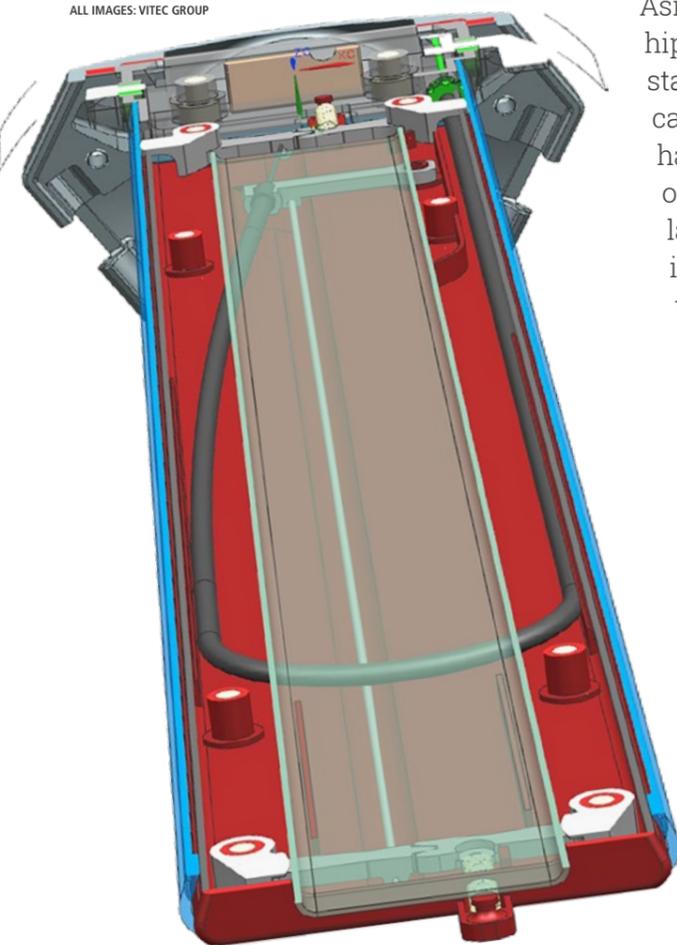


# “How do we help our customers create more?”

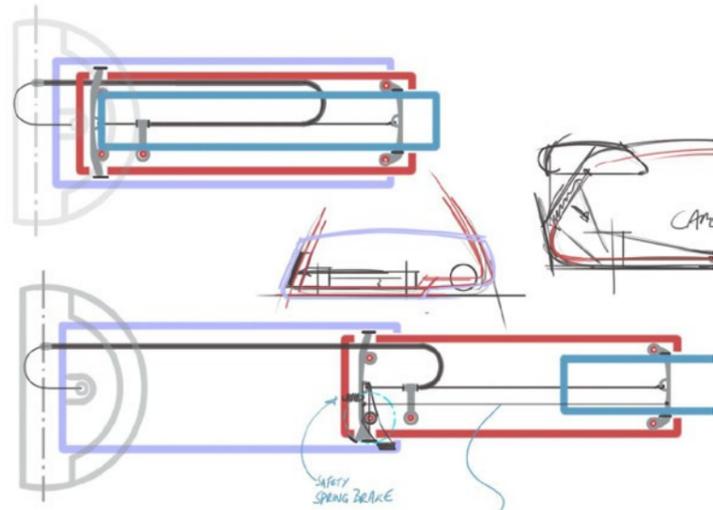
The question behind Sachtler’s flowtech tripod and aktiv pan and tilt head

ALL IMAGES: VITEC GROUP



Early flowtech concepts showing the cable curled into a 'J' shape for the mechanism to lock the legs at any height

Aside from gimbals, Easyrigs, Steadicams, peds, jibs, hips, shoulders, knees... etc, the tripod has been the stable partner keeping us steady throughout our careers. Whilst every other part of our kit ensemble has seen frequent leaps in technological advances, often at a rapid rate, the trusty tripod has, by and large, remained relatively unchanged. Until, that is, the flowtech tripod arrived and started to really turn heads (it was awarded a GTC Seal of Approval in 2020). So, Zerb asked **James Guest**, Head of Engineering for GTC sponsor Sachtler, to explain how the flowtech and aktiv were born out of the team asking themselves one basic question.



Production design of the locking and lever mechanisms taking shape

The idea behind this simple question was to reframe how we approached developing our products, by encouraging the engineers and designers to focus on the end user first and work from there. Sachtler is a leader in the field and so we chose to take some brave steps and a fresh approach to products that have seen little innovation in recent years. To achieve this, we asked ourselves what could a tripod look like that would help our customers create more content and be more creative in their shots. In adopting this approach, we weren't just focusing on giving an existing design a minor improvement, we wanted to create products that would add significant value to camera and production teams.

## Beginning with the end (user)

I believe there are three key elements to innovation. The first is to understand the user. By that, I mean that we needed to truly understand them, to discover what makes them tick, what are their goals and objectives, and to really get to grips with what their day-to-day work is like. We joke that our mission is to understand the users of our products better than they understand themselves. Silly, of course, but if we could unravel the reasoning behind what was being asked for, then we could perhaps develop features that would really benefit the customer. It was our way of collaboratively addressing what Henry Ford famously observed: *“If I had asked people what they wanted, they would have said faster horses.”*

Of course, we did ask camera professionals what they wanted, but we spent more time getting to know what was behind their requests by watching people work and then talking to them about how they use our products. This is where our question, *“How do we help our customers create more?”* comes from – this is our belief in their end goal reduced to one simple question. Whether it is to increase the number of shots they can get within any given day, or to set up that perfect shot as the sun is setting that they wouldn't normally have time to catch, or to manage to get a different angle not easily achieved previously; we want to help our customers create more.

## Open to all ideas

The second element to innovation is diversity of ideas and perspectives, because no one has a monopoly on these. Everyone has their blind spots, so team diversity was important to ensure that we had lots of ideas to choose from. We also were mindful that, whenever we attempted to implement one, then we didn't miss any other opportunities or, equally as important, didn't create any new problems.

Something I cannot emphasise enough, is that bringing together different views and ideas really is where the magic happens. I used to be sceptical on this point, thinking that only some people have a flair for good ideas, and that formal brainstorming meetings never really achieve much. But, having been through this process a few times now, I have witnessed the best ideas materialise at the most unlikely times through a team's collaboration, where the initial spark of an idea is kicked around and turned into something really great.

## Getting to grips with levers

The key is just getting different people interacting and asking thought-provoking questions: *“How could you... xyz?”*. The idea for the flowtech release levers came about late one evening in our German design office when three of us were



Some ideas for how flowtech could have looked

just about to leave for the day. We started fiddling with an old tripod that had a certain type of horizontal carry-handle located near the bowl when one of the designers suggested the concept of upward-opening handle-like levers. The other designer realised that such a design would also help with lifting and positioning the tripod when it had a camera on it, which led us to consider how the levers could be designed in such a way that you could operate three levers simultaneously with two hands – and it went from there. You get a real buzz from days like that, where you feel you've just created something that could help people.

However, there were also many days when I felt team members were just pointing out flaws in fundamentally good ideas and we weren't making any progress. Although days like that are equally as important, at some point you do need to just pick an idea and try it out. When it came to working out how to make the mechanism that links the three handle-like levers to the clamps that actually clasp the leg at any desired working height, we weren't getting anywhere, despite coming up with various ideas. Our breakthrough unexpectedly came when someone else entered the room during a brainstorming meeting and suggested: *“You could do it with a bicycle brake cable curled into a 'J' shape, but I don't think that would work.”* It was pure chance, but one of the more senior engineers in the room jumped on the idea, tried it out and made it work.

## flowtech's many stages

The third and final element in innovation is refinement. This is about taking those ideas and features you want to develop and evolving them from an idea or sketch into something that works beautifully. The 'perspiration' if you like. At the beginning of the flowtech project, we thought it would take two to three iterations of the design to get us over the finishing line, but that turned out to be a huge underestimation. It's hard to put a definitive figure on how many design loops the whole product went through because every feature was different, but overall we were well into double figures. Some of these loops were short, with several versions tried within a day, thanks to 3D printing technology and computer-aided design; then there were other features in which we invested a lot of time, developing them extensively on the computer and making prototypes, only to abandon them and change direction. For example, the aforementioned 'J'-shaped bicycle

brake cable solution was the second attempt at linking the handle-like levers to the leg clamps after we had already produced two prototypes with a completely different mechanism. It was important to be brave and call a halt on anything when it became obvious it wasn't fulfilling what we had set out to achieve.

Every version of the design concept was considered carefully against a set of criteria; this included evaluating the ergonomics, performance, strength and durability in different environmental conditions, such as extremes of temperature and, in the case of flowtech, sand ingress, mud and salt water. Most importantly, every version of the design was shown to camera operators and discussed extensively with them, including samples being sent out for them to trial in the real world. We gathered the feedback, test results and data, and reviewed it all before proceeding to refine, refine and refine again until it was right for the customer. Unfortunately, this isn't a maths question where there is only one correct answer; you have to keep working to a point when you feel it is right – and a good indication you are there is when those who try it out don't want to give it back!

**Ergonomics and versatility**

With flowtech and aktiv, we used the process outlined above and we hope this has created items of kit that customers love to use. The new features that these products offer fall into two themes that "help the customer create more": ergonomics and versatility. The ergonomic features allow the camera operator to focus on their craft, the shots they want to capture and how to achieve them by removing unwanted distractions and saving time. The fewer extraneous things that detract from getting their shots, the more value they can add to their content. The flowtech's three co-located levers are near the camera and can be operated together, meaning they are comfortable and quick to use. The magnetic latches and quick-release carpet feet are simple and fast, so there's no fumbling with clips or straps, and the shape of the legs is comfortable when carried on the shoulder. The hinge-lock spreader is key to versatility, allowing the tripod to be employed in whatever mode is needed, with or without mid-level or floor spreader and, because it can go lower to the ground, less equipment is needed to achieve more creative shots.

**aktiv, flowtech's new stablemate**

These same themes have been used for aktiv. We focused on an action that is done hundreds of times a day: levelling the head. We spent many hours timing how quickly we could 'bubble up' heads with different mechanisms for levelling, and explored a variety of ergonomic layouts before we chose the aktiv SpeedLevel design. We also revived the concept of

the 'PrismBubble', which had been suggested by one of our senior engineers around 10 years earlier. This is one of those ideas that is so simple and effective that you cannot believe it has taken so long to end up on a product. With every other pan and tilt head ever made, the user can no longer see the spirit level when working with the tripod at full height so, when designing aktiv, we used a prism to reflect the image to make the bubble visible from the side as well as from above. We also use blue light to illuminate the bubble because the fluid fluoresces, making it easier to see – simple and very, very effective. At the same time, we expanded the illumination to the drag and balance markings so that they can be viewed more easily in the dark – just press the prism once to illuminate the bubble or press and hold for full illumination.

**The flexibility of aktiv's SpeedSwap**

The next challenge was how using aktiv could improve the creative element of acquiring shots. It occurred to us that one of the barriers to using sliders or other support equipment is the need to remove the bowl stud, as this requires tools; "I have a pocket full of screws and tools" is how one user described it to us. It takes time to assemble the slider to the tripod and head to the slider, or it's necessary to carry an additional, cheaper pan and tilt head in the kit, which makes the system a bit tall and shaky when it's all stacked up. Using a second pan and tilt head that is different and doesn't feel the same as your regular head can be frustrating, and when all these factors are put into the mix, it's hardly an ideal way of working. We came up with SpeedSwap, which we combined with the SpeedLevel, so there's just one lever that does the two actions, depending on how high it's lifted: lifting the lever a short way enables the head to be levelled; lifting it to the top enables the head to be removed from the tripod. The SpeedSwap accessories (with more to come) allow the head to be mounted however it is needed. There are various adaptors including: one for mounting aktiv on a slider with a 3/8" mounting stud or any other product with a 3/8" attachment; another allows a slider to be quickly mounted on a 75mm tripod. We've already seen some rather creative repurposing going on, for example using this adaptor to mount a locked-off camera even lower than is possible with a pan and tilt head.

This brings me to one of my favourite features. Combining aktiv with flowtech unlocks the ability to drop the tripod



Left to right: The evolution of the SpeedLevel lever; early design for the PrismBubble; aktiv and flowtech together – developed under the same philosophy

even lower than is achievable with a conventional pan and tilt head. Firstly, the legs can splay out fully, and secondly, the head assembly can now lie flat on the floor thanks to the absence of a bowl clamp.

**Over to you...**

It is very rewarding when the whole is greater than the sum of its parts. With flowtech and aktiv, we asked the question "How do we help our customers create more?", and I hope you feel we've found a solution. By keeping you, our customers, as the focus, and taking a good, hard look at the ways in which tripods have sometimes unintentionally hindered your efforts, we've removed some of the obstacles and distractions, whilst simultaneously offering you more creative ways of filming with less equipment.

**Fact File**



To find out more about the flowtech tripod, visit: [website: sachtler.com/en/flowtech](http://sachtler.com/en/flowtech)

To find out more about the aktiv head, visit: [website: sachtler.com/en/aktiv](http://sachtler.com/en/aktiv)

To read about the Sachtler story and to find out more about the company, visit: [website: sachtler.com/en/about-us/the-sachtler-story](http://sachtler.com/en/about-us/the-sachtler-story)



Left to right: one of many ideas considered for how aktiv could have looked; aktiv and flowtech together can achieve lower camera positioning than with other systems; the aktiv SpeedSwap accessories make changes of setup quick and easy.



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