



GEA CLEANING TECHNOLOGY

Cleaning Technology for beverage industries

CLEANING TECHNOLOGY

At the forefront of GEA Flow Components

Aggressive robust cleaning, together with reliability and economic efficiency are key characteristics of the state-of-the-art cleaners in the GEA Flow Components range.

GEA Flow Components

The Flow Components portfolio comprises hygienic pumps, valves and Cleaning Technology. Our products comply with the highest hygiene standards, such as EHEDG and 3-A.

Our customers' success depends on the quality and profitability of their products. That is why they rely on advanced technology and on our decades of experience in ensuring smooth processing of liquid products. Our sophisticated process components and service offers for everything that flows are available worldwide from the international GEA sales network

State-of-the-art Cleaning Technology, made to our customers' preferences

At the GEA Cleaning Technology Technical Center we develop innovative cleaning products and solutions together with our customers. Our decades of up close experience with operations and systems at our customers' production sites ensure optimum selection and configuration of the tank cleaners for every application.

Maximum efficiency

Multiple product types within the GEA Cleaning Technology range enable our customers to choose the correct style and performance to match their cleaning requirements. This enables the precise selection with a multitude of smart adaption options to achieve faster CIP operation, increasing production availability, and reduced consumption of valuable resources. Robust construction features of all our cleaners provide for exceptionally performance while delivering top-quality products to consumers.

Maximum reliability

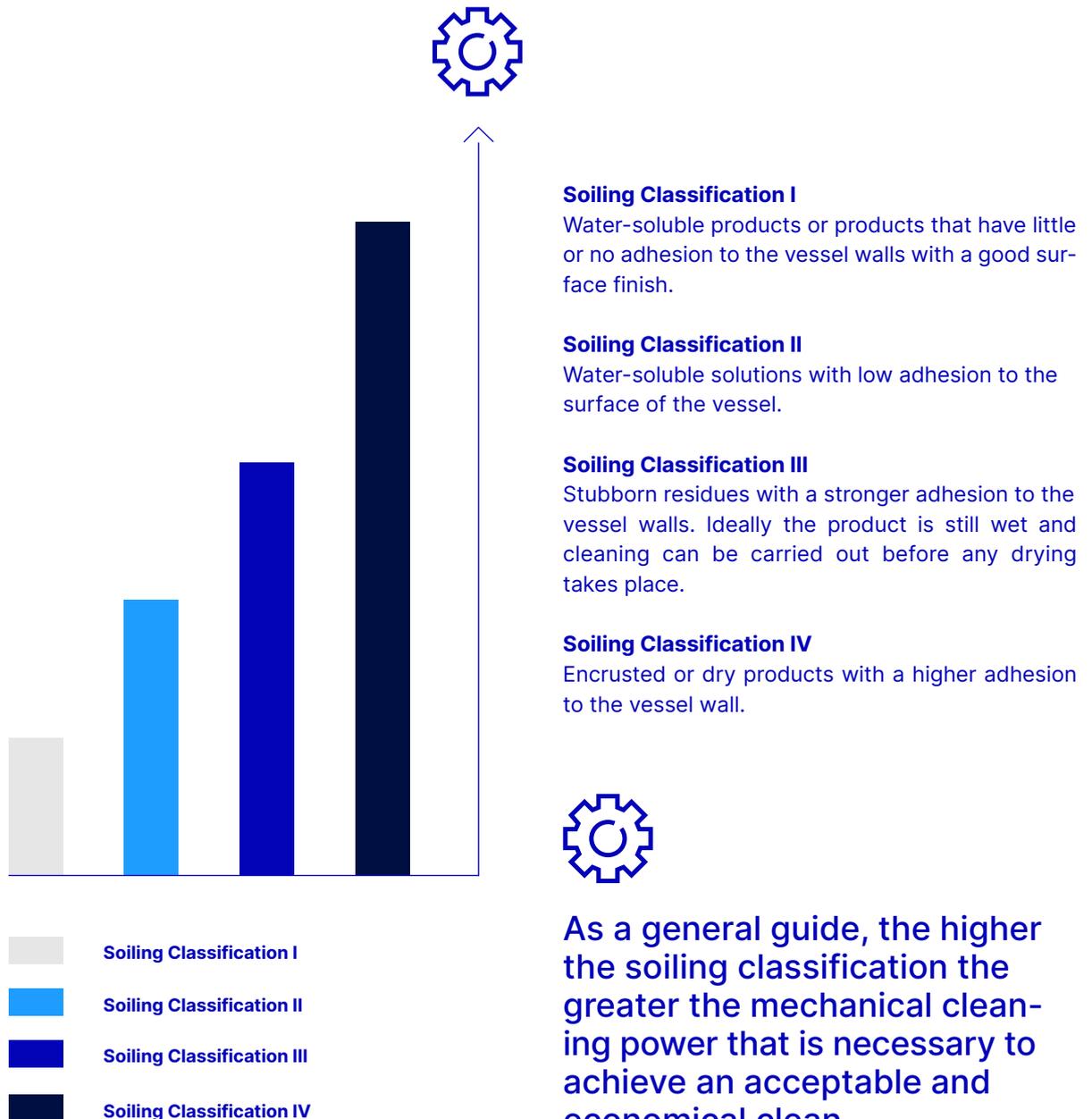
Our customers rely on the safe, continuous operation of their production systems without unplanned breaks or disturbances. That is why GEA cleaners are optimized for uncompromising reliability in all applications. Thanks to their robust design and long service life, they are known as "workhorses" for their ease of maintenance and outstanding service, proven over decades, and for the great number of cleaners currently in operation. Of course, GEA cleaner also comply with all relevant hygiene standards and norms, with continuous documentation and up-to-date certifications safely ensuring judicial security.



Always delivering performance.

SOILING CLASSIFICATIONS

The right solution –
Soiling classifications determine the mechanical cleaning power required for effective vessel cleaning.



CLEANING TECHNOLOGY PORTFOLIO

Static Cleaners

The cleaning of vessels within soiling classification I requires a liquid distribution which delivers large volumes of fluid simultaneously over the complete vessel. Static spray balls offer very little mechanical force so they rely on the liquid running down the vessel walls to create surface friction or to dissolve the residues.

Free Rotating Cleaners

Free rotating cleaners are characterized by their fast rotation around a single axis. This rotation is driven by the liquid flow which creates a range of small to medium-sized fast moving droplets to produce a mechanical force on the vessel walls.

GEA Cleaning Technology

Wide model range of Cleaning Technology products.
Optimisation to specific vessel requirements.



Spray balls



Torus/Chemitorus



IS 25 Retractor



Turbodisc/Chemidisc

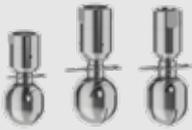


Clipdisc

GEA is a full-line supplier of premium cleaning solutions. Our range has a variety of models suited to different stages of the industrial process. We can outfit your entire application requirements with specialised cleaner types capable of cleaning your process vessels with care and precision. Optimising the use of water and chemicals to help you maintain the strictest hygienic criteria.

Slow Rotating Cleaners

GEA's slow rotating cleaners use targeted flat or round jets to project the cleaning solution onto the vessel walls. These units operate at higher liquid pressures than free rotating units but, because of their design, maintain slower rotation speeds. This enables these devices to impact greater cleaning forces onto the vessel walls than the free rotating units.



Turbo SSB

Orbital Cleaners

The extensive range of orbital and index cleaners from GEA offers high impact cleaning solutions for the most difficult to clean applications. The orbital cleaners work on two rotating axes, both horizontal and vertical, along a predetermined path creating a tight 3D matrix.



Cyclone / Twister

Index Cleaners

The extensive range of orbital and index cleaners from GEA offers high impact cleaning solutions for the most difficult to clean applications. The index cleaners provide highly effective cleaning performance through their piston operated index mechanism. The advantage of this type of cleaner is that large amounts of energy can be applied by this slow moving operation, directly onto the vessel walls.



Fury 404

Tank Safety System

The tank safety system VARITOP® is a modular system based on standardized components. VARITOP® is used for tank cleaning, to protect tanks against inadmissible over-pressure and vacuum and for controlled gassing and degassing. Every customer can select alternative functional components. In addition, the configuration can be designed largely individually. The result is a functional unit adapted to customer desires.



VARITOP®



Sanitor



Typhoon / Tempest / Tornado



Fury 602 / Tankmaster



Troll Ball



OC 200



Fury TWB



Rotating Jet Cleaner



Jumbo 6

GEA AND THE BEVERAGE INDUSTRY

For every conceivable cleaning application in beverage production, the full GEA cleaner range gives you peace of mind and optimal cleaning capabilities.

All over the world, our unique, hygienic cleaning solutions are installed in:



Breweries

All GEA cleaning technology cleaners are self cleaning which prevents contamination of the beer and ensures product characteristics are maintained.



Juice production

Our wide range of cleaner caters for the highly varying cleaning requirements of juice manufacturers, maintaining the desired hygienic levels and product integrity.



Soft drinks

Our Cleaning in Place (CIP) and Sterilization in Place (SIP) capable cleaners are ideal for maintaining the hygienic standards of the carbonizing processes in this industry. Residue in vessels are reliably cleaned away in time for the next batch.



Wineries

This venerable tradition requires a high degree of environmental control with rigid hygiene standards: GEA hygienic cleaning solutions ensure the finished product lives up to its label.



Distilleries

Here the emphasis is on safe handling in hazardous environments. In order to meet the needs of this industry, we offer cleaners that comply with the ATEX requirements.



QUALITY PRODUCTS REQUIRE QUALITY CLEANERS

In such a diverse and competitive industry the selection of cleaners directly contribute to the quality of your product. GEA Cleaning Technology does this simply by providing reliable and repeatable cleaning of tanks and production vessels protecting product quality and brand image. And this is why:

Standardisation

Clearly defined list of models with industry standardised connections. GEA Cleaning Technology provides smart solutions for standard applications with uncompromising hygiene and quality. The GEA OC200 , for instance, offers a clearly defined list of interchangeable options to tailor the cleaning performance.

Customisation

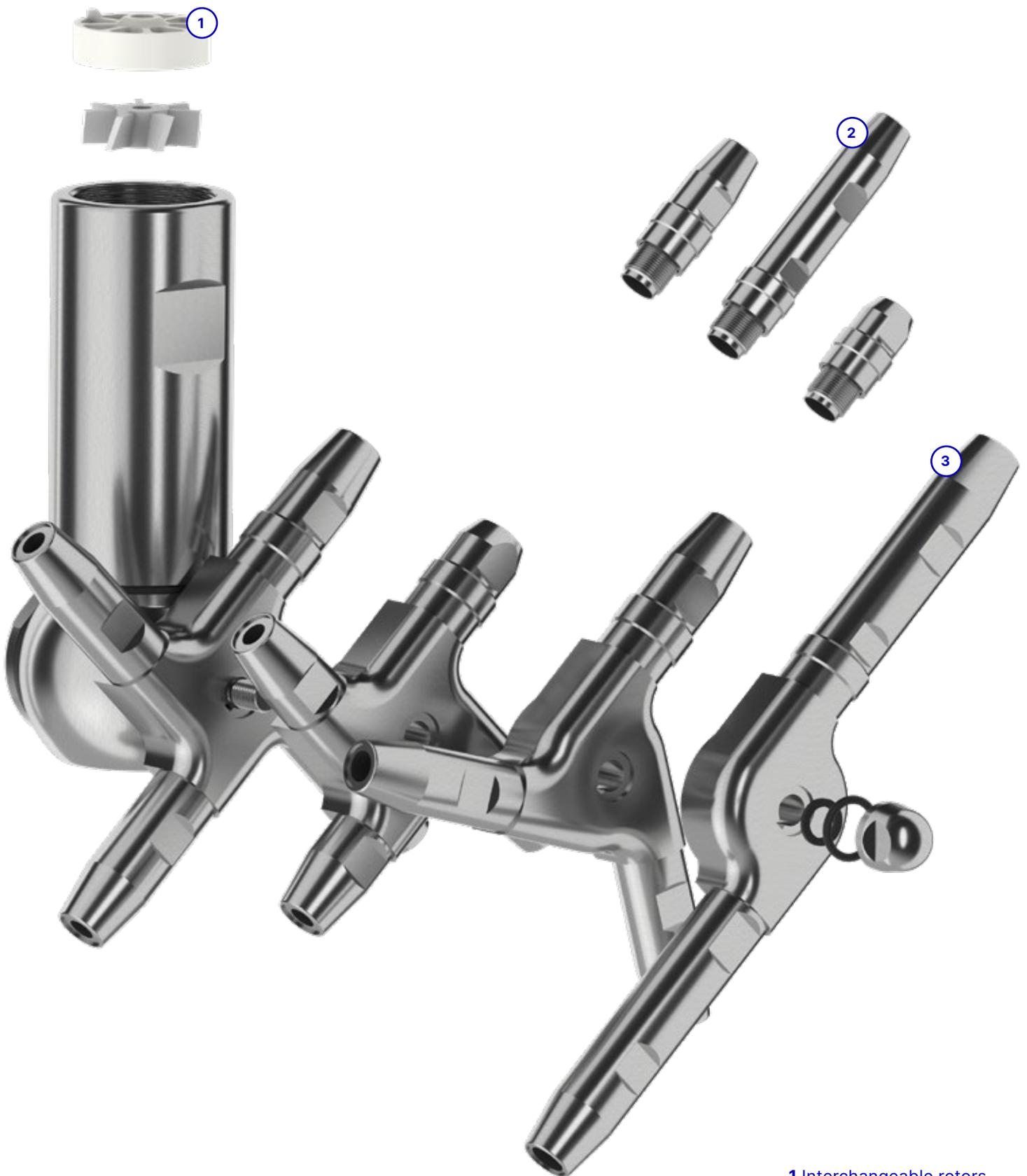
Customised to perform. With the GEA OC200, you always get a perfect match to your needs. The OC200 offers a choice of numerous connections, rotors, sealing materials, nozzle carriers and nozzle sizes. One cleaner many options.

Quality materials

Only the highest grades of stainless steel are used to ensure reliability. Machined to the highest standard and quality checked before assemble. That's why all GEA Cleaning Technology products provide a robust, homogenous and pore-free surface. These surfaces can then be electropolished – which means a completely smooth surface down to the molecular level.

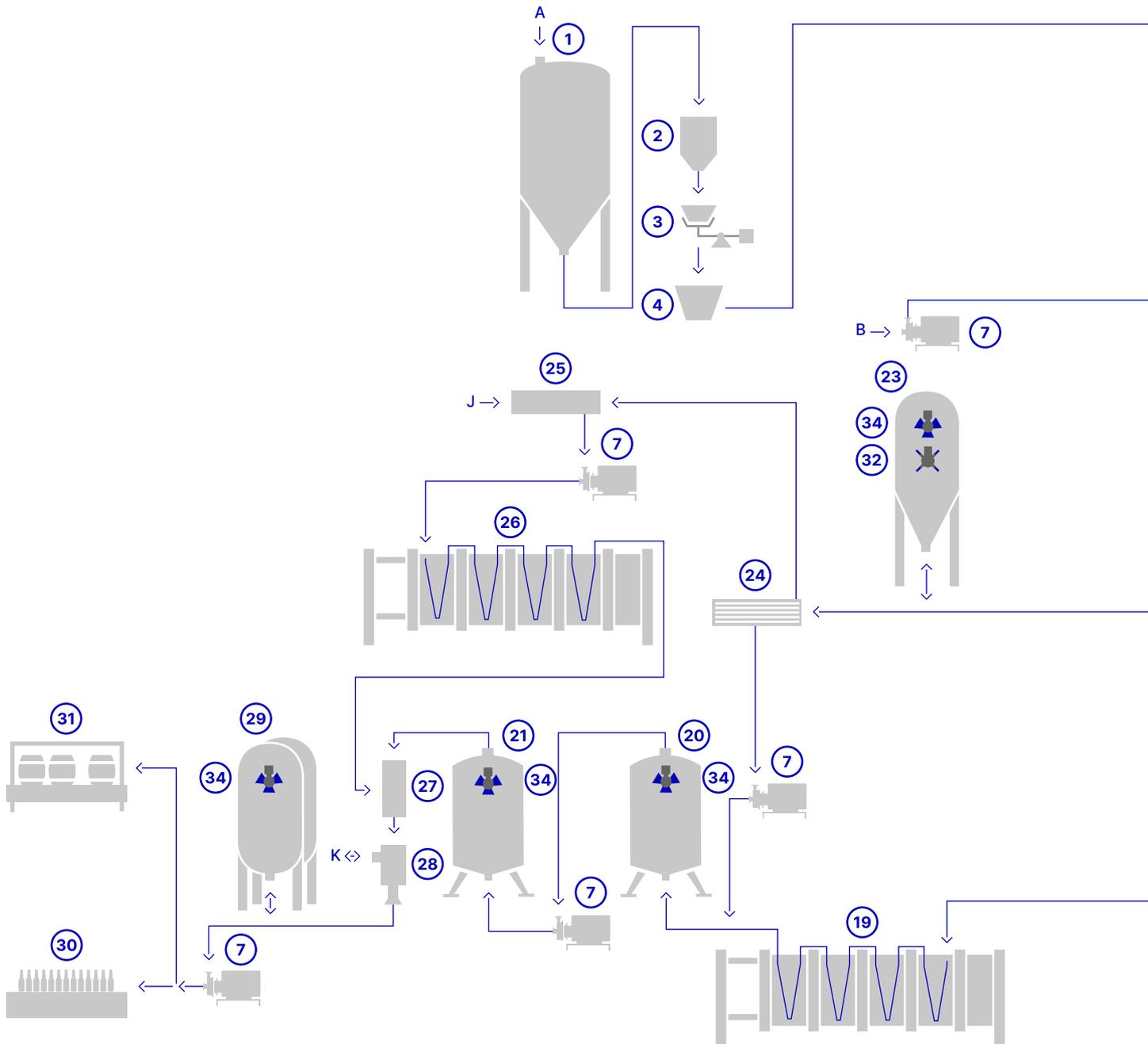
Unique modular design

The modular concept of the OC200 allows the performance of the cleaner to be adjusted using a number of standard key components that can tailor the performance to suit the individual application. This allows you to optimise the use of valued resources such as water, chemical, energy and time-ensuring sustainability of supply for future generations.



- 1** Interchangeable rotors and stators for rotational speed control
- 2** Selection of nozzle diameters and length
- 3** Different nozzle carriers for 2, 3 & 4 nozzle options

CLEANER & PUMP FIELDS OF APPLICATION

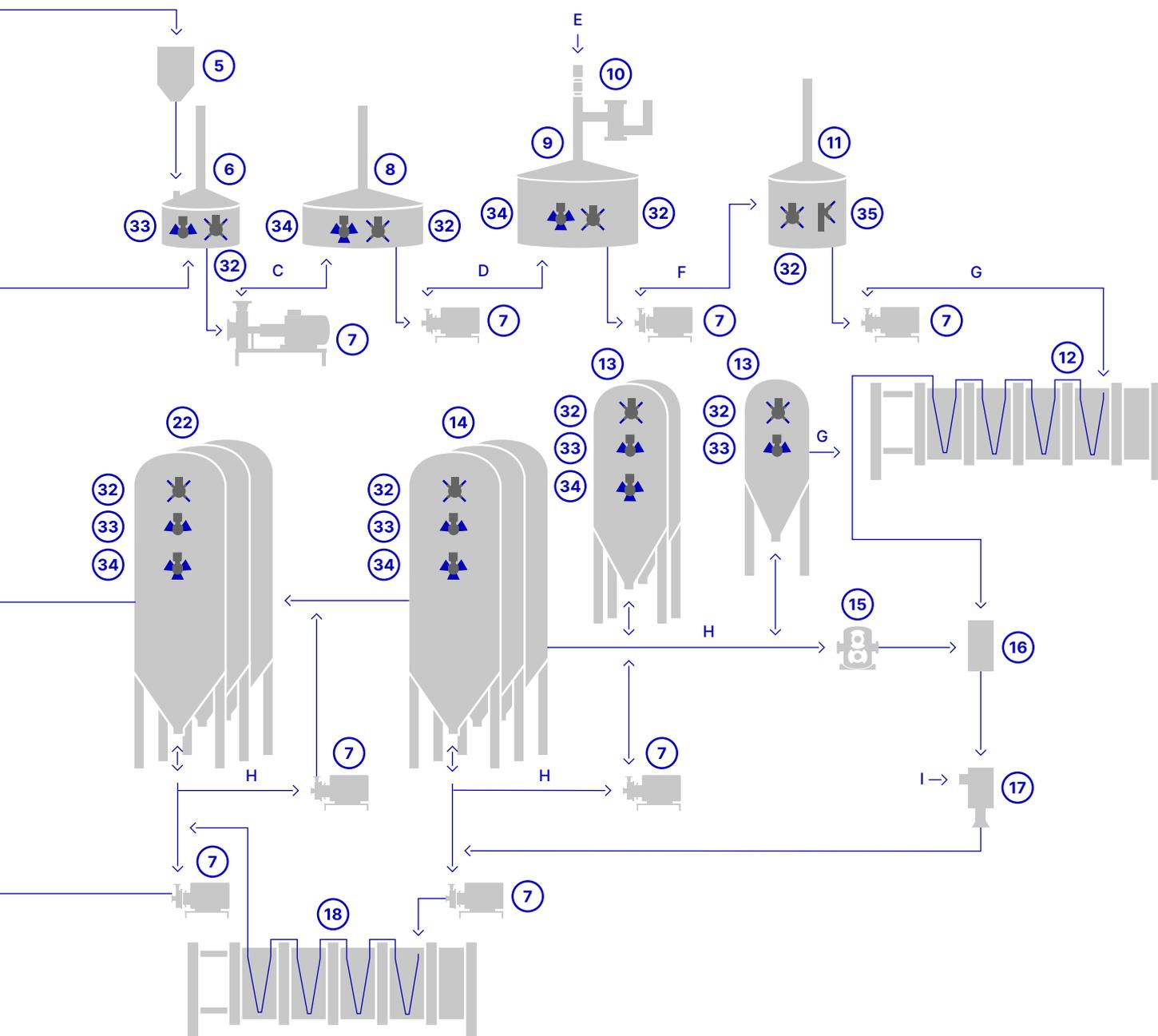


Procedure in a brewery

- A** Malt
- B** Water
- C** Mash
- D** Lauter wort
- E** Hopping rate
- F** Hot wort
- G** Wort
- H** Yeast
- I** Sterile air
- J** Process water
- K** CO₂

- 1** Malt silo
- 2** Malt cleaning
- 3** Scale
- 4** Malt-mill
- 5** Grist case
- 6** Mash pan

- 7** Product pump
(centrifugal pump)
- 8** Lauter tun
- 9** Wort kettle
- 10** Heat recovery
- 11** Whirlpool
- 12** Wort cooler



13 Yeast tanks
14 Fermenting tanks
15 Product pump
 (rotary lobe pump)
16 Yeast dosage
17 Wort aeration
18 Green beer cooling

19 Beer cooling
20 Filter
21 Stabilizer
22 Storage tanks
23 Yeast production
24 Yeast beer cooling
25 Deaerator

26 Cooling
27 Blender
28 Carbonizer
29 Pressure tank
30 Bottling
31 Keg filling

32 Orbital cleaner
33 Rotating jet cleaner
34 Slow rotating cleaner
35 Index cleaner

CLEANING TECHNOLOGY THAT SAFEGUARDS YOUR PRODUCT

In a competitive industry you need premium cleaners that safeguard the quality of your product. GEA hygienic cleaners are manufactured and certified to the highest industry standards. With our solutions, you know your product's integrity is guaranteed and its level of quality reproduced every time. In beverage industries all vessels are cleaned reliably. Our cleaners are designed for quick and effective CIP (Cleaning In Place) applications so reducing the chance of residue tainting the next batch. And like all GEA Cleaning Technology products our sanitary solutions are designed to be highly user-friendly.

CIP

All GEA Cleaning Technology products have been designed and developed to be compatible with all standard CIP detergents and solutions. We do offer alternative materials where special process solutions are required.

Applications large and small

We at GEA have products to cater for all requirements from the smallest of process vessels to the largest storage vessels. Our experts are always on hand to assist you in assessing the application where size and soiling classification is vitally important.



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