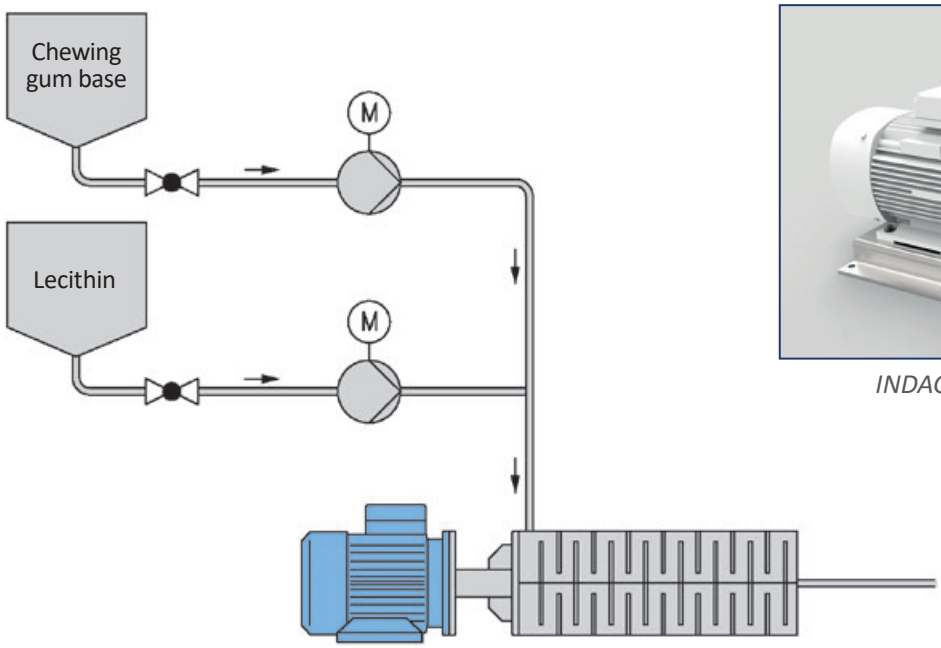
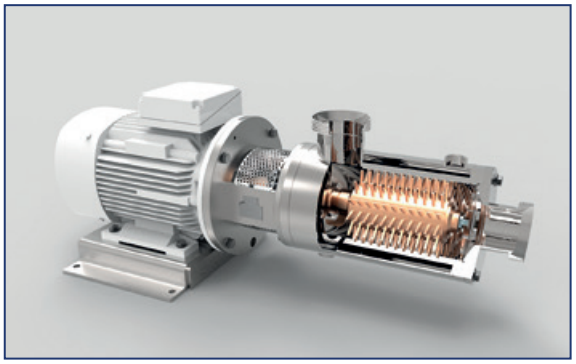
Case No. 114A
Mixing chewing gum with lecithin and other ingredients







INDAG Intensive Inline Mixer, Type DLM/S

Flow chart example for an 'end-of-pipe' solution

Process description

The actual chewing gum base is usually produced in upstream mixing vessels. The process takes place at temperatures between 85 and 110°C. Lecithin serves as an emulsifier and cannot be added in these vessels. If lecithin comes into contact with the chewing gum base too early, it can react with other ingredients (e.g. resins, fats or flavours) or distribute unevenly, which can lead to an unstable emulsion. Furthermore, lecithin can partially degrade at high temperatures or lose its emulsifying effect. The main compound is often processed at high temperatures, which is why lecithin is only mixed in later. This challenging mixing task is performed by an INDAG intensive inline mixer.

A discharge pump is located directly below the mixing vessel. This is usually a gear or rotary piston pump. The pump feeds the still hot mass to the INDAG intensive inline mixer. The liquid lecithin is added immediately before the mixer using a dosing lance. The pressures can reach up to 25 bar, which means that piston or piston diaphragm pumps are often used for the addition of lecithin. The mass can be cooled immediately after the mixer so that the function of the →

Advantages

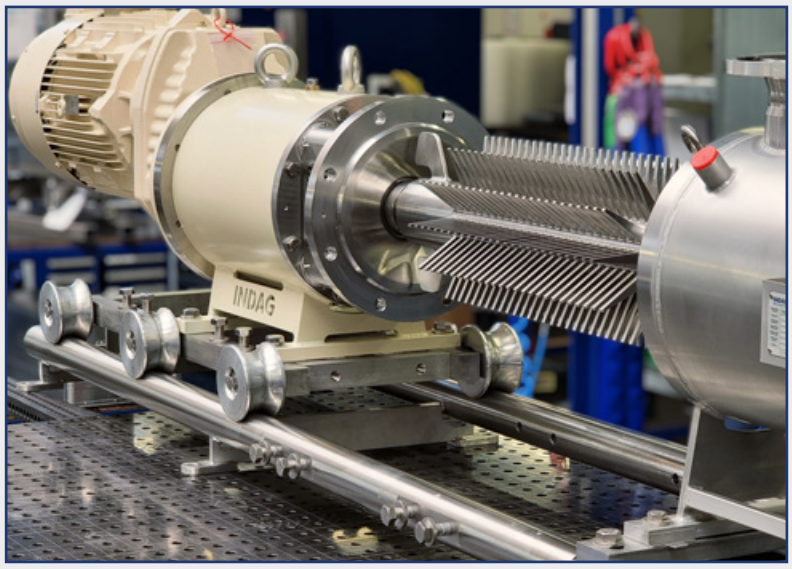
- **Homogeneous mixing of the lecithin directly before cooling the chewing gum compound. This allows the lecithin to retain its full function as an emulsifier.**
- **Prevents lecithin from reacting with other ingredients, such as resins, fats and, where applicable, flavourings.**
- **No pressure loss across the mixer allows for easy retrofitting into the existing process.**
- **The low speed of the mixer allows for homogeneous mixing of the lecithin without negatively affecting the structure of the chewing gum compound.**
- **CIP-compatible**
- **Version with 'easy-clean' slide for quick and safe opening of the DLM/S mixer, eliminating the need for lifting equipment on site.**

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→ lecithin as an emulsifier is not negatively affected.

The mixers meet the highest industry standards and feature very solid components and a double-acting mechanical seal.



Open intensive inline mixer on 'easy clean' slide

Comparable applications with a similar process and the same mixer

- Aeration of chewing gum compounds

NORTH AMERICAN PROCESS, INC.
d/b/a INFINI-MIX Process Solutions
811 East Maple Avenue
Mora, MN 55051
(855) PROCESS (776-2377)
Sales@naprocess.com
www.WeMixStuff.com

INDAG