



WORKING HIGHER & **SAFER**

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THE EVOLUTION OF HIGH RISE WINDOW & FACADE CLEANING HAS ARRIVED

Up until now high rise window and facade cleaning has only been done by professional cleaning companies who specialise in abseiling, skylifts, and for smaller buildings have expensive scaffolding implemented or the use of boom and/or other lifting equipment.

It has been said that high rise window cleaning is one of the six most dangerous professions. Further-

more due to the expense these tasks are done less frequently leaving windows becoming dirty for longer periods of time.

With the innovation of KTV Working Drone and the development of this solution using drones eliminates the need for rope access technique and skylifts making it a safer, more efficient and cost effective solution than the tradition methods.

SETTING THE STANDARD FOR WORKING DRONES

KTV Working Drone evolved out of the KTV Group which was founded in 1992 by Kennet Nilsen. KTV Group have more than 30 years experience with facade and window cleaning and are experts in their field.

KTV Working Drone originated from an idea to find an innovative and efficient way to clean facades and windows. This was back in 2015. A lot of mods were needed to make the drone work properly for cleaning, also commercial.

Fast forward the result is a unique drone with tailor-made and uniquely adapted mounting equipment with specially designed cleaning equipment. A patent pending safety solution to prevent the drone from falling down during operation is also developed.

The drone has been extensively tested and commercialized for window and facade cleaning, and has been used operationally since 2020 by the KTV Group in Norway.

In 2022, KTV Working Drone was ready and the commercialising process started. Today KTV Working Drone is established almost all over the world, and the partner network is growing rapidly.

The future holds many opportunities for development for KTV Working Drone. We think our drones soon will be able to do small repairs, special inspections and even surface treatment.

DRONE SERVICES

WINDOW CLEANING

High rise commercial window cleaning can be very time consuming. KTV Working Drone has developed a new more efficient and safer way of providing high rise window cleaning which is also considered faster hence reducing costs.

Modern day buildings including apartment blocks, office developments and commercial properties in general have large areas of glazing.

Due to the height, design and location of these buildings, it can be time consuming and expensive to keep on top of regular maintenance. Very often

these buildings require work to be done at height which is both expensive and brings with it inherent risk.

Therefore up until now only professional commercial window cleaners with height accreditation, scaffolding or, for smaller buildings, boom lifts were the only and best option.

KTV Working Drone is the first company in the world to properly commercialise the use of drones to provide an alternate solution for this type of window cleaning service. This makes the process safer, faster and can also provide the service more frequently.

FACADE CLEANING

Many multi-storey buildings create challenges and become demanding for many professional cleaners which must adhere to strict safety protocols making such services complex. Facades come in all sorts of different materials e.g. glass, stone, copper, composite aluminium sheets, stainless steel which require different methods and requirements to have them cleaned.

Environmental friendly solutions are now being sought by many organisations, developers and strata companies and new government regulations alike and

this is why KTV Working Drone solutions are not only safer but can provide many advantages to traditional cleaning methods and is also more efficient and becomes a quicker task to complete.

Having a clean facade is one of the most important tasks to provide companies and buildings with a clean environment that meets many of the requirements needed.

KTV Working Drone is now able to provide an alternative to a problem that hasn't had too many other options other than the more traditional methods to date.







EXPANDING ALL OVER THE WORLD

GLOBAL REACH

KTV Working Drone has country branches all over the world and new countries are being added each month; all sharing the same philosophy, safety policies and the same strict controls and procedures in accordance with international quality standards ISO 9001, ISO 14001 and OHSAS 18001.

No matter which country you live in, we have approved operating licenses from the relevant civil and aviation

authorities, for operating drones for the purpose of cleaning buildings. All our franchisee drone operations are fully trained and comply with local civil and aviation laws.

We have a strong focus on HSE and public safety in our work areas. Using drones makes for a safer working environment not only for workers but also for the public.

KTV WORKING DRONE GROWTH

In most of the world more and more drones are being deployed for different industries and innovation is continuing faster than ever in many industries.

Drones regardless of purpose are being brought into everyday lives regardless if they are flown for fun, military or commercial reasons.

The drone market globally is growing extremely year in year out, and KTV Working Drone is and will be taking a great part in the race.





OUR HISTORY AND THE EVOLUTION OF CLEANING

KTV Working Drone evolved out of KTV Group, which was founded in Norway in 1992 by Kennet Nilsen. KTV Group have more than 30 years experience with facade and window cleaning and are experts in their field.

KTV Group developed fast and became a service partner offering service operations for the offshore- and land based industry and real estate, focusing on professional cleaning and surface treatment.

With the founding of the new brand KTV Working Drone in 2022; KTV Working Drone is the first company to properly commercialise the use of drones in a variety of industries.

Several years have been spent developing equipment, systems and procedures to better be able to service customers in countries all over the world with a unified safer approach.

R & D has always been a central part of the company, and the R & D work will continue together with our partners. Our partners are important for the further development of KTV Working Drone, and through transfer of experience we'll all learn from each other.

All partners get the opportunity to participate in the continued development of KTV Working Drone and the future opportunities this brings.

WE USE TWO METHODS

1. SelfCleaner method

If the facade is traditionally dirty the drone applies a solution SelfCleaner by foaming it onto the facade with low pressure. The SelfCleaner agent is a special formulated cleaner that was developed and used since 2015 by our parent company KTV Group. If the buildings haven't been cleaned and/or are extremely dirty the process is to clean the facade and windows with the clean-water method.

2. The clean-water method

In short, the clean water method is purified water with reverse osmosis, heated to 70 degrees, and applied with high pressure by the KTV Working Drone. This means the cleaning of windows is eco-friendly being cleaned without chemicals and windows stay cleaner over time. It also eliminates the risk of surface wear such as streaks caused by the more traditional, more dangerous manual cleaning methods.

SOLAR PANEL CLEANING

Our cleaning method does not harm the panel surface.

The method originally developed for window cleaning, is perfect for cleaning solar cell panels and will not harm the surface.

A major advantage of this method is that the surfaces will stay clean longer than from traditional cleaning and there is no risk of streaks.

MORE ABOUT THE SELFCLEANER METHOD

The SelfCleaner method was developed in 2015, and are used on all facades where humidity, pollution, algae, micro-organisms, greenery are issues.

The method enables facade cleaning without the use of high-pressure flushing. The special agent SelfCleaner is foamed on the facades with low pressure, and then it's the weather and wind that cleans the surfaces over a period of 3-4 weeks.

Already after 1-2 weeks you will see clearly visible results, but SelfCleaner continues to work for about 3 months.

With this method, high pressure is not used, and this avoids unnecessary wear and tear and does not damage the facades.





KTV WORKING DRONE



FUTURE DEVELOPMENT

WHAT'S NEXT

- **Spray painting**

With continued development, extended testing and new partnerships with paint manufacturers, we are moving closer to the final testing fase.

- **Higher altitudes**

We have solved the operating height restriction with our patent pending roof safety system. There are no longer limitations on operation height, and we will continue the testing to be able to operate safely in heights and altitudes up to 600 meters and above.

- **Goggles**

As a result of operating in higher altitudes, the use of special flight goggles is being considered and tested.

- **Remote Control rooms**

Looking further, we are planning to create special control rooms where drone pilots can operate drones all over the world, via the internet. Drone pilots will be able to provide support, provide remote tasks, work safer and be able to provide specialist services anywhere in the world.

Remote control rooms would be a great advantage in areas with a lot of noise, high/low temperatures, and other problem areas.

OUR SAFETY STATEMENT

At KTV Working Drone, safety is our highest priority. We are fully committed to maintaining a safe and secure environment for all members of our team, our partners and our franchisees.

We have developed a detailed safety policy that must be followed rigorously to ensure that everyone involved in our operations remains safe. We will continue to work tirelessly to guarantee this safety.

KTV Working Drone implements the necessary safety procedures/precautions according to the safety standards that have been outlined in the company's global safety policy including, but not limited to:

- Minimizing our impact on the environment
- To not harm or disturb uninvolved persons
- To not inflict damage to property, buildings, vehicles and other assets
- To always operate within the global privacy act guidelines

KTV Working Drone will operate according to the well-established culture in aviation.

By learning, development and adapting our service, we will strive for positive growth for the brand and industry.





KTV WORKING DRONE

OUR INTENTION

At KTV Working Drone, our primary objective is to make a positive impact and enhance people's daily work experience.

We are committed to promoting safety and well-being for those who work at heights, including lift operators, scaffolders, and façade climbers. These physically demanding jobs often result in stress injuries and pose significant risks every day. We are dedicated to supporting this group and improving their working conditions through innovative drone-based solutions.

