

Specialist sawmilling solutions

In the 1950s builder and carpenter Johann Resch often found his work took him high up into the alpine meadows of the Dolomite Mountains. European larch and spruce grew in abundance in the forests he could see around him, yet the timber he used in the buildings he constructed was hauled up from sawmills situated in the valleys thousands of metres below. The time taken by the saw-blades of the mills to convert logs into lumber was miniscule compared with the time taken by the animal teams to haul the raw material down, and the finished product up, the near-vertical slopes below the massive limestone pinnacles of the Italian Alps.

Johann Resch believed that there was a straightforward solution to this laborious, costly and frustrating method of working. His response was to transport a saw into the forest where it could cut timber on site. Necessity was, in this case, the mother of invention: the innovative carpenter and his brother Ignaz set about designing and building the first 'Resch' mobile bandsaw in autumn 1954. A successful test cut with the new equipment was made on 14 February 1955.

The prototype was soon busy at work converting the natural, sustainable forestry resources of the Italian region of Alto Adige into construction material for the inhabitants of the Dolomites. For 35 years the brothers Resch continued to

fabricate ever more efficient and sophisticated mobile saws in the coniferous forests flanking the highest jagged crags of the mountain range.

By the 1990s, however, satisfying the increased demand for Resch machines was being hampered by the constraints of the steep and tortuous mountain roads. Furthermore, logging transport systems were far more advanced and hauling timber down to the valleys was now a more economic proposition. A change of location was due and production was transferred from the heights down to the village of Blumau – also known as Prato de Isarco in the Italian tongue. The community stands on the old merchant route from the Mediterranean to northern Europe – the Brenner Pass.

If the place names and surnames of the mountain dwellers sound more Germanic than Italian, there is a straightforward explanation. For many centuries the area was under the control of the Austrian Empire and was known as the Südtirol (South Tyrol). After the First World War the territories were ceded to Italy, but despite a process of 'Italianisation' being imposed by Benito Mussolini, the culture has remained essentially Teutonic. Put simply, German continues to be the language most commonly spoken. The bus driver from the provincial capital of Bolzano (Bozen) certainly understood enough of my faltering



(Left to right) Christoph Lunger, Rudolf Lantschner and Martin Rieder at the Resch & 3 works in Blumau.

German to stop his vehicle right outside the Resch & 3 factory in Blumau.

Martin Rieder is responsible for planning and sales at Resch & 3. He explained how product development had been managed by Johann and Ignaz Resch. "The performance of each machine was evaluated when it was cutting timber in the woods. This led to changes in design that incorporated the latest advances in engineering technology. The result is the production of top quality, extremely reliable bandsaws." At first only producing lighter, highly mobile mills, the move to the Isarco valley allowed a diversification into the manufacture of easily installed stationary equipment.

In 2006, after 50 years at the helm, the brothers Resch decided to transfer the company to three loyal long-term employees: the aforementioned Martin, Rudolf Lantschner and Christoph Lunger. Rudolf manages quality control,

assembly, training and instruction. Christoph controls and supervises the production of the bandsaws. A change of company name was in order, too, with the new partners electing to trade as 'Resch & 3'.

The immediate challenge for the young entrepreneurs was to consolidate and expand the brand in the Südtirol; a province with an extremely rich forest resource and a strong tradition in timber processing. Although the orchards and vineyards for which the locality is renowned may appear extensive, they cover only 3% of Südtirol's 7,500 square kilometres. Forests, on the other hand, cloak 42% of the land surface with softwoods dominating. A small amount of broad-leaved trees stand in the valleys and on the lowest slopes of the mountains. Above this 'sub-montane' environment the European spruce (*Picea abies*) dominates with a 60% representation. The native larch (*Larix decidua*) follows at 18%, with two species of pine each occu-



(Left) No part of Europe is exempt from inclement weather and this Eastern European customer no doubt appreciates the benefit of a fully insulated protective operator cabin. The Resch & 3 1200 Profi can cut timber with a diameter of up to 1.5 metres. (Right) Where visual monitoring of individual board quality is necessary during the milling process a board removal system can be fitted. Boards and slabs are automatically removed during the return travel phase and placed alongside the machine. This allows the operator to inspect the exposed surface of the timber before the next cut begins.





(Left) All products and components are manufactured in the Brennerstrasse workshops in the Isarco valley. Across the waters of the mountain river stand the viaducts of the E45 motorway linking Italy and Austria via the Brenner Pass. Fast and reliable 24-hour delivery of spares is an important part of the company's back-up service. (Right) Johann Resch was often asked to work high amongst the towering pinnacles of the Dolomites. The mobile bandsaw made it possible to source the timber he needed from the natural forests that cloaked the slopes below the flower-strewn alpine meadows.

pying around 10%.

The red, flaky bark of the Scots pine (*Pinus sylvestris*) is a familiar sight for residents the length and breadth of Europe. *Pinus cembra*, variously known in English as Arrolla/Swiss/Stone pine, is an Alpine speciality. The five-needled pine has made a surprisingly large contribution to the forestry culture of the province. Distributed by the unmistakable spotted nutcracker (*Nucifraga caryocatactes*), humans too relish the tree's large seeds, which are also used to flavour a variety of fiery Schnapps. In recent years the tree has been widely established – even above the natural tree line – to consolidate snow cover and prevent avalanches in places such as the top ranking ski resort of Val Gardena. Interestingly enough, this beautiful valley's economy was – and to a large extent still is – based

on the craft of wood carving. The timber of the *pino cembro* (in Italian) or *Zirbelkiefer* (in German) has traditionally been used for the ornate creations.

Back in Martin Rieder's office, it was pointed out that around 100 sawmills continue to operate in Südtirol. He added: "There is no paper or chipboard production hereabouts. People want to turn the timber into boards for furniture manufacture and joinery." Resch & 3 must satisfy very demanding and experienced clients, but confidence in the sector remains high. For example, the company has recently installed five new static milling lines for sawmillers in the province. Many local sawmill lines are geared, as in the UK, to the throughput of small- and medium-sized logs. Many of these concerns rely on regular visits by Resch customers with their

mobile machines to break down 'oversized' timber with a diameter of more than 55cm.

The latest machine to leave Blumau was a mobile version for Switzerland. Its heavy-duty build means that the machine weighed in at 8 tonnes. A trailer capable of transporting the mill on the road at 80kph was a requirement of the customer and the project was successfully delivered by the team at Resch & 3. "The next machine will be a stationary saw for Austria," commented Martin Rieder. "In fact, the next three machines will be static installations. We're quite pleased with our order book at the moment," he added.

High quality timber processing equipment never comes cheap, and central Europe has gained something of a reputation for being a costly supplier of engineering products. Martin Rieder admitted that customers sometimes appeared to balk at the price tags on the Resch & 3 machinery. Could he explain, then, why they should consider making a larger investment than was absolutely necessary?

"If they buy from us they get exactly what they need. This takes time for us to design and our production standards are of the highest quality. We are also prepared to incorporate the latest technology. I was recently told by an Israeli customer that he had searched all over Europe but until he met Resch & 3 he couldn't find anyone to solve his particular problems. That's how we like to be known."

The machine now installed in Israel actually converts softwoods from Scandinavia and the Baltic States into construction lumber. Much of the material handled is, of

course, European spruce – the dominant forest tree of the Dolomite Mountains.

Machines manufactured in Blumau have also made their mark when it comes to milling hardwoods. A complete bandsaw line has been supplied to the German company MAI + Sohn for milling large beech logs. A second German company, Leopold, cuts beech and oak laminate flooring to between 3-7mm thicknesses with a fully automated Profi ES1050.

Theurl Holz of Assling, Austria, required a bandsaw for lamination. In this instance, however, high feed-speed together with a high level of cutting precision were a priority. The provision of a 55kW power plant met the specifications.

The TBS 1200 lamination bandsaw developed for the Italian company Habitat incorporates a continuous rotation from 0° to 90°. A bevel cut is therefore possible at any desired angle.

"Attendance at forestry shows is very important to us as a company," said Martin Rieder. The sale of the largest bandsaw manufactured to date stemmed from a meeting at Ligna 2007 in Hanover. An English furniture manufacturer, specialising in milling oak, was looking to upgrade his machinery. "He was impressed with our demonstration and we moved on from there. Resch & 3 can build a machine for anyone, anywhere and will provide exactly what the customer needs. We may be a small company with eight or so employees, but we can produce six to eight machines a year and each will be tailored specifically to the customer's individual requirements."

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For static systems the Italian manufacturer can supply the three-tonged gripper carriage. The operator, from the cabin, is able to remove and separate slabs, balks or boards (singly or in stacks) clear of the sawing area.