

STATE-OF-THE-ART TECHNOLOGY OF PHYSICAL REFINING FOR DECENTRALIZED VEGETABLE OIL PROCESSING

- Get vegetable oil by purely physical method with no use of chemicals
- Low process losses in oil no soapstock produced
- Vacuum below the values of industry standard 2 mbar
- High content of antioxidants and low content of trans-unsaturated fatty acids and process contaminants
- Refining of specialty oil starting from 100 kg of oil per hour





REFINING

When developing the refining technology we have focused on reaching the highest quality of the final product (refined vegetable oil). We have achieved excellent qualitative parameters of the refined oil with low content of trans-unsaturated fatty acids, which adversely affect human health (cause atherosclerosis) and low content of process contaminants (3-MPCD and GE), which are carcinogenic.

This way we have obtained oil, which is not only healthier, but due to gentle refining method it preserves maximal quantity of natural antioxidants (namely tocopherols), which further extends the shelf life of the refined oil. We have reached such results mainly by lowering temperature exposure, in order to avoid thermal degradation of oil. The process of Refining consists of 4 steps: The refining process consists of 4 procedures: Degumming, Bleaching, Deacidification and Dewaxing, which is used for removal of waxes from sunflower oil. These technologies are available as standalone units as well.



OIL & FEED TECH



ADVANTAGES OF PHYSICAL REFINING OF VEGETABLE OILS

- Minimalizes use of chemicals
- Saves energy by heat recovery due to providing a complex solution
- Utilizes of deep vacuum
- Low energy demand of the vacuum system due to optimized freezing system
- Minimizes wastes due to efficient utilization of byproducts (lecithin, waxes, free fatty acids)

COMPARISON OF PROCESSES OF PHYSICAL AND CHEMICAL REFINING



Efficient utilization of byproducts of physical refining (phospholipids, lecithin, spent bleaching earth, waxes, FFA condensate)

Unusable byproducts formed in chemical refining (soapstock, deocondensate)

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