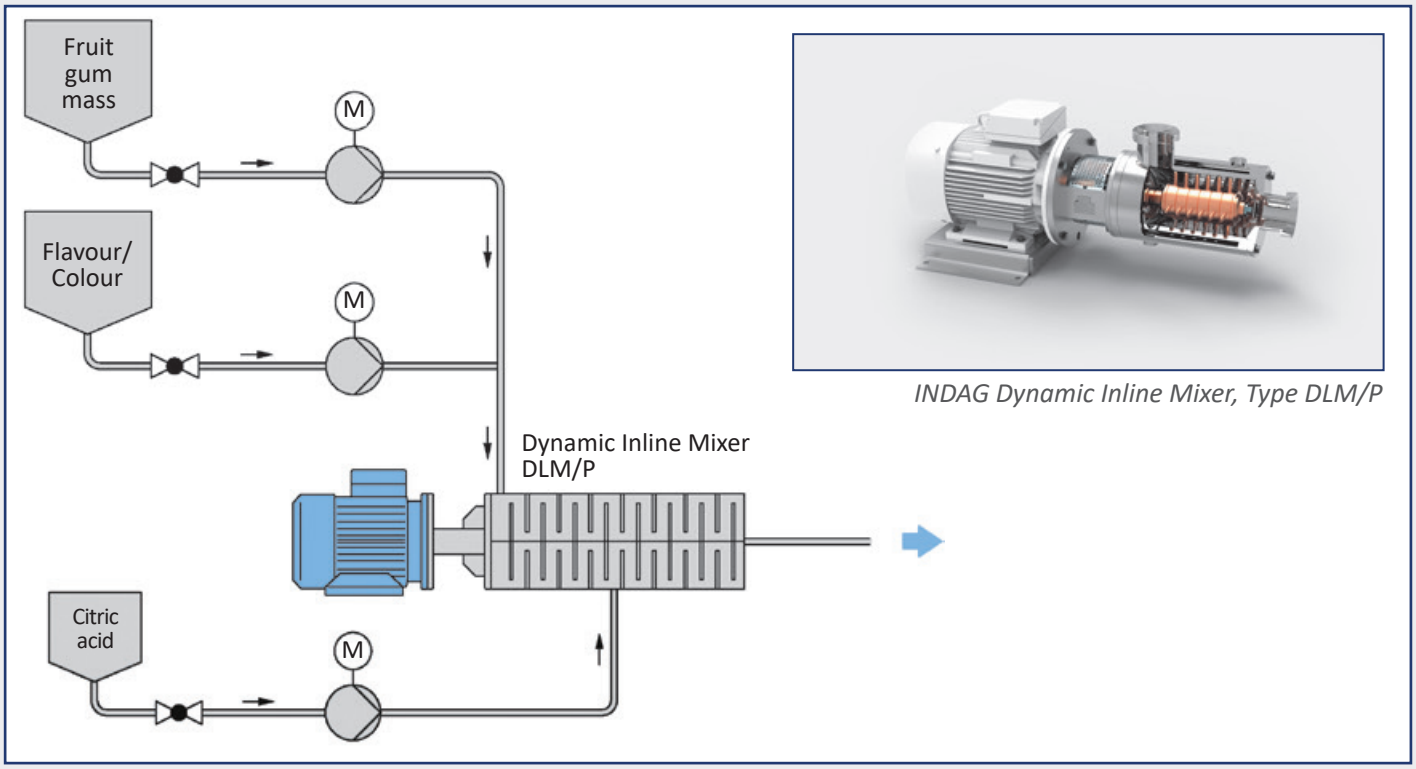
Case No. 110A
Fruit gum mass + liquid citric acid





INDAG Dynamic Inline Mixer, Type DLM/P

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

Process description

The fruit gum mass is boiled homogeneously in a preparation container at approx. 85 - 110°C. The ingredients of the base mass are fruit juice or fruit puree as well as sugar and pectin. The heated mass is continuously fed into the INDAG Dynamic Inline Mixer type DLM/P by an external pump.

Flavourings or colourings are added inside the mixer or in a T-piece just before it. These can be proportions of far less than 1 %.

The citric acid, which activates the pectin, is fed directly into the mixing zone via an INDAG dosing lance and mixed there immediately. This prevents over- or under-reaction and no lumps or gel nests can form.

This mode of operation means that the same jelly mass can always be produced in the upstream cookers. This mass is only specialised at the end of the process ('end of pipe') by adding all the additives.

The products are conveyed through the rotating mixer and gently and evenly mixed together by its rotor and stator.

→

Advantages

- **The pectin is activated by the citric acid in a very homogeneous way, without lumps forming**
- **Maximum flexibility for products with changing recipes**
- **Lump-free and streak-free mixing of the additives**
- **'End of pipe mixing' minimises the cleaning effort when changing recipes.**
- **Compact and very efficient mixing head minimises product losses during product changeover**
- **Temperature increase below 1°C during mixing**
- **The structure and quality of the jelly mass is not negatively affected by the gentle mixing process.**
- **Closed hygienic design, easy to clean, suitable for CIP cleaning**

Case No. 110A
Fruit gum masses / Jelly masses + liquid citric acid

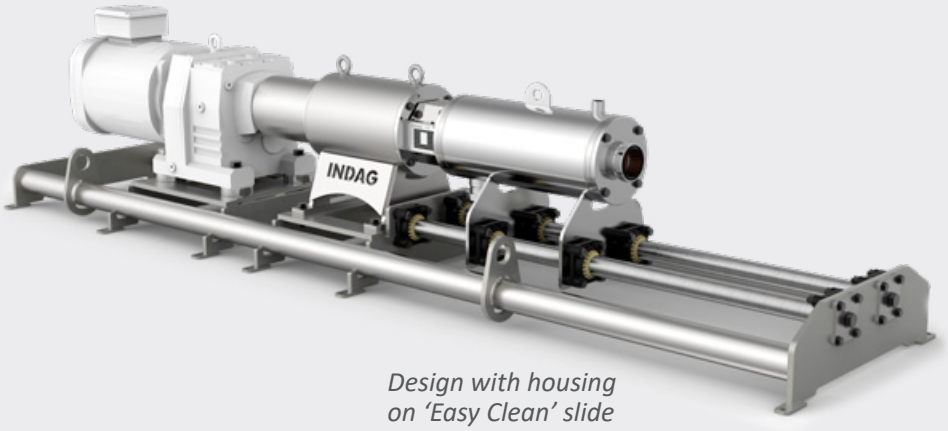


→ Thanks to the correct selection of the mixing elements, little shear energy is introduced into the product, which does not destroy it and guarantees a minimum heat input of less than 1°C. The homogeneously mixed end product leaves the mixer either frontally or radially and is ready for filling.

The rotor-stator distances are designed according to the particle size. This ensures the perfect mixture for every application.

The mixer is often installed directly upstream of a filling line. We call this 'end of pipe mixing'. The finished mixed product is conveyed into a filling line.

In the event of manual cleaning, an INDAG 'Easy Clean' slide can be installed for simplified and ergonomic opening of the mixer housing. This enables a very short and very simple manual cleaning process. The mixer is also CIP-capable.



Design with housing on 'Easy Clean' slide

The production capacities vary from a few hundred kilograms per hour up to twenty tonnes per hour.



INDAG Dynamic Inline Mixer DLM/P



Pin mixing elements

Comparable applications with a similar process and the same mixer

- Flavouring caramel masses
- Refining hard candies

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