

CORREX®

Impressed Current Anode Systems

Electronically controlled
corrosion protection for
storage water heaters



Sacrificial anodes as corrosion protection ex works

Conventional protection methods

The permanent flow of oxygen rich fresh water into your hot water storage tank will inevitably cause corrosion of the tank if no countermeasures are taken. In traditional systems, two types of protective measures are taken against corrosion.

The first measure consists of an internal coating which, however, always leaves small areas unprotected. The second measure is the use of a magnesium anode which additionally produces a protective current.



The problem in this case is the fact that – as the experts say – the anode „sacrifices“ itself in the course of time. When the anode is used up the flow of protective current in the tank ceases and corrosion sets in.



Reliable corrosion protection for your storage water heater

Durable and value-maintaining corrosion protection

CORREX® impressed current anode systems are the value-maintaining alternative to sacrificial anodes. These systems make use of the latest technology and ensure an electronically regulated protective current flowing permanently through your tank.



The continuous protective current is regulated by a potentiostat and injected into the tank via a titanium electrode.

This system ensures safe corrosion protection for the most currently used types of tanks made of:

- enamelled steel
- stainless steel*

* For stainless steel tanks, especially in the presence of chloride-containing water, the subsequent installation of a CORREX® impressed current anode is highly recommended.



**Electronically
controlled with
CORREX® impressed
current systems**

CORREX®

The principle of the CORREX® impressed current anode system

To be efficient, the protective current must be perfectly adapted to the individual conditions in the tank.

The current must neither be too low nor too high. For this reason, the current is regulated by a potentiostat which ensures perfect adaptation to existing operating conditions.

Over-protection as well as under-protection can thus be safely avoided.

The current is injected into the tank via a mixed-oxide-coated titanium electrode which is practically wear-free throughout its entire service life.



Electronic measurement and exact regulation of the current

The current is alternately measured and injected at millisecond intervals:

- measurement of the actually existing potential in the tank
- determination of the current required to reach the nominal potential
- injection of the protective current
- nominal potential reached

The tank can no longer be attacked by corrosion.

Easy to install by a specialist

Our CORREX® impressed current systems are supplied with all parts required for installation. Potentiostat and electrode are connected to each other by cable.

The plug on the potentiostat is easy to insert and has enough resistance to prevent accidental disconnection.



The anode is connected quick and easy by our SmartConnect plug, which also eliminates the risk of accidental polarity reversal. The included accessories allow quick socket or hole installation.



CORREX® Impressed Current Anode Systems

Recommended system components

Program overview		For enamelled steel					For stainless steel		
Potentiostat		AGOS EVO / TUCO ADVANCED					PERI EVO		
Type		integrated Euro-plug / IEC320 C8 socket					IEC320 C8 socket		
Mains voltage		230 V					230 V		
Frequency		50 / 60 Hz					50 / 60 Hz		
Nominal current		100 mA					2 x 180 mA		
Setpoint potential		2,3 V					1,9 V		
Ambient temperature range		0 - 40 °C / 32 - 104 °F					0 - 40 °C / 32 - 104 °F		
Safety class		IP II					IP II		
Storage tank volume (l)	heat exchangers (number)	1 x TA 200	1 x TA 400	2 x TA 400	1 x TA 800	2 x TA 800	1 x TA 400	1 x TA 800	2 x TA 800
50	0	■					■		
80	0	■					■		
100	0	■					■		
150	0	■					■		
200	0	■					■	■	
300	0	■						■	
400	0	■						■	
450	0		■						■
500	0		■						■
600	0		■						■
800	0		■						■
1000	0		■						■
1200	0			■					■
1500	0			■					
2000	0			■	■	■			
50	1	■					■		
80	1	■					■		
100	1	■						■	
150	1	■						■	
200	1	■						■	■
300	1	■							■
400	1		■						■
450	1		■						■
500	1		■						■
600	1		■						■
800	1		■	■	■				■
1000	1			■	■				■
1200	1			■	■				
1500	1			■					
2000	1					■			
300	2	■							■
450	2		■						■
500	2		■	■					■
600	2			■					■
750	2			■					■
800	2			■	■				
1000	2			■					
1200	2					■			
1500	2					■			

TA = Titanium anode

All information supplied without representations or warranties of any kind, either express or implied. The system component data indicated are target values without engagement supplied only for guidance purposes and based on the assumption that the tanks have been manufactured in compliance with DIN 4753. The observance of the defined limit values concerning the quality of the enamel coating (standard protection current consumption) and, in the case of stainless steel, of a chromium content of at least 16 % is of particular importance. Any metallic parts additionally installed in enamelled storage

tanks (heat exchangers, electric heating inserts, etc.) must be insulated and, if applicable, be equipped with a trimming resistor for the electrical potential. If the tank is equipped with several anodes, it must be ensured that the anodes are uniformly distributed inside the tank. The height/width ratio of the tank must not exceed a maximum limit of 3:1. Binding system component recommendations are imperatively contingent upon preliminary laboratory measurements and tests of the tank in question by Magontec.

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