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ENGINEERING YOUR UPTIME.

COAL-FIRED PLANT VALVE SOLUTION GUIDE



Coal-fired Power Plants

Everlasting Valve Company products are uniquely suited for coal-fired power plant applications, especially in systems handling fly ash, bottom ash, and slurry service.

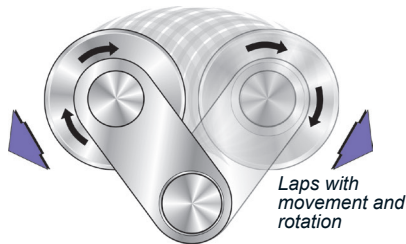
Key challenges include:

- Abrasiveness: causes severe wear in valves, elbows, and piping
- Erosive flow: especially at bends and throttling points
- Plugging / buildup: if moisture intrudes or improper aeration occurs

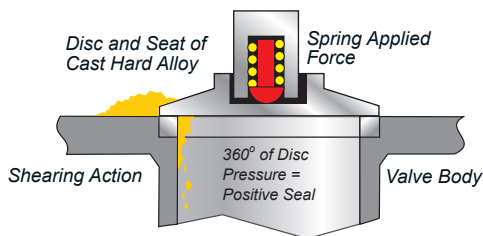
Across these stages, Everlasting's rotating disc design is ideal for handling abrasive powders, dense slurries, and hot air streams that quickly wear out conventional valves.

Everlasting Valves & Diverters Features:

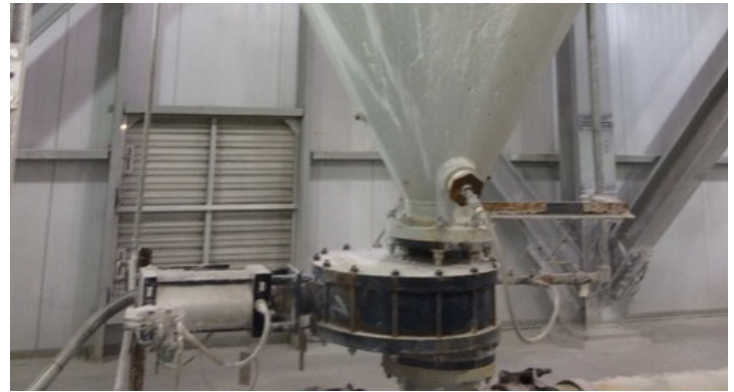
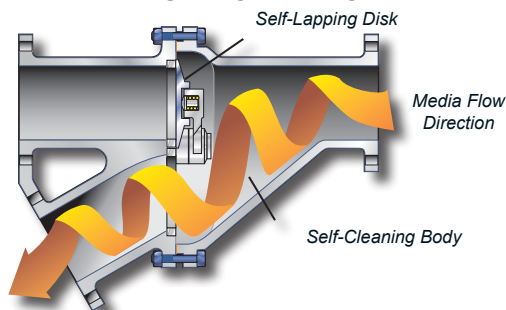
SELF-LAPPING SEALING SURFACES



POSITIVE SHUT-OFF



SELF-CLEANING



The Everlasting BMV Valve Series are excellent in ash recirculation applications.

Coal-fired Power Plants Applications for Everlasting Valves

In coal-fired power plants, fly ash is one of the most important by-products and operational challenges.

Fly ash is the fine particulate residue carried out of the boiler with flue gases when pulverized coal is burned. It consists primarily of Silicon Dioxide (SiO_2), Aluminum Oxide (Al_2O_3), Iron Oxide (Fe_2O_3), and Calcium Oxide (CaO). Particle sizes are typically below $100 \mu\text{m}$, with a glassy, spherical morphology due to the high combustion temperature.

During coal combustion:

1. Coal is ground and burned in the boiler furnace.
2. The non-combustible minerals in coal melt and vaporize
3. As flue gases cool, these minerals solidify into fine ash particles (fly ash)
4. Fly ash is captured by electrostatic precipitators (ESPs), bag filters, or cyclones before gases reach the stack

Handling & Conveying

Fly ash is typically collected dry and transferred through pneumatic conveying systems to storage silos.

Severe-service valves such as Everlasting Valve Company rotating-disc valves are often used to manage these flows.

Why Everlasting Valves Excel in Coal-fired Plant Operations

- The disc rotates and slides across the seat during operation, self-cleaning and clearing abrasive particles (such as fly ash)
- The dynamic spring-loaded stuffing box maintains tight sealing and is serviceable
- Everlasting Valves are ideal for abrasive, erosive, or high-temperature media — all common in coal-fired ash handling

Application and Everlasting Valve Product Fit:

Fly Ash Applications

- Precipitator Row Isolation
- Bag-house
- Economizer
- NuvaFeeder (UCC)
- Lock Hopper Vent / Equalization
- Ash Recirculation
- Diverter Lines
- Pug Mill / Ash Conditioner

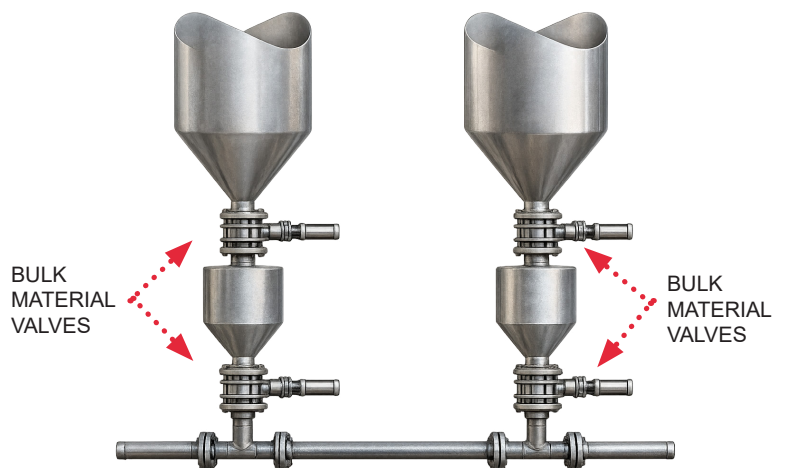
Bottom Ash Applications

- Slope / Flush Nozzle
- Jet Pump Isolation
- Ash Recirculation
- Seal Trough Level Control
- Seal Trough Flush



ADM FBC Co-Gen Bed Ash, 300F Vacuum System

Application Fit Diagram



Bag-house / Economizer / FBC Bed Drain Applications

Functional Specifications

System Area	Media	Typical Everlasting Valve	Function
Boiler Blow-down	Hot water, sludge	Quick/Slow Opening Blow-down	Scale & solids removal
ESP / Bag-house Discharge	Dry fly ash	Bulk Material Valve (BMV)	Isolation
Bottom Ash Hopper	Slurry / wet ash	Process Valve	Ash discharge
Silo Outlet	Dry fly ash	BMV or Diverter Valve	Controlled unloading
Ash Conveying Lines	Pneumatic fly ash	BMV or Diverter	Line switching, mixing



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Service Excellence in Action

When you choose Everlasting Valve Company, you're not just selecting a product—you're gaining a partner dedicated to long-term performance and support. Our commitment to service extends far beyond standard maintenance or repair. It means timely access to our knowledgeable team of engineers and service professionals—ready to respond anytime, anywhere your operations demand.

At Everlasting, we pride ourselves on becoming an extension of your team. You can count on us to take ownership of every challenge and deliver practical, lasting solutions. When issues arise, our technical experts go beyond the symptoms to uncover the true cause. We evaluate your complete system to identify and resolve problems with precision and care.

Our comprehensive service approach is designed to maximize equipment reliability, enhance operational efficiency, and reduce total cost of ownership.

Contact us today for your next project!



Whether you are requesting a quote, need more information, or want to discuss customized valves that address your specific requirements, just let us know. Everlasting Valve is committed to providing prompt, responsive service, every time.

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