Indian construction equipment market among the top 10

• In 2007, the size of the Indian construction equipment market was about US$ 2.4 billion to US$ 2.64 billion, a fraction of the US$ 75 billion global market.

• The market grew more than 30 per cent over 2006 in comparison to a growth of 5 per cent globally.

• The Indian market comprises 200 domestic manufacturers (small, medium and large) and the top six players account for about 60 per cent of the market.

• The import market was in excess of US$ 375 million in 2007.

• There is a huge scope to improve revenues from services for construction equipment.

• Global service revenues scaled up 11 per cent to 20 per cent as compared to Indian companies.

• Exports are expected to be worth US$ 100 million to US$ 200 million by 2010, after having registered a compound annual growth rate (CAGR) of 30 per cent over the period 2001 to 2005.

Sources: CII-KPMG Report, Indian Infrastructure Equipment Magazine, KPMG analysis; Construction Equipment, IBEF
The industry has four major segments

Construction equipment industry

- Earth moving equipment
  - Excavators
  - Loaders
  - Skid steer loaders
  - Motor graders
  - Crawler loaders
  - Wheeled loading shovels
- Construction vehicles
  - Backhoe
  - Bull dozers
  - Trenchers
  - Motor scrappers
- Material handling equipment
  - Dumpers
  - Tankers
  - Tippers
  - Trailers
  - Cranes
  - Conveyors
  - Forklifts
  - Hoists
- Construction equipment
  - Tunneling and drilling equipment
  - Concrete mixers
  - Road making machines (compactors)
  - Pavers
  - Spraying and plastering machines
  - Stone crushers
  - Slurry seal machines
  - Heavy duty pumps
Industry dominated by earthmoving equipment … (1/4)

- Excavators registered a CAGR of 30 per cent.

- High-end excavators are in more demand than lower-end excavators.

- The lower-end demand is from irrigation projects.

- The higher-end demand is from the mining and cement industries.

- New technology, end-to-end solutions are important.

Construction equipment industry structure in 2007

Sources: KPMG analysis, industry sources
Industry dominated by earthmoving equipment … (2/4)

Earthmoving equipment segment
total market size ~US$ 1.4 billion (2007)

Forecast industry structure for 2015-16

Sources: Industry sources; primary research; CII-KPMG report; KPMG analysis
Industry dominated by earthmoving equipment … (3/4)

- The backhoe market is highly mature.
- It is the second-largest market in the world.
- For 2008, the expected growth rate was 11 per cent.
- JCB India has a 70 per cent market share.
- Imports are likely to decrease with increasing demand for end-to-end solutions.

Sources: Industry sources, KPMG analysis
Industry dominated by earthmoving equipment … (4/4)

- A total of about 1,321 units were sold in 2005–06.

- The loader market registered a CAGR of 41 per cent over the period 2002 to 2006.

- The segment was expected to grow at about 10 per cent over the period 2007 to 2009.

- Lower capacity equipment is growing at a higher rate as most of the customers are first-time buyers.

- Comprehensive maintenance and service support is important.

- Iron ore mining activities create the major demand for loaders in the country.
Growth in material handling equipment segment

- The material handling equipment is dominated by cranes and forklifts.

- Forklifts are selected on the basis of power inputs and pollution.

- The segment exhibited a CAGR of 20 per cent from 2005 to 2007 and was expected to have a growth of 11 per cent in 2008.

- The demand is largely from F&B, retail and automobile sectors.

- Palletisation and containerisation are expected to increase demand.

- Price and cost efficiency is important.

Material handling equipment market share
Total market size ~US$ 325 million (2007)

Sources: Industry sources, KPMG analysis
Growth in material handling equipment segment

Volume terms ~2,150 units (2007)

- Battery: 15%
- LPG: 2%
- Diesel: 83%

Value terms ~US$ 38 million (2007)

- Battery: 14%
- LPG: 3%
- Diesel: 83%

Sources: Industry sources, KPMG analysis

- Pick-n-carry cranes account for 50 per cent of the cranes market.
- They grew at a CAGR of 72 per cent over the period 2004 to 2007.
- The segment was likely to exhibit a CAGR of 10 per cent in 2008.
- Key drivers are construction and industrial sectors.
- Slew and tower cranes witnessed 34 per cent and 71 per cent CAGR, respectively, over the period 2005 to 2007.
Construction equipment and vehicles

- Road construction equipment had a market share of US$ 175 million in 2006.

- In the segment, compactors contributed US$ 48 million in 2005–06.

- Compactors registered a CAGR of 20 per cent over the period 2003 to 2006.

- Demand will be driven by road construction, irrigation projects, power and other construction projects.

- The competitive advantage of construction equipment lies in technological superiority.

- Relationship with large organised buyers is important.
Investments in user industries to drive industry … (1/4)

- As of 2009, the Indian construction industry, at current prices, contributed more than US$ 91 billion to the country’s gross domestic product (GDP).

- It employs more than 18 million people.

- Construction investments accounted for 11 per cent of GDP and 50 per cent of gross fixed capital formation.

- Construction activity has grown at 11 per cent over the period 2006 to 2009.

- Construction equipment accounts for 5 per cent to 24 per cent of construction project costs.

- Construction equipment accounts for 22 per cent of road construction costs.
Investments in user industries to drive industry … (2/4)

Total planned road investments (by segments), 2005-10

- GQ+NSEW: 7.7 US$ Billion
- Non-NHDP (III,IV,V): 25.2 US$ Billion
- States and rural roads: 21.2 US$ Billion
- Total: 54.1 US$ Billion

Sources: NHAI, Budget and Plan Documents

ADB leading for transport sector projects

- 2008: Lending 1,000, Non-Lending 5,300
- 2009: Lending 1,200, Non-Lending 5,000
- 2010E: Lending 1,100, Non-Lending 4,717

E= Estimated
Investments in user industries to drive industry … (3/4)

• Investment in safe water supply and sanitation services is expected to touch US$ 41.2 billion in 2009–10.

• Urban transport infrastructure investments in cities with populations of 100,000 or more during the next 20 years would be around US$ 49.3 billion.

• Investments in urban infrastructure have grown at a CAGR of 12.9 per cent over the period 2006 to 2009.

Total planned urban infrastructure

Sources: CRIS INFAC, SSKI Research
E = Estimated
Investments in user industries to drive industry … (4/4)

• Investments worth US$ 10.1 billion are expected in irrigation projects over the period 2006 to 2010.

• Over 300 irrigation projects were taken up as a part of the Tenth Five-Year Plan.

• Under the plan, US$ 1 billion was allocated for repair, renovation and restoration of 20,000 water bodies with a command area of 1.47 million hectares.

• There is an increased emphasis on state government irrigational activities.

• The Andhra Pradesh government is expected to spend US$ 8.8 billion on irrigation projects from 2009 to 2014.

• 60 per cent of irrigation investment goes into construction, of which 21 per cent is on construction equipment.
Ports, airports and railways to drive construction equipment demand … (1/2)

- Investment in major and minor ports was expected to be about US$ 18 billion in 2008.

- Cargo handled by ports in 2008 was expected to grow at 8 per cent.

- Domestic and international inbound and outbound traffic is expected to increase over the coming years.

- The investment in developing airports is likely to be US$ 9 billion over the period 2008 to 2011.

- The estimated cost in upgrading airports in metros is US$ 2.2 billion.

- Privatisation of ports and airports to increase investments.

- The government would need to make an investment of US$ 820 billion in relaying railway tracks and improving the existing network.

- Gas discoveries are likely to lead to an increase in pipeline networks, spurring demand for construction equipment. An estimated 18,671 km. of a domestic oil and gas pipeline network was expected to be laid over the period 2004 to 2008.
Ports, airports and railways to drive construction equipment demand … (2/2)

- India is witnessing a huge boom in residential, commercial and retail construction.

- The construction of 16 billion sq ft is expected by 2010.

- Real estate is likely to account for 61 per cent of total investment in the construction industry over the period 2008 to 2011.

Real estate development

![Real estate development chart](Source: CRIS INFAC Construction Report)
Growth in industrial investment to help construction equipment growth … (1/5)

Note: IIP Base Year 1980-81
Growth in industrial investment to help construction equipment growth … (2/5)

- Steel majors are undertaking large capacity expansions.

- The steel industry has an expected capex outlay of US$ 15.4 billion to meet the needs of infrastructure projects, consumer durables, automobile and construction industries over the Eleventh Plan period (2007–2012).

- Steel is expected to register 9 per cent to 10 per cent growth over the period 2009 to 2014. 

Source: Ministry of Steel
Growth in industrial investment to help construction equipment growth … (3/5)

• The power sector is expected to see investments worth US$ 96.5 billion over the next 10 years for capacity generation addition.

• Installed capacity is likely to increase to 212,000 MW by 2012 against 115,000 MW at present.

• The estimated investment until 2009 is about US$ 37.6 billion, implying demand worth US$ 4.6 billion for construction equipment.

• The engineering industry has an opportunity of US$ 68 billion because of US$ 192 billion capex planned over the next decade.
Growth in industrial investment to help construction equipment growth … (4/5)

- The organised retail sector in India is expected to grow at a CAGR of 32 per cent over the next 10 years.

- Growth in organised retailing would drive organised logistics and warehousing industries.

Source: Morgan Stanley research
E = Estimated
Growth in industrial investment to help construction equipment growth … (5/5)

• The growth in throughput is 10 per cent over the period 2006 to 2010.

• India has 355 opencast mechanised mines; 73 foreign direct investment (FDI) proposals worth US$ 830 million in the mining sector are still to be approved.

• Coal mining accounts for 80 per cent of mining activity in India.

• The expected growth in coal mining is 40 per cent in the next five years and almost double by 2020.

• A capex of US$ 4.8 billion is planned in the mining sector as per the Eleventh Five-Year Plan.

• Privatisation of coal mining will increase power generation.

India refining capacity demand-supply

Sources: Companies, ABN AMRO research; F = Forecasted

MT = million tonnes
Success factors for manufacturers

<table>
<thead>
<tr>
<th>After-sales services</th>
<th>Indian manufacturers do not earn much in after-sales when compared to global majors; manufacturers have to provide constant after-sales services to customers.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Focus on R&amp;D and innovation</td>
<td>Manufacturers should provide customised solutions by providing additional accessories. Innovation is possible by understanding the customer profile and R&amp;D would be necessary for customisation; customer training and education should be done in parallel with product technology development.</td>
</tr>
<tr>
<td>Providing end-to-end solutions</td>
<td>The construction equipment-user industry is cost conscious and, hence, it is important for manufacturers to provide end-to-end solutions. This would include equipment manufacturing, resale of equipment by providing new customer leads, rental options, best finance options for buying equipment in association with financial institutions, etc. Manufacturers should act as one-stop shops for customers.</td>
</tr>
<tr>
<td>Forming industry associations</td>
<td>Manufacturers should strengthen industry associations. A good industry association provides a platform for technological discussions and will lead to consolidation.</td>
</tr>
</tbody>
</table>
### Industry snapshot

- **Threat of substitute**
  - LOW
  - Every construction equipment has a specific purpose
  - Substitutes could only be through value addition through technology, comfort maintenance etc.
  - Complete substitution may not happen in near future. Product replacement or enhancement is possible

- **Inter-firm rivalry**
  - MODERATE
  - Price and service are the differentiators
  - Lack in sharp differentiation leading to competition in price
  - Huge demand for construction equipment in future

- **Barriers of entry**
  - LOW
  - Well-established players and recognised players
  - Cheaper imports can reduce the market share of present manufacturers
  - Increasing growth in demand
  - Players with technological know-how can succeed, as technology is the major entry barrier

- **Bargaining power of suppliers**
  - HIGH
  - Suppliers have not kept pace with growth in demand, leading to delayed deliveries
  - Import of some critical components
  - Volatility of steel prices impacting production cost
  - Less number of suppliers for high demand

- **Bargaining power of buyers**
  - MODERATE
  - Earlier, manufacturers/sellers held sway because of huge demand
  - With the entry of new players, this trend expected to change
  - Manufacturers now are providing end-to-end solutions to buyers

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**CONSTRUCTION EQUIPMENT | September 2009**
Business models/strategies

• Foreign investors can enter the domestic market by setting up marketing companies. This allows them to establish a brand and also, at a later stage, to establish their own manufacturing units.

• A foreign investor or manufacturer could have a joint venture with an Indian partner through technology transfer. Any product that has better installed technology has greater demand compared to its competition. Potential customers have to be made aware of technological advancements. There is huge impact on equipment performance, monitoring, features and usage due to technological advancements.

• A foreign investor could associate with an Indian manufacturer whose processes are good by providing monetary support to establish more manufacturing units.

• A foreign player can also help Indian manufacturers in providing after-sales services. It has been noticed that the revenues earned by international players through services are high when compared to Indian players.

• The business of rentals and leasing is more lucrative globally in comparison with the Indian rental and leasing market. Rentals and leasing penetration is expected to increase; the rentals market has the potential of being a US$ 700 million business by 2010 and leasing of construction equipment is expected to go up from the present 5 per cent to 15 per cent.
Supporting government regulations and policies

• 100 per cent FDI allowed in manufacturing projects

• Exemption from obtaining an industrial license

• Manufacturers are free to select project location

• Import duties reduced to encourage imports

• Exports from export-oriented units (EOUs), special economic zones (SEZs) and export processing units (EPUs) are encouraged

• Locations with high growth potential to be supported by government to bridge technology and productivity gaps; skills’ upgradation, physical infrastructure, environmental mitigation facilities to be provided by government in selected areas of intervention

• Schemes similar to SEZs can be developed for EOU s with capital investment in plant and machinery over US$ 6 million (Rs 25 crore)
Attractive states/locations

States with attractive features/policies for the construction equipment sector have been identified based on the growth of user industries, government initiatives and other factor conditions such as exports, R&D infrastructure, quality manpower, etc. Following are the states that are attractive for the construction equipment industry:

- Andhra Pradesh
- Gujarat
- Himachal Pradesh
- Karnataka
- Rajasthan
- Chhattisgarh
- Kerala
- Maharashtra
- Tamil Nadu
- Madhya Pradesh
- Punjab
Key takeaways … (1/2)

• The Indian construction equipment industry grew at a rate of 30 per cent over the period 2005 to 2007.

• India has a vast technical talent base, an established component vendor base and low labour rates, all of which lend it the distinct advantage of becoming an export hub for the Middle East and South-east Asian markets. India can also be regarded as a future R&D hub for international giants because of low R&D manpower costs.

• In this customer-driven market, it is important for manufacturers to provide end-to-end solutions. After-sales support and offering of financial options is important for players in the construction equipment market.

• India is following the international trend of consolidation in the industry; most Indian manufacturers are associating with international majors on the technological front.

• For international firms looking to enter the Indian market, the time is right with investments soaring up in each of the construction segments as shown earlier.

• The barriers of entry are low, as there is huge demand for the future.

• Though the bargaining power of suppliers is high, manufacturers can import components to completely manufacture construction equipment and cater to growing demand.
Key takeaways … (2/2)

• Excavators and construction equipment are expected to witness huge demand in the future with large-scale infrastructure plans in place in the country.

• Material handling equipment will also have huge demand with growth and improvement in retail, ports, airports and other relevant industries.

• There is opportunity for foreign investors to enter the material handling equipment and road construction equipment industry owing the segments' fragmentation.

• With investments to the scale of US$ 700 billion to US$ 800 billion planned in all the relevant user industries of construction equipment, this is the best time for construction equipment manufacturers.
Profile of key players … (1/5)

<table>
<thead>
<tr>
<th>JCB India</th>
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</thead>
<tbody>
<tr>
<td>• JCB came to India in 1979.</td>
</tr>
<tr>
<td>• The company had a turnover of US$ 335 million in 2006–07.</td>
</tr>
<tr>
<td>• The company is growing by 25 per cent to 30 per cent annually.</td>
</tr>
<tr>
<td>• JCB India is a subsidiary of J C Bamford Excavators Ltd</td>
</tr>
<tr>
<td>• Its products range from backhoe loaders, wheeled loaders to excavators and skid steer loaders.</td>
</tr>
<tr>
<td>• It has a 70 per cent market share in the backhoe loader segment and around 13 per cent market share in the overall Indian construction equipment industry.</td>
</tr>
<tr>
<td>• It has facilities at Ballabgarh in Haryana and Pune in Maharashtra.</td>
</tr>
<tr>
<td>• The company has 38 dealers and 206 outlets.</td>
</tr>
<tr>
<td>• It has a dedicated parts centre at Ballabgarh and parts distribution depots at Chennai, Pune and Kolkata.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bharat Earth Movers Ltd (BEML)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• BEML is the largest player in the earthmoving equipment sector.</td>
</tr>
<tr>
<td>• The company turnover was around US$ 630 million in 2007–08.</td>
</tr>
<tr>
<td>• The mining and construction equipment segment is around 63.3 per cent; defence segment is about 31.8 per cent; and railways around 4.9 per cent.</td>
</tr>
<tr>
<td>• The company is the largest public sector undertaking in this industry.</td>
</tr>
<tr>
<td>• Some of its customers are Delhi Metro Rail Corporation, Coal India, Jessop Co. Ltd.</td>
</tr>
<tr>
<td>• It has facilities in Bangalore, Kolar Gold Fields, and Mysore in Karnataka.</td>
</tr>
<tr>
<td>• The company has a 70 per cent market share in the domestic earthmover industry and 12 per cent in the overall construction equipment industry.</td>
</tr>
<tr>
<td>• It has 33 marketing offices and has a strong foothold in the government sector.</td>
</tr>
</tbody>
</table>
Profile of key players … (2/5)

<table>
<thead>
<tr>
<th>Company</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>L&amp;T Case</strong></td>
<td>• The companies together had a turnover of US$ 156 million in 2007. Both the companies are subsidiaries of L&amp;T Ltd.</td>
</tr>
<tr>
<td></td>
<td>• They are joint ventures with CNH American LLC and Komatsu Asia Pacific Pvt Ltd, Singapore, respectively.</td>
</tr>
<tr>
<td></td>
<td>• L&amp;T Case manufactures loaders, backhoes and vibratory compactors; while L&amp;T Komatsu manufactures hydraulic excavators.</td>
</tr>
<tr>
<td></td>
<td>• L&amp;T Case hold 21 per cent market share in vibratory compactors.</td>
</tr>
<tr>
<td></td>
<td>• L&amp;T Komatsu holds 20 per cent market share in excavators.</td>
</tr>
<tr>
<td></td>
<td>• L&amp;T Case has facilities at Pithampur, Madhya Pradesh.</td>
</tr>
<tr>
<td></td>
<td>• L&amp;T Komatsu has its operations in Bellary, Karnataka.</td>
</tr>
<tr>
<td><strong>Ingersoll-Rand India Ltd</strong></td>
<td>• The public limited company (majority owned by Ingersoll-Rand) is a market leader in compactors and had a turnover of Rs 388 crore in 2007.</td>
</tr>
<tr>
<td></td>
<td>• It is primarily into construction technology and compact vehicles, air solutions and climate control.</td>
</tr>
<tr>
<td></td>
<td>• The company has a 39 per cent market share in the compactor segment.</td>
</tr>
<tr>
<td></td>
<td>• Its major products are compaction equipment, pavers, loaders, light towers, air compressors, etc.</td>
</tr>
<tr>
<td></td>
<td>• The company has operations in Bengaluru and Ahmedabad and has a good distribution network with 22 company offices and 80 distributors across India.</td>
</tr>
</tbody>
</table>
Profile of key players … (3/5)

<table>
<thead>
<tr>
<th>Tractors India Ltd (TIL)</th>
<th>Telco Construction Equipment Company Ltd (Telcon)</th>
</tr>
</thead>
<tbody>
<tr>
<td>This public limited company is a market leader in the slew cranes segment in India.</td>
<td>The company is a market leader in excavators.</td>
</tr>
<tr>
<td>It had a turnover of Rs 842 crore 2007.</td>
<td>It has collaborations with Hitachi Construction Machinery Company, Japan, for hydraulic excavator and cranes; John Deere, USA, for backhoe loader technology; and with CESAN, Turkey, for asphalt plants.</td>
</tr>
<tr>
<td>Its product range includes slew cranes, earthmoving equipment, diesel generating sets, forklifts, etc.</td>
<td>It is a subsidiary of Tata Motors and had a turnover of Rs 2,143 crore in 2008-09.</td>
</tr>
<tr>
<td>It has a 32 per cent market share in the slew crane segment.</td>
<td>Its major products are excavators, loaders, mechanical shovels, high tonnage crawler cranes, etc.</td>
</tr>
<tr>
<td>It has its facilities at Kamarhatty in West Bengal and Sahibabad in Uttar Pradesh.</td>
<td>The company has a 50 per cent market share in the excavator segment and an overall market share in the construction equipment segment of 11 per cent.</td>
</tr>
<tr>
<td>The company has 33 Indian and four overseas offices in its distribution network.</td>
<td>The Tata Group of companies, government enterprises and contractors are its major customers. It has facilities installed at Jamshedpur in Jharkhand and Dharwad in Karnataka.</td>
</tr>
<tr>
<td></td>
<td>Its marketing network is spread across India and three international locations.</td>
</tr>
</tbody>
</table>
### Profile of key players … (4/5)

<table>
<thead>
<tr>
<th><strong>Voltas</strong></th>
<th></th>
</tr>
</thead>
</table>
| • This public limited company is a part of the Tata Group is the second-largest player in the forklifts segment. Its customers are largely engineering industries.  
• Its products include industrial air conditioning and refrigeration equipment, air conditioners, water coolers, freezers, commercial refrigerators, forklift trucks and large water supply pumps.  
• The company had a turnover of US$ 852.6 million in 2008–09, of which less than 7 per cent is accounted by the material handling division.  
• It has a 31 per cent share in the forklifts segment. Its facilities are in Thane, Maharashtra; Union territory of Dadar; and Sanathnagar in Andhra Pradesh.  
• Voltas has its head office at Mumbai and zonal headquarters at Mumbai, Kolkata, New Delhi and Chennai.  
• It has territorial offices in eight more Indian cities and three international locations. |

<table>
<thead>
<tr>
<th><strong>Godrej &amp; Boyce Mfg. Co. Ltd</strong></th>
<th></th>
</tr>
</thead>
</table>
| • This private limited company’s product list includes forklifts (diesel, electric, battery).  
• It holds a 48 per cent market share in the forklifts segment.  
• The company had a turnover of US$ 402.6 million in 2007.  
• Its major customers are airline operators, automobile industry, FMCG, pharmaceutical industry, and oil and petroleum industry.  
• It has facilities at Mumbai, Maharashtra, and 14 branches and 20 dealers across India. The company is a market leader in forklift trucks (both in the diesel and battery variants). |
Profile of key players … (5/5)

<table>
<thead>
<tr>
<th>Escorts Construction Equipment Ltd (ECEL)</th>
<th>Action Construction Equipment Ltd (ACE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• It pioneered the manufacture of pick-and-carry cranes in India.</td>
<td>• This public limited company had a turnover of US$ 84.38 million in 2008–09.</td>
</tr>
<tr>
<td>• The company is a subsidiary of Escorts Ltd It had a turnover of US$ 61 million in 2007.</td>
<td>• Its product range includes hydraulic mobile pick-n-move cranes, forklift trucks, loaders, tower cranes, aerial work platforms, lifts, lorry loaders/truck mounted cranes, etc.</td>
</tr>
<tr>
<td>• The company holds a 56 per cent market share of the domestic pick-and-carry market.</td>
<td>• It has a 41 per cent share in the pick-and-carry cranes segment.</td>
</tr>
<tr>
<td>• It has facilities at Faridabad, Haryana.</td>
<td>• It has its facilities at Faridabad in Haryana.</td>
</tr>
<tr>
<td>• Its product range includes pick-and-carry cranes, slew cranes, articulated boom cranes, tower cranes, forklift trucks, front-end loaders, vibratory soil compactor, tandem vibratory rollers, etc.</td>
<td>• ACE has eight offices and 33 dealer locations across India.</td>
</tr>
<tr>
<td>• The company has 16 ECEL business centres and 54 dealer locations.</td>
<td>• The turnover of the company has grown at a CAGR of approximately 96 per cent over the last four years. The company has plans of diversifying its product portfolio to include truck mounted cranes, forklifts and backhoes.</td>
</tr>
</tbody>
</table>
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