

Breaking new ground in needle free drug delivery

The latest cold forming knowledge and expertise from Dawson Medical is an essential part in the development of a revolutionary needle-free syringe from Zogenix, a pharmaceutical company specialising in new and innovative application technologies. SUMAVEL™ DosePro™ requires precision manufacturing to work effectively, which is why Zogenix chose to partner with Dawson Shanahan on the project and benefit from their experience in cold forming high quality components.

Zogenix was founded with the goal of enhancing and differentiating medicines using new technologies to relieve the suffering of people with CNS and pain disorders. The company's leading product, SUMAVEL DosePro (sumatriptan injection) system, is a drug-device combination that enables needle-free delivery of subcutaneous sumatriptan for the acute treatment of migraines and cluster headaches.

Bill Feinstein, Director, Operations Planning and Procurement at Zogenix, commented, "We knew that we would need to partner with a company who could offer a high level of knowledge and experience in this sophisticated technology, while also providing a superior degree of support during the development of SUMAVEL DosePro. With Dawson Medical being an important partner to our business, it was a natural step for us to approach them to help us create this new solution, which represents a truly ground breaking approach to needle-free drug delivery."

The company has been working with Dawson Medical on the development of this unique product since its inception. Mark Jennings at Dawson Medical, explained, "Our client had heard of the benefits of cold forming in terms of both quality and manufacturing cost

savings and approached us to produce one component of the DosePro device by cold forming. They were so impressed with our innovative solution that they then asked us to make a second component, again to demanding tolerances."

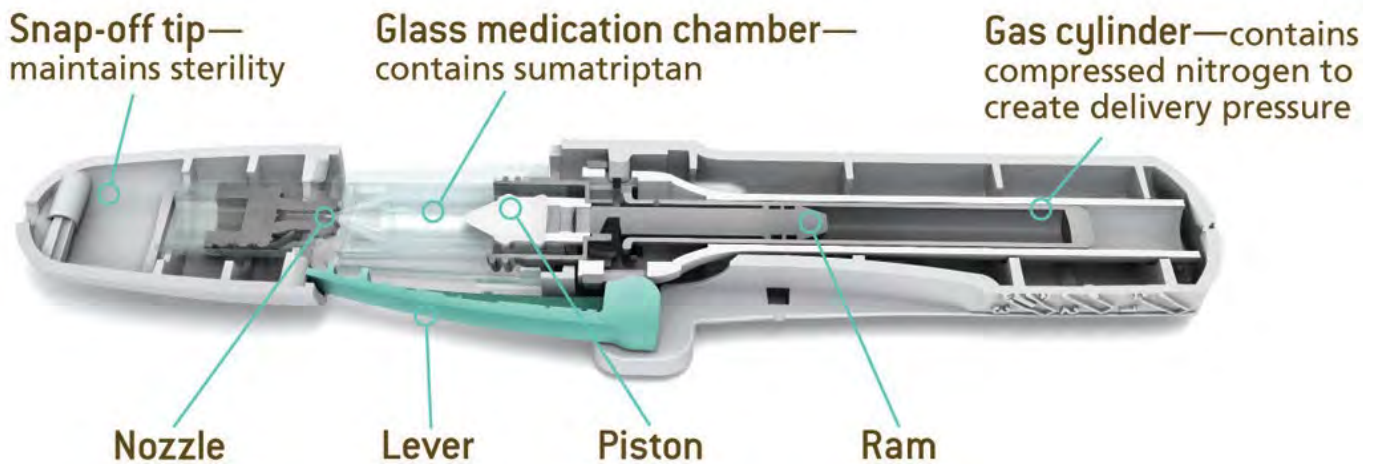
"Using our intricate cold forming processes we were able to achieve a specially engineered part with a highly accurate pressure and finish that would enable the drug to be shot into the system without the need for a needle. A mirror surface on the inside of the piston and the angles in the design also played a crucial role in ensuring that the trigger mechanism works effectively."

"We began to work closely with Zogenix to enhance the design of the DosePro system and suggested that we could manufacture a number of integral elements of the system in-house and within their budget. With assistance from Simon West at E-Tech, we set to work creating the bespoke machining and tooling needed to manufacture one of the components and together developed and tested the parts until an optimum solution was found."

The precision-made components produced by Dawson Medical, including an aluminium chamber and steel ram, have been specially engineered to administer the drug into the user's body without the need for a needle. As a result, medication can be administered quickly, simply and without anxiety. The success of the design is partly due to the high quality finish and intricate production of the cold formed parts, which make it possible for the administration mechanism to work.



Breaking new ground in needle free drug delivery continued...



SUMAVEL® and DosePro® are registered trademarks of Zogenix

Bill Feinstein believes that the partnership between the two companies has been key to the successful development of DosePro, stating, "Throughout the manufacture process, Dawson Medical have been extremely collaborative, throwing the necessary resources at challenges to help us find the best solutions. DosePro is a product based on physics and

comprises many parts which all have to work exactly the way they are intended and in harmony together. Dawson Medical have played a vital role in making this possible. We're extremely excited about launching this truly revolutionary system, and look forward to continuing to work with Dawson Medical in the future".

Over 80 years of history

Dawson Medical is part of a small group of companies which can trace its roots back to the early nineteen thirties, offering engineering services to the automotive sector before becoming a supplier of critical parts for anti-lock braking systems on aircraft. Since then we've partnered with customers in almost every sector of industry, from automotive and motorsports, to aviation, power distribution, electronics and medical.

Today, we have the knowledge, skills and resources to engineer innovative solutions from one-off parts to high volume components and are acknowledged as a world leader in precision cold forming and engineering technologies.

We work with customers around the world, helping businesses like yours deliver real bottom line improvements in product and component performance, based on the realisation of technical, regulatory and commercial goals.

