

# Clean glass is our passion: crystal-clear solutions - made in Germany



### Your plants are our only concern:

technical perfection for your success!



GTA has been developing and producing high-quality glass cleaning machines for the industry for over 30 years. Our range of products includes machines in vertical and horizontal versions as well as coating cleaners. Whether it's about the cleaning of glass for the automotive, building and solar industries or very small glass: we offer you optimum solutions for every production requirement. An investment in machines from GTA is an investment in sophisticated and reliable technology, which impresses with its extremely long service life.

Vertical and horizontal glass cleaning machines from GTA fulfil the highest performance standards for cleaning and drying. They are available for medium to large glass dimensions. All parts are made from stainless steel, including in the drying zone, so rusting of the material is impossible. The drive elements are located outside the machine body. Contact with water is thus impossible. The machines are characterised by a sturdy support frame and are also suitable for the harshest conditions of use. Available options are the automatic detection of Low-E glasses, automatic thickness measurement and precise PLC control using a touch screen.

As long-standing, experienced partners to the industry, we offer complete solutions from one source. From the design of the machines to the assembly and technical installation to the PLC programming, we cover the entire range of services. We are in action for you all over the world. Our experts take care of the installation and configuration on site as well as the maintenance and repair, including all services. The team from GTA is there for you if you need help, because our main aim is to ensure your productivity.



ARCHITECTURE
SOLAR
AUTOMOTIVE
VERY SMALL GLASS



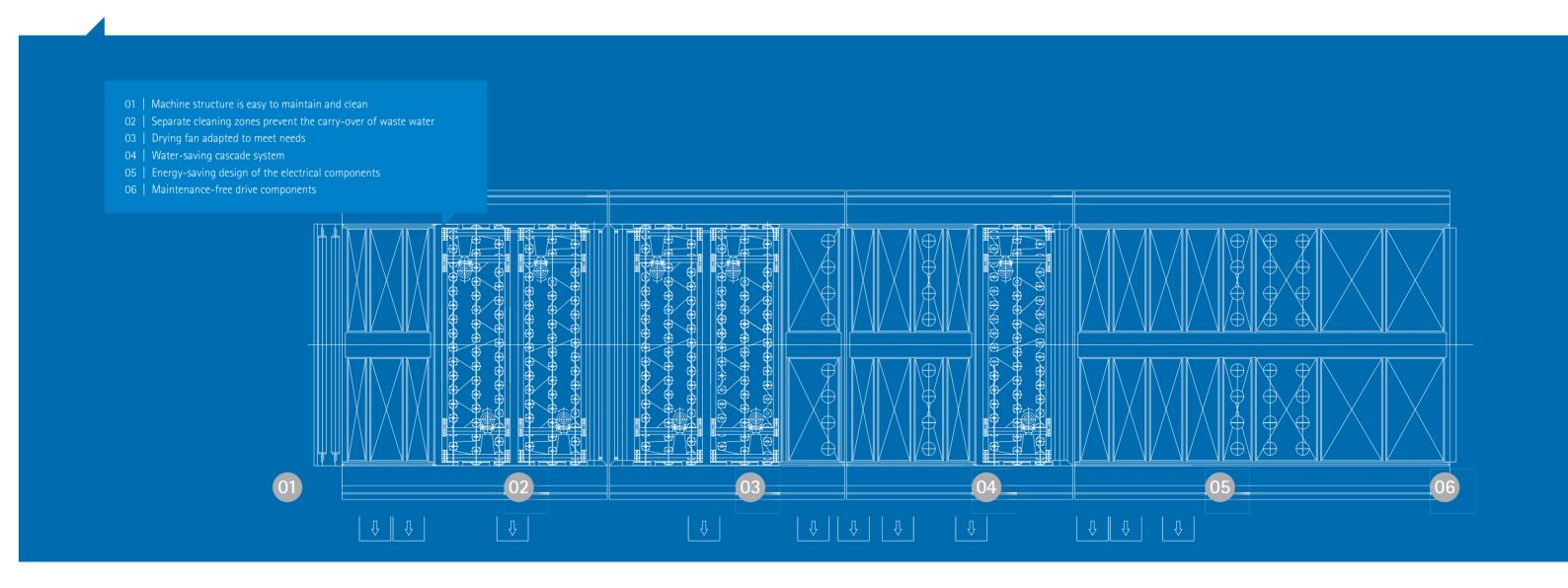
### Premium quality in the high-cost segment:

maximum performance for maximum requirements

Perfect cleaning quality, highest drying quality and extremely long durability: this triad of convincing arguments characterises our machines in the high-cost premium segment. Maximum performance is always guaranteed here - and at maximum speeds of up to 25 metres per minute at that!

Our high-performance glass cleaning machines are developed and manufactured in Germany. German-made quality – this promise of performance is reflected amongst other things in an average machine service life of over 25 years. Individuality is a major concern at GTA! Our machines can be adapted to individual needs and requirements so that the highest possible cleaning and drying quality is guaranteed [e.g. by an individually adapted number of cleaning brushes and

individually designed drying zones with flow-optimised stainless steel air nozzles]. You've to come to the right place as well if you're looking for solutions for special applications such as very small glass and curved panes. We make sure that the glass cleaners are integrated perfectly into your production lines.

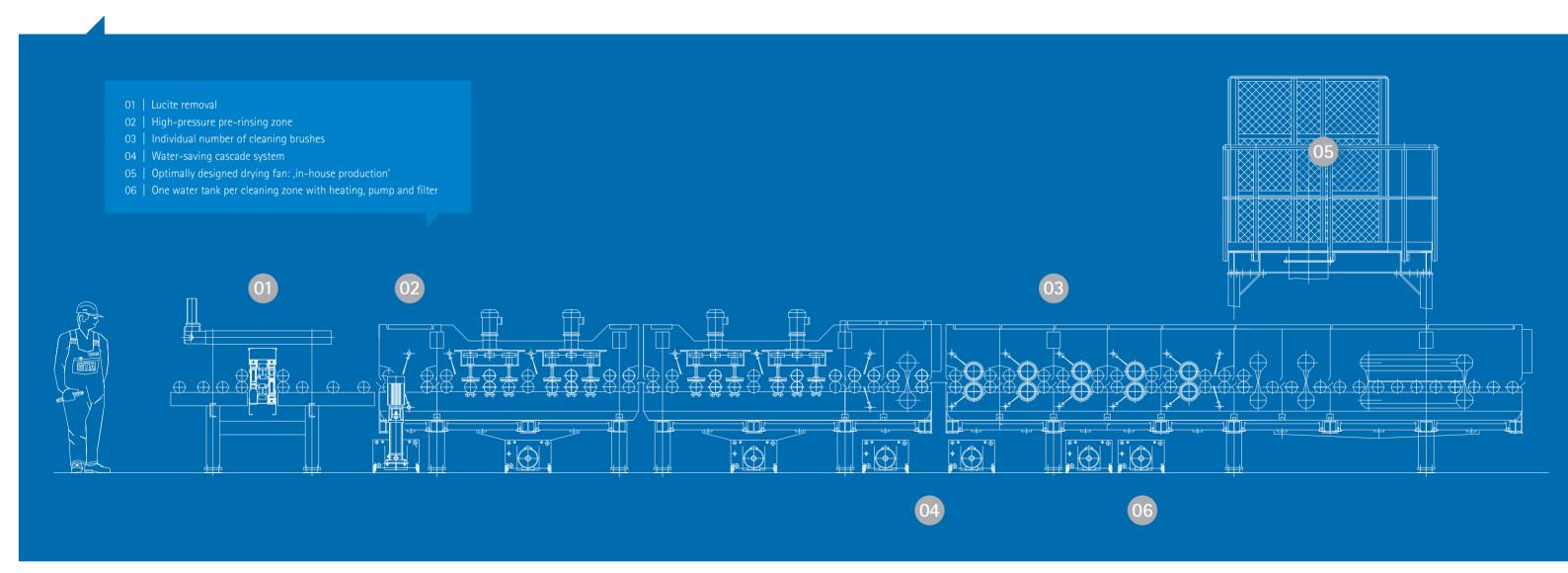


### Low cost meets high performance:

intelligent technology makes it possible

From the individual solution in the high-cost segment to the low-cost standard solution, GTA fully covers the complete requirement profile of the industry. For whatever task or whatever price segment you choose: the convincing performance of the machines is always ensured.

It is well-known that experience makes the difference in design and development! We design and build glass cleaning machines for you for the most demanding of tasks. State-of-the-art technologies, well-thought-out components and high-quality materials ensure that a perfect cleaning result awaits you at the end. A long service life is guaranteed in every case thanks to the finely crafted machines and the use of sturdy components.



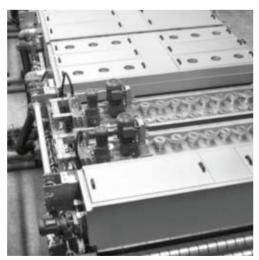
## **Perfection convinces:** coating cleaners for the highest demands

The technologically mature coating cleaners from GTA guarantee maximum cleaning and drying quality. They fulfil the highest requirements for coating and ensure that the glass is prepared perfectly.

#### Technical data:

Working width up to 3,300 mm Glass thickness from 2 mm to 25 mm Speeds from 0 to 25 m per minute The technological secret of the coating cleaners is the perfect combination of polishing bridges, intermediate drying and cleaning zones. A constantly outstanding cleaning result is thus always ensured. Thanks to the use of high-quality components the coating cleaners from GTA impress with their long service life and high availability. The machine structure and the drive components are designed in such a way that maintenance and cleaning can be reduced to a minimum. Coating cleaners from GTA can be integrated optimally into any production line, so that maximum efficiency is ensured in the process chain. Thanks to the individually selectable number of cleaning brushes, the individual design of the drying zones with flow-optimised stainless steel air nozzles and the drying fans that can be adapted to suit needs [thanks to in-house engineering!], the coating cleaners can be designed to precisely suit the requirements of your production.





#### Performance parameters of the coating cleaners

- → Highly effective release agent extraction
- → High pressure pre-rinsing zone with a pressure of over 10 bar
- → Oscillating rotary brushes for the removal of dirt and oxide layers
- → Glass breakage drawers under the individual cleaning and drying zones
- → Separate cleaning zones prevent the carry-over of waste water and polishing agents
- → Water-saving cascade system

- → Automatic glass thickness measurement
- → Infinitely variable drive speed
- → Fans located above the machine
- → One water tank per cleaning zone with heating, pump and filter
- → Intelligent water management system with conductance measurement
- → Air filtration up to filter class H13



### **Premium Line:**

the optimum in performance

The machines from our Premium Line are precisely the right technological solution for the most demanding processes. The balance between quality, price and performance is ideal here.

Maximum cleaning and drying quality, the use of exclusively high-quality components and materials as well as the many years of know-how of our specialists always ensure optimum results. Machines from GTA can be integrated seamlessly into every production line and impress by their long service life. Smooth, highly efficient processes are thus always ensured. A further plus factor: both the complete machine structure and the conception of the drive components are designed in such a way that maintenance and cleaning are barely necessary. Ineffective machine downtimes are thus eliminated.

Our specialists have a great deal of experience and industry knowledge. They try to understand your tasks and processes in detail and together with you they find the right solution for your specific requirements. Whether infinitely variable drive speed or the respective need for adaptable drying fans: all performance parameters guarantee highly efficient and smooth manufacture processes. It's your advantage!

#### Technical data:

Working widths from 800 mm to 3,300 mm Glass thickness from 0.3 mm to 25 mm Speeds from 0 to 25 m per minute

### → High pressure pre-rinsing zone with a pressure of over 10 bar → Individually adaptable number of cleaning brushes

Performance parameters of the Premium Line

- → Glass breakage drawers under the individual cleaning and drying zones
- → Separate cleaning zones prevent the carry-over of waste water!
- → Water-saving cascade system
- → Electrical glass thickness adjustment
- → Automatic glass thickness measurement

- → Infinitely variable drive speeds
- → Fans located above the machine
- → One water tank per cleaning zone with heating, pump and filter
- → Intelligent water management system with conductance measurement
- → Air filtration up to filter class H13
- → Individually designed drying zones with flow-optimised stainless steel air nozzles





### Standard Line:

success based on experience

The compact machines from our Standard Line make very good alternatives to the Premium Line. They are less expensive whilst at the same time guaranteeing top cleaning and drying quality.

### Performance parameters of the Standard Line

- → High-pressure pre-rinsing zone
- → 3 sets of cleaning brushes
- → Separate cleaning zones prevent the carry-over of waste water
- → Water-saving cascade system
- → Electrical glass thickness adjustment
- → One water tank per cleaning zone with heating, pump and filter
- → Drying fan adaptable to needs [thanks to in-house engineering!]
- → Individually designed drying zones with flow-optimised stainless steel air nozzles

#### Technical data:

Working widths from 1,000 mm to 3,300 mm Glass thickness from 2 mm to 25 mm Speeds from 0 to 8 m per minute The glass cleaning machines from the Standard Line were designed to be space-saving and are always available in the standard sizes.

High-quality components and rustproof materials guarantee a long service life. A further plus factor is the minimum maintenance effort required, which ensures high machine availability. Naturally the machines from the Standard Line can also be integrated optimally into the user's manufacturing processes. Good price, high performance, extremely low expenditure – these are simply convincing advantages!

The glass is cleaned extremely carefully and afterwards dried drip-free by a noise-insulated high-performance fan. The drive speed can be adjusted infinitely at any time.







## Cleaning machines for very small glass: reliability down to the minutest detail

GTA also has a suitable cleaning unit for the perfect cleaning and drying of very small glass: the horizontal cleaning machines from the KWM series have been specially developed for this.

### → Infinitely adjustable transport speed

The machines are characterised by a compact design and simple access to all parts. Naturally we can also realise special requests for you according to your specifications.

The frame and the cladding are made of rustproof stainless steel. The transport shafts are coated with plastic tubing and are mounted on maintenance-free plain bearings. Propulsion is provided by a worm shaft via a maintenance-free toothed belt. The transport speed can be easily and infinitely adjusted. Three pairs of roller brushes ensure thorough cleaning. All parts that come into contact with water are made of corrosion-resistant material. For the efficient drying of the glass we have developed a special high-pressure blower that operates extremely quietly thanks to its all-round cladding. Downstream air nozzles guarantee a perfect finish.

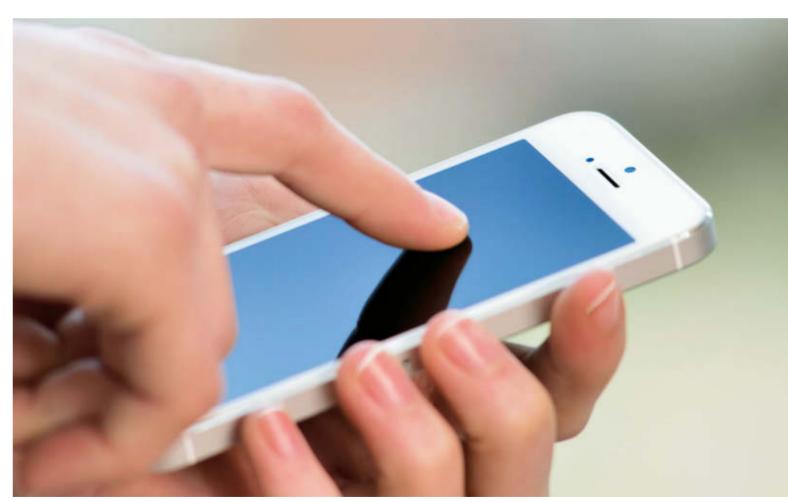
#### Technical data:

Working width up to 1,000 mm Minimum glass size 36 mm x 10 mm Glass thickness from 0.1 mm to 12 mm Throughput speed up to 5 m per minute



### Performance parameters of the cleaning machines for very small glass

- → Frame and claddings made of rustproof stainless steel
- → Transport shafts with wear-free coating
- → Maintenance-free plain bearings
- → Drive by means of worm shaft via maintenance-free toothed belts
- → Pre-rinsing zone and pairs of roller brushes for thorough cleaning





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