



Safety Railing Systems

for Waste Water Treatment



- HIGH CORROSION RESISTANCE, STRENGTH & DURABILITY
- BESPOKE DESIGN SOLUTIONS & INSTALLATION SERVICES AVAILABLE
- LONG LASTING, COST EFFECTIVE COMPLIANT SOLUTIONS



SEPARATING PEOPLE FROM HAZARDS



Waste Water Treatment

Durable and high corrosion resistance; withstands the most severe outdoor exposure

Safety Railing Systems

Kee Safety is a leading global supplier of safety railing components and customised systems for fall protection and safe access solutions to the global water industry - all designed to separate people from hazards.

Waste and Water Treatment Facilities

Water treatment facilities require corrosion resistant, durable, heavy duty solutions to withstand outdoor exposure and everyday use; Kee Safety offers high quality safety railing solutions that easily meet these requirements.

Constructed using KEE KLAMP tubular malleable iron, or KEE LITE aluminium fittings, our systems can both be used for internal and external applications.

An additional optional powder coating can be arranged, or aluminium fittings and tube can be anodised to provide extra corrosion protection for the harshest of environments. They are quick, easy to design and install, and are very cost effective due to the modularity of their parts.

KEE KLAMP Slip-on fittings securely join standard sizes of structural tube into almost any configuration imaginable, utilising the widest range of fittings available on the market today.

Benefits:

- Simple way to create guardrail & handrail
- High corrosion resistance
- Galvanised steel or Aluminium options
- No welding / no hot work permits
- Quick installation / cost effective
- Adaptable to changes in design
- Flexible systems allow on-site alterations



Galvanised slip-on fittings

Innovative and versatile products that are used in the construction of Safety railing systems, handrails and barriers.

The fittings are hot dip galvanised cast iron for optimum corrosion resistance, strength and durability.

Anodised aluminium fittings and tube

Kee Safety LLC has the ability to supply off-the-shelf anodised KEE LITE aluminium fittings and tube. Anodising provides the extra corrosion protection needed for the harsh environments like the Middle East.

Benefits:

- **Durability** - anodised products have an extremely long life span and offer significant economic advantages through maintenance and operating savings.
- **Colour Stability** - exterior anodic coatings provide good stability to ultraviolet rays, do not chip or peel, and are easily repeatable.
- **Easy Maintenance** - scars and wear from handling, installation, frequent surface dirt cleaning and usage are virtually non-existent. Rinsing or mild soap and water cleaning usually will restore an anodised surface to its original appearance.
- **Cost-Effectiveness** - lower maintenance costs offers greater long-term value.
- **Health and Safety** - anodising is a safe process to apply. An anodised finish is chemically stable, will not decompose; is non-toxic; and is heat-resistant. The anodising process is a reinforcement of a naturally occurring oxide process; it is non-hazardous and produces no harmful or dangerous by-products.



Aluminium fittings

Tubular fittings manufactured from a high grade Aluminium Silicon Magnesium Alloy.

The components are strong yet light, and extremely durable even in harsh environments.



Fittings versus Fabrication

If you have never considered using fittings to construct a barrier or guard rail, you will not be aware of the numerous advantages fittings have over fabricated alternatives.

Flexibility: When constructing and installing a welded handrail, the flexibility to make last minute adjustments on site is extremely minimal. All measurements need to be accurate before the construction is made, however there is little margin for error when the rail gets to site. Often small adjustments are required which necessitates expensive and time consuming rework. Fittings are different: there is an inherent tolerance that allows for on-site adjustments, tube can be cut on site to length and no expensive equipment is required to make the guardrail fit together.

Durability: All of our supplied fittings and tube have an extremely high durability factor, given that they are all hot dip galvanised; this consequently gives them greater resistance to rust than if "black" tube is used for welding. Welded tube is usually treated after being set into concrete and so often rusts at ground level. Galvanised tube, which can be powder coated if required, lasts a lot longer.

Adaptability: If a section of railing is damaged on a welded construction, it often requires whole sections to be removed and reworked; this is a time consuming and expensive exercise. When using fittings, the damaged area can easily be removed by simply unscrewing the single section, replacing the damaged area and then retightening the screws to the correct torque.

The vast range of fittings we have available means we can accommodate changes in direction of 5° - 345° degrees.

Aesthetics: Handrails that are fully assembled using fittings portray a uniformed, regular appearance and are industry recognised to be more aesthetically pleasing than many fabricated welded options.



Features of using fittings over fabrication

- Speed and ease of installation
- No welding and no hot work permits required to work on an installation
- Can be adjusted on site to suit local conditions
- Quick to install fittings don't damage any protective coatings applied to the tube
- All fittings are highly corrosion resistant
- Fully flexible construction
- Consistent appearance
- Available off the shelf



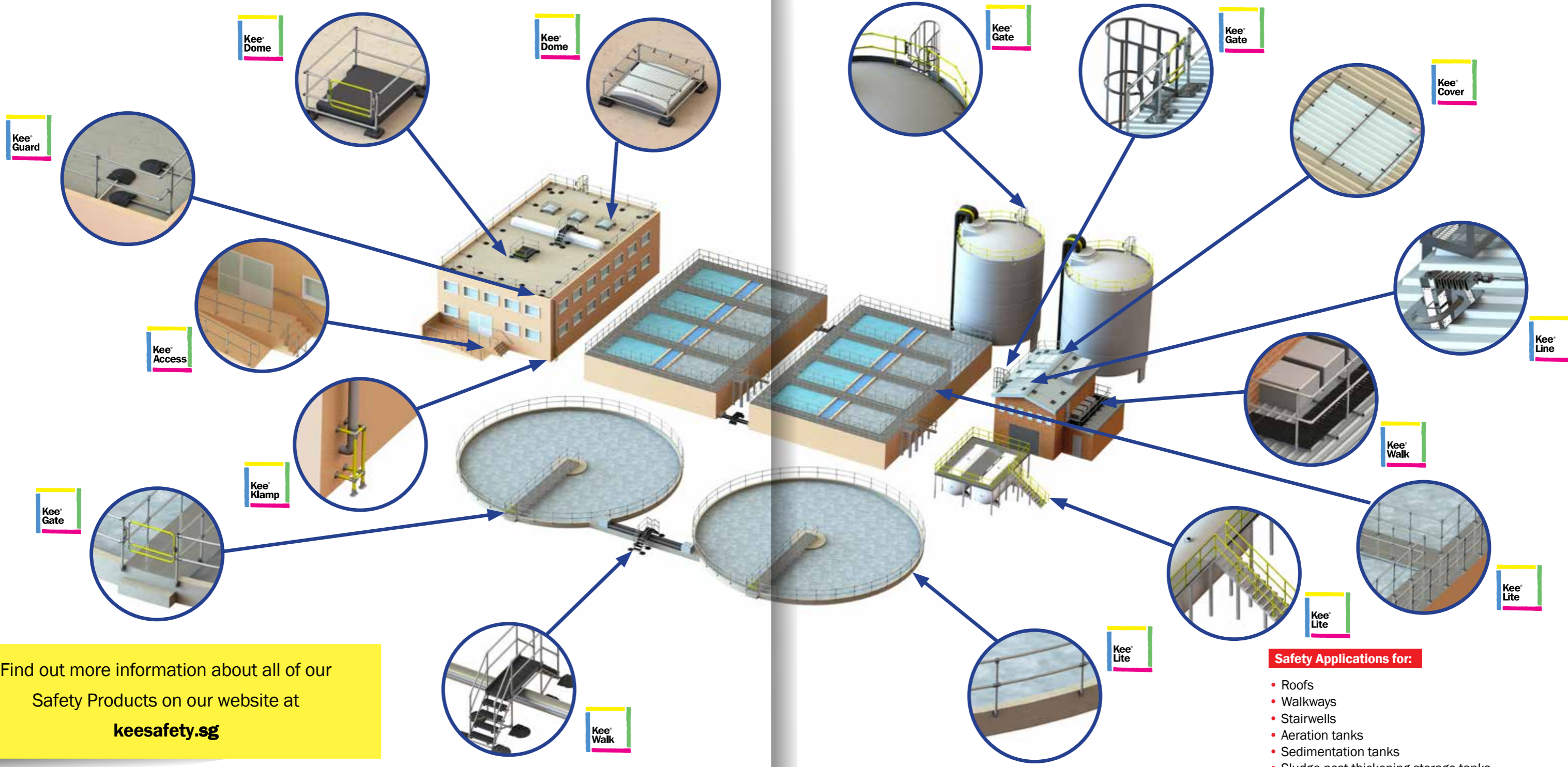
Benefits of using fittings over fabrication

- Long lasting
- Cost effective solution
- Maintenance free
- Reduces risk of corrosion
- Can be reconfigured to suit changing site requirements
- Consistent strength throughout the structure
- Aesthetically more pleasing than many welded options

The widest range of **Aluminium** and **Galvanised** fittings available on the market



Safety Solutions for Waste Water Treatment Plants



Find out more information about all of our Safety Products on our website at keesafety.sg

Safety Applications for:

- Roofs
- Walkways
- Stairwells
- Aeration tanks
- Sedimentation tanks
- Sludge post-thickening storage tanks



Kee Safety Singapore Pte Ltd
38 Ang Mo Kio Industrial Park 2
#01-03, Singapore 569511
T: +65 6385 4166
E: sgsales@keesafety.com
keesafety.sg

KEE KLAMP, KEE LITE, KEE ACCESS, KEEGUARD, KEE DOME, KEE GATE, KEE COVER and KEE WALK are trademarks of Kee Safety Limited. Whilst every effort has been made to ensure the accuracy of the information contained in this brochure Kee Safety Singapore Pte Ltd cannot be held responsible for any errors or omissions. Kee Safety Singapore Pte Ltd reserves the right to alter or withdraw products without prior notice. Kee Safety Singapore Pte Ltd accepts no responsibility for any loss or damage arising from improper use of its products.

©2020 Kee Safety Limited Ltd. All Rights Reserved.
KS/ME_v1_01/20