NeoTOP CONCEPT: ALWAYS ADAPTING TO YOUR REQUIREMENTS

Dividella TOPLoading packaging lines
Increasing market and product segmentation, not to mention the way modern medicines work, means that the wide variety of secondary packaging is constantly growing. As a result, flexibility and the overall efficiency of the packaging process are becoming more important. Diviella accommodates this trend with the NeoTOP system concept, a family of modular, semi- and fully automated packaging machines. They can be configured to customer’s specific requirements and have been specially developed to handle lots which vary in size.

A BROAD RANGE OF APPLICATIONS
The NeoTOP systems combine the well-known advantages of NeoTOP mono-material packs with a machine designed according to the state of the art in mechatronics. NeoTOP systems, in their almost infinite configurations, are therefore particularly suitable for packing:
- parenteral forms of administration
  (vials, syringes, auto injectors, pens, ampoules, cartridges)
- blisters, tablet blisters
- pouches, trans dermal systems, tubes
- inhalers, nasal sprays and other applicators

MODULAR PACKAGING SYSTEMS ARE IN DEMAND

Greater availability in the packaging cycle
Available production time is increased thanks to shorter times for format changes, shorter start-up, line clearance time and shorter line clearing times. NeoTOP systems are designed for a nominal output corresponding to their purpose of 10 - 240 packs per minute.

FEATURES AND BENEFITS OF NeoTOP SYSTEMS
- reliability in the packaging process
- proven flexible, modular platform that can be configured for an almost infinite variety of cartoning applications
- generous carton size range allows single and multi-count products to be packaged on the same machine
- high degree of flexibility in terms of pack contents
- highest performance - lowest cost of ownership
- compact
- high degree of availability thanks to short conversion times
- world leading machine reliability, efficiency, GMP and ease-of-use
- wide range of applications in terms of products and packs
- simple, safe machine operation
- low-cost maintenance
- no waste on start-up after machine stop
- first pack = good pack

DIVIDELLA’s NeoTOP systems cover all the packaging requirements perfectly throughout the life cycle of a product. From clinical trial through market launch to increasing market share, the same packaging solutions can be produced at different outputs on the same semi- and fully automated packaging lines. This eliminates the need for repeated packaging adaptations in the course of bringing a product to market.
NeoTOP CONCEPT
TOLOADERS WITH INFINITE POSSIBILITIES

PACKAGING PROCESS

COMPLIANCE IN PACKAGING DESIGN

Patient
- clear product overview thanks to top opening
- patient guidance
- products and leaflets are easily accessible
- easily re-closable

Production
- lower total cost of package TCP
- safe process (100% verification after loading)
- lower total cost of ownership TCO
- flexible platform
- quick format change over

Logistics
- flat mono-material (cardboard) blanks (inbound)
- compact dimensions (outbound)
- product protection
- late stage customization

Marketing
- flat cardboard blanks printable on both sides
- brand recognition
- sustainability (no plastic)
- security options
- T&T

Regulatory
- tamper evident closing
- T&T

WHAT MODULARITY DOES FOR OUR NeoTOP SYSTEMS

The standard configurations of our NeoTOP packaging lines consist of these following modules:

- erecting module
- inserting module
- closing module

Different machine configurations are possible depending on the way these three elements are combined, giving you maximum flexibility in regards to number and type of products to be packed.

Erecting module
The magazines for the flat blanks - partitions and carton - are positioned for high visibility and are accessed from outside. They can be filled during operation. The flat blanks are erected and glued into cartons and placed on a vacuum conveyor. The correct shape of the pack is checked and defective packs are ejected. Carton erection and partition forming are active, servomotor driven processes.

Inserting module
Products can be laid in manually, automatically or using a combined method. Dividella offers a wide range of product feeders that ensure gentle handling and safe loading of the product. Thanks to the modularity, feeders can be retrofitted at a later stage on site.

Closing module
Other infeeding functions such as leaflet or booklet insertion can be accomplished on this module as well. Conform to Directive 2011/62/EU cartons can be closed in various ways, using hotmelt, fugitive glue or labels, with or without tamper-evidence – see above examples – and finally, packs which have not been confirmed as correct at all stations are ejected.

Other functions
- Product presence check using a camera
- Direct infeeding systems connecting to upstream processes
- Application of variable data
- Security features like Tamper-evident closing with glue points, labels and several more
- Insertion of inserts of all kinds
- Code verification

Format changes
These are performed quickly, easily and using no tools. The change parts are pinned. No fine adjustment is required after a format change thanks to our digital dials.

Depending on the machine type and configuration a format change can be accomplished within 20 to 40 minutes (2 persons) without the use of tools.

Patient
- clear product overview thanks to top opening
- patient guidance
- products and leaflets are easily accessible
- easily re-closable

Production
- lower total cost of package TCP
- safe process (100% verification after loading)
- lower total cost of ownership TCO
- flexible platform
- quick format change over

Logistics
- flat mono-material (cardboard) blanks (inbound)
- compact dimensions (outbound)
- product protection
- late stage customization

Marketing
- flat cardboard blanks printable on both sides
- brand recognition
- sustainability (no plastic)
- security options
- T&T

Regulatory
- tamper evident closing
- T&T

WHAT MODULARITY DOES FOR OUR NeoTOP SYSTEMS

The standard configurations of our NeoTOP packaging lines consist of these following modules:

- erecting module
- inserting module
- closing module

Different machine configurations are possible depending on the way these three elements are combined, giving you maximum flexibility in regards to number and type of products to be packed.

Erecting module
The magazines for the flat blanks - partitions and carton - are positioned for high visibility and are accessed from outside. They can be filled during operation. The flat blanks are erected and glued into cartons and placed on a vacuum conveyor. The correct shape of the pack is checked and defective packs are ejected. Carton erection and partition forming are active, servomotor driven processes.

Inserting module
Products can be laid in manually, automatically or using a combined method. Dividella offers a wide range of product feeders that ensure gentle handling and safe loading of the product. Thanks to the modularity, feeders can be retrofitted at a later stage on site.

Closing module
Other infeeding functions such as leaflet or booklet insertion can be accomplished on this module as well. Conform to Directive 2011/62/EU cartons can be closed in various ways, using hotmelt, fugitive glue or labels, with or without tamper-evidence – see above examples – and finally, packs which have not been confirmed as correct at all stations are ejected.

Other functions
- Product presence check using a camera
- Direct infeeding systems connecting to upstream processes
- Application of variable data
- Security features like Tamper-evident closing with glue points, labels and several more
- Insertion of inserts of all kinds
- Code verification

Format changes
These are performed quickly, easily and using no tools. The change parts are pinned. No fine adjustment is required after a format change thanks to our digital dials.

Depending on the machine type and configuration a format change can be accomplished within 20 to 40 minutes (2 persons) without the use of tools.

1st place Ameristar Packaging Award 2013 and World Star Award 2013/2014 - Sanofi Pasteur
A reduction in pack volume of 50% cut the expensive cold-chain shipping & storage costs in half.
OUR FAMILY OF TOPLOADERS COVERING ALL YOUR PACKAGING REQUIREMENTS

ADAPTING TO MARKET REQUIREMENTS

Our family of TOPloaders covers all your packaging requirements. The NeoTOP machine family consists of a wide range of machines and configurations for different production volumes. The same package can run on all machines.

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

The same packaging solutions from clinical trials through to established market presence

<table>
<thead>
<tr>
<th>Packaging Service</th>
<th>NeoTOP x</th>
<th>NeoTOP x</th>
<th>NeoTOP 804</th>
<th>NeoTOP 1604</th>
<th>NeoTOP 804 Triple Mode</th>
</tr>
</thead>
<tbody>
<tr>
<td>manual packaging</td>
<td>semi automated</td>
<td>fully automated</td>
<td>fully automated</td>
<td>fully automated high speed</td>
<td>fully automated high speed</td>
</tr>
<tr>
<td>smallest lot sizes</td>
<td>small lots</td>
<td>mid-sized lots</td>
<td>mid to large lots</td>
<td>large lots</td>
<td>large lots</td>
</tr>
<tr>
<td>- 1,000,000 packs/year/shift</td>
<td>- 1 mio.</td>
<td>- 5 mio.</td>
<td>- 8 mio.</td>
<td>- 16 mio.</td>
<td>- 24 mio.</td>
</tr>
</tbody>
</table>

**NeoTOP x**
Modular and extendable packaging system, so you’re not stuck on one implementation; enabling flexible and efficient production.

<table>
<thead>
<tr>
<th>range of formats</th>
<th>max. no. of partitions</th>
<th>output packs/min</th>
</tr>
</thead>
<tbody>
<tr>
<td>minimum</td>
<td>60 x 45 x 17</td>
<td>4 / 6</td>
</tr>
<tr>
<td>maximum</td>
<td>260 x 200 x 120*</td>
<td></td>
</tr>
</tbody>
</table>
* up to

**NeoTOP 804**
Modular and extendable packaging system for the production of mid to large lots.

<table>
<thead>
<tr>
<th>range of formats</th>
<th>max. no. of partitions</th>
<th>output packs/min</th>
</tr>
</thead>
<tbody>
<tr>
<td>minimum</td>
<td>60 x 45 x 17</td>
<td>4</td>
</tr>
<tr>
<td>maximum</td>
<td>240 x 170 x 70</td>
<td></td>
</tr>
<tr>
<td>Triple Mode</td>
<td>30 x 60 x 17</td>
<td>1 / 4</td>
</tr>
<tr>
<td>maximum</td>
<td>70 x 170 x 70*</td>
<td></td>
</tr>
</tbody>
</table>
* up to

**NeoTOP 1604**
Modular and extendable packaging system, so you’re not stuck on one implementation for the production of large lots.

<table>
<thead>
<tr>
<th>range of formats</th>
<th>max. no. of partitions</th>
<th>output packs/min</th>
</tr>
</thead>
<tbody>
<tr>
<td>minimum</td>
<td>60 x 35 x 17</td>
<td>4</td>
</tr>
<tr>
<td>maximum</td>
<td>200 x 170 x 60*</td>
<td></td>
</tr>
<tr>
<td>optional</td>
<td>450 x 170 x 60*</td>
<td></td>
</tr>
</tbody>
</table>
* max. depending on box footprint
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, softblister etc. Through the years, Dividella has used its 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 in product handling, we have developed new modular feeding systems. This means that up to 400 objects per feeding unit per minute can be packaged; before the products are inserted they can also be aligned, spread 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 NeoTOP 804, which can produce up to 240 packs per minute in triple mode. Dividella has developed a wide range of scalable feeding systems for this purpose. Consequently, very large, thick inserts can be fed in at full speed, using minimum labour.

**Line expansion brings greater flexibility and efficiency**

1) Machine layout for Vial application

2) After expansion: Vial and/or Syringe application

**Providing solutions with feeding systems for all shapes and sizes – with no restrictions**

**Dividella Feeding Technology**

**NeoTOP Concept**

**Toploaders with infinite possibilities**

**Providing solutions with feeding systems for all shapes and sizes – with no restrictions**

**Dividella Feeding Technology**

**Line expansion brings greater flexibility and efficiency**

1) Machine layout for Vial application

2) After expansion: Vial and/or Syringe application

**Syringe Infeed**
The Syringes are delivered lying down through a puck system

**Syringe Inserter**
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

**Vial Infeeder**
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
BECAUSE WE DON’T JUST BUILD MACHINES

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

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

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

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

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

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

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

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.

NeoTOP CONCEPT
TOLOADERS WITH INFINITE POSSIBILITIES

DIVIDELLA DIVIDELLA

10 | DIVIDELLA