Wahlco*Metroflex* *FLEX-SEAT* Guillotine
Technical Advantages

Features	*Benefits / Advantages*
Rack and Pinion Drive	
Rack pins are self-cleaning.	Positive drive opening and closing damper No maintenance required to maintain positive movement of the blade. Unlike Chain Drives, racks do not stretch.
Pinions and shafts located at a single elevation.	Inspection checks only required at duct elevation. Chain drive designs require additional sprockets, pinions and shafts at the upper frame. These are generally not readily accessible or require additional platforms (cost).
No chain take-ups or chain tensioners	Positive even movement of the blade. Lower maintenance requirements and costs.
Flex-Seat Seals	
Flexible Hardened Seals	Flexibility of the seals sheds any accumulation of buildup as the damper is closed. Seals are work hardened to increase the yield strength and subsequent memory to insure positive sealing over the operating conditions of the damper. The shape of the seal has been optimized to allow for natural deflection of the blade while maintaining a positive seal.
Solid Seating Surface	The solid seating surface provides a positive support of the seal, which limits seal deflection and insures positive contact between the seal and the blade rail.
Seal Replacement	Seals are replaced from the inside of duct thus eliminating access requirements around the outside of the duct.
Engineered/Fabricated Blade	Eliminates blade distortion during flue gas temperature transients. Reduces residual thermal stresses due to welding of thick flat plates. Minimizes field erection costs due to less welding time required to field splice the blade (if required).

Features		*Benefits / Advantages*
Frame Design		
	Seal air is introduced between the blade rail and seal.	No corrosion prone seal air chambers required. Cool seal air causes acid condensation on the surfaces of damper designs requiring seal chambers. Corrosion of the seal air chambers is the primary cause of failure in flat plate seal chamber designs. In addition, ash accumulates in seal chambers, which accelerates corrosion. In the Flex-Seat design there are no areas for the ash to accumulate.
Enclosed Bonnet		Eliminates in-leakage of ambient air or discharge of flue gas to atmosphere due to seal air system malfunction or the seal air system not being in operation. Reduces corrosion at the throat seals (top of duct), which is common in open bonnet designs due to cool seal air leaking to atmosphere at the throat area. Reduces seal air consumption by 60% when the blade is in the open position as compared to open bonnet designs, which require nearly the same amount of seal air in either the open or closed position.