AQUACURE® Iron Removal

AQUACURE Iron Removal Systems

AQUACURE Iron Removal Systems are custom built, application specific water treatment systems for the reduction of iron and manganese in water. As water chemistry can vary widely from site to site or bore to bore, each system is tailor made to suit the needs of each individual water treatment application in order to ensure appropriate outcomes and the best long-term system performance.

The basic philosophy for all AQUACURE systems is that they shall be designed for reliable operation and long service life, and they should be fully automatic and designed to require minimal maintenance and minimal user input.

Typical System Design

For many applications the basic components of an AQUACURE Iron Removal System may consist of an AQUACURE DMI Filter loaded with DMI-65 media plus an integrated in-line chlorine dosing system. Normally configured for continuous regeneration for consistent and effective long-term performance, and regular automatic backwash for sediment and precipitate removal to drain, this typical configuration is an efficient and effective approach for reliable removal of high levels of iron and manganese from many source waters.

What is DMI-65?

DMI-65 is an advanced oxidation water filtration media. With correct system design, AQUACURE Iron Removal Systems with DMI-65 are well suited for production of filtrate with iron and manganese levels that comply with Australian drinking water standards and/or are reduced to undetectable levels (as required, to suit various applications). The DMI-65 media has a high capacity to filter out suspended solids down to 10µm nominal and can be used for mechanical filtration and turbidity reduction in addition to its iron and manganese reduction potential. DMI-65 media can also remove Arsenic, Aluminium and Hydrogen Sulphide under certain conditions.

Operating Parameters

The normal operating parameters for an AQUACURE Iron Removal System incorporating an AQUACURE DMI Filter are as follows:

Raw water pH (operating range)	5.8 - 8.6
Water temperature and ambient temperature (operating range)	4°C - 35°C (Media = <45°C)
Media bed depth	Minimum 600mm
Freeboard	Minimum 40% of bed depth
Regeneration	Continuous Regeneration, liquid chlorine (sodium hypochlorite)
Backwash duration	Typically <30mins*
Backwash frequency	Typically 1-3 days*
Media attrition	1-5% per annum*
Media service life	5-8 years before media reload*
Maximum practical limit of iron (Fe++) or manganese (Mn++) in raw water	Up to 20ppm. (Up to 50ppm possible under certain conditions.)*
Maximum practical limit of hydrogen sulphide (H2S) in raw water	Up to 5ppm

*depending on raw water quality

*Please contact Aquacure on **07 3277 6696** or water@aquacure.com.au for more information.*

DMI-65 is a registered trade name of Quantum Filtration Medium Pty Ltd.