

## Wandres cleaning systems deliver particle-free surfaces in furniture production



Assessing the finish of a furniture panel after surface coating

A Sword Brush cleans a belt conveyor beneath the transport level (Images: Wandres)

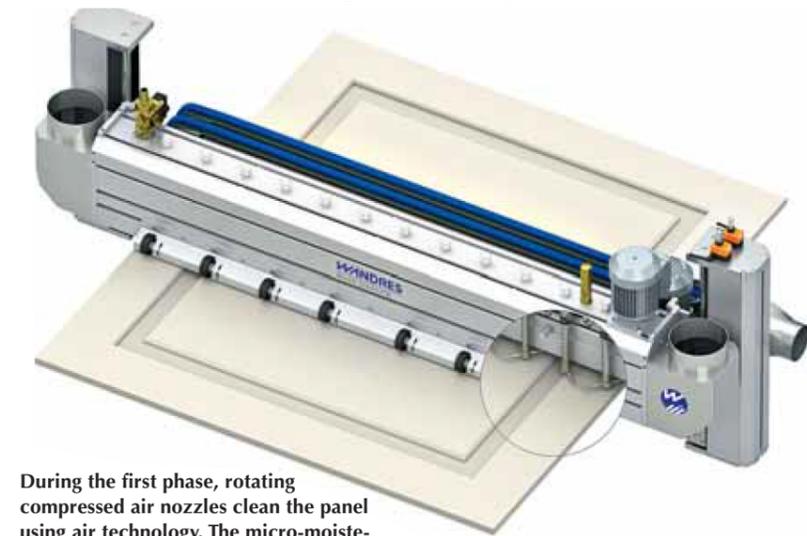
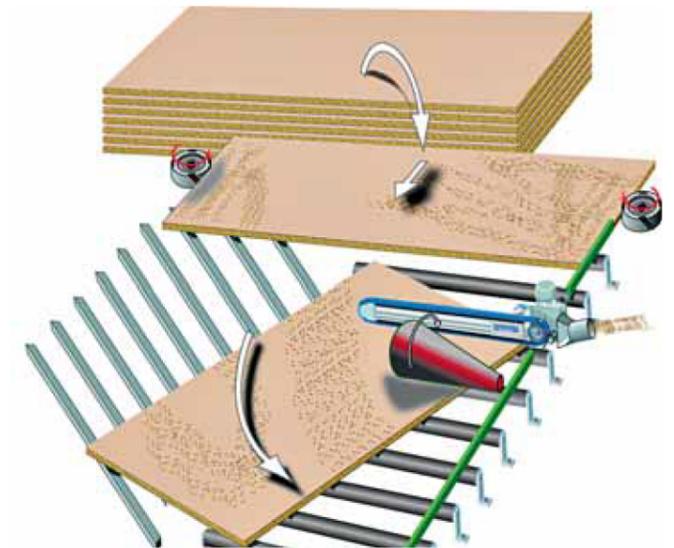


A Sword Brush cleans the panels in the area of contact of the turning cone (right)



After the panel sizing saw, large amounts of sawdust and shavings remain on the panel surface and are removed by a Tornado Channel

A Combi Sword Brush cleans furniture panels already coated with a surface finish. This prevents damage occurring when particles accumulate, reach the final packaging stage and cause indentations and scratches during transport



During the first phase, rotating compressed air nozzles clean the panel using air technology. The micro-moistened filaments of a circulating linear brush subsequently remove any remaining particles from the surface

Sanding wood inevitably produces wood dust as do sawing, drilling and milling processes. All of these processing steps are necessary during the production of furniture panels with a surface finish and they all generate dust. Particles remaining on the panels may cause blemishes and indentations on the surfaces. To prevent this happening, Wandres GmbH micro-cleaning in Stegen is offering cleaning solutions which combine air-assisted and brush cleaning technology. The removal of dust and shavings prior to coating processes is exceptionally important as these would otherwise cause inclusions in the surface finish. A Tornado Channel "TKR" with rotating compressed air driven Tornado Nozzles blows

contaminating particles out of recesses and disposes of them via the central suction system. The "TKR" is frequently deployed in combination with the Sword Brush "Una X" which cleans from above and from below. The micro-moistened filaments of the Sword Brush bind even the tiniest dust particles, removing them from the surface and delivering them, once again, to the central suction system. The combined cleaning installation is equipped with height adjustment and can be manually or electrically adapted to the thickness of the panel which is to be cleaned. Particular attention should be paid not only to the surface of the panels but also to the conveyor belts which become contaminated with particles

and dusts. To avoid entrainment of these contaminating particles, a Sword Brush is tasked with cleaning the slack side of the conveyor belt. Should any particles be present in the area of contact of the turning cone, these will be pressed into the surface of the panel during the turning process. If the final surface finish has already been applied, then any indentations caused by this pressure would be entirely unacceptable. To keep the area of contact around the cone spotlessly clean, here too a Sword Brush, this time Type "BIX", is in action. A compact design means the "BIX" can be mounted at the height adjustment unit of the cone and thereby automatically adjusted to the correct

operating height when changes in panel thickness occur. The length of the Sword Brush is designed to cover the whole working area of the turning cone. "Nesting" refers to the process of efficiently sawing and machining different sized, both larger and smaller, parts out of a large panel to achieve the best yield. Enormous amounts of dust and shavings arise during this process and can be removed by a Tornado Channel "TKR". The turbulence created by compressed air provides for the cleaning of surfaces and grooves after milling and before handling by the vacuum gripper. Cleaning prior to handling is crucial as otherwise particles are deposited on the vacuum cups and then transferred, thus contaminating subsequent

panels. If the vacuum gripper has already moved the panels to the next production phase, the protection board which remains behind will be cleaned using air technology to prevent any transference to the underneath surface of the following panel. Immediately before packing, the finished panels are cleaned one further and, at the same time, one final time. Once again the Combi Sword Brush "Una" is in action, this time providing for the effective cleaning of the panels from both sides. This final dust removal procedure is particularly vital prior to stacking as the force exerted by the panels on one another when stacked is quite considerable. Any particles remaining between the surfaces at this point would, therefore, cause significant damage during transport, resulting in indentations and marks on the surfaces or even surface abrasion. None of these would be at all acceptable to the consumer. All the systems described above can be easily integrated into existing production lines due to the space-saving design. Wandres cleaning installations are guaranteed to deliver a reliable cleaning process and provide, therefore, for finished products of the highest quality. [www.wandres.com](http://www.wandres.com)