
Off-Highway Research

The Construction Equipment Industry in EUROPE

Country Analysis

AUSTRIA

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INTRODUCTION

The objective of this study is to present a concise overview of the development of the markets for various types of construction equipment and agricultural tractors in Austria. This report assesses the major trends that have taken place since the publication of Off-Highway Research's last study in 2006 on the subject, and offers a forecast for each product sector until 2014.

The findings presented in this study are based upon an extensive interview programme carried out in May 2010 with all leading suppliers and domestic manufacturers, and on Off-Highway Research's existing database. In addition to the profiles of distributors offered, an analysis of the production operations of Liebherr, CNH and Wacker Neuson can be found after the equipment analysis section of this report.

Agricultural tractor data comes from official registrations but there is a formal exchange of sales statistics between importers of construction equipment which is organised by the Austrian dealer association, MAWEV. Although a few companies are not members of this exchange, it is extremely comprehensive and relates solely to machines sold for first use in Austria. This is of particular importance in an analysis of the Austrian market, since the majority of dealers also operate branch networks in the Eastern European countries bordering Austria, or have a distribution arrangement with local dealers.

The sales data in this report does, however, include machines which are immediately put into dealer rental fleets. MAWEV is also responsible for the organisation of the Austrian construction equipment trade show, the MAWEV show, which is held near Linz every three years.

POLITICAL BACKGROUND

Austria can be described as being located at the crossroads of Europe, set as it is between the cultures of East and West and ringed by eight other states. Geographically, its territory encompasses both the Eastern Alps (which cover some two thirds of its surface area) and the Danube Region. The foothills of the Alps, the Vienna Basin and the Pannonian Plain in the East are the principal areas of settlement and economic activity. Throughout the centuries, its people and its lands have played a major role in central European history and during the 18th century Vienna's Habsburg court became one of the most influential in Europe.

Table 1. Austria: Basic Data, 2010

Land Area		83,859 km ²
Population		8.3 million
Main Towns (Population '000)	Vienna:	1,630
	Graz:	248
	Linz:	189
	Salzburg:	150
	Innsbruck:	117
Governmental System	Federal Republic with 9 provinces:	
	Province	Capital City
	Vienna	Vienna
	Lower Austria	St. Pölten
	Upper Austria	Linz
	Styria	Graz
	Tyrol	Innsbruck
	Carinthia	Klagenfurt
	Salzburg	Salzburg
	Voralberg	Bregenz
	Burgenland	Eisenstadt

Source: Official Statistics

Defeat in the First World War led to the dissolution of the Austro-Hungarian empire and the emergence of the Republic of Austria, a relatively tiny portion of the once huge Habsburg empire. After the Second World War Austria was divided into four zones which were occupied until 1955 by the Allies. As a result of the Austrian State treaty in the same year, the country was required to remain permanently neutral, although the growth in Austria's economy during the last 50 years, together with recent events in Western Europe, have cast a different light on the post-war settlement.

Since 1945 Austrian politics had been dominated by just two parties: the Social Democrats and the People's Party. The so-called Grand Coalition had represented unwavering political stability in Austria for many years, although following the federal elections of October 1999 the political mould of Austria was broken for the first time in nearly 30 years. Amid much controversy a right-wing coalition

government comprising the far right Freedom Party (FPÖ) and the conservative People's Party (ÖVP) was elected to power. The right-wing extremist views of the FPÖ, and in particular those of its former leader Jörg Haider, have caused well publicised diplomatic difficulties with Austria's partners in the EU and have threatened to leave Austria isolated on the world stage.

After three years in power the government sensationally collapsed in October 2002 following a form of putsch instigated by Jörg Haider that had allegedly been designed to sabotage plans for eastward expansion of the European Union. Following new elections in November 2002 the People's Party was re-elected with 42 per cent of the vote, whilst the Freedom Party's share slumped to just 10 per cent. Coalition options with the Social Democrats and Green Party were explored by the ÖVP but without success and, amid rising tensions between the two parties, a re-formed coalition with the Freedom Party was once again initiated in 2003.

The Social Democrats under Alfred Gusenbauer emerged as the winner of Austria's general election in October 2006. After negotiations with the ÖVP were successfully concluded, the SPÖ-ÖVP coalition government was sworn in on January 11, 2007 by President Heinz Fischer. This coalition broke-up again in June 2008. Elections in September 2008 further weakened both major parties, Social Democrats and People's Party, but together they still hold more than 50 per cent of the votes with the Social Democrats holding the majority. The Freedom Party and the recently deceased Jörg Haider's new party Alliance for the Future of Austria, both right-wing parties, were strengthened. Due to the surge of the right at the last elections, many speculated that any government coalition would include at least one of the two far-right parties. This idea was put to rest when both the Social Democrats and the People's Party stated that neither of them would work with the Freedom Party or the Alliance for the Future of Austria. Lengthy negotiations led to a renewed "Grand Coalition" consisting of the Social Democrats and the People's Party.

Despite the development of political insecurities and attacks from the far right, the coalition government successfully gained entry to the European Union in January 1995. The most immediate impact of EU membership on Austria was an opening up of the country in both economic and political terms. As in other EU member states, budgetary discipline was re-established and many necessary economic reforms were implemented. The advent of the euro is now generally accepted and welcomed; enlargement of the EU, by contrast, remains far more controversial because there is genuine fear that it could lead to mass immigration and job losses in Austria.

ECONOMIC BACKGROUND

Table 2. Austria: Main Economic Indicators, 2007-2009

	2007	2008	2009
Real GDP Growth (%)	3.5	2.0	-3.6
Unemployment Rate (%)	3.5	3.8	4.7
Consumer Prices (%)	2.3	3.2	0.1
Budget Balance % of GDP	-2.4	-	-0.8
Current Account Balance/GDP	-0.2	0.1	1.2
Exports (%)	7.5	8.1	7.9

Source: WIFO, OECD

Thirty years ago Austria was one of Europe's poorest countries; today, it is among the half dozen richest OECD countries, has one of the lowest unemployment rates in Europe, enviable price stability and a skilled labour force. Austria is a highly developed industrialised nation with an important service sector which accounts for two-thirds of employment and 65 per cent of output. Unlike many other developed countries, industry (including construction) has maintained its share of total output, accounting for around 35 per cent. The agriculture sector, which is small yet highly developed, contributes 1.7 per cent of the national GDP.

The foremost industries are foodstuffs and luxury commodities, mechanical engineering and steel construction, chemicals and vehicle manufacturing. In the electronic engineering field, Austria has made a name for itself with the production of customised electronics products like microprocessors and integrated circuits for airbags, ABS braking systems and components for Airbus airliners and high-speed trains. The country's central location and high quality tourist assets (skiing, Alpine scenery and rich cultural heritage) are also important.

Table 3. Austria: Main Export Markets, 2008 (%)

Germany	29.5
Italy	8.6
USA	4.3
Switzerland	4.2

Source: OECD

With a small domestic market, Austrian firms have had to look to export markets for expansion. The degree to which the economy has internationalised in recent years can be seen from the rise in the ratio of exports of goods and services to GDP. Largely as a result of accession to the EU and the opening up of former communist countries, exports have risen to around 50 per cent of GDP, up from 38 per cent in the mid-1990s.

In 2004, favourable business conditions worldwide began to set in motion a cyclical upswing in the Austrian economy, which continued to gain strength in 2006 and 2007. Through a major shift towards export, the country managed to grow beyond its late 1990s figures of 1.0 per cent. In 2008/2009, however, economic growth contracted as a result of the global economic recession, and GDP fell by 3.6 per cent.

CONSTRUCTION ACTIVITY

Table 4. Austria: Construction by Type, 2006-2009

	% Change at Real Terms			
	2006	2007	2008	2009
Residential	6.0	5.7	2.8	2.3
Non-Residential	3.1	4.4	2.7	2.0
Building	4.8	5.1	2.7	2.2
Civil Engineering	6.2	6.7	3.9	3.6
Total	5.1	5.5	3.0	2.5

Source: WIFO

Housing construction recovered after weak development in 2006 and 2007. The restrained housing production in the first half of the century also caused a backlog in housing, whilst strong migration from Western and, in particular Eastern and South-Eastern Europe caused a much higher demand for dwellings.

In non-residential construction, the demand for industrial and commercial buildings increased considerably in 2007 as the general economic upswing prompted companies to invest in new facilities. There is still an ongoing positive trend in office buildings and a high demand from institutional investors. The peak in non-residential construction was reached in 2007 with growth of 4.4 per cent. In 2008 to 2009 many big city development projects stabilized the commercial building sector. Growth in non-residential construction increased by 2.7 per cent in 2008 and 2.0 per cent in 2009.

The strongest positive growth effects arose from infrastructure investments in civil engineering, albeit at slightly lower levels than in previous years. Civil engineering grew by 3.5 per cent in the period 2008-2009 after a very dynamic growth of nearly 7 per cent in 2007. The main reason for the still very favourable development is the mid-term public expansion program in road and rail infrastructure.

All in all total real construction output increased by 5.5 per cent in 2007. In the subsequent two years there has been a slowdown in growth in the course of the weaker general economic performance.

AGRICULTURAL ACTIVITY

The agricultural labour force in Austria has been in a process of decline since the end of the Second World War. In the period from 1960 to 1990 alone, the percentage of the population working in the industry fell from around 16 per cent to just 4.5 per cent. At the same time the number of farms has steadily fallen from nearly 400,000 in 1960 to 187,000 in 2008, with the result that remaining farms have increased in average size and lost labour has been replaced by increased mechanisation. Furthermore, around 60 per cent of the farms are currently operated on a part-time basis with owners and their families often working in unrelated industries, most notably tourism.

Table 5. Austria: Number of Farms by Size Category, 2008

Size (ha)	Units	%
Under 2	25,395	13.6
2-5	37,524	19.9
5-10	28,820	15.4
10-20	29,585	15.8
20-30	26,150	14.0
30-50	22,730	12.2
50-100	10,545	5.8
100-200	3,620	1.9
Over 200	2,665	1.4
Total	187,034	100.0

Source: ÖSTAT

Approximately 40 per cent of all Austrian farms are classified as disadvantaged mountainous holdings, and the land area occupied by agricultural holdings in Austria is 3.4 million hectares, which amounts to 44 per cent of the total land mass. Forests, an intrinsic part of the national economy, account for 42 per cent of land area.

Table 6. Austria: Agricultural Land Use, 2009 (%)

Arable Land	41.0
Grassland	
– Multi Cut	27.0
– One Cut	4.5
Alpine Pasture	25.0
Vineyards, Nurseries	2.5

Source: Official Statistics

The livestock side of agriculture is particularly important in Austria because it can be undertaken in marginal areas. Cattle production is the most intensive branch with an estimated total head of 2.1 million. The pig stock amounts to nearly four million, poultry 3 million and the sheep stock to around 400,000.

Perhaps the most significant factor to affect Austrian agriculture in recent times has been the country's entry into the EU in 1995. Confrontation with international competition together with the abolition of market price supports initially caused great problems for Austria's farmers and necessitated a considerable extension of public funds for agriculture. Whilst profits only fell slightly in the first year of membership, there were heavy losses in gross yields due to a decline of 22 per cent in prices caused by the Common Agricultural Policy.

Table 7. Austria: Agricultural and Forestry Production by Sector, 2009
(%)

Forestry	20.3
Milk	16.6
Pigs	16.3
Cattle	12.8
Fruit, Wine	10.1
Cereals	7.3
Vegetables	6.7
Poultry	4.7
Other	5.2

Source: Official Statistics

FORESTRY

Forests cover 42 per cent of Austria, a high percentage compared with most EU countries. Forestry accounts for 21 per cent of combined output of agriculture and forestry. Exploitation is mainly in the hands of large-scale firms in both the public and the private sector. The public sector's involvement is exercised through the *Bundesforste*, accounting for 18 per cent of the total harvest in 2009. In the private sector the Roman Catholic Church and old aristocratic families still exert a powerful influence on output. One-third of total output in 2009 came from private forests of more than 200 hectares. In contrast to agriculture, forestry was little affected by EU membership and is not dependent on subsidies.

SUMMARY OF SALES AND PRODUCTION 2005–2009

The tables below show the development of total sales and production of the products covered in this study. Details of the weight categories, horsepower and market shares are contained in each product section.

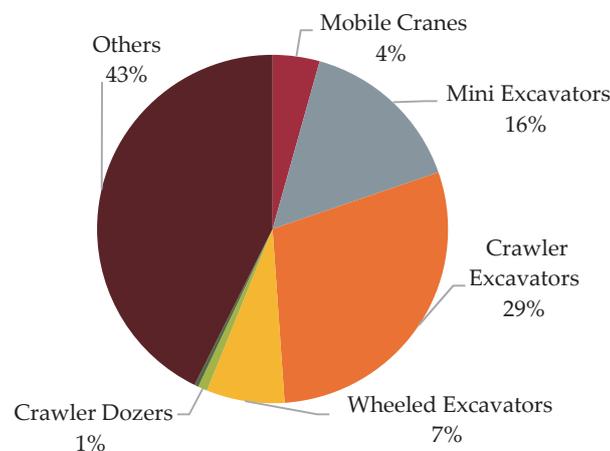
SALES

Table 8. Austria: Sales of Construction Equipment and Agricultural Tractors 2005-2009 (Units)

	2005	2006	2007	2008	2009	% Change 2005-2009
Mobile Cranes	45	70	85	92	95	+111
Mini Excavators	544	715	696	535	338	-38
Crawler Excavators	880	1,032	982	940	641	-27
Wheeled Excavators	201	262	253	217	158	-21
Crawler Dozers	25	25	24	32	19	-24
Crawler Loaders	4	6	9	7	8	+100
Wheeled Loaders Under 80 Hp	122	239	243	226	130	+6
Wheeled Loaders Over 80 Hp	342	409	415	404	214	-37
Backhoe Loaders	94	103	123	93	62	-34
Skid-Steer Loaders	110	129	107	105	81	-26
RTLs – Masted	30	35	30	25	23	-23
RTLs – Telescopic	83	96	89	79	61	-26
Motor Graders	16	36	29	31	19	+19
Rigid Dump Trucks	8	2	9	5	4	-50
Articulated Dump Trucks	40	60	59	52	19	-52
Mobile Compressors	328	335	350	345	190	-42
Asphalt Finishers	43	48	52	45	25	-42
Compaction Equipment	357	325	269	252	109	-69
Total Construction Equipment	3,272	3,927	3,824	3,485	2,196	-33
Agricultural Tractors	6,344	6,826	6,750	6,934	6,781	+7

Source: Off-Highway Research

Chart 1. Austria: Sales of Construction Equipment and Agricultural Tractors 2009 (Units)



Source: Off-Highway Research

Austria is traditionally a very stable market, although during the last five years the construction equipment sector has been subject to unprecedented fluctuations in demand.

Following three years of successive growth from 2001 to 2005 when sales rose to some 3,400 units, the market finally succumbed to the inevitable cyclical pattern of demand and posted a decline of six per cent in 2005. All product sectors were affected with the exception of crawler excavators and, in contrast to previous years, demand for compact equipment declined significantly, although the relatively small mini excavator sector remained stable.

In 2006 the market embarked on a significant recovery and sales peaked at over 3,900 units, the highest level of demand ever recorded. In the context of a recovering economy, construction activity expanded significantly, with the main growth stimulus coming from the improvement of the road and rail infrastructure towards the country's eastern neighbours. Civil engineering proved to be the strongest component of the construction industry, with heavy earthmoving equipment featuring in several big projects. The relatively young population of machines was sufficient to meet work load requirements, however, and demand over the next two years declined modestly, although still remained at historically high levels.

Following the onset of the global financial crisis in the second half of 2008, demand for new construction equipment underwent a massive decline of 34 per cent in 2009, equating to the lowest volume of sales since 1987. Despite the Federal government's pledge of €20 billion for investment in infrastructure construction over the next four years, so far only limited funds have been made available. This has had the effect of limiting contractors' confidence to invest in new machines and, given the relatively young population of existing machines, many have elected to postpone fleet renewals until some improvement in the economic situation becomes evident.

Sales of crawler excavators, in particular, have grown significantly in recent years, with much of the demand attributable to the burgeoning popularity of the midi excavator sector. In contrast, the mini excavator sector has remained relatively stagnant as users have increasingly traded up to the larger, more versatile machines. The continuing decline in demand for backhoe loaders, historically a popular machine with Austrian contractors, has been of particular concern. The midi excavator and small wheeled loader combination is cited as the chief culprit in the backhoe's demise and it now seems that volumes are unlikely to ever recover.

PRODUCTION

Whilst the production of off-highway equipment has never been a major activity in Austria, the country is home to several important manufacturing operations. Compact excavator production has been significantly expanded at Wacker Neuson,

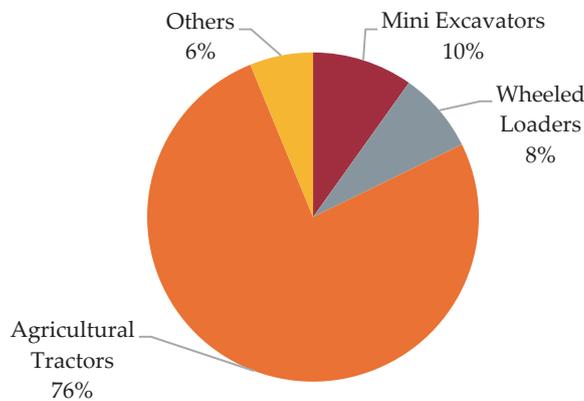
based in Linz, and in 2005 the company began the assembly of skid-steer loaders. Agricultural tractor production at CNH’s plant in St. Valentin has also increased substantially during the period under review and the plant has been designated as a CNH worldwide competence centre. Liebherr has two construction machinery plants in Austria; crawler dozers and loaders, and more recently telescopic handlers, are built at Telfs, near Innsbruck, while the company’s wheeled loader range is assembled at Bischofshofen, near Salzburg.

Table 9. Austria: Production of Construction Equipment and Agricultural Tractors, 2005-2009 (Units)

	2005	2006	2007	2008	2009
Mini Excavators	2,878	3,100	4,175	3,740	1,450
Crawler Excavators	450	475	550	520	220
Wheeled Excavators	110	175	305	350	180
Skid-Steer Loaders	150	300	320	550	125
Crawler Dozers	310	415	520	584	244
Crawler Loaders	350	412	295	219	95
Wheeled Loaders Under 80 Hp	944	1,211	1,325	1,269	704
Wheeled Loaders Over 80 Hp	1,219	1,572	2,035	1,519	466
Telescopic Handlers	25	50	70	71	48
Agricultural Tractors	8,345	6,950	8,675	12,830	11,250
Total	14,781	14,660	18,270	21,652	14,782

Source: Off-Highway Research

Chart 2. Austria: Production of Construction Equipment and Agricultural Tractors, 2009 (Units)



Source: Off-Highway Research

A comprehensive analysis of these suppliers’ manufacturing operations is contained in the Manufacturer Profiles section at the end of this report.

POPULATION

The population of off-highway equipment is partially covered by government censuses, but many of the figures in the table below are Off-Highway Research’s estimates of the active population based on historical sales data.

Table 10. Austria: Population of Construction Equipment and Agricultural Tractors, 2009

	Units
Mobile Cranes	800
Mini Excavators	7,500
Wheeled Excavators	4,000
Crawler Excavators	10,500
Crawler Dozers	800
Crawler Loaders	300
Backhoe Loaders	2,000
Wheeled Loaders	6,000
Skid-Steer Loaders	1,500
Rigid Dump Trucks	225
Articulated Dump Trucks	300
Rough Terrain Lift Trucks – Masted	250
Rough Terrain Lift Trucks – Telescopic	500
Motor Graders	475
Asphalt Finishers	400
Mobile Compressors	6,500
Total Construction Equipment	42,050
Agricultural Tractors	435,200

Source: Off-Highway Research, Official Statistics

MARKET SHARES

Table 11 summarises market shares in the product areas covered in this report. The leading companies overall are Caterpillar, Volvo, Liebherr and Komatsu, although Takeuchi is the established market leader in the mini excavator sector and, due to the success of its midi excavators, also in the crawler excavator sector. Detailed analyses of all major importers are provided in the section on distributors.

Table 11. Austria: Suppliers of Off-Highway Equipment and Their Market Shares, 2009 (Units)

	Mobile Cranes	Crawler Excavators	Wheeled Excavators	Mini Excavators	Dozers	Crawler Loaders	Wheeled Loaders	Backhoe Loaders	Skid-Steer Loaders	RLLTs	Motor Graders	Articulated Dump Trucks	Rigid Dump Trucks	Asphalt Finishers
Ahlmann	-	-	-	-	-	-	5	-	-	-	-	-	-	-
Atlas Weyhausen	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Bobcat	-	-	-	15	-	-	1	-	26	2	-	-	-	-
Case	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Caterpillar	-	66	15	12	5	4	53	9	12	-	2	2	3	-
Doosan	-	-	1	-	-	-	-	-	-	-	-	-	-	-
Dynapac	-	-	-	-	-	-	-	-	-	-	-	-	-	3
Gehl	-	-	-	-	-	-	-	-	22	-	-	-	-	-
Grove	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Hitachi	-	96	14	14	-	-	12	-	-	-	-	-	-	-
Hyundai	-	5	2	-	-	-	2	-	-	-	-	-	-	-
Hydrema	-	-	-	-	-	-	-	1	-	-	-	2	-	-
JCB	-	7	-	4	-	-	2	37	1	1	-	-	-	-
Jumbo	-	-	-	-	-	-	-	-	-	20	-	-	-	-
Komatsu	-	65	13	27	10	-	34	6	10	-	-	9	1	-
Kramer	-	-	-	-	-	-	33	-	-	4	-	-	-	-
Kubota	-	10	-	35	-	-	1	-	-	-	-	-	-	-
Liebherr	65	42	44	-	3	4	110	-	-	-	-	-	-	-
Manitou	-	-	-	-	-	-	-	-	-	17	-	-	-	-
Massey Ferguson	-	-	-	-	-	-	-	-	-	5	-	-	-	-
Mecalac	-	-	2	-	-	-	-	-	-	-	-	-	-	-
Merlo	-	-	-	-	-	-	-	-	-	35	-	-	-	-
Mustang	-	-	-	-	-	-	4	-	-	-	-	-	-	-
New Holland	-	93	9	26	1	-	6	2	-	-	17	-	-	-
Tadano Faun	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Takeuchi	-	150	20	130	-	-	-	-	-	-	-	-	-	-
Terex	-	2	21	1	-	-	7	5	-	-	-	-	-	-
Terex Demag	22	-	-	-	-	-	-	-	-	-	-	-	-	-
Vögele	-	-	-	-	-	-	-	-	-	-	-	-	-	21
Volvo	-	81	14	15	-	-	64	2	-	-	-	6	-	1
Wacker Neuson	-	22	2	51	-	-	9	-	10	-	-	-	-	-
Yanmar	-	2	1	8	-	-	-	-	-	-	-	-	-	-
Total	95	641	158	338	19	8	344	62	81	84	19	19	4	25

Source: Off-Highway Research

EQUIPMENT ANALYSES

MOBILE CRANES

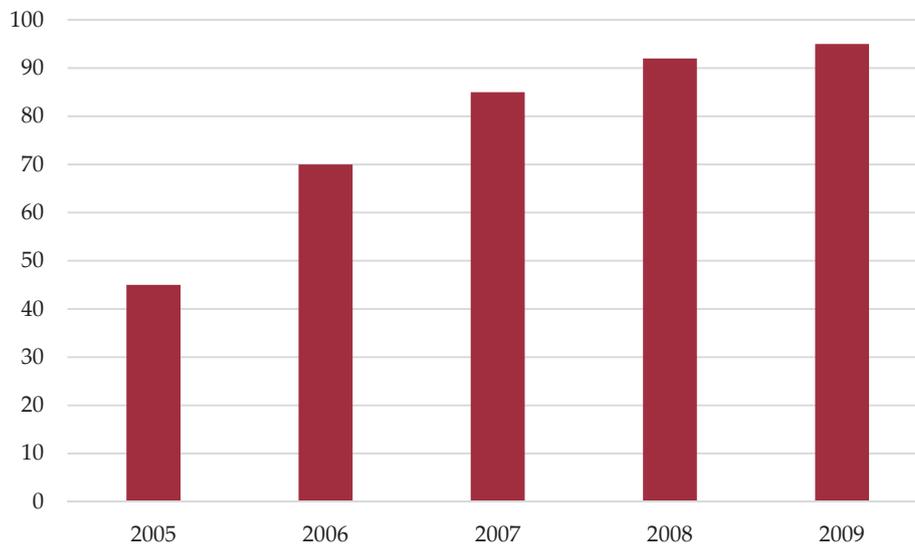
MARKET SIZE AND TRENDS

Table 12. Austria: Sales of Mobile Cranes by Types, 2005-2009 (Units)

	2005	2006	2007	2008	2009
All Terrain	45	68	82	88	80
Truck-Mounted	-	2	2	4	9
Crawler	-	-	1	-	6
Total	45	70	85	92	95

Source: Off-Highway Research

Chart 3. Austria: Sales of Mobile Cranes by Types, 2005-2009 (Units)



Source: Off-Highway Research

The market for mobile cranes in Austria is traditionally stable due largely to the dominance of five major crane hire companies, which operate fleets of between 50 and 150 cranes, and which together account for some 80 per cent of total demand. Each of these crane hire operators undertakes specific and regular replacement programmes, and this affords an enviable stability to the overall pattern of demand, particularly for all terrain machines.

Occasional fluctuations in the market do nevertheless occur, most notably in the first half of the 1990s when sales plummeted to 20 units following a collapse in crane hire rates. Increased activity in the commercial property and housebuilding sectors during the mid-1990s, however, restored the confidence of crane hirers to reinvest in replacement machines and stability once again returned to the market. The announcement in 2003 of a series of capital investment subsidies by the Federal

government resulted in an unprecedented level of demand for new cranes as crane hire companies rushed to instigate advanced fleet replacement programmes. As a result, the market reached its highest recorded level of 106 units in 2004.

Demand declined briefly in 2005 following the high level of sales in the previous year, although recovered strongly in the subsequent four years as crane hire companies took advantage of buoyant economic conditions to instigate fleet replacement programmes.

The all terrain crane continues to dominate the market with 40-80 tonne machines accounting for the majority of sales. The virtual monopoly held by one manufacturer, Liebherr, means that market trends are largely dictated by this company's product development. An obvious example of this has been the growing trend towards the use of larger capacity cranes following the introduction by Liebherr of its 90 tonne model.

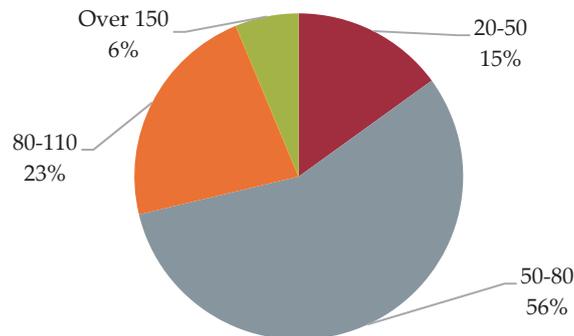
Truck-mounted cranes have generally accounted for an incremental number of units per year, although there is mounting evidence to suggest that the market is now moving exclusively towards the use of the more sophisticated all terrain products.

Table 13. Austria: Sales of All Terrain Cranes by Lift Capacity, 2009

Tonnes	Units
20-50	12
50-80	45
80-110	18
110-150	-
Over 150	5
Total	80

Source: Off-Highway Research

Chart 4. Austria: Sales of All Terrain Cranes by Lift Capacity, 2009



Source: Off-Highway Research

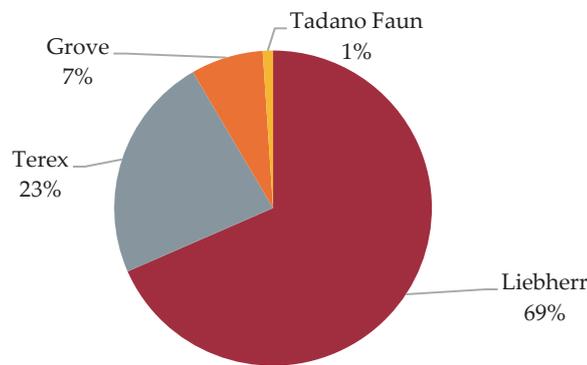
MARKET SHARES

Table 14. Austria: Suppliers of Mobile Cranes and Their Market Shares, 2005-2009 (Units)

	2005	2006	2007	2008	2009
Liebherr	40	45	52	62	65
Terex	3	20	23	20	22
Grove	-	5	9	10	7
Tadano Faun	2	-	1	-	1
Total	45	70	85	92	95

Source: Off-Highway Research

Chart 5. Austria: Suppliers of Mobile Cranes and Their Market Shares, 2009 (Units)



Source: Off-Highway Research

Liebherr still dominates the market as it does throughout Europe, and regularly achieves a market share of over 80 per cent in the all terrain sector. Liebherr mobile crane sales are co-ordinated from the company's headquarters at Bischofshofen, the manufacturing site of its wheeled loader range. In addition to Bischofshofen, Liebherr operates a further six depots throughout the country which act as service stations for its entire range of earthmoving machinery, as well as for mobile and tower cranes.

The remainder of mobile crane sales is effectively shared between just two manufacturers, **Terex** and **Grove**. Terex has traditionally been the second largest supplier and sells its range of all terrain cranes direct from its manufacturing headquarters in Zweibrücken, Germany, although the company also employs a local sales manager based in Salzburg. **Grove** cranes are sold directly from its headquarters in Germany, although the company has been unable to offer a significant challenge to the two established suppliers. **Tadano Faun's** range of German built all terrain cranes was distributed until recently by the New Holland dealer, Kohlschein, based in Vienna, although the latter elected to renounce the franchise in 2009.

Table 15. Austria: Distribution Networks of Suppliers of Mobile Cranes, 2010

Manufacturer	Distributor
Liebherr	Liebherr
Grove	Direct sales
Tadano Faun	Direct sales
Terex	Direct sales

Source: Off-Highway Research

POPULATION AND END-USERS

There are estimated to be about 800 active cranes in Austria at the present time. Approximately 90 per cent of sales are accounted for by crane hire specialists. An enduring feature of the Austrian market is the multitude of small crane users in Austria, many of whom operate just one to five machines, although as much as 80 per cent of total demand is accounted for by just five major rental operators. The remainder of sales goes to general construction companies.

FORECAST

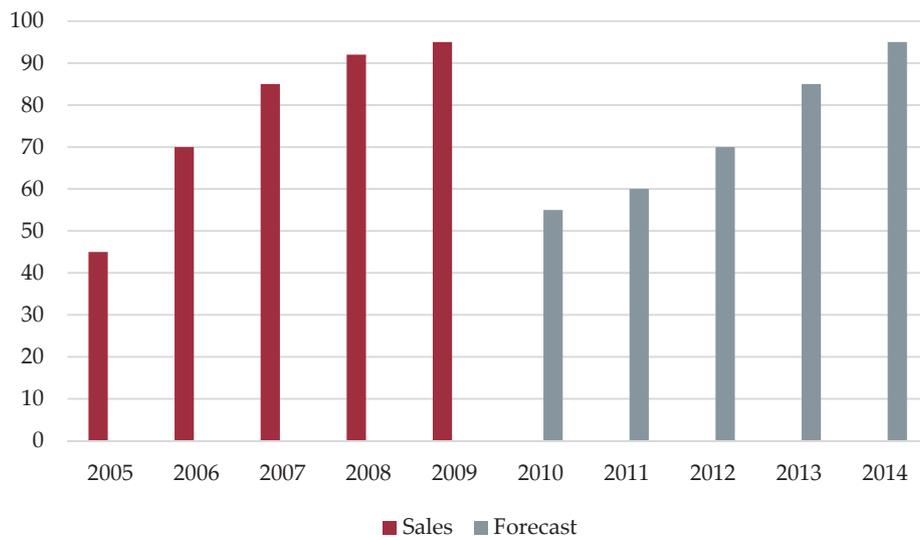
The traditionally stable nature of the Austrian crane market means that wide fluctuations in demand are uncommon. Following the high purchasing patterns over the last six years, however, it is the consensus amongst suppliers that the market is now saturated. Furthermore, the effects of the global economic recession and government budgetary restrictions mean that the volume of available projects has fallen significantly. The problem has been exacerbated by the fact that the prices of used cranes have plummeted which has discouraged owners from buying new machines. It now seems likely that a return to far lower volumes will characterise the pattern of the market in the short to medium term, with demand recovering to more customary levels towards the end of the forecast period. All terrain cranes are certain to dominate, with only incremental sales being achieved by truck-mounted machines.

Table 16. Austria: Forecast Sales of Mobile Cranes, 2010-2014 (Units)

2010	2011	2012	2013	2014
55	60	70	85	95

Source: Off-Highway Research

Chart 6. Austria: Forecast Sales of Mobile Cranes, 2005-2014 (Units)



Source: Off-Highway Research

MINI EXCAVATORS

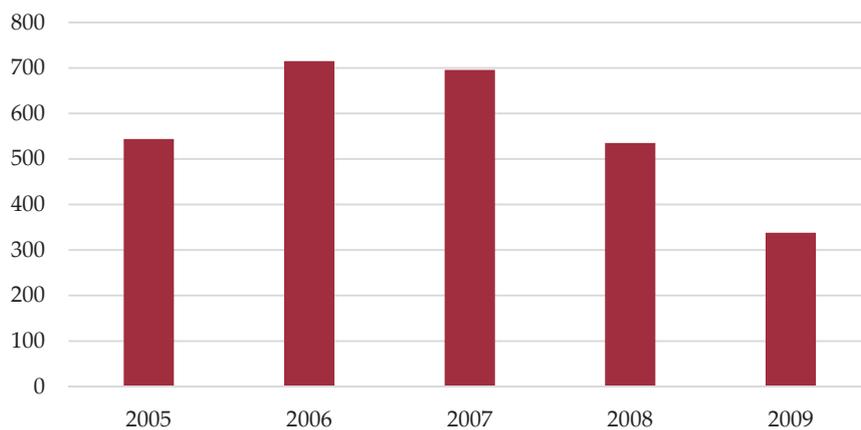
MARKET SIZE AND TRENDS

Table 17. Austria: Sales of Mini Excavators, 2005-2009 (Units)

2005	2006	2007	2008	2009
544	715	696	535	338

Source: Off-Highway Research

Chart 7. Austria: Sales of Mini Excavators, 2005-2009 (Units)



Source: Off-Highway Research

In common with other European markets, the mini excavator firmly established its presence in Austria during the 1990s. Although acceptance of the product was initially slow, from 1993 onwards the market underwent a significant growth phase

as an increasing number of suppliers entered the market and the concept of compact equipment gained widespread popularity amongst Austrian contractors.

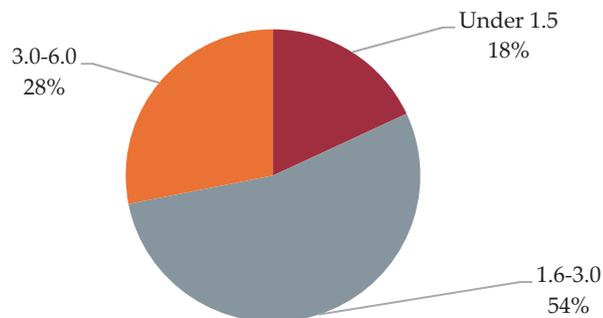
The increased exposure afforded to the mini excavator through the marketing activities of progressive suppliers such as the market leader Takeuchi, and the domestic manufacturer Wacker Neuson, has been of particular significance in developing the market. A further factor to influence demand for mini excavators has been the growing popularity of rental, particularly during the last 15 years. Increasing pressure on construction companies to cut fixed costs in the light of the recessionary trend in the construction sector has, in many cases, rendered rental a more viable option to outright purchase. Similarly, the advent of the *Mietkauf* system, or rental with option to purchase, has proved to be an additional inducement for mini excavator customers, sustaining demand for the product at a time of declining sales volumes in many other machinery sectors.

Table 18. Austria: Sales of Mini Excavators by Weight Category, 2005-2009

Tonnes	2005		2009	
	Units	%	Units	%
Under 1.5	98	18	61	18
1.6-3.0	280	52	182	54
3.0-6.0	166	30	95	28
Total	544	100	338	100

Source: Off-Highway Research

Chart 8. Austria: Sales of Mini Excavators by Weight Category, 2009



Source: Off-Highway Research

The most salient feature of the mini excavator market during recent years has been the trend towards larger size machines. In 1993 the 1.2-1.3 tonne mini excavator alone accounted for 75 per cent of sales, although this figure has subsequently declined to around 20 per cent. The bulk of demand now falls within the 1.5-3.0 tonne class whilst demand for 3.0-6.0 tonne machines has risen to some 30 per cent of the market. The trend has come about largely because many contractors, whose initial mini excavator purchase was a 1.0-1.5 tonne machine, have realised the potential of the product for more demanding applications and have upgraded

accordingly. It is important to note also that this trend has resulted in a move by some customers away from mini excavators altogether in favour of 7-8 tonne midi excavators, although it is unlikely that demand for the conventional, under 6 tonne machine will be affected by this development.

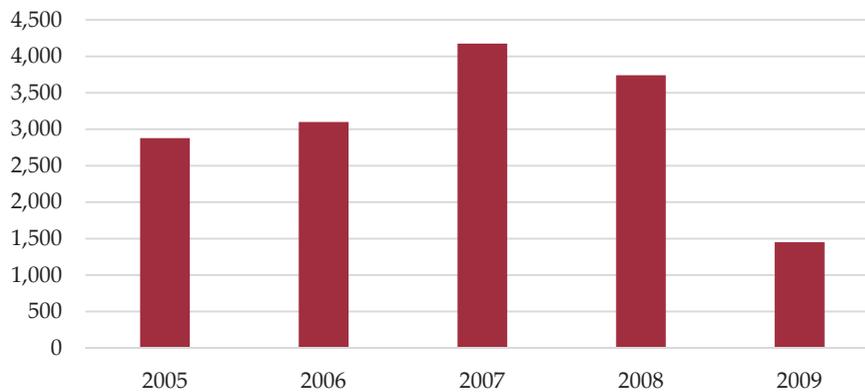
PRODUCTION

Table 19. Wacker Neuson: Production of Mini Excavators <6 Tonnes, 2005-2009 (Units)

2005	2006	2007	2008	2009
2,878	3,100	4,175	3,740	1,450

Source: Off-Highway Research

Chart 9. Wacker Neuson: Production of Mini Excavators <6 Tonnes, 2005-2009 (Units)



Source: Off-Highway Research

Austria currently has one producer of mini excavators, **Wacker Neuson**, based in Linz in Upper Austria. The company began production in 1984 having previously been involved in hydraulics. Throughout the 1990s Neuson gradually expanded its mini excavator offering in addition to diversification into niche product sectors such as tracked dumpers and forestry harvester equipment. Today the Linz plant produces a comprehensive range of mini excavators, wheeled and crawler excavators, skid-steer loaders and site dumpers.

Neuson is one of the success stories of the European construction equipment industry, and production volumes at its Linz factory have increased significantly during the last 10 years, largely as a result of the rapid growth in export sales. In 2000 Neuson merged with the German based manufacturer of compact wheeled loaders, Kramer, which elevated the newly formed company, Neuson Kramer Baumaschinen AG, to the status of a full-line supplier of compact construction equipment. In the autumn of 2007 the company successfully concluded a merger with compaction equipment manufacturer, Wacker Construction Equipment AG,

based in Munich, Germany, and was renamed Wacker Neuson AG. The excavator manufacturing company in Austria is known as Wacker Neuson Linz GmbH.

A full analysis of the company's manufacturing operation may be found in the Manufacturer Profile section at the end of this report.

MARKET SHARES

Table 20. Austria: Suppliers of Mini Excavators and Their Market Shares, 2005-2009

	2005		2006		2007		2008		2009	
	Units	%								
Takeuchi	290	53	340	48	330	47	210	39	130	39
Neuson	52	10	48	7	65	9	55	10	51	15
Kubota	41	8	49	7	52	7	53	10	35	10
Komatsu	21	4	83	12	69	10	71	13	27	8
New Holland	34	6	14	2	8	1	13	2	26	8
Volvo	15	3	36	5	53	8	22	4	15	4
Bobcat	-	-	-	-	13	2	22	4	15	4
Hitachi	2	-	14	2	17	2	10	2	14	4
Caterpillar	21	4	63	9	49	7	49	9	12	4
Yanmar	9	2	7	1	14	2	8	2	8	2
JCB	20	4	10	1	7	1	2	-	4	1
Terex	-	-	-	-	4	1	5	1	1	-
Sunward	-	-	23	3	13	2	10	2	-	-
Hyundai	1	-	3	-	2	-	5	1	-	-
I-R Bobcat	24	4	20	3	-	-	-	-	-	-
Case	1	-	2	-	-	-	-	-	-	-
Doosan	-	-	1	-	-	-	-	-	-	-
Terex Schaeff	2	-	2	-	-	-	-	-	-	-
Libra	7	1	-	-	-	-	-	-	-	-
Kobelco	1	-	-	-	-	-	-	-	-	-
Daewoo	3	1	-	-	-	-	-	-	-	-
Total	544	100	715	100	696	100	535	100	338	100

Source: Off-Highway Research

The market is effectively dominated by just one supplier, **Takeuchi**, which regularly accounts for up to 50 per cent of sales. The company is represented by the specialist compact equipment dealer, Huppenkothen, based in Lauterach in the Tyrol. Huppenkothen was an early entrant into the market and has achieved market leadership for many years despite increasing competition from the domestic manufacturer, Neuson. Despite its remote headquarters near the Swiss border, Huppenkothen has a comprehensive nationwide network of depots and complements its activities with Gehl skid-steer loaders and Ammann compaction equipment.

The company has been a leading exponent in the promotion of mini excavator rental and currently operates a fleet of some 150 machines. Huppenkothen's performance is all the more creditable when one considers the potentially damaging effects of the

traditionally high value Yen, although its position as market leader appears, for the foreseeable future at least, unassailable.

The remainder of sales is accounted for by some 10 suppliers, of whom **Neuson**, **Kubota** and **Komatsu** have been the only ones to offer a consistent challenge to the dominance of Takeuchi. The performance of the remaining suppliers has remained predictably stable throughout the period under review.

Table 21. Austria: Distribution Networks of Suppliers of Mini Excavators, 2010

Manufacturer	Distributor
Wacker Neuson	Wacker Neuson
Takeuchi	Huppenkothen
Case	Biegger+King
Caterpillar	Zeppelin, Laurer
Bobcat	CEE
Volvo	Volvo Österreich
Terex	Baumaschinen Handel
Hitachi	Baumaschinen Handel
Hyundai	Mörtlbauer
Komatsu	Kuhn
New Holland	Kohlschein
Yanmar	Breuer
JCB	Terra
Kubota	Esch-Technik
Doosan	CEE

Source: Off-Highway Research

POPULATION AND END-USERS

The mini excavator market has entered a period of relative stability following a continual growth phase during the second half of the 1990s. The active population of machines has continued to rise throughout the last five years, however, and is estimated to have reached a total of 7,500 units.

Around 85 per cent of machines are sold to small to medium size contractors who will operate on a sub-contractual basis to larger construction companies. The landscaping industry is an important end-user sector and accounts for the remaining 15 per cent of sales.

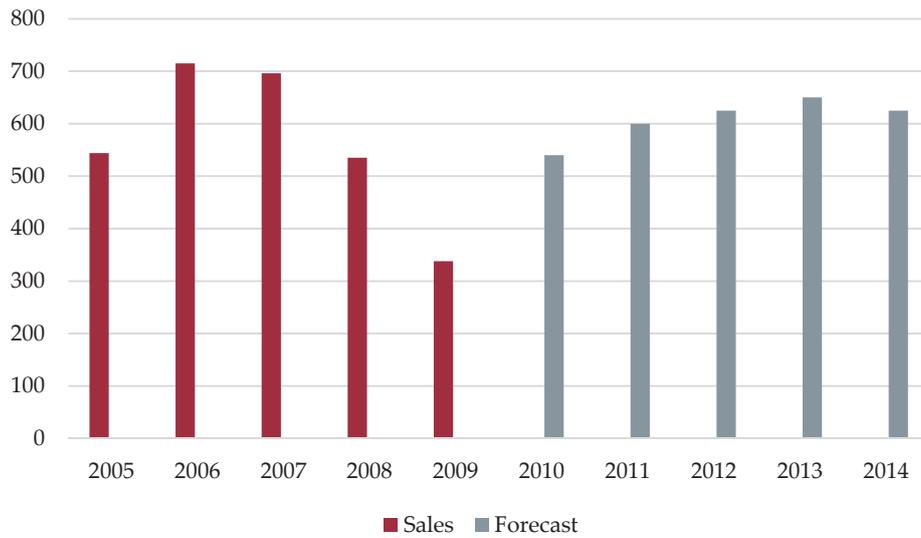
FORECAST

Table 22. Austria: Forecast Sales of Mini Excavators, 2010-2014 (Units)

2010	2011	2012	2013	2014
540	600	625	650	625

Source: Off-Highway Research

Chart 10. Austria: Forecast Sales of Mini Excavators, 2005-2014 (Units)



Source: Off-Highway Research

The current high population of working machines ensures that the replacement market alone will sustain a healthy volume of replacement business, and in the short to medium term demand should stabilise at a level of 600-650 units annually.

HYDRAULIC EXCAVATORS

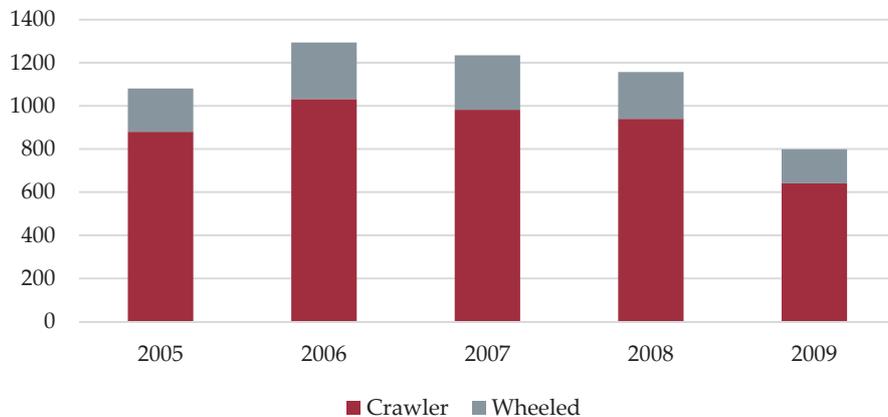
MARKET SIZE AND TRENDS

Table 23. Austria: Sales of Hydraulic Excavators by Type, 2005-2009 (Units)

	2005	2006	2007	2008	2009
Crawler	880	1,032	982	940	641
Wheeled	201	262	253	217	158
Total	1,081	1,294	1,235	1,157	799

Source: Off-Highway Research

Chart 11. Austria: Sales of Hydraulic Excavators by Type, 2005-2009 (Units)



Source: Off-Highway Research

CRAWLER EXCAVATORS

Demand for crawler excavators has risen to record levels during the period under review, with the market effectively doubling in size over the last 10 years. Much of this growth has been attributable to a recovering economy in the second half of the decade and buoyant activity in the civil engineering sector, the stimulus for which has come from the improvement of the road and rail infrastructure towards the country's eastern neighbours.

Furthermore, competition amongst the large array of small sub-contracting firms, which constitute the major buying group for crawler excavators, remains intense due to the scarcity of contracts and the requirement for efficient and reliable machinery therefore remains paramount. With the obvious exception of 2009, sales of new excavators have been largely unaffected by concerns about construction industry recession, and sub-contractors have continued to implement regular fleet replacement programmes.

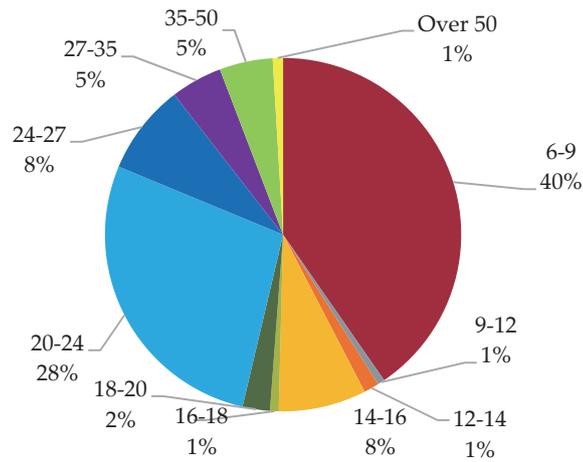
There is little doubt, too, that demand has been sustained by the rising popularity of the midi excavator sector, characterised by the extremely successful performance of Takeuchi's 7.5 tonne excavator, the TB175, and the subsequent launch of competitive products from nearly all other suppliers. The 7.0-9.0 tonne category is by a considerable margin the fastest growing sector for excavators and now accounts for over 35 per cent of all crawler excavator sales in Austria. Within the context of the overall market this inevitably distorts the true pattern of demand for excavators in the conventional weight classes, sales of which have in fact remained relatively stable.

Table 24. Austria: Sales of Crawler Excavators by Weight Category, 2009

Tonnes	Units	%
6-9	259	40
9-12	4	1
12-14	9	1
14-16	51	8
16-18	5	1
18-20	16	3
20-24	177	27
24-27	53	8
27-35	30	5
35-50	31	5
Over 50	6	1
Total	641	100

Source: Off-Highway Research

Chart 12. Austria: Sales of Crawler Excavators by Weight Category, 2009



Source: Off-Highway Research

The most important category in volume terms is the 7-9 tonne class, dominated by the ubiquitous Takeuchi TB175 machine. These machines have proved highly popular for use on the plethora of smaller job sites which abound in Austria, and their ability to be specified on rubber tracks often renders them the preferred alternative to wheeled excavators or backhoe loaders. Recent strong demand for Takeuchi’s 14-tonne model, the TB1140, has also seen a significant growth in the importance of this sector.

In the conventional size categories the most widely accepted machine remains the 21 tonne excavator and there is unlikely to be any change to this pattern in the foreseeable future. There is still significant demand for products up to 25 tonnes, however, whilst the bulk of machines sold above this size are in the 27-30 tonnes’ category. There is only a small demand for crawler excavators above 35 tonnes.

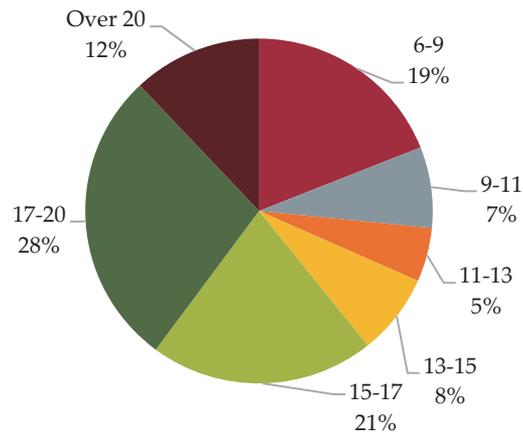
WHEELED EXCAVATORS

Table 25. Austria: Sales of Wheeled Excavators by Weight Category, 2009

Tonnes	Units	%
6-9	30	18
9-11	12	8
11-13	8	5
13-15	12	8
15-17	33	21
17-20	44	28
Over 20	19	12
Total	158	100

Source: Off-Highway Research

Chart 13. Austria: Sales of Wheeled Excavators by Weight Category, 2009



Source: Off-Highway Research

Wheeled excavator sales benefited during the late 1990s from the high level of activity in housing and commercial property development, although, perhaps surprisingly, they have never achieved the acceptance afforded to them in neighbouring Germany. Demand has nevertheless remained remarkably stable, rising steadily to reach a peak in 2000 when 315 units were sold. During the period under review demand has since stabilised at an average level of around 200-250 units per year.

There has been little change in the preferred size of machine used in this traditionally conservative market and in the conventional size classes there remain two distinct areas of demand. The 17-20 tonne class is the most popular category, accounting for some 30 per cent of all wheeled excavator sales. The second most important category is the 15-17 tonne sector, which in 2009 accounted for some 21 per cent of sales. Sales of midi excavators are sustained primarily by Takeuchi's 7.5 tonne offering and Terex's 8.5 tonne model. There is still a limited demand for wheeled excavators above 20 tonnes, particularly in quarries and forestry, and 19 units in this category were sold in 2009.

MARKET SHARES

CRAWLER EXCAVATORS

The crawler excavator market is extremely competitive for such a relatively small volume sector, with around 15 suppliers currently active in the market. It has, however, proved remarkably stable in terms of individual rankings of suppliers.

The crawler excavator market has traditionally been very price sensitive which, coupled with the small physical size of the country obviating the need for extensive service networks, has allowed smaller import operations to achieve impressive success.

Table 26. Austria: Suppliers of Crawler Excavators and Their Market Shares, 2005-2009

	2005		2006		2007		2008		2009	
	Units	%	Units	%	Units	%	Units	%	Units	%
Takeuchi	200	23	225	22	210	21	200	21	150	23
Hitachi	57	6	90	9	94	10	94	10	96	15
New Holland	132	15	153	15	183	19	142	15	93	14
Volvo	82	9	127	12	131	13	164	17	81	13
Caterpillar	124	14	116	11	119	12	106	11	66	10
Komatsu	113	13	119	12	102	10	100	11	65	10
Liebherr	67	8	62	6	55	6	67	7	42	7
Neuson	33	4	33	3	24	2	18	2	22	3
Kubota	1	-	7	1	9	1	8	1	10	2
JCB	34	4	39	4	17	2	12	1	7	1
Hyundai	1	-	26	3	12	1	16	2	5	1
Terex	-	-	-	-	1	-	1	-	2	-
Yanmar	3	-	6	1	11	1	-	-	2	-
I-R Bobcat	-	-	5	-	3	-	6	1	-	-
Doosan	-	-	16	2	8	1	6	1	-	-
Mecalac	1	-	2	-	3	-	-	-	-	-
Terex Schaeff	-	-	3	-	-	-	-	-	-	-
Sunward	-	-	3	-	-	-	-	-	-	-
Daewoo	28	3	-	-	-	-	-	-	-	-
Case	4	-	-	-	-	-	-	-	-	-
Total	880	100	1032	100	982	100	940	100	641	100

Source: Off-Highway Research

One of the most significant developments to occur in the crawler excavator market was the launch in 1996 of **Takeuchi's** midi excavator model, the TB070, which managed to capture 12 per cent of the market in its first year. It has achieved this through mini excavator customers trading up in size, crawler excavator customers trading down in size, and by converting traditional backhoe loader operators. The sheer volume of sales achieved by its dealer, Huppenkothen, has expanded the overall crawler excavator market considerably and means that the 7.5 tonne weight class now accounts for an unusually high level of sales. Similarly, the introduction of the company's 14 tonne model, the TB1140, has also helped to expand the market during recent years.

New Holland, whose crawler excavator product was formerly marketed under the **Kobelco** brand name, has traditionally been the leading supplier of conventional sized crawler excavators. Its importer, Kohlschein, has long experience in the hydraulic excavator business and represented the Kobelco marque for over 20 years prior to its incorporation into the CNH organisation. Austria was Kobelco's most successful market in Europe and the company benefited considerably from its dealer's stability and expertise in the crawler excavator sector. Significantly, the change of brand name on the crawler excavators has had no adverse affect on Kohlschein's ability to promote the New Holland product as successfully as it did the original Kobelco machines.

More recently, however, New Holland has faced an increasing challenge from **Hitachi**, whose products are distributed by Baumaschinen Handel, based in Vienna. The Hitachi product has earned a reputation for reliability and competitive pricing, which has been enhanced by the dealer's commitment to customer support. Baumaschinen is also the general importer for the Terex compact equipment product line.

Volvo, **Caterpillar** and **Komatsu** are all well established suppliers and have consistently vied for second position in the conventional size crawler excavator sector. Each company benefits enormously from the quality of its products and exceptional level of customer support offered by its dealers.

WHEELED EXCAVATORS

Table 27. Austria: Suppliers of Wheeled Excavators and Their Market Shares, 2005-2009

	2005		2006		2007		2008		2009	
	Units	%								
Liebherr	53	26	87	33	71	28	63	29	44	28
Terex	-	-	-	-	36	14	38	17	21	13
Takeuchi	25	12	35	13	30	12	25	11	20	13
Caterpillar	23	11	23	9	28	11	12	6	15	10
Volvo	5	3	13	5	18	7	22	10	14	9
Hitachi	7	3	8	3	14	5	13	6	14	9
Komatsu	19	9	20	8	16	6	17	8	13	8
New Holland	13	7	8	3	9	4	8	4	9	6
Neuson	-	-	2	1	10	4	9	4	2	1
Hyundai	-	-	2	1	4	2	3	1	2	1
Mecalac	4	2	7	3	-	-	1	1	2	1
Doosan	-	-	8	3	10	4	1	1	1	-
Yanmar	-	-	1	-	-	-	-	-	1	-
Sennebogen	2	1	-	-	5	2	5	2	-	-
JCB	4	2	5	2	2	1	-	-	-	-
Terex Atlas	24	12	31	12	-	-	-	-	-	-
Terex Schaeff	4	2	11	4	-	-	-	-	-	-
Case	4	2	1	-	-	-	-	-	-	-
Euromach	3	1	-	-	-	-	-	-	-	-
Daewoo	11	6	-	-	-	-	-	-	-	-
Total	201	100	262	100	253	100	217	100	158	100

Source: Off-Highway Research

The wheeled excavator market is a stable one, both in terms of the volume of units sold and the performance of suppliers competing within the sector. **Liebherr** has been market leader for many years regularly achieving up to 30 per cent of the market. The company benefits from the ability to compete in all size categories of the sector and has been particularly successful in all weight classes with its 900 Series machines.

Of the remaining suppliers, only **Takeuchi**, with its single TB175W midi excavator, and **Terex Atlas** have been able to offer a credible challenge to the dominance of Liebherr.

The table below lists the suppliers of both wheeled and crawler excavators.

Table 28. Austria: Distribution Networks of Suppliers of Hydraulic Excavators, 2010

Manufacturer	Distributor
Atlas	Kohlschein
Terex Mining	Zeppelin
Case	Biegger+King
Caterpillar	Zeppelin
Komatsu	Kuhn
Terex	Baumaschinen Handel
Hitachi	Baumaschinen Handel
Hydrema	Drott
Doosan	CEE
Hyundai	Mörtlbauer
JCB	Terra
Liebherr	Liebherr
Macmoter	Fritz
Mecalac	Laurer
Wacker Neuson	Wacker Neuson
New Holland	Kohlschein
Volvo	Volvo Austria
Takeuchi	Huppenkothen

Source: Off-Highway Research

POPULATION AND END-USERS

Table 29. Austria: Population of Hydraulic Excavators by Type, 2009 (Units)

Crawler	10,500
Wheeled	4,000
Total	14,500

Source: Off-Highway Research

The buoyant level of crawler excavator sales during the period under review has meant that the total population of hydraulic excavators has increased from around 12,000 machines in 2005 to its current level of 14,500. Around a quarter of the population is constituted by wheeled excavators.

Excavators of both types are bought predominantly by the small and medium sized general contractors who will typically own two to three machines. There are hundreds of these companies operating within Austria, and the absence of a developed plant hire market means they are frequently employed by large construction firms on a sub-contract basis.

Whilst the smaller companies will generally purchase machines up to 24 tonnes' capacity, crawler excavators in the 24 to 50 tonne classes are often sold to specialist earthmoving companies in addition to gravel pits; crawler machines above 50 tonnes are found exclusively in quarry applications. Wheeled excavators up to 20 tonnes are used mainly in the roadbuilding and housebuilding sectors although machines above this weight tend to be found working in more specialised industrial applications such as scrap metal or forestry.

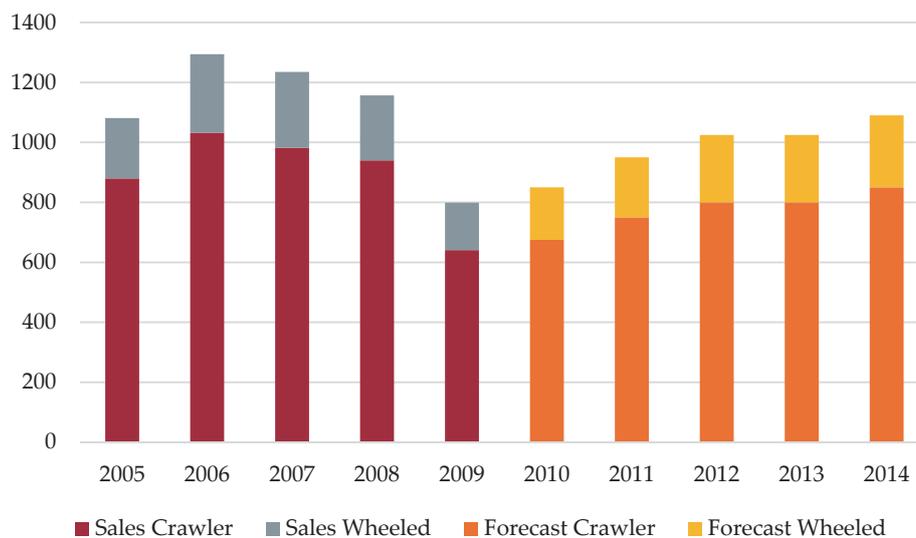
FORECAST

Table 30. Austria: Forecast Sales of Hydraulic Excavators, 2010-2014 (Units)

	2010	2011	2012	2013	2014
Crawler	675	750	800	800	850
Wheeled	175	200	225	225	240
Total	850	950	1,025	1,025	1,090

Source: Off-Highway Research

Chart 14. Austria: Forecast Sales of Hydraulic Excavators, 2005-2014 (Units)



Source: Off-Highway Research

2009 is expected to be the trough in the current demand cycle, although the enduring ramifications of the recent economic recession mean that the market is unlikely to recover by more than 10 per cent in 2010. Despite the government's pledge of €20 billion for investment in infrastructure construction over the next four years, so far only limited funds have been made available. This has had the effect of limiting contractors' confidence to invest in new machines and, given the relatively young population of existing machines, many have elected to postpone fleet renewals until some improvement in the economic situation becomes evident.

The medium to long term outlook is nevertheless more favourable and the forecast growth in the economy and construction sector should finally stimulate contractors

to implement fleet replacement programmes. Although the market for wheeled excavators is unlikely to record the same level of growth during the forecast period as the crawler sector, the requirement to remain competitive should ensure a healthy level of replacement sales, and confirm Austria's reputation as one of Europe's most stable markets.

CRAWLER DOZERS

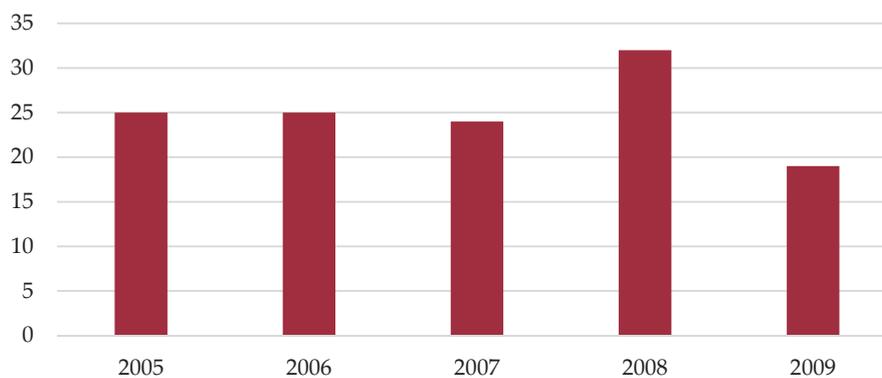
MARKET SIZE AND TRENDS

Table 31. Austria: Sales of Crawler Dozers, 2005-2009 (Units)

2005	2006	2007	2008	2009
25	25	24	32	19

Source: Off-Highway Research

Chart 15. Austria: Sales of Crawler Dozers, 2005-2009 (Units)



Source: Off-Highway Research

Demand for crawler dozers has remained relatively weak for many years, largely as a result of declining applications in civil engineering. In 1996 the market reached its lowest recorded level with just eight machines sold, although subsequently recovered as a result of the fleet replacement programmes of several main customers. More recently demand has stabilised at around 25 units per year.

The most popular sizes of dozer remain those within the 150-200 horsepower category, typified by the Caterpillar D6 variants, Komatsu D61/65 and Liebherr PR724 models. These machines are employed primarily in utility work such as civil engineering and secondary works, and may even be found in such diverse applications as golf course construction.

A small demand for large dozers up to 400 horsepower is sustained by the production industries such as mines and quarries, although sales rarely account for more than one machine at a time. Dozers were once used on a more widespread basis in mines for ripping duties, but the trend towards replacement of the dozer by

the lower cost alternative offered by the hydraulic excavator has all but stifled sales to this sector. Furthermore, the average size of mines in Austria is too small to justify the expense of new crawler dozers and the tendency is to use machines of five to 10 years old.

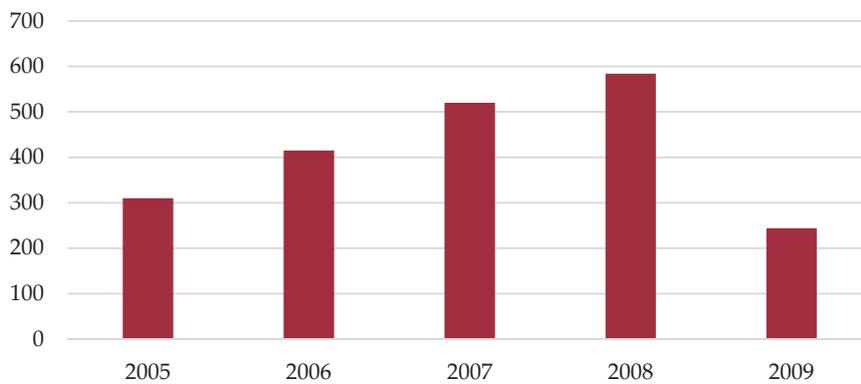
PRODUCTION

Table 32. Liebherr: Crawler Dozer Production in Austria, 2005-2009 (Units)

2005	2006	2007	2008	2009
310	415	520	584	244

Source: Off-Highway Research

Chart 16. Liebherr: Crawler Dozer Production in Austria, 2005-2009 (Units)



Source: Off-Highway Research

The **Liebherr** plant at Telfs, near Innsbruck, produces all the dozer requirements of the corporation worldwide. The range consists of six models ranging from the 117 horsepower PR712 machine, to the PR764 mining dozer equipped with a 422 horsepower engine. The Litronic control system is featured on all the models.

A more comprehensive review of Liebherr's production operation at Telfs can be found under the Manufacturer Profiles section at the end of this report.

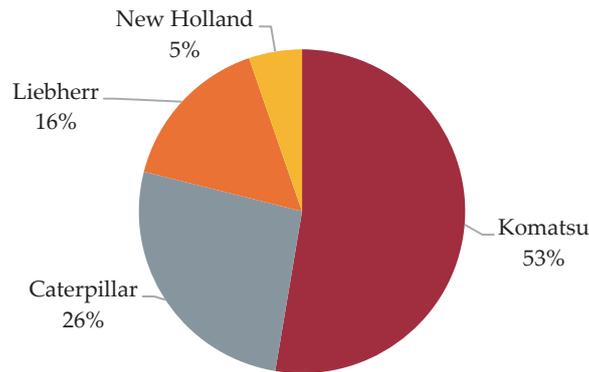
MARKET SHARES

Table 33. Austria: Suppliers of Crawler Dozers and Their Market Shares, 2005-2009

	2005		2006		2007		2008		2009	
	Units	%								
Komatsu	15	60	8	32	7	29	15	47	10	53
Caterpillar	6	24	10	40	10	42	8	25	5	26
Liebherr	3	12	6	24	7	29	5	16	3	16
New Holland	1	4	1	4	-	-	4	13	1	5
Total	25	100	25	100	24	100	32	100	19	100

Source: Off-Highway Research

Chart 17. Austria: Suppliers of Crawler Dozers and Their Market Shares, 2005-2009



Source: Off-Highway Research

Komatsu’s presence in the market was re-established in 1996 following the disruption of its dealer change at the end of 1994. Increasingly competitive pricing has resulted in the company achieving market leadership for three of the last five years.

Caterpillar was the traditional market leader for many years, although more recently the company's performance has suffered as a result of pricing inequality with its main competitors. Despite a smaller product range, **Liebherr** has the advantage that its product is manufactured in Austria and the company continues to achieve a respectable volume of sales annually. The only other active supplier is **New Holland**, although only an incremental number of units have been sold during the period under review.

Table 34. Austria: Distribution Networks of Suppliers of Crawler Dozers, 2010

Manufacturer	Distributor
Case	Biegger+King
Caterpillar	Zeppelin
New Holland	Kohlschein
Komatsu	Kuhn
Liebherr	Liebherr

Source: Off-Highway Research

POPULATION AND END-USERS

The traditional user of crawler dozers remains the general earthmoving contractor and the bulk of demand is supplied by this sector. Quarries and mines account for a small number of incremental sales in the larger weight classes.

The overall population of dozers declined steadily during the 1990s and Off-Highway Research estimates the current population to be around 800 units.

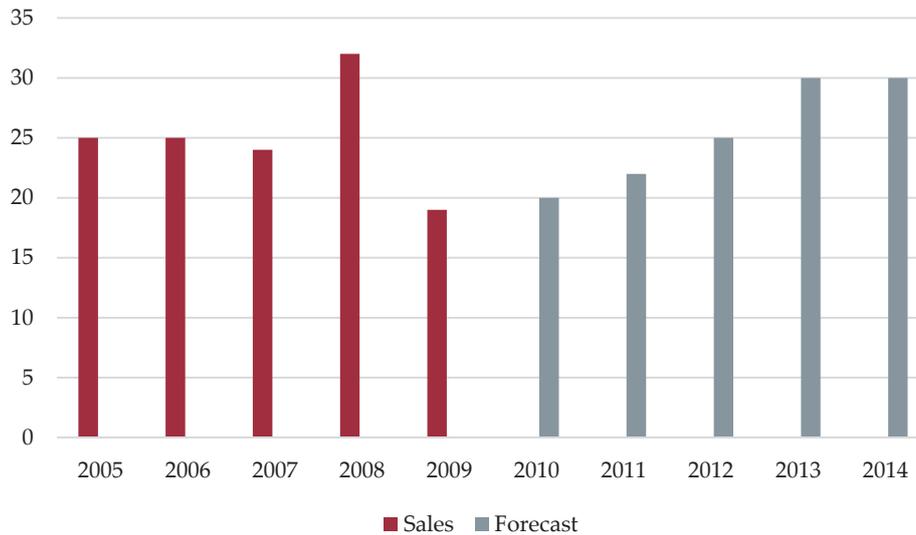
FORECAST

Table 35. Austria: Forecast Sales of Crawler Dozers, 2010-2014 (Units)

2010	2011	2012	2013	2014
20	22	25	30	30

Source: Off-Highway Research

Chart 18. Austria: Forecast Sales of Crawler Dozers, 2005-2014 (Units)



Source: Off-Highway Research

The crawler dozer market is primarily a replacement one. The short term outlook for the civil engineering sector remains muted and as a result only a modest level of replacements may be expected during the next two years, after which demand is likely to recover to more customary levels. The reduced number of hours currently being worked by existing machines, however, dictates that contractors will continue to extend the working lives of their dozers in preference to adhering to normal replacement cycles, and this will impede a greater expansion of the market.

CRAWLER LOADERS

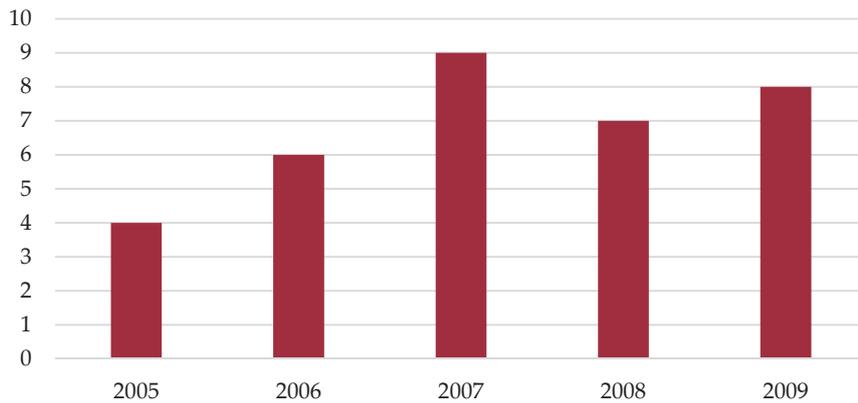
MARKET SIZE AND TRENDS

Table 36. Austria: Sales of Crawler Loaders, 2005-2009 (Units)

2005	2006	2007	2008	2009
4	6	9	7	8

Source: Off-Highway Research

Chart 19. Austria: Sales of Crawler Loaders, 2005-2009 (Units)



Source: Off-Highway Research

The role of the crawler loader in the earthmoving industry has been gradually replaced by the hydraulic excavator and articulated dump truck combination, whilst its demise in quarries is the result of advancing tyre technology on conventional wheeled loaders.

In the early 1990s the market for crawler loaders averaged around 35 units annually, although in subsequent years the decline in sales has been extensive and there is little evidence to suggest that any recovery is imminent at all. Demand now rarely exceeds 10 units annually, and during the period under review has fallen substantially below that.

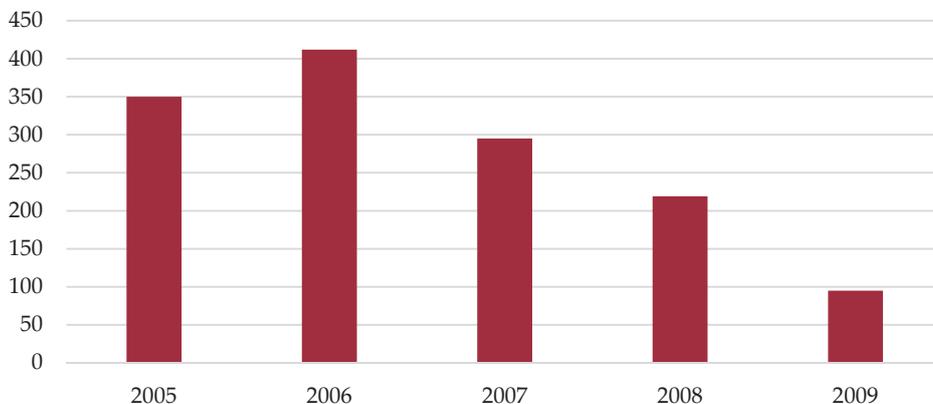
PRODUCTION

Table 37. Liebherr: Crawler Loader Production in Austria, 2005-2009 (Units)

2005	2006	2007	2008	2009
350	412	295	219	95

Source: Off-Highway Research

Chart 20. Liebherr: Crawler Loader Production in Austria, 2005-2009 (Units)



Source: Off-Highway Research

Liebherr produces three models at its Telfs plant for sale worldwide. Production volumes have recovered somewhat since the very low levels experienced in the 1990s, although they are still only about half of those in the mid-1980s. The widespread contraction of demand for crawler loaders throughout Europe in the last 15 years has had a serious impact on Liebherr, and volumes have largely been sustained in recent years by the North American market.

A review of the Telfs manufacturing operation, together with a listing of both crawler loader and dozer ranges, can be found in the Manufacturer Profiles section toward the end of this report.

MARKET SHARES

There are only two suppliers currently active in the crawler loader market. **Caterpillar** was market leader for many years, although has been overtaken by **Liebherr** in the last three years. For its part Liebherr has not always been able to rely on the fact that its machines are produced locally, although it can count on a certain level of repeat business from customers who prefer the hydrostatic transmission concept.

Table 38. Austria: Suppliers of Crawler Loaders and Their Market Shares, 2005-2009

	2005		2006		2007		2008		2009	
	Units	%								
Liebherr	-	-	2	33	5	56	5	71	4	50
Caterpillar	4	100	4	67	4	44	2	29	4	50
Total	4	100	6	100	9	100	7	100	8	100

Source: Off-Highway Research

Table 39. Austria: Distribution Networks of Suppliers of Crawler Loaders, 2010

Manufacturer	Distributor
Caterpillar	Zeppelin
Liebherr	Liebherr

Source: Off-Highway Research

POPULATION AND END-USERS

Off-Highway Research estimates that the active population of crawler loaders has now fallen to approximately 300 units, based on recent sales records and estimates of average useful life. Crawler loaders are used both in quarries and on some civil works sites. Some machines are also employed in specialist applications such as the reconstruction of stone river beds, where the crawler loader's flexibility can be fully exploited.

FORECAST

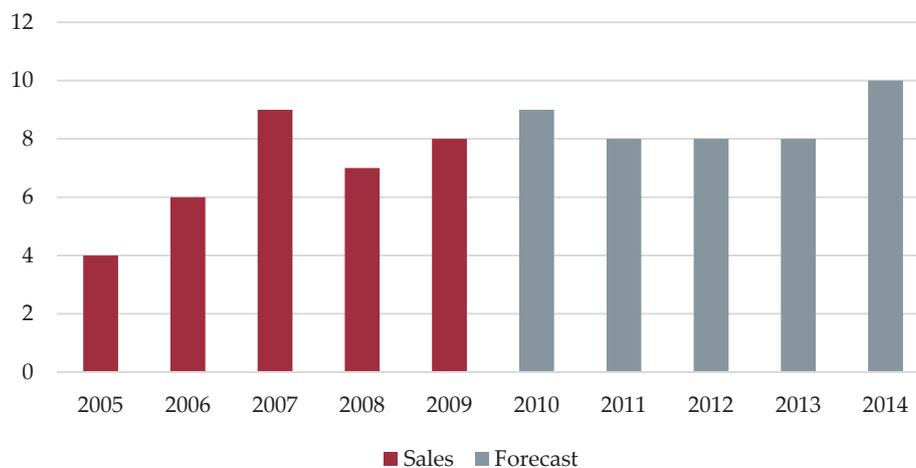
Whilst the possibility of a recovery in crawler loader sales is increasingly unlikely, there will inevitably be a small but stable demand for such a machine in a mountainous country like Austria. The sector is a mature one and future demand will only be the result of the requirement to replace ageing machines.

Table 40. Austria: Forecast Sales of Crawler Loaders, 2010-2014 (Units)

2010	2011	2012	2013	2014
9	8	8	8	10

Source: Off-Highway Research

Chart 21. Austria: Forecast Sales of Crawler Loaders, 2005-2014 (Units)



Source: Off-Highway Research

WHEELED LOADERS

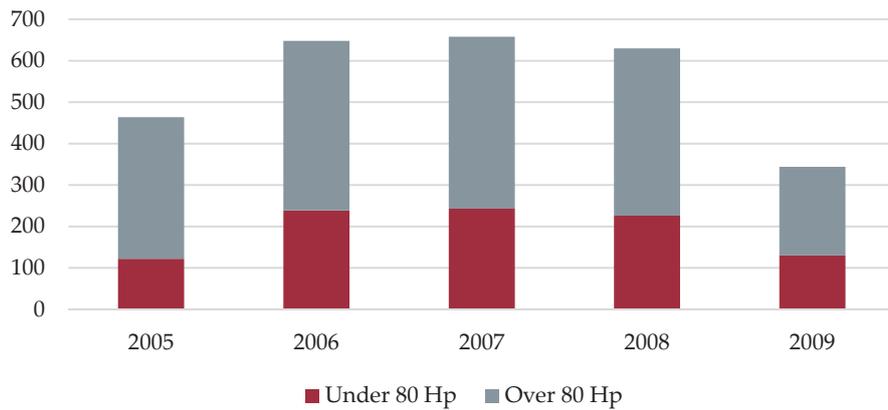
MARKET SIZE AND TRENDS

Table 41. Austria: Sales of Wheeled Loaders by Horsepower Category, 2005-2009 (Units)

	2005	2006	2007	2008	2009
Under 80 Hp	122	239	243	226	130
Over 80 Hp	342	409	415	404	214
Total	464	648	658	630	344

Source: Off-Highway Research

Chart 22. Austria: Sales of Wheeled Loaders by Horsepower Category, 2005-2009 (Units)



Source: Off-Highway Research

The wheeled loader market is one of the most competitive sectors in the construction equipment market with around 16 suppliers, although just three companies, Volvo, Liebherr and Caterpillar regularly account for 70 per cent of annual sales.

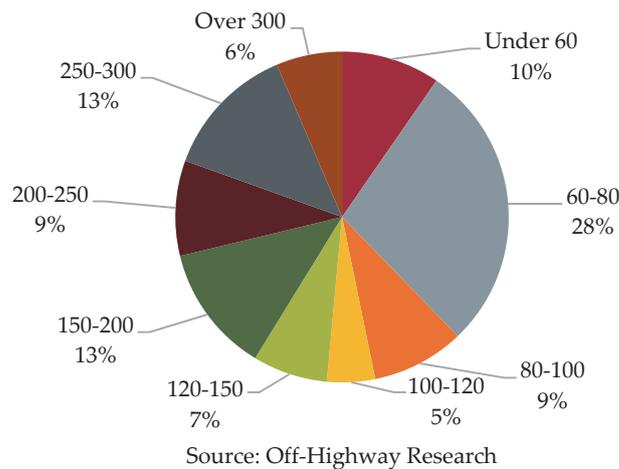
Demand for wheeled loaders remained stable during the 1990s, with an average sales volume of 380 units per year. A buoyant construction sector and favourable economic conditions in recent years, however, have resulted in a significant growth in the market with sales reaching over 650 units in 2007, their highest recorded level.

Table 42. Austria: Sales of Wheeled Loaders by Horsepower Category, 2009

Horsepower	Units	%
Under 60	33	10
60-80	97	28
80-100	31	9
100-120	16	5
120-150	25	7
150-200	43	12
200-250	32	9
250-300	45	13
Over 300	22	6
Total	344	100

Source: Off-Highway Research

Chart 23. Austria: Sales of Wheeled Loaders by Horsepower Category, 2009



The most salient feature of the market during the last five years has been the increasing importance of the 60-80 horsepower class which now accounts for around 30 per cent of overall sales compared to just 10 per cent in 2002. This is partly attributable to the increasing popularity of compact machinery rental, which has raised the profile of the product, but also to the higher volume of inner city construction work where the versatility of these machines makes them the preferred option.

Acceptance of compact wheeled loaders below 80 horsepower has traditionally been muted due to the popularity of the backhoe loader and site dumper combination. There is increasing evidence to suggest, however, that the small wheeled loader is finding growing favour with contractors; indeed it is the reason cited by some suppliers for the recent decline in the backhoe loader market.

In the larger wheeled loader categories demand is particularly buoyant for machines of 150-200 horsepower, although there has been an increasing trend towards loaders over 250 horsepower. Many of these machines are used in quarries, an industry where the requirement to remain competitive necessitates a regular replacement policy and, by association, ensures a stable market volume.

PRODUCTION

All **Liebherr** wheeled loaders are made at the company's plant in Bischofshofen, near Salzburg. The factory was built in 1961 and currently has a covered area of 46,000 m² on a total site of 12.6 hectares.

**Table 43. Liebherr: Wheeled Loader Production in Austria, 2005-2009
(Units)**

	2005	2006	2007	2008	2009
Under 80 Hp	944	1,211	1,325	1,269	704
Over 80 Hp	1,219	1,572	2,035	1,519	466
Total	2,163	2,783	3,360	2,788	1,170

Source: Off-Highway Research

Liebherr began production of its wheeled loader range in Germany but in 1986 transferred the entire process to Bischofshofen. Prior to this the factory had been making only self-erecting cranes but substantial investments were made at the end of the 1980s, enabling wheeled loader production capacity to rise to around 1,500 units per year.

In 1994 the original concept was updated with the creation of the Stereo Loader®, a name for the combining of centre pivot steering with rear axle steering. The chief advantage of this innovation is to tighten the machine's turning circle radius by 20 per cent, thus facilitating operation in confined spaces. An additional benefit is increased lateral stability which allows safer use on uneven terrain. Liebherr also manufactures a limited range of compact wheeled loaders under licence for John Deere which is sold in North America under the Deere brand name.

The introduction of the latest wheeled loader ranges resulted in a significant rise in production volumes in Bischofshofen during the last five years and output reached a record level of 3,400 units in 2007. Liebherr currently manufactures a range of sixteen wheeled loaders ranging from the 63 horsepower L506 to the 340 horsepower L586. Production of compact wheeled loaders up to 80 horsepower currently accounts for around 40-45 per cent of output at Bischofshofen but this ratio can vary significantly according to market conditions in Germany, the major consumer of the product.

MARKET SHARES

Liebherr has been overall market leader throughout much of the period under review. The new Series 4 Stereo loader range and Series 6 large wheeled loaders have been well received in the market and have enabled Liebherr to increase its market share at the expense of its main competitors, Volvo and Caterpillar. The company benefits from having a wide range of wheeled loaders that enables it to be competitive in nearly all size categories.

Table 44. Austria: Suppliers of Wheeled Loaders and Their Market Shares, 2005-2009

	2005		2006		2007		2008		2009	
	Units	%								
Liebherr	143	31	179	28	160	24	162	26	110	32
Volvo	116	25	178	27	195	30	176	28	64	19
Caterpillar	76	16	91	14	103	16	101	16	53	15
Komatsu	44	9	71	11	70	11	47	8	34	10
Kramer	29	6	41	6	64	10	79	13	33	10
Hitachi	-	-	-	-	3	-	8	1	12	3
Wacker Neuson	-	-	-	-	-	-	-	-	9	3
Terex	6	1	6	1	11	2	11	2	7	2
New Holland	12	3	18	3	15	2	14	2	6	2
Ahlmann	-	-	3	-	4	1	4	1	5	1
Mustang	-	-	-	-	-	-	-	-	4	1
JCB	15	3	12	2	9	1	12	2	2	1
Hyundai	-	-	5	1	6	1	5	1	2	1
Atlas Weyhausen	7	2	1	-	1	-	1	-	1	-
Bobcat	-	-	2	-	-	-	1	-	1	-
Kubota	2	-	-	-	-	-	2	-	1	-
Weidemann	4	1	24	4	11	2	5	1	-	-
Doosan	9	2	15	2	5	1	2	-	-	-
Case	1	-	1	-	-	-	-	-	-	-
Hydrema	-	-	1	-	1	-	-	-	-	-
Total	464	100	648	100	658	100	630	100	344	100

Source: Off-Highway Research

Volvo has consolidated its position as a dominant force in the market during the period under review, achieving market leadership in 2007/2008, and has overtaken Caterpillar as the main challenger to Liebherr. Volvo wheeled loaders are distributed by the company's wholly owned subsidiary in Salzburg, which took over the previous dealer, Bilia.

A large proportion of Volvo wheeled loaders are sold to the forestry industry and the company has traditionally been reliant on the fortunes of this sector to sustain its market share. In recent times the forestry sector has suffered a significant drop in prices due to the import of cheap wood from Eastern Europe, and sales of wheeled loaders were inevitably affected. Nevertheless Volvo has continued to sell well in the higher horsepower categories in particular, and in 2009 some 60 per cent of its sales were of machines above 150 horsepower.

Caterpillar regularly achieved a market share of 20-30 per cent at the beginning of the decade, although its performance has declined in the face of intense competition from both Liebherr and Volvo. Caterpillar benefits from having an extensive range of machines and consistently achieves sales in all size categories. The introduction of Caterpillar's compact range of wheeled loaders has enabled its dealer Zeppelin to successfully penetrate the low powered sector, whilst the larger 962 and 966 models remain the company's volume selling products.

Table 45. Austria: Suppliers of Wheeled Loaders Under 80 Horsepower and Their Market Shares, 2005-2009 (Units)

	2005		2006		2007		2008		2009	
	Units	%								
Liebherr	42	34	65	27	53	22	45	20	38	29
Kramer	29	24	41	17	64	26	79	35	33	25
Caterpillar	7	6	39	16	36	15	30	13	19	15
Volvo	14	11	36	15	40	16	34	15	11	8
Wacker Neuson	-	-	-	-	-	-	-	-	9	7
Komatsu	14	11	12	5	14	6	8	3	5	4
Ahlmann	-	-	3	1	4	2	4	2	4	3
Mustang	-	-	-	-	-	-	-	-	4	3
Terex	1	1	6	2	11	4	11	5	2	1
New Holland	1	1	6	2	5	2	3	1	2	1
Atlas Weyhausen	6	5	1	-	1	-	1	-	1	1
Bobcat	-	-	2	1	-	-	1	-	1	1
Kubota	2	2	-	-	-	-	2	1	1	1
Weidemann	4	3	24	10	11	4	5	2	-	-
JCB	2	2	4	2	3	1	3	1	-	-
Hydrema	-	-	-	-	1	-	-	-	-	-
Total	122	100	239	100	243	100	226	100	130	100

Source: Off-Highway Research

Komatsu has maintained a consistent, if unremarkable, market share throughout the period under review. The franchise has been held by the well established Kuhn organisation since 1995 and the dealer has extensive experience of the wheeled loader market, having in the past represented both the Hanomag and Schaeff marques. Perhaps surprisingly, the company has yet to pose a significant threat to the traditional dominance of the three leading suppliers.

Table 46. Austria: Suppliers of Wheeled Loaders Over 80 Horsepower and Their Market Shares, 2005-2009 (Units)

	2005		2006		2007		2008		2009	
	Units	%								
Liebherr	101	30	114	28	107	26	117	29	72	34
Volvo	102	30	142	35	155	37	142	35	53	25
Caterpillar	69	20	52	13	67	16	71	18	34	16
Komatsu	30	9	59	14	56	13	39	10	29	14
Hitachi	-	-	-	-	3	1	8	2	12	6
Terex	5	1	-	-	-	-	-	-	5	2
New Holland	11	3	12	3	10	2	11	3	4	2
JCB	13	4	8	2	6	1	9	2	2	1
Hyundai	-	-	5	1	6	1	5	1	2	1
Ahlmann	-	-	-	-	-	-	-	-	1	-
Doosan	9	3	15	4	5	1	2	-	-	-
Case	1	-	1	-	-	-	-	-	-	-
Hydrema	-	-	1	-	-	-	-	-	-	-
Atlas Weyhausen	1	-	-	-	-	-	-	-	-	-
Total	342	100	409	100	415	100	404	100	214	100

Source: Off-Highway Research

Table 47. Austria: Distribution Networks of Suppliers of Wheeled Loaders, 2010

Manufacturer	Distributor
Ahlmann	Laurer
Atlas Weyhausen	Kohlschein
Bobcat	CEE
Case	Biegger+King
Caterpillar	Zeppelin, Laurer
Doosan	CEE
New Holland	Kohlschein
Hitachi	Baumaschinen Handel
Hyundai	Mörtlbauer
Hydrema	Drott
JCB	Terra
Kawasaki	Fritz
Komatsu	Kuhn
Kramer	Wacker Neuson, Drott
Kubota	Esch-Technik
Liebherr	Liebherr
Terex	Baumaschinen Handel
Volvo	Volvo Austria
Weidemann	Mauch

Source: Off-Highway Research

POPULATION AND END-USERS

The population has grown slightly since Off-Highway Research's last report in 2006. The important end-user sector outside pure construction remains the sand and gravel industry, which regularly accounts for the majority of sales of wheeled loaders in the over 200 horsepower sector. The forestry industry continues to generate a satisfactory demand for the product, albeit at a reduced level compared to that seen at the end of the 1980s.

Table 48. Austria: Population of Wheeled Loaders by End-User, 2009

	Units	%
Construction	3,360	56
Quarries, Sand and Gravel	1,320	22
Forestry	1,020	17
Industry	180	3
Agriculture	120	2
Total	6,000	100

Source: Off-Highway Research

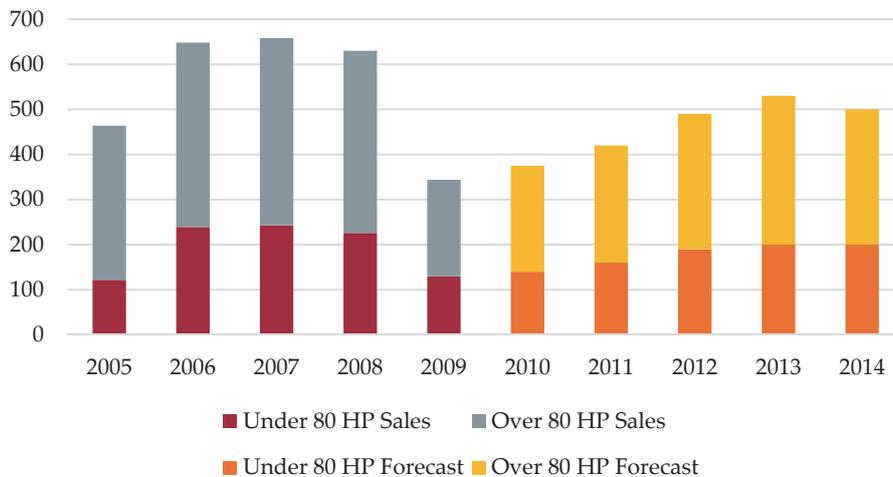
FORECAST

Table 49. Austria: Forecast Sales of Wheeled Loaders by Horsepower Category, 2010-2014 (Units)

	2010	2011	2012	2013	2014
Under 80 Hp	140	160	190	200	200
Over 80 Hp	235	260	300	330	300
Total	375	420	490	530	500

Source: Off-Highway Research

Chart 24. Austria: Forecast Sales of Wheeled Loaders by Horsepower Category, 2005-2014 (Units)



Source: Off-Highway Research

The majority of wheeled loaders sold are destined for the production industries, which operate regular fleet replacement programmes. As a result the market for medium to large sized wheeled loaders is traditionally very stable and there is little suggestion that this will alter in the future. Volumes are likely to return to what might be described as more normal levels following the large increase in demand in 2006-2008 and the subsequent collapse in 2009, and significant fluctuations in the market are unlikely to occur during the next five years. The market for compact wheeled loaders has risen in recent years due to the increased visibility afforded to the product in rental fleets, although their proportion of overall sales is forecast to stabilise in the medium to long term.

BACKHOE LOADERS

MARKET SIZE AND TRENDS

The backhoe loader traditionally proved to be a firm favourite among the many small contractors throughout Austria and, until the mid-1990s, the versatility of the machine ensured a stable level of new sales. Until the mid-1990s annual sales averaged 420 units, but then the market exhibited the first signs of faltering demand.

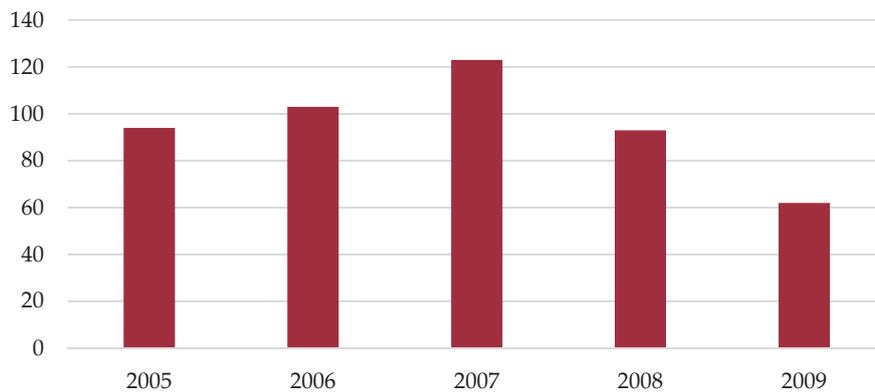
By 1999 volumes had plummeted to the depths previously only experienced during the construction recession of the early 1980s, and which most suppliers thought would never be repeated. Further disastrous collapses in sales have followed and in 2009 the market reached its lowest recorded level, just 62 units.

Table 50. Austria: Sales of Backhoe Loaders, 2005-2009 (Units)

2005	2006	2007	2008	2009
94	103	123	93	62

Source: Off-Highway Research

Chart 25. Austria: Sales of Backhoe Loaders, 2005-2009 (Units)



Source: Off-Highway Research

The rapid decline in the popularity of the backhoe loader is primarily attributable to the popularity of the midi excavator sector, which has been afforded such high visibility. The use of such excavators in combination with compact wheeled loaders is proving a more viable alternative for many contractors, a situation that has been mirrored in Germany for many years.

The Austrian backhoe loader customer traditionally favours the higher specification 4-wheel drive machine in the 100 horsepower sector, and consequently compact machines have had little impact as yet. Conversely, the popularity of 4-wheel steer machines, typified by JCB's 4CX, has begun to wane following what appeared to be a very promising initial period of acceptance.

MARKET SHARES

JCB has traditionally dominated the market and has particularly benefited from the stability offered by the long association with its dealer, Terra. Throughout the period under review the company has achieved a market share of up to 60 per cent, largely at the expense of its traditional competitor, **Terex Fernec**, whose dealer for many years, Austro Diesel, suffered from adverse publicity surrounding its financial situation in 2003. **Caterpillar** now occupies second position in the sector whilst the small volume of additional sales is split between just four suppliers.

Table 51. Austria: Suppliers of Backhoe Loaders and Their Market Shares, 2005-2009

	2005		2006		2007		2008		2009	
	Units	%	Units	%	Units	%	Units	%	Units	%
JCB	47	50	45	44	73	59	43	46	37	60
Caterpillar	17	18	15	15	17	14	12	13	9	15
Komatsu	3	3	5	5	5	4	5	5	6	10
Terex Fermecc	9	10	16	16	18	15	11	12	5	8
New Holland	5	5	6	6	7	6	16	17	2	3
Volvo	5	5	12	12	1	1	5	5	2	3
Hydrema	1	1	-	-	-	-	1	1	1	2
Case	7	7	4	4	2	2	-	-	-	-
Total	94	100	103	100	123	100	93	100	62	100

Source: Off-Highway Research

Table 52. Austria: Distribution Networks of Suppliers of Backhoe Loaders, 2010

Manufacturer	Distributor
Case	Biegger+King
Caterpillar	Zeppelin
Komatsu	Kuhn
Hydrema	Drott
Terex	Baumaschinen Handel
JCB	Terra
New Holland	Kohlschein
Volvo	Volvo Austria

Source: Off-Highway Research

POPULATION AND END-USERS

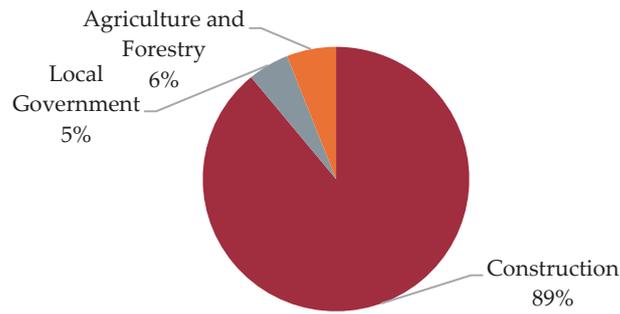
The current active population of backhoe loaders is estimated to be around 2,000 machines, a decrease of around 1,500 units since the mid-1990s. The sharply declining market is now very much a replacement one only and the chief end-user sector remains the small contractor.

Table 53. Austria: Population of Backhoe Loaders by End-User, 2009

	Units	%
Construction	1,780	89
Local Government	100	5
Agriculture and Forestry	120	6
Total	2,000	100

Source: Off-Highway Research

Chart 26. Austria: Population of Backhoe Loaders by End-User, 2009



Source: Off-Highway Research

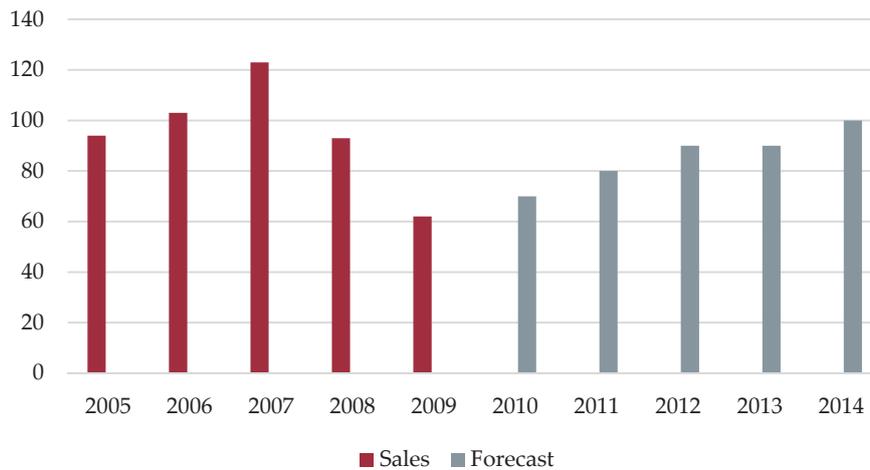
FORECAST

Table 54. Austria: Forecast Sales of Backhoe Loaders, 2010-2014 (Units)

2010	2011	2012	2013	2014
70	80	90	90	100

Source: Off-Highway Research

Chart 27. Austria: Forecast Sales of Backhoe Loaders, 2005-2014 (Units)



Source: Off-Highway Research

The expanding market for midi excavators continues to precipitate the decline in backhoe loader sales and the outlook for this multi-purpose machine appears increasingly bleak. The backhoe loader nevertheless retains a loyal following in many areas of the country and, although demand is unlikely to recover significantly, Off-Highway Research believes that the market will stabilise at around 90-100 units per year for the medium term at least.

SKID-STEER LOADERS

MARKET SIZE AND TRENDS

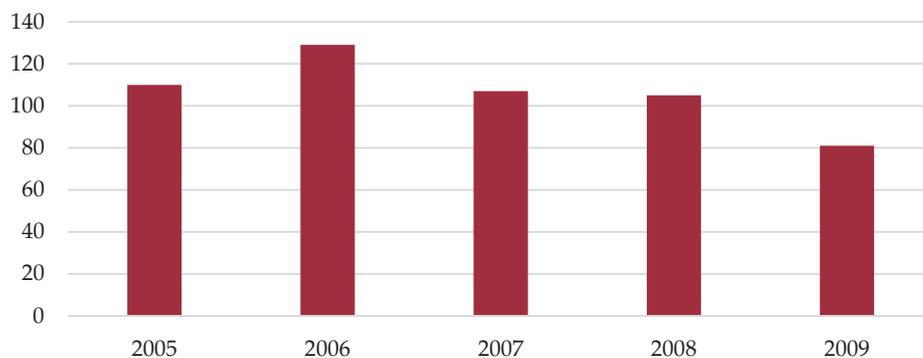
Austria is not an ideal country for skid-steer loaders because it lacks large scale livestock farming, heavy industry and seaports. On the other hand, it has a large amount of socialised housing built after 1900, much of which has required urgent renovation and which has provided the bulk of demand for skid-steer loaders during recent years.

Table 55. Austria: Sales of Skid-Steer Loaders, 2005-2009 (Units)

2005	2006	2007	2008	2009
110	129	107	105	81

Source: Off-Highway Research

Chart 28. Austria: Sales of Skid-Steer Loaders, 2005-2009 (Units)



Source: Off-Highway Research

A rising market in the early 1990s, which in 1994 attained its highest recorded level at 270 units, inevitably attracted an over supply of manufacturers, although demand has fallen sharply to settle at what might be considered a more realistic level of sales.

The decline in demand has also been exacerbated by several other factors, most notably the influx of nearly new machines from Germany as a result of that country's construction industry crisis, and the ensuing bankruptcies of both construction companies and machinery rental operations. Austria's own construction industry recession, too, resulted in many companies reducing investment levels in new machinery, and the consolidation of several construction companies has further reduced the potential pool of skid-steer loader customers.

An important source of skid-steer loader demand during the 1990s was the extensive cabling work for telephone and television companies. This work has reached completion, however, with a consequent cooling of demand for skid-steer loaders complete with backhoe attachments. The situation in the landscaping industry, another important user of smaller capacity skid-steer loaders, is similarly bleak. The

current lack of investment in both commercial and housebuilding sectors has precipitated a reduction in work for the specialist landscapers who have understandably delayed investment decisions.

The most popular size of skid-steer loader remains the 600-700 kilogram machine which regularly accounts for 60 per cent of demand. The smallest machines, up to 400 kilograms' capacity, constitute about 10 per cent of sales at present and are primarily sold to landscaping specialists, who use the machines in conjunction with a flatbed trailer for removing the excavated spoil. There is very little demand for large capacity skid-steer loaders and machines above 800 kilograms account for less than 10 per cent of the overall market.

The versatility of a skid-steer loader is afforded to it by the large range of attachments available for use with the machine. In common with many other European markets, Austrian contractors are keen to exploit the multi-functional nature of the machines beyond merely loading operations. Nearly all skid-steer loaders are bought with a minimum of two attachments, most commonly a backhoe, but also sweeper brushes, cold planers and fence post borers.

PRODUCTION

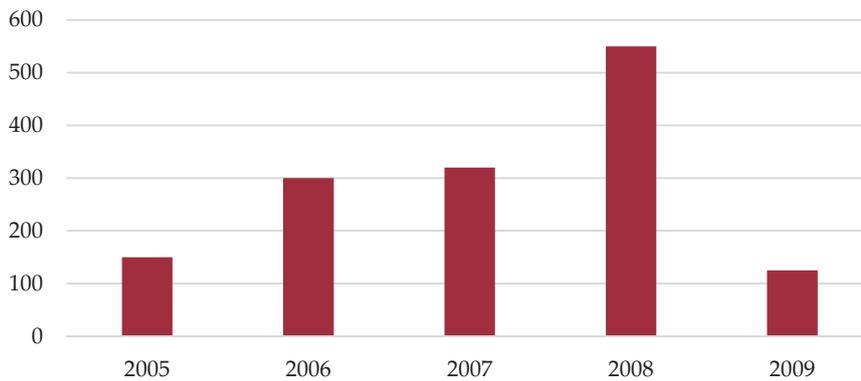
Neuson began production of a three model range of skid-steer loaders at its Linz factory in 2005. The company acquired the design rights to the product from UK manufacturer Belle, although intensive development work has gone into the Neuson product and it differs significantly from the original Belle design. The smallest model is the 501S which has a payload of 510 kilograms whilst the larger 901S machine is capable of handling 900 kilograms. There are also high flow versions of the 701 and 901 models which are designated by the SP model suffix. More recently, a tracked model, the 1101C, has been introduced with a payload capacity of 1,150 kilograms.

**Table 56. Wacker Neuson: Skid-Steer Loader Production in Austria, 2005-2009
(Units)**

2005	2006	2007	2008	2009
150	300	320	550	125

Source: Off-Highway Research

Chart 29. Wacker Neuson: Skid-Steer Loader Production in Austria, 2005-2009 (Units)



Source: Off-Highway Research

Production of skid-steer loaders in 2006, the first full year of production, amounted to 300 units, and rose to 550 units in 2008 before the effects of the global financial crisis caused output to drop sharply in 2009.

MARKET SHARES

Bobcat has always been the leading marque in skid-steer loaders. The previous importer, Lowatschek & Regner, was a specialist in this type of machine and held the Bobcat franchise since 1973. The company focused much of its efforts on the skid-steer loader business and was instrumental in establishing the product in Austria, regularly achieving a consistent market share of 40-45 per cent.

Table 57. Austria: Suppliers of Skid-Steer Loaders and Their Market Shares, 2005-2009

	2005		2006		2007		2008		2009	
	Units	%	Units	%	Units	%	Units	%	Units	%
Bobcat	46	42	39	30	38	35	18	17	26	32
Gehl	30	27	30	23	25	23	20	19	22	27
Caterpillar	6	5	19	15	1	1	8	8	12	15
Neuson	12	11	5	4	8	7	35	33	10	12
Komatsu	6	5	25	19	28	26	18	17	10	12
JCB	6	5	7	5	2	2	2	2	1	1
New Holland	-	-	-	-	3	3	2	2	-	-
Messersi	-	-	2	2	1	1	1	1	-	-
Doosan	-	-	1	1	1	1	1	1	-	-
Hyundai	1	1	1	1	-	-	-	-	-	-
Daewoo	1	1	-	-	-	-	-	-	-	-
Case	2	2	-	-	-	-	-	-	-	-
Total	110	100	129	100	107	100	105	100	81	100

Source: Off-Highway Research

With effect from January 2000 Melroe Europe announced the appointment of an additional importer, compaction equipment specialist Wacker. Lowatschek &

Regner remained dissatisfied with the arrangement and relinquished the franchise in 2001. The subsequent merger of Wacker and Neuson Kramer in 2007 precipitated a further restructuring and the franchise was awarded to a new dealer, CEE Maschinenvertrieb, based in Ebenfurth.

The net result of these distribution restructuring measures inevitably unsettled some customers and Bobcat's market share was significantly eroded during the immediate aftermath. It has since recovered, although not to former levels.

Gehl has firmly established itself as the most consistent challenger to Bobcat's dominance in the market. The marque is represented by the dynamic Huppenkothen company of Lauterach, which holds market leadership in the mini excavator sector with the Takeuchi product, once again demonstrating the importance of specialist dealers in achieving success with the skid-steer loader product.

Table 58. Austria: Distribution Networks of Suppliers of Skid-Steer Loaders, 2010

Manufacturer	Distributor
Case	Biegger+King
Caterpillar	Zeppelin, Laurer
Komatsu	Kuhn
Gehl	Huppenkothen
Bobcat	CEE
JCB	Terra
New Holland	Kohlschein
Wacker Neuson	Wacker Neuson

Source: Off-Highway Research

Wacker Neuson is the most recent entrant to the sector following the launch of its new product range in 2005. Of the other companies actively selling only **JCB**, **Caterpillar** and **Komatsu** have achieved any significant level of sales in this otherwise over-supplied sector.

POPULATION AND END-USERS

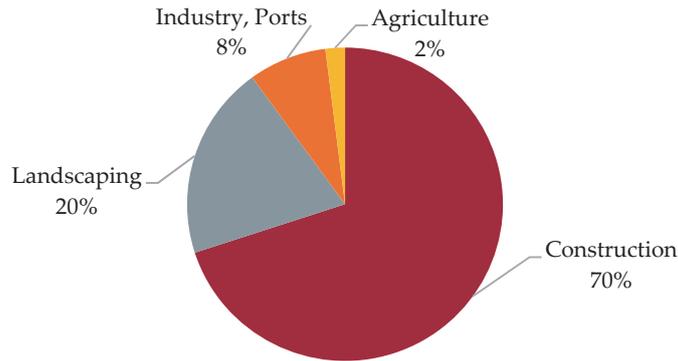
The popularity of construction equipment rental, which has been so instrumental in other European markets in promoting the skid-steer loader concept, has yet to reach a meaningful level of acceptance in Austria. The existing market is therefore primarily one of replacement, although the population of active machines was expanded in recent years by the arrival of low usage second-hand machines from bankrupt German construction and rental companies.

Table 59. Austria: Population of Skid-Steer Loaders by End-User, 2009

	Units	%
Construction	1,050	70
Landscaping	300	20
Industry, Ports	120	8
Agriculture	30	2
Total	1,500	100

Source: Off-Highway Research

Chart 30. Austria: Population of Skid-Steer Loaders by End-User, 2009



Source: Off-Highway Research

The profile of skid-steer loader end-users remains virtually unchanged with general construction, in particular demolition work, constituting the bulk of demand, whilst landscaping continues to represent an important application. Although larger farms have consumed a number of skid-steer loaders, the agricultural sector will not develop as a significant user due to the preponderance of small livestock farms in Austria, which cannot justify the cost of a new machine. Furthermore, material handling operations on these farms is invariably undertaken by the cheaper alternative of the low powered wheeled loader typified by suppliers such as Weidemann.

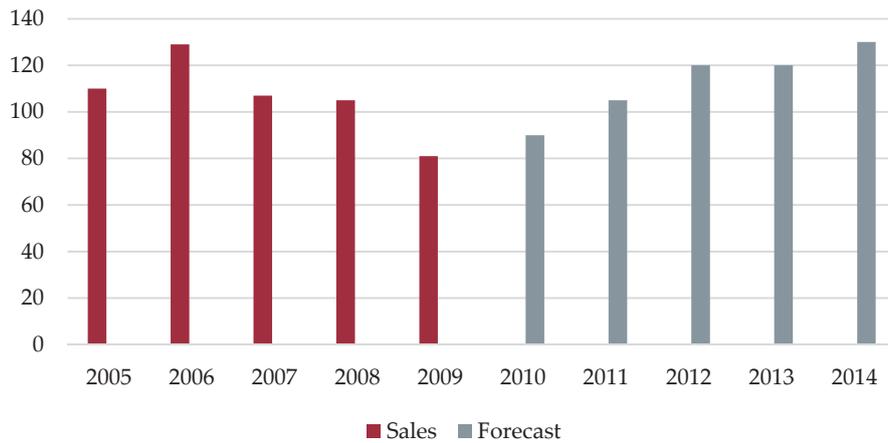
FORECAST

Table 60. Austria: Forecast Sales of Skid-Steer Loaders, 2010-2014 (Units)

2010	2011	2012	2013	2014
90	105	120	120	130

Source: Off-Highway Research

Chart 31. Austria: Forecast Sales of Skid-Steer Loaders, 2005-2014 (Units)



Source: Off-Highway Research

Immediate prospects for growth in this sector remain pessimistic due to the saturated nature of the market. There is little doubt that the mini excavator has proved more successful in some applications where previously the skid-steer loader was the preferred choice, although the use of small articulated loaders has not provided the same level of competition for the product as is the case in Germany. The maneuverability and ease of transport provided by the skid-steer loader will nevertheless continue to sustain a stable level of demand during the next five years.

ROUGH TERRAIN LIFT TRUCKS

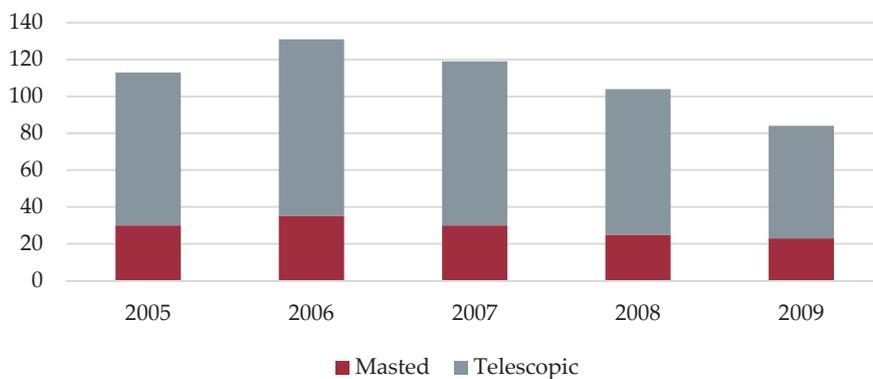
MARKET SIZE AND TRENDS

Table 61. Austria: Sales of Rough Terrain Lift Trucks, 2005-2009 (Units)

	2005	2006	2007	2008	2009
Masted	30	35	30	25	23
Telescopic	83	96	89	79	61
Total	113	131	119	104	84

Source: Off-Highway Research

Chart 32. Austria: Sales of Rough Terrain Lift Trucks, 2005-2009 (Units)



Source: Off-Highway Research

The above table includes sales of both fixed mast rough terrain lift trucks, such as the Ranger series manufactured by the local producer, Terra Technik, formerly Jumbo, and of telescopic handlers popularised by the French manufacturer Manitou, and JCB.

Despite limited growth in recent years the telescopic handler market remains a small volume sector. The concept has achieved virtually no acceptance in the construction industry where the ubiquitous tower crane is employed for all material handling applications. Furthermore, the lack of large scale agriculture has also prevented penetration into a sector which is fast becoming Europe's primary consumer of telescopic handlers, since the country's myriad of small livestock operations cannot justify the expense of such a machine.

The very small, but stable demand for fixed mast lift trucks is a result of their usage in the forestry and wood handling industries. The market is dominated by Ranger, a locally produced masted machine in the 3.5 to 4.0 tonne lift category with sufficient clearance to work in wood yards.

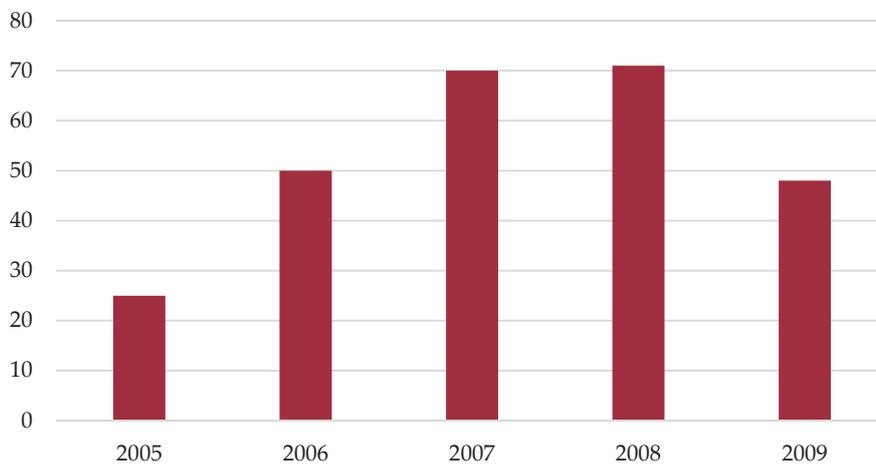
PRODUCTION

Table 62. Liebherr: Telescopic Handler Production in Austria, 2005-2009 (Units)

2005	2006	2007	2008	2009
25	50	70	71	48

Source: Off-Highway Research

Chart 33. Liebherr: Telescopic Handler Production in Austria, 2005-2009 (Units)



Source: Off-Highway Research

Liebherr began the production of its new telescopic handler range at the end of 2005 in its Telfs factory, near Innsbruck, the site of the company's crawler dozer and loader assembly plant. Just 25 units were built in that year and deliveries of the first units were made in 2006 to the company's rental subsidiary, Liebherr Mietpartner. Production has risen modestly, reaching a peak of 71 units in 2008.

The machines were initially made available for hire and sale in Germany, Austria, Switzerland and the Netherlands and are marketed in the construction and industrial sectors. The complete, four model range was officially launched in other European markets following the 2007 Bauma exhibition in Munich. The first public presentations of the TL435-10 Liebherr telehandler were staged in Germany in September at the Nordbau 2006 and Galabau 2006 exhibitions in Neumünster and Nuremberg respectively.

The telehandler range is manufactured on a dedicated production line at the Liebherr-Werk Telfs factory. Four versions of the machine, the TL435-10, TL435-13, TL445-10 and TL442-13, are available with lift heights of 10-13 metres and load capacities of between 3.5 and 4.5 tonnes. All models are fitted with a 114 horsepower four cylinder Liebherr engine.

MARKET SHARES

Table 63. Austria: Suppliers of Telescopic Rough Terrain Lift Trucks and Their Market Shares, 2005-2009

	2005		2006		2007		2008		2009	
	Units	%								
Merlo	50	60	60	63	48	54	55	70	35	57
Manitou	-	-	-	-	1	1	1	1	14	23
Massey Ferguson	3	4	11	11	-	-	6	8	5	8
Kramer	1	1	11	11	8	9	3	4	4	7
Bobcat	-	-	-	-	-	-	5	6	2	3
JCB	9	11	5	5	11	12	4	5	1	2
Komatsu	2	2	4	4	3	3	3	4	-	-
New Holland	-	-	-	-	-	-	1	1	-	-
Faresin	-	-	-	-	-	-	1	1	-	-
John Deere	5	6	-	-	-	-	-	-	-	-
Claas	-	-	-	-	14	16	-	-	-	-
JLG	7	8	3	3	2	2	-	-	-	-
I-R Bobcat	4	5	2	2	2	2	-	-	-	-
Caterpillar	2	2	-	-	-	-	-	-	-	-
Total	83	100	96	100	89	100	79	100	61	100

Source: Off-Highway Research

In the telescopic handler sector, the Italian manufacturer **Merlo** consistently occupies first position via its small farm machinery dealer Mauch. The company's performance is particularly impressive in view of the fact that its machines were only launched in Austria for the first time at the MAWEV show in 1994.

Other companies active in the sector include **Manitou**, **Massey Ferguson**, whose range of telescopic handlers is aimed at the agricultural sector, **Bobcat**, **Kramer**, **JCB**, **Liebherr** and **Komatsu**, all of whose ranges are sold primarily into the construction sector.

Table 64. Austria: Suppliers of Masted Rough Terrain Lift Trucks and Their Market Shares, 2005-2009

	2005		2006		2007		2008		2009	
	Units	%								
Jumbo	30	100	35	100	30	100	25	100	20	87
Manitou	-	-	-	-	-	-	-	-	3	13
Total	30	100	35	100	30	100	25	100	23	100

Source: Off-Highway Research

The **Ranger**, manufactured by the Terra Technik company of Perg is the largest seller in forestry. Formerly known as Jumbo, the company was acquired by the Strobl group in 1989, although is now a subsidiary of Industrie Holding GmbH. **JCB's** range of rough terrain lift trucks is sold by Terra, also a subsidiary of Industrie Holding.

Table 65. Austria: Distribution Networks of Suppliers of Rough Terrain Lift Trucks, 2010

Manufacturer	Distributor
Caterpillar	Zeppelin
JCB	Terra
JLG	JLG
Komatsu	Kuhn
Kramer	Wacker Neuson
Liebherr	Liebherr
Manitou	Alpina
Bobcat	CEE
Merlo	Mauch
New Holland	Kohlschein
Faresin	Friedrich Berger

Source: Off-Highway Research

Manitou's range of rigid mast machines had been sold by two regional dealers prior to 1997, Ebbs & Radinger and Stambach, although the Maniscopic range of telescopic handlers was sold only by Stambach. The amalgamation of Ebbs & Radinger and Stambach into the Neuson group meant that all Manitou's products were marketed centrally by Stambach from its headquarters in Vienna. Product conflicts with the New Holland franchise, however, led to the renunciation of the Manitou franchise by Stambach in 2003. Manitou's full range of rough terrain lift trucks and access platforms is now sold through its exclusive importer, Alpina, an access platform specialist based in Vienna.

POPULATION AND END-USERS

The total population consists of only about 750 units, of which around 250 are of the masted variety and are primarily used in the forestry industry for timber handling

applications. There are considered to be approximately 500 telescopic machines in operation, mostly within the construction and industrial sectors.

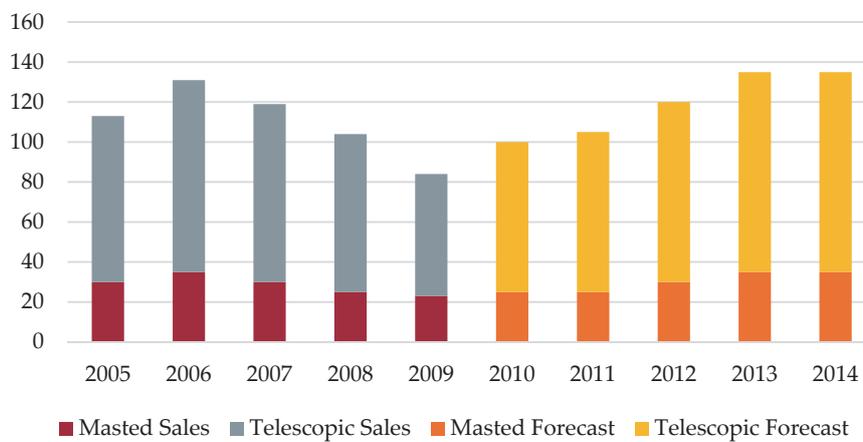
FORECAST

Table 66. Austria: Forecast Sales of Rough Terrain Lift Trucks, 2010-2014 (Units)

	2010	2011	2012	2013	2014
Masted	25	25	30	35	35
Telescopic	75	80	90	100	100
Total	100	105	120	135	135

Source: Off-Highway Research

Chart 33. Austria: Forecast Sales of Rough Terrain Lift Trucks, 2005-2014 (Units)



Source: Off-Highway Research

Previous hopes of expanding the market for telescopic handlers have proved futile. The construction industry remains largely unreceptive to the concept due to reservations about the safety aspect of the product and to the widespread popularity of the tower crane. With little scope for use within agriculture it must be assumed there will be little growth of the telescopic sector in the foreseeable future, and that overall demand for rough terrain lift trucks will be sustained only by the replacement programmes of existing users in the forestry and construction industries.

MOTOR GRADERS

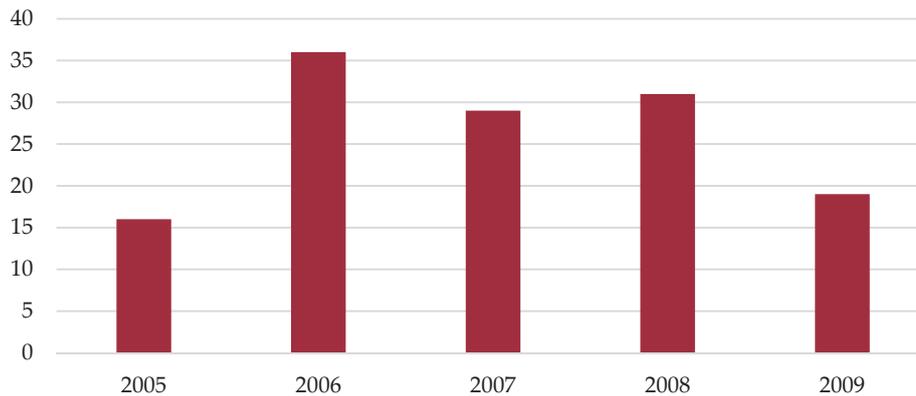
MARKET SIZE AND TRENDS

Table 67. Austria: Sales of Motor Graders, 2005-2009 (Units)

2005	2006	2007	2008	2009
16	36	29	31	19

Source: Off-Highway Research

Chart 34. Austria: Sales of Motor Graders, 2005-2009 (Units)



Source: Off-Highway Research

During the mid-1990s sales of new graders failed to exceed 20 units per year. During the period under review, however, the market for graders has averaged 26 units per year, due largely to the continuing need for the machines in road maintenance and reconstruction. The infrastructure of Austria is, however, largely complete and the lack of new roadbuilding projects means that sales are now restricted to the replacement of ageing machines. The average working life of a grader is 20 years and the grader customer's propensity to repeatedly rebuild his machines means that demand is extremely small.

MARKET SHARES

Table 68. Austria: Suppliers of Motor Graders and Their Market Shares, 2005-2009

	2005		2006		2007		2008		2009	
	Units	%								
New Holland	15	94	28	78	22	76	24	77	17	89
Caterpillar	-	-	5	14	3	10	5	16	2	11
HBM-Nobas	1	6	1	3	3	10	2	6	-	-
Volvo	-	-	2	6	1	3	-	-	-	-
Total	16	100	36	100	29	100	31	100	19	100

Source: Off-Highway Research

New Holland, previously branded as O&K, has achieved a dominant market leadership position for over 20 years. The company initially benefited from taking on the Faun subsidiary in 1986 and with it a 75 per cent market share, although the additional advantage of competitive pricing over rival Caterpillar has helped sustain its performance throughout the 1990s and beyond.

The only other manufacturers present are **Caterpillar**, **HBM-Nobas**, which entered the market in 2003 via its dealer Terra, and **Volvo**, which has achieved a small number of incremental sales.

POPULATION AND END-USERS

The total population is estimated at 475 units. Graders are primarily used in the construction industry for new roadbuilding or maintenance of the existing road networks. There is also a small demand from quarry owners to maintain haul roads. A further application for graders has been in the renewal and upgrading of the country's railway network, much of which dates back to the Second World War period.

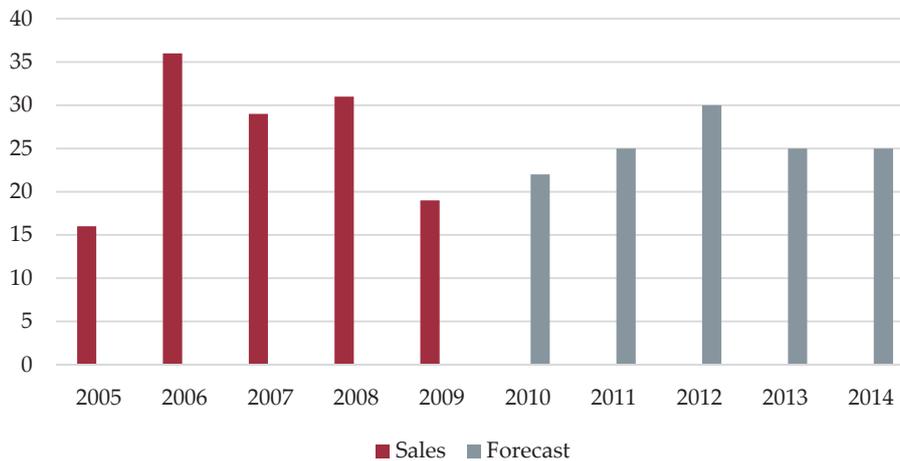
FORECAST

Table 69. Austria: Forecast Sales of Motor Graders, 2010-2014 (Units)

2010	2011	2012	2013	2014
22	25	30	25	25

Source: Off-Highway Research

Chart 35. Austria: Forecast Sales of Motor Graders, 2005-2014 (Units)



Source: Off-Highway Research

The grader market appears to have settled at a level of around 25-30 units per year. Road repair and reconstruction will continue to furnish demand for new graders, although the problems of overcoming environmentalists' objections to new roadbuilding will ensure that there will be no significant fluctuation in sales volumes for the foreseeable future. Demand is therefore expected to be stable during the forecast period.

DUMP TRUCKS

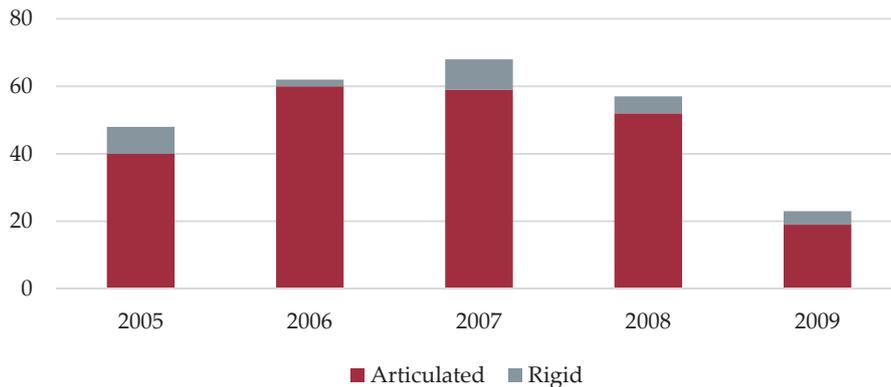
MARKET SIZE AND TRENDS

Table 70. Austria: Sales of Dump Trucks by Type, 2005-2009 (Units)

	2005	2006	2007	2008	2009
Articulated	40	60	59	52	19
Rigid	8	2	9	5	4
Total	48	62	68	57	23

Source: Off-Highway Research

Chart 36. Austria: Sales of Dump Trucks by Type, 2005-2009 (Units)



Source: Off-Highway Research

The absence of large infrastructure projects and the limited number of quarries and mines dictates that the market for both rigid and articulated dump trucks is small and largely confined to replacements.

During the 1990s demand for **articulated trucks** stabilised at around 22 units per year. A high level of pent-up demand and a buoyant construction sector, however, eventually resulted in a marked upturn in sales and during the period under review volumes have reached unprecedented levels. Much of the recovery has been attributable to increased purchasing by the production industries, such as graphite mining and quarries. The level of replacement business generated in these sectors has resulted not only from increased demand for mineral production, but also from the end-users' need to remain competitive in recessionary times.

The most popular size category of articulated dump truck has traditionally been the 23 tonne class, dominated by market leader Volvo's A25 machine. In recent years, however, there has been an increasing trend towards the use of larger capacity trucks as the quarries have sought to expand production capacity, and in 2009 sales of 27 tonne dump trucks accounted for nearly 50 per cent of overall demand.

Demand for **rigid dump trucks** has similarly failed to follow any logical purchasing pattern, although current demand remains at a very small level. There are very few

rigid dump truck customers in Austria, the two main ones being the iron ore mine at Eisenerz in Styria, and the Omya limestone quarry in Carinthia. Here the demand is for large capacity trucks in the 85 to 100 tonne category, although smaller capacity machines are occasionally sold for use on large scale earthmoving projects. The rigid truck sector is confined to a replacement market which can be expected to average between 5-8 units per year, although any large production increases in the quarries or mines can encourage the purchase of supplementary machines.

MARKET SHARES

Volvo is the established market leader in the articulated dump truck sector, mirroring the company’s dominance of the pan-European domain. Its market share has, however, been eroded to some extent in recent years by increasing levels of competition within the sector. The remainder of suppliers typically compete for around 50 per cent of the market, any of whom is capable of achieving a small number of incremental sales in a given year.

Table 71. Austria: Suppliers of Articulated Dump Trucks and Their Market Shares, 2005-2009

	2005		2006		2007		2008		2009	
	Units	%								
Komatsu	5	13	9	15	8	14	7	14	9	47
Volvo	27	68	25	42	31	52	23	44	6	32
Caterpillar	3	8	9	15	8	14	13	25	2	10
Hydrema	-	-	3	5	2	3	6	11	2	10
Bell	1	3	12	20	10	17	3	6	-	-
Terex	4	10	2	3	-	-	-	-	-	-
Total	40	100	60	100	59	100	52	100	19	100

Source: Off-Highway Research

Table 72. Austria: Suppliers of Rigid Dump Trucks and Their Market Shares, 2005-2009

	2005		2006		2007		2008		2009	
	Units	%								
Caterpillar	2	25	1	50	6	67	3	60	3	75
Komatsu	4	50	1	50	3	33	2	40	1	25
Terex	2	25	-	-	-	-	-	-	-	-
Total	8	100	2	100	9	100	5	100	4	100

Source: Off-Highway Research

Table 73. Austria: Distribution Networks of Suppliers of Dump Trucks, 2010

Manufacturer	Distributor
Astra	Fritz
Bell	Liebherr
Caterpillar	Zeppelin
Doosan	CEE
Hydrema	Drott
Hitachi	Baumaschinen Handel
JCB	Terra
Komatsu	Kuhn
Terex	Kohlschein
Volvo	Volvo Austria

Source: Off-Highway Research

There are two regular suppliers active in the rigid truck sector but neither of them sells large quantities. As a result, the award of a single contract has a significant impact upon market share in any particular year. **Caterpillar** has traditionally been the leading supplier of rigid dump trucks, although the company has faced increasing competition from **Komatsu** in recent years, which has established a good reputation with mining and quarry customers and has benefited from a competitive pricing strategy. The only other active supplier is **Terex**, although the company has sold just two units during the period under review.

POPULATION AND END-USERS

Table 74. Austria: Population of Dump Trucks by Type, 2009

Rigid	225
Articulated	300
Total	525

Source: Off-Highway Research

The rigid dump truck is sold mainly to quarries though a small number are operated by earthmoving contractors. Mining represents another important end-user sector.

The more versatile articulated dump truck has a slightly wider cross-section of end-users with earthmoving contractors and sand and gravel pits constituting the bulk of demand. In addition a number of machines are sold to graphite and coal mines.

Populations of both types of dump trucks can be regarded as having reached maturity with most new sales representing part of regular replacement programmes.

FORECAST

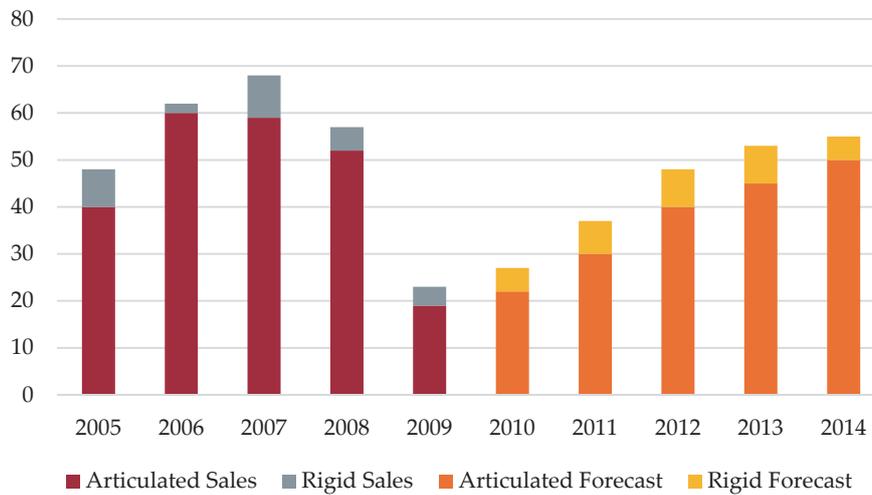
Sales of dump trucks are notoriously difficult to forecast, and the advent of one or more large civil engineering projects or increase in quarry production can lead to unexpected fluctuations in demand. The above forecast therefore only represents the anticipated replacement of existing fleets.

Table 75. Austria: Forecast Sales of Dump Trucks by Type, 2010-2014 (Units)

	2010	2011	2012	2013	2014
Articulated	22	30	40	45	50
Rigid	5	7	8	8	5
Total	27	37	48	53	55

Source: Off-Highway Research

Chart 37. Austria: Forecast Sales of Dump Trucks by Type, 2005-2014 (Units)



Source: Off-Highway Research

ASPHALT FINISHERS

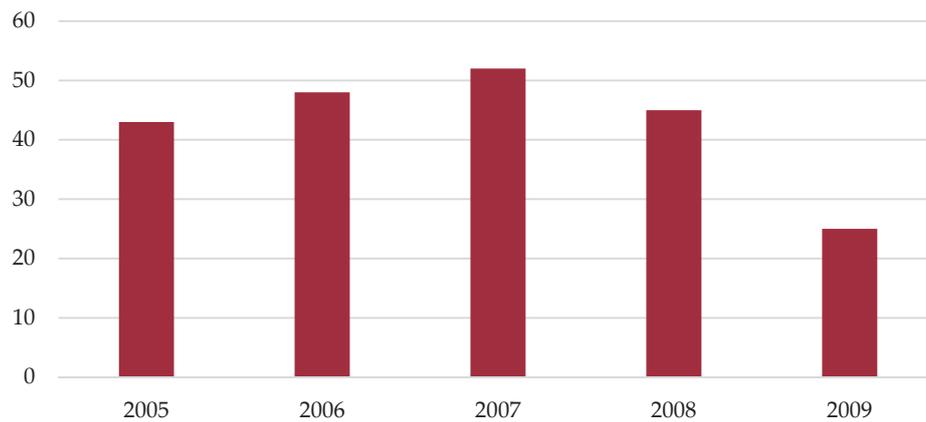
MARKET SIZE AND TRENDS

Table 76. Austria: Sales of Asphalt Finishers, 2005-2009 (Units)

2005	2006	2007	2008	2009
43	48	52	45	25

Source: Off-Highway Research

Chart 38. Austria: Sales of Asphalt Finishers, 2005-2009 (Units)



Source: Off-Highway Research

Sales of asphalt finishers averaged 43 units per year during the first half of the 1990s, although the middle of the decade marked the end of a number of important roadbuilding projects and sales halved to reach their lowest level for 12 years. Towards the end of the decade, however, there was a substantial recovery in the market as the result of high pent-up demand and contractors' decisions to instigate their postponed investment in new machines. In 1999 sales rose to 60 units, the highest recorded level of new finisher sales. The lack of significant government investment in road building projects in the new millennium inevitably slowed demand for new machines and the market has stabilised once again at its customary level of 40-45 units per year.

Whilst the new road network is not complete, there is only a relatively small volume of remaining work, and the asphalt finisher market is therefore largely dependent on repair work. The level of road maintenance nevertheless continues to create a steady replacement demand as the civil engineering contractors seek to remain competitive by upgrading their fleets.

The most popular specification of finisher remains the wheeled type, which currently accounts for around 60 per cent of total sales, although in previous years this figure was regularly as high as 90 per cent. Ease of mobility on the smaller maintenance projects so common in Austria is what persuades contractors to opt for the wheeled undercarriage in favour of the tracked machine. There has, however, been a discernible trend during recent years towards the increasing use of tracked undercarriages, although this may simply be a reflection of the presence of some larger repair contracts which have necessitated the crawler machine's ability to use wider screeds.

There has been no change in the preferred size of screed, the 6.0-6.5 metre version, which is specified on around 60 per cent of new machines. The construction of bicycle tracks is a favourite method of appeasing the environmentalists' lobby, and

there is therefore still a small but constant demand for the so-called footpath pavers typified by Vögele's Superboy model.

MARKET SHARES

Table 77. Austria: Suppliers of Asphalt Finishers and Their Market Shares, 2005-2009

	2005		2006		2007		2008		2009	
	Units	%								
Vögele	36	84	43	90	44	85	38	84	21	84
Dynapac	3	7	1	2	3	6	4	9	3	12
Volvo	-	-	-	-	-	-	3	7	1	4
I-R ABG	4	9	4	8	5	9	-	-	-	-
Total	43	100	48	100	52	100	45	100	25	100

Source: Off-Highway Research

Vögele has been market leader for many years. Its products were originally sold by the Theisen organisation in Wiener Neudorf, which held the franchise for nearly 40 years. Theisen was a renowned specialist in road building machinery and, in addition to the Vögele franchise, held the representation for Hamm compaction equipment and Wirtgen cold planers. Theisen's decision in 2001 to relinquish all its construction equipment franchises in favour of establishing a pure rental operation has meant that distribution of the Vögele, Hamm and Wirtgen brands is now handled directly by the Wirtgen Austria subsidiary company in Steyrermühl. The stability and quality of parts and service back-up afforded by the Wirtgen subsidiary has served to strengthen Vögele's already dominant position in the sector, and the company's market share has increased to over 80 per cent during the period under review.

Dynapac and **Volvo**, previously **IR-ABG**, are effectively the only other active participants in the market, and between them typically achieve annual sales of up to 10 units. Prior to the company's acquisition by Volvo, ABG finishers were distributed by the New Holland dealer, Kohlschein, who retained the services of the former O&K personnel who marketed the brand for many years in Austria. The product now comes within the remit of the Volvo Austria organisation in Bergheim, near Salzburg.

Dynapac enjoyed a good record in Austria and held market leadership of the sector in the early 1990s, although recent disruptions to its distribution organisation have led to a loss of market share in recent years. In 1998 the franchise was transferred from the Strobl subsidiary, Invicta, to the Drott organisation which, despite having no previous experience of the finisher market, achieved a creditable performance in promoting the finisher product. In January 2003, the franchise was transferred yet again, this time to the Volvo importer, Bilia. In 2004 Dynapac took the decision to establish its own sales office in Brunn, although the company's subsequent

acquisition by Atlas Copco has seen responsibility for sales and marketing transferred to the Atlas Copco headquarters in Vienna.

Caterpillar asphalt finishers are sold through the Zeppelin organisation following the Italian company's acquisition by Caterpillar, although the product is not actively promoted by the dealer and no sales have been made in recent years. **Bomag** pavers are officially available on the market, although the subsidiary company in Vienna has yet to penetrate the sector.

Table 78. Austria: Distribution Networks of Suppliers of Asphalt Finishers, 2010

Manufacturer	Distributor
Bomag	Bomag Austria
Caterpillar	Zeppelin
Dynapac	Atlas Copco
Volvo	Volvo Austria
Vögele	Wirtgen Austria

Source: Off-Highway Research

POPULATION AND END-USERS

The life of an asphalt finisher can be relatively long, 15 years representing a typical average. The active population of machines is estimated to be around 400 units and Vögele finishers account for around 85 per cent of this total.

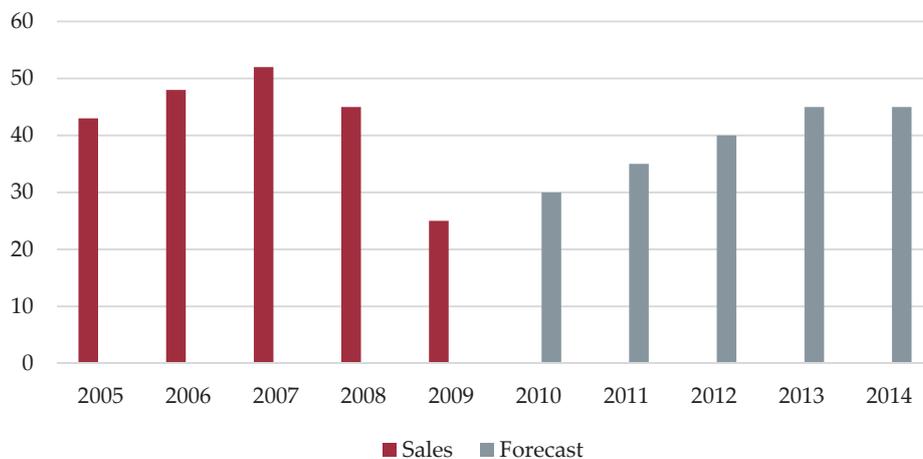
FORECAST

Table 79. Austria: Forecast Sales of Asphalt Finishers, 2010-2014 (Units)

2010	2011	2012	2013	2014
30	35	40	45	45

Source: Off-Highway Research

Chart 39. Austria: Forecast Sales of Asphalt Finishers, 2005-2014 (Units)



Source: Off-Highway Research

The normal level of asphalt finisher sales is generally considered to lie in the region of 45 units per year. The large pent-up demand for machines at the beginning of the millennium has now been satisfied and, in the absence of any obvious stimuli to investment by contractors, the market is likely to affect a slow recovery in 2010/11 before settling at a stable level of demand towards the end of the forecast period.

COMPACTION EQUIPMENT

MARKET SIZE AND TRENDS

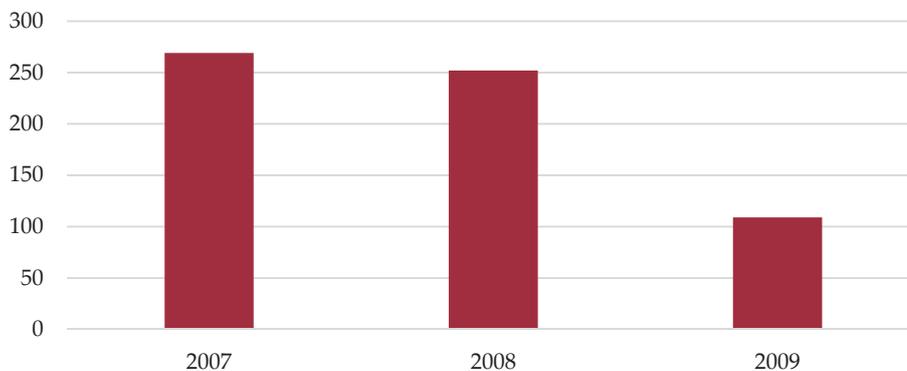
STANDARD SIZE COMPACTION EQUIPMENT

Table 80. Austria: Sales of Compaction Equipment by Type, 2007-2009 (Units)

	2007	2008	2009
Tandem Vibratory			
– Under 5.0 Tonnes	84	66	32
– Above 5.0 Tonnes	25	30	3
Single Drum			
– Under 8.0	44	49	33
– 8.0-12.0	40	22	11
– Over 12.0	39	37	18
Combination	32	41	8
Pneumatic-Tyred	5	7	4
Total	269	252	109

Source: Off-Highway Research

Chart 40. Austria: Sales of Compaction Equipment by Type, 2007-2009 (Units)



Source: Off-Highway Research

Approximately 65 per cent of all compaction equipment is used in earthmoving applications, as opposed to pure asphalt compaction. The compaction equipment market is a mature sector and is typically subject to a maximum of 2-3 per cent fluctuation in volume in any given year, since the bulk of purchases are undertaken by major contractors who operate regular fleet replacement programmes. The impact of the global economic recession in 2009, however, resulted in a sharp decline in demand for compactors, in particular asphalt rollers, as the Federal and state governments implemented widespread investment cuts.

Pedestrian Vibratory Rollers were traditionally popular for small repairs and for minor site preparation, although demand in recent years has declined significantly as the trend towards the use of small ride-on tandem rollers of 1.0-1.5 tonnes' capacity has manifested itself more strongly.

Tandem Vibratory Rollers: Small tandems below 3.0 tonnes account for the bulk of demand, typically 80 per cent, a reflection of the large amount of road refurbishment, particularly in inner city areas, that is currently taking place. In the low volume heavy tandem sector, machines of 7.0 tonnes account for well over half of all sales.

Single Drum Soil Compactors now represent the largest market sector. Sales in recent years have remained stable despite the lack of spending on new roads, and there has been an increasing trend amongst contractors to retain such machines in their fleets. Machines below 8.0 tonnes account for some 35-40 per cent of demand.

Combination rollers continue to account for a small, but stable level of demand that amounts to around 35-40 machines per year. The market for **pneumatic-tyred rollers** has been in decline for many years in Austria, although incremental sales of new and, in particular, second-hand machines are achieved most years.

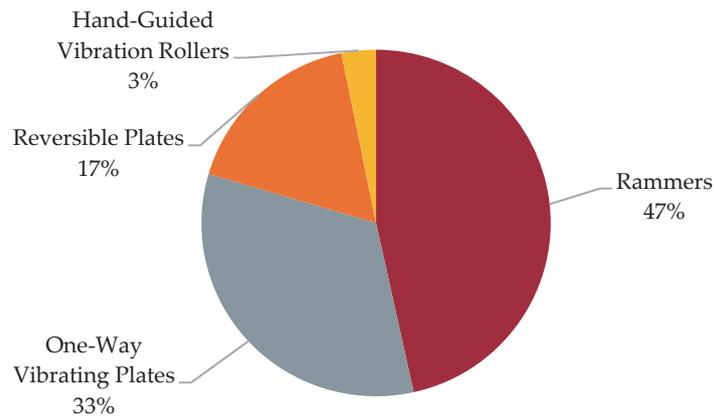
LIGHT COMPACTION EQUIPMENT

**Table 81. Austria: Sales of Light Compaction Equipment by Type, 2007-2009
(Units)**

	2007	2008	2009
Rammers	749	531	410
One-Way Vibrating Plates	657	678	291
Reversible Plates	330	328	152
Hand-Guided Vibration Rollers	42	41	28
Total	1,778	1,578	881

Source: Off-Highway Research

Chart 41. Austria: Sales of Light Compaction Equipment by Type, 2009 (Units)



Source: Off-Highway Research

With the obvious exception of 2009, the market for light compaction equipment is extremely stable and has not been subject to the cyclical pattern of demand seen in other construction equipment sectors. As in neighbouring Switzerland, this is largely due to the virtual absence of a structured plant hire industry and demand is therefore not dictated by the fleet renewal programmes of large rental operators as is the case in other European markets such as the UK or France.

Light compaction equipment is bought almost exclusively by contractors, whether in the landscaping sector, road building sector or general construction sector, and the comparatively short working life of the machines and low operating costs mean that they are replaced on a relatively constant basis.

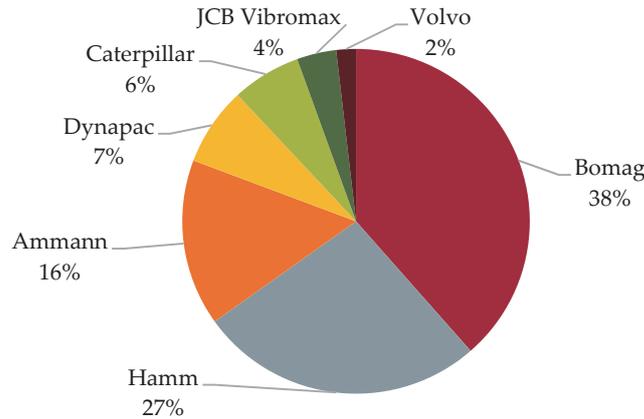
MARKET SHARES

Table 82. Austria: Suppliers of Standard Compaction Equipment and Their Market Shares, 2009 (Units)

	Tandem Vibratory	Self-Propelled	Combination	Pneumatic-Tyred	Total	
					Units	%
Bomag	12	22	6	2	42	38
Hamm	10	16	2	1	29	27
Ammann	8	8	-	1	17	16
Dynapac	2	6	-	-	8	7
Caterpillar	1	6	-	-	7	6
JCB Vibromax	2	2	-	-	4	4
Volvo	-	2	-	-	2	2
Total	35	62	8	4	109	100

Source: Off-Highway Research

Chart 42. Austria: Suppliers of Standard Compaction Equipment and Their Market Shares, 2009 (Units)



Source: Off-Highway Research

Overall **Bomag**, distributed by its own subsidiary company in Vienna, has built up a reputation as the leading supplier of compaction equipment with an average market share of 40-45 per cent. It has retained market leadership in all the standard and large size compaction sectors and is particularly strong in the tandem roller category.

Hamm is the second largest selling brand and is sold through Wirtgen’s own subsidiary company in Steyrermühl. The marque became well established under its former distributor, Theisen, a specialist in road building equipment that also held the Vögele asphalt finisher and Wirtgen cold planer franchises.

Table 83. Austria: Distribution Networks of Suppliers of Compaction Equipment, 2010

Manufacturer	Distributor
Ammann	Huppenkothen
Caterpillar	Zeppelin
Bomag	Bomag Austria
Dynapac	Atlas Copco
JCB Vibromax	Terra (Standard)
	Drott (Light)
Hamm	Wirtgen Austria
Wacker	Wacker
Weber	Fritz, Breuer

Source: Off-Highway Research

Ammann, through its dealer Huppenkothen, is the only supplier that can be said to offer a realistic challenge to the dominance of the two leading brands, whilst both **Dynapac** and **Wacker** have both affected a small volume of sales through their own subsidiary companies. The only other active suppliers are **Caterpillar**, **JCB Vibromax**, and **Volvo**. None of these companies has actively marketed their

respective compaction equipment ranges, preferring instead to focus on their mainline earthmoving machinery ranges.

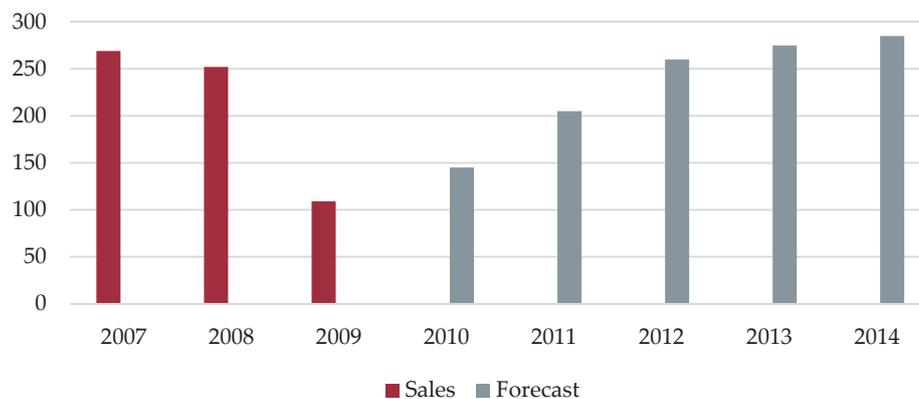
FORECAST

Table 84. Austria: Forecast Sales of Compaction Equipment by Type, 2010-2014 (Units)

	2010	2011	2012	2013	2014
Self-Propelled	75	100	120	125	125
Tandem Vibratory	50	75	100	110	120
Combination	20	30	40	40	40
Total	145	205	260	275	285

Source: Off-Highway Research

Chart 43. Austria: Forecast Sales of Compaction Equipment by Type, 2007-2014 (Units)



Source: Off-Highway Research

In common with many other product sectors, sales of compaction equipment declined dramatically in response to the onset of the global financial crisis. Government austerity measures and the lack of business confidence amongst contractors to invest in new machinery mean that demand is unlikely to recover significantly for at least 18 months, although suppliers expect volumes to return to more normal levels towards the end of the forecast period. The market is essentially a replacement one only and, for the foreseeable future at least, the population of low usage machines is sufficient to cover the requirements of road repair and maintenance contracts.

MOBILE COMPRESSORS

MARKET SIZE AND TRENDS

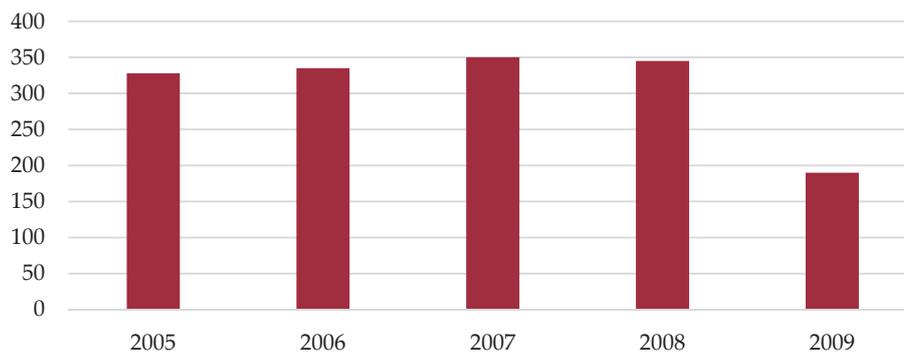
Of all the product sectors affected by recession in the construction industry, it is the mobile compressor market which has been hardest hit in terms of percentage decline. Sales of compressors had been buoyant during the early 1990s due to the increased level of activity in housebuilding and civil engineering, which provided a steady flow of projects such as bridge refurbishment, road improvement and railway maintenance.

Table 85. Austria: Sales of Mobile Compressors, 2005-2009(Units)

2005	2006	2007	2008	2009
328	335	350	345	190

Source: Off-Highway Research

Chart 44. Austria: Sales of Mobile Compressors, 2005-2009(Units)



Source: Off-Highway Research

In the mid-1990s the economic recession worsened and public sector investment in construction plummeted. The restructuring of construction companies themselves began with the disappearance of many small and medium sized concerns, which in turn resulted in a wave of mergers throughout the industry. The net effect for suppliers of mobile compressors was a drastically reduced customer base, and a reduction in sales of nearly 60 per cent in just three years.

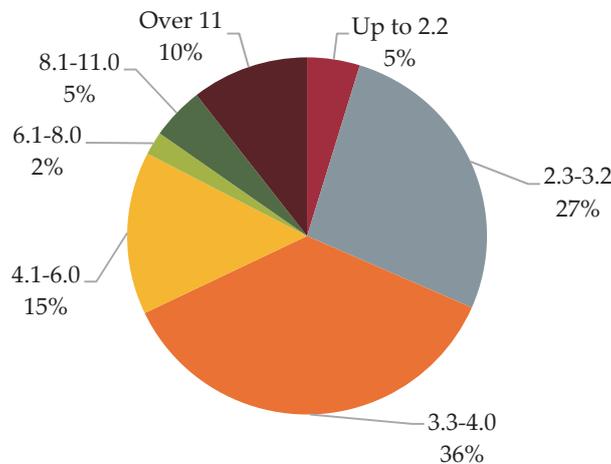
Demand recovered modestly towards the end of the 1990s, albeit at a significantly reduced rate compared to other product sectors, and the market rose above 400 units for the first time in five years. The lack of available contracts in subsequent years, however, precipitated a further decline in the market, from which it has failed to recover. Most observers now concede that the market for mobile compressors will stabilise at a much lower level of 300-350 units per year for the foreseeable future.

Table 86. Austria: Sales of Mobile Compressors by Category, 2005-2009

Air Output (m ³ /min)	2005		2009	
	Units	%	Units	%
Up to 2.2	20	6	9	5
2.3-3.2	83	25	51	27
3.3-4.0	121	37	69	36
4.1-6.0	44	13	28	15
6.1-8.0	9	3	4	2
8.1-11.0	18	6	9	5
Over 11	33	10	20	10
Total	328	100	190	100

Source: Off-Highway Research

Chart 45. Austria: Sales of Mobile Compressors by Category, 2009



Source: Off-Highway Research

Despite the contraction of demand, the most popular sizes of compressor have not altered since Off-Highway Research's last study in 2006 and remain the 2.5 to 3.5 m³/min machines.

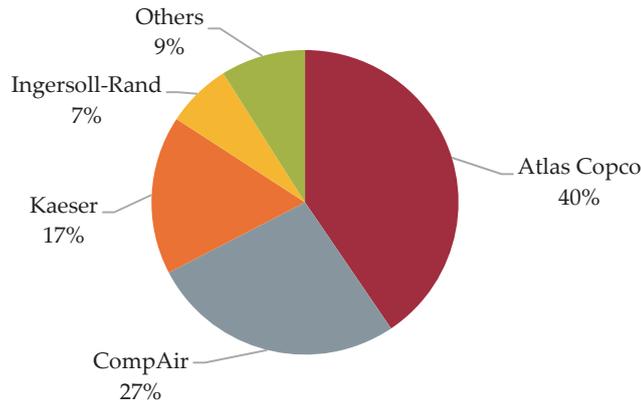
MARKET SHARES

Table 87. Austria: Suppliers of Mobile Compressors and Their Market Shares, 2009

	Units	%
Atlas Copco	77	40
CompAir	51	27
Kaeser	32	17
Ingersoll-Rand	13	7
Others	17	9
Total	190	100

Source: Off-Highway Research

Chart 46. Austria: Suppliers of Mobile Compressors and Their Market Shares, 2009



Source: Off-Highway Research

The perennial market leader is **Atlas Copco**, whose wide range of machines is manufactured at the world's largest mobile compressor factory in Antwerp. The company has a subsidiary in Vienna to support its full range of activities in addition to a nationwide network of 10 dealers. Sales of compressors in the above 10 m³/min category are handled directly by the subsidiary company, whilst the developing rental business for compressors remains the preserve of its dealers.

The **CompAir** product line is distributed by the company's subsidiary in Salzburg and through two independent dealers, Jäger and Drott. The third leading supplier is **Kaeser**, whose products are also marketed by its own subsidiary company in St. Florian and by two independent dealers.

A full list of active suppliers in Austria is given in the table below.

Table 88. Austria: Distribution Networks of Suppliers of Mobile Compressors, 2010

Manufacturer	Distributor
Atlas Copco	Atlas Copco, Regional Dealers
CompAir	CompAir, Jäger, Drott
Ingersoll-Rand	Elbo, Breuer
Irmer & Elze	Fritz
Kaeser	Kaeser Kompressoren, Dreger, Laurer

Source: Off-Highway Research

POPULATION AND END-USERS

The current population of mobile compressors is estimated to be around 6,500 units. Contractors, particularly those specialising in renovation and maintenance work, are the most important users of mobile compressors and it is thought that over 80 per cent of sales to this sector consist of machines with a capacity of less than 5 m³/min. The majority of compressors are operated by small firms, many of them with

specialisations such as stone cleaning. In civil engineering the piling, water drilling and tunnelling companies are all important customers.

The rental of compressors is viewed by suppliers as a developing business despite the traditional owner culture prevalent among the country's contractors. Approximately 10 per cent of new compressor sales are accounted for by the rental sector and is a reflection of shortening contracts and lack of capital resources. Furthermore, the ingrained cash-only mentality of the Austrian customer is gradually being eroded as the options of leasing and finance become more viable alternatives for many companies.

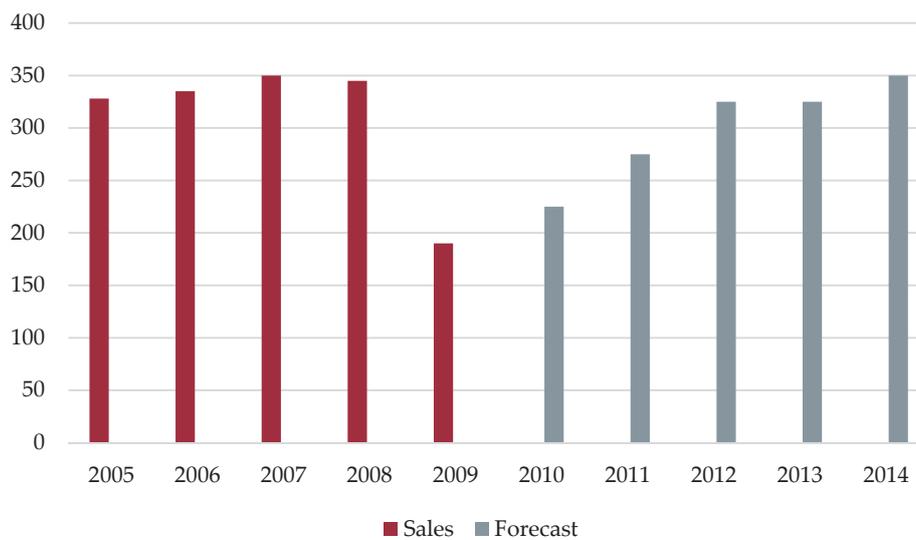
FORECAST

Table 89. Austria: Forecast Sales of Mobile Compressors, 2010-2014 (Units)

2010	2011	2012	2013	2014
225	275	325	325	350

Source: Off-Highway Research

Chart 47. Austria: Forecast Sales of Mobile Compressors, 2005-2014 (Units)



Source: Off-Highway Research

Demand for mobile compressors appears set to remain at a depressingly low level with little prospect for growth in the medium term, according to suppliers. The replacement market should, however, ensure a modest recovery in sales by 2011 with a further small increase in volumes by the end of the forecast period.

AGRICULTURAL TRACTORS

MARKET SIZE AND TRENDS

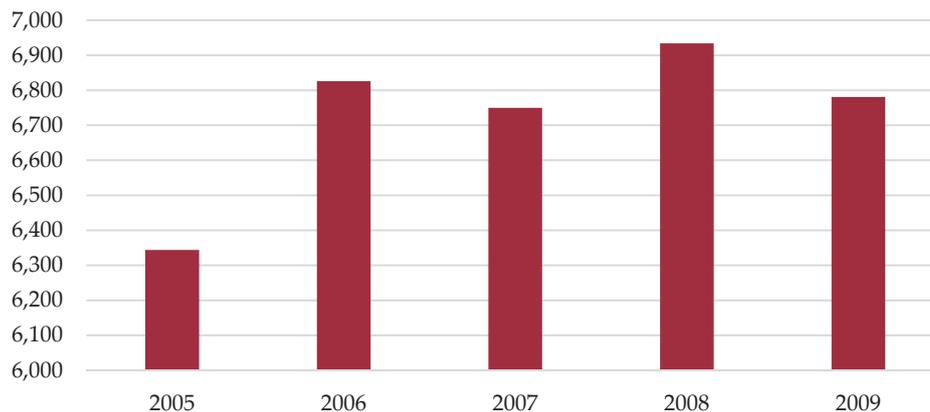
Sales of agricultural tractors during the latter half of the 1980s averaged a very stable 8,500 units per year thanks largely to Austria's generous agricultural support systems. Demand began to falter in 1992, however, and by 1995 the market had fallen to its lowest recorded level. The primary cause had been the uncertainty surrounding Austria's entry into the EU in 1995, and the fear amongst farmers that their current level of subsidies would not be maintained within the framework of the Common Agricultural Policy. Many part-time farmers decided to leave the industry for good and those that remained withheld spending on new equipment until it became clearer what the future held for them.

Table 90. Austria: Sales of Agricultural Tractors, 2005-2009 (Units)

2005	2006	2007	2008	2009
6,344	6,826	6,750	6,934	6,781

Source: Off-Highway Research

Chart 48. Austria: Sales of Agricultural Tractors, 2005-2009 (Units)



Source: Off-Highway Research

In September 1995 the European Commission announced a long term package of subsidies for European farmers, the net effect of which was the restoration of farmers' confidence to reinvest in new machinery, and during the next two years the market grew strongly to reach a peak in 1997 of nearly 9,000 units. In 1998-1999 demand fell sharply once more, reflecting not only the cyclical nature of the sector, but also the response to declining EC subsidies and a saturated market. During the last five years the market has entered a period of extreme stability and settled at an average level of 6,700 units, which most observers now consider to be the normal level of demand.

Table 91. Austria: Tractor Registrations by Horsepower Category, 2005-2009

Horsepower	2005		2009	
	Units	%	Units	%
Under 40	247	4	271	4
41-52	90	1	136	2
53-75	1,579	25	1,560	23
76-120	3,632	57	4,000	59
Over 120	796	13	814	12
Total	6,344	100	6,781	100

Source: Official Statistics

The ongoing amalgamation of farms has precipitated a discernible trend in favour of larger horsepower tractors, which can be ascertained from the table above. Traditionally, the main part of the market had been entrenched for many years in medium-sized tractors of 55 to 75 horsepower, although the main focus is now on tractors of 80-120 horsepower.

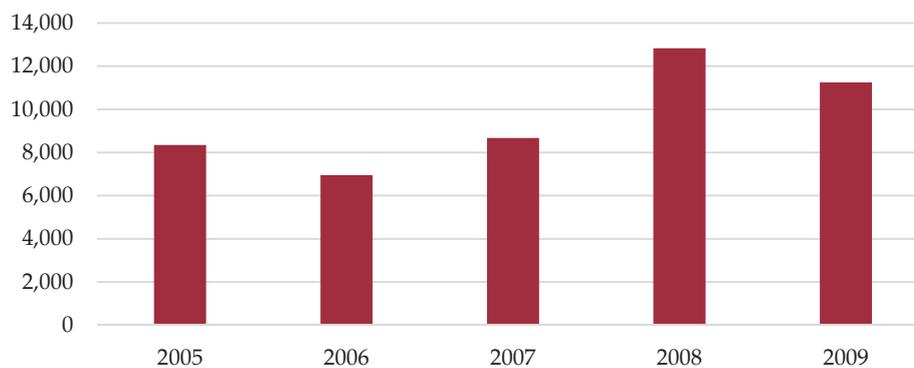
PRODUCTION

Table 92. Austria: Production of Agricultural Tractors, 2005-2009 (Units)

	2005	2006	2007	2008	2009
CNH	7,045	5,700	7,400	11,500	10,000
Lindner	1,300	1,250	1,275	1,330	1,250
Total	8,345	6,950	8,675	12,830	11,250

Source: Off-Highway Research

Chat 49. Austria: Production of Agricultural Tractors, 2005-2009 (Units)



Source: Off-Highway Research

Austria is home to two manufacturers of agricultural tractors. **CNH Österreich**, known as Case-Steyr following its acquisition by Case in September 1996, is now a wholly owned subsidiary of the CNH Group and no longer part of the Steyr-Daimler-Puch engineering concern.

CNH manufactures a comprehensive range of agricultural tractors at its assembly plant in St. Valentin, from 86 horsepower to the largest 224 horsepower Steyr

6225CVT machine. Production of Steyr model variants (sold in specific markets such as Austria, Switzerland, Germany, Northern Italy, Belgium and some Nordic regions) runs concurrently with those of Case IH, the only differences being paint colour, engine and brand decal. Production of a limited range of New Holland brand tractors in St. Valentin ended in 2009. In 2006 the plant was accorded the status of CNH's European sales and production centre for tractors between 80 and 224 horsepower and officially became the European headquarters for the Case IH and Steyr brands.

In addition to the standard agricultural specification tractors with the conventional red and white Steyr livery, the company produces a range of variants specifically designed for use in forestry and by local authorities and which sport orange and white paintwork and Steyr decals.

The CNH acquisition of Steyr's tractor company has finally ensured the long term future of the production facility at St. Valentin following several years of financial uncertainty as a result of declining production volumes. Assembly of the Case IH model range enables the company to compete in many more markets than it was able to do with the Steyr brand alone, and has resulted in a significant expansion of production at St. Valentin. Over €7 million have been invested in recent years in developing the Austrian plant and in 2008 a record production level of 11,500 units was achieved.

A more detailed analysis of the company's manufacturing operation may be found in the Manufacturer Profile section at the end of this report.

Lindner is the second manufacturer of tractors, although it is a totally different operation from that of CNH. Nearly all production is destined for the domestic market and consists predominantly of low-slung, four-wheel drive tractors for use on slopes. It is ideally suited to the mountainous regions prevalent in the country, a feature that also enables the company to sell well in Switzerland. Other export destinations include Germany, France and, more recently, Slovenia and Serbia.

The company was founded in 1946 in the town of Kundl, in the mountainous Austrian Tyrol where it is still situated today. Production volumes are very stable and average around 1,250 units per year. Lindner manufactures one model range, the Geotrac, which was introduced in 1996 and now encompasses eight models with Perkins 900-series engines ranging from 65 to 126 horsepower. The company achieved a turnover in 2009 of around €58 million and employs 200 people.

MARKET SHARES

Steyr is the perennial market leader, and continues to be held in high regard by Austrian farmers. However, it continues to face a strong challenge from **New**

Holland, which achieved market leadership in 2005, and **John Deere**, both of whom have benefited from aggressive pricing strategies. The other domestic manufacturer, **Lindner**, has also maintained a consistent presence, albeit in the lower horsepower classes.

Table 93. Austria: Suppliers of Agricultural Tractors and Their Market Shares, 2005-2009

	2005		2006		2007		2008		2009	
	Units	%								
Steyr	983	15	1,154	17	1,160	17	1,232	18	1,210	18
Lindner	840	13	930	14	925	14	851	12	1,047	15
John Deere	731	12	1,038	15	1,020	15	1,038	15	1,026	15
New Holland	1,044	16	1,108	16	1,100	16	1,072	15	1,013	15
X. Fendt	632	10	605	9	595	9	621	9	655	10
Massey Ferguson	335	5	466	7	460	7	508	7	384	6
Deutz	382	6	416	6	390	6	489	7	369	5
Case IH	134	2	186	3	180	3	289	4	272	4
McCormick	133	2	156	2	150	2	209	3	196	3
Valmet	151	2	189	3	185	3	179	3	178	3
Same	278	4	197	3	200	3	166	2	176	3
Mercedes-Benz	91	1	98	1	95	1	92	1	90	1
Landini	85	1	90	1	85	1	90	1	85	1
Claas	-	-	187	3	185	3	98	1	80	1
Renault	93	1	-	-	-	-	-	-	-	-
Others	432	7	6	-	20	-	-	-	-	-
Total	6,344	100	6,826	100	6,750	100	6,934	100	6,781	100

Source: Central Statistical Office

POPULATION

Table 94. Austria: Population of Agricultural Tractors by Province, 2009 (Units)

Lower Austria	143,215
Upper Austria	103,487
Styria	77,120
Burgenland	31,597
Carinthia	27,420
Tyrol	21,308
Salzburg	18,785
Vorarlberg	8,723
Vienna	3,579
Total	435,234

Source: Official Statistics

FORECAST

The EU's recent announcement of a long term package of fixed subsidies for farmers until 2013 has had a positive influence on the confidence of farmers to invest in new tractors. Suppliers forecast a stable level of demand for the foreseeable future,

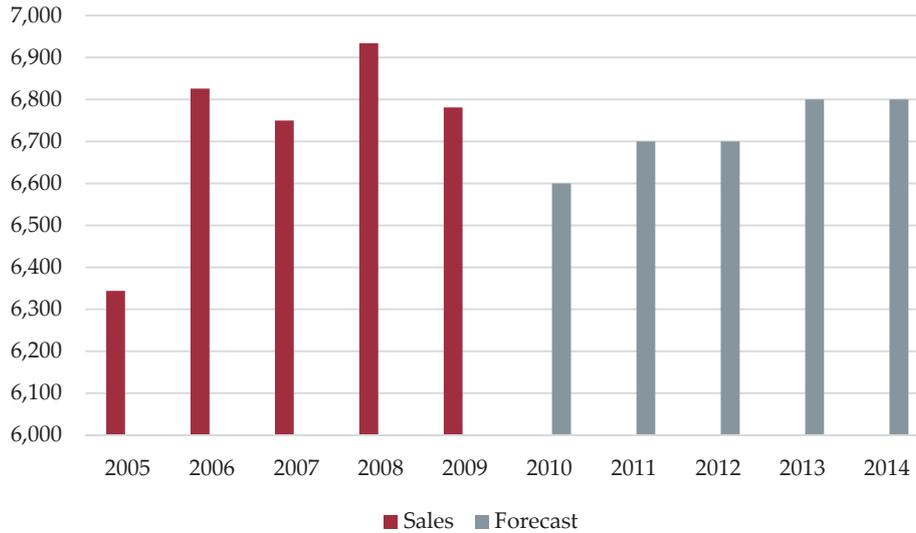
sustained in the medium to long term by the regular replacement programmes of end users.

Table 95. Austria: Forecast Sales of Agricultural Tractors, 2010-2014 (Units)

2010	2011	2012	2013	2014
6,600	6,700	6,700	6,800	6,800

Source: Off-Highway Research

Chart 50. Austria: Forecast Sales of Agricultural Tractors, 2005-2014 (Units)



Source: Off-Highway Research

MANUFACTURER PROFILES

LIEBHERR

The company's presence in Austria consists of four production plants:

- **Bischofshofen:** Wheeled loaders, and the headquarters for the domestic sales operation for all Liebherr construction equipment.
- **Telfs:** Crawler dozers and loaders; telescopic handlers.
- **Nenzing:** Dock and shipyard cranes.
- **Lienz:** Refrigerators and freezers.

WHEELED LOADERS

Factory Address	Liebherr-Werk Bischofshofen GmbH Dr.Hans Liebherr-Straße 4 A-5500 Bischofshofen
Telephone	+43 (0) 6462 888 0
Website	www.liebherr.com
Ownership	Liebherr International AG. Liebherr-Werk Bischofshofen is now a subsidiary of EMtec, the divisional controlling company for all Liebherr earthmoving equipment operations. The Bischofshofen plant, near Salzburg, supplies all the company's worldwide wheeled loader requirements. The factory was built in 1961 and has a total site area of 126,000 m2, of which 46,000 m2 is covered.

Table 96. Liebherr: Wheeled Loader Production in Austria, 2005-2009 (Units)

	2005	2006	2007	2008	2009
Under 80 Hp	944	1,211	1,325	1,269	704
Over 80 Hp	1,219	1,572	2,035	1,519	466
Total	2,163	2,783	3,360	2,788	1,170

Source: Off-Highway Research

Liebherr originally manufactured its range of wheeled loaders in Germany but production was transferred to Austria in 1986. Bischofshofen had previously been making only self-erecting and tower cranes, and the arrival of the wheeled loader product necessitated substantial investment in new assembly facilities.

Maximum annual production capacity is 3,500 units, a volume nearly achieved in 2007 when around 3,400 units were produced. Production of wheeled loaders over 80 horsepower prevails and typically accounts for around 60 per cent of total output. The plant also manufactures three compact models under licence for John Deere for sale in North America, which account for approximately 10-15 per cent of overall output in Bischofshofen.

Table 97. Liebherr: Range of Wheeled Loaders Produced in Austria, 2010

Model	HP	Manufacturer	Service Weight (Tonnes)
L506 Stereo	63	Deutz	5.1
L507 Stereo	65	Deutz	5.2
L508 Stereo	65	Deutz	5.5
L509 Stereo	82	Deutz	6.0
L510 Stereo	82	Deutz	6.2
L514 Stereo	98	Deutz	8.3
L524	117	Liebherr	10.6
L528	117	Liebherr	11.1
L538	143	Liebherr	12.7
L542	143	Liebherr	13.3
L550	177	Liebherr	16.5
L556	191	Liebherr	17.3
L566	259	Liebherr	22.5
L576	272	Liebherr	24.2
L580	272	Liebherr	24.6
L586	340	Liebherr	31.4

Source: Company Information

The design of the wheeled loader range is quite unusual in respect of the transmission, which combines a variable displacement hydrostatic travel motor with an automatic powershift gearbox with pre-selection. In 1994 the concept was updated with the creation of the Stereo Loader®, a name for the combining of centre pivot steering and steering of the rear axle. This makes the turning circle as much as 20 per cent tighter than on conventional centre pivot machines.

In January 2006 major design changes were implemented on the four largest models above 190 horsepower, referred to as Series 6, the most significant of which was the fitment of new engines to meet the latest Tier 3 emissions legislation. Similar changes were incorporated on the medium sized wheeled loaders from 117 to 143 horsepower, new versions of which were officially launched at the 2007 Bauma exhibition.

COMPONENT SOURCING

The most significant development has been the return to the use of Deutz engines in the Stereo Loader range. John Deere engines, branded as Liebherr for markets outside North America, had previously been employed on the compact loaders up to 100 horsepower, although are now only fitted to the Deere branded models sold in North America. Liebherr's own engines are fitted to all models above this power rating. Hydrostatic drives are sourced from Hydromatik and Rexroth and are mated directly to gearboxes from Spicer, which also supplies axles together with ZF. In common with Liebherr's policy of non-reliance on a single supplier the cabs are now sourced from Italcab in Italy in addition to Fritzmeier of Germany.

Table 98. Liebherr: Component Sourcing for Wheeled Loaders, 2010

Engines	Liebherr, Deutz, John Deere
Hydraulic Pumps	Hydromatik, Bosch Rexroth
Splitter boxes	Liebherr
Gearboxes	Dana-Spicer
Axles	ZF, Dana-Spicer
Chassis	Liebherr
Cabins	Fritzmeier, Italcab
Buckets	Liebherr
Wear Parts	Esco, Uni-Z
Tyres	Various

Source: Company Information

CRAWLER DOZERS AND LOADERS

Factory Address	Liebherr-Werk Telfs GmbH Hans Liebherr-Strasse 35 A-6410 Telfs
Telephone	+43 (0) 5262 600-0
Website	www.liebherr.com
Ownership	Liebherr International AG.

Telfs, near Innsbruck, is the location for the production of crawler dozers and loaders. The product range also includes pipe laying crawler tractors. The Telfs plant originally had a designed capacity of 1,000 units per year but it has never achieved that level since 1985. The problem has been the stark reduction in demand for both crawler dozers and loaders throughout Europe in recent years, and total production of both machines is now around 650 units per year. Volumes have been sustained to some extent since 2001 by the licensing agreement with John Deere, which takes three dozer models and two loader models for distribution in North America. Currently this accounts for approximately 25 per cent of total output at Telfs.

Liebherr's Litronic control system was installed in the crawler dozers in 1989 and in the crawler loaders in 1996. This system integrates electronics and functional hydraulics and monitors, regulates and controls the hydrostatic travel drives. All dozer and loader models are fitted with Liebherr engines and hydrostatic transmission systems that allow them to maneuver with both tracks powered and without shifting gears.

The latest development in the dozer range has been the launch at the 2006 Intermat exhibition in Paris of the 764 model, the world's largest hydrostatic crawler dozer, which replaces the 751M. At the end of 2005 the 742 model was replaced by another Generation 4 machine, the PR744. In 2007 the remaining Series 2 dozers were also superseded by Generation 4 machines which feature extensive revisions to the driveline, increased power ratings and redesigned driver's cabin.

Table 99. Liebherr: Range of Crawler Dozers and Crawler Loaders Produced in Austria, 2010

Product	Model	HP	Manufacturer	Service Weight (Tonnes)	Bucket Capacity (m ³)
Crawler Dozers	PR714	117	Liebherr	12.5-14.8	-
	PR724	163	Liebherr	16.8-20.3	-
	PR734	204	Liebherr	20.4-24.9	-
	PR744	252	Liebherr	24.6-31.7	-
	PR754	340	Liebherr	35.0-40.8	-
	PR764	422	Liebherr	44.2-52.7	-
Crawler Loaders	LR614	98	Liebherr	10.6-12.0	1.2-1.25
	LR624	143	Liebherr	16.9-18.5	1.5-1.8
	LR634	184	Liebherr	20.7-22.7	1.9-2.4

Source: Company Information

The crawler loader range has also been updated with the launch at the 2006 Intermat exhibition of the Generation 4 LR634, a direct replacement for the ageing LR632 model. The latest Generation 4 model in the range is the LR624, launched at the 2007 Bauma exhibition. Production of the largest loader, the LR641, was terminated in 2004.

Table 100. Liebherr: Production of Crawler Dozers and Crawler Loaders, 2005-2009 (Units)

	2005	2006	2007	2008	2009
Crawler Dozers	310	415	520	584	244
Crawler Loaders	350	412	295	219	95
Total	660	827	815	803	339

Source: Off-Highway Research

COMPONENT SOURCING

Table 101. Liebherr: Component Sourcing for Crawler Dozers and Crawler Loaders, 2010

Engines	Liebherr
Hydraulic Pumps	Linde
Drive Motors	Linde
Valve Blocks	Bosch Rexroth
Undercarriages	Intertractor/Berco
Cabins	Liebherr Telfs
Buckets	Liebherr Telfs
Blades	Liebherr Telfs

Source: Company Information

TELESCOPIC HANDLERS

Factory Address	Liebherr-Werk Telfs GmbH Hans Liebherr-Strasse 35 A-6410 Telfs
Telephone	+43 (0) 5262 600-0
Website	www.liebherr.com
Ownership	Liebherr International AG.

Liebherr began the production of its new telescopic handler range at the end of 2005 in its Telfs factory, near Innsbruck, the site of the company’s crawler dozer and loader assembly plant. Just 25 units were built in that year and deliveries of the first units were made in 2006 to the company’s rental subsidiary, Liebherr Mietpartner.

Table 102. Liebherr: Production of Telescopic Handlers, 2005-2009 (Units)

2005	2006	2007	2008	2009
25	50	70	71	48

Source: Off-Highway Research

The machines were initially made available for hire and sale in Germany, Austria, Switzerland and the Netherlands and have been marketed in the construction and industrial sectors. The complete, four model range was officially launched in other European markets following the 2007 Bauma exhibition. The first public presentations of the TL435-10 telehandler were staged in Germany in September at the Nordbau 2006 and Galabau 2006 exhibitions in Neumünster and Nuremberg respectively.

The new telehandler range is manufactured on a dedicated production line at the Liebherr-Werk Telfs factory. Four versions of the machine, the TL435-10, TL435-13, TL445-10 and TL442-13, are available with lift heights of 10-13 metres and load capacities of between 3.5 and 4.5 tonnes. All models are fitted with a 114 horsepower four cylinder Liebherr engine.

Significantly, the telehandler range has been developed to a particularly high specification in conjunction with Liebherr’s engineering departments at its crane factory in Ehingen, Germany and at its wheeled loader factory in Bischofshofen, Austria. As such, the machines have been specified with several features unique to the telescopic handler sector, most noticeably the ovaloid boom profile pioneered on Liebherr mobile cranes, the inherently superior stiffness of which allows increased lift capacities. All hydraulic hoses have also been fully integrated within the boom itself.

The product has also been designed with a low boom pivot point to increase visibility, a critical feature for telehandlers operators, and to afford a higher level of stability when the machine is working at its upper reach limits. High output

hydraulic systems have been carried over from the Liebherr wheeled loader product and the machines also feature a hydrostatic transmission for stepless forward and reverse travel drive. A single joystick control also enables several operations to be performed simultaneously.

COMPONENT SOURCING

Table 103. Liebherr: Component Sourcing for Telescopic Handlers, 2010

Engines	Liebherr
Hydraulic Pumps	Linde
Working Hydraulics	Bosch Rexroth
Axles	Dana Spicer
Chassis	Liebherr Telfs
Cabins	Wölfle
Buckets	Various
Tyres	Various

Source: Company Information

WACKER NEUSON

Factory Address	Wacker Neuson Linz GmbH Haidfeldstraße 37 A-4060 Linz-Leonding
Telephone	+43 (0) 732 90 5 90-0
Website	www.wackerneuson.com
Ownership	Wacker Neuson SE
Employees	The Wacker Neuson Group employs a total of 3,200 people, 280 of whom are based at the Linz factory.
Turnover	The turnover of the Wacker Neuson Group reached €597 million in 2009 (2008: €870 million).
Structure of Operations	Wacker Neuson was created through the 2007 merger of Wacker Construction Equipment AG and Neuson Kramer Baumaschinen AG. Weidemann GmbH was acquired by Wacker Construction Equipment AG in 2005, while Kramer-Werke GmbH was acquired by Neuson Baumaschinen GmbH in 2001. Wacker Neuson Linz GmbH, previously known as Neuson Baumaschinen GmbH, is the name of the mini and compact excavator production company in Linz, the subject of this profile. It originally began production of mini excavators in 1985 and today manufactures mini and midi excavators, skid-steer loaders, site dumpers and tracked dumpers.

MINI AND MIDI EXCAVATORS

Table 104. Wacker Neuson: Mini and Midi Excavator Range, 2010

Products	Model	HP	Manufacturer	Operating Weight* (Tonnes)
Micro Excavator	803	13	Yanmar	1.0
Mini Excavators	1404	18	Yanmar	1.5
	1703	18	Yanmar	1.8
	2003	18	Yanmar	2.0
	2404	18	Yanmar	2.3
	2503	26	Yanmar	2.6
	28Z3	21	Yanmar	2.7
	3503	32	Yanmar	3.6
	38Z3	29	Yanmar	3.7
	50Z3	38	Yanmar	5.1
	6003	58	Yanmar	5.7
Midi Excavators	75Z3	58	Yanmar	7.6
	8003	58	Yanmar	7.8
Wheeled Excavators	14504	102	Deutz	15.3
	6503	58	Yanmar	5.8
	9503	102	Deutz	10.0

* Weights are shown with canopy/cab
Source: Company Information

Wacker Neuson currently manufactures a range of 16 mini/midi excavators at its Linz-Leonding factory with service weights ranging from 1.0 to 15.0 tonnes. Included in the product offering are four zero tail swing models and two wheeled

excavator models. This represents a significant expansion over the range available during the early 1990s and enables the company to compete in all weight sectors and in all European markets.

The largest excavator in the range is the 15.3 tonne 14504 model, launched at the 2010 Bauma exhibition, which replaces the outgoing 12002 model. Other recent additions to the range are the 803 micro excavator and 1404 model, both of which were launched at the 2006 Intermat exhibition in Paris. A unique feature of several models in the range is VDS technology (Vertical Digging System), which enables continuous tilting of the superstructure to compensate for uneven terrain up to 15 degrees.

The first zero and short tail swing excavators were introduced in 2004. The four zero tail swing models are designated by the 'Z3' suffix and are available with service weights of 2.7, 3.7, 5.1 and 7.6 tonnes. Two models, the 5.7 tonne 6003 and 7.8 tonne 8003, are classified as short tail swing excavators.

In June 2010 Wacker Neuson announced the conclusion of a highly significant manufacturing agreement with Caterpillar Inc. of North America. The agreement, with a term of 20 years, relates to the development and manufacture of mini excavators, with an operating weight of up to 3 tonnes designed to Caterpillar's specifications, at Wacker Neuson's Linz plant. Production is planned to commence in mid-2011.

Caterpillar currently offers three models in this size range. The new model range will consist of up to seven machines, starting with an operating weight of 0.8 tonnes. The mini excavators will be produced to Caterpillar's technical and brand specifications and will be distributed and supported via Caterpillar's global dealer network, with the exception of Japan. All Caterpillar models will be clearly differentiated from comparable Wacker Neuson models in the same product range.

The agreement will allow both companies to leverage joint economies of scale in the manufacturing and development process, while supplying their respective, complementary sales channels with differentiated, competitive machines. It will also enable both parties to spread the cost of developing and modifying lower-emission products across higher volumes. For Wacker Neuson the additional volume in the first year of full production in 2012 is set to more than double the existing output of comparable mini excavators at Linz, and could potentially see production rise to 7,000 units per year.

PRODUCTION

Table 105. Wacker Neuson: Production of Excavators, 2005-2009 (Units)

	2005	2006	2007	2008	2009
Mini Excavators	2,878	3,100	4,175	3,740	1,450
Crawler Excavators	450	475	550	520	220
Wheeled Excavators	110	175	305	350	180
Total	3,438	3,750	5,030	4,610	1,850

Source: Off-Highway Research

As a result of the company's growing reputation and increased development of export markets production rose continuously throughout the 1990s and has continued to do so into the new millennium, eventually reaching a peak in 2007 of 5,000 units.

In January 1999 production of excavators was transferred to a new purpose-built factory in the Leonding district of Linz in order to cope with the rapidly rising volume of sales. Output has soared from 1,400 units in 1996 to over 5,000 units in 2007, placing Wacker Neuson on an equal status with companies such as Yanmar, Komatsu and Caterpillar in volume terms. In 1999 the company entered a marketing agreement with the North American Gehl organisation to supply its excavators for sale in Gehl livery in the US market. The arrangement has proved to be beneficial to both parties and production for Gehl now accounts for up to 15 per cent of output from Linz.

COMPONENT SOURCING

Table 106. Wacker Neuson: Component Sourcing for Excavators, 2010

Component	Source
Engines	Yanmar Japan; Deutz
Hydraulic Pumps	Bosch Rexroth; Nachi
Hydraulic Motors	Bosch Rexroth; Sauer-Danfoss; Kayaba
Tracks	Bridgestone
Hydraulic Valves	Bosch Rexroth; Kawasaki; Kayaba
Filters	Hydac
Slewing Gear	Rothe Erde
Transmissions	Kayaba; Transmittel
Cabs	Lugstein

Source: Company Information

SKID-STEER LOADERS

Table 107. Wacker Neuson: Skid-Steer Loader Range, 2010

Model	HP	Manufacturer	Payload (Kilograms)
501s	36	Yanmar	510
701s	46	Yanmar	680
701sp	52	Yanmar	680
901s	68	Deutz	907
901sp	68	Deutz	907
1101c	86	Deutz	1,150

Source: Company Information

Neuson began production of a three model range of skid-steer loaders at its Linz factory in 2005. The company acquired the design rights to the product from UK manufacturer Belle, although intensive development work has gone into the Neuson product and it differs significantly from the original Belle design. The smallest model is the 501s which has a payload of 510 kilogram whilst the largest 1101c tracked machine is capable of handling 1,150 kilogram. High flow versions of the 701 and 901 models are available and are designated by the ‘sp’ model suffix.

For the 501S, Neuson has boosted the power by 15 per cent over the Belle design with a three cylinder Yanmar engine providing 36 horsepower. The 701S uses a four cylinder Yanmar normally aspirated diesel engine that produces 46 horsepower while the 701SP features a turbocharged Yanmar unit with 52 horsepower. Neuson has retained Belle’s Quattrostatic four hydraulic motor design to power the wheels through separate gearboxes rather than reverting to the more traditional central motors and drive chains. The 701 models have full servo controls, while the 501S has mechanical levers as standard with servo controls offered as an option.

The most recent additions to the range, the 901s and the track-mounted 1101c, were launched in 2008 and offer significantly higher payloads than the two smaller models. The company also plans to introduce larger capacity models in the short to medium term in order to compete more successfully in the important North American market.

PRODUCTION

Table 108. Wacker Neuson: Production of Skid-Steer Loaders, 2005-2009 (Units)

2005	2006	2007	2008	2009
150	300	320	550	125

Source: Off-Highway Research

Output at the Linz facility reached 300 units in 2006, the first full year of production and rose to a peak of 550 units in 2008.

COMPONENT SOURCING

Table 109. Wacker Neuson: Component Sourcing for Skid-Steer Loaders, 2010

Engines	Yanmar, Deutz
Hydraulic Pumps	Bosch Rexroth
Hydraulic Motors	Sauer Danfoss
Tracks	Tyres: BKT
Hydraulic Valves	Bosch Rexroth
Filters	Hydac
Transmissions	Transmittal
Cabs	Lugstein

Source: Company Information

CNH ÖSTERREICH

Factory Address	CNH Österreich GmbH Steyrer Straße 32 A-4300 St. Valentin
Telephone	+43 (0) 7435 500-0
Website	www.steyr-traktoren.com
Ownership	Wholly owned subsidiary of Case New Holland (CNH Global N.V.).
Employees	443.

In September 1996 the Steyr-Daimler-Puch concern sold 75 per cent of its tractor manufacturing division, Steyr Landmaschinentechnik, to American tractor giant Case IH. In February 1997 Case's share was extended to 80 per cent. The net effect of this for Steyr has been an increase in production volumes at its St. Valentin assembly plant from 3,800 units in 1995 to a peak of nearly 11,500 units in 2008, as production of Case IH's range of tractors supplemented Steyr's own product offering. Following the fusion of Case and New Holland in 1999, Case Steyr became a wholly owned subsidiary of the newly formed CNH organisation and its ties to the Steyr-Daimler-Puch engineering concern were cut. Today the Steyr brand name is retained on the tractors for marketing purposes, although the company is now known as CNH Österreich.

CNH manufactures a comprehensive range of agricultural tractors at its assembly plant in St. Valentin, from 86 horsepower to the largest 224 horsepower CVT/CVX machine. The plant itself encompasses a total area of 17 hectares of which 42,000 m² is covered. Production capacity originally extended to 7,800 units per year on a one shift basis, but has been expanded to cope with the substantial extra demand generated by the Case tractor ranges.

Production of Case model variants runs concurrently with that of Steyr models, the only differences being paint colour and brand decal. Production of a limited range of New Holland tractors was halted in 2009. The Steyr Profi model range manufactured at St. Valentin is also produced in Case IH's red livery and decals, and sold as the Maxxum range in world markets where the Case IH brand has traditionally outsold that of Steyr. Similarly, the Steyr CVT range produced in St. Valentin is marketed in Case IH livery as the CVX range.

Table 110. CNH: Range of Agricultural Tractors Produced in Austria, 2010

Steyr	Case IH	HP	Engine
9085MT	CS 85 Pro	86	Sisu/Iveco*
9095MT	CS 95 Pro	93	Sisu/Iveco*
9105MT	CS 105 Pro	101	Sisu/Iveco*
-	Maxxum 100 X-Line	101	Iveco
4110 Profi	Maxxum 110/X-Line	112	Sisu/Iveco*
4120 Profi	-	121	Sisu
4130 Profi	-	132	Sisu
6115 Profi	Maxxum 115/X-Line	117	Sisu/Iveco*
-	Maxxum 120	121	Iveco
6125 Profi	Maxxum 125/X-Line	126	Sisu/Iveco*
-	Puma 125	127	Iveco
-	Maxxum 130	132	Iveco
6140 Profi	Maxxum 140/X-Line	141	Sisu/Iveco*
6140 CVT	CVX 140	141	Sisu
-	Puma 140	142	Iveco
6150 CVT	CVX 150	150	Sisu
6160 CVT	CVX 160	160	Sisu
-	Puma 155	160	Iveco
-	Puma 165	167	Iveco
6175 CVT	CVX 175	175	Sisu
-	Puma 180	182	Iveco
6195 CVT	CVX 195	196	Sisu
6200 CVT	Puma 195/CVX	197	Sisu/Iveco*
6210 CVT	Puma 210/CVX	213	Sisu/Iveco*
-	Puma 225/CVX	224	Iveco
6225 CVT	-	251	Sisu

* Steyr brand fitted with Sisu engine. Case IH brand fitted with Iveco engine.

Source: Company Information

CNH's marketing policy ensures a distinct differentiation between the Case IH, Steyr and New Holland brands and varies according to customer acceptance within individual countries in Europe. For example, Steyr badged and painted tractors are sold in Austria, Switzerland, Germany, Northern Italy, Belgium and some Nordic regions. In the UK, where the Steyr name is virtually unknown, only the Case and New Holland machines are available. In the majority of markets, however, the two or, in some instances, three CNH brands are sold in direct competition.

Table 111. Steyr: Production of Agricultural Tractors in Austria, 2005-2009 (Units)

2005	2006	2007	2008	2009
7,045	5,700	7,400	11,500	10,000

Source: Off-Highway Research

Production volumes have increased significantly since 1996 when the assembly of Case tractors was incorporated at St. Valentin, reaching a peak of 11,500 units in 2008. Volumes have also been sustained during recent years by a buoyant European tractor market.

COMPONENT SOURCING

Table 112. Steyr: Component Sourcing for Agricultural Tractors, 2010

Engines	Sisu, Iveco
Gearboxes	ZF
Front Axles	Carraro
Rear Axles	ZF
Cabs	CNH (Croix)

Source: Company Information

Since the publication of Off-Highway Research's last report in 2006 there has been some consolidation of component supply at St. Valentin. Perkins engines are no longer used following the decision to switch to the use of Sisu units for reasons of synergy and to co-ordinate the medium horsepower tractor ranges with the larger, over 100 horsepower machines.

The acquisition of the Steyr transmission facility by ZF now dictates that all gearboxes and rear axles are now supplied under the ZF brand name, whilst front axles are now sourced exclusively from Carraro and no longer from Sige. Cabs are supplied directly from the CNH plant in Croix, France for the CVT/CVX, 9000MT series and Profi/Maxxum ranges.

Table 113. Austria: Major Distributors of Construction Equipment and Their Franchises, 2010

Distributor	Mobile Cranes	Hydraulic Excavators	Mini Excavators	Crawler Dozers	Wheeled Loaders	Backhoe Loaders	Motor Graders	Skid-Steer Loaders	RTLTs	Dump Trucks	Asphalt Finishers	Compaction Equipment
Alpina									Manifou			
Atlas Copco											Dynapac	Dynapac
BaumaschinenHandel		Terex, Hitachi	Terex, Hitachi		Terex, Hitachi	Terex Fermecc		Mustang	AUSA	Hitachi		
Biegger + King		Case	Case	Case	Case	Case		Case	Case	Case		
Bomag Austria											Bomag	Bomag
Breuer		Yanmar	Yanmar									Weber
CEE		Doosan	Bobcat		Doosan	JCB		Bobcat	Bobcat	Doosan		
Drott		Hydrema, Komatsu	Komatsu, Yanmar		JCB, Kramer	Hydrema		Komatsu	Komatsu	Hydrema		JCB Vibromax
Esch-Technik			Kubota		Kubota							
Fritz		Macmoter	Airman, Macmoter		Kawasaki			Thomas		Astra	Hanta	Weber
Huppenkothfen		Takeuchi	Takeuchi		Ahlmann			Gehl				Ammann
Kohlschein		New Holland, Atlas	New Holland	New Holland	New Holland, Atlas Weyhausen	New Holland	New Holland	New Holland	New Holland			Atlas Weyhausen
Kuhn		Komatsu	Komatsu	Komatsu	Komatsu	Komatsu	Komatsu	Komatsu	Komatsu	Komatsu, Moxy		
Laurer		Mecalac	Caterpillar		Ahlmann, Caterpillar			Caterpillar				
Liebherr	Liebherr	Liebherr		Liebherr	Liebherr				Liebherr	Liebherr, Bell		
Mauch					Weidemann				Merlo, Weidemann			
Mörtlbauer		Hyundai	Hyundai		Hyundai, Venieri	Venieri						
Terra		JCB	JCB		JCB	JCB	HBM-Nobas	JCB	JCB, Jumbo	JCB		JCB Vibromax
Volvo Österreich		Volvo	Volvo		Volvo	Volvo	Volvo	Volvo		Volvo	Volvo	Volvo
Wacker Neuson		Wacker Neuson	Wacker Neuson		Kramer			Wacker Neuson	Kramer			
Wirtgen Österreich											Vögele	Hamm
Zeppelin		Caterpillar, Terex O&K	Caterpillar	Caterpillar	Caterpillar	Caterpillar	Caterpillar	Caterpillar	Caterpillar	Caterpillar	Caterpillar	Caterpillar

Source: Off-Highway Research

DISTRIBUTOR PROFILES

DROTT

Factory Address	M.R. Drott GmbH & Co Laxenburgerstraße/IZ A-2351 Wr.Neudorf
Telephone	+43 (0) 2236 688-0
Website	www.drottbau.at
Ownership	50 per cent in the private ownership of the Drott family and 50 per cent in the ownership of Günter Kuhn. The Drott Group, which was founded in 1952, comprises two organisations and three industrial divisions. Drott Bautechnik, the subject of this profile, is the only division related to construction equipment and was founded at the beginning of the 1960s.
Turnover 2009	Not revealed.
Personnel	95

FRANCHISES

Table 114. Drott: Range of Franchises, 2010

Company	Products
JCB Vibromax	Light compaction equipment
JCB	Wheeled loaders
Hydrema	Dump trucks, hydraulic excavators, wheeled loaders, backhoe loaders
Komatsu	Hydraulic excavators, mini excavators, telehandlers, skid-steer loaders
Yanmar	Mini excavators
Kramer	Wheeled loaders, telescopic handlers
Dynapac	Light compaction equipment
Thwaites	Site dumpers
Krupp	Hydraulic hammers, demolition shears
CompAir	Mobile compressors

Source: Company Information

Drott has traditionally concentrated on construction equipment rental and is Austria's leading exponent of this sector. The company's current rental fleet numbers some 2,000 units. Recent years have seen increasing focus applied to the distribution of new machines, however, and the company has benefited from taking up a number of new franchises. In 1998 Drott took over the Dynapac asphalt finisher and compaction equipment representation for Austria, in addition to the sole distributor rights for Yanmar mini excavators and tracked dumpers. The Dynapac franchise was relinquished in 2003, although the light compaction equipment range remains in the portfolio. In 2005 the company was awarded the franchise for the full range of Hydrema construction equipment and in 2006 the JCB Vibromax franchise for light compaction equipment. The recent acquisition of 50 per cent of the company

by the Komatsu dealer, Kuhn, also means that Drott is able to sell selected products from that supplier.

SALES

Table 115. Drott: Sales of Construction Equipment, 2009 (Units)

Thwaites	Site dumpers	53
Yanmar	Wheeled excavators	1
	Crawler excavators	1
	Mini excavators	5
Hydrema	Backhoe loaders	1
	Dump trucks	2
Kramer	Wheeled loaders	1
Atlas Copco	Hydraulic hammers	33

Source: Off-Highway Research

Drott concentrates primarily on sales and rental of construction equipment to the civil engineering sector. In its short tenure with the franchise Drott achieved notable success with the Dynapac asphalt finisher product and on more than one occasion was able to challenge the established dominance of Vögele.

DISTRIBUTION

In May 2000 Drott moved from its old premises in central Vienna to a brand new headquarters in the Wiener Neudorf industrial estate south of the city, which has become the favoured location for many of Austria's construction equipment dealers. It has a further nine sales and service depots located in Vienna, St. Pölten, Traun, Salzburg, Strass, Taxenbach, Nüziders, Graz and Klagenfurt. Drott has also operated a subsidiary company in Slovenia for over 10 years.

FUTURE DEVELOPMENTS

With specific regard to rental, Drott's primary aim is to expand the concept of pure rental in Austria as opposed to rental with an option to purchase. Currently only around 40 per cent of Drott's overall turnover from rental comes from pure rental of construction equipment. In the so-called rent-to-rent sector the company claims a 50 per cent market share.

With regard to machinery sales Drott's medium term strategy will focus on the consolidation and development of the Hydrema franchise, although penetrating the highly competitive hydraulic excavator and wheeled loader sectors is likely to prove extremely difficult.

KOHLSCHEIN

Factory Address	Ing. Fritz Kohlschein & Sohn GmbH IZ NO Süd, Strasse 14/M24 A-2351 Wiener Neudorf
Telephone	+43 (0) 2236 609-0
Website	www.kohlschein.at
Ownership	100 per cent in the private ownership of Frau Jonke, the daughter of the company's original founder.
Turnover 2009	€38 million.
Personnel	48

FRANCHISES

Table 116. Kohlschein: Range of Franchises, 2010

Company	Products
New Holland	Construction equipment – full range
Atlas	Hydraulic excavators
Atlas Weyhausen	Wheeled loaders
NPK	Demolition shears, hydraulic hammers
Terex	Dump trucks

Source: Company Information

Kohlschein successfully represented the Kobelco marque for many years in Austria, and concentration on the crawler excavator market has been the primary focus for this small but highly successful family enterprise. The incorporation of the Kobelco brand into the CNH organisation has resulted in the dealer being awarded the exclusive New Holland franchise for Austria. The Atlas franchise has the advantage of allowing the dealer to offer an alternative wheeled excavator product where necessary. As a result of the corporate restructuring within the CNH group, Kohlschein acquired the Tadano Faun crane franchise and ABG asphalt finisher franchise, which had previously been represented by the now defunct O&K Austria organisation. Both these franchises have, however, recently been relinquished.

SALES

Table 117. Kohlschein: Sales of Construction Equipment, 2009 (Units)

New Holland	Crawler excavators	93
	Mini excavators	26
	Backhoe loaders	2
	Crawler dozers	1
	Graders	17
	Wheeled excavators	9
	Wheeled loaders	6
Terex	Wheeled excavators	21
Atlas Weyhausen	Wheeled loaders	1

Source: Off-Highway Research

Kohlschein had been the leading supplier of hydraulic excavators in Austria for many years with the Kobelco marque and its achievement was a graphic illustration of the ability of small import operators to acquire a high level of success in the Austrian market. The switch to the New Holland brand has had no adverse impact on Kohlschein's success in the sector and in 2009 the company achieved second position in the conventional size crawler excavator sector and second position in the wheeled excavator sector with the Terex product. It has been particularly successful with the New Holland-Kobelco short radius excavators, which have been well accepted by Austrian contractors.

DISTRIBUTION

The company operates from the former Intropa company headquarters on the Wiener Neudorf industrial estate, a short distance south of Vienna. Subsidiary operations have been established in Hungary, the Czech Republic and Slovakia, where Kohlschein represents the Atlas and Hitachi brands.

FUTURE DEVELOPMENTS

Consolidation of its existing position in the crawler excavator sector will inevitably remain a priority for Kohlschein, as it has done for many years. The advent of the New Holland franchise has, however, altered the company's status from a crawler excavator specialist to that of a full-liner and Kohlschein is fortunate in being able to call upon the resources and expertise of former O&K and Intropa employees who were re-employed by Kohlschein following the CNH structural changes in Austria. Expansion of new business opportunities in Eastern Europe will also be an important aim in the medium term, as will development of the company's rental operation.

KUHN

Factory Address	Kuhn Baumaschinen GmbH Gewerbestraße 7 A-5301 Eugendorf/Salzburg
Telephone	+43 (0) 6225 82 06-0
Website	www.kuhn-gruppe.com
Ownership	Günter Kuhn.
Turnover 2009	€500 million (Kuhn Group). More than 65 per cent of turnover is achieved outside Austria.
Personnel	700, of whom 80 are involved with construction machinery in Austria.

FRANCHISES

Table 118. Kuhn: Range of Franchises, 2010

Company	Products
Komatsu	Construction equipment - full range
Powerscreen*	Recycling and crushing equipment
Palfinger*	Lorry cranes
Mitsubishi	Fork lift trucks
FRD	Hydraulic hammer attachments

* Incorporated within Kuhn-Ladetechnik GmbH

Source: Company Information

Kuhn took over the full Komatsu franchise for Austria in January 1995 from the previous dealer, Strobl. Prior to this Kuhn had been selling Hanomag wheeled loaders since 1989 and also Furukawa hydraulic excavators since 1991. Potential product conflicts between the Komatsu range of compact machinery and that of Schaeff necessitated the transfer of the latter in October 1998 from Kuhn to Theisen. Kuhn is currently the largest Komatsu dealer in Europe.

SALES

Table 119. Kuhn: Sales of Construction Equipment, 2009 (Units)

Komatsu	Crawler excavators	65
	Wheeled excavators	13
	Wheeled loaders	34
	Mini excavators	27
	Skid-steer loaders	10
	Crawler dozers	10
	Articulated dump trucks	9
	Rigid dump trucks	1
	Backhoe loaders	6

Source: Off-Highway Research

The Komatsu franchise has given Kuhn a full range of construction equipment and the company is a competitive supplier in most sectors, particularly with standard

sized crawler excavators where it has maintained a steady market share during the last five years. More recently, the company's performance in the compact equipment sectors improved significantly as a result of increased marketing focus.

DISTRIBUTION

Table 120. Kuhn: European Subsidiary Companies, 2010

Company	Location	Number Of Depots
Kuhn Kft	Budapest, Hungary	4
Kuhn-Bohemia	Prague, Czech Republic	6
Kuhn-MT	Budweis, Czech Republic	2
Kuhn-Slovakia	Bratislava, Slovakia	3
Kuhn-d.o.o.	Trzin, Slovenia	1
Kuhn-Hrvatska	Zagreb, Croatia	1
Kuhn-BH	Sarajevo, Bosnia	1
Kuhn-Schweiz	Heimberg, Switzerland	2
Kuhn Deutschland	Ebersberg, Germany	3
Kuhn-Polska	Lomianki, Poland	2

Source: Company Information

The Austrian sales and service headquarters is located in Salzburg with an additional six depots providing nationwide coverage.

In common with many other Austrian construction equipment dealers, the Kuhn organisation has been quick to exploit the opening up of East European markets and has established a wide network of subsidiaries in neighbouring countries, each of which holds the Komatsu franchise for that region.

In 2000 Kuhn was awarded the Komatsu franchise for Switzerland and in 2001 the Komatsu franchise for the Bavaria and Schwabia regions in Germany, where it replaced the two previous Komatsu dealers, Häfele and Kiesel.

FUTURE DEVELOPMENTS

Further consolidation of Komatsu's presence in Austria and existing markets will be head of the company's agenda for the foreseeable future. The company has no immediate plans for expansion into other territories.

LIEBHERR

Factory Address	Liebherr-Werk Bischofshofen GmbH Dr. Hans Liebherr-Straße 4 A-5500 Bischofshofen
Telephone	+43 (0) 6462 888-0
Website	www.liebherr.com
Ownership	Liebherr International AG.

FRANCHISES

Table 121. Liebherr: Product Range, 2010

Product	Source
Mobile Cranes	Germany
Hydraulic Excavators	Germany, France
Crawler Dozers and Loaders	Austria
Wheeled Loaders	Austria
Tower Cranes	Germany
Concrete Mixers	Germany
Rope Excavators	Austria

Source: Company Information

Liebherr also distributes the Bell articulated dump truck range through its existing network in Austria.

SALES

Table 122. Liebherr: Sales of Construction Equipment, 2009 (Units)

Liebherr		
	Mobile cranes	65
	Crawler excavators	42
	Wheeled excavators	44
	Crawler dozers	3
	Crawler loaders	4
	Wheeled loaders	110

Source: Off-Highway Research

Liebherr continues to be a dominant force in the market, particularly in the mobile crane sector where it regularly achieves a market share of over 80 per cent. It is also highly successful with hydraulic excavators, where it has held market leadership of the wheeled excavator sector for many years and with wheeled loaders where it has achieved market leader status in three of the last five years.

DISTRIBUTION

The domestic sales company headquarters is located at Liebherr's wheeled loader factory in Bischofshofen, near Salzburg. In addition, there are company depots located in Vienna, Wels, Peggau, Telfs, Rankweil and Klagenfurt.

TERRA

Factory Address	Terra Maschinen GmbH & Co. KG Fabianstraße 8 A-1110 Vienna
Telephone	+43 (0) 1 690 01-0
Website	www.terra-world.com
Ownership	Terra was originally a subsidiary company of the large Strobl group of companies. In April 2000 it was sold together with Zeidler, the Nissan fork-lift truck dealer, to the Industrie Holding GmbH, part of the Austrian Hainzl group. In 2003, Terra Baumaschinen and Zeidler were merged to form Terra Maschinen GmbH & Co. KG.
Turnover 2009	Not revealed.
Personnel	420 (including subsidiary companies).

FRANCHISES

Table 123. Terra: Range of Franchises, 2010

Company	Products
JCB	Construction equipment
JCB Vibromax	Compaction equipment >5 tonnes
Ranger	Rough terrain lift trucks
Nissan	Fork-lift trucks
HBM-Nobas	Motor graders
Crown	Fork-lift trucks

Source: Company Information

An interesting addition to Terra's list of franchises has been the HBM-Nobas range of motor graders and draglines, which the company acquired on 1 December 2002. The acquisition of compaction equipment manufacturer Vibromax by JCB has also resulted in Terra being awarded the franchise for the JCB Vibromax heavy compaction range. The company's range of light compaction equipment is marketed through the Drott organisation in Austria.

SALES

Table 124. Terra: Sales of Construction Equipment, 2009 (Units)

JCB	Crawler excavators	7
	Wheeled excavators	4
	Wheeled loaders	2
	Mini excavators	4
	Skid-steer loaders	1
	Telescopic handlers	1
	Backhoe loaders	37

Source: Off-Highway Research

Terra remains market leader in backhoe loaders, JCB's core product, and has increased its market share further still following the bankruptcy of Austro Diesel, the erstwhile Fermecc dealer. The declining popularity of the backhoe loader in Austria in favour of midi excavators will be of concern to Terra, which, despite a wide product range, has yet to achieve a significant penetration of other sectors.

DISTRIBUTION:

In 2010 Terra, in conjunction with JCB, announced a strategic restructuring of its distribution network. Under the terms of the re-organisation, Terra Maschinen Vertriebs und Service GmbH will remain as general importer in Austria for the complete range of JCB construction and material handling equipment, but a new network of smaller, regional dealers will also be established to forge closer ties with customers throughout the country. These dealers will be directly administered by the Industrie Holding organisation, which is also responsible for the activities of 13 other Terra Group sales companies throughout Eastern Europe.

In addition to the Austrian sales companies, Terra has established an increasing number of subsidiary companies in neighbouring Central European countries.

- Terramet – Czech Republic: JCB, Ingersoll-Rand
- Terrastroj – Slovakia: JCB, Potain, Ingersoll-Rand, Nissan
- Terra JCB - Slovenia: JCB
- Terra Jaska – Croatia: JCB
- Terra Jntrex – Bosnia: JCB
- Terra Hungaria – Hungary: JCB
- Terra Koevi – Serbia: JCB
- Terra Romania - Romania: JCB

FUTURE DEVELOPMENTS

A dedicated construction equipment rental company, under the brand name TerraRENT, has been established and underlines Terra's increasing commitment to the sector. There is currently a network of nine rental stations throughout Austria. The complete range of JCB construction equipment is available for hire for short or extended periods of time in addition to fork-lift trucks from Nissan.

VOLVO ÖSTERREICH

Factory Address	Volvo Baumaschinen Österreich GmbH Grafenholzweg 1 A-5101 Bergheim bei Salzburg
Telephone	+43 (0) 662 469 11-0
Website	www.volvoce.at
Ownership	100 per cent subsidiary of the Volvo Construction Equipment Group. The franchise was held until recently by the Swedish trading company, Bilia AB. Bilia is currently the largest Volvo dealership in the world, is itself part owned (37 per cent) by Volvo and, although primarily active in Scandinavia, is also present in Germany, France and Italy. In 1998 Bilia bought out the previous Volvo dealer in Austria, IBK, from the Creditanstalt bank and the company's new name, Bilia Baumaschinen, was adopted.
Turnover 2009	€75 million.
Personnel	120.

FRANCHISES

Volvo's Austrian subsidiary company focuses exclusively on the Volvo brand.

SALES

Table 125. Volvo Österreich: Sales of Construction Equipment, 2009 (Units)

Volvo	Crawler excavators	81
	Wheeled excavators	14
	Wheeled loaders	64
	Articulated dump trucks	6
	Mini excavators	15
	Backhoe loaders	2
	Asphalt finishers	1

Source: Off-Highway Research

The strongest area of interest for Volvo remains the medium to large size wheeled loader market where it has traditionally retained market leadership for many years. Crawler excavators are another success story as of course are articulated dump trucks where the company's position remains unassailable. Wheeled excavators and compact equipment remain weaker areas and Volvo has been conspicuously unable to challenge the established suppliers in these sectors.

DISTRIBUTION

The company's head office is situated in Bergheim, near Salzburg with additional depots in Gumpoldskirchen, Lieboch, Volders and St. Marien.

Volvo Baumaschinen Österreich also has subsidiary companies in Budapest, Bratislava, Prague, Zagreb and Bucharest. With effect from 1997 the Austrian subsidiary company has also been able to sell Volvo construction equipment in Slovenia, Croatia and Bosnia via a network of independent dealers situated in those territories.

FUTURE DEVELOPMENTS

Volvo is keen to become an active participant in Austria's growing rental sector, and it is currently developing the Volvo Rents franchise. The company also wishes to place more emphasis on the promotion of compact machinery generally in Austria, and to this end has established a dedicated sales team.

ZEPPELIN

Factory Address	Zeppelin Österreich GmbH Zeppelinstraße 2 A-2401 Fischamend
Telephone	+43 (0) 2232 790-0
Website	www.zeppelin-cat.at
Ownership	Wholly owned subsidiary of the Zeppelin company of Munich, the Caterpillar importer for Germany. The Austrian company originally traded under the name Eisner until a recent change of name was instigated to highlight its association with the famous Zeppelin company.
Turnover 2009	Not revealed.
Personnel	170.

FRANCHISES

Table 126. Zeppelin: Range of Franchises, 2010

Company	Products
Caterpillar	Construction equipment
Terex O&K	Mining excavators
Hyster	Fork-lift trucks
Verachtert	Crushers, grapples, sieving buckets

Source: Company Information

The extent of the Caterpillar product line means that Zeppelin is almost entirely dependent on the Caterpillar franchise. Bitelli road building products have been incorporated into the programme since the Italian company's acquisition by the North American organisation, although little progress has been made with them. Hyster fork-lift trucks are a recently added sideline. The franchise for CompAir mobile compressors was relinquished several years ago on the basis that this product did not sit comfortably within the company's mainline construction equipment interests.

SALES

Zeppelin is well placed in the crawler excavator sector, although in recent years has been outperformed by Hitachi, Volvo and New Holland. In contrast, wheeled excavator sales have been disappointing. Large wheeled loaders are another strong area, although the company has lost market share during the last three years to its two main rivals, Volvo and Liebherr. In the lower volume sectors Caterpillar is the leading supplier in rigid dump trucks, crawler dozers and crawler loaders.

Table 127. Zeppelin: Sales of Construction Equipment, 2009 (Units)

Caterpillar		
	Crawler excavators	66
	Wheeled excavators	15
	Mini excavators	12
	Wheeled loaders	53
	Crawler dozers	5
	Crawler loaders	4
	Skid-steer loaders	12
	Backhoe loaders	9
	Articulated dump trucks	2
	Rigid dump trucks	3
	Motor graders	2

Source: Off-Highway Research

DISTRIBUTION

In May 1998 Zeppelin moved to a highly modern new headquarters in Fischamend, some 4 kilometres from Vienna airport and offering considerably improved logistics over its previous offices situated in a built-up area of Vienna. The company has additional sales and service depots located at Linz, Kalsdorf, Innsbruck and Stadelbach.

FUTURE DEVELOPMENTS

Zeppelin is currently one of the country's leading rental operators and is currently applying focus on expanding its Cat Rental Store operations. The company's performance in the compact equipment sector falls some way short of expectations, however, and Zeppelin will be keen to explore ways of increasing its penetration of this important sector.

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