DosaCHEM

CHEMICAL DOSING UNITS

innovation
solution
value

Bioaction

Air & liquid phase odour abatement technology

DosaCHEM
CHEMICAL DOSING UNITS

CDU2.5 Chemical dosing unit

STORAGE AND HANDLING OF TOXI

Do your current storage systems for chemical dosing meet the requirements for:

- **HAZARDOUS CHEMICAL STORAGE?**
- **ENVIRONMENTAL SAFEGUARDS?**
- **O.H.&S. REQUIREMENTS?**

Chemical dosing of iron salts Ferric Chloride ($FeCl_3$) and Ferrous Chloride ($FeCl_2$) or MHL, Magnesium Hydroxide Liquid $Mg(OH)_2$ in sewer networks is a well-recognised mitigation method for the treatment of odour and corrosion problems caused by gases such as Hydrogen Sulphide (H2S) and Volatile Organic Compounds (VOCs).

The chemicals used in dosing are highly toxic and require specialised storage -- facilities and delivery systems for the sewer.

INDUSTRY SOLUTIONS

- SEWERAGE NETWORK
- WASTEWATER TREATMENT PLANTS
- DRINKING WATER
- FOOD MANUFACTURING
- MINING

		Tank Capacity	Chemicals able to be stored		Vessel	Outside Dimensions			Weight
Series	Model	Litres (000)	Ferrous Chloride	MHL	Material	Width ***C*** (m)	Length ***D*** (m)	Height ***A*** (m)	Tonne
dosaCHEM™	CDU2.5	2.5	✓	✓	PP	2.4	2.4	2.8	7.5
	CDU5.0	5.0	✓	✓	PP	2.4	3.5	2.8	10.2
	CDU8.0	8.0	✓	✓	PP	2.4	5.0	2.8	14.1
	CDU10.0	10.0	✓	✓	PP	2.4	6.0	2.8	17

Chemical dosing systems

O.H.&S. Compliance

Complete operator safety system package included;

- Safe delivery process automation, which stops the operator unloading unless all systems are OK.
- Safety shower and eye wash with water pressure sensor.
- Wash-down hose-real with water pressure sensor.
- Mechanical fill level indicator.
- Emergency fill-pump cut off and emergency stop button.
- Fill nozzle isolated behind a Perspex cover.
- All dosing pump and pipe systems are isolated behind the Perspex barrier in a separate cabinet.
- Chemical proof tank and bund.
- The operator is isolated from the chemical area during filling.
- Internal drainage sump to isolate chemicals from the operator.
- Electrical control cabinet separated from the chemical storage area to minimise risk of fire.
- Lights and extraction fan turn on automatically upon entry.

IC SUBSTANCES – AS4452-1997

Other chemicals used in industries like mining and manufacturing also require secure chemical dosing facilities to house dangerous chemicals.

Bioaction's Chemical Dosing Unit (CDU) has been developed in consultation with major Australian water utilities and others to deliver a state of the art facility for the safe and secure bulk storage and handling of dangerous chemicals for the municipal water and waste-water markets as well as other industries. The Bioaction range of chemical dosing units has been design to comply with all the standards defined in AS4452-1997.

Door mounted safety shower and eye wash.

flexible solutions for odour & corrosion control

Environmental safety is paramount when storing toxic chemicals. The CDU building is completely lined with chemical resistant PE/HDPE and the chemical bund is made from the same, preventing the escape of any chemicals in the event of an internal spill. Additionally all critical internal components are constructed from chemical resistant plastics. The CDU's connections to water, power and supply lines to infrastructure are housed in an internally accessed subterranean services port to prevent access externally.

The valve located in the delivery bay bund is automated by the CDU's controls to close when the CDU is accessed and on a timer delay open again when the operator has exited the building thus preventing any chemical escape should a tanker failure occur.

The CDU is secured by reinforced concrete walls and powder coated 316 stainless steel security doors.

The chemical tank has been designed as a low rise tank make the most efficient use of the internal space and reduce the risk of spurting chemical in the event of tank rupture.

All SCADA transmission requirements are catered for including:

- Level indicator in the tank for continuous monitoring via a 4-20mA signal.
- Dosing pump fault diagnostics
- Door open security signal
- High and low level switches in the tank
- Actuated valves in the tank bund and the operator control bund are controlled via PLC

The Bioaction CDU range has been optimised for road and rail transport to site by using efficient sizing and by constructing the units from lightweight reinforced concrete. This enables rapid transport to site and with only small cranes required due to the lightweight easy off loading and placement onsite is achieved.

INNOVATION - CUSTOM DESIGN SERVICE

Bioaction will work with contractors and key clients to design and develop a solution for each specific application to meet strict project criteria. We use in-house process design programs to develop the optimal system.

SOLUTION - SYNERGISTIC ENGINEERING

Utilising a range of treatment technologies including biological, absorption, oxidization, and chemical dosing. The individual technologies in the Bioaction design suite compliment each other.

VALUE - SMART DESIGN

Bioaction designs systems with freight and construction logistics key to the development process delivering lower overall project costs.

UNDERSTANDING THE INDUSTRY AND MEETING ITS EXPECTATIONS

All process industries are required to operate under strict controls from environmental agencies and regulators like the EPA regarding development and land use. Many of these controls relating to disposal of waste and the production and venting of gaseous emissions to atmosphere consider how the toxic and odorous nature of these emissions may affect the community. Bioaction specialise in the analysis of the specific requirements of each business to tailor systems that deliver the required outcomes in a timely and cost effective manner.

BIOACTION SERVICES

- DESIGN
- ENGINEERING
- CONSTRUCTION
- ELECTRICAL
- ENVIRONMENTAL
- MAINTENANCE
- REFURBISHMENT
- FILTER MEDIA

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AWA australian water association

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W-I-O-A Australia EXCELLENCE IN OPERATIONS

Water Environment Federation the water quality people

APPROVED COMPANY ISO 9001 Quality Management Systems QMS

APPROVED COMPANY ISO 14001 Environmental Management Systems QMS

APPROVED COMPANY AS/NZS 4801 OH&S Management Systems QMS

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