



## Efficient product costing in SAP: EMAG replaces Excel with ORBIS PCC

EMAG Maschinenfabrik GmbH has recently started performing its construction and development calculations with the ORBIS Product Cost Calculator (ORBIS PCC) instead of Microsoft Excel. With the SAP-based add-on, the company can directly access current and future data and prices from the SAP ERP system and calculate the manufacturing costs for the machines in detail, exactly and transparently. Not only are the calculations extremely accurate now, they are also performed 20 percent quicker, which leaves product management with more time for core tasks.



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Whether it's a crankshaft, rolling or pumping ring, piston, brake cylinder, toothed gear or railway wheel: The turning, milling, grinding and drilling of disc and wave-shaped or cubic metal work pieces for drives, engines and chassis components requires highest precision.

## EMAG Maschinenbau GmbH

Head office: Salach

Products: Tool machines and manufacturing systems

Sites: 41 worldwide

Employees: over 2,500 employees globally

<http://www.emag.com>

### Calculation of up to 5,000 individual items

The innovative and reliable manufacturing systems of the international EMAG Group from Salach in Baden-Wuerttemberg, are particularly well suited for this. From turning, grinding, cutting, joining or laser welding machines to electro-chemical metal machining and induction hardening technology, the company provides its customers with the best customized solutions for any application. In 2015, the EMAG Group achieved a turnover of Euro 577 million with its more than 2,500 employees.

A decisive factor for the economic success of the machine manufacturer is that it is able to calculate the machine production costs very accurately already in the development phase and can make reliable statements about the costs in this stage. *"As a result we not only are in control of the costs, but we also gain competitive advantages. If, during the construction process, it becomes apparent that the machine cannot be manufactured at a market-related price, we can develop alternatives early on"*, explains Markus Hahn, Head of Production Cost Management at EMAG Holding GmbH. The calculation processes are incredibly complex, as, depending on size and design type of a machine, we need to cost 2,000 to 5,000 individual items in the BOM list.

### Integrating development calculations in SAP

Since recently, EMAG performs the tasks of the construction and development-accompanying costing with the ABAP-based add-on ORBIS Product Cost Calculator (ORBIS PCC), which is integrated seamlessly and release-compliant into the existing SAP-ERP system.

*"With this application we are creating a uniform database for our calculation processes. Therefore, all processes*

*can be performed accurately, are IT-supported, standardized and allow for a high level of detail"*, Markus Hahn explains. ORBIS PCC replaces an in-house solution based on Microsoft Excel with which the entire costing had to be performed manually outside of SAP ERP and was very time-consuming.

EMAG relied on the process and consultancy know-how of ORBIS in the implementation. Thanks to the excellent cooperation of all parties involved in the project, and the high level of personal commitment of the ORBIS consultants, a solution could quickly be implemented and taken into operation. Also, individual requirements such as the option of scanning in document structures, saving a target price for each assembly or reconciling new engineering BOMs with the current calculation, were competently implemented in this context.



### Production costs under control at all times

The benefits of product costing integrated in SAP ERP were quickly noticeable. The costs for a new machine can now be determined in detail and therefore with great accuracy, already in the development phase. Current prices of all product components as well as small parts such as screws or connection pieces flow from the SAP software into the calculation, as well as data from the work plants. Previously, such a detailed calculation was inconceivable – the effort and expense would have been too great, because the required SAP data had to be copied to Excel manually.

The cost curve of a machine can now be traced transparently across the entire development process as the calculation is based on the document structure, which is generated during the construction phase in the CAD model and flows directly into ORBIS PCC. In the further course of the development up to the finished prototype, the calculations are gradually fine-tuned according to the cur-

rent data from the document structure list and therefore become even more accurate. In this context, the current calculation is constantly reconciled with the target prices for the individual assemblies stored in ORBIS PCC. This way, deviations or imbalances are immediately detected and can be corrected, for example by choosing a more cost-effective alternative early on.



### Costing 20 percent faster

By eliminating the time-consuming manual data transfer for product costing, the process has been significantly streamlined and has become noticeably faster. Especially the calculation of some parts such as screws, washers or motors, which are installed into different machines unchanged, is now much easier. As the prices are already stored in SAP ERP, they are immediately available for calculations in ORBIS PCC.

The time saving is substantial: According to Markus Hahn, this is "at around 20 percent". Employees in product costing benefit from this as they now have more time for their core tasks such as the identification and analysis of cost drivers or the development of measures for reducing product costs. The calculation has also become faster as the BOM structure of an assembly, for example a motor, does not have to be broken down completely in ORBIS PCC, as it does in SAP Standard, but rather a breakdown can be performed optionally and specifically for individual items. This eliminates the need

for an elaborate search of the individual component of an assembly, and they no longer need to be calculated individually.

*" With the Product Cost Calculator integrated in SAP, we achieve more speed, quality and transparency in the development-accompanying calculation. We can identify cost overruns already in the construction process and thus have more time for our core tasks", is Markus Hahn's positive conclusion.*

### More improvements in planning

Further steps are already in planning. For example, the analysis functions of the add-on will be improved, the costing which is currently only possible in Euro, will take into account currency fluctuations, and there will be the option of calculating various assessment variants.



Markus Hahn, Head of Product Cost Management at EMAG Holding GmbH



## SUCCESS STORY

Machine / Plant Construction  
ORBIS Product Cost Calculator  
EMAG Maschinenfabrik GmbH

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