BaSys
Bartels
Systembeschläge

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Concealed technology, combined function: Interview with the Bartels brothers about the „Pivota DXS Close 2.0“

„Pivota DXS Close“ is a concealed door hinge that integrates the closing mechanism. Flush doors move gently and automatically into the lock. The combined technology of hinge and closing mechanism, which works completely concealed, was developed by Bartels Systembeschläge GmbH from Kalletal, BaSys for short. Albert and Jürgen Bartels, managing owners, answered some questions about this special product.

BaSys already presented the first version of a concealed hinge with integrated door closer in 2017. How did this idea come about?

We have always been fascinated by the idea of equipping hinges with useful additional functions. The „Pivota Safe“ models, for example, which have integrated burglary protection, are proof of this. The topic of integrating a door closer has been on our minds for quite a while. In fact, we already presented a „Pivota DX 100“ with integrated closer at the BAU 2005. The principle was similar to the „Pivota DXS Close 1.0“, only the pull was applied to the piston and not directly to the hinge’s joint to close the door in a controlled manner.

Nevertheless, a concealed hinge with a closing function was revolutionary at the time because no closer was visible. In terms of development, we were way ahead of our time, but we were not able to implement the new solution in terms of sales. At that time, the first thing was to establish concealed hinges on the market.

Whereas in 2005 our hinge joints were still exclusively made of aluminium and could not permanently absorb the forces, we have further developed the „Pivota DX“ product family in such a way that steel joints are also used for the highest loads. With this component in our design luggage, we then took up the idea from back then again and presented it in 2017 in the form of the „Pivota DXS Close 1.0“.

Version 2.0 of the „Pivota DXS Close“ is now available. What distinguishes this version from the original version?

Thanks to feedback from customers and our own experience with version 1.0, there was room for improvement in two areas. We were particularly bothered by the fact that version 1.0 was almost impossible to adjust and that the bought-in spring mechanism was sensitive. The „Pivota DXS Close 2.0“ overcomes these weaknesses. In contrast to the original version, it works mechanically: two springs, each equipped with a spindle, now replace the sensitive and non-adjustable gas-filled spring. The springs can be pre-tensioned via the spindles and the tensile force scaled – depending on the room volume, door widths and door weights. In the new „Pivota DXS Close“, the integrated damping is also viscously mounted so that the damping strength can be flexibly adapted to the closing speed of the door. The new construction is made directly at our factory in Kalletal. It is designed for long-lasting and maintenance-free function with constantly reliable pulling and closing force.

How exactly does this combined hardware technology work?

When the door is opened, which is possible up to 180 degrees, the springs pre-tension. If the door is then no longer held, the closing mechanism pulls on the hinge in a controlled manner so that the door automatically moves towards the lock. For more safety and comfort, the hinge is equipped with a so-called soft-close system that brakes the door at an opening of about 20 degrees. Then it releases and the door falls gently and reliably into the lock.

Where do you see the main areas of application for the „Pivota DXS Close“?

The „Pivota DXS Close 2.0“ is suitable for flush doors with a maximum weight of up to 80 kg – currently in T0 design, as no fire protection certificate is available yet. This solution is ideal wherever a classic door closer should not be visible and where there is simply no space for it, for example on floor-to-ceiling doors without a classic frame or on arched doors. The faceplate width of the hinge is 30 mm; therefore, installation requires a minimum door leaf thickness of 40 mm.

Door hinge and door closer combined in one product. What are the advantages of this product for fabricators in industry and trade?

The fabricator does not need an additional door closer. There is also no need for a third hinge, which is usually necessary when using a separate door closer. The time savings for milling and assembly are correspondingly high, as are the cost savings for the components that are not required. The 3-D adjustability is still given.

Like all its hinge and striking plate systems, BaSys is constantly developing the „Pivota DXS Close“. What are the next steps?

In order to make the hinge interesting for use in buildings, we have to prove its suitability for fire protection – we are currently working on this. Subsequently, a CE certificate would also be logical; however, this is not entirely uncomplicated due to the current standardisation situation. An even better adjustment of the closing force in the installed state would be another sensible development step.



Caption: Albert (on the right side) and Jürgen Bartels (left), managing owners of BaSys – Bartels Systembeschläge/Germany. Photo: Basys

BaSys

BaSys stands for Bartels Systembeschläge. The family-owned company run by Albert and Jürgen Bartels has been developing, producing and selling an all-embracing range of building hardware since 1995. With its hinge and striking-plate systems, BaSys regards itself as a problem solver for door and frame manufacturers throughout Europe as well as for national and international customers from retail and the trades. In 2001, the company was the first German manufacturer to present a concealed and three-dimensionally adjustable hinge with the "Pivota" product range, initiating a new design trend in the door industry. At company headquarters in Kalletal, East Westphalia, BaSys employs around 100 members of staff.