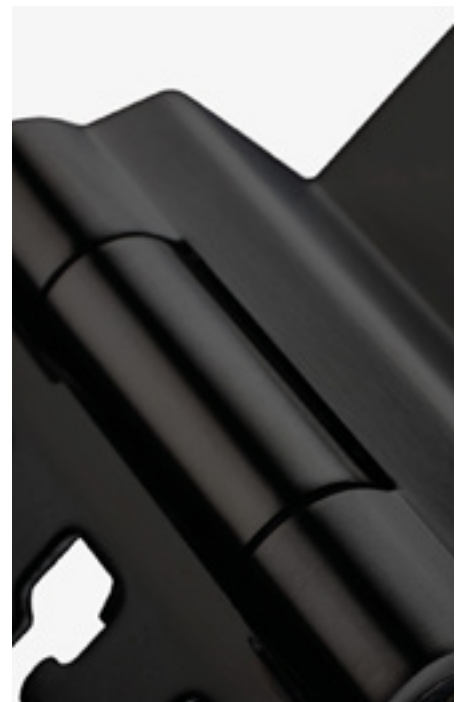




THE SECRET BEHIND A PERFECT FINISH

If one dares to look beyond the finish, one can see and understand that it is primarily what is inside that reveals the real value of something. However, the finish itself also deserves special attention. It is an integral, very significant detail, as it usually represents the hallmark of a product. Hence, it is precisely here that the highest precision and perfection are required. Especially in the field of finish technology, a slight defect can influence or even ruin the

entire result. This is what makes finish technology so responsible and interdisciplinary, but at the same time also conservative, since it's all about standing out by being flawless and thus an understatement," says Dr. Udo Pecher from Production Planning at SIMONSWERK. As a finish expert, he provides an exciting insight into the art of finishing, including innovative manufacturing processes.



PERFECT BASIS FOR LIMITLESS POSSIBILITIES

The wide range of finishes available from SIMONSWERK shows that there are virtually no limits to designs. High-quality materials, trend colours, RAL colours, special colours as well as special foils, enable individual design wishes for hinge systems. Different processes and machines are required for this. From polishing, lacquering and galvanising to conversion coating, anodising, staining or burnishing – all the processes used for SIMONSWERK products, are based on the perfectly coordinated interaction of individual work steps to achieve an optimum end result.



“The art of finish technology is to apply a homogeneous coating over a large area on raw parts without distortion in the form of dust particles, wrinkles, runners or other inconsistencies.”



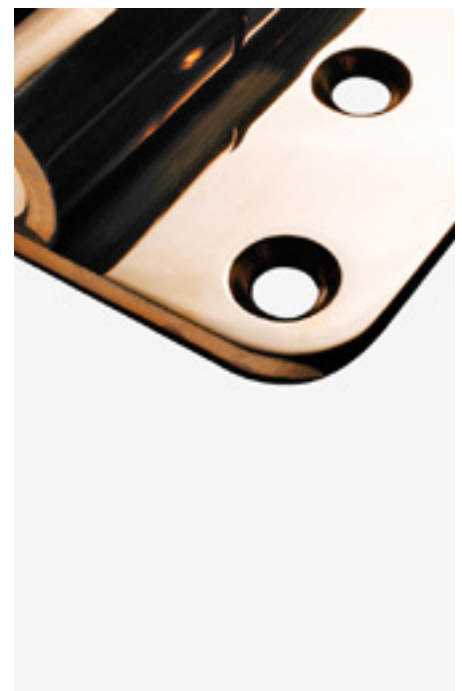
“The number of finishes defects is also an indicator of the status on the path to our goal of producing a perfect finish,” says Dr. Pecher. This makes it clear that finish technology depends on suitable raw part quality to achieve the best possible results. This means that increasing focus and further development must be given to the early detection of deviations in the stamping process, for example. “It is therefore important to counteract every risk factor starting with the primary material for the subsequent coating, as the quality of a split hinge can already influence all production stages. This is why our treatment methods are constantly being tested, refined according to the state of the art and corresponding practical test procedures established,” explains Dr. Pecher.

This means that complex workpieces with screw-on surfaces and rollers, such as the **VARIANT VX** hinge components to get a satin-matte finish, can already be reproducibly ground in a perfectly aligned state on automatic CNC-controlled stainless steel grinding systems. Within the scope of the **TECTUS** hinge production at SIMONSWERK, the fully automatic coating process in particular, is most impressive. Here, three robots automatically place the components to be painted onto the painting belt. The parts are thus coated in narrow rows at high speed and in top quality. Two



“A perfect finish does not allow for any compromises, but requires a perfect starting position!”

robots automatically take the painted workpieces from the belt and place them in the right containers for further processing. A further finish technology optimisation of the in-house vibratory finishing process has even led to the fact that zinc die-cast components can be cleaned and pre-treated ready for coating, at the same time. “While the focus of such technologies remains on the timeless classics, we can also supply unusual finishes such as anodising colours, PVD metal coatings or wood designs which can be supplied by water transfer printing processes, on customer request.”



REMARKABLY EXTRAORDINARY

The decision still applies in terms of the design concept: Tone on tone or accentuated. No matter which appearance is to be created, a harmonious overall concept is both the goal and the starting point— always being based on perfected products in terms of their quality and aesthetics. At SIMONSWERK, this is particularly evident in the completely concealed hinge system TECTUS. Thanks to its precise technology in a discreet design, the hinges can optimally accommodate straight-lined room structures and implement them flush with the surface. In addition to the most popular hinges in Satin Chrome Look and Satin Nickel Look, Stainless Steel Look and Satin Nickel, Matte Deep Black in particular has become an increasingly popular finish in recent years.

So far, according to Dr. Pecher, the timeless standard finish retain the upper hand in this respect, but innovative designs can also be combined and implemented in high quality at the customer's request. "There are even phosphorescent coatings that, together with the handle, provide an orientation in a room in complete darkness," explains Dr. Pecher, "and new colour combinations can also be the starting point for subtle new colour nuances and trends."

Since the use of wood as a material as well as a natural look in design concepts is increasing perceptibly, SIMONSWERK is resorting here to special foils and an interesting process, among other things, in order to be able to implement a corresponding authentic wood look. "For these optics, foils are laid flat on the surface of an immersion bath as a carrier for a special lacquer. The foil dissolves in the water, while the floating solid paint is liquefied again by spraying with an activator. The pre-treated workpieces are dipped into this liquid ink and thus decor-coated. Afterwards, the printed parts are washed, dried and made durable with a 2K clear lacquer," explains Dr. Pecher. This shows the manifold possibilities within the multi-layered finish design of SIMONSWERK's products, but also the challenges that come with it when it comes to implementing individual customer wishes in the highest quality.

Further information on the many different finishes of SIMONSWERK's products can be found [here](#).