optidos Profi – Your modern process control engineering

# CONTENT

CONTROLLED QUALITY LEADS TO SUCCESS

For more than 40 years Borntraeger GmbH is your service-oriented professional partner in the field of automisation and process technology. Our area of expertise is the dosing and the weighing of raw materials in the food industry, the luxury food industry, as well as in the chemicals and the synthetic materials industry.

We are a powerful team of 20 employees, and we are experts in client-specific planning, construction, PLC and PC programming, as well as in control panel construction. Our modular system provides recipe management, production planning, dosing, batch traceability, materials management, warehouse management and further special features.

Our many years of experience, our focus on specific clients' requests and the successful cooperation with our partner Siemens have helped us to evolve continuously our tried and tested modular solutions.

Every day we open up new horizons and develop new ideas to fulfil your requests and requirements in every little detail with individual and innovative solutions. This is how we meet your and our own high standards; this is why we are one of the leading companies in the field of automisation and process technology; and this is the reason why you can trust in us.

OPTIDOS PROFI
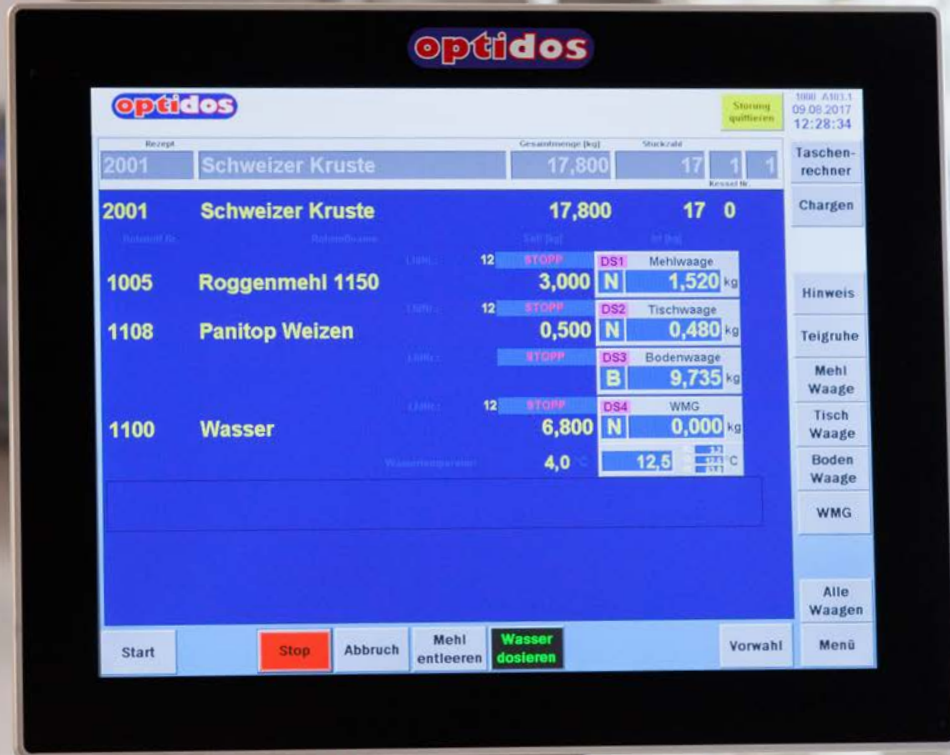
Optidos stands for "optimal dosing" while its ancillary "Profi" is a nod to the professional qualities of this all-round product line.

Many years of technical expertise and exchanging experiences with users are coming together in this system and will continue to do so, as we evolve and adapt the systems continuously to new requirements emerging from day-to-day operations.

Initially intended solely for weighing and dosing, it has evolved into a modular technology that supports, simplifies and makes many production steps traceable. However, craftsmanship is still at the forefront and the intention is to enhance rather than replace it.

Housed in a user-friendly and high-quality casing, optidos Profi is a manufacturing execution system that meets professional requirements in every aspect.

Experiencing how easy it is to produce with and operate an optidos control makes anyone forget any reservations they might have had about using technology. Craftsmanship and technological innovation complement each other in a near perfect way.

optidos Profi is fully adaptable to your requirements and will fulfil its tasks with utmost precision whilst ensuring user convenience. It enables you to complete numerous tasks, besides dosing and administration, in no time, ensuring consistent quality levels of your products.

„Technology as innovation, not additional workload!"

optidos Profi and tabletop scale

You can start with pre-weighing and have the option to complete the recipe at a later stage. The electronic recipe book helps you to remember everything. Connected to other components, optidos Profi becomes the perfect partner for administration and production.

On the following pages you will find examples of different solutions. There are many options to connect optidos Profi to other systems, from dough temperature and dough resting time to inventory control and kneaders.

Should you not find your consisting or planned facility within our offers, do not hesitate to contact us so we can set up an individual offer in compliance with your wishes.

CONNECTIVITY

The connection options between production resources
need to be as multi-layered as the production process
of bakery goods itself.

Setting up the recipe book

Once the system is set up to weigh all the ingredients correctly, the next step is to complete and store the recipe and execute it in a structured way, ensuring consistently high product quality.

The optidos Profi recipe book enables you to store and manage your recipes. It allows you to give access to as many employees as you wish, and ensures that there is no room for "personal interpretation". Once you have completed a basic recipe, you can produce as many units as you like; the recipe book will calculate automatically the quantities of all ingredients relative to the required product units.
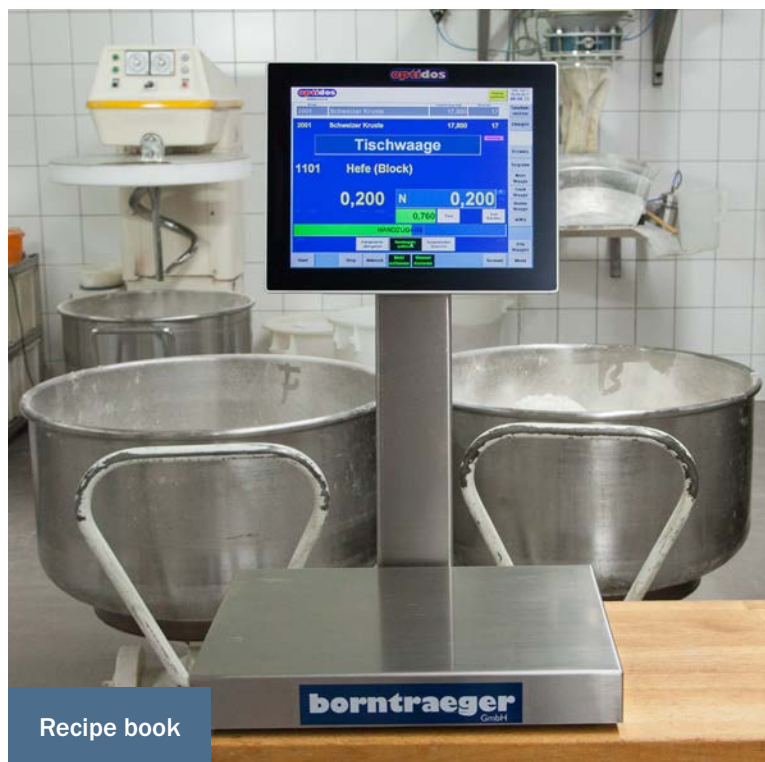
Recipe book

Flour scale

Flour scale

Connecting to existing silos and new systems

One of the key features of the optidos Profi system is being able to connect to flour scales, no matter whether it is a new or a pre-existing system. Almost any flour scale can be equipped with these weighing electronics. In the software, in addition to rough and exact dosing, features such as optimising accuracy and fill level calculation can be assigned to the silos.

This means that the key ingredient for baking will be weighed correctly and smoothly, regardless of whether one or more silos will procure the flour for a recipe.

Tabletop scale

Made entirely of stainless steel, the tabletop scale turns optidos Profi into a flexible helper in virtually any location of your production site. Its compact construction and low weight makes it easy to move the scale around.

The large top plate (46 x 33 cm) weighs out up to 50 kilos. With a fine scaling range down to one gram, it is ideal, for example, for the use in confectionary or for minor ingredients.

Floor scale

The sturdy floor scale is completely made of stainless steel and available with or without optional roll-on platform. Existing floor scales can be equipped with the necessary weighing electronics and connected to optidos Profi.

Equipment – for example, the one-person lifting system

Equipped with a lifting system, for example, gas-fill shock absorbers, cleaning these scales will become easier and can be managed by just one person.
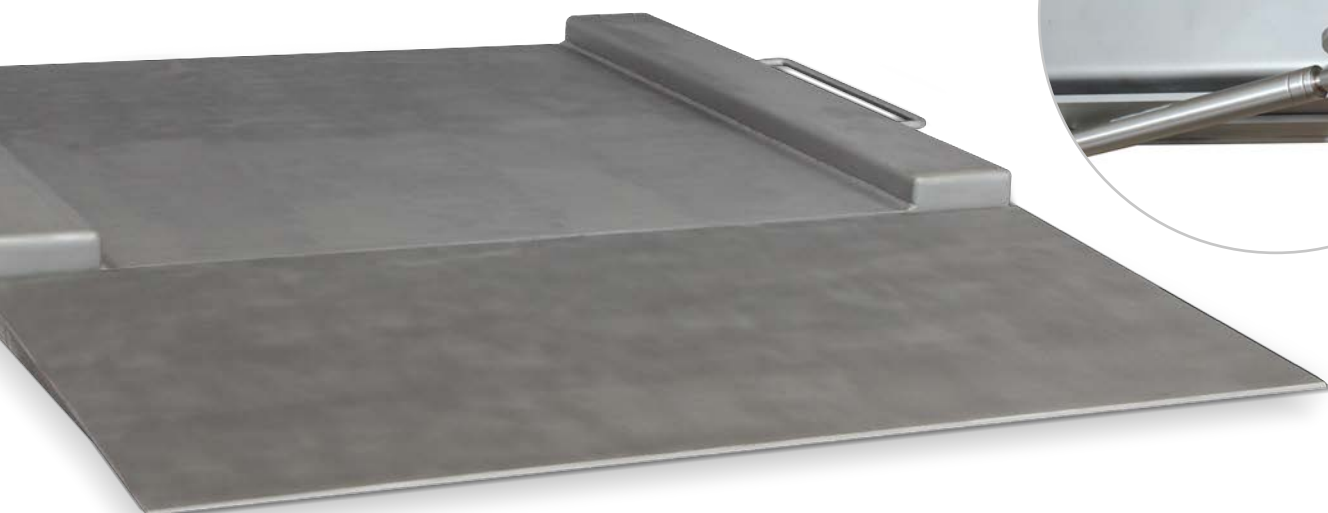
WMG water-mixing unit

Water will be provided in the exact quantity and at the perfect temperature, controlled and automatically regulated by optidos Profi according to the corresponding recipe.

A 3-way water pipe, for icy, normal, and hot water, ensures that the ideal mix and thus the correct water temperature are achieved.

Compatibility

You already have a water-mixing device? optidos Profi is compatible with most water-mixing appliances of companies such as Langheinz and Deltamatic.

Sourdough / dough starter system control

Over the years, the use of sourdough and dough starter systems has become increasingly popular. Beside the characteristic flavour, it is, not least, the possibility to keep bakery products fresh, which has enhanced the use of dough starters.

Sourdough

Connecting to Hematronic

Hematronic appliances by Hörburger AG are, among others, compatible with our systems. From just dosing to fully controlling the systems, anything is feasible. optidos Profi monitors every step, from preparation to fermentation, from storage to dosing.

Unsold bread / yeast programme / salt unit

optidos Profi can also monitor the dosing of unsold bread-mixing devices, yeast dissolvers and salt units, enabling you to control many appliances from a control unit.

Putting optidos Profi in control of the kneader means it will initiate the type of kneading stored in the recipe. This saves you from having to select and activate the relevant programme on the kneader.

Controlling the kneader

... by selecting recipes manually

Use optidos Profi to start the kneading programme stored in the recipe. All you have to do is select a kneader from the list. optidos Profi will do the rest, "telling" the kneader what to do.

... by entering the kneading bowl number

You can number your kneading bowls. Before starting the dough preparation process, enter the number of the bowl you are using and later select the kneader you wish to employ. The kneading programme, as defined in the recipe, will be activated and your dough is as good as done.

... using RFID

It becomes even more convenient with RFID control. Equipped with transmitters, all the devices can "communicate" with each other without your involvement. The kneader knows which bowl contains which recipe and initiates automatically the corresponding kneading programme. This is the easiest and most reliable way to do this!

Connected kneader

Connecting to a lifter-tipper

Being connected to optidos Profi is useful because it means that the system can block the tipper-lifter, and your dough will never be processed too early or too late. The dough rest controls the lifter-tipper and releases it within a certain time frame. Beyond these time frames, the lifter-tipper can be released only via a key switch. This helps you to eliminate further potential causes of error.

DOUGH MONITORING

———————

Dough making is the foundation of excellent quality and economic success – which is why you should always keep an eye on how your dough is performing during production and afterwards.

Controlling the dough temperature with a flour room sensor

Several parameters are key to determine the right dough temperature. This is when room and flour temperature sensors are useful. They also track any warming of the kneader and include it in the evaluation. All this is taken into account to calculate the bulkwater temperature that brings the dough to the optimal temperature before processing it further.

The sensors connect to the system and are available separately.

Flour room sensors are compatible with existing systems.

Flour room sensor
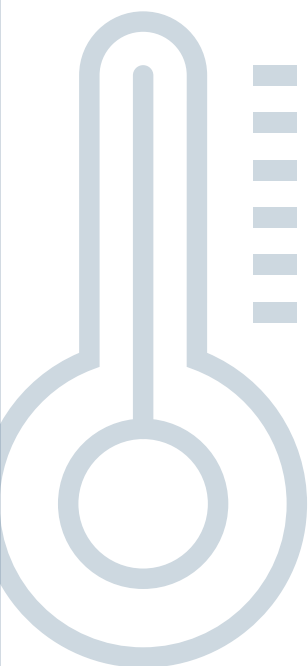
Dough temperature control, including readjustment

When the measurement of the dough temperature is activated, the recipes are stored as "not completed yet" until the temperature has been measured following the kneading of the dough. The temperature is measured manually by the operator and logged into the recipe as actual temperature. The temperature will also be stored in the batch protocol, making it easy to trace it later.

TTS	Rezept	Restzeit	Isttemp	Solltemp
✓	Schweizer Kruste	00:36:44	25,0	25,0
✓	Roggenkrüstchen	00:01:14	25,0	26,0
✓	Roggenkrüstchen	00:02:56	25,3	26,0
✗	Schweizer Kruste	00:06:50	23,5	25,0
✓	Kaisersemmel	00:09:45	24,0	24,0
✓	Schweizer Kruste	00:25:38	24,0	25,0
✗	Frankenlaib	00:28:46	27,5	29,0
	Roggenkrüstchen	00:10:00	0,0	26,0
	Kaisersemmel	00:15:00	0,0	24,0

Dough rest

Haste makes waste. The dough rest programme helps you to capture the dough temperatures either manually or via a radio sensor. It shows the progress of the dough rest in a chart on the optidos Profi screen or, optionally, on an additional screen. In this way you can always, even from a distance, keep an eye on the dough rest progress.

You can define the parameters shown in the chart. Common are recipe name and number, batch number, actual and target temperature, remaining dough rest time, as well as whether or not actuals and targets for the dough are within the limits.

The dough rest time can be extended or reduced automatically if the dough temperature exceeds the pre-defined limits. The stages of the dough are marked in different colours. At the end of the dough rest all data is entered into the batch protocol for reference.

Measuring dough temperature via cable

Wireless dough temperature measuring

PLANNING / ORGANISATION

Being well prepared means you get through the day more smoothly and relaxed. Knowing what lies ahead makes it easier to plan ahead, to be more flexible and more cost-effective. Transfer your experience to optidos Profi and keep your mind free for other important things.

Production schedule

Christmas is approaching and, as ever, a very busy period. In order for you not to be as "surprised" by the festive days as most of your customers, why not plan ahead?

The production schedule allows you to plan your processes and structure your recipes in groups and by days. For example, "Christmas" group, "Christmas Eve" day. Simply plan ahead what needs to be done and when.

The production schedule is not a rigid framework but gives you the flexibility to adapt to changing needs such as process order, production targets, and raw material quantities. The production schedule can be made for up to 10 lines and for an unlimited number of days in advance. Come what may, you have a plan.

Ticket printer / dough routing sheet / shift protocol

If a recipe is only partly processed, a printout of the current status via the ticket printer is all you need. The person taking over can see at a glance which recipe it is and what has been done.

Dough routing sheets contain valuable information when it comes to processing the ready dough. It allows you to check, for example, whether the dough preparation was carried out correctly.

Shift protocols help to ensure the quality of your own work. They indicate if any errors were made in production.

Batch protocols / monitoring and evaluating the production

Charge protocols provide you with a quick and convenient overview of anything that has been produced on that day. You can also retrace the production process in every detail, including who produced what. You can check all parameters and you will see at once if any errors crept in.

With charge protocols you are always well informed and can ensure the quality of your products over time.

SAFETY

Good systems never fail. But what, if they do? Really good systems always provide a plan B, just in case, to keep your operation running.

Access via office computer

to manage raw materials and recipes
away from production facility

Customer's Devices for emergencies

Remote

VNC

Back-up provided by customer

Virtual machine

with database software,
emergency systems software
and office software

Customer's server

LAN   LAN   LAN

Example of a optidos network configuration

#1

Industrial
Computer in
production
(DLS activated)

#2

Industrial
Computer in
production
(DLS activated)

#...

Industrial
Computer in
production
(DLS activated)

Emergency control

In the unlikely event of an emergency, you will still
be able to operate all important modules manually.
Our emergency operation function will prevent you from
experiencing any unexpected downtimes. For example,
on the control terminal you will be able to select any
silo and dose the required quantity.

Data storage
on customer's server

"Two are better than one". Thus we recommend
storing data regularly on a second server. If one server
fails, you still have everything you need at hand: your
recipes, protocols and records.

Remote mode with virtual machines

If any of your hardware fails, for example, optidos Profi
devices, you will still be able to control your system
with so-called virtual machines such as tablets,
laptops or even smartphones.

In case of a server failure, one of the optidos Profi
appliances will step in, function as server and
communicate directly with the controls.

TRANSFERRING AND READING ADDITIONAL DATA

Every modern production generates large amounts of data on
different devices. optidos Profi gathers this data and provides it,
in a clear overview, in one place.

Weighing silos

optidos Profi can also help you to stay always up-to-date on your raw material stock. It allows you, for example, to continuously monitor your flour stock levels. Simply equip your silos with load cells, which will transmit stock levels. By forwarding the information directly to your supplier, you avoid delivery bottlenecks and save time.

Silo fill levels

Monitoring deliveries on display via weight recording

After logging into the password-protected silo user terminal, your supplier will be able to check the silos that you have assigned to his or her mill. The driver selects a silo, which then will be tared and filled. The load increase in the silo is captured and processed during the filling operation. From the comfort of your office you can monitor whether the actual fill load corresponds with the delivery note.

Monitoring silo fill levels via server and optilog-f fill level monitor

With the optilog-f fill level monitor, transmitting actual silo levels becomes even easier and happens almost independently. The system transfers fill levels automatically to your suppliers, and your suppliers can check them at any time. All you need to do is agree sufficient stock levels with your mill and the rest will happen automatically.

The mill reads the fill levels and can also access the consumption flow – this is vital information in order to better plan deliveries.
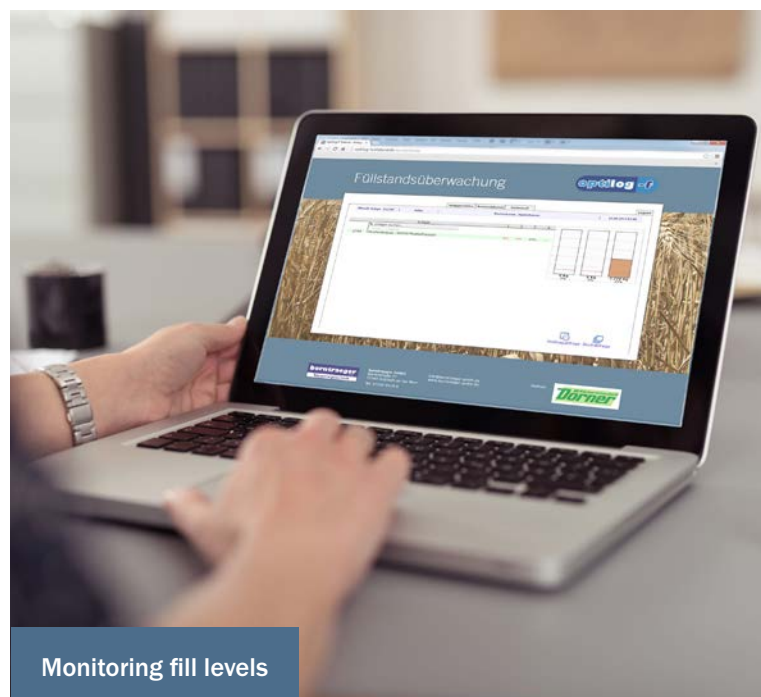
Monitoring fill levels

INTERFACES

Almost any computer-aided system generates data sets. This might include information that is valuable to other applications. Being able to exchange data simplifies processes and reduces your workload. So allow your systems to communicate with each other.

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Interfaces to ERP / business solution software

optidos is a smart way to connect a multitude of pre-existing systems.

The key is that our systems keep on exchanging data continuously rather than just during the installation. The different systems update each other continuously and ease your workload considerably. In addition to obtaining up-to-date and correct data, it will free up valuable time that you can use for other tasks.

We provide interfaces for applications indicated on the left but also for many other systems.

Inventory control

Being connected to inventory control systems is key. It enables you to trace the efficiency and profitability of your entire production process, from dough making to dough processing, from distribution to the checkout. In the past, this information had to be gathered and evaluated manually, taking much time and effort. Nowadays, all this happens at the push of a button.

Craftsmanship and heritage are important but to secure your future it is key to keep track of everything. The optidos Profi interfaces will help you to achieve this.
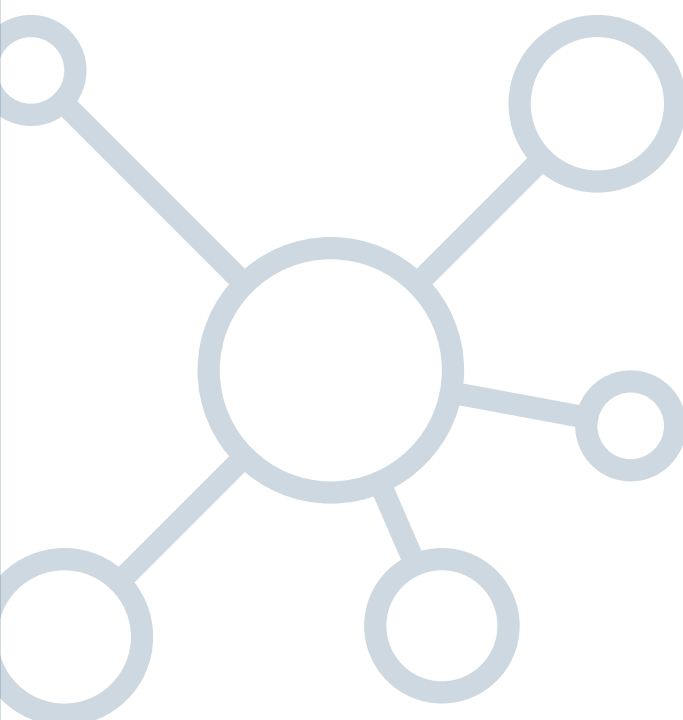
Swivel arm

We offer different swivel arms bringing the display closer to the operator and making it easier to keep track of the screen content.

Swivel arms

ADDITIONAL PRODUCTS

Our product range goes far beyond optidos Profi.
On the following pages you will find entry-level dosing and weighing controls, a solution specifically developed for pastry shops, and practical equipment for our systems.

OPTIDOS BASIC

Our optidos Basic software has a clear and easy-to-use navigation menu for dosing systems.

optidos Basic is perfect for getting started with the most convenient way of controlling recipes. It speeds up the preparation and ensures consistent product quality levels.

optidos Basic software includes hardware that you can upgrade at any time and without any problems to optidos Profi.

OPTIDOS CONFECTIONARY

optidos Confectionary has been developed with processes specific to confectioners in mind.
The software navigation is clear and simple; the technology of the appliances is cutting-edge.

The system is very reliable and saves you time because it automatically converts quantities and ensures that all the correct ingredients are being used.

In detail

- Production process can be exactly defined, achieving consistently high quality
- Automatic confirmation and taring (adjustable)
- Parallel processing of several orders
- Processing can be interrupted and will then continue from point of interruption
- Can store an unlimited number of recipes, raw materials, text and images under one item
- Optional single weighing or joint weighing with taring
- Negative weighing can be defined in recipe
- Direct weighing of recipes
- Images and text can be assigned to any item, recipe, raw material or instruction
- Pre-fabricated raw materials can be marked as such and will be skipped during weighing
- Weighing optimisation: same recipes in different orders can be joined automatically and weighed together
- Issue a raw material list for the following day
- Quality checks through batch protocol and balance sheet
- Print function for items and recipes
- Can interconnect several locations via network

  and much more

COMPARING OPTIDOS PRODUCTS

optidos MW

optidos MW Plus

	optidos MW	optidos MW Plus	optidos Basic	optidos Profi
User terminal	Siemens user panel	Industrial computer	High performance industrial computer (temperature range: 0-50 °C / 0-122 °F)	High performance industrial computer (temperature range: 0-50 °C / 0-122 °F)
Assembly type	Housed in a wall-mounted stainless steel casing	Housed in a wall-mounted stainless steel casing	Anodised and milled aluminium casing. Fanless construction	Anodised and milled aluminium casing. Fanless construction
IP code	IP54	IP54	IP65	IP65
Standard screen size	4"	12"	15"	15"
Optional screen size	❌	❌	❌	21.5" wide screen
Software system	Pre-installed Siemens software system	Windows Enterprise	Windows Enterprise	Windows Enterprise

Raw materials

	optidos MW	optidos MW Plus	optidos Basic	optidos Profi
Number of raw materials	10	100	200	100.000
Expandable	❌	✅	✅	Full expansion
Number range	1 - 10	1000 - 1100	1000 - 1200	Free to choose
Data entry of weighing tolerance per raw material	✅	✅	✅	✅
Input of raw material costs	❌	❌	❌	✅
Define raw material type (groups)	❌	❌	❌	✅
Specify packaging sizes	❌	❌	❌	✅
Define TA	❌	❌	❌	✅

Recipes	optidos MW	optidos MW Plus	optidos Basic	optidos Profi
Number of recipes	50	100	200	100.000
Expandable	❌	✅	✅	✅
Lines per recipe	8	26	26	26
Input of unit weights	❌	✅	✅	✅
Input of dough temperature	❌	✅	✅	✅
Release / block recipes	❌	✅	✅	✅
Sub recipes (dough in dough)	❌	❌	❌	✅

Care & management				
User administration	❌	✅ Access rights for 3 people Free to choose	✅ Access rights for 5 people Free to choose	✅ Access rights for 50 people Free to choose
Raw material inventory	✅	✅	✅	✅
Display silo fill level	❌	✅	✅	✅
Failure messaging	System messages and aggregated errors Power element	System messages and aggregated errors Power element	System messages and aggregated errors Power element	System messages and single errors Clear text for power element + silo system
Office software	❌	❌ But VNC or remote connection with office	✅ Stand-alone office software, synchronisation with production	✅ Stand-alone office software, synchronisation with production
Production schedule	❌	❌	❌	✅
optidos software on customer's server	❌	❌	❌	✅
Interface to IT system	❌	❌	✅	✅

Dosing programme including control	optidos MW	optidos MW Plus	optidos Basic	optidos Profi
Flour scale	✓	✓	✓	✓
Tabletop scale (DMS)	✗		✓	✓
WMG-3X-E water-mixing unit	✗	✓	✓	✓
Daxner water-mixing unit	✗	✓	✓	✓
Langheinz water-mixing unit (technical review required)	✗	✓	✓	✓
Deltamatic water-mixing unit (technical review required)	✗	✓	✓	✓
WMD152 / 153 water-mixing unit	✗	✓	✓	✓
KBS 30 / 40 water-mixing unit	✗	✓	✓	✓
Floor scale for manual dosing	✗	✓	✓	✓
Floor scale for automated dosing	✗	✗	✓ Max. 2 components	✓ Unlimited

Additional features

	optidos MW	optidos MW Plus	optidos Basic	optidos Profi
Bulkwater calculation and scale ice calculation	✗	✗	✓	✓
Multi-line operation	✗	✓ Only in connection with optidos Profi	✓ Only in connection with optidos Profi	✓
Dough rest monitoring	✗	✗	✓	✓
Kneading bowl control system	✗	✗	✗	✓
Kneading bowl control system RFID	✗	✗	✗	✓
Kneader control system	✗	✗	✗	✓
Dosing programme unsold bread	✗	✗	✗	✓
Dosing programme sourdough	✗	✗	✗	✓
Dosing programme liquid yeast	✗	✗	✗	✓

General

	optidos MW	optidos MW Plus	optidos Basic	optidos Profi
New installations	✗	✗	✓	✓
Modernisation	✓	✓	✓	✓
Remote maintenance	✗	✓	✓	✓
Upgrade option	✗	✗	✓ To optidos Profi	Maximum version

REFERENCES

Nowadays many bakeries are using modern process technology engineering successfully. Below you will find a selection of our reference projects.

Postcode 0-

07545 Gera - Sternenbäck GmbH

01824 Königstein - Landbäckerei Schmidt GmbH

06796 Brehna - EDNA International GmbH

Postcode 1-

13581 Berlin - DeWi Back Handels GmbH

14641 Wustermark - BioBackHaus Leib GmbH

16227 Eberswalde - Eberswalder Brot- und
　　　Feinbackwaren GmbH

Postcode 2-

21079 Hamburg - Back-Haus Wedemann

24114 Kiel - Backparadies Leefen KG

27755 Delmenhorst - Bäckermeister
　　　Haferkamp GmbH

Postcode 3-

31855 Aerzen - Aerzener Brot und Kuchen GmbH

33332 Gütersloh - Bäckerei Birkholz

36039 Fulda - Herzberger Bäckerei GmbH

Postcode 4-

41366 Schwalmtal - Kamps GmbH

45549 Sprockhövel - Bäckerei Borggräfe GmbH

48341 Altenberge - Essmann's Backstube GmbH

Postcode 5-

57250 Netphen-Dreis-Tiefenbach - Großbäckerei
　　　Schneider GmbH

57482 Wenden - Junge GmbH

59889 Eslohe-Bremk - Landbäckerei Sommer GmbH

Postcode 6-

63303 Dreieich - Bäckerei & Konditorei Weller KG

67065 Ludwigshafen - Bäcker Görtz GmbH

67098 Bad Dürkheim - Bäckerei Reiner Sippel

Postcode 7-

70188 Stuttgart - Bäckerei Voß

71083 Herrenberg - Bäcker Baier

73235 Weilheim / Teck - Scholderbeck

73463 Westhausen - Handwerksbäckerei
　　　Mack GmbH & CO. KG

74632 Neuenstein - Pfisterer & Oettinger GmbH

Postcode 8-

83324 Ruhpolding - Der Bäcker Schuhbeck KG

85276 Pfaffenhofen - Bäckerei Wiesender
　　　GmbH & Co. KG

86441 Zusmarshausen - EDNA International GmbH

88299 Leutkirch im Allgäu - Bäckerei Steinhauser

Postcode 9-

90482 Nürnberg - Brezen Kolb GmbH

90542 Eckental-Brand - Der Kalchreuther Bäcker

91058 Erlangen-Tennenlohe - Der Beck

91180 Heideck - Bäckerei Schmidt KG

91593 Burgbernheim - Brothaus

OUR SUPPLIERS

As a provider of high quality goods and services, we are working only with suppliers who have the highest quality standards. Here are some of our partners with whom we have been collaborating successfully for many years.

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Siemens	EPLAN
Rittal	Beckhoff
Murrelektronik	ABB

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