Hess Group, 57299 Burbach-Wahlbach, Germany

# Setting the pace – innovative spare parts online services

Accessibility, availability and lifetime of spare parts catalogs including additional service information are a well-known challenge throughout the concrete block machine industry. Depending on the technology used, this may mean that the technical documentation is already out of date before the update reaches the customer. While printed hard copies are the most time-consuming way in terms of accessibility for the customer, the Hess Group relied on a data carrier-based distribution, such as e.g. USB sticks, for electronic spare parts catalogues and manuals. However, such a data distribution approach could not always cover all needs, and some information has to be delivered in paper form. A few years ago, Hess Group switched to a 3D representation of the assemblies. Thus, it has become necessary to install a proprietary software module on the customer's PC. The installation of third-party software, on the other hand, poses a security problem in many companies.

SmartParts

The challenge for the Hess Group was, therefore, to create a new standard for the electronic spare parts catalogue that overcomes the hurdles described at the beginning, functions independently of devices and platforms, and allows changes to be entered quickly and as conveniently as possible for the customer. The "SmartParts" project was launched.

Hess Group developed a platform-independent solution, which makes it possible to guarantee even more complex 3D representations - without installing third-party software. Only necessary is a browser of your choice, which is available by default with every operating system anyway. Also, the operating system (OS) itself is freely selectable. No matter if Windows, macOS, iOS, Android or Linux. Therefore, a SmartParts user may walk within his plant using , for instance, a tablet, and while walking around can access every assembly in his plant as a 3D model representation!
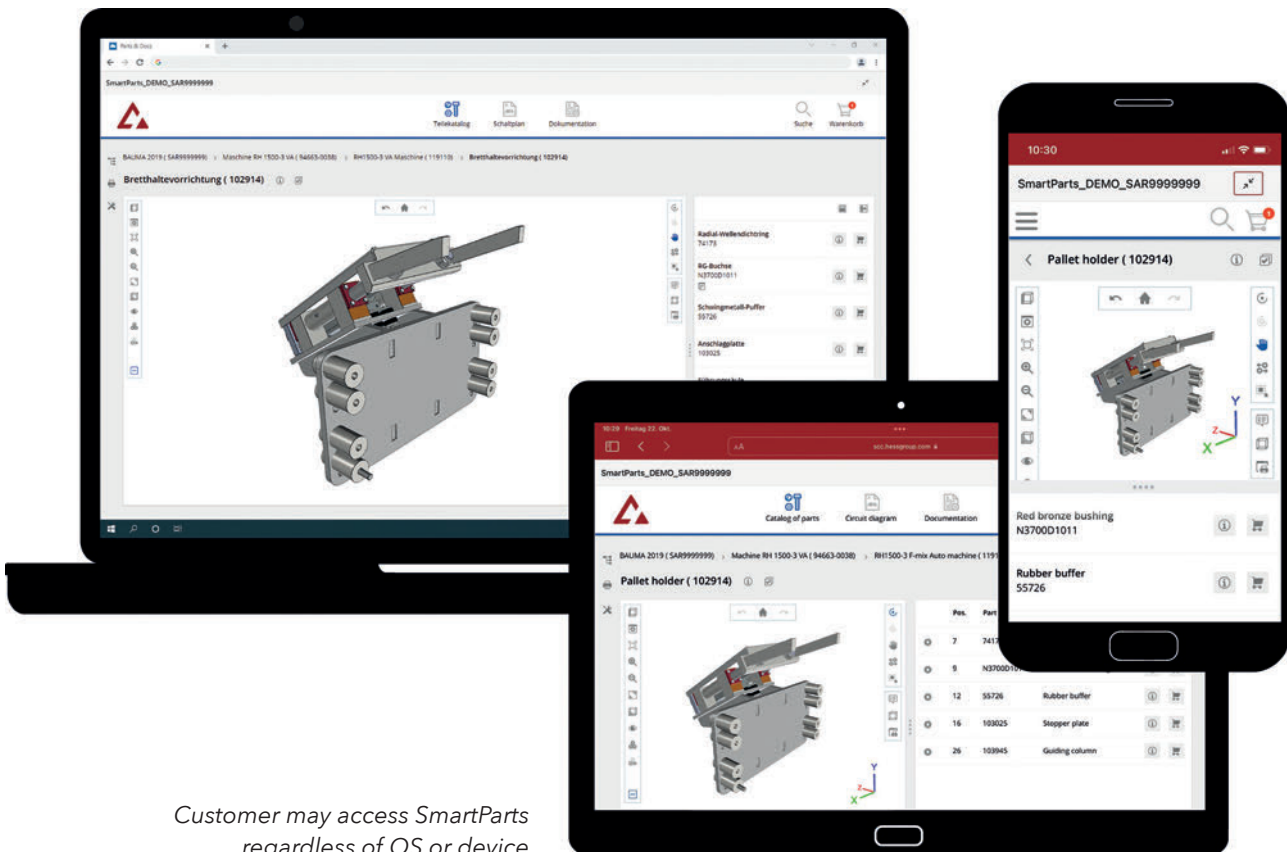
Customer may access SmartParts regardless of OS or device
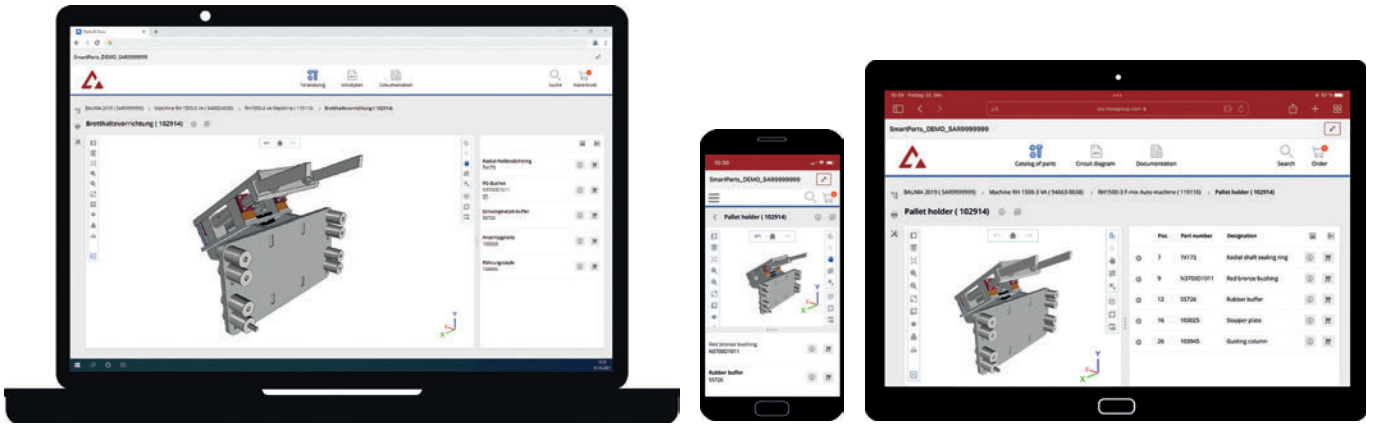
*Responsive design adapts to the capabilities of the hardware*

SmartParts, being essentially an online service accessible with the browser software of the customer's choice, is well embedded within a service platform, is currently in its development stages, called SmartCloudConnect by Hess Group. SmartCloudConnect is all about the machine and plant monitoring, gaining access to production statistics, operating parameters of every machine assembly via its very own sensors, filling the phrase of Industry 4.0 and its claim of predictive maintenance with life in the process.

Among the advantages of a service provided by SmartCloudConnect are on-demand available production status, maintenance type according to the high standards, reducing downtime to a minimum. The embedding of SmartParts in this SmartCloudConnect Ecosystem means that the customer can find and select the parts he needs with minimal effort. Intelligent. Intuitive. Instant.

SmartParts provides online access to parts catalogue, circuit diagrams and documentation, thereby providing the complete range of information a customer needs for

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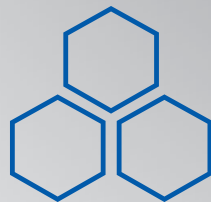
Starting point: the SmartParts Log-in Screen

service and maintenance of his plant. All this service information is easily accessible as an online service at the internet URL https://scc.hessgroup.com.

SmartParts is available for free to every Hess Group customer. After a brief personal introduction to this online platform provided via MS Teams by the Hess Group documentation department, the customer gets the log-in data necessary to gain access. When a user logs in for the first time, the system will ask for a personalized password forwarding afterward to the SmartCloudConnect start page. This dashboard serves as a general starting point. The documentation department has gathered a knowledge base consisting of a downloadable

manual on the SmartParts software operation, an FAQ, and direct links to videos explaining the system functionality on the Youtube channel of Hess Group. SmartParts covers the entire Hess plant as 3D models, wiring diagrams, and operating instructions.

SmartParts consists of three main areas, the parts catalogue, the wiring diagram section and the documentation part. All manuals received by customer as a hard copy are available as searchable and printable PDF documents. In addition, the software provides a powerful search function and the possibility to place an inquiry for any selected part represented by SmartParts. Just one click at the shopping cart will do as a central collection point. Each request will be automatically transferred in the Hess ERP system, avoiding typing errors while providing inquiry in digital form to a Hess After Sales Service employee. The responsible employee will process the request and create an individual offer for the components of the customer choice on short notice.
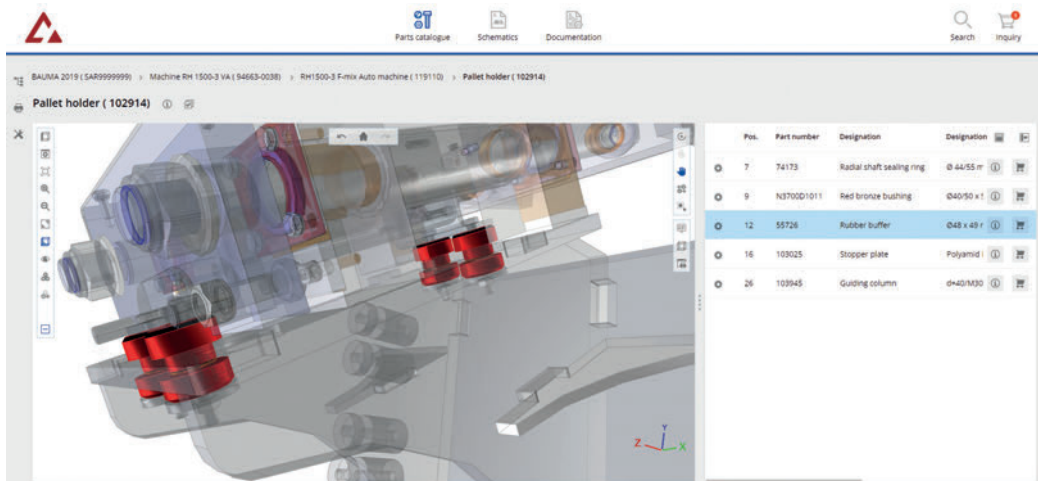
A known problem of data carrier distribution mode is not just that it requires the installation and lacks the performance of SmartParts. Updates of installed software at the customer's site are quite often comparatively slow, maybe even problematic, or not possible at all. SmartParts, on the contrary, is constantly updated by an overnight synchronization process so that the customer does not have to worry about the timeliness of his data.
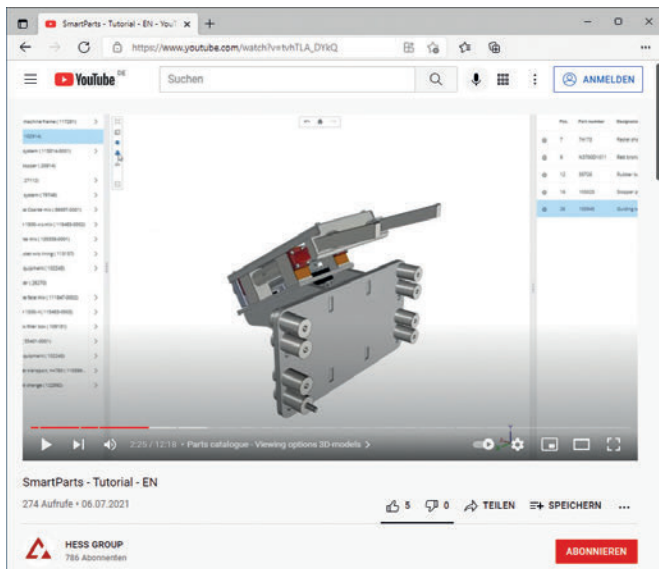
Parts catalogue

Tutorials how to use SmartParts are available via the Hess Group YT Channels

The parts catalogue comprises all components of the machine. The virtual components in the main window can be rotated in any direction, shown or hidden, or shown semi-transparent to view internal parts of assemblies that are normally not visible from the outside.

The 3D model representation is a highlight of the parts catalogue. Using WebGL as technology, the 3D display is extremely performant and requires no additional software to be installed. Loading times are remarkably short, even for complex models. Although the software is not intended as an assembly guide, it allows the disassembly of components for a basic understanding of the structure of a component. This is making SmartParts also very popular with Hess's own fitters who use it on portable devices to get a basic understanding of necessary steps when disassembling machine parts on-site.

A windows-like directory tree on the left side of the main window always provides navigation while the parts list on the right side shows the parts of the selected model. There is a bidirectional connection throughout the whole of SmartParts. Whenever a part is selected in the parts list it will be highlighted in the 3D model. Vice versa a part selected in the 3D representation will lead to a parts list entry highlighted correspondingly. That of course helps to overcome the language barrier in the long term, because you do not necessarily have to know the Hess-specific designation to identify parts. This bidirectional connection is continuous throughout the whole

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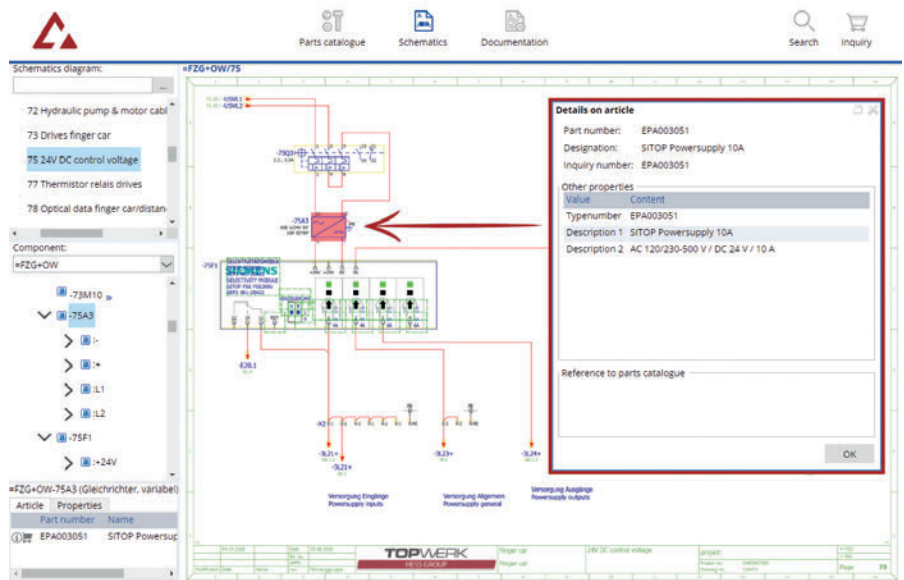
Part identification and circuit tracing with interactive schematic data

online service and is not limited to the connection between the parts list and the corresponding 3D model. Having selected an electrical part jumping to the corresponding electrical diagram where the component is implemented is as easy and done with one click as taking the other way round by selecting a part in the wiring diagram section and from there getting directly redirected to the parts list where an inquiry regarding this very component can be placed. This comes in handy when an electrician uses the electrical diagram section for current tracing.

Worth mentioning, SmartParts works online within your browser. No installation is required, easy to access on any device of your choice. Find and select the spare parts, maintenance information, access the supplied documentation and electrical circuit diagrams with one click.

To sum up, SmartParts was developed to provide customers with easily accessible electronic spare parts, schematics, and documentation applications from one source. Using SmartParts, users can identify and select the spare parts by application of advanced 3D modeling features. Thanks to integrated interactive circuit diagrams, SmartParts makes recognizing electrical components throughout the plant very easy. Manuals with integrated search functions provide all available information for a smooth and secure operation and maintenance of your concrete block and paver machine leading to extended uptime and higher overall efficiency.

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