New Application Service for hydraulic cylinders makes work easier for designers

From a physical viewpoint, hydraulic cylinders are very simple linear drive units. But, as is so often the case, a detailed, closer look reveals otherwise.

"Hydraulic engineers are passionate tinkerers who work hard day after day, putting their heart and soul into the development of ever more innovative solutions", says Patrick Mussler, systems specialist at AHP Merkle GmbH in Gottenheim. He has been employed in this industrial sector for many years and works meticulously at improving many aspects of hydraulic cylinders. This includes ensuring that the huge product portfolio is clearly and neatly arranged.

After all, AHP Merkle's domain also includes an immense repertoire of readily available customized cylinders in addition to standard hydraulic cylinders. That is why the ahp.book was first compiled many years ago: A catalog containing all the information designers need for calculating, dimensioning, selecting, designing, ordering and documenting hydraulic cylinders. The new version, ahp.book 3.0, contains numerous new products and has been available since January 2013.

**Free cylinder APP for Apple and Android**

"And, as a special treat for those designers who want to implement their ideas and feed them with hard facts while on the road or simply in-between, can now serve up all they need in bite-size chunks on a tablet", adds Patrick Mussler. He is, of course, referring to the new "hydraulic cylinder" app for tablets and smartphones.

The app is only 14 MB in size and therefore quick to download and use. A click on the black AHP symbol quickly calls up a clear and self-explanatory list of options:

- Catalog
- Text search
- QR scan
- News
- PDF
- Locations
- Settings
- Legal notice

A click on "AHP Info" in the "Catalog" menu reveals numerous interesting facts on the technology and calculation of the different cylinder types. The same menu item also offers a paper-based catalog in three languages (German, English and French) in PDF format. However, the greatest advantage and therefore the heart of this app is this: 13 cylinder types plus a button for accessories show designers the incredible range of options that exists in the world of hydraulic cylinders, all at the touch of a button. Take block cylinders, for instance: the selection comprises ten different designs such as BZ, BRB, BZF, BVZ, etc. The special feature here is that the selective choice generates a long list of more than a dozen parameters on the tablet together with a corresponding, three-dimensional image of the hydraulic cylinder on the right. Patrick Mussler emphasizes: "This gives designers an immediate and real
At a glance the user sees what options the new and free “Hydraulic Cylinder” app from AHP Merkle has to offer.

Impression of what the cylinder they are looking for looks like and whether it corresponds to their requirements.

Rotate cylinders with a finger in three-dimensional space

The app provides corresponding dimension sizes for selectable parameters such as piston diameter, rod diameter, switch, stroke, etc. Manual input of custom dimensions is also possible. A “Generate Preview” button appears when one or more parameters are changed. When it is pressed the server recalculates the cylinder based on the new parameters and generates a corresponding 3-D model. You can rotate the image freely in space with your finger to inspect it at close quarters from any angle.

“This visual inspection method enables designers to decide there and then whether the end product corresponds to their expectations”, comments Patrick Mussier. Additionally, visual inspection can also detect possible incorrect dimensional values in good time.

This helps increase efficiency when designing machines and equipment, according to the expert from Gottenheim.

The system even displays important additional information such as the oil volume in an extended and retracted state. At the end of the process the user can use two selection fields to make further use of the cylinder data: “Communicate” and “Email CAD Model”.

Clicking on the button “Email CAD Model” offers an option to have not only the CAD data sent by email but also an additional 3-page documentation on the cylinder.

Isn’t it thrilling?

From 335 to 90 km/h in 2.5 s

If you want to drive fast, you’ve got to be able to brake hard. To build their high-performance cars, the Sauber F1 team has been relying for years on EDM machines from Mitsubishi Electric. The top-of-the-range models are the only ones on the market with the TSM that boosts erosion quality with its cogging- and wear-free motion. Get more horsepower onto the road with the MV Series and pay us a visit at EMO (Hall 23, Stand C08).