DOCware

Moneybox
Electronic Spare Parts Catalogues

www.docware.com

Moneybox Electronic Spare Parts Catalogues

In view of economic crisis, retrogressive order situation and decreasing turnover, many companies attach great importance to saving costs. Electronic spare parts catalogues are a means for achieving economies – inter-divisional and inter-process – in the departments technical documentation, spare part ordering, technical customer service and support. How and why the implementation of a spare parts catalogue software reduces costs will be explained below and backed by figures from practical experience.

Electronic spare parts catalogues

Electronic spare parts catalogues are electronically created and on data media (CD, DVD) or via communication networks (Internet, intranet) distributed parts catalogues. They contain all relevant data for the spare part identification and ordering. Exploded views, pictures and 3D models are linked to the according information in the parts lists. By clicking on the particular parts in the drawing/graphic the related parts list information is displayed instantly. The identification of required assemblies or parts is effected by different search functions or by navigation in the spare parts catalogue. Either you navigate via the tree structure, that reflects the hierarchic structure of the catalogue – divided in products, assemblies and parts – or via the graphic display. Many electronic spare parts catalogues are equipped with an ordering function.
On one hand there are standard software products for the creation of spare parts catalogues that – according to the supplier – vary in their functional range and adaptability to customer individual demands. On the other hand there are service providers that offer customised solutions that are partly also hosted by them.

Inter-divisional cost savings

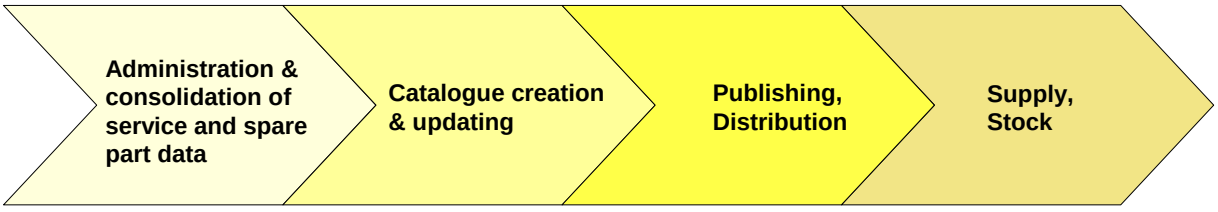
Providing parts catalogues a professional software saves time and money on the following processes:

- Creation and update of spare parts catalogues
- Spare part ordering
- Technical customer service and support

Wherefrom the saving potential results in detail will be pointed out below.

Cost reduction in catalogue creation

A professional spare parts catalogue software enables cost savings on the following processes of catalogue provision:



According to a customer survey conducted by the software provider Docware in 2008, electronic spare parts catalogues reduce the effort in production, updating and distribution of spare parts catalogues by up to 60%. The savings are mainly based on:

- Integrated use of data
- Connection of data sources
- Central data organisation

- Media-neutral data management
- Automation of data import, data processing and catalogue production
- Creation of all media from one data source (Single Source Publishing)
- Flexible further and multiple use of the data
- Less paper and distribution costs

The highest saving potential can be achieved by implementing database-driven parts catalogue systems with directly connected data sources, a high automation level and broad configuration capacities.

Integrated use of data
An up-to-date spare parts catalogue software supports the integrated use of data and data structures. These run directly into the catalogue production from ERP, PLM or CAD systems. Re-creation and re-editing becomes obsolete. Solutions that import the required data and documents via interfaces automatically into the catalogue software allow for a maximum of cost savings. For the cost-effective implementation of an application with automated data import, a spare parts catalogue software with standard interfaces to the existing third-party system should be chosen.

3D catalogues
You will obtain a maximum of data continuity and efficiency if the spare parts catalogues are produced directly from the CAD system. In this process the original 3D data run into the catalogue creation. 2D drawings are directly derived from the 3D models. Also the parts list data can be extracted from the construction data. This requires, besides continuous 3D data, a 3D-compatible spare parts catalogue software.

A number of companies that use their 3D construction data directly for the parts catalogue production report on significant increase in efficiency and substantial cost savings. An example is MASA AG, a leading manufacturer of machines and turn-key plants for the building material industry. Located in Andernach (Germany) the company runs a spare parts catalogue system basing on PARTS-PUBLISHER of Docware. 3D data from SolidEdge is directly integrated into the catalogues. The implementation of PARTS-PUBLISHER resulted in an increased number of parts catalogues produced annually. Before using PARTS-PUBLISHER MASA produced 17 parts catalogues annually. Now they create 104 parts catalogues annually at constant manpower. The number of drawings needed to be established was reduced from 475 to 48. Instead of using exploded views that had to be re-established in each case, the catalogues are now principally illustrated with 3D models directly from the CAD system. The need to establish about 90% less drawings does save time and money.

Source: MASA AG

HEKUMA, a manufacturer of injection moulding machines with about 150 employees, designs with Inventor. Since 2006 parts catalogues CDs are produced directly from Inventor. “We save about 280 hours annually in catalogue creation – which is a good man-month of working time – since we use our 3D construction data directly for the catalogues”, explains Helmut Schmid, Service Manager at HEKUMA GmbH. HEKUMA produces annually on average 60 machine-specific catalogues each with about 3,500 parts list entries and 25 drawings or 3D models.

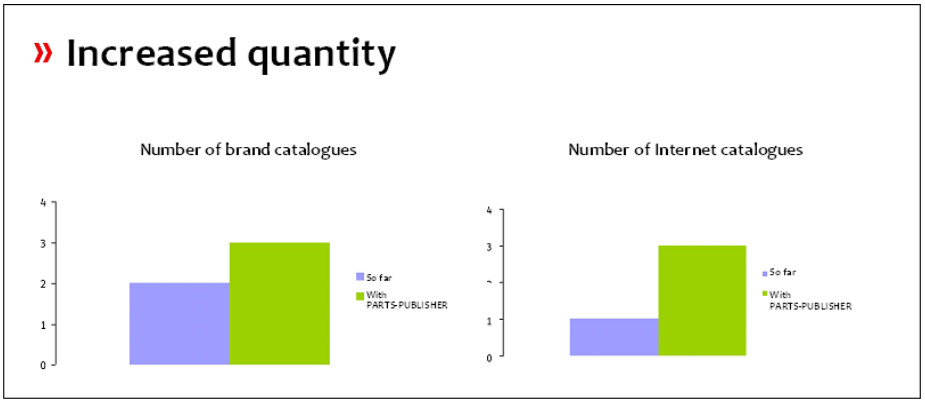
STAHL KONECRANES does also save money with 3D spare parts catalogues. Michael Dietterle, Head of Technical Documenation at KONECRANES Straddle Carrier Business in Tauberbischofsheim (Germany), reports: “With the direct import of the 3D data from SolidEdge into our spare parts catalogue system PARTS-PUBLISHER we save about 73 hours of working time per catalogue. These 73 hours would be in addition if we worked conventionally by creating 2D drawings.

Central data management
A modern spare parts catalogue software operates with a central catalogue database for producing all catalogues. Modifications in the catalogue database are automatically integrated into all catalogues. This avoids redundancies and saves money. Filling and maintenance of the catalogue database can be effected manually or partly automated. Far more savings can be achieved by a fully automated data import via interfaces. Ttheir importance is pointed out above.

Single source, cross media
Especially in companies creating several catalogue media (print, CD, DVD, Internet) a spare parts catalogue software working according to the Single Source principle can achieve considerable savings. One single data pool kept media-neutral in the catalogue database serves as source for all catalogue media. The conventional practise of multiple editing of data for different media is omitted.

Automation
With respect to gain savings, automation possibilities of a spare parts catalogue software are of prime importance. This is where the available software products differ considerably. Who emphasises efficiency and economy of time should turn one’s attention to the editing tool and if necessary on automation interfaces when selecting a spare parts catalogue software. Because behind quite similar catalogue performances – viewer functions and user interfaces that hardly differ – there may be quite a different effort in catalogue production. As some software products demand a high proportion of manual operations, there are some that – after one-time configuration of the catalogue – only need a few mouse clicks from the data import to the output of the catalogue.

A company that largely automated the production of their spare parts catalogues is STIEBEL ELTRON, a globally operating manufacturer of electro, hot water and heating devices. Since 2006 a spare parts catalogue system basing on PARTS-PUBLISHER of Docware was implemented, the company reduced about 60% of the costs for the parts catalogue production. According to Irmgard Lüke from the technical information centre at STIEBEL ELTRON in Holzminden (Germany) the output of catalogues compared to former times has doubled, thanks to the largely automated catalogue production.



Source: STIEBEL ELTRON GmbH & Co. KG

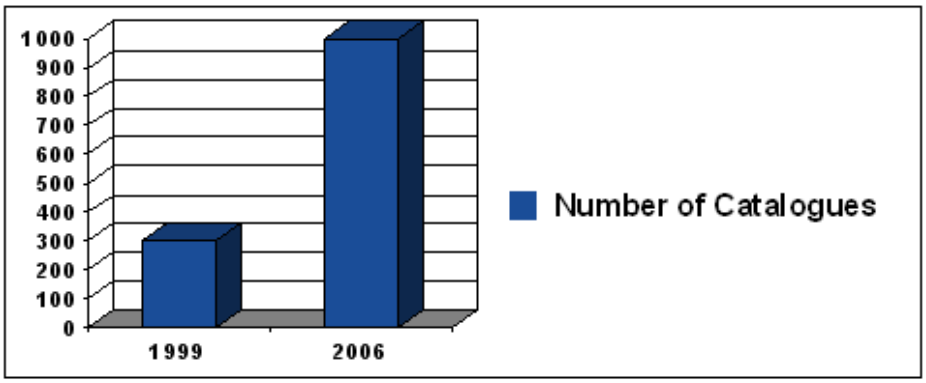
The highest level of automation is offered by catalogue solutions with an automation interface. In these cases it only takes a single mouse click or a definite event in the leading system – for example setting the status on “delivered” in the ERP system – to run the entire catalogue production process without any manual intervention.

With such a fully automated solution the companies KAESER Compressors and the tobacco machine manufacturer HAUNI reduced their efforts for the ongoing production of machine-specific spare parts catalogues to zero. Both companies create their catalogues with the parts catalogue software PARTS-PUBLISHER directly from SAP.

Configuration

There often is a need to provide order-, machine-, customer- or user-specific catalogues. What conventionally requires high manual effort, can be effected largely automated and cost-saving using a spare parts catalogue software. Pre-condition is a catalogue software with broad configuration possibilities for the appearance and content of the catalogues as well as filter functions for the selective data display. From one and the same data basis only the data meeting the requested criteria is selected: serial number related data for type-specific catalogues, selected languages for country-specific catalogues, customer-specific prices for customer-individual contents, etc.. The compilation of data that conventionally takes hours to weeks, only requires a few seconds or minutes with an adequate spare parts catalogue software.

SENNEBOGEN Maschinenfabrik GmbH in Germany is a company that provides order-related spare parts catalogues on CD. Since the manufacturer of cranes implemented an electronic spare parts catalogue system (PARTS-PUBLISHER) integrated with a PLM system (keytech PLM) the production of a spare parts catalogue only takes about 15 minutes. Before, several weeks were needed to produce one single catalogue. “Whereas we produced about 300 spare parts catalogues in 1999 – at that time they were not yet order-specific but for all purpose – the number was tripled to about 1000 order-specific catalogues, after implementation of our electronic spare parts catalogue system”, states Sandro Körner, Head of Technical Documenation at SENNEBOGEN.



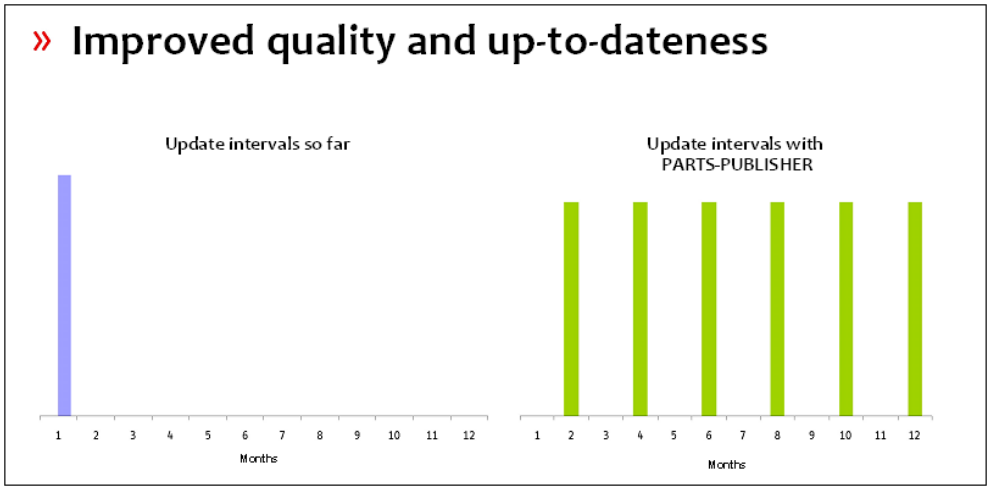
Source: SENNEBOGEN Maschinenfabrik GmbH

Reduced costs for updating catalogues

Usually updating of spare parts catalogues meant to invest a lot of money – for the re-creation as well as for the re-distribution. With a professional spare parts catalogue software the effort for updates may be reduced to a minimum. It only takes a few mouse clicks to generate catalogues with updated data. The highest saving potential can be reached by catalogue systems with connected data sources. In these cases only the re-import of the data into the catalogue database is activated and an automatic data replication is performed. Data modifications in the leading system affect the catalogue database and all catalogue media.

Many companies producing their spare parts catalogues conventionally do rarely provide catalogue updates in view of the immense costs. For companies working with electronic spare parts catalogues this cost pressure does no longer exist. Due to the small effort for catalogue updates need-driven updating cycles are possible.

In this context STIEBEL ELTRON should be recalled. This company reduced the updating intervals of their spare parts catalogues after implementation of the spare parts catalogue software PARTS-PUBLISHER noticeably. Instead of one there are now six catalogue updates per year.



Source: STIEBEL ELTRON GmbH & Co. KG

An extra cost-efficient way of updating already distributed spare parts catalogue CDs is updating them via Internet or intranet. Amendment files are provided on a server and can be downloaded by authorised catalogue users. The integration of the update with the CD catalogues runs automatically. Distribution of new CDs becomes superfluous. So far only the spare parts catalogue software specialist Docware offers this standardised technology.

CARL ZEISS Industrial Metrology in Oberkochen (Germany), a company updating it´s PARTS-PUBLISHER spare parts catalogues DVDs via the Internet, reports that globally 450 service technicians work with their service DVDs, that are updated 12 times a year via intranet. This is how they save about 28,000 € – which would be the amount for re-production and re-distribution of the DVDs.

Less costs for paper, distribution and supply

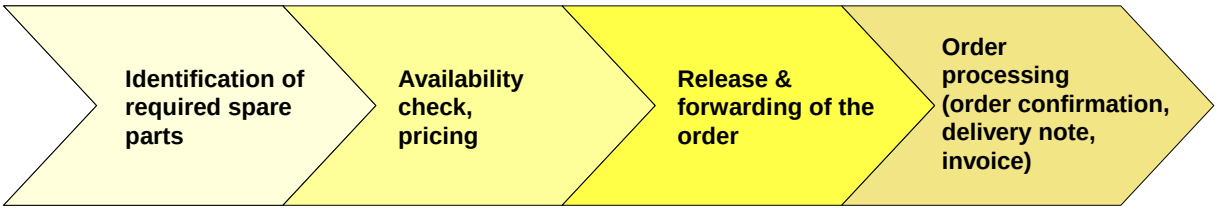
That the use of electronic media saves costs for material, distribution and supply goes without saying. And for Internet catalogues dynamically filled from a database these costs can be completely omitted.

But also CD catalogues save money, announces Michael Dietterle, Head of Technical Documenation at KONECRANES Straddle Carrier Business. „By using the spare parts catalogue CD instead of printed catalogues we save 2,000 to 3,000 € per order.“

SENNEBOGEN Maschinenfabrik GmbH providing order-related CD catalogues saves up to 750,000 sheets of paper annually.

Savings on spare parts order processing

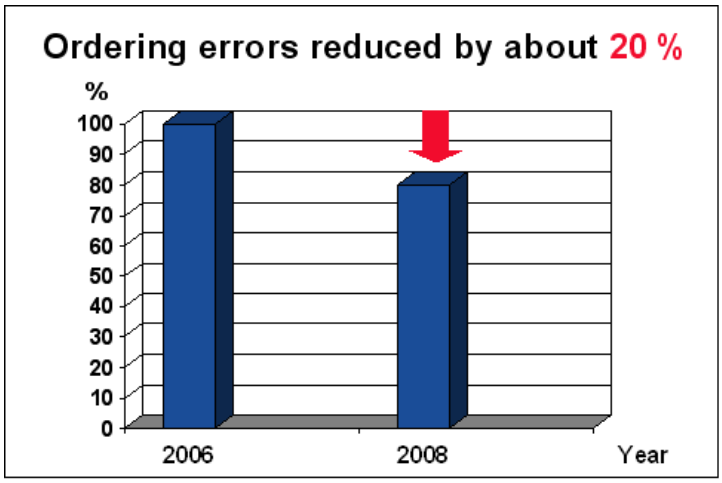
Professional spare parts catalogue software saves time and money on the following ordering processes:



Less ordering errors
Electronic spare parts catalogues can reduce wrong orders and involved costs. Essentially this is due to three factors:

- The user-friendly presentation of up-to-date, reasonably linked data simplifies the spare parts search. The complex, error prone search in bulky and confusing printed catalogues is omitted.
- Machine-, device- or plant-specific catalogues provide clear spare part information. Catalogue users only see those parts, that are integrated in their machine or plant. Required spare parts and related data are reliably identified by only a few mouse clicks.
- The possibility to order directly from the CD or Internet catalogue eliminates transmission errors because the data of the required parts is taken over to the shopping cart point-and-click and directly transferred to the order address.

A company that registered 20% less wrong orders after implementing an Internet parts catalogue system is KÖGEL Fahrzeugwerke GmbH, one of the largest European manufacturers of commercial vehicles. The Bavarian manufacturer runs an online service portal with vehicle-specific catalogues. They are identified via chassis number at the login into the catalogue system. The vehicle-specific display of data avoids stumbling over terms or variants and supports the unerring selection of the required parts.



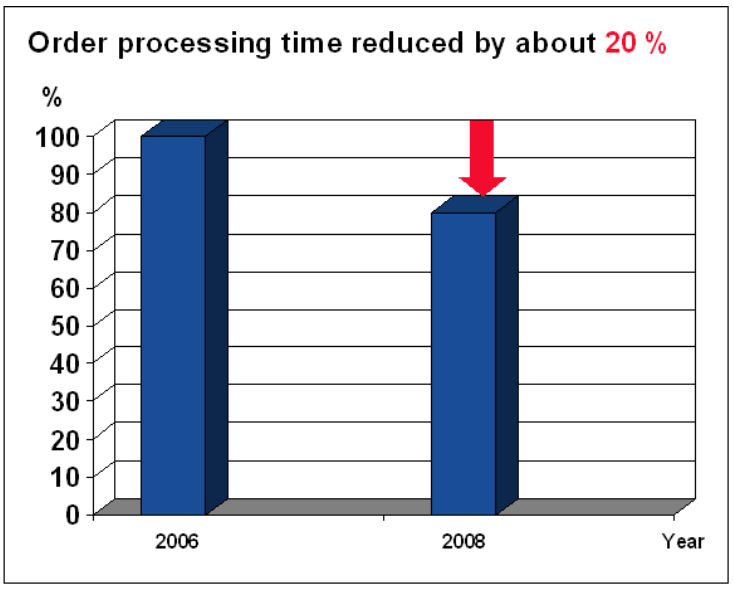
Source: KÖGEL Fahrzeugwerke GmbH, After Sales Parts Logistics

Automated order processing
Electronic spare parts catalogues enable an integrated and accelerated order processing with shortened processing and delivery times. Orders released from the catalogue system can be directly used for electronic further processing. A maximum of efficiency and cost-saving is offered by spare parts catalogue solutions linked to the ERP system. The catalogue system can either be connected with the ERP system directly or via the integration with an e-business system, for example a shop.
There are different automation levels for the order processing. Fully automated solutions allow for orders released via the catalogue system to be directly generated and automatically processed in the ERP system.
The following processes run automatically:

- replication of the ordering and ERP data
- up-dating of availability and delivery times
- generation and transfer of order confirmation, delivery note and invoice

Integrated EPR/catalogue solutions reduce the effort for order processing significantly.

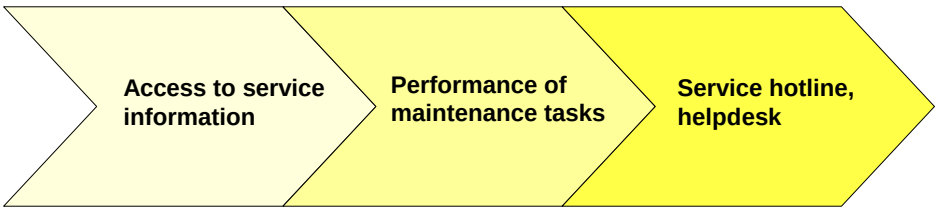
Since the implementation of the online spare parts catalogue the aforementioned KÖGEL Fahrzeugwerke GmbH needs about 20% less time for order processing though the catalogue system is so far not linked with the ERP system. With the previewed connection of the spare parts catalogue system to PSIpenta in 2009 KÖGEL expects further economies. KÖGEL treats more than 3,500 spare part orders per month.



Source: KÖGEL Fahrzeugwerke GmbH, After Sales Parts Logistics

Savings in the technical after sales service

Professional spare parts catalogues software safes time and money in the following processes of the technical customer service and support:



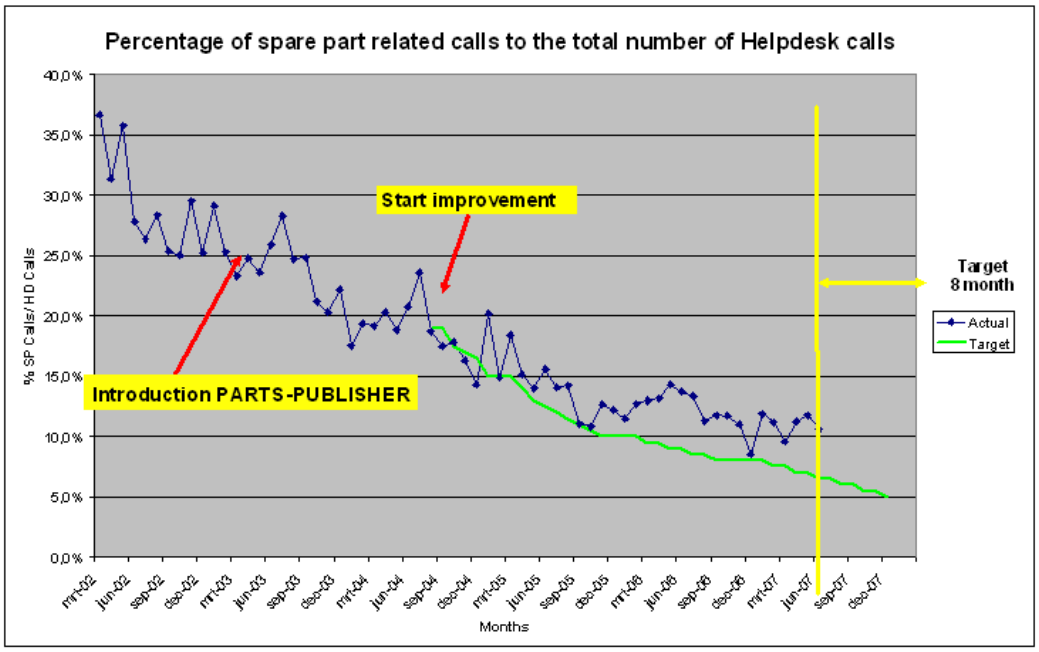
Efficient service

Electronic spare parts catalogues can reduce the costs for maintenance tasks, because the service stuff has better access to better information. Spare part and service information is found easier and faster than this is possible the conventional way with bulky and unclear printed catalogues. Complete, up-to-date, clear and descriptive information, which can be accessed at any time and from any place, shortens search times, improves access to information and actionability, avoids unsuccessful trips and enables the processing of more service tasks in the same period. So the efficiency of a service team increases.

Relief of helpdesk

Electronic catalogues guarantee fast access to high-quality spare part and service information and can relief hotline and helpdesk. Clear and up-to-date information that can be accessed by only a few mouse clicks, and simple ordering mechanisms that hardly require manual interventions, redundantise enquiries.

Precise figures about reduction of helpdesk enquiries were surveyed by PHILIPS Healthcare. The manufacturer of medical equipment provides spare parts catalogues on CD, via intranet (service technicians) and on the Internet (customers) since already a couple of years. Sites in Germany, the US and Netherlands benefit of an electronic spare parts catalogue system with central catalogue database. The chart below illustrates the development of helpdesk enquiries after the implementation of electronic spare parts catalogues. According to the “Spare Part Call Reduction Report" of the Dutch subsidiary of PHILIPS Healthcare 2001 one out of three helpdesk enquiries were about spare parts. In 2005 – three years after the implementation of electronic spare parts catalogues – only one out of seven enquiries was related to spare parts. From 2002 to 2006 the number of spare parts enquiries was reduced by 92%.



Source: Spare Part Call Reduction Report, PHILIPS Medical, Best, Netherlands

"The number of phone calls at the service hotline was reduced by about 15 % since operation of the KÖGEL online parts ordering system”, stated Armin Jerg, responsible for the department parts logistics at KÖGEL in Ulm.

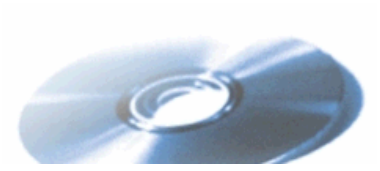
Conclusion

Implementing an electronic spare parts catalogue system results in important cost savings. Some of these cost savings are evident some are less obvious. But all of the above mentioned saving potentials are measurable and traceable. This was proven by questioning a number of spare parts catalogue users that evaluated the appropriate data. Of course, not every spare parts catalogue software bears the same saving potential. The highest savings were attained by implementing database-driven spare parts catalogue systems with direct connection of the data sources, a high automation level and broad configuration possibilities. As a rule: who invests more, receives more functions and saves more and faster. Depending on investment level, functional range, level of integration with ERP, PLM, CAD and/or e-business systems and intensity of use, electronic spare parts catalogue systems generally amortise within three to five years.

Comparison spare parts catalogues: conventional / electronic

Spare parts catalogue creation conventionally:	**with electronic spare parts catalogue software:**
Decentral data management	Central data management
Manual compilation of data	Automated compilation of data, standardised data import
High percentage of manual operations for data processing and catalogue creation	High degree of automation for data processing and catalogue creation
Multiple editing of data for production of different media	Media-neutral data management and processing, free choice of the output medium, production of all media (cross media publishing) from one data pool (single source)
Media breaks, redundancies	Consistent data without redundancies
Lack of integration with an existing IT environment, isolated applications	Easy integration with ERP, PLM, PPS, CAD-, e-Commerce, e-Procurement and e-Service systems
Great deal of effort for updats	Updates require a minimum of effort
Updates require the distribution of change notifications or the redistribution of catalogues; high material costs	Catalogue production on demand; updates of circulating CDs possible via the Internet (no redistribution necessary)
3D integration into the spare parts catalogue conventionally:	**with electronic spare parts catalogue software:**
To use 3D design data for they have to be considerably reworked or reprocessed.	Re-using existing 3D data for the technical illustration: • Direct integration of 3D models into the spare parts catalogue and/or the descriptive documentation • Extraction of parts lists from the design data
The limited use of 3D model data means re-creation, delays and higher costs	Continuous use of original 3D data saves time and money; No need to create new drawings
High translation costs	Self-explanatory and language-neutral 3D views and animations reduce translation costs
Spare part identification conventionally:	**with electronic spare parts catalogue software:**
High searching effort: • Long searching times, poring over catalogues, paging through bulky printed documents Searching in different systems or documents: • Related information filed separately (spare parts catalogue / service documentation) • Change notifications / service bulletins supplied later and individually filed	A minimum of searching effort, short searching times: • Spare part identification point-and-click in a matter of seconds All service and spare part relevant information gathered (service documentation integrated, change notifications, service bulletins etc. automatically and traceably integrated into the catalogue)
Limited availability: Access to required information not always guaranteed (e.g. field service: the service technician does not have the matching service	Information at the point of need: Notebook, PC and/or PDA with parts catalogue or Internet access guarantee access to the complete spare part and service documentation matching the

folder or spare part catalogue on hand, the available information is out-dated, change notification got lost, etc.)	service case
Data quality improvable: • Outdated • Unclear • Nonspecific • Errors • Incomplete etc.	Optimised data quality: • Always up-to-date data (a minimum of updating effort allows for continuous catalogue updates) • Machine-, device-, plant- or customer-specific information • Machine history integrated in the catalogue (exchanged parts, predecessor and successor parts) • Optimised clearness (integrated 2D and/or 3D drawings with option of interaction (zooming, rotating, etc.) • Related information linked
Media breaks, redundancies: Different data base for different media, documents; up-dates only effected in parts of the data or delayed	Consistent data without redundancies: All media supplied from one source; changes in the catalogue database affect all media
Spare parts ordering conventionally:	**with electronic spare parts catalogue software:**
Follow-up enquiries with the supplier necessary (lacking data quality, time consuming searching, no access to required data)	Less enquiries due to a better data quality, easy access to required data, relieving of hotline
Telephone order processing only at business hours	Ordering possibility 365 days around the clock
Wrong orders due to ambiguity of data	Little wrong orders due to clear data (machine-, variant-, type-specific displaying); cost savings by reduced wrong order rate
Manual transfer of ordering data, transmission errors possible	Ordering directly from the catalogue, no transmission errors
	with connection to the ERP system:
Clarification of availability takes time (phone call etc.)	Online availability check and information
Manual entering of orders into the ERP system	Through-going electronic order processing (direct transfer of order into the ERP system, e.g. via XML, IDOC, etc.)
Order processing requires a high percentage of manual operations	Order processing largely automated: • Accelerated order processing • Shorter delivery and down times



Docware GmbH
Alexanderstrasse 9
D-90762 Fuerth
Tel: +49-911-977 59-0
Fax: +49-911-977 59-99
E-mail: info@docware.de
Web: www.docware.com