



BRINGING THE TASTES
INSIDE THE SEEDS

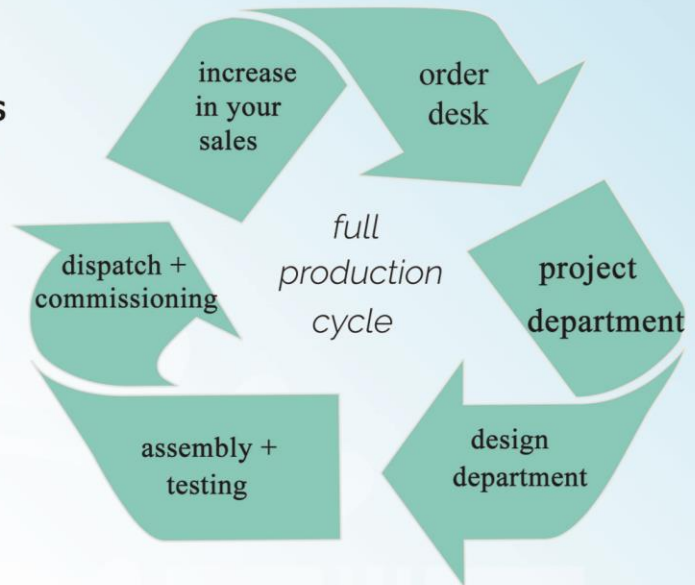


Untypikal about company

We are not like typical equipment manufacturers.

We don't make standard offers and don't do typical work. Our team is a fusion of specialists from different fields who create a single integrated solution.

This structure offers our customers maximum flexibility and individuality in creating each specific project. Equipment is only a 1/3 of our day-to-day projects; the rest is working with technology at a deeper level. That's why we are the creators of "living" solutions!



GENERAL DISCRIPTION:

Proper salting of seeds and nuts is a key to the long-standing storage thereof with ensuring the best palatability traits to be appreciated by your customers.

Seeds and nuts salted with diffuse technique in a vacuum environment have an original rich taste and are less prone to oxidation.

The advantage of applying the vacuum principle of diffuse salting is the low level of the waste brine residue, since the product absorbs the maximum possible amount of brine in a high vacuum environment. Therefore, your ***product is always salted with fresh brine***, that undoubtedly has a positive effect on the final product and also eliminates the use of various filters, sumps whatsoever requiring continuous boiling of the brine, thus providing for saving costs of electricity.

Due to the hard vacuum and advanced salting technologies applied, the product salted with our equipment has a much brighter taste as compared with products salted in the hot water environment. In view of the process technology, the plant may saturate products not only with salt, but also with other flavoring ingredients, which allows you to make a variety of new products that your consumers will certainly appreciate. Diffuse salting principle assumes the penetration of the brine into the product through its natural protective casing. Following the feeding of fresh product (seeds, nuts) into the machine, pores on the product shells are opened with the pressure, temperature and vacuum vibration and through which a pre-prepared brine containing salt and spices enters inside (into the kernel of seed or nut). Therefore, the best palatability traits are ensured.

Main parameters:



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Meaning	Single execution	Double version
Capacity	300\600 kg\h	1000\1500 kg\h
Power	15-40 kW	30-80 kW
Loading capacity	250\450	700\900
Adding flavors and tastes	Additional option	Additional option
Water	300-400 l\h	500-600 l\h
Air pressure	6 bar, 10 l\min	6 bar, 20 l\min

Diffusion Chamber



Parts of diffusion unit:

- 1) Tank, 2,000 L (stainless steel)
- 2) Tank drive motor 5 KW.
- 3) Frame (stainless steel)
- 4) Air treatment plant (primary air treatment)
- 5) Loading door
- 6) Automatic system for tank moving to the loading position.
- 7) Electronic self-diagnostic system (for troubleshooting purposes)
- 8) Vertical loading funnel
- 9) Horizontal discharge funnel
- 10) Auxiliary brine discharge cock
- 11) Automatic brine injection unit
- 12) Automatic flavors injection unit
- 13) Adjuster for the stirrer blades in the tank for gentle stirring of the product.



Automatic brine preparation station



Station consists of:

- 1) Main tank, 250 L vol.
- 2) Heating oil jacket
- 3) Salt infeed hopper
- 4) Ultrasonic level detection unit
- 5) Industrial pump for thorough stirring of salt
- 6) Electrically driven valves for brine supply line
- 7) SHTEBEL in-line water heating unit
- 8) Automatic salt dispenser

All units and parts are made of food grade stainless steel.

Brine preparation station is intended for making, stirring, heating and accurate dosing of the brine fed to the diffusion chamber.

Brine dosing accuracy is controlled via computer and allows reducing amount of not used brine up to 5L for each 150 kg of seeds. Therefore, the need for continuous filtration of the waste brine is eliminated.

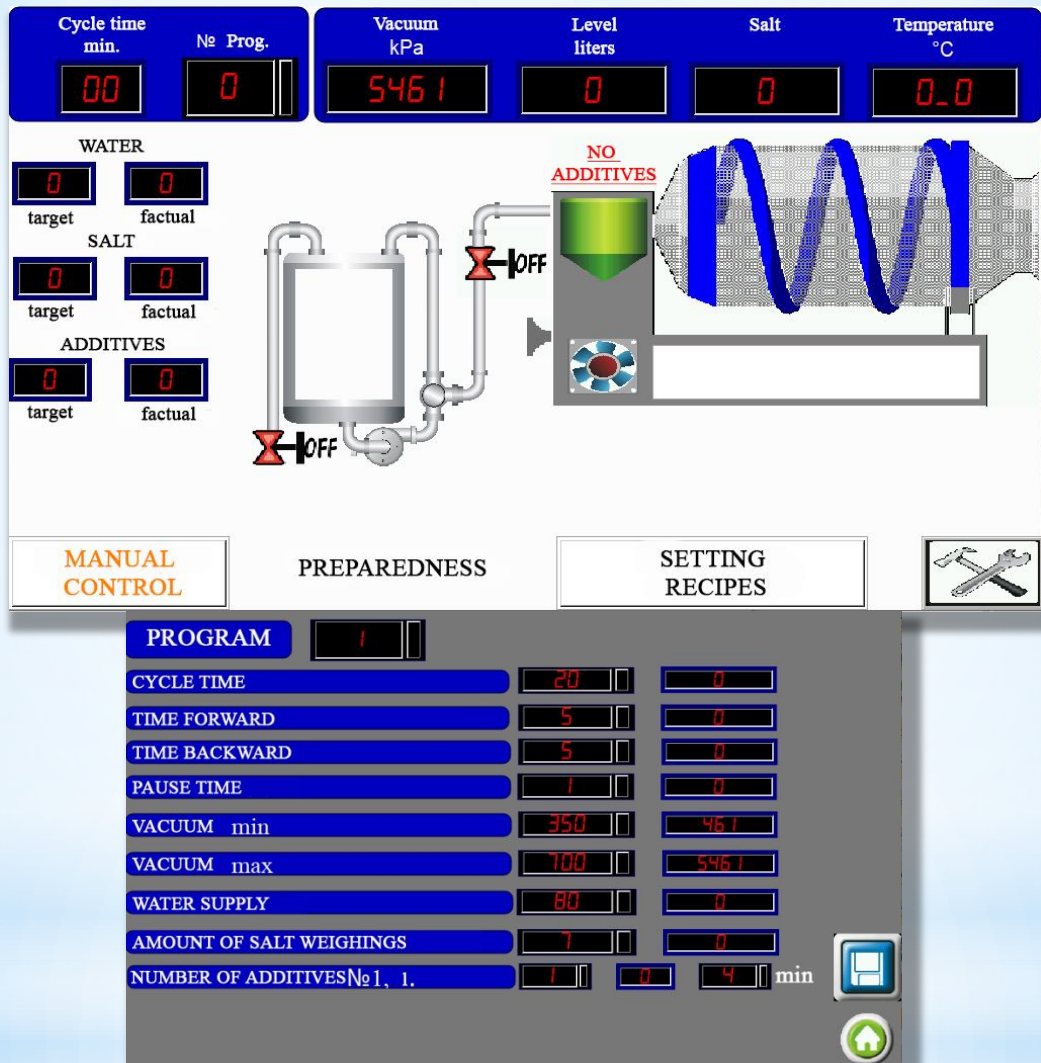
BUSCH Vacuum Treatment Plant (VTP) (Vacuum pump station)



**Vacuum treatment plant (VTP) with rated capacity
of 60 - 100 cu. m/min.**

- 1) Creates hard vacuum environment in the diffuse brine treatment chamber.
- 2) Vacuum pump vanes are made of titanium.
- 3) Additional oil purification system.
- 4) The VTP is provided with a protective system preventing the vacuum pump from shell residues, dust, vapors or salt getting inside.
- 5) Kamoizzi vacuum vibration unit.

Programming and automation of the line



Transducers and measuring transmitters that allow analyzing of each and every parameter of the brine treatment process.

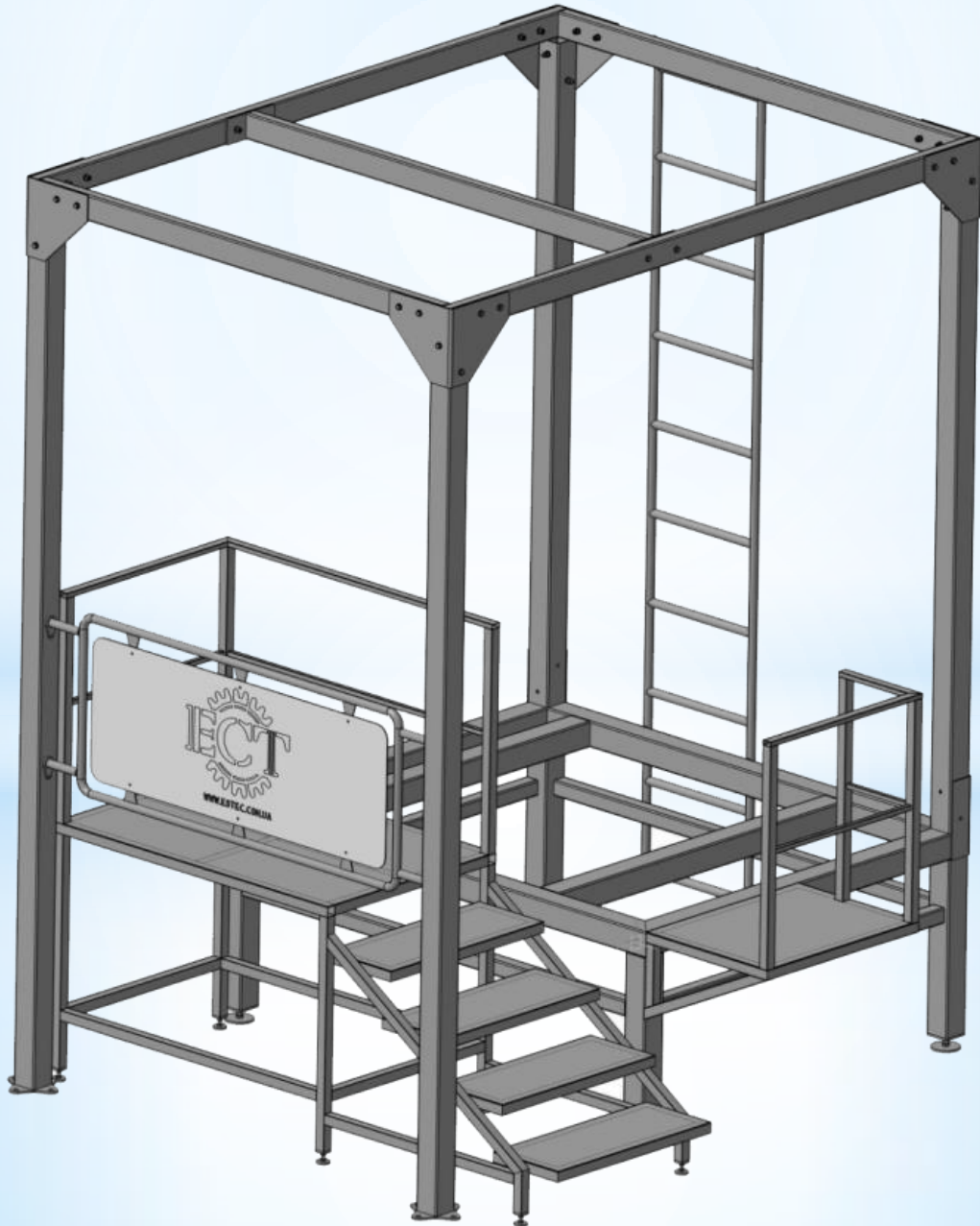
Operator touch-screen panel.

Controllers enabling a real-time monitoring and automatic adjustment of process parameters according to recipe chosen.

Software with an ergonomic Russian or English interface makes it easy to operate the equipment.

Automatic system analysis will always help to eliminate emerging issues while operating the line.

Overpass for maintenance and installation raw material loading hopper

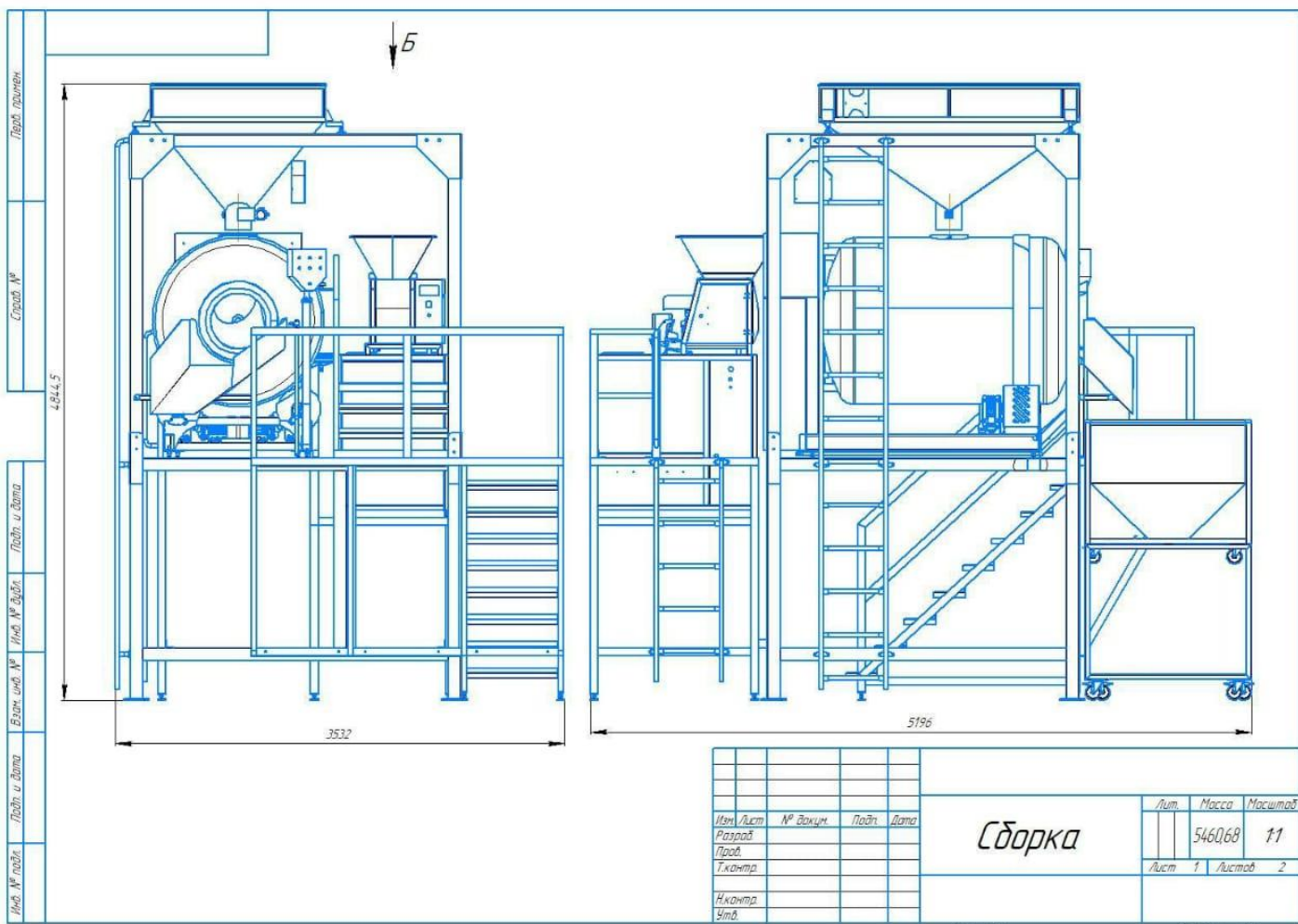


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						ТОВ "ЕСТ"				
Имя/Имя	№ докум.	Год	Дата	г. Житомир						
Розов	Климен		2020							
Григор										
Иванов										
Сид	Небедов									

Product loading hopper

Conveyors and elevators
used for the process integration
and automation purposes

The receiving hopper is mounted above the diffusion chamber. Equipped with a function of automatic weighing of raw materials according to a given recipe. It is equipped with a pneumatic gate. Made of food grade stainless steel.



How it looks alive:



Seed, nut and snack product manufacturers



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watch the video



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