Bucket Elevators represent one of the most popular systems for elevating bulk materials in use today. Their inherent simplicity makes them a popular choice within manufacturing and processing factories all over the world. Continuous developments in bucket shape, head and boot profiles, manufacturing and operating specifications have resulted in the highly efficient Hilo load range available today.

In general most free flowing materials and many materials with poor flow characteristics can be successfully handled with a bucket elevator. The specification of the standard range is also easily tailored to suit:-

- fragile or friable materials
- oily materials and their products
- materials which fluidise
- abrasive materials
- hot or wet environments

Guttridge Hilo load Bucket Elevators are in operation all over the world in many different industry sectors handling a huge variety of bulk materials:

**Foods** - flour, rice, tea, sugar, milk powder, miscellaneous powders, flakes, granules

**Animal Feeds, Pet Foods and Cereals** - wheat, barley, corn, oil seeds and their products, meals, pellets, flakes

**Chemicals and Minerals** - cement, sand, glass cullet, asphalt, limestone, ores, coal, salt, fertilisers, fine powders

**Biomass and Waste** - wood pellets, wood chips, paper, RDF, straw pellets, rubber, plastics, glass

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Guttridge

Bulk Materials Handling

www.guttridge.com
Optional Access Platform & Ladder

Industrial Duty Access Platform and Ladder
A robust heavy duty design constructed from heavy gauge sections.

- painted or galvanised finish
- clamp fixings for easy on-site fitting
- intermediate rest platforms available
- alternative layouts and ladder access
- configurations available

Optional Self-Clean Elevator Boot

Many applications cannot tolerate the level of cross-contamination that can occur in a standard design of bucket elevator. Our well-proven floating boot design overcomes these traditional shortcomings in a very compact and cost-effective way.

The belt alignment and bucket-to-base clearance are manually set to suit individual plant requirements. General boot maintenance and belt tensioning are virtually eliminated, after initial commissioning, with only minimal amounts of residual material remaining after production runs.

- Complete control over cross-contamination
- Automatic belt tensioning to a pre-set tension
- Constant bucket-to-base clearance for minimal material residue
- Can be retrofitted to most propriety elevators in current use
- Optional air purge and flexible ‘wiper’ blade removes remaining material residues
- Available in mild steel with a galvanised or painted finish and stainless steel
Design
Our technical staff draw on a wealth of technical and operational experience to provide high quality advice and assistance to clients. There are many bucket systems available today and a plethora of design parameters that need to be varied to produce a cost-effective and efficient design of bucket elevator. We offer an unrivalled approach to design and specification which ensures that our machines are built to perform to the client’s requirements. Guttridge machines are built to last with a lower lifetime cost.

- Shaft, bearings & pulley removable in one piece, for simplicity of servicing
- Head pulley secured to shaft with taper-lock fittings, prevents sideways movement
- Integral lifting eyes for easy installation
- Vee-belt drive to shaft-mounted gearbox with integral backstop
- Heavy duty curved sweep plate for high efficiency
- Large access panel above outlet
- Full sized, high efficiency outlet
- Adjustable flexible outlet throat plate
- Central shedder under pulley
- Rolled steel angle end flanges
- Heavy duty legging, jig assembled
- Maintenance Access Doors (not pictured), generously sized at full leg width
- High tensile belt with EP core and SBR covers
- Modern ‘Parabolic’ pressed steel bucket
- Central cleaning access (also showing optional rotation sensor)
- General purpose inlet
- Boot pulley secured to shaft with taper-lock fitting, prevents sideways movement
- Heavy duty curved, close tolerance boot radius plate
Bucket Elevators

Optional Extras
- low level downleg inlet
- inlet/outlet adaptor to square
- inlet control slide
- head and boot wear plates
- chain & bucket systems
- special bearing and seal arrangements
- bearing temperature sensors
- geared motor & chain drive
- maintenance platform and ladder
- rotation and belt alignment sensors
- explosion relief panels (mandatory for some applications)
- self clean ‘floating’ boot
- stainless steel construction
- galvanised or alternative paint colours
- special designs to suit particular requirement

Various types of elevator belting are available:-
- standard general purpose
- oil & fat resistant
- heat resistant
- food quality

A wide selection of buckets are available to suit different product requirements:-
- standard mild steel pressed
- stainless steel pressed
- plastic
- bottomless
- reinforced, wear-plated
- special purpose fabricated

Head and Boot pulleys are specified to suit product requirements:-
- standard mild steel fabricated
- stainless steel fabricated
- rubber lagged
- cage & wing type

<table>
<thead>
<tr>
<th>Elevator Size</th>
<th>6LP</th>
<th>9LP</th>
<th>150HL</th>
<th>230HL</th>
<th>300HL</th>
<th>370HL</th>
<th>450HL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cereals @ 750kg/m³</td>
<td>35</td>
<td>30</td>
<td>60</td>
<td>140</td>
<td>230</td>
<td>350</td>
<td>430</td>
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<tr>
<td>Meals @ 560kg/m³</td>
<td>13</td>
<td>18</td>
<td>28</td>
<td>57</td>
<td>136</td>
<td>208</td>
<td>248</td>
</tr>
<tr>
<td>Pellets @ 610kg/m³</td>
<td>11</td>
<td>16</td>
<td>24</td>
<td>46</td>
<td>80</td>
<td>125</td>
<td>150</td>
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<tr>
<td>flour @ 560kg/m³</td>
<td>12</td>
<td>18</td>
<td>27</td>
<td>57</td>
<td>135</td>
<td>208</td>
<td>250</td>
</tr>
<tr>
<td>Sugar @ 800kg/m³</td>
<td>16</td>
<td>24</td>
<td>33</td>
<td>66</td>
<td>116</td>
<td>178</td>
<td>212</td>
</tr>
<tr>
<td>Sand @ 1600kg/m³</td>
<td>27</td>
<td>58</td>
<td>136</td>
<td>210</td>
<td>250</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cement @ 1100kg/m³</td>
<td>22</td>
<td>48</td>
<td>112</td>
<td>173</td>
<td>205</td>
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</table>

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Casing Depth</th>
<th>Casing Width</th>
<th>Boot Height</th>
<th>Head Height</th>
</tr>
</thead>
<tbody>
<tr>
<td>Illustrative Capacity</td>
<td>640</td>
<td>270</td>
<td>650</td>
<td>625</td>
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<tr>
<td>Nom. Dimensions</td>
<td>640</td>
<td>370</td>
<td>650</td>
<td>625</td>
</tr>
</tbody>
</table>

All dimensions are nominal in mm, full planning dimensions are available on request.

Notes
1. Capacities quoted above are illustrative only and assume an accurate, controlled feed of dry free-flowing materials of the specified density. Air aspiration may also be necessary.
2. Capacity varies with the precise material characteristics, in particular density, particle size and flow characteristics.
3. Motor power, bucket size, spacing and belt speed are selected to match the individual performance and physical characteristics of the chosen elevator size, as well as customer's specified capacity. Some of these factors are also taken into account if product degradation needs to be minimised.
4. When specifying a bucket elevator there are many factors which need to be taken into account, therefore technical advice must be sought before ordering.
5. We have experience with many different types of materials and can specify machines to handle up to 1350m³/hr - if in doubt please ask.

Specifications and dimensions may be altered without prior notice.