



## **CALCITE GRAVEL REACTION VESSEL, PRESSURE-RESISTANT**

### **WALLACE & TIERNAN® PROCESS SYSTEMS**

Calcite gravel is used for the neutralization of hydrochloric acid which appears in water when you add chlorine gas. As the calcite gravel dissolves, there is a formation of hydrogen carbonates and therefore an increase in acid capacity.

The natural solubility of calcite gravel in water is very low. Only so much calcite gravel can be dissolved in respect to how much hydrochloric acid from the chlorine solution is added. In this way, the process is regulated automatically.

### **RANGE OF APPLICATIONS**

Calcite gravel is used to treat swimming pool water when chlorine gas is used as a disinfectant. Using calcite gravel, the pH value is regulated, hydrochloric acid is bonded to the calcium carbonate, and the acid capacity is stabilized. The process is especially suitable for soft refill water with a high pH value.

### **FEATURES**

- Natural process for the neutralization of acid
- Robust construction, inside coated vessel, consistent against chlorine compounds
- Due to the process, running dry is not possible
- Sufficient contact time by means of a bottom-up flow
- Visual fill level gauge

### **Key Benefits:**

- Stable acid capacity by using a natural raw material, reducing the amount of ready-made solutions in the pool water
- Partial or complete substitution of the use of sodium hydroxide
- Good flocculation results due to stable acid capacity
- Economical thanks to the inexpensive raw material
- Two vessel sizes available and therefore suitable for all swimming pool filter systems
- Easy installation due to solid laminated vessel connections
- High level of safety by means of pressure relief valve according to pressure equipment directive 2014/68/EU, operation pressure max. 2 bar

## HOW IT WORKS

The calcite gravel reaction vessel is additionally installed into the chlorine solution line between the chlorine gas injector and the point of application.

The concentration of chlorine solution is up to 2.0 g/l of chlorine gas with a pH value of approx. 2. Due to high acidity, the hydrochloric acid and calcite gravel react with each other very quickly.



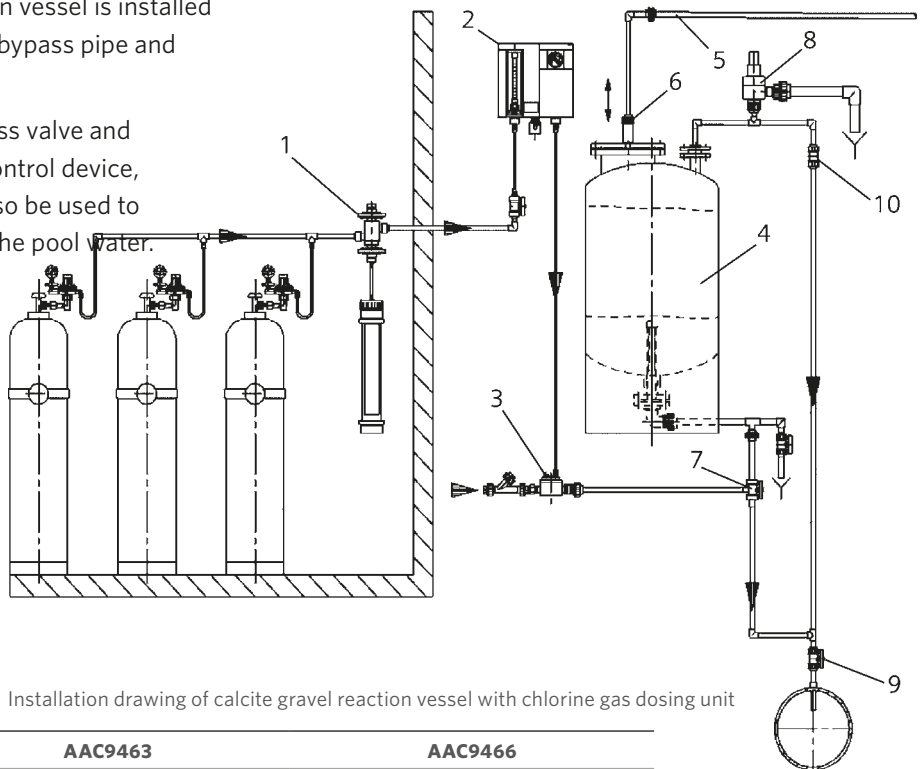
After a short delay period, the acid is fully neutralized by the calcite gravel.

As a standard, the calcite gravel reaction vessel is installed into to the chlorine solution line with a bypass pipe and manual 3-way changeover valve.

In the version with a motor-driven bypass valve and in combination with a measuring and control device, the calcite gravel reaction vessel can also be used to automatically regulate the pH value of the pool water.

### Legend

- 1 Chlorine gas supply
- 2 Vacuum gas feeder V10k
- 3 Injector
- 4 Calcite gravel reaction vessel
- 5 Vent line
- 6 Ventilation and venting valve
- 7 3-way ball valve (manual or motor-driven)
- 8 Safety valve
- 9 Injection
- 10 Check valve



Installation drawing of calcite gravel reaction vessel with chlorine gas dosing unit



Detail safety valve

Technical data	AAC9463	AAC9466
Volume	200 l	300 l
Calcite gravel capacity	approx. 310 kg/200 dm <sup>3</sup>	approx. 470 kg/300 dm <sup>3</sup>
Capacity (between MIN and MAX)	200 kg	350 kg
Max. operating pressure	2 bar	2 bar
Max. flow	1250 l/h	2500 l/h
Diameter	612 mm	612 mm
Height	1225 mm	1600 mm
Empty weight	40 kg	50 kg
Operating weight	approx. 540 kg	approx. 770 kg



Auf der Weide 10, 89312 Günzburg, Germany

+49 (8221) 904-0 [www.evoqua.com](http://www.evoqua.com)

Wallace & Tiernan is a trademark of Evoqua, its subsidiaries or affiliates, in some countries.

All information presented herein is believed reliable and in accordance with accepted engineering practices. Evoqua makes no warranties as to the completeness of this information. Users are responsible for evaluating individual product suitability for specific applications. Evoqua assumes no liability whatsoever for any special, indirect or consequential damages arising from the sale, resale or misuse of its products.

© 2016 Evoqua Water Technologies GmbH Subject to change without notice WT.055.401.000.DE.PS.0716

### Wallace & Tiernan® Products worldwide

**Australia**  
+61 3 8720 6597  
info.au@evoqua.com

**Canada**  
+1 905 944 2800  
canadainfo@evoqua.com

**China**  
+86 21 6057 7247  
sales.cn@evoqua.com

**France**  
+33 1 41 15 92 20  
wtfra@evoqua.com

**Germany**  
+49 8221 9040  
wtger@evoqua.com

**Singapore**  
+65 6830 7165  
sales.sg@evoqua.com

**UK**  
+44 1732 771777  
info.uk@evoqua.com

**USA**  
+1 856 507 9000  
wt.us@evoqua.com