TOPCON NEWS
Laser Edition

Topcon's 5 year guarantee on all new lasers

Your guarantee for maximum productivity!

It's time for the RL-VH4G interior laser that's right for all your jobs. Unmatched horizontal and vertical layout establishing level across an area, large or small, is easy with the RL-VH4G. The GreenBeam® quadruples beam brightness so you never lose the beam, even in direct sunlight! Vertical set-ups are a snap. Set up over layout points, turn it on, and the laser's rotation transfers these points to any vertical surface on the job to position studs, drop walls, or bulkheads. Speed the pace of any 90° layout or alignment job, quickly establishing corners and tee's.

Self-leveling under 5 seconds

Set up within 5 degrees of level and push the power button. RL-VH4G features fast self-leveling (under 5 seconds) so it will be spinning and ready to go to work when you are. There's even an auto Hi shut down that automatically turns off the laser it if is bumped or disturbed saving costly re-work.

5 years guarantee on all new lasers

Topcon understands that every second you can not use your RL-VH4G (or any other new Topcon laser), is a second lost.

That's why we guarantee to solve any problem; swiftly and without restrictions. For the next five years you will be safe in the knowledge that Topcon takes care of you and your instrument.

Proven reliability

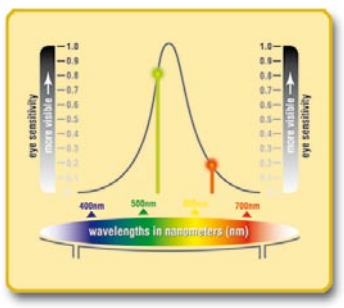
Topcon understands the demands you put on your professional equipment. Every investment you make in an instrument has to offer maximum productivity.

Our proven reliability and top quality service give you the assurance and confidence you are covered during your professional construction work.

Whatever difficulties you come across; without any doubt. Take advantage of our offer, put your mind at ease and start working with our 5 years guarantee.

Why green?

It's brighter. Up to four times brighter than conventional beams. As the chart shows, your eye sees certain wavelengths of light better than others, with the mid-500 nanometer range being the most visible. That's why Topcon developed the GreenBeam®.



You can see the GreenBeam® anywhere under any condition. Set up the laser for best coverage every time. You're using the beam instead of losing it, so the job gets done faster.

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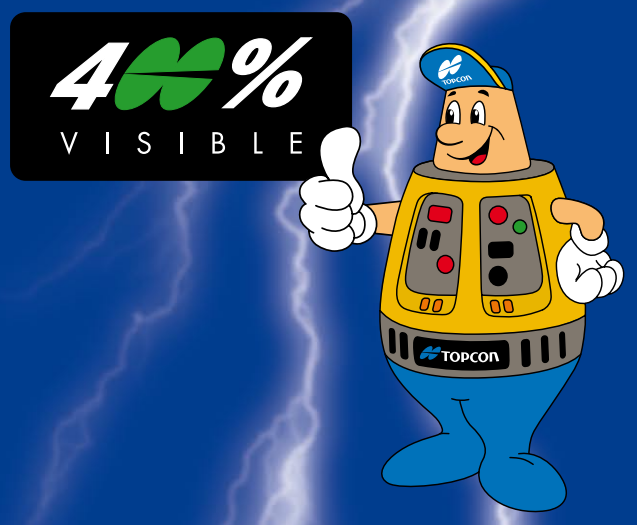


It's time.

LASER CENTRE

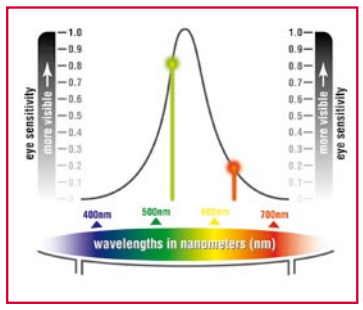
In search for the laser beam

TP-L4G Green beam makes working with a laser visible

Looking for a visible Pipe Laser? With Topcon's TP-L4G you have the best visible pipe laser in the industry. The visibility of a Topcon Green Beam is four times greater than conventional red beams and its spot quality is vastly superior to any red beam laser diode instrument.

What does the added visibility mean to you? A visible beam is all you have, the easier you can see it, the quicker and more accurate you will work, the higher will be your productivity. But four times more visible? How can that be? Here's how. The human eye only sees light that has a wavelength in the visible spectrum.

The human eye can see light that falls between approximately 385 nm and 725 nm. If you check the specifications of most red beam



interior lasers you'll see that the beam wavelength averages 633 nm. The Topcon Green Beam has a wavelength of 532 nm. The colour green occupies that segment of the spectrum that's 4.3 times better visible. Besides being visible a pipe laser has to meet the demands of tough jobsite conditions, and Topcon's TP-L4 is the toughest. All cast aluminum housing that's sealed to keep out moisture, even when submerged. It will survive, even in the harshest environments. Add to these strength things like patented autoalignment, the

World's most accurate grade mechanism, power options that let you keep working when other lasers

stop and a full line of pipe lasers let you decide what fits your job and your budget.

So what's the fastest way to get from here to there? Start by calling your nearest Topcon dealer.

Leveling HSV AOL Arena - Topcon 2D MC System

Laying a new playing surface at the AOL Arena

The inside of the AOL Arena has recently been dominated by tractors instead of players. On Friday, 3 November 2006 the football field where local Bundesliga football team HSV (Hamburger SV) plays, was renewed. This order was given to the Hamburg construction company Schlatermund. Within three days the old pitch was taken out, planed and replaced with a new one.

Within four hours the entire surface was planed with a kilver from the Dutch company AP. It has a work width of 2.5 meters and an automatic dual laser steering system with Topcon Europe Positioning laser receivers LS-B2. The surface for the playing field was produced by a dual slope laser RL-H2Sa of TOPCON. The simplicity and the high efficiency of the devices convinced all those present. The client and the implementing enterprises were very content with the subgrade level results with accuracies of ±3mm. On Saturday the new lawn could be shifted in time. „So that the troops of head coach Thomas Doll once again have perfect playing conditions and will be more successful."

Phoenix surveying

Phoenix surveying and Topcon forge an even stronger alliance

Phoenix Surveying Equipment is one of the largest dealers of Topcon equipment in the United Kingdom. Based in Bristol with 5 offices across the the 51 employee strong company specializes in the sale, hire and repair of all types of surveying equipment to the construction and surveying sector. For the last thirty years the company has been a strong presence in the area without any significant expansion. This situation has changed dramatically since a management buy out and change of ownership late 2005. The new management structure in the Phoenix organization combined with strategic changes in the Topcon distribution model has seen rapid business expansion for both parties.

"For many years our relationship with Topcon was almost adversarial, we were occasionally competitors as well as customers and suppliers", says Peter Huda of Phoenix with a laugh. "But when we (Peter Huda and Martin Purchase) recently took over

the company greater collaboration took place, we saw an opportunity for Phoenix to grow and Topcon to achieve parallel success."

A new alliance was forged with Phoenix expanding not only territorially but also in terms of product portfolio. Sale and rental of Robotic Total Stations and GPS have been added to an already large product mix of general construction survey instruments and laser business.

Successful alliance

This alliance has proven to be highly successful for both Phoenix and Topcon. "Our growth in the last two years has been amazing", tells Martin Purchase.

"We try to be a one stop shop for the construction industry. We offer the whole range, from something as simple as an optical level to state-of-the-art GPS."

Choosing to hire

He continues: "Our business model is focused in key areas: In the first place hire. This is an important part of our business, because most construction companies in the UK are used to hiring their equipment.

Many jobsites are responsible for their own profitability, so capital investment in expensive assets for a jobsite that is only there for four months is not always cost effective. That is a key reason why a lot of our customers choose to hire. The UK construction culture is rental based, from cabins to power, right up to major capital expenditure like heavy plant and machinery."

Window shopping at the jobsite

"In addition to straight rental turnover we also develop good sales business on the back of having access to the site by virtue of our hire presence." Peter Huda: "I think sales make up about 50% of our business. For us each jobsite is like a shop window. When potential customers walk past a jobsite and see the unique Topcon products at work they soon think: 'I must have one of those'.

From this we generate sales and new hire clients. What we also do, is make sure that no product on our fleet is ever older than 18 months. So our customers know they are working with state-of-the-art equipment. They can always upgrade to

the newest model." And in these rapidly expanding technological times, who doesn't want the latest model and the best solution available? "I think it can be compared to leasing a car. Even though the first decision to invest in a new car may be a difficult one, once you have made that initial investment, it is not so hard to upgrade for a new and more advanced model after two or three years. This guarantees that you always have the latest technology."

Oaktree environmental

‘Topcon’s GPS…. the most cost effective solution’

“For us, Topcon’s GPS is simply the most cost-effective solution”, says Marco Muia, director of Oaktree Environmental. The company recently purchased the Topcon HiPer Green Label to help in their specialized work. “We offer the environmental industry an accurate survey of their sites. This usually includes helping the clients in either getting a renewal on their license or help in getting a license for a new recycling site.” The Cheshire based company of 8 employees has been successfully promoting their specialized services to the waste industry for the last 10 years.

“Through the years we have always looked at new technologies to help in our work”, Marco Muia continues. “In the beginning we used to hire surveyors, but after a while we decided that it would be easier to do the smaller surveys ourselves.” With this a growing interest in surveying equipment was born.

Speeding up the work

“When a customer calls us, we usually have to respond quickly. By no longer outsourcing the surveying, but doing it ourselves, we can respond to their questions immediately. We started surveying with a simple level and then moved on to a Total Station. Recently we bought the Topcon HiPer Green Label for our surveying tasks and this has really helped speed up our work. For the Total Station you would need two people for the survey, but now it’s a one man job. The surveys

are done far quicker and we get the data that we really need.”

Working cost efficiently

Richard Sims, one of the consultants of Oaktree, has been using the GPS for some time now. “We no longer need to hire a surveyor and fit the work into his schedule, but can do it ourselves. We have the best insight into our workload and can make quick decisions. For example a customer called me on Tuesday, ‘I need a survey right now’, with a look at my agenda I could plan him in for Thursday and quickly do the job. That would not have been possible without the GPS, then I would have to hire a surveyor and it might have taken weeks before he had any time available. Now we can do the work in the most cost efficient way.”

Affordable option

Marco Muia continues: “We chose Topcon because the HiPer Green Label was the most affordable for us. Every instrument we buy has to pay for itself and with the GPS we can expect it to pay for itself in a couple of years.”

Those are important considerations when buying an instrument. “In the end the price difference was very significant. But also it is easy to use. The GPS gives me the right data.” Richard Sims agrees: “We are not surveyors, so we needed an instrument that we all could work with. The GPS is based on a Windows environment and that makes it easily recognizable for everybody. It is also easy to download the data. We have not spent too much money and it does what we want, which makes it cost effective to use.”

Important work

Marco Muia adds another footnote to this: “The main advantage is that we can check the boundaries of a property fairly easy. We need to check the historical data to see if the planning consents & permits are valid.

Somebody may have drawn a rough red line on a map many years ago and we have to check if these boundaries still apply. With the GPS we can quickly check if all the boundaries are the same as those used when the permit was given. This can mean the difference between applying for a new license or for the old license to still be valid.”

Dawnus Construction

Topcon equipment helps in St Asaph Bridge lift

In St Asaph in the county of Denbighshire in North-Wales recently, a 42 meter long steel bridge was lifted into place. For this accurate job Topcon’s GPT-9000A Robotic Total Station was used to assure, with millimeter accuracy, that everything fitted. Rhys Thomas of Bangor based Dawnus Construction talks us through this delicate operation. “The tender for the new bridge was awarded in January. Originally the design of the bridge was completely different, but we came up with a steel alternative that ended up being cheaper than the original design.” It did however require a 1000 ton crane, with 360 ton ballast, to lift it all into place. A feat of engineering.

“In January 2007 we won the tender for this bridge. The county of Denbighshire, like other counties in Wales, is broadening and upgrading the many foot and cycle paths to accommodate the tourists visiting the countryside. This bridge is part of the many cycle paths along the North Wales coastline.”

Four pieces

“We started on the site in March 2007. The whole bridge was designed and built off site by a specialist company named Nu-Steel. They manufactured the four sections of the entire 41.9 meter long bridge in their factory.”

Lay of the land

Many of the designs however had been based on old drawings. A quick survey of the area with Topcon’s HiPer GPS+ RTK system showed that the lay of the land had changed from the original. “First of all we surveyed the area to update our clients records and then

established our primary control for the bridge.”

1000 ton crane

“The actual bridge came up in four pieces and had to be assembled on site. Then it was time for the actual lift. The crane arrived here during the night of Wednesday the 19th of September. The base sector was driven into place and then a smaller crane of ‘only’ 200 ton was used to help in the assembly of the much larger crane. The larger crane was delivered on eight lorries. Eventually the 1000 ton crane was ready at 10.00am on Thursday the 20th of September.”

We would miss our slot

“The crane was ready, but we still had to wait for all the official representatives of the county to show up. However we eventually decided to start the lift because the weather was starting to change. The wind was picking up and if we had to wait much longer for the county representatives we would miss our slot for the lift. So we attached four straps to the designated places on the bridge and started lifting.”

Check and double check

A lot of checks were done before the actual lift. Many checks and re-checks, first with the Hi-Per and then with the GPT-9000 Total Station had taken place before the bridge was even off the ground. “The bridge had to be put on four abutments. So we also did as built surveys on the structure work. The GPT-9000 Total Station re-checked all the survey work which was originally done with the HiPer.”

Swing it into place

Finally it was time to swing the bridge into place. “It had to be lifted up in the first place and then rotated. Before it could rotate however it still needed to pick up some more ballast. The structure weighs 54 tons, so you need some counter weight on the other side.

After this it was all a matter of letting it down gently between the two banks and placing it on the holding down bolts. It all fell into position without any problems. There was plenty of tolerance on the bolts but we did not need it at all. The bridge went in straight on.”

Confident in the accuracy

Rhys Thomas closes: “That is also the advantage of using precision equipment. You can be confident in the accuracy of the instrument and the data you work with.

In the end the setting down on all the abutments only took 45 minutes.” And so months of preparation assured a snug fit of the new St. Asaph bridge.

Complete, modular solution for excavators

The best in site automation

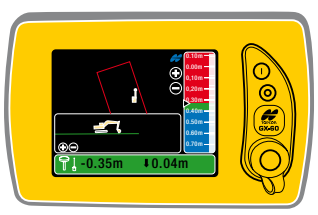
Topcon offers a complete range of solutions for excavators, from entry level indication to complete GPS+ receiver positioning. Topcon is proud to present its complete portfolio of grade reference instruments allowing operators to grade faster while keeping full control of the machine. The benefits for users of Topcon's total solutions are clear; eliminating over-excavation, minimizing material waste and increasing profits.

Top of the excavator system line is Topcon's 3DXi. This innovative solution has a sturdy design and is made for outdoor job conditions. Four new temperature compensated 360-degree CAN-based tilt sensors measure angles from cab, boom, stick, and bucket, creating a precise cut every time. GPS+ technology ensures maximum productivity with access to both GPS and GLONASS satellites.

Immediate return on investment

The 3DXi is easy to install and set-up. But most of all it's easy to operate. In deep, blind cuts, under water, digging ponds or canals, or following the most complex design, this technology will pay dividends from the first day of operation.

With 3DXi there is no over-excavation, so contractors can save on materials, time and money on every job. 3DXi even provides the ability to set up to six different bucket sizes, to change buckets during the job.



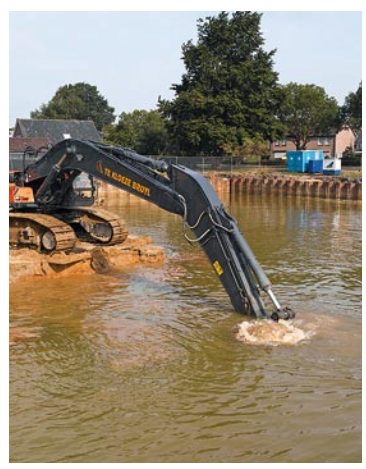
The tilting bucket sensor option offers operators complete control over every aspect of the grading. The GX-60 acts as an in-cab display, allowing the user to „see" the machines exact position on the site and the bucket's cutting edge simultaneously.

Operators can use the display not only to position their machine over a utility center line, but for steering indication as well. The 3DXi eliminates the need for a grade checker to constantly monitor excavation depth.

Even multiple views can be used when more detailed information is required including plan, profile and sectional and dual grade indications. Next level in the range is the 2DXi. Topcon offers the 2DXi laser solution as a basic system, ready for GPS+. The easy to use 2DXi system includes standard tilt sensors, the GX-60 graphical display and the LS-B10W laser receiver which can be added in the CAN Bus configuration.

In addition, Topcon offers entry level solution, the 2DXe. With the 2DXe Topcon offers the usual level of reliability clients expect of Topcon products at a more economical price.

This lightweight system consists of tilt sensors, the GX-40 graphical display and detachable light bar for indication. Unlike its bigger brother, the GX-40 does not consist of a touch screen, but offers a similar level of functionality using key pad buttons.



Topcon activities in Czech Republic - Geodis provides Topcon machine control technology

How to automate 104 tons of steel?

In the Czech Republic Topcon is writing history by automating 104 tons of steel. Recently a Caterpillar D-11 of the APB-company from Plzen was fully automated with a Topcon 3D GPS+GLONASS leveling system. The Caterpillar D-11 series of tracked-type tractors are among the largest conventional bulldozers in the world: ten meters long and four meters wide. Without a doubt they are some of the heaviest; with a staggering 104 tons of raw steel and 850 HP.

The D-11R is being used at a new production plant of the Hyundai Motor Company. Hyundai is the largest South Korean car manufacturer.

The task at hand is no small one either, with an area of 200 hectares where six production units and a testing path will be developed. For this three million cubic meters had to be excavated and another three million cubic meters were filled. On this construction site - besides the D11-R - the company uses Topcon 3D GPS+GLONASS levelling systems on:

a CAT D8R series 2, a CAT D8T Dozers, a CAT 160H Motor Grader and a CAT 330 excavator.

The GPS base station is constantly placed on the cellular area. Besides which the APB-company also uses four units of GPS+GLONASS Hiper receivers for surveying and control work.

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