



**Gewässer-
Umwelt-
Schutz
GmbH**



Glycol protector

Product brochure
GGW/AGW
GLF
GHS



Water - our source of life

Since 2005, GUS Gewässer-Umwelt-Schutz GmbH has been offering you comprehensive solutions with safety containment systems in the refrigeration and air conditioning technology segment to meet legal requirements.

Our qualified field service is on the road for you in Germany, Belgium, the Netherlands, Luxembourg, the Czech Republic, Denmark, Poland, Austria, Switzerland and other European countries.

Quality at fair prices!

If you don't want to compromise on quality, but always have an eye on costs, then GUS is the right company for you. At our site in

Nordhorn, qualified specialists manufacture suitable systems for customized applications. Continuous further development, also in the area of accessories, as well as reflection of the work results in the team guarantee precision work down to the last detail and an optimum price-performance ratio.

Working in close partnership with our customers, our team develops solutions that optimally meet the respective requirements. Their qualifications and commitment are the basis for our success.

Your -Team

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Glycol protector

The glycol protector is a tested containment system for refrigeration and air conditioning systems installed on it and, by legal requirements, prevents water-glycol mixtures and oils of water hazard classes one to three (WGK1-WGK3) that have run into the glycol protector from being flushed out when it rains. Leaks are detected, displayed, and retained.

The suitability of the system has been verified by TÜV Rheinland.

The original TÜV certificate can be viewed on

our website www.oelprotektor.de.

Further information on the glycol protector:

- Low Voltage Directive: CE by 2006/95/EC
- EMC: CE by 89/336/EEC
- Maintenance-free drain valves

The glycol protector is a safety system made of stainless steel 1.4301 or aluminum AlMg3 with a material thickness of 1.5 mm. All stainless steel elements are pickled over their entire surface as corrosion protection.



The Water Resources Act (WHG) and the Plant Ordinance (AwSV) regulate the handling of substances hazardous to water. The glycol protector made of stainless steel or aluminum AlMg³ helps to meet this legal requirement.

In the event of a leak, it prevents leaking oils and glycol of water hazard classes one to three from polluting the environment within the scope of the legal requirements.

The glycol protector with integrated oil separator drains the highest amount of precipitation measured in Germany without causing the sump to overflow. The glycol protector is available with two different sensor technologies:

- GWG glycol detection pressure sensor
- GLF Glycol detection conductivity sensor



Delivery content



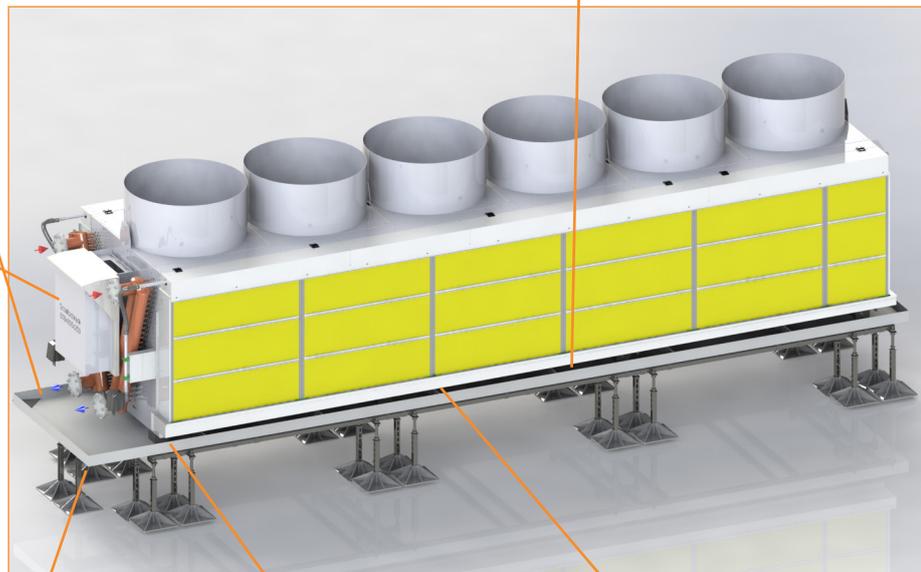
Multi-part drip tray
- depending on requirements



1 pressure sensor 1/2"
in the refrigeration circuit
(incl. 5 m cable)



1 piece
Switch box
(control module)
IP65-protected and
UV-resistant



Safety valve with
servomotor - depend-
ing on requirement



1 weather protection cover for the safety
valve with
servomotor



Pedestals or other
special solutions
- depending on
requirements



GLF sensor
(incl. 5 m cable)

GGW/AGW Glycol protector

Glycol detection pressure sensor

The GGW/AGW glycol protector is an extension of the oil protector. In addition to preventing the escape of light liquids (e.g. oils), it also prevents the escape of water-glycol mixtures or other water-soluble substances in accordance with legal requirements.

The system uses a digital pressure sensor to monitor the water-glycol circuit. The information supplied is processed by the control module. System-related pressure fluctuations are distinguished from an emergency, i.e. a leakage, and in the event of a leakage, the safety valves used are closed immediately. Leaking water-polluting substances are retained in the glycol protector and the operator is alerted. The water-glycol circuit is constantly monitored by modern sensor technology. The control box is IP65-protected and UV-resistant and contains a microprocessor, relays, terminal blocks, and the complete internal wiring.

The microprocessor evaluates the data from the sensors. If the control unit detects a leak in the fluid circuit, the drain valves are locked and an alarm contact is activated. This ensures that the leaking water-glycol mixture is safely contained. Special switching technology prevents the valves from opening again without the operator having given the go-ahead. The alarm is output as plain text on the microprocessor display.

To meet the requirements of safety systems, the drain valves are automatically closed, locked and the alarm contact is activated in the event of a power failure, microprocessor defect, cable break, defective valve control, or sensor defect.

The drain valves are protected from external influences by an aluminum housing and equipped with potential-free contacts for alarm and operating signal. No additional defrost heating is required for the year-round operation of the valves.

The largest possible amounts of precipitation in Germany are safely collected and discharged. The GGW/AGW glycol protector fulfills the requirements of §62 ff. of the WHG (Water Resources Act) and the AwSV (Plant Ordinance). The strict guidelines of the Ordinance on Installations for the Handling of Substances Hazardous to Water (WasgefStAnIV) are also met.

Notes:

- When selecting the GGW/AGW glycol protection, make sure that the GGW/AGW glycol protection is large enough to ensure that all machine parts carrying water-polluting substances are located in the area of the GGW/AGW glycol protection.
- The separators must not be built over.
- It must be ensured that the rain can fall unhindered onto the sloping rain guard.
- In addition, it must be ensured that the stainless steel material used for the substructure is grade 1.4301 or aluminum AlMg³ with a wall thickness of 1.5 mm. Accordingly, a sufficient substructure must be provided to prevent yielding under load.

GLF Glycol protector

Glycol detection conductivity sensor

The GLF is the most modern detection of glycol in the family of glycol protectors. The sensor is installed in the protector using a stainless steel bracket and monitors the medium in the tank. Even the smallest amounts of glycol are detected in fractions of a second and the system reacts immediately. This is achieved by a combination of two sensors that are specially programmed to detect glycol in rainwater.

The sensor reacts within fractions of a second to a change in conductivity in the medium. This means that even small quantities can be retained immediately. Another advantage is the ease of maintenance and durability of the sensor system.

The stainless steel tips of the sensor can be cleaned without chemicals. Even algae formation or dirt loads in the water cannot damage the sensor.



GLF sensor



GLF sensor installed



Switch box



GHS valve

Compact. Easy. Universal. Safe.

Glycol highspeed valve

Electric rotary actuator with ball valve
 Open-close control, 24 ... 240 VAC/DC,
 95° angle of rotation incl. 5° preload
 8 Nm, 15 Nm with emergency setting func-
 tion:
 fast spring return < 1 s



Type	Torque	Supply	Motor running time	Spring return	Control	Return
GHS 8	8 Nm	24..240 VAC/DC	3/15/30/60/120 s/90°	< 1 s /90°	open-closed	2 x EPU *
GHS 15	15 Nm	24..240 VAC/DC	3/15/30/60/120 s/90°	< 1 s /90°	open-closed	2 x EPU *

* Electrical potential-free changeover switches

The GHS actuator generation is the re-
 volution for safety dampers in technical
 building equipment.

The IP66 degree of protection, small di-
 mensions, a weight of only 3.5 kg, integ-
 rated heating, and an optional stainless
 steel housing ensure safe operation even
 under difficult ambient conditions. Brus-
 hless motors stand for a long service life.

Motor running times can be selected on-site.
 The universal power supply unit is self-adaptive
 for input voltages from 24 ... 240 VAC/DC. The
 drives are 100 % stall-proof and self-locking.

The GHS drives are equipped with an inte-
 grated spring return function to realize sa-
 fety positions.

In addition, the drives each have two integ-
 rated, permanently set, potential-free auxili-
 ary switches with changeover contacts.

Highlights:

- Industrial use
- Universal power supply 24... 240 AC/DC
- 5 adjustable motor running times 3-15-30-60-120 s/90°
- Open-close control with spring return, spring return time < 1 s/90°
- 2 integrated auxiliary switches, switching at 5° and 85°
- Integrated heating down to -40 °C ambient temperature
- Integrated safety temperature limiter
- Concealed operating elements for parameterization (push-button, lamp, switch)
- Comprehensive accessories concept

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August 2024

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