

**THE MARKET FOR CONSTRUCTION EQUIPMENT AND  
AGRICULTURAL TRACTORS IN AUSTRIA  
NOVEMBER 2006**

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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 December 2003 on the subject, and offers a forecast for each product sector until 2010.

The findings presented in this study are based upon an extensive interview programme carried out in September 2006 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, Steyr and 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, 2006**

<b>Land Area</b>	83,859 km <sup>2</sup>																				
<b>Population</b>	8.1 million																				
<b>Main Towns (Population '000)</b>	Vienna: 1,630 Graz: 226 Linz: 186 Salzburg: 150 Innsbruck: 120																				
<b>Governmental System</b>	Federal Republic with 9 provinces: <table border="1" style="margin-left: 20px;"> <thead> <tr> <th><u>Province</u></th> <th><u>Capital City</u></th> </tr> </thead> <tbody> <tr> <td>Vienna</td> <td>Vienna</td> </tr> <tr> <td>Lower Austria</td> <td>St. Pölten</td> </tr> <tr> <td>Upper Austria</td> <td>Linz</td> </tr> <tr> <td>Styria</td> <td>Graz</td> </tr> <tr> <td>Tyrol</td> <td>Innsbruck</td> </tr> <tr> <td>Carinthia</td> <td>Klagenfurt</td> </tr> <tr> <td>Salzburg</td> <td>Salzburg</td> </tr> <tr> <td>Voralberg</td> <td>Bregenz</td> </tr> <tr> <td>Burgenland</td> <td>Eisenstadt</td> </tr> </tbody> </table>	<u>Province</u>	<u>Capital City</u>	Vienna	Vienna	Lower Austria	St. Pölten	Upper Austria	Linz	Styria	Graz	Tyrol	Innsbruck	Carinthia	Klagenfurt	Salzburg	Salzburg	Voralberg	Bregenz	Burgenland	Eisenstadt
<u>Province</u>	<u>Capital City</u>																				
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, led by the current federal chancellor Wolfgang Schüssel, 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.

In April 2005, following severe disputes within the FPÖ, Jörg Haider created a new party, the Alliance for the Future of Austria (BZÖ). All FPÖ members of government joined the newly formed party, although following the October 1 2006 elections the ÖVP- BZÖ coalition lost their majority in parliament. Political observers now expect that the new government will be a coalition between the ÖVP and the Social Democratic Party of Austria (SPÖ).

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, 2003-2005**

	2003	2004	2005
<b>Real GDP Growth (%)</b>	1.1	2.4	2.6
<b>Unemployment Rate (%)</b>	4.3	4.8	5.2
<b>Consumer Prices (%)</b>	1.3	2.1	2.3
<b>Budget Balance % of GDP</b>	-2.4	-	-0.8
<b>Current Account Balance/GDP</b>	-0.2	0.1	1.2
<b>Exports (%)</b>	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. In 2002 Austria's GDP per head was more than 10 per cent higher than the EU average, making it the fourth richest EU country. Austria is a highly developed industrialised nation with an important service sector which accounts for two-thirds of employment and 60 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 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.

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.

**Table 3. Austria: Main Export Markets, 2005**

(%)

<b>Germany</b>	31.2
<b>Italy</b>	8.7
<b>USA</b>	5.8
<b>Switzerland</b>	5.2
<b>France</b>	4.2

Source: OECD

The strong economic performance in the late 1980s continued into the early 1990s, with Austria benefiting from German reunification and the opening up of Eastern Europe. However, growth slowed in the first few years of EU membership, but recovered well in 1998 (3.9%). This was the highest GDP growth rate since 1990, and it was also significantly higher than in the EU (2.7%). Austria's recovery was mainly based on exports and investment in machinery and equipment, both positive effects of EU membership.

By the end of the 1990s economic growth rates had slowed in line with a marked decline of economic growth in most of Europe following the crises in emerging markets. In the second half of 1999, however, employment had already started to grow and the economy began to recover once more with GDP rising to 3.5 per cent in 2000, due primarily to booming exports and lively domestic demand. In 2001 and 2002 GDP expansion weakened once more, above all as a result of renewed budgetary consolidation and restrictive expenditure policies by the Federal government. The Austrian economy continued to suffer from persistently weak overall demand and in 2003 GDP rose by only 1.1 per cent.

From 2004, however, favourable business conditions worldwide began to set in motion a cyclical upswing in the Austrian economy, which has continued to gain strength in 2006. Demand incentives have been transmitted from exports to domestic investment, thereby fostering a sustained upturn.

## CONSTRUCTION ACTIVITY

**Table 4. Austria: Construction by Type, 2001-2004**

	Volume 2003 (€Bns)	% Change at Constant Prices			
		2001	2002	2003	2004
<b>Residential</b>	11.5	-8.5	-2.9	6.0	0.6
<b>Non-Residential</b>	9.9	-1.5	0.8	2.7	-1.3
<b>Civil Engineering</b>	7.0	3.5	5.8	6.2	2.6
<b>Total</b>	<b>28.4</b>	<b>-3.5</b>	<b>0.6</b>	<b>5.1</b>	<b>0.5</b>

Source: WIFO

After a very weak performance in 2001 and marking time on balance in 2002, construction activity came back strongly in 2003. Housing was in a very bad way in 2001 and 2002, with the number of houses built falling from 50,000 to just above 40,000. Matters improved during 2002 and but the increase in the following year was artificial and short-lived. Much housing is subsidised (the private sector accounts for only 56 per cent of the housing stock) and the recipients of the subsidies feared that they were about to lose the privilege in the 2003 discussions about public spending. They spent more than usual in 2003, with the result that in 2004 only about 42,500 homes were completed.

Non-residential construction is always a delicate balance in such a small country. Offices and factories can employ only a limited number of people and the office accommodation market is often oversupplied. Hence in the four years shown above there were two good years and two

bad, for new construction and for renovation (although not the same years). The fall in 2004 was caused, by investors jumping into the market in 2003 to use accelerated depreciation measures that were withdrawn at the end of the year.

Civil engineering was the only type of construction to show positive figures in every year after 2000. The EU enlargement obliges the country to build road and railway infrastructure more rapidly and the government is caught in a trap of its own making. It postponed projects in the second half of the 1990s; now it has to implement them, to play its part as an EU member sitting next to the new member states. Two packages of spending went on infrastructure of all kinds in 2002/2003 and the general infrastructure plan was passed in 2002, releasing €45 billion for new projects.

The main highways have passed into the hands of a new agency that has secured funds (partly by tolls on heavy trucks) and obliged the government to recognise its duty to maintain the 2,000 km under its control. Projects are much more numerous than in the past, these being the largest among them:

- The building of the long awaited road going from Vienna northwards, towards the Czech border at Drasenhofen (towards Brno in the Czech Republic) started in 2003. The three parts will be ready in 2008 and 2009.
- The construction of the A6 from Vienna to Bratislava (Slovakia) started in 2004 and the road will be ready by 2007.
- A new road from Eisenstadt and Wiener Neustadt southwards towards the Hungarian city of Szombathely opened to traffic in the summer of 2004.
- A route from Graz, northwards to Kapfenberg was begun in November 2003, with opening planned for October 2006.

## **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 190,400 in 2005, 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, 2005**

<b>Size (ha)</b>	<b>Units</b>	<b>%</b>
<b>Under 2</b>	25,895	13.6
<b>2-5</b>	37,890	19.9
<b>5-10</b>	29,320	15.4
<b>10-20</b>	30,085	15.8
<b>20-30</b>	26,650	14.0
<b>30-50</b>	23,230	12.2
<b>50-100</b>	11,045	5.8
<b>100-200</b>	3,620	1.9
<b>Over 200</b>	2,665	1.4
<b>Total</b>	<b>190,400</b>	<b>100.0</b>

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, 2005**

(%)

<b>Arable Land</b>	41.0
<b>Grassland</b>	
– Multi Cut	27.0
– One Cut	4.5
<b>Alpine Pasture</b>	25.0
<b>Vineyards, Nurseries</b>	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, 2005**

(%)

<b>Forestry</b>	20.3
<b>Milk</b>	16.6
<b>Pigs</b>	16.3
<b>Cattle</b>	12.8
<b>Fruit, Wine</b>	10.1
<b>Cereals</b>	7.3
<b>Vegetables</b>	6.7
<b>Poultry</b>	4.7
<b>Other</b>	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 2005. 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 2005 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.

### **FORECAST ASSUMPTIONS**

**Table 8. Austria: Forecast Construction Activity by Type, 2006-7**

(% change at constant prices)

	2006	2007
<b>Residential</b>	1.1	1.8
<b>Non-Residential</b>	1.9	1.7
<b>Civil Engineering</b>	2.5	2.7
<b>Total</b>	<b>1.7</b>	<b>2.0</b>

Source: WIFO

In the context of a recovering economy, construction activity is set to expand in the forecast period but at a rate below 2.0 per cent each year. The main growth stimulus will come from the improvement of the road and rail infrastructure towards the country's eastern neighbours.

The economy may perform better than the EU average in the medium term, if the effects of tax reforms, trade with the new EU countries and an improvement in residential construction combine favourably. The risk is that increasing oil and gas prices may discourage consumers and slow the rate of recovery, which is already in progress because of expanding export volume and the needs of industry to invest in more capacity.

Housing will unfortunately grow slowly up to 2007, as public expenditure on subsidies cannot grow and the private sector is showing signs of saturation. Only after the forecast period can the economists see the greater prosperity of the citizens being translated into more buying of housing. The only positive factor before 2007 is the grants for energy saving measures on existing housing that the state is providing as part of its efforts to meet its Kyoto aim.

Non-residential construction should do well as the economy improves. At present there is a lot of office space empty but the state is offering lower taxes as an incentive to organisations to regard Vienna as an ideal centre for the new Europe, in competition with Frankfurt, Brussels and London. This should have some effect from 2006 onwards.

Civil engineering will be the strongest component of the construction industry, with heavy earthmoving featuring in many of the ongoing projects mentioned earlier, as well as in big new projects, such as a new autobahn round Linz in the West. Express roads will play a role, such as the S7 from the Hungarian border at Rábfüzes, towards Gleisdorf. This new road will connect the southeast of Austria with the west of Hungary. The road from Linz to the Czech border, towards Prague is another planned link, as is a road from the Swiss border to Innsbruck. Finally, a new express road will link Leoben, north of Graz to Klagenfurt. The railway improvement activity already started will continue but should accelerate after 2007, when a new plan comes into force.

## **SUMMARY OF SALES AND PRODUCTION 2001-2005**

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 9. Austria: Sales of Construction Equipment and  
Agricultural Tractors, 2001-2005**

(Units)

	2001	2002	2003	2004	2005	% Change 2001-2005
<b>Mobile Cranes</b>	39	28	65	95	43	+10
<b>Mini Excavators</b>	606	543	502	548	544	-10
<b>Crawler Excavators</b>	594	697	776	762	880	+48
<b>Wheeled Excavators</b>	193	190	225	244	201	+4
<b>Crawler Dozers</b>	16	26	34	41	25	+56
<b>Crawler Loaders</b>	13	10	10	9	4	-69
<b>Wheeled Loaders under 80 hp</b>	92	72	97	131	122	+32
<b>Wheeled Loaders over 80 hp</b>	312	320	345	365	342	+10
<b>Backhoe Loaders</b>	167	119	124	132	94	-44
<b>Skid-Steer Loaders</b>	183	176	130	145	110	-40
<b>RTLTs – Masted</b>	30	25	32	40	50	+66
<b>RTLTs – Telescopic</b>	67	122	115	119	83	+24
<b>Motor Graders</b>	29	26	29	38	16	-45
<b>Rigid Dump Trucks</b>	7	15	12	8	8	+14
<b>Articulated Dump Trucks</b>	29	33	33	42	40	+38
<b>Asphalt Finishers</b>	39	36	44	44	43	+10
<b>Total Construction Equipment</b>	<b>2,416</b>	<b>2,438</b>	<b>2,573</b>	<b>2,763</b>	<b>2,605</b>	<b>+8</b>
<b>Agricultural Tractors</b>	<b>6,429</b>	<b>6,327</b>	<b>6,250</b>	<b>6,625</b>	<b>6,344</b>	<b>-1</b>

Source: Off-Highway Research

Austria is traditionally a very stable market, although during the last decade the construction equipment sector has been subject to unprecedented fluctuations in demand. During the period 1998-2000 sales of construction equipment rose to their highest recorded levels, although have since returned to more customary levels of demand over the following five years.

For much of the 1990s Austria's construction industry languished in the grip of recession and demand for new machinery fell to extremely low levels as contractors held off on capital investment. An increasingly positive economic outlook towards the end of the decade, however, coupled with the need to replace ageing machinery, finally resulted in a sustained rise in the market, which peaked in 2000 at 2,959 units, the highest level of sales ever recorded in Austria.

Inevitably such volumes could not be sustained indefinitely and by 2001 the market had cooled in response to a weakening of demand for new construction brought about by the government's attempts to reduce budget deficits and curb public spending. Furthermore, any machinery requirements for the few contracts that did emerge could easily be covered by the existing

population of machines, 50 per cent of which was still less than four years old. Fears about a further decline in the market in 2002 proved unfounded, although volumes failed to grow significantly beyond the previous year's level.

Following three years of successive growth, the Austrian 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.

A significant influence on demand for new machinery in 2005 was caused by the Federal government's decision to instigate changes in the tax regulations governing capital investment at the end of 2004. These changes stimulated the advance purchase of machines that would have traditionally been ordered in the first quarter of 2005, and inevitably demand last year was adversely affected. In line with suppliers' expectations at the beginning of this year, the market has returned to a normal pattern of demand and sales should undergo a modest recovery of around five per cent by the end of 2006.

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. Wheeled loaders above 100 horsepower also exhibited promising growth up until 2000, although demand for compact wheeled loaders has effectively remained stagnant throughout the period under review.

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. Mini excavator production has been expanded at Neuson, based in Linz, and in 2005 the company began the assembly of skid-steer loaders. Agricultural tractor production at CNH's Steyr plant, based in St. Valentin, has also increased 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 10. Austria: Production of Construction Equipment and  
Agricultural Tractors, 2001-2005**  
**(Units)**

	2001	2002	2003	2004	2005
<b>Mini Excavators</b>	3,300	3,000	3,200	3,500	3,438
<b>Skid-Steer Loaders</b>	-	-	-	-	150
<b>Crawler Dozers</b>	274	275	307	310	310
<b>Crawler Loaders</b>	294	248	280	450	350
<b>Wheeled Loaders under 80 hp</b>	570	372	415	1,085	944
<b>Wheeled Loaders over 80 hp</b>	930	969	1,050	903	1,219
<b>Telescopic Handlers</b>	-	-	-	-	25
<b>Agricultural Tractors</b>	9,314	10,720	8,650	9,200	8,345
<b>Total</b>	<b>14,682</b>	<b>15,584</b>	<b>13,902</b>	<b>15,448</b>	<b>14,781</b>

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 11. Austria: Population of Construction Equipment and Agricultural Tractors, 2005**

**(Units)**

<b>Mobile Cranes</b>	650
<b>Mini Excavators</b>	6,000
<b>Wheeled Excavators</b>	4,000
<b>Crawler Excavators</b>	8,000
<b>Crawler Dozers</b>	800
<b>Crawler Loaders</b>	350
<b>Backhoe Loaders</b>	2,250
<b>Wheeled Loaders</b>	5,500
<b>Skid-Steer Loaders</b>	1,500
<b>Rigid Dump Trucks</b>	225
<b>Articulated Dump Trucks</b>	250
<b>Rough Terrain Lift Trucks – Masted</b>	250
<b>Rough Terrain Lift Trucks – Telescopic</b>	400
<b>Motor Graders</b>	450
<b>Asphalt Finishers</b>	350
<b>Mobile Compressors</b>	6,000
<b>Total Construction Equipment</b>	<b>36,975</b>
<b>Agricultural Tractors</b>	<b>400,000</b>

Source: Off-Highway Research, Official Statistics

### **Market Shares**

Table 12 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 12. Austria: Suppliers of Off-Highway Equipment and Their Market Shares, 2005**

(Units)

	Mobile Cranes	Crawler Excavators	Wheeled Excavators	Mini Excavators	Crawler Dozers	Crawler Loaders	Wheeled Loaders	Backhoe Loaders	Skid- Steer Loaders	RTLs	Motor Graders	Articulated Dump Trucks	Rigid Dump Trucks	Asphalt Finishers
Atlas Weyhausen	-	-	-	-	-	-	7	-	-	-	-	-	-	-
Bell Equipment	-	-	-	-	-	-	-	-	-	-	-	1	-	-
Case	-	4	4	1	-	-	1	7	2	-	-	-	-	-
Caterpillar	-	124	23	21	6	4	76	17	6	2	-	3	2	-
Doosan	-	28	11	3	-	-	9	-	1	-	-	-	-	-
Dynapac	-	-	-	-	-	-	-	-	-	-	-	-	-	3
Euclid-Hitachi	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Euromach	-	-	3	-	-	-	-	-	-	-	-	-	-	-
Gehl	-	-	-	-	-	-	-	-	30	-	-	-	-	-
Grove	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HBM-Nobas	-	-	-	-	-	-	-	-	-	-	1	-	-	-
Hitachi	-	57	7	2	-	-	-	-	-	-	-	-	-	-
Hyundai	-	1	-	1	-	-	-	-	1	-	-	-	-	-
Hydrema	-	-	-	-	-	-	-	1	-	-	-	-	-	-
I-R ABG	-	-	-	-	-	-	-	-	-	-	-	-	-	4
I-R Bobcat	-	-	-	24	-	-	-	-	46	4	-	-	-	-
JCB	-	34	4	20	-	-	15	47	6	9	-	-	-	-
JLG	-	-	-	-	-	-	-	-	-	7	-	-	-	-
John Deere	-	-	-	-	-	-	-	-	-	5	-	-	-	-
Jumbo	-	-	-	-	-	-	-	-	-	30	-	-	-	-
Kawasaki	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kobelco	-	-	-	1	-	-	-	-	-	-	-	-	-	-
Komatsu	-	113	19	21	15	-	44	3	6	2	-	5	4	-
Kramer	-	-	-	-	-	-	29	-	-	1	-	-	-	-
Kubota	-	1	-	41	-	-	2	-	-	-	-	-	-	-
Libra	-	-	-	7	-	-	-	-	-	-	-	-	-	-
Liebherr	38	67	53	-	3	-	143	-	-	-	-	-	-	-

(continued)

**Table 12. Austria: Suppliers of Off-Highway Equipment and Their Market Shares, 2005 (continued)**

(Units)

	Mobile Cranes	Crawler Excavators	Wheeled Excavators	Mini Excavators	Crawler Dozers	Crawler Loaders	Wheeled Loaders	Backhoe Loaders	Skid- Steer Loaders	RTLs	Motor Graders	Articulated Dump Trucks	Rigid Dump Trucks	Asphalt Finishers
Manitou	-	-	-	-	-	-	-	-	-	20	-	-	-	-
Massey Ferguson	-	-	-	-	-	-	-	-	-	3	-	-	-	-
Mecalac	-	1	4	-	-	-	-	-	-	-	-	-	-	-
Merlo	-	-	-	-	-	-	-	-	-	50	-	-	-	-
Neuson	-	33	-	52	-	-	-	-	12	-	-	-	-	-
New Holland	-	132	13	34	1	-	12	5	-	-	15	-	-	-
Paus	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sennebogen	-	-	2	-	-	-	-	-	-	-	-	-	-	-
Tadano Faun	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Takeuchi	-	200	25	290	-	-	-	-	-	-	-	-	-	-
Terex	-	-	-	-	-	-	-	-	-	-	-	4	2	-
Terex Atlas	-	-	24	-	-	-	-	-	-	-	-	-	-	-
Terex Damage	3	-	-	-	-	-	-	-	-	-	-	-	-	-
TEREX Fermec	-	-	-	-	-	-	-	9	-	-	-	-	-	-
TEREX Schaeff	-	-	4	2	-	-	6	-	-	-	-	-	-	-
Vögele	-	-	-	-	-	-	-	-	-	-	-	-	-	36
Volvo	-	82	5	15	-	-	116	5	-	-	-	27	-	-
Weidemann	-	-	-	-	-	-	4	-	-	-	-	-	-	-
Yanmar	-	3	-	9	-	-	-	-	-	-	-	-	-	-
<b>Total</b>	<b>43</b>	<b>880</b>	<b>201</b>	<b>544</b>	<b>25</b>	<b>4</b>	<b>464</b>	<b>94</b>	<b>110</b>	<b>133</b>	<b>16</b>	<b>40</b>	<b>8</b>	<b>43</b>

Source: Off-Highway Research

## EQUIPMENT ANALYSES

### MOBILE CRANES

#### Market Size and Trends

**Table 13. Austria: Sales of Mobile Cranes by Types, 2001-2005**

**(Units)**

	2001	2002	2003	2004	2005
<b>All Terrain</b>	35	24	65	95	43
<b>Truck-Mounted</b>	4	4	-	-	-
<b>Total</b>	<b>39</b>	<b>28</b>	<b>65</b>	<b>95</b>	<b>43</b>

Source: Off-Highway Research

The market for mobile cranes in Austria is traditionally stable with demand averaging between 30 to 40 units per year. This is largely due to the dominance of five major crane hire companies in Austria, 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.

In 1999 and 2000 two of the largest crane hire companies in Austria undertook significant fleet replacement programmes and the market rose sharply with sales of more than 70 units. Demand stabilised once again in the subsequent two years and the market returned to its more customary levels. The announcement in 2003 of a series of capital investment subsidies by the Federal government, however, 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 95 units in 2004.

The all terrain crane continues to dominate the Austrian market with 55 and 60 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 one to three 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 14. Austria: Sales of All Terrain Cranes by Lift Capacity, 2005**

<b>Tonnes</b>	<b>Units</b>
<b>20-40</b>	4
<b>40-80</b>	29
<b>80-100</b>	6
<b>100-120</b>	1
<b>120-150</b>	-
<b>Above 150</b>	3
<b>Total</b>	<b>43</b>

Source: Off-Highway Research

### Market Shares

**Table 15. Austria: Suppliers of Mobile Cranes and Their Market Shares, 2001-2005**

(Units)

	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>
<b>Liebherr</b>	28	23	46	65	38
<b>TEREX Demag</b>	3	1	13	20	3
<b>Tadano Faun</b>	3	-	4	7	2
<b>Grove</b>	1	-	2	3	-
<b>Kato</b>	4	4	-	-	-
<b>Total</b>	<b>39</b>	<b>28</b>	<b>65</b>	<b>95</b>	<b>43</b>

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 Austria 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 in Austria is effectively shared between just two manufacturers. **TEREX Demag** products are sold direct from its headquarters in Zweibrücken, Germany, whilst **Tadano Faun**'s range of German built all terrain cranes is distributed by the New Holland dealer, Kohlschein, based in Vienna. **Grove** cranes are also sold directly from the company's headquarters in Germany, although the company has been unable to offer a significant challenge to the established suppliers.

**Kato** was distributed in Austria for over 30 years by the highly respected Friedrich Berger organisation of Schwanenstadt. Berger is a crane specialist and holds mobile crane and hydraulic excavator franchises in the Czech Republic, Slovakia, Hungary, Slovenia and Croatia. Berger is also the market leader in Austria for lorry cranes with the HIAB brand.

**Table 16. Austria: Distribution Networks of Suppliers of Mobile Cranes, 2006**

<b>Manufacturer</b>	<b>Distributor</b>
<b>Liebherr</b>	Liebherr
<b>Grove</b>	Direct sales
<b>Tadano Faun</b>	Kohlschein
<b>TEREX Demag</b>	Direct sales

Source: Off-Highway Research

### **Population and End-Users**

There are estimated to be about 650 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 machine, 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 unusually high purchasing patterns in 2003/2004, it seems likely that a return to more customary volumes of between 35-40 units will characterise

the pattern of the market in the short to medium term. All terrain cranes are certain to dominate, with only incremental sales being achieved by truck-mounted machines.

**Table 17. Austria: Forecast Sales of Mobile Cranes, 2006-2010**

**(Units)**

2006	2007	2008	2009	2010
45	40	35	35	40

Source: Off-Highway Research

## MINI EXCAVATORS

### Market Size and Trends

**Table 18. Austria: Sales of Mini Excavators, 2001-2005**

**(Units)**

2001	2002	2003	2004	2005
606	543	502	548	544

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 Neuson, has been of particular significance in developing the market. 1999 represented the peak year of demand by which time sales had risen by over 40 per cent compared to the level recorded in 1992.

A further factor to influence demand for mini excavators in Austria has been the growing popularity of rental, particularly during the last ten 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 19. Austria: Sales of Mini Excavators by Weight Category, 2002-2005**

Tonnes	2002		2005	
	Units	%	Units	%
<b>Under 1.5</b>	190	35	98	18
<b>1.6-3.0</b>	158	29	280	52
<b>3.0-6.0</b>	195	36	166	30
<b>Total</b>	<b>543</b>	<b>100</b>	<b>544</b>	<b>100</b>

Source: Off-Highway Research

The most salient feature of the Austrian mini excavator market during recent years has been the trend towards larger size machines. In 1993 the 1,200-1,300 kg mini excavator alone accounted for 75 per cent of sales. Whilst this size of machine still accounts for around 20 per cent of overall sales, the above table highlights the percentage drop in sales compared to machines over 3 tonnes. 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 six tonne machine will be affected by this development.

### **Production**

**Table 20. Neuson: Production of Mini Excavators, 2001-2005**

**(Units)**

2001	2002	2003	2004	2005
3,300	3,000	3,200	3,500	3,438

Source: Off-Highway Research

Austria currently has one producer of mini excavators, **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.

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 ten years. Much of this is attributable to the growth in export sales, but also to its supply agreement with the Gehl organisation in North America. Perhaps the most significant development has been the merger in 2000 with the German based manufacturer of compact wheeled loaders, Kramer, which has elevated the newly formed company, Neuson Kramer Baumaschinen AG, to the status of a full-line supplier of compact construction equipment.

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 21. Austria: Suppliers of Mini Excavators and Their Market Shares, 2001-2005**

	2001		2002		2003		2004		2005	
	Units	%	Units	%	Units	%	Units	%	Units	%
<b>Takeuchi</b>	300	49	280	52	275	55	300	55	290	53
<b>Neuson</b>	42	7	38	7	30	6	41	7	52	10
<b>Kubota</b>	12	2	15	3	18	4	31	6	41	8
<b>New Holland</b>	-	-	-	-	-	-	-	-	34	6
<b>I-R Bobcat</b>	28	5	13	2	13	3	17	3	24	4
<b>Komatsu</b>	29	5	40	7	27	5	16	3	21	4
<b>Caterpillar</b>	63	10	16	3	48	10	29	5	21	4
<b>JCB</b>	7	1	14	2	14	3	22	4	20	4
<b>Volvo</b>	36	6	20	4	6	1	14	2	15	3
<b>Yanmar</b>	28	5	38	7	14	3	18	3	9	2
<b>Libra</b>	11	2	5	1	4	1	6	1	7	1
<b>Doosan</b>	1	-	7	1	13	2	-	-	3	1
<b>TEREX Schaeff</b>	5	1	21	4	13	2	2	1	2	-
<b>Hitachi</b>	-	-	-	-	-	-	1	-	2	-
<b>Kobelco</b>	12	2	12	2	16	3	41	7	1	-
<b>Hyundai</b>	-	-	-	-	-	-	-	-	1	-
<b>Case</b>	6	1	3	-	2	-	-	-	1	-
<b>Pel Job</b>	4	1	4	-	-	-	-	-	-	-
<b>O&amp;K</b>	10	1	8	2	9	2	2	1	-	-
<b>Hanix</b>	2	-	9	2	-	-	2	1	-	-
<b>Fermec</b>	10	1	-	-	-	-	-	-	-	-
<b>Others</b>	-	-	-	-	-	-	6	1	-	-
<b>Total</b>	<b>606</b>	<b>100</b>	<b>543</b>	<b>100</b>	<b>502</b>	<b>100</b>	<b>548</b>	<b>100</b>	<b>544</b>	<b>100</b>

Source: Off-Highway Research

Just two suppliers, Takeuchi and Neuson, who between them regularly account for over 60 per cent of the market, have traditionally dominated the Austrian market. Approximately 20

companies compete in this saturated sector, although in practice sales are distributed between just ten suppliers.

**Takeuchi** is represented by Huppenkothen of Lauterach in the Tyrol. This company 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 network of depots throughout Austria and has expanded 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 in Austria and currently operates a fleet of some 150 machines. Huppenkothen's performance in Austria 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.

**Neuson** has been a consistently successful participant in the Austrian market and, until recently, has been the only other supplier to offer a serious challenge to the dominance of Takeuchi. Neuson sells through a small network of dealers and, since April 1999, via a Neuson Group subsidiary company, Stambach, based in Vienna but with an extensive distribution network throughout the country.

**Table 22. Austria: Distribution Networks of Suppliers of Mini Excavators, 2006**

<b>Manufacturer</b>	<b>Distributor</b>
<b>Neuson</b>	Neuson, Stambach
<b>Takeuchi</b>	Huppenkothen
<b>Caterpillar</b>	Zeppelin, Laurer
<b>I-R Bobcat</b>	Wacker
<b>Volvo</b>	Volvo Österreich
<b>TEREX Schaeff</b>	Baumaschinen Handel
<b>Hitachi</b>	Baumaschinen Handel
<b>Hyundai</b>	Schuller
<b>Komatsu</b>	Kuhn
<b>New Holland</b>	Kohlschein
<b>Yanmar</b>	Breuer
<b>JCB</b>	Terra
<b>Kubota</b>	Esch-Technik
<b>Doosan</b>	Rido
<b>Libra</b>	Oswald

Source: Off-Highway Research

The performance of the remaining suppliers listed in the above table has remained predictably stable throughout the period under review, with the notable exception of **Kubota**, whose market share has increased steadily since the transfer of its franchise to the specialist compact equipment dealer, Esch-Technik. A comprehensive listing of all suppliers is offered above.

### **Population and End-Users**

The mini excavator market has entered a period of 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 6,000 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 in Austria and accounts for the remaining 15 per cent of sales.

### **Forecast**

**Table 23. Austria: Forecast Sales of Mini Excavators, 2006-2010**

**(Units)**

<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>
550	575	575	525	525

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 525-575 units annually.

## HYDRAULIC EXCAVATORS

### Market Size and Trends

**Table 24. Austria: Sales of Hydraulic Excavators by Type, 2001-2005**

(Units)

	2001	2002	2003	2004	2005
<b>Crawler</b>	594	697	776	762	880
<b>Wheeled</b>	193	190	225	244	201
<b>Total</b>	<b>787</b>	<b>887</b>	<b>1,001</b>	<b>1,006</b>	<b>1,081</b>

Source: Off-Highway Research

### Crawler Excavators

Despite the absence of major construction projects in Austria demand for crawler excavators continued to rise unabated from 1993 to 2000, with the market effectively doubling in size over the same period. 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. As a result 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.

In common with all other product sectors the market fell significantly in 2001, although the Federal government's decision to release funds for public infrastructure works in 2002 acted as a stimulus to demand and sales recovered strongly by 20 per cent. This recovery has been sustained throughout the last three years and in 2005 demand reached its highest recorded level.

Much of the growth in the sector during the last ten years is directly attributable to the extremely successful introduction of Takeuchi's seven tonne midi excavator, the TB070, in 1996 and the subsequent launch of competitive products from a number of other suppliers, notably Neuson's 8002 machine. The 7.0-9.0 tonne category is by a considerable margin the fastest growing sector for excavators and now accounts for over 30 per cent of all crawler excavator sales in Austria. In addition, the recent introduction of Takeuchi's 14-tonne crawler excavator has had an equally impressive impact on demand, particularly in 2005 when around 120 units of this model alone were retailed by the dealer. 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 25. Austria: Sales of Crawler Excavators by Weight Category, 2005**

<b>Tonnes</b>	<b>Units</b>	<b>%</b>
<b>6-9</b>	183	21
<b>9-12</b>	5	1
<b>12-14</b>	21	3
<b>14-16</b>	151	17
<b>16-18</b>	18	2
<b>18-20</b>	40	5
<b>20-24</b>	265	30
<b>24-27</b>	92	10
<b>27-35</b>	80	9
<b>35-50</b>	22	2
<b>Over 50.0</b>	3	-
<b>Total</b>	<b>880</b>	<b>100</b>

Source: Off-Highway Research

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 an extremely small demand in Austria for crawler excavators above 35 tonnes, and in 2005 just 25 units of this class were delivered.

The second most important category 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.

### **Wheeled Excavators**

Wheeled excavator sales benefited during the 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 200-225 units per year.

**Table 26. Austria: Sales of Wheeled Excavators by Weight Category, 2005**

<b>Tonnes</b>	<b>Units</b>	<b>%</b>
<b>6-9</b>	28	14
<b>9-11</b>	11	6
<b>11-13</b>	28	14
<b>13-15</b>	15	7
<b>15-17</b>	35	17
<b>17-20</b>	56	28
<b>Over 20</b>	28	14
<b>Total</b>	<b>201</b>	<b>100</b>

Source: Off-Highway Research

There has been little change in the preferred size of machine used in the traditionally conservative Austrian market and 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 2005 accounted for some 17 per cent of sales. There is still a limited demand for wheeled excavators above 20 tonnes, particularly in quarries and forestry, and 28 units in this category were sold in 2005.

### **Market Shares**

#### **Crawler Excavators**

The Austrian 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 in Austria 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.

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 tonne weight class now accounts for an unusually high level of sales in Austria. Similarly, the introduction of the company's 14-tonne model, the TB1140, has also helped to expand the market during the last two years.

**Table 27. Austria: Suppliers of Crawler Excavators and Their Market Shares, 2001-2005**

	2001		2002		2003		2004		2005	
	Units	%	Units	%	Units	%	Units	%	Units	%
<b>Takeuchi</b>	70	12	65	9	70	9	90	11	200	23
<b>New Holland</b>	-	-	-	-	-	-	-	-	132	15
<b>Caterpillar</b>	109	18	102	15	134	17	109	14	124	14
<b>Komatsu</b>	69	12	112	16	101	13	89	11	113	13
<b>Volvo</b>	26	4	56	8	60	8	85	11	82	9
<b>Liebherr</b>	63	11	72	10	74	10	70	9	67	8
<b>Hitachi</b>	-	-	-	-	-	-	41	5	57	7
<b>JCB</b>	10	2	19	3	19	2	18	2	34	4
<b>Neuson</b>	46	8	21	3	37	5	40	5	33	4
<b>Doosan</b>	13	2	10	1	23	3	20	2	28	3
<b>Case</b>	20	3	23	3	9	1	-	-	4	-
<b>Yanmar</b>	6	1	20	3	13	2	2	-	3	-
<b>Mecalac</b>	-	-	-	-	-	-	2	-	1	-
<b>Kubota</b>	2	-	-	-	5	1	9	1	1	-
<b>Hyundai</b>	-	-	-	-	-	-	-	-	1	-
<b>TEREX Schaeff</b>	4	1	6	1	10	1	2	-	-	-
<b>TEREX Atlas</b>	-	-	-	-	-	-	1	-	-	-
<b>PelJob</b>	1	-	-	-	-	-	-	-	-	-
<b>O&amp;K</b>	26	4	22	3	24	3	12	2	-	-
<b>Libra</b>	-	-	-	-	1	-	-	-	-	-
<b>Kobelco</b>	100	17	137	20	155	20	170	22	-	-
<b>I-R Bobcat</b>	-	-	-	-	6	1	-	-	-	-
<b>Hanix</b>	1	-	1	-	-	-	1	-	-	-
<b>Fiat-Hitachi</b>	28	5	31	4	-	-	-	-	-	-
<b>Fiat Kobelco</b>	-	-	-	-	35	5	21	3	-	-
<b>Total</b>	<b>594</b>	<b>100</b>	<b>697</b>	<b>100</b>	<b>776</b>	<b>100</b>	<b>782</b>	<b>100</b>	<b>880</b>	<b>100</b>

Source: Off-Highway Research

**New Holland**, whose crawler excavator product was formerly marketed under the **Kobelco** brand name, is 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.

**Caterpillar** has consistently vied for market leadership in the conventionally sized crawler excavator sector and occupied the top position from 1994 to 1999, although ceded it in subsequent years to Kobelco. The company has benefited enormously from the success of its 300 series excavators and from the reputation of its highly respected dealer, Zeppelin Österreich, formerly Eisner, which is now a wholly owned subsidiary of Zeppelin in Munich, the Caterpillar importer for Germany.

**Komatsu**'s market share has improved significantly in recent years as a result of the improved marketing strategy of its dealer, Kuhn. In 2002 the company achieved a highly creditable second place in the sector and in the standard crawler excavator classes Komatsu now represents the only tangible challenge to the dominance of both Caterpillar and New Holland.

### **Wheeled Excavators**

The wheeled excavator market in Austria 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 market 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, **TEREX Atlas** and **Caterpillar** have been able to offer a credible challenge to the dominance of Liebherr.

**Table 28. Austria: Suppliers of Wheeled Excavators and Their Market Shares, 2001-2005**

	2001		2002		2003		2004		2005	
	Units	%	Units	%	Units	%	Units	%	Units	%
<b>Liebherr</b>	54	28	58	31	65	29	87	34	53	26
<b>Takeuchi</b>	10	5	10	5	20	9	15	6	25	12
<b>TEREX Atlas</b>	-	-	20	11	23	10	31	12	24	12
<b>Caterpillar</b>	19	10	13	7	32	14	45	18	23	11
<b>Komatsu</b>	15	8	11	6	13	6	16	6	19	9
<b>New Holland</b>	-	-	-	-	-	-	-	-	13	6
<b>Doosan</b>	7	4	12	6	12	5	9	3	11	5
<b>Hitachi</b>	-	-	-	-	-	-	3	1	7	3
<b>Volvo</b>	3	2	9	5	2	1	10	4	5	2
<b>TEREX Schaeff</b>	6	3	20	11	9	4	3	1	4	2
<b>Mecalac</b>	2	1	-	-	8	4	4	2	4	2
<b>JCB</b>	3	2	1	1	2	1	1	-	4	2
<b>Case</b>	10	5	7	4	4	2	-	-	4	2
<b>Euromach</b>	-	-	-	-	-	-	6	2	3	1
<b>Sennebogen</b>	-	-	-	-	-	-	4	2	2	1
<b>Pel-Job</b>	1	1	1	1	-	-	-	-	-	-
<b>O&amp;K</b>	15	8	20	11	23	10	14	6	-	-
<b>Neuson</b>	4	2	1	1	2	1	-	-	-	-
<b>Kramer</b>	1	1	-	-	-	-	-	-	-	-
<b>Fuchs</b>	5	3	2	1	-	-	-	-	-	-
<b>Fiat-Hitachi</b>	11	6	5	3	-	-	-	-	-	-
<b>Fiat Kobelco</b>	-	-	-	-	10	4	5	2	-	-
<b>Atlas Weyhausen</b>	27	14	-	-	-	-	-	-	-	-
<b>Total</b>	<b>193</b>	<b>100</b>	<b>190</b>	<b>100</b>	<b>225</b>	<b>100</b>	<b>253</b>	<b>100</b>	<b>201</b>	<b>100</b>

Source: Off-Highway Research

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

**Table 29. Austria: Distribution Networks of Suppliers of Hydraulic Excavators, 2006**

<b>Manufacturer</b>	<b>Distributor</b>	<b>Manufacturer</b>	<b>Distributor</b>
<b>TEREX Atlas</b>	Kohlschein	<b>Hyundai</b>	Schuller
<b>Terex Mining</b>	Zeppelin	<b>JCB</b>	Terra
<b>Caterpillar</b>	Zeppelin	<b>Liebherr</b>	Liebherr
<b>Komatsu</b>	Kuhn	<b>Macmoter</b>	Fritz
<b>Terex Mining</b>	Schuller	<b>Mecalac</b>	Laurer
<b>TEREX Schaeff</b>	Baumaschinen Handel	<b>Neuson</b>	Stambach, Neuson
<b>Hitachi</b>	Baumaschinen Handel	<b>New Holland</b>	Kohlschein
<b>Hydrema</b>	Drott	<b>Volvo</b>	Volvo Austria
<b>Doosan</b>	Rido	<b>Takeuchi</b>	Huppenkothen
<b>Euromach</b>	Oswald		

Source: Off-Highway Research

**Population and End-Users**

**Table 30. Austria: Population of Hydraulic Excavators by Type, 2005**

**(Units)**

<b>Crawler</b>	8,000
<b>Wheeled</b>	4,000
<b>Total</b>	<b>12,000</b>

Source: Off-Highway Research

The population of hydraulic excavators has increased from around 6,800 machines in 1992 to its current level of 12,000. About 35 per cent of the population is constituted by wheeled excavators, although sales of this product have been more affected by the construction industry recession than those of the more versatile crawler excavator.

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 31. Austria: Forecast Sales of Hydraulic Excavators, 2006-2010**

**(Units)**

	2006	2007	2008	2009	2010
<b>Crawler</b>	875	850	850	800	800
<b>Wheeled</b>	225	225	190	190	200
<b>Total</b>	<b>1,100</b>	<b>1,075</b>	<b>1,040</b>	<b>990</b>	<b>1,000</b>

Source: Off-Highway Research

Sales of both crawler and wheeled excavators have invariably confounded pessimistic forecasts and the market has repeatedly failed to react as adversely to economic conditions as is often feared. The extent of the collapse in sales in 2001 and 2002, however, surprised many observers and served to emphasise the fact that the sector can be as susceptible to fluctuations in demand as any other.

The medium term outlook is nevertheless favourable and the forecast growth in the civil engineering sector has already instilled confidence in contractors to continue fleet replacement programmes initiated in 2005 and in the first half of 2006.

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 32. Austria: Sales of Crawler Dozers, 2001-2005**

**(Units)**

<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>
16	26	34	41	25

Source: Off-Highway Research

Demand for crawler dozers has remained relatively weak throughout the 1990s and during the period under review, 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.

The standard size of machine used in Austria remains the 15 to 22 tonne machine, typified by the Caterpillar D6 and Liebherr PR724 models. This category of machine is 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 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 Austrian 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 ten years old.

**Production**

**Table 33. Liebherr: Crawler Dozer Production in Austria, 2001-2005**

**(Units)**

2001	2002	2003	2004	2005
274	275	307	310	310

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 105 horsepower PR712 machine, to the PR752 mining dozer equipped with a 330 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 34. Austria: Suppliers of Crawler Dozers and Their Market Shares, 2001-2005**

	2001		2002		2003		2004		2005	
	Units	%	Units	%	Units	%	Units	%	Units	%
<b>Komatsu</b>	3	19	5	19	5	15	14	34	15	60
<b>Caterpillar</b>	8	50	12	46	14	41	18	44	6	24
<b>Liebherr</b>	5	31	6	23	12	35	9	22	3	12
<b>New Holland</b>	-	-	-	-	-	-	-	-	1	4
<b>Fiat-Hitachi</b>	-	-	3	12	-	-	-	-	-	-
<b>Fiat Kobelco</b>	-	-	-	-	3	9	-	-	-	-
<b>Total</b>	<b>16</b>	<b>100</b>	<b>26</b>	<b>100</b>	<b>34</b>	<b>100</b>	<b>41</b>	<b>100</b>	<b>25</b>	<b>100</b>

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 a comparable volume of sales to Liebherr, although a large order in 2005 saw Komatsu achieve market leadership for the first time.

**Caterpillar** is the traditional market leader, although until recently the company's performance has suffered as a result of pricing inequality with its main competitors. Despite a smaller product range, **Liebherr** had been the chief beneficiary of Caterpillar's loss of market share and the company has the additional advantage that its product is manufactured in Austria.

**Table 35. Austria: Distribution Networks of Suppliers of Crawler Dozers, 2006**

Manufacturer	Distributor
<b>Caterpillar</b>	Zeppelin
<b>New Holland</b>	Kohlschein
<b>Komatsu</b>	Kuhn
<b>Liebherr</b>	Liebherr

Source: Off-Highway Research

**Population and End-Users**

The traditional user of crawler dozers in Austria 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 operating in Austria declined steadily during the 1990s and Off-Highway Research estimates the current population to be around 800 units.

**Forecast**

**Table 36. Austria: Forecast Sales of Crawler Dozers, 2006-2010**

**(Units)**

2006	2007	2008	2009	2010
25	28	20	20	15

Source: Off-Highway Research

The Austrian market is primarily a replacement one. The buoyant outlook in the civil engineering sector and release of government funds for infrastructure development should sustain a modest level of replacements during the next two years, after which demand is likely to contract 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 37. Austria: Sales of Crawler Loaders, 2001-2005**

**(Units)**

2001	2002	2003	2004	2005
13	10	10	9	4

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 Austrian 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 13-14 units annually, and during the period under review has fallen substantially below that.

### **Production**

**Table 38. Liebherr: Crawler Loader Production in Austria, 2001-2005**

**(Units)**

2001	2002	2003	2004	2005
294	248	280	450	350

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, since the company has only targeted the machine at this particular 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

Caterpillar has been the perennial market leader, although briefly ceded its position to Liebherr in 2003. 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 39. Austria: Suppliers of Crawler Loaders and Their Market Shares, 2001-2005**

	2001		2002		2003		2004		2005	
	Units	%	Units	%	Units	%	Units	%	Units	%
<b>Caterpillar</b>	12	92	8	80	1	10	5	56	4	100
<b>Liebherr</b>	1	8	2	20	9	90	4	44	-	-
<b>Total</b>	<b>13</b>	<b>100</b>	<b>10</b>	<b>100</b>	<b>10</b>	<b>100</b>	<b>9</b>	<b>100</b>	<b>4</b>	<b>100</b>

Source: Off-Highway Research

**Table 40. Austria: Distribution Networks of Suppliers of Crawler Loaders, 2006**

<b>Manufacturer</b>	<b>Distributor</b>
<b>Caterpillar</b>	Zeppelin
<b>Liebherr</b>	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 350 units, based on recent sales records and estimates of average useful life. Crawler loaders in Austria 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 41. Austria: Forecast Sales of Crawler Loaders, 2006-2010**

(Units)

2006	2007	2008	2009	2010
12	12	15	15	10

Source: Off-Highway Research

## **WHEELED LOADERS**

### Market Size and Trends

**Table 42. Austria: Sales of Wheeled Loaders by Horsepower Category, 2001-2005**

(Units)

	2001	2002	2003	2004	2005
<b>Under 80 hp</b>	92	72	97	131	122
<b>Over 80 hp</b>	312	320	345	365	342
<b>Total</b>	<b>404</b>	<b>392</b>	<b>442</b>	<b>496</b>	<b>464</b>

Source: Off-Highway Research

The wheeled loader market is one of the most competitive sectors in the Austrian construction equipment market with around 20 suppliers, although just three companies, Caterpillar, Volvo and Liebherr regularly account for 70 per cent of annual sales.

Demand for wheeled loaders remained surprisingly stable during the 1990s despite the country's construction industry recession, with an average sales volume of 380 units per year. In 2000, however, the market reached its highest recorded level of 564 units, largely as the result of fleet replacements. In line with overall market developments demand fell in 2001 and failed to recover in 2002. During the last three years, however, a buoyant construction economy has resulted in a more sustained recovery in sales.

**Table 43. Austria: Sales of Wheeled Loaders by Horsepower Category, 2005**

<b>Horsepower</b>	<b>Units</b>	<b>%</b>
<b>Under 60</b>	33	7
<b>60-80</b>	89	19
<b>80-100</b>	36	8
<b>100-120</b>	38	8
<b>120-150</b>	54	12
<b>150-200</b>	76	16
<b>200-250</b>	49	11
<b>250-300</b>	55	12
<b>Over 300</b>	34	7
<b>Total</b>	<b>464</b>	<b>100</b>

Source: Off-Highway Research

The most salient feature of the market during the last three years has been the increasing importance of the 60-80 horsepower class which now accounts for around 20 per cent of overall sales compared to ten 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 in Austria 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 m<sup>2</sup> on a total site of 12.6 hectares.

**Table 44. Liebherr: Wheeled Loader Production in Austria, 2001-2005**

(Units)

	2001	2002	2003	2004	2005
<b>Under 80 hp</b>	570	372	415	1,085	944
<b>Over 80 hp</b>	930	969	1,050	903	1,219
<b>Total</b>	<b>1,500</b>	<b>1,341</b>	<b>1,465</b>	<b>1,988</b>	<b>2,163</b>

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.

At the 2004 Bauma exhibition a new range of compact Stereo loaders, the Series 4, was launched. The most significant development has been the incorporation of John Deere engines, thereby ending the long association with the company's previous engine supplier, Deutz. Liebherr manufactures a limited range of compact wheeled loaders under licence for John Deere which is sold in North America under the Deere brand name.

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 are currently being incorporated on the medium sized wheeled loaders from 110 to 136 horsepower and the new models will be officially launched at the 2007 Bauma exhibition.

The introduction of the latest wheeled loader ranges resulted in a significant rise in production volumes in Bischofshofen during 2004 and 2005 and output is set to reach 2,800 units in 2006, the highest recorded level of production. Liebherr currently manufactures a range of fourteen wheeled loaders ranging from the 60 horsepower L506 to the 272 horsepower L580. Production of compact wheeled loaders up to 80 horsepower currently accounts for around 40 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**

**Table 45. Austria: Suppliers of Wheeled Loaders and Their Market Shares, 2001-2005**

	2001		2002		2003		2004		2005	
	Units	%	Units	%	Units	%	Units	%	Units	%
<b>Liebherr</b>	97	24	86	22	120	27	154	30	143	31
<b>Volvo</b>	93	23	88	22	126	29	134	26	116	25
<b>Caterpillar</b>	97	24	118	30	100	23	103	20	76	16
<b>Komatsu</b>	35	9	35	9	29	7	55	11	44	9
<b>Kramer</b>	6	1	10	3	10	2	13	2	29	6
<b>JCB</b>	14	3	7	2	5	1	13	2	15	3
<b>New Holland</b>	-	-	-	-	-	-	-	-	12	3
<b>Doosan</b>	6	1	3	1	14	3	15	3	9	2
<b>Atlas Weyhausen</b>	4	1	1	-	2	-	1	-	7	2
<b>TEREX Schaeff</b>	1	-	1	-	2	-	2	-	6	1
<b>Weidemann</b>	18	4	9	2	12	3	5	1	4	1
<b>Kubota</b>	-	-	-	-	-	-	-	-	2	-
<b>Case</b>	9	2	7	2	-	-	-	-	1	-
<b>Paus</b>	-	-	4	1	-	-	-	-	-	-
<b>O&amp;K</b>	14	3	17	4	16	4	7	1	-	-
<b>Hydrema</b>	-	-	-	-	-	-	3	1	-	-
<b>Fiat-Hitachi</b>	10	2	6	2	-	-	-	-	-	-
<b>Fiat Kobelco</b>	-	-	-	-	6	1	6	1	-	-
<b>Total</b>	<b>404</b>	<b>100</b>	<b>392</b>	<b>100</b>	<b>442</b>	<b>100</b>	<b>511</b>	<b>100</b>	<b>464</b>	<b>100</b>

Source: Off-Highway Research

**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 extremely 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.

**Volvo** has consolidated its position as a dominant force in the market during the period under review and in the last three years has overtaken Caterpillar as the main challenger to Liebherr. Volvo wheeled loaders are now 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 Austrian 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 2005 some 60 per cent of its sales were of machines above 150 horsepower.

**Caterpillar** established itself as the market leader in both wheeled loader sectors in 2002, since when 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 in Austria.

**Table 46. Austria: Suppliers of Wheeled Loaders Under 80 Horsepower and  
Their Market Shares, 2001-2005**  
(Units)

	2001		2002		2003		2004		2005	
	Units	%	Units	%	Units	%	Units	%	Units	%
<b>Liebherr</b>	22	24	12	17	30	31	44	34	42	34
<b>Kramer</b>	6	7	10	14	10	10	13	10	29	24
<b>Volvo</b>	12	13	10	14	12	12	20	15	14	11
<b>Komatsu</b>	6	7	5	7	6	6	15	11	14	11
<b>Caterpillar</b>	17	18	15	21	18	19	21	16	7	6
<b>Atlas Weyhausen</b>	4	4	1	1	2	2	1	1	6	5
<b>Weidemann</b>	18	20	9	13	12	12	5	4	4	3
<b>Kubota</b>	-	-	-	-	-	-	-	-	2	2
<b>JCB</b>	-	-	2	3	3	3	5	4	2	2
<b>TEREX Schaeff</b>	1	1	1	1	2	2	2	2	1	1
<b>New Holland</b>	-	-	-	-	-	-	-	-	1	1
<b>Paus</b>	-	-	4	6	-	-	-	-	-	-
<b>O&amp;K</b>	3	3	3	4	2	2	2	2	-	-
<b>Hydrema</b>	-	-	-	-	-	-	3	2	-	-
<b>Case</b>	3	3	-	-	-	-	-	-	-	-
<b>Total</b>	<b>92</b>	<b>100</b>	<b>72</b>	<b>100</b>	<b>97</b>	<b>100</b>	<b>131</b>	<b>100</b>	<b>122</b>	<b>100</b>

Source: Off-Highway Research

**Komatsu's** fortunes in the market have been transformed since its franchise was transferred to the Kuhn organisation in 1995. Kuhn has had extensive experience of the wheeled loader market having in the past represented the Hanomag marque and, more recently, that of Schaeff, the German specialist manufacturer of compact construction equipment. The enhanced presence of Komatsu in Austria could well see the company's market share increase in the longer term at the

expense of the more established names, although it remains unlikely to pose an immediate threat to the traditional dominance of those companies.

**Table 47. Austria: Suppliers of Wheeled Loaders Over 80 Horsepower and Their Market Shares, 2001-2005**  
(Units)

	2001		2002		2003		2004		2005	
	Units	%	Units	%	Units	%	Units	%	Units	%
<b>Volvo</b>	81	26	78	24	114	33	114	30	102	30
<b>Liebherr</b>	75	24	74	23	90	26	110	29	101	30
<b>Caterpillar</b>	80	26	103	32	82	24	82	21	69	20
<b>Komatsu</b>	29	9	30	9	23	7	40	10	30	9
<b>JCB</b>	14	4	5	2	2	1	8	2	13	4
<b>New Holland</b>	-	-	-	-	-	-	-	-	11	3
<b>Doosan</b>	6	2	3	1	14	4	15	4	9	3
<b>TEREX Schaeff</b>	-	-	-	-	-	-	-	-	5	1
<b>Case</b>	6	2	7	2	-	-	-	-	1	-
<b>Atlas Weyhausen</b>	-	-	-	-	-	-	-	-	1	-
<b>O&amp;K</b>	11	4	14	4	14	4	5	1	-	-
<b>Fiat-Hitachi</b>	10	3	6	2	-	-	-	-	-	-
<b>Fiat Kobelco</b>	-	-	-	-	6	2	6	2	-	-
<b>Total</b>	<b>312</b>	<b>100</b>	<b>320</b>	<b>100</b>	<b>345</b>	<b>100</b>	<b>380</b>	<b>100</b>	<b>342</b>	<b>100</b>

Source: Off-Highway Research

**Table 48. Austria: Distribution Networks of Suppliers of Wheeled Loaders, 2006**

<b>Manufacturer</b>	<b>Distributor</b>
<b>Atlas Weyhausen</b>	Kohlschein
<b>Caterpillar</b>	Zeppelin, Laurer
<b>Doosan</b>	Rido
<b>New Holland</b>	Kohlschein
<b>Hitachi</b>	Baumaschinen Handel
<b>Hyundai</b>	Schuller
<b>Hydrema</b>	Drott
<b>JCB</b>	Terra
<b>Kawasaki</b>	Fritz
<b>Komatsu</b>	Kuhn
<b>Kramer</b>	Stambach
<b>Kubota</b>	Esch-Technik
<b>Liebherr</b>	Liebherr
<b>Paus</b>	Laurer
<b>TEREX Schaeff</b>	Baumaschinen Handel
<b>Volvo</b>	Volvo Austria
<b>Weidemann</b>	Mauch

Source: Off-Highway Research

### Population and End-Users

The population has grown slightly since Off-Highway Research's last report in 2003. 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 49. Austria: Population of Wheeled Loaders by End-User, 2005**

	Units	%
<b>Construction</b>	3,080	56
<b>Industry</b>	165	3
<b>Quarries, Sand and Gravel</b>	1,210	22
<b>Agriculture</b>	110	2
<b>Forestry</b>	935	17
<b>Total</b>	<b>5,500</b>	<b>100</b>

Source: Off-Highway Research

### Forecast

The majority of wheeled loaders sold in Austria 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 have already returned to what might be described as normal levels following the large increase in demand in 1999 and 2000, and further fluctuations in the market are unlikely to occur during the next five years. The market for compact wheeled loaders is expected to rise modestly during the forecast period as the product is afforded increased visibility in rental fleets.

**Table 50. Austria: Forecast Sales of Wheeled Loaders by Horsepower Category, 2006-2010**

(Units)

	2006	2007	2008	2009	2010
<b>Under 80 hp</b>	130	140	140	135	135
<b>Over 80 hp</b>	325	325	340	340	325
<b>Total</b>	<b>455</b>	<b>465</b>	<b>480</b>	<b>475</b>	<b>460</b>

Source: Off-Highway Research

## 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. From the mid-1980s until 1992 annual sales averaged 420 units, but in 1993 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 2005 the market reached its lowest recorded level, just 94 units.

**Table 51. Austria: Sales of Backhoe Loaders, 2001-2005**  
(Units)

2001	2002	2003	2004	2005
167	119	124	132	94

Source: Off-Highway Research

The primary reason for the decline in the popularity of the backhoe loader is, in the opinion of most suppliers, attributable to the popularity of the midi excavator sector, which has been afforded such high visibility in Austria. 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 90 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 in Austria following what appeared to be a very promising initial period of acceptance.

**Market Shares**

**Table 52. Austria: Suppliers of Backhoe Loaders and Their Market Shares, 2001-2005**

	2001		2002		2003		2004		2005	
	Units	%	Units	%	Units	%	Units	%	Units	%
<b>JCB</b>	82	49	59	50	64	52	72	55	47	50
<b>Caterpillar</b>	9	5	8	7	16	13	19	14	17	18
<b>TEREX Fermec</b>	42	25	28	24	16	13	22	17	9	10
<b>Case</b>	10	6	-	-	5	4	-	-	7	7
<b>Volvo</b>	-	-	-	-	2	2	1	1	5	5
<b>New Holland</b>	13	8	-	-	5	4	2	2	5	5
<b>Komatsu</b>	5	3	12	10	5	4	9	7	3	3
<b>Hydrema</b>	-	-	-	-	-	-	-	-	1	1
<b>Kramer</b>	-	-	6	5	-	-	-	-	-	-
<b>Fiat-Hitachi</b>	6	4	6	5	-	-	-	-	-	-
<b>Fiat Kobelco</b>	-	-	-	-	11	9	7	5	-	-
<b>Total</b>	<b>167</b>	<b>100</b>	<b>119</b>	<b>100</b>	<b>124</b>	<b>100</b>	<b>132</b>	<b>100</b>	<b>94</b>	<b>100</b>

Source: Off-Highway Research

**JCB** has traditionally dominated the Austrian 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 maintained a market share of 50 per cent, largely at the expense of its traditional competitor, **Fermec**, 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 53. Austria: Distribution Networks of Suppliers of Backhoe Loaders, 2006**

Manufacturer	Distributor
<b>Caterpillar</b>	Zeppelin
<b>Komatsu</b>	Kuhn
<b>Hydrema</b>	Drott
<b>TEREX Fermec</b>	Baumaschinen Handel
<b>JCB</b>	Terra
<b>New Holland</b>	Kohlschein
<b>Volvo</b>	Volvo Austria

Source: Off-Highway Research

## **Population and End-Users**

The current active population of backhoe loaders in Austria is estimated to be around 2,250 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 54. Austria: Population of Backhoe Loaders by End-User, 2005**

	Units	%
Construction	2,000	89
Local Government	115	5
Agriculture and Forestry	135	6
<b>Total</b>	<b>2,250</b>	<b>100</b>

Source: Off-Highway Research

## **Forecast**

**Table 55. Austria: Forecast Sales of Backhoe Loaders, 2006-2010**

**(Units)**

2006	2007	2008	2009	2010
100	110	110	115	115

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 in Austria appears increasingly bleak. The backhoe loader nevertheless retains a loyal following in many areas in Austria and, although demand is unlikely to recover significantly, Off-Highway Research believes that the market will stabilise at around 100-115 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 56. Austria: Sales of Skid-Steer Loaders, 2001-2005**

**(Units)**

<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>
183	176	130	145	110

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 recent 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 enduring construction industry crisis, and the ensuing bankruptcies of both construction companies and machinery rental operations. Austria's own construction industry recession, too, has 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 in the Austrian market remains the 600-700 kilogramme machine which regularly accounts for 60 per cent of demand. The smallest machines, up to 400 kilogrammes' capacity, constitute about 25 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 in Austria and machines such as the Bobcat 863 account for just ten 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 sold in Austria are bought with a minimum of two attachments, most commonly a backhoe, but also sweeper brushes, cold planers and fence post borers.

### **Production**

**Table 57. Neuson: Skid-Steer Loader Production in Austria, 2001-2005**

**(Units)**

2001	2002	2003	2004	2005
-	-	-	-	150

Source: Off-Highway Research

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 kilogrammes whilst the larger 701S machine is capable of handling 680kg. There is also a high flow version of the 701 called the 701SP.

Production of skid-steer loaders in 2005 amounted to 150 units, split almost equally between the 501 and 701 machines. Output at the Linz facility in 2006, the first full year of production, is planned to reach around 400 units and Neuson hopes to achieve at least 600 units in 2007.

### **Market Shares**

**I-R 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.

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

dissatisfied with the arrangement and relinquished the franchise in 2001. The net result of these distribution restructuring measures inevitably unsettled some customers and Bobcat's market share was significantly eroded during the immediate aftermath. The powerful marketing resources of the new importer, however, have ensured that Bobcat's market share has subsequently recovered to its former level.

**Table 58. Austria: Suppliers of Skid-Steer Loaders and Their Market Shares, 2001-2005**

	2001		2002		2003		2004		2005	
	Units	%	Units	%	Units	%	Units	%	Units	%
<b>I-R Bobcat</b>	65	36	60	34	55	42	71	49	46	42
<b>Gehl</b>	50	27	55	31	40	31	35	24	30	27
<b>Neuson</b>	-	-	-	-	-	-	-	-	12	11
<b>Komatsu</b>	11	6	11	6	5	4	10	7	6	5
<b>JCB</b>	13	7	11	6	10	8	11	8	6	5
<b>Caterpillar</b>	17	9	11	6	14	11	14	10	6	5
<b>Case</b>	9	5	6	3	2	2	-	-	2	2
<b>Hyundai</b>	-	-	-	-	-	-	-	-	1	1
<b>Doosan</b>	-	-	1	1	-	-	2	1	1	1
<b>New Holland</b>	2	1	1	1	-	-	-	-	-	-
<b>Libra</b>	6	3	4	2	1	1	-	-	-	-
<b>Fiat Kobelco</b>	-	-	-	-	2	2	2	1	-	-
<b>Belle</b>	10	5	16	9	1	1	-	-	-	-
<b>Total</b>	<b>183</b>	<b>100</b>	<b>176</b>	<b>100</b>	<b>130</b>	<b>100</b>	<b>145</b>	<b>100</b>	<b>110</b>	<b>100</b>

Source: Off-Highway Research

**Gehl** has firmly established itself as the only real challenger to I-R Bobcat's dominance in the Austrian 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 59. Austria: Distribution Networks of Suppliers of Skid-Steer Loaders, 2006**

Manufacturer	Distributor
<b>Caterpillar</b>	Zepelin, Laurer
<b>Komatsu</b>	Kuhn
<b>Gehl</b>	Huppenkothen
<b>I-R Bobcat</b>	Wacker
<b>JCB</b>	Terra
<b>New Holland</b>	Kohlschein
<b>Neuson</b>	Stambach
<b>Thomas</b>	Fritz

Source: Off-Highway Research

**Neuson** is the most recent entrant to the sector following the launch of its three model range in 2005. Of the other companies actively selling in Austria 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 has been expanded recently by the arrival of low usage second hand machines from bankrupt German construction and rental companies.

**Table 60. Austria: Population of Skid-Steer Loaders by End-User, 2005**

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

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 in Austria. Although larger farms have consumed a number of skid-steer loaders, the agricultural sector will not develop as a significant user simply 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 61. Austria: Forecast Sales of Skid-Steer Loaders, 2006-2010**

**(Units)**

2006	2007	2008	2009	2010
125	130	130	145	145

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 manoeuvrability 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 62. Austria: Sales of Rough Terrain Lift Trucks, 2001-2005**

**(Units)**

	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>
<b>Masted</b>	30	25	32	40	50
<b>Telescopic</b>	67	122	115	119	83
<b>Total</b>	<b>97</b>	<b>147</b>	<b>147</b>	<b>159</b>	<b>133</b>

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 in Austria 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 in Austria 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 Austrian 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**

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 of telescopic handlers in Telfs is expected to reach around 60 units this year, although the company is confident that in the medium term volumes will rise to 500 units per year.

The machines have initially been available for hire and sale in Germany, Austria, Switzerland and the Netherlands and will be marketed in the construction and industrial sectors. The complete, four model range will be officially launched in other European markets following the 2007 Bauma exhibition in April. 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 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 TL445-13, 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 109 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.

**Table 63. Liebherr: Component Sourcing for Telescopic Handlers, 2006**

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

Source: Company Information

**Market Shares**

**Table 64. Austria: Suppliers of Telescopic Rough Terrain Lift Trucks and Their Market Shares, 2001-2005**

	2001		2002		2003		2004		2005	
	Units	%	Units	%	Units	%	Units	%	Units	%
<b>Merlo</b>	32	48	42	34	50	43	70	59	50	60
<b>JCB</b>	8	12	15	12	20	17	14	12	9	11
<b>JLG</b>	-	-	-	-	14	12	10	8	7	8
<b>John Deere</b>	5	7	3	2	4	3	8	7	5	6
<b>I-R Bobcat</b>	10	15	5	4	1	1	3	3	4	5
<b>Massey Ferguson</b>	-	-	-	-	2	2	13	11	3	4
<b>Komatsu</b>	-	-	-	-	-	-	-	-	2	2
<b>Caterpillar</b>	-	-	-	-	-	-	-	-	2	2
<b>Kramer</b>	-	-	-	-	-	-	-	-	1	1
<b>Sennebogen</b>	-	-	-	-	-	-	1	1	-	-
<b>New Holland</b>	4	6	26	21	-	-	-	-	-	-
<b>Manitou</b>	8	12	30	25	20	17	-	-	-	-
<b>Haulotte</b>	-	-	-	-	4	3	-	-	-	-
<b>Claas</b>	-	-	1	1	-	-	-	-	-	-
<b>Total</b>	<b>67</b>	<b>100</b>	<b>122</b>	<b>100</b>	<b>115</b>	<b>100</b>	<b>119</b>	<b>100</b>	<b>83</b>	<b>100</b>

Source: Off-Highway Research

In the telescopic handler sector the Italian manufacturer **Merlo** consistently occupies first position in Austria 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 **JLG**, whose range of telescopic handlers is aimed at the construction sector and **I-R Bobcat**. **Kramer**, **Liebherr** and **Komatsu** are the latest entrants to the sector, all of whose ranges are sold exclusively into the construction sector.

**Table 65. Austria: Suppliers of Masted Rough Terrain Lift Trucks and Their Market Shares, 2001-2005**

	2001		2002		2003		2004		2005	
	Units	%	Units	%	Units	%	Units	%	Units	%
<b>Jumbo</b>	20	67	15	60	20	63	25	63	30	60
<b>Manitou</b>	10	33	10	40	12	38	15	38	20	40
<b>Total</b>	<b>30</b>	<b>100</b>	<b>25</b>	<b>100</b>	<b>32</b>	<b>100</b>	<b>40</b>	<b>100</b>	<b>50</b>	<b>100</b>

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.

**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.

**Table 66. Austria: Distribution Networks of Suppliers of Rough Terrain Lift Trucks, 2003**

Manufacturer	Distributor
<b>Caterpillar</b>	Zepelin
<b>JCB</b>	Terra
<b>JLG</b>	JLG
<b>Komatsu</b>	Kuhn
<b>Kramer</b>	Stambach
<b>Liebherr</b>	Liebherr
<b>Manitou</b>	Alpina
<b>I-R Bobcat</b>	Wacker
<b>Merlo</b>	Mauch
<b>New Holland</b>	Stambach

Source: Off-Highway Research

**Population and End-Users**

The total population consists of only about 650 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 400 telescopic machines in operation, mostly within the construction and industrial sectors.

**Forecast**

**Table 67. Austria: Forecast Sales of Rough Terrain Lift Trucks, 2006-2010**

**(Units)**

	2006	2007	2008	2009	2010
<b>Masted</b>	45	40	50	40	40
<b>Telescopic</b>	110	110	120	90	90
<b>Total</b>	<b>155</b>	<b>150</b>	<b>170</b>	<b>130</b>	<b>130</b>

Source: Off-Highway Research

Previous hopes of expanding the market for telescopic handlers have proved futile. The Austrian 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 68. Austria: Sales of Motor Graders, 2001-2005**

**(Units)**

2001	2002	2003	2004	2005
29	26	29	38	16

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 27 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 69. Austria: Suppliers of Motor Graders and Their Market Shares, 2001-2005**

	2001		2002		2003		2004		2005	
	Units	%	Units	%	Units	%	Units	%	Units	%
<b>New Holland</b>	-	-	-	-	-	-	-	-	15	94
<b>HBM-Nobas</b>	-	-	-	-	3	10	5	13	1	6
<b>O&amp;K</b>	21	72	19	73	22	76	30	79	-	-
<b>Volvo</b>	-	-	-	-	3	10	2	5	-	-
<b>Caterpillar</b>	5	17	2	8	1	3	1	3	-	-
<b>Bomag</b>	2	7	5	19	-	-	-	-	-	-
<b>Komatsu</b>	1	3	-	-	-	-	-	-	-	-
<b>Total</b>	<b>29</b>	<b>100</b>	<b>26</b>	<b>100</b>	<b>29</b>	<b>100</b>	<b>38</b>	<b>100</b>	<b>16</b>	<b>100</b>

Source: Off-Highway Research

**O&K**, now branded as **New Holland**, has achieved a dominant market leadership position for over 20 years. The company initially benefited from taking on the Faun subsidiary in Austria 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 **HBM-Nobas**, which entered the market in 2003 via its dealer Terra, **Volvo**, which has achieved a small number of incremental sales, and **Caterpillar**.

### Population and End-Users

The total population is estimated at 450 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 in

Austria 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 70. Austria: Forecast Sales of Motor Graders, 2006-2010**

**(Units)**

2006	2007	2008	2009	2010
25	28	28	25	25

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 71. Austria: Sales of Dump Trucks by Type, 2001-2005**

**(Units)**

	2001	2002	2003	2004	2005
<b>Articulated</b>	29	33	33	42	40
<b>Rigid</b>	7	15	12	8	8
<b>Total</b>	<b>36</b>	<b>48</b>	<b>45</b>	<b>50</b>	<b>48</b>

Source: Off-Highway Research

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

Demand for dump trucks reached very low levels during much of the 1990s, although pent-up demand towards the end of the decade saw sales in 2000 reach 56 units, their highest level since 1990.

During the 1990s demand for **articulated trucks** stabilised at around 22 units per year. A high level of pent-up demand eventually resulted in a marked upturn in sales and during the period under review volumes have more than doubled to reach a level of 40 units. Unusually, 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 from increased demand for mineral production, but from the end-users' need to remain competitive in recessionary times.

The most popular size category of articulated dump truck sold in Austria 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. In 2005 demand for both 27 tonne and 32 tonne dump trucks exceeded that for the 23 tonne class machine.

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 10-15 units per year, although any large production increases in the quarries or mines can encourage the purchase of supplementary machines.

### Market Shares

**Table 72. Austria: Suppliers of Articulated Dump Trucks and Their Market Shares, 2001-2005**

	2001		2002		2003		2004		2005	
	Units	%	Units	%	Units	%	Units	%	Units	%
<b>Volvo</b>	10	34	25	76	19	58	28	67	27	68
<b>Komatsu</b>	-	-	-	-	-	-	-	-	5	13
<b>Terex</b>	2	7	-	-	2	6	3	7	4	10
<b>Caterpillar</b>	14	48	7	21	-	-	-	-	3	8
<b>Bell</b>	-	-	-	-	6	18	6	14	1	3
<b>Moxy</b>	3	10	1	3	6	18	2	5	-	-
<b>Hydrema</b>	-	-	-	-	-	-	1	2	-	-
<b>Others</b>	-	-	-	-	-	-	2	5	-	-
<b>Total</b>	<b>29</b>	<b>100</b>	<b>33</b>	<b>100</b>	<b>33</b>	<b>100</b>	<b>42</b>	<b>100</b>	<b>40</b>	<b>100</b>

Source: Off-Highway Research

**Volvo** is the established market leader in the articulated dump truck sector, mirroring the company's dominance of the pan-European domain. The remainder of suppliers typically competes for around 30 per cent of the market, of whom **Terex** has been the most consistent during the period under review. The only other active participants are **Caterpillar**, **Komatsu**, and **Bell**, any of whom is capable of achieving a small number of incremental sales in a given year.

**Table 73. Austria: Suppliers of Rigid Dump Trucks and Their Market Shares, 2001-2005**

	2001		2002		2003		2004		2005	
	Units	%	Units	%	Units	%	Units	%	Units	%
<b>Komatsu</b>	1	14	3	20	3	25	4	50	4	50
<b>Terex</b>	1	14	4	27	4	33	-	-	2	25
<b>Caterpillar</b>	5	71	5	33	5	42	4	50	2	25
<b>Euclid-Hitachi</b>	-	-	3	20	-	-	-	-	-	-
<b>Total</b>	<b>7</b>	<b>100</b>	<b>15</b>	<b>100</b>	<b>12</b>	<b>100</b>	<b>8</b>	<b>100</b>	<b>8</b>	<b>100</b>

Source: Off-Highway Research

There are four regular suppliers active in the rigid truck sector but none 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 **Terex** and **Komatsu** in recent years, both of whom have established a good reputation with mining and quarry customers and benefit from competitive pricing strategies. Sales of **Hitachi** trucks remain inconsistent due to pricing inequality in the larger payload categories.

**Table 74. Austria: Distribution Networks of Suppliers of Dump Trucks, 2006**

Manufacturer	Distributor
<b>Astra</b>	Fritz
<b>Bell</b>	Liebherr
<b>Caterpillar</b>	Zeppelin
<b>Hydrema</b>	Drott
<b>Hitachi</b>	Baumaschinen Handel
<b>JCB</b>	Terra
<b>Komatsu</b>	Kuhn
<b>Moxy</b>	Kuhn
<b>Terex</b>	Schuller
<b>Volvo</b>	Volvo Austria

Source: Off-Highway Research

**Population and End-Users**

**Table 75. Austria: Population of Dump Trucks by Type, 2005**

<b>Rigid</b>	225
<b>Articulated</b>	250
<b>Total</b>	475

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 in Austria.

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**

**Table 76. Austria: Forecast Sales of Dump Trucks by Type, 2006-2010**

**(Units)**

	2006	2007	2008	2009	2010
<b>Articulated</b>	30	30	35	35	40
<b>Rigid</b>	10	12	12	15	15
<b>Total</b>	40	42	47	50	55

Source: Off-Highway Research

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.

## ASPHALT FINISHERS

### Market Size and Trends

**Table 77. Austria: Sales of Asphalt Finishers, 2001-2005**  
**(Units)**

2001	2002	2003	2004	2005
39	36	44	44	43

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 in Austria 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 in Austria. 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 in Austria 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 in the Austrian market 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 six to 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 in Austria, 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 78. Austria: Suppliers of Asphalt Finishers and Their Market Shares, 2001-2005**

	2001		2002		2003		2004		2005	
	Units	%	Units	%	Units	%	Units	%	Units	%
<b>Vögele</b>	28	72	26	72	35	79	38	86	36	84
<b>I-R ABG</b>	6	15	5	14	1	3	2	5	4	9
<b>Dynapac</b>	5	13	5	14	8	18	4	9	3	7
<b>Total</b>	<b>39</b>	<b>100</b>	<b>36</b>	<b>100</b>	<b>44</b>	<b>100</b>	<b>44</b>	<b>100</b>	<b>43</b>	<b>100</b>

Source: Off-Highway Research

**Vögele** has been market leader for many years in Austria. 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 Wirtgen's Austrian subsidiary company. 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 last two years.

**I-R ABG** and **Dynapac** are the only other active participants in the market, and between them typically achieve annual sales of 10-12 units. ABG finishers are distributed by the New Holland dealer, Kohlschein, who has retained the services of the former O&K personnel who marketed the brand for many years in Austria.

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 in Austria have led to a considerable 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 and to contract the servicing of pavers and compaction equipment to a small independent company, BMS, also based in Brunn.

**Bitelli** 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.

**Table 79. Austria: Distribution Networks of Suppliers of Asphalt Finishers, 2006**

Manufacturer	Distributor
<b>Bitelli</b>	Zeppelin
<b>Dynapac</b>	Dynapac
<b>I-R ABG</b>	Kohlschein
<b>Vögele</b>	Wirtgen Austria

Source: Off-Highway Research

### Population and End-Users

The life of an asphalt finisher in Austria can be relatively long, 15 years representing a typical average. The active population of machines is estimated to be around 350 units and Vögele finishers account for around 85 per cent of this total.

### Forecast

**Table 80. Austria: Forecast Sales of Asphalt Finishers, 2006-2010**  
(Units)

2006	2007	2008	2009	2010
42	40	45	45	38

Source: Off-Highway Research

The normal level of asphalt finisher sales in the Austrian market is generally considered to lie in the region of 45 units per year. Several years of weak demand during the 1990s created a large pent-up demand for machines at the end of the decade, which has now effectively been satisfied. In the absence of any obvious stimuli to investment by contractors the outlook for the market, therefore, is to continue at a stable level of demand throughout the forecast period.

## COMPACTION EQUIPMENT

### Market Size and Trends

#### Standard Size Compaction Equipment

**Table 81. Austria: Sales of Compaction Equipment by Type, 2003-2005**

(Units)

	2003	2004	2005
<b><u>Tandem Vibratory</u></b>			
– 1.5-2.0	60	60	66
– 2.1-4.0	105	96	112
– 4.1-6.0	-	-	-
– 6.1-8.0	10	14	15
– Over 8.0	10	10	12
<b><u>Self-Propelled</u></b>			
– Under 8.0	40	40	45
– 8.0-11.0	30	25	30
– Over 11.0	30	30	35
<b>Combination</b>	35	35	40
<b>Pneumatic-Tyred</b>	1	1	2
<b>Static</b>	-	-	-
<b>Total</b>	<b>321</b>	<b>311</b>	<b>357</b>

Source: Off-Highway Research

Approximately 65 per cent of all compaction equipment sold in Austria is used in earthmoving applications, as opposed to pure asphalt compaction. The low level of civil engineering activity in recent years has resulted in a significant decline in demand for all types of compaction equipment. The compaction equipment market in Austria 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.

**Pedestrian vibratory rollers** have traditionally been the largest selling compaction equipment sector in Austria, and have proved to be popular for small repairs and for minor site preparation. Demand in recent years has declined significantly, however, as the trend towards the use of small ride-on tandem rollers of 1.0-1.5 tonnes' capacity has manifested itself more strongly.

The **tandem vibratory roller** is the largest selling type of compactor. 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 Austria. In

the low volume heavy tandem sector, machines of 7.0 tonnes account for well over half of all sales.

**Self-propelled rollers** now represent the second largest market sector. Sales in recent years have been limited due to the lack of spending on new roads, although there has been an increasing trend amongst contractors to now retain such machines in their fleets. Machines below 8.0 tonnes account for some 40 per cent of demand.

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

**Light Compaction Equipment**

**Table 82. Austria: Sales of Light Compaction Equipment by Type, 2003-2005**

**(Units)**

	2003	2004	2005
<b>Rammers</b>	600	640	625
<b>One-Way Vibrating Plates</b>	725	760	745
<b>Reversible Plates</b>	200	215	225
<b>Hand-Guided Vibration Rollers</b>	130	110	115
<b>Total</b>	<b>1,655</b>	<b>1,725</b>	<b>1,710</b>

Source: Off-Highway Research

The market for light compaction equipment in Austria 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 in Austria 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 83. Austria: Suppliers of Standard Compaction Equipment and  
Their Market Shares, 2005**

**(Units)**

	Tandem Vibratory	Self- Propelled	Combination	Pneumatic- Tyred	Static	Total	
						Units	%
<b>Bomag</b>	70	40	14	2	-	126	35
<b>Hamm</b>	60	25	20	-	-	105	29
<b>Ammann</b>	40	20	4	-	-	64	18
<b>Dynapac</b>	15	15	2	-	-	32	9
<b>Caterpillar</b>	5	10	-	-	-	15	4
<b>Wacker</b>	10	-	-	-	-	10	3
<b>JCB Vibromax</b>	5	-	-	-	-	5	2
<b>Total</b>	<b>205</b>	<b>110</b>	<b>40</b>	<b>2</b>	<b>-</b>	<b>357</b>	<b>100</b>

Source: Off-Highway Research

Overall **Bomag**, distributed by its own subsidiary company in Austria, has built up a reputation as the leading supplier of compaction equipment with an average market share of 45-50 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 Austria. 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.

**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 effected a small volume of sales through their own subsidiary companies. The only two remaining suppliers active in Austria are **Caterpillar**, sold through the Zeppelin organisation, and **JCB Vibromax**, sold through JCB's importer, Terra. Neither of these companies has actively marketed their respective compaction equipment ranges, preferring instead to focus on their mainline earthmoving machinery ranges.

**Table 84. Austria: Distribution Networks of Suppliers of Compaction Equipment, 2006**

<b>Manufacturer</b>	<b>Distributor</b>
<b>Ammann</b>	Huppenkothen
<b>Caterpillar</b>	Zeppelin
<b>Bomag</b>	Bomag Austria
<b>Dynapac</b>	Dynapac Austria
<b>JCB Vibromax</b>	Terra (Standard)
	Drott (Light)
<b>Hamm</b>	Wirtgen Austria
<b>Wacker</b>	Wacker
<b>Weber</b>	Fritz

Source: Off-Highway Research

**Forecast**

**Table 85. Austria: Forecast Sales of Compaction Equipment by Type, 2006-2010**

**(Units)**

	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>
<b>Self-Propelled</b>	110	105	100	115	115
<b>Tandem Vibratory</b>	190	200	205	180	180
<b>Combination</b>	40	35	35	30	30
<b>Total</b>	<b>340</b>	<b>340</b>	<b>340</b>	<b>325</b>	<b>325</b>

Source: Off-Highway Research

In common with many other product sectors, sales of compaction equipment have recovered reasonably well following the decline experienced in the mid-1990s. 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**

**Table 86. Austria: Sales of Mobile Compressors, 2001-2005**

**(Units)**

<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>
375	322	319	366	328

Source: Off-Highway Research

Of all the product sectors affected by the recent construction industry recession in Austria, 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.

In 1996 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 during the period 1997-2000, 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 the following two years precipitated a further decline in the market, however, which has continued unabated during the period under review. This has led many observers to the conclusion that the market for mobile compressors will never see a return to the volumes recorded during the first half of the 1990s.

Despite the contraction of demand, the most popular sizes of compressor used in Austria have not altered since Off-Highway Research's last study in 2003 and remain the 2.5 to 3.5 m<sup>3</sup>/min machines.

**Table 87. Austria: Sales of Mobile Compressors by Category, 2002-2005**

Air Output (m <sup>3</sup> /min)	2002		2005	
	Units	%	Units	%
Up to 2.2	32	10	20	6
2.3-3.2	77	24	83	25
3.3-4.0	139	43	121	37
4.1-6.0	42	13	44	13
6.1-8.0	3	1	9	3
8.1-11.0	13	4	18	6
Over 11	16	5	33	10
<b>Total</b>	<b>322</b>	<b>100</b>	<b>328</b>	<b>100</b>

Source: Off-Highway Research

**Market Shares**

**Table 88. Austria: Suppliers of Mobile Compressors and Their Market Shares, 2005**

	Units	%
<b>Atlas Copco</b>	135	41
<b>CompAir</b>	85	26
<b>Kaeser</b>	62	19
<b>Ingersoll-Rand</b>	16	5
<b>Others</b>	30	9
<b>Total</b>	<b>328</b>	<b>100</b>

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 ten dealers. Sales of compressors in the above 10m<sup>3</sup>/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 89. Austria: Distribution Networks of Suppliers of Mobile Compressors, 2006**

<b>Manufacturer</b>	<b>Distributor</b>
<b>Atlas Copco</b>	Atlas Copco, Regional Dealers
<b>CompAir</b>	CompAir, Jäger, Drott
<b>Ingersoll-Rand</b>	Elbo, Breuer
<b>Irmer &amp; Elze</b>	Fritz
<b>Kaeser</b>	Kaeser Kompressoren, Dreger, Laurer

Source: Off-Highway Research

**Population and End-Users**

The current population of mobile compressors is estimated to be around 6,000 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 5m<sup>3</sup>/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 in Austria 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 90. Austria: Forecast Sales of Mobile Compressors, 2006-2010**

(Units)

2006	2007	2008	2009	2010
350	375	375	350	350

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 in 2006 with a further small increase in volumes during the next three years.

## **AGRICULTURAL TRACTORS**

### Market Size and Trends

**Table 91. Austria: Sales of Agricultural Tractors, 2001-2005**

(Units)

2001	2002	2003	2004	2005
6,429	6,327	6,250	6,625	6,344

Source: Off-Highway Research

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 of Austria's 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 92. Austria: Tractor Registrations by Horsepower Category, 2002-2005**

Horsepower	2002		2005	
	Units	%	Units	%
<b>Under 40</b>	190	3	247	4
<b>41-52</b>	126	2	90	1
<b>53-75</b>	2,088	33	1,579	25
<b>76-120</b>	3,163	50	3,632	57
<b>Over 120</b>	760	12	796	13
<b>Total</b>	<b>6,327</b>	<b>100</b>	<b>6,344</b>	<b>100</b>

Source: Official Statistics

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 Austrian 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 6,400 units, which most observers now consider to be the normal level of demand

The ongoing amalgamation of farms in Austria 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 93. Austria: Production of Agricultural Tractors, 2001-2005**

**(Units)**

	2001	2002	2003	2004	2005
<b>CNH</b>	8,354	9,470	7,550	8,000	7,045
<b>Lindner</b>	960	1,250	1,100	1,200	1,300
<b>Total</b>	<b>9,314</b>	<b>10,720</b>	<b>8,650</b>	<b>9,200</b>	<b>8,345</b>

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 60 horsepower to the largest 190 horsepower CVT/CVX 170 machine. Production of Steyr model variants (sold in specific markets such as Austria, Switzerland, Germany, Northern Italy, Belgium and some Nordic regions) runs concurrently at St. Valentin with those of Case IH, the only differences being paint colour and brand decal. In addition, the plant manufactures the New Holland TVT model range.

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 and New Holland model ranges 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 2002 a record production level of nearly 9,500 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 in Austria, although it is a totally different operation from that of CNH. Nearly all production is destined for Austria 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. 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 five models with Perkins 900-series engines up to 100 horsepower. The company achieved a turnover in 2005 of around €50 million and employs 200 people.

### Market Shares

**Steyr** is the perennial market leader in Austria, and continues to be held in high regard by Austrian farmers. Its once seemingly unassailable status has, however, been gradually eroded by the increasing challenge offered by **New Holland**, which achieved market leadership in 2005, and, more recently, by **John Deere** and **Fendt**, 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 94. Austria: Suppliers of Agricultural Tractors and Their Market Shares, 2001-2005**

	2001		2002		2003		2004		2005	
	Units	%	Units	%	Units	%	Units	%	Units	%
<b>New Holland</b>	1,130	18	1,033	16	1,022	16	1,055	16	1,044	16
<b>Steyr</b>	1,451	23	1,249	20	1,335	21	1,148	17	983	15
<b>Lindner</b>	956	15	928	15	930	15	896	14	840	13
<b>John Deere</b>	519	8	683	11	680	11	885	13	731	12
<b>X. Fendt</b>	297	5	390	6	400	6	631	10	632	10
<b>Deutz</b>	381	6	384	6	390	6	364	5	382	6
<b>Massey Ferguson</b>	438	7	457	7	460	7	362	5	335	5
<b>Same</b>	337	5	239	4	240	4	287	4	278	4
<b>Valmet</b>	-	-	-	-	-	-	135	2	151	2
<b>Case IH</b>	146	2	113	2	110	2	164	2	134	2
<b>McCormick</b>	-	-	-	-	-	-	67	1	133	2
<b>Renault</b>	-	-	-	-	-	-	49	1	93	1
<b>Mercedes-Benz</b>	-	-	-	-	-	-	94	1	91	1
<b>Landini</b>	-	-	-	-	-	-	71	1	85	1
<b>Others</b>	774	12	851	13	683	11	417	6	432	7
<b>Total</b>	<b>6,429</b>	<b>100</b>	<b>6,327</b>	<b>100</b>	<b>6,250</b>	<b>100</b>	<b>6,625</b>	<b>100</b>	<b>6,344</b>	<b>100</b>

Source: Central Statistical Office

**Population**

**Table 95. Austria: Population of Agricultural Tractors by Province, 2005**

**(Units)**

<b>Lower Austria</b>	128,215
<b>Upper Austria</b>	97,487
<b>Styria</b>	74,120
<b>Burgenland</b>	30,597
<b>Carinthia</b>	26,420
<b>Tyrol</b>	20,308
<b>Salzburg</b>	17,785
<b>Vorarlberg</b>	7,723
<b>Vienna</b>	2,579
<b>Total</b>	<b>405,234</b>

Source: Official Statistics

**Forecast**

**Table 96. Austria: Forecast Sales of Agricultural Tractors, 2006-2010**

**(Units)**

2006	2007	2008	2009	2010
7,000	6,500	6,300	6,250	6,250

Source: Off-Highway Research

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 Austrian farmers to invest in new tractors. Suppliers forecast a rise in sales in 2006 of around ten per cent after which demand is expected to return to its normal level, sustained in the medium to long term by the regular replacement programmes of end users.

**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

**Tel:** +43 (0) 6462 888 0  
**Fax:** +43 (0) 6462 888 287  
**Website:** [www.liebherr.com](http://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 126,000m<sup>2</sup>, of which 46,000m<sup>2</sup> is covered.

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, although current volumes are around 2,000 units, a significant increase over the level three years ago. Production of wheeled loaders over 80 horsepower prevails and in 2005 accounted for nearly 60 per cent of total output. The plant also manufactures three compact models under licence for John Deere for sale in North America. John Deere production typically accounts for around 15 per cent of overall output in Bischofshofen.

**Table 97. Liebherr: Range of Wheeled Loaders Produced in Austria, 2006**

Model	Engine		Service Weight (Tonnes)
	HP	Manufacturer	
L506 Stereo	58	Liebherr	5.1
L507 Stereo	63	Liebherr	5.2
L508 Stereo	63	Liebherr	5.5
L509 Stereo	74	Liebherr	6.0
L510 Stereo	79	Liebherr	6.2
L514 Stereo	98	Liebherr	8.3
L524	110	Liebherr	10.1
L534	136	Liebherr	12.1
L538	136	Liebherr	12.4
L544 2plus2	165	Liebherr	15.0
L556 2plus2	188	Liebherr	17.3
L566 2plus2	259	Liebherr	22.8
L576 2plus2	272	Liebherr	23.7
L580 2plus2	272	Liebherr	24.6

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.

At the 2004 Bauma exhibition a new range of compact Stereo loaders, the Series 4 was launched. The most significant development has been the incorporation of John Deere engines, thereby ending the long association with the company's previous engine supplier, Deutz.

**Table 98. Liebherr: Production of Wheeled Loaders by Horsepower Category, 2001-2005**

(Units)

	2001	2002	2003	2004	2005
Under 80 hp	570	372	415	1,085	944
Over 80 hp	930	969	1,050	903	1,219
<b>Total</b>	<b>1,500</b>	<b>1,341</b>	<b>1,465</b>	<b>1,988</b>	<b>2,163</b>

Source: Off-Highway Research

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 are currently being incorporated

on the medium sized wheeled loaders from 110 to 136 horsepower and the new models will be officially launched at the 2007 Bauma exhibition.

**Component Sourcing**

**Table 99. Liebherr: Component Sourcing for Wheeled Loaders, 2006**

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

Source: Company Information

John Deere engines, branded as Liebherr for markets outside North America, are employed on loaders up to the 110 horsepower L524 whilst 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.

**Crawler Dozers and Loaders**

**Factory address:** **Liebherr-Werk Telfs GmbH**  
Hans Liebherr-Strasse 35  
A-6410 Telfs

**Tel:** +43 (0) 5262 600-0  
**Fax:** +43 (0) 5262 600-72  
**Website:** [www.liebherr.com](http://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.

**Table 100. Liebherr: Range of Crawler Dozers and Crawler Loaders Produced in Austria, 2006**

Product	Model	Engine		Service Weight (Tonnes)	Bucket Capacity (m <sup>3</sup> )
		HP	Manufacturer		
Crawler Dozers	PR712B	105	Liebherr	11.8-14.7	-
	PR724	160	Liebherr	16.0-19.0	-
	PR734	200	Liebherr	20.9-22.7	-
	PR744	250	Liebherr	24.6-30.0	-
	PR752	330	Liebherr	34.2-41.3	-
	PR764	421	Liebherr	39.1-46.2	-
Crawler Loaders	LR622B	132	Liebherr	15.4-17.0	1.5-1.8
	LR634	184	Liebherr	21.0-23.0	2.3-2.4

Source: Company Information

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 models are fitted with Liebherr engines.

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 are also scheduled for replacement by Generation 4 machines which, like the current new models, will feature extensive revisions to the driveline, increased power ratings and redesigned driver's cabin.

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

**Table 101. Liebherr: Production of Crawler Dozers and Crawler Loaders, 2001-2005**

(Units)

	2001	2002	2003	2004	2005
<b>Crawler Dozers</b>	274	275	307	310	310
<b>Crawler Loaders</b>	294	248	280	450	350
<b>Total</b>	<b>568</b>	<b>523</b>	<b>587</b>	<b>760</b>	<b>660</b>

Source: Off-Highway Research

**Component Sourcing**

**Table 102. Liebherr: Component Sourcing for Crawler Dozers and Crawler Loaders, 2006**

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

Source: Company Information

The only change of significance since Off-Highway Research's last report in 2003 has been the incorporation of a Liebherr engine on the new 764 crawler dozer in place of the Cummins unit fitted to the outgoing 751 model. The dropping of the 641 crawler loader model also means that Mercedes-Benz engines no longer feature in the range.

**Telescopic Handlers**

**Factory address:** Liebherr-Werk Telfs GmbH  
Hans Liebherr-Strasse 35  
A-6410 Telfs

**Tel:** +43 (0) 5262 600-0  
**Fax:** +43 (0) 5262 600-72  
**Website:** [www.liebherr.com](http://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. Production of telescopic handlers in Telfs is expected to reach around 60 units this year, although the company is confident that in the medium term volumes will rise to 500 units per year.

The machines have initially been available for hire and sale in Germany, Austria, Switzerland and the Netherlands and will be marketed in the construction and industrial sectors. The complete, four model range will be officially launched in other European markets following the 2007 Bauma exhibition in April. 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 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 TL445-13, 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 109 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, 2006**

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

Source: Company Information

**NEUSON**

**Address:** Neuson Baumaschinen GmbH  
Haidfeldstraße 37  
A-4060 Linz-Leonding

**Tel:** +43 (0) 732 90 5 90-0  
**Fax:** +43 (0) 732 90 5 90-200  
**Website:** [www.neusonkramer.com](http://www.neusonkramer.com)

**Ownership:** Neuson Holding AG. The majority of shares are in the ownership of Hans Neunteufel, the original founder of Neuson. The Kramer family holds a minority shareholding in the company.

**Employees:** The Neuson Group employs a total of 600 people, 280 of whom are based at the Linz factory.

**Turnover:** The turnover of the Neuson Group reached €200 million in 2005.

**Structure of Operations:** In 2000 Neuson announced its merger with the German based manufacturer of small wheeled loaders and excavators, Kramer, which has elevated the newly formed company, Neuson Kramer Baumaschinen AG, to the status of full-line supplier of compact construction equipment. The two operations are essentially run along independent lines and **Neuson Baumaschinen GmbH** is the name of the mini excavator production company in Linz, the subject of this profile.

Neuson is a privately owned group of manufacturing and trading companies comprising completely independent and separate business units. The original hydraulics company founded by Neuson's owner, Hans Neunteufel, in 1981 still exists as Neuson Hydraulik, and is also the company which began production of mini excavators in 1985. Only in 1990 was the construction machinery division formed into a dedicated company, Neuson Baumaschinen.

In 1998 the decision to remain independent led to the formation of the **Neuson Holding AG** of which Neuson Baumaschinen is a constituent company. Other companies belonging to the holding company include hydraulic breaker manufacturer Böhler Pneumatik International, the Austrian construction equipment dealer Stambach and its subsidiary the ERA rental company.

**Mini and Midi Excavators**

**Table 104. Neuson: Mini and Midi Excavator Range, 2006**

Products	Model	Engine		Operating Weight (Tonnes)
		HP	Manufacturer	
<b>Micro Excavator</b>	803	11	Yanmar	0.8
<b>Mini Excavators</b>	1404	24	Yanmar	1.5
	1503	24	Yanmar	1.7
	1903	24	Yanmar	1.9
	2203	24	Yanmar	2.0
	2503	37	Yanmar	2.6
	3003	37	Yanmar	3.1
	3003 Vario	37	Yanmar	3.4
	3503	48	Yanmar	3.5
	3503 Vario	48	Yanmar	3.8
	3703	48	Yanmar	3.7
	38Z3	37	Yanmar	3.6
	50Z3	48	Yanmar	4.9
	6003	69	Yanmar	5.5
75Z3	69	Yanmar	7.3	
<b>Midi Excavators</b>	8003	69	Yanmar	7.6
	8003 Vario	69	Yanmar	8.2
	12002	101	Yanmar	11.5
	12002 Vario	101	John Deere	11.9
<b>Wheeled Excavators</b>	6503	69	Yanmar	5.6

\* Weights are shown with canopy/cab

\*\* Wheeled undercarriage

Source: Company Information

Neuson currently manufactures a range of 16 mini/midi excavators at its Linz-Leonding factory. This represents a significant expansion over the range available during the early 1990s and enables Neuson to compete in all weight sectors and in all European markets.

The '02' Series of mini excavators was introduced in 1995, whilst the eight tonne 8002 model was launched in April 1997. The smallest models feature the patented 'Kippmatik' system, which enables the excavator's upperworks to be tilted on hydraulic rams up to 15 degrees, allowing the operator to execute vertical trenching on a slope or while working on uneven ground.

Towards the end of 2000 and at the 2001 Bauma exhibition in Munich Neuson launched its latest range of mini excavators, the '03' Series. The new models replace the '02' Series machines with operating weights up to 8.0 tonnes and feature up-rated hydraulic systems, improved ergonomics and a redesigned boom enabling an increase in lift capacities of up to 40 per cent. The largest excavator in the range remains the 12.0 tonne 12002 model, which holds the distinction of being the heaviest machine on the market available with rubber tracks. The most 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.

In 2003 Neuson launched its so-called VARIO technology, an eccentric mechanism that enables the superstructure of the machine to be shifted to four different positions, combining the benefits of a conventional excavator with those of a zero tail swing machine. The system is currently available as an option on the 3003 and 3503 mini excavators and 8003 and 12002 midi excavators.

In 2004 Neuson launched its first zero and short tail swing excavators. The three zero tail swing models are designated by the 'Z3' suffix and are available with service weights of 3.5, 4.9 and 7.3 tonnes. Two models, the 5.5 tonne 6003 and 8.0 tonne 8003, are classified as short tail swing excavators.

### **Production**

Production rose during the early 1990s as the most important export market, Germany, reached its height following the post-reunification construction boom. As a result of the company's growing reputation and increased development of export markets production rose continuously throughout the 1990s and into the new millennium, eventually reaching a peak in 2004 at 3,500 units. Neuson plans to be assembling 5,000 excavators by 2008.

**Table 105. Neuson: Production of Excavators, 1996-2005**

**(Units)**

1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
1,380	1,410	2,100	2,580	3,000	3,300	3,000	3,200	3,500	3,438

Source: Off-Highway Research

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. Production of excavators has soared from 1,400 units in 1996 to 3,500 units in 2005, placing 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. Neuson: Component Sourcing for Excavators, 2006**

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

Source: Company Information

Neuson's core business remains the sale and manufacture of mini and midi excavators, although it has made several attempts at diversification into niche markets. The company's current product range features a tracked dumper, which was launched in 1991, in addition to forestry harvesting machinery based on its five and eight tonne crawler excavator chassis.

**Skid-Steer Loaders**

**Table 107. Neuson: Skid-Steer Loader Range, 2006**

Model	Engine		Operating Weight (Tonnes)
	HP	Manufacturer	
<b>501S</b>	36	Yanmar	1.8
<b>701S</b>	46	Yanmar	2.3
<b>701SP</b>	52	Yanmar	2.4

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 510kg whilst the larger 701S machine is capable of handling 680kg. There is also a high flow version of the 701 called the 701SP.

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. Servo controls will, however, be offered as an option on the smaller machine later in 2006.

Neuson plans to introduce additional skid-steer loader models during the course of 2006, including a 900kg capacity 901S and an 800kg 801S. The 901S will use a modular design, offering both wheeled and tracked versions. In addition, there may be a parallel lift arm model with a higher capacity.

**Production:** Production of skid-steer loaders in 2005 amounted to 150 units, split almost equally between the 501 and 701 machines. Output at the Linz facility in 2006, the first full year of production, is planned to reach around 400 units and Neuson hopes to achieve at least 600 units in 2007.

**Table 108. Neuson: Production of Skid-Steer Loaders, 2001-2005**

(Units)

2001	2002	2003	2004	2005
-	-	-	-	150

Source: Off-Highway Research

**Component Sourcing**

**Table 109. Neuson: Component Sourcing for Skid-Steer Loaders, 2006**

<b>Engines</b>	Yanmar
<b>Hydraulic Pumps</b>	Bosch Rexroth
<b>Hydraulic Motors</b>	Sauer Danfoss
<b>Tracks</b>	Tyres: BKT
<b>Hydraulic Valves</b>	Bosch Rexroth
<b>Filters</b>	Hydac
<b>Transmissions</b>	Trasittal
<b>Cabs</b>	Lugstein

Source: Company Information

**CNH ÖSTERREICH**

**Address:** CNH Österreich GmbH  
Steyrer Straße 32  
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**Tel:** +43 (0) 7435 500-0

**Fax:** +43 (0) 7435 500-84

**Website:** [www.steyr-traktoren.com](http://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 was an increase in production volumes at its St. Valentin assembly plant from 3,800 units in 1995 to a peak of nearly 9,500 units in 2002, as production of Case's CS 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 60 horsepower to the largest 196 horsepower CVT/CVX machine. The plant itself encompasses a total area of 17 hectares of which 42,000 m<sup>2</sup> 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, and one New Holland model range, runs concurrently with that of Steyr models, the only differences being paint colour and brand decal. The Steyr Profi model range manufactured at St. Valentin is also produced in Case IH's red livery and decals, and sold as the MXU Pro 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 and in the blue livery of New Holland as the TVT range.

**Table 110. CNH: Range of Agricultural Tractors Produced in Austria, 2006**

Steyr	Brand		Engine	
	Case IH	New Holland	HP	Manufacturer
9080M	-	-	82	Sisu
9090M	-	-	89	Sisu
9100M	-	-	97	Sisu
4100 Profi	MXU100PRO	-	101	CNH
4115 Profi	MXU110PRO	-	116	CNH
6115 Profi	MXU115PRO	-	116	CNH
6125 Profi	MXU125PRO	-	125	CNH
6135 Profi	MXU135PRO	-	136	CNH
6135 CVT	CVX1135	TVT135	137	Sisu
6145 CVT	CVX1145	TVT145	147	Sisu
6155 CVT	CVX1155	TVT155	156	Sisu
6170 CVT	CVX1170	TVT170	171	Sisu
6195 CVT	CVX1195	TVT190	196	Sisu

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, 2001-2005**

**(Units)**

2001	2002	2003	2004	2005
8,354	9,470	7,550	8,000	7,045

Source: Off-Highway Research

Production volumes increased significantly in 1996 as the assembly of Case tractors was incorporated at St. Valentin, reaching a peak of 9,470 units in 2002 following the introduction of the CVX/CVT range in July 2000. Volumes have declined during the last three years due to a decline in the European tractor market, although still remain on a healthy level.

**Component Sourcing**

**Table 112. Steyr: Component Sourcing for Agricultural Tractors, 2006**

<b>Engines</b>	CNH, Sisu
<b>Gearboxes</b>	ZF
<b>Front Axles</b>	Carraro
<b>Rear Axles</b>	ZF
<b>Cabs</b>	CNH (Croix)

Source: Company Information

Since the publication of Off-Highway Research's last report in 2003 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, 9000M series and Profi/MXU ranges.

**Table 113. Austria: Major Distributors of Construction Equipment and Their Franchises, 2006**

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
BaumaschinenHandel		TEREX Schaeff, Hitachi	TEREX Schaeff, Hitachi		TEREX Schaeff, Hitachi	TEREX Fermec				Hitachi		
Drott		Hydrema								Hydrema		JCB Vibromax
Dynapac Österreich											Dynapac	Dynapac
Esch-Technik Fritz		Macmoter	Kubota Airman, Macmoter		Kubota Kawasaki			Thomas		Astra	Hanta	Weber
Huppenkothen		Takeuchi	Takeuchi		Ahlmann			Gehl				Ammann
Kohlschein	Tadano Faun	New Holland, Terex Atlas	New Holland	New Holland	New Holland, Atlas Weyhausen	New Holland	New Holland	New Holland	New Holland		ABG	
Kuhn		Komatsu	Komatsu	Komatsu	Komatsu	Komatsu	Komatsu	Komatsu	Komatsu	Komatsu, Moxy		
Laurer		Mecalac	Caterpillar		Caterpillar			Caterpillar				
Liebherr	Liebherr	Liebherr		Liebherr	Liebherr				Liebherr	Liebherr, Bell		
Mauch					Weidemann				Merlo, Weidemann			
Oswald		Euromach	Libra					Libra				
Rido		Doosan	Doosan		Doosan			Doosan				
Schuller		Hyundai	Hyundai		Hyundai					Terex		Tremix
Stambach		Neuson	Neuson		Kramer			Neuson	Kramer			Weber
Terra		JCB	JCB		JCB	JCB	HBM-Nobas	JCB	JCB, Jumbo	JCB		JCB Vibromax
Volvo Österreich		Volvo	Volvo		Volvo	Volvo	Volvo			Volvo		
Wacker			Bobcat					Bobcat	Bobcat			Wacker
Wirtgen Österreich											Vögele	Hamm
Zeppelin		Caterpillar, Terex O&K	Caterpillar	Caterpillar	Caterpillar	Caterpillar	Caterpillar	Caterpillar	Caterpillar	Caterpillar	Bitelli	Caterpillar

Source: Off-Highway Research

## **DISTRIBUTOR PROFILES**

### **BERGER**

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**Tel:** +43 (0) 7673 35 01-0

**Fax:** +43 (0) 7673 32 11

**Website:** [www.berger-maschinen.at](http://www.berger-maschinen.at)

**Ownership:** The company was founded in 1910 by Ferdinand Berger and has remained in the private ownership of the Berger family ever since.

**Turnover 2005:** Not revealed. Approximately 30-40 per cent of overall turnover derives from Berger's subsidiary companies in Eastern Europe.

**Personnel:** 360 in the Berger group, 200 of whom are employed in Austria.

**Franchises:** Berger is one of Austria's largest and longest established trading companies with a wide range of construction and agricultural machinery interests both in Austria and in large parts of Eastern Europe. It is the leading specialist in Austria for lorry cranes with the Hiab franchise and previously for truck-mounted cranes with the Kato brand, which it represented for over 30 years. The Grove franchise for mobile cranes is held on an unofficial basis, although this arrangement is valid only for the Austrian market. Berger also holds the Kato hydraulic excavator franchise for the East European territories in which it is active. Prior to 1998 it also held the Case construction equipment franchise for Eastern Europe, although this was subsequently transferred to Austro Diesel.

**Table 114. Berger: Range of Franchises, 2006**

<b>Company</b>	<b>Products</b>
<b>Grove</b>	Mobile cranes (regional basis)
<b>Hiab, Jonsered, Loglift</b>	Lorry cranes
<b>Clark, Rocla, Fantuzzi</b>	Fork-lift trucks
<b>Sennebogen</b>	Material handling excavators

Source: Company Information

Other important business sectors for Berger include garden care machinery and small tractors for use by local authorities. The company is also an active supplier of fork-lift trucks and currently represents no fewer than four suppliers' products. Berger also holds the Hyundai and New Holland construction equipment franchises, and the Renault and JCB agricultural tractor franchises for the East European territories only; in Hungary, however, Berger represents Renault tractors only.

**Sales:** In common with most European markets the mobile crane industry in Austria is dominated by the all-terrain machine and, as such, the opportunities for Berger are relatively limited.

**Distribution:** The company's head office is situated in Schwanenstadt close to where it owns two main depots for the servicing and spare parts storage of construction equipment and agricultural machinery, and which also act as an assembly area for lorry cranes. Berger has additional depots in Wiener Neudorf and Graz which serve as sales and service centres for its full range of products. The company also operates contractual arrangements with over 40 specialist workshops throughout Austria for the servicing of cranes and fork-lift trucks, and for the storage of spare parts.

Berger has been an active supplier of construction equipment to Eastern Europe for some 40 years and has established subsidiary companies in the Czech Republic (3), Slovakia (1), Hungary (3) and Croatia (1).

**Future Developments:** Berger's strategy will be to remain focused on the core areas of its business, namely lorry cranes and fork-lift trucks. There will be no moves to expand into construction equipment in Austria and the emphasis will be to consolidate its existing presence in the above mentioned sectors and thereby to secure customer loyalty.

**DROTT**

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**Tel:** +43 (0) 2236 688-0  
**Fax:** +43 (0) 2236 688-100  
**Website:** [www.drottbau.at](http://www.drottbau.at)

**Ownership:** 100 per cent in the private ownership of the Drott family. 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 2005:** Not revealed.

**Personnel:** 80.

**Franchises:** 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. 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.

**Table 115. Drott: Range of Franchises, 2006**

Company	Products
<b>JCB Vibromax</b>	Light compaction equipment
<b>Hydrema</b>	Dump trucks, hydraulic excavators, wheeled loaders, backhoe loaders
<b>Kramer</b>	Wheeled loaders, telescopic handlers
<b>Thwaites</b>	Site dumpers
<b>Krupp</b>	Hydraulic hammers, demolition shears
<b>CompAir</b>	Mobile compressors

Source: Company Information

**Sales**

**Table 116. Drott: Sales of Construction Equipment, 2005**

**(Units)**

<b>Kobelco</b>	Mini excavators	1
<b>Thwaites</b>	Site dumpers	39
<b>Hydrema</b>	Backhoe loaders	1
<b>Kramer</b>	Wheeled loaders	1
	Telescopic handlers	1

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 eight sales and service depots located in Vienna, St. Pölten, Traun, Salzburg, Münster, Nüziders, Graz and Klagenfurt. Drott has also operated a subsidiary company in Slovenia for eight 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

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**Tel:** +43 (0) 2236 609-0  
**Fax:** +43 (0) 2236 609-31  
**Website:** [www.kohlschein.at](http://www.kohlschein.at)

**Ownership:** 100 per cent in the private ownership of Frau Jonke, the daughter of the company's original founder.

**Turnover 2005:** €45 million.

**Personnel:** 65.

### Franchises

**Table 117. Kohlschein: Range of Franchises, 2006**

Company	Products
<b>New Holland</b>	Construction equipment – full range
<b>TEREX Atlas</b>	Wheeled excavators
<b>Atlas Weyhausen</b>	Wheeled loaders
<b>Tadano Faun</b>	Mobile cranes
<b>I-R ABG</b>	Asphalt finishers
<b>NPK</b>	Demolition shears, hydraulic hammers

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 TEREX 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 has also acquired the Tadano Faun crane franchise and ABG asphalt finisher franchise, which had previously been represented by the now defunct O&K Austria organisation.

**Sales**

**Table 118. Kohlschein: Sales of Construction Equipment, 2005**

**(Units)**

<b>New Holland</b>	Crawler excavators	132
	Mini excavators	
	Backhoe loaders	5
	Crawler dozers	1
	Graders	15
	Mini excavators	34
<b>TEREX Atlas</b>	Wheeled excavators	13
	Wheeled loaders	12
<b>Atlas Weyhausen</b>	Wheeled excavators	24
<b>Atlas Weyhausen</b>	Wheeled loaders	7
<b>Tadano Faun</b>	All terrain cranes	2
<b>I-R ABG</b>	Asphalt finishers	4

Source: Off-Highway Research

Kohlschein had been the leading supplier of crawler 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 2005 the company once again achieved market leadership in the conventional size crawler excavator sector. It has been particularly successful with the New Holland-Kobelco short radius excavators, which have been well accepted by Austrian contractors. The transfer of personnel from the former O&K subsidiary company in Vienna has also ensured that there has been no loss of continuity with regard to the Tadano Faun and ABG franchises.

**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 (2001) and the Czech Republic (2002) where Kohlschein represents the TEREX 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 newly established rental operation.

**KUHN**

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**Tel:** +43 (0) 6225 82 06-0  
**Fax:** +43 (0) 6225 82 06-47  
**Website:** [www.kuhn-gruppe.com](http://www.kuhn-gruppe.com)

**Ownership:** Günter Kuhn.

**Turnover 2005:** €240 million (Kuhn Group). More than 50 per cent of turnover is achieved outside Austria.

**Personnel:** 500, of whom 80 are involved with construction machinery in Austria.

**Franchises:** 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.

**Table 119. Kuhn: Range of Franchises, 2006**

<b>Company</b>	<b>Products</b>
<b>Komatsu</b>	Construction equipment - full range
<b>Moxy</b>	Dump trucks
<b>Fuchs</b>	Material handling excavators
<b>Powerscreen*</b>	Recycling and crushing equipment
<b>Palfinger*</b>	Lorry cranes
<b>Mitsubishi</b>	Fork lift trucks

\* Incorporated within Kuhn-Ladetechnik GmbH

Source: Company Information

**Sales**

**Table 120. Kuhn: Sales of Construction Equipment, 2005**

**(Units)**

<b>Komatsu</b>	Crawler excavators	113
	Wheeled excavators	19
	Wheeled loaders	44
	Mini excavators	21
	Skid-steer loaders	6
	Crawler dozers	15
	Articulated dump trucks	5
	Rigid dump trucks	4
	Backhoe loaders	3
	Telescopic handlers	2

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 crawler excavators where its market share has increased substantially during the last five years. In 2005 the company's performance in the compact equipment sectors improved significantly as a result of increased marketing focus.

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

**Table 121. Kuhn: European Subsidiary Companies, 2006**

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

Source: Company Information

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**

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**Fax:** +43 (0) 6462 888-287  
**Website:** [www.liebherr.com](http://www.liebherr.com)

**Ownership:** Liebherr International AG.

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

**Table 122. Liebherr: Product Range, 2006**

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

Source: Company Information

**Sales**

**Table 123. Liebherr: Sales of Construction Equipment, 2005**

**(Units)**

<b>Liebherr</b>	Mobile cranes	38
	Crawler excavators	67
	Wheeled excavators	53
	Crawler dozers	3
	Wheeled loaders	143

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.

**STAMBACH**

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**Fax:**               +43 (0) 1 29 20 574

**Website:**       [www.stambach.at](http://www.stambach.at)

**Ownership:** Wholly owned subsidiary of Neuson Baumaschinen AG. Stambach is a long established construction equipment dealer based in Vienna and in April 1999 it was bought by the Neuson company of Linz. Stambach's construction equipment sales activities are encompassed within Stambach Baumaschinen GmbH.

**Turnover 2005:** €12 million.

**Personnel:** 30

**Franchises**

**Table 124. Stambach: Range of Franchises, 2006**

Company	Products
<b>Neuson</b>	Mini/midi excavators, skid-steer loaders, site dumpers
<b>Kramer</b>	Wheeled loaders, telescopic handlers
<b>I-R Montabert</b>	Hydraulic hammers, demolition shears
<b>Weber</b>	Compaction equipment

Source: Company Information

Stambach had been associated with the New Holland and Manitou marques for many years in Austria, although a conflict of product interests with these brands subsequently led to the relinquishing of the Manitou franchise. The award of the New Holland franchise to Kohlschein in 2005 also saw an end to Stambach’s association with that company. Following its acquisition by the Neuson group in 1999 Stambach was granted the exclusive franchise for Neuson products in Austria, although corporate restructuring has meant that Neuson now utilizes four dealers. In addition, the merger between Neuson and Kramer has resulted in the Kramer franchise also being granted to Stambach. In 2003, a new franchise, I-R Montabert, was added to the portfolio as a replacement for the Atlas Copco hydraulic hammer franchise and in April 2006 Stambach was awarded the franchise for Weber light compaction equipment.

**Sales**

**Table 125. Stambach: Sales of Construction Equipment, 2005**

**(Units)**

<b>Neuson</b>	Mini excavators	52
	Midi excavators	18
	Skid-steer loaders	12
	Site dumpers	101
<b>Kramer</b>	Wheeled loaders	29

Source: Off-Highway Research

Stambach has enjoyed considerable success with the Neuson marque whilst the addition of the Kramer product line has enabled the company to penetrate the compact wheeled loader sector.

**Distribution:** The company’s headquarters was recently relocated a short distance away from its original site in the northern district of Vienna at the site of the Ebbs & Radinger dumper

manufacturing plant. In the rest of Austria Stambach operates via its own depots and independent dealers located in St. Florian, St. Veit, Siezenheim and Kirchbichl.

**Future Developments:** Stambach's declared aim is to achieve market leadership of the mini/midi excavator sector with the Neuson product range. The launch of Neuson's 12 tonne 12002 model should at last enable the company to offer an effective challenge to the established dominance of this weight class by Takeuchi.

**TERRA**

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**Fax:** +43 (0) 1 69 001-185  
**Website:** [www.terra-world.com](http://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 2005:** Not revealed.

**Personnel:** 420 (including subsidiary companies).

**Franchises**

**Table 126. Terra: Range of Franchises, 2006**

<b>Company</b>	<b>Products</b>
<b>JCB</b>	Construction equipment
<b>JCB Vibromax</b>	Compaction equipment >5 tonnes
<b>Ranger</b>	Rough terrain lift trucks
<b>Nissan</b>	Fork-lift trucks
<b>HBM-Nobas</b>	Motor graders, rope excavators
<b>Crown</b>	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 recent 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 127. Terra: Sales of Construction Equipment, 2005**

**(Units)**

<b>JCB</b>	Crawler excavators	34
	Wheeled excavators	4
	Wheeled loaders	15
	Mini excavators	20
	Skid-steer loaders	6
	Telescopic handlers	9
	Backhoe loaders	47
<b>HBM-Nobas</b>	Motor graders	1

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:** There is a full network of sales and service branches situated in Graz, Mauthausen and Wiesing.

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 recently 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**

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**Fax:** +43 (0) 662 469 11-10

**Website:** [www.volvoce.at](http://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%) 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 2005:** €0 million.

**Personnel:** 151.

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

**Sales:** The Volvo range of compact wheeled loaders and mini excavators has allowed the company to penetrate the increasingly important compact equipment sector, and in 2005 the company also sold a number of backhoe loaders in Austria. 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 a disappointment and Volvo has been conspicuously unable to challenge the established suppliers in these sectors.

**Table 128. Volvo Österreich: Sales of Construction Equipment, 2005**

**(Units)**

<b>Volvo</b>	Crawler excavators	82
	Wheeled excavators	5
	Wheeled loaders	116
	Articulated dump trucks	27
	Mini excavators	15
	Backhoe loaders	5

Source: Off-Highway Research

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

Volvo Baumaschinen Österreich also has subsidiary companies in Budapest, Bratislava, Prague and Zagreb. 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. Expansion in the hydraulic excavator sector has also been identified as a priority, particularly following the introduction of the latest Volvo range.

## **ZEPPELIN**

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**Website:** [www.zeppelin-cat.at](http://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 2005:** Not revealed.

**Personnel:** 170.

**Franchises**

**Table 129. Zeppelin: Range of Franchises, 2006**

Company	Products
<b>Caterpillar</b>	Construction equipment
<b>Bitelli</b>	Asphalt finishers, cold planers
<b>TEREX O&amp;K</b>	Mining excavators
<b>Hyster</b>	Fork-lift trucks
<b>Verachtert</b>	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 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 the brand. Hyster fork-lift trucks are a recently added sideline. The franchise for CompAir Holman 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 particularly well placed in the crawler excavator sector where the success of Caterpillar's 300 series machines has enabled the company to establish itself as one of the leading suppliers in the market. In contrast, wheeled excavator sales have been disappointing. Large wheeled loaders are another very 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 130. Zeppelin: Sales of Construction Equipment, 2005**

**(Units)**

<b>Caterpillar</b>	Crawler excavators	124
	Wheeled excavators	23
	Mini excavators	21
	Wheeled loaders	76
	Crawler dozers	6
	Crawler loaders	4
	Skid-steer loaders	6
	Backhoe loaders	17
	Articulated dump trucks	3
	Rigid dump trucks	2
	Telescopic handlers	2

Source: Off-Highway Research

**Distribution:** In May 1998 Zeppelin moved to a highly modern new headquarters in Fischamend, some four 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.