

HEEL JOINTS

Design 990 Heel Joints are frequently used in narrow-gauge mining turnouts to eliminate looseness at the heel of the switch point. A pipe thimble allows the heel joint to be tightened securely while still permitting free movement of the point. These joints are made using either plain splice bars or angle bars. One bar has a pipe thimble welded to it, while the other is slightly bent. Typically, three-hole bars are used for switches shorter than 5 feet, and four-hole bars are chosen for switches measuring 5 feet or longer.

Standard Heel Block Assemblies are common in many standard-gauge industrial switches. They secure the switch point at the heel, maintain the correct spread, and ensure the closure rail and switch point remain aligned. These assemblies include a block, a bent-and-planed bar, an outside bar, a thimble, and bolts. The block may be made from cast iron, steel, or welded steel. The outside bar can be a “D-bar” strap or a standard joint bar. Square-head bolts are generally paired with the D-bar, while track bolts are used with the joint bar. In some cases, a shoulder bolt replaces the thimble and standard bolt.

Floating heel blocks serve the same role as standard heel blocks but are not bolted through the stock rail. Their versatility lies in the fact that one block design can be used with switches of different lengths. The Single-Hole Floating Heel Block Assembly, shown at right, features a block that bolts to the joint bars and fits snugly against the stock rail. Since a thimble is typically not used, the hole in the switch point does not need to be oversized. Another floating heel block variation is designed for use with continuously welded rail (“CWR”). This type bolts directly to the switch point rail with two bolts, requiring no joint bars.

