



Yukon



Continuous cleaning systems



Pure Technology.

Customised cleanliness

Do you want to clean your components efficiently and sustainably while meeting the increasing requirements for technical cleanliness? We have the right cleaning solution for you. Our different plant types are customised to suit your specific application.

Our consulting and engineering staff can draw on their experience from numerous completed projects. Cleaning trials with original components at our Technical Centre give you as the user the reassurance of making a safe investment for your facility while also determining the exact parameters for cleaning chemicals, time and temperature.

BvL systems deliver reliable cleaning for your components and can be integrated seamlessly into your pro-

duction line. They are easy to operate and comply with the strict guidelines of the automotive industry. They are also designed in compliance with the Machinery Directive 2006/42/EC, C standard EN 12921 and the German Accident Prevention Regulations (UWV).

- Sturdy design & long service life
- Guaranteed cleaning success
- Intuitive operation
- Easy access for easy maintenance
- Quality components from renowned manufacturers
- Quality “made in Germany”
- Specialist firm in line with the German Water Management Act (WHG), certified management systems





for high throughput

for continuous material flow

as in-line solutions

for integration into the
production process



Brief description

The **Yukon** is a customised spray cleaning system for continuous material flow. The parts pass through the successive treatment zones continuously (or in combination, for instance, with a circular conveyor system). For the cleaning process, the parts move past the fixed nozzle systems.

Basic system

Cleaning system:	spray cleaning with flat spray nozzles
Operating principle:	continuous process
Number of tanks:	single-tank or multi-tank systems
Loading:	manual or automated
Housing:	stainless steel
Tank insulation:	stainless steel
Control and operation:	Siemens Simatic with Siemens touch panel
Bath monitoring:	Libelle Fluid Control saves resources and allows optimum use of the cleaning baths



Cleaning technology

- continuous nozzle frame: offset nozzle arrangement provides cleaning from all sides
- separation of treatment zones by means of neutral and intermediate zones reduces mixing
- nozzles and nozzle frames adapted to the component
- useful dimensions, loads and pump capacities can be adapted



Options and supplements

- drying systems: air blast device, circulating air drying, vacuum drying
- handling: workpiece carriers, clamps, multi-track conveying, with separate drives if required, adapted to on-site conveyor system (chutes, roller conveyors, robot loading, automation)
- cleaning capacity adapted to customer requirements
- bath maintenance measures (e.g. filtration systems, oil separator)
- process reliability: Libelle Cleaner Control, Libelle Oil Control, Libelle Data Control, remote diagnostics
- cooling systems, degaussing systems
- floor drip pan
- other system components



Smart Cleaning

Intelligent cleaning with **BvL** apps and digital interconnectivity! Transparent process information for predictive system diagnostics and maintenance: efficient and automatic.



Process steps

The process steps in successive treatment zones:

- spray cleaning, sequence of different wet treatment zones (washing, degreasing, phosphating, rinsing, passivating)
- drying

Individual adaptations

The right system for any challenge: **BvL Yukon** continuous cleaning systems can be adapted to your special requirements in terms of cleanliness, process economy and energy efficiency. Of course we also take the available space on site into account.

Treatment zones

The nozzle systems are individually tailored to your component to ensure thorough cleaning even in hard-to-reach areas like blind holes and undercuts.

Conveyor systems

We keep an eye on your production process. The **Yukon** can be optimally integrated into your production flow. We have the right conveyor system for your component, adapted to size, geometry and weight, e.g. wire mesh conveyor, chain conveyor, lamella conveyor, overhead conveyor. Optimum coordination and adaptation with mechanical and electrical hardware and software interfaces are a given for us.

Energy saving strategies

Insulation of the system components, e.g. housing, filters and pipes, save energy.

Libelle **Cleaner** Control and Libelle **Oil** Control ensure constant measuring of the cleaning agent and oil concentration in the bath. Libelle **Fluid** Control records the level of contamination of the cleaning medium. This optimises bath service life and ensures that the bath is changed at the right time.

Optional Smart Cleaning technologies automatically control sub-processes, which also reduces energy consumption. Special waste air management in the air blast or drying zone, for example, controls the waste air depending on humidity to optimise the process.

Treatment zones

The following sample images of treatment zones, conveyor systems and variants illustrate the manifold configuration options of our systems and show optional expansions.

Sizes

Usable length, width and height as well as load capacity and tank volume are individually adapted.

System examples	Unit	Ex. 1	Ex. 2
Effective width	mm	250	2,000
Effective height	mm	100	800
Load capacity	kg	20	400
Tank volume 1	l	950	5,000
Tank volume 2	l	–	3,000
Tank volume 3	l	–	3,000
Tank volume 4	l	–	5,000
Tank volume 5	l	–	3,000
Total system length	mm	2,400	29,500
Other technical data and on-site services on request			



Cleaning/rinsing zones

- for flat components



- with quick-change nozzle frame



- with multi-track version and viewing window



Adapted nozzles

- for targeted air blast cleaning of holes



Air blast zones

- with air blast nozzles all around



- for flat components with air blast nozzles only from top and bottom



YukonDAD wire mesh conveyor

- with large or small mesh size depending on the component size
- several tracks that can be run independently from one another at different speeds



YukonDAH overhead conveyor

- universal workpiece carrier system
- power and free conveyors



YukonDAK chain conveyor

- with bolted-on workpiece carriers



YukonDAK chain conveyor

- with removable workpiece carriers



YukonDAL lamella conveyor

heavy-duty conveyor

Conveyor systems

Variants



Variant

Combined plant system: Yukon continuous cleaning system for pre-cleaning and post-cleaning combined with Geyser high-pressure system for targeted cleaning and deburring with high pressure



Variant

- intensive external/internal cleaning with special lance technology
- adjustable workpiece carrier for cleaning components of different sizes reduces setup costs



Variant

Customer-specific machine layout with main drying on the opposite track



Variant

Water-cooled steam condenser: The emitted steam is mostly condensed and fed back into the system.



Variant

Loading onto a multi-track conveyor with a pick-and-place system



Variant

Loading zone with contour plate and component scan ensuring correct component orientation for cleaning



Variant

Continuously linked system with loading/unloading at one position and buffer stations for time-limited system operation without external intervention



Variant

Portal loading for temporary automated operation with six bays for floor rollers with baskets: operation The portal gripper picks up baskets with components, loads them into the cleaning system and stacks them back in the cells after cleaning. Optionally available with a separate floor roller cleaning station.





Variant

Space-saving single-tank version with a small footprint



Variant

Two-tank version with separate tanks allows for different temperatures.



Variant

Three-tank version with linked washing tanks allows for large tank volumes.



Variant

Space-saving layout of the bath maintenance components and the control cabinet on a walk-on base results in a minimised footprint.



Variant

Additional intensive cleaning device and system components Nevada drying and Arctic cooling tunnel



Variant

Overhead conveyor: large plant system, here with two tracks and drying zone on the opposite track



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