

EVERY CAPSULE COUNTS

The new Modu-C CS fills 43,500 capsules per hour. It is also available as a containment version. Both versions have numerous special features that guarantee flawless quality of every single capsule.

Daniel Müller is Sales Director in the Capsule Technologies division at Harro Höfliger. In an interview he talks about the development of the new capsule filling machine and explains its unique features.

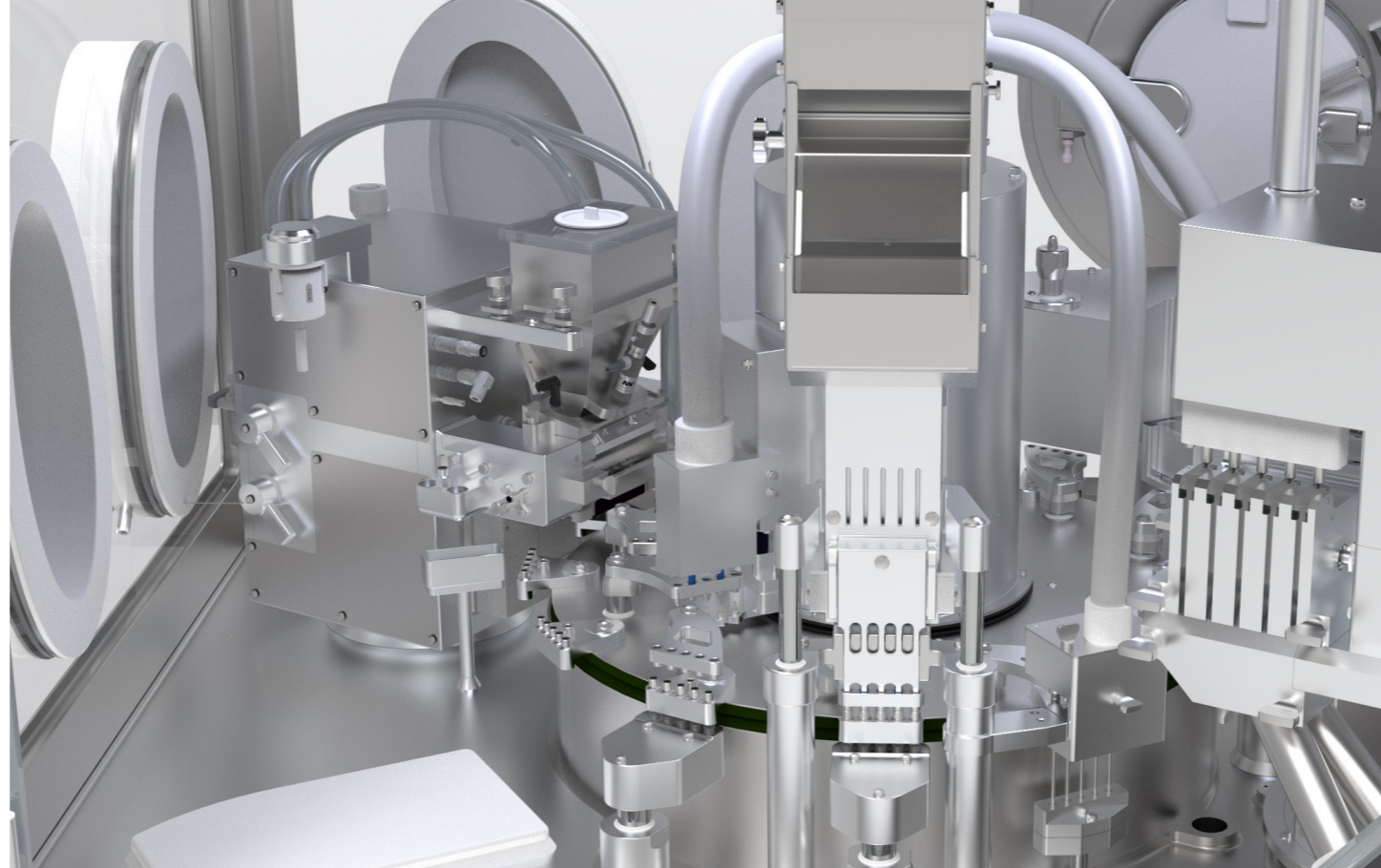
Daniel, the new Modu-C capsule filling machine has the name CS. Why?

So far, the capsule sector has been consisting of three basic machines. The LS (Low Speed), which is mainly suited for development purposes with 25,000 capsules per hour. Then there are two machine types used for production: The MS which stands for Mid Speed with an output of 100,000 capsules per hour, and the HS – High Speed – with an output of 200,000 capsules. With 43,500 capsules per hour, the new machine ranks right between our LS and MS models. This is where CS comes from: Cross Speed.

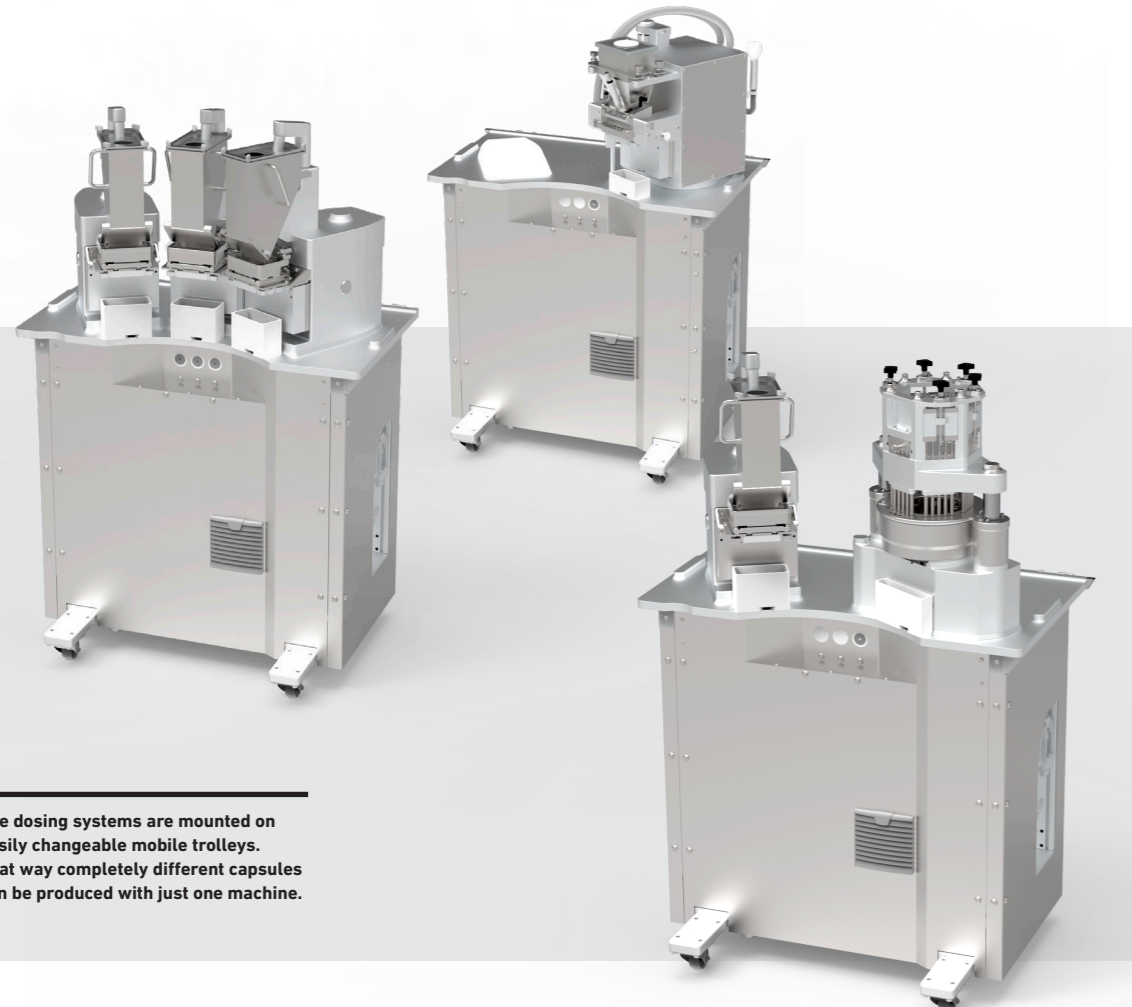
Who was the target audience for the development of this machine?

Generally speaking, every company in the capsule sector that finds itself in this output segment. All common powders and pellets can be filled on it; and the machine can be used for both R&D and commercial production.

Due to working very efficiently with small residual powder quantities, it is also ideally suited for high-priced drugs. In addition, pharmaceutical development departments are dealing with increasingly complex powders, such as freeze-dried powders or pure active



The patented segment turret reliably conveys the capsules through the system. In the containment version, a milled tabletop facilitates easy cleaning.



The dosing systems are mounted on easily changeable mobile trolleys. That way completely different capsules can be produced with just one machine.

What does flexibility mean here?

Theoretically, it means that hundreds of different products can be produced on one single machine. This is due to our trolley concept: The dosing systems are located on a mobile trolley which can be rapidly and easily moved out of the machine and replaced by another one. In addition, our exchangeable format parts cover the entire dosing range. By the way, one and the same trolley can be used in the non-containment and in the containment version.

Why is there a containment version?

Many ingredients which are filled into capsules nowadays are highly active. This is why we generate negative pressure in the machine so that the particles cannot escape. The active ingredient shall reach the patient but not the operator. We can integrate a deduster to clean the shell of every capsule. An external deduster is no longer necessary, which reduces space requirements. In addition, we have developed a special cleaning system with spray mist for additional operator safety. Moreover, the fact that 100% weighing can also be implemented in the closed containment, is a real revolution in the capsule sector.

What makes this weighing method so special in your eyes?

We check the weight of every individual filled capsule gravimetrically – and this is done completely inside the system, which is something that does not exist in any other containment capsule filling machine. Weigh cells are very sensitive and weight determination can be disturbed by air flows and vibrations. In order to prevent this, our engineers have developed a special technical solution.

In addition to 100% weighing, we can integrate an IPC station, which stands for in-process control. The system then checks the net weight, i.e. only the filling material of, for example, 20 capsules every half hour. We also use that station to adjust and calibrate the AMV sensor for the capacitive inline control of the filling quantity.

Hence the motto "Every capsule counts"?

Capsule weighing and many other additional features make it possible to ensure high capsule quality. Whether we are talking about a patient who needs a medication for treating a disease, or a pharmaceutical company who fills high-priced powders – both depend on flawless processing and in both cases this means: "Every capsule counts". Therefore, this motto was at the heart of developing the CS.

ingredients, which are usually very cohesive. Even such demanding powders can be safely dosed with the CS model.

A unique feature is that we can install two drum stations on one dosing trolley at the same time. This enables the filling of two separate powder types into one capsule. Furthermore, the drum filler technology is used for the dosing of tiny quantities or of material with very low density.

Not least, we are also addressing contract manufacturers with the CS because, among other things, it offers the Modu-C series' famous flexibility.

"100% weighing of capsules in a closed containment is a real revolution."

Daniel Müller, Sales Director Capsule Technologies at Harro Höfliger



Helmar Lünig