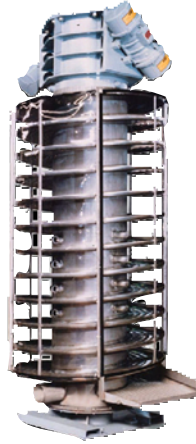




Metal Industry

Preheated 290°C brass chips are elevated 7.6m at 25,000 PPH to a melting furnace in a brass foundry's melt shop. Vibrating aluminium enclosure minimizes heat loss, reducing furnace energy requirements.



Polymer Parts

Spiral includes easily removable transparent covers. Portable construction includes integral centre-tube isolation system and mounting base with fork-life brackets. 300mm dia rubber O-rings, oil seals, and gasket preps are quenched in a water spray, then dried and cooled while being elevated. 12 minute retention is accomplished in a 1200mm x 1200mm floor space.



Plastic Industry

Pellets are indirectly water cooled while being elevated on this 900mm diameter Carman Spiral Elevator. Self-cleaning operation and 304 stainless steel product contact surfaces assure product quality and eliminate batch-to-batch contamination. Portable support pedestal includes fork-lift brackets.



Food Industry

Toasted food products are transferred from the discharge of a fluid bed dryer/cooler to screening and storage. Gentle conveying action reduces degradation and easily cleanable 304 stainless steel radiused product contact construction assures product purity. Center-tube mounted isolation system simplifies installation and reduces vibration transmission into building structure.



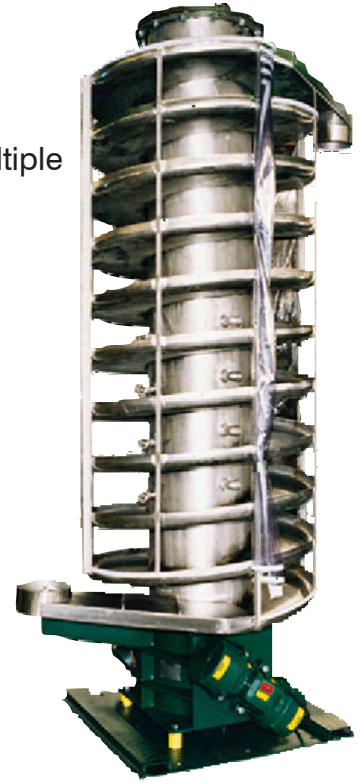
Chemical Industry

Oxidation is minimised as the hot product is cooled while being elevated 6.7m in an inert gas filled pipe. Heat transferred to the pipe is removed by forced air circulation on spiral pipe exterior.

Multiple Processes

A Carman Spiral Elevator is the perfect way to accomplish multiple processes while elevating your product. Unique features and capabilities include:

- Elevating with gentle vibratory motion.
- Air circulation for convection heating or cooling.
- Jacketed flights for contact heating or cooling.
- Embossed flights for dewatering.
- Quenching with feed tray bath or water sprays.
- Extended product retention for curing.
- Shrouds for atmosphere control.



Long Retention with Minimal Floor space

Carman's spiral Elevator design offers a space-saving footprint with a vertical height capability of up to 10m, and closely pitched trough flighting. Extremely long retention time is possible with minimal floor space.

Gentle, Sanitary Handling

The Carman Spiral Elevator uses smooth, harmonic, vibratory motion to gently toss the product forward without degradation. In addition, Carman's spun metal flight design offers easy cleanability.

Custom Matched to Your Application

Carman engineers thoroughly evaluate your product, desired throughput, and process requirements before designing a Carman Spiral Elevator to suit your specific needs. Standard flight widths range from 125mm to 900mm (505mm to 3050mm overall outside diameter) with maximum lift of 10m. Vibratory drive systems are selected based on physical material characteristics and can be engineered to convey virtually any product.

Tested With Your Product

Using laboratory test equipment, Carman engineers can evaluate process requirements, demonstrate equipment capability and develop specifications for production equipment. If preferred, rental equipment for plant site testing is available.

Process Warranty...Your Assurance of Performance

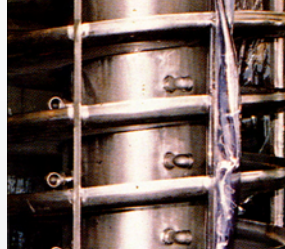
If laboratory tested, Carman Spiral Elevators include a Process Warranty. By optimising operating efficiencies, Carman engineers are able to suggest the most economical equipment for your process.





Standard

Standard flights are 3mm thick steel alloy spun into an easy-to-clean helical shape, with sidewalls and radiused corners included.



Air Sweep

Air from the pressurized center tube is directed through nozzle jets across the product for heating or cooling. The air handling package can be located at the top or bottom of the spiral tower.



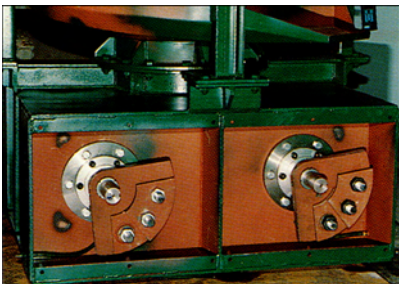
Direct Contact Heat Transfer

Jacketed flighting is available for conduction heating or cooling applications. Supply and discharge headers, and high pressure hose connectors are available with control valves for zoned operation.



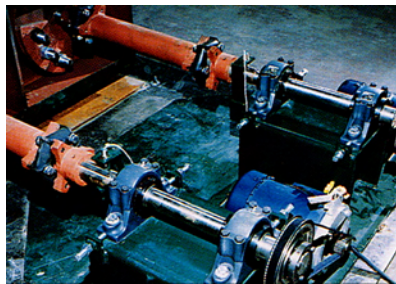
Custom Flight Design

Custom flight designs are available for special applications. The pipe flight configuration shown above is used when an inert atmosphere and conduction heating or cooling are beneficial.



Heavy Duty Force Vector Drive

Shown here with guards removed, this drive is used on Spiral Elevators requiring large drive forces. It includes twin rotating eccentric weight assemblies synchronised for reliable, low maintenance operation. Each assembly includes off-the-shelf, totally enclosed motors with gear belt speed reduction, interconnecting drive shafts with flexible couplings, high-strength alloy vibrating shafts, adjustable rotating eccentric weight assemblies and heavy duty, grease lubricated, spherical roller bearings. Stroke and attack angle are manually adjustable. Variable frequency drives are available for on-line retention control.

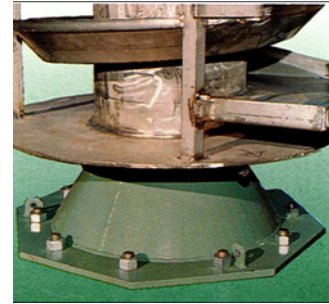


Standard Duty Twin Motor Drive

The drive system includes two totally enclosed, watertight, vibratory motors complete with adjustable eccentric weight assemblies for stroke adjustment. Motors inertially synchronize. Variable frequency drives are available for on-line conveying speed and residence adjustment.

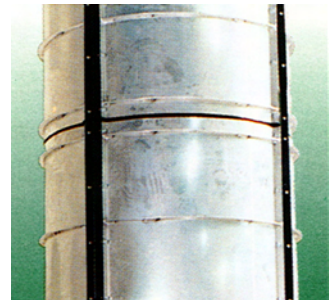
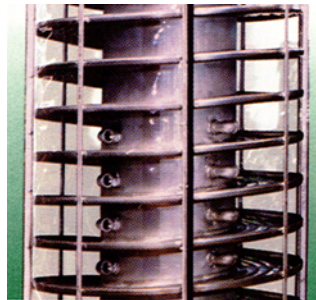


Isolation Support System

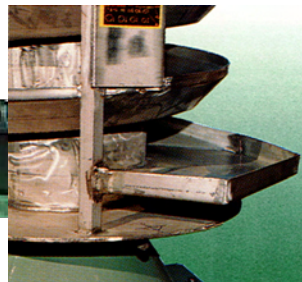


Stable isolation support system includes an internal support tube and pedestal base and top-mounted steel coil or solid rubber isolators. This eliminates the need for external tie offs and reduces dynamic force transmission. The isolation assembly ships inside the Spiral Elevator to facilitate installation.

Isolation Support System



Enclosures are furnished for heat and dust containment or atmosphere control. Clear plastic and aluminium vibrating covers are shown above. Stationary enclosures are also available.



Oversized feed trays receive material without spillage. A drain is provided for applications where excess fluids are anticipated or for quench pool depth control.

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