

WaterMATIC KalGUARD⁺ Limescale Water Treatment

Model : KalGUARD⁺ 28 - is a new system (**patent pending**) combining an enhanced electrolytic controller driving a dedicated and specialised zinc alloy electrode unit. This will allow the effective management of all water hardness levels including extreme and severely hard water situations. The system is a totally environmentally friendly non-polluting means of permanent water treatment.

The KalGUARD electrode unit is an enhanced zinc based sacrificial cathodic cell designed to work in conjunction with a sophisticated controller to maintain the desired water treatment parameters using 'feed-back' electronics.



The specialised electrode unit is designed to be replaced after a 5 to 8 year service period on continuous dosing applications, or in 8 to 10 years with added proportional flow sensing or with a timer switch to maximise operating time in intermittent demand situations. (Separate Data will be provided for these options).

It will protect complete water pipe systems by eliminating the formation of, and affecting the removal of existing, limescale encrustation throughout thereby ensuring continued maximum thermal efficiency and long major equipment life. This will also assist towards compliance with carbon emission regulations.



It does not use any chemicals or salt, nor any unusual electrical or electronic effects.

The product specification for system/installation design purposes is :-

Manufacturer : **Sentinel Performance Solutions Group, U.K.**

Product Code : **KalGUARD⁺ 28 controller & electrolytic cell**

To suit Pipe Size : 28mm O/D (1" BSP)

Controller : Input either 230/240v 50 Hz Single Phase (EC) or 110/120v 60 Hz. Single Phase (USA), fitted with a 2 metre cable with a moulded plug. Controls designed to be 'tamper-resitant' inside a latched locked enclosure

Design Output : 0 – 12 v, 1 - 300 mA d.c, conductivity independent, with constant current amplifier. Output provided through an installed 3 metre twin core flexible cable fitted with an off-set 2 pin screw down connection.

Features : Provides visual data to set and monitor correct level of treatment, with LEDs showing power on, fault state with alarm, anode life remaining, and secondary circuit output confirmation.

Dimensions : 193 mm (W) x 103 mm (D) x 180 mm (H)

Controller Weight : 1.32 kg incl. cables

Test Regulations : EMC – EN 50081-1 50081-2

Construction : The control box is a standard IP65 ABS plastic enclosure with a transparent front cover to allow visual access to the meter display. The controls are inside the front cover and allow the unit to be used for a wide range of water pipe installations. The box is suitable for wall mounting, and comes with a 2 metre power cable and a 3 metre secondary control cable for connection to the electrode unit.

Electrode Unit : to suit 1" BSPT steel pipe or adapter for 28 mm copper pipe

Connection : 1" BSP Female Iron

Pipe Size : BSPT steel pipe or adapter for 28 mm copper pipe

Connection : 1" BSP Female Iron

Design Flow : 0 – 1.06 l/s (64 l/min or 3.84 M³/hr) with $\Delta p = 0.13$ bar

$\Delta p = \frac{1}{2}$ Bar Flow : 2.17 l/s (130 l/min or 7.8 M³/hr)

Length : 450mm

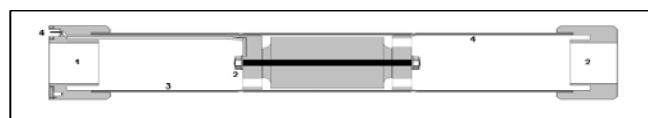
Diameter : 54 mm (Main body)

Weight : 3.10 kg

Test Regulations : BS EN ISO 9002 (1994) accredited; (UK) WRAS Certification 0706038; (Germany) TÜV Nord Prüfprogramm Cert. Nr. 2.4-498/01

Materials Used : Outer Body - Copper BS 2871 Pt.1 Table X
Anode Support - Grilamid L20G Natural
Anode Material - Pure Zinc with Magnesium BS 6561

Construction : The anode assembly is pressed into the copper body and locked into position. The body diameter is reduced at the ends and brazed to the end connectors. The unit cannot be opened.



1 Meter
2 Pipe Connection
3 Zinc (Anode)
4 Copper Wall (Cathode)

Patent Pending

NB : With on-going product improvement, we reserve the right to change or modify the specification without prior notice being given. Where pertinent, users will be advised and revised specification sheets issued.

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Technical Specification subject to change (23/6/08 – MJP).