

GfG Water Systems

Range of fittings and accessories for MiniCal and Variocon



- Combi-fittings
- Immersion fittings
- Industrial fittings
- Flow-type fittings
- Cooling-water probes and accessories

Worldwide Supplier Of Gas Detection Solutions



Variocon 2010 Series

Range of fittings for pH/redox/chlorine measurements



Combi-fitting

for chlorine, pH, redox; 13.5 mm conduit thread

Pressure range: unpressurised

Temperature range: +5 to +50°C

Material: POM, high-grade steel

Cleaning opening per plug-in location

Dimensions of mounting plate:

340 x 260 x 5 (H x W x D)

Flow control with integrated needle valve

Hose connection 1/4"

Integrated pre-amplifier for potentiostatic chlorine electrode

A uniform flow rate over the electrode is required for measuring chlorine; this is ensured by the specially developed chlorine fitting. All parameters of relevance for swimming pools or other chlorine measurements – chlorine, pH, redox – can be measured simultaneously. The electrodes are easily screwed into the robust fitting.



Immersion fitting

for pH, redox; 13.5 mm conduit thread

Pressure range: unpressurised

Temperature range:

Material: PVC

Length: variable up to 2000 mm

Solenoid valve for cleaning with compressed air or water

PVC immersion fitting for mounting a pH or redox electrode. The length of the fitting depends on the

structural conditions; max. overall length 2000 mm. Easy installation and handling are the distinguishing features of this fitting. The electrodes are inserted in conduit thread screw fittings in the lower part of the fitting. The electrode connections are located inside the fitting and separated from the medium.



Flow-type fitting

for pH, redox; 13.5 mm conduit thread

Pressure range: unpressurised

Temperature range: +5 to +50°C

Material: PVC

Mounting: DN25 adhesive pipe socket

The flow-type fitting is installed in unpressurised pipelines. The medium flows through the fitting; a built-in deflector plate prevents effects caused by higher flow velocities and at the same time protects the electrodes against contamination, e.g. by sand. pH or redox electrodes can easily be screwed in here.



Reinforced flow-type fitting

for pH, redox; 13.5 mm conduit thread

Pressure range: unpressurised

Temperature range: +5 to +50°C

Material: PVC

Mounting: DN25 adhesive pipe socket

The reinforced flow-type fitting is

installed in unpressurised pipelines. The medium flows through the fitting; a built-in deflector plate prevents effects caused by higher flow velocities and at the same time protects the electrodes against contamination, e.g. by sand. pH or redox electrodes can easily be screwed in here.



Industrial fitting

for pH electrode (225 mm)

Pressure range: up to 6 bar

Temperature range: -10 to +130°C

Material: chrome steel, POM, Viton

Space requirement: 430 mm +

350 mm

Mounting with PE, PP or Cr-Ni steel welding sockets

IP65 enclosure

The extremely robust industrial fitting is used for pressurised circuits. pH or redox electrodes can be installed or removed and adjusted during operation. The fitting can be used without any difficulty for pressures up to 6 bar. The electrode terminals are securely separated from the medium in the pipeline. PP/PE or high-grade steel welding sockets are used for adjustment to structural conditions in installation.

MiniCal Series

Range of fittings for leak detection in cooling circuits



Bypass fitting

for ammonia, ammonium
Pressure range: 1-6 bar
Temperature range: -10 to +50°C
Material: POM, high-grade steel
On-site stopcocks with integrated measuring amplifier
Output signal: 2 x 4-20 mA
Media: water, ethylene glycol, propylene glycol, Pekasol, Tyfoxit
Power supply: 24 V DC or 230 V DC

The bypass fitting enables cooling circuits to be monitored continuously for ammonia leaks. The measurement is integrated in the secondary circuit, and the fitting is installed easily and quickly. In order to measure the ammonia content a partial current is fed to the measuring chamber and then pumped back into the pipeline. Stopcocks are fitted on the existing pipelines so that servicing and maintenance work can be performed during operation. The integrated high-performance pump conveys the medium back to the circuit, thus preventing any loss of coolant. Monitoring of the pump cycles enables both pump malfunctions and any reduction in flow rates below the minimum (e.g. due to contamination), which is essential for reliable and rapid measuring results, to be detected.

- Rapid and reliable detection of leaks
- Flow monitoring
- Easy operation and installation



Flow-type fitting

for ammonia, ammonium
Pressure range: unpressurised
Temperature range: +5 to +50°C
Material: PVC
Cleaning opening
Mounting: DN25 adhesive pipe socket
Integrated measuring amplifier
Output signal: 2 x 4-20 mA
Power supply: 24 V DC

The flow-type fitting is installed in unpressurised pipelines. The medium flows through the fitting; a built-in deflector plate prevents effects caused by higher flow velocities and at the same time protects the electrodes against contamination, e.g. by sand. The electrodes are easily screwed into the fitting.



Freon fitting

for gas sensors CS21, CI21 for CFC / FC, e.g. R12, R22, R134a, R402a, R404a, R407c, R406a, R507
Pressure range: up to 3 bar
Temperature range: -10 to +50°C
Material: POM, PVDF
Medium: water circuits
Installation on pipelines: DN50 / PN16 flange incl. manual throttle valve
Dimensions: 250 mm from flange
Power supply: 24 V DC
Output signal: depending on transmitter, 0.2-1mA or 4-20mA

The MiniCal III system for Freons has been specially developed to detect FC / CFC leaks in cooling circuits. The compact design enables it to be installed directly in the secondary circuit. The robust fitting is installed quickly and easily. A throttle valve separates the measuring system from the circuit and enables subsequent servicing and maintenance work to be performed during operation. FCs / CFCs do not mix with liquids and diffuse in the measuring chamber through a gas-permeable diaphragm which separates the cooling circuit from the measuring chamber. Detection is by means of selective gas sensors, which can already detect very small gas concentrations. A wide range of gas sensors is available.



Immersion fitting

for ammonia, ammonium
Pressure range: unpressurised
Temperature range: +5 to +50°C
Material: PVC
Length: variable up to 2000 mm
Integrated measuring amplifier
Output signal: 2 x 4-20 mA
Power supply: 24 V DC

The immersion fitting is installed in tanks and discharge pipes and can accommodate an electrode. The length of the fitting depends on the structural conditions; total length up to 2000 mm. Easy installation and handling are the distinguishing features of this fitting. The electrodes are easily screwed in inside the fitting.

Electrodes and accessories

Variocon 2010 Series Electrodes



pH electrodes

- Length 120 mm, 13.5 mm conduit thread
- Applications: drinking water, swimming pool water or water with a low solids content
- Installation: in flow-type or immersion fittings
- Pressure range: max. 1 bar

pH electrode, industrial type

- Length 120 mm, 13.5 mm conduit thread
- Applications: waste water neutralisation, refrigeration (up to 6 bar, max. temperature 130°C)
- Pressure range: max. 6 bar
- Temperature range: -10 .. 130°C

pH electrode, industrial type

- Length 225 mm, 13.5 mm conduit thread
- Installation: in industrial fitting
- Pressure range: max. 6 bar
- Temperature range: -10 .. 130°C

Redox electrode

- Length 120 mm, 13.5 mm conduit thread
- Pressure range: unpressurised, max. 1 bar

Potentiostatic chlorine electrode

- Length 85 mm, 13.5 mm conduit thread
- Applications: swimming pools (drinking water)
- Measuring range: 0-2.5 mg/l Cl₂ (free chlorine)
- Installation: in combi-fitting

GfG Variocon 2010 measuring amplifier

In order to learn more about the versatile Variocon 2010 measuring amplifier and its potential uses, just request the specific product brochure from us.

Variocon 2010 Series pH calibrating solution



- pH4
- pH7
- pH10

Redox calibrating solution



- 133 mV
- 465 mV

Storage and cleaning



- KCl solution for electrode storage
- Diaphragm cleaner for electrode cleaning

MiniCal Series Electrodes



Ammonia electrodes

- Gas-sensitive NH₃ electrode for detecting ammonia leaks in refrigeration plants with water / glycol mixtures (brine)

Ammonium electrode

- Ion-selective NH₄⁺ electrode for detecting ammonia leaks in refrigeration plants

Ammonium electrode

- specifically for use with additives, such as Depositrol

Reference electrode

- Reference electrode for ion-selective NH₄⁺ measurement
- used together with NH₄⁺ electrode

Gas sensor CS21

- for Freon fitting, see CS21 datasheet

