

Batch Vacuum Process Plants Type zoatec[®] BG

For flexible and efficient
production of pharmaceuticals
and cosmetics

BATCH SYSTEMS



For mixing,
dispersion and
homogenising
of liquid and
semi-solid products

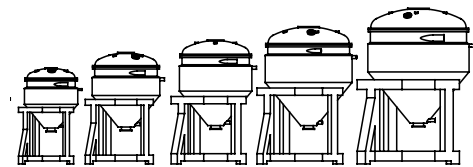
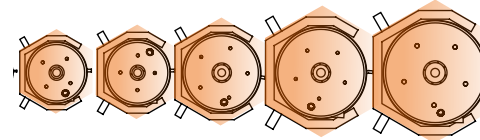


For liquid processes

AZO.
LIQUIDS

Your requirements – Our solutions

- Flexibly usable plant
- Optimal space utilisation
- Easy compliance with GMP relevant guidelines
- Reliable batch times:
Calculation using optimised scale-up method
- Consistent product quality with every batch
- Easy cleaning and maintenance
- Low operating cost
- Simple operation



Perfect reproducibility and the highest hygiene standards for liquid and semi-solid pharmaceuticals and cosmetics

We optimise your processes in our technical centre

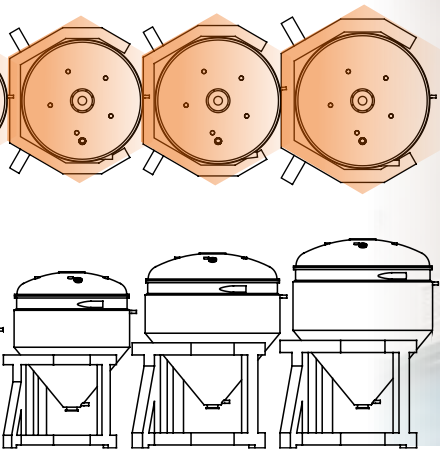
Mixing, dispersion and homogenising are our passion

In our lab, we determine the process parameters that enable reproducible attainment of the best product quality with the highest hygiene standards.

Thanks to our many years of experience in producing pharmaceutical creams, gels, lotions, suppositories and salves as well as top-quality cosmetics, we can help you find optimal solutions to your requirements.

The modular assemblies of the zoatec® BG vacuum process plants are used in all situations where dry and liquid ingredients or combinations of liquid ingredients need to be combined for mixing, dispersion or emulsification.





The well-conceived design of the AXO LIQUIDS process plants sets them apart from all conventional systems

We assemble complete process plants from standardised modules. These modules are independent of the process parameters and can be adapted to your needs very flexibly.

The individual modules can be installed in the equipment room or in the production room – according to your wishes.

We are experts at scaling up from the lab to the production environment. Our plants are always optimally matched to your processes, your recipes, your premises and your operating sequences – because we listen to you.

This applies to the components, the CIP and SIP processes, the control software, qualification and validation, as well as the maintenance procedures.



Optimal cleanout is especially important for cost-effective production of small quantities

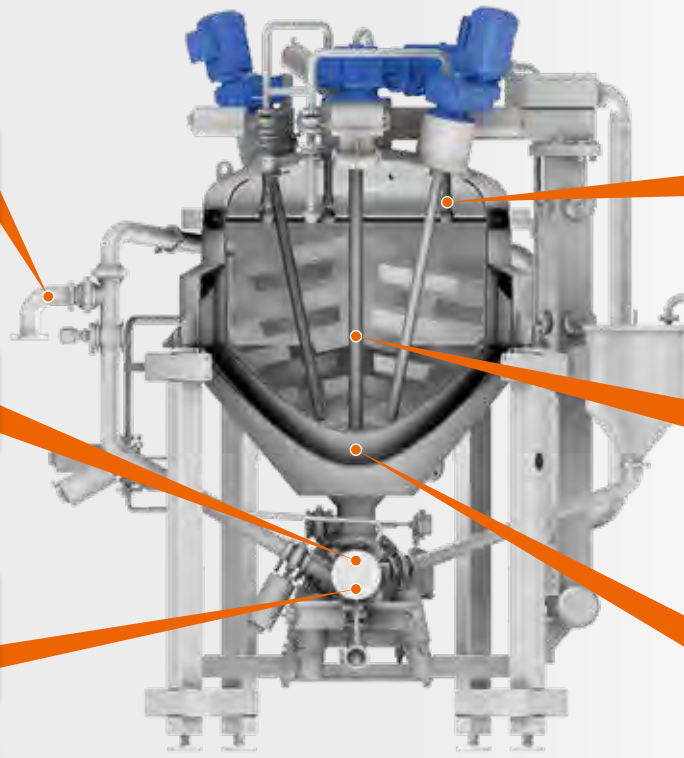
Spray nozzles for residue-free CIP cleaning without manual intervention

Homogeniser: Easy access and low wear by design

Blender combinations: Optimal adaptation to product requirements

Patented pump mode: Non-destructive mixing of chunky substances and fast product discharge

Insulated double jacket: Fast heating and cooling



Our innovative design: Modular is better

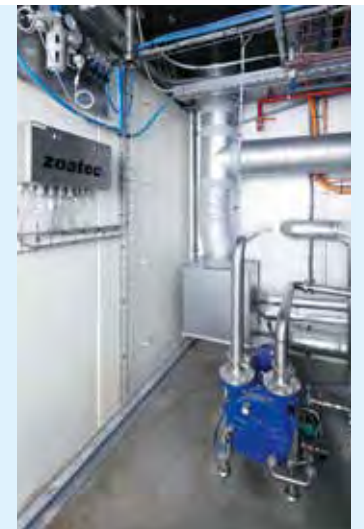
Honeycomb machine frames

- Separate installation of process and supply modules
- All components on the process vessel are easily accessible for process handling, cleaning and maintenance)
- Mounted on just four machine feet (four load cells with high readout accuracy)
- Consistent frame shape for easy upscaling)
- Frame accepts every container shape without modification: Conical 80° Conical 130° Dished, etc.

Separation of process and supply modules

- Separation of production and technical areas
- Also enables installation in constrained spaces
- Easy implementation of extensions and specific regulations (ATEX, sterile, hygiene, etc.)

Avoids interference from the supply module when load cells are used on the process module





Versatile blender and mixer

- Combinations with a fixed baffle and up to two movable baffles are possible
- Other blending modules can be integrated (dissolver, rotor-and-stator homogeniser, etc.)
- Optimally adaptable to your product requirements
- Improved heat exchange
- More turbulence for shorter CIP process
- Shorter batch times

AZO LIQUIDS Homogeniser

- Constant product feed to the tools results in small droplet size with optimal distribution
- High pumping and shear speed for fast intake of large quantities of dry ingredients and reactive products
- Fast product venting
- The homogeniser pumps away from the shaft seal, resulting in less wear and longer seal life
- The tool and shaft seal can easily be removed from the front for inspection, without major pipe dismantling effort
- High pump capacity enables use as a CIP pump



A variety of blender combinations enable optimal adaptation to the product



AZO LIQUIDS Homogeniser – The innovative core element of the process plant



Innovative homogeniser with patented pump mode

AZO LIQUIDS Pump Mode

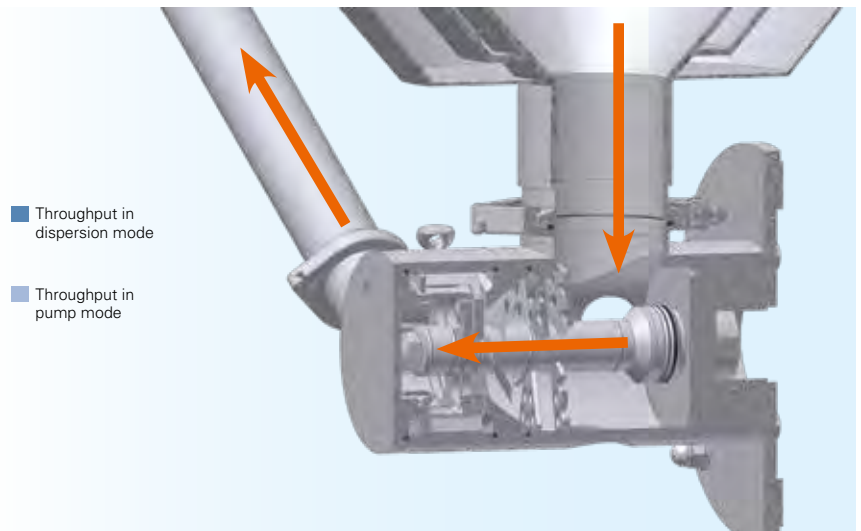
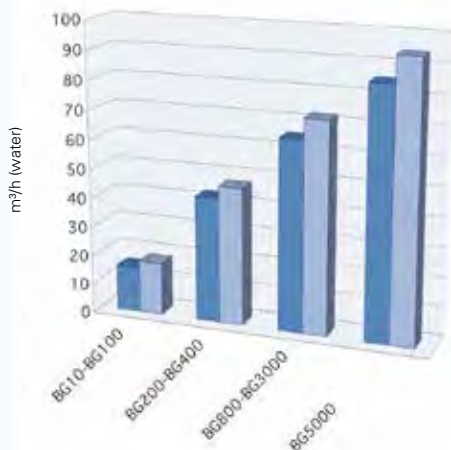
- Non-destructive blending of sensitive products, for example non-destructive blending of care pearls without installing an additional pump and piping
- Fast product discharge with large batch sizes and shear-sensitive products
- Better blending of large quantities of dry ingredients



Dispersion Mode



Patented pump mode



Homogeniser with flow direction away from the shaft seal



Type zoatec® BG Vacuum Process Plant

Best for batch! From quotation to automation

zoomatic Process Controller

The zoomatic controller is an expandable system that covers the full spectrum of customer requirements – from individual basic control functions to fully automatic recipe mode and even complete batch documentation.

Controller versions:

- **zoomatic smart**
Basic HMI solution for a predefined functional scope

- **zoomatic professional**

Modularly expandable concept based on a SCADA system, extending to compliance with FDA regulations according to CFR21, Part 11. Project execution according to GAMP and an ISA S88.01 compliant software structure can be implemented.

- **zoomatic remote**

Full PLC controller with interface for connection to an external system

- **zoomatic lib**

For integration into another system

Dimensions



Technical specifications of zoatec® BG Batch Vacuum Process Plant

Sizes: BG: 10, 100, 200, 400, 800, 1.200, 2.000, 3.000, 5.000 (larger capacities available upon request)

Size	Minimum Start capacity [litre]	Maximum Usable capacity [litre]	Process module			Weight [kg]	Supply module			Weight [kg]
			A [mm]	B [mm]	C [mm]		D [mm]	E [mm]	F [mm]	
BG10	4	10	800	900	1.500	350	600	600	1.600	150
BG100	40	100	1.200	1.200	1.850	600	900	800	1.600	200
BG200	80	200	1.400	1.400	2.350	750	1.050	800	1.800	250
BG400	150	400	1.600	1.600	2.600	1.000	1.050	800	1.800	350
BG800	340	800	2.000	2.000	3.000	1.500	1.250	1.000	2.000 – 2.200	500
BG1200	430	1.200	2.200	2.200	3.200	2.300	1.250	1.000	2.000 – 2.200	700
BG2000	760	2.000	2.400	2.400	3.600	3.000	1.500	1.000	2.200 – 2.500	900
BG3000	1.240	3.000	2.700	2.700	3.900	4.500	1.500	1.000	2.200 – 2.500	1.500
BG5000	1.890	5.000	3.200	3.200	4.300	11.000	1.500	1.000	2.200 – 2.500	3.500

Larger plants and dimensions for 130° conical and dished containers available upon request. Subject to technical changes without prior notice.



Our spectrum of services:

- Engineering for entire plants and complete AZO group projects
- Qualification and validation
- Custom plant engineering (continuous plants, late stage mixing, etc.)
- Sterile versions and ATEX applications
- Customer Process Centre (CPC): Including trials with customer products, product analyses, and scale-up calculations
- Project management
- Consulting, process analysis and process optimisation
- Software systems conforming to CFR 21 Part 11 (new installations, updates and upgrades)
- Commissioning and training
- Conversion, maintenance and repair
- After Sales / Support & Service / Replacement Parts