



ATLANTIS-PAK

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Packaging Solutions



AMITAN Pro A CASING

Process Operating Manual



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1. APPLICATION

The **AMITAN Pro A** casing is designed for production of all types of encased cooked sausages and hams made by technological processes that involve smoking (smoke roasting), which makes it possible to obtain products with the traditional sensory characteristics typical of products packaged in cellulose casings.

The **AMITAN Pro A** casing is made by an original technology from blends of high-quality materials of synthetic and natural origin.

2. ADVANTAGES

2.1. The **smoke-permeable AMITAN Pro A** casing makes it possible to roast and smoke the products to impart to them the characteristic pleasant taste and flavor, and to create the coagulated protein crust and glossy surface of the products under the casing.

2.2. The **high mechanical strength** of the **AMITAN Pro A** casing makes it possible to use high capacity automatic and semi-automatic clippers, which provides for a high speed of production and stability of the shape.

2.3. The **elasticity** of the casing makes it possible to overstuff the **AMITAN Pro A** casing by 10%.

2.4. The **high oxygen barrier capacity** compared with the cellulose casings ensures the following advantageous properties:

- reduction of the oxidation processes, in particular, rancidification of speck;
- preservation of the individual flavor of spices in the finished products throughout the shelf life.

2.5. With its **low permeability to water vapor** the **AMITAN Pro A** casing is an economic alternative to cellulose casings, because moisture losses are reduced during thermal processing and storage, which makes it possible to:

- achieve the desired smoked taste and flavor;
- reduce the moisture losses during the thermal processing and storage of sausage products in the **AMITAN Pro A** casing.

2.6. Microbiological resistance. The polymers used for production of the **AMITAN Pro A** casing are inert to the action of bacteria and mold fungi. This improves the hygienic characteristics of both the casing itself, and the finished products.



3. ASSORTMENT

The casing calibers are 50 - 120mm.

Colors of the **AMITAN Pro A** casing: white, clear, brown, red, claret, salmon, cherry, red orange, smoke, mahogany, light smoke, orange, cream, cream 1, pink.

Casing in bespoke colors can be supplied.

Single- or double-sided printing is possible on the **AMITAN Pro A** casing. The number of print colors varies from 1 to 6. CMYK printing is optional.

The **AMITAN Pro A** casing is supplied in rolls or shirred sticks.

4. CASING USE TECHNOLOGY

4.1 Storage and transportation of the casing

4.1.1. The casing must be stored in the original packing in closed dry and clean rooms conforming to the sanitary-hygienic standards for the relevant sector of the food industry, at a distance of not less than 1m from heating devices, in the absence of strong-smelling or corrosive substances, at a temperature not exceeding 25°C and air relative humidity of 50-60% .

4.1.2. During storage and transportation, the casing should not be exposed to direct sunlight or high temperatures.

4.1.3. Open the manufacturer's packing immediately before processing of the casing. If the integrity of the manufacturer's packing is compromised during storage, exclude any possibility of premature humidification (wetting) of the casing during the subsequent storage, since it may cause adhesion of the casing in the process of drying and rupture during the processing.

4.1.4. If the casing was transported or stored at a temperature below 0 °C, then prior to use hold it at room temperature for not less than 24 hours.

4.1.5. Never drop the boxes with casings or subject them to impacts.

4.1.6. Never stack casing rolls without cardboard spacers between the roll ends.

4.2 Preparation of the casing for use

The procedure for preparation of the **AMITAN Pro A** casing for stuffing consists in the following:

Bring the casing to the production shop from the store room, put it on a dry surface (floor, table), then open the manufacturer's packing immediately before use of the casing.



Soak in potable water with a temperature of 25-30 °C. Do not soak the casing in hot water, otherwise the casing will shrink during the soaking process.

The casing in rolls must be first cut into lengths, then soaked so that the water wets the inside of the tube. When shirred sticks of the **AMITAN Pro A** casing are used, keep the shirred stick fully submerged in water. Water must freely penetrate inside the shirred stick, driving out the air.

Casing soaking time:

- not less than 30 minutes for casings cut into lengths;
- not less than 60 minutes for shirred casings.

After the soaking, remove the residual water from the tube, and put the casing over the stuffer horn.

Do not soak more casing than is required.

If these requirements are observed, the casing will acquire a high elasticity, which significantly facilitates the stuffing process, and provides for uniform filling throughout the chub.

4.3 Preparation of the emulsion

For the production of cooked sausages and hams in the **AMITAN Pro A** casing, the quantity of water added to the emulsion remains the same as when cellulose casings are used.

In the development of new recipes according to the regulatory documentation, the amount of the added water should be determined with regard to the moisture-retaining properties of the gelling agents used, such as carrageenans, plant proteins, animal proteins, etc., to avoid any water pockets.

4.4 Molding of sausage products

Start molding of the **AMITAN Pro A** casing with inspection of the equipment and the work table.

Make sure that there are no burrs on the equipment parts, or sharp objects, dents, or rough areas on the working surface of the table, in order to avoid damage to the casing.

Do not allow any rubbing of the casing roll end against rough surfaces during the processing.

Never puncture the casing of the chubs. The casing will burst, if punctured.

The ratio between the stuffed caliber and the nominal caliber of the casing is an important factor. In the process of molding of the sausage products, take care to fill the casing as tight as possible, without air trapped inside. It is recommended to fill the **AMITAN Pro A** casing with 10% overstuffing (when the 65mm nominal caliber



casing is used, the recommended stuffed caliber should be 71.5mm). The lower the emulsion temperature and the denser the consistence, the less is the stuffed caliber.

Selection of the recommended stuffed caliber provides for a good appearance of the finished product, increases the stuffing capacity, and reduces the risk of water or fat pockets.

In case of manual tying of sausage chubs, pay special attention to the quality of the tying material, and pre-soak the string, whenever necessary, to soften the hard inclusions and prevent damaging the casing.

The clip must securely hold the ends of the chub, without damaging the casing. (see Table 1).

Recommended clip types

Table 1

Caliber	POLY-CLIP		ALPINA	TECHNOPACK		COMPO	CORUND
	Clip interval 12 interval 15 interval 18	Clip серии S	Clip interval 12 interval 15 interval 18	Clip серии E	Clip серии G	Clip серии B, BP	Clip
50 - 60	15-7-5×1.5 15-8-5×1.75 18-7-5×1.75	628 632 735	15/7-5×1.5 15/8-5×1.75 18/7-5×1.75	210 410	175 370	B 2, BP 2	XE 210 XE 220 2.5x13.6x 14
65-70	15-8-5×1.5 18-7-5×1.5 18-9-5×2.0	628 632 735	15/8-5×1.5 18/7-5×1.5 18/9-5×2.0	210 220 410	175 370	B 2, BP 2	XE 220 2.5x13.6x 14 2.5x13.6x 15
75-80	15-8-5×1.5 15-9-5×1.5 18-9-5×2.0	632 638 735 844	15/8-5×1.5 15/9-5×1.5 18/9-5×2.0	220 410 420	175 200 370	B 2, BP 2 B 3, BP 3	XE 220 2.5x13.6x 15 2.5x13.6x 16
85-100	15-9-	740	15/9-	220	200	-	XE 220



	5×1.5 15-10- 5×2.0 18-9- 5×2.0 18-10- 5×2.5	844	5×1.5 15/10- 5×2.0 18/9- 5×2.0 18/10- 5×2.5	420	370 390		2.5×13.6× 15 2.5×13.6× 16
105-120	15-10- 5×2.0 15-11- 5×2.0 18-10- 5×2.5 18-11- 5×2.0	740 744 844	15/10- 5×2.0 15/11- 5×2.0 18/10- 5×2.5 18/11- 5×2.0	220 230 420	200 225 370 390	-	-

4.5 Thermal processing

Thermal processing of cooked sausages and hams in the **AMITAN Pro A** casing is carried out in stationary shaft-type chambers and universal heat chambers.

Each manufacturer should choose its individual thermal processing modes, because the capacity of the equipment (stationary shaft-type chamber or universal heat chamber) is all important in this process.

We recommend the classical thermal processing, which includes the stages of drying (color formation), smoking, and cooking.

Drying should start at a temperature of 50 - 55 °C. As the drying cycle progresses, the temperature is gradually raised to 60 - 65°C. At this stage coagulation of the emulsion proteins is achieved, and the 'protein crust' is formed.

The next stage is smoking at a temperature of about 70 - 75 °C. At this stage further consolidation of the crust occurs and the crust becomes colored under the effect of the smoke components.

Then the product is cooked at the air humidity of 100% and temperature of 75 - 80 °C until ready for consumption.

The processes of drying and smoking have a significant impact on the quality of the finished product. By adjusting the temperature and duration of these stages, the thermal processing losses, the crust thickness, the color and the taste of the product can be varied.

The best thermal processing conditions are achieved when the drying, smoking, cooking, and cooling are carried out in programmable units.



Examples of thermal processing conditions for the **AMITAN Pro A** casing are shown below.

Example 1 (see Table 2). Fessmann chamber (liquid smoke). Product: cooked sausage, dia 65.

Table 2

Process stage	Temperature, °C	Time, minutes
Heating	55	25
Roasting	65	20
Smoking	65	10
Drying	65	10
Smoking	70	10
Drying	70	10
Smoking	70	10
Drying	70	10
Cooking	78	until 72 °C in product core
Smoking	70	10
Drying	65	10

Example 2 (see Table 3). Thermostar chamber (beech chips). Product: cooked sausage, dia 65.

Table 3

Process stage	Temperature, °C	Time, minutes
Heating	55	30
Drying	65	20
Smoking	65	20
Smoking	70	20
Smoking	75	20
Cooking	78	until 72 °C in product core
Drying	65	10

4.6 Cooling

Upon completion of the thermal processing, the sausages and hams in the **AMITAN Pro A** casing must be immediately cooled.

Cooling can be carried out under running water or shower, or by means of spraying with time-delayed equipment, until the chub core temperature is down to 25-35°C.



Cold air cooling is not allowed. Exclude any exposure of the finished products to air drafts until complete cooling of sausages, because this may cause wrinkles on the surface of the product.

5. MANUFACTURER'S GUARANTEES

The Manufacturer guarantees conformity of the casing with the Specification requirements subject to compliance with the required conditions of transportation and storage at the user's warehouse.

The shelf life of the casing is 2 years from manufacture, subject to integrity of the manufacturer's packing.

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