



*Clarke's*<sup>®</sup>  
Flo-Matic<sup>®</sup>  
Storage Bins

## How Flo-Matic® Bins Work

Clarke's **Flo-Matic** Bins and Unloaders increase profits by storing and discharging hard to handle materials including hogged cedar bark, chips, plywood trim, wet planer shavings, wet hogged fuel, bagasse, prepared refuse and other similar residues.



Wet Strands



Wet Cedar Bark



Bagasse



Hogged Fuel

Because the **Flo-Matic** incorporates design simplicity, heavy duty components, and top quality construction, it has gained the reputation as the most reliable and economical storage and discharge system available today.

Material enters the top of the **Flo-Matic** Bin and a conveyor distributes the material the full length of the bin, providing utilization of total bin capacity. (See schematic below.)

The discharge system consists of a traversing discharge auger, a traverse mechanism drive, and an accumulation conveyor.



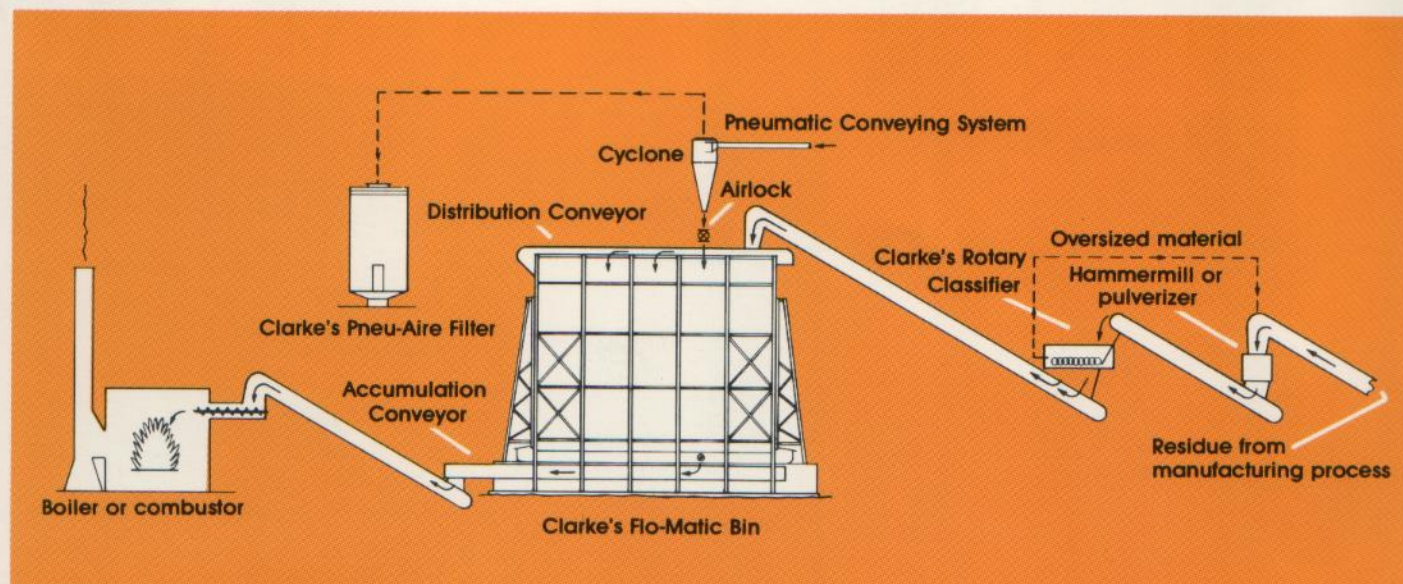
Discharge auger provides a controlled flow of material out one side of enclosure to accumulation conveyor.

The discharge auger is forced into the material column by the traverse mechanism drive. As the auger turns it discharges a controlled flow of material out one side of the enclosure into the accumulation conveyor.

The traverse mechanism drive consists of a small SCR motor, gearbox and chain drive that moves the discharge auger into the material by exerting a constant force on the auger support trolleys.

The accumulation conveyor receives the discharged material and moves it to a drop point outside the drive enclosure.

This drive system features self-aligning bearings, a shaft-mounted gear reducer, TENV or TEFC motor, limit switch control and heavy duty fabricated components; a design which has produced a self-protecting, extremely rugged system, known for its reliability.



## Flo-Matic® Features and Benefits

**Flo-Matic interface controller.** The interface controller provides manual or automatic control of all bin functions. It includes solid state traverse directional control, motor load indication, and lighted directional indication. The interface also includes sequenced relay control of all drives associated with the system and provides speed indication and control of discharge auger drive. Isolation transformers are furnished for all SCR drives.



Interface controller provides manual or automatic control of all bin functions.

**Drive components outside material column for easy maintenance.** All drive components including the shaft mounted reducer and drive motor are trolley mounted outside the material column and travel suspended for easy access.

**Auger parking area.** This optional feature amounts to a specially constructed end wall and access area with hinged cover which allows the discharge auger to be moved completely outside of the material enclosure for inspection or maintenance.

Auger parking area (optional) allows auger to be moved outside of the material enclosure for inspection or maintenance.



**SCR drives provide variable discharge rates.** Discharge rates are designed to meet specific requirements. SCR drives have proven very reliable for variable discharge demands. With the addition of a process controller to the SCR drive system, the discharge of the bin will follow demand signals of most types or process instruments such as pressure, temperature or steam flow. The **Flo-Matic** is also available with A.C. discharge drive for constant material flow demands.

**Accumulation conveyor.** Clarke's designs each accumulation conveyor to meet system demands and to handle the specified material.

**Distribution conveyor provides for full utilization of bin capacity.** The chain distribution conveyor has Dial-A-Flow® Adjustable gates and overflow protection. Other distribution systems such as flighted conveyors, shuttle conveyors and traveling belt trippers are used when necessary.

**Concrete foundation supports material load.** Most models of the **Flo-Matic** Bin feature a simple concrete foundation and material pedestal designed to provide inexpensive reliable support.

**Rigidly braced Flo-Matic structure.** Clarke's **Flo-Matic** Bin features all steel structural beam construction designed to withstand Seismic loadings.

**Negative sloped steel walls eliminate bridging.** The **Flo-Matic** features reinforced steel wall panels that present a smooth surface to the material. These panels are welded and fully caulked at assembly for maximum strength and integrity.

**Heavy duty discharge auger.** The diameter and pitch of each **Flo-Matic** discharge auger is built to meet your particular requirements. It is hardfaced on the flight face, tip, root and barrel and stress relieved for longer wear-life.



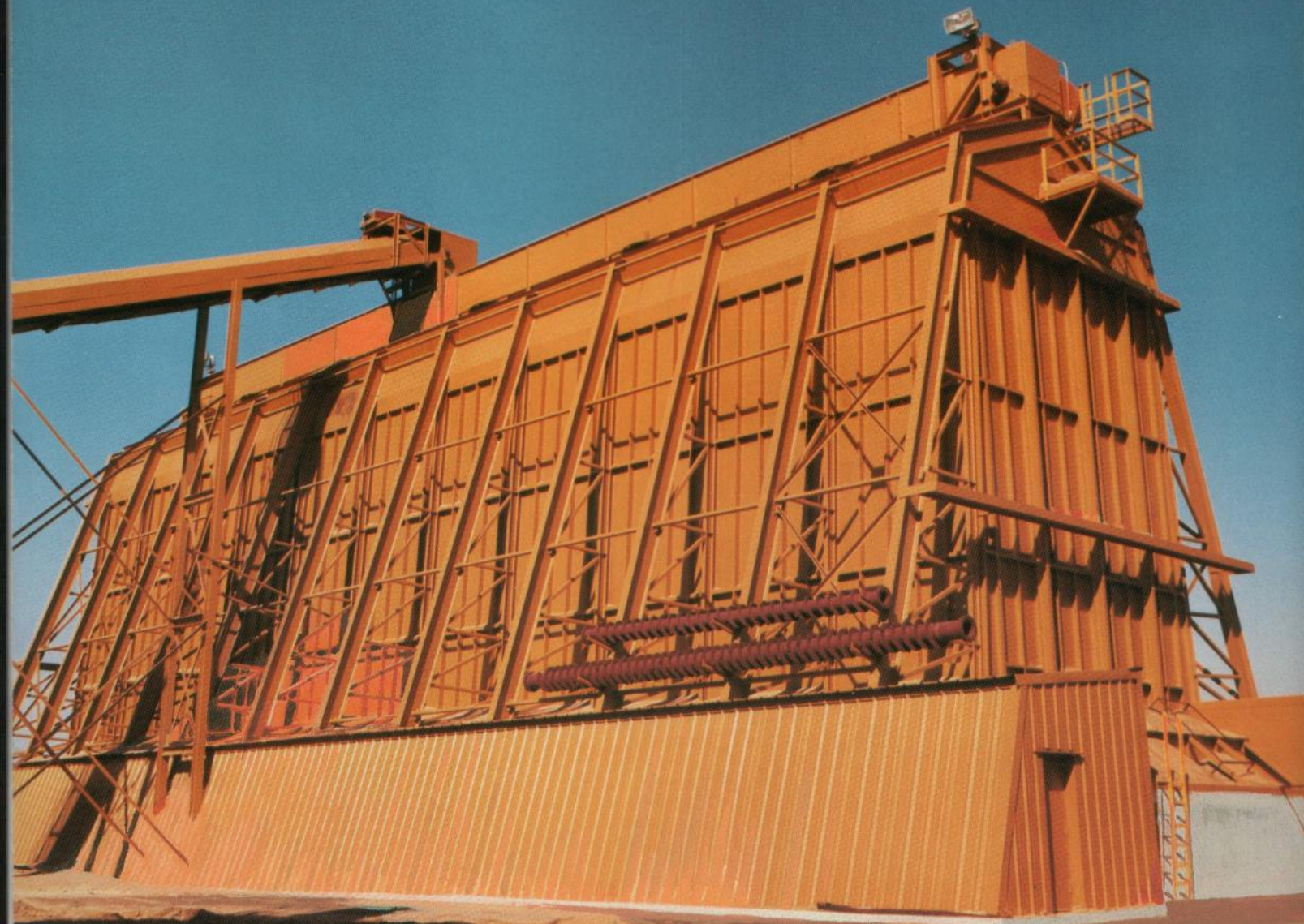
Clarke's custom builds each auger to meet your specific requirements. Each auger is hardfaced and stress relieved.



**Above Left:** Clarke's Type L Flo-Matic Bin handles Southern Pine hogged fuel.

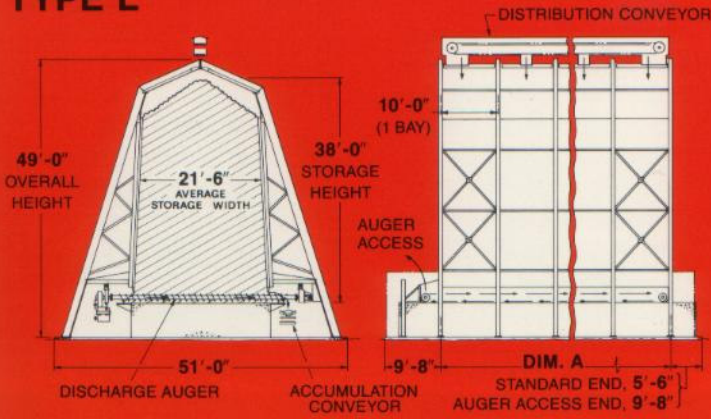
**Above Right:** Clarke's Type I Flo-Matic handles dry hogged fuel.

**Below:** Clarke's Type L Flo-Matic handles wet hogged fuel.

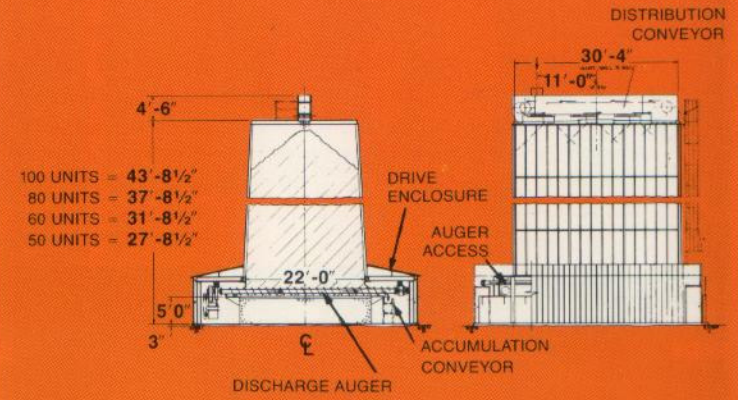


# Flo-Matic® Storage Bin Specifications

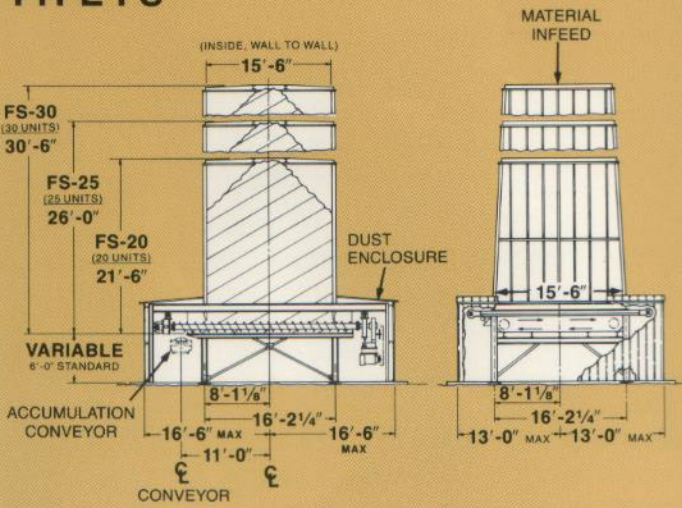
## TYPE L



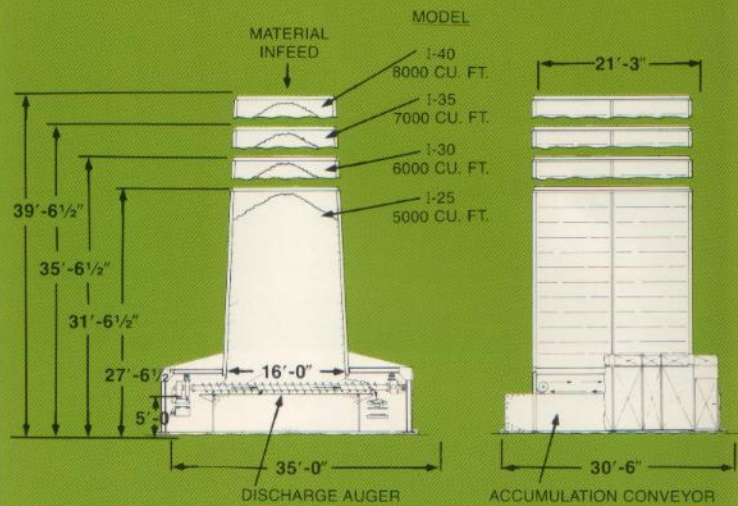
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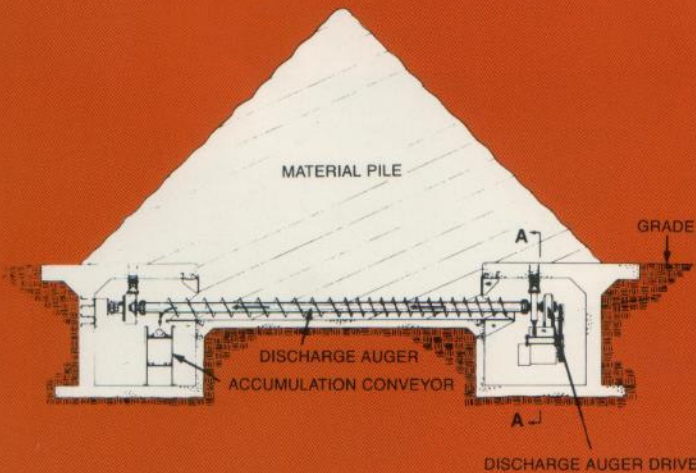
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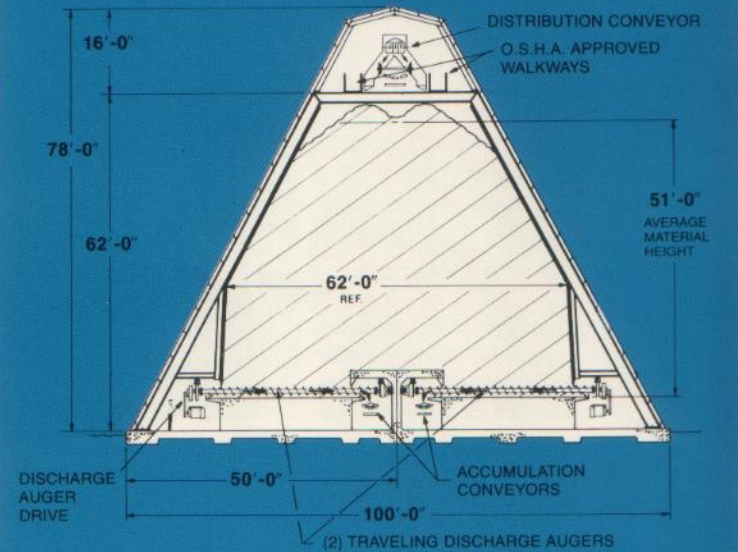
## TYPE I



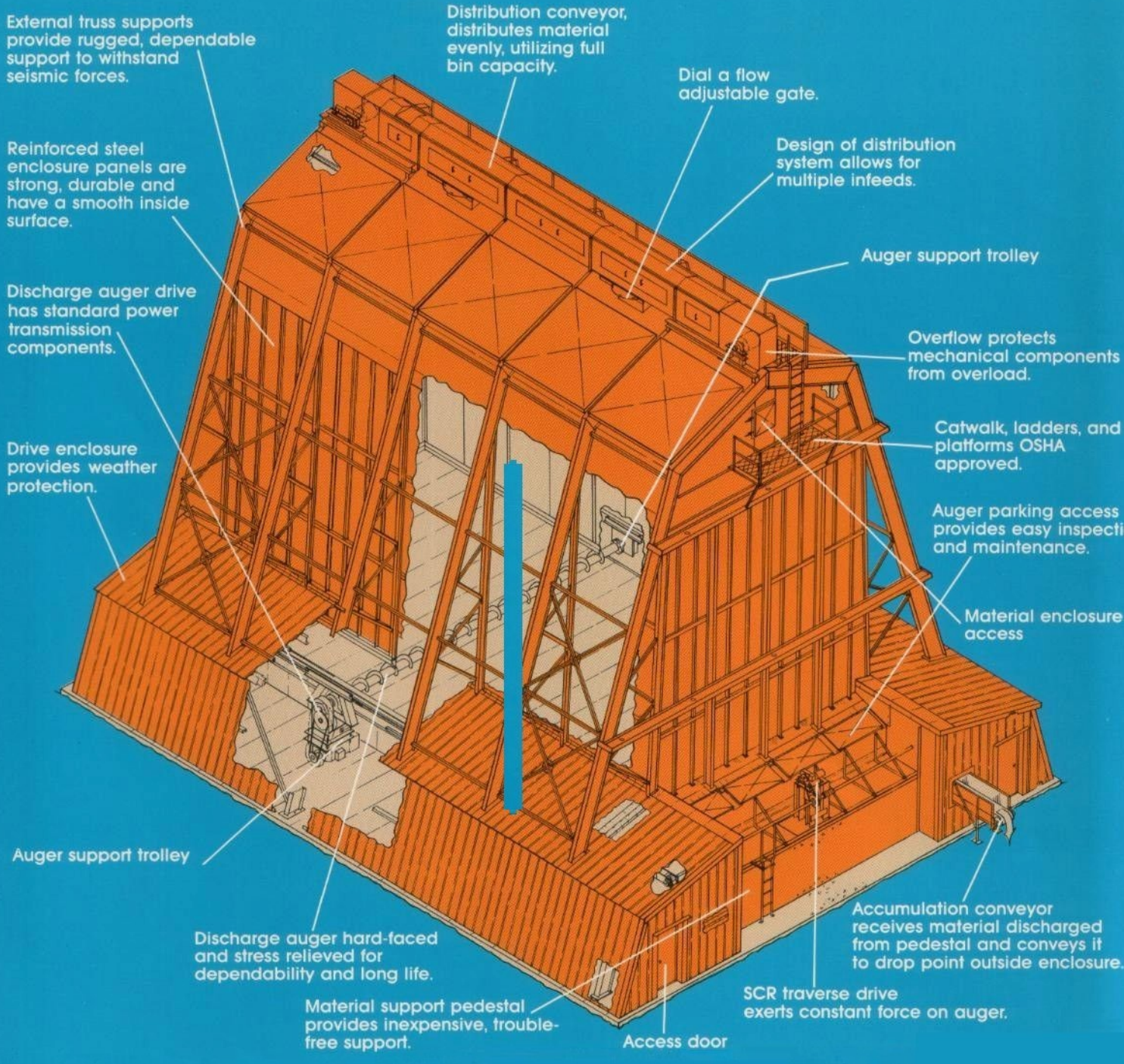
## MODEL BGR



## TYPE DL



# Flo-Matic® Bin Features and Benefits



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