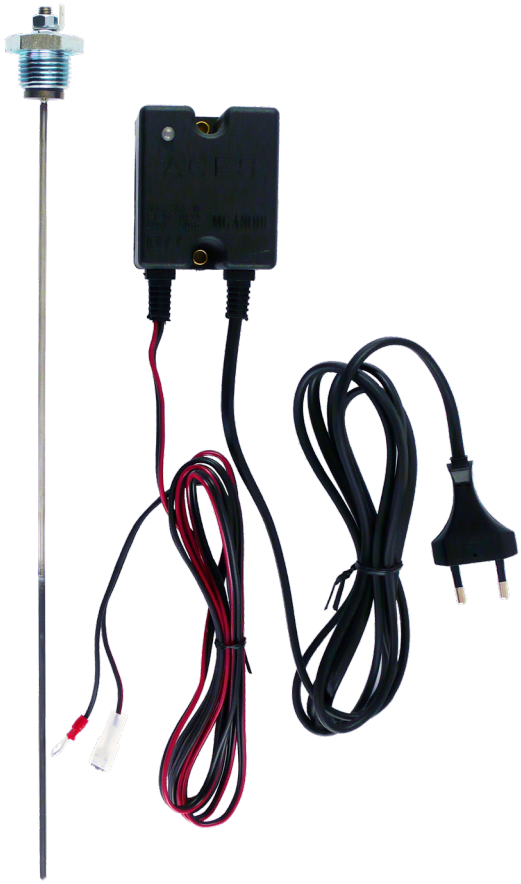
Regulus

www.regulus.eu

ACES

European Patent
No. 0630426



Installation and Operation Instructions

A C E S

Anti-Corrosion Electronic System

EN

CE

ACES

IMPROVED CATHODIC PROTECTION SYSTEM USING ELECTRIC CURRENT, FOR HOT WATER STORAGE TANKS

An anticorrosion system traditionally used for instantaneous and water heaters storage hot water storage tanks is usually represented by using stainless steel or inner surface treatment (e.g. enamel or Teflon) and magnesium anodes.

However, this system has two major disadvantages:

a) The passive protection offered by the internal lining of the tank is frequently incomplete, since slight imperfections, even if these are within the limits established by DIN standard 4753, part III (7sqcm/sqm), lead to a reduction in efficiency.
b) Magnesium anodes are subject to deterioration, and must therefore be checked and replaced frequently.

The new system

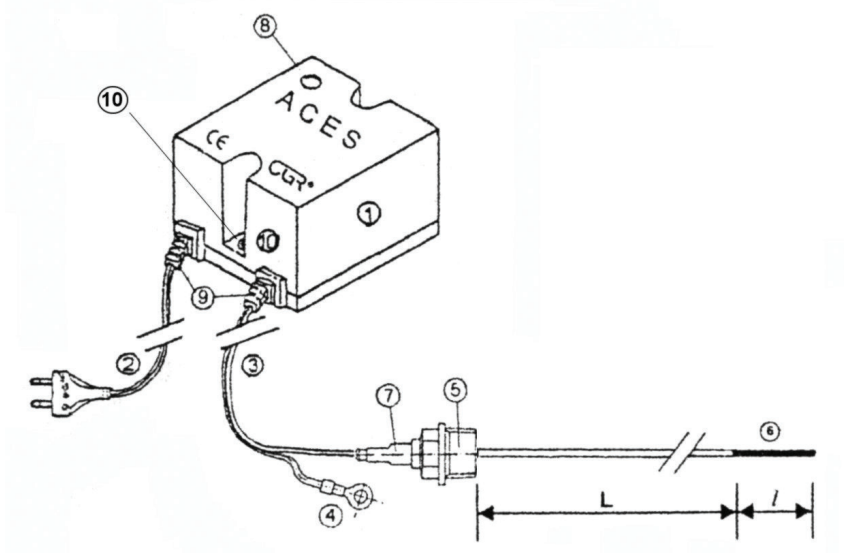
State-of-the-art technology, combining the use of electronics with the latest research into the behaviour of electrochemical currents, has led to the development of the new Anti-Corrosion Electronic System (ACES) that provides electronic protection against corrosion.

ACES offers a wide range of unique functions:

a) Active protection by means of electric current from an external source.
b) A high degree of operation flexibility: the system adapts itself to changes in the condition of the inner layer and to water quality through an automatic control of the el. current intensity.
c) Permanent protection, no regular checks and/or maintenance needed.
d) ACES protects boilers and hot water storage tanks against corrosion, saving thus costs and time.

Technical Specification

	ACES
IP rating	IP 55
ambient working temperature	0-40 °C
power supply cable	with flat plug (length 1.9 m)
low voltage service cable	with faston connector (length 1.9 m)
anode holder	UNI-ISO 7/1-R1/2“
anode	3 mm diam. in treated titanium
power supply	230V ± 10% - 50/60Hz
max. output tension	18V
maximum output current	0.18A
max. power consumption	2.5W
overall dimensions of generator	60x52x45mm
weight	÷ 0.4kg



1. generator
2. power cable
3. service cable
4. earth
5. anode plug 1/2“
6. anode
7. female connector
8. service LED green/red
9. cable bushings
10. mounting eyelets

How It Works

The ACES cathodic anti-corrosion devices generate a direct current which maintains the potential of the electrolyte at an optimum level. The potential of the electrolyte is maintained at the optimum level by regulating the intensity of the current between the anode and the cathode (tank shell). The potential difference between the shell and the titanium anode is continuously measured, the device reacts to any changes within microseconds and immediately compensates for these changes. This essential characteristic makes it possible to use a single anode which transmits the current to the water and determines the potential.

Description

The anode consists of a titanium core with an activated tip, fitted to a 1/2“ threaded plug. The use of noble metals, activated by a patented process, guarantees efficient operation and prolongs the service life of the tank. The generator is housed in a fireproof, heat-resistant casing in Noryl resin.

The ACES system is simple to use and can be fitted to a wide range of instantaneous water heaters and hot water storage tanks of various capacities.

Installation and Operation

A LED positioned on the front of the casing indicates the conditions of the device: green light means that it is in perfect working conditions. The red light means a defect and it is necessary to unplug power supply cable. If the tank is empty, it shall be replenished with water or the anode repositioned. The anode must not touch any metal part of the tank as it could cause short circuit and subsequent damage to the device. It is recommended to place the active section of the anode (the dark one) into the geometric center of a tank. No anode cleaning is permitted as it might get damaged.

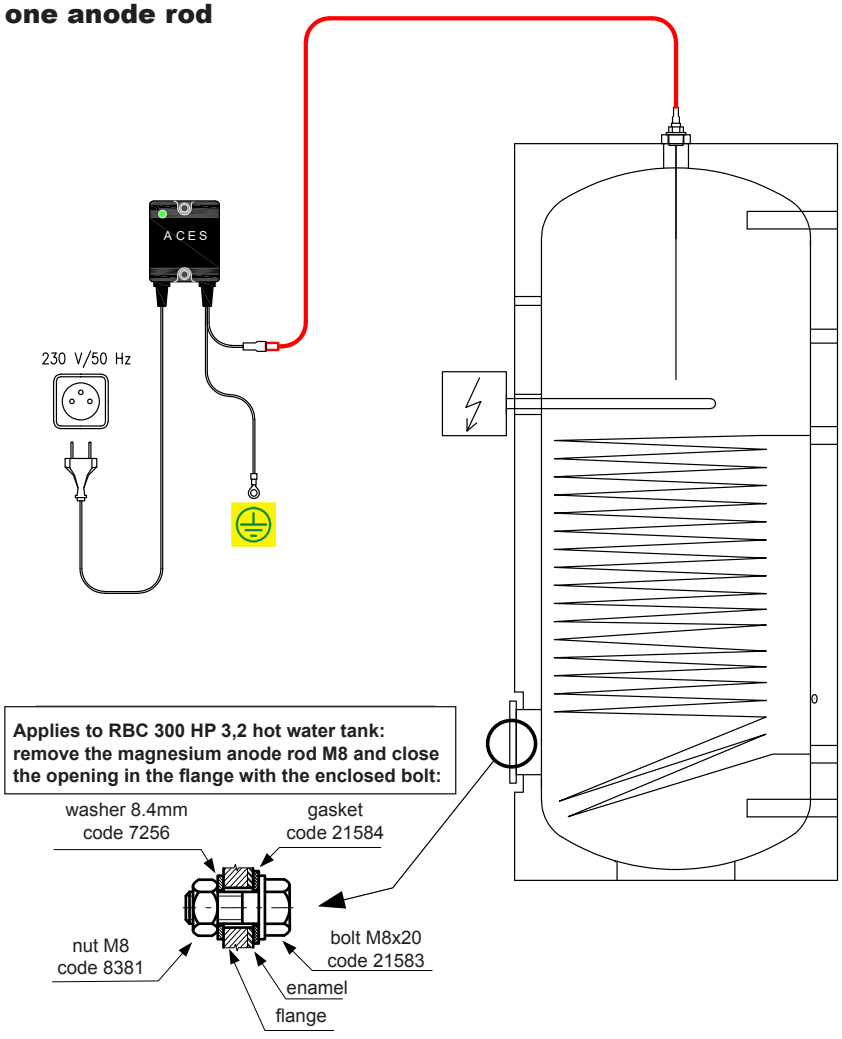
When installing the anode, do not touch its active coating and protect it from damage or contamination.

When installing an anode rod, its proper polarity must be maintained: the cable with the female connector shall be connected to the anode (+) while the cable with the eyelet shall be connected to the tank ground (-). No magnesium anode rod may remain in the tank.

Failure to respect the above described wiring will make the warranty null and void.

Placement of the anode rods in a hot water tank

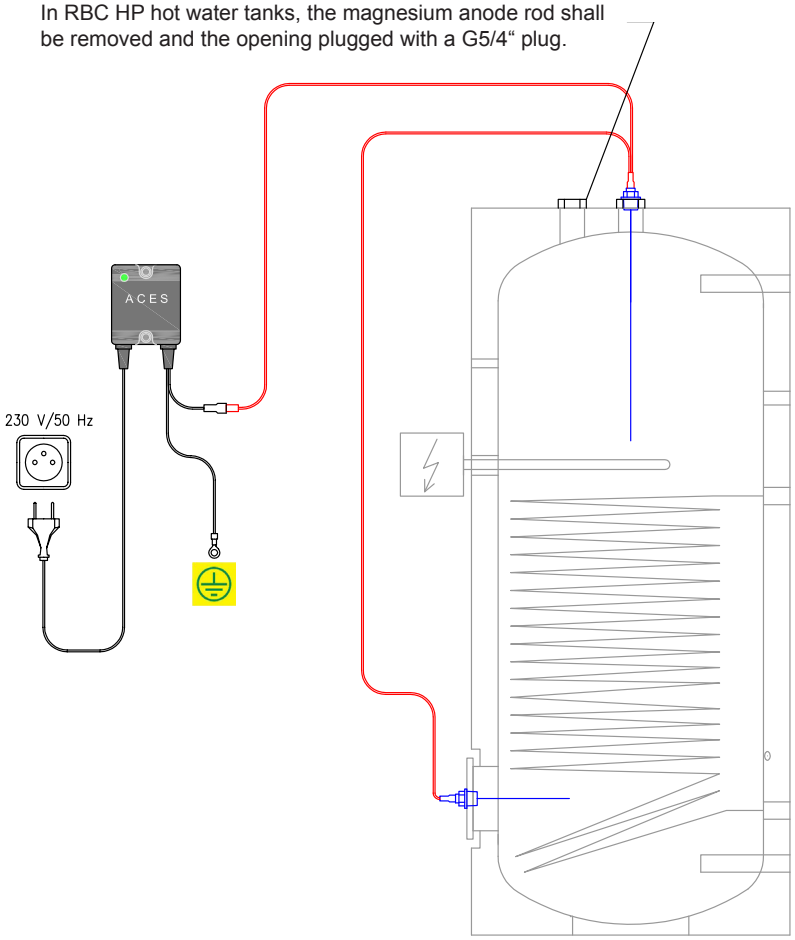
1. Set with one anode rod



2.Set with two anode rods

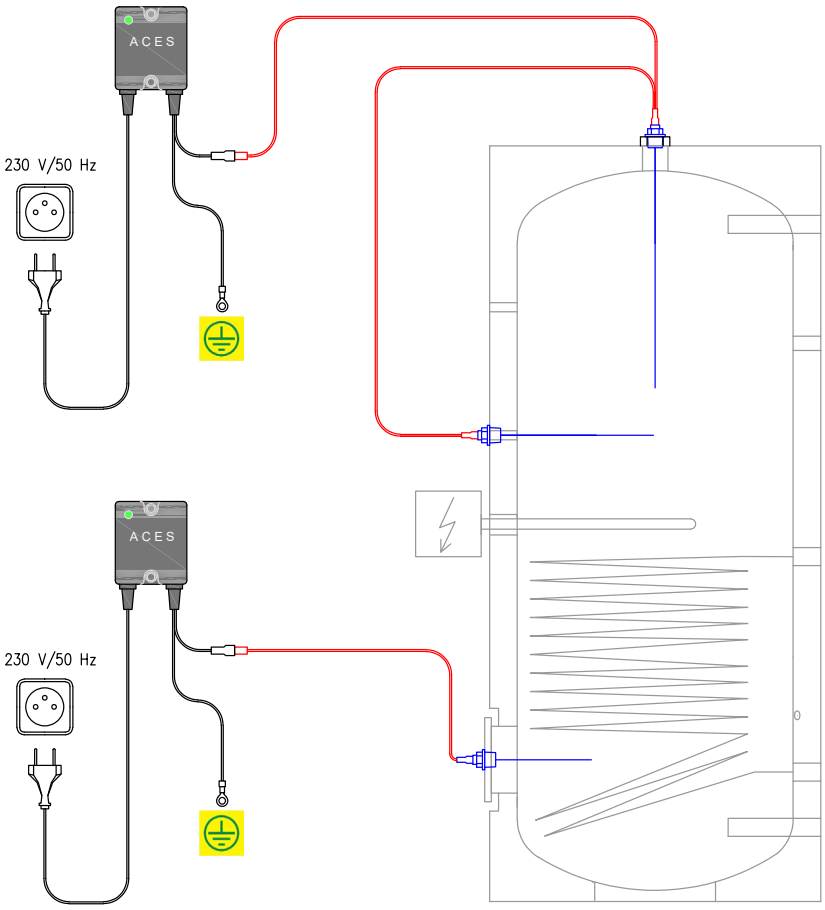
If the set involves anode rods of different lengths, place the longer one from the top into the hot water tank and the shorter into the flange.

In RBC HP hot water tanks, the magnesium anode rod shall be removed and the opening plugged with a G5/4“ plug.



3.Set with three anode rods

Place the shortest anode rod into the flange of the HW tank.



The right use depending on the tank volume

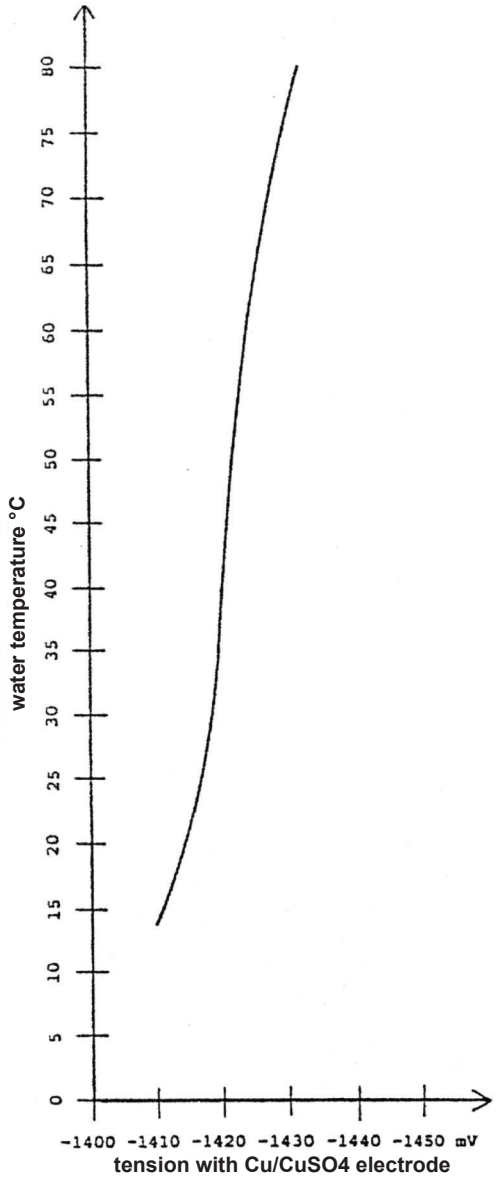
The maximum capacity of the tank to be successfully protected depends on the material used (stainless-steel, steel) and on the condition of the internal lining (enamel, plastic coating, etc.). If the internal lining is in good condition and the heating element or heat-exchanger is insulated, the current produced by the generator is sufficient to protect tanks with a capacity of up to 2,500 liters.

For tanks over 2500 l two or more generators should be installed.

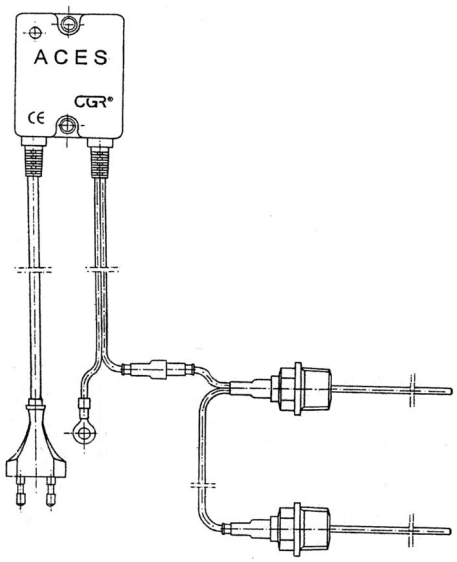
The cathodic anti-corrosion process provided by the ACES generator and the generator itself are covered by European patent No. 0630426.

The manufacturer reserves the right to modify the product at any time without prior notice.

Protection potential chart measured according to DIN 4753.
Tests were carried out on an enamelled 500 l hot water storage tank with DHW heating by an electric heating element, protected by ACES.



ACES, assembled with cables and two anodes.



WARRANTY CERTIFICATE

Type: .....

Serial Number: .....

Seller: ..... Date of purchase: .....

WARRANTY CONDITIONS

1. The warranty period is 24 months from the date of purchase.
2. When claiming warranty, this Warranty Certificate must be submitted together with the purchase receipt.
3. The warranty is valid only when the technical conditions set by the Manufacturer, installation manual and instructions in the documentation and on the product itself are maintained.
4. The warranty does not cover defects caused by external conditions or improper operation conditions, defects caused by usual wear and tear, further when the product is not used in compliance with its purpose and when the defect was caused by mechanical damage, improper handling, tampering by a third person, improper installation, improper stocking, natural disaster etc.

©2026 We reserve the right to errors, changes and improvements without prior notice.

v1.8-03/2026

REGULUS spol. s r.o.
E-mail: sales@regulus.eu
Web: www.regulus.eu