

RELIABLE BY DESIGN

LEONHARDT DOSING EQUIPMENT



LEONHARDT
DOSING EQUIPMENT FOR THE FOOD INDUSTRY

04 **TG**
COMPACT AND VERSATILE

06 **TGs**
SMALL AND ROBUST

08 **AG**
GENTLE AND DYNAMIC

10 **SD**
INNOVATIVE AND TREND-SETTING

14 **SD-M**
THE SPEEDY SPRINTER

16 **COMPLETE ASSEMBLY LINES**

18 **LD**
THE PRACTICAL TEAM PLAYER

20 **TECHNICAL DATA**

04 / 05

HIGH QUALITY AND ROBUST

**LEONHARDT DOSING EQUIPMENT HAS AN EXCELLENT
REPUTATION: MANUFACTURED TO THE HIGHEST QUALITY,
VERY ROBUST AND RELIABLE IN EVERY WAY.**

No wonder that they have been serving our many customers so well for so many years. Our consistent high quality, permanent product development and innovation allow us to create the perfect solution for your application.

GENTLE AND CLEAN DOSING

The unique feature of the LEONHARDT dosing machines is the gentle handling of the products. It requires specific innovative solutions to avoid spoiling the consistency or appearance of the respective products. Thanks to our many years of experience and targeted development we

can offer technically proven solutions for any new challenge the market requires. Moreover the highest hygiene standard of all of our series is well recognised. At the very beginning of product development LEONHARDT ensures that disassembly and cleaning of the machine is very easy for our customers. The highest demands of operating in wet conditions with varying temperatures and strong cleaning detergents are commonplace for these machines; they are manufactured to handle the hardest conditions without any problems.

TG

**THE TG SERIES MACHINES MEET THE HIGHEST REQUIREMENTS
IN TERMS OF GENTLE PRODUCT PROCESSING, ACCURATE DOSING
AND HYGIENE.**

Thanks to optimized component design and large cylinder diameters TG is the perfect choice for a variety of products: easily damaged deli salads, fish delicatessen with large chunks, dressings, soups and sauces, red cabbage and spinach, honey, jams and hazelnut or chocolate spreads, meal components with larger chunks such as stews, cooked sauerkraut, mashed potatoes, goulash etc. The compact and mobile equipment can be used for a variety of applications in commercial kitchens and industrial food production. As a real all-rounder the LEONHARDT TG series features easy handling, quick cleaning and customised performance ranges from 20 to 240 deposits/minute.



06 / 07

COMPACT AND HIGH PERFORMANCE

THERE IS USUALLY LIMITED SPACE FOR BULKY MACHINERY IN INDUSTRIAL KITCHENS AND FACTORIES PRODUCING DELICACY SALADS AND READY MEALS. LEONHARDT DOSING MACHINES PROVIDE PERFECT SOLUTIONS WITH MINIMAL SPACE REQUIREMENTS.

And if space is particularly tight, we will of course create customised solutions which seamlessly integrate into your production area. This flexibility is made possible by combining state-of-the-art manufacturing production with high technical precision. Every one of our machines combines LEONHARDT quality with project-designed manufacturing tailored to your needs. Customised to perfection!

FULL FLEXIBILITY

LEONHARDT equipment can be perfectly integrated with other packaging lines. Whether it's in combination with thermoformers, tray sealers,

tube or stand-up bag machines, folded box lines, conveyor systems for jars, cans, bowls and buckets or completely different applications – LEONHARDT dosing machines keep up with the pace. Customised solutions in combination with standardised options make practically every solution and any demand for capacity possible. Pneumatic drives or fast dynamic servo technology are used depending on the application. Interfaces to control scales and master line controls can be set up, as can wireless data exchange via WLAN.

TGs

NEW ON THE MARKET AND ALREADY VERY POPULAR – THE TGs SERIES IS PARTICULARLY SLIM AND VERSATILE.

Machines of this series can be used easily and flexibly with different tray lines/tray sealers, thermoformers or conveyor belt systems – but naturally also as semi-automatic with foot pedal. This small solution meets the highest requirements and offers gentle material handling and processing, exact dosing and high hygienic standards. Available with a dosing range of 15–1.170 cc (max. 2.340 cc with double stroke) the TGs is suitable for the precise dosing of soups, sauces and dressings, mayonnaise, easily damaged deli salads with larger chunks, jams and desserts such as blancmange, fruit compotes, meal components such as stews, mashed potatoes or goulash and many other products. The TGs series is robust, reliable and very attractive in every aspect. There are many reasons to use the TGs by LEONHARDT – discover yours!



08 / 09

TECHNICAL ADVICE AND SERVICE

AT LEONHARDT, CONSULTATION BEGINS WELL IN ADVANCE OF YOUR PURCHASE AND CONTINUES THROUGHOUT THE ENTIRE LIFE-CYCLE OF THE MACHINE.

The first question concerns the model that best suits your needs. Frequently, the ideal solution is a combination of standard design and customised modifications. At LEONHARDT the design and assembly of the equipment are based on an advanced manufacturing system. This enables us to allow for any special requirements from the very outset – without any major effort and at a reasonable price.

Existing machines can often be adapted to fit into new production lines enabling you to reduce your costs and maximise your investment. The professional service provided by LEONHARDT and our quick supply of spare parts also ensures minimal downtime – throughout the entire long life of the machine.

AG

BASED ON THE TG SERIES (PAGE 4 / 5), THE FAST DYNAMIC AG SERIES OFFERS PARTICULARLY HIGH CAPACITIES AT REDUCED ENERGY CONSUMPTION.

Optimized servo drives and a user-friendly control panel (touch screen) enable the easy and precise setting of all important dosing parameters for the individual flow behaviour of specific products. In case of frequent product changes or varying consistencies an easy-to-use parameter setting is required. Up to 200 different product programs can be stored under an individual name and recalled at any time. Flexibility quickly pays off and facilitates the seamless integration into tray lines (single or multiple lines), thermoforming machines, conveyer systems for glass/tins/buckets, folding carton lines or vertical bag machines. User-friendly operation and handling of the AG series ensure that these dynamic equipment series can be handled absolutely trouble-free.



10/11

INNOVATION FOR THE LATEST FOOD TRENDS

**FOOD TRENDS ARE CHANGING FASTER AND FASTER. THE CON-
VENIENCE MARKET ALSO UNDERWENT CONSIDERABLE CHANGES
DURING THE PAST YEARS.**

There is an increasing demand for ready made meals with ingredients such as pasta salads, asian noodles, cooked rice, high quality vegetable mixes and seafood. These ingredients must be processed and dosed in a particularly gentle way to maintain their consistency and appearance. New technical solutions enabling the gentle transport and exact dosing of these non-pumpable products were needed to meet these high requirements.

LEONHARDT developed a new generation of volumetric depositors with an integrated vacuum system for a wide range of difficult to dose products. These machines meet the highest requirements in terms of hygiene and handling and have been performing very well in the toughest production conditions since they were introduced: The SD series is setting new standards in every aspect.

SD

THE SD SERIES WAS ESPECIALLY DESIGNED FOR PRODUCTS WITH LOW MOISTURE CONTENT WHICH COULD ONLY BE PACKAGED MANUALLY OR AT HIGH COST (MULTIHEAD SCALES) UP TO NOW.

The SD series are especially suitable for dosing high quality trend food: pasta salads, cooked asia and bami noodles, nasi goreng, raw fresh-cut vegetable salads with ingredients such as feta cubes, pieces of tomato or cucumber, blanched vegetables, seafood mixtures, vegetable-mushroom mixes, olives, fruit salads and many other products. The integrated vacuum system ensures precise dosing results and meets the highest requirements in terms of food hygiene. SD machines can be used universally and they can be combined with tray lines/tray sealers, thermoforming machines, conveyer systems for glass/tins/buckets and folding carton lines. The highly dynamic control unit incl. control panel (touch screen) enables high cycle times within the performance range from 20–120 fillings/minute and ensures high user-friendliness. The SD series is a real trendsetter for innovative applications.



FAST, FASTER, SD: EXCEPTIONALLY UNIVERSAL THANKS TO MOBILE LOADING OPTIONS

The 250 L hopper with gentle feeding spirals is the usual choice for very many product recipes. Loading is simple and time-saving thanks to the standardized trolleys and lifting units. The mobile loading conveyor is well suited to particularly gentle handling of sensitive spaghetti, linguine, or other delicate components. It is docked to the SD and immediately operational. This conveyor can also be cleaned quickly and hygienically: simply swivel 90° into a horizontal position, remove the belt, and reinstall in just a few simple steps. If you want to use both options – that's no problem. The mobile hopper with feeding spirals and the loading conveyor can also be alternately combined with the same SD (special version), enabling a particularly wide range of applications and quick recipe changes.



SD-M

FLEXIBLE, MOBILE AND QUICK TO CHANGE OVER FROM ONE PRODUCT TO ANOTHER.

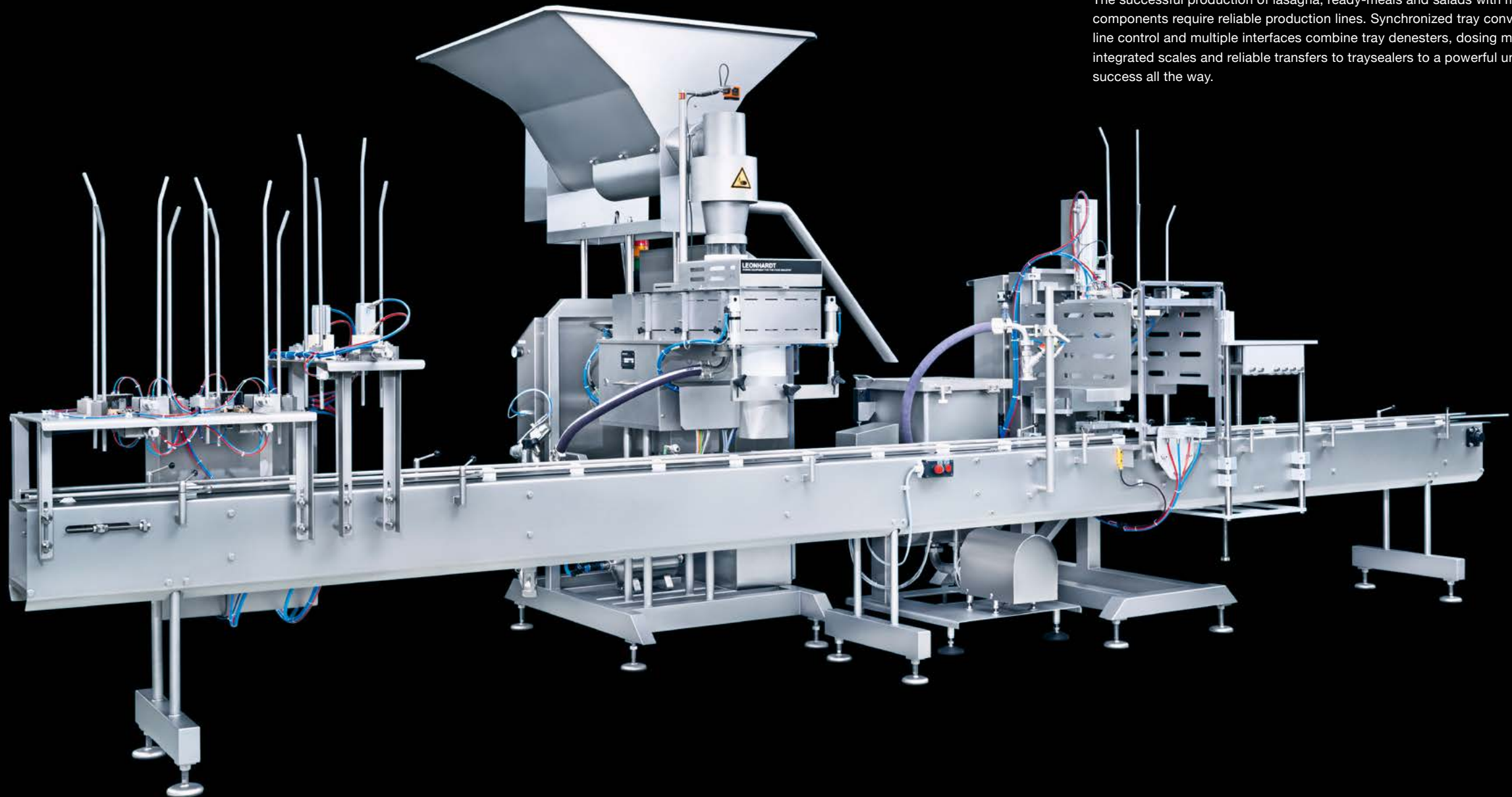
Today, supermarkets want a wider variety of products. That means shorter production runs. This demands for easy operation, smooth dosing and rapid changeovers. Also the more stringent requirements in connection with allergens, vegetarian and vegan ingredients and possible contamination require a fast and efficient cleanability of a machine used especially for frequent batch changes. The machine has been designed with fast product changeovers in mind as well as adhering to the highest hygiene standards. The integrated platform with steps ensures an ergonomic working height for the operator. The variable dosing system and the integrated vacuum system have proven themselves when running sensitive and non-pumpable food products. The SD-M will portion nasi goreng, asia noodles, vegetables and pasta salads, seafood, sensitive deli salads, Cous Cous and many other recipes with very low give away whilst ensuring there is no damage to the product.



LINES

COMPLETE DOSING LINES FROM LEONHARDT ARE OFFERING ADDED VALUE. INTEGRATED SCALES AND INTELLIGENT LINE CONTROL UNITS WITH TENDENCY CONTROL AND FILL ON DEMAND (TARGET WEIGHT) ARE MOVING ALL RECIPES TO THE FAST TRACK.

The successful production of lasagna, ready-meals and salads with multiple components require reliable production lines. Synchronized tray conveyors with line control and multiple interfaces combine tray denesters, dosing machines, integrated scales and reliable transfers to traysealers to a powerful unit. For your success all the way.



18/19

INDIVIDUAL PRO- DUCTION AT THE PRESENT TIME

LEONHARDT HAS BEEN DEVELOPING AND MANUFACTURING SPECIALIST EQUIPMENT FOR THE FOOD INDUSTRY UNDER OWN NAME SINCE IT WAS ESTABLISHED IN 1904. THE COMPANY'S HEAD OFFICE IS LOCATED IN DREIEICH, IN THE SOUTH OF FRANKFURT (MAIN), GERMANY.

As a medium-sized supplier of specialist equipment for the food industry, LEONHARDT responds promptly and flexibly to the needs of the market and its customers. Flexibility and reliability are also crucial for research, development, construction and manufacturing. Nowadays, LEONHARDT operates according to an advanced manufacturing system, which responds to customers requests and requirements by means of tailor-made solutions. In terms of technology and business management, the current manufacturing system could not have been created without networked data systems. In a similar way to high-grade consumer goods, such as cars, many investment goods, including dosing

devices, are increasingly manufactured »on demand«, which also allows them to be made with the performance profiles and characteristics that customers require. If a company is able to deliver this kind of manufacturing, the costs will not hit the roof. The company philosophy of LEONHARDT aims to promote flexibility, speed and cost control under all circumstances, even in relation to the further expansion of the company. LEONHARDT will expand its manufacturing system in a decisive way and continue to achieve perfection - because this is the best strategic answer to the challenges of the future.

LD

THE LD LIQUID DEPOSITOR WITH 1-24 FILLING NOZZLES. EASY TO USE. SMART CONCEPT

For applications with low-viscosity liquids such as brine or vinegar, oil, water, or broths and liquid sauces, dosing machines with piston systems, rotary valve systems, or multi-position pump units are often too complex due to their specific dosing technology. Smart, cost-optimized solutions are especially needed when large thermoforming formats or high capacity outputs require many filling heads to operate simultaneously. The LD series draws on a basic unit with a hopper, circulation pump, and electric controls. Metering hoppers that are individually configured to the thermoforming format or the packaging grid can be equipped with filling heads in a few simple steps and easily exchanged for other formats. As an alternative to gravimetric time control (metering hoppers), the LD is also available with a magnetic-inductive flow meter system. Our practical team player works well with interfaces to all common packaging machines, line controls, and upstream weighing systems.



20/21

TG

COMPACT AND VERSATILE

PRODUCTS

Soups, sauces, dressings, goulash up to chunks of 40 × 40 mm, stews, deli salads, ready made meal components such as mashed potatoes, red cabbage and sauerkraut, vegetable mixes, fruit compotes and jams, honey and many other products (pumpable and homogenous)

TEMPERATURE POSITION

2–90 °C

DOSING RANGE

Entire range 10–6,600 cc per cycle and pump point e.g.
DN 30 stroke 150: 10–105 cc
DN 50 stroke 150: 50–290 cc
DN 80 stroke 150: 200–750 cc
DN 90 stroke 250: 300–1.760 cc
additional diameters are available

DOSING PERFORMANCE

max. 20–45 cycles/min./dosing position, depending on the consistency of the product and the dosing volume

DOSING POSITIONS

1–12. Performance is dosing positions × cycles

DOSING SYSTEM

Dosing cylinders with rotary valve system, very easy to dismantle and clean. Dosing pistons made from stainless steel/plastic with special seals

DRIVE

Pneumatic, 1 × central drive for all dosing positions, individual drives for each dosing position available

CONTROL UNIT

SPS S7

CONTROL UNIT OPTIONS

Connection to higher level line control, tendency control via external check weigher

USER INTERFACE

Function switches

ACCESSORIES

Stirrer, heated hopper, level control, transfer pump, vertical movement system, horizontal movement system (pneumatic or servo-driven), individual drives (pneumatic), a huge array of filling heads

TGs

SMALL AND ROBUST

PRODUCTS

Soups, sauces, dressings, goulash up to chunks of 30 × 30 mm, stews, deli salads, ready made meal components such as mashed potatoes, red cabbage and sauerkraut, vegetable mixes, fruit compotes and jams, honey and many other products (pumpable and homogenous)

TEMPERATURE POSITION

2–90 °C

DOSING RANGE

Entire range 15–1.170 cc per cycle and pump point e.g.
DN 35 stroke 150: 15–150 cc
DN 65 stroke 150: 100–500 cc
DN 100 stroke 150: 330–1.170 cc

DOSING PERFORMANCE

max. 20–50 cycles/min./dosing position, depending on the consistency of the product and the dosing volume

DOSING POSITIONS

1–8. Performance is dosing positions × cycles

DOSING SYSTEM

Dosing cylinders with rotary valve system, very easy to dismantle and clean. Dosing pistons made from stainless steel/plastic with special seals

DRIVE

Pneumatic (Servo drive with TGs Servo). 1 × central drive for all positions, individual drives for each position available

CONTROL UNIT

SPS S7

CONTROL UNIT OPTIONS

Connection to higher level line control, tendency control via external check weigher/additional filling to obtain target weight per package (»fill on demand«) only for TGs Servo version

USER INTERFACE

Function switches (+ operator panel / touch screen with TGs Servo)

ACCESSORIES

Stirrer, level control, transfer pump, vertical movement system, horizontal movement system (pneumatic), individual drives (pneumatic), a huge array of filling heads

22 / 23

AG

GENTLE AND DYNAMIC

PRODUCTS

Soups, sauces, dressings, goulash up to chunks of 40 × 40 mm, stews, deli salads, ready made meal components such as mashed potatoes, red cabbage and sauerkraut, vegetable mixes, fruit compotes and jams, honey and many other products (pumpable and homogenous)

TEMPERATURE POSITION

2–90°C

DOSING RANGE

Entire range 10–6,600 cc per cycle and pump point e.g.
DN 30 stroke 150: 10–105 cc
DN 50 stroke 150: 50–290 cc
DN 80 stroke 150: 200–750 cc
DN 90 stroke 250: 300–1.760 cc
additional diameters are available

DOSING PERFORMANCE

max. 20–55 cycles/min./dosing position, depending on the consistency of the product and the dosing volume

DOSING POSITIONS

1–12. Performance is dosing positions × cycles

DOSING SYSTEM

Dosing cylinders with rotary valve system, very easy to dismantle and clean. Dosing pistons made from stainless steel/plastic with special seals

DRIVE

Servo drive, 1 × central drive for all dosing positions, individual drives for each dosing position available

CONTROL UNIT

SPS S7

CONTROL UNIT OPTIONS

Connection to higher level line control, tendency control via external check weigher/additional filling to obtain target weight per package (»fill on demand«) data exchange/synchronisation via WLAN

USER INTERFACE

Control panel (touch screen) and function switches. The target volume can also be set while the machine is running. It is set directly in cc. Piston speed and acceleration profiles are defined in % values. The user can easily enter this data and store under a product name

ACCESSORIES

Stirrer, heated hopper, level control, transfer pump, vertical movement system, horizontal movement system (pneumatic or servo-driven), individual drives (pneumatic), a huge array of filling heads



24 / 25

SD

INNOVATIVE AND TREND-SETTING

PRODUCTS

Designed for delicate non-pumpable products. The SD series are especially suitable for dosing pasta salads, cooked asia and bami noodles, nasi goreng, raw fresh-cut vegetable salads with ingredients such as feta cubes, pieces of tomato or cucumber, blanched vegetables, seafood mixtures, vegetable-mushroom mixes, olives, fruit salads and many other products

TEMPERATURE POSITION

2–90°C

DOSING RANGE

Entire range 60–2,000 cc
per cycle and pump point e.g.

DN 50: 110–240 cc

DN 75: 250–530 cc

DN 100: 430–940 cc

DN 125: 670–1,470 cc

additional diameters are available

DOSING PERFORMANCE,

max. 30–60 cycles/min./dosing
position, depending on the consistency
of the product and the dosing volume

DOSING POSITIONS

1–2. Performance is dosing
positions×cycles

DOSING SYSTEM

Volumetric+vacuum system

DRIVE

Pneumatic, individual drives for each
dosing position (servo drive version
available)

CONTROL UNIT

SPS S7

CONTROL UNIT OPTIONS

Connection to higher level line controls,
tendency control via external check
weigher incl. servo-driven volume
setting

USER INTERFACE

Control panel (touch screen) and
function switches

ACCESSORIES

Vertical mask system, servo-driven
volume setting, heated hopper, level
control, counter-screw, motor-driven
height adjustment, horizontal distribu-
tion system



SD-M

THE SPEEDY
SPRINTER

PRODUCTS

Designed for delicate non-pumpable products. The SD series are especially suitable for dosing pasta salads, cooked asia and bami noodles, nasi goreng, raw fresh-cut vegetable salads with ingredients such as feta cubes, pieces of tomato or cucumber, blanched vegetables, seafood mixtures, vegetable-mushroom mixes, olives, fruit salads and many other products

TEMPERATURE POSITION

2–90 °C

DOSING RANGE

Entire range 60–940 cc
per cycle and pump point e.g.
DN 50: 110–240 cc
DN 75: 250–530 cc
DN 100: 430–940 cc
additional diameters are available

DOSING PERFORMANCE,

max. 30–60 cycles/min./dosing
position, depending on the consistency
of the product and the dosing volume

DOSING POSITIONS

1. Performance is dosing
positions×cycles

DOSING SYSTEM

Volumetric+vacuum system;
high level food hygiene

DRIVE

Pneumatic

CONTROL UNIT

SPS S7

CONTROL UNIT OPTIONS

Connection to higher level line controls

USER INTERFACE

Control panel (touch screen) and
function switches

ACCESSORIES

Vertical mask system, working plat-
form for the operator, product loading
with E2-Lifter or ascending conveyor

LD

THE PRACTICAL
TEAM PLAYER

PRODUCTS

Thin liquids like oil, water, brine, soy
sauce (without pieces or herbs).

TEMPERATURE POSITION

2–90 °C

COMBINATIONS

Tray lines (single and multi-lane),
thermoforming machines, conveyor
belts for glass, can, beakers and
pails.

DOSING RANGE

Total range 10–1,000 cc per stroke
and dosing point (other ranges op-
tional)

DOSING CAPACITY

Max. 20–50 working cycles / min,
depending on the dosing volume

DOSING POSITIONS

1–24. The performance results from
dosing points × working cycles

DOSING SYSTEM

Gravimetric (time control), optionally
with magnetic-inductive flow measure-
ment

CONTROL UNIT

PLC-S7

CONTROL UNIT OPTIONS

Connection to line controls or upstream
weighing systems for addition to target
weight per package ("Fill on demand")

USER INTERFACE

Function switches (optionally with con-
trol panel / touch screen)

MASCHINENFABRIK LEONHARDT GMBH

Darmstädter Straße 64
D-63303 Dreieich
Germany

+49 (0) 6103 37 219 0

sales@maleo.de
www.maleo.de

LEONHARDT INTERNATIONAL

Julianastraat 1-B
NL-5611 HS Eindhoven
The Netherlands

+31 (0) 40 23 66 133

post@leonhardt-international.eu
www.maleo.de