PROC-X

MANUFACTURING GROUP

CANDY BARS. PROTEIN BARS. ON-THE-GO SNACKS.

From ingredients to impulse buys.

Integrated processing from raw materials to the finished pack.

Build texture. Control consistency. Protect quality.

Bulk handling • Dosing • Milling • Mixing • Cooking
Forming • Extrusion • Coating • Packaging • Inspection

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MANUFACTURING GROUP

ONE GROUP. A CONNECTED PROCESS.

Eight brands. From intake to the finished pack.

01

AIS | INGREDIENT HANDLING

Bulk storage, conveying, weighing and dosing connect raw materials to the recipe.

02

DP | MILLING & SIZE REDUCTION

Prepare suitable dry ingredients to the particle size needed for mixing and texture.

03

QUANTUMX | MIXING & COOKING

Match dry blenders, dense-mass mixers and heated or vacuum vessels to the formulation.

04

EMULXION | DISPERSION

Prepare pumpable binders, emulsions and filling bases with suitable mixing and dispersion.

05

FUXION | EXTRUSION

Configure extrusion around the ingredients, shape and desired snack structure.

06

THERMOFLOW | DRYING

Remove moisture where drying forms part of the validated production route.

07

PRECIXION | PACKAGING & FILLING

Coordinate suitable filling and packaging equipment with the upstream process.

08

INSPEX | INSPECTION

Integrate checkweighing and metal detection matched to product and package.

THE PROC-X ANSWER

Proc-X coordinates equipment, controls and specialist modules around one agreed project scope.

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CHOOSE THE ROUTE. DEFINE THE PRODUCT.

Different products. Different process demands.

01 COLD-FORMED PROTEIN BARS

Dose powders and binders, mix, form, cut and wrap. Add coating and cooling where needed. Cold forming provides no inherent microbial kill step.

02 COOKED CANDY CENTRES

Prepare syrup, cook to the required solids and texture, aerate or add inclusions as specified, then form, cool and finish.

03 BAKED BARS & SNACKS

Mix, form and bake; cool before finishing and packaging. Validate the thermal process for the actual recipe and equipment.

04 EXTRUDED SNACKS

Feed and condition ingredients, extrude, cut, dry or bake as required, season and cool before packing.

05 COATED & LAYERED PRODUCTS

Coordinate centres, fillings, layers and coatings. Match temperatures and setting stages to each component.

THE PROC-X ANSWER

Proc-X starts with product behaviour and the intended preservation route, then specifies the line.

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MANUFACTURING GROUP

START WITH CONTROLLED INGREDIENTS.

Receiving, storage & bulk material handling.

01

RECEIVE & VERIFY

Confirm ingredient identity, lot records and acceptance criteria. Manage allergens and microbiological risks through supplier and receiving programmes.

02

STORE FOR THE MATERIAL

Keep powders, nuts, grains, fats and syrups under suitable conditions. Control moisture, temperature and stock rotation.

03

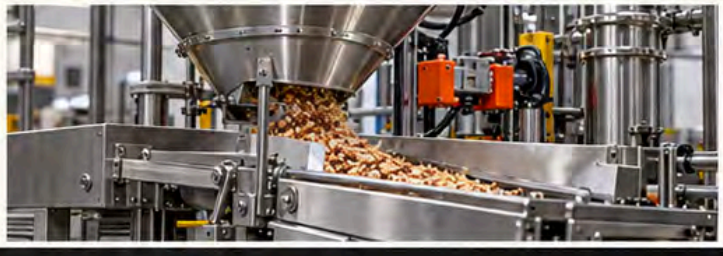
TRANSFER WITH CARE

Select conveying by flow, fragility and segregation risk. Limit dust release and protect ingredients at transfer points.

04

FEED THE PROCESS

Coordinate bag tipping, bulk unloading, liquid supply and intermediate storage with downstream demand and cleaning access.



THE PROC-X ANSWER

AIS connects intake, storage, conveying and dosing. Define dust controls, hygiene and traceability for the complete handling system.

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PARTICLE SIZE SHAPES THE BITE.

Milling & ingredient preparation.

01

DEFINE THE TARGET

Set particle-size and texture requirements for sugars, dry protein ingredients, fibres and spices. Base mill selection on material properties.

02

MATCH THE MILL

Evaluate impact, pin or other suitable methods by hardness, fat content, heat sensitivity and required throughput.

03

CONTROL HEAT & DUST

Assess temperature rise, extraction and combustible-dust hazards. Select cooling or specialist protection where the assessment requires it.

04

VERIFY BEFORE MIXING

Check particle-size distribution and ingredient condition. Avoid unnecessary milling of inclusions intended to remain intact.

THE PROC-X ANSWER

DP prepares suitable ingredients for consistent processing; AIS coordinates feeding and collection. Trial difficult, fatty or heat-sensitive materials.

PROC-X
MANUFACTURING GROUP

EVERY INGREDIENT. IN THE RIGHT AMOUNT.

Automatic dosing, premixing & recipe control.

01 WEIGH MAJOR INGREDIENTS

Dose powders, grains, nuts and liquids to agreed tolerances. Match feeders and weighing systems to flow and batch size.

02 MANAGE SMALL ADDITIONS

Premix flavours, micronutrients and other low-dose ingredients where appropriate. Verify distribution and prevent missed or duplicated additions.

03 SEQUENCE THE RECIPE

Coordinate dry additions, binders, fats and inclusions. Record ingredient lots, actual weights and recipe revisions.

04 VERIFY THE BATCH

Use defined checks, reconciliation and controlled rework rules. Plan allergen changeovers and protect recipe access.

THE PRO-X ANSWER

AIS dosing and QuantumX premixing support repeatable batches. Integrate controls and records with the customer's production system.

PROC-X
MANUFACTURING GROUP

Build the binder. Define the texture.

Syrups, caramel & cooked centres.

01 DISSOLVE & BLEND

Prepare water, sugars, syrups, fats and other ingredients in the specified sequence. Match agitation to dissolution and heat transfer.

02 COOK TO THE SPECIFICATION

Control heating and concentration to achieve the required solids and texture. Product temperature alone may not fully describe the endpoint.

03 USE VACUUM WITH PURPOSE

Vacuum can lower boiling temperature during concentration. Evaluate foaming, aroma loss and product response through trials.

04 TRANSFER AT THE RIGHT CONDITION

Maintain temperature and viscosity for mixing, depositing or layering. Limit uncontrolled holding and product build-up.

THE PROC-X ANSWER

QuantumX heated and vacuum vessels support suitable binder processes; EmulXion prepares pumpable dispersions. Integrate specialist confectionery cookers where required.

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THE RIGHT MIXER FOR THE MASS.

From free-flowing powders to dense bar dough.

01 RIBBON & PADDLE

Evaluate ribbon mixers for suitable dry blends and paddle designs for controlled inclusion handling. Confirm uniformity through trials.

02 PLOW & HIGH-SHEAR

Use plow mixing for intensive powder movement. Apply high shear to suitable dispersions or agglomerate reduction, not fragile inclusions.

03 PLANETARY & SIGMA / Z-BLADE

Evaluate high-torque configurations for cohesive, sticky or dense masses. Specify usable load, drive duty, discharge and cleaning access.

04 HEATED & VACUUM VARIANTS

Add thermal control or vacuum when the formulation benefits. Verify viscosity changes, air removal, sealing and discharge under actual conditions.

THE PROC-X ANSWER

QuantumX mixer selection starts with rheology, batch size and product trials. EmulXion supports suitable lower-viscosity dispersion stages.

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PROTEIN BARS WITH A CONTROLLED BITE.

Powder wetting, dense mixing & texture development.

01 PREPARE THE INGREDIENT SYSTEM

Confirm protein, fibre, sweetener and fat specifications. Screen or premix dry ingredients as needed and prepare the binder separately.

02 INCORPORATE WITHOUT DRY POCKETS

Sequence powders and binder for wetting and uniformity. Control shear, mixing energy and temperature as viscosity builds.

03 FORM AT THE RIGHT CONSISTENCY

Discharge, slab or extrude and cut within the processing window. Protect inclusions and minimise sticking or deformation.

04 ASSESS TEXTURE DURING STORAGE

Track firmness, moisture migration, flavour and coating compatibility. Validate water activity and shelf life for the complete formulation and pack.

THE PROC-X ANSWER

AIS dosing, QuantumX dense-mass mixing and PreciXion packaging connect around the formulation. Trials establish the useful operating window.

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MANUFACTURING GROUP

Layer flavour. Control the centre.

Caramel, nougat, nuts, wafers & fillings.

01 PREPARE EACH COMPONENT

Develop caramel, nougat and filling processes to their own specifications. Coordinate cooking, aeration and holding where needed.

02 PROTECT INCLUSIONS

Add nuts, crisps and wafer components at the stage that preserves their structure. Manage moisture transfer between layers.

03 ASSEMBLE & FORM

Synchronise layer thickness, centre temperature and line speed. Use suitable depositing, slab forming or specialist assembly equipment.

04 SET BEFORE FINISHING

Cool or condition the centre for cutting and coating. Check dimensional stability, adhesion and texture through the finished product's life.

THE PROC-X ANSWER

Proc-X connects handling, mixing and suitable cooking with specialist aeration, wafer, layering and forming modules selected for the product.

PROC-X
MANUFACTURING GROUP

KEEP THE CRUNCH. BIND EVERY BITE.

Cereal, nut & seed bars.

01 PREPARE THE DRY COMPONENTS

Confirm grain, nut and seed condition. Use approved prepared ingredients or integrate validated roasting or other treatment where required.

02 DISTRIBUTE THE BINDER

Prepare binder to the required condition and mix for even coverage. Balance distribution against crushing fragile cereals or inclusions.

03 FORM & CONSOLIDATE

Meter the blend, form the slab and set thickness. Control compression for cohesion without losing the intended bite.

04 COOL, CUT & PROTECT

Set the binder before cutting and wrapping. Evaluate crumbling, sticking, oxidation and moisture uptake in the selected package.

THE PROC-X ANSWER

AIS dosing and QuantumX mixing feed coordinated forming and packaging. Trials establish handling, compression and cooling requirements.

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MANUFACTURING GROUP

SHAPE THE NEXT SNACK.

Extrusion from conditioned feed to finished texture.

01 PREPARE & CONDITION

Dose dry ingredients and liquids consistently. Control feed moisture and conditioning for the selected extrusion route.

02 EXTRUDE & SHAPE

Match screw configuration, energy input and die to the formulation. Distinguish cooking extrusion from cold forming of a prepared mass.

03 CUT, DRY OR BAKE

Coordinate cutting and downstream treatment with product structure. Verify moisture removal and the required thermal process.

04 SEASON, COOL & PACK

Apply oil or seasoning where specified, cool and protect from moisture pickup. Verify texture and package performance.

THE PROC-X ANSWER

Fuxion extrusion and ThermoFlow drying connect with AIS feeding and PreciXion packaging. Integraite specialist ovens and cooling where required.

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SMALL FORMATS. PRECISE PORTIONS.

Bites, balls & filled snacks.

01

CONTROL MASS CONSISTENCY

Prepare a uniform mix within a defined temperature and viscosity window. Manage inclusions that affect flow and portioning.

02

PORTION & SHAPE

Select depositing, forming or cutting by stickiness, piece size and required shape. Check weight and dimensional consistency.

03

ADD A FILLING

Coordinate shell and centre delivery for suitable filled products. Control ratio, placement and closure to limit leakage.

04

RELEASE & FINISH

Manage release surfaces, cooling and transfer. Apply coatings or toppings where needed before inspection and packaging.

THE PROC-X ANSWER

Proc-X connects mixing with suitable portioning and specialist forming modules. PreciXion and InspeX support the final pack and weight checks.

PROC-X
MANUFACTURING GROUP

Form consistently. Cut cleanly.

Slabs, ropes, layers & controlled portions.

01 FEED THE FORMER

Supply the mass at a steady rate and suitable temperature. Use buffering only where holding will not compromise quality.

02 CONTROL THE GEOMETRY

Set slab thickness, layer ratio or rope profile. Match compression and gauging to product structure and inclusion size.

03 SELECT THE CUT

Evaluate guillotine, rotary or ultrasonic cutting. Verify edge quality, sticking, blade access and cleaning with the actual formulation.

04 COORDINATE TRANSFERS

Match belt speeds and spacing through coating, cooling and wrapping. Monitor weight variation and handle rework under defined rules.

THE PROC-X ANSWER

Proc-X specifies the mixing-to-forming interface and integrates specialist forming and cutting around measurable product requirements.

PROC-X
MANUFACTURING GROUP

FINISH WITH A DISTINCTIVE COATING.

Chocolate, compound coatings & toppings.

01 PREPARE THE COATING

Control melting, mixing and holding for the chosen chocolate or compound system. Manage moisture contamination and formulation-specific flow.

02 TEMPER WHERE REQUIRED

Chocolate generally requires controlled tempering. Compound coatings follow their own supplier-defined melting and setting conditions.

03 ENROBE, DRIZZLE OR TOP

Coordinate centre temperature, coating flow and belt speed. Apply toppings consistently and manage recovered coating hygienically.

04 SET & VERIFY

Match cooling to the coating and centre. Assess appearance, adhesion, cracking and bloom during storage trials.

THE PROC-X ANSWER

Proc-X integrates specialist chocolate preparation, tempering and enrobing with upstream centre production and downstream cooling and packaging.

PROC-X
MANUFACTURING GROUP

Set the structure. Stabilise the snack.

Cooling, drying & moisture control.

01 DEFINE THE ENDPOINT

Specify the temperature, moisture or water activity needed for the product. These measurements serve different purposes and are not interchangeable.

02 MATCH THE TREATMENT

Use suitable cooling for binders and coatings. Apply drying or baking only where required by the snack route.

03 MANAGE THE ENVIRONMENT

Control airflow and humidity around the product. Avoid condensation and excessive moisture exchange during transfers.

04 VERIFY BEFORE WRAPPING

Check texture, coating set and product condition at the packer. Coordinate residence time and line capacity to prevent bottlenecks.

THE PROC-X ANSWER

ThermoFlow supports suitable drying duties. Proc-X integrates specialist cooling and baking modules with the line's product and capacity requirements.

PROC-X
MANUFACTURING GROUP

PROTECT THE SNACK. VERIFY THE PACK.

Wrapping, pouches, multipacks & inspection.

01

SELECT THE PACK FORMAT

Match flow wraps, pouches and multipacks to handling and retail needs. Choose barriers against moisture, oxygen and aroma loss.

02

CONTROL SEALING & CODING

Keep seal areas clean, verify seals and print legible date and lot codes. Check label identity and allergen information.

03

CHECK WEIGHT & FOREIGN MATERIAL

Apply InspeX checkweighing and package-compatible metal detection. Evaluate specialist X-ray inspection where the risk assessment requires it.

04

VERIFY REJECTION & TRACEABILITY

Test inspection and reject functions against defined criteria. Segregate rejected packs and link records to the production batch.

THE PROC-X ANSWER

PreciXion packaging and **InspeX Inspection** connect to forming and cooling. Configure specialist wrapping and inspection around the actual package.

PROC-X
MANUFACTURING GROUP

COMPLETE LINES. DISTINCT PRODUCT ROUTES.

Four examples from ingredient intake to retail pack.

01

COATED PROTEIN BAR

Receive and dose. Prepare binder, mix the dense mass, form and cut, coat and cool, then wrap and inspect. AIS, QuantumX, PreciXion and InspeX connect with specialist finishing modules.

02

LAYERED CANDY BAR

Dose and prepare centres. Cook, aerate where specified, layer, set and cut, then enrobe, cool, wrap and inspect. Proc-X integrates suitable vessels with specialist confectionery equipment.

03

CEREAL & NUT BAR

Dose prepared inclusions. Prepare binder, gently mix, slab form, consolidate, cool and cut, then wrap and inspect. AIS and QuantumX support feeding and mixing.

04

EXTRUDED SNACK

Dose, condition, extrude and cut. Dry or bake as required, season and cool, then pack and inspect. AIS, Fuxion and ThermoFlow connect with packaging and specialist finishing.

THE PROC-X ANSWER

Illustrative routes require trials, hygienic design and validation. Define the microbial control strategy for every recipe; low moisture is not a kill step.

PROC-X
MANUFACTURING GROUP

PROVE PERFORMANCE BEFORE PRODUCTION.

Trials, hygiene, acceptance & handover.

01 TRIAL THE REAL RECIPE

Use representative ingredients, inclusions and batch loads. Measure uniformity, texture, temperature, discharge and downstream handling.

02 DESIGN FOR CLEANING

Plan access, dry or wet cleaning and allergen changeovers. Verify cleaning methods for equipment and product; control moisture in dry areas.

03 VALIDATE THE FINISHED PRODUCT

Establish the food-safety process and shelf-life programme with qualified specialists. Assess microbiology, texture, oxidation and packaging.

04 AGREE ACCEPTANCE & SUPPORT

Define factory and site acceptance tests, documentation, training and critical spares. Separate equipment acceptance from product process validation.

THE PROC-X ANSWER

Proc-X brings equipment, controls and specialist interfaces into an agreed scope with measurable criteria, drawings, P&IDs and operating documentation.

PROC-X
MANUFACTURING GROUP

Your next snack starts here.

From ingredients to the finished pack.

Candy bars. Protein bars. Cereal bars. Bites. Extruded snacks.

EIGHT BRANDS. ONE PROC-X GROUP.

QuantumX • EmulXion • DP • AIS
FuXion • ThermoFlow • InspeX • PreciXion

LET'S BUILD YOUR PROCESS.

www.procxinc.com
john.paul@procxinc.com
Office: +1 872 260 5071
Direct: +1 872 260 6701
24820 N 16th Ave, Suite 100
Phoenix, AZ 85085, USA

OFFICES & LOCATIONS

United States — Kansas City • Phoenix
United Kingdom • Poland
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