Forklift Types

**Counterbalance forklifts**

These forklifts have cargo handling equipments such as a mast and a fork, and have a weight attached the rear for counterbalancing the load. Internal combustion engines fueled by petroleum, liquefied petroleum gas or diesel, or batteries power them. Load capacity is 0.5t to 42t. They are used in many locations from manufacturing facilities to warehouses and used in indoor and outdoor facilities. Their characteristics are close to heavy machineries such as trucks.

**Warehouse forklifts**

These forklifts have a structure that enables the fork to slide forward (reach) for loading and unloading operations. They bring loads inside when they operate for transport. Power is provided by batteries. In a typical warehouse setting most forklift used have load capacity of around 1.5t. They are used for operations in cramped areas, such as those inside warehouses. Specifications required is different by each regions (Europe, North America, and Asia) It is a key factor for success that the proposal that meets the requirements of the individual customers is provided.
Business Environment for Forklifts

1. In general, market trend remain unchanged. – Counterbalance Market; Mature, Warehouse Market ; Expand Demands for forklifts powered by internal combustion engines are rapidly increasing in Asian markets, particularly in China.

2. More sophisticated, borderless and bigger customers have made a full lineup approach indispensable.

3. The shift toward an oligopoly has been spurred by globalization.
   - Toyota (Toyota Industries Corp.) outdistances the pack.
   - Market reorganization has become a possibility.
   - A challenge for Nichiyu is to establish a presence in a global market.
   - Mitsubishi Heavy Industries have a reputation in a global market, but its main market is a engine-type forklift one.

4. Criteria for survival (Projection) = 20 % share for each market (CB & WH)

### Market trends (worldwide)

(Unit: 1,000 units)

<table>
<thead>
<tr>
<th>Year</th>
<th>Engine-driven counterbalance forklifts</th>
<th>Electric counterbalance forklifts</th>
<th>Warehouse forklifts</th>
<th>China</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>235 (100)</td>
<td>113 (100)</td>
<td>223 (100)</td>
<td></td>
</tr>
<tr>
<td>2001</td>
<td>571 (100)</td>
<td>259 (116)</td>
<td>672 (118)</td>
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</tr>
<tr>
<td>2002</td>
<td>290 (123)</td>
<td>123 (109)</td>
<td>738 (129)</td>
<td></td>
</tr>
<tr>
<td>2003</td>
<td>672 (118)</td>
<td>130 (115)</td>
<td>313 (140)</td>
<td></td>
</tr>
<tr>
<td>2004</td>
<td>738 (129)</td>
<td>286 (128)</td>
<td>824 (144)</td>
<td></td>
</tr>
<tr>
<td>2005</td>
<td>885 (155)</td>
<td>330 (148)</td>
<td>155 (137)</td>
<td></td>
</tr>
<tr>
<td>2006</td>
<td>364 (155)</td>
<td>400 (170)</td>
<td>885 (155)</td>
<td></td>
</tr>
<tr>
<td>2010 (Estimate)</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

### Market shares (2006)

**Counterbalance forklifts**

- Toyota 20%
- Nacco 17%
- Linde 14%
- MHI 10%
- Jungheinrich 14.5%
- BT 18%
- Others 26.2%

**Warehouse forklifts (reach forklifts only)**

- Toyota 8%
- BT 18%
- Nacco 6%
- Others 26.2%
- Toyota 8%
- Crown 14.5%
- Linde 11%
- MHI 10%
- Nisson 1.5%
- MHI 2.7%
- Nichiyu 2.3%

(Note) Figures are our predictions and estimates.
Domestic Market Trends

- Japan is a matured market, and the total market volume has hit a ceiling. The fierce competition has been kept. (the number of players is seven in Japanese players alone.) Environmental issues drives electric forklifts demand up.

- A full-line approach to customers is required in response to expand the demands by major and big customers or in logistics and warehouse business. (Japanese players except for Nichiyu and Mitsubishi have a network all over the Japan and a full-line approach.)

  Toyota (Toyota Industries Corp.) outdistances the pack.
  TCM was purchased by Hitachi Construction Machinery and has adopted a policy of strengthening battery-driven forklifts.
  Komatsu terminated to be allied with Linde (in 2006).
  Nichiyu ranks a second player in battery-driven forklift in Japan.
  Mitsubishi doesn’t have as the market presence as it has overseas, but competitive in engine-driven forklifts.

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**Market distribution (2006)**

### Engine-driven forklifts
- **Toyota** 43%
- **Komatsu** 23%
- **TCM** 11%
- **Nissan** 8%
- **Sumitomo** 4%
- **MHI** 10%

### Electric forklifts
- **MHI** 1%
- **Sumitomo** 7%
- **TCM** 5%
- **Nissan** 5%
- **Komatsu** 14%
- **Toyota** 44%

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### Domestic Market Trends (1988-2010)


**Chart:**
- Engine-driven forklifts: Toyota 43%, Komatsu 23%, TCM 11%, Nissan 8%, Sumitomo 4%, MHI 10%
- Electric forklifts: MHI 1%, Sumitomo 7%, TCM 5%, Nissan 5%, Komatsu 14%, Toyota 44%