

USE OF CONVECTION STEAMERS IN RESTAURANT HOUSEHOLDS

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Convection steamer is a universal thermal equipment combining two technologies of food processing – by steam and convection. This allows you cooking products in a variety of modes. Convection steamer treats products by heat circulating hot air and steam separately or in combination. Application of a convection steamer allows one working chamber to use different methods of cooking: roasting, baking, cooking, steaming, baking and regeneration. Convection steamer is able to replace a number of other devices: a cooker, an oven, a convection oven, a frying pan, a food boiler, a fryer, and others. Typically, a convection steamer oven can concentrate up to 75% of thermal operations carried out in the kitchen. Among the advantages of the convection steamer, we may call the weight loss of meat (60% lower in comparison with cooking on the stove). The volume of vegetables and garnishes boiling down is 100% less (products maintain all nutrients and vitamins). 95% less fat is used in a convection steamer. Electricity consumption is 60% less, and in addition, there is no need to keep the convection steamer working permanently as the output is 5 minutes. 40% water is saved. Cooking time reduces by 30–50%. Kitchen space is saved due to the combination of several types of heat treatment in one working camera. Money is saved due to the purchase of additional equipment. The main modes of the convection steamer are convection, steam cooking, and a combined cooking option when both steam and hot air are used simultaneously.

Steam mode ensures even cooking. The appetizing color and preservation of a significant part of nutrients are the main features of this mode of work. It is used for extinguishing, blanching and cooking. The use of hot steam retains most of mineral salts and nutrients and significantly reduces the use of oil, salt and spices.

The convection mode is ideal for preparing a delicate fillet, cutlets with a crunchy crust, a brittle bite or preparation of deep-frozen products. Hot air stream envelops the product from all sides, instantly binds meat

protein, thus preventing the release of meat juice. Therefore, even fast-cooked meat of large volumes remains juicy. This mode is suitable for roasting, baking and grilling.

Steam and hot air interact during the combined mode application. Hot and humid climate in the working chamber prevents food from drying, reduces weight loss and allows a cook achieve even frying. Cooking time reduces, and the losses, which are inevitable during usual roasting, are reduced by almost 50%. This mode is designed for combined extinguishing, combined frying, glazed and combined baking.

Convection steamer is a professional kitchen equipment, applying different combinations of steam and compulsory convection modes for cooking. This type of kitchen equipment allows producing up to 70% of all possible products treated by heat. Thus, convection steamers replace some types of thermal equipment, among which there are steamers, ovens, convection ovens, electric cookers, cookers, frying pans. Therefore, this type of equipment is very relevant for use at restaurants and in food industry. The main criterion for distinguishing convection steamer from other types of similar devices is the presence of operating mode switches in them. At the same time, the main modes of a convection steamer operation are: steam cooking; convection; combinatory cooking; low temperature steam; regeneration. In working position of a convection steamer, two methods of vaporization are distinguished.

The first one is to get steam with your own steam generator or boiler. The other method presupposes direct injection of water into the turbine, whose blades spray water, which falling on the heating elements, quickly evaporates, forming steam. Also, reduction of energy consumption and raw material consumption (oils), improvement of dietary properties of a product, the possibility of cooking dishes from different types of raw materials simultaneously, unification of the working chamber volume can be attributed to the convection steamer's advantages. Therefore, the use of convection steamers in restaurants is efficient in terms of profitability. It means that it is possible to cook a large quantity of products consuming less heat energy, due to its multifunctionality, convection steamer can replace the steamer, frying pan, plate, thus simultaneously saving space in the kitchen.