

# LIFTING STATIONS. A NEW WAY OF PLUMBING HIGHER.



## INTRODUCTION

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Plumbing is an integral part of all building or renovation projects, regardless of whether a project falls into the commercial, residential, healthcare, or hospitality sector.

In this whitepaper, with recent advances in technology, we offer alternative solutions for bigger domestic and commercial projects where the pumps need increased reliability and high performance in the form of Lifting Stations.

## AN OVERVIEW DETAILING

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- The use of Lifting Stations
- The variations available to ensure drainage requirements are met
- The benefits for your next new construction or renovation project – either residential or commercial
- The type of project where Lifting Stations might be considered



## LIMITATIONS TO CONVENTIONAL PLUMBING IN LARGE SCALE RENOVATION PROJECTS

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### Inflexibility

When faced with a refurbishment of existing facilities, the design team involved are often left with limited design options as gravitational plumbing cannot be easily relocated. This can often be a source of frustration and hindrance to the execution of the renovation plan.

### Inaccessibility

There may be constraints due to physical barriers such as core drilling post-tensioned slabs, or inaccessibility to pipework hidden behind walls, under floor boards or tiles.

There may also be constraints due to the heritage-listing of existing buildings where alteration and disruption of the building fabric must be kept to a minimum



## Inappropriate application

Whilst small bore Macerators and Grey water pumps are ideal for small residential and commercial applications, their size and performance may not have the ability to take the load from multiple fixtures. Granny flats, large scale residential and commercial projects may deliver heftier volumes of grey and black water waste at hotter temperatures than small bore Macerator and Grey water pumps can cope with.

## ALTERNATIVE SOLUTION

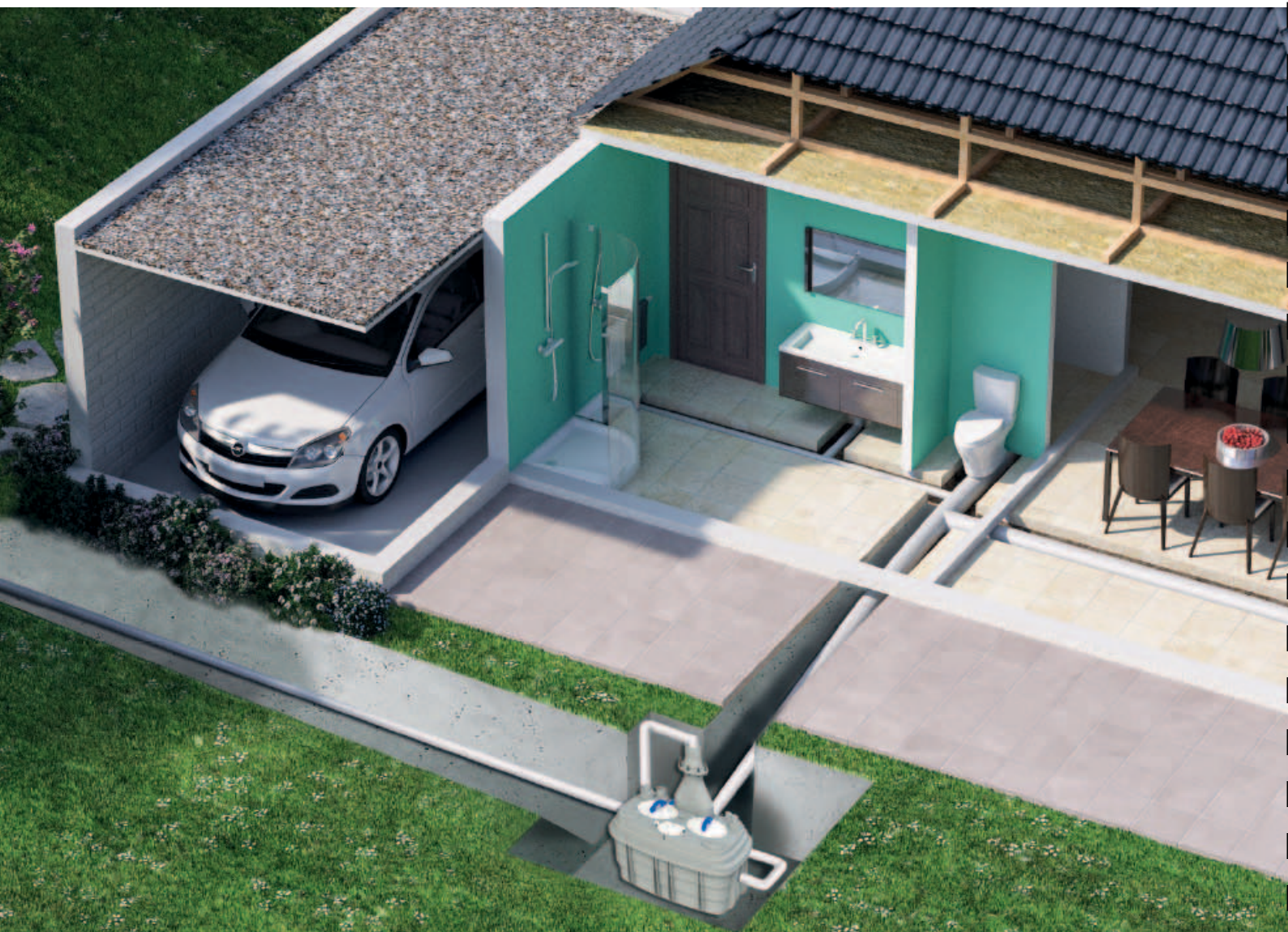
In response to the drawbacks and constraints accompanying conventional plumbing for large scale renovation projects, key manufacturers have developed an innovative range of efficient, reliable, high performance Lifting Stations that can be used for discharging black and grey waste water at the same time.

Lifting Stations will assist designers, engineers, plumbers and builders to overcome some of the common plumbing restrictions that may be encountered when considering the viability of a project. When attached to fixtures that drain below the sewer line, Lifting Stations elevate and evacuate the waste water to the nearest drainage point on the main drain line reducing the need for expensive core drilling or digging up of concrete slabs. With numerous inlet points sized from 40mm to 100mm, Lifting Stations can accept waste from multiple fixtures including toilets, basins, showers, baths, urinals, bidets, sinks, dishwashers, laundry tubs and washing machines.

“Adding an end of trip facility to the basement of the high-rise office block was made possible by the use of a Lifting Station.

We were able to connect five toilets, six basins, four showers and a urinal to the Lifting Station.

The waste was then transferred to a distant existing drain with minimal disruption.”





These units can also be positioned remotely from the plumbing fixtures to keep projects looking aesthetically pleasing.

Single and twin motor options on Lifting Stations can provide the necessary capabilities for multiple fixtures into one pump. These units can also lift much higher – up to 11 metres, and handle much hotter temperatures - between 70°C and 90°C than domestic small-bore Macerators and Grey water pumps.

Utilising twin motor Lifting Stations means that full commercial or residential premises I.E. commercial kitchens, restaurants, units or single dwellings could be accommodated by just one pump.

Twin motor Lifting Stations utilise a duty-cycle operation ensuring a longer life for the product, with the second motor also acting as a back up in case of redundancy.

They are suitable for a broad range of residential and commercial environments including granny flats and tiny houses, apartments, offices, pubs, clubs, restaurants, laundries, remote accommodation, mining camps and even offshore oilrigs.

**Lifting Stations can generally be broken down into two categories:**

### **Grey Water Lifting Stations**

Dedicated Grey Water Lifting Stations can accept waste water from sinks, basins, showers, urinals, laundries and kitchens.

Able to pump up to 350 litres per minute and able to withstand higher temperatures through to 90°C, they have an ability to pump water to the maximum 11-metres head, or up to 110 metres horizontally from the station.

### **Combination Lifting Stations**

These units can accept both black waste water from toilets together with grey waste water from sinks, basins, showers, urinals, laundries and kitchens.

Able to pump up to 160 litres per minute, single motor options can accept waste from multiple fixtures and are perfect for granny flats or tiny houses or commercial kitchens.

Twin motor options are suited for larger commercial projects and have been able to pump black and grey waste water from up to nine complete ensuites to distant existing sewer points.

Newest technology provides an option for twin motor Vortex pumps. With larger open clearance on discharge lines, these pumps can accept waste from multiple fixtures, black & grey discharging up to 13 litres per second.

The design of the Combination Lifting Station means it must sit below all the fixtures. It can be located in a pit, and with its IP68 rating, it would still operate for up to short periods if accidentally submerged or flooded.



## SUMMARY

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### Why use a Lifting Station?

- It pumps higher and further away
- More efficient and reliable pumps with twin motor system
- It pumps out both black and grey waste water
- It has most number of inlets
- They are suitable for large scale domestic and commercial projects
- Newer technology

### Projects using Lifting Stations

- Medical centers
- End of trip facilities
- Mining camps
- Pubs/clubs/restaurants
- Granny Flats/House extension
- Cafes
- Events -Commonwealth Games, Supercars



## SANIFLO

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For over 60 years, Saniflo has provided architects and hydraulic engineers with the ability to quickly and easily install bathroom fixtures, laundry rooms and kitchens anywhere and without major construction work.

With its reputation for high quality French design and manufacture, Saniflo has earned its position as global leader in plumbing solution manufacturing.

The Saniflo team is constantly innovating and expanding their broad range of high-tech products, which continues to lead and inspire the plumbing industry whilst conforming to the highest environmental and technological standards.

### New Generation Technology

Integrated Macerating Toilets whilst part of European designs for decades, these are relatively new to Australia.

In this innovative design, a toilet bowl has a built-in macerator with a connection point for waste from a hand basin.

Cistern less, the compact unit flushes via a solenoid valve and is Australia's first 6-star WELS rated flushing toilet using just 3 litres for full, and 1.8 litres for half flush.

