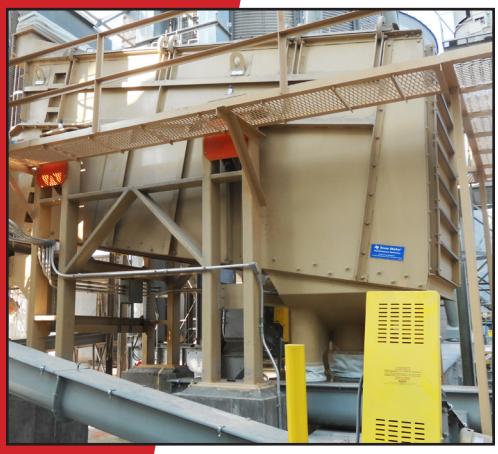
CLEANING DRY SHELLED CORN



Design Requirements

1. Product Type: Dry Shelled Corn
2. Material Density:
3. Capacity: 10,000 BPH
4. Duty: 24/7

Customer Challenge

Most people don't think about clean corn when they pour a cocktail. But that is not the case at Hopkinsville Elevator in Hopkinsville, KY, where employees are thinking about clean corn 24 hours a day, 7 days a week. Hopkinsville provides one of three ingredients used in the production of whiskey: clean whole corn. The elevator set out to double the cooperatives cleaning capacity by adding a new grain cleaner at the South Union location.

Triple/S Solution

Triple/S sized a 6×10-ft, eight-deck arranged to scalp cob pieces and reduce F.M. to less than 1%, at 10,000 bushels/hr of dry shelled corn. The 6×10-ft screen decks are in four parallel sets of two, scalping through ½-in.-diam round holes and cleaning on ¼-in. clear opening woven wire screens. The dual purpose screen scalps corn across 240 sq ft of screen area, and cleans across 240 sq ft. The incoming stream is automatically divided into four equal streams discharging onto the scalping screens. The corn passes through the ½-in.-diam scalping screen that retains the cob pieces, and over the ¼-in. cleaning screen to separate the foreign material and chips. The coarse product and fines discharged from each of the four sets are brought together and discharged through three separate chutes – oversize, product, and undersize.

The Texas Shaker oscillates in a straight horizontal line, 1 in. at 475 rpm. The gentle action is best for efficient screening. The screen decks are inclined downward at six degrees. Self-cleaning, removable ball decks resist blinding. Live rubber balls confined in grids under the screens bounce against the screens to prevent blinding with pieces getting stuck in the openings. The attached vibrator module comprises two parallel gear-coupled unbalanced shafts, which counter-rotate to generate a straight-line inertia force. This makes it self-balancing; the inertia forces are absorbed in the motion of the machine. The shafts are mounted in spherical roller bearings and completely enclosed. Texas Shaker models are fully enclosed and dust-tight.

Triple/S and the Customer

When asked if the new cleaner had met the company's expectations, Andy Newton of Hopkinsville said, "No. It is better than we expected. It's cleaning out more fines than we ever anticipated and it is exceeding the capacity promised by Triple/S."