

VITRAC STORIES

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"The user-friendliness and versatility of the VITRAC are unique"

Armin and Karl Platter, Vintners at the Mockhof in Leitach, Bozen

VITRAC: Mr Platter, you have the development of the VITRAC. What made you decide to design a completely new machine for vineyards on steep slopes?

Karl Platter: We wanted to have a machine that worked well in our vineyards. My son Armin and I hunted around on the internet for hours for machines that would work be suitable. We did not want a tracked vehicle because it seemed too tiring and slow, and the conventional articulated tractors were too dangerous for us. Although we found some equipment on the market, there was always something that did not prove to be ideal: either the cab was too high to drive around bends, or the equipment was not especially suitable for the steep slopes. Together with Georg Ramoser and other winemakers, we wrote down a checklist of ideas for the perfect machine for our terrain. To our good

fortune, after a long search, we found the mechanic Willy Mulser, who was willing to make a prototype of our ideas. We tested this at the Mockhof and were surprised by how well it worked on the first attempt.

What role did teamwork between vintners and technicians play in the development?

There was a good relationship between winemakers, developers and technicians right from the start. In my opinion, *VITRAC* could not have been achieved without this level of cooperation. We put the prototypes to the test time and again in the vineyard, because it's really only when you get down to proper work that you can see where things still need to be improved. *VITRAC* was not designed on the drawing board. Slowly but surely, we found ways to optimise the performance and the machine

had to pass the practical test over and over again.

After four prototypes, the end product was ready for use: It's an absolute gem for wine growing on steep slopes.

What do you think is the biggest advantage of VITRAC?

Everything has been done to ensure that the safety of the farmers is guaranteed. Nowadays most farms are farmed by one person only, and so the machines must be designed to be user friendly and safe. And if a machine is user friendly, this also contributes to safety: When working with *VITRAC*, the driver is not stressed out and doesn't get so tired. You do not have to work the clutch or put it into the right gear, and you don't have to carry out tricky turn manoeuvres on the bends. The tool carrier follows the path smoothly. You don't need to look behind you



to check if the attached accessories are following on behind. And with the air-cushioned comfort seat instead of the conventional coach box seat you save yourself a lot of backache, which is otherwise inevitable after umpteen knocks to the spine. This user-friendly aspect of the *VITRAC* is unique, in my opinion. Naturally, for optimum safety and usability, you always need interaction between three things: the machine, the terrain and the user.

Did you have to make any changes to your vineyards?

Yes, we optimised the paths and bends. We put turning plates down and concreted over the bends, which had previously been stone. Now we can drive safely in all weather. The traction of the *VITRAC* is perfect even when it's wet and slippery. If you do this preparation work once in the vineyards, you save yourself a lot of time and trouble.

What impresses you most about VITRAC?

A lot! On one hand, I'm very impressed with the exceptional manoeuvrability – it's unbelievable how you can get around the smallest space with VITRAC. It's so narrow that it's easy to get into every row. When people try it for the first time they are amazed by how easy it is to handle. You do not have to worry about the rear swinging out or about an accessory like the sprayer getting stuck. Everything was meticulously measured and designed to the smallest possible radius.

The sprayer in particular took a lot of tinkering...

Yes, we thought long and hard about what our ideal sprayer would look like. A 200-litre capacity was important to us. With five times the concentration of pesticides, the calculations for 10 hectolitre are easy and the dosage is perfect. With the cruise control, the same speed is maintained throughout the day, which means that the pesticide is spread evenly and can be calculated with precision. The sprayer works absolutely perfectly, it's a gem! We

over 400 rows to drive when we spray pesticides in our vineyard, and just today, we managed to do it in one morning.

What else do you use VITRAC for?

For all sorts of things; with its numerous accessories, it is extremely versatile. For example, we also use the dumper skip: During summer storms, excessive water came into the vineyards from the road and we had to get rid of 30 cubic metres of dirt - the hydraulically tiltable dumper skip worked tremendously. Without it, we would have had to do the job with a wheelbarrow. We also use the dumper skip during the harvest, so we work a good three times faster than with a tracked vehicle. We also use VITRAC for transportation. The nice thing is that the tool carrier is so light even one person working alone can handle it: Even if you run into problems and get stuck, you can get it back on the path with a small chain hoist in no time. For the larger and heavier machines, we need a fire engine or an excavator.

Mockhof, Armin and Karl Platter, Oberleitach 8, Bozen



"Everybody said you're off your head"

Georg Ramoser, Vintner and Cellar Master at the Untermoserhof in St. Magdalena

VITRAC: Mr. Ramoser, together with other winemakers you developed the idea for today's VITRAC and built it with the mechanic Willy Mulser. Why did you want a new vineyard implement?

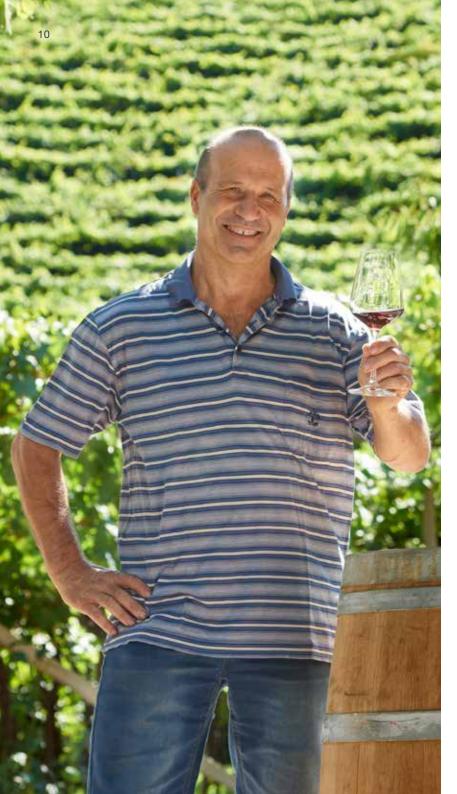
Georg Ramoser: In 1990, I bought tracked vehicles for my fairly steep vineyards, and got along well for twenty years. However, working with this machinery was exhausting in the long term, and the tracked vehicles took a lot of maintenance. We vintners thought that a tractor-tool carrier combo would be ideal for our terrain. We spent a long time looking for somebody who wanted to build it with us, or rebuild existing devices. However, the big companies had no interest in a machine that was specifically designed for viticulture on steep slopes; the market is too small for them. In the end, to our good fortune, we came across the mechanic Willy Mulser and he was just the man for the job. I've got the greatest of appreciation for Willy because he took us seriously and joined us in the adventure.

And then the development work began...

Oh yes, there were a lot of ups and downs and setbacks and successes – Several years of development lay ahead of us. Together with Willy Mulser we developed numerous prototypes, which were tested by the vintners Armin Platter of the Mockhof, Franz Gojer of the Glögglhof and myself, at our own risk, in the vineyards. We passed our suggestions on to Willy and threw our ideas into the pot together. Step by step, with a few breaks in between times, the prototypes were developed further. Every single part of the VITRAC has taken its very own development path, and we worked on it for a good seven years. Everyone told us we were off our heads. But we believed in it from the beginning, and the results proved us right!







What kind of terrain was VITRAC conceived for?

VITRAC is a great device for steep slopes with terraced vines, narrow rows and tight bends. That's exactly what it was designed for. There is no other machine that is capable of these tasks.

What was most important to you during the planning phase?

The top priority has always been to guarantee a high level of occupational safety. The machine must not overturn, even in the steepest position. With its low centre of gravity and other safety measures in the design, the tool carrier is now stable even on steep slopes. In addition, the weight of the driver when tilting is often decisive. When he leaves by the front of the VITRAC, the machine tilts backwards and does not overturn. In the VITRAC, the escape route is free of obstacles as there is no steering wheel in the way. The driver can also leave the vehicle from the side in an emergency. In addition, various components such as the swivel joint, the self-locking drive and the sensors ensure that we can work in safety. Safety was of fundamental importance to us, and the risks are often underestimated. We have tested VITRAC many times in all sorts of situation, and never once has it overturned.

It wasn't easy to get VITRAC approved at first...

Yes, that's right! We had to have the machine approved. Engineers came up from the Vehicle Approval Centre in Bologna to see what the prototype looked like in action on-site. First of all, the engineers really wanted a roof over the cab but, when we showed them the roll bar and proved that it is legally approved for certain areas of application,

we were able to convince them. VITRAC was also put through its paces by SUVA, the accredited and notified certification body in Switzerland, in type examination to certify that the machine complies with European directives for health and safety.

How does VITRAC reduce your workload?

Ever since the outset. VITRAC has been classed as a wheeled tool carrier to which a variety of accessories can be attached. For one thing, I can do a number of different jobs with it, and I am much faster and more comfortable while doing so. When spraying, for example, we winemakers have to react as rapidly as possible, which calls for high- performance equipment. We even did comparison runs against a tracked vehicle: we drove parallel with a tracked vehicle and VITRAC out of the pergolas. took the curve and drove back into the next row. When cornering, we were always five metres ahead with VITRAC. If I count that down all the rows, then VITRAC speeds up my work by thirty percent. All in all, this eases the workload enormously. We're more than satisfied!

Untermoserhof, Georg Ramoser, Untermagdalena 36, Bozen, www.untermoserhof.com





"It's at its best on steep slopes"

Christoph Mock, Vintner and Cellar Master at the Wassererhof in Völser Ried in the lower Eisack Valley

VITRAC: Mr. Mock, why did you choose VITRAC?

Christoph Mock: Twenty years ago, we took over the Wassererhof and made the move from fruit cultivation to pure viticulture. My brother Andreas and I come from a vineyard in Leitach in Bozen, which is now run by our younger brother. At the beginning we used a tracked machine to work on the steepest slopes around the Wassererhof, as we did in Bozen. Then we came across VITRAC and the tool carrier left us in no doubt. Our vineyards feature a slope of up to 45%: On these steep slopes, you can really see the difference with the VITRAC, not to mention the fact that it's twice as comfortable.

Did it take you long to get used to working with the tool carrier?

Yes, I didn't think for a moment that it would be such a quick process. In the past we sprayed with a simple tracked vehicle, which was extremely time consuming and took a lot of patience. Now with *VITRAC* it's all so easy.

What kind of work do you use VITRAC for?

At the moment we use it mainly as a sprayer and mulcher. But the tool carrier is very versatile: We are very interested in using it in the future as a trimmer and with other implements.

How did you get on with it when you were applying pesticides?

VITRAC guarantees high performance spraying. Just before or after a fall of rain it is important to react as quickly as possible and, with this machine, I can do that. Our vineyards are two kilometres apart, and I can get from one to the other quickly on the VITRAC. That means I can cover all plants swiftly when I'm spraying and protect the vines against fungal diseases quickly.





Did you have to make any changes to the vineyards?

We had to prepare the vineyard to a small extent, but we didn't need to make many major changes. We inspect the terraces regularly and level them as required, keeping them compact. This kind of maintenance makes working with VITRAC more comfortable and safer. After the recent Esca outbreak we had to replant some new vines and the terrain was on the bumpy side afterwards, but we levelled out these sections and it was all fine again.

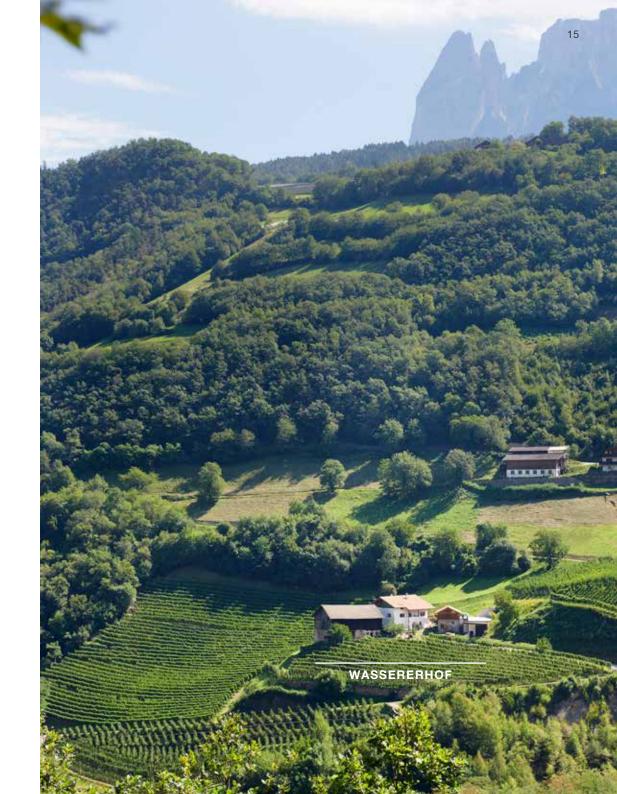
Does the machine take a lot of work off your hands?

Yes, absolutely. The mechanical help that *VITRAC* provides is a great relief. Extra jobs such as side mulching or pruning can be carried out efficiently and this is important for us. Since 2013, we have been bottling our wines ourselves and market them independently. Our market is increasing, our business is growing, and we may use our unused land for viticulture in the future. That's why we have to be able to work well and quickly.

What would you improve about the VITRAC?

I really can't think of any improvement. Every time I meet Markus Federer from *VITRAC*, he brings back a *VITRAC* software update or some other innovation! Markus is a vintner himself, which means that the *VITRAC* team can contribute their own practical experience towards the further development of the tool carrier. It couldn't be better!

Wassererhof, Christoph and Andreas Mock,
Völser Ried 21, Völs am Schlern, www.wassererhof.com



"An investment that pays for itself"

Hannes Kainzwalder, Vintner at the Oberpartegger-Hof in Villanders in the Eisack Valley

VITRAC: Mr. Kainzwalder, why did you choose VITRAC?

Hannes Kainzwalder: At first I fancied getting a tractor, and then a tracked vehicle, which I did actually work with for a while. However the extreme wear and tear of tracked vehicles bothered me. They fight against the land, and against themselves. My long-term goal, then, has always been to buy a wheeled vehicle. But there was nothing that was the right size until *VITRAC* came along.

Has VITRAC met your expectations?

Yes, VITRAC is very versatile and I work much faster. For example, I can get from one place to another more quickly. When I'm spraying, it just takes me a few minutes to drive back from the vineyard to the farm, load up and get back to the vines. Changing implements is just as fast and they are also recognised automatically, regardless of manufacturer. Above all, I find the tool carrier outstandingly comfortable. In the past I was on my knees after several hours on a tracked vehicle. Today I spend up to twelve hours on VITRAC and feel none the worse of it in the evening. The technology eases the workload a lot.

For example?

For example, the mulcher tines can be adjusted individually: Previously, I had to mow the vineyards with the mower, and it took me two weeks; with *VITRAC*, it just takes two days. When I'm spraying, the display shows the nozzles, which means that I no longer need to look back to check all the time – I just drive off and the machine does the work. That's a huge advantage and really saves a lot of time.







You came up with one of the ideas to optimise the sprayer...

That's right. The idea for the angle sensor which controls the lower nozzle was based on one of my suggestions. This device allows the user to limit the angle of rotation of the entire fan and turn off the nozzles automatically depending on the angle, without having to stop and do it manually. This means that the spray can be applied efficiently or completely adjusted to the slope even on steep terraced areas. I have four hectares of vineyards and I save on a lot of pesticides through this system, which is good for the environment and for the wallet.

With the tracked vehicle, you complained that about the constant repairs that had to be carried out to damaged ground. Has VITRAC resolved this problem?

Yes, *VITRAC* really protects the terrain. With its light weight, overall weight distribution and wide tyres, there's very little pressure on the ground. In the past I had to use an excavator to repair the ground, especially on the bends. Today there are plants growing where I used to have to fill in the holes in the ground. It saves me a lot of work. The access roads which I had already prepared for a tractor are perfect for the *VITRAC*.

What do you appreciate most about VITRAC?

The CAN bus data transfer system is a huge advantage in my opinion. It allows you to customise the tool carrier, and the latest updates are available immediately. I call the *VITRAC* team and tell them

what I want, and a member of staff comes to the laptop and updates the software in a few minutes. This teamwork is worth its weight in gold.

How satisfied are you with the service in case of emergency?

One of my sensors went on the blink one Saturday morning. All it took was one call to the *VITRAC* team: the problem was sorted out in twenty minutes and I was able to get back to work. This service is a necessity for us farmers; we work every day from morning to night, and the best of machinery is no use if the service does not match it.

Has the investment in VITRAC paid off in your opinion?

Yes, it is a worthwhile investment in my opinion, and pays for itself in a company of this size as it eases the workload and speeds work up. The more attachments I have, and the more I use *VITRAC*, the better it gets. I use the tool carrier a lot: no other machine would be up to the job. You only get to know the strengths and weaknesses of a machine if you work a lot with it. I thoroughly recommend *VITRAC*!

Oberpartegger, Fam. Josef Kainzwaldner, Unter-St.-Stefan 7, Villanders, www.oberpartegger.com



"It doesn't roll, even on the steepest slopes"

Florian Mair, Vintner at the Karnoderhof in Prösler Ried in the lower Eisack Valley

VITRAC: Mr Mair, how long have you been using VITRAC?

Florian Mair: For two years. Previously, we used a tracked machine. For technical and health reasons we opted for *VITRAC*. A few hours of spraying by tracked machine was absolutely exhausting. Now I drive around the vineyard for hours in the *VITRAC* and have no back pain afterwards.

What kind of work do you use the tool carrier for?

At the moment, I use it mainly for pesticide application and mulching. In the future, we would like to enhance the tool carrier with other implements such as the trimmer.

What are the decisive features of the VITRAC for you?

A lot! VITRAC is very convenient, versatile and gets the job done faster. To make a comparison: With the tracked vehicle, I drove at about 3.2 kilometres per hour in the vineyard, and with the VITRAC I get up to 5 km / h. When you count it up, this saves a great deal of time. It now takes me about an hour less to apply pesticides. I also appreciate the safety of the VITRAC: I haven't had an accident with it, whereas

in the past there was always one mishap or the other. But VITRAC does not overturn, even on the steepest slope!

On slopes with up to 90% incline, you can never get distracted...

Absolutely. You always have to be careful, especially when you're spraying the vineyards after a fall of rain. It's less dangerous on terraced vineyards but you can never be too careful, especially on the bends. *VITRAC* is very stable as it has such a low centre of gravity. In comparison to other machines the difference is clear to be seen!

Did you have to make any changes to your vineyards to use VITRAC?

Given that we worked with a tracked machine in the past, we had already set up the terrain for vehicle access, and this also proved to be ideal for the *VITRAC*. Since the machine is highly manoeuvrable, I can drive all the way down the trails and no longer have to veer off - even in the steepest parts I never had a problem. If you carry out regular terrain maintenance, the machine can be used wonderfully well everywhere.

Have you ever had any problems with the soil protection, given that your vineyards are so steep?

No, and I'm particularly happy about that – after all, the soil is everything in the vineyard. But the manoeuvrability and light weight of the $\it VITRAC$ put very little pressure on the ground. This is particularly important to me, because when a heavy weight drives over the roots, it's always the vines that suffer. \rightarrow







Do you also use the cruise control?

Of course, when mulching as well as spraying. Normally when you're spraying you slow down automatically when you get tired or speed up when you are in a hurry and want to finish the job. With the cruise control I set the speed I want and, in contrast to other hydrostatic machines, it also remains stable. This means I can spray the whole system evenly. The spray pressure also remains the same, so that the same amount of pesticide is applied everywhere. I think that's great!

What is the greatest strength of the VITRAC?

The light is amazing! I sprayed once in total darkness and with the powerful beam of the LED lamps it was bright as day. I can work for longer, whether it's early in the morning or late into the night, to my father's delight. Before we bought the VITRAC we talked about it a lot, and we had the odd heated argument. But I don't hear any complaints from him now...

Karnoderhof, Mair Family, Völser Straße 6, Völs am Schlern



"Ideal for small vineyards too"

Marco Zanoni, Vintner and Cellar Master at the Maso Furli in Lavis, Trento

VITRAC: Mr. Zanoni, what was your first impression of the VITRAC?

Marco Zanoni: When I saw the device for the first time at a presentation, I was enthralled on the spot. In my opinion, *VITRAC* is highly innovative and one of a kind. Although there are many machines, they all have some limitations and turn out to be less than perfect for use in my vineyards.

What is the difference?

Well, I don't need a tractor, I need a versatile machine. VITRAC fulfils this requirement to the full and is perfect for smaller wineries like mine, which covers four hectares. Large and heavy devices

hamper me. In my opinion, one should work with a scalpel rather than a machete. Sure a machete may be faster, but it probably does a lot more damage.

What does VITRAC offer you that other implements don't?

VITRAC is very light in weight and is very manoeuvrable. This ensures easy access to the vineyards, and I can use the tool carrier for a variety of jobs. My vineyards are between two to ten kilometres apart. When it rains, I just take the VITRAC where I need it and get on with the job. With a tractor, I would think about it five times. →



You run an organic vineyard. Does the machinery need to have any special features?

Soil conditions and management play an important role in organic farming. With its reduced weight, tyres and weight distribution, *VITRAC* does not damage the terrain. In addition, with *VITRAC* I can narrow down the work area to the minimum possible, so I do not cause any collateral damage. Some organic farmers only use horses instead of heavy machinery in their wineries, but I like *VITRAC* much better.

VITRAC is safer than a horse too ...

Yes, I'd rather put my hand under the tyres of the VITRAC than under a horse! Seriously, when you are up to your eyes in work and pushed for time, you sometimes forget the safety aspect. This may not be such a big problem on level terrain, but even with a small slope it's a completely different matter. The VITRAC is easy and safe to brake, and it cannot roll forward out of control. The low centre of gravity means that the tool carrier is exceptionally stable, even on steeper terrain.

Would you recommend VITRAC?

It's just an incredible machine! As you can see, I'm in no doubt. The VITRAC is particularly suitable for wine growers who do not produce on an industrial level. The machine is very easy to handle, and even my young sons can use it. Of course the purchase is an investment, but it's one that offers enormous opportunities.

Maso Furli, Marco Zanoni, Via Furli 32, Lavis - Trento, www.masofurli.it



"All you need to do is put your foot down and steer!"

Matthias Höller, Vintner at the Windegg Estate and Vineyard in Kaltern

VITRAC: Mr. Höller, the vines around the Ansitz Windegg are trained in both the pergola and in the Guyot systems. Can VITRAC be used for both?

Matthias Höller: Yes, I use VITRAC for both vineyards, and it works perfectly. With two hectares, we have a relatively large area to cover, and so we use the tool carrier a lot. If you have to cover two hectares, that means a good few kilometres of walking through the vineyards. I can save myself the walk now, and work much faster too.

At a 60% gradient, the slopes are pretty steep...

Steep and narrow: We have a row width of 1.10 metres, but the *VITRAC* is so compact and manoeuvrable that it can get anywhere and everywhere. Even with the mulcher, I can reach every spot perfectly, which means that I don't have to go over it again. The mulcher can be used anywhere, and with the round brush, I can reach every single corner. I think the tool carrier proves its worth on steep slopes in particular, and it is so light that it also protects the soil. Now, we don't have to tear up the ground by hand every two years: It saves us a lot of work!







What was your main reason for purchasing VITRAC?

The VITRAC team showed me the tool carrier on site on the steepest slope – and I was won over instantly. Words can't express how easy and safe it is to drive! For example, when using pesticides, I can drive from one row to the other without wasting time reversing or looking back: I just put my foot down and steer!

What kind of work do you use the tool carrier for most often?

For practically everything. Previously, we had to mow and spray the entire area by hand, but VIT-RAC cut our personnel expenses significantly. Now, we can have our employees working elsewhere rather than in the vineyards. We also use VITRAC

on the other farm land, not just in the vineyard. When you work it out over the years, the investment pays for itself.

How satisfied are you with the driving comfort and ease of use?

Sometimes I sit on the tool carrier for up to 8 and a half hours a day, but the air-cushioned seat means that I do not have any back pain afterwards. With the multi-function joystick VITRAC is also easy to understand at a glance, and to handle. I don't even have to look at the joystick or the steering wheel, but can look forward and have a clear overview when I'm mulching or spraying and. I don't need to stop and check all the time because I can sort out minor problems with the menu button: For example, if the pesticide is not applied high enough up, I simply change the program setting.

And if a technical problem crops up?

Then I call the *VITRAC* team and the next day at the latest one of them comes there.

Windegg Estate, Höller family, Windegg 3, Kaltern, www.windegg.it



Working on sloping vineyards has never been so safe and comfortable

Vineyards on steep slopes shape the countryside of many regions and create a unique cultivated landscape. Whether crops are terraced or run up and down the hillside, on steep slopes, terraces that are often the only economically viable means of running a vineyard and producing high quality wines. Until now, intensive manual labour alone has made cultivation possible in steep vineyard terraces with narrow paths between the vines and low pergolas. In order to make life easier for the winemakers in the vineyard, mechanic Willy Mulser developed the VITRAC tool carrier together with vintners from South Tyrol. The vehicle was specifically designed for terraced vineyards on extremely steep slopes with narrow rows and difficult terrain.

Stability on steep slopes

During the planning phase, great care was taken to ensure the occupational safety of the *VITRAC*. With its low centre of gravity, the tool carrier is highly stable on steep slopes: The front of the machine is in perfect balance, as the combustion engine and

the hydraulic components are positioned centrally. The weight of the driver is also above the wheel centre, as is the sprayer, ensuring that the rear of the machine is also balanced. Given that the vehicle is so well-balanced, very little pressure is exerted on the central joint. Other design features such as the intelligent swivel joint lock, the motor-protective circuit breaker, protective roll bars and the emergency exit on three sides further increase occupational safety. Occupational safety and health protection have also been confirmed through type tests carried out by the accredited and notified certification body Suva, in Switzerland.

Hints and tips for designing and adapting terraces

In order to operate *VITRAC* with even more safety and comfort, it is advisable to carry out some adaptation work in the vineyards on the steep terrain if this has not already been done.

Horizontal terraces with horizontal rows

Sloping vineyards should be terraced on a slope of more than 10%. In terraced vineyards, the rows are dug into the slope and run as horizontally as possible. After each row, an embankment raises the height to the next level. The rows should be designed to include a few empty runs.

ADVANTAGES OF TERRACING:

- lower risk of erosion
- safe turning by means of well-laid turning areas
- work can be carried out on level terrain
- less risk of slipping and slipping compared to vertical rows







Complies with the Suva type examination certificate no. E 7130.d & no. E 7131.d

Turning area and radius

Setting up turning areas significantly increases driving safety. On steep terrain, the turning area is often bolstered with concrete, stone or geo walls.

VITRAC turning radius

For a total width of 90 cm Inner turning radius: 425 mm Outer turning radius: 1,325 mm

With its dual articulation, *VITRAC* can reach a turning angle of around 80° without losing stability.

Caring for terraces

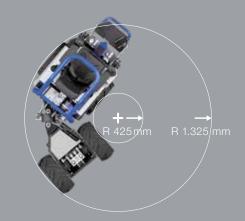
In order to ensure smooth operation of machinery, terraces should be maintained regularly. Depending on the type of soil, the terraces can lose soil to a greater or lesser extent. As a result, the terrace loses width and driving is more difficult. Regular care and maintenance of the rows and turning points increases occupational safety and also ensures greater ease and comfort.



Width of rows

With a total length of 2.25 metres or 2.55 metres, a width of 80 centimetres or above, and lane-centring steering, the *VITRAC* can enter the next row directly from a line spacing of 1.30 metres without having to manoeuvre several times. All you need to do is make sure that the rear does not swing out when the front is passing through.

A wealth of interesting information and tips, tried-and-tested experiences and new insights into establishing vineyards on steep slopes can be found in the guide "Neuanlagen im Steillagenweinbau. Anleitung zur maschinengerechten Erstellung von Neuanlagen im Weinbau." by Paul Hafner and Florian Sinn, South Tyrol Advisory Service for fruit and wine growers, 2015, whom we would like to thank for allowing us to use excerpts from it. The brochure is only available to members of the South Tyrol Advisory Council.



New vineyards in steep locations

Consultancy:

Before you begin works, our experienced service team will provide you with advice on how to lay the terraces in the vineyard efficiently, lay turning stones or calculate the distance between the vines and width of rows to ensure that you reach the

maximum number of plants per hectare.

Soil preparation:

First loosen up the soil, remove the topsoil, till the subsoil, level out the land and replace the topsoil. If the slope is moderate, the terrain can be prepared

with a track excavator. On extremely steep slopes, the spider excavator ("Hupfer") is recommended but, in this instance, more time is required.

Terracing:

Terraces can be created, depending on the slope,













with a mini excavator, screw conveyor or spider excavator. Terracing with a mini excavator is slower, but leads to more compact and stable terrain and the embankment can be shaped immediately. Terracing with a screw conveyor takes less time, but then the resulting "nose" must be removed by hand

and the terrace cleaned. The ground is not packed as firmly as with a mini excavator and settles afterwards.

Construction and planting:

With the VITRAC, all materials (rope wires, posts,

anchoring hooks, etc.) can now be transported to the site to set up the vineyard; depending on the excavator used, scaffolding can also be set up prior to terracing. The new vineyard must now be grassed over to strengthen the soil and prevent erosion.













A REVOLUTION IN **SLOPE-TOOL CARRIER.**

VITRAC IS A BRAND OF WM AGRI TECHNICS GmbH

Breiener Straße 15 I-39053 Blumau (BZ)

Tel. +39 0471 353 332 info@vitrac.it www.vitrac.it

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