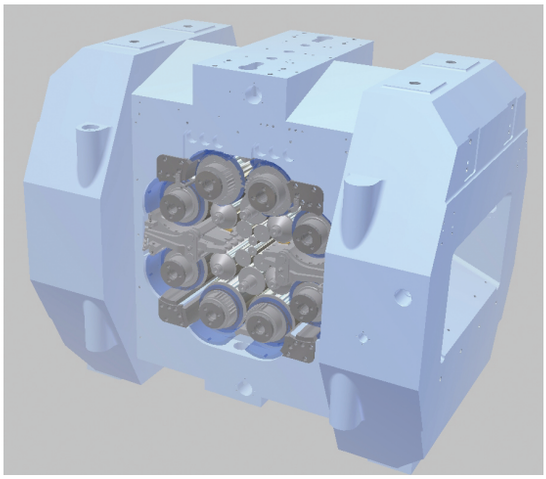
Sendzimir Zero Crown Housing

INNOVATION BY DESIGN Design, Fabrication, Installation, Maintenance



The core T. Sendzimir, Inc. design with its strong side frames and a tapered top and bottom, has withstood the testing of newer technical analyses - such as finite element analysis - further reinforcing the validity of this excellent housing structure.

Originally designed in 1972, the one-piece cast steel has short heavy columns and is designed with the heaviest cross-section at the center of the mill, where the effect of separating forces is the greatest. The key characteristic has the deflection of the housing under load virtually uniform across the width of the mill. This effect is achieved by the use of the heavy, tapered side frames, providing for a more rigid the construction.The Zero Crown housing does not seek to eliminate housing stretch under load, rather the design concept is to allow the housing to stretch uniformly under load. Side frame deflection and transverse slab deflection are combined in a unique way to maintain uniform force along the full length of the work rolls, thus assuring zero crown contour across the entire strip width.

The Zero Crown housing is usually about 10% to 15% heavier than a conventional housing. Instead of a cast-in boss for mounting the screwdown cylinders and crown adjustment, a separate welded bridge has to be used. The Zero Crown shape is much simpler than previous design mill housings, so the pattern is easier to fabricate, and, it is easier to set the housing up for machining.

There have been many Zero Crown Housings now built world-wide since 1973. All Sendzimir Licensees use this basic design.

Mill Housing Design	Mill Modulus (MTons/mm)
Sendzimir ZR-21 Zero Crown Housing	496
4 Columns Hydraulic Split Housing	320
Split Housing Cluster Mill in 4-High Housing	225
Mitsubishi 6-High Cluster Mill	248

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