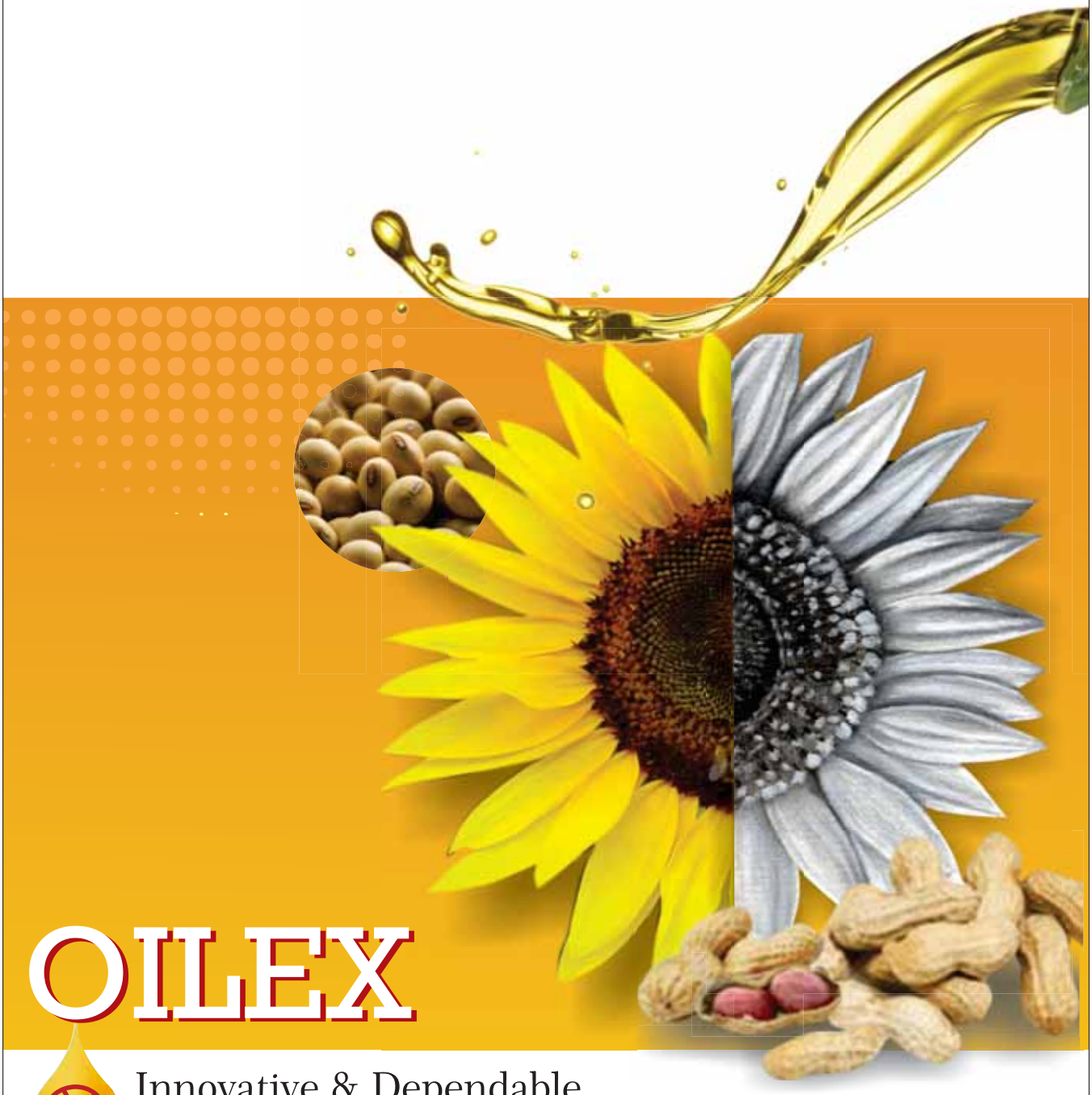


OILEX

Innovative & Dependable
Solutions in
Oil Extraction

Oilex Engineers (India) Pvt. Ltd.

OILEX

Established in 1984

Oilex is one of India's reputed manufacturers and exporters of Vegetable Oil Extraction and Processing Industry since 1984.

We believe in supplying top quality products and world class customer service through ethical and best practices, offering our customers complete product satisfaction.

Our products are bespoke, to meet our customer's demanding requirements and specifications. We work to the highest standards in our industry and strive for ongoing business growth and development and strive to surpass customer expectations through our innovative and cutting-edge production facilities.

Oilex is associated to the global players in this sector and has been able to handle challenges creatively provided by the clients.

We have forged a strong longstanding relationship with many of our customers through affordable, innovative and dependable solutions which has resulted in high proportion of repeat business.

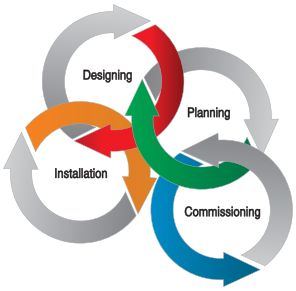
Mission

To create new business paradigms by executing projects on time and within budgets by providing superior quality products with utmost customer satisfaction.

Vision

Our vision is to be globally competitive organization with a focus to produce world class tailor made products exceeding customer expectations

More than **200** Projects completed successfully



Pioneers in (since 1984)

- Seed Processing Plant
- Solvent Extraction Plant
- Meal Finishing Plant
- Vegetable Oil Refining Plants
- Oil Mill Plants
- Seed Processing Plant
- Feed Mill

Export

(More than 20 countries)

Turkey
Bangladesh
Nigeria
Nepal
Kenya
Russia
Ukraine

Valued Customers

Achievements

Niryat (Export) Ratna Award
for Exporting the best Machinery for Solvent extraction Plant 1993 - 1994

Awarded Star Performer
for their outstanding contribution to engineering exports during the year 2010-11

Certified ISO 9001 - 2008 Company

OILEX

Established in 1984

Seed Processing Machineries

Efficient extraction needs very good preparation of the oil bearing seeds hence it is necessary that each and every oil bearing cell of the material is brought in contact with the solvent. However materials can be broadly classified in two groups:

Oil Bearing Seeds	Oilcake

Bucket Elevator
Used for feeding / Conveying the seeds / cakes into expeller and other cleaning & decorticating machinery.

Seed Cleaners / Destoners
These machines are suitable for efficient cleaning of all types of grains and seed.

Seed Crackers
Used for breaking the oil seeds before sending it to the cooker for better cooking.

Cooker
The cooker is a vertical cylindrical body equipped with jacketed plates with live steam which enhances in efficient cooking of the oil bearing seeds.

Seed Flakers
To mill the oil seeds into thin flakes by roller flaker mill, which can extend the surface area, make the oil material more elastic for extraction process.

Expander/ Extruder
Most modernized unit with updated features to process flakes to make porous cake good for solvent extraction and squeeze partial oil from highly oil content seeds like Rapeseed / Canola / Sunflower etc.

Horizontal Drier Cooler
This equipment is used for drying / cooling of material/ cake with the help of aspiration system to maintain the temperature of the cake before sending it to solvent extraction plant.

Solvent Extraction

is a very simple process comprising of following sections :

- Extraction of Oil from prepared raw material.
- ↓
- Desolventising section.
- ↓
- Distillation.
- ↓
- Solvent Recovery section.

Seed Cracker

Seed Flaking

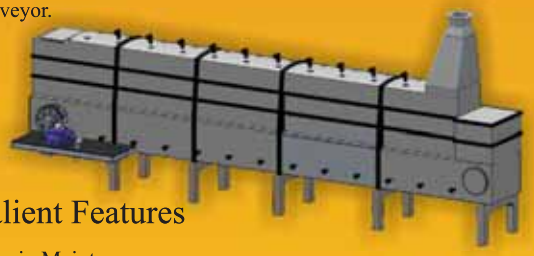
Seed Cooking Section

Expander/ Extruder

Extractor

Extractor is a machine with slow moving articulated band conveyor inside a totally enclosed chamber. A series of sprays are located above the band conveyor for spraying miscella and solvent on top of the moving extractor laden with material for extraction. During the movement of the bed through the extractor it is washed continuously at various points with miscella of decreasing concentration and finally with a fresh solvent in a counter current manner by means of sprays kept in a line over the meal bed.

The miscella percolates through the meal bed, passed through the perforated bottom and collects in various hoppers kept below the bed which ultimately flows to the miscella holding tank. The extracted meal from the band conveyor falls into the discharge bin and conveyed to the desolventising section by vapour seal chain conveyor.



Salient Features

- Easy in Maintenance.
- Lower Power Consumption.
- Highly Effective Extraction.
- Very Good Self Cleaning arrangement provided for the mesh.

Desolventiser Toaster

The Toaster consists of a vertical cylindrical vessel with horizontal jacketed compartments i.e. Double Bottoms and a central rotating vertical shaft on which blades are mounted to sweep in each compartment. The basic principles involved in desolventisation is indirect/direct heating of material with steam to a temperature well above the boiling point of solvent and thus ensuring that no solvent is left over with the material.

Vapours of solvent are then sent to the condensers via scrubber where solvent is condensed.

Salient Features

- Very Good quality of the toasted meal.
- Very Low Steam Consumption.
- Mechanical / Pneumatic level controlling to maintain effective bed height.
- Energy efficient process and minimizes solvent loss.

Main Solvent Extraction

OILEX

Established in 1984

Distillation Section

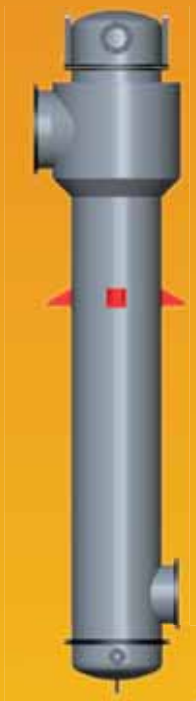
Mixture of oil and solvent obtained in the extractor is known as Miscella and it normally contains 15% to 25% of oil in solvent. The rich miscella from extractor is collected in tanks from where it is pumped to the distillation column. It is kept under vacuum by means of a series of steam ejector. The miscella passing through tubes of evaporator is heated by jacketed steam and thus hexane is turned into vapour immediately. The vapours are led to the condensers via separators. The concentrated miscella passes on to the Oil Preheated to raise the temperature to 100ºC and then to stripping column for final removal of the last traces of solvent from oil. The vapours from the equipments are condensed in the condenser.

Solvent Recovery System

Solvent vapours are formed both in desolventisation section as well as distillation section and these are to be condensed. After condensation the hexane is recovered & recycled back into the system. A specially designed Recuperation system also absorbs any further traces of the Hexane vapors and minimizes the loses.

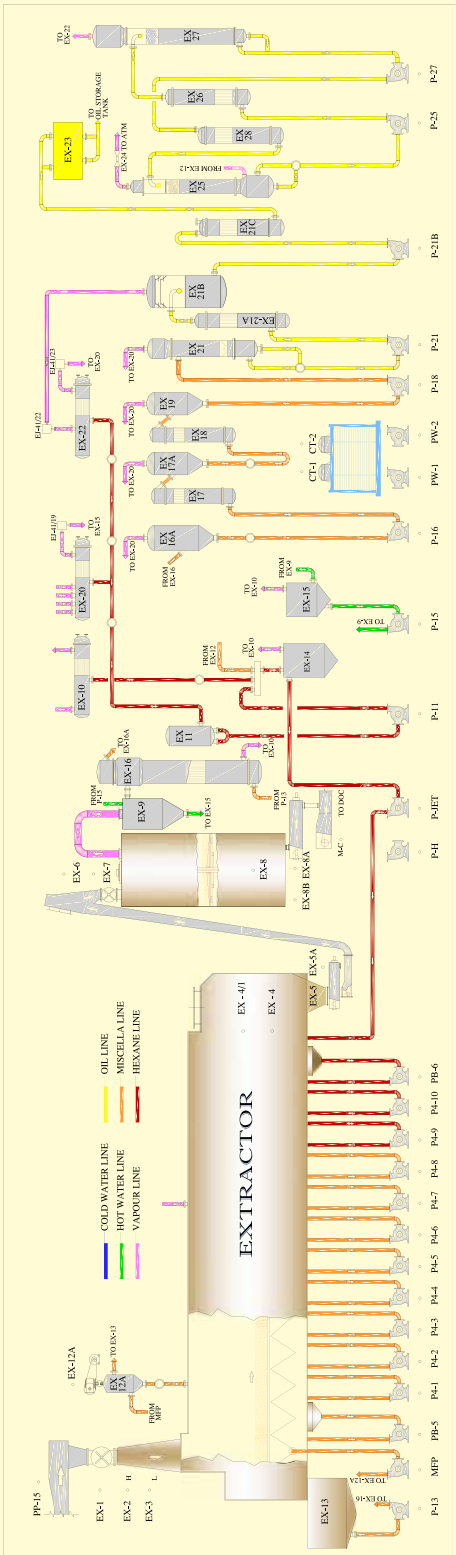
Meal / De-oiled Cake Section

The Extractor and desolventised meal is transported to finishing section by means of chain conveyor. In presence of higher moisture, it can be reduced by passing the meal through a special drier cum cooler. In this required percentage of moisture can be attained an also can be cooled to a required temperature. Further the meal is sent to weighing and bagging section.



Distillation Pumps / Condensers

Flow Chart
for
Solvent
Extraction Plant

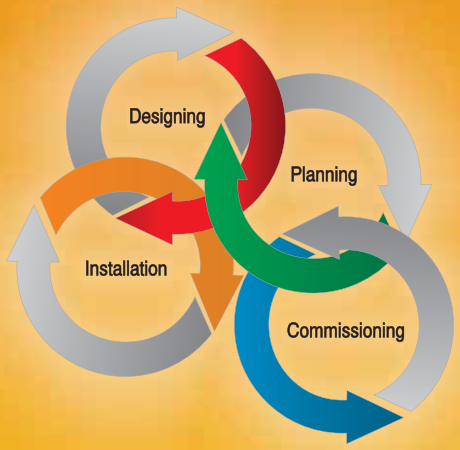


SR NO	CODE	DESCRIPTION	SR NO	CODE	DESCRIPTION	SR NO	CODE	DESCRIPTION	SR NO	CODE	DESCRIPTION
01	EX-1	ROTARY VALVE	09	EX-6	SOLVENT CONVEYOR	17	EX-12A	FINE SEPARATOR	25	EX-18	HEATER	33	EX-23	OIL HOLDING TANK
02	EX-2	FEEDING HOPPER	10	EX-7	ROTARY VALVE	18	EX-13	MISCELLA HOLDING TANK	26	EX-19	SEPARATOR	34	EX-25	ABSORBER
03	EX-3	LEVEL INDICATOR	11	EX-8	DESOLVENTISER TOASTER	19	EX-14	WATER SOLVENT SEPARATOR	27	EX-20	CONDENSER	35	EX-26	HEATER
04	EX-4	EXTRACTOR	12	EX-8A	PLUG 'O' SEAL	20	EX-15	HOT WATER BOILER	28	EX-21	OIL STRIPPER	36	EX-27	FINAL OIL STRIPPER
05	EX-4/1	EXTRACTOR DRIVE SHAFT	13	EX-9	DUST CATCHER	21	EX-16	ECONOMISER	29	EX-21A	HEATER	37	EX-28	OIL COOLER
06	EX-4/2	EXTRACTOR DRUM SHAFT	14	EX-10	CONDENSER	22	EX-16A	SEPARATOR	30	EX-21B	VACCUM DRIER	38	PP-15	FEEDING CONV FROM PREP
07	EX-5	DISCHARGE HOPPER	15	EX-11	LIQUID SEALING DEVICE.	23	EX-17	MISCELLA EVAPORATOR	31	EX-21C	FINAL OIL COOLER			
08	EX-5A	PLUG 'O' SEAL	16	EX-12	CONTACT COOLER	24	EX-17A	SEPARATOR	32	EX-22	CONDENSER			

OILEX

Established in 1984

Complete Turnkey Solutions



Oilex Engineers (India) Pvt. Ltd
Regd. & Mkt Off :
101, Akshaya Plaza, Road No.1,
Chembur, Mumbai- 400 071. India
Phones : +91-22-2528 3924 / 2528 1265
Telefax : +91-22-2528 7909
Email : info@oilexindia.com
www.oilexindia.com

Oilex Engineers (India) Pvt. Ltd
Works :
W - 45, C, MIDC, Anand Nagar
Additional Ambernath - 421506
Dist. Thane

An ISO 9001 - 2008 Certified Company