

COMPANY PROFILE:
HITACHI CONSTRUCTION MACHINERY (EUROPE)
DECEMBER 2006

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INTRODUCTION

This report details the operations of Hitachi Construction Machinery (Europe) N.V, referred to as HCME throughout this report, and is an update of the profile last published by Off-Highway Research in October 1999.

The report is the first to be published since the opening of the factory in the Netherlands and the divorce from Fiat and the Fiat-Hitachi joint venture. It outlines how the new facility is integrated within the new Hitachi Construction Machinery organisation in Europe.

HISTORICAL OUTLINE

Hitachi Ltd began manufacturing rope shovels in 1949. In 1965 it launched the first Japanese hydraulic excavators, its own design, the model UH03. It opened the Adachi plant in 1966, then the current main plant at Tsuchiura in 1969. The former plant was moved and merged with Tsuchiura in 1974.

Hitachi has been selling construction equipment in Europe for 40 years. It began when Hitachi Ltd appointed Hoovers Constructie NV of Tilburg as the exclusive importer of its range of construction equipment in Benelux in 1966.

By 1970 Hitachi had reorganised its Japanese operations and the construction machinery division was created as an independent company, called Hitachi Construction Machinery Co Ltd. This operation was to become the main driving force behind the company's entry into the European construction equipment market.

From 1966 to 1972 Hoovers sold more than 50 Hitachi machines in the Netherlands. In order to support its existing customers, as well as to form a strategic basis for its future plans in Europe, Hitachi took over Hoovers and established a new company called Hitachi Construction Machinery (Europe) on 1 August 1972. The base was in Oosterhout, a small town north of Breda, equidistant from the major ports of Rotterdam and Antwerp. These ports' proximity was

essential, especially in the early days, and the company started with one Japanese worker, and the four original Dutch personnel.

In the 1970s Hitachi launched a number of crawler cranes designed in Japan, mainly for the domestic market, but which had appeal throughout the world. Many of the early machines sold by HCME were pile drivers or crawler cranes with a fixed hydraulic adjustable post used for foundation work.

The mid-1970s witnessed the expansion of HCME's business outside the Benelux countries, with new dealers being appointed throughout Europe to sell crawler cranes and the associated range of pile drivers. The success of the crane business meant that HCME had to expand its premises in Oosterhout, where all cranes sold in Europe were assembled from components manufactured in Japan. The company acquired premises nearby at Mechelaarstraat, giving it a total of 7,000 m² of factory space, of which 4,500 m² was covered. In that period sales of hydraulic excavators also started to become serious element of the company's operations.

In 1981 the company opened a new parts warehouse at Oosterhout, which allowed for the first time that all the machines sold by HCME in Europe, Africa and the Middle East could be fully supported by the Oosterhout facility. In that year HCME sold its 500th machine, a demonstration of the steady growth made by the company in its first decade. The growth was such that in the following year the company opened the other half of the premises acquired at Mechelaarstraat in 1979. This expansion allowed the company to alter the shape of the premises and a new entrance was created, which resulted in the changing of the address from Mechelaarstraat to the current one at Souvereinstraat 16.

The mid-1980s were years when trade tension between Europe and Japan built up over the question of exports of various goods from Japanese factories. Passenger cars and electronic goods were among them. In the field of standard hydraulic excavators the question was resolved by different Japanese manufacturers in differing ways and Hitachi chose a partnership with a European manufacturer. Europe was much less of a centre of manufacturing of excavators than Japan at the time. Japan built three times as many hydraulic excavators as Europe and Hitachi alone built more units in a year than the top four European manufacturers together.

Hitachi went into a joint venture with the Italian manufacturer known at that time as Fiatallis, forming a joint venture named Fiat-Hitachi. Fiat-Hitachi bought a site in San Mauro, Turin, Italy and built a new factory. At first the plan was to build a limited number of Hitachi crawler excavators, while the rest of the Hitachi crawler excavator product line would continue to be

imported into Europe from Japan via HCME. The first Fiat-Hitachi excavator was supplied by HCME to a Dutch contractor in April 1988. The business prospered, to become the second largest manufacturer of hydraulic excavators in the region by the middle of the 1990s, when it added a second assembly line.

In 1989 the Hitachi mini excavator was launched in the European market and immediately it was decided that its production would have to be located in Europe as well as in Japan. The existing site in Souvereinstraat was currently running at full capacity with its crawler crane business, and new premises were sought close to the existing facility. Fortunately, only 200 metres from the Souvereinstraat address industrial premises were available, and in 1990 these became the new site of the Hitachi mini excavator factory in Europe.

In 1989, HCME also became the Dutch distributor for the Tadano range of mobile cranes, which, when allied to the Hitachi crawler crane range gave the company the strongest range of cranes in the Netherlands. The company relinquished this franchise in 2000, when it was transferred to Waterland Trading.

During the 1990s the number of mini excavator models produced in Oosterhout grew from the original two models, the UE15 and UE30, to the current nine models, in the ZX range. Production volumes trebled and today are even higher, with HCME being the seventh largest manufacturer of mini excavators in Europe.

In March 2001, Fiat and Hitachi announced that they were to end their joint venture agreement. Hitachi announced its wish to establish a separate identity in Europe and promised to open a new factory in the west of Amsterdam, producing a new Hitachi range of crawler and wheeled excavators. The site was inaugurated in August 2002 with the opening of the Training and Demonstration centre and the new factory was officially opened in January 2003, with the first excavator leaving the site at the end of that month, destined for the United Kingdom.

In July 2002, as a result of the co-operation in Japan between Hitachi and Furukawa, a new company, Hitachi-Furukawa Loaders, was established, with a capital of €6 million at the original Furukawa factory in Genas, France. The plant assembled four models of the former Furukawa range, modified and sold in Hitachi colours until 2006, when it launched an entirely new range of wheeled loaders partly designed in Japan.

COMPANY STRUCTURE

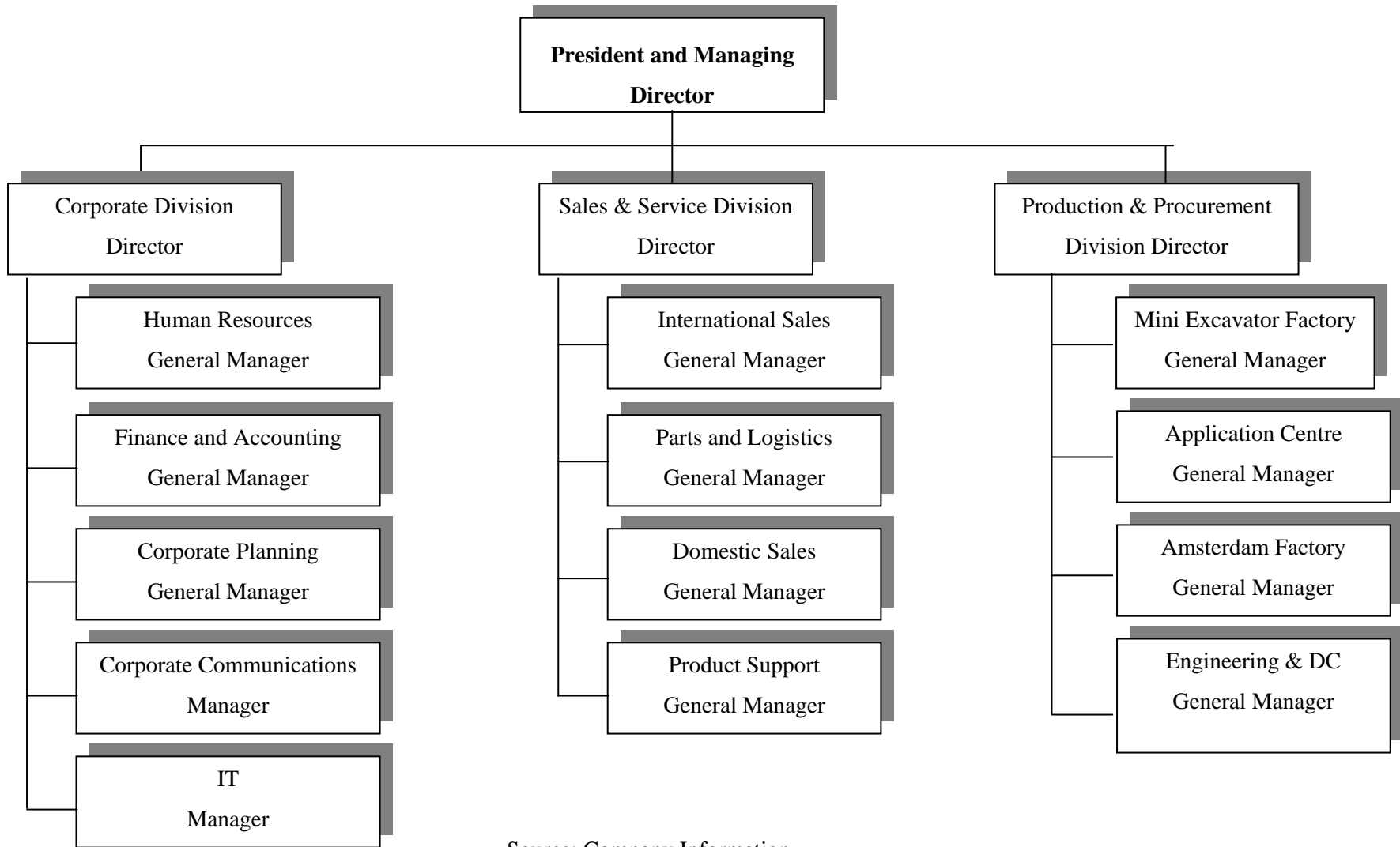
HCME has a very simple operating structure. The company originally started as a dealer for the Benelux countries, then it became an assembler and finally it became a production source. The expansion of the company has resulted in a slightly different structure but the philosophy of the company remains unchanged.

HCME has four functions:

- It is the dealer in the Netherlands for Hitachi products.
- It manufactures a range of mini excavators in Oosterhout, crawler and wheeled excavators in Amsterdam and wheeled loaders in Lyon, France and assembles Hitachi crawler cranes for sale in Europe, Africa and the Middle East.
- It is the distribution centre for Europe for all Hitachi-branded construction equipment not manufactured in Europe, including rigid dump trucks.
- It is the parts distribution centre for Europe, Russia and North Africa for Hitachi-branded products.

HCME is wholly owned by Hitachi Construction Machinery Ltd of Japan, and is run by a Managing Director who reports directly to the parent company in Japan. He runs the company with three basic groups of functions – production, sales and corporate functions.

Table 1. HCME: Company Structure, 2006



Source: Company Information

FINANCIAL ANALYSIS

The table below shows the progress of the Japanese parent over the last five years.

Table 2. Hitachi Construction Machinery: Financial Highlights, Fiscal Years 2002-2006

(¥ Millions)

	2002	2003	2004	2005	2006
Net Sales	298,766	328,496	402,195	448,043	626,457
Operating Income (Loss)	(3,295)	16,399	32,858	40,120	57,177
Net Income (Loss)	(17,603)	3,883	12,490	17,325	24,223
Number of Employees	9,452	9,924	9,983	10,602	13,291

Note: Fiscal Years end on 31 March

Source: Company Information

From 1997 onwards Hitachi, like all Japanese construction equipment manufacturers, suffered on an increasing scale from the fall of the domestic market. Domestic turnover, which had been as high as ¥209 billion in 1997 fell dramatically for two years, steadied in 2000 and 2001, then collapsed again in 2002 to 2004 inclusive. Overseas sales were the saviour of the company, so that the total turnover continued to increase during the last decade, with the two unhappy exceptions of 1999 and 2002.

Hitachi Construction Machinery has thus turned from being a company with a third of its business based overseas into one winning more than two thirds of its turnover outside Japan. Annual reports admit that annual decreases in the percentage of revenues coming from domestic Japanese sales are a problem. They point out, however, that Japanese customers are extremely demanding when it comes to product performance, including quality and delivery time and that these customers prepare Hitachi for success in global competition. Hitachi involves itself in direct sales, service, and machinery rental in Japan, so there is still room for improvements in finance systems, product distribution mechanisms including used equipment and overall logistics.

The operations in the Europe/Africa/Middle East region have grown rapidly in importance since the founding of the hydraulic excavator operation in the Netherlands. The region now accounts for more than one fifth of all global sales.

Table 3. Hitachi Construction Machinery: Sales in Europe, Africa, Middle East,
Fiscal Years 2003-2006

	2003	2004	2005	2006
¥ Mns	37,724	63,932	92,304	132,647
% of Total	11	16	21	21

Notes: Consolidated basis.

Fiscal Years end on 31 March

Source: Company Information

The turnover of the two companies in Netherlands and France has doubled since 2004. As past investments repay themselves, they are also achieving respectable levels of operating income.

Table 4. Hitachi Construction Machinery: Financial Highlights,
Fiscal Years 2004-2006

(¥ Millions)

	2004	2005	2006
Net Sales in Europe	52,484	80,914	113,578
Operating Income (Loss)	1,229	4,066	8,103

Notes: Data refers to the companies in France and Netherlands.

Fiscal Years end on 31 March

Source: Company Information

CORPORATE STRATEGY

The corporation as a whole has ambitious targets for growth. In a recent interview the President said that he was thinking of reaching operating profits of ¥100 billion on sales of ¥1 trillion in consolidated results for the fiscal year ending March 31, 2011 (the figures in 2006 were ¥57 billion of profits on sales of ¥626 billion). The local head of HCME says that unofficially he thinks that his part of the company can double sales within five years.

The announcement of a new medium-term management plan with final targets is scheduled for the beginning of 2007. The company plans to spend ¥150 billion over five years, 60 per cent for production facilities to build a network of production and procurement facilities in strategic locations around the world. Thirty per cent will be used to boost sales capabilities, and the remaining ten per cent will be directed toward the development of information systems for

searching and visualising data such as global inventory conditions and consolidated management indicators.

The increase of manufacturing in Europe has resulted in a change of corporate philosophy. The strategy is now to 'think global, act local'. Hitachi is a global supplier, but until recently had a small and largely indirect presence in Europe. HCME today has a new organisation that allows the European customer much closer access to the company and enables Hitachi to react more quickly to the needs of the local customer, hence the new company slogan. The strategy is not new, as it is the mantra of many of the leading manufacturers from North America and the Far East, but until now Hitachi was not pursuing local action in respect of Europe on its own. Other manufacturers of construction equipment have been successful in undertaking such a policy and HCME is committed to making the philosophy succeed and thereby to become one of the leading players in the European market.

The success of the strategy will be measured over time by the volume of Hitachi machines sold throughout the continent. By 2005 it was already in the top ten of volume construction equipment sellers in Europe and it has the potential to move higher than its present ranking. Hitachi's chairman has stated that the company has to think 'European' and embrace change where necessary. It should not, however, lose family values inherent in Japanese companies and which have been so instrumental to the success of Hitachi over the last 30 years. Thus, while the key personnel in Europe are Japanese, there is a strong European presence and the harmony of the two gained over 30 years will undoubtedly help the company to achieve its goals.

The advent of the Amsterdam factory now allows HCME to build machines to the customer's own specification. This level of flexibility will go a long way in ensuring the company achieves its strategic goals. The Application Centre, the term used by HCME to incorporate its crane activity in Oosterhout, is another example of utilising local skills for the greater good of the company. The centre's engineering facilities, which are used for crawler cranes and foundation rigs, have now been expanded to supply specialist booms and sticks for the new excavator range and as a result have provided advantages for individual dealers throughout Europe.

MANUFACTURING FACILITIES

HCME now has four separate facilities in Europe; two in Oosterhout for the assembly of crawler cranes and mini excavators; the new factory in Amsterdam; and the wheeled loader facility in Lyon, France.

Crawler Cranes /Special Applications Excavators– Oosterhout

The Souvereinstraat facility in Oosterhout, a town in southern Holland, close to Breda and the Belgian border, is the site of crawler crane assembly and special applications for excavators and is the older of the two sites. HCME purchased the site in 1979, although only half of the site was originally occupied, and cranes were assembled on the site of what are now the administrative offices of HCME's domestic operation.

The Mechelaarstraat premises were purchased because the cranes were getting larger and the original site was not large enough. Three years later the continuing success of the product, allied to the fact that the size of the average crane was growing, called for the use of the other half of the land that had been bought.

During the 1990s demand for new cranes continued to decline throughout Europe and the Middle East, and so the present factory space is more than sufficient to meet current demands. The Souvereinstraat site is quite large and with little prospect of growth in the assembly operations, it is unlikely that HCME would need to expand the present site. The total area of the Souvereinstraat site is 26,600 m², of which 9,160 m² are covered. Only 800 m² of the buildings are used for offices, the rest serving as a production hall and parts warehouse.

Mini Excavators – Oosterhout

The second plant in Oosterhout is the mini excavator factory on **Florijnstraat**, approximately 200 metres from the main site in Souvereinstraat. After a year of building mini excavators on the Mechelaarstraat site in 1989 to test the production programmes, it was obvious that production of mini excavators was going to be very successful, and that a new site had to be found if the desired volumes were to be achieved.

Hitachi spent 8 million guilders (now equivalent to €3.6 million) on tooling and the factory today is now one of the most modern to be found anywhere in Europe. It is a full manufacturing facility, with the site having its own development department on the premises. It is important to understand that it does not assemble mini excavators made from components imported from Japan, but is a proper manufacturing facility in its own right.

The Florijnstraat site covers 17,000 m², of which 4,900 m² consists of the production facilities, and offices for engineering and production control. The small percentage of the site allocated to

the production facilities indicates that the company could expand the site should it so wish. The current annual capacity of the factory is 3,000 mini excavators.

The factory produced that maximum amount in 2005, so the question arises of whether an expansion is warranted. In Japan the company has its own dedicated mini excavator plant, which can supply some machines to Europe with relative ease. Japan has adopted the zero tailswing type of design before Europe but Europe is now changing in that direction. HCME can import zero tailswing models from Japan and conversely, may be wary of installing that type in the European production programme before it would be accepted by the market.

The mini excavator market in Europe is not yet fully mature and has expanded by one third in the last three years. Hitachi has neither lost nor won any market share in mini excavators in the last five years in Europe. HCME now builds the ZX mini excavator range up to 3.5 tonnes in Oosterhout and imports the 4.0 and 5.0 tonne types from Japan, as well as all the narrow radius machines.

A total of 80 people are currently employed at the Florijnstraat factory, of whom 60 are direct employees. The factory is very modern and specifically designed to manufacture mini excavators. The company is continuing to invest in new tooling to ensure that the facility is the most modern factory of its type. The result is that the machines are built as cost effectively as possible.

Standard Hydraulic Excavators – Amsterdam

The third site came about when Hitachi ended the joint venture with Fiat and said it would continue to supply and build excavators in Europe. The company had enjoyed over 30 years of growth in southern Holland and the chosen site, to the west of Amsterdam had much to recommend it. It is very close to the RoRo port for incoming components and outgoing products (the complete upper structure is made elsewhere). It is also very close to Schiphol Airport, allowing easy access for customers and dealers to the new site.

The 18-hectare site located in the western harbour of Amsterdam, comprises 32,200 m² of covered space. The main production area comprises 26,400 m² and is a rectangular building, approximately 240 metres by 120 metres. All the major components are imported in sub-assemblies. The factory has a modern paint facility where all the components are painted before the complete machine enters a separate paint facility. An area is also designated within the factory for any customisation that may be required.

In June 2006 the company marked the production of the 10,000th unit at the plant and opened a new wing, covering 2,200 m². The second phase of the expansion programme will open later in 2006. A new 19,200 m² development will be linked to the existing main building by a corridor. It will house an additional machining centre, a paint line for parts and a machine preparation area. The whole investment is costing €20 million and will enable production to increase from 3,500 to 6,000 excavators per annum over the next four years.

Alongside the new production area is a training and demonstration centre. This is the first time Hitachi has had such a facility in Europe and it enables dealers and customers to receive on-site training on all aspects of the Hitachi product range. The office block, which comprises an area of 2,800 m², houses the international operations of HCME, the domestic operations remaining at Oosterhout.

The technical and demonstration centre comprises four specialist-teaching rooms where machines or components can be stripped down and studied as well as an auditorium that has a dual function. The first is as a presentation area and secondly, when the curtains are opened, offers a spectacular view of the open-air demonstration area, an 80 metre long sand box that allows all the Hitachi products to be shown in a working environment. The auditorium has audio contact with the machines thereby affording the audience protection from the elements at the same time as allowing the communication of instructions to the machine's operator.

Wheeled Loaders –Genas

The fourth production site is located in Genas, Lyon in France. The Furukawa company based there was liquidated in 2002, the replacement being a joint venture of Hitachi and the Furukawa construction equipment subsidiary that had Hitachi CM as a major shareholder. The company was named **Hitachi-Furukawa Loaders Europe SAS** and produced Hitachi brand wheeled loaders for Europe, Africa and the Middle East at the plant from 2002 onwards. On 1 October 2004, however, Hitachi bought out Furukawa and renamed the business **Hitachi Construction Machinery France SAS**. It currently employs 49 people but the level of employment will rise there in the near future.

The site is long established, having previously been owned by Yumbo, International Harvester and Furukawa. It covers a substantial area of 12 hectares, with 14,000m² of manufacturing area but much of it was unused after Furukawa ceased making hydraulic excavators there. From 2002

to 2005 it made modified versions of the former wheeled loader range, and then in 2006 it began to add production of the new Hitachi ZW range, developed in Japan.

Hitachi has invested over €100 million on the new facilities in Europe, together with founding marketing companies in Germany and France. The Amsterdam factory is the showcase of Hitachi's long term investment and commitment to the European market but the company is equally committed to all its products and factories throughout Europe. It also underlines the resolve of Hitachi to ensure that the quality of the company's name and product is of the same standard as that seen in Japan.

MARKETING AND DISTRIBUTION

Table 5. HCME: European Independent Dealer Network, 2006

Country	Dealer		
	Construction Equipment	Crawler Cranes	Access Equipment
Albania	SCAI	-	-
Austria	Baumaschinen Handel	-	-
Belgium	Luyckx (Elsen-Traktor for Compact Line)	Luyckx	Eurosupply Hoogwerksystemen
Bulgaria	Z&M	-	-
Denmark	HP Entreprenormaskiner	HP	TBA
Estonia	Laadur	-	-
Finland	Rotator	Rotator	Rotator
France	HCME	HCME	HCME
Germany	Kiesel	Kiesel	Kiesel
Greece	Atlas Hellas, Ergotrak	-	-
Iceland	Ishlutir	-	-
Ireland	HM Plant	HM Plant	HM Plant
Italy	SCAI and 13 others	SCAI	SCAI
Latvia	Laadur Baltic	-	-
Lithuania	Laadur Baltija	-	-
Macedonia/Croatia/Slovenia/Bosnia	GOIMPEX	-	-
Malta	SCAI	-	-
Netherlands	HCME	HCME	HCME
Norway	Nanset Standard	Nanset Standard	Nanset Standard
Poland	TONA	-	-
Portugal	Moviter	Moviter	-
Spain	Serex/HJM/Moviter	-	-
Sweden	Delvator	-	-
Switzerland	Probst Maveg	Probst Maveg	-
United Kingdom	HM Plant	HM Plant	HM Plant

Source: Company Information

The marketing and distribution of a product are very important elements in the potential success and long-term future of any company in this industry. It was the biggest challenge facing the company after the announcement of the dissolving of the joint venture with Fiat. For 15 years

the network developed in the context of the Fiat-Hitachi joint venture but after 2001 a new network had to be established. The task facing Hitachi was to retain as much of the existing network as possible while at the same time seeking out new companies for those that had to be replaced. Legal restrictions hampered the process but HCME retained the majority of its existing network and achieved a relatively smooth changeover between the old and the new.

HCME has established liaison offices in a number of countries to support the network of independent dealers. The most important in the process of creating the independent network were in France and Germany, where the joint venture has ruled before. There are also offices in Madrid as well as Moscow and Istanbul for the CIS and Middle East areas, the latter being supplemented with an office in Dubai. The new arrangements ensure a strong company presence, with a direct link to company personnel based in Amsterdam.

Austria

The process of appointing a dealer in Austria was quite slow, purely as a result of local developments. In 2001 the local Kobelco dealer, Kohlschein, bought Intropa, the local Fiat Kobelco dealer and so Hitachi had to achieve the transition with a totally different partner. Eventually it started with a small privately owned dealer, Baumaschinen Handel. This company, with 22 employees, many of whom had established the Fiat-Hitachi crawler excavator in Austria, has branches in the Tyrol and Klagenfurt. It sells Schaeff and Fermec products from the Terex stable but Hitachi is its main product line.

Belgium

Belgium is one of the few countries where HCME has had to appoint two dealers. Luyckx is market leader in Belgium in both the crawler excavator and mini excavator sectors, (the latter with Kubota) and has established a very strong reputation. The Hitachi compact line goes via a small company, Elsen-Traktor.

Luyckx has created an excellent name for the Hitachi brand in Belgium since the early 1980s, and will ensure that the new Zaxis product range is well received. Luyckx was one of the core importers that Hitachi needed to retain to ensure a strong performance immediately.

Denmark

The Hitachi franchise for Denmark settled down in 2000/2001 after some difficult years, as the dealer HP took up the mini excavator, then the rest of the range. Having sold 250 mini excavators and 150 larger machines it has done well to reach into the top ten of dealers in the country.

Finland

The Hitachi crawler excavator is very well established here and Rotator has sold the product since 1980. Rotator has an excellent image in Finland and sells many different products, including Bomag compaction equipment and Ljungby Maskin wheeled loaders. It is also the market leader in access platforms through Aichi.

It is a large company with headquarters in Vantaa, in north Helsinki, supported by three sales offices in Tampere, Seinajoki and Turku. Technical and service support, covering the Helsinki, Tampere, Turku and Oulu areas are provided by 20 mobile servicemen, while service in remaining parts of Finland is sub-contracted.

France

The now dissolved joint venture controlled marketing in France directly before 2001, so there was a major task to build up a network after the summer of 2002. Within six months the office in Paris secured 14 of the 21 dealers that are now in place. For excavators it has a complete network of 15 dealers in mainland France signed up (only four of them being former Fiat-Hitachi dealers), to which one can add four mini excavator dealers and two businesses in overseas territories. The company is called Hitachi Construction Machinery Sales and Service France SAS.

Germany

HCME faced the same problem in Germany as it did in France, that is to say no direct involvement before 2001. HCME set up an office and established a network of 28 independent dealers to cover the country. This did not meet the market needs and the market share was around one per cent overall. Kiesel, however, had made a success of the south in 2003 to 2004, making more than half of all Hitachi construction equipment sales and winning eight per cent in its own region.

Since 2005 Kiesel has been the national dealer and the HCME office is a smaller support operation. Kiesel employs 400 people. It has branches all over the country but has some small sub-dealers, such as the five compact line dealers. Hitachi sold more than 500 machines in Germany in 2005 and its market share is three times as big as before.

Greece

The Petroglou company, best known as the holder of the Furukawa breaker franchise, founded a subsidiary Atlas Hellas in 2003, which won the franchise for Hitachi construction equipment in all types up to 50 tonnes' service weight. It began the serious marketing of Hitachi hydraulic excavators when availability improved in 2005. It was immediately the market leader, winning 20 per cent share in crawler excavators. It hopes to double its sales of excavators in 2006, compared to 2005. It is creating an inventory of machines ready to sell and is building a new centre, of 23,000 m² at Km 19 on the road to Corinth. This will be the home for all new machines, leaving only small machines and parts in Athinon Avenue.

Italy

The Italian market posed serious problems when the relationship with Fiat was dissolved. Fortunately, it was able to secure the services of SCAI, which was one of the more successful Fiat-Hitachi dealers in the country and invested in the company, thereby ensuring a financially strong importer. It is particularly important that HCME has a strong financial presence in the country in order to enable it to compete with the newly emerging Fiat and Kobelco joint venture.

There are thirteen other dealers to cover regions outside the northerly territory of SCAI, one of them selling only compact construction equipment.

Netherlands

The company operates a mixture of direct sales and dealerships for its mainline products and has established a network of seven dealers for its range of compact equipment – machines under 10 tonnes' service weight. In addition it has three depots in Oosterhout, Rotterdam and Frisland but a new depot in Hoogeveen will replace the Frieland depot in 2007. The seven dealers are Timmerman, Stammas, Van der Vlist, Pladdet, Verbunt, Pellen and Brandes.

Pladet and Pellen also act as full line dealers for Hitachi in the Netherlands.

Norway

Nanset Standard began with Hitachi as far back as 1982, so its remaining with the company after January 2003 was no surprise. It has a full network of local salesmen and approximately 20 independent service agents. It has developed a strong position for Hitachi in a relatively short period and outsold all but Volvo in the crawler excavator market in 2005.

Portugal

Moviter changed the fortunes of Fiat-Hitachi in the 1990s, transforming it into a market leader in hydraulic excavators. At the end of 2003 it chose Hitachi as its franchise for the future and restored the leading position after much uncertainty. It has five active branches, a high number for this small country and has also moved after that to take responsibility for sales in the south and west of Spain (see below).

Spain

In the days of Fiat-Hitachi a very efficient sales administration in Madrid managed a successful network, in conjunction with three other CNH construction equipment brands. Hitachi by itself, therefore, had no position in the market, except that in the north a dealer sold mining excavators and dump trucks with some success. It installed an office in Madrid and the northerly dealer, Serex founded a sales company for standard sized construction equipment, HJM. This ensured coverage in 27 provinces of the north but the rest of the country (23 provinces) needed to be covered. The Portuguese dealer of HCME, Moviter has taken up the challenge. There is a Moviter office in Madrid that has so far appointed 12 sub-dealers but will appoint more. Hitachi also has its own office in the capital.

Sweden

Delvator has worked as the Hitachi dealer since 1999 and soon won third place in the crawler excavator market. After the change of franchise it has returned to that position and wins about 15 per cent market share on a regular basis.

Delvator works from a large centre in Eslov, operating a network of nine sub-dealers and agents alongside its own staff. For service the company uses 23 service stations located throughout Sweden.

Switzerland

The Probst organisation bought the long serving Hitachi dealer Maveg-Notz in 2003. Probst had been in the business since 1960 but was based in French-speaking Switzerland and specialised in road machinery. Acquiring Maveg-Notz, based on the border between the French and German-speaking regions meant some big changes for Probst but it has retained the Hitachi franchise and the holding company has also created two dealerships in France that sell Hitachi construction equipment. In its own country it has stayed with the Lyss head office and a structure of three branches, one in each language area to serve customers.

United Kingdom and Ireland

HM Plant has, for a number of years, been the most successful dealer in Europe in selling Hitachi and Fiat-Hitachi products, accounting for a fifth of the regional total by the end of the 1990s. It was vital to HCME to retain its loyalty to ensure that the brand retained its prominent position in the UK market. HM Plant was sought keenly by both HCME and Fiat and the matter went as far as a court case in December 2002, resolved in favour of HM Plant and HCME. HM Plant is now partly owned by HCM.

HM Plant controls all marketing aspects through its branches, which have grown from eight to ten in recent times. This direct presence is essential in a market where most sales are made to rental companies, large and small. Its great strength is the crawler excavator, where it has kept approximately 20 per cent of the market throughout the period of change.

In Ireland HM Plant used to function as a source of machines for two sub-dealers but the situation became unsatisfactory after 2000. "Grey iron" imports of small Hitachi crawler excavators became a problem and many customers also opted for used Hitachi products from the UK. The market is now twice as large as five years ago and HM Plant intervenes directly in the market, doubling the Hitachi market share.

Product Support

Product support is a vital element in the successful sale of any product, and particularly so for earthmoving equipment. HCME is aware of this importance and has established a central parts depot in Oosterhout after the end of the Fiat-Hitachi joint venture. It supports all Hitachi-branded machines sold in Europe, the Middle East and North Africa. The new depot covers an area of 3,000 m² and has the capacity to store 60,000 items.

EQUIPMENT ANALYSES

MINI EXCAVATORS

Model Range

The company launched the Zaxis range in 2003, adding two new zero tail swing machines that were not previously produced in the Netherlands. A further three zero tailswing types have entered the line-up recently. The latest, the Zaxis 27U-2, has a canopy version that weighs 2.9 tonnes and can be transported easily in most regulatory environments in Europe.

**Table 6. Hitachi Construction Machinery Europe:
Mini Excavators Available in Europe, 2006**

Model	Engine		Service Weight (Tonnes)	Product Source
	HP	Manufacturer		
<u>Standard</u>				
EX08-2B	9	Kubota	0.8	Japan
Zaxis 16	12	Isuzu	1.7	Netherlands
Zaxis 18	12	Isuzu	1.8	Netherlands
Zaxis 25	18	Isuzu	2.5	Netherlands
Zaxis 30	27	Kubota	3.0	Netherlands
Zaxis 35	27	Kubota	3.2	Netherlands
Zaxis 40	36	Kubota	4.2	Japan
Zaxis 50	36	Kubota	4.7	Japan
<u>Zero Tailswing</u>				
Zaxis 27U-2	26	Yanmar	3.1	Japan
Zaxis 30U-2	30	Yanmar	3.4	Japan
Zaxis 35U-2	30	Yanmar	3.9	Japan
Zaxis 40U	41	Yanmar	4.2	Japan
Zaxis 50U	41	Yanmar	4.7	Japan

Source: Company Information

Production

From 1986 to 1995 HCME Oosterhout adapted and finished machines imported from Japan, and then in 1996 it began to assemble five models from scratch. In respect of the Zaxis range it limited its production to the ZX 16, 18 and 25 until the Spring of 2005. It then added the ZX 30 and 35, which are currently the most popular machines, accounting for 40 per cent of production.

**Table 7. Hitachi Construction Machinery Europe:
Production of Mini Excavators, 2001-2005**

(Units)

2001	2002	2003	2004	2005
2,750	2,400	2,700	3,000	3,000

Source: Off-Highway Research

Production of mini excavators is on a single production line. Production volumes fell in 2002 after the announcement of the end of the Fiat-Hitachi joint venture, to which it supplied machines but recovered after that. The plant accounts consistently for eight per cent of European production but many competitors produce more, a fact that may point to some expansion in the future.

Component Sourcing

**Table 8. Hitachi Construction Machinery Europe: Component Sourcing for
Mini Excavators, 2006**

Engines	Isuzu, Kubota, Yanmar
Track Drives	Trasmital/Kayaba
Track Motors	Kayaba
Hydraulic Pumps	Fujikoshi
Hydraulic Cylinders	Leduc/Kayaba
Seats	KAB/Japan
Cabs	TIM/Japan
Booms	HCM Japan
Chassis	In-house/HCM Japan
Tracks	Bridgestone/Fukuyama

Source: Company Information

The main manufacturing process carried out in-house is the construction of the undercarriage. The parts for the side frame, centre frame and blades are sourced from European suppliers and welded together by hand. The undercarriages are assembled on one side of the production line, with the upper structures on the other. The loose components are manually welded on to the undercarriage and upper structure, before the welding robots take over. They weld component parts onto the left and right-hand sides simultaneously so that one undercarriage can be welded while a second unit is being positioned and have been in place since the end of 2005.

Sales by Country

The market shares in mini excavators are not particularly high. Among 30 or more suppliers in the European arena, Hitachi stands at number nine, whereas in its home market of Japan it reaches sixth position out of only eight suppliers. This market is highly competitive and much influenced by big deals done with rental companies. Direct selling on the part of competitors willing to sell at very low margins is a feature of the market and networks of dealers, set up for other purposes than selling mini excavators, can be sidelined. This is not to say that the company is particularly unsuccessful, and it certainly sells all it can make at the present time.

Table 9. Hitachi: Market Shares in Mini Excavators in Selected European Countries, 2005

	Units	%
Austria	2	1
Belgium	35	3
Denmark	110	6
Finland	12	4
France	212	2
Germany	220	3
Greece	6	10
Ireland	50	4
Italy	710	6
Netherlands	180	12
Norway	34	4
Portugal	22	7
Spain	50	3
Sweden	10	2
Switzerland	60	5
United Kingdom	675	6
Total	2,388	5

Source: Off-Highway Research

HYDRAULIC EXCAVATORS

Model Range

HCME builds its whole range of wheeled excavators from 13 to 21 tonnes and crawler excavators from 10 to 50 tonnes in Amsterdam.

The first wheeled models to be sold in Europe were the ZX160W and ZX210W, launched between January and March 2003, with the first ZX160W leaving the factory in February 2003. Two further models, the ZX130W and ZX180W were launched in March 2003. The first crawler

machines were launched in January 2003, with the honour of the first machine to leave the factory going to a ZX210 destined for the UK. The ZX240 was launched in March 2003 with the rest launched in January 2004.

During 2006 the Zaxis-3 models will gradually replace the Zaxis-2 designs. These feature Stage IIIA emission-standard engines and have systems specially designed to reduce fuel consumption by up to 15 per cent, according to the company. Each model has performance improvements, compared to the model that it replaces, usually in respect of operating speed and digging force. Regular users will also note improved control over simultaneous operation of the boom and stick.

Table 10. Hitachi Construction Machinery Europe: Hydraulic Excavators Available in Europe, 2006

Type	Model	Engine		Max. Service Weight (Tonnes)	Product Source
		HP	Manufacturer		
Wheeled	ZX130W	117	Isuzu	13.4-15.3	Netherlands
	ZX160W	121	Isuzu	15.6-18.0	Netherlands
	ZX180W	121	Isuzu	19.2-21.5	Netherlands
	ZX210W	147	Isuzu	19.2-21.5	Netherlands
Crawler	ZX70	52	Isuzu	6.4	Japan
	ZX80SB	52	Isuzu	7.4	Japan
	ZX110	85	Isuzu	10.4	Netherlands
	ZX130	88	Isuzu	12.4-14.1	Netherlands
	ZX135US	88	Isuzu	13.2	Netherlands
	ZX160LC	110	Isuzu	15.7	Netherlands
	ZX180LC	119	Isuzu	17.9	Netherlands
	ZX210LC	147	Isuzu	19.6/21.1	Netherlands
	ZX225US/USR	147	Isuzu	22.0/23.0	Netherlands
	ZX250LC-3	168	Isuzu	23.8-26.3	Netherlands
	ZX280LC-3	178	Isuzu	27.9-29.5	Netherlands
	ZX350LC-3	247	Isuzu	32.8-34.4	Netherlands
	ZX460LCH	315	Isuzu	45.8-47.0	Netherlands
	ZX500LC	315	Isuzu	50.0	Japan
	ZX600/LC	395	Isuzu	57.0	Japan
	ZX650	395	Isuzu	57.5	Japan
	ZX800	453	Isuzu	73.9	Japan
	ZX850	453	Isuzu	75.9	Japan
	EX 1200-5	650	Hitachi	108.0	Japan
	EX 1900BE	965	Hitachi	181.0	Japan
EX 2500-5	1,250	Cummins	239.0	Japan	
EX 3600-5	1,900	Hitachi	348.0	Japan	
EX 5500	2,638	Cummins	515.0	Japan	
EX 8000	3,752	Hitachi	780.0	Japan	

Source: Company Information

Production

Table 11. Hitachi Construction Machinery Europe: Production of Hydraulic Excavators in Europe, 2001-2005

(Units)

	2003	2004	2005
Wheeled	500	750	1,000
Crawler	1,500	2,300	3,000
Total	2,000	3,050	4,000

Source: Off-Highway Research

The factory in Amsterdam is an assembly operation with all the major components imported in sub-assemblies either from Japan or from Europe, with imports and exports aided by the nearby port facilities. It is therefore no surprise that production volumes built up rapidly. The 5,000th machine was assembled in December 2004, the 10,000th unit on 5 May 2006.

Component Sourcing

At present the main manufacturing done on site is the welding of the track frame (using locally bought sub-assemblies) and the sticks. The upper frame and the boom will come from Japan, although the counterweight will be bought in Europe. The factory has a paint facility for components and a separate paint facility for complete machines. An area is also designated within the factory for any customisation that may be required.

Table 12. HCME: Component Sourcing for Hydraulic Excavators, 2006

Component	Crawler Excavators	Wheeled Excavators
Engines	Isuzu	Isuzu
Axles	-	ZF
Travel Motors	Trasmital	-
Hydraulic Pumps	Kawasaki	Kawasaki
Track Frame	In-house	-
Tracks	Bridgestone, Fukuyama	-
Seats	KAB	KAB
Rollers	Hitachi	-
Cabs	TIM	TIM
Booms and Arms	In-house	In-house

Source: Company Information

Sales by Country

The success story of the excavators is undeniable. The company has had a free hand to sell its products only really since 2003 and even then it was obliged at the same time to build up its network, while offering a good service to prospective buyers. That first year was very difficult and it could sell only 1,700 crawler excavators in the territories shown above. In the following year, 2004, it leaped to 3,150 units. While the market was on a rising tendency, expanding from 19,000 to over 25,000 units in 2005, Hitachi was also gaining market share. In 2004 it was reaching 14 per cent, after nine per cent in the preceding year. By 2005 it could claim more than 3,500 units sold, with its market share in crawler excavators putting it in second place in the market in Europe.

Table 13. Hitachi: Market Shares in Hydraulic Excavators in Selected European Countries by Type, 2005

	Wheeled		Crawler	
	Units	%	Units	%
Austria	7	3	57	7
Belgium	71	23	227	31
Denmark	1	3	64	15
Finland	19	12	132	20
France	73	4	248	7
Germany	70	3	230	8
Ireland	-	-	90	8
Italy	50	10	702	15
Netherlands	114	16	162	27
Norway	18	10	250	19
Portugal	-	-	80	19
Spain	70	6	195	13
Sweden	43	12	79	15
Switzerland	6	2	51	7
United Kingdom	-	-	1,050	19
Total	542	6	3,617	14

Source: Off-Highway Research

While there is a small market in Japan for such machines, the popular wheeled excavator is a European concept, dominated by German engineering. The Hitachi machines have increased their penetration, from four per cent in 2003 to six per cent by 2005 but are still only in seventh place in the market. It will probably take the company some time to learn the market, as it did for competitors that currently outsell it, like Komatsu, Volvo and Caterpillar. On the brighter side, it can be seen from the 2005 results that the products are going very well in Benelux and Scandinavia. For Hitachi, as for many competitors, the acid test will be Germany. In this market

local machines are highly rated but the three competitors just named have all broken through in Germany and wheeled excavators are no longer a local monopoly there.

WHEELED LOADERS

Model Range

From 2002 HCME marketed four wheeled loaders made by the plant in France, the LX series. These interim models are in the process of giving way to a new range, based on designs created for the world-wide market by Hitachi and TCM, the wheeled loader specialist that is now a subsidiary of HCM Ltd.

**Table 14. Hitachi Construction Machinery Europe:
Wheeled Loaders Available in Europe, 2006**

Model	Engine		Product Source
	HP	Manufacturer	
LX 145E-2	145	Isuzu	France
LX 170E-2	167	Isuzu	France
LX 210E-2	192	Isuzu	France
ZW220	220	Isuzu	France
LX 290E-2	306	Isuzu	France
ZW 250	240	Isuzu	France
ZW 310	295	DaimlerChrysler	France

Source: Company Information

Genas made four wheeled loader models in the 2.2 m³ to 4.5 m³ categories for the Hitachi LX series, as shown above. Production began in the autumn of 2002, with an official launch in early 2003. They have Isuzu engines with mechanical controls and a new generation of ZF electronic transmission, with ZF axles. The range will be replaced with machines of the ZW range, designed in Japan. During 2006 two models will go out, to be replaced by three new designs in the classes up to 4.0m³ bucket capacity, shown at Intermat 2006. The other two LX models will disappear in 2007, replaced by four new models, bringing the ZW range to a total of seven, with the smallest being of 85 horsepower.

The ZW Series, launched on world markets at the beginning of 2006, combines TCM frame and drive design and manufacturing technology with Hitachi component design and hydraulic and electronic technology. Both companies' models feature identical design and model designations throughout the world, but in Europe there are few TCM wheeled loader outlets. The creators

have put in various features to win new users. For Hitachi the task is to win a name for wheeled loaders, rather than being known purely as an excavator company. The points that it hopes are winning features include:

- Lower fuel consumption due to the Total Torque Control system.
- Enhanced durability, creating a need for fewer oil changes, reduced oil consumption and more durable parts. The cooling fan can be reversed for easy removal of dirt from the radiator. The flat cabin floor and front chassis are also designed for easy removal of dirt.
- The loaders are equipped with GPS units to continuously monitor the engine, technical faults and location. This simplifies maintenance, so dealers can be more pro-active and preventive maintenance can be carried out on-site.
- A new hydraulic circuit enables compound operations with simultaneous lift arm and bucket motion.
- A newly developed load-sensing automatic transmission shifts speeds according to vehicle load.
- A large cab glass area provides a wide field of view.
- A three step clutch cut-off system allows the operator to choose a perfect balance between barking force and clutch cut-off when loading hoppers on a slope.

Production

Table 15. Hitachi Construction Machinery France SAS: Production of Wheeled Loaders in France, by Brand, 2001-2005
(Units)

	2001	2002	2003	2004	2005
Hitachi	-	25	240	270	300
Furukawa	150	50	-	-	-
Total	150	75	240	270	300

Source: Off-Highway Research

Furukawa updated its wheeled loader designs in 1998 but faced a steep uphill task to reach satisfactory volumes. It ended production of the Furukawa range in 2002 and the Hitachi replacements began at the same time. The volumes produced have been small, equivalent to two per cent of the European industry (whereas the crawler excavators have already reached 15 per cent).

Component Sourcing

The LX series has Isuzu engines with mechanical controls and a ZF electronic transmission, with ZF axles, form the powertrain. The hydraulic system, powered by a Denison pump, has a mixture of components in it – a Bosch Rexroth power splitter and Bosch Rexroth control valves, for instance.

Table 16. Hitachi Construction Machinery France SAS: Component Sourcing for Wheeled Loaders, 2006

	LX Series	ZW Series
Engines	Isuzu	Isuzu, DaimlerChrysler
Transmissions	ZF	TCM/ZF
Hydraulic Pumps	Denison	Hitachi
Control Valves	Bosch Rexroth	Hitachi/Kayaba
Pilot Controls	David Brown	Kawasaki
Axles	ZF	TCM
Cabs	SIAC	Ninomiya
Chassis	In-house	TCM
Loader	In-house	ACMG
Buckets	In-house	Fuhrmann
Tyres	Michelin, Bridgestone, Goodyear	Michelin, Bridgestone

Source: Company Information

The new ZW series is a different proposition in terms of production, with a large amount of the necessary pieces being made in Japan, including chassis from TCM.

Sales by Country

Table 17. Hitachi Construction Machinery Europe: Market Shares in Wheeled Loaders in Selected European Countries, 2005

	Units	%
Denmark	3	1
France	20	2
Germany	30	1
Italy	103	6
Netherlands	7	1
Norway	1	-
Portugal	15	9
Spain	75	6
Switzerland	1	1
Total	255	2

Source: Off-Highway Research

The position of Hitachi in wheeled loaders has been in transition for the last five years. Most dealers must have known that the corporation was putting a massive effort into developing new products, using the resources it had acquired in Japan through taking over Furukawa construction equipment operations and TCM. The LX series, however, had a solid pedigree and did well in Spain and Italy in 2005. Elsewhere one can hardly blame the dealers for concentrating on establishing other, better known products first.

CRAWLER CRANES

In 2002 Hitachi Construction Machinery merged its crane operations with Sumitomo Heavy Construction Crane and created a new joint brand Hitachi Sumitomo. The joint venture has proceeded through different stages, establishing joint sales and R&D departments in 2002 and the taking over the principal factory in Japan at Nagoya in 2004.

HCME is therefore now an overseas affiliate of this joint venture, assembling cranes and marketing them within its sales territory.

Model Range

Table 18. Hitachi Construction Machinery Europe: Crawler Cranes Available, 2006

Model	Max Lift Capacity (Tonnes)	Engine		Product Source
		HP	Manufacturer	
SCX400EN/TEN	40	200	Isuzu	Japan
SCX550	55	200	Isuzu	Japan
SCX700EN	90	200	Isuzu	Japan
SCX800-2EN/HD-2EN	80	288	Isuzu	Japan
SCX900-2EN	90	288	Isuzu	Japan
SCX1200-2EN	120	288	Isuzu	Japan
SCX1500-2EN	150	288	Isuzu	Japan
SCX2800-2EN	275	370	Mitsubishi	Japan

Source: Company Information

In 1996 Hitachi launched the CX range in Europe. There are now eight models available. The SCX900-2 and SCX1200-2 were launched in 2004; the SCX800 and SCX2800 in 2006. HCME's aim is to produce a product that has a high level of uniformity with North American and Asian specifications.

Assembly

HCME does not manufacture complete crawler cranes in the Netherlands, for the upper structure is imported from Japan, while the tracks, side frames, undercarriages and front attachments are made in the Oosterhout factory. The actual crawler crane is manufactured within the Hitachi-Sumitomo joint venture in Japan.

The main activity in Oosterhout is the development and modification of basic machines to customer requirements. HCME is making booms and various attachments to minimise the transportation costs from Japan; and makes the tracks and side frames, and most of the undercarriage. Intertractor of Germany supplies the rollers, sprockets and track shoes.

The crawler crane assembly operation results in very few items being out-sourced. The upper structure comes directly from Japan where the machine is built. The number of cranes assembled each year depends on the size of units ordered but at the present time the volume passing through the Oosterhout facility is approximately 10 units per month.

Sales in Europe for crawler cranes are now very small. Many are used for foundation work and are kept for long working lives.

IMPORTED MACHINERY

Rigid Dump Trucks

Table 19. Hitachi Construction Machinery Europe: Rigid Dump Truck Range, 2006

Model	Engine		Payload (Tonnes)	Product Source
	HP	Manufacturer		
EH600	384	Cummins	33	India
EH700-2	525	Cummins	38	Canada
EH750-2	525	Cummins	40	Canada
EH1000	700	Cummins	60	Canada
EH1100	760	Cummins	66	Canada
EH1600	1,050	Cummins	90	Canada
EH1700	1,200	Cummins	98	Canada
EH3000	1,800	Cummins	156.9	Japan
EH3500	2,000	Cummins	193.3	Japan
EH4500-2	2,700	Cummins	254.0	Japan
EH5000	2,697	Detroit Diesel	317.6	Japan

Source: Company Information

The smallest rigid dump truck comes from India but the types actually bought in Europe for the quarrying industry are the 40 to 100 tonne payload models currently manufactured in Canada. The full range consists of 11 models, ranging up to the largest EH4500, rated at 255 tonnes. However, very few models above 100 tonnes are sold in Europe.

Sales by Country

Table 20. Hitachi Construction Machinery Europe: Sales of Rigid Dump Trucks in Selected European Countries, 2005

(Units)

Finland	2
Germany	3
Spain	95
Total	100

Source: Off-Highway Research

Hitachi purchased the Euclid line of rigid dump trucks for reasons completely unconnected with the situation of the brand in Europe. In a European context buyers are looking for long-lived transport vehicle to work mostly in quarries and they place a high value of the back-up offered by suppliers. In this aspect previous owners of Euclid failed in most markets and the company sank as low as selling only 20 machines across the whole continent in some years.

In 2004 the dealer in Spain showed that matters could be different. The seller of heavy mining machinery, Serex, which is part of the same group as HJM, the dealer for smaller machines in the region, sold 50 trucks of 65 tonnes to the local mining industry and then went on during the next 18 months to sell the same amount again.

Rubber Crawler Carriers

Table 21. Hitachi Construction Machinery Europe HCME: Rubber Crawler Carrier Range, 2006

Model	Engine		Payload (Tonnes)	Product Source
	HP	Manufacturer		
EG70-R	178	Isuzu	6.5	Japan
EG110-R	246	Isuzu	11.0	Japan

Source: Company Information

The design for these machines is based on Hitachi excavators and they have a rotating upper structure that allows unloading without turning the carrier, ideal for narrow spaces. This type of crawler carrier is designed mainly to carry materials on soft ground. They use rubber crawlers, so that they can drive on paved roads (maximum speed 10 km/hr) and not damage the surface.

Aerial Work Platforms

**Table 22. Hitachi Construction Machinery Europe HCME:
Aerial Work Platform Range, 2006**

Model	Engine		Max Height (Metres)	Platform Capacity (Kg)	Product Source
	HP	Manufacturer			
HX99B	12	Kubota	9.7	200	Japan
HX140B	18	Kubota	13.9	250	Japan

Source: Company Information

Hitachi claims to have the widest variety of crawler-type aerial platforms in Japan and offers two different types for overseas sales. By using crawlers the machines can move on to unpaved ground, and there is no need to use outriggers during operation. The platforms use hydraulics instead of electricity for basic operation, making for easy and smooth operation.