

News and information from CALDARO

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# Gazette

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Caldaro's history at  
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## *Get the grip*

Viper XT has made a great success in the  
world of heavy-duty vehicles.  
Get to know the evolution of Viper.

## Flexibility and innovation

When you are the leading OEM in your segment, a standard joystick, pedal or sensor isn't good enough. These components are the link between man and machine and communicate the quality of the entire machine, so they have got to be better than what the competition is using.

Our customers don't come to us for an off-the-shelf product. They have specific needs or want a unique product with special features.

Together with our customers, we build safety features into our products. You can't have steering out of control, for example, so we offer fully redundant sensors in our products.

**"You can rely on Caldaro, wherever you are."** This way the onboard system can detect a sensor failure and distinguish it from an actual movement. Our customers tell us which functions are safety critical and we take up the gauntlet.

We're also continually working on the ergonomics. Designers of big, heavy-duty machines often like to have a large joystick with high activation forces, but we've recently been working with a major OEM who wanted to take the small fingertip movement joysticks we usually supply for forestry equipment and apply them to their huge mining trucks – a bold decision. But very well received by the operators, allowing them to reach a higher efficiency and less fatigue.

Of course, it's not only the ergonomics and mechanical design that allow fine movements. All our joysticks and pedals are electronic, which means they are more responsive than their traditional hydraulic counterparts.

We sell our products in more than 40 countries around the globe. We have a subsidiary in the USA and work with a network of trusted distributors around the world.

You can rely on Caldaro, wherever you are in the world.



**Claudio Talamo,**  
CEO Caldaro AB

# Viper's got the grip

The latest addition to the Viper family is ViperXT – a joystick grip featuring up to three analogue controls, of which two can be used simultaneously.

**CALDARO LAUNCHED THE VIPER XT** 2016 after being approached by the leading manufacturer of construction machines. This company had been co-working with Caldaro for the past ten years on Viper, now they asked for more functions in their joysticks.

Petter Löfgren, engineer and technical manager at Caldaro:

"The company asked for the ability of steering control in the handle, and thanks to the versatility of Viper we managed to put that proportional lever on the front. The steering lever and the proportional thumb rocker button for controlling hydraulic attachments can be used simultaneously. This allows the operator to let go of the wheel and put the hands on the joysticks to drive the machine, and still maneuvering the attachments."

The ViperXT became the third addition to the Viper family. The story of the grips started in the early 2000's when Caldaro was asked to develop a handle for the European off-highway industry for the market leader of hydraulic systems. Petter Löfgren was appointed to run the project. The

project never took off, but Caldaro didn't want to put an end to their new and innovative product. Petter and his team continued their work.

"The ideas were too good not to be implemented. We had solutions how to put more important functions into a handle, and we knew how to make it very appealing to both eye and touch", says Petter Löfgren.

In 2005, the story took a new turn when the producer of construction machines approached Caldaro. Their European branch had identified some new requirements for their handles. When Petter and his team compared the requests to the handle they had been working on, the two matched to a large extent. Petter Löfgren:

"When getting that order, we could realize our plans. In 2006 we delivered the first Viper."

Twelve years after the introduction, the different versions of Viper appear in an increasing number of heavy-duty vehicles, to date 250.000.

"For Viper to be fitted in new generations of machinery is the greatest credit of all." •

### MODULAR SYSTEM

Have it configured to suit your machine. The Viper family is available in many different versions, the possibilities for adapting the controls to your needs are almost endless. ViperXT can fit ten push-buttons and a proportional rocker, or five push-buttons, two proportional functions and an F-N-R. Redundant output is optional, and the push button switches are available with change-over function in case machine safety requires this.

### THE BEST MATERIALS

The best material has been chosen for each component. All of them to be optimised together as a complete joystick. Yet still possible to produce in an efficient way.

### TWO-COMPONENT MOLD GRIP

The molding procedure combines two automotive engineering plastics. The semi-soft overmold gives the handle a comfortable grip and ensures safe handling. The two-component mold, combined with male/female sealing and precise torque assembly makes the grip super sealed.

### STABLE FOUNDATION

The Caldaro heavy duty C14 joystick base.

In 2014, the Viper multifunction joystick grip from Caldaro played a role in the blockbuster movie *Transformers*.



## » Viper family evolution



## A joy(stick) for the sake of ergonomics

Ergonomics make all the difference for using the Caldaro C15 inside a big drill rig. "Just using this new joystick and no heavy pulling in hydraulic levers saves your shoulders and back", says machine operator Peter Öberg.

By only using his hands and fingertips, he steers the giant machine.

"I have been operating these big drilling machines for 13 years. It has always been quite grueling operating the old



hydraulic levers. However, since I started operating this machine I have all I need in these joysticks", says Peter Öberg pointing at the C15 joysticks at each armrest of his chair.

With the help of a pedal on the floor, he can switch mode for the joystick to move the drill rig into the right GPS coordinates for the next drilling hole.

"Using the joysticks together with the computer screen in front of me makes it easy being just in position. And I can operate a machine a full day with minimum stress to avoid musculoskeletal injuries."

## Pedal at 45 degrees

The P09 pedal was already a success. Manufacturers of heavy machines all over the world have already fallen in love with the well designed smooth pedal. P09, a compact, electronic pedal that delivers higher precision and better ergonomics.

Finnish company Vilakone Oy, was seeking to replace their current pedal with a more robust and longer lasting version, but there wasn't plenty of options suitable for their needs. Also P09 from Caldaro was only available as 30 degree version at that time.

"We thought we would need to change the floor construction of the cabin to

get the pedal ergonomics right. But the people from Caldaro quickly responded to us with a 45-degree version of the pedal that was a perfect fit for our use", says Antti Lindström, industrial designer at Vilakone.

Also the signals, connector, and the wiring of the pedal were customized by Caldaro to meet the specification of Vilakone.

"We always try to meet the needs. Now I can have an extra smile on my face when I see a Wille machine doing the snow clearance here in Stockholm," says Erik Kauppi, sales engineer at Caldaro.



P09 45°, made for Vilakone Oy.

# Caldaro's 7th Bauma appearance in Munich

SINCE THE 1950's, THE BAUMA FAIR IS AN obvious place to be for everyone working in a machine manufacturing business. The fair, which is held every third year in Munich, attracts over 500,000 visitors. Caldaro is one of many returning exhibitors.

"Bauma is a meeting place where we not only meet new customers but, just as important, meet existing customers, suppliers and competitors. If you don't show up at Bauma, it's almost as if you don't exist, says Erik Kauppi at Caldaro. •



► **1959**  
The Bauma fair has been around since the 50's and is by far the most important fair for machine manufacturers.



► **2004**  
In 2004, Caldaro premiered the Viper joystick. It had a great success at the fair, and has sold in over 250,000 copies

Foto: Blarki Sigurvsennsson



► **2010**  
It was very close that Caldaro couldn't attend to the fair. The Icelandic volcano Eyjafjallajökull got an eruption and an ash cloud closed the air traffic. At the last minute a car was rented which could take the Caldaro team to the fair.

**Caldaro shows an innovative design of custom design multi-function joystick, in this specific case for Toyota.**



► **2013**  
In our 60 m<sup>2</sup> stand, we exhibited several new products and technical solutions developed in unique customer projects.



## Caldaro takes part in UN Global Compact

Caldaro is one of the first companies in its industry to sign the UN Global Compact, the world's largest and most widely embraced voluntary corporate sustainability initiative..

– The effort we already put on these questions now gets a completely different weight. The collaboration also gives us support in our continued commitment, says Claudio Talamo, CEO of Caldaro. In total, 10,000 companies and 4,000 organizations in 162 countries have signed the

ten principles of the framework that deal with respect for human rights, labor conditions, environment and anti-corruption.

– For us it is quite natural to participate because we put sustainability issues high on our agenda, among other things we already have several ISO certifications. In addition, it is stimulating to become part of a global movement, where most of our global customers are also involved, and feel that together we form a strong force for the future,"says Claudio Talamo.