

Trusting in one's core competency – a lip seal for the Memograph M

Alfred Rüeegger, Product Application Engineer

Endress+Hauser Wetzler GmbH+Co. KG in Nesselwang, Germany, is a leading international supplier of measuring instruments as well as services and solutions for the industrial process engineering industry. The company places high demands on itself: "We strive to set examples in the quality of our products and services" is one of the tenets of the company's credo. But what does such a highly specialized company do when it has to tackle a task that lies outside its core competency? Simple – it brings a partner on board that specializes specifically in that area: the Angst+Pfister Group.

Endress+Hauser Wetzler GmbH+Co. KG turned to Angst+Pfister for a housing seal for its Memograph M videographic recorder, a latest-generation device that displays information on all relevant process values, records and analyzes measurement data and monitors alarm set point values – in short, an absolutely high-end piece of equipment. The videographic recorder is primarily used in process measurement and control areas of the water/wastewater and energy sector as well as the food and pharmaceutical industry.

For its videographic recorder, the company was looking for a seal for the hinged cover of a socket board equipped with USB, TCP/IP, OPC and Ethernet ports. Given the special deployment parameters and the geometry, a simple standard seal could not be used. A solution specifically tailored to the application and fully meeting the high quality standards of the device needed to be found.

Specialists for specialists

Endress+Hauser Wetzler GmbH+Co. KG's initial search for the ideal seal did not produce the desired outcome. For such a company that sets standards with regard to reliability, quality and technology, it soon became clear that its longstanding successful cooperation with the Angst+Pfister Group was reason enough to entrust the "entire seal package" to a company that sets the same kind of standards in its own area of expertise. This enabled the customer to refocus all of its attention on its own core competency.

Cover shut tight

What exactly was the challenge faced in developing this special seal? Given the typical areas of deployment for the Memograph M, the seal had to meet IP 65 ingress protection requirements, which means that it had to be dust-tight and impervious to water splashes. Moreover, the port interface was to be sealed with a pivotable cover hinged to the housing. Hence, the cover and thus also the seal are not simply set down straight over the port interface, but are instead swung into place. A seal must work with extreme precision in such situations.



After rigorously analyzing the deployment parameters, Angst+Pfister decided on a lip seal. Now the optimum design needed to be found. The crucial element is the construction of the lip seal. If the pretensioning is inadequate, the sealing lips do not sit perfectly and the cover does not seal properly. An excessive pretensioning, in contrast, makes the hatch cover difficult or impossible to close.

Seal with a bonus

An initial seal was developed. It already largely met the specifications set by Endress+Hauser Wetzler GmbH+Co. KG, but did not yet completely satisfy Angst+Pfister. After marginally altering the sealing lip geometry, series production could begin. As a small extra, the EPDM lip seal is coated with PTFE. This reduces friction and makes opening and closing the hatch child's play. And there's a welcome side effect: the seal is easy to install and is very durable, which adds up to a noticeable cost saving.

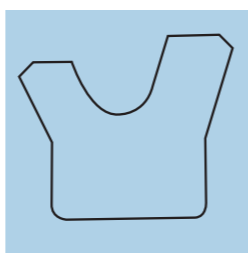
Partner-like relationship

The greater the demands that a company places on its performance, the more important it is to choose the right partner. Endress+Hauser Wetzler GmbH+Co. KG in Nesselwang picked the Angst+Pfister Group. Years of satisfaction with our support and the trust-filled partner-like relationship weren't all that prompted the company to make this decision; after all, good cooperation can only blossom when it goes hand in hand with experience, high engineering skills and profound quality consciousness.

You, too, can take advantage of our experience and rely on enduring cooperation by contacting us.



Lip seal



Profile cross-section



Memograph M with 7-inch TFT display

Your contact:
Alfred Rüeegger
Angst+Pfister GmbH, 70565 Stuttgart, Germany
Telephone: +41 (0)44 306 63 56
E-mail: alfred.rueegger@angst-pfister.com