



# Heritage Homes to Float on air to Market

Expansion with Aero-Caster air technology maximizes facility space –  
*Produce more buildings at less cost*

## Company Background

In the modest heartland town of Wayne, NE (population 5,583), homebuilder Heritage Homes is one of the area’s biggest businesses, employing some 110 people and building anywhere from 130 to 200 finely-crafted new homes a year.

They build not only single level ranch style structures, but also spacious Cape Cod two-story, appealing mountain chalets, and dozens of other styles, some basic and some elegantly elaborate. Heritage Homes has been turning out sought-after, custom-quality residences for nearly thirty years, year after year, rain or shine. In fact, rain or shine doesn’t matter because these houses are all built indoors and almost all end up somewhere else—in other parts of Nebraska, or in adjacent Colorado, Iowa, Kansas, South Dakota, Wyoming, Montana or New Mexico.

With gross annual sales in excess of \$25 million, Heritage Homes’ products also include bank and commercial buildings, school buildings, and other non-residential structures all built with the same resource saving state-of-the art technology.



Sample Models

## Production Practices

Construction design and quality, and a tenacious focus on efficiency and cost effectiveness drive the Heritage Homes’ production process. Delivered value is the company’s reason for being. Production Supervisor Jay Fink describes it as “real orchestration.” It’s that and more, from the creation of templates, and elaborate jigs that would not commonly be found in typical outdoor construction, to the company’s choice of the AeroGo Aero-Caster load moving system that gives their production line unparalleled mobility and an impressive list of other advantages.



Jay Fink  
*Production Supervisor*

The 100,000-plus sq ft plant houses an imposing assembly line that physically moves the large structural modular sections through the plant from start to finish, as a team of building specialists sequentially create the floor deck, wall and roof framing, add wiring, plumbing, doors, windows, interior drywall, fixtures, trim, carpets, cabinets and painting.

## Responding to Market Changes

According to Heritage Sales Manager Mike Mattison, the size of American homes has risen in past years, and Heritage Homes' modular products have trended larger as well. "When we started, our average home was defined as a two piece modular unit structure of



Mike Mattison  
Sales Manager

around 1,200 to 1,300 square feet. Now our average square footage is somewhere around 1,700 and some of the homes on the Heritage Production line may be comprised of as many as three to five modular sections," he noted. "All the modulars for an average three bedroom, two-story home may be completed in as little as 21 days," he continued. "After the modulars are delivered, on-site assembly may be completed in as few as five days, plus another three to four weeks for site work such as garages, sidewalks, porches, and HVAC that will be performed by our authorized Heritage Homes Builder. Heritage Homes' systems enable clients to have their home built in half the time it takes to build traditional on-site construction. Timing like that adds to the appeal of the Heritage modular concept." The method also has some specific appeal because of natural conditions in

Heritage Homes' marketplace, Mattison explained. "Building indoors eliminates weather issues that delay much of the construction process in many other areas of the country. Timely production coupled with meeting customer requests at a great value is what Heritage Homes offer."

## Maximizing Production

One measurable key to cost-effectiveness has been their choice of the AeroGo Aero-Caster Load Beams to move the weighty home modules through their production line system. When Heritage completed their last plant expansion they took a fresh look at their modular moving technology. "The factory has been here since 1978," Fink explained. "At that time, the conventional way of moving modular units, or modular units down our production floor was either on rollers or wheels attached to the house or a track system. Our system was similar, with six parallel rows of rollers running down the length of the factory. We mounted the units on top of I-beams at the time. Now we've gone to a square box beam and manually push the houses down the line on top of these rollers. When we expanded our facility, we had all this brand new concrete and it really bothered me that we were going to punch



Above, Heritage Home's  
old assembly line floor fixtures.

holes in it and bolt in rollers. Then I saw an AeroGo ad in a magazine.” Fink followed up and what he found was a revelation and a better way to move modular units from station to station. AeroGo engineers describe it as “compliant fluid film technology.” It’s like assigning one or more immensely powerful, miniature hovercraft to bear a load on a cushion of air.

AeroGo Aero-Casters in their many forms are literally “air bearings” that float heavy loads on a thin film of air, in any direction and virtually without friction, enabling objects to be moved with little physical effort compared to centuries-old technologies. “Three people can move a 66 x 28 foot house without mechanical assistance,” Fink asserted.



AeroGo Load Beams positioned under home frame.

“Our factory already runs mainly on air,” Fink pointed out. “All of our tools, routers, nailing tools, and things like that are air driven. We already had the capacity to use air as a source of movement on these Aero-Casters and our air compressor was big enough to handle it. The cost of the Aero-Casters was probably 10% less than all of those steel rollers and all of that stuff. We already had the capacity to use air as a source of movement on these Aero-Casters, and it seemed like we could incorporate it with our other rolling system. And I liked the idea of the floor being clear for housekeeping purposes, trip hazard safety and things like that. A big effort of our company is to keep a clean factory—for a lot of reasons. Safety is one of those. We also do a lot of tours here and it’s a pride thing. We want customers to know that we’re treating their new home correctly and give them a sense of well-being. If you go into somebody’s house that is very messy, you start wondering how organized they are.”



Heritage Home’s new expansion facility better utilizes space for increased production.

After exchanging information with AeroGo engineers, Heritage had the Seattle-based company custom tailor the Aero-Caster Load Beams with risers designed to accommodate the understructure of their modular homes at the same height as the existing rollers, allowing a smooth transition between modes of movement. The company’s move to the Aero-Caster system was quick and easy. Most of the initial post-installation tweaks were handled by telephone. The AeroGo Aero-Casters installed in the expanded and upgraded facility allow directional mobility that is not possible with rollers designed for linear movement.

“The unique mobility of Aero-Casters is of value to us because some of our units are multiple sections,” Fink pointed out. “Some are small and some are big depending on how the house is designed. With the Aero-Casters we have the ability to push units off to the side, turning them in different directions and to take advantage of unused floor space and customer demands. On a conventional system of beams and rollers, they’re pretty much where they’re going to be until they go out the door.”

Reflecting the company’s commitment to cost effectiveness, Fink emphasized, “That kind of efficiency translated into money. The time frame is what’s dramatic; AeroGo has saved us a lot of time in man hours and safety issues. The less people you have doing a line move, the more they are contributing to toward working the house and creating value. We work in a lean manner where we try to save steps. Plus, we seek to maximize the use of our space as much as we can.” Previously construction workers had to stop their work to push units down the line and it took far more manpower. With the flexibility of AeroGo’s directional mobility and the new ease of movement, previously wasted space can become productive, while workers also can be freed for other functions such as pre-cutting materials or building sub-components that speed construction. Our throughput time becomes faster.”

### **AeroGo System**

The AeroGo Load Beam System used by Heritage has a capacity of 14,000 pounds per beam. Typically three to five Load Beams are used per house depending on total weight and desired support. The beams themselves are adjustable in length from 12 to 16 feet, with a primary Aero-Caster at one end and a secondary at the other. The Aero-Caster provides an air cushion lift of up to 5/8-inch when inflated. With the Load Beam System, friction is reduced to a very low level while the load weight is spread over a large floor area, preventing damage to concrete floors. The Load Beam’s low profile enable a transportation system that moves the home modules a scant 2-1/2 inches above floor level, which helps minimize worker strain injuries as they enter and leave the structures with tools, materials and equipment.

According to Fink, safety is an important by-product of the AeroGo system. “It’s fairly easy to control these things,” he asserted. “They’re not only safer compared to pushing a modular sections along on beams and having it fall off the rollers, but backs can be injured by the stress of pushing boxes. In comparison to rollers, with AeroGo Aero-Casters the heavier



AeroGo Load Beam System



DuraGlide Aero-Caster beneath each end of the Load Beam



a load is, the easier it is to move. The manpower effort is minimal. Once they start moving, they just kind of move very easily on their own and they stop just as easily. It's quiet, it's clean, and it's safe and easy."

The easy, gentle move through the factory enabled by AeroGo Load Beams floating on Aero-Casters is important not only to maintain the structural integrity of a home that may end up a thousand miles from Wayne, NE. It is also part and parcel of Heritage Homes' insistence on quality. "Our homes are probably what they'd call 'overbuilt' in the construction world. We have a complete sheathing around the exterior of the house for structural integrity, plus a banding system. We had an instance of a tornado going through a town, where the only house left standing was ours," Fink stated.

With better-built homes on the move, Heritage Homes uses innovative ideas, cutting edge technology, and air itself to turn the tables on the elements and establish itself as a leader in an exciting industry providing a new level of value and quality to American homebuyers.