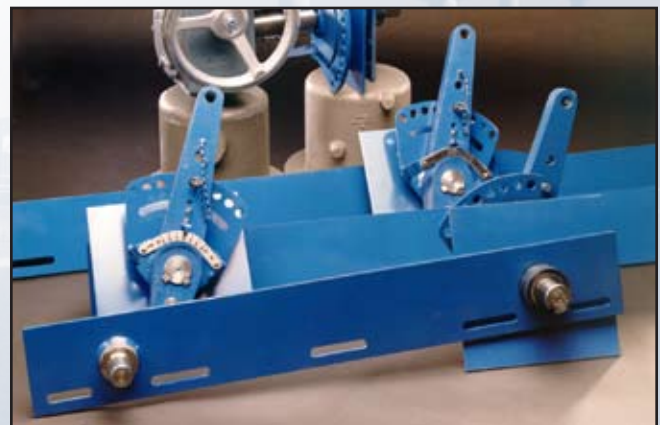
External View of Tilt Mechanism



Tilt Mechanism Driving Nozzle Tip Movement

Completion of the upgrade may include new pins, linkage, shafts and hardware. R-V also offers turnkey actuator replacement including engineering, sizing, location, mounting brackets, hardware and installation supervision.

The upgrade is available as a modular kit. Components are shop assembled to steel plate modules assuring a smooth, accurate field installation.



Tilt Mechanism Modular Kit

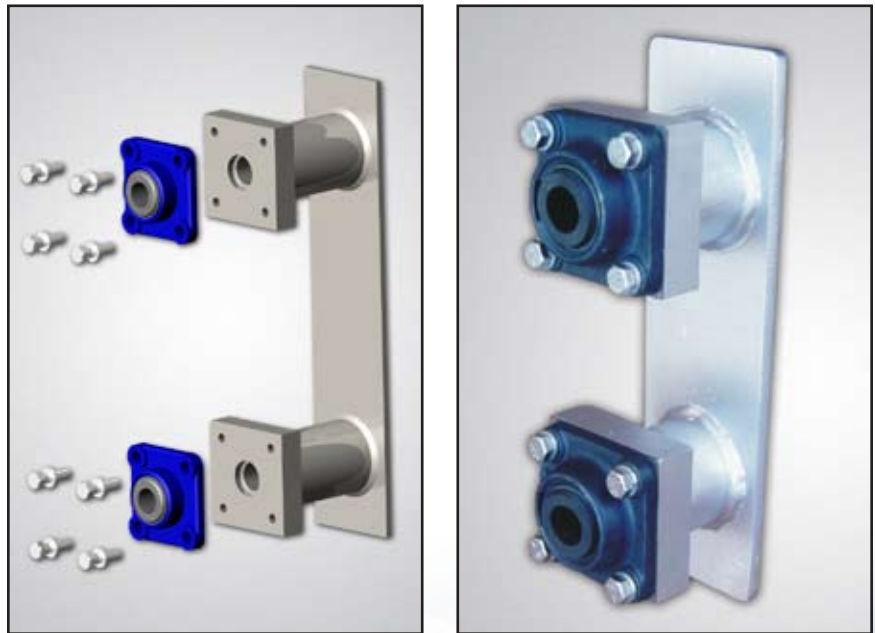


## Damper Bearing Upgrades

Replacement of your rigid, corner-fired windbox damper bearings with R-V's self-aligning graphite damper bearing upgrade will provide the dependable air regulation required for optimum boiler efficiency and effective NOx control.

### Benefits

- Self-aligning
- Self-lubricating
- Graphite construction
- Dependable regulation



R-V engineered damper bearing

R-V's windbox damper system is a complete single source responsibility package for use on new windboxes or for upgrading existing windbox dampers. The central feature of the system is the self-aligning, self-lubricating graphite bearing assembly provided in a modular form as shown above.

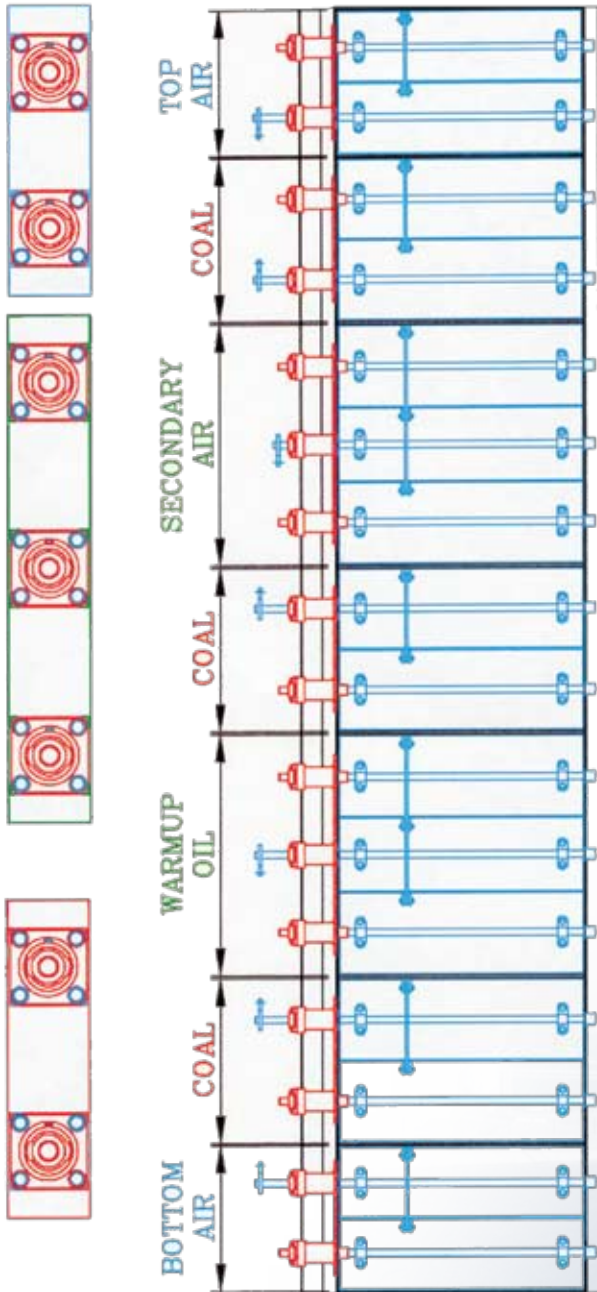
The self-aligning feature provides the necessary action to correct misalignment on many overheated and distorted windboxes in operation. The self-lubricating graphite bearing will provide years of smooth operation. Damper blades, linkage and stainless steel damper shafts can be designed for either parallel or opposed blade rotation. New damper actuators with pre-engineered mounting kits and direct drive couplets are also available.



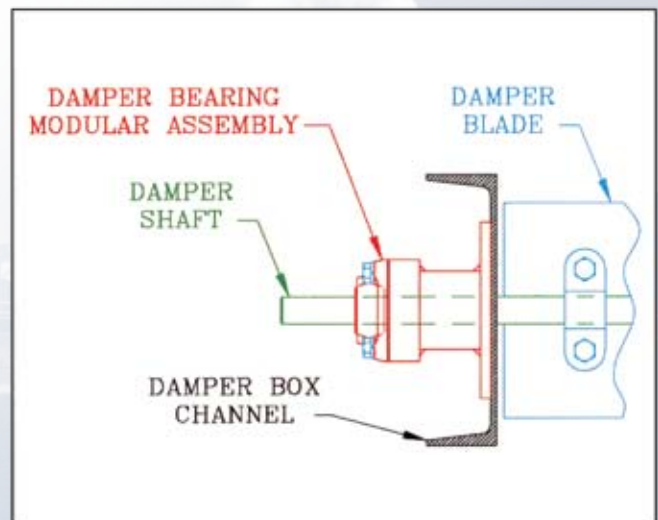


## Modular Bearing Assembly

R-V's modules are available for all burner widths and compartment heights. As show below, a normal replacement includes each compartment in all corners.



Damper Bearing Modular Assembly



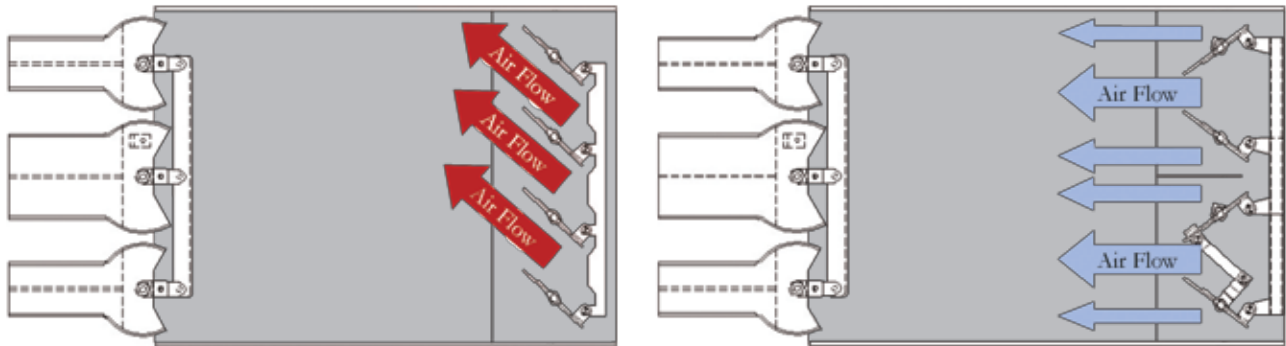




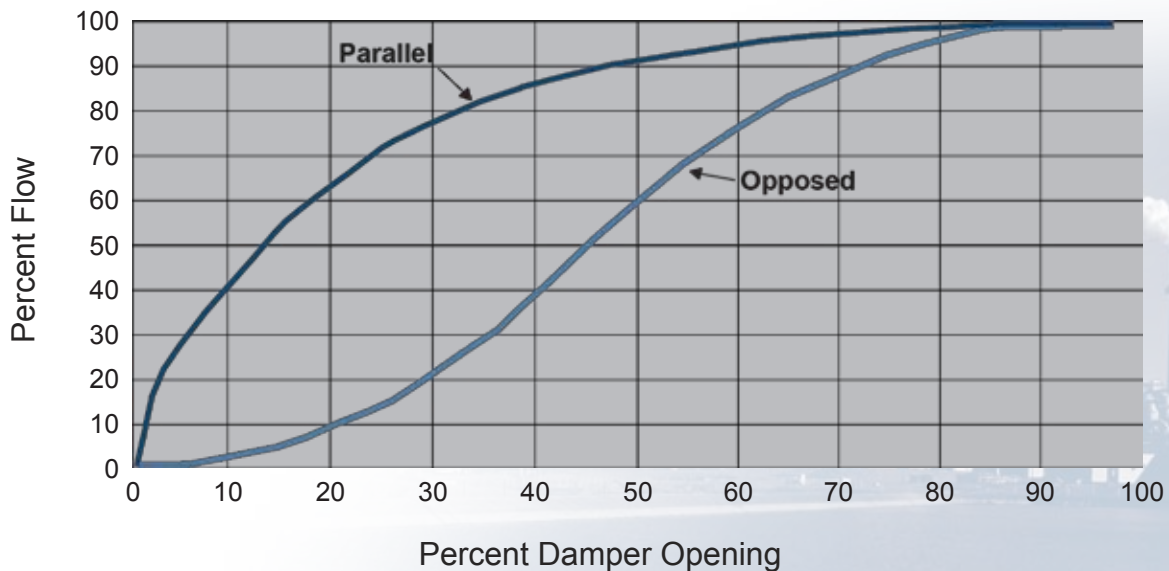
## Opposed Damper Blades

Improve your air flow distribution and control by replacing your existing parallel operating damper blades with R-V Industries' opposed blade design.

- ▶ **Maintain even distribution of air downstream of dampers**



- ▶ **Enhance air flow control over the entire operating range**



(Note: Typical air flow control comparison)

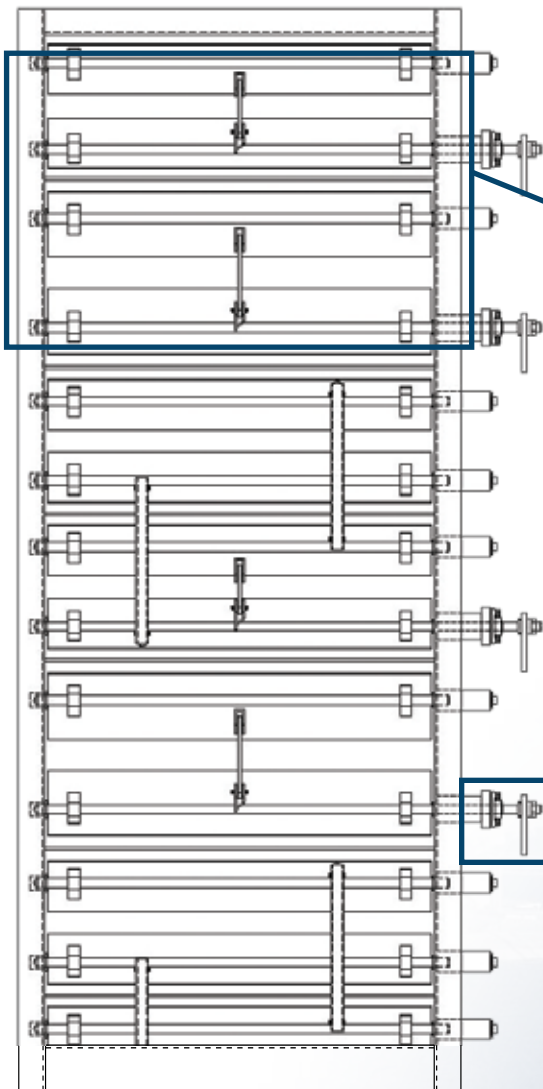




## Opposed Damper Blades

Many older tangentially-fired furnaces incorporate parallel blade windbox dampers for controlling air. This arrangement gives less than optimal air flow distribution and control within each windbox compartment.

R-V Industries offers a complete package to convert your existing parallel damper blade design to an opposed arrangement. The package includes new blades, stainless steel shafts, linkage and modular bearing assemblies. Optional damper frames with shop assembled blades, shafts and bearings reduce field installation costs.



**Opposed Damper Blade Design**



**Modular Self-Aligning Graphite Bearings**

