



Make it better.

MACHINERY

Better manufacturing.

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Welcome to ACG.

We know how hard it can be to get better. That's why, for sixty-five years, we've been getting better at helping make people better.

ACG is a privately owned enterprise that takes a long term relationship approach to business. We believe that everything works better when people work better together.



Everyone on Earth deserves access to better health.

With a presence in 138 countries on six continents, ACG is now the world’s largest integrated supplier of components and solutions for enabling the manufacturing of solid dosage forms. We provide hard-shell capsules, barrier packaging materials, manufacturing machinery, and fully integrated traceability solutions.

Machinery

ACG provides a full spectrum of oral dosage manufacturing equipment. Our global design team takes a customer-led approach, and we’re renowned for exceptional after-sales service.

Capsules

With ‘reliability’ at the centre of our Capsules business ethos, ACG offers both hard-shell gelatin and HPMC capsules. Our diverse capsule portfolio caters to your formulation needs, and with factories on three continents, we have the scale and reach to guarantee a secure supply to almost anywhere on the planet.

Packaging materials

We supply the world’s most extensive range of barrier packaging films and foils, with almost everything produced in-house for better market supply and quality control. Our team of experts is available to provide a perfect solution for your needs.



Everywhere you need us.



- GLOBAL OFFICES
- MANUFACTURING FACILITIES
- ▲ WAREHOUSES
- AGENTS
- NEW / EXPANDING ACG FACILITIES

Welcome to ACG machinery.

Health products are only as good as the equipment that manufactures them.

At ACG, we understand that the equipment we make plays a vital role in helping save lives, keep families together, and in allowing people to live life to the maximum.

That's why, when you purchase any piece of our machinery, you can trust it's been made with utmost care and consideration – from quality materials, to innovative and sustainable design, to having the most exacting production standards.

As part of the package, you also receive best-in-class aftermarket service and customer support, along with more than sixty years of pharmaceutical manufacturing expertise and advice.

All ACG hardware is made by our Engineering division, while ACG Inspection provides the brains inside a range of our equipment – particularly vision inspection systems, and advanced serialisation, aggregation and anti-counterfeiting solutions.

ACG Engineering division + ACG Inspection division = ACG machinery products



What makes ACG's machinery better?

1

Global design, local support

Our multinational team of engineers, designers and developers ensures our machines are always at the forefront of technology. ACG acquired its own German development team in 2016, and also regularly collaborates with equipment designers in France, Italy, the USA, India, and Croatia.

Support teams are more local, however, and are always on hand to assist with technical, regulatory and any other kind of assistance you may require.

2

We see the bigger picture

You already know that working with machines involves far more than just the machines themselves. For example, it's also about how your machines interact with the capsules or packaging materials running on them.

As the world's only integrated solid dosage solution provider (having 'Capsules', 'Engineering', 'Packaging Materials' and 'Inspection' divisions), only ACG can offer holistic and integrated advice on your manufacturing processes, and provide everything you need from under one roof.

3

Our parts are better

All our format and change parts are manufactured with the highest spec'd materials, in world-class facilities, and using the best CNC machines on Earth. Every part is also tested under live conditions so you can use them straight from the box.

All of the quality that goes into our parts is reflected in how reliably they perform – saving you time and money in the long term.



4

Machines that talk

With ACG Smart Connected, you can remotely monitor your machines in real time, diagnose problems, and enhance OEE (overall equipment efficiency).

Our simple adaptor kit makes it really easy to turn your existing analogue machines into smart connected ones.

5

Bringing you the future, faster

ACG's blister inspection systems incorporate AI technology, providing a quantum leap forward in defect detection accuracy, especially for low contrast product and foil combinations. They also continue learning new behaviours from themselves (deep learning) to incrementally improve their own efficiencies.

6

We've got you covered

ACG machines meet key international standards – CE marking for Europe, UL certification for North America, NR12 for Brazil, and ATEX compliance for enhanced operator safety. We also provide GAMP 5 validation, where necessary, and 21 CFR Part 11 compliance.

Additionally, the highest standards are maintained through comprehensive ISO certifications in energy efficiency (ISO 50001), quality (ISO 9001), environmental stewardship (ISO 14001), and workplace safety (ISO 45001).



Everything capsules. Everything tablets.

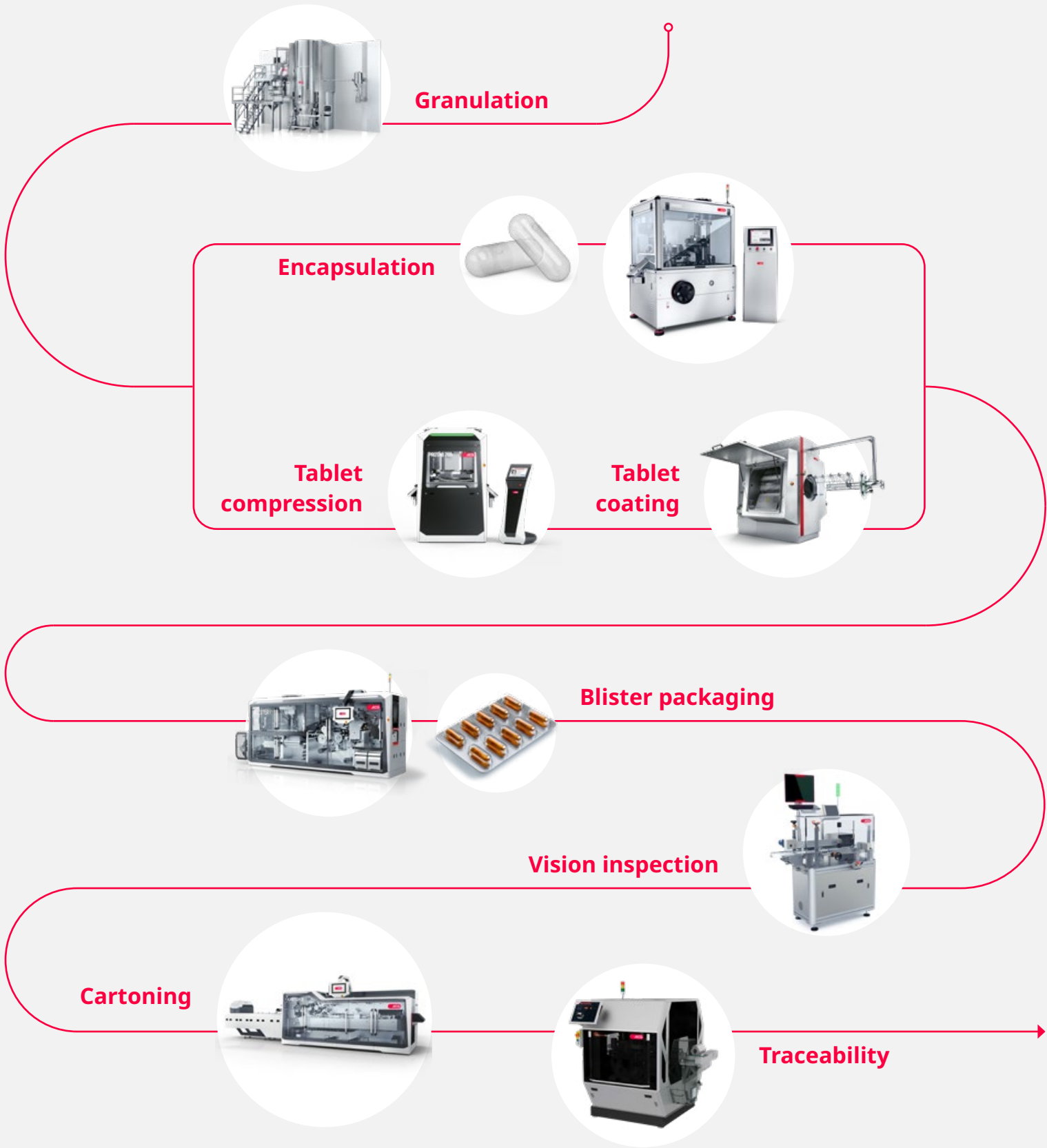
We don't just provide pharmaceutical machinery, but everything you need to run your production efficiently.

Since 1961, ACG has been the global specialist in oral solid dosage (OSD) manufacturing.

Aligned to this, we offer an unmatched range of products and services – from empty hard shell capsules, to granulation and capsule-filling machines, to tablet compression and coating equipment, to packaging materials, packaging machinery and inspection and supply chain traceability solutions.

Our holistic approach to working with every element of the OSD manufacturing ecosystem means only ACG has knowledge of how each product and service impacts the other. Therefore, only we can provide properly considered guidance on improving productivity and efficiencies across an OSD production line.

Whether you have a greenfield OSD-manufacturing project, or are simply thinking of expanding, there is no better partner to consult than ACG.



An overview of our equipment.



Granulation
High shear mixers, fluid beds, fluid bed combos and integrated granulation trains.



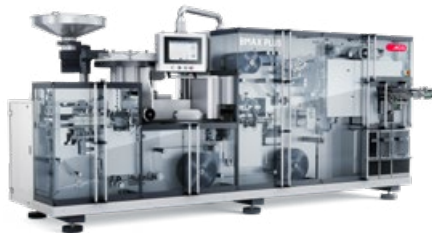
Encapsulation
Capsule-filling equipment for powders, pellets, tablets, liquids and HPAPIs.



Tablet compression
Single-rotary and double-rotary presses, with interchangeable turrets and tooling options.



Tablet coating
Horizontal airflow perforated drum coaters, featuring our proprietary nozzle.



Blister packaging
Flat forming-flat sealing, and rotary forming-rotary sealing blister machines and format parts.



Cartoning
Continuous and intermittent carton packaging machines.



Vision inspection
Inspection systems for tablets, capsules, packaging, and codes and labels.



Track & trace
Carton serialisation, 360° referencing, aggregation, bottle serialisation, traceability software.

Our products

Granulation and pelletisation

GTC III
OEB 5-compliant granulation line

The GTC III ensures maximum operator safety and environmental protection, making it ideal for granulating oncological, hormonal, biopharmaceutical, antiviral, and other HPAPIs.

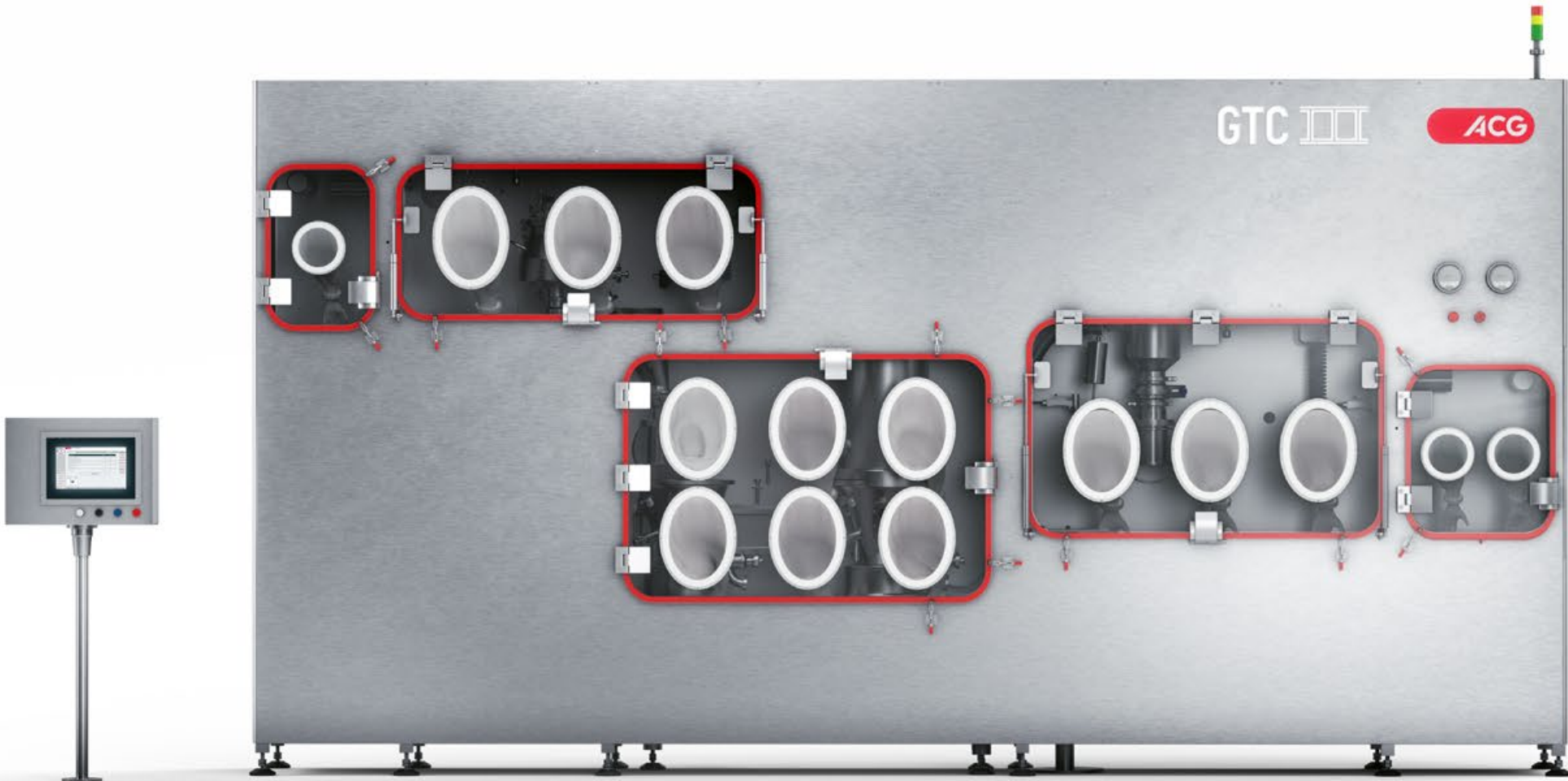
The system integrates an HSM with a wet mill, fluid bed, dry mill, and blender for contained granulation, particle sizing, and final blending.

GTC III also features multiple glove ports for 100% accessibility, an integrated weighing scale for real-time monitoring of binder solution spray rates, and rapid active transfer ports to facilitate material charging in isolators without compromising integrity.

Strategically placed fixed and handheld washing nozzles ensure thorough and efficient cleaning, saving both time and effort.

The IPC-based control system complies with 21 CFR Part 11 and includes features such as audit trails, user management, recipe management, and batch reporting.

GTC III supports flexible working volumes, ranging from 0.6 to 6 litres.



Granulation and pelletisation



MINIQUEST F
A venturi-based fluid bed system for initial feasibility studies

This unique granulation system is specially designed for use in academia, with batch sizes as small as 100 g.

This multi-tasking system is ideal for drying, granulation, and Wurster pellet-coating, while its exclusive Schlick nozzle ensures excellent process results.



QUEST™ HSM
The R&D and pilot-scale high-shear mixer

Developed in collaboration with ACG Innovation Centre (Europe), QUEST HSM™ is ACG's latest addition to the processing systems product line. It incorporates 12-bar pressure shock resistance, and can work seamlessly with our advanced process control system.

Our system offers the flexibility of interchangeable process bowls, available in various capacity sizes.



QUEST™ FB
An ideal tabletop fluid-bed system for feasibility studies

QUEST™ FB is a truly versatile granulation system. It's perfect for feasibility studies, and can be used for drying, granulation, and Wurster pellet coating.

It features a retrofittable assembly for both top- and bottom-spray in a single container, and can process batch sizes as small as 200 g.

All QUEST™ FB models are available with 2-bar pressure shock resistance.



GPCG 1.1
A lab and pilot-scale granulation system

GPCG 1.1 is one of the most trusted models in its performance class for feasibility and scale-up studies. Packed with all the features of a production-scale machine, GPCG 1.1 is ideal for handling a wide variety of products.

It covers the entire process of drying, granulation, and Wurster pellet coating in a single container.



QUEST™ FB I
Facilitates pharma innovation while enabling seamless scale-up

This lab-scale fluid-bed system champions safety and precision and is ideal for pharmaceutical feasibility studies. It features a certified 12-bar pressure shock-resistant design, with a versatile Schlick spray nozzle for both granulation (top-spray) and Wurster coating processes.

With a versatile working volume of 0.3 to 3 L and a mobile trolley platform, this unit maximises space while providing high performance right where you need it.



QUEST™ FB II
A versatile R&D scale granulation system with 12-bar pressure shock resistance

The ultimate lab system, performing drying, granulation and Wurster pellet coating in a single container.

The granulation system is accompanied by four process inserts to accommodate varied batch sizes and products. Certified 12-bar explosion resistance means the machine sets new safety standards.

Other features include dust-free filter change, slide-in / slide-out process inserts, and plug-and-play design.

Granulation and pelletisation



QUEST™ FB III
The perfect set-up for Design of Experiments (DoE) studies

QUEST FB™ III is ideal for DoE studies, highlighting scale-up implications and establishing parameter ranges.

It fully supports drying, top-spray granulation and Wurster-coating applications.



HSM X•ONE series
High-shear mixer with 12-bar pressure shock resistance

This advanced suite of high-shear mixers features cutting-edge 12-bar pressure shock resistance, and ACG's exclusive process control system.

HSM X•ONE ensures accurate end-point determination, and is available with a Z-shaped or straight impeller, and a chopper in diverse designs – all with adjustable speeds.

It also has an atmospheric version.



FBE X•ONE and FBC X•ONE series
Advanced fluid-bed systems with 12-bar pressure shock resistance

The X•ONE series features unique inflatable seals, and the revolutionary MOST™ (Maximum Operational Safety Technology) concept (patent pending), certified by independent European authorities.

Practically indestructible, the series takes a completely unique approach to 12-bar safety. It comes with signature ACG Smart Connected technology, and is also available in a 2-bar pressure shock resistance version.



GT X•ONE series
Advanced closed-loop wet granulation system

Combining the best of our high-shear mixer (HSM X•ONE) and fluid-bed equipment (FBE X•ONE / FBC X•ONE), GT X•ONE makes granulation more adaptable and seamless – and enhances aesthetics, safety and output.

GT X•ONE comprises next-generation 12-bar fluid-bed technology, and achieves the perfect combination of safety, efficiency and aesthetics. Featuring the MOST™ (Maximum Operational Safety Technology) concept, it empowers an unmatched experience in process optimisation.

Granulation and pelletisation overview

High-shear mixers

Machine	Working volume (litres)
HSM 150 X•ONE	45 – 120
HSM 300 X•ONE	90 – 240
HSM 400 X•ONE	120 – 320
HSM 600 X•ONE	180 – 480
HSM 800 X•ONE	240 – 640
HSM 1200 X•ONE	360 – 960
HSM 2000 X•ONE	600 – 1,600

Models are also available in a non-pressure, shock-resistant design for select markets / formulations

Fluid bed combos

Machine	Working volume (litres)	
	Top-spray	Wurster coating
FBC 125 X•ONE	33 – 168	7 – 80
FBC 250 X•ONE	75 – 368	23 – 170
FBC 500 X•ONE	135 – 608	40 – 365
FBC 800 X•ONE	220 – 888	85 – 590
FBC 1300 X•ONE	345 – 1,344	130 – 835
FBC 1800 X•ONE	525 – 1,956	180 – 1,185

Models are also available in 2-bar vented design for select markets / formulations.

Fluid beds

Machine	Working volume (litres)
FBE 125 X•ONE	33 – 168
FBE 250 X•ONE	75 – 368
FBE 500 X•ONE	135 – 608
FBE 800 X•ONE	220 – 888
FBE 1300 X•ONE	345 – 1,344
FBE 1800 X•ONE	525 – 1,956

Models are also available in 2-bar vented design for select markets / formulations.



Our products

Encapsulation

ZRO series High yield capsule-filling machines

This series of high speed, fully automatic capsule-filling machines is available in capacities of up to 200,000 capsules per hour. Our patented ZRO technology helps reduce waste and significantly enhances yield – thereby increasing OEE (overall equipment efficiency).

This machine is ideal for difficult formulations such as powders that are sticky, fluffy, hygroscopic, heat-sensitive or free-flowing.

The ZRO series is equipped to perform capsule filling with all forms of pellets, various shapes and sizes of tablets, and even capsules within capsules. These machines can also be integrated seamlessly with ACCURA, ACG's 100% capsule checkweighers.



Encapsulation



AF series
Automatic capsule-filling technologies

This series of fully automatic capsule-filling machines has outputs ranging from 6,000 to 200,000 capsules per hour. They're suitable for capsule sizes #000 to 5, using tamping technology. Plus, the precise slug-dosing principle ensures high filling accuracy.

These versatile machines allow multiple dosage combinations, such as powders, pellets, tablets, micro-tablets, softgel, and capsule-in-capsule filling. They can also integrate seamlessly with ACCURA, ACG's 100% capsule checkweigher.

All models within the series feature ACG Smart Connected technology.



FLUIDOCAP series
Automatic liquid filling in hard shell capsules

Easy-to-operate automatic machines for liquid filling. Outputs range from 1,000 to 70,000 capsules per hour, and can fill with various liquids, pastes, suspensions, thixotropics and hot melts.

FLUIDOCAP machines can handle formulations with viscosities of 40 to 40,000 cP, and include 'no-capsule-no-fill sensors' that reduce waste, plus nitrogen or inert gas purging for encapsulating oxygen-sensitive formulations. They also fill pellets, tablets, and capsule-in-capsule variants, and have technology for sealing capsules filled with liquids, semi-solids and solids.



PROSEAL
A technology for sealing hard shell capsules filled with liquids, semi-solids and solids

This band-sealing machine is ideal for sealing capsules filled with formulations comprising liquids, semi-solids, pastes, thixotropics, powders, pellets, tablets, micro-tablets and capsules. With a changeover time of 260 minutes, PROSEAL has a highly efficient three-drum capsule loading and orientation system.

Better airflow management through separate blowers for suction and discharge ensures fast and effective drying of capsules, so PROSEAL has an output capacity of up to 70,000 capsules per hour.



SECUREFILL series
High-level containment capsule-filling lines

This containment series is suitable for highly potent and toxic formulations with controlled OEL (occupational exposure limits), such as oncology, biopharmaceuticals, antivirals, and other HPAPIs. The machines are equipped with a negative pressure structure that includes RTP port, HEPA filters, glove ports, and accurate dosing mechanisms.

Meanwhile, the WIP (wet-in-place) system ensures wetting of all airborne particles in the pharma zone, thereby safeguarding the operator and environment. SECUREFILL's output range is 6,000 to 40,000 capsules per hour.



ACCURA series
100% capsule check-weighing systems

ACG's capsule-checkweighers guarantee capsule weight accuracy, whether they're empty, filled, or partially filled, and with anything from powders to pellets. Maintaining precise dosing safeguards the integrity of pharmaceutical production, and ensures enhanced product quality and compliance.

The ACCURA series of 100% capsule checkweighers is designed specifically for precise automatic and continuous weighing, and uses the latest digital technology. These machines are also best suited for medium to large production batches with capacities exceeding 200,000 capsules per hour.

Encapsulation overview

Capsule fillers

	SA 9	AF 25T	AF 40T	AF 90T	AF 150T	AF 200T	FLUIDOCAP 1000	FLUIDOCAP 70	SECUREFILL 25T	SECUREFILL 40T	ZRO 90T	ZRO 200T	Proseal 70
Specifications	Pilot		Solid filling production				Liquid filling production		Containment solution		High yield		Band sealing

Technology

Automatic		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Semi-automatic	✓						✓						

Formulation type

Powder / Granules	✓	✓	✓	✓	✓	✓			✓	✓	✓	✓	
Tablets / Pellets / Micro tablets / Capsules	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	
Liquid							✓	✓					

Specifications

Capsule size	#00 – #5	#00 – #5	#00 – #5	#00 – #5	#00 – #5	#00 – #5	#00 – #4	#00 – #4	#00 – #5	#00 – #5	#00 – #5	#00 – #5	#00 – #4
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Speed

Capsules / hr (max)	28,800	25,000	40,000	90,000	150,000	200,000	1,000	70,000	25,000	40,000	90,000	200,000	70,000
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Capsule check-weighers

	ACCURA 100FF	ACCURA 200FF
Technology	Format free	Format free
Automatic	✓	✓
Weighing accuracy (mg)	±2	±2
Load cell precision (mg)	0.2	0.2
Weighing range (mg)	20 – 2000	20 – 2000
Number of tracks	12	24
Capsule size	#00 – #5	#00 – #4
Maximum speed (capsules / hr)	100,000	200,000

Custom-made attachments for special encapsulation needs

Encapsulation machines	Possibilities of filling capsules with different combinations using CODE (Customised Oral Dosage Encapsulation) series		
	Powder	Tablets / pellets / micro-tablets / capsules	Liquid
AF series	✓	✓	✗
FLUIDOCAP F70	✗	✓	✓
SECUREFILL series	✓	✓	✗
ZRO series	✓	✓	✗
SA 9	✓	✓	✗

Encapsulation

Other equipment

Machine	Production	Description
CW 10	Up to 10 capsules / min	A fully automatic online sample checkweigher (CW) designed for statistical weight control of filled capsules.
DP 100 DP 200	Up to 100,000 capsules / hr Up to 200,000 capsules / hr	Advanced rotating brush de-dusters and polishers (DP) for continuously removing powder from capsules.
MCS 100 MCS 200+	Up to 100,000 capsules / hr Up to 200,000 capsules / hr	Our mini-capsule sorters (MCS) that remove diametrically distorted capsules, loose caps, and loose powder from capsule batches.
ECS 100	Up to 200,000 capsules / hr	An empty capsule sorter (ECS) that separates loose caps and bodies from filled capsules.
FCE 200	Up to 200,000 capsules / hr	Our filled capsule elevator (FCE) lifts and conveys filled capsules to a higher level, using an in-built blower unit.
MD	Up to 270,000 capsules / hr	An in-line metal detector (MD) for even the smallest particles of ferrous and non-ferrous metals, and stainless steel, in filled capsules.
CTS	Up to 90,000 capsules / hr	Our capsule tablet sorter (CTS) visually inspects tablets, softgels and hard capsules to identify cosmetic defects.
DBM 40	Up to up to 40 blisters / min	A semi-automatic de-blistering machine (DBM) that helps remove empty capsules and tablets from rejected PVC / ALU blisters.
SE 100 SE 200	Up to 100,000 capsules / hr Up to 200,000 capsules / hr	Sorter elevators (SE) that remove diametrically defective capsules before hopper charging, for defect-free operations.
PCS	Up to 400 liters / hr	A product conveying system (PCS) that automatically replenishes the hopper, and can be integrated with capsule-filling machines to indicate product levels.



Our products

Tablet compression

PROTAB™ 700
Double rotary production-scale
tablet compression machine

PROTAB™ 700 pushes technological boundaries to simplify the tablet compression process significantly and achieve optimum efficiency.

This double rotary tablet press is designed for production-scale batches and offers outputs of up to 800,000 tablets per hour.

Features include an interchangeable turret for D / B / BB / BBS tooling, the lowest mechanical changeover time, retrofittable bilayer-kit technology, and instant fault-identification and rectification.

It also provides individual layer sampling and rejection of bilayer tablets, for higher accuracy.



Tablet compression



PROTAB™ 300
Single rotary pilot-scale
tablet compression machine

PROTAB™ 300 has a production capacity of up to 215,000 tablets per hour at the rated rpm. Its unique InstAmend technology ensures high uptime.

PROTAB 300™ offers single-tablet sorting capabilities with automatic weight-correction, even at the rated rpm for consistent high-quality production

It also ensures greater cost savings, thanks to a sophisticated design that leads to minimal leftovers (50 g) in the feeder. Meanwhile, its modular design provides 360° access to the pharma zone.

LEGACY series
High-speed tablet
compression machine

A single rotary tablet compression series, ideal for medium and large-scale batches. A robust design supports versatile processing and high-speed applications.

LEGACY features a fully automatic weight control system with single-tablet rejection capability at the rated rpm. It also includes a unique three-paddle force feeder design with MUPS kit extension.

LEGACY machines help maintain hardness and low friability of tablets, avoiding dissolution profile errors by minimising pellet crushing.

Tablet compression overview

	PROTAB™ 300	PROTAB™ 700	LEGACY 6100	LEGACY 6100 Paramount Turret
Scale	R&D	Production	Production	Production
Stations w.r.t tooling type				
D+B	8+8			
D	21	51	37	46
B	27	63	45	57
BB	34	79	61	
BBS	36	85	67	
Maximum speed (tablets / hr)	216,000	816,000	402,000	342,000

Our products

Tablet coating

SMARTCOATER™ X•ONE series

The world's most efficient tablet-coating system

SMARTCOATER™ X•ONE is smart in the truest sense. With an elegant aesthetic reflecting the conflux of design and technology, SMARTCOATER™ X•ONE has a smart airflow pattern, and a quick and efficient discharge – right up to the last tablet. A fully perforated drum design allows optimum horizontal airflow for drying.

Its exclusive ACG X•ONE nozzle by Schlick ensures better process efficiency and handling, while the wash-in-place system ensures efficient cleaning during changeovers. It offers maximum flexibility of batch sizes (from 125 litre to 2000 litre) and an option for sugar coating.



Tablet coating



MINIQUEST T
A tablet coating machine for future-ready pharmacists, MINIQUEST T is designed to help academia accommodate wide-ranging project needs.

The result of ACG’s drive to bridge the competency gap between industry expectations and academic capabilities, MINIQUEST T works on negative pressure technology. Its ACG-exclusive Schlick nozzle ensures excellent process results, even in batches as small as 100 g.



QUEST™ TC
This R&D-scale tabletop coating machine is ideal for reducing waiting times, and time to market.

The machine has a perforated drum design, and comes with three interchangeable drums. Equipped with our exclusive Schlick nozzle, QUEST™ TC ensures excellent process results.

It can also be used for batches as small as 200 g, so it’s perfect for R&D and feasibility studies.



QUEST™ TC III
QUEST™ TC III is a pilot-scale, perforated drum tablet coating system that comes with four interchangeable drums (2 litre / 9 litre / 24 litre / 56 litre) to accommodate varied batch processing needs.

With a fully perforated drum design, QUEST™ TC III ensures optimum horizontal airflow. QUEST™ TC III is also equipped with a WIP system for easy cleanability. Its advanced X•ONE nozzle assures the best coating efficiency.



SECURECOAT series
The SECURECOAT series includes containment tablet coaters designed with operator safety front of mind, and for use with highly potent active pharmaceutical ingredients (HPAPIs) that require occupational exposure band (OEB) 4 compliance. The SECURECOAT is a containment machine series ideal for coating tablets containing oncological, cytotoxic, biopharmaceutical, hormonal, and other high-potency drugs.

Tablet coating overview

Tablet coaters	
Machine	Working volume (litres)
SECURECOAT 125	38 – 125
SECURECOAT 250	75 – 250
SECURECOAT 350	105 – 350
SMARTCOATER 125 X•ONE	38 – 125
SMARTCOATER 250 X•ONE	75 – 250
SMARTCOATER 350 X•ONE	105 – 350
SMARTCOATER 500 X•ONE	150 – 500
SMARTCOATER 700 X•ONE	210 – 700
SMARTCOATER 1000 X•ONE	400 – 1000
SMARTCOATER 1400 X•ONE	560 – 1400
SMARTCOATER 2000 X•ONE	800 – 2000

Both the SECURECOAT series and the SMARTCOATER X•ONE series (SMARTCOATER X•ONE 125 to SMARTCOATER X•ONE 700) still operate efficiently at just 15% batch occupancy. This offers unmatched flexibility.



Our products

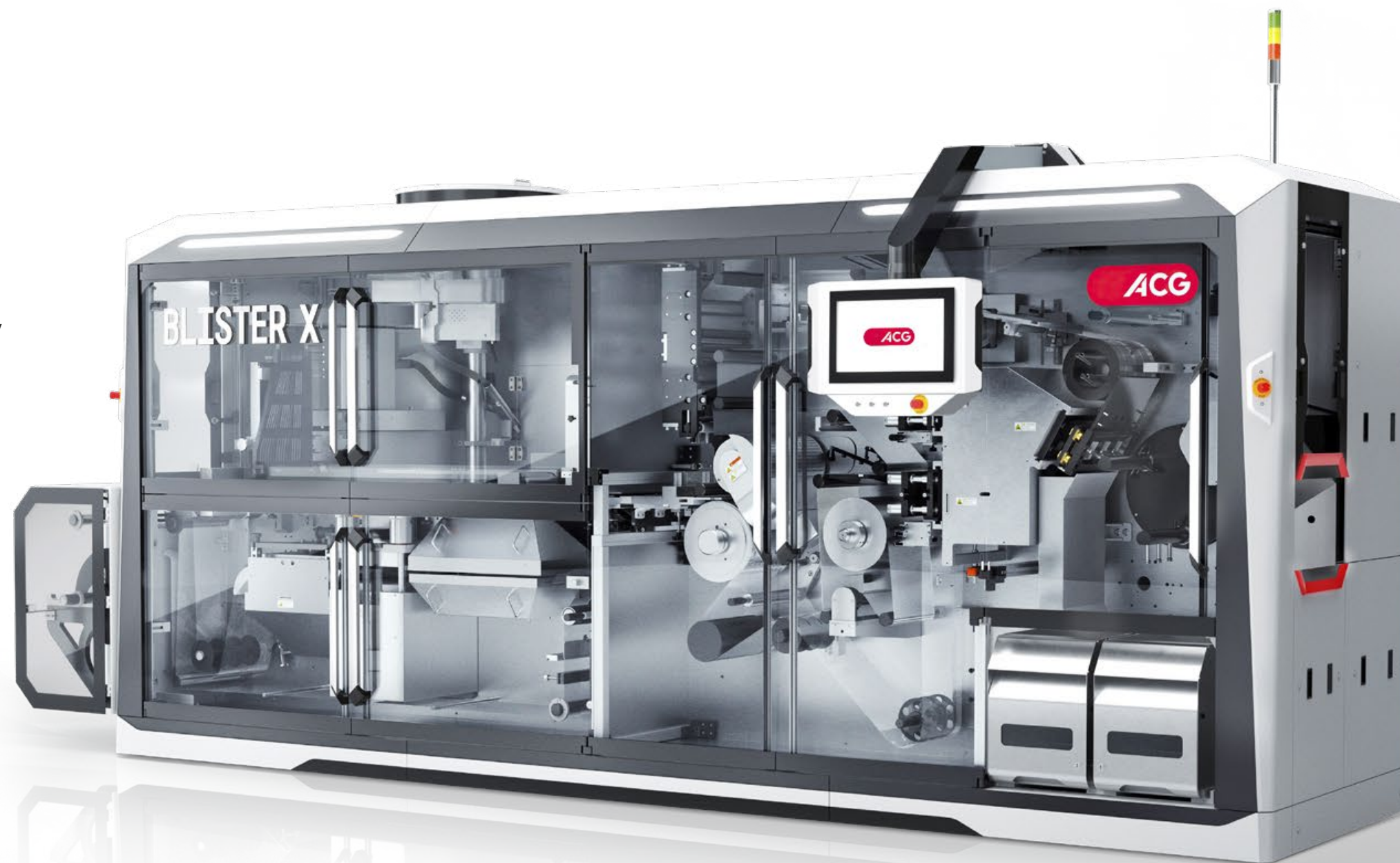
Blister packaging

BLISTER X

Next generation continuous-motion high output blister packaging machine

A powerhouse for large manufacturing batches, BLISTER X is designed with large forming areas for faster forming cycles. It is completely servo-controlled, ensuring reliability, flexibility, and productivity, as well as blister packs of consistently high quality.

BLISTER X utilises a three-stage heating process for film forming that minimises temperature fluctuations, and results in precisely defined blister cavities with consistent wall thickness.



Blister packaging



BMAX PLUS
Regulatory-compliant,
versatile, servo-driven
blister packaging machine

This continuous-motion blister packaging machine is cGMP-compliant and has a balcony type design. It ensures ease of access and cleaning, and the ability to perform edge-to-edge punching ensures zero waste in its web travel direction.

SCADA / 21 CFR Part 11-compliant software and hardware, along with a SMART HMI, helps to maintain paperless records.



BP 102 / BP 105MF
A unique single-drum
rotary machine

This single-drum blister packaging machine allows forming and sealing on the same drum, resulting in a smaller machinery footprint. The machine is flexible enough to produce blisters with up to four products. Meanwhile, its ability to perform edge-to-edge punching ensures zero waste.



BP 450AD
A continuous-motion, deep-cavity
blister packaging machine

This deep-cavity blister packaging machine is designed for packing ampoules, vials, pre-filled syringes, spatulas, small tubes, and combination packs of syringe and ampoules, etc. Maximum cavity depth is 28 mm.

Using our proven single-drum, continuous-motion technology, this machine ensures simplicity in feeding and operation, and can readily accept embossing and perforation tools.

An ability to perform edge-to-edge punching ensures zero waste.



CARTOBLIS / CARTOBLIS DD
A unique single-drum,
high-speed rotary machine

This thermo-former is a single-drum rotary blister machine (with optional deep-draw capability) designed for easy downstream integration with online cartoning.

Its benefits include the capability to produce blisters with multiple products, and perform edge-to-edge cutting, which means zero waste.



BQS
A versatile, robust, flat-forming,
flat-sealing, continuous-motion
blister packaging machine

This balcony-design machine means easier access and cleaning.

BQS can accommodate a wide range of products and packaging films, as it's designed for both thermo-forming and cold-forming operations. The machine allows quick and easy changeover, and offers edge-to-edge cutting, thereby increasing operational efficiency.

BQS also comes with ACG's signature Smart Connected technology.

Blister packaging



QUEST NANOBLIS
A versatile tabletop R&D blister packaging machine for stability trials

Lightweight and portable, this tabletop machine has a compact footprint and is ideal for stability trials. QUEST NANOBLIS is cGMP-compliant, and comes with a balcony design that can accommodate perforation or embossing tools.

It can also handle all kinds of thermo-forming and cold-forming films, and its parameters are completely scalable to the level of a production machine.



MINIBLIS PLUS
An ideal blister packaging option for small-scale exhibit batches and production runs

This machine is a flat-forming, flat-sealing option for all kinds of blister packs, especially for exhibit and short-run production.

Designed for thermo-forming and cold-forming applications, it also features a nitrogen-purging capability, and can link up to a cartoning machine for multi-feeding processes.



SECUREBLIS
Assured containment HPAPI blister packaging

This innovative blister packaging machine is a high-containment option for potent substances, and prevents both airborne and surface contaminations.

Designed for OEB level 3, it ensures a safe working environment and features SCADA / 21 CFR Part 11-compliant software and hardware – along with a SMART HMI to help maintain paperless records.

Blister packaging overview

	BLISTER X	BMAX PLUS	BP 102	BP 450AD	CARTOBLIS	BQS	SECUREBLIS MINI	CARTOBLIS DD	QUEST NANOBLIS	MINIBLIS PLUS
	Production						Containment solution	Deep cavity applications	Small scale	
Product										
Capsules	✓	✓	✓		✓	✓	✓		✓	✓
Tablets	✓	✓	✓		✓	✓	✓		✓	✓
Syringes				✓				✓		
Ampoules, vials				✓				✓		
Foil										
PVC / PVdC	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
ALU	✓	✓				✓	✓		✓	✓
Maximum cavity depth	12 mm	12 mm	12 mm	28 mm	12 mm	12 mm	12 mm	28 mm	12 mm	12 mm
Speed										
Cycles (max / min)	55	50				45	25		30	25
Web (metres / min)			4.5	4.5	6.5			4.5		
Technology										
Flat-forming	✓	✓				✓	✓		✓	✓
Flat-sealing		✓				✓	✓		✓	✓
Rotary-forming			✓	✓	✓			✓		
Rotary-sealing	✓		✓	✓	✓			✓		

Our products

Cartoning

HICART PLUS
High-speed, continuous motion,
horizontal cartoning machine

HICART PLUS meets ever-changing packaging requirements with ease and reassurance.

Its features include rear side-flap closing, carton positioning, and a rotary carton pick-up system with carton pre-breaking.

HICART PLUS integrates effortlessly with blister packaging machinery, and other upstream and downstream machines. It offers fast, easy and replicable changeover, and can be used for a wide variety of carton closure-types and pitch configurations.



Cartoning



VEKTOR
A compact and horizontal, intermittent-motion cartoning machine

Built on the robust framework of balcony design, this compact cartoning machine is cGMP-compliant, and ideal for blister applications with multiple stacks. VEKTOR is a format-free machine that ensures fast changeovers.

VEKTOR can integrate seamlessly with upstream and end-of-line downstream machines, and allows combi-pack collation and cartoning for lengths up to 240 mm. It's available in 5 and 8 inch pitch width configurations.



VP 120
A versatile cartoning machine with vertical feeding, ideal for handling products of different shapes and sizes

A continuous-motion cartoning machine, VP 120 was developed to handle standard rigid products as well as irregular shaped, non-rigid products and combination cartoning. VP 120 can contain multiple products in a single carton.

With various closure options, it can handle a wide range of carton sizes without additional format parts.

It can also be automated to handle dedicated feeding systems.



CP 120
An automatic, continuous motion, horizontal cartoning machine

Equipped with an in-built 'no carton-no leaflet' system and an empty-carton rejection system, CP 120 ensures accuracy and reliability.

CP 120 is capable of packing blisters, bottles, ampoules, vials, tubes, and FMCG products. Optionally available with higher output and pre-pushing capability, it also facilitates reverse tuck-in, parallel / aeroplane tuck-in, glue-closure, and combinations thereof.

Cartoning overview

	HICART PLUS	CP 120	VP 120	VEKTOR
Blister	✓	✓	✓	✓
Bottle / vial	✓	✓	✓	
Ampoule	✓	✓	✓	
Syringe / cartridge	✓	✓	✓	
Sachets / pouch	✓	✓	✓	✓
Tube	✓	✓	✓	

Carton configuration

Reverse tuck-in	✓	✓	✓	✓
Parallel tuck-in	✓	✓	✓	✓
Glued type	✓	✓	✓	✓
5th flap cartons	✓	✓	✓	✓
Tamper-evident cartons	✓	✓		✓

Our products

Washing

CONSERVE 360®
High-efficiency, eco-friendly
bin washing system

CONSERVE 360® is an advanced, eco-friendly, and cGMP-compliant automated cleaning system designed specifically for Intermediate Bulk Containers (IBCs). This state-of-the-art solution delivers validated, repeatable cleaning results while eliminating the need for manual intervention.

The system employs high-pressure jet technology with specially designed nozzles capable of operating at up to 70 bar, ensuring thorough removal of even the most stubborn residues. By optimising spray efficiency, CONSERVE 360® reduces water consumption by up to 60% and provides shorter cleaning cycles compared to conventional methods.

Cleaning operations are fully recipe-based, allowing pre-programmed wash sequences. An optional conductivity sensor in the drain line provides online validation of cleaning efficacy.

CONSERVE 360® features a crevice-free stainless steel design with zero exposed fasteners, and a double-walled self-cleaning structure to ensure hygienic integrity.

The system also supports 21 CFR Part 11 compliance, enabling secure electronic record keeping, audit trails, and the reviewing of historical cleaning data.



Our products

Vision inspection

VISITAB
Proditec from France – VISITAB series

ACG has partnered with Proditec to harness their expertise in tablet and capsule inspection systems based on high-end, laser-aided technology.

Our VISITAB series is a fully automatic tablet inspection machine capable of high volume inspection for various visual defects, including misshaping, spots, stains, chippings, coat peeling, shade variation, and print and engraving errors.

Turnkey vision systems, comprising high-speed line-scan cameras and a patented tablet-handling system, ensure 360° inspection of tablets.



Vision inspection



QUALISHIELD BS series
Our high tech AI-powered blister inspection systems

The QUALISHIELD BS series can integrate seamlessly with various blister packaging machines. It’s designed to detect the full range of potential product defects in blister packs to ensure you meet stringent quality standards. QUALISHIELD BS also supports the integration of multiple cameras in a single controller, plus an additional camera for barcode, pharmacode or batch-detail inspection.



QUALISHIELD PH series
Pin-hole inspection systems you can rely on

Our state-of-the-art scanning system is designed specifically to detect surface imperfections on aluminium foils. It detects pinholes or pores anywhere in the inspection window, inspects base aluminium foils after forming, and checks lidding foils before sealing. And you can tailor it to the full range of format sizes available on blister packaging machines.



QUALISHIELD CV series
High-speed, high resolution, code and label inspection systems

The QUALISHIELD CV series is a multi-colour, camera-based solution for inspection of a variety of data, including barcodes, pharmacodes, 2D codes, batch details, and much more – on inspection media such as cartons, labels, leaflets, foils, tubes, and many others. You can install it on any carton or blister packing machine, and it’s retrofittable to a wide range of bottling, cartoning and manual packaging lines. The CV series can be integrated with various types of cameras, based on different needs.

Vision inspection overview

Blister inspection

Model	Field of view
QUALISHIELD BS11	240 mm x 150 mm
QUALISHIELD BS12	240 mm x 150 mm
QUALISHIELD BS15	260 mm x 200 mm
QUALISHIELD BS20	300 mm x 195 mm
QUALISHIELD BS30	320 mm x 300 mm
QUALISHIELD BS40	240 mm x 150 mm
QUALISHIELD BS50	260 mm x 150 mm

Pin-hole inspection

Model	Inspection area (FOV)
QUALISHIELD PH10	200 mm
QUALISHIELD PH20	240 mm
QUALISHIELD PH21	260 mm
QUALISHIELD PH30	300 mm
QUALISHIELD PH31	300 mm
QUALISHIELD PH40	320 mm
QUALISHIELD PH41	380 mm

Our products

Track & trace

VERISHIELD CS series

Our range of accurate and reliable carton serialisation systems

The VERISHIELD CS series is a range of carton serialisation systems that are easy to use, and can serialise cartons of various sizes, from small blister packs to large shipping containers. They comply with regulatory requirements all over the world and are suitable for providing a high level of security and traceability of pharmaceutical products.



Track & trace



VERISHIELD LS
Our range of label
serialisation systems

The VERISHIELD LS series is designed to uniquely identify and serialise labels, providing a comprehensive solution for product authentication, traceability, and supply chain security.



VERISHIELD BA series
360° bottle referencing systems

VERISHIELD BA series enables the seamless tracking of products from production to distribution. It has been designed to efficiently manage and track the movement of individual bottles within larger packaging units by creating a hierarchical relationship between individual bottles and their respective packaging units.



VERISHIELD CA series
Regulatory-compliant bottle and
carton aggregation systems

Embodying a world class cGMP industrial design, the VERISHIELD CA series makes your carton and bottle aggregation process a whole lot faster and easier.



VERISHIELD SM300
Traceability software

VERISHIELD SM300 is a plant management suite for track & trace that ensures data security and integrity. It is a centralised server system application comprising multiple modules including global regulations, serial number management, data management, user report functionality, and horizontal and vertical integration modules.

Aftermarket, not afterthought.

When you invest in an ACG machine, you're not just buying a product. You're investing in a relationship that will last a lifetime.

Whether you need process advice, training, or simply a machine fixed fast, we will always go above and beyond to provide excellent service and first-class solutions.



Maintenance
Beyond ensuring everything is perfectly installed, tried and tested to begin with, you can count on our renowned warranty service, regular check-ups and ongoing support. You may also choose to invest in preventative maintenance, a calibration package, or ACG Smart Connected technology to ensure you preempt issues before they arise.

Upgrades, compliance, and enhancements
We seamlessly replace obsolete components and provide software upgrades for user interfaces that ensure your equipment not only meets current regulatory requirements (including 21 CFR Part 11 compliance) but also sets the stage for future advancements. Every upgrade comes with full documentation. Beyond compliance, our upgrades are designed to extend the longevity of your machinery, protecting your investment and reducing the frequency of replacements.

Retrofitting and refurbishment
We can help revitalise your existing machinery by refurbishing it, or installing retrofitable process inserts. This not only increases utility, but also saves time and money. All replacements and upgrades come with a warranty.

Spare parts
Our authentic ACG spare parts provide unparalleled performance, productivity and longevity. Plus, they come with all the usual ACG benefits, such as having dedicated customer service, a powerful data analytics team, and a full warranty.

Training
ACG's expert training can help your teams better understand and manage your machinery for greater productivity. We also help train R&D personnel and production pharmacists in process technology through ACG Labs.



Our products

Smart Connected

ACG Smart Connected provides an instant connection to your machine's health. This real time data can be used to monitor performance, diagnose problems, and ensure it's always running optimally.

From there, you can begin optimising daily performance and put strategies in place for achieving ongoing equipment efficiency.

24-hour monitoring

Real time monitoring of machine health and performance via an easy-to-use dashboard.

Health management

Productivity maintenance through automated monitoring, and predictive checks to alert potential failures.

Performance optimisation

Utilisation of AI, along with expert practical knowledge and historical data, to optimise production processes and improve quality.

Expert collaboration

Smart Connected is more than a product, it's a solution. It comes with a whole ecosystem of support, including data analysts, machine experts and pharma specialists with decades of global industry knowledge.



Process development laboratory

Making it better. Together.

In February 2021, ACG inaugurated a process development laboratory in Shirwal, India.

Dedicated to the collaborative pursuit of making the world healthier, here customers can come and co-create with ACG experts in all aspects of process development, while gaining access to some of the world's most innovative pieces of process equipment and technology platforms.

We believe magic happens when people come together in a spirit of partnership.

Highlights

- / Spread over 880 square metres
- / Well equipped with lab-scale and pilot scale equipment for all relevant process technologies
- / Is home to a highly skilled team of 15+ pharmaceutical professionals (with individual specialisations, and experience of handling over 3,500 formulations)
- / Includes an in-process laboratory to monitor physical parameters
- / Features a facility to train in process optimisation and scale-up to effectively support product development and commercialisation



Let's talk.

Get in touch to find out more about our range of products and services. If you have specific equipment needs, we can even collaborate on delivering a purpose-made solution. We look forward to chatting.

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Make it better.

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