coperion

baker perkins · diosna · coperion k-TRON · gabler · kemutec · unifiller · vmi

Pharma & Nutrition
integrated solutions

coperion.com/fhn

About Coperion Health & Nutrition solutions

Coperion is a global industry and technology leader in specialized solutions and integrated systems for the health and nutrition industries.

Our experts for Health and Nutrition (H&N) develop and produce manufacturing machinery, and components for pharmaceutical, nutraceutical, personal care, and cosmetics industries. Coperion's H&N technology brands deliver industry-leading solutions backed by decades of global expertise utilizing Baker Perkins, DIOSNA, Gabler Engineering, Kemutec, K-Tron, Unifiller, and VMI.

We offer comprehensive solutions for oral solid dosage forms as well as topical creams/lotions in both batch and continuous processes. Whether from receipt of raw ingredients, excipients and API's to the final milling, mixing, granulating, drying, extruding, spheronizing and/or coating steps, our integrated systems include contained product transfer throughout. Our medicinal confectionery lines can also provide cooking, mixing, forming, demolding and sanding in both batch and continuous modes.

Coperion employs more than 5,000 people with over 50 sales and service companies worldwide.

Stay updated

Our 'Pharma in Focus' Newsletter delivers the latest developments and is distributed several times a year.

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Why choose Coperion?

Versatile options
Batch to continuous processing technology solutions for solid and liquid products.

Single source supply
Full system design for peace of mind – from R&D to production processing.

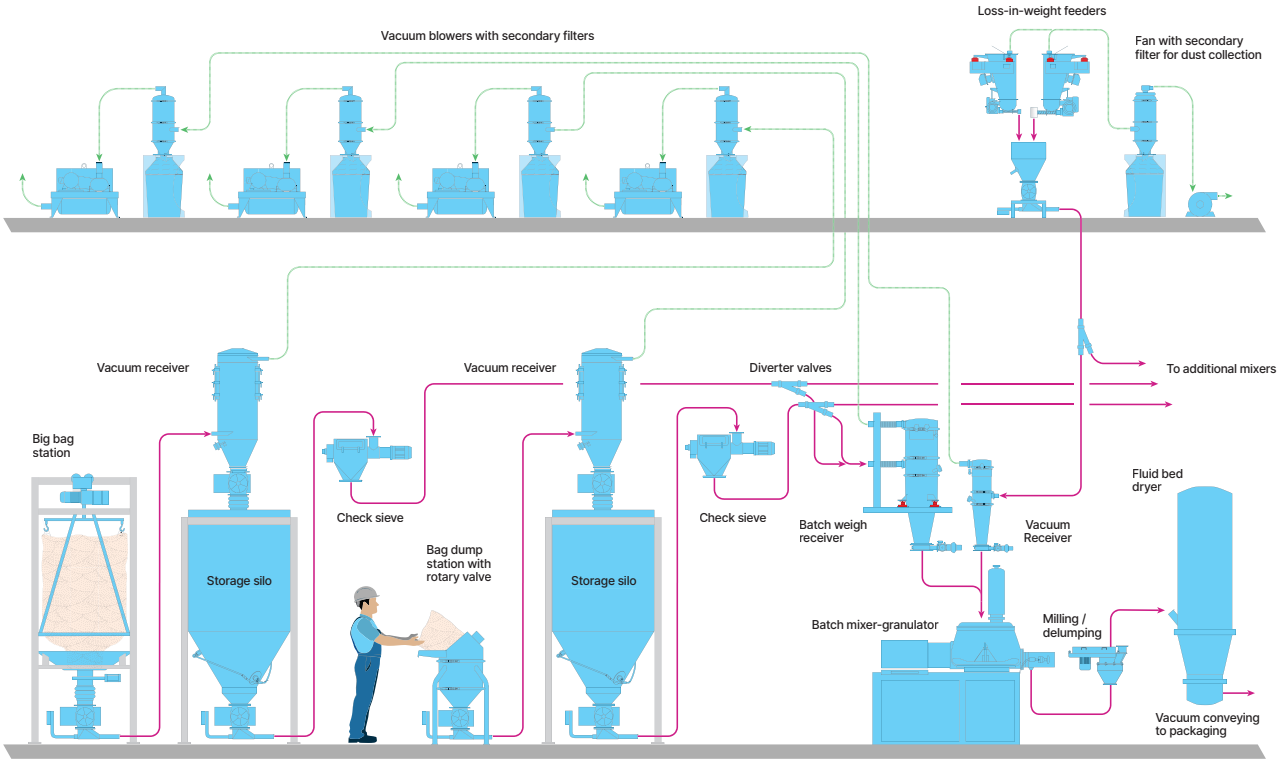
Specialized engineering teams
Ensure GMP-compliant design focused on safety and efficiency and can provide systems suitable for various containment and OEL levels.

Reliable processing
Coperion unites renowned application experts and technology providers, offering a comprehensive suite of solutions for all your pharmaceutical processing needs.

Batch & continuous processing
System overview

System solutions – Full system design for peace of mind – from R&D to full-scale production.

Our specialized engineering teams ensure GMP-compliant design focused on safety and efficiency and can provide systems suitable for various containment and OEL levels, whether it is continuous or batch system designs.



Batch processing system scheme

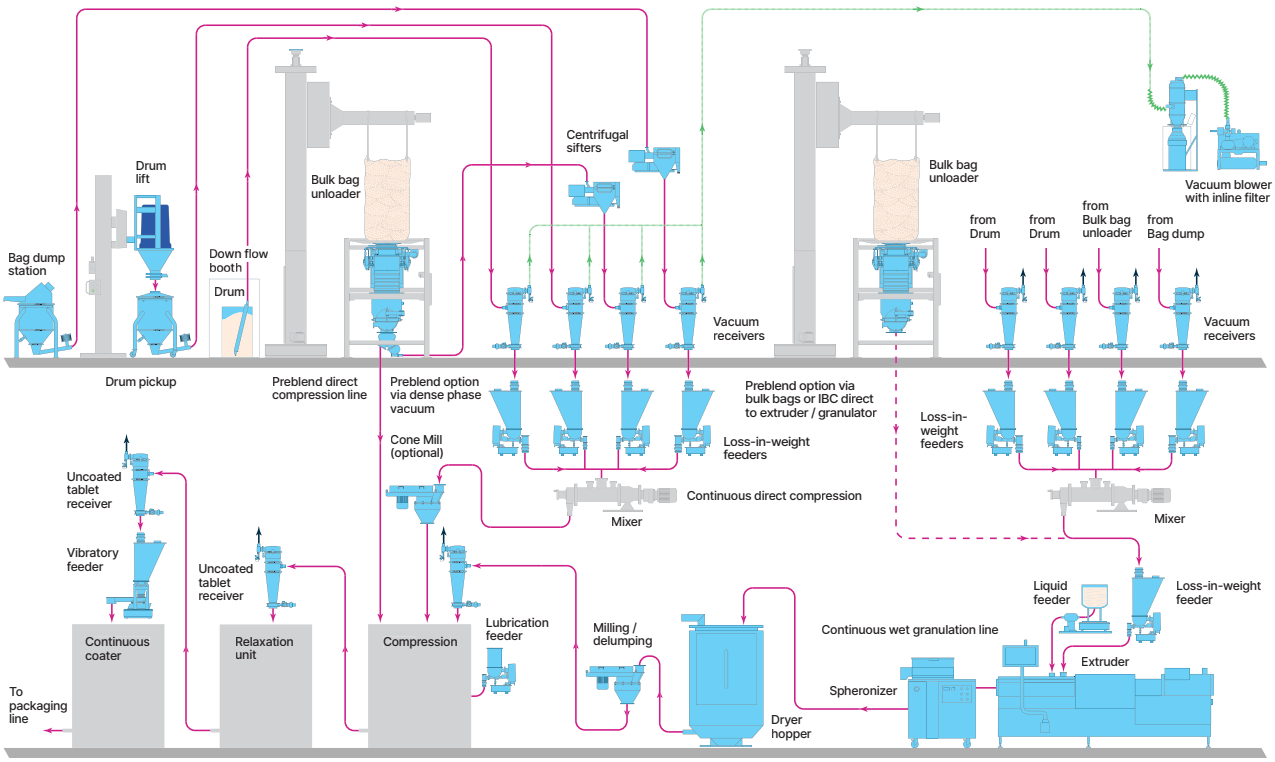
For batch processing, Coperion can deliver all ingredients to the mixing/granulation and/or fluid bed drying steps and ensure safe transfer of all components at specific automated batch weights. Using our load cell technology in either gain-in-weight or loss-in-weight design, as well as our pneumatic transfer methods, the system can be designed with full recipe control to ensure that the proper ingredients from the correct source are delivered and dispensed accurately to the batch process. All system components can be completely integrated and designed to ensure the optimum in product and operator safety as well as introducing innovations for quicker cleaning and product turnover.

Key:

Process flow

Processing air

GMP COMPLIANT



Continuous processing system

Whether the continuous process includes blending, granulating, hot melt or wet extrusion, Coperion can provide a single source supply from raw ingredient transfer to the final continuous process, with high accuracy delivery via patented technology loss-in-weight feeders. Whether the ingredient source includes potent API's with special containment requirements, or delivery from bulk bags, sacks or drums, the complete system can be integrated with Coperion's pneumatic transfer devices to ensure quick and efficient refill of the continuous Loss-in-weight feeders. Full system integration as well as process validation is available.

Processing solids

Solid dosage forms are widely used in various industries such as pharmaceuticals, homeopathy, and nutrition supplements.

This includes tablets, effervescent granules, powder granules, and (micro) pellets. When choosing a process and technology, several aspects must be considered. The characteristics of the targeted intermediate and final products are crucial for the desired quality, quantity, safety, and efficacy.

We accompany you on every stage from R&D to production – with their expertise and our integrated system solutions.

Our Coperion process experts for:

- Ingredient handling
- Material handling
- Pneumatic conveying
- Dispensing & feeding
- Mixing & homogenizing
- Granulating
- Drying
- Extruding
- Spheronizing
- Coating

We offer entire integrated systems - everything from a single source.

Solids feeding

Accurate powder feeding is essential for consistent and efficient processes.

Whether handling fine, floodable, cohesive, or free flowing materials, a wide range of feeding technologies ensures flexibility and precision. Options include screw and vibratory feeders, and weigh belt systems, available in various volumetric or gravimetric configurations to create the optimal solution for any application. All systems deliver repeatable accuracy, from lab to production scale. Additionally, a special line of screw and vibratory feeders has been developed specifically for the strict hygiene requirements of applications in the pharmaceutical industry.

K-Tron Twin Screw Microfeeder

K-Tron Twin screw feeders

coperion K-TRON

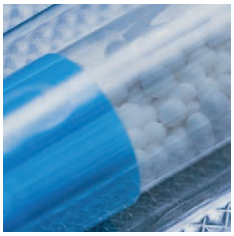
	Twin screw feeders	Screw feeders
Models	**Twin Screw Microfeeder K-ML-SFS-MT12, MT16 Pharmaceutical Quick Change Twin Screw Feeder K3-PH-ML-D4-QT20, QT35**	**MechaTron AP, AccuRate series feeders**
Scale	Lab scale, production scale	Production scale
Capacity (in litres)	1 - 80	1, 3 - 1491
Size (wxdxh in mm)	w: 343 - 522 d: 450 - 605 h: 447 - 1389, 7	w: 203 - 368 d: 368 - 836 h: 302 - 871
Feed rate	0.031 - 2012l/h	MechaTron AP: 0,5 - 150 kg/hr AccuRate Series Feeders: 0,00048l/h - 7929l/h
Benefits & properties	Volumetric or high accuracy gravimetric feeding, continuous, even mass flow with minimal pulsations, screw filler gently moves bulk material to the throat and into the feed screws, drive assembly completely enclosed in SST housing, modular design.	Quick and easy disassembly for service and maintenance
Products	Excipients, API's, supplements, polymers for extrusion	

K-Tron
Receiver
& feeder

K-Tron
Loss-in-
weight
vibratory
feeder

coperion K-TRON

	Vibratory feeders
Models	**Loss-in-Weight Vibratory Feeder K3-HD-CL-SFS-V100 (tray), Loss-in-Weight Vibratory Feeder K3-PH-ML-D4-V200 (tube), Loss-in-Weight Vibratory Feeder K3-HD-ML-D5-V200 (tray), Loss-in-Weight Vibratory Feeder K3-HD-ML-V200 (tray), Loss-in-Weight Vibratory Feeder K3-HD-ML-V300 (tray)**
Scale	Lab scale, production scale
Capacity (in litres)	10 - 750
Size (wxdxh in mm)	w: 400 - 668 d: 468, 7 - 948 h: 830, 5 - 2058
Feed rate	1 - 8500l/h
Benefits & properties	Volumetric or high accuracy gravimetric feeding, continuous, even mass flow with minimal pulsations, PH-V200 hygienic tube tray has no corners and is easy to clean, tray access for cleaning through ferrule clamps, drive assembly completely enclosed by hygienic silicone cover, lower maintenance requirements due to the absence of mechanical wear parts, modular design.
Products	Friable pharmaceutical granulations, uncoated tablets, capsules



Solid mixing, granulating & drying

Homogeneous mixing of solid mixtures in high-shear mixers (HSM) ensures uniform distribution and a homogeneous excipient base.

By spraying liquid onto solid mixtures, the granulation process, in either a HSM or a fluid-bed granulator, transforms dry powder into free-flowing, stable granules with improved handling e.g. controlled-release properties. Drying, such as in fluid-bed or single-pot systems, gently removes residual moisture while preserving product integrity. These scalable processes, easily transferable from lab to full production, are essential in pharmaceutical, nutraceutical, and cosmetic manufacturing, ensuring efficiency, safety, and consistent product quality.

DIOSNA Laboratory high-shear mixer granulator

DIOSNA Vacuum mixer granulator

diosna

	Pharmaceutical (P) high-shear granulators
Models	**P1 - P 1250**
Scale	Lab scale, production scale
Capacity (in litres)	0,25 - 1350
Size (wxdxh in mm)	w: 800 - 2600 d: 550 - 3100 h: 535 - 3755
Max. tip speed in m/s	7
Benefits & properties	High efficiency thanks to fast mixing times with maximum quality and optimum homogeneity for difficult mixtures
Products	Granules, powder mixture, agglomerates

	Single Pot - HSG & Vacuum dryer (VAC)
Models	**VAC-10 - VAC1200**
Scale	Lab scale, production scale
Capacity (in litres)	2 - 1200
Size (wxdxh in mm)	w: 1897 - 4150 d: 880 - 1850 h: 1240 - 4700
Max. tip speed in m/s	7; 6 at ≥ 150 l capacity
Benefits & properties	Wet granules are produced and then dried under vacuum, stripping gas (compressed air or nitrogen) can be added and finely distributed while drying, mixing tool is equipped with a wall scraper
Products	Granules, powder mixture, agglomerates, effervescent granules, environmentally sensitive products




DIOSNA Minilab rapid change (RC) modular laboratory processor fluid bed module

DIOSNA Universal mixer

diosna

	Fluid bed processors
Models	**Minilab RC, Midilab RC, CAP150 - CAP1250**
Scale	Lab scale, production scale
Capacity (in litres)	1 - 1350
Size (wxdxh in mm)	w: 1290 - 2881 d: 704 - 2645 h: 1090 - 8300
Max. air flow rate in m^3/h	150 - 8000
Benefits & properties	Remote maintenance access, Extensive batch data acquisition and documentation, Mini and Midilab module exchange to coater
Products	Granules, agglomerates, tablets, seeds, coated pellets, microoganisms

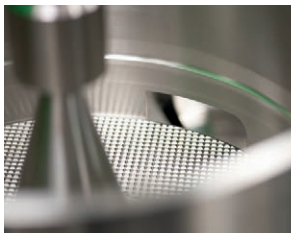
diosna

	Universal mixer granulators
Models	**V10 - V 1600**
Scale	Lab scale, production scale
Capacity (in litres)	10 - 1702
Size (wxdxh in mm)	w: 1270 - 3650 d: 900 - 1750 h: 1230 - >2800
Max. tip speed in m/s	7
Benefits & properties	High efficiency thanks to fast mixing times with maximum quality and optimum homogeneity for difficult mixtures, optional double jacket for heat applications
Products	Plastic coloration, wet granulation, eyeshadow, food, nutraceutic, chemics, agriculture, cosmetics,food supplements, consumer goods (e.g. tobacco and its alternatives)

Spheronization

A key challenge in both the pharmaceutical and nutraceutical industries is producing easy-to-administer forms that are simple, yet effective for daily use.

(Micro)pellets and granules meet these needs, and spheronizer technology is effective for manufacturing high-quality, uniformly sized granules. A product-specific geometry of the rounding disc profile is essential, and precision is critical, especially in pharmaceutical manufacturing to handle active ingredients gently and accurately. We offer complete pellet manufacturing systems, from mixing to extrusion, spheronizing, drying, and coating - ensuring quality and consistency from lab to production scale.



Gabler
Spheronizer

gabler

	Spheronizers
Models	**Spheronizer R-250, Spheronizer R-400 - R-700**
Scale	Lab scale, production scale
Capacity	<10 kg/h
Size (wxdxh in mm)	w: 600 - 1200 d: 600 - 1350 h: 600 - 1050
Size of pellets	0.4 - 3 mm
Benefits & properties	Individual and ergonomic for ideal product flow, parts that come into contact with the product can be dismantled in a few simple steps and are easy to clean, a crane assists the operator in installing and removing the disc, geometry of the rounded disc profile can be adapted to specific products
Products	Extrudate ropes to spheres (pellets)

K-Tron Feeder

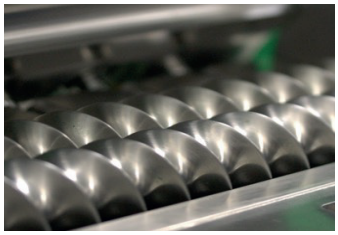
Gabler Spheronizer

Gabler Extruder

Extrusion

Extrusion is a continuous process where a powder blend is compacted and forced through an orifice under a variety of control parameters.

In hot melt extrusion, a polymer and powder blend containing an API is formed into an extrudate which can then be shaped into pellets or granules. In wet extrusion, liquids or solvents are added as binders to achieve the desired consistency and product properties. Two extruder designs in lab, pilot and production scale are available: The Coperion ZSK extruder with its modular barrel and screw configuration for tailored process flexibility, and the Gabler DE extruder with its clamshell design for quick cleaning and fast product changeover.



Coperion MEGAlab Extruder

gabler

	Extruders
Models	**Extruder DE-40 - 140**
Scale	Pilot scale, production scale
Capacity	<950 kg/h
Size (wxdxh in mm)	w: 510 - 1600 d: 770 - 990 h: 870 - 1380
Hole diameter stainer plate	1.0 mm
Benefits & properties	Easy cleaning, process part cylinder divided in upper and lower shell, independent heating zones, configurated co-rotating screws for all process requirements, integrated into a complete line or stand-alone
Products	Solid dosage forms, stomas, implants, insoluble drugs

coperion

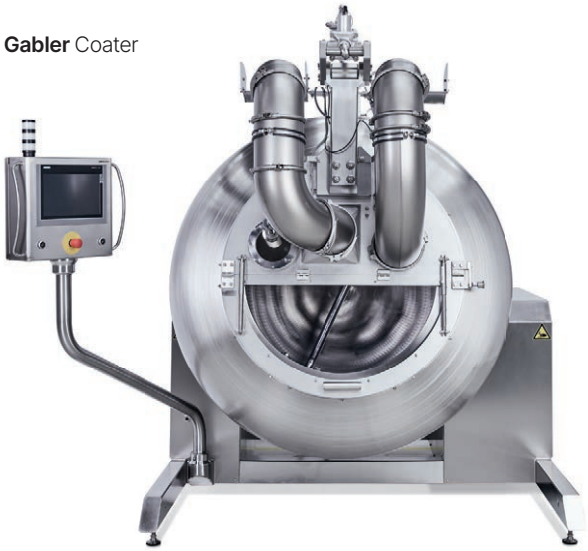
	Extruders
Models	**ZSK 18 MEGAlab, ZSK 26, ZSK 32, ZSK 40, ZSK 70**
Scale	Lab scale, production scale
Throughput	1 - 120 kg/h
Size (wxdxh in mm)	w: 650 - 1000 d: 2000 - 6000 h: 1800 - 1900
Screw diameter	18 - 70 mm
Benefits & properties	Twin screw design offers a variety of unit operations within one piece of equipment, reliable scale up due to ZSK design, modular barrel design, easily integrated with K-Tron feeders
Products	Active ingredient-containing adhesives for transdermal patches, active ingredients as a basis for granules for capsule filling, medical adhesives, compounds of implants, and medical plastics

Tablet & pellet coating

Coatings are a long-established method in the production of film-coated tablets, pellets and dragées widely used in pharmaceutical and nutraceutical industries to enhance product value and appeal.

Horizontally perforated drum coaters are common for tablets, while onion-shaped pan coaters are also suited for round products like dragées and pellets. Pellets are coated in fluid-bed apparatus with Wurster coating system. For nutraceutical gummies, continuous drum coaters gently tumble products in a granular medium, providing a uniform finishing layer. While coatings ensure stability by protecting the product against moisture and harmful light as well as supports controlled release, improves swallowability, and visual effects. It also enhances taste, texture, and appearance.

Gabler Coater



gabler

	Pan coaters
Models	**Coating machine CML-20, CMS / CMT 250-500**
Scale	Pilot scale, production scale
Capacity (Kg per litres)	20 - 500 batch finished product
Size (wxdxh in mm)	Subject to design
Coating angle pivotable between	+80° - -80°
Benefits & properties	Efficient spraying technology reducing amount of raw material needed, easy to access, clean and maintain
Products	Film or suspension coated products




DIOSNA Minilab rapid change (RC) drum coater

DIOSNA Midilab rapid change (RC)

diosna

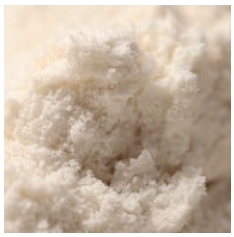
	Drum & fluid bed coaters
Models	**Minilab RC, Midilab RC**
Scale	Lab scale, pilot scale
Capacity (in litres)	1 - 20
Size (wxdxh in mm)	w: 1288 - 2881 d: 875 - 990 h: 1091 - ww1914
Benefits & properties	Front door can be pivoted and has a large sight glass for optimum process monitoring, spray arm can be individually adjusted to the drum size and load, rapid change to FBD
Products	Powder coating, pellet Wurster coating or tablet coating

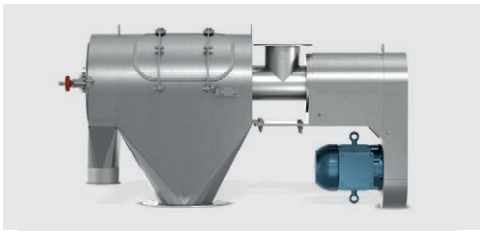

Milling & sifting

Milling and sifting, as process intermediate steps, are key for accurate and fluent pharmaceutical and nutraceutical processing.

Controlled and accurate fine grinding of pharmaceutical products requires high standards of hygiene and cleanability. Meeting the most stringent requirements including prevention of cross contamination between batches, or of the lubricant contaminating the mill chamber is vitally important in the pharmaceutical industry. Sifting impacts the accuracy and homogeneity of flawless mixtures. It is effective for size classification, separates material that isn't of the required size, ensures removing unwanted material, and de-risks wet and dry granules, and powder handling.

Kemutec
KEK Cone Mill





Kemutec KEK Centrifugal Sifter

kemutec

	Mills
Models	**KEK Cone Mill CM120, KEK Cone Mill CM170, KEK Cone Mill CM220, KEK Cone Mill CM340**
Scale	Lab scale, production scale
Feed rate (kg/h)	10 - 4000
Size (wxdxh in mm)	Subject to design
Benefits & properties	Hygienic - CIP, inline of vacuum system - easy to clean, enclosed screen inspection
Products	Wet & dry powder granulation, pharmaceuticals powders

kemutec

	Sifters
Models	**KEK Sifter 300C, KEK Sifter 650C**
Scale	Lab scale, production scale
Feed rate (kg/h)	100 - 10.000 kg/h
Size (wxdxh in mm)	Subject to design
Benefits & properties	Hygienic - CIP, inline of vacuum system - easy to clean, enclosed screen inspection
Products	Policing & de-agglomeration, pharmaceuticals powders

Solid material transfer

Efficient material handling ensures reliable ingredient transfer and continuous production, even with materials that exhibit challenging flow properties.

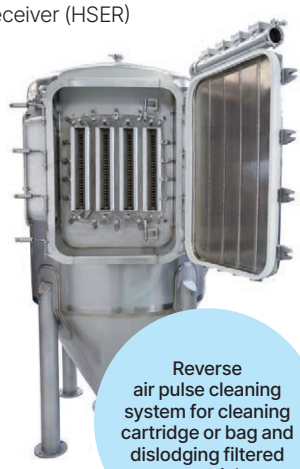
Pneumatic transfer modes, via dilute or dense phase, vacuum or pressure, can provide safe and efficient transfer of even the most difficult flowing powders. Our K-Tron pneumatic conveying technologies handles delicate materials like tablets, APIs, and excipients. Supporting dense and dilute phase vacuum transfer, they ensure safety, cleanliness, and easy cleaning. Suitable for standalone or integrated use, these systems optimize ingredient transfer in pharmaceutical applications.

K-Tron P10
Pneumatic receiver

K-Tron
P30
Pneumatic
receiver

K-Tron
P100
Pneumatic
receiver

Coperion
Hygienic side entry
receiver (HSER)



Reverse air pulse cleaning system for cleaning cartridge or bag and dislodging filtered material.

coperion K-TRON

	Pneumatic receivers
Model	**P10 Pneumatic receiver**
Outlet	With butterfly valve
Material capacity	7 dm3 (0.4 ft³)
Conveying capacity	Up to 600 kg/h (1,320 lb/h)*
Products	Pharmaceutical solids

coperion K-TRON

	Pneumatic receivers
Model	**P30 Pneumatic receiver**
Outlet	With butterfly valve
Material capacity	27 dm3 (1 ft³)
Conveying capacity	Up to 1,000 kg/h (2,200 lb/h)*
Products	Pharmaceutical solids

coperion K-TRON

	Pneumatic receivers
Model	**P100 Pneumatic receiver**
Outlet	With butterfly valve
Material capacity	90 dm3 (3.2 ft³)
Conveying capacity	Up to 3,600 kg/h (7,920 lb/h)*
Products	Pharmaceutical solids

*All conveying rates are based on a distance of 15 m (50 ft) and bulk density of 0.5 kg/dm3 (31 lb/ft3).
Rates vary with material characteristics, conveying distance and plant layout

Components (valves, etc)

We offer superior batch and continuous plant solutions, leveraging extensive experience and design expertise.

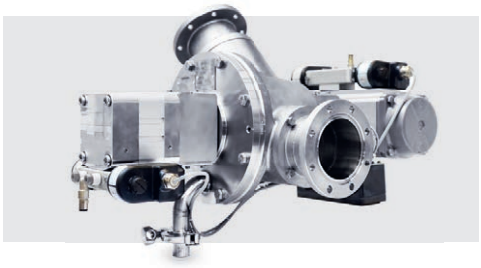
Our systems are optimized for pharmaceutical and nutraceutical processing across all applications, from laboratory to production scale. The complete portfolio ensures seamless throughput, while integrative and peripheral components are essential for system functionality.

Integrative components

- Airlocks
- Diverter, rotary valves
- Secondary filters

Peripheral solutions

- Bulk bag unloading
- Dust collection
- Feed bins & bag dump stations



Qualification services & controls capabilities

Coperion's Health & Nutrition technologies provide an extensive array of validation documentation based on the lifecycle approach, including FRS/FDS, FAT, SAT-IQ and SAT-OQ.

Custom system PLC controls are available to meet 21 CFR Part 11 compliance. Detailed HMIs can be provided to perform a wide array of advanced functions including recipe and ratio controls, barcodes/tracking and complete system alarm analyses. Our automated systems are in conformance with GAMP5.

Further system solutions

Batch rapid change systems designed for R&D and pilot time and space-saving production.

The Minilab and Midilab rapid change (RC) series secures rapid product and process development as laboratory equipment. In the compact system, specific processes such as drying, spray granulation in top spray, tangential and bottom spray technology, powder coating, pellet coating or tablet coating are implemented, and processes can be changed by rapid module exchange.

K-Tron Pharma feeders

DIOSNA Midilab RC and Minilab RC fluid bed modules can be replaced by the drum coating module

Containment systems

Containment options for all equipment with designs including split butterfly valves up to full isolator integration, OEB 6.

- **Batch dispensing • Coating • Feeding**
- **Feeding & wet extrusion • Granulation**
- **Hot-melt extrusion & spheronization**
- **Large-scale mixing • Milling & size reduction**
- **Reactor loading • Vacuum homogenizer**

Processing liquids

Liquid, semi-liquid, viscous, and semi-solid products like ointments, gels, emulsions, toothpastes, eyedrops, nasal spray, cough syrup etc, have different areas of application.

Depending on these and the desired effects, the compositions are complex. Mixing, mixing conditions, and the degree of homogenization. To obtain an effective and safe stable product, the right process must be found, and the technologies must be carefully selected.

We offer comprehensive solutions for pharmaceutical and personal care products and accompany you from the receipt of your raw materials and effective ingredients, through R&D testing and pilot-scale trials to equip you, according to your specific manufacturing needs.

We offer entire integrated systems - everything from a single source.

Liquid mixing: diluting, dispersing, homogenizing, emulsifying

Our liquid mixing solutions rely on the right choice of tools, ratios, and mixing parameters to ensure consistent quality and reliable scale-up.

From laboratory to pilot scale and full production, our mixing solutions offer capacities suited to every stage. With a wide range of tools, they handle diverse raw materials and rheologies to cover all mixing processes. Features such as vacuum, heating/cooling, and clean-in-place (CIP) ensure efficient operations from raw material introduction through to mixing, draining, and cleaning, delivering consistent, high-quality products with the desired texture and characteristics.

VMI Turbotest

VMI Mobimix

vmi

	Bench mixers	Pilot & production mixers
Models	**Turbotest, Turbotest Up**	**Mobimix 600, Mobimix 800, Telescopic Mobimix, Mobimix 1200, Mobimix 1500**
Scale	Lab scale	Production scale
Capacity (in litres)	0,25 - 20	10 - 2000
Size (wxdxh in mm)	w: 480 d: 529 h: 848.5 - 948.5	Subject to design
Revolutions per minute	5-4000	Homogenization/dissolution/ suspension 50-500; Dispersion 300 - 1500 / Emulsion 300 - 3000
Benefits & properties	2-3 user modes, covering a wide range of containers, diversity of tools, ergonomic design, intuitive touchscreen interface, reproducibility of process parameters	Wide range of tools, intuitive touch screen interface, integration into Atex environment possible, double safety, compact equipment, hydraulic lifting
Products	Pharmaceutical and cosmetic products (skincare, makeup, personal care) cosmetic emulsions, body milks, lotions, shampoos, toothpastes, sunscreens, etc.	Chemical, cosmetic and pharmaceutical applications

VMI Ultralab

VMI Vacuum Homogenizer Trilab

VMI Planetary Mixer

vmi

	Vacuum mixers
Models	***Ultralab, *Trilab, *Trimix**
Scale	Lab scale, pilot scale, production scale
Capacity (in litres)	0,5 - 20000
Size (wxdxh in mm)	/
Revolutions per minute	6 - 5000
Benefits & properties	Agitation - Double: peripheral and central; Triple: peripheral + axial flow through main agitator + bottom emulsifier-homogenizer. Thermal regulation - cooling/heating; Vacuum - application of vacuum/pressure. Touchscreen interface. For Trilab & Trimix: introduction of ingredients via open tank/ hopper/ bottom of the vessel
Products	Skincare, personal care, ointments, gels, shampoos, toothpastes, sunscreens, etc.

* Vacuum applicable

vmi

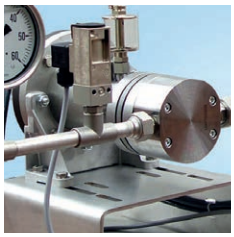
	Planetary mixers
Models	**R51*, R51E**, PH412, PH612, PH812**
Scale	Lab scale, production scale
Capacity (in litres)	R51(E**): 4,5; PH-series: 40-80
Size (wxdxh in mm)	w: 380 - 715 d: 505 - 880 h: 635 - 1530
Revolutions per minute	/
Benefits & properties	Versatility, several tools available, programmable with touchscreen interface, compact and ergonomic for work comfort, R51 can also be used with vacuum
Products	Pharma & personal care: Toothpaste, starch paste; Chemical industry: resins with mineral fillers (with or without catalyst), ceramic slurries, refractory products, cement with or without fibers (metallic or organic), concrete for standardized tests (with aggregates up to 20 mm), fatty inks, and more

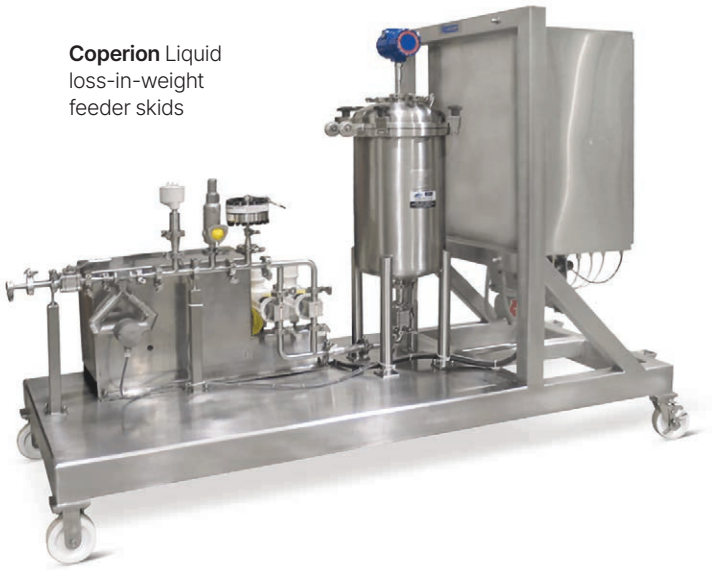
** E variant contains frequency converter

Liquid feeding

In applications where liquids need to be fed, pumps and tanks are combined to provide controlled liquid feeding.

Loss-in-weight liquid feeders on high accuracy load cells provide accurate continuous gravimetric flow control of liquids. Heated units can also be provided if material viscosity is an issue or for feeding temperature-sensitive materials. Depending on the application requirements, additional equipment such as mixers can be supplied as well. Liquid feeders are suitable for many different industries and prove their reliability in daily use when feeding pastes or liquids into the production process.





Coperion Liquid loss-in-weight feeder skids

coperion K-TRON

	Liquid feeders	
Models	**LIW K-ML-P Liquid Feeder Mini**	**Liquid loss-in-weight feeder skids**
Scale	Lab scale	Lab scale, production scale
Capacity (in litres)	7.5	<300
Size (wxdxh in mm)	w: 670 d: 980 h: 980	w: 670 - 970 d: 980 - 1780 h: 980 - 3050
Feed rate (l/h)	0.5 to 1500	
Benefits & properties	Specialty design high accuracy liquid loss-in-weight feeders, can be designed for a wide variety of viscosities and liquid properties, ideal for metered liquid addition to mixers, extruders, granulators	
Products	Extruded end products, OSD formulations	

Liquid material transfer

Efficient production environments require gentle material handling to ensure reliable ingredient transfer, smooth operation and consistent results.

Transfer pumps provide compact and economical solutions for creams, lotions and other liquids without compromising quality or consuming valuable production space. Products can be pumped directly from bowls, totes or pails with precision and ease which minimizes manual intervention. Easy integration with depositors allows for automated dosing and filling. Even with challenging materials or a wide variety of portioning needs, consistent performance of a transfer pump's straightforward operation further enhances overall process safety and efficiency in the nutraceutical market.

Unifiller
iPump transfer pump

Unifiller
iSpot compact series depositor

unifiller

	Pumps
Model	**iPump Transfer Pump**
Scale	Production scale
Capacity (litres/min)	20
Size (wxdxh in mm)	w: 810 d: 810 h: 1170
Air	4 CFM @ 80 psi (113 l/min @ 5.5 bar)
Benefits & properties	Our compact transfer pump, the iPump quickly transfers products without sacrificing quality or production space
Products	Cosmetic and pharmaceutical applications

unifiller

	Depositors	
Models	**iSpot Depositor**	**Compact series depositor (Tabletop), Compact series depositor (Mobile/Powerlift)**
Scale	Production scale	
Capacity (deposits/min)	60	80
Size (wxdxh in mm)	w: 770 d: 820 h: 1170	w: 150 - 320 d: 940 - 990 h: 710 - 1720
Air	3 CFM @ 80 psi (85 l/min @ 5.5 Bar)	
Benefits & properties	Draw and portion smooth products directly from a bowl or pail for a no-mess depositing machine	The Compact is a production workhorse with a wide deposit range, able to meet versatile depositing needs. It can be fitted with many accessories and attachments customized
Products	Cosmetic and pharmaceutical applications	

Processing medical confectionery

Gummies and medicinal candy appeal to many age groups through color, shape and taste.

Their taste-masking of the active ingredient makes gummies ideal for children as well as adult supplements and a safer alternative for the senior adults and people with disabilities. With the accelerated growth of supplements and gummies, not only are nutraceutical companies involved, as well as brand and generic pharmaceutical companies who are also leveraging their clinical expertise for additional entry into this important market.

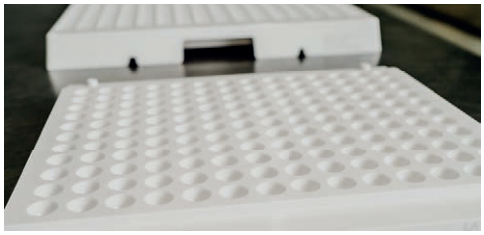
We offer technologies that enable starch-free gummy production, integral forming, coating, and cooking systems - all of which are modern and scalable solutions.

We offer entire integrated systems - everything from a single source.

Depositing & cooking

Cooking, depositing, demolding and coating are central steps in nutraceutical gummy production.

Cookers prepare syrups or masses from sugar, sugar-free, or dairy-based recipes, available in batch or continuous configurations from pilot to production scale. Depositing into solid or silicone molds, rather than traditional starch molds, enables accurate shaping, while ensuring a smooth hygienic surface. Batch or continuous demolding systems release gummies from molds, reducing manual labor and preserving product integrity. Together, these processes ensure efficiency, scalability, and consistent quality in modern nutraceutical manufacturing.



Baker Perkins
Jellycook
ServoForm
Mini

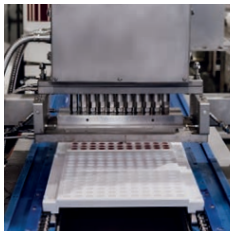
baker perkins

	Demolders
Models	**Silicone Demolder Mini, ServoForm Demolder**
Scale	Pilot scale, production scale
Throughput	30000+ - 145000+ gummies per hour
Size (wxdxh in mm)	w: 483 - 3635 d: 787 - 1699 h: 940 - 1693
Production method	Batch & continuous
Benefits & properties	Allows for automatic demolding and removes the manual process
Products	Medicated or functional pectin and gelatin gummies

baker perkins

	Cookers	
Models	**Turbofilm Mini Continuous Cooker**	**JellyCook Mini Lift Cooker, JellyCook Cooker - Standard, JellyCook Cooker - Max, JellyCook Cooker - Duo**
Scale	Pilot scale, production scale	
Throughput	30000+ gummies per hour	
Size (wxdxh in mm)	w: 2400 d: 1470 h: 2017	w: 889 - 2540 d: 905 - 3277 h: 2286 - 2769
Production method	Continuous	Batch
Benefits & properties	Efficient production of jelly & gummies, and hard candy, designed for easy installation and maximum efficiency	Faster batch times, provides consistent batch cooking with high value additives, colors, and flavors, easy to operate, even cook temperature
Products	Hard candies, lozenges and lollipops	Medicated or functional pectin and gelatin gummies






Baker Perkins
ServoForm
Mini+ Depositor

Baker Perkins ServoForm™ Jelly Depositor

baker perkins

	Depositors			
Models	**FRED depositor (Mechanical or Electronic)**	**ServoForm Mini*, ServoForm Mini+**	**ServoForm Flexi, ServoForm Flexi Auto, ServoForm Flexi Auto Twin**	**ServoForm Jelly Depositor**
Scale	Lab scale	Pilot scale, production scale	Production scale	Production scale
Throughput	5 kg batch	30000+ gummies per hour	85000 - 290000+ gummies per hour	115000 - 540000+ gummies per hour
Size (wxdxh in mm)	w: 1720 d: 1100 h: 2200	w 2020 - 3980 d 1220 - 1300 h 2160 - 2200	Full line	Full line
Production method	Batch	Batch & continuous	Continuous (Servo Form Flexi also batch)	Continuous
Benefits & properties	Results - fully scalable to pilot and production machines	Precise, flexible and hygienic with multiple end product varieties and rapid changeover	Precise, flexible and hygienic with multiple end product varieties and rapid changeover. Fully automatic production over 300kg/hr with no loss of flexibility	Fully automatic dedicated line
Products	All medicated or functional gummies and candies		Medicated or functional pectin, gelatin, carrageenan gummies	Medicated or functional pectin and gelatin gummies

*Also as 'ServoForm Mini continuous' as fully automatic line

Sugar coating

Sugar coating serves multiple purposes in confectionery production and is ideal for applications such as vitamin gummies.

Primarily, it enhances the visual appeal of the product by giving it a shiny, attractive surface. Additionally, sugar coating can improve the texture, providing a pleasant crunch or smoothness, and can help mask any undesirable flavors or textures. It also acts as a protective layer, preserving freshness and extending shelf life. Overall, sugar coating is a crucial step in creating high-quality, visually appealing, and flavorful confections that attract patients and consumers.

Baker Perkins
Sugar Sander
Mini

baker perkins

Model	Sugar Sander Mini
Scale	Pilot scale, production scale
Throughput	30000+ gummies per hour
Size (wxdxh in mm)	w: 762 d: 1270 h: 1219
Production method	Batch & continuous
Benefits & properties	Assembly cart to combine the Silicone Demolder Mini with the Sugar Sander Mini for a more continuous process
Products	Pectin and gelatin gummies

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Pharma & Nutrition
integrated solutions

Coperion, 7901 NW 107th Terrace
Kansas City, MO 64153
T: 816-891-9300,
E: info@coperion.com

coperion.com/fhn