

ACG
ENGINEERING

**EVERYTHING
YOU NEED
TO ACHIEVE
SUPERIOR
MANUFACTURING
PERFORMANCE**





ACG ENGINEERING

We are committed to providing comprehensive solutions to achieve superior manufacturing performance, quality, and value. Our engineering solutions encompass processing machines such as our advanced granulation machines, a complete portfolio of tablet manufacturing machines and tooling, encapsulation machines, and end-to-end packaging machines. We passionately engineer meaningful pharma technology solutions that help our customers propel their business. Our breadth of expertise and the constant endeavor to expand our range of machines help businesses be future-ready.

Our Values: Consistent quality, collaborative approach, and unrelenting dedication help us see opportunities where others see obstacles.



PRODUCTION



R&D SOLUTION

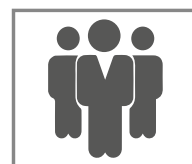


CONTAINMENT SOLUTION

ACG IN NUMBERS



5
Decades
of Industry
Experience



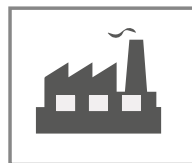
100+
Countries
with Satisfied
Customers



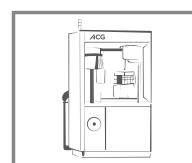
13
Global
Offices



1000+
Global Track
& Trace Line
Implementations



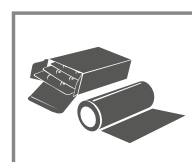
15
Global
Manufacturing
Facilities



20,000+
Machines
Installed



100+
Billion Capsules
Production
Capacity



38,000+
Tons Packaging
Films and Foils
Produced Annually

OUR GLOBAL PRESENCE





GRANULATION



Advanced Closed Loop Wet Granulation System GT X•ONE Series

With GT X•ONE, experience a granulation process that is a class apart! With our state-of-the-art high shear mixer HSM X•ONE and fluid bed system FBE X•ONE, GT X•ONE is an epitome of the next generation 12 bar fluid-bed technology: a perfect combination of safety, efficiency, and aesthetics. Empowered with the MOST (Maximum Operational Safety Technology) safety concept (patent pending), the machine provides an unmatched experience in process optimization.



High Shear Mixer/Granulator with 12 Bar Pressure Shock Resistance

HSM X•ONE Series

This advanced series of high shear mixers is empowered with cutting-edge features such as 12 bar explosion resistance and the advanced X•ONE COMMAND process control system. Its advanced features ensure accurate end point determination. HSM X•ONE is available with a Z-shaped or straight impeller and a chopper in diverse designs, all with adjustable speeds.

Also available with 2 bar pressure shock-resistant feature



Advanced Fluid Bed Systems with 12 Bar Pressure Shock Resistance

FBE X•ONE and FBC X•ONE Series

With our fluid bed systems, FBE X•ONE and FBC X•ONE, we are making a bold statement! Developed in close collaboration with ACG Innovation Centre - Europe, we set new standards in terms of performance, handling, and operational safety! Our X•ONE series features unique inflatable seals and the revolutionary MOST (Maximum Operational Safety Technology) safety concept (patent pending), certified by independent European authorities. Practically indestructible—this series is a completely unique approach to 12 bar safety!

Also available with 2 bar pressure shock-resistant feature



Tabletop Fluid Bed System for Feasibility Studies

Quest™ FB

Quest™ FB is the perfect granulation system for feasibility studies. The versatile system can be used for drying, granulation, and Wurster pellet coating. It features a retrofittable assembly for both top-spray and bottom-spray in a single container. It can process batch sizes as small as 200g.

All the Quest FB models are available with 2 bar pressure shock-resistant feature except Quest FB II X•ONE.



Versatile R&D-Scale Granulation System with 12 Bar Pressure Shock Resistance

Quest™ FB II X•ONE

The ultimate lab system, Quest™ FB II X•ONE performs 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. With a certified 12 bar explosion resistance design, the machine sets new standards in safety. Other features include dust-free filter change, slide-in/slide-out process inserts, and a plug-and-play design.



The Ideal Solution for Design of Experiments (DoE) Studies

Quest™ FBC III

Quest™ FBC III is an ideal solution for performing DoE studies to understand scale-up implications and establish parameter ranges. QUEST™ FBC III can be used for drying, top spray granulation, and Wurster coating applications.



The R&D Scale High Shear Mixture

Quest HSM III

QUEST HSM III is ACG's latest offering within our processing systems product line. QUEST HSM III has been developed jointly by XERTECS, Germany, and ACG, incorporating 12-bar pressure shock resistance and the ACG X-ONE COMMAND™ process control system (optional).

The system offers the flexibility of interchangeable process bowls, available in 15 L, 30 L, and 65 L sizes.



Lab and Pilot Scale Granulation System

GPCG 1.1

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 varied range of products. The entire process of drying, granulation, and Wurster pellet coating occurs in a single container.



Versatile R&D Granulation System for Academia

MiniQuest F

This unique granulation system is specially designed to suit the needs of academia with a minimum batch size as small as 100 g. The multi-tasking system is ideal for drying, granulation, and Wurster pellet coating. Its exclusive Schlick nozzle delivers excellent process results.



MACHINES	Scale	HSM granulation	
		Min volume in L	Max volume in L
HSM 150 X•ONE	Production	53	106
HSM 300 X•ONE		95	191
HSM 400 X•ONE		129	258
HSM 600 X•ONE		185	370
HSM 800 X•ONE		240	481
HSM 1200 X•ONE		361	721

MACHINES	Scale	Top spray granulation		Wurster coating	
		Min volume in L	Max volume in L	Min volume in L	Max volume in L
Miniquest F	R&D	0.2	0.7	0.04	0.2
Quest FB		0.9	3	0.3	1.5
Quest FB II		1.8	9	1.8	8
Quest FBC III		12	55	5	25
GPCG 1.1		1.41	4.7	0.48	2.4
Quest HSM III		4.5	45.5		
FBE 5	Production	3	10		
FBE 25		12	55	-	-
FBE 125		38	100	-	-
FBE 250		80	212	-	-
FBE 500		150	400	-	-
FBE 800		240	640	-	-
FBE 1300		372	988	-	-
FBE 25C		12	55	5	25
FBE 125C		60	160	15	75
FBE 250C		130	344	35	170
FBE 500C		225	600	75	365
FBE 800C		340	896	120	590
FBE 1300C		485	1288	170	835

MACHINES	Scale	Top spray granulation		Wurster coating	
		Min volume in L	Max volume in L	Min volume in L	Max volume in L
FBE 125 X•ONE	Production	38	100	-	-
FBE 250 X•ONE		80	212	-	-
FBE 500 X•ONE		150	400	-	-
FBE 800 X•ONE		240	640	-	-
FBE 1300 X•ONE		372	988	-	-
FBC 125C X•ONE		63	168	15	75
FBC 250C X•ONE		140	368	35	170
FBC 500C X•ONE		230	608	75	365
FBC 800C X•ONE		335	888	120	590
FBC 1300C X•ONE		505	1344	170	835
FBC 1800C X•ONE		735	1956	237	1185

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ENCAPSULATION



High Yield Capsule Filling Machines

ZRO Series

This series of high-speed fully automatic capsule filling machines is available in capacities of up to 90,000 and up to 200,000 capsules/h. The patented ZRO technology helps lower wastage and significantly enhances the yield, thereby increasing the Overall Equipment Effectiveness (OEE). With an accurate micro dosing capability of up to 15 mg, the machine is ideal for difficult formulations such as powders that are sticky, fluffy, hygroscopic, heat-sensitive and free-flowing, and powders with a high percentage of fines. The machine can be seamlessly integrated with Accura—ACG's 100% capsule checkweighers.



Automatic, Solid Dosage, High-speed Capsule Filling Technologies

AF Series

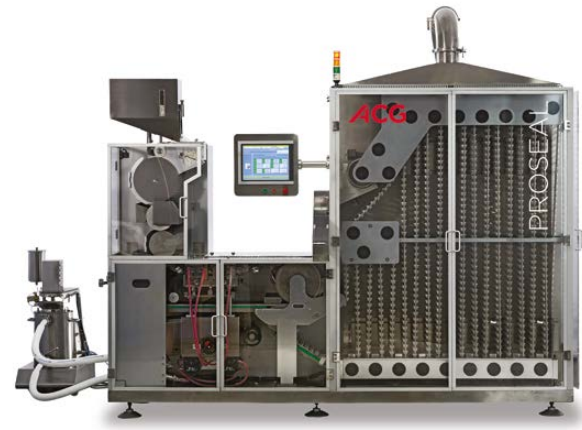
This series of high-speed fully automatic capsule filling machines has outputs ranging from 6,000 to 200,000 capsules/h. Owing to their micro-dosing capability (up to 25 mg), these machines are suitable for capsules of varied sizes (from #000 to 5). Further, the precise slug dosing principle ensures high filling accuracy. The versatile machines allow multiple dosage combinations such as powders, pellets, tablets, micro tablets, softgel, and capsule-in-capsule filling. The machine can be seamlessly integrated with Accura—ACG's 100% capsule checkweighers.



Automatic Liquid Filling in Hard Gelatin Capsules

Fluidocap Series

This unique series comprises of easy-to-operate fully automatic machines for liquid filling of two-piece hard gelatin capsules. Available with outputs ranging from 20,000 to 70,000 capsules/h, the machine is ideal for filling liquids in hard gelatin capsules of varied characteristics such as free flow liquids, pastes, suspensions, thixotropics, and hot melts. The machines are equipped with mechanisms to handle formulations with varied viscosities (10 cps to 80,000 cps). Other outstanding features include inbuilt “no-capsule-no-fill sensors” that reduce the wastage of formulations and nitrogen or inert gas purging for the encapsulation of oxygen-sensitive formulations.



A Technology for Sealing of Hard Gelatin Capsules Filled with Liquids, Semi-Solids, and Solids

Proseal (Fluidocap Sealing)

This band sealing machine is ideal for sealing of capsules filled with formulations in the form of liquids, semi-solids, pastes, thixotropics, powders, pellets, tablets, micro-tablets, and capsules. With a changeover time of 260 min, this machine is equipped with a highly efficient, three-drum capsule loading and orientation system. Better airflow management through separate blowers for suction and discharge ensures effective and quick drying of capsules. Proseal has an output capacity of up to 70,000 capsules/h.



High-level Containment Capsule Filling Lines

Securefill Series

This containment series is suitable for highly potent and toxic formulations requiring Occupational Exposure Limit (OEL) levels of up to OEL 5 (such as oncology, biopharmaceuticals, antivirals, and other high-potency compounds). The machines are equipped with an isolator structure including RTP ports, HEPA filters, glove ports, and accurate dosing mechanisms. Further, the Wet-in-Place (WIP) system ensures wetting of all loose particulates in the pharma zone, thereby safeguarding the operator and environment. The output range is 6000 - 40,000 capsules/h.



Semi-automatic Capsule Filling Machine

SA 9

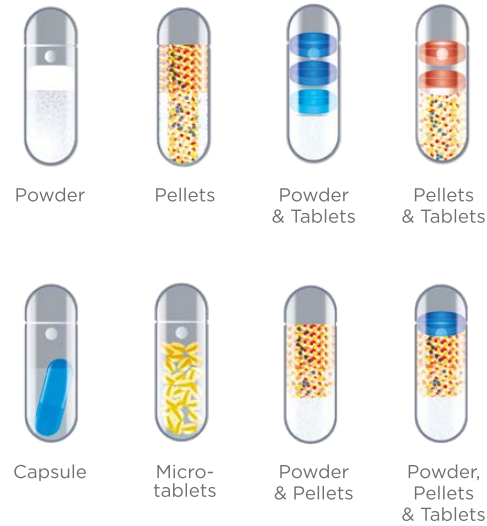
This semi-automatic capsule filling machine offers a certain degree of automation, which eliminates the need for continuous operator attention. The machine ensures higher levels of fill-weight accuracy, thus reducing reject rates. The machine also minimizes formation of dust, as the filled capsules are closed vertically. Depending on the size of the capsules and product characteristics, SA 9 can deliver an output of up to 28,000 capsules/h.



Fully Automatic Lab Scale Capsule Filling Machine

AFT Lab

This fully automatic powder filling machine has a small footprint with an output of 6,000 capsules/h. The machine helps reduce changeover time and costs owing to its combination change parts that have one magazine for four distinct sizes of capsules. The machine allows filling of multiple dosage combinations such as powders, pellets, tablets, micro tablets, softgel, and capsule-in-capsule. The machine allows easy scale-up to AF 25T with easy kit replacement.



Semi-automatic Liquid Filling Machine

Fluidocap 1000

This semi-automatic filling and sealing equipment is ideal for R&D scale. This compact machine can perform both filling and sealing operations. The machine can handle formulations with viscosity ranging from 80 cps to 80,000 cps, including pastes, hot melts, and thixotropics. Further, it can be used to fill a large variety of capsules from sizes of 00 to 4. Both gelatin and HPMC capsule can be filled using this machine. The machine has an output capacity of 1000 capsules/h.



Customized Oral Dosage Encapsulation

CODE series

This series comprises custom-made offerings for special encapsulation needs. Retrofittable on a successful range of encapsulation machines that have been developed, the CODE series gives pharmaceutical companies an advantage of filling combinations of granules, pellets, liquids, powder, mini and micro tablets, capsules, and soft gels into a capsule. The CODE series also offers the advantage of combining different molecules of different release profiles (IR + ER + DR), which in turn leads to enhanced bioavailability and improved product stability.



Automatic 100% Capsule Checkweigher

Accura Series

This series is designed for the precise, automatic, and continuous weighing of every hard capsule in filled or partially filled state. Featuring an integrated Electro-Magnetic Force Restoration (EMFR) weigh cell, Accura utilizes the latest digital technology to ensure that the results of measurement are accurate and of the highest quality. The Accura series offers checkweighers with an output capacity ranging from 40,000 to 200,000 capsules/h.



Productivity Enhancers

To fully exploit the capabilities of your capsule-filling machines, enhance productivity, and minimize losses due to handling, ACG offers a wide range of ancillary equipment. Our range of systems enables smooth encapsulation, while ensuring a high degree of automation and a lower dependence on manual labor. Our entire range of line machines is engineered to ensure higher productivity, maximized output, and significantly reduced downtime.



MACHINES	ACCURA 40	ACCURA 100FF	ACCURA 200FF
Technology			
Automatic	√	√	√
Weighing Accuracy (mg)	±2	±2	±2
Load Cell Precision (mg)	0.2	0.2	0.2
Weighing Range (mg)	50-1500	20-2000	20-2000
Number of Tracks	6	12	24
Capsule Size	#00-#4	#00-#5	#00-#4
Speed			
Capsules/h (max)	35000	100000	200000

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172009

Cb = pH[H ⁺]	[OH ⁻]	Alpha
7.403.98E-08	2.51E-07	0.200
7.802.51E-08	3.98E-07	0.265
8.001.00E-08	1.00E-06	0.500
8.403.98E-09	2.51E-06	0.715
8.801.58E-09	6.31E-06	0.865
9.001.00E-09	1.00E-05	0.900
9.403.98E-10	2.51E-05	0.985
9.802.51E-10	6.31E-05	1.000

MACHINES → FILTERS ↓	AF 40T	AF 90T	AF 150T	AF 200T	Fluidocap F40	Fluidocap F70	SECUREFILL 6T	SECUREFILL 12T	SECUREFILL 25T	ZRO 90T	ZRO 200T	SA 9	AF 25T	F 1000 (Liquid Filling)	AFT LAB (Solid Filling)	Proseal 70
	Solid filling production				Liquid filling production		Containment solution			High yield		Pilot		R&D runs		Band Sealing
Technology																
Automatic	√	√	√	√	√	√	√	√	√	√	√		√		√	√
Semi-automatic												√		√		
Filled Shape																
Powder	√	√	√	√			√	√	√	√	√	√	√		√	
Tablets/pellet/micro tablets/capsules	√	√	√	√	√	√	√	√	√	√	√	√	√		√	
Liquid					√	√								√		
Specifications																
Stations	8	10	12	10	10	10	10	10	10	10	10		8		8	
Capsule size	#000-#5	#000-#5	#000-#5	#000-#5	#00-#4	#00-#4	#00-#5	#00-#5	#00-#5	#000-#5	#000-#5	#00-#5	#000-#5	#00-#4	#000-#5	#00-#4
Speed																
Capsules/h (max) Standard dosing	40000	90000	150000	200000	40000		6000	12000	25000	90000	200000	21600-28800	25000	1000	6000	70000
Capsules/h (max) Seal free dosing						70000										

Machine	Output	Description
CW 10	Up to 10 capsules/min	Check Weigher (CW) 10 is a fully-automatic online sample check weigher designed for statistical weight control to check samples of filled capsules.
DP 100 DP 200	Up to 100,000 capsules/h Up to 200,000 capsules/h	De-duster Polisher (DP) is an advanced de-dusting and polishing system that uses the rotating brush concept to clean powder off the capsules on a continuous basis.
MCS 100 MCS 200+	Up to 110,000 capsules/h Up to 230,000 capsules/h	Mini Capsule Sorter (MCS) removes diametrically distorted capsules, loose caps, and loose powder from a batch of capsules.
ECS 100	Up to 220,000 capsules/h	Empty Capsule Sorter (ECS) is designed for automatic sorting of empty capsules, loose caps, and loose bodies from the filled capsules.
FCE 200	Up to 250,000 capsules/h	Filled Capsule Elevator (FCE) is used for lifting and conveying the filled capsule from a lower level to a higher level using an inbuilt blower unit.
MD	NA	Metal Detector (MD) detects minute particles of metal - ferrous, non-ferrous, and stainless steel - in filled capsules. It is a 100% online metal detection.
CTS	Up to 90,000 capsules/h	Capsule Tablet Sorter (CTS) is a machine for visual inspection of tablets, softgels, and hard capsules of a wide range of shapes and sizes to identify cosmetic defects such as spots, cracks, scratches, etc.
DBM 40	Up to 40,000 capsules/h	De-blistering Machine (DBM) is a semi-automatic de-blistering machine that helps in emptying capsules and tablets from rejected PVC/ALU blisters.
SE 100 SE 200	Up to 100,000 capsules/h Up to 200,000 capsules/h	Sorter Elevator (SE) sorts out diametrically defective capsules prior to hopper charging, enabling defect-free operation in the capsule filling equipment.
PCS 200	Up to 400L/h	Product Conveying System (PCS) automatically actuates replenishment of the product hopper, and can be integrated with the capsule filling machine to indicate product levels in the hopper.

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TABLETING



Single Rotary Pilot-scale Tableting Machine

Protab™ 300

Best suited for pilot, small-scale production batches, Protab™ 300 has a production capacity of up to 215,000 tablets/h at the rated rpm. Its unique InstAmend technology ensures a high uptime. Protab™ 300 offers single tablet sorting capabilities with auto weight correction even at the rated rpm for consistent high-quality production. Protab™ 300 also ensures greater savings, thanks to its sophisticated design that leads to minimal leftovers (50 g) in the feeder. Further, its modular design provides a 360° accessibility of the pharma zone.



High-speed Tableting Machine

Legacy Series

This single rotary tableting series is ideal for medium and large-scale production batches. The machine is crafted with a robust design based on a tie beam design for versatile processing and high-speed applications. It features a fully automatic weight control system with single tablet rejection capability at the rated rpm. It also features a unique three paddle force feeder design with MUPS kit extension. The machine helps maintain hardness and low friability of tablets, avoiding dissolution profile errors by minimization of pellets crushing. The output of the machine is 4,00,000 tablets/h.



Multi-tip Tooling

A multiple tip tool houses more than one tip per punch, thereby allowing tablets to be produced on every single turret station. This gives an enhanced output when compared to single tip standard punches.



Customized Tooling

In addition to standard tablet tooling, ACG also manufactures designer shaped tablet tooling. These punches and dies can be used to highlight brand identity, as an anti-counterfeiting measure or for ease of recognition.

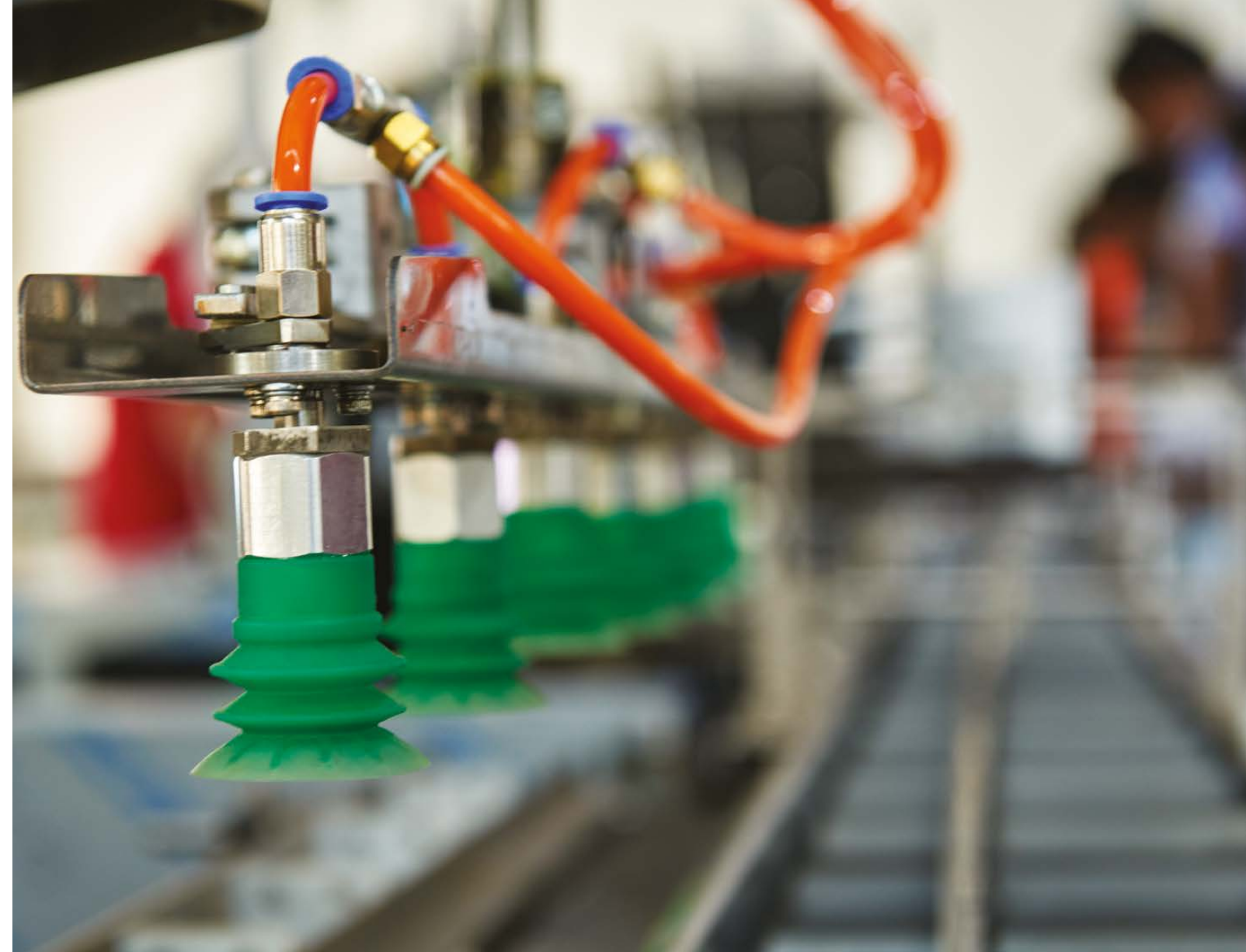


Specialized Tooling

To further enhance the performance of tooling, ACG offers a range of coatings. Our experience with hundreds of formulations help us address specific needs and provide advice on coatings that would be ideal for your requirement.

Specialized Heat Treatment

Special fluidized-bed heat treatment process is used for dies and punches without mixing other materials in the heat cycle. It can also perform heat treatment in bulk. The triple tempering process is also used to achieve hardness throughout a set.



	PROTAB™ 300	LEGACY 6100
	R&D	Medium and large scale production
Stations w.r.t tooling type		
D	21	37
B	27	45
BB	34	61
BBS	36	67
Speed		
Tablets/h range	126000-216000	222000-402000

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TABLET COATING



The Most Efficient Tablet Coating System

SmartCoater™ Series

SmartCoater™, the SC series of tablet coating system from ACG, is smart in the truest sense. With an elegant aesthetic appearance, developed with the conflux of design and technology, SmartCoater™ 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 air flow for drying. Its exclusive ACG X•ONE nozzle by Schlick ensures better process efficiency and handling. A wash-in-place system ensures efficient cleaning during changeovers. As with all smart things, SmartCoater™ offers maximum flexibility in terms of batch sizes (ranging from 125L to 1400L) and an option for sugar coating.



Quest TC III

Quest TC III is a pilot-scale, perforated-pan tablet coating system that comes with four interchangeable pans (2L/9L/24L/56L) to accommodate varied batch processing needs. With a fully perforated drum design, Quest TC III ensures optimum horizontal air flow. Quest TC III is also equipped with a WIP system for easy cleanability. Its advanced X•ONE nozzle assures the best coating efficiency.



Quest TC

This R&D scale tabletop coating machine is an ideal solution for reducing waiting time and time to market. The machine has a perforated pan design, and comes with three interchangeable pans. Equipped with exclusive Schlick nozzle, Quest TC ensures excellent process results. What more! It can be used for batch sizes as small as 200 g! A perfect solution for R&D and feasibility studies!



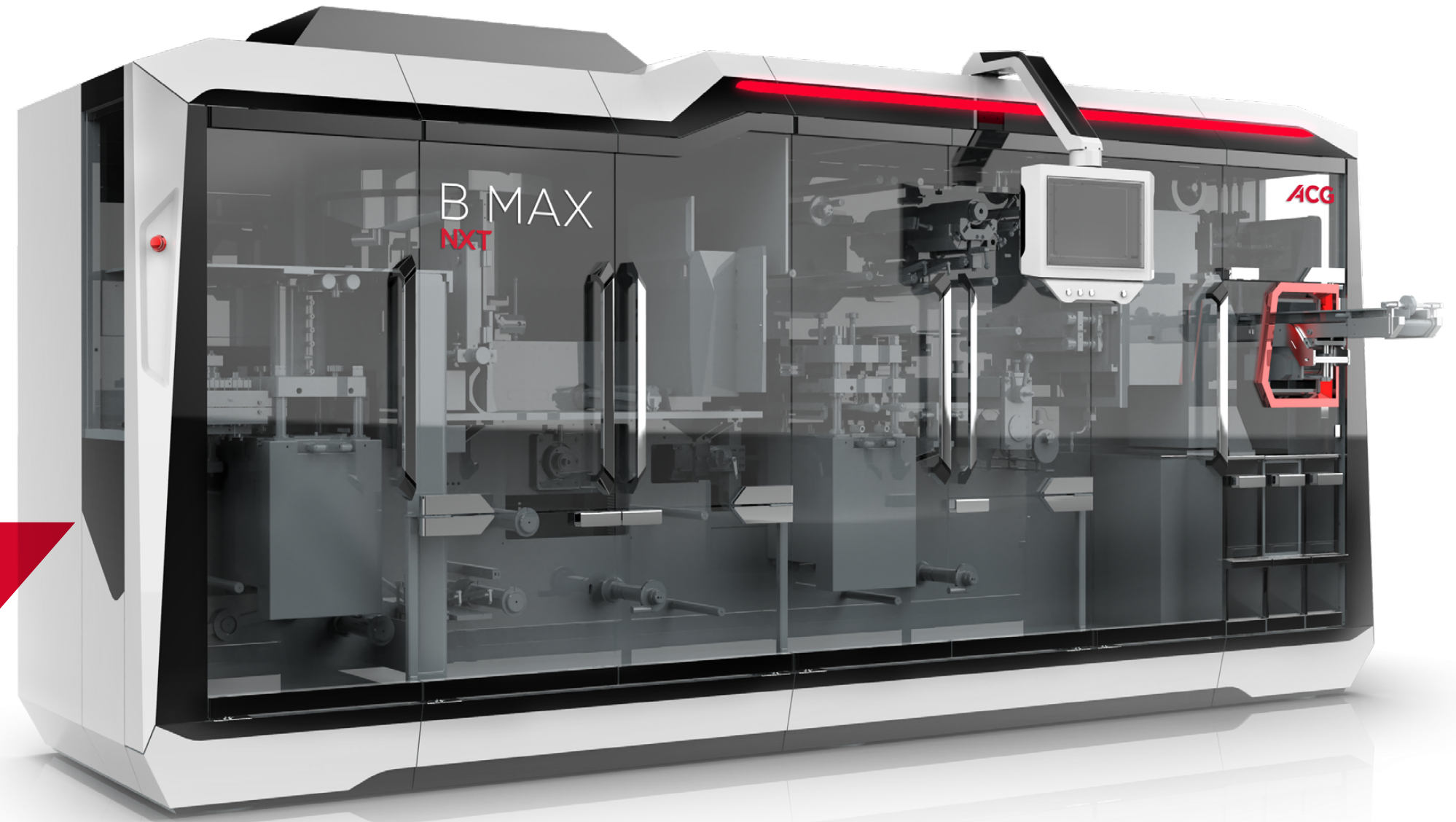
MiniQuest T

A tablet coating machine for future-ready pharmacists! MiniQuest T is specially designed to suit the needs of academia to accommodate their project needs. MiniQuest T is the result of ACG's efforts in bridging the competency gap between industry's expectation and academia. MiniQuest works on negative pressure technology. Its exclusive Schlick nozzle ensures excellent process results. What more! It can handle batch sizes as small as 100 g.



MACHINES	SCALE	Min volume in L	Max volume in L
Miniquest T	R&D	0.2	0.7
Quest TC		0.3	2.5
Quest TC III		1.12	56
SC-125	Production	70	125
SC-175		98	175
SC-250		140	250
SC-350		196	350
SC-500		280	500
SC-700		392	700
SC-1000		560	1000
SC-1400		784	1400

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PRIMARY PACKAGING



Regulatory Compliant, Versatile, Servo-driven Blister Packaging Machine

B MAX

This continuous motion blister packaging machine is cGMP compliant and has a balcony type design. It facilitates ease of access and cleaning, and its ability to perform edge-to-edge punching ensures zero wastage in its web travel direction. SCADA/21 CFR Part 11 compliant software and hardware along with a SMART HMI help maintain paperless records. Powered by the latest servo technology, B MAX ensures accuracy, speed, power, and position control, which improve the OEE.



Versatile, Robust, Continuous Motion Blister Packaging Machine

BQS

This continuous motion blister packaging machine has a balcony design that allows ease of access and cleaning. BQS can accommodate a wide range of products and packaging films since it is designed for both thermoforming and cold forming operations. The machine allows quick and easy changeover, and offers edge-to-edge cutting, thereby increasing the OEE.



High Quality Single Drum Rotary Machine: Value for Money

BP 102

This unique single drum blister packaging machine allows forming and sealing on the same drum, resulting in a small footprint for the machine. The machine is flexible enough to produce blisters with multi-products (up to four products). Further, its ability to perform edge-to-edge punching ensures zero wastage.



Unique Single Drum, High-speed Rotary Machine

Cartoblis

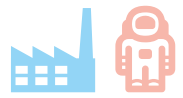
This thermoforming machine is a single drum rotary blister machine (with deep-draw capability as an option) designed for easy downstream integration with online cartoning. Some of its inherent benefits include the capability to produce blisters with multi-products and to perform edge-to-edge cutting, which results in zero wastage.



Continuous Motion, Deep Cavity Blister Packaging Machine

BP 450AD

This deep cavity blister packaging machine is designed for packing ampoules, vials, pre-filled syringes, spatulas, small tubes, and combination packs of syringe + ampoule, etc., up to a cavity depth of 28 mm. The machine uses the principle of our proven single drum, continuous motion technology to ensure simplicity in feeding and operation. The machine can readily accept embossing and perforation tools. Further, its ability to perform edge-to-edge punching ensures zero wastage.



Containment Solution for Blister Packaging for HPAPI

Secureblis

This innovative blister packaging machine is a high containment solution for highly potent substances. The series is specially designed to prevent airborne and surface contaminations. Designed for OEB level 3, this machine completely isolates potent drugs, ensuring a high level of protection for the operator against hazardous drugs. The machine allows for temperature and RH monitoring of the product inside the containment. It is also equipped with a punch safety system for preventing crushing of the cavity. SCADA/21 CFR Part 11 compliant software and hardware along with a SMART HMI help maintain paperless records that come as an option.



An Ideal Blister Packaging Solution for Small-scale Exhibit Batches and Production Runs

Miniblis

This machine is a versatile solution for producing all forms of blister packs that are vital for R&D testing, clinical trials, exhibit batches, and short-run production. This makes Miniblis the most vital solution in the pharmaceutical sector. It is designed for both thermoforming and cold forming applications. Other outstanding features include manual and auto product feeding along with a servo-driven linear indexing station.



A Versatile Tabletop R&D Blister Packaging Machine for Stability Trials

Quest Nanoblis

This tabletop blister packaging machine with a compact footprint is ideal for stability trials. The machine is lightweight and portable, and can even be operated on a table. The machine is cGMP compliant, and comes with a balcony design, which has the provision to accommodate perforation or embossing tools. Further, the machine is designed to handle all kinds of thermoforming and cold forming films, and the parameters that are set on this machine are completely scalable to the level of a production machine.



	BQS	B MAX	BP 102	CARTOBLIS	SECUREBLIS-B45	SECUREBLIS-MINI	BP 450AD	CARTOBLIS-DD	QUEST NANOBLIS (R&D MODEL)	MINIBLIS
	Production				Containment solution		Deep cavity applications		R&D/Pilot runs	
Products										
Hard gel and Soft Gel Capsules	√	√	√	√	√	√			√	√
Tablets	√	√	√	√	√	√			√	√
Syringes							√	√		
Ampoules, vials							√	√		
FMCG products							√			
Cavity										
Depth (mm)	12	12	12	12	12	12	28	28	12	12
Foils										
PVC	√	√	√	√	√	√	√	√	√	√
PVC/Aclar	√	√				√			√	√
PVC/PVdC	√	√	√	√	√	√	√	√	√	√
PVC/PE	√	√	√	√	√	√	√	√	√	√
ALU	√	√				√			√	√
Speed										
Cycles (max/min)	45	50			45	25			30	25
Web (meters/min)			4.5	6.5			4.5	4.5		
Technology										
Flat forming	√	√			√	√			√	√
Flat sealing	√	√				√			√	√
Rotary forming			√	√			√	√		
Rotary sealing			√	√	√		√	√		
Containment					√	√				
R&D/ Pilot Runs									√	√
Machine Size										
Length (mm)	4,530	4,830	4,500	3,810	6,650	4,000	4,570	4,570	1,710	3,490
Width (mm)	1,550	1,850	1,210	1,230	1,460	1,060	1,250	1,230	620	1,060
Height (mm)	2,380	2,425	2,075	2,100	2,820	2,070	2,150	2,030	1,010	1,890
Gross Weight (kg)	5,100	5,700	2,080	3,200	7,400	3,210	3,200	3,460	640	2,770

Disclaimer- All values mentioned are ideal figures. These may vary due to continuous improvements based on customer interactions. Specifications mentioned above are subject to change without prior notice.

SECONDARY PACKAGING



Versatile, Reliable, High-performance, Continuous Motion Cartoner

Hicart Plus

A robust, versatile, and one of the fastest cartoning machines, Hicart Plus meets the demands of ever-changing packaging requirements. It is perfectly designed to carton any rigid object, including ampoules, vials, bottles, tubes, pouches, bags, sachets, and soaps. Empowered by servo-control, Hicart Plus has many valuable features such as rear side flap closing, carton positioning, and rotary carton pick up system with carton pre-breaking. Moreover, it can be easily integrated with the blister packaging machine and other upstream and downstream machines. Hicart Plus offers fast, easy, and reproducible changeover. It offers myriad carton closure types, such as reverse tuck-in, parallel/aero plane tuck-in, glue-closure, and a combination of tuck-in and glue-closure.



Horizontal, Intermittent Motion, Compact Cartoning Machine

Vektor

Built on the robust framework of balcony design, this versatile cartoning machine is cGMP compliant, and is ideal for blister applications with multiple stacks. Vektor is a format part-free machine that ensures fast changeovers. It can also pack other products such as sachets, bottles, ampoules, vials, and other cosmetic products. It can easily be integrated with upstream and end-of-line downstream machines. It offers myriad carton closure types, such as reverse tuck-in, parallel/aero plane tuck-in, glue-closure, a combination of tuck-in and glue-closure, and tamper-evident carton in a predefined format. Furthermore, it allows combi-pack collation and cartoning for carton lengths up to 220 mm.



Versatile Cartoning Machine with Vertical Feeding, Ideal for Handling Products of Different Shapes and Sizes

VP 120

A versatile, continuous motion cartoning machine, VP 120 was developed to handle standard rigid products as well as irregular shaped, non-rigid products and combination products, that are difficult to pack on other cartoning machines. VP 120 can carton multiple products in a single carton. It offers myriad carton closure types, such as reverse tuck-in, parallel/aeroplane tuck-in, glue-closure, and a combination of tuck-in and glue-closure. It can handle a wide range of carton sizes without needing any format parts. Moreover, it can be automated for handling dedicated feeding systems.



Versatile, Automatic, Continuous Motion, Horizontal Cartoning Machine

CP 120

Equipped with an in-built “no carton-no leaflet” system and an empty carton rejection system, CP 120 ensures accurate and reliable cartoning of products. It also offers myriad carton closure types, such as reverse tuck-in, parallel/aeroplane tuck-in, glue-closure, and a combination of tuck-in and glue-closure. The compact footprint of the machine is an added advantage!



Products	HICART PLUS	VP 120	VEKTOR	CP 120
Blisters	√	√	√	√
Bottle/vial	√	√	√	√
Tubes	√	√	√	√
Soaps	√	√	√	√
Sachets	√	√	√	√
Pouch	√	√		√
Jar	√	√		
Toothbrush		√		
Ampoules	√	√		√
Syringe/cartridge		√		
Carton Configuration				
Reverse tuck-in	√	√	√	√
Parallel tuck-in	√	√	√	√
Glued type	√	√	√	√
Lock bottom		√		
5 th flap cartons	√		√	
Tamper-evident cartons	√		√	
Speed				
Cartons/min	180	120	90	120
Technology				
Automatic	√		√	√
Semi-automatic		√		
Intermittent		√	√	
Continuous	√	√		√
Carton sizes				
Max				
Length (mm)	200	320	200	200
Width (mm)	100	135	95	100
Height (mm)	85	98	90	85
Min				
Length (mm)	45	57	65	45
Width (mm)	20	20	20	20
Height (mm)	20	14	16	15

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ALLIANCES



Proditec from France—Visitab Series

ACG has partnered with Proditec for harnessing Proditec's 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 of various visual defects. It conducts a fast and accurate inspection of tablets for defects including shape, thickness, spots, stains, chippings, coating, peeling, shade variation, print, and engraving. Turnkey vision systems, comprising six high-speed line-scan cameras and a patented tablet handling system ensure 360° inspection of tablets.



Theegarten-Pactec from Germany—FP Series

ACG has partnered with Theegarten-Pactec, an international market leader in confectionery packaging technology, specializing in flow wrapping technology for the packaging of pharmaceuticals, candies, chocolates, cookies, and other applications. Our FP series comprises horizontal, high-speed wrapping machines for fin sealing (pillow packing) of pharmaceutical and allied products. The series is based on a robust flow wrapping technology, and is empowered with a variety of servo-controlled feeding system combinations. These combinations can be retrofitted to customize the machine for specific applications.



Pharmagel from Italy—Softgel Encapsulation Technologies

Pharmagel—a leading supplier of softgel encapsulation lines has an enriched experience of over six decades in providing the best encapsulation technology. ACG has partnered with Pharmagel to bring the GK and HT series for softgel encapsulation. These series of softgel encapsulation lines ensure high-quality softgel manufacturing.

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