DIVIDELLA
KÖRBER SOLUTIONS

NeoTRAY CONCEPT: ALWAYS ADAPTING TO YOUR REQUIREMENTS

Dividella High Speed Packaging Lines

ACCELERATE
FLEXIBLE AND ADAPTABLE PACKAGING AND MACHINE SOLUTIONS = PROTECT YOUR ASSETS

ACCELERATE YOUR ADVANTAGES

- New, compact packaging designs
- Wide range of applications in terms of products and packaging design
- Proven technology
- Small footprint
- Fast line clearance due to GMP compliant design
- Fast change over
- No waste on start-up after machine stop
- Reliability in the packaging process
- Highest performance – lowest cost of ownership
- Easy, safe machine operation
- Low maintenance cost
- Complete line integration possible
- Non-proprietary state of the art control system
- Open controls architecture and use of industry standards (PackML) allow easy vertical integration
- Short lead times due to modularity & standardization

ACCELERATE YOUR FLEXIBILITY

No more having to choose between toploading flexibility or sideloading speed. With NeoTRAY you can have the best of both worlds: all the flexibility of toploading product insertion possibitlites, married with the speed of a sideload cartoner – in one compact machine. This combination enables production that is both high speed and efficient, while utilizing 100 % monomaterial for cost effective packaging of the highest quality.

ACCELERATE YOUR FUTURE

The NeoTRAY modular packaging system processes all medical dosage forms common today – efficiently, reliably, and at top speeds. It can easily be reconfigured thanks to its modular design, so producers are well equipped for whatever the future may bring.

NeoTRAY *400*	range of formats H x A x B in mm	output packs/min
minimum	65 x 35 x 15	400
maximum	200 x 90 x 110	

NeoTRAY *300*	range of formats H x A x B in mm	output packs/min
minimum	65 x 50 x 15	300
maximum	200 x 150 x 110	

Modular machine design offers the maximum flexibility in the packaging of ampoules, vials, syringes, pens, injectors, blisters and an almost unlimited variety of other pharmaceutical products.

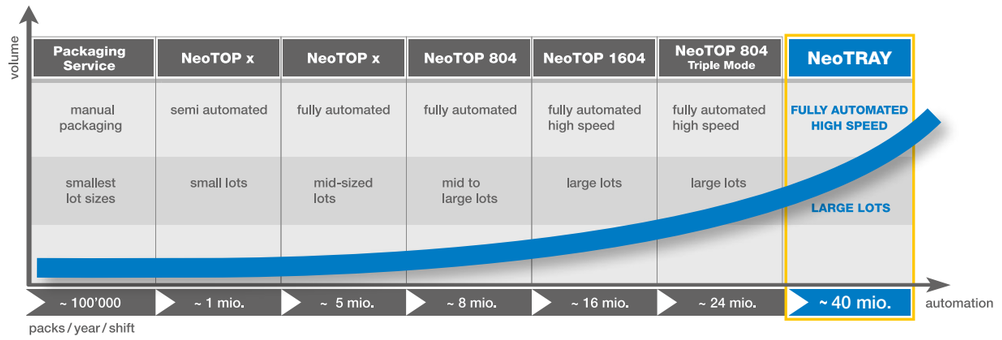
A BROAD RANGE OF APPLICATIONS

The NeoTRAY systems combine the wellknown advantages of 100 % monomaterial packs with a state of the art machine design to provide an exceptionally flexible platform for the packaging of

- parenteral forms of administration (vials, syringes, auto injectors, pens, ampoules, cartridges)
- pouches, transdermal systems, tubes, blisters
- inhalers, nasal sprays and other applicators

ADDITIONAL FEATURES

- Continuous motion operating principle enables speeds up to 400 cpm
- Stacking conveyor with dividers and adjustable width allows for product configuration flexibility and transport of products safely to the infeed area
- Continuous motion insertion station with overload protection and booklet or leaflet pre-infeed
- Carton magazine with positive separation of each carton for error free carton removal
- Motor driven height adjustment of the carton conveyor during format changeover
- Carton reject station with removable bin for “bad” cartons; bin can be emptied during machine operation
- Horizontal carton discharge belts for secure transport of cartons out of machine to downstream processes



100 % MONOMATERIAL PACKAGING SOLUTIONS ENGINEERED TO PROTECT ANY PRODUCT

Packaging design plays a key role from the very beginning

DEVELOPMENT IS TEAMWORK

Dividella's project team is intimately involved in the entire development process right from the start. All products which are to be packaged are therefore clearly defined at the beginning of each project. The aim is to package as many medicines as possible using the same design and therefore, on the same machine. To make the packaging process as efficient as possible, Dividella's packaging specialists will, on request, make proposals for the harmonization of the relevant customer portfolio.

During the design process particular attention is given to the details of the packaging concept, Details such as paperboard grades, perforation type and die structure have a significant influence on the performance and running stability of the material. When you purchase a packaging solution from Dividella, we work with you and your packaging material supplier to optimize these details to provide you with the best possible solution.

THE KEY FOR SUCCESS:

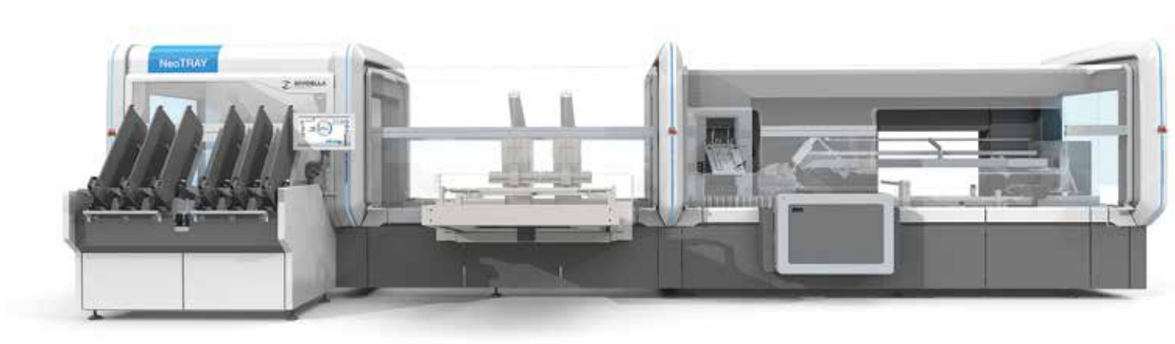
THE COMBINATION OF A CREATIVE PACKAGING DESIGN AND A SMART MACHINE.

This is what is so special about Dividella, we are a unique combination of the creative and the pragmatic. We are always searching for the most elegant design solution, but always with an eye out for the practical necessities of a solution that must run reliably in a challenging production environment over the entire life cycle of both the machine and the product.

NeoTRAY is designed to use 100% monomaterials so as to provide packaging of the highest quality in the most efficient and cost effective manner possible. The NeoTRAY style carton secures the product, providing excellent protection and an attractive presentation to the user. The final carton can be either side or top opening, offering a flexible user experience based upon product requirements.

TRAY FORMING | **TOP LOADING** | **SIDE LOADING**

TOP AND SIDE LOADING WORKING TOGETHER IN CONTINUOUS MOTION = HIGH SPEED



SECURE TRAY AND PRODUCT TRANSPORT

GMP Compliant Construction and Clean Design

- Table top and balcony designs combined to provide a work area that supports a quick and error free line clearance and one that is also easily cleanable
- Elegantly designed, light and easily manageable format parts
- Fast machine changeover – can be performed by one operator in less than 30 minutes
- Vertical sliding doors provide convenient access for cleaning and format changeover
- Machine enclosures are constructed of impactresistant acrylic glass to provide for an unrestricted view into machine operating areas
- Separated control, drive and product areas

Excellence in Automation and Control

- Machine operation by means of a centralized HMI with user friendly and intuitive GUI
- Integrated control system from B&R – PLC, motion and safety on a common platform
- IEC61131 compliant programming (structured text)
- Inherently secure operation with reliable product inspections and reject verification/counter check for each rejected carton or tray
- Prepared for vertical integration – no hardware changes necessary for connection to enterprise level systems

Main Safety Features

- Safety system from B&R integrated into the overall machine control concept
- Safety system meets requirements set forth in EN14119 and EN60204-1
- All safety devices are dual channel
- Lockable safety doors
- All safety doors are monitored with safety switches connected to the integrated safety PLC solution from B&R
- All safety doors are mechanically locked during machine motion
- Operator must actively unlock the doors prior to them being allowed to open

Fully Automated Compartment Width Adjustment

The adjustment of the stacking conveyor dividers to the required product width is automated. A specific station in the cartoning section performs this task. If the width of the stacking conveyor compartment must be changed, the operator sets the required compartment width at this station.

The automatic adjustment is then performed after all machine safety doors are closed, the automatic compartment adjustment is selected on the operating terminal, and the machine is started via the start button. The compartment dividers are adjusted to the desired position along the entire length without any further intervention by the operator.

TRAY FORMING

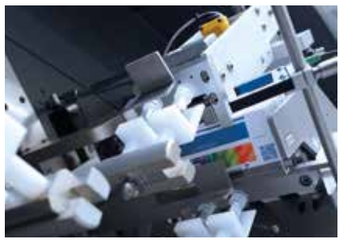
The tray feeding & forming module actively forms and erects trays from pre-glued, die-cut blanks. The magazines for the blanks are positioned for high visibility and ease of access from outside the machine. Erected trays are placed from above into the stacking conveyor. The trays are then transferred to the product and booklet insertion areas. The complete magazine assembly can easily be swung outwards into a service position to allow for more convenient access during a format changeover or maintenance.

TOP LOADING

Dividella's state of the art feeding systems top-load the products in a continuous motion into the erected trays. The stacking conveyor consists of two parallel revolving endless belts with attached dividers at uniform intervals (depending on the pitch of the machine either 120 or 180 mm). The conveyor is servo driven. The dividers are designed in such a way that they can be adjusted automatically to the required product width from the HMI.

SIDE LOADING

After product insertion, the filled trays arrive at the cartoning module via the stacking conveyor. 3-point guides enable safe transport of height > width cartons. The filled trays are transferred to the cartoning area where the trays are side-loaded into the waiting cartons. The free sliding movement of the cartons avoids scratches during machine operation. Cartons can be closed in a variety of ways including: hot melt, straight tuck, reverse tuck and tamper evident features.



Additional options: checking machine readable codes on the packaging, verifying the trays' contents, loading leaflets and/or booklets, printing alphanumeric text and coding on the package, and inspection of this text and/or codes.

PROVIDING SOLUTIONS WITH FEEDING SYSTEMS FOR ALL SHAPES AND SIZES – WITH NO RESTRICTIONS

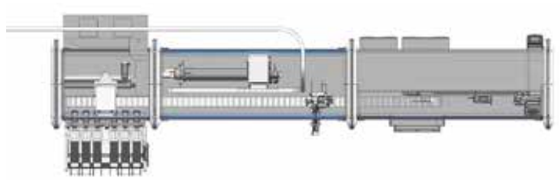
DIVIDELLA FEEDING TECHNOLOGY

One of the most difficult tasks in automated manufacturing involves the development of gentle and flexible feeding systems for items such as syringes, vials, pens, softblisters etc. Through the years Dividella has used it's wealth of experience in this field to develop a wide variety of customized feeding systems. The systems have been put into operation in many different situations and, through their various developments, have become a field tested and reliable part of the Dividella eco-system.

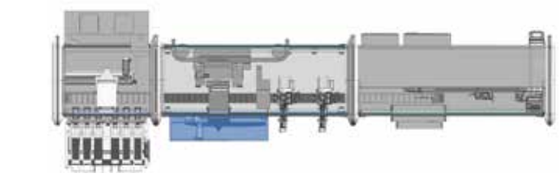
On the basis of Dividella's many years of experience of product handling – we have developed a new modular feeding system especially for the NeoTRAY. This system provides a packaging capacity of up to 800 products per minute can be packaged. Prior to being inserted the products can also be aligned, grouped and individually checked.

Apart from the actual pharmaceutical products, placing inserts can present major challenges. The handling of inserts is a critical area, especially in the case of high output machines such as the Dividella NeoTRAY, which can produce up to 400 packs per minute. Dividella has developed a wide range of scalable feeding systems for this purpose. Consequently, very large, thick inserts can be fed at full speed, using minimum labor.

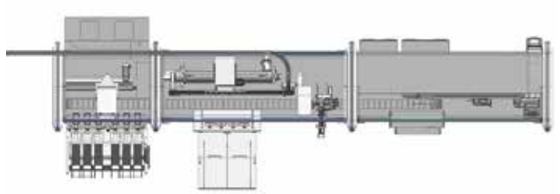
1) NeoTRAY with overhead direct infeed for pens & syringes



2) NeoTRAY with puck infeed for pens & syringes



*3) NeoTRAY **combination pack** for vials & syringes or unipacks of vials, ampoules or syringes*

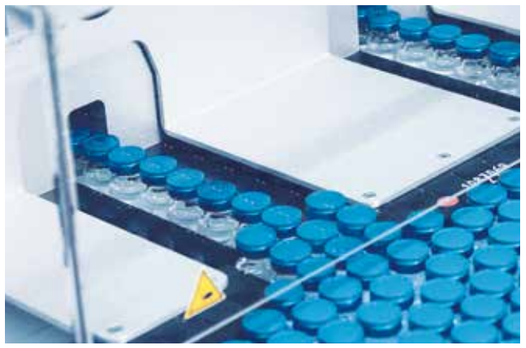


Syringe Inserter
The Syringes are delivered lying down through a puck system

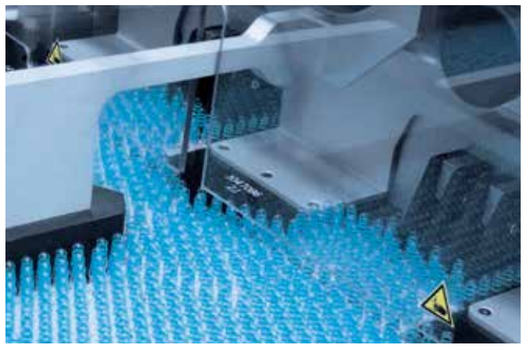
Syringe Infeed
With overhead conveyor and no glass on glass contact

Pen Insertion
Pens or Injectors are delivered lying down through a puck system

Pen Insertion
Pens or Injectors are delivered standing upright through a puck system



Vial Infeed
Standing Vials are delivered via a feeding table to the pick and place handling units



Ampoule Infeed
Standing Ampoules are delivered via a feeding table to the pick and place handling units

CUSTOMER SUPPORT

- Ticket System (JIRA)
- Emergency Hotline
- Remote Access
- Worldwide Service Organization

ACADEMY

- Operational Training
- Maintenance Training
- Electrical & Software Training
- Production Support

CONSULTING

- Validation & Qualification
- Engineering/ Feasibility Studies
- Packaging Engineering
- OEE Analysis

RETROFIT PRODUCTIVITY

- Carton Gluing System
- HMI Upgrades
- Feeding Unit Upgrades
- Module Upgrades

FIELD SERVICE

- Troubleshooting/ Corrective Maintenance
- Preventive Maintenance
- On-site Support
- Embedded Engineering

SPARE PARTS

- Original Spare Parts
- Refurbished Parts
- Repair Parts
- 3D Spare Parts Catalogue

MISCELLANEOUS

- Format Tooling
- Obsolescence Management
- Service Agreements
- Relocation Services

PHARMA 4.0

- Guided Format Change
- Vertical Integration
- Data Analytics
- Cobotics/Robotics

LINE INTEGRATION – GENERAL CONTRACTING

Three Levels of Integration:

- **1- Stand alone machine project**

In this case, Dividella manages the packaging machine and related services. Fully integrated 3rd party equipment can be included such as camera systems, printers, labelers etc.

- **2 - Line Integration**

Dividella manages the integration of the entire packaging line. The customer purchases all 3rd party equipment and delivers it to Dividella for the line integration activities.

- **3 - General Contracting**

Dividella is responsible for the specification, purchase and integration of the entire packaging line. The line could include equipment both upstream and downstream of the Dividella cartoner. The consulting, integration and 3rd party upcharge costs are shown in a separate and transparent manner.

TOP LOADING
SIDE LOADING
NeoTRAY
THE BEST OF TWO WORLDS COMBINED

Our core values

As market leader for innovative pharma packaging solutions, we allow no compromises in the quality of our products and our customer service. With our engineering and packaging development expertise, we contribute to our customers' success. We act in partnership and we are personally responsible for the results of our work.

Dividella AG
Werdenstrasse 76 · 9472 Grabs · Switzerland · www.dividella.ch
T + 41 81 750 33 66 · F + 41 81 750 33 43 · mail@dividella.ch

Dividella AG 05.2018

www.dividella.ch

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