FIELD TEST
High speed (>500fpm) unit conveyors have been known to exhibit a high pitched, 100+db, sound emitting from the carry rollers. Controlled field testing has confirmed the belt can excite a vibration in the roller tube creating the noise. PPI has developed solutions capable of drastic noise reduction.

PPI performed controlled tests where multiple roll types were monitored under the exact same conditions. A section of conveyor emitting high noise was selected for the test area. Existing rollers were confirmed to be new and in good working order. The customer had recently changed these rollers thinking the noise was bearing related and found change in the noise level with the new rolls. Decibel readings were measured at 5 separate locations on each of the 5 test rollers; below the edge of the roller, below the center of the roller, between the next roller, above the edge of the belt on the carry side, and above the center of the belt on the carry side. The sound monitor was held within 1-3 inches of the point of interest.

Both low noise products achieved a 15db noise reduction at the rolls. This resulted in a 10db noise reduction at a work station about 15 feet below the tested conveyor.

CONVEYOR DETAILS:
- 150ft
- Horizontal
- 10 HP
- 540fpm
- 42” Rough top PVC Belt
- Metal slider pan on carry side
- 2.125” steel rollers on return
- Formed sheet metal conveyor frame
FEATURES AND BENEFITS:

- Up to 15db noise reduction*
- Wide concentric grooves
- Promote airflow between roller and belt
- Machined for low TIR
- PVC/phthalate resistant, 85 duro, neoprene lagging

Rubber Lagged Aluminum Tube

- Aluminum tube
- Deep groove ball bearings
- 50% lower weight than standard carry roller assembly
- Drop-in equivalent to all common 2.125” carry rollers (with slight installation modification)

Rubber Lagged Steel Tube

- Steel tube
- ER bearings
- Nearly a drop-in equivalent to all common 2.125” carry rollers. (2.375” diameter)

* Noise reduction values dependent on the distance from roller, belt speed, belt width, conveyor build, and surrounding equipment noise level.