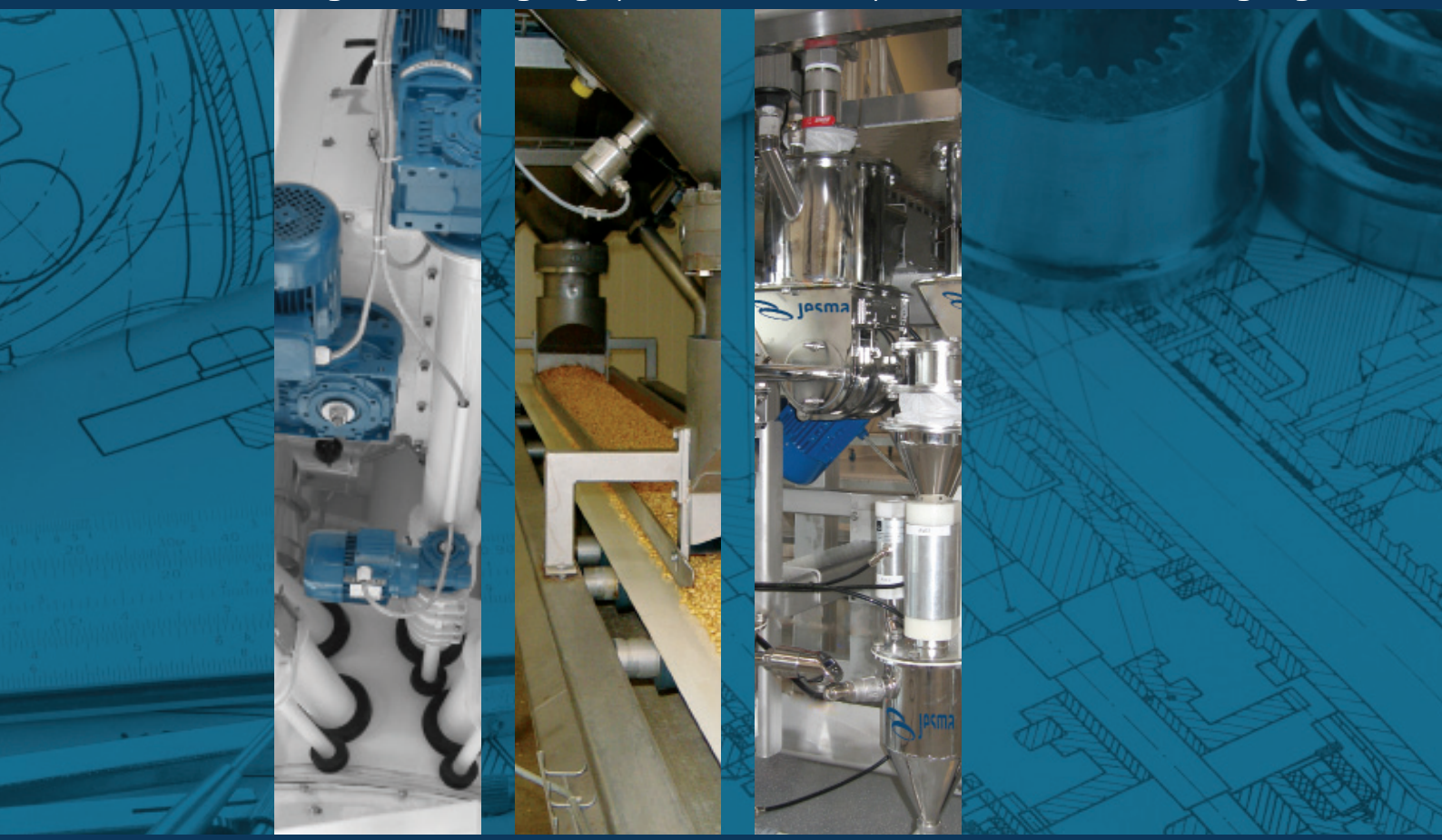
Case story
Arla Foods

Advanced weighers and weighing systems for static, dynamic and continuous weighing



jesma®
- weighing solutions

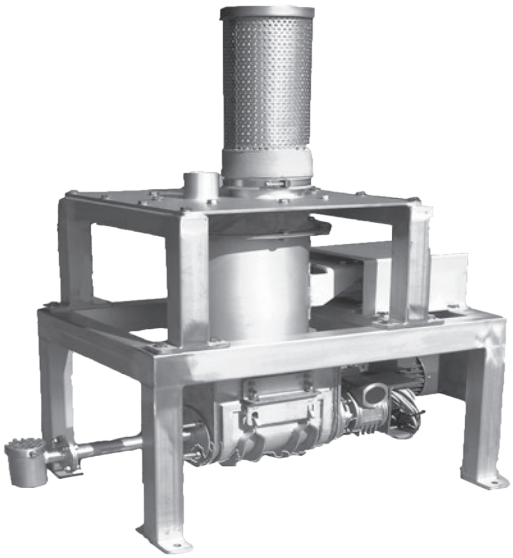
Arla Foods

Reliable precision....

At Arla Foods in Samden, Denmark, they wished to improve the accuracy in the relation between the flow and the addition of additives. Their wish was simply to obtain the best possible accuracy between the actual flow and the desired additive. In other words, when the flow went up, the additive also had to go up and vice versa. First and foremost, it was important that the additives were accurately dosed, but Arla also wished some sort of certainty that a possible addition error would be registered and stopped immediately.

Arla is very much aware of the importance of a functional system, as a wrongly added substance may destroy the total mixing.

Jesma suggested implementing a loss-in-weight system. The purpose of this system is to handle the addition of additives and at the same time monitor that there are no errors in the addition. In case this happens, the system will report this to the overall control system.
With this solution Jesma was able to comply with both an extremely high accuracy in the addition of additives, and at the same time securing that a possible error in the addition of additives would be registered and stopped immediately.



Engineer Allan Pedersen declares:

"Wet-mix products are very demanding to produce, as we operate with very expensive raw materials which are dosed in large amounts. A possible error in the production will be very expensive. At the same time, the products contain a number of additives, which are to be added in 100% precise amounts. An error in the additive mix will destroy the rest of the product"

"Today we have three Jesma loss-in-weight systems, which fully complies with our high quality standards. They are all part of our large mixing system, and are both functional and accurate. At the same time, the weighers are easy to operate, as they calculate the dosing's from specific requirements and are very reliable"

Engineer Allan Petersen
Arla Foods in Samden, Denmark

RELIABLE ACCURACY

In general about Jesma loss-in-weight systems

The Jesma loss-in-weight feeder is a fully electronic weighing system, which is specially designed for continuous dosing of additives with a high dynamic accuracy incl. the critical stage of re-filling the weighing bin.

The functional principle for a LIW system is through repeated static weighing of the product bin to determine and regulate the mass flow.
The product bin is slowly emptied, and the relation between the loss in weight and the speed of the discharge system gives the amount signal, which controls the dosing speed to the required value.
To achieve highest possible dynamic accuracy, the discharge system is mounted with a 2-channel incremental encoder with high signal rate which continuously monitors the speed of the discharge and signals the actual speed to the Jesma weigh controller.

Through careful considerations regarding product characteristics, all Jesma loss in weight feeders are designed for highest possible dynamic accuracy, market leading operational reliability and user friendliness.

The loss-in-weight system consists of a weigh bin suspended in load cells, a discharge and a feeding device.

The weigh bin is available in many sizes and designs – all of them carefully considered and perfectly designed to avoid product bridging and to keep a steady product flow.

From the weigh bin the product is discharged mechanically or by gravity. Easy flowing and dry products can be discharged by gravity in conical outlets, however difficult flowing material such as vitamins or enzymes are extracted mechanically through a live scraper bottom with an agitator screw.

From the bin discharge the material is mechanically dosed through a screw conveyor, rotary valve or belt conveyor – Also the type of feeding device is carefully considered and selected according to the product characteristics.

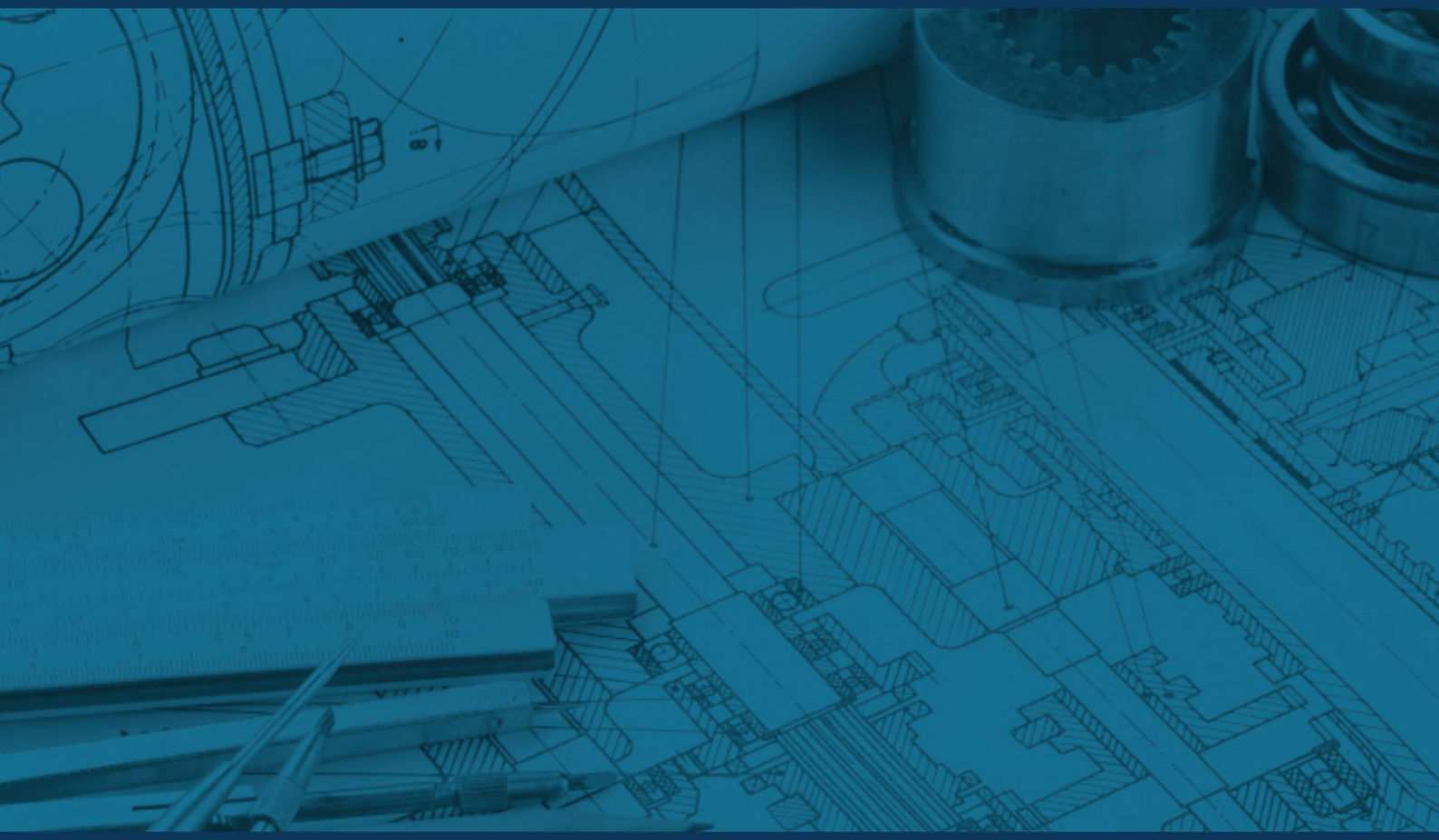
The speed of the discharge is controlled by a frequency converter and the speed is continuously monitored and regulated through the incremental encoder and the control system.

With unknown products or limited experience in the product characteristics, Jesma offer to perform product tests in our test centre in order to achieve the optimum technical solution.

Depending on the project and product characteristics the loss in weight feeders are, completely or partly, available in following materials:
Normal painted steel St.37.2
Stainless steel AISI 304
Stainless steel AISI 316
Hardox

Jesma delivers all kinds of weighers and weighing systems, both as approved and as standard solutions. In close co-operation with the customer, Jesma prepares the perfect solution for the specific project - this is how the project at Arla Foods has emerged and been realized.

Jesma®
- weighing solutions



Jesma
Helsingørvej 18
DK-7100 Vejle
Tel. +45 7572 1100
Fax +45 7572 1222
Mail: jesma@jesma.dk
www.jesma.com

Jesma GmbH
Alter Kirchenweg 83
D-24983 Handewitt
Tel.: +45 7572 1100
Fax:+45 7572 1222
Mail: jesma@jesma.com
www.jesma.com

Jesma Sp. z o.o.
ul. Przemysłowa 48B
PL-Piła 64-920,
Tel.+48 7220 11022
Fax +48 672 153 458
Mail: mtr@jesma.com
www.jesma.com

Jesma BV
Klein Wolfslaar 18 C
NL-4854 PK Breda
Tel.+31 161 434 183

Mail: nl@jesma.com
www.jesma.com

www.jesma.com