

Sustainability campaign from the Black Forest

Energy efficient innovations from Bürkle on LIGNA 2013



■ Protecting the environment, reducing energy and resources consumption, recycling used materials and thinking about future generations: In international context sustainability is much more than just a "fashion trend" or a "marketing tool". Authenticity – a traditional unique selling point of the German middle-sized business – is decisive for the corporate success with the customer.

Companies as Robert Bürkle GmbH from Freudenstadt which seriously tackle energy and resource efficiency and implement the same in everyday business and with their products are one step ahead. It takes, however, a lot of effort, from employee motivation up to the implementation of design works. "Intelligent" machine manufacturing in the truest

meaning of the word: from our employees, over to our developed machines and concepts up to you as our customer!

We will present a firework of ideas and solutions at the LIGNA 2013 in Hanover, which is a traditional hotspot for us, all based on our commitment "We make it e.a.s.y for you!" The protection of energy and resources is what you will see at our fair booth F 13, hall 17: You will be able to experience live demonstrations of our new developments in the thermoforming sector and in PUR applications, our OPTIMA press, the lacquering line and the DRUMA grain printing machine, as well as for the UV-LED drying technology. The next pages contain a slight teaser of what you can expect to see at our fair booth.

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Dear LIGNA Readers, Dear LIGNA Visitors,

Finally time has come again – LIGNA will open its gates again in Hanover from 06th May 2013 until 10th May 2013. Bürkle will present several novelties and developments in the press and coating technology for the wood and furniture industry at our new location in hall 17, booth F13. Following our 2013 fair theme "Efficiency in machine engineering" we will demonstrate interesting solutions as for example energy saving and material saving machine designs, low-maintenance systems, intelligent controls and user-friendly operator surfaces up to our 24/7 e.a.s.y-Service.

We are looking forward to your visit!
Yours,
Ralf Spindler





Unconditional model upgrading

Saving energy and resources with lacquering and curing processes

■ Bürkle catches out by presenting a lacquering line including curing unit that will show the recent impressive developments of the RC type series as well as the possibilities of LED curing. It is particularly striking and remarkable that the Freudenstadt Company focuses again and again on the further development of so-called standard units.

For example the filler and roller coating machines RCF and RCL are subject to permanent optimizing, even though their previous models have had their successful standing on the market for some time. Up to now, there have been a lot of different base frames for the roller coating machines. Today a modular design system with only one base frame per working width forms the basis.

The number of gears used has been decreased through standardization at the same time: Now, four gear types cover the whole spectrum. They are based on the modular design system of SEW-Eurodrive with slight modifications. Especially to be mentioned is the new e.a.sy-Pren lacquering applying roller: With it Bürkle responds to current consumer tastes that

often favor the "used-look" or "freshly sawn" respectively scrubbed surfaces.

The demonstrated drying unit is a combination of a UV unit and an LED module. The new generation of the LED modules that was tested in multi-shift operation under challenging production conditions, is now air-cooled. It provides the only real chance to progress significantly with the reduction of energy costs. The steps are for example energy consumption, lifetime, switching, switching-on after each idle run: The saving of energy consumption (up to 80%) is only possible with the LED technology. With the conventional UV technology this is not possible – no matter how much the same has already been exhausted.

In comparison to gas discharge or UV lamps, LEDs are no temperature lamps: They convert energy to almost 100% light without any loss of waste heat. Besides cost and energy efficiency optimization this is a second advantage: The surface temperature of the lacquered workpieces hardly increases during the drying process so that dark stains can be dried without any problems on pinewood workpieces which emit resin when exposed to heat. And additionally: The statement that LED curing units are not suitable for transparent lacquers will be clearly disproven through live demonstrations at the LIGNA.



From unit specialist to turnkey provider

Bürkle reinvents indirect gravure printing and themselves

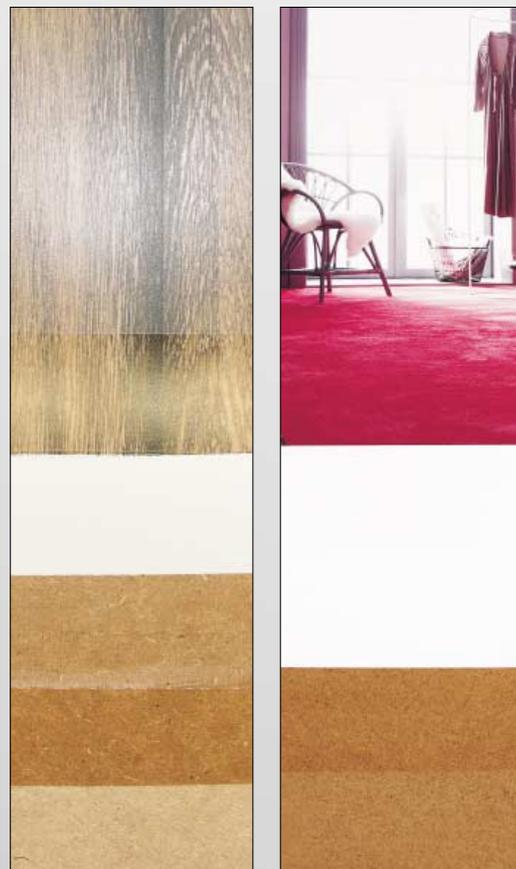
■ In the segment indirect gravure printing Bürkle presents three machines that will be delivered to Poland immediately after LIGNA. There is a permanent demand for lines with this process. Options as those offered by digital printing are often no real alternatives regarding costs and printing speeds.

A technology that is still interesting is direct printing. This process shows a suitable solution for the direct upgrading of workpiece surfaces without any substrate paper. In comparison to previous and more experimental phases a quantum leap has been made in quality: Meanwhile, directly printed surfaces have been improved and have the same status as their decor paper alternatives.

A precondition is naturally the necessary knowhow in the machine and line engineering. With this fact and a considerable experience Bürkle can score as all delivered systems that have been delivered recently to important customers are machines "made by Bürkle".

As the possibilities of digital printing nearly seem endless, Bürkle shows on LIGNA smart engineering concepts and surprising workpiece patterns instead of machines. Concerning the question if and how digital printing can be integrated into existing and really individual production sequences the company will show their solution competence.

Bürkle will present further products in audio-visual form in Hanover. The extensions that have been made recently are interesting. Today, Bürkle present themselves as turnkey provider dominating upstream and downstream handling processes. Bürkle is not only specialized in large formats but also offers fast machines for furniture parts with up to 30 cycles/ min.





Market leadership obliges

Laminating and application of PUR hot melt: Experts trust in Bürkle

■ Professionalism and an advance in development are important aspects to persist on the market of superior furniture. Carpenter companies as well as companies for interior works have clearly recognized this chance. Therefore, there are increasing inquiries for optically and qualitatively challenging Bürkle lines for the gluing of surfaces.

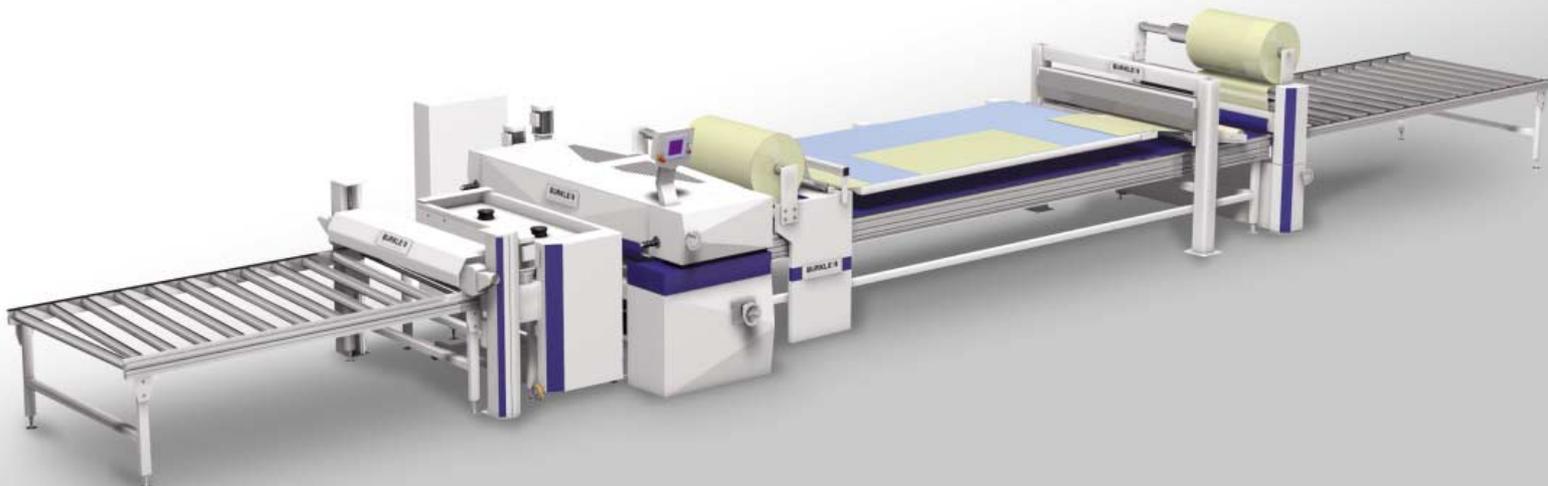
PUR hot melts meet with these high requirements and considerably expand the material spectrum that shall be glued: Wood, aluminum, HPL, leather, plastics, paper and textiles – the row could be continued "endlessly". Nearly everything is possible. With the multi-line PUR laminating line Bürkle will present a highly-flexible modular design on LIGNA. This line is suitable from "batch size 1" up to an industrial performance production.

The surface quality is on a high level now and easily surpasses the known "typical press".

However, the line has further advantages: optimal accessibility, easy operation, high availability, low capital expenditure. In detail you can see how the advanced technology can convince. Features like a low suction power of the board cleaning, constant temperature on the whole glue application roller, intensive cleaning of surface materials and 1-man operation for saving personnel costs.

In the laminating sector Bürkle definitely maintains market leadership as the quoted line portfolio cannot be found anywhere else. The spectrum starts with cold laminating lines that work with foils and that can cure PVAC glue inside the stack. Furthermore, you can find laminating lines for the application of protective foils, as for example after lacquering. In addition, there are hot laminating lines for PVAC glue, for hot melt through the application via rollers and nozzles or for urea glues.

The highlight: Each customer who need these units for the laminating of full-sized boards up to a width of 2.600 mm or for the single or both-sided laminating of already formatted furniture parts will get everything from one source! No matter if you use the machine for feeding, handling, transport, saving or sorting resp. stacking – as the machine manufacturer offers complete solutions from their conception and production. Options for the integration of format processing, quality check and material control complete the range of products quoted for.





Material efficiency comes true with lightboard design

Production of frameless boards is solved with Board-on-Stiles

■ Bürkle is known as inventor of the BOS technology in modern production of lightboards for the furniture industry. Assumed from the industrial production of frameless lightboards with all challenges for further processing, the favorite system of Bürkle with part frame (BOS – Board-on-Stiles) prevails as the most efficient production process.

The best proof for is that Bürkle has recently launched totally four high capacity lines for the production of lightboards in different automation and equipment steps within a short time. The BOS system is the main focus – also on LIGNA where the company will demonstrate “live” the Optima press as a highlight of the lightboard and door production.

There are a lot of advantages of this technology and allow to integrate the lightboard production into the existing production processes. Therefore, investments in machines and lines for special fittings, that are needed for example for frameless lightboards are now unnecessary and are used for the BOS technology only in seldom cases.

There are no increased costs for fittings when normal chipboard is replaced by a BOS lightboard. For gluing you can use glue systems that are cost-saving, safe and easy to process. Principally the same are binding agents based on resin glue, PVAC or EPI.

Large-format wood-based panels will be fed into the production lines of the BOS system.



Afterwards the same are cut to the corresponding rail material in the system. A logistical organization for the cutting of rails and the production of frames as well as their intermediate storage are thus not

necessary. Consequently, the production control is reduced to a manageable effort.



400 installed lines – the best proof of confidence

Thermoforming lamination with various options

■ Without thermoforming foil lamination of profiled workpieces for the kitchen, bathroom, living room and bedroom furniture industry is no longer possible. Especially since the trend has been going to high gloss surfaces, the membrane less pressing processes are demanded more than ever before. Bürkle has developed and completed this process. Satisfied customers with over 400 installed lines worldwide are the best evidence for this.

For the membrane less thermoforming presses of Bürkle the used foils either can be heated through direct contact to the heating platens (uni resp. decor foils) or through lamp warmth without any contact. The contactless pressing process is suitable for the production of furniture fronts with brilliant high gloss surfaces. Top quality is one aspect, but the saving of resources is the other one. Therefore, the membrane less process is triumphing twice: No membranes, no wear, no reinvestment, no effort concerning the disposal and reduced energy consumption!

Bürkle will demonstrate on LIGNA the basic model of the thermoforming presses "M8" with a molding pressure of 4 bars. Through an integrated

control inside the press an additional switch cabinet is not needed which ensures a considerable space-saving and short installation times. On LIGNA you can see the M8 with two feeding stations. A great modification is the pneumatic cutting device for separating foils which saves the manual cut.

The current trend – that is the laminating of molded and considerably "deeper" workpieces for the kitchen and bathroom furniture sector will be demonstrated "live" on the M8 on LIGNA. The solution here are lay-up trays with plug-type frames with which the total chamber height can be increased from the normal 55 mm up to 200 mm (on demand). In addition, you can also reach an increase of performance in third dimension of almost 400 %!

Two further features that are especially interesting for customers with a high variety of parts are on the one hand foil paternosters

which can provide up to ten different foils and on the other hand the transverse separator which can process two different foils in one press cycle.

Last but not least Bürkle surprises with a new modern touch panel with colour display, a well-arranged menu guiding and an intuitional control. The touch panel is equipped with an intelligent parameter control for avoiding faulty inputs and inadequate parameter combinations. For this reason, new processes are designed fast and efficiently and can be saved with the Bürkle recipe management any time. In addition, new processes can be replaced and used again later according to your requirements.



e.a.sy-Service 24/7

Comprehensive all-in package instead of "marketing slogans"

■ Bürkle customers rely on perfected and future-oriented technologies – these are machines and lines of premium quality. The result shall always be "e.a.sy". The service hotline and highly developed diagnostic systems belong to the standard of the service offer and assure the highest possible process reliability. Four separate service packages as for example – Basic, Advanced, Profi and e.a.sy 24/7 come up to each customer's expectations.

The mostly demanded options are "Advanced" and the all-in 24 hour service package "e.a.sy 24/7". The option mentioned last has been supplied with more than 20 lines within the last 18 months. The support process within the e.a.sy-Service combines traditional service features with the e.a.sy Remote Service (RSC).

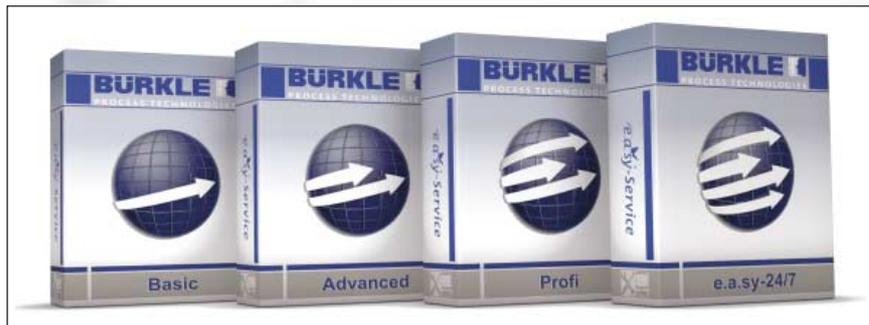
With a 24h-Welcome Desk that is available independently from the agreed service package 24 hours a day, 7 days a week and 365 days per year, the customer has the possibility to reach our qualified staff around the clock. During the Bürkle working hours the service hotline is answered by phone experts. If it is necessary the case can be solved by RSC-Support, and spare parts can be supplied or service actions can be arranged. In RSC this case is analyzed

on a platform per Remote Service. If you dispose of an e.a.sy-Service 24/7 contract a return call is effected automatically at the customer through the Bürkle service personal. This happens around the clock but not later than two hours after the registration of the service case on the 24h-Welcome Desk.

Also beyond the office hours our service staff in Freudenstadt and Mastholte is able to check the availability of service engineers and spare parts. This is effected via digital access to the Bürkle spare part stock as well as to the staff planning software. The sending of engineers as well

as the final sending of spare parts finally planned and started during the regular working hours.

We can never ensure failure remedy in real-time. But we can ensure an all-in service of 24 hours service that comes up to its designation. Service targets are the reduction of downtimes, highest productivity and an almost permanent machine availability that support Bürkle customers with their 24/7 e.a.sy-Service package.





UV Lam-Inert Technology: Surface finishing for special requirements

Higher efficiency at low costs:

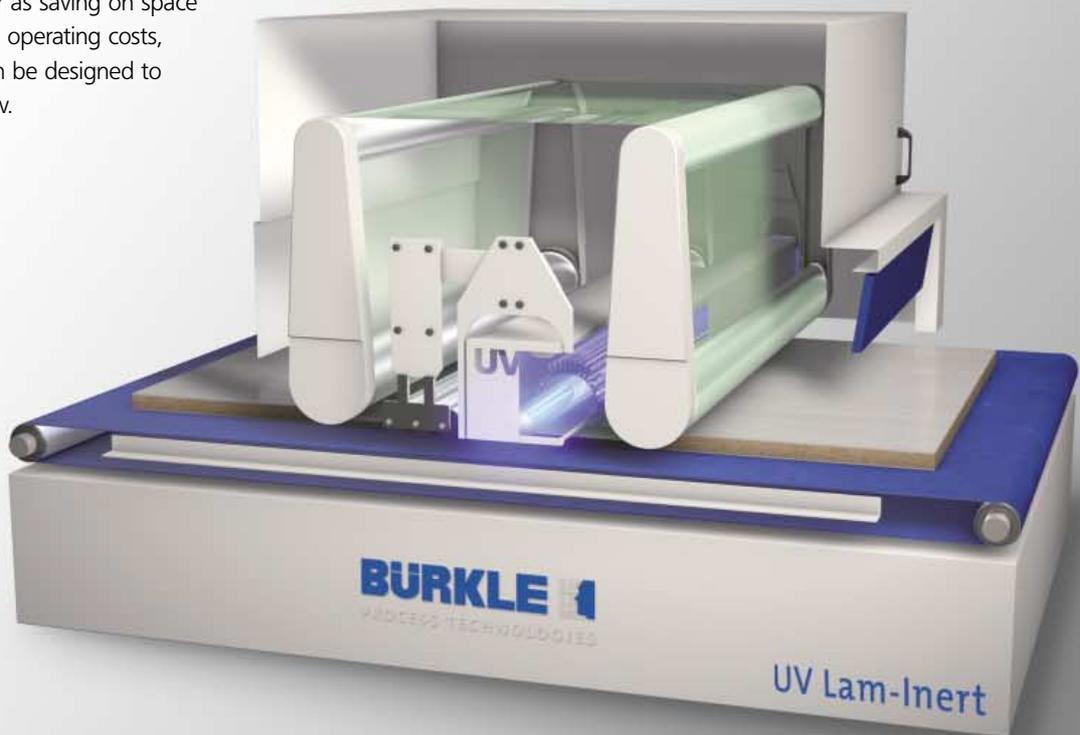
innovative lacquer curing equipment for exceptional surfaces

■ An extraordinary delicacy called "UV Lam-Inert Curing" is behind the Inert Curing Technology presented by Bürkle. Following a conventional roller coating machine the still wet coating is smoothed by a transparent, synchronous rotating film. The curing by UV lamps is happening through the film that is in direct contact with the coating. This creates an inert environment that ensures high efficiency and thus causes lower energy costs for the curing.

Next advantage is that it is possible to shape the surface in an almost limitless range between perfect high gloss and a deceptively real, deep pore characteristic. The latter would be almost impossible with a pure roller coating line. Shiny surfaces also require less sanding – which saves resources, energy consumption and system costs. The advantages can even reach as far as saving on space requirements and on operating costs, as a finishing line can be designed to be much shorter now.

But not enough, high coating weights applied in a single step with a roller coating machine is also no longer a problem. The boundary of applying lacquer without a structure so far is well below 15 g/m². With UV Lam-Inert easily 60 g/m² of paint are quite simply applied. This means in reverse: a finishing line using this technology replaces a multi-stage process and by that helps to lower the investment costs and the energy consumption due to a higher efficiency.

In parallel, Bürkle is using UV Lam-Inert in another field: as "spot repair" designated for the filling of deep defects on parquet lamellas or solid wood components. Also here the process has a lot of advantages. The productivity is high, the surface quality is absolutely homogeneous thanks to the rotating film and even very deep defects are repairable in one step. Overall, this technology is almost magic and it is ready for demonstrations and for testing following the LIGNA at the Bürkle Innovation-Centre in Freudenstadt.



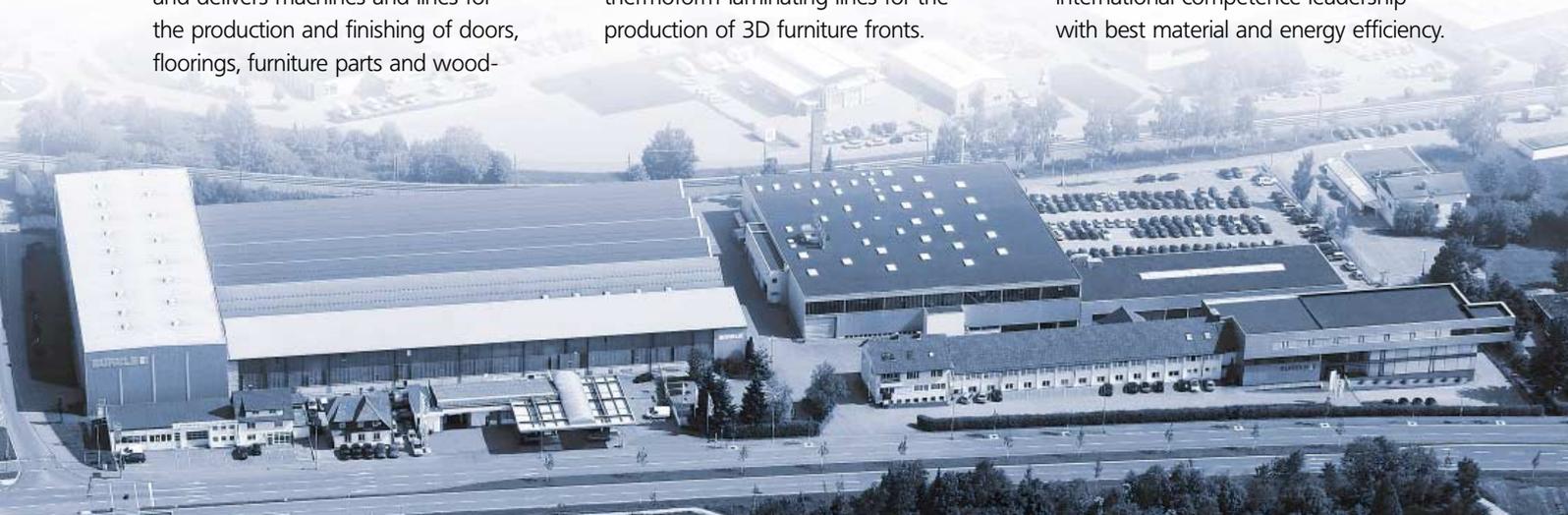
More than 90 years of tradition

A Swabian company is world market leader

■ Robert Bürkle GmbH, Freudenstadt, belongs to the technology and world market leaders in the pressing and coating sector. Our company, established by company founder Robert Bürkle in 1920, has around 700 employees worldwide and delivers machines and lines for the production and finishing of doors, floorings, furniture parts and wood-

based panels. The scope of supply comprises turn-key lines for the production of doors and parquet as well as for lacquering and printing lines. In addition, we are specialists for foil laminating and throughfeed presses as well as for thermoform-laminating lines for the production of 3D furniture fronts.

Above average investments were ploughed into research and development in the last years. The innovation center, completed in 2008, is one of these investments amongst others. Highest technical standards secure Bürkle an international competence leadership with best material and energy efficiency.



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