



Oilseeds Preparation Plants

Andreotti Impianti is an Italian Company active in the design, manufacture, erection and start-up of oilseeds and edible oils processing plants. Born in 1955 on the initiative of Mr. Argentino Andreotti, ANDREOTTI IMPIANTI S.p.A. has through the years remained a totally private family Company, consolidating its position as Italian Leader, reaching up a notable reputation also on the international markets, where its growth factor has been on a continuous remarkable uptrend over the last few years.

This year we'll celebrate our 60th anniversary. Many things have been changed over these first 60 years of activity, apart from considering each of our Client as our greatest asset.



ANDREOTTI IMPIANTI, WORLDWIDE SUCCESSFUL
FOR OVER 60 YEARS, NOW



OILSEEDS PREPARATION PLANTS

Andreotti Impianti technologies cover all the necessary equipment for the preparation of the main oilseeds as soybeans, sunflowerseed and rapeseed.

The preparation plant is a very crucial sequence of activities from which depends the performance guarantees of any following process plant. The main target of preparation is in fact to prepare, modify and bring the harvested seed in the most suitable specification for having the most effective extraction by solvent extraction or mechanical pressing.

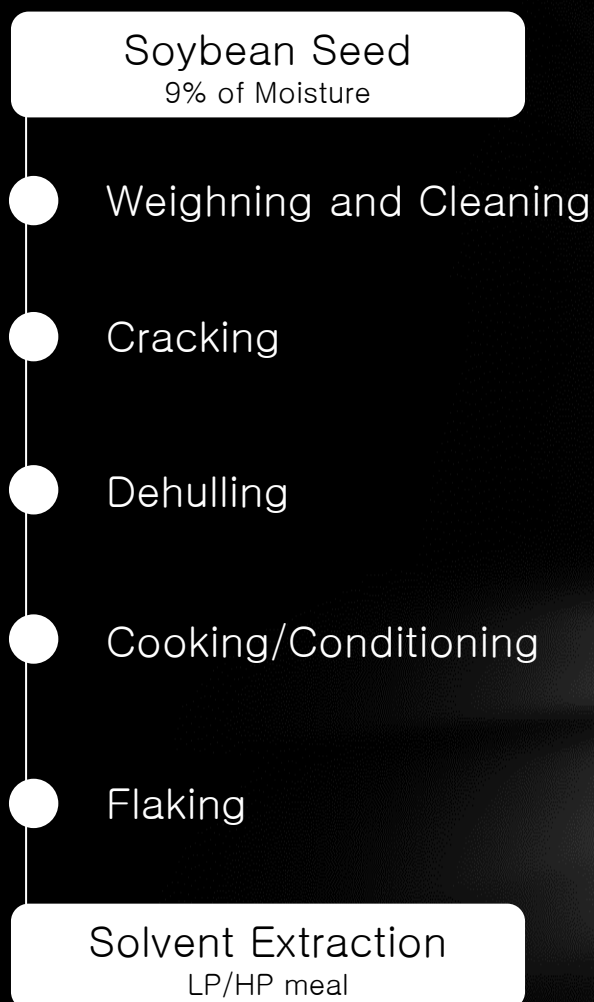


MAIN PREPARATION STEPS

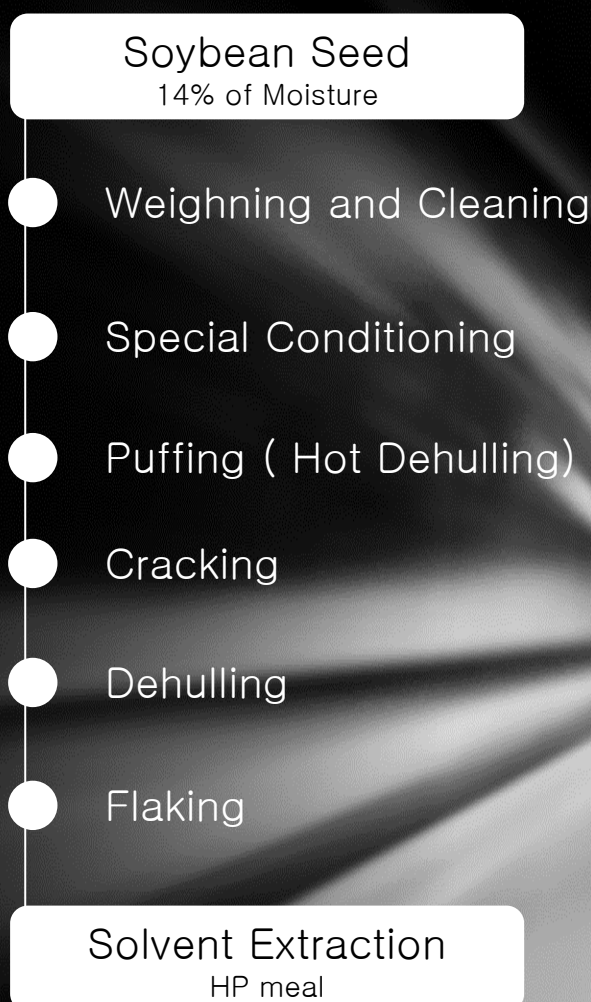
According to the type of seed processed, the preparation plant foresees a dedicated succession of several processes:

- Weighing and cleaning—removing of coarse particles
- Destoning—removing stones and impurities
- Conditioning—reducing the viscosity and adjust the moisture content
- Cracking—reducing the size of the cleaned oilseeds
- Dehulling—removing hulls for modifying the final meal protein content
- Flaking—improving extraction performances for soybean
- Pressing—improving extraction performances for rapeseed

FRONT END DEHULLING



WARM DEHULLING



PREPARATION OF SOYBEANS

Many different ways of processing soybean seed are possible.
The choice on the most suitable process depends on two main aspects:

- Starting moisture grade of Soybean seeds
- Final targeted meal protein content

Independently we're talking about Front End dehulling, Warm Dehulling , Hot Dehulling or processes without dehulling ,the seed could be fed to the plant with a moisture grade up to 14% and we could get a final meal that fully match the HP meal specification



Rapeseed

- Weighning and Cleaning
- Cracking
- Cooking/Conditioning
- Flaking
- Pressing

Solvent Extraction

PREPARATION OF RAPESEEDS

The rapeseed has an higher oil content than soybean seed and need to be physically modified in terms of shape and particle size before being sent to extraction plant.

The rapeseed in fact, after being cleaned, is broken and conditioned in dedicated equipment before flaking where the thickness of the flakes is a key factor for an efficient oil extraction phase.

Very commonly the flakes of rapeseed are transformed in to expelled cake thanks to screw presses action, where the oil content in the cake is reduced to below 20%

Sunflowerseed

● Weighning and Cleaning

● Dehulling

● Hulls separation

● Hull control

● Cooking / Conditioning

● Flaking

● Pressing

Solvent Extraction

One Stage Dehulling:

- Residual hulls content ~ 16%
- Meal protein content < 40%

Double Stage Dehulling:

- Residual hulls content ~ 12%
- Meal protein content > 40%

PREPARATION OF SUNFLOWERSEED

One of the most important phase in Sunflowerseed processing is the dehulling one that has a direct impact on final meal protein content. Higher is the amount of Hulls removed, higher will be protein % in the extracted meal.

Andreotti could provide several ways to remove the hulls from sunflowerseed:

- One stage dehulling for 16% hull residual content in dehulled seed
- Double stage dehulling for 12% hull residual content in dehulled seed.

After the dehulling a hull control section is required for ensuring that oil losses during hull separation is as low as possible

Extracted Meals / Hulls

● Sieving

● Grinding

● Pelletizing

● Pellet cooling

Pellets

GRINDING AND PELLETTIZING

Why is important to grind and/or pelletize meals and hulls?

The extracted meals could be used in feed production as important protein additive in combination with other feed ingredients.

The separated hulls could be sold in the market as they are or even most commonly are used as an alternative energy source especially for steam generation in boiler rooms.

Thanks to grinding and/or pelletizing plants, Andreotti technologies could transform by-product in valuable ones, driving the client to be paid back with a premium price or having significant operational and logistical cost savings.



Made In Italy

ANDREOTTI IMPIANTI S.p.A. manufactures the core pieces of equipment of all designed process plant in highly qualified workshops in Italy for assuring an unexceeded construction quality control.



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