



# Soymilk Processing and Cereal Drinks

GEA centrifuges are the first choice



# Invest in Innovation

Tapping its full potential, GEA gives the process of soymilk and of cereal drinks an outstanding competitive edge.

Soy drinks are exceptionally rich in protein, free from lactose and cholesterol and are a valuable alternative for people who follow a healthy diet. Soymilk is used to enrich fruit juices and, vice versa, it is itself enriched with fruit juice.

## Gentle treatment of the product is essential

Beverage manufacturers have to be capable of optimally serving the diverse and constantly changing expectations of their consumers. To achieve this, they have to be able to produce the soymilk

gently, flexibly, and economically. The process technology from GEA is precisely designed to achieve this objective.

## Proven innovative strength

GEA has proved its innovative strength in more than 3000 processes and provides soymilk producers throughout the world benefit from these innovations in terms of improved product quality and increased yield.



# Two Stars in Advanced Soymilk Processing

GEA separators and decanters have been used for decades in process lines for soymilk production.

Thanks to their high throughput capacities and maximum separating efficiency, they have proved a success in tough daily production conditions. The easily integrated decanters separate the soymilk from the solids (Okara) in the first clarification phase.

To optimize the yield, a second decanter recovers further valuable soymilk in the extraction stage. The result is that the investment is quickly repaid.

Centrifugal clarifiers are used to separate fine particles if required. Separators can also make possible the defatting of soymilk.

Separators and decanters for soymilk recovery offer the following advantages:

- High separating efficiency
- High throughput capacity
- Reliable controllability
- Simple maintenance and repair
- Low energy consumption
- With decanters: high dry substance content in solids (Okara)
- Full automatic installation
- CIP able and hygienic installation



# GEA Decanter is also Available in Hygienic Design

Processing and production of beverages at the highest level, hygienically and in a reproducible quality – this is what the new GEA decanter for beverages in a hygienic design brings to the industry.

It ensures comprehensive processing and thus product safety through complete CIP-ability and reproducible cleaning. This high standard is achieved through special measures, such as the use of FDA-approved components, modification of the surface from Ra 4.0  $\mu\text{m}$  to Ra 0.8  $\mu\text{m}$ , and design of corners and surfaces with optimal CIP-ability.

#### Scroll

- Smooth surfaces (Ra 0.8  $\mu\text{m}$ )
- Hermetic scroll body
- Solids discharge
- Optimized solids discharge port design
- No possibility of product residue

#### Hood

- Defined spray nozzle arrangement
- Spray nozzles
- Weld-on
- Optimized spray cycles sequence

#### Hermetic feed system

- Rotating feed tube and box distributor
- Soft product acceleration
- Defined CIP guidance

#### Bowl shell

- Smooth surfaces
- Increased CIP-ability



*GEA decanter also available in hygienic design*



# Two Step Processing for Your Success

Soy milk and the continuous improvement of its production go hand in hand. As a partner to soy milk producers, and backed up by world-wide experience, GEA has fundamentally improved the soy milk production process.

## Maximizing product yield – minimizing costs

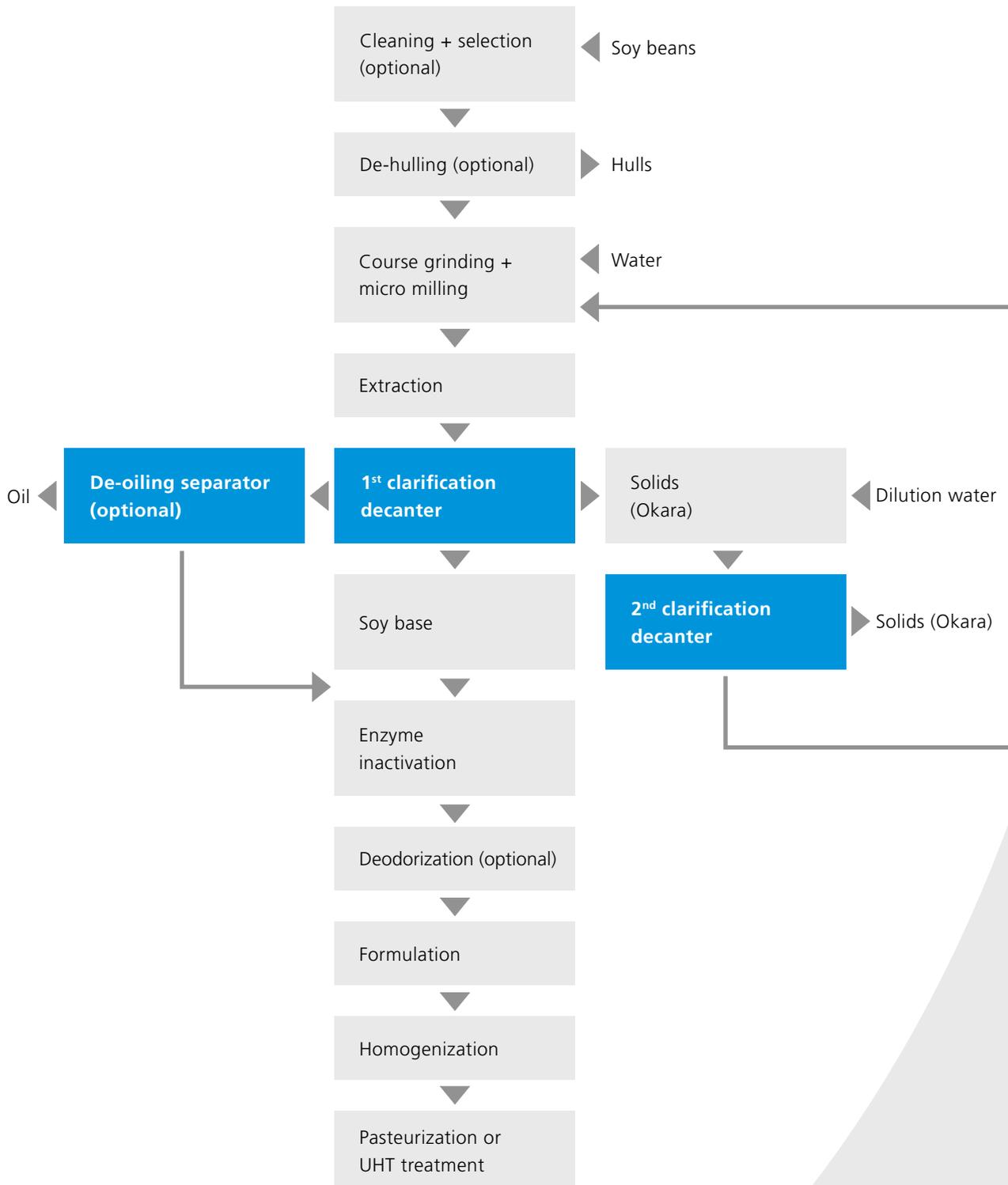
GEA is the leading supplier in process technology for the food industry.

The GEA process is renowned for soy milk production. The distinctive features of these process lines are the seamless integration and measurable increase in efficiency in all process stages. All processes are optimally harmonized from the preparation of the soybean through to extraction and formulation, and the homogenisation and pasteurisation of the soy milk.

## Consulting all-inclusive

GEA not only sets standards in the production of soy milk, it also requires fewer interfaces, provides maximum raw material yield, shows a measurable reduction in energy and water costs, benefits from very low maintenance, and offers comprehensive consulting – all from a single source. CIP able and hygienic design of machines and installations.

## Soy milk production with GEA centrifuges





## Beany or Non-Beany – Technology Makes the Difference

Enzymatic adjustment – the flexibility of GEA technology makes it possible to produce a soymilk with “beany” or “non-beany” flavour.

Reducing lipoxygenase activity turns in preventing oxidation of the unsaturated fatty acids, inhibiting the undesirable formation of aromatic substances (beany flavor). If a beany taste is desired, this flavor can be produced by adjusting the corresponding process parameters in the extraction stage.

In this way, the diverse variety of flavours demanded by world-wide markets can be achieved. The precise realisation of these variants is crucial for consumer acceptance and generating new earning potential.

Valuable substances are retained with this new technology and can be refined into diverse product and taste variants in the following process phase: the formulation stage.

#### GEA contributes:

- A boost in yield proteins
- Inactivation of the lipoxygenases
- Dearomatization
- Separation of fine particle residues
- Fat separation by separators
- CIP-able and hygienic machines and installation

# Design Your Profit!

## GEA gives soymilk producers the required flexibility

Product innovations and new taste experiences are expected and sought by consumers. In times of growing awareness for a healthy diet, products from gently processed soymilk are rapidly winning a larger share of the market. As fast-moving items, they are being given more shelf-space in supermarkets.

Wellness products and functional foods, i.e. products that enhance their nutritional value through vitamins and other health promoting substances, are extremely popular. With the process lines from GEA, producers have the technology to adjust the product precisely.

GEA gives producers of soy drinks the ability to individually create any flavour and any desired consistency.

Technologically harmonized process stations for the addition of vitamins, health promoting substances, fruits, flavours and other ingredients as well as efficient technologies for homogenisation and pasteurisation or UHT treatment provide safety at every stage.

### GEA supports the production of:

- Soy drinks and products with diverse flavours
- Tofu from soymilk with native proteins
- Acidulated soy products (yoghurts)
- Soft cheese
- Pudding
- Cereal drinks like oat and rice or others like almond

	Main position	Taste
Europe, USA, Canada and Australia	Milk alternative	Non-beany, sweetened (USA, Canada)
Eastern Europe and Africa	Milk substitute	Non-beany; blends with milk
South and Central America (Iberia)	Soft drink: soymilk and juice	Juice; flavoured
China/HK, Singapore, Malaysia, Thailand, Taiwan, (India)	Traditional drink	Beany, sweetened
Japan, Korea	Traditional drink	Non-beany, sweetened

Preferred product variants of the different markets

# GEA Service – For your continued success

GEA Service offers dedicated teams of service experts. Our focus is to help our customers build, maintain, and improve their performance, market presence and competitive edge for the entire life cycle of their plants and equipment.

Partnering with GEA gives you the benefit of our world-renowned, customer-tailored service and recommended spares upgrade, modernization and optimization services. With our support you can be certain that every piece of GEA equipment and technology will operate optimally from day one, and for its complete lifespan, to give you maximum return on your investment.

- Getting you started – Seamless support for instant productivity and performance
- Keeping it running – The cost-efficient way of ensuring safety and reliability
- Constantly improving – Sharing our knowledge to safeguard your investment
- Together with you – Enduring commitment to you and your business



GEA Service - For your continued success



Consulting & Operations

Life Cycle Service

Extended Life



## We live our values.

Excellence • Passion • Integrity • Responsibility • GEA-versity

GEA is a global technology company with multi-billion euro sales operations in more than 50 countries. Founded in 1881 the company is one of the largest providers of innovative equipment and process technology. GEA is listed in the STOXX® Europe 600 Index. In addition, the company is included in selected MSCI Global Sustainability Indexes.

### GEA Germany

GEA Westfalia Separator Group GmbH

Werner-Habig-Straße 1  
59302 Oelde, Germany

Tel +49 2522 77-0  
Fax +49 2522 77-2089

sales.germany@gea.com  
gea.com