

MCBERNS ZC-SERIES ODOUR FILTER UNITS



ZC1200

FEATURES

- **LARGER CAPACITY ODOUR FILTER**
- **ELIMINATES ODOURS FAST BY CONTINUOUS ADSORPTION**
- **REDUCES CUSTOMER COMPLAINTS**
- **ADSORBS & TREATS HIGH LEVELS OF H₂S, ACIDIC GASES & VOCS**
- **REPLACEMENT CARTRIDGES**
- **ROBUSTLY CONSTRUCTED TO SUIT THE HARSH ENVIRONMENT**
- **COMPACT & AESTHETICALLY DESIGNED TO BLEND INTO THE SURROUNDING AREA.**

The McBerns ZC-Series Filter Range has a proven reputation for treating odours fast and for being cost effective. The ZC series filters achieve up to 99% H₂S gas removal through adsorption and treatment processes when installed and operated in accordance with product specifications.

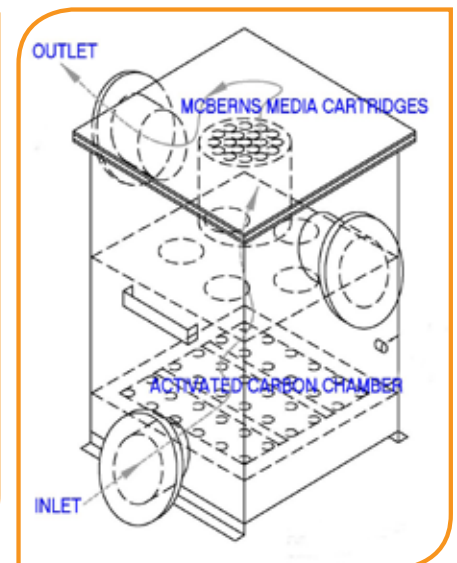
The toxic gases and odorous compounds, including hydrogen sulphide gas, acidic gases and volatile organic compounds (VOC's) are adsorbed and treated by the mixed media filters. The filters utilise a combination of natural minerals, oxidising agents and micro-porous, impregnated, pelletised activated carbon media.

They are designed for trunk sewerage systems, sewer air release valves, manholes, pump stations, packaged treatment systems, sewer pressure main discharge MH's and treatment plants.

In the ZC Series Filter Range there are five sizes to suit almost any situation or odour problem. They are modular and can be fitted as stand alone or installed in parallel if required. The units are fully rechargeable with our specially formulated McBerns cartridges and filter media.

The **ZC300, ZC1200, ZC1500** and **ZC4000** Units are constructed from stainless steel with a combination of uPVC replaceable cartridges and an activated carbon treatment zone.

All ZC odour filters have an anti-corrosion internal coating with stainless steel fixtures and the outlets/drain valves are a combination of uPVC and Polyethylene(PE).



MCBERNS ZC-SERIES ODOUR FILTER UNITS

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ZC-300; ZC1200 & ZC1500 ODOUR FILTER UNITS

The ZC300, ZC1200 and ZC1500 are passive units capturing large gas surges which occur with high volume sewage flows. They can be used as an extraction system in combination with a 3/phase 'ExE' fan. The ZC-series filters are capable of handling air flows of 20l/s up to 260l/s plus and high H₂S ppm. They are a modular design and can be joined parallel to increase overall treatment capacity.

ZC300 ODOUR UNIT: Airflow from 20 to 100 l/s(passive)
DIMENSIONS: 800mmsq x 1230mm high
WEIGHT: 380kgs
CONSTRUCTION: powder coated stainless steel



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ZC1200 ODOUR UNIT: Airflow from 20 to 200+l/s(passive)
DIMENSIONS: 1100mmsq x 1300mm high
WEIGHT: 850kgs
CONSTRUCTION: powder coated stainless steel



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ZC1500 ODOUR UNIT: Airflow from 20 to 260+l/s(passive)
DIMENSIONS: 1100mmsq x 1580mm high
WEIGHT: 1050 kgs
CONSTRUCTION: powder coated stainless steel



INTERNAL LINING

The interior of the ZC Filters are sprayed with a super tough polymer, which is chemical resistant. The lining reduces the corrosive effect of H₂S gases on the inside of the odour filters making them stronger and longer lasting.



"EXE" EXTRACTION FAN WITH COVER

Used where there is a high displacement of air and excessive odours within a pump station. A 3-phase "EXE" extraction fan can be attached to the filter which assists in the fast removal and treatment of the H₂S gases, this increases the filters effectiveness.



MCBERNS ZC-SERIES ODOUR FILTER UNITS

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ZC4000 ODOUR FILTER UNIT



The ZC-Series Odour Filters Units have proven to be excellent at mitigating H₂S gas for both high concentrations and high air flow rates. We have now released our biggest odour unit the ZC4000.

The ZC4000 is suitable for much larger applications in municipal wastewater, mining, commercial and industrial sectors, wherever odour is a problem. It has been designed to manage odours at large sewage pump stations, treatment plants, package treatment plants, trunk sewers, discharge manholes, vent stacks or other large maintenance structures.

The ZC4000 will also be available for temporary applications while construction or maintenance is in progress. We currently have a ZC4000 unit operational at a large water authority in S.E.Qld whilst a major pump station upgrade is being undertaken.

Housed in a half-sized shipping container which is approximately 3m x 2.4 m x 2.4m. The ZC4000's advantage is, it comes complete and can be delivered and connected quickly, with little or no disruption to operations. We are also offering short or long term hire of the ZC4000 mobile units.

FEATURES

- TREATS HIGH TO EXTREME LEVELS OF H₂S
- HIGH AIRFLOW RATES IN-EXCESS OF 200L/S
- FAST & EASY TO INSTALL
- PASSIVE OR EXTRACTIVE SYSTEMS
- PORTABLE & RELOCATABLE
- LOW VISUAL IMPACT
- COLOUR CHOICES
- VANDAL PROOF
- SUITABLE FOR LOW SECURITY SITES

ZC4000 ODOUR UNIT: Airflow over 200lps
DIMENSIONS: 3000mm X 2400mm X 2400mm
WEIGHT: 3500kgs

| ZC-SERIES ODOUR CONTROL UNITS TECHNICAL SPECIFICATIONS | | | | | | | | | | | |
|--|---------------------------------|----------------------------------|---------------|--------------------|------------------------------|----------------------|-----------------------|-----------------------------|-------------|----------------------------|---------------------------------|
| INLET | | | OUTLET | | | | | | | | |
| FILTER TYPE | Av.H ₂ S conc.(ppmV) | Max.H ₂ S conc.(ppmV) | AIRFLOW (l/s) | PRESSURE LOSS (Pa) | H ₂ S conc.(ppmV) | WIND ASSISTED OPTION | EXTRACTION FAN OPTION | DIMENSIONS (mm) | WEIGHT (kg) | MEDIA REPLACEMENT (months) | INSPECTION FREQUENCY |
| ZC300 | 30 | 500 | 20 - 100 | 500 | UP TO 99.9% | NO | YES | 800mmSq X 1230mmH | 380 | 24 - 36 | PASSIVE = 3 WIND ASSISTED=1 |
| ZC1200 | 50 | 1000 | UP TO 200 | 500 | | NO | YES | 1100mmSq X 1300mmH | 850 | 24 - 36 | PASSIVE = 3 WIND ASSISTED=1 |
| ZC1500 | 170 | 1000 | 200 PLUS | 650 | | NO | YES | 1100mmSq X 1570mmH | 1050 | 24 - 36 | PASSIVE = 3 FAN ASSISTED = 1 |
| ZC4000 | 200 | 1000 | 260 PLUS | 1000 | | NO | YES | 3000mmL X 2400mmW X 2400mmH | 3500 | 24 - 36 | PASSIVE = 3 FAN ASSISTED = 1 |

MCBERNS ODOUR LOGGING DATA

Our latest logging data collected was in December 2014. The data was collected simultaneously, so data comparisons could be verified.

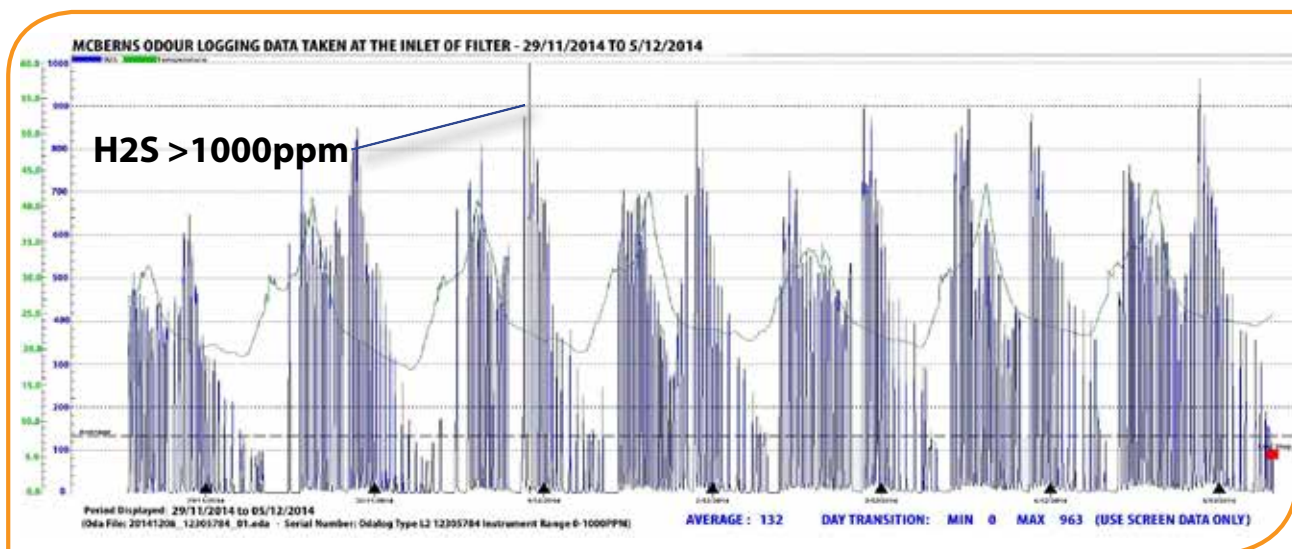
From the inlet side of a ZC1200 there were spikes of H2S in excess of 900ppm, while from the outlet side the H2S levels were reduced to 0ppm. We have been regularly monitoring this site for over 18 months and the data collected has been consistent over this period of time.

The filter was installed in June 2013. The *media has not* been changed in the past 18 months and is still capturing and treating the H2S & VOC's at very high concentrations. The outlet readings are still recording zero H2S escaping from the filter.

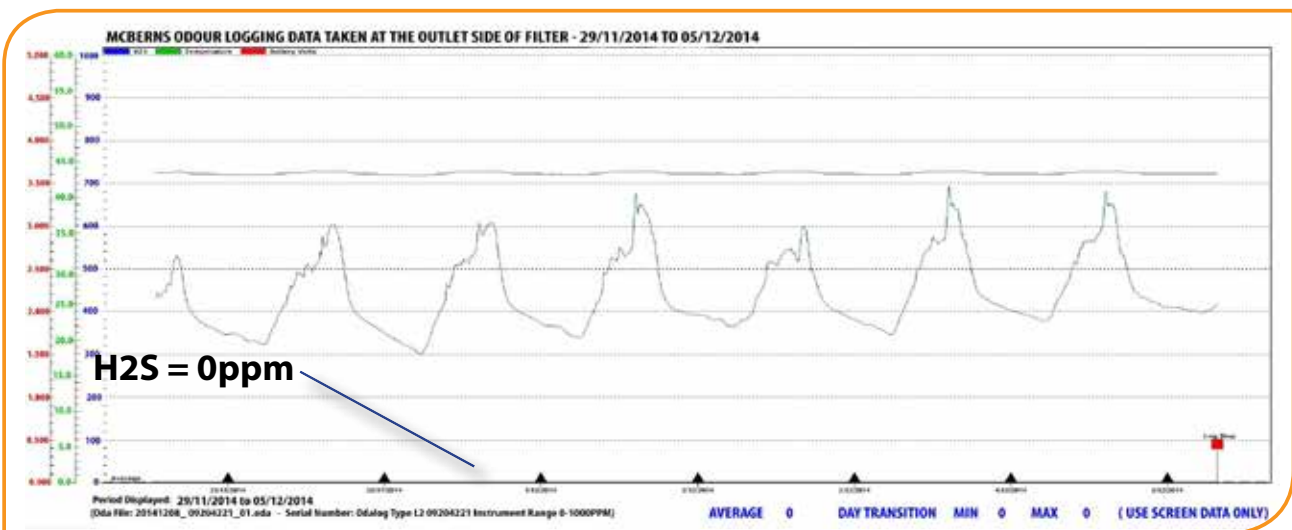
The McBerns odour filters are designed to achieve a minimum H2S gas reduction of greater than 95% at the specified gas concentration and for a nominated contact time of 3, 5 or 10 seconds depending on the waste stream air flow rate, while operating within a temperature range of 15 – 45°C.



ODOUR LOGGER DATA ON FILTER INLET



ODOUR LOGGER DATA ON FILTER OUTLET



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