



**ATLANTIS-PAK**

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Packaging Solutions

# HEAT-SHRINK BAGS

# AMIVAC VT

Process Operating Manual



## **1. APPLICATION**

The AMIVAC VT heat-shrink high-barrier bags are designed for vacuum packaging, cooking, surface pasteurization, storage and sale of ham and meat products, without re-packaging.

The AMIVAC VT bags are made in accordance with Specifications TU 2297-007-27147091-2000.

The AMIVAC VT bags conform with the requirements of the Technical Regulation of the Customs Union TP TC 005/2011 'On Packaging Safety', as confirmed by the duly issued Declaration of Conformity.

The production, use, storage and transportation of the bags do not harm the environment or human health.

## **2. PROPERTIES AND ADVANTAGES OF THE PRODUCT**

### **2.1. Advantages of AMIVAC VT heat-shrink bags**

2.1.1. The optimum barrier characteristics in relation to oxygen and water vapor provide for a prolonged storage of the packaged products, during which the weight of the product and its sensory characteristics are preserved until consumption.

2.1.2. High thermal resistance makes it possible to cook products at temperatures of up to 95 °C inclusive.

2.1.3. High strength of the bags excludes the risk of damage of the product packaging during transportation, processing (cooking) and storage.

2.1.4. Individual protective packaging of the AMIVAC bag packs guarantees protection from adverse external factors throughout the guaranteed storage term, and provides for an excellent sanitary and hygienic condition of the bags.

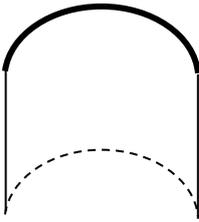
2.1.5. High transparency provides for demonstration of the packaged product on the shop shelves.



### 3. ASSORTMENT OF THE PRODUCTS

The assortment of the AMIVAC VT bags is shown in Table 1.

Table 1

	Seals	
	Straight	Semi-circular
Bag width	from 150 to 425 mm	from 150 to 425 mm
Bag length	from 100 to 1200 mm	from 100 to 1200 mm
Appearance		
Pasting on tape	Option	Option

**Bag colors:** clear

**Printing:** The AMIVAC VT bags can be used for either single- or double-sided printing. The number of the print colors is from 1+0 to 10+10. CMYK printing is optional.

**The AMIVAC VT bags are supplied in the following forms:**

- rolls with tear-off perforation;
- rolls without perforation;
- pasted on two tapes (for automatic equipment)
- cut into separate bags inside transportation packs, each pack containing 100 bags.

## 4. PROCESSING OF THE AMIVAC VT BAGS

### 4.1. Storage and transportation of bags

4.1.1. The bags must be stored in dry and clean rooms, where the temperature does not exceed 35°C, and the relative humidity is not more than 80%.

4.1.2. During the storage and transportation, the boxes containing the bags should not be exposed to high temperatures (more than 35°C) or direct sunlight.

4.1.3. Never drop the boxes containing the bags or subject them to impacts.

4.1.4. If the bags were transported at a subzero temperature, keep them at room temperature for at least 24 hours before opening the manufacturer's packing.

4.1.5. The leftover bags should be re-packaged into a new pack under vacuum.

## 4.2. Selection of the required bag size

To find the required width (S) of the bag, measure the perimeter of the product to be packaged in its widest part. Calculate the bag width by the formula:

Width = perimeter of the product (in its widest part) x 0.55 (mm)

To find the required length (L) of the bag, measure the perimeter of the product to be packaged in its longest part. Calculate the bag length by the formula:

Length = perimeter of the product (in its longest part) / 2 + 100 mm

If the bag will be closed by clipping, add **100** mm to the calculated bag length value.

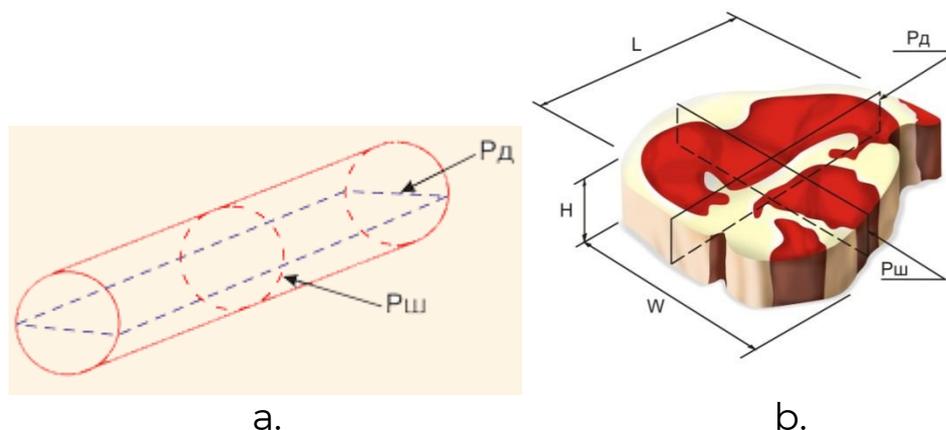


Fig.1

where  $P_{ш}$  is the perimeter of the product in its widest part;  
 $P_{д}$  is the perimeter of the product in its longest part.

### 4.3. Preparation of the bags for processing

It is recommended to open the packs containing the bags immediately before use. If any bags taken out of the transportation packing are left over, it is recommended to re-package them under vacuum into a new pack.

No contact of the bags with water is allowable until completion of the product packaging.

### 4.4. Packaging

Packaging of food products must be performed in a production/ packaging room compliant with the requirements of the sanitary regulations and rules applicable to the food industry.

Packaging of the product shall be performed by means of special equipment (vacuum packaging machines, clippers). Adhere to the operating modes recommended by the manufacturer of the packaging equipment to ensure a stable packaging process.

If there is no operating manual for the equipment, observe the following operating recommended operating modes:

#### 4.4.1 Packaging on chamber machines:

- Check the sealing zone. Keep the sealing zone clean. No foreign inclusions are allowable, and the protective coating of the heating element must be free of burnt-through areas.
- Put the bag containing the product in the vacuum zone. The product inside the bag should not be too close to the heat-sealing bar, the recommended distance being 5-10 cm away from the bar. This reserve length will be needed for expansion of the bag during the cooking.
- There should be no bag folds under the bar to avoid subsequent loss of sealing (Fig. 2).

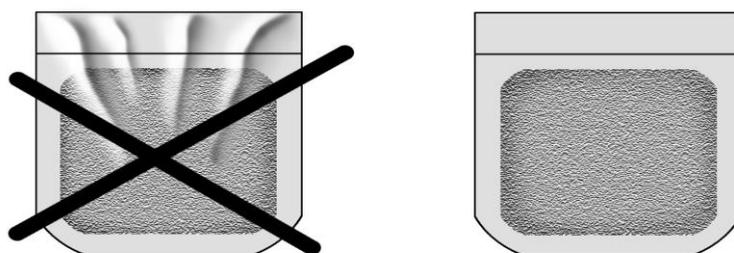


Fig.2

- Select the vacuum depth. The vacuum depth is adjusted depending on the product to be packaged. The approximate vacuum depth value is 95 - 98% (residual pressure about 4.9 kPa). When packaging products with a high moisture content, the vacuum depth should be reduced, depending on the product moisture content.
- Select the mean sealing time. Increase or decrease the sealing time to achieve the optimum seal formation mode.
- If the bags are sealed with separate control of the strings, select such a time for string contact as to provide for free separation of the cutoff part of the bag.
- Evacuate the bag (when packaging products in a modified gas atmosphere, the stage of evacuation is followed by the stage of filling of the bag with a modified gas atmosphere specially selected for the particular type of product) and heat-seal by closing the lid of the vacuum packaging equipment.
- After heat-sealing, the seal must be continuous and must show the imprint of the sealing bar of the packaging machine.  
If the package sealing is lost, the product must be returned for re-packaging. Failed bags may not be re-used.

#### **4.5. Cooking (pasteurization) of the products**

Sealed bags are loaded into cooking cauldrons or on the shelves of a special cooking chamber. The packaged products shall be cooked until ready for consumption depending on the weight of the product (from 30 minutes to 8 hours) at a temperature of 80-95 °C. After the cooking, the bag may be removed off the product, or the product may be left inside the AMIVAC VT bag for storage and sale.

The same bag may be used for surface pasteurization of the product. Put the sealed bag on the chamber shelf and heat it at the temperature of 72-75 °C during 3-5 minutes. This may be followed by heat shrinking (if necessary).

#### **4.6. Heat shrinkage**

Heat shrinkage of the bag containing the product is achieved in a heat-shrinking tank or tunnel. The equipment must provide for adjustment and control of the conditions and parameters of the technological process of heat shrinking.

Heat shrinking shall be performed by immersion of the bag containing the product in hot water or by exposure to hot water (steam) with a temperature from 90°C to 95°C during 2-3 seconds.



It is recommended to carry out the scheduled maintenance washing and treatment of the equipment.

#### **4.7 Storage and transportation of products packaged in AMIVAC VT bags**

It is recommended to put the packaged products in a cold store with a temperature not higher than 6°C, not later than 20 minutes after packaging.

### **5. MANUFACTURER'S GUARANTEES**

5.1 The Manufacturer guarantees conformity of the AMIVAC bags with the requirements of the Specifications subject to compliance with the required conditions of transportation and storage at the user's warehouse, and preservation of the integrity of the original packing.

5.2 The shelf life of the bags is 1 year from the date of manufacture.





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