



ADVANCED WEIGHERS AND WEIGHING SYSTEMS FOR STATIC, DYNAMIC AND CONTINUOUS WEIGHING



Product Guide

SUPPLIER FOR

- The grain and feed milling industry
- The food industry
- The chemical/technical industry



Welcome to Jesma A/S

Jesma is a visionary Danish company working with the development, production and sale of weighers and weighing solutions for static, dynamic and continuous weighing.

Weighing- and dosing technique is our speciality and all products are designed and constructed to market leading reliability and user friendliness.

Jesma was founded in 1917 as "Standard weight company" and has since that time developed into one of the leading suppliers for industries in which optimum reliability and high accuracy are important qualities.

Through our many years of experience, Jesma has achieved a wide know how within all types of weighing solutions and we are therefore able to advise our customers at an early stage in the projecting phase.

This brochure provides an overview of our qualifications and products, emphasizing the benefits in choosing a weighing or gravimetric dosing solution from Jesma.

We wish you joyful reading and if you require further more information regarding the possibilities and advantages of choosing Jesma as your supplier, you are always welcome to contact our sales department.





We lift your company to new levels

Cooperation

Jesma has a close cooperation with customers, suppliers and research institutes, and strives to offer our customers the most efficient and productive weighing solution, where quality is a natural part of the delivery.

Jesma's product range within dynamic weighing consists of:

- Weigh feeders and belt weighers
- Flow scales
- Loss in weight systems
- Intake- and outloading scales
- Hopper scales
- Check weighers

Our products are offered in an extensive standard programme and thereby cover a considerable part of the market demand. Jesma also offers a wide range of customer and project adapted solutions. We are therefore able to meet almost all wishes and demands our customers may have since our products are designed to handle capacities from 1 kg/h to more than 2000 t/h.

No matter if the project is a complete dosing system or special software to a static weighing solution, Jesma can provide a solution.

Our skilled engineers in the construction department continuously develop new products with the purpose of improving operational reliability, user friendliness and accuracy in the weighing process of our customers.

Before a new product is launched it is thoroughly tested in our test centre to make sure that the product meets market demands and our own quality control.

Besides from development projects, our test centre is also used to test customer's own materials, so a project adapted weighing solution can be constructed with the actual product properties in mind.

This provides the customer with the optimal weighing solution.



Weigh feeders & Belt scales

Jesma has a wide selection of weigh feeders for use in the food industry, the grain and feed milling industry as well as the chemical and technical industries.

To achieve our aim of optimum reliability, long lifetime and high accuracy the weigh feeders from Jesma have the following advantages:

- All weigh feeders are designed and constructed for the specific project. This secures that the equipment is perfectly suited for the actual project.
- An incremental encoder (tacho) is mounted on the idle roller. This improves the continuous monitoring of the belt, and gives an immediate alarm signal by belt drive irregularities.
- The crowned driving roller improves the tracking of the belt during operation and reduces the risk of belt slide.
- Over dimensioned load cells secures the high accuracy even by an uneven material flow.
- All weigh feeders are available in compliance with ATEX zone 21 and 22 directives.
- The weigh feeders are available in painted steel, stainless steel or with stainless steel parts in contact with the product.

JesBelt A and JesBelt S

- Weighing accuracy from 0.25 %
- JesBelt A is available as trade approved equipment according to OIML R-50, Welmec and MID guidelines class 0.5 and higher
- The modular standard construction allows a future upgrading to trade approved equipment, hereby reducing the cost significantly by a future demand for approved weighing.
- The automatic belt tightening on the JesBelt A reduces the requirement for planned service stops.
- The manual belt tightening on the JesBelt S allows accurate and systematic belt tightening
- Available in 12 standard sizes and further possibilities of customer and project adapted solutions.
- Available with the JesTrack® automatic belt tracking system. The JesTrack® system automatically corrects belt slides and thus improving the operation reliability.





RELIABLE ACCURACY

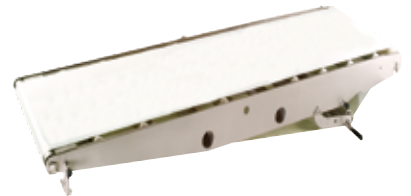
JesBelt D

- Weighing accuracy from 0.5 %
- Compact construction which can be mounted where very little space is available
- The quick belt change reduces the service time for planned service stops
- The Automatic belt tightening reduces the requirement for planned service stops



JesBelt K

- Weighing accuracy from 0.5 %
- The "Easy to clean" construction makes the JesBelt K perfectly suited for the food industry.
- The quick belt change reduces the service time for planned service stops or at product change



VBF

- Available with durable belt suitable for high temperature materials and for sharp materials such as glass and rocks.
- Simple and strong construction provides easy maintenance and reduced service costs
- With a construction around a sturdy steel frame, the VBF is suitable for heavy duty industries.



VIB Belt scale

- Weighing accuracy from 0.25 %
- Available as standard units and project adapted equipment
- Constructed to fit the existing conveyor and thus reduce the commissioning period
- VIB is available as trade approved equipment according to OIML R-50, Welmec and MID guidelines class 0.5



JesBuffer

- Designed for the accurate and reliable dosing of low density materials like straw, paper, fibres and mineral wool.
- The JesBuffer consists of a buffer unit which provides an accurate material thickness onto the weigh feeder where the dosing capacity is controlled and regulated.
- The JesBuffer is fully project designed to meet customer requirement
- The automatic belt tightening on the weigh feeder unit reduces the requirement for planned service stops and improves the reliability of the JesBuffer.





Intake- & outloading scales

Jesma provides a complete program of intake- and out-loading scales consisting of 8 standard sizes with capacities up to 900 m³/h

The Jesma intake-and out-loading scale can be installed anywhere in a production where there is a need to weigh directly in a dynamic product flow.

JesHopper-Intake

- Weighing accuracy better than 0.1 %
- The JesHopper-Intake is available as trade approved equipment according to OIML R-107, Welmec and MID guidelines class 0.2 and higher
- Carefully selected components secure an optimum weighing result.
- The high slide angles in the hoppers secure the total emptying and thereby providing optimum accuracy.
- Removable lids secure easy access for service and cleaning.
- Available in painted steel or stainless steel
- The standard JesHopper-Intake is supplied including pre-bin and weighing hopper
- Optional, the JesHopper-Intake is also available with discharge hopper





RELIABLE ACCURACY

Flow scales

Flow scales from Jesma are primarily used for process weighing of bulk materials such as powder or granulated products. Furthermore flow scales are the correct choice when limited space is available, but a measurement of the actual product flow is required. This could be in connection with the dosing of other products or general product regulation.

JesFlow

- The JesFlow is available in 5 sizes with capacities up to 50 m³/h.
- The weighing principle by using the centrifugal forces of the material secures a good weighing accuracy compared to traditional impact weighers.
- With its limited build height, the JesFlow is perfect for retrofit into system lines and projects where limited space is available
- Inspection hatches with dust proof sealing and the inspection window allows easy access and supervision
- To improve the reliability and the life time of the JesFlow, the weighing unit and its load cell is separated from the product flow.
- No moving parts secure a long lifetime and reduce the service requirements



VPR

- The VPR impact weigher is available in 5 different sizes with capacities up to 400 m³/h.
- By using only horizontal forces any material deposits on the weighing plate will not affect the weighing accuracy.
- With its limited build height the VPR is perfect for retrofit into system lines and projects where limited space is available
- Overload protection on the load cell secures a long lifetime.
- Inspection hatches with dust proof sealing and the inspection window allows easy access and supervision
- To improve the reliability and the life time of the JesFlow, the weighing unit and its load cell is separated from the product flow.
- No moving parts secure a long lifetime and reduce the service requirements





Hopper scales

A hopper scale from Jesma is the flexible solution for batch weighing, and it meets the market requirements for optimum reliability and improved environment.

The hopper scales are designed for installation in modern process industries where the high degree of automation requires a solid and reliable construction.

The JesHopper is available in many standard sizes and with batch capacities up to 10000 kg, and with accuracies from just +/- 200 g.

The hopper scales are modular built in a dust-proof and flexible steel sheet construction, and the length can be adapted to fit any requirement.

The scales are as standard supplied for mounting of customer chain conveyor.

However Jesma also offer the hopper scales including chain conveyor according to customer and project requirement.

Single hopper scale VBE

- The single hopper scale is available as low height batch weigher
- The modular construction allows easy extension in the future for accommodating increased number of ingredients.
- The scale is supplied including adjustable guide plate above the chain conveyor. The guide plate allows a perfect product flow into the chain conveyor thus ensuring complete and optimum emptying.



Double hopper scale VBE

- The double hopper scale is designed to accommodate the hardest demands for production efficiency.
- The double hopper construction allows the weighing bin to be filled while the unloading bin is emptied thus increasing the batch/hour capacity





RELIABLE ACCURACY

Loss in weight system

A loss in weight system from Jesma can be used everywhere where continuous dosing is required with high accuracy.

Regulation of mixing proportions using a weighing system makes the end-product more accurate compared to other available techniques. The result is a more uniform end product and thereby a higher product quality.

VDI

The loss in weight system VDI from Jesma is designed according to the specific requirements of the customer. This could be a "master-slave" addition of an additive in relation to the main flow, or continuous dosing of a pre-set amount.

With the market leading dosing technology of the Jesma control system, the VDI secures an optimum and reliable dynamic dosing accuracy. Even in the critical phase of re-filling the hopper during operation, the control system maintains a high and reliable dosing accuracy.

- The VDI is designed and constructed to accommodate the specific characteristics of any product.
- For example are VDI units for non-flowing materials supplied including a lifting screw in the hopper for elimination of material bridging and thereby optimizes the material flow.
- Conveyor screws with increasing windings and decreasing shaft diameter reduces the risk of compressing the material and thereby provides a higher operational reliability.
- The removable extraction screw allows easy and simple service and cleaning.
- Possibility of testing the material in the Jesma test centre – secures that the right construction is chosen to the actual material.





Micro- & lab dosing scales

Jesma offer a wide variety of micro and lab dosing scales for weighing of ingredients. Which scale is best suitable for the task, depends on the required capacity and the characteristics of the product. Jesma offers scale for micro dosing from 2 kg to 1500 kg per batch.

Lab scale VBE/EED

- Capacity from < 2kg with a static accuracy of +/- 0.5 g
- Capacity up to 20 kg with a static accuracy of +/- 5 g
- Teflon coated bin secures optimal emptying and minimal cross contamination
- The dosing bin turns 180 degrees and optimum emptying and minimal cross contamination is secured by means of a pneumatic hammer.
- An inspection door allows easy access for maintenance and supervision.



Micro scale VSS/EE

- The micro scale VSS/EE is a fully electronic scale specially developed for use in micro dosing systems.
- The static weighing capacity of the scales range from 20 kg to 100 kg
- The entire bottom is turned when emptied, thus securing optimum emptying of the weighing bin and eliminating cross contamination.
- Capacity from 20 kg with a static accuracy of +/- 5 g
- Capacity up to 100 kg with a static accuracy of +/- 20 g
- An inspection door allows easy access for maintenance and supervision.





RELIABLE ACCURACY

Micro- & lab dosing systems

A condition for a high quality end-product is a controlled and accurate dosing of ingredients.

Micro and lab dosing systems from Jesma are specially developed for fine dosing of minerals, vitamins and other raw materials, where over-dosing can be harmful and expensive.

At Jesma each system is adapted to the requirements of the customer. By always taking the product characteristics into consideration Jesma is making it possible to dose poor flowing products.

Micro dosing system

A micro dosing system from Jesma can be delivered with up to 24 silos. The silos can be placed in a circle or a square depending on the customer requirements and available space.

- Silos can be equipped with scraper and lifting screw in the bottom, hereby ensuring optimum emptying of difficult materials and a uniform filling of the dosing screw.
- The silo and dosing system is designed according to filling method, necessary silo size, silo bottom and requirement for coarse and fine dosing. These considerations allow us to optimize the system for all types of materials and capacities.
- All components are designed for optimum user-friendliness both the scales and silos are supplied including inspection hatches for easy service and maintenance access.
- The system and its components are designed according to a very simple principle. This secures easy cleaning and trouble-free maintenance.
- All components are designed and constructed to obtain an optimum operational reliability and minimal cross contamination.



Lab dosing systems

A lab dosing system from Jesma is designed for very accurate dosing of vitamins and other micro nutrients that must be managed through an overall recipe management.

- Screws and hoppers can easily be taken out of the frame construction and replaced, hereby allowing a quick and easy change of material.
- The risk of dosing errors is eliminated as each individual material has its own hopper which can be clearly labelled.
- As an option the dosing screws can be supplied including a spring-loaded flap on the screw outlet. This ensures that no material unintended can drizzle down into the scale in the event of vibration.





Check weighers

Jesma has over the past years developed several check weighers based on specific customer requirements. This includes both small adjustments to existing production lines and new complete installations.

JesCheck-Carousel

The JesCheck-Carousel is a check weighing solution for weighing and sorting materials on a conveyor belt. This solution is highly flexible and can be installed anywhere where cans, bins and similar must be weighed without disturbing or stopping the flow of products.

- The installation can be executed without large modifications on existing machinery, –secures a fast installation period and thereby a reduced down-time.
- Few movable parts – this secures a long life time and a reduced risk of brake down.
- Static weighing –secures a great accuracy in the weighing.
- Replaceable carousel – this means that products in different sizes can be weighed with a very short switching time.



Jescheck-Metal

JesCheck is a combined check weighing and metal detection, which helps to streamline a given production as two processes have been combined into one.

- Performs two functions in the same operation, which saves space and time in the production and thereby increases efficiency
- Full programmable control system – this gives unlimited possibilities to adapt the control system to the existing product lines.





RELIABLE ACCURACY

Weight controllers

Jesma have a large selection of weight control system for every need, both in standard solutions as well as customer adapted solutions.

JesTronic 400

JesTronic 400 is suitable for controlling static as well as dynamic weighing processes. JesTronic 400 controls continuous weighing- and dosing processes containing a flow of powders or granulated products.

- JesTronic 400 from Jesma has the following advantages:
- One display can control up to 7 product lines – this saves time when the production needs to be monitored.
- Data communication through RS422 or RS485 including ASC 2 or modbus protocol.



WC-9604

The WC 9604 is an advanced computer-based control unit for automatic weighers. The WC 9604 is well-suited for static and dynamic weighing processes with continuous weighers like belt scales, impact scales and LIW units

WC-9604 from Jesma has the following advantages:

- Built with guide text in the display and international recognized function keys according to EU standard - this increases user friendliness.
- Complies with the market's demand for speed, safety and precision.
- Automatic after run correction
- Approvable according to OIML R-50 and MID
- Data communication through RS422 or RS485 including PLC protocol.
- Possibility of communication through Profibus



IT E-series

Weighing terminals from Systec are flexible and stable while giving a great overview of the processes.

They are fully programmable and almost any weighing task can be controlled: Static weighing, batch weighing, recipe handling, dosing and check weighing.

A Systec indicator from Jesma has the following advantages:

- New software can be downloaded at all times
- Approvable according to OIML R107
- Large colour graphic display – this makes the indicator very user-friendly
- Approvable for mounting in areas with ATEX
- Data communication through Ethernet, RS232, RS422, RS485, current loop and profibus.
- Up to 64 I/O





Project management

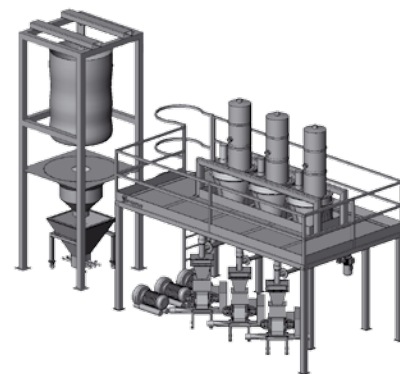
The key-stone in successful projecting is the ability to develop, design and control a project from idea to operation. To offer the most optimum solution it is essential to have a good insight into the customer's requirements to the project. Because of our many years of experience we are able to ask the right questions in the projecting phase and thereby create a clear basis for the specific system. In close dialogue with the customer we prepare a specific offer taking the specific system requirements into consideration. Jesma is responsible for the entire process; this provides a great degree of flexibility, which means we can customize the system specifically to any customer requirements.

With a skilled staff of technicians and engineers Jesma offers professional guidance and advice in the design of your individual weighing system

In addition to Jesma's wide range of weighing solutions, we also offer a number of products that complements the system and thereby providing a turn-key solution.

This includes amongst other things:

- Complete steel structure
- Filling system for manual, mechanical or vacuum-/pressure transport.
- Transport system from weigher to mixer.
- Weight control unit and complete dosing computer system



Development and construction is a core competence at Jesma.

We guarantee a high quality level and guidance from Jesma's competent and experienced employees to ensure an optimal solution to cover the customer's actual need.





RELIABLE ACCURACY

Service

Jesma has established a unique service- and calibration concept. The essence of the service concept is to reduce the costs related to unforeseen production breakdowns and unintended wear of the weighers and weighing systems.

Weighers and weighing systems are often an important unit in a production line and require therefore service both regularly and immediately. Because the weigher often is the centre in a company's production line it is therefore of great importance that our service technicians are able to arrive promptly.

We supply high-technology industrial weighing equipment, which is why we also have high quality requirements to suppliers and to our own produced weighing systems. We assure you the highest quality and top service when buying a weighing solution from Jesma.

The service agreement is free of charge, meaning that Jesma will arrange date and time for the service visit. A stop in the production line may be very costly and time consuming.

- Investing in a proper service agreement is quickly returned, and at the same time prevents an unexpected stop in the production line.
- We offer service solutions for dynamic weigher and weighing solution completely adapted to the customer's need.
- The service includes checking of the weighers function, test running and preparation of calibration certificate (with traceable weights).
- The number of yearly service visits depends on the customer's need and quality control.





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