The Optimal Atmosphere for your Food
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Trademark

‘Atmobox‘

Atmo -sphere in its own box

European trademark
Patented sealing rim
Atmobox: Short Definition

- Reusable transport and storage box
- Sealable with plastic film
- Enclosing food hermetically tight under modified atmosphere (MAP)
Atmobox: Details

- **Transport Box**
  - Standard measure of 600 x 400 x 200 mm, like E2-box.
  - No need to change existing logistic process
- **Storage Box**
  - 2 to 3 times longer shelf life
- **Sealable**
  - infinitely often resealable
- **Hermetically Tight**
  - MAP-capable but also usable without change of atmosphere
- **Pastic Film Removable**
  - easily and without leaving residuums
Atmobox: Details

- Bearing Capacity
  like E2 - box: 200 KG guaranteed

- Machine Washable
  reusable for food after washing in current washing machines

- Stackability
  without hurting the sealing film or sealing rim of the box below
Atmobox: Details

- **Types**
  - 2 nestable versions available

- **Equipment (optional)**
  - RFID-Transponder, Barcode, DataMatrix-Code
Atmobox – The Components
- Components

- Sealing Machine
- Sealing Film
- Food Gas
Sealing Machines

Semi Automatic Machine

Automatic Machine
Sealing Film

PA / EVOH / PA / Sealing Layer
## Food Gas

Comparison of shelf-life for products packed in air and with MAPAX® respectively

<table>
<thead>
<tr>
<th>Food</th>
<th>Typical shelf-life in air</th>
<th>Typical shelf-life with MAPAX®</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raw red meat</td>
<td>2-4 days</td>
<td>5-8 days</td>
</tr>
<tr>
<td>Raw light poultry</td>
<td>4-7 days</td>
<td>16-21 days</td>
</tr>
<tr>
<td>Raw dark poultry</td>
<td>3-5 days</td>
<td>7-14 days</td>
</tr>
<tr>
<td>Sausages</td>
<td>2-4 days</td>
<td>2-5 weeks</td>
</tr>
<tr>
<td>Sliced cooked meat</td>
<td>2-4 days</td>
<td>2-5 weeks</td>
</tr>
<tr>
<td>Raw fish</td>
<td>2-3 days</td>
<td>5-9 days</td>
</tr>
<tr>
<td>Cooked fish</td>
<td>2-4 days</td>
<td>3-4 weeks</td>
</tr>
<tr>
<td>Hard cheese</td>
<td>2-3 weeks</td>
<td>4-10 weeks</td>
</tr>
<tr>
<td>Soft cheese</td>
<td>4-14 days</td>
<td>1-3 weeks</td>
</tr>
<tr>
<td>Cakes</td>
<td>several weeks</td>
<td>up to one year</td>
</tr>
<tr>
<td>Bread</td>
<td>some days</td>
<td>2 weeks</td>
</tr>
<tr>
<td>Pre-baked bread</td>
<td>5 days</td>
<td>20 days</td>
</tr>
<tr>
<td>Fresh cut salad mix</td>
<td>2-5 days</td>
<td>5-10 days</td>
</tr>
<tr>
<td>Fresh pasta</td>
<td>1-2 weeks</td>
<td>3-4 weeks</td>
</tr>
<tr>
<td>Pizza</td>
<td>7-10 days</td>
<td>2-4 weeks</td>
</tr>
<tr>
<td>Pies</td>
<td>3-5 days</td>
<td>2-3 weeks</td>
</tr>
<tr>
<td>Sandwiches</td>
<td>2-3 days</td>
<td>7-10 days</td>
</tr>
<tr>
<td>Ready meals</td>
<td>2-5 days</td>
<td>7-20 days</td>
</tr>
<tr>
<td>Dried foods</td>
<td>4-8 months</td>
<td>1-2 years</td>
</tr>
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Sealing Process
Sealing Process

One box length of film is unrolled
Box is moved into the machine
Gas exchange
Film is cut around the box
Film is sealed on the box
Box moves out

Semi Automatic Machine in the Cheese Industry
Sealing Process - 1st Step

- One box length of film is unrolled
- Box is moved into the machine
- Gas exchange
- Film is cut around the box
- Film is sealed on the box
- Box moves out

- film is unrolled and stretched
- box is put on the compartment
Sealing Process - 2nd Step

- One box length of film is unrolled
- Box is moved into the machine
- Gas exchange
- Film is cut around the box
- Film is sealed on the box
- Box moves out

- box sinks into the compartment
- and moves into the machine
Sealing Process - 3rd Step

- One box length of film is unrolled
- Box is moved into the machine
- Gas exchange
- Film is cut around the box
- Film is sealed on the box
- Box moves out

- Machine closes
- Gas exchange if wanted (in this case the box is evacuated and food gas is filled in)
Sealing Process - 4th Step

- One box length of film is unrolled
- Box is moved into the machine
- Gas exchange
- Film is cut around the box
- Film is sealed on the box
- Box moves out

➢ film is cut around the box
Sealing Process - 5th Step

- One box length of film is unrolled
- Box is moved into the machine
- Gas exchange
- Film is cut around the box
- Film is sealed on the box
- Box moves out

- Film is sealed on the sealing rim of the box by a heated metal frame
- Film rests are winded after cut
Sealing Process - 6th Step

- One box lenkt of film is unrolled
- Box is moved into the machine
- Gas exchange
- Film is cut around the box
- Film is sealed on the box
- Box moves out
Applications
Applications (examples)

Food - Cooled and Uncooled

Processed Food for Gastronomy and Canteen Kitchen

Fish and Meat

Technical Bits and Pieces, Elektronic Parts

High Value Goods
Benefits
Benefits

- **Prolongation of Shelf Life**
  - better food quality, less perishableness

- **Protection against Drying Out**
  - better quality, no weight loss (i.e. during ripening beef)

- **Stocking, Handling and Transport in one Box and without Repacking**
  - simplifying logistics

- **Transport of Sealed Filled Atmoboxes together with Empty Atmoboxes in one Vehicle Possible**
  - reducing number of trips
Benefits

- **Relyable Product Hygiene**
  - higher quality: no infiltration of foreign substances or bodies

- **Cleanliness**
  - liquid tight and smell tight

- **Theft Protection**
  - Cost Advantages as opened film indicates theft

- **Reduced Film Consumption**
  - Cost Advantages comparing to vacuum bags, used film is not qualified as special waste
Gas Tightness
Development of Oxygen Rate in Atmobox without Product

![Graph showing the development of oxygen rate over time.](image)
Development of Oxygen Rate in Atmobox with Smoked Ham

![Graph showing the development of oxygen rate over time in different boxes. The x-axis represents time in days, and the y-axis represents oxygen concentration in percent. The graph includes three lines representing different boxes, with Legend: box c20, box c20s, box n2.]

- Box c20
- Box c20s
- Box n2
Annexes
Atmobox

Sizes outside
Length: 600 mm
Width: 400 mm
Height: 200 mm
Height in stack: 190 mm
Weight.: 2000 g

Sizes inside
Length above: 553 mm
Length below: 553 mm
Width above: 353 mm
Width below: 353 mm
Height(bottom/sealing rim): 180 mm

Volume 30 Liters

Order number 547
Atmobox nestabel

Sizes outside
Length: 600 mm
Width: 400 mm
Height: 200 mm
Height in stack: 84 mm
Weight: 1960 g

Sizes inside
Length above: 553 mm
Length below: 533 mm
Width above: 535 mm
Width below: 333 mm
Height (bottom/sealing rim): 180 mm

Volume 29 liters
Order number 588
Atmobox nestabel

Sizes outside
Length: 600 mm
Width: 400 mm
Height: 140 mm
Height in stack: 64 mm
Weight: 1625 g

Sizes inside
Length above: 553 mm
Length below: 533 mm
Width above: 353 mm
Width below: 332 mm
Height (bottom/sealing rim): 180 mm

Volume 18 liters

Order number 595
Your Interlocutor

Helmut Wollersheim
(Dipl.-Kfm)

In den Helten 30a
D-53919 Weilerswist
Germany

Tel +49 (0) 2254 6014743
Fax +49 (0) 2254 6014744
Mobil +49 (0) 160 97915480

www.atmobox.de  wollersheim@atmobox.de