

Correx® Impressed Current Anode Systems

Recommended system components

Program overview		For enamelled steel				For stainless steel			
Potentiostat		UP 2.3-919		MP 2.3-900		UP 1.9-924		MP 1.9-900	
Type		Plug-in potentiostat		Plug-in potentiostat		Plug-in potentiostat		Plug-in potentiostat	
Mains voltage		230 V		230 V		230 V		230 V	
Frequency		50 / 60 Hz		50 / 60 Hz		50 / 60 Hz		50 / 60 Hz	
Nominal current		100 mA		50 mA		180 mA		100 mA	
Setpoint potential		2,3 V		2,3 V		1,9 V		1,9 V	
Ambient temperature range		0° - 40° C		0° - 40° C		0° - 40° C		0° - 40° C	
Safety class		IP II		IP II		IP II		IP II	
storage tank volume (l)	Heat exchangers (number)	UP 2.3-919 1 x TA 400	UP 2.3-919 2 x TA 400	UP 2.3-919 1 x TA 800	UP 2.3-919 2 x TA 800	MP 2.3-900 1 x TA 200	UP 1.9-924 1 x TA 800	2xUP1.9-924 2 x TA800	MP 1.9-900 1 x TA 400
50	0					■			■
80	0					■			■
100	0					■			■
150	0					■			■
200	0					■	■		■
300	0					■	■		■
400	0					■	■		■
450	0	■						■	
500	0	■						■	
600	0	■						■	
800	0	■						■	
1.000	0	■						■	
1.200	0		■					■	
1.500	0		■					■	
2.000	0		■	■	■			■	
50	1					■			■
80	1					■			■
100	1					■	■		■
150	1					■	■		■
200	1					■	■	■	■
300	1					■	■	■	■
400	1	■						■	
450	1	■						■	
500	1	■						■	
600	1	■						■	
800	1	■	■	■				■	
1.000	1		■	■				■	
1.200	1		■	■				■	
1.500	1		■					■	
2.000	1				■			■	
300	2					■		■	
450	2	■						■	
500	2	■	■					■	
600	2		■					■	
750	2		■					■	
800	2		■	■				■	
1.000	2		■					■	
1.200	2				■			■	
1.500	2				■			■	

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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Correx® impressed current anode systems

Electronically controlled
corrosion protection for
storage water heaters

Although all data have been thoroughly checked we cannot assume any warranty in this respect. All product statements are subject to change without notice.
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Safe corrosion protection for your hot-water storage tank

Electronically controlled with Correx® impressed current anode systems



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.

Impressed current anode systems – 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 via a titanium electrode into the tank.

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.

The principle of the Correx® impressed current anode system

To be efficient, the protective current must be perfectly adapted to 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 by means of a mixed-dioxide-coated titanium electrode which is practically wear-free throughout its entire service life.

Electronic measurement and exact regulation of the current

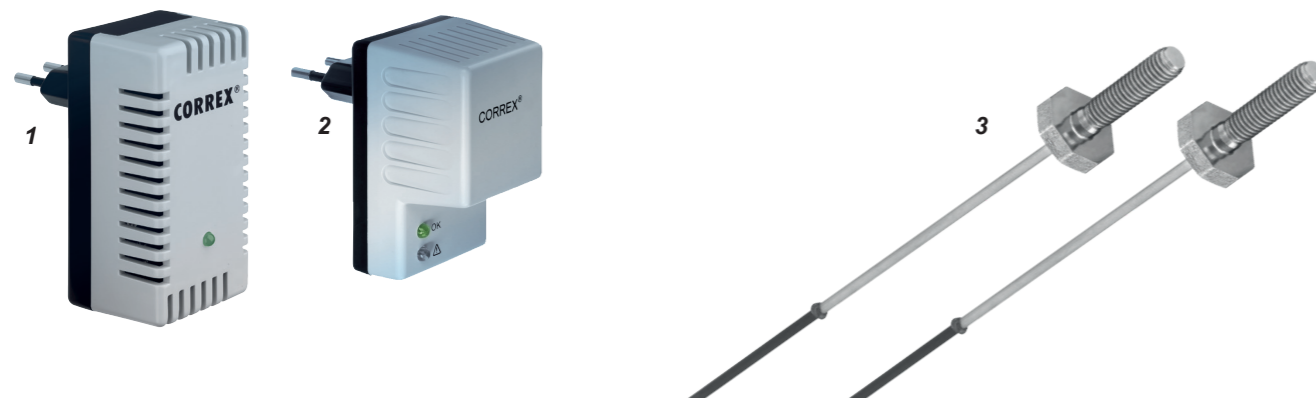
The current is alternately measured and injected at millisecond intervals:

- 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 installation by specialists

Correx® impressed current anode systems are supplied with all parts required for the installation. The potentiostat and the electrode are simply connected by means of the corresponding cable, and the accessories supplied permit hole mounting as well as socket mounting of the impressed current system.



- 1 Measurement and control potentiostat Correx® UP
- 2 Measurement and control potentiostat Correx® MP
- 3 Mixed-oxide-coated Correx® titanium electrodes (TA)
- 4 The complete mounting kit for fast installation with detailed operating instructions

