

CASE STUDY

Why it's not always just about the numbers

Improved accuracy and total confidence in the work done has justified AV Unibrak's investment in Trimble's RPT600 Rapid Positioning Tool for setting out, as has a 30% reduction in rework.

AV Unibrak is one of the UK's largest independent ventilation companies offering a full design, planning, installation, and maintenance service. The company works with some of the country's biggest contractors on high profile projects across the UK including Manchester's Crown Street and New Victoria Tower developments and in London on Barking Riverside, the London Dock and Nine Elms Parkside.

Under the guidance of Managing Director, Jamie McCann, the company has sought to establish a reputation for high quality, timely work. Whilst Jamie has a realistic view of how the construction industry can be perceived – there are delays, there are errors and there are methods undertaken to rectify those mistakes where time dominates rather than a quality finish – he wishes to disassociate his company from this 'near enough' approach and consequently, the AV Unibrak mission is to consistently provide a high-quality job that both satisfies the client and brings benefit to the company itself.

Selected for a clear purpose

Always looking to improve efficiency, Jamie, along with the company's Head of Design, Gabriel Asante-Boadu, felt that the setting out of ventilation services was one area in which the company could vastly improve upon, simply by moving away from traditional tape measure based methods towards new technology. Whilst the old system worked relatively well due to the expertise of trained AV Unibrak staff who were highly adept at setting out from a drawing by hand, it did mean that every job required the proficiency of these staff which then created bottlenecks when there was a heavy demand for their services.

Manual methods could also be subject to human error and small inaccuracies when using offsets. Another drawback was that the process to ensure that the setting-out team had the latest drawings was long winded involving emails to site and several phone calls.

Having researched the market for a potential system, both Gabriel and Jamie felt that Trimble's RPT600 Rapid Positioning Tool would be a useful addition for the site work.

The RPT600 is Trimble's compact setting out tool that uses an easy to see green laser that points directly to where you need to set out, all with millimetre accuracy. It is also incredibly easy to use by all team members with its automated functions and guided workflows.

In particular, the RPT600 matched Gabriel's wish to find a system that could be easily integrated into their existing workflow, with minimal disruption to staff, whilst removing much of the day-to-day pressure a heavy workload could put on the setting out team:



AV Unibrak on site with the Trimble RPT600 Rapid Positioning Tool

The AV Unibrak system:

- RPT600 – Rapid Positioning System for setting out
- Trimble FieldLink – software running on the tablet for controlling the setting out system
- T100 Tablet – powerful, rugged device with fast computing power
- Trimble FieldPoints - Easy to use plug-in for placing points on the drawing file
- Support and servicing provided by KOREC Group



Trimble RPT600 System



Trimble FieldLink software running on the tablet for controlling the setting out system

"The Trimble equipment clearly provided us with the best possible scenario, primarily because it combined the accuracy we required (consistent millimetre positions) with ease of use. Our setting out team members are not IT experts and we could see that the Trimble RPT600 system would be easy for them to adapt to within days and in fact they were up and running after just a couple of run throughs."

Using the Trimble RPT600

AV Unibrak invested in 3 RPT600 systems, each controlled by Trimble FieldLink software running on a rugged Trimble T100 Tablet which is designed to handle power hungry construction applications. Additionally, the team uses Trimble FieldPoints. This is point creation software that enables AV Unibrak to easily create 2D and 3D setting out points within their preferred design file. The software works as a plugin within CAD and Revit and enables points to then be easily exported into the company's FieldLink software for use on site.

Gabriel reports that all the setting out work can now be effectively managed from the office due to the setting out team having access to the T100 Tablets and their attendant comms functionality. Improved communication and automated drawing updates ensure that the site team is always working from the latest design. This has resulted in increased accuracy on every job along with a massive reduction in errors.

Gabriel can track progress in real time and therefore better plan for best use of the team's time. All the field team can easily use the system which means that the setting out experts do not have to carry out all the measurement themselves and instead can work a step ahead preparing for those with the system. Ease of use for the new users is backed up by automated reporting which ensures that Gabriel can check that all work is correctly completed as per the drawing.

Qualitative benefits

The system has been used on at least 15 projects across the UK and is in use all day, every day. Typically, on projects such as the 26-storey residential development

Key benefits for AV Unibrak:

- Confidence in the quality of work done.
- Reduction in human error, the RPT is always right
- Easy to integrate into an existing workflow
- Improved comms that ensure the site team always works from the latest drawings, reducing errors
- 30% reduction in rework
- Extremely easy to use by all members of the site team allowing for a better distribution of skills
- Opens up new doors for setting-out all of a job's MEP

“ We estimate that the new RPT600 workflow has delivered a reduction in rework of about 30%. In an industry where correction for Building Standards can cost millions, this is significant. ”

Jamie McCann, Managing Director

at New Victoria Tower (1 & 2) in Manchester, Gabriel will provide a 2D drawing plan of each floor plate with over a thousand setting out points on it. This is then sent to the site team.

On this particular job, the ventilation setting out work was handled so efficiently by AV Unibrak that the contractor awarded them all of the MEP setting out work across both towers.

Whilst Jamie estimates that the accuracy of the RPT600 system and new workflow has delivered a reduction in rework of about 30%, he stresses that the real benefits are qualitative:

"If there's one outstanding benefit of the introduction of this new system, it has to be simply the quality of the setting out work that we can now produce. In fact any member of our site team can now produce this level of work not just the tape measure veterans. We can show our contractors that everything is precise because the Trimble is always right!"

"This has opened up new doors for us and the additional work that we were awarded on the New Victoria project is a great example of this. Correcting measurement work for Building Standards can cost millions of pounds so our contractors value the accuracy we can bring to a project. In fact, the only people who don't like the RPT600 are some of our fellow sub-contractors because the quality of our work shows up inaccuracies elsewhere."

AV Unibrak has been delighted with the support provided by KOREC, Trimble's UK and Irish Distributor, and note that the T100 Tablet has enabled KOREC to provide excellent support remotely which has ensured that any queries were quickly dealt with there and then on site.



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With the new workflow firmly established, AV Unibrak has recently extended its investment with Trimble investing in a Trimble XR10 Mixed Reality system running FieldLink MR, a way for them to not only visualise their designs using the holograms, but also enabling them to use the application to control their fleet of RPT600's, setting out to their designs with mm accuracy.

Follow us to catch up with them in a few months to see how they're getting on!

"We have total confidence in the accuracy of the RPT600 and therefore in the quality of the work we undertake for the contractor."

Gabriel Asante-Boadu,
Head of Design

"Do it once, do it right and your other issues will go away."

Jamie McCann, Managing
Director

CONTACT US

Please do get in touch for further information on any of the products or services mentioned in this case study or just a chat about your requirements.

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