



VIPER JOYSTICK GRIP SERIES





VERSATILE AND ADAPTABLE VIPER SERIES

Viper™ allows variable grip positions and thus prevents awkward angles and wear on the wrist joint, thanks to its highly appreciated, ergonomic design.

Proportional steering can be performed easily with the thumb via a rocker button for maximum sensitivity and control, which means no more thumb rolling.

As an option, you can even have a unique index finger-controlled gear selector (FNR) that makes operation comfortable and distinct.

The three largest Viper grips – standard, plus, and XT – are made of double-moulded plastic, with a hard inner core for durability and a soft outer shell for superior comfort.

This provides not only an exclusive touch but also seals the two plastic halves properly, providing a grip made for harsh environments. The electronics are effectively protected.



BUILD IT TO MEET YOUR REQUIREMENTS

Viper™ is available in many different versions and sizes. The modular design makes it easy to fit all the functions you need to get quick access within your palm. The possibilities for adapting the controls are almost endless.

The Viper grips fit our joystick bases C14 and C15.

AVOID DOWNTIME

Viper™ has been tested and approved for tough environments and has a proven lifetime of more than 20 million operations*.

Viper™ proves that quality pays for itself. With Viper grips, you get a tool that makes your daily life easier and more comfortable at the same time as the operators' work becomes efficient.

*referred to Viper + C14 12-degree angle deflection

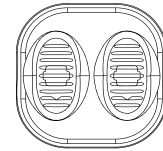
FEATURES FOR THE VIPER GRIPS

- Fits C14 and C15
- Directly suitable for a hydraulic valve
- Modular design; numerous adaptation possibilities
- Multifunction grip
- Ergonomic design
- Buttons
- A capacitive sensor for "operator presence" detection

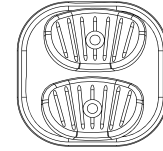
OPTIONS FOR THE VIPER GRIPS

- Choose between 10 faceplate panels
- Incorporate the small C03B joystick within the Viper faceplate
- Black buttons
- Multicoloured buttons
- Hall effect sensor

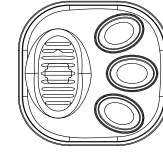
FACEPLATE PANELS



Type A



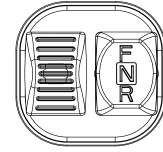
Type A*



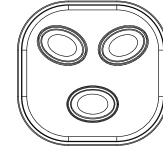
Type B



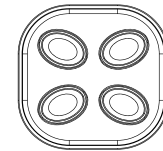
Type B*



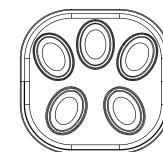
Type C



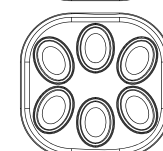
Type D



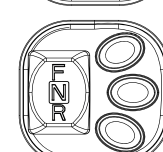
Type E



Type F



Type G



Type H

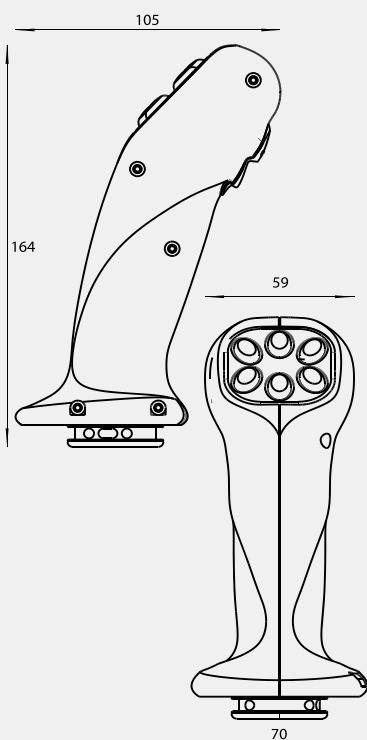
*Turned 90 degrees



C14

VIPER

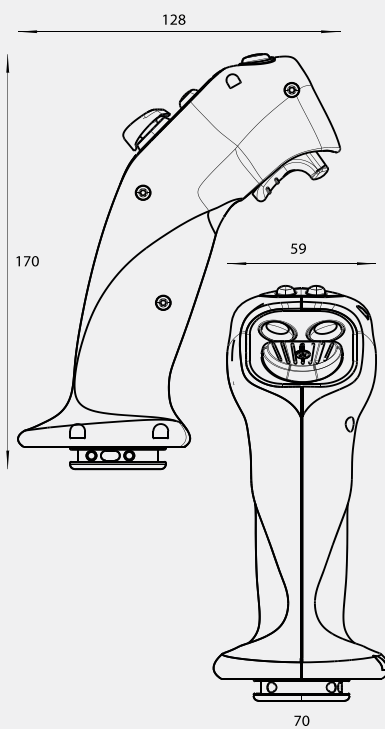
1-2 proportional sensors,
height 164 mm



C14

VIPER PLUS

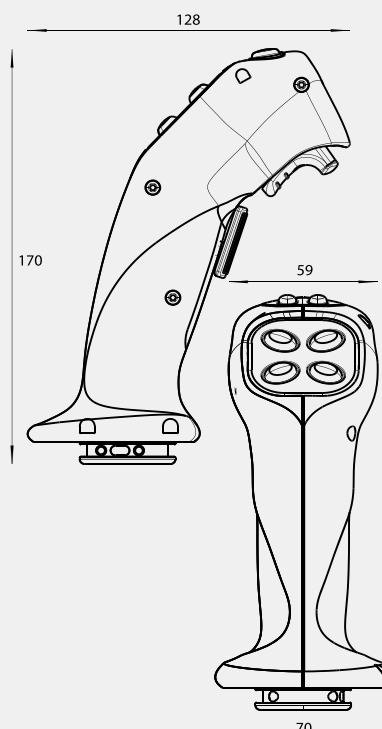
1-2 proportional sensors,
height 170 mm



C14

VIPER XT

1-3 proportional sensors,
height 170 mm

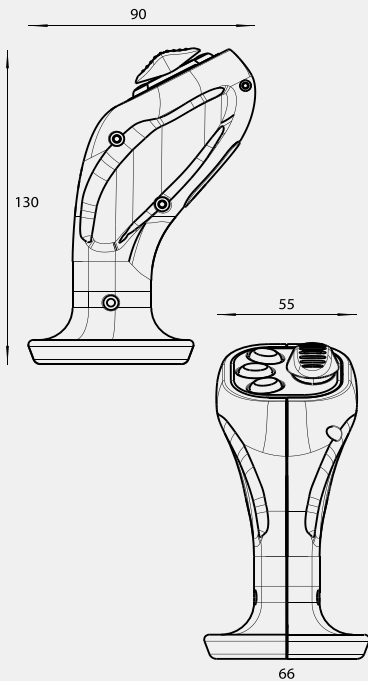




C14

VIPER MEDIUM

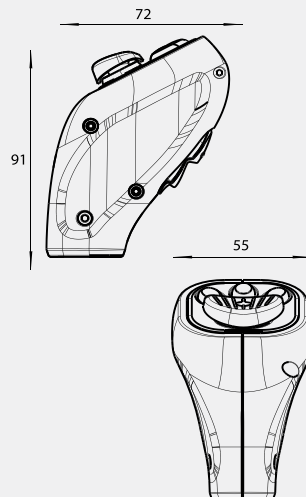
1-3 proportional sensors,
height 170 mm



C15

VIPER SLIM

1-2 proportional sensors,
height 164 mm





SPECIFICATIONS

CAN'T FIND YOUR REQUIRED SPECIFICS? CONSULT US!

MECHANICAL PERFORMANCE

Viper Standard, Plus, XT: dual mould black plastic

Viper Medium, Slim: single mould black plastic

High grade silicon (button)

Temp. range: -40°C to +85°C (-40°F to 185°F)

Ingress Protection: IP 66 & IP67 (Viper),
IP65 (ViperPlus)

Maximum load: 600 N

PUSHBUTTON AND TRIGGER SWITCHES

Function: Momentary type, tactile action

Switch life: min 10 000 000 operations

Power rating: 50mA at 24 VDC

Optional: Changeover type (NO/NC)

Optional: High current switch (1A at 24 VDC)

FNR SHIFTER

Function: Alternating type, haptic action

3-position rocker switch (F, N and R)

Separate switch signal for each position

Life expectancy: Min 5 000 000 operations
(mechanical)

Power rating: 1A at 24 VDC

PROPORTIONAL ROCKER

Sensor: Hall effect, ratiometric

Single or dual output

Mechanical travel: $\pm 12^\circ$ from centre

Power supply: regulated 5 VDC ($\pm 10\%$)

Proportional voltage output: 10–90%,
dual crossed or parallel, others upon request

Life: min 10 000 000 operations

Current consumption: 14mA

EMC: 100 V/m

ESD (Connector pin/air): $\pm 8\text{kV}/+15\text{kV}$

OPERATOR PRESENT SENSOR (DMH)

Optional contactless electronic sensor
located inside handle.

Power supply: 7.0–28 VDC or 5 VDC

Characteristics of output: 5 VDC = ON (with hand
present) and 0V = OFF (with hand not present)

Current consumption: 30mA at 28 VDC
and 15mA at 5 VDC

Switching time: 0.1 ms

EMC: 100 V/m (preliminary)

BUILT FOR HEAVY DUTY

The C14 joystick base provides the best combination of full grip size and perfect precision. It's large enough to match the full-sized heavy-duty machines and strong enough to withstand the toughest operators. You can rely on the C14 to stay intact and keep its precision year after year.

All temperatures, hot or cold, the C14 will endure all temperatures from -40°C to $+85^{\circ}\text{C}$ (-40°F to 185°F).

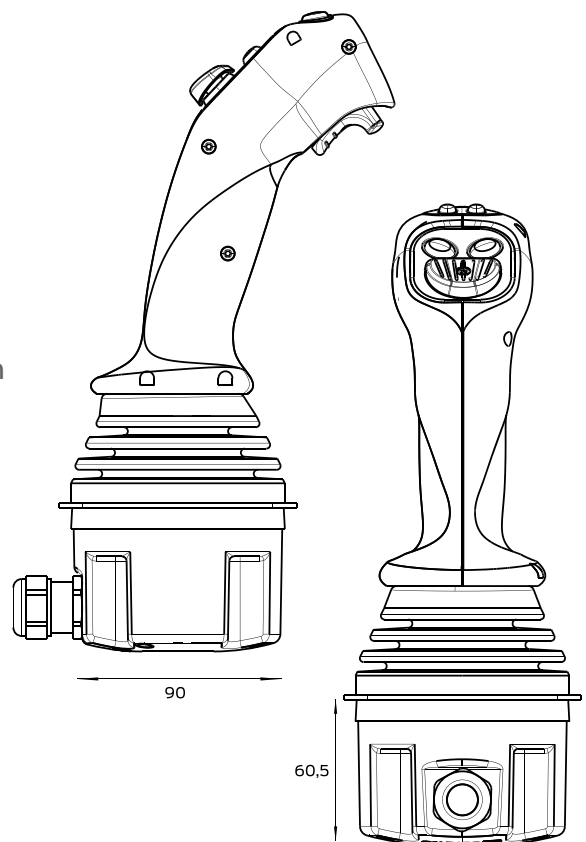
The best material has been chosen for each component. The rubber mixture endures the toughest conditions.

The strong shaft is manufactured in one single piece and with extended dimensions. This makes it practically impossible to bend.

Thanks to its sealed panel mounting, the electronics are protected from fluids, salt, and oil.

Precision that lasts; it will withstand more than 10 million operations and keep its precision over time.

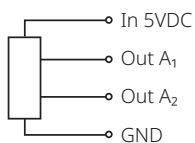
C14



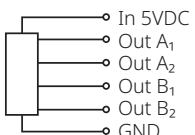
DEVELOPED WITH CUSTOMER INPUT

- Tested in salt and copper mines
- Excellent guide-feeling

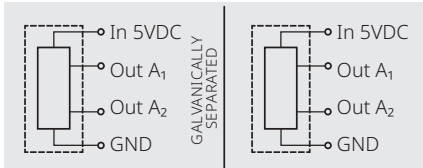
SINGLE OUTPUT



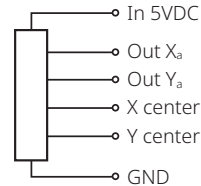
DUAL OUTPUT



DUAL INDEPENDENT OUTPUT



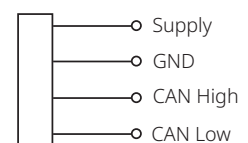
SINGLE + DIGITAL OUTPUT*



*Centre validation signal 1 per axis (please consult Caldaro)

CAN INTERFACE

CANopen, CANopen Safety or J1939 protocol



THE UNBREAKABLE JOYSTICK

URT tackled the challenge of designing an unbreakable joystick. The result is the C15.

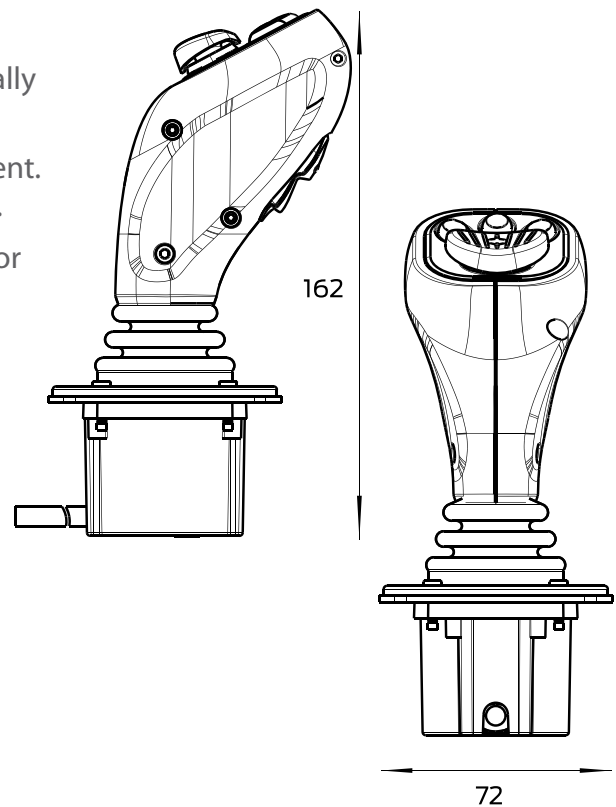
This can be used across a spectrum of applications, from the toughest environments to exquisitely high-precision, fine-tuned medical equipment.

Protected electronics: circuit boards and electronics are potted with a silicone compound that protects them from threats such as salt, mist, water, lubricants and virtually all chemicals.

The strong shaft is manufactured in one single piece and with extended dimensions. This makes it practically impossible to bend.

The best material has been chosen for each component. The rubber mixture endures the toughest conditions.

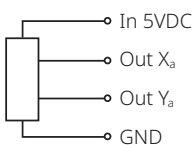
Full redundancy with direction switches and double or double independent output signals. The C15 is also available with CAN interface.



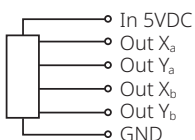
OTHER FEATURES MAKING C15 IRRESISTIBLE:

- Guide-feeling
- Operating angle 9, 12, 17 or 20 degrees
- Sealed panel mounting

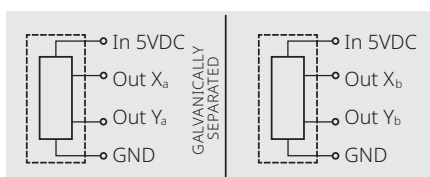
SINGLE OUTPUT



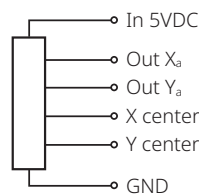
DUAL OUTPUT



DUAL INDEPENDENT OUTPUT



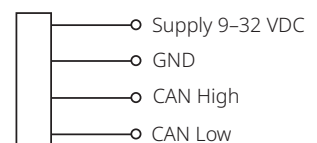
SINGLE + DIGITAL OUTPUT*



*Centre validation signal 1 per axis (please consult Caldaro)

CAN INTERFACE

CANopen, CANopen Safety or J1939 protocol



PREMIUM PRODUCTS



INDUSTRIAL JOYSTICKS

Our full grip-sized industrial joysticks are designed to suit the most demanding heavy-duty applications in terms of mechanical strength and environmental requirements. Designed with the operator in focus, these joysticks are ergonomic and user-friendly, built for operating every productive hour.

Our palm grip joysticks are designed with particular emphasis on operator comfort and precision control. After decades of experience working with joysticks, our technical advisers are well placed to supply customers with the ideal solution for their individual needs, and always with various CAN bus options.

Our fingertip joysticks are designed for smooth operator control with high precision. These mini joysticks are often used in precision machines, forklifts and remote controls but can also be found in agricultural applications.

We can offer a wide range of joysticks with up to 5 analog axis and contactless redundant sensors.



INDUSTRIAL PEDALS

Our specially designed foot pedals for heavy-duty throttle, brake and retardation control are as robust as they are precise. All our industrial pedals are designed and manufactured for the most demanding applications in harsh environments. The pedals withstand the toughest conditions in all surroundings for dependability and your safety.



POSITION SENSORS

We have been supplying sensors since the early 80's. Initially, it was only potentiometers with wire-wound or conductive plastic in both rotating and linear versions. Currently, contactless technology (Hall effect and inductive) has evolved and is now used effectively in many different sensor types, both rotating and linear.

MARINE CONTROLS

Real craftsmanship levers made by our specialist team in Flen. Every control lever has a smooth, elegant feeling and consists of small, moving parts that fit together intricately. All parts are custom-made, with no mass production. We have developed about 200 different variations for a great variety of marine and offshore applications since we started in 1985.

