

CASE HISTORY



Thayer Weigh Belt “KEEPS THE CATCH FRESH”

Commercial fishing vessels must maintain their catch of at a sustained temperature of 41 degrees Fahrenheit (5 degrees Celsius) or below at all times. The approved method to maintaining temperature include approved refrigeration equipment or embedding in ice.

Used by commercial ice houses located at the boat dock, THAYER'S Model "S" ICE SCALE has been used for decades to accurately weigh ice for use on commercial fishing vessels. These highly accurate scales must withstand a corrosive, wet environment and constant temperature changes, yet be able to accurately weigh to within $\pm 0.5\%$.

In operation the ice maker rake transfers the material to a screw feeder. The screw feeder then feeds the ice onto a chute and the chute feeds the "S" Weigher where it is weighed, totalized and fed to a rotary valve that is part of a pneumatic transport system that conveys the ice.

Larger-decked vessels with fish holds generally carry their ice in the hold, where it is kept in hold pens below deck until required for icing the catch. Some decked vessels in the size range from 35 ft to 55 ft Loa (10.6 m to 16.7 m) load insulated containers full of ice either directly into the fish hold or secure them on deck. These same containers are then used to store part of the catch on ice.

When discharging the catch into containers with ice, the fish can be removed from the hold and transferred directly to the processing plant or market, eliminating handling steps and resulting in a better quality product

The "S" WEIGHER

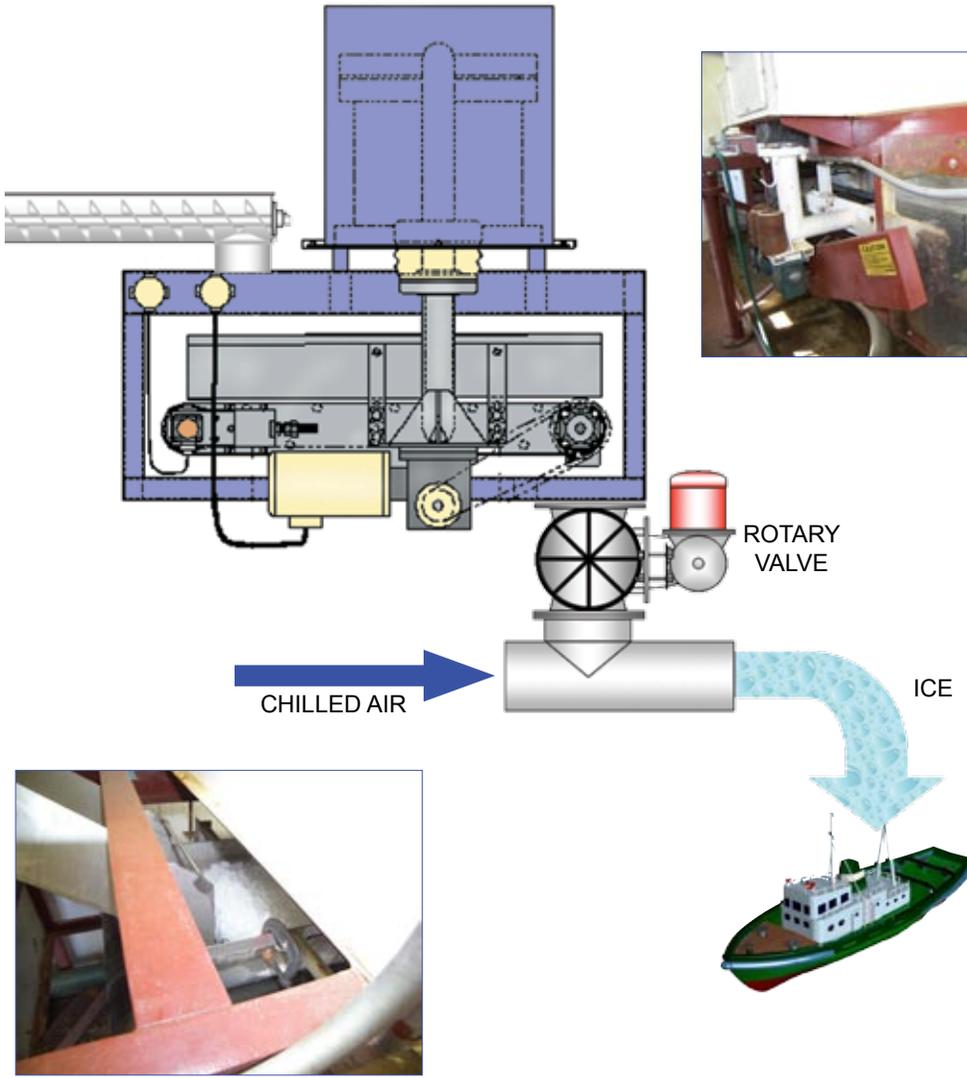
Thayer's Series "S" gravimetric scales are designed for continuous control and/or measurement of solid material which can be conveyed on a belt. This unit can be applied singularly or in combination for batch weighing, proportioning, blending, metering or inventory control.

Depending on the material handled, pre-feeder can be screw, rotary, belt, vibratory or pinch valve. Screw, rotary or pinch valve pre-feeders are normally used with fluid powders, while belt and vibratory pre-feeders are used with granular or fibrous materials.

Scale: The S Weigher uses Thayer Scale's patented Model 18 precision flexure plate suspension scale with FMSS technology. The scale provides for complete mass counterbalancing of the dead load of the conveyor, permitting the load sensor to react only to the net material load. This unique system is not affected by dirt, shocks or vibration, and can withstand overloads in excess of 1,000 pounds without causing damage or affecting calibration. The highly advanced and extremely robust sensing technology is based on the marriage of the LVDT, embedded temperature sensing and proprietary linearizing and temperature compensating algorithms. The scale is mounted above the conveyor, which is totally suspended. This design eliminates belt effects and permits immediate scale response when the flow rate varies.

Conveyor: The conveyor is heavy-duty construction, employing standard industrial idlers and pulleys. Conveyor belting is endless and is normally furnished with a molded edge flange. Side skirts are also supplied to eliminate side spillage. Since load measurements are not affected by the physical characteristics of the belting and its supporting means (belt stiffness, sliding friction, belt non-uniformity, splice effects, tension/misalignment interaction, etc.) the type of belting construction and its material can be chosen on the basis of durability and belt-tracking ability without concern for accuracy compromise. The unique cantilevered conveyor support makes it possible to replace belting without dismantling the conveyor.





Founded in 1949, Thayer Scale is a pioneering developer of continuous weighing and feeding equipment for the dry solids conveying and processing industries. Thayer's Belt Scales and Weigh Feeders of both the Weigh Belt and Loss-in-Weight types, cover an extremely wide range of applications in virtually all industries that involve dry solids conveying and processing. From Loss-In-Weight Feeders that feed vitamins into cereals at rates below 1 pound per hour to 6-Idler Conveyor Scales weighing coal at rates up to 10,000 tons per hour, there are more than 100 proven product variations available to suit most application requirements. Thayer Scale enjoys a unique reputation as a supplier of equipment that provides the rare combination of measurement precision and extreme robustness. Equipment installed more than 40 years ago continues to operate reliably and accurately.



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