



Handling and Process Technology
modular – economical – reliable

SERVOLIFT

SERVOLIFT

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WELCOME THE STORY BEHIND SERVOLIFT.

1

From a three-man office to a global player.

1976

No sooner had Wilfried Lahl, Reinhard Fies and Jean Claude Lolivrel founded their joint design office than a pharmaceutical company got in touch with the three young engineers. The company was looking for a reliable solution for lifting, moving and tilting drums which satisfied the high demands for hygiene imposed by the sector. Only one day later, the three engineers sent their construction drawings for a drum lifter with two supporting arms, the present SERVOLIFT SL.

That was the start of SERVOLIFT's success story. To date, the handling application has been built thousands of times, modified and it is naturally being further developed continually, even today. One thing has however remained the same:

The very special skills and dedication as a manufacturer of special machines.

This is the reason for the success on the way to becoming a complete supplier of handling, blending and cleaning equipment in the pharmaceutical, chemical, food and cosmetic industries, as well as in all related industrial branches.

1997

A fast growing mechanical and plant engineering company has developed from the design office of that time. The range of products covers electronically controlled blending systems, stationary and mobile lifters, drum dumpers and numerous individually constructed special machines, as well as systems for drum and container cleaning technology.

SERVOLIFT decides to extend its business activities beyond the European borders. Step by step, agencies and partnerships are being created in the USA, Mexico, Brazil and South Korea.

2011

- System technology which has always been designed entirely in house and developed systematically to give standard modules that can be combined flexibly.
- Individual planning, efficient realization and long term service - always near to the customers in 41 countries:

If you are looking for a solution:

We will provide you with it.

*"If no one has a solution,
ask Servolift!"
Project manager,
Boehringer Ingelheim*



**WE ADDRESS YOUR NEEDS:
GEOGRAPHICALLY, TECHNICALLY, PERSONALLY.**

2

Wherever you work. Because being near matters.

Wherever in the world you want to set up a new plant or re-equip an existing one, SERVOLIFT is close at hand.

- Short travelling times in order to personally inspect the initial constellation on-site and discuss it with you
- Low costs for commissioning and availability at short notice for maintenance work

The best way is to meet us for a personal talk



**FIGURES THAT SPEAK FOR THEMSELVES.
WE UNDERSTAND WHAT IS IMPORTANT TO YOU.**

3

Our customers are proof of our know-how.

In the pharmaceutical industry, there are especially high demands for process safety and hygiene, for example in compliance with GMP standards and FDA specifications. We satisfy the highest clean room requirements – in whichever country you manufacture. A share of the pharmaceutical industry of around 70% in our customer structure proves this fact.

Furthermore

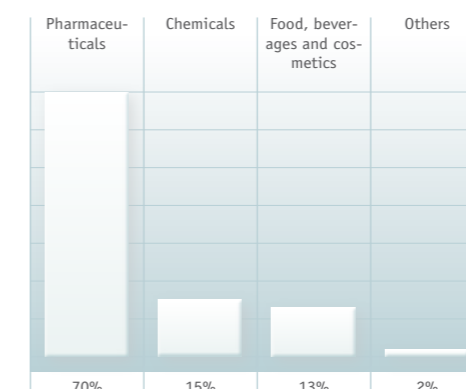
In many sectors, an important part of the added value is achieved today with:

- Optimally rationalized production processes
- Low consumption of resources by the production plants as well as low maintenance and service costs

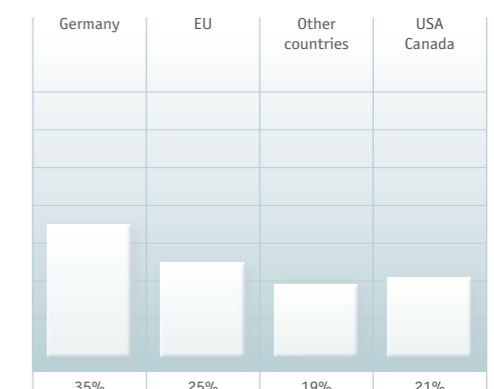
We achieve these added values for our customers by:

- developing individual systems when necessary in order to solve the task for the handling and processing technology, and
- the simultaneous use of our unique modular system of proven modules and components that were developed and produced in-house

Sectors



Worldwide active





GAIN NEW PERSPECTIVES OUTSIDE OF THE PRODUCTION PROCESS AND IN THE PROCESS ITSELF.

4

Horizontal and vertical product flow.

A systematically developed, first class handling concept continues seamlessly in the process technology. Thinking further ahead, that's typical for SERVOLIFT.

All-encompassing concept

The better a system's applications harmonize with each other the more economical and smoother the production:

- Optimal interfaces between production levels
- Consistent use of a small number of handling, process technology and control systems
- Elimination of unnecessary intermediate steps
- Only a few hardware and software systems that work together in harmony
- Cost savings for maintenance and service work

Horizontal and vertical production

It doesn't matter to us whether you produce in horizontal or vertical lines. What is important for us is to hand over an ideal, ready-to-use application or even a complete system with which you can produce using state-of-the-art technology:

- Mapping of all paths and movements between process steps
- Integration of related process technologies
- Modular customization, extension and flexibility

Added values through service

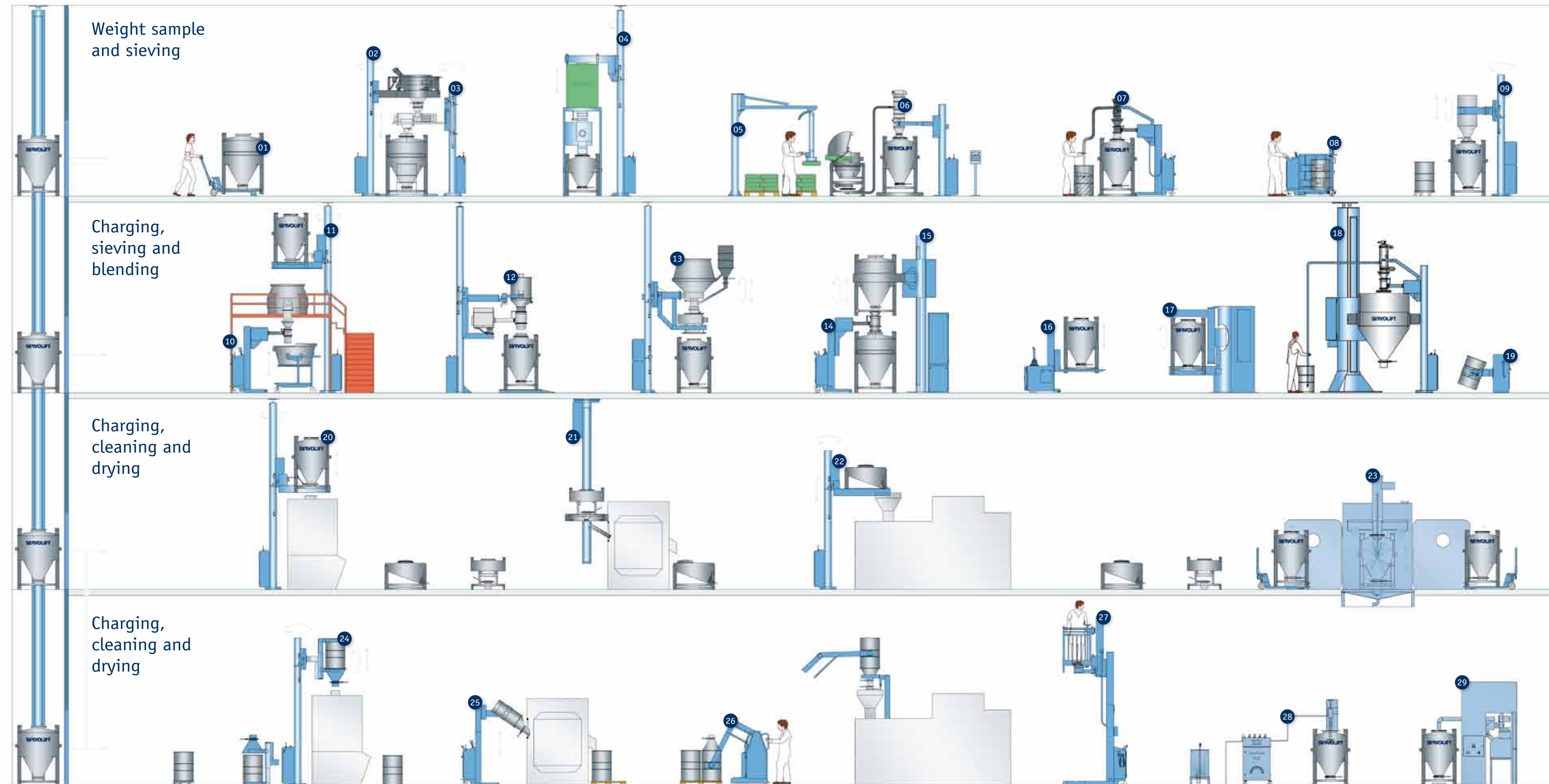
Furthermore, it is important for us to offer you excellent service at all times and with attention to every detail, even after your system has been commissioned:

- from training your employees through to maintenance
- for production conversions and changes to your system, even years later
- competent, solution-oriented and quick to react, in all respects

Our passion for perfect engineering is so great that it is a matter of course for us to offer you a dependable, long-term partnership to provide you with security and flexibility.

One of our customers put it like this:

"It's our job to develop the recipe. But too many cooks spoil the broth, so SERVOLIFT, could you do it all please?"



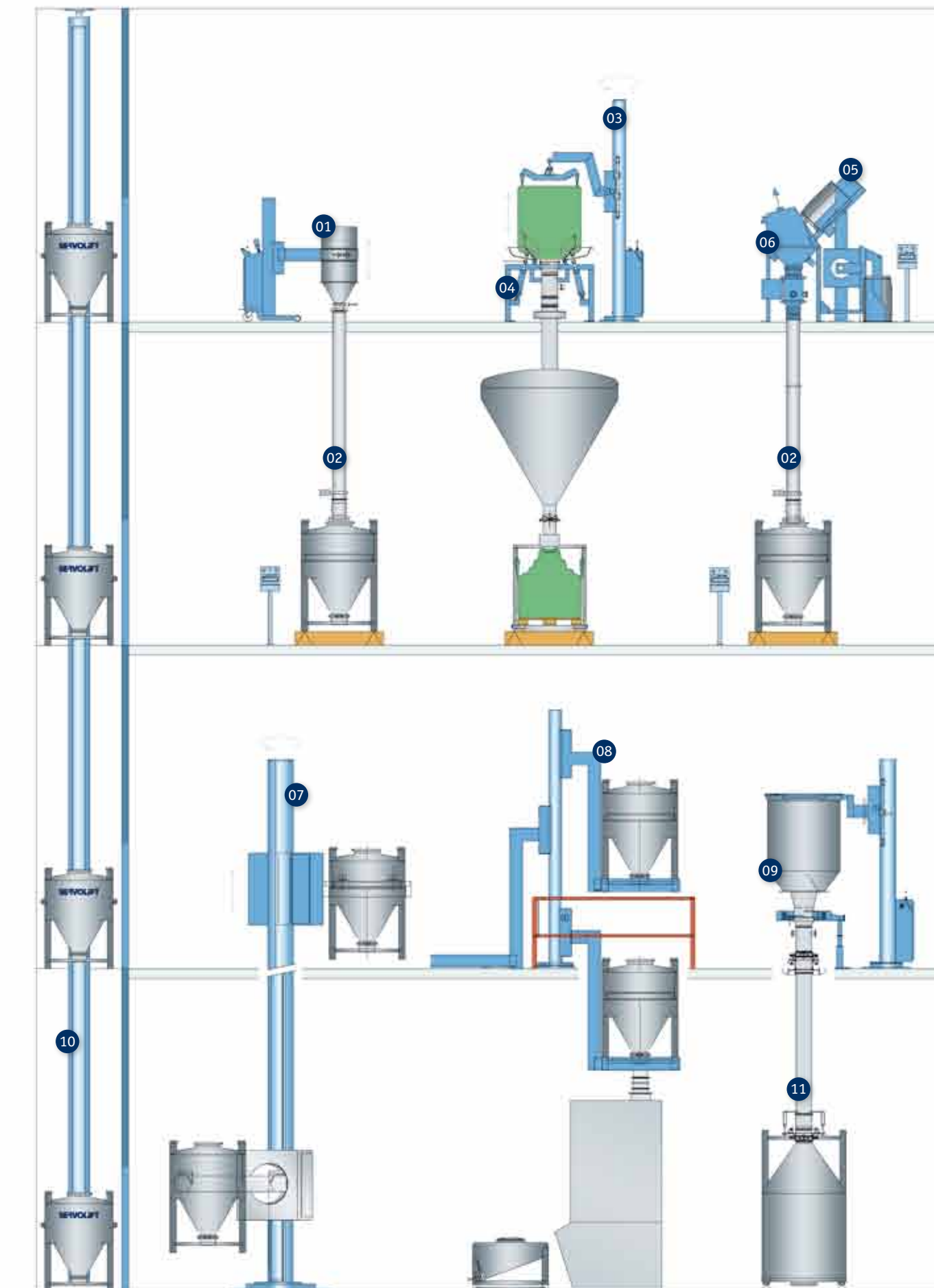
Glossary

Horizontal product flow

- 1) Manual lift truck for container transport
- 2) Stationary lifter with weighing bin
- 3) Stationary lifter with control sieve
- 4) Big Bag lifter with discharging function
- 5) Vacuum lifter handling various bins and bags
- 6) Lifter with vacuum conveyor
- 7) Mobile lifter with vacuum conveyor and sizing mill
- 8) Drum crusher
- 9) Drum blender with handling function
- 10) Mobile lifter with sizing mill
- 11) Container lifter for charging purpose
- 12) Stationary lifter for discharging purpose with integrated calibration
- 13) Fluid bed bowl handling with dry calibration and adding of lubricants
- 14) Mobile lifter with sizing mill
- 15) C-frame container blender
- 16) Mobile lifter for transport of container
- 17) Cage blender without lift function
- 18) Bin blender with fixed blending container including feeding lifter / WIP; CIP device
- 19) Drum blender
- 20) Container lifter for feeding purpose
- 21) Ceiling mounted lifter for feeding of coater
- 22) Stationary lifter for tablet containers to feed packaging machine
- 23) Single chamber cleaning system with automated drying and cooling
- 24) Stationary lifter with squeeze funnel system for feeding purpose
- 25) Mobile drum lifter for feeding of coater
- 26) Mobile Drum Lifter "SL 250"
- 27) Mobile Lifter with telescopic unit and cage
- 28) Semiautomatic washing rack for automated inner washing of bins
- 29) Separate drying station

Vertical product flow

- 1) Mobile drum lifter for charging purpose
- 2) Container charging station with scale
- 3) Big Bag lifter
- 4) Pneumatic discharge aid for Big Bags
- 5) Drum dumper
- 6) Bag discharging unit with integrated crusher
- 7) Container blender with various handling functions (lifting, slewing and positioning function)
- 8) Container lifter for feeding purpose
- 9) Big Bag lifter with exhaust system
- 10) Stationary lifter for transport within multiple levels
- 11) Discharging and feeding via high containment split butterfly valve system





WE MOVE THINGS –
WHATEVER IT IS THAT NEEDS TO BE MOVED.

5 Handling systems

Batch containers, drums, big bags, special bins – whatever needs to be moved in your production, we have the solution.

Imagine that powders and granules in bins with capacities of several hundred liters have to be moved in your production as easily as possible and absolutely safely from A to B, then lifted to a height of 6.50 meters and tipped precisely into the hopper of a machine. We can do that perfectly.

And in any conceivable variation as well:

- Whether drums, containers, big bags or special bins...
- Whether 30 or 3,000 kilograms...
- Whether a gripping, clamping, carrying, fork or hook system...
- Whether with or without traction drive or with a telescopic version for moving under low construction elements and through doorways...
- Whether stationary, free-standing, floor, wall or ceiling mounted...
- Whether manually operated or individually programmed...
- Whether under clean room conditions or in potentially explosive environments...

Key facts about handling systems

- Economical handling of all kinds of bins, virtually maintenance-free
- For all sectors with hygiene requirements
- Low cost thanks to the use of extensively tested standardized modules, developed in-house
- Extremely convenient for the operator to use
- Maximum precision and safety
- Maximum flexibility for solving customer-specific requirements

By the way

SERVOLIFT handling systems are optimally suited for process chains, for example in combination with sieving, weighing or blending systems.

**Just take a look
at the next few pages.**

Handling is a universal conception which we have been implementing in practice in countless variations – both mobile and stationary – for more than 35 years.



THE RIGHT DOSAGE – RATIONALITY AND ADDED VALUE

6

Systems for sieving and weighing

Handling, sieving, weighing and dosing technologies are considered to be difficult to combine. All the more reason why we want to show you the potential for efficiency that we achieve here:

complete, modular *SERVOLIFT* solutions.

Starting from handling technology for all kinds of bins and containers, it's a logical consequence to not only prepare the next typical production steps perfectly but to take them ourselves instead.

Whether in the laboratory or in production, the potential for increasing process rationality and production added value lies in perfectly combining handling and sieving or weighing systems.

- A universal system reduces the complexity of the interfaces: That saves time and increases reliability
- Reduced maintenance costs
- Modular extensions e.g.
 - Connection of high-precision dosing systems
 - Programmable, recipe-controlled weighing
- Optimal connection to process control systems

Sieving

- Low maintenance, quiet vibrating sieves, primarily for use with free-flowing, dry bulk materials
- Optimally combined with *SERVOLIFT* handling solutions for bridging height differences
- Fast, easy cleaning of sieve inserts

Weighing

- Complete solution for weighing and dosage
- For all types of barrels: drums, sacks, containers, cardboards, big bags
- As a manual, semi or fully automated application, as specified by the customer

Whatever efficiency is possible, *SERVOLIFT* will achieve it for you:

Handling, sieving, weighing and dosing – one system, endless possibilities.



OPTIMALLY BLENDED – HANDLING AND PROCESS TECHNOLOGY

7

Blending systems

From a laboratory blender up to a drum, container or special blender: The blending and production process gets moving, thanks to integrated handling technology.

In the same way as with sieving and weighing, blending is also a task which is solved perfectly with the modular SERVOLIFT system:

- Fully automated, validated **blending process with a tumbling movement:** By doing without blender blades, mixers etc., a blending process could be developed that protects the product and is 100% compliant with hygiene standards. This involves less cleaning effort and thus contributes to savings in time and costs.
- Integrated handling functions for lifting, slewing or tilting all kinds of bins: For optimal connection of upstream and downstream production steps e.g. filling or discharging
- Space-saving single column principle can be implemented as an in-front-of-the-wall or a behind-the-wall construction: To make your system architecture as flexible as possible
- Consistently simple and ergonomic operation: For safe and error-free work.

It goes without saying

At SERVOLIFT, you will find the right blending system for all needs:

- From 10 liter to 5,000 liter bins, for bearing capacities from 5 to 5,000 kilograms
- Programmed safety with light barriers, light curtains, surface scanners or simply protective housing

Numerous features can be combined individually for any blender system:

- Load cells
- Equipment for spraying liquids
- NIR spectroscopy
- Connection of choppers, sieving functions etc.
- CIP-capable solution when combined with SERVOLIFT cleaning systems
- Complies with requirements in FDR CFR 21 Part 11
- Verified qualification documents (IQ, OQ, DQ)

SERVOLIFT – so that handling and process technologies work hand-in-hand.



CLEANLY DESIGNED, ALL THE WAY – BIN CLEANING WITH MAXIMUM EFFICIENCY

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Cleaning and drying systems

Batch containers, drums, special bins etc. must be more than just “somehow clean”. Absolute reliability and short process times are essential, as well as low direct and indirect costs: typical SERVOLIFT

Reliability

For cleaning systems, reliability is one of the most important decisive factors in order to ensure that cross contamination is ruled out and the hygiene requirements prevailing at any time are fulfilled without compromise.

Over and above these matters, which go without saying, SERVOLIFT achieves decisive efficiency benefits:

- Cleaning processes can be configured individually and thus optimally adjusted to suit the items being cleaned. Flexibility when configuring all parameters, recipe management and password administration are always integrated.
- Short process times for cleaning and integrated drying ensure high throughput rates. This means that the number of bins in reserve can be reduced and the space required for their storage and drying can be saved.

Ecological is economical

SERVOLIFT has developed the cleaning and drying systems as a Green Line concept by reducing media supply and waste water to a minimum:

- This reduces effort and costs and
- provides for future-proof, environmentally friendly operation.

Because it is clear that lower energy consumption for tempering medium and process air as well as the consistent use of resource-saving technologies, e.g. by optimizing media flows, are the essential approaches for achieving low operating costs: Just clean design, all the way – typical SERVOLIFT.

Your requirements – SERVOLIFT has the solution

Whether you are planning to switch from manual to automatic cleaning, or are looking for possibilities for installing a fully automated pass-through cleaning system: SERVOLIFT will develop the solution to suit your individual needs – while using flexibly configurable system modules proven over many years.

High throughput, low costs, ecologically pioneering, absolutely dependable:

SERVOLIFT cleaning systems



- GMP, GAMP compliant, reducing bottlenecks
- Fulfill all levels of the hygiene requirements up to automation level
- As an allrounder, single chamber or double chamber cleaning system
- As a clean-in-place-system in combination with SERVOLIFT blending systems or containers
- Nozzles and cleaning technology that can be individually configured for your applications and kinds of bins





WHATEVER YOU NEED – HIGH QUALITY MADE TO MEASURE

9

Bins, containers, drums, additional components

Whether standard rectangular containers, drums, blending drums or bins with individual geometries, either as a single item or series production: At SERVOLIFT, you will find the right bin for every task: we make them for you.

Everything from one source
The SERVOLIFT range of bins, containers and drums meets the high demands that must be satisfied by all SERVOLIFT components:

- Realization of individual customized specifications to provide the best possible solution for special tasks
- Uncompromising quality in manufacture to ensure that the demands on the quality of materials and workmanship are fulfilled permanently and reliably
- Optimal interaction of ALL SERVOLIFT components from handling applications through to bin cleaning

Variety

Especially for the pharmaceutical, cosmetic and food industries, SERVOLIFT supplies all kinds of transport, storage and blending containers:

- Easy to clean
- GMP compliant
- Can be extended by components such as: funnels, valves, discharge aids, adapters, nozzles etc.

SERVOLIFT constructs on request customized single containers and small series with capacities from 10 to 5.000 liters, naturally conforming to the highest cleaning and hygiene requirements:

- With pick-up bars
- With stacking corners
- Perfectly compatible with SERVOLIFT handling systems

Drums as a system concept

Drums are always used where small quantities are produced or where there is need for a high degree of variability and adaptations to suit the surroundings.

The relatively low purchase costs as well as the low space requirements are decisive factors that speak in favor of drums

SERVOLIFT offers you a variable drum system which can be extended by additional components at any time:

- Funnels
- Blending hoods
- Discharge aids
- Transport trolleys
- etc.

Your sector, your application, your requirements.
A partner from A to Z: SERVOLIFT



BEYOND TECHNICAL COMPETENCE – WORKING TOGETHER IN TRUST

10

Because there are people in the background

Whether an individual solution or complete engineering, we rely on trust and constructive collaboration to develop the perfect solution for you.

Operating personnel

Application planning and installation are the one thing, the everyday work and operation of a machine or a whole system are the other.

We cordially invite you,

to let us train your operating personnel in advance instead of waiting until acceptance. The more complex your system becomes the more it makes sense to consider the wishes and requirements of your operating team early on during planning and development. If the people who operate your system every day are perfectly satisfied with your machines, this contributes greatly to quality assurance and the continuously high efficiency of your production.



Dear business partner,

At the end of this brochure, I would like to speak to you directly.

I hope that the previous pages have given you an impression of what we can do: Not only as engineering professionals for individual specialized applications but also as full-service suppliers of coherent, modular extendable complete systems which can be modified flexibly at any time.

We have consciously elected to do without the documentation of technical specifications. As this brochure is primarily about one thing: Your trust in having found the right partner – with SERVOLIFT and its employees – to provide a perfect solution for your requirements.

We want to confirm and deepen this trust with real service. Talk to us about technology, key figures and economy; let your engineers get together with ours to clarify what can be done at once and where individual modifications must be implemented ...

This brochure is just a beginning – take the next step and get in touch with us. We invite you to inspect our company, to visit us at our trade fair appearances or to let our sales staff advise you comprehensively and in depth, we look forward to you and your task.

Kind regards

Wolfgang Graner

Managing Director

PS: You will find detailed technical information in our product brochures. If we have aroused your interest, please get in touch with us.

SERVOLIFT

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