PROC-X

MANUFACTURING GROUP

ICE CREAM. GELATO. YOGURT.

Exceptional taste. Engineered from the start.

Integrated processing from ingredients to the finished pack.

Natural flavour. Beautiful colour. Consistent texture.

Dosing • Milling • Mixing • Homogenisation
Pasteurisation • Fermentation • Freezing • Packaging

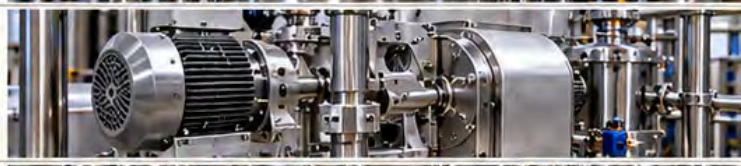
PROC-X
MANUFACTURING GROUP

ONE GROUP. A CONNECTED PROCESS.

From ingredients to ice cream, gelato and yogurt.

01 | **AIS | INGREDIENT HANDLING**
Bulk storage, conveying, weighing and dosing connect powders and liquids to the recipe.

02 | **DP | MILLING & SIZE REDUCTION**
Prepare suitable dry ingredients and reduce agglomerates before blending and hydration.



03 | **QuantumX | MIXING & PREPARATION**
Dry premixes, jacketed mixing and fruit preparations, with vacuum options where appropriate.

04 | **EmulXion | DISPERSION & HOMOGENISATION**
Disperse powders and emulsify fats. Match high-shear and high-pressure systems to the base.

05 | **Fuxion | EXTRUDED INCLUSIONS**
Create cereal and protein crisps for selected toppings and inclusions.

06 | **ThermoFlow | INGREDIENT DRYING**
Dry suitable ingredient streams where powders or dried inclusions form part of the project.

07 | **PreciXion | FILLING & PACKAGING**
Match cups, tubs, bottles and pouches to product viscosity, inclusions and pack format.

08 | **InspeX | INSPECTION**
Integrate checkweighing and metal detection selected for the product and packaging.

THE PROC-X ANSWER

One coordinated scope for equipment, controls and process integration.
Specialist pasteurisation, fermentation, freezing and cold-chain modules are integrated as required.

PROC-X
MANUFACTURING GROUP

CHOOSE THE ROUTE. DEFINE THE PRODUCT.

Three product families. Different process priorities.

01 ICE CREAM

Prepare and heat-treat the mix, homogenise as required, cool and age. Freeze with controlled air incorporation, add inclusions, fill, harden and store frozen.

02 GELATO

Balance sugars, solids and flavour. Prepare and pasteurise the base, cool and mature as required, then batch or continuously freeze to the desired texture.

03 SET & STIRRED YOGURT

Prepare, homogenise and heat-treat the base, then cool and add cultures. Set yogurt ferments in its pack; stirred yogurt ferments in a tank before gentle cooling and filling.

04 DRINKING & CONCENTRATED YOGURT

Control viscosity for drinking formats. For concentrated products, select separation, membrane processing or an appropriate solids-standardisation route.

THE PROC-X ANSWER

Proc-X aligns ingredient preparation, process modules and packaging with the product route and agreed project scope.

PROC-X
MANUFACTURING GROUP

GREAT PRODUCTS START WITH CONTROLLED INGREDIENTS.

Receiving, storage and hygienic transfer.

01

RECEIVE & VERIFY

Check ingredient identity, condition, lot details and acceptance criteria. Milk, cream, powders, fruit and cultures each need a defined intake plan.

02

STORE FOR THE INGREDIENT

Provide controlled storage for liquids, dry powders and fruit preparations. Maintain supplier-specified conditions for sensitive cultures, flavours and colours.

03

MOVE WITH CARE

Match pumps and conveying systems to viscosity, powder flow and particle sensitivity. Protect ingredients from moisture, contamination and unnecessary aeration.

04

KEEP LOTS CONNECTED

Link receiving, storage and batch records. Plan allergen segregation and cleaning for milk, nuts, soy and other recipe ingredients.

THE PROC-X ANSWER

AIS connects intake, storage, conveying and weighing to the recipe. Proc-X coordinates hygienic transfer and traceability requirements.

PROC-X
MANUFACTURING GROUP

EVERY INGREDIENT. THE RIGHT AMOUNT.

Automatic dosing, premixing and recipe control.

01 METER THE MAJOR STREAMS

Weigh or meter milk, cream, water, sugars and powders against the approved recipe. Confirm actual additions before the next step.

02 CONTROL SMALL ADDITIONS

Use appropriately sized dosing systems for stabilisers, emulsifiers, flavours and colours. Verify low-dose ingredients rather than relying on bulk-scale resolution.

03 PREMIX FOR DISTRIBUTION

Where suitable, disperse minor dry ingredients through a compatible carrier before hydration. Choose milling or deagglomeration only where needed.

04 RELEASE THE CORRECT RECIPE

Manage recipe versions, ingredient identity and addition order. Record tolerances and exceptions, with permissions matched to the operator's role.

THE PROC-X ANSWER

AIS dosing, QuantumX premixing and DP size reduction support repeatable batches, integrated with agreed controls and batch records.

PROC-X
MANUFACTURING GROUP

BUILD A SMOOTH BASE. HYDRATE WITH CONTROL.

Mixing technology matched to the formulation.

01

WET POWDERS EFFECTIVELY

Control powder addition rate and liquid circulation to reduce floating powder and dry-centred lumps. Match induction capacity to viscosity and powder behaviour.

02

MATCH THE MIXER

Use high shear for suitable dispersion duties and sweep or anchor agitation for viscous bases. Select vessel geometry, working volume and circulation together.

03

GIVE INGREDIENTS TIME

Set addition sequence, temperature and hydration time for proteins, starches and gums. Confirm performance in the complete formulation.

04

PROTECT THE FINISHED STRUCTURE

Reduce shear when folding in fruit or handling cultured yogurt. Use vacuum only where suitable; uncontrolled aeration can disrupt downstream processing.

THE PROC-X ANSWER

QuantumX vessels and EmulXion dispersion systems combine bulk mixing, powder wetting and controlled shear around the product's needs.

PROC-X
MANUFACTURING GROUP

REFINE THE EMULSION. CONTROL THE TEXTURE.

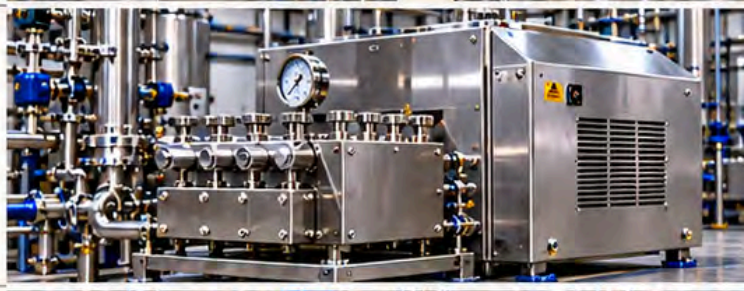
Dispersion, homogenisation and deaeration.

01 DISPERSE BEFORE REFINING

Prepare a uniform feed with suitable powder wetting and fat dispersion. A rotor-stator mixer and a high-pressure homogeniser perform different duties.

02 SELECT THE PRESSURE

Match homogenisation pressure, stages and feed temperature to fat, protein and solids. Establish settings through product trials rather than one universal recipe.



03 MANAGE ENTRAINED AIR

Where required, integrate controlled deaeration to reduce unwanted air. This is separate from the deliberate air incorporation used during ice cream freezing.

04 VERIFY THROUGH THE PROCESS

Check emulsion stability, viscosity and finished texture. Yogurt base homogenisation normally precedes fermentation; later handling must respect the developed gel.

THE PROC-X ANSWER

EmulXion high-shear and high-pressure systems integrate with QuantumX preparation vessels and specialist dairy processing modules.

PROC-X
MANUFACTURING GROUP

CONTROL THE HEAT. PROTECT THE PRODUCT.

Pasteurisation and thermal processing.

01 MATCH THE THERMAL PROCESS

Select batch or continuous heat treatment for the formulation, throughput and required outcome. Validate the time-temperature combination for the product and market.

02 DESIGN FOR THE FORMULATION

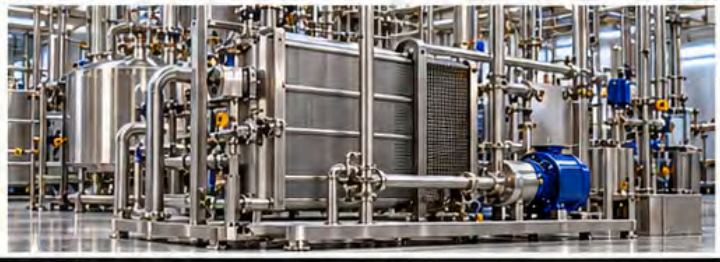
Fat, sugar, solids and viscosity affect heat transfer. Yogurt base heating also develops protein functionality for the desired body and texture.

03 VERIFY THE CRITICAL CONDITIONS

Monitor and record the required process conditions. Integrate holding, flow control and diversion or batch-release interlocks as appropriate.

04 COOL & KEEP IT PROTECTED

Cool to the next stage's defined conditions. Protect treated mix from recontamination and control downstream additions, transfer and storage.



THE PROC-X ANSWER

Proc-X integrates preparation vessels, controls and specialist thermal modules around a validated product-specific process.

PROC-X
MANUFACTURING GROUP

BUILD THE SCOOP. PROTECT THE COLD CHAIN.

Ice cream ageing, freezing and hardening.

01 AGE THE PREPARED MIX

Cool and hold the treated mix under controlled conditions. Allow fat crystallisation and ingredient hydration appropriate to the formulation.

02 FREEZE WITH CONTROL

Match freezer operation, air incorporation and draw conditions to the recipe. Balance texture, density and production consistency.

03 ADD INCLUSIONS & FILL

Meter fruit, sauces, nuts or crisps with suitable feeders. Coordinate particle size, distribution and filling without damaging the product.

04 HARDEN & MAINTAIN TEMPERATURE

Harden packaged product promptly to the validated target. Manage storage and distribution temperature fluctuations to limit texture deterioration.

THE PROC-X ANSWER

Proc-X connects mix preparation and inclusion handling with specialist freezing, hardening, PreciXion filling and InspeX inspection.

PROC-X
MANUFACTURING GROUP

MAKE GELATO WITH CHARACTER.

Recipe balance, controlled freezing and flavour.

01 BALANCE THE BASE

Match sugars, fat, proteins and total solids to scoopability and serving conditions. Fruit, nut and chocolate recipes need their own balance.

02 PREPARE & PASTEURISE

Disperse powders, blend liquids and apply the validated thermal process. Cool and mature the base where the formulation requires it.

03 FREEZE FOR THE FINISH

Select batch or continuous freezing to suit output and product style. Control air incorporation and consistency rather than relying on a fixed universal setting.

04 PRESERVE THE FLAVOUR

Add qualified pastes, ripples and inclusions at the appropriate stage. Control hardening, holding and display conditions for the chosen route.

THE PROC-X ANSWER

QuantumX preparation, EmulXion dispersion and AIS dosing integrate with specialist gelato freezing and suitable packaging systems.

PROC-X
MANUFACTURING GROUP

CULTURE THE BASE. RESPECT THE GEL.

Set and stirred yogurt: two distinct routes.

01 PREPARE FOR FERMENTATION

Standardise the base, homogenise as required and heat-treat for safety and texture. Cool to the selected culture's inoculation conditions.

02 SET YOGURT: FERMENT IN PACK

Dose culture hygienically, fill and incubate the packs under controlled conditions. Cool at the defined endpoint while protecting the undisturbed gel.

03 STIRRED YOGURT: FERMENT IN TANK

Ferment in a controlled vessel, then cool and smooth with appropriate shear. Blend qualified fruit preparations and fill hygienically.

04 CONTROL THE ENDPOINT

Follow culture-specific temperature, time and acidity criteria. Confirm texture, cooling performance and stability through the intended shelf life.

THE PROC-X ANSWER

Proc-X coordinates base preparation, specialist fermentation and cooling, gentle transfer, fruit dosing and PreciXion filling.

PROC-X
MANUFACTURING GROUP

FROM POURABLE TO SPOONABLY THICK.

Drinking and concentrated yogurt.

01 ENGINEER THE DRINK

Develop the required flow and mouthfeel through solids balance, culture selection and controlled smoothing. Check separation and consistency after filling.

02 SELECT THE CONCENTRATION ROUTE

Choose suitable separation or membrane processing, or a formulation based on standardised solids. Define texture, yield and by-product handling together.

03 HANDLE THICK PRODUCTS GENTLY

Match pumps, pipework and filling valves to viscosity. Control shear, pressure drop and residence time to preserve the intended texture.

04 VALIDATE THE FINISHED FORMAT

Check viscosity, syneresis, flavour and pack performance over storage. Define chilled or separately validated heat-treated routes and the intended culture claim.

THE PROC-X ANSWER

Proc-X combines preparation and mixing with specialist concentration modules, hygienic transfer and PreciXion filling for each format.

PROC-X
MANUFACTURING GROUP

PLANT-BASED. PROCESS WITH PURPOSE.

Frozen desserts and cultured alternatives.

01 CHOOSE THE BASE

Match oat, soy, almond, coconut or other bases to flavour, protein, fat and solids targets. Each ingredient system needs its own processing approach.

02 PREPARE & REFINE

Hydrate powders or prepare suitable wet-milled bases. Control particle size, dispersion and filtration where required to reduce grit and improve consistency.

03 BUILD THE STRUCTURE

Match emulsification, homogenisation and heat treatment to the formulation. For cultured alternatives, select cultures suited to the available nutrients.

04 PROVE THE FINISHED PRODUCT

Assess freezing behaviour or fermentation, then verify texture, separation and flavour during storage. Plan allergen controls and accurate product naming.

THE PROC-X ANSWER

DP, AIS, QuantumX and EmulXion support ingredient preparation and base development, integrated with specialist thermal, culture and freezing modules.

PROC-X
MANUFACTURING GROUP

REAL FLAVOUR. CONTROLLED FROM THE START.

Natural flavours, fruit preparations and inclusions.

01 DEFINE THE FLAVOUR

Select qualified vanilla extracts, cocoa, coffee, fruit or nut preparations for the recipe. Specify strength, carrier, allergens and batch consistency.

02 PREPARE WITH CARE

Match milling, mixing and cooking to the ingredient. Use gentle agitation for fruit pieces; apply a validated treatment where the preparation requires it.

03 DOSE AT THE RIGHT STAGE

Choose the addition point around heat sensitivity, volatility and hygiene. Ingredients added after the main heat treatment need a controlled safety strategy.

04 CHECK THE COMPLETE RECIPE

Evaluate flavour release after freezing or fermentation and through storage. Fruit preparations also change acidity, water, sugar and solids balance.

THE PROC-X ANSWER

AIS dosing, DP preparation, QuantumX fruit-processing vessels and EmulXion dispersion support repeatable flavour delivery.

PROC-X
MANUFACTURING GROUP

NATURAL COLOUR. ENGINEERED TO LAST.

Select the source. Protect the shade.

01 MATCH COLOUR TO THE BASE

Evaluate fruit and vegetable concentrates or suitable colouring ingredients for the application. Milk bases and acidic yogurt can produce different shades.

02 TEST THE PROCESS CONDITIONS

Check colour response to pH, heat, oxygen and light. Consider ingredient interactions and the full processing sequence before selecting a colour system.

03 CONTROL DISPERSION & DOSING

Match water- or oil-compatible colour systems to the formulation. Use accurate metering and suitable mixing to avoid streaking or shade variation.

04 VERIFY THROUGH SHELF LIFE

Assess colour in the finished pack under intended storage and display conditions. Confirm ingredient permissions and label wording for the destination market.

THE PROC-X ANSWER

Proc-X combines accurate dosing, controlled dispersion and process trials to help retain the intended colour in the finished product.

PROC-X
MANUFACTURING GROUP

SIMPLER INGREDIENT LISTS. TEXTURE THAT PERFORMS.

Formulation and processing must work together.

01 DEFINE THE PRODUCT PROMISE

Agree the ingredient policy and target texture before selecting equipment. A shorter ingredient list still needs a robust formulation and process.

02 BUILD BODY THROUGH PROCESS

Optimise solids balance, protein hydration, heat treatment and homogenisation where appropriate. Select cultures for the desired yogurt texture.

03 BALANCE FROZEN TEXTURE

Changes to sugars, fat, fibres or stabilisers affect freezing and scoopability. Trial the complete recipe for ice crystals, melting behaviour and mouthfeel.

04 VALIDATE THE TRADE-OFFS

Measure viscosity, separation and sensory quality over storage. Qualify any ingredient substitutions and verify label claims for the intended market.

THE PROC-X ANSWER

QuantumX and EmulXion systems give formulators control over mixing, hydration and dispersion, supported by product-specific trials.

PROC-X
MANUFACTURING GROUP

PROTECT THE FINISH. VERIFY EVERY PACK.

Filling, sealing, inspection and cold-chain handover.

01 MATCH THE FILLER

Select cups, tubs, bottles or pouches around viscosity, inclusions and production rate. Coordinate dosing, handling and changeovers with the upstream process.

02 CONTROL THE CLOSURE

Protect the filling zone and keep seal surfaces clean. Verify fill quantity, closure integrity, date coding and pack presentation.

03 SELECT THE INSPECTION

Integrate checkweighing and metal detection matched to product and packaging. Evaluate detection location and test performance, especially with foil or metallised packs.

04 HAND OVER AT THE RIGHT CONDITION

Coordinate refrigeration or hardening with the product route. Maintain lot traceability, reject control and defined storage and dispatch conditions.

THE PROC-X ANSWER

PreciXion filling and packaging work with InspeX inspection and the integrated process to support consistent, traceable finished packs.

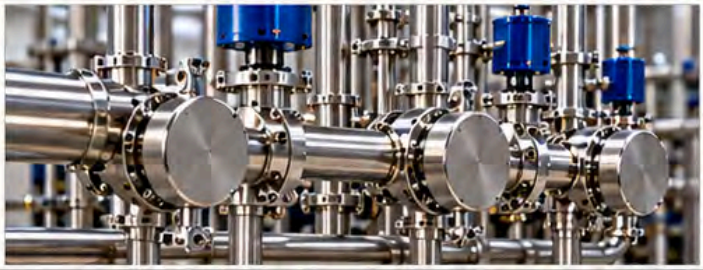
PROC-X
MANUFACTURING GROUP

DESIGN FOR HYGIENE. CLEAN WITH CONFIDENCE.

Cleanability, changeovers and process verification.

01 BUILD CLEANABILITY IN

Specify accessible product-contact areas, drainable pipework and suitable seals. Consider valves, dead legs and cleaning access during line design.



02 MATCH THE CLEANING METHOD

Use CIP where the equipment is designed for it. Define disassembly and manual cleaning for components that need separate attention.

03 CONTROL THE CLEANING CYCLE

Validate cleaning parameters for the soils and equipment. Monitor the required flow, temperature, chemistry and contact time; verify rinse completion before production.

04 VERIFY BEFORE RELEASE

Plan allergen changeovers, hygiene checks and environmental monitoring. Record cleaning results and release equipment against agreed acceptance criteria.

THE PROC-X ANSWER

Proc-X coordinates hygienic equipment design, cleaning interfaces and controls so the production line can be operated and verified as a complete system.

PROC-X
MANUFACTURING GROUP

COMPLETE LINES. PROVEN WITH YOUR PRODUCT.

Example routes, trials and production handover.

01

ICE CREAM LINE

AIS dosing and QuantumX preparation; EmulXion dispersion or homogenisation; integrated pasteurisation, cooling, ageing and freezing; PreciXion filling, InspeX inspection and hardening.

02

GELATO LINE

Ingredient dosing and base preparation; appropriate homogenisation and pasteurisation; cooling and maturation where required; specialist freezing, ripple addition and packing.

03

YOGURT LINE

Dose, mix, homogenise and heat-treat the base, then cool and inoculate. Fill before incubation for set yogurt, or ferment in tank before cooling and filling for stirred yogurt.

04

TRIAL, ACCEPT & HAND OVER

Agree product and throughput targets. Confirm texture, flavour, colour and cleaning performance; define FAT, SAT, training and acceptance criteria before commissioning.

THE PROC-X ANSWER

Each line is configured to the formulation, capacity and pack. Proc-X coordinates its brands and specialist modules within an agreed project scope.

PROC-X

MANUFACTURING GROUP

Your next signature product starts here.

From ingredients to the finished pack.

Ice cream. Gelato. Yogurt. Plant-based alternatives.

EIGHT BRANDS. ONE PROC-X GROUP.

QuantumX • EmuXion • DP • AIS

FuXion • ThermoFlow • InspeX • PreciXion

LET'S BUILD YOUR PROCESS.

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