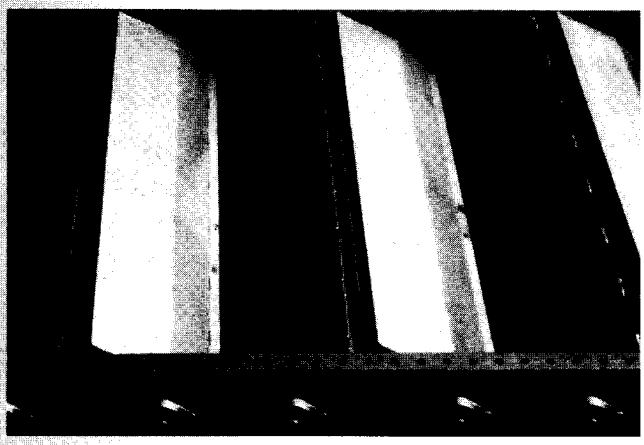
# Heavy-Duty Louver Dampers

AHS louver dampers are made in two blade configurations: parallel and opposed, and are primarily used for isolation and control respectively. They can also be combined with seal air into a double parallel for mansafe, or mixed configuration providing mansafe, isolation, and control. They can be made for a temperature range up to 2100 degrees F.

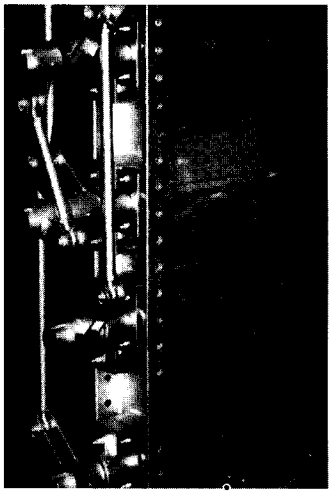


An opposed blade louver damper has a broader and more linear control range, which can be effectively utilized with appropriate controllers, and is usually preferred to a parallel blade damper for modulating duty even though it is more expensive. An opposed blade damper allows the flow to remain parallel to the duct at any degree of opening, while a parallel damper changes the direction of flow as it modulates.

AHS airfoil blades are designed with a corrosion allowance up to 1/16 inch per side depending on application and material, and a bending allowance that is less than the industry standard of 1/360 times the length.

Stresses are kept below 60 percent of yield strength for bending and below 30 percent for torsion and combined stresses at the specified operating temperature with consideration for possible upset temperatures. Creep rates are based upon 1% in 100,000 hours.

AHS believes that the control damper will influence the stability of the control loop more than all other control elements combined. This is why all louver shafts, axles, and linkages are machined and fitted to close tolerance



specifications. The bearings are located outboard of the adjustable gas tight packing bonnet to assure a clean smooth operation and ease of maintenance. Linkages on all opposed type louver dampers are completely field adjustable. Where blade seals are required for low leakage performance, all blade seals are compression type design to assure long life with maximum sealing efficiency.

Damper drives can be electric, pneumatic, hydraulic, or by hand operation. They can be selected to be slow or fast acting and mounted to meet your requirements for accessibility. Drives are sized with a 200% safety factor to assure trouble free operation.

Where man-safe, zero process leakage, and control capabilities are desired: both parallel and opposed configurations can be combined into a double louver damper with a seal air fan producing 3 w.g. above the process pressure. Leakage is zero when both banks of blades are in the closed position and the seal air fan is energized. The up stream bank of blades is usually of parallel configuration for isolation purposes and the down stream is of opposed configuration for control purposes. When the blades are wide open, our design situates the blades of each damper so they combine to a single airfoil slip streaming the gas flow. This minimizes pressure drop across the damper. The double louver damper can accommodate a single drive integrating both banks of blades for a single function (isolation), or dual drives to accommodate both isolation and control.

All of the above can be customized to your specifications.