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# Technical Article

Technical Article Content Pulled from the NIBA Belt Line Newsletter

## Learning the Language of Elevators

*This is the second in a series of articles designed to inform readers about the many different types of bucket elevators and their various functions. In the March issue, we've already talked about the three types of elevators: centrifugal, continuous, and positive discharge.*

To understand your customers' specific needs, learn to speak their language. The following vocabulary is often used when describing bulk material conveyors and components:

1. Up-leg bonnet – covers the elevating side of the head pulley/sprocket when the loaded buckets arrive, ready to empty their bulk solids.
2. Down-leg bonnet – covers the discharge area, usually lined with impact and abrasion resistant material for protection from the dumped bulk material headed for the discharge throat.
3. Head shaft and bearing – supports and aids the rotation of the head pulley/sprocket. The centerline is used for reference in design and troubleshooting.
4. Head section – top of the elevator, transitioning the up-leg movement of the loaded buckets to the discharge area where the bulk material is dumped.
5. Inspection door – optional opening offering a view of the head pulley/sprocket to check operational parameters such as wear and alignment.
6. Discharge throat and wiper plate – where the dumped bulk material exits the elevators. The wiper, usually of an impact and abrasion resistant material, is adjustable to close the gap between the down-leg buckets and the discharge throat.
7. Belt/chain and buckets – many variations exist, so be sure to ask for as many specifications as possible. When describing the belt, ask about material, tensile strength, width, and hole center spacing. The chain has number, pitch (link length), attachment number, and spacing. Bucket description includes style (trade name), size, material of construction (gauge, if steel), hole-punching specification, and material being elevated.
8. Elevator leg or trunking – casing around the belt/chain travel area.
9. Boot section – bottom support of the elevator, transitioning the empty buckets around the boot pulley/sprocket through the loading area.
10. Up-leg inlet hopper – facilitates loading the buckets with powdered bulk solids to be elevated. Should enter the boot well above centerline of the boot pulley, down-leg hoppers are also a popular option.
11. Boot shaft and take-up bearing – supports and aids the rotation of the boot pulley-sprocket. Take-up bearing allows for the proper tensioning of the belt/chain.
12. Boot clean-out slide – allows entry to clean out bulk materials unnecessarily built up in the boot section.

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