

GEA INLINE FORMULA® Powder Dissolver

Designed to disperse powder into liquid
based on proven high shear mixing
technology from GEA.



**Powder into liquid**

The GEA INLINE FORMULA® Powder Dissolver can be used within many applications such as dissolving of starch and stabilizers, recombined milk, milk and plant-based beverages, pre-mixers such as yogurt, desserts and ice cream, sugar and brine solutions and many more.

Fluidizing powder into liquid requires process knowhow and engineering skills

Design based on proven high shear mixing technology

High shear mixing is one of the most demanding unit operations in today's process industries and a critical step in the production of high-quality end products. Choosing the right mixing technology is crucial to total cost of ownership and just-in-time production. With a design based on GEA's proven high shear mixing technologies, the GEA INLINE FORMULA® Powder Dissolver offers energy efficient, cost-efficient powder dissolving for multipurpose manufacturing - but with a small footprint.

Fluidize powder and hydrocolloids into liquid

With a robust, ergonomic and compact skid-mounted design manufacturers are equipped for every application with the Powder Dissolver system.

With the focus on flow characteristics the unit is designed to fluidize powder and hydrocolloids into liquid and meanwhile apply shear forces to the product. The Powder Dissolver is designed specifically for those who do not need the highly advanced high shear vacuum mixer (GEA INLINE FORMULA® SOL High Shear Mixer).

Compared to conventional methods of powder additions into the mixer tank with top-mounted agitator, the Powder Dissolver can reduce the process time significantly.

With the Powder Dissolver, liquid accelerates over the specially designed injector creating a venturi-based effect. This core design enables the operators to fluidize high volumes of powder without facing issues of "back-flush" or powder blockages of the entire system.

The Powder Dissolver is equipped with an integrated stator/rotor in order to apply shear forces to the product to ensure a rapid dispersion of powder and achieve a better, finer distribution and ultimately a homogeneous mix. By using the same flow characteristics as a centrifugal pump, we achieve high recirculation flow over downstream tanks enabling a fast turnover.

A large quantity of powder easily fluidizes into a liquid stream due to the combination of vacuum and the liquid injector.

Technical specifications

GEA INLINE FORMULA® Powder Dissolver

Processing parameters

Max flow (on water), m ³ /h	90
Head @ max flow (on water), m	32
Max viscosity, cP	600
Max density, SG	1,5
Powder addition (crystal sugar), kg/h	4500

Consumption data

Installed power, kW	18,5
Power supply, 50Hz, V	380-480
Fuse size	63A
Service water capacity, up to approx. L/h	5 @ ≤ 20 °C
Service water pressure	≤ 2 barg

Connections*

Inlet	DN100
Outlet	DN80
Service water	8mm push-connector

Dimensions

Funnel Volume, L	42
Length, mm	1500
Width, mm	550
Height, mm	950
Weight, kg	350

Key benefits

- Energy efficient Powder Dissolver with small footprint
- Ergonomic working environment for the operators
- Hygienic design
- Fully drainable after CIP (Clean-In-Place)
- Low CAPEX and OPEX
- Multi-purpose applications

Typical applications

- Dissolving of starch and stabilizers
- Recombined milk
- Milk- and plant-based beverages
- Pre-mixers such as yogurt, desserts and ice cream
- Sugar and brine solutions

and many more...

Materials

All parts in contact with the product are made from stainless steel EN 1.4404 (AISI 316L). Other parts are made from EN 1.4307 (AISI 304L).

Options

- Control System (incl. frequency converter with start/stop button and emergency button)
- Recirculation loop

*All connections are Clamp DIN 32676-A, unless stated otherwise.

Above process parameters are guidelines and can vary depending on powder ingredients.



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Working with GEA Service means partnering with a dedicated team of service experts.

Our focus is to build, maintain, and improve customer performance throughout the entire life cycle of the plant and its equipment.

Beginning of Life Services

Getting you started with seamless support for instant productivity and performance.

Lifetime Services

Keeping it running with the cost-efficient

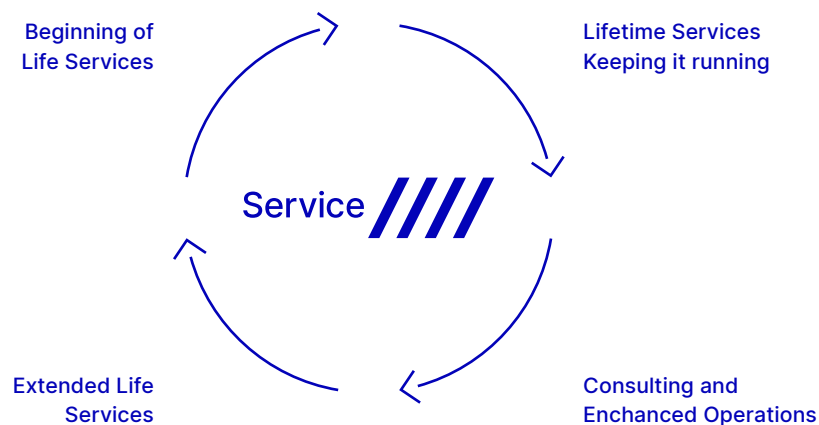
way of ensuring safety and reliability.

Extended Life Services

Constantly improving by sharing our knowledge to safeguard your investment

Consulting & Enhanced Operations

Together with you by enduring commitment to you and your business.



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