

diagonal⁴

magazine of fine surfaces

united kingdom

Starred chefs
Swiss precision for UK's
finest joiners

Her Majesty's Joiners
Vmax for excellent surfaces

Six pack
„Eurostar amongst sanders“

Years aHead
CNC-sander is world champion's
secret of success

KUNDIG



Dear reader,

for many years, Kündig UK has been linked with British joinery. Our goal is to have a satisfied customer, we therefore put a lot of effort into this relationship and try to provide the best possible equipment along with the best possible service. It's something you cannot measure or order, you just have to experience it for yourself.

When satisfied customers tell us that we have a good reputation for our sanders, we feel honoured. Kündig produce nothing but sanders and therefore we endeavour to deliver the best machines possible.

I am pleased to present to you the first issue of our customer magazine "Diagonal" in English. We have gathered a number of stories about successful manufacturers using Kündig sanders in the UK to illustrate what I've mentioned before: That we try very hard to find competent solutions. As representative of Kündig UK I'm glad to hand over this magazine to you and wish you an interesting and informative insight into Kündig.

yours sincerely
Carl O'Meara

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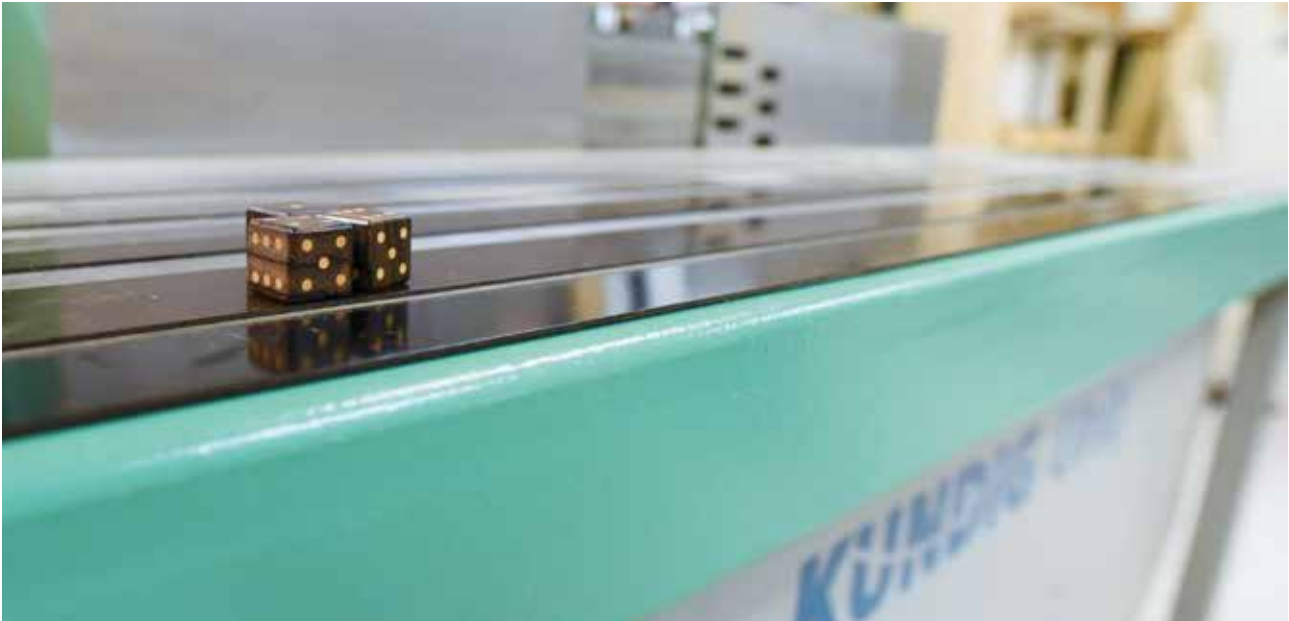
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Swiss precision for UK's finest furniture makers

Starred chefs amongst joiners

To say you were trained in cooking by Jamie Oliver would be excellent reference. This seems to be the same with Waters&Acland, who are ranked amongst the best furniture makers in the UK. For their sophisticated surface-finish they only trust precision-sanders from Switzerland ...



Waters&Acland are recognised to be ranked amongst the best furniture makers in the United Kingdom. Cabinet makers from all over the country jump at the chance to be trained by them. To own one of their certificates looks good on a curriculum vitae.



Strictly speaking, Waters&Acland are quite a regular cabinet/furniture making business based in the Lake District National Park. When looking at their works, you start to understand why furniture makers from all over the UK jump at the chance to be trained by them: “Today we are not only a manufacturer but we also run a school”, says Will Acland. He and Oliver Waters frequently receive awards for their furniture-design. Even the Prince of Wales has visited this exceptional company. Their prestigious clients include Burberry, along with a number of private connoisseurs of fine arts and crafts.

Both workshop and school therefore run hand in hand. Waters&Acland offer classes lasting from a week to one year, where already skilled craftsmen can hone their knowledge. They are not only trained to a height of perfection in crafts but also in furniture design. Therefore their trainees can sometimes seamlessly carry on with a long line of British designers like Adams or Chippendale. All those efforts led Waters&Acland to be ranked amongst the best furniture makers in the country by experts.

Perfect work needs fine tools

A visit to their workshops warms the heart of every admirer of fine tools: The typical British cast-iron planes are arranged neatly polished in a wall unit. Amongst them are rare ones which are hard to come by these days. Some of the chisel-sets are equipped with home-turned handles made from exquisite woods. They look as they have never been punished by an iron hammer. “You need fine tools to do perfect work”, Will smiles at the visitor who can’t tear his eyes away, “This is equally as true for hand-tools as it is for machinery.”

Speaking about machinery – that’s the reason why we are actually here. It is quite evident that the machine-workshop is as immaculate as the rest. The machinery is at its finest – only approved quality-brands are present. Both sanders originate from Swiss precision-manufacturer Kündig – not without reason, Will ensures: “Most of the time we treat our furniture with a

sophisticated polished oil-surface. This process only succeeds when the preliminary work – this means mainly sanding – is done neatly.” Therefore their Kündig Premium-2 1100-RE wide-belt sander and Kündig Uniq edge-sander are preferable, reports Will. This raises the question as to why Waters&Acland didn’t favour the state-of-the-art oblique-sanding technology of the Kündig Brilliant instead of the “traditional” Kündig Premium? “It wasn’t necessary for us”, Will states “Even conventional sanding-technique works exceptionally with a Kündig sander.” In his view this relates to the high precision of this Swiss quality-product: “Of course you can get a more refined result with Kündig’s oblique sanding-heads. But we wanted a sanding-process that matches more with the reality out there. Our trainees learn to perfect

a surface by themselves, without the help of a Kündig Brilliant sander.”

“Everybody still wants a Kündig sander”

In the discussion that follows, he agrees that with polished oil-surfaces, they would clearly benefit from the finer, traceless sanding with Kündig’s oblique sanding-technology. Actually this makes him an admirer of Kündig, he says: “I think through its fine sanding-quality a Kündig is a perfect match for exclusive arts&crafts joinery.”

Stemming from some of the best workshops in the United Kingdom, Kündig has achieved its excellent reputation with good reason, Will Acland laughs: “Everybody still wants a Kündig sander – it is simply the best.” ■

For perfect work fine tools are crucial ...



... Will Acland feels certain. Therefore he trusts in Swiss precision for sanding: “Everybody still wants a Kündig sander – it is simply the best.”, he says.



Education at the immaculate workshops of Waters&Acland is equal to training with a starred chef.



Obviously there are only approved brands at the machine-workshop. Kündig Uniq in front, Kündig Premium-2 1100-RE behind.

Vmax for excellent surfaces

Her Majesty's Joiners

It's always good to have satisfied customers – but how many can say they have received a letter of thanks bestowed by Her Majesty the Queen? To please such a distinguished client Tailor Made Joinery have trusted in Swiss precision sanders for many years now ...



Above: TMJ crafts sophisticated furniture for banks, industry and private clients.

Middle: One of the highlights was the restoration of Windsor castle – her Majesty the Queen personally bestowed her gratitude.

Right: James Taylor applies high quality standards.

Left: A Kündig Vmax is used for mirror like finishes.



There is no need to introduce Taylor Made Joinery in Bildeston to UK-based professionals – certainly since the spectacular reconstruction of Windsor Castle TMJ is at the forefront of joinery manufacturers with Her Majesty the Queen showing her appreciation.

Managing Director James Taylor takes great pride on this highlight in the company's history: "But it's not that we haven't produced equally beautiful projects for other well known clients." Microsoft for example – the list of customers reads like the Who's who of jet set and business-world.

First-class quality is vital

For top-class customers one point is of vital importance: "We are expected to produce work of unrivalled quality." Even with Britain's age-old crafts-tradition the usual understanding of quality is not enough, James Taylor told us: "We started many years ago to apply tighter quality-standards." What sounds so simple has to be thought out carefully with all it's consequences first: "We don't just estimate. Instead we design very accurately by CAD and process with CNC-machines. Only this gives the necessary precision for complex designs – we measure in tenths of a millimetre."

A visit to the workshop with veneer shop manager Mark Davis shows up-to-date machinery: "You cannot work exactly to a tenth of a millimetre with a 50 years old rickety spindle moulder. You need modern precision-machinery for this", Mark points out.

First Botop in the UK

This is also true with sanders: "Precision commences prior to CNC-machining with the calibration of veneered boards." As they use multiple CNC's they also require precision sanding: "Amazingly enough it is all done by a single sander. Despite that it's a little bit bigger than usual" smiles Mark. He is talking about the first Botop in the UK, a high-performance sander from Kündig. "This Kündig-sander calibrates both sides in one pass and can also do pre-sanding, fine-sanding and even cross-belt-sanding in the same cycle."

The Kündig Technic Botop-5 1350-XREEd-R at TMJ has an unusual arrangement of sanding-heads: First, in the top-sanding part is a cross-belt sanding-head followed by a calibration roller and two electronic sanding pads. "This enables us to process entire cross-veneered boards by using the cross-belt instead of the longitudinal ones. The

throughput of the Kündig is marvellous. It processes the boards for several CNC's at the same time without effort."

Reliable Kündig

Despite this great performance – a single wide-belt sander would not be enough for 70 employees. "We thought we needed a second machine as a backup just in case the Botop failed. This actually never happened, the Kündigs are very reliable" Mark is happy. Of course the "back-up" is also a Kündig, a Brilliant-2 1600-RCd model: "This is not exactly makeshift", he laughs, "With its enormous working width of 1600 millimetres it turned out to be very practical. The unique Kündig oblique sanding-head provides excellent surface-quality, particularly on delicate combined veneers. Through the oblique angled sanding belt even cross grain appears with almost no sanding traces." And he adds: "The Kündig Brilliant also is very easy to use, so it's possible to process even

single pieces very quickly." With their demanding customers and tight schedules reliability is essential for TMJ: "Our Kündig sanders never fail, this cannot be praised enough", Mark points out.

Vmax for sanding lacquer

The best things come in threes – there's another Kündig in the spraying department of TMJ and it's also a unique machine: "We use a Kündig Vmax for lacquer-sanding which is in our opinion one of the best sanders for mirror-like finishing."

For those who aren't familiar with the term Vmax: These are two oblique sanding heads, one positioned at +10° and the other at -10°. With these two oblique sanding heads, they almost act like cross-sanding – that's what Vmax is, two heads arranged as a "V": "In practice it means getting plane and perfect surfaces without sanding traces", Mark reports, ready to furnish proof. With contrast powder as is used by car-body painters sanding traces on filler become visible. The result

The Kündig Technic Botop-5 1350-XREEd-R was the first of its kind in the UK and can calibrate, pre-sand, fine-sand and even cross-sand in a single pass.

Even single pieces can be processed very quickly with the Kündig Brilliant.



Veneer shop manager Mark Davis (picture) appreciates precision and reliability with the Swiss sanders.



With a working width of 1600mm this Kündig Brilliant-2 1600-RCd proves to be a flexible addition to the large Botop sander.



of the demonstration by Mark's chief-sprayer is amazing: Traces clearly visible before sanding are gone after sanding with the Kündig Vmax.

"Precision and reliability of our three Kündig sanders are really outstanding", Mark Davis resumes satisfied. "A board sanded on Monday can be reproduced exactly on Thursday. They are easy to use providing the necessary precision for our quality-standards. And for high-class paint-jobs I think there's hardly anything better than this amazing oblique sanding technology from Kündig."

① "No sanding traces" with the Kündig Brilliant Vmax 1350-EdEd-L confirms the chief-sprayer.

② The sanding heads form a "V".

③ "I think there's hardly anything better than this amazing oblique sanding technology of Kündig's Brilliant Vmax", states veneer shop manager Mark Davis.

④ With contrast-powder applied prior to sanding the lack of any traces can be proved.





As is traditional for a joiner, Phillip Levenson wears the pencil behind his ear. His investment in a Kündig Premium wide-belt sander turned out to be a piece of good fortune.

Time-saving wide-belt sander in joinery

50 hours less – that's a fact

In a joinery company, machinery must last for a long time as investments often pay off in the long-term only. If a machine pays for itself after only a short period of time and also offers outstanding longevity this simply equates to higher profitability.

Phillip Levenson is the younger brother and Neil the elder brother. Their Mother manages the office and their Father is meant to be retired but can still often be found helping out in the workshop. A traditional family-business, manufacturing windows at their Knowsley factory in the north-west of England: "Traditional box sash-windows are still widely used and are one of our specialities. We also manufacture insulated glass windows along with both interior and exterior doors", Phillip Levenson, the Manager of M&R Joinery Services tells us. "We differ from other window manufacturers in that we can offer painted windows. Usually traditional manufacturers only offer unfinished windows which are painted on site."

Apart from this, things haven't changed a lot from traditional production-methods, Phillip reports: "Of course we use machines, but this is kept within limits as suitable machinery for joinery often involves a large investment. Originally we had a cross cut saw, four sided planer, spindle moulder, mortiser – and

Photos: ©Robert Kittel

that was about it. Now, we have added a modern spray line and separate glazing department."

In need for a durable sander

The modern spraying-line showed up a weak spot with the established process: "We used to sand windows with pad-sanders but with increasing numbers this proved to be more and more ineffi-

cient." Therefore Phillip and Neil investigated the market of wide-belt sanders: "A service technician then advised us to look at Kündig which proved to be very valuable advice which was very important to us. Machines need a long lifecycle in joinery until till they pay for themselves." The first demonstration at Kündig UK left the brothers deeply impressed: "The machine had such a working height that it was possible to process a whole box-sash frame and the Kündig was much more precise than anything else in our workshop." M&R then ordered a Kündig Premium-2 1350-RP: "To tell you the truth this was a huge investment for us but we

Traditional box sash-windows are a speciality of M&R Joinery Services.

Neil Levenson is impressed by the efficiency: „50 hours less – now that's a result.“



were confident that this investment would be justified over the long-term in the time saved in sanding.”

50 hours a week saved

“As things turned out, time-savings by the Kündig sander proved to be much better than we ever could have expected, his brother Neil states enthusiastically: “We are now saving 50 man-hours a week with the new sander. Now that’s satisfying.” Also surface-quality improved considerably: “It sands perfectly flat and precise. You can feel that after spraying, the surfaces are smoother and also need less sanding in between coats of paint.”

Kündig was the starting point to future

“Actually these savings were noticeable immediately”, Phillip points out: “Added

to this, these Kündig precision-machines are legendary for their durability. I have heard about Kündig’s built 25 years ago running precisely and reliably since day one. I think that’s great. It would make a profit if the machine pays for itself sooner than expected. It’s with pleasure that we can use this profitability for many years to come.”

Everybody in the company is delighted to be working with the Kündig Premium-2 1350-RP as it is so easy to use, Phillip makes his conclusion: “It gave me food for thought that this modern Swiss wide-belt sander enabled us to progress so quickly. Now I’m considering how to update all of our existing machines for more modern and capable ones.” And he smiles: “Purchasing the Kündig certainly was a starting point to the future for us.” ■

① The Kündig Premium-2 1350-RP offers a fixed table and enough working-height for even box-sash frames.

② A calibration-roller (r.) and a pneumatic pad enables calibration and finishing in one pass.

③ As one can clearly see, their Father (in front) is retired although he still enjoys being in the workshop.

④ Due to a modern spraying-line M&R can offer ready-finished windows.



Consistent quality sanding even with load-peaks

Twins

No matter how you look at it, the financial power of oligarchs possibly preserve traditional crafts. However, these international clients do not tolerate missed deadlines – that is the reason Longpré rely on Swiss sanders . . .

Going back as far as the rococo period, joinery from the UK adorned the palaces of the rich and famous. Some may comment that the well-heeled have an individual taste. “But one has to accept that only their patronage enabled the best in crafts to be produced”, says James Couper, Production Manager at Longpré Furniture in Bruton, Somerset. “If there were no clients willing to pay the costs involved of making valuable furniture, joinery would be reduced to foil-coated bulk-articles. I don’t think that anybody seriously wants that.” That is why company-founder Paul Longpré focused on this sophisticated target-group. With 37 employees, he specialises in high class furniture and interiors. This isn’t that simple, James tells us: “We have to be discreet. In these circles privacy is much appreciated. We can rarely talk about celebrities or the beautiful furniture we have crafted for them.”

Arts&Crafts

Yet their artisan details like carvings or marquetrys would prove extremely interesting for enthusiasts: “We are working in the Arts&Crafts tradition”, James explains. Founded at the start of the 20th century by William Morris and John Ruskin, the Arts&Crafts movement wanted to return to bespoke joinery undertaken by single masters: “This is exactly how we work – everybody crafts his piece from A to Z.” Which can sometimes prove challenging: “And I don’t mean Victorian-style furniture in pink . . .” James smiles, “But rather that the modern ideas of construction deadlines often do not even allow drying of the glue.” Not to mention the contractual penalties: “This can easily lead into bottle-necks. If a machine then fails – it doesn’t bear contemplating.” Therefore the whole machinery is doubled in presence: “Backup is essential to us if something goes wrong. We only purchase tried and tested brands which can also offer a good service in the UK.” Accordingly, they own two sliding table saws, veneer presses, planers, spindle moulders also of course, not to mention the 2 wide-belt sanders – both from Kündig, the Swiss specialist manufacturer of precision sanders.

No complaints about Kündig

“Working to an exacting timetable, employees quickly start to complain if a machine



doesn't work properly. Kündig is the sole exception in our workshop – nobody ever complains about these Swiss precision sanders."

The older of the two sanders at Longpré, a Kündig Duplex, has run reliably for years, James reports. It is already equipped with a (back then) super-modern "lacquer-option" which allows stepless adjustment of feed- and belt-speed.

Not long ago a Kündig Premium-2 1350-RE was added: "Both machines offer excellent sanding quality, with the electronic sanding-pad on the newer one being even more precise." James also likes the easy handling: "I think Kündig is better than other brands in this respect. Everybody in our workshop sands his work himself. If you don't use a machine daily easy operation is crucial." He mentions the neat touch-screen of the Kündig Premium: "I like that. It is easy to read and logical."

Kündig UK put in great efforts

James is impressed with the service of Kündig UK: "You can get sanding-belts or spare-parts the next day. Kündig UK put great effort into service." That is not to be taken for granted he says: "The Kündig-service has been tried and tested with us for many years now."

Accuracy and reliability

"At Longpré we serve a sophisticated market. Tycoons do not tolerate missed deadlines. Therefore reliable workshop equipment is crucial to us", James Couper concludes: "That is what Kündig means to me – accuracy and reliability." ■

Opposite page: Longpré offers solid craftsmanship.

Production-manager James Couper.

- ① *The whole machinery is doubled in presence.*
- ② *Reliable machines without bells and whistles are important at Longpré.*
- ③ *Arts & Crafts – one man crafts his piece from A to Z.*
- ④ *This Kündig Duplex allows stepless adjustment of feed- and belt-speed*
- ⑤ *The new Kündig Premium offers easy operation and an even more precise electronic sanding-pad.*





The reliability of their Kündig-sanders attracts everybody at the Halstock workshop, Dave Higgins (4th f. l.) says.

Swiss sanders with long-term value

Long-term relationship

Their first Kündig sander, bought two decades ago, runs perfectly Halstocks say. That isn't any reason to give up on technical progress. Since then they have bought three Kündig precision-sanders and are thinking about a fourth ...

Quality still remains when the price is long forgotten – this well-known British car-brand slogan also applies to Kündig, David Higgins smiles, Senior Cabinet Maker at Halstock in Yeovil: “As a matter of fact our Kündig Enorm-Primo has been in service for longer than Halstock has existed. We arose from the amalgamation of three local cabinet makers from Somerset and the sander belonged to one of them. Today nobody can remember how much the Kündig cost back then but it was surely worth every penny.” The legendary durability of Kündig sanders is no empty promise, Dave states: “A Kündig is built for eternity. Our machine has run perfectly well since day one.” That is why there are three Kündig sanders in

service today: “We’ve got quite a good reputation with our sophisticated joinery so the company is growing steadily. Therefore we also need suitable machinery.”

“A real step forward”

Halstock is a perfect example of a modern British joinery company. The workshop is extremely neat and equipped with well-kept up-to-date machinery. Labour conditions and quality standards clearly differ from the norm in the UK. “We invest a lot of money to get more precision with shorter processing times.” This eventually led to the purchase of an edge-sander and another wide-belt sander – both from Kündig of course: “We were really satisfied with our first Kündig. The precision and sanding quality was outstanding when it was new and is even very good by today’s standards. But we needed to expand our capacities as business grew.”

Halstock opted for a Kündig Brilliant-2 1350-RED wide-belt sander: “There was nothing wrong with our old sander but the Brilliant plays in a different league. You can clearly see the progress in sanding-quality over the years”, states Dave. A vacuum feed-belt,

Jasper Heinrich, Operations Director.

Photos: ©Robert Kittel



even more precise thickness-adjustment and most notably the revolutionary oblique-sanding technique are only some of the improvements he specifies: “To more than 80% we process high-gloss polyester-coatings with the Brilliant where oblique sanding really shines.” Even with sticky polyester, belt-clogging is greatly reduced by the oblique sanding-head, Dave confirms: “You get an outstandingly even and smooth surface with oblique sanding. It doesn’t show sanding-traces like you find with conventional sanders.” Dave appreciates the precision of the Kündig which is accurate to a tenth of a millimetre: “That’s what I call modern precision.”

Measurable time-saving

The bottom line is that the new Kündig sander pays off: “We do time recordings and post calculations. The processing time for sanding has reduced significantly due to the new sander.” Halstock even started to process parts of their subcontractors: “We can now do this much faster and with better surface-quality than they

can achieve.” This is also true for the Kündig UniQ edge-sander, says Dave: “It also saves us a lot of processing time.”

Plans for further development

The growing company already has new plans: “We’re looking to build another production facility equipped with a CNC and an additional Kündig sander”, Operations Director Jasper Heinrich told us: “A sander other than another Kündig will not enter the equation.”

- 1 Halstock workshops at Yeovil, Somerset.
- 2 Kündig UniQ edge-sander.
- 3 The company grew steadily to 50 employees.
- 4 The Kündig Brilliant -2 1350-REd is able to process even very small parts with precision.
- 5 This Kündig Enorm-Primo has been in service for longer than Halstock has existed. It has turned out to be very reliable for two decades.
- 6 Working conditions and quality standards at Halstock differ from the norm.





Extended working width and surface-excellence

“V” for window

The benefits of a frame-by-frame window production are often confronted with higher machinery-investments compared to the processing of single parts. Probably this may be only half-truth, as a growing number of precision window-sanders from Switzerland proves...



Window-sashes can be processed by the Kündig Brilliant-2 1600-RdPd-F with a standard working width of 1600 mm straight-forward. A special sanding-process enables perfect surfaces.

Swiss window-company Trütsch utilize an opulent 3000 m² production-area at their plant at Ibach: “We hope to benefit long term by increased quality and a more efficient production”, explains Hans Trütsch. There is a lot of competition in the Swiss window-market he reports. It is caused by the restricted access to the European market, as Switzerland is not a member of the EU. So most manufacturers are limited to their home-market: “You must offer extremely good value for money to survive here.”

He confesses to being a mentor now: “My daughter and a manager run the company today, I’m retired”, he smiles. His daughter Cornelia Wiget and manager Edi Zwyer strongly disagree: “His long-standing expert-knowledge is vital for the company. Barely nothing would exist here without him”, Zwyer says, pointing at the plant of this family-business founded in 1876. 28 employees process about 2500 wooden- and wood-alloy windows per

year as well as window shutters and front doors. Apart from recent energy-saving windows they also manufacture for heritage-restorations. They can even produce leaded-windows themselves.

Surface is the key to customer

“You can’t tell by looking if a window is good or not – no matter how many CE-labels there are sticking on it”, Hans summarizes the dilemma of every windowmaker. “But customers can recognize a good paint-job. So the coatings got more furniture-like over the past years. They are the key to customers.” According to him it makes no sense to fight prices with industry: “Getting better prices by improved quality strikes me to be economically more reasonable. So we invested primarily to our surface department.” Which means not only better sprayguns or high-tech milling-tools but also precision-sanders: “They improve coating quality most of all”, he says confidently.

Working-width is vital

He trusts in proved processing methods: “There is a lot of discussion on processing and coating of single parts”, Hans reckons, “But speaking with a hard head one can get more performance by an angular profiling processor than with a CNC-centre and a frame-by-frame production is also a lot more secure.” Therefore the most important purchase was the wide-belt sander, he says: “Hence this promised the biggest leap in quality to us.” But with a frame-by frame production one can run easily into a bit of a problem: “Such a sander can’t be wide enough.” Normally the sashes are fed obliquely to prevent ugly sanding-traces across the grain: “Then even extra-wide machines quickly become too narrow.” One of his friends, a cabinet maker, has owned a Kündig wide-belt sander for many years: “This Kündig is tried and trusted, so we decided to ask the Swiss market-leaders too.” He was pleasantly surprised at the very beginning when



“Barely nothing would exist here without him” says manager Edi Zwyer about doyen Hans Trütsch.



Hans Trütsch and his daughter Cornelia are convinced: “The Kündig had a noticeable positive effect in a very short time.”



Even with an opulent 1600 mm working-width the machine is quite compact.



The two sanding-units form a "V" with angles of 350° and 10°. Sashes can be fed straightforward to make use of the whole working-width.



he found out "...that a working-width of 1600 mm is a standard with Kündig. Usually wide-belt sanders of this size are custom-made and prized accordingly."

"V" for window-sanding

"We realised that Kündig makes a popular dedicated sander for windowmakers, known as Vmax." The concept convinced him instantly: "This invention is really clever. Instead of feeding the sashes obliquely and losing working width, they turned the sanding-heads oblique in the Vmax." The two sanding-units form a "V" with angles of 350° and 10°: "This acts almost like cross-sanding, where the traces should neutralize each other too. So you can feed up to 1600 mm wide sashes straightforward without paying attention to long- or cross-grain. Actually this is time-saving since we must sand by hand now only a few extra-wide frames left." His painters are satisfied too, Hans points out:

"Even spruce gets very smooth with marginally no traces left in cross-grain. They say that woodfibres now stand up less and as a result spraying is much easier. We need less lacquer-sanding now – as a matter of fact, now it's sufficient to give it a once over by hand to remove dust-particles." It's no wonder that his verdict about the Kündig Brilliant-2 1600-RdPd-F is absolutely positive: "This dedicated sander turned out to be a real time-saver. The Kündig is reliable and sturdy and delivers on a constantly high level. The quality of our surfaces got visibly better and this is a major sales argument now." Hans is convinced: "In my mind Kündig provides a nearly ideal sanding-system for frames with the V max. Due to oblique sanding there is almost no belt clogging so the sanding-belts last longer than usual even in coniferus timber. In our production the Kündig had a noticeable positive effect in a short time. Yes, we are happy." ■



Satisfied painter: "Woodfibres stand up less now and spraying is much easier."



In their plant at Ibach employees of Swiss window-maker Trütsch enjoy good working conditions.



28 employees process about 2500 wooden- and wood-alloy windows per year as well as window shutters and front doors.



„Eurostar amongst sanders“

Six pack

Friendship Mill Beds can now sand their parts up to three times faster, reports owner Edward Ireland. Their brand new Kündig Technic high-speed sander brings together six steps into one ...



The high-performance sander Kündig Technic Botop-6 650-RRR-RRR is according to Edward Ireland from Friendship Mill Beds “the Eurostar amongst sanders.”

Time for tea on a busy production line? Yes, this is now possible since the Kündig Technic Botop-6 hit the workshop, owner Edward Ireland smiles: “I was amazed about how much time this Swiss high-speed sanding-line saves us.”

Friendship Mill manufactures beds from Scandinavian pine at Read, Lancashire. To keep the pace as an all British company in this highly competitive market-sector, Edward relies on personalisation: “We offer individual design and lettering for bed-heads, which is popular with children’s beds. This gives us a local advantage in the UK, but it won’t be enough on its own to stave off competition.”

Sanding the way for better efficiency

Edward takes every opportunity to make the production even more efficient. The company was founded in 1992 and is able to produce 5000 beds per year with only 12 employees: “It is important to me that

there is still furniture ‘made in England’, which also has something to do with my social responsibility as a company-owner.”

A lot of the work is carried out by the CNC and some of the other machines have either been modified or custom-made for specific production needs. To keep lacquer consumption and emissions as low as possible they employ electrostatic spraying using a robot, yet most potential to streamline production was found in the sanding of countless parts, Edward reports: “We found that the previous three-belt sander needed a lot of handling by two workers. Every single part had to be picked countless times, stacked then fed back through until all four sides were sanded. Added to this, the old sander was quite slow and sanding quality wasn’t as good.”

Tracking for bespoke machinery

A sanding-line with “more power” was needed: “But – which one?” Edward

wondered. “You can’t purchase a custom-made industrial-sander at the corner shop.” As often happens, the recommendation came from a service engineer: “He recommended me to contact Carl O’Meara of Kündig UK.”

After he figured out Edward’s requirements, the experienced O’Meara advised him to get an offer for a Kündig Technic high-performance sander. This Technic range from Kündig offers a bespoke design based on customer’s production needs. “Initially I had to swallow hard, when I got their offer”, laughs Edward, “It wasn’t exactly the cheapest machine on the market, but you receive amazing value for money. In fact all our requirements were met by Kündig which is hugely satisfying.”

One of those requests was the sanding of quite short parts: “Previously these 250 mm long parts could only be sanded by hand which is obviously time consuming, now these small pieces pass through the sanding-line as quickly and

Overall six sanding-heads enable double-sided sanding with the Kündig Technic Botop-6 650-RRR-RRR.



Equipped with three different grit-sizes it is possible to process parts from a planed surface to a finished surface in only one pass.



safely as the larger parts thanks to a very capable vacuum feed-belt.“

A visit to see an example of a top and bottom sanding machine at a stair manufacturer in Lyon, France convinced him completely: “Kündig produce nothing other than sanding machines to a peak of perfection. They are also a very responsible family-owned business similar to us, which appealed a lot to me. Additionally, their machines look well thought out and solidly designed. In summary: I was very impressed.” After an inspiring meeting with chief-engineer Stephan Kündig, Edward ordered the UK’s first Kündig Technic Botop-6 650-RRR-RRR with a whopping six heads.

Three times faster

“The Botop-6 now processes in a single pass what previously needed multiple sanding-cycles.” Three calibration-rollers each are located to a top- and a bottom-sanding unit. They process the parts from a two-sided planed surface to a finished surface in a single run: “The Kündig Botop

can now do that much faster than our old sander giving an even better surface finish.” As desired sanding-time was significantly reduced: “It’s a fact that we are now three times faster with this Kündig high-performance sander. This happens to be the Eurostar amongst sanders”, he states enthusiastically.

Furthermore the Kündig is easy to use: “A single man can do everything on his own. We don’t need a second one to assist any longer and can keep him busy with other work. There are no complicated adjustments with the Kündig and changing belts is also very quick so there are practically no downtimes.” Production safety is an important point: “The Kündig gives fast, fine sanding with constantly reliable results”, he summarises. His decision for the Swiss quality-product was right, he says: “It’s a good investment that will pay off earlier than expected. The Kündig sped up our production throughout the company and has saved us more money than it cost”, Edward Ireland is pleased, sipping from his tea cup ...

① A lean 650 mm working width is perfectly suited to bed-components. Even so the Botop-6 is quite an impressive machine.

② Edward Ireland is pleased: “The Kündig sped up our production throughout the company and has saved us more money than it has cost.”

③ ④ ⑤ Made in England: Friendship Mill Beds manufactures beds from Scandinavian pine at Lancashire.





With only a few simple steps the three sanding belts of a Kündig Premium-3 1100-RRP can be changed.

Upgrading in kitchen manufacturing

“Always wanted a Kündig ...”

Ironically, the recession over the last few years has led to rapid growth at kitchen-manufacturer deVol. This didn't happen by itself. Robin McLellan was instrumental in the investment of a new sander and revolutionising the whole production process...

His pet-phrase is “...to be bang on” and that's exactly how the youthful Robin McLellan is doing – bang on. When world economics changed radically back in 2008 there were only two options left open, reports Robin: “To change something with manufacturing and products or to flatline. There was no future to crack on as normal. Therefore in fact, the financial crisis was good for us, it was the necessary kick we needed.” DeVol manufactured kitchens as an artisan back then: “Which was sympathetic, but also incredibly time-consuming. In Britain recession meant that customers' budgets halved, which forced us to compete with much more mass produce products made outside of the UK.”

Step #1: Make your product more simple

He therefore looked for opportunities to simplify the hand-made frame constructions. Robin, Paul O'Leary (director) and Ben Creed (workshop manager)

created “Shaker style”-kitchens, as all three of them are design graduates. Therefore deVOL developed a modular range of furniture to complement their existing bespoke “Classic Furniture”. The Shaker range was designed to be efficient to produce and was influenced by the New England Shaker movement: “At the start of the recession we realized that to be successful we needed to offer a top quality product at a price that enabled us to compete with competitors importing furniture.” DeVol's new design and competitive price went down well with the public.

Step #2: Make your employees specialists

The next step seemed to be logical: “Before, every employee crafted a job from A to Z. Now they are specialised on a particular step and hand over the part to the next station after processing it. There had to be a lot of restructuring: “First of all we had to improve our accuracy. Everything now has to be

Photos: ©Robert Kittel



exact to a fraction of a millimetre, otherwise it wouldn't fit with other parts." Due to their manufacturing reorganisation they can now produce in larger numbers, says Robin proudly.

Step #3: Make your advertising more visual

Consequently advertising was also developed: "You have to boost advertising in a crisis instead of reducing it as most people do. Most of the time you simply have to keep your workshop running and marketing would be reduced. You can't do that all by yourself, it's a specialist's job. We do take on lots of design graduates from nearby Loughborough University. They are much better at understanding how to present our products professionally." Therefore deVol has a permanent presence in journals such as "Country Living" or "Elle Decoration" now and can do the creative side including photography and branding in house.

Step #4: Get a Kündig!

"You absolutely need a Kündig", Robin jokes: "Seriously - We always wanted a Kündig. We got to a point where we couldn't cope with our increasing production numbers without a capable wide-belt sander. We therefore purchased our Kündig." Their Kündig Premium-3 1100-RRP is an important corner-stone of upgrading the machinery: "As I mentioned, we had to significantly reduce tolerances. The Swiss precision-sander is really helpful with this as it is very easy to adjust with high precision." Added to this are reduced setup-times, increased production speed and a perfect finish, Robin points out: "With our growing production we were in need of a better performance. This is where our Kündig Premium comes in - it is really fast and surface-quality is even better which also results in a higher quality painted finish."

These measures made an impact: "We are better off than ever before even with today's unpredictable economic climate", Robin is pleased. "With the efficient Kündig sander we now have potential to grow further - so to us the purchase made a lot of sense." ■

- ① DeVol manufactures kitchens at Loughborough.
- ② Robin McLellan developed deVol from a small craft workshop to a UK-wide kitchen manufacturer.
- ③ The hinges are chiselled.
- ④ The employees now manufacture in assembly groups.
- ⑤ Precise thickness-adjustment is very simple with Kündig.
- ⑥ Three sanding-heads provide calibration, pre-sanding and fine-sanding within one pass.





High-gloss edge sanding

Yachting in the Alps

How do you manage to build yachts in the heart of the Austrian Alps? The answer, and why a Kündig precision-sander is necessary for this, can be best explained by Markus Mandler himself...



Overall three feeding-belts provide a gentle feed for delicate high-gloss parts with the Kündig Uniq-S Lack. Feed- and cutting-speed has stepless adjustment to the characteristics of applied lacquer-materials.

In a valley surrounded by 3000 m high Austrian mountains, the village of Amlach is situated with a population of just 42. Mandler Interiors is located there and employs nearly as many people as the village has residents. One would not expect to find one of Europe's best locations for luxurious yacht interiors here.

The first question to ask manager eng. Markus Mandler therefore seems naturally to be: How do you manage to build yacht-interiors in the heart of the Austrian Alps? Television is to blame, he answers: "In 2006 I saw a documentary on the interior-construction of a cruise liner and was instantly fascinated." Back then, he had taken over his father's joinery company with five employees. However, there wasn't much development potential due to the location: "So I thought, this could possibly be a niche for us." No sooner said

than done – a ship's chandler, also situated in Carinthia, was desperately searching for production capabilities and at the time the economy was booming back then. Soon Mandler had his first order. "But it wasn't that simple. As a subcontractor you have to be better than your contractee." Lightweight design, fire standards and working with expensive materials make this special field not exactly trivial: "We had to work very hard for success." Today, Mandler can proudly refer to outstanding testimonials – for instance, one of the biggest motor-yachts in the world. With a length of 140m, this yacht is not much smaller than the two cruise-liners of 225m, for which Mandler also delivered the interiors.

Surfaces are very important

Technical aspects of such interiors are complex, Mandler explains: "Working with

composites, complicated assembly procedures and comprehensive standards. Designers and owners take technically perfect solutions for granted and don't care how this is achieved. Therefore they focus mainly on creative aspects – selected materials and exquisite surfaces. In fact mostly mirror like finishes are requested."

Rare high-gloss edge-sander

One can see this in every step of the production. Sanding- and polishing-equipment seem to be the most important working tools. They are chosen strictly after a requirements specification, Mandler reports: "Certainly finest sanding-quality comes first, but service availability is also important." Failures could have fatal consequences for the company, he points out: "In such a case, every minute until the arrival of a service techni-



Daniela Mandler-Weber is the CFO of Mandler Interiors, Markus Mandler the CEO.



Once a joinery company with five employees, over the years the siblings established a business with 30 specialists.



There are only a few edge sanders suitable for lacquer-sanding. Kündig's Uniq-S Lack enables this sensitive work to a very high standard.



The action controlled timing avoids the sanding of rounded corners.

cian counts. Some of the contractual penalties on our jobs can be life-threatening." This eventually led to the purchase of a Kündig Uniq-S Lack: "We desperately needed an edge sander suitable for high-gloss coatings for a major contract. I was a bit shocked when I found out that there are just a few choices out there." Therefore his decision was pragmatic: "Anyway, only Kündig was able to deliver in a short time." After all, this wasn't too hard for Kündig – the Uniq-S edge sander is a popular model produced in vast numbers. The suffix "Lack" (lacquer) means that the machine is equipped especially for processing coated surfaces. Feed rate and cutting speed can be adjusted steplessly. A sensing pneumatic sanding pad, similar to the ones used in wide-belt sanders, makes the Uniq-S Lack unique. The action of the sanding pad is controlled electronically. This means that the pad keeps its position

when the work-piece exits it. Rounded corners and damages to ultra-thin coating layers are avoided due to the unique Kündig technology.

First class service

But Mandler not only praises the speedy delivery time: "Also the Service provided by Kündig is quick and reliable. At the very beginning we ran into a problem. However, Kündig's technician found our adjustment error at a glance and corrected it in a tick." Since then the machine runs extremely well, he points out: "My employees report that sanding edges with the Kündig saves them a lot of polishing work. In my opinion, this is a good sign of the excellent quality of Kündig in lacquer sanding. It's not always how much money you spend", Mandler resumes, "it's the value for money you get, that counts for me. And with Kündig this value is outstanding." ■



The reliability of Kündig is important for Mandler due to contractual penalties.

Mirror-like finish means a lot of sanding and polishing.

Compliance to standards is self-evident, the owners often only focus on design.

The employees say that the Kündig sander saves time with polishing.





CNC-sander is world champion's secret of success

Years aHead

In the 1950s Howard Head was a pioneer when he invented the first sandwich-ski. Amongst ski-manufacturers, Head was one of the first users of Kündig's unique CNC-sanding-technology. It would seem that the Austrians also owe part of their latest World Champion titles to the Swiss!



In a splendid ancient industrial building, a seemingly insignificant iron door leads to the sanctum: “Head Technology – Research & Development Racing” is written on a small sign. We are greeted with a smile by engineer Bernhard Riepler, also known as “Mr. Racing”: “We practically never have visitors here, but for Kündig we will make an exception.” This is understandable because they manufacture the skis for the world champions at this top-secret department in Kennelbach, Austria. And of course they don’t want you to look too deeply into their secrets. The racing department of Head can be proud of countless victories by famous racers like Hermann Maier, Didier Cuche, Bode Miller and recently Ted Ligety, Lindsey Vonn and Anna Fenniger.

This secret isn’t a secret any longer

A “normal” skier does not have any idea of the enormous efforts behind racing, Riepler explains to us: “Our athletes need about 3500 pairs of skis per season.” This means 20 to 30 pairs per runner and discipline: “With a top-racer, there can be a collection of some 200 pairs for several disciplines.” Every ski is custom made: “Changes come either from the runner or is suggested by Head, if we were able to find another hundredth of a second by optimisations. We want to produce the best possible equipment for our athletes.” This seems to be a tradition of the

“Mr. Racing”, Bernhard Riepler is responsible for the manufacturing of tailor-made racing skies by Head for stars like Lindsey Vonn, Bode Miller or Anna Fenniger. The tails, which measure only a few tenth of a millimetre, can be made exactly only by sanding with an Kündig CNC, Riepler says.



company. In 1950 Founder Howard Head revolutionised ski production with his metal-wood sandwich construction. The British Head CEO Johan Eliasch also loves to race, states Riepler: “He was even a forerunner in the world cup and has been largely responsible for our racing department.” Eliasch was one of the first in ski-business who purchased a then brand new Kündig CNC-sander for “his” racing-department. This was more than ten years ago and is the reason, why we were allowed to visit the secret Head racing department so lately: “Today, our former secret of success isn’t a secret any longer, since many famous ski manufacturers now use this unique Kündig-technology.”

Pioneering CNC-sanding

What makes CNC-sanding technology so interesting for ski-manufacturers is its repetitive precision, Riepler explains: “Two tenths millimetre of thickness more or less at the core can change handling characteristics of a racing ski significantly. Hence, adaptations happen in an area of only a few hundredths of millimetres.” He says that the Kündig Technic 1100-CNC has provided Head with the ability to consistently reproduce winning geometries: “Before the introduction of the CNC-machine this had to be done by time consuming trial and error.”

Since then Head has gained considerable knowledge and ability in formative sanding techniques, he states: „Some modern construction principles were generally only made possible with this machine. For example the transition zone,

The geometry of a racing ski can be reproduced precisely only by CNC sanding.





Helmut Gmeiner machines skis for world champions. The Kündig Technic CNC is extremely reliable, he says.



The sanding-head moves up- and downwards during sanding controlled by a computer and can grind up to 16 mm at one go. A vacuum feed belt keeps the ski securely in position.

where the core and the gliding-layer border on each other, is now only a few tenths of millimetres thick. It can be produced only by high precision sanding.” Extremely high-quality skis are still made mainly from wood whereas foam cores are only used with cheap skis. “In my opinion the Kündig CNC-technology was the pioneer for a precise reproduction of racing skis.”

Precise reproduction

Helmut Gmeiner could feel at least indirectly as a multiple World Champion and Olympic- and World Cup winner. The CNC-operator is responsible for the important forming process of the cores. “Oh no”, he laughs, “winning is always the work of

many people. The racer, the service guys and not to forget our whole team here in the racing department.” Gmeiner praises the reliability of his Kündig Technic 1100-CNC: “We have had this machine for almost ten years now and she has always been very reliable. Maybe our software is a little dated today, but the results are still state of the art.” As raw materials, different species of wood are glued together: “Mainly beech and ash wood for the core and poplar for the flanks because of the lower weight.” In the first step the waist contour is pre-formed then the profiles are sanded in pairs by the Kündig CNC. For this, the sanding-head moves upwards and downwards during sanding which is computer controlled. “We can grind up to

16 mm per passage“, he explains. The rather coarse grit does not impede the performance: “This would also be possible with finer abrasives. We need the coarse grit to get a keyed surface for better laminating results.” For a high precision, the sanding unit moves on precision ball screws which are aligned to extremely low angle errors. “This confirms for me the proverbial Swiss precision”, a delighted Riepler says. “Although our machine was one of the first examples in ski-manufacturing a decade ago, she is still seen as latest technology. The CNC-sanding technology permits production with smallest possible tolerances. Kündig have made the manufacturing of racing-skis a lot easier for us.”

Success has many faces: The racer, his service man, the materials ...

... and the tailor-made racing skis made by the team of the racing department.

For a decade now, this Kündig CNC is a part of the race victory's by Head.



KÜNDIG Premium

SANDER
N° 2

Δ < >

STOP

START

EMERGENCY
STOP

Photos: ©Robert Kittel

Kündig sanders are not only green on the outside. Bed-manufacturer Warren Evans is delighted by the very low power-consumption as a standard feature with the Kündig Premium.

Energy-efficient wide-belt sanders

Green machine

There is only a small ecological footprint in relation to the production of bedroom furniture at Warren Evans. So small, that they receive frequent awards for being a “green company”. Even their sanders are green ...

They have been named as “Best Green Company” on four occasions by the Sunday Times, received a Platinum Award from the Mayor of London, along with receiving a vast number of other honours for ecologically and ethically correct business management – yes, being green is a major-concept at London-based furniture maker Warren Evans. “We make constant efforts to keep our energy consumption as low as possible to obtain a smaller carbon footprint”, says production-manager Paul Stanley. “We don’t allow waste to occur. Instead everything is reduced, reused, recycled and also utilized by our own biomass-facility. Added to this, we try to treat our employees with ethical fairness – the preservation of their jobs is our priority.” The good news, alongside those awards, is that the company also operates with economical success: “Our production numbers are steadily increasing.” They only use wood from sustainable sources and Warren Evans was also the first FSC-certified bed-manufacturer in the United Kingdom.

Green wide-belt sander

Even though they appreciate manual labour at Warren Evans – more on this later – having such a vast production you need a capable sander says Paul: “We take care to only purchase energy-efficient machinery. When we were looking for a new wide-belt sander Kündig soon came into play.

Produktion-manager Paul Stanley is happy with the performance of Kündig.



Usually we tend to use multiple small machines instead of a big one.”

Smaller machines do have a lower power consumption and it is possible to cluster them together, he explains: “But Kündig offers something much better – an electronically controlled power save mode as a standard feature. This reduces power-consumption depending on the load. It can even go into standby mode like a TV-set. These Swiss sanders are not only green on the outside, they are green all the way through.”

Protecting jobs is a priority in the ethically managed company.



- ① *The triple belt Kündig Premium-3 1100-RRP sanders are arranged side by side so it is easy to hand over the parts from one machine to the other.*
- ② *The only slightly modified standard sanders give high performance.*
- ③ *All parts are programmed to a part-list and can be recalled by the push of a button.*
- ④ *Even short parts can be sanded with precision.*



There is also a second reason that you can see “green twins” at the sanding department of Warren Evans: “Initially we were recommended a Kündig Technic Botop top-&bottom-sanding-line for our needs. With this high-performance sander it would have easily been possible to get all the work done by only one man. But we didn’t want that at all. It would have meant having to reduce the number of our employees which is against our ethical-policy.”

The pragmatic solution: Two identical Kündig Premium-3 1100-RRP sanders to keep the second employee busy with transferring the parts from one sander to the other. This is quite efficient. High performance is also achieved by another modification: “Our calibration rollers run faster than usual. With high cutting-speeds it is possible to remove filled areas more quickly to obtain a high feeding-speed.”

A program for every single part

In everyday life, the twin-sanders prove to be useful, Paul reports: “It’s possible to change to another part at the push of a button without complicated adjustments. The complete parts-list is programmed in the sanders. Errors are not possible and set-up times are virtually zero.”

His experiences so far are very good, Paul is enthusiastic: “We expected the twin-machine solution to have less performance against the alternative. As mentioned we were willing to risk the consequences of buying two machines knowing there would be an additional operator required as opposed to a single machine. Amazingly enough our standard-sanders aren’t that much slower. That says a lot about the great performance of standard Kündig products.” He is also delighted with the low power-consumption: “A Kündig is just a green machine”, he laughs. ■



KUNDIG

Swiss precision sanders

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