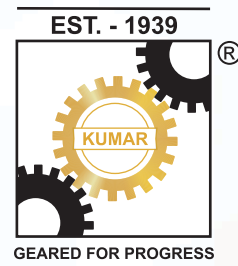


# KUMAR OIL MILLS



JOINT VENTURE PARTNER



## Kumar Metal Industries Pvt. Ltd.



### CORPORATE HEAD QUARTERS :

101, Kakad Bhavan, 30th Road,  
Opp. Gaiety Galaxy Cinema,  
Bandra ( West), Mumbai - 400 050, India.



### MANUFACTURING UNIT I :

Plot No. 7, Mira Co- Op.  
Industrial Estate,  
Mira Road, Dist. Thane - 401 164, India.

+91-22-2644 1667 / 73 / 74  
+91-22-2642 7982  
+91-22-2642 8136  
kumarind@vsnl.com  
www.kumarmetal.com



### MANUFACTURING UNIT II :

Ten Mastan Naka, Near Manor,  
Ahmedabad Highway No. 8, Palghar  
Dist. Thane - 401 403, India.



A SQUEEZE  
**ABOVE**  
THE REST



# SUPERIOR PERFORMANCE

## LOWER POWER CONSUMPTION

Selection of motors is done keeping in mind the peak load that could arise due to inconsistent feeding resulting in lower power consumption.

## EXTERNAL GEAR BOX

The high efficiency gear box ensures low maintenance, reduced noise levels and less power consumption

## LOWER OPERATION AND MAINTENANCE

Due to sturdy construction and stringent quality norms our machines work with higher efficiency and incur lower maintenance costs.

## PREMIUM EXPELLED OIL QUALITY:

Well designed worm assembly and chamber construction ensures superior quality of expelled oil which is sold in the market at premium rates.

## SUPERIOR QUALITY OF CAKE:

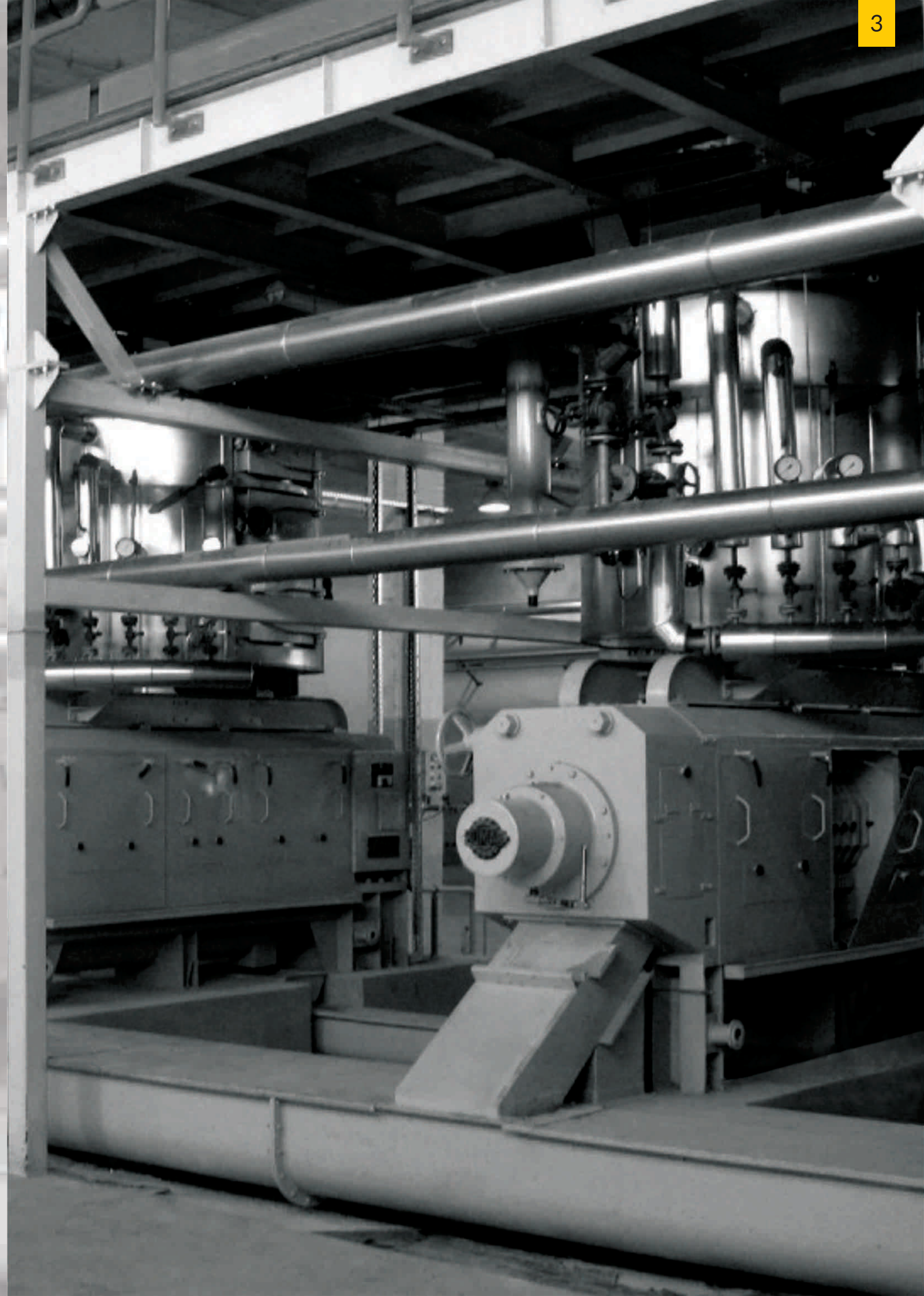
Since pressure exerted in the machine is even, the cake quality is excellent and cake produced from the machine is of natural color without charring or burning effect.

## LOWER RETENTION OF OIL IN CAKE:

Superior process parameters ensure lower retention of oil in the cake.

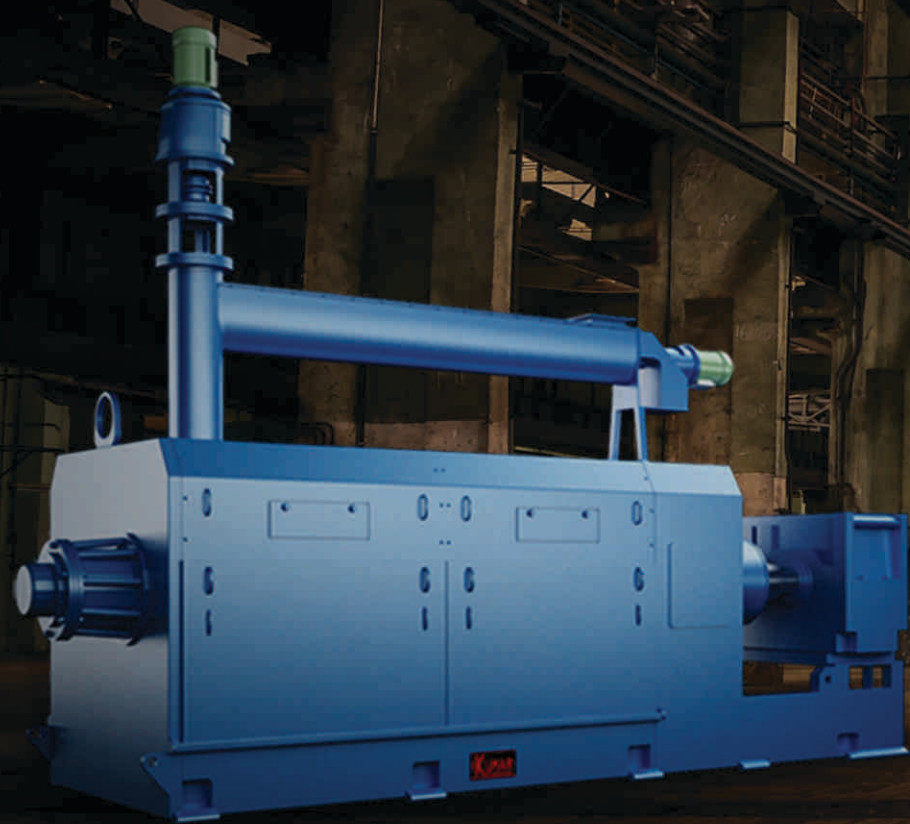
## INTERNATIONAL CERTIFICATIONS:

As per applicable international norms, equipments and machinery are manufactured in compliance with **ASME & EU DIRECTIVES**.





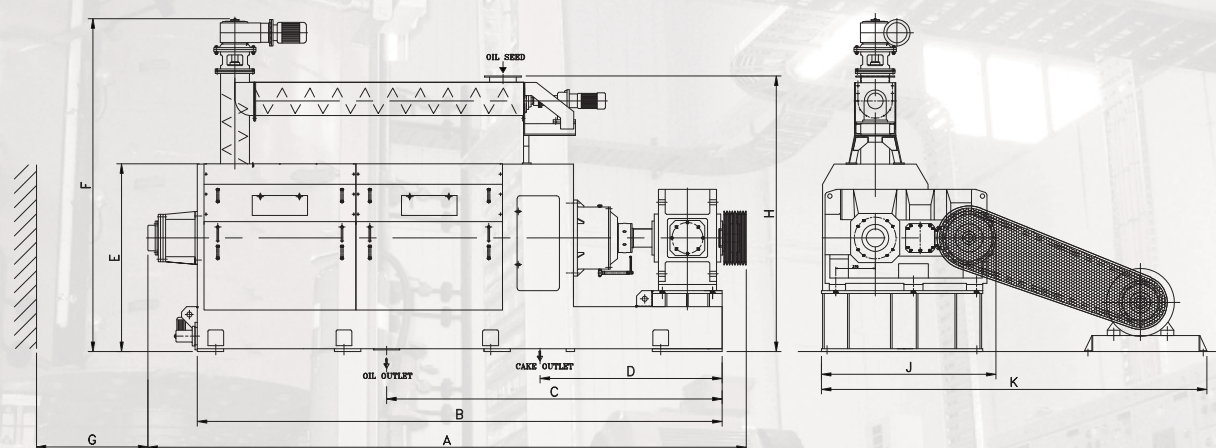
# OIL EXPELLERS



## 'X'PRESS SERIES



\*Capacities, residual oil contents in cake and required power ratings vary with the type, composition, quality and preparation of seed to be processed.



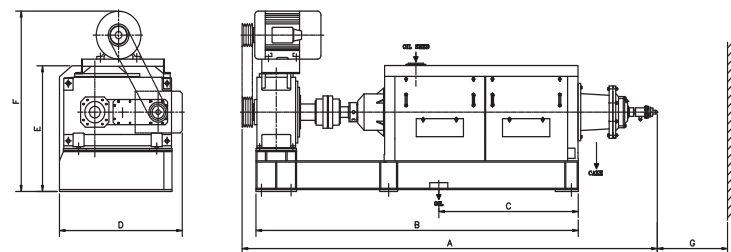
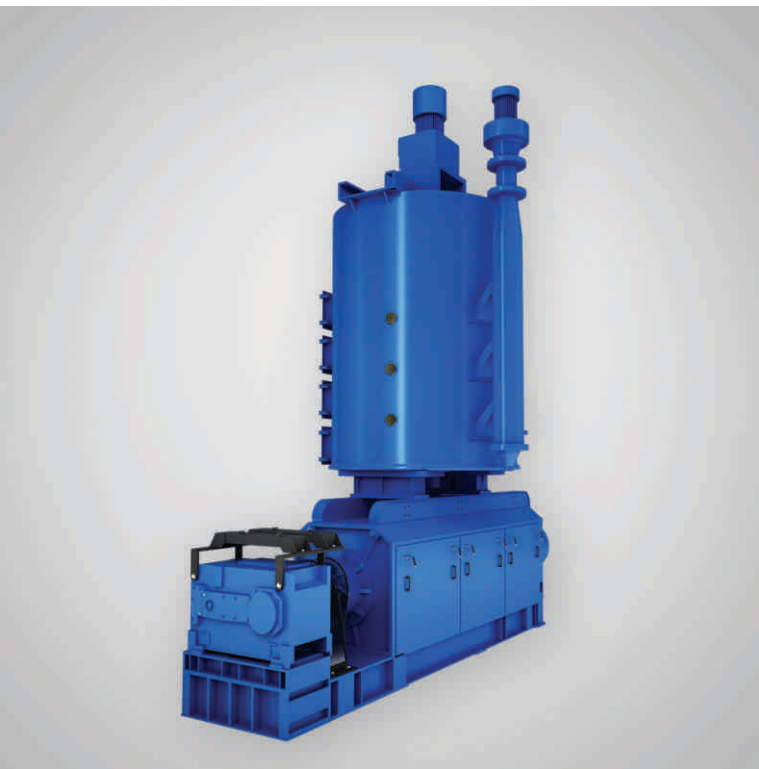
## The Process

Oil seeds are properly cleaned & destoned before further processing. Properly cleaned & destoned oil seeds are subjected to size disintegration / flaking to achieve superior efficiency of the machine. This disintegrated seed is then cooked where the oil cells get properly tempered to expel the oil easily. This cooked seed is subjected to mechanical pressing in the expeller where the oil comes out with some amount of fines. This oil is then filtered via Vibro Separator and filter press to get clean & clear oil. The control, operation and supervision of the plant can be handled by minimal operating staff.

TECHNICAL DATA		UNIT	PRE-PRESS		FULL-PRESS	
Type			XP-200	XP-250	XP-200	XP-250
Capacity		MT / 24h	170-200	200-250	100-130*	130 / 140*
Residual oil in cake		%	16-19	16-19	6-8	6-8
Required power rating		KW / HP	201 / 270	250 / 335	160 / 215	250 / 270
Chamber size	Feed	mm.	Ø300 x 1300 L	Ø315 x 1300 L	Ø300 x 1300 L	Ø315 x 1300 L
	Disch		Ø275 x 1350 L	Ø290 x 1350 L	Ø275 x 1350 L	Ø290 x 1350 L
Approx.Wt.		MT	17.5	18.0	17.5	18.0

DIMENSIONS (APPROX.)										
Unit	A	B	C (Can vary as per layout)	D	E	F	G (For shaft removal)	H	J	K
mm.	5670	4975	3180	1725	1775	3150	5500	2610	1655	3655

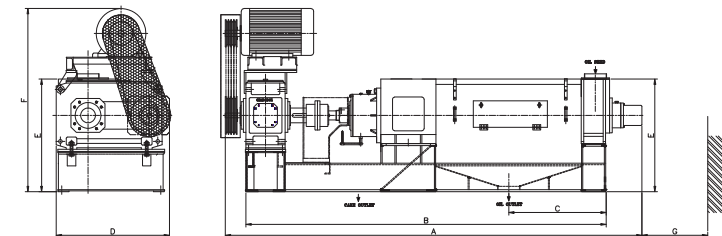
# SUPER PRESS SERIES



TECHNICAL DATA		UNIT	PRE-PRESS		FULL-PRESS	
Type			NSP-IIB	NSP-IIIICL	NSP-IIB	NSP-IIIICL
Capacity		MT / 24h	28-30	50-55	20-22*	35-40*
Residual oil in cake		%	16-19	16-19	6-8	6-8
Required power rating		KW / HP	55/75	110 / 150	55 / 75	110 / 150
Chamber size	Feed	mm.	Ø279.4 x 584.2 L	Ø330 x 939.8 L	Ø279.4 x 584.2 L	Ø330 x 939.8 L
	Mid.		X	Ø279.4 x 584.2 L	X	Ø279.4 x 584.2 L
	Disch		Ø209.5 x 863.6 L	Ø228.6 x 863.6 L	Ø209.5 x 863.6 L	Ø228.6 x 863.6 L
Approx.Wt.		MT	7.5	10.6	7.5	10.6

DIMENSIONS (APPROX.)	UNIT	NSP-IIB	NSP-IIIICL
A	mm.	4604	5475
B	mm.	3519	4200
C (can vary as per layout)	mm.	1556	2145
D	mm.	1144	1250
E	mm.	1940	2246
F	mm.	1311	1315
G (for shaft removal)	mm.	3000	3800

# OIL-N-OIL SERIES



\*Capacities, residual oil contents in cake and required power ratings vary with the type, composition, quality and preparation of seed to be processed.

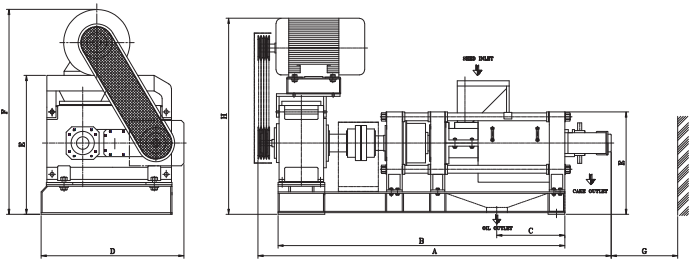
TECHNICAL DATA		UNIT	PRE PRESS	
Type			NMK- IVC	NMK- VII
Capacity		MT/24h	14-16*	55-60*
Residual oil in cake		%	16-19	16-19
Required power rating		kW / HP	22 / 30	45/60
Chamber size (Dia x Lg.)		mm.	178/222 x 1117.6	255/230 x 1565
Approx.Wt.		MT.	3.5	6000

TECHNICAL DATA		UNIT	FULL PRESS		
Type			NMK- III	NMK- IVC	NMK- VII
Capacity		MT/24h	8-9	10-12	25-30
Residual oil in cake		%	6-8	6-8	6-8
Required power rating		KW / HP	19 / 25	22 / 30	45/60

DIMENSIONS (APPROX.)	UNIT	NMK- III	NMK- IVC	NMK- VII
A	mm.	3180	3490	4473
B	mm.	2745	3030	3790
C (Can vary as per layout)	mm.	680	821	980
D	mm.	875	875	1170
E	mm.	1080	1080	1190
F	mm.	1612	1678	1795
G (for shaft removal)	mm.	2200	2500	3000



# PALM KERNEL OIL EXPELLER

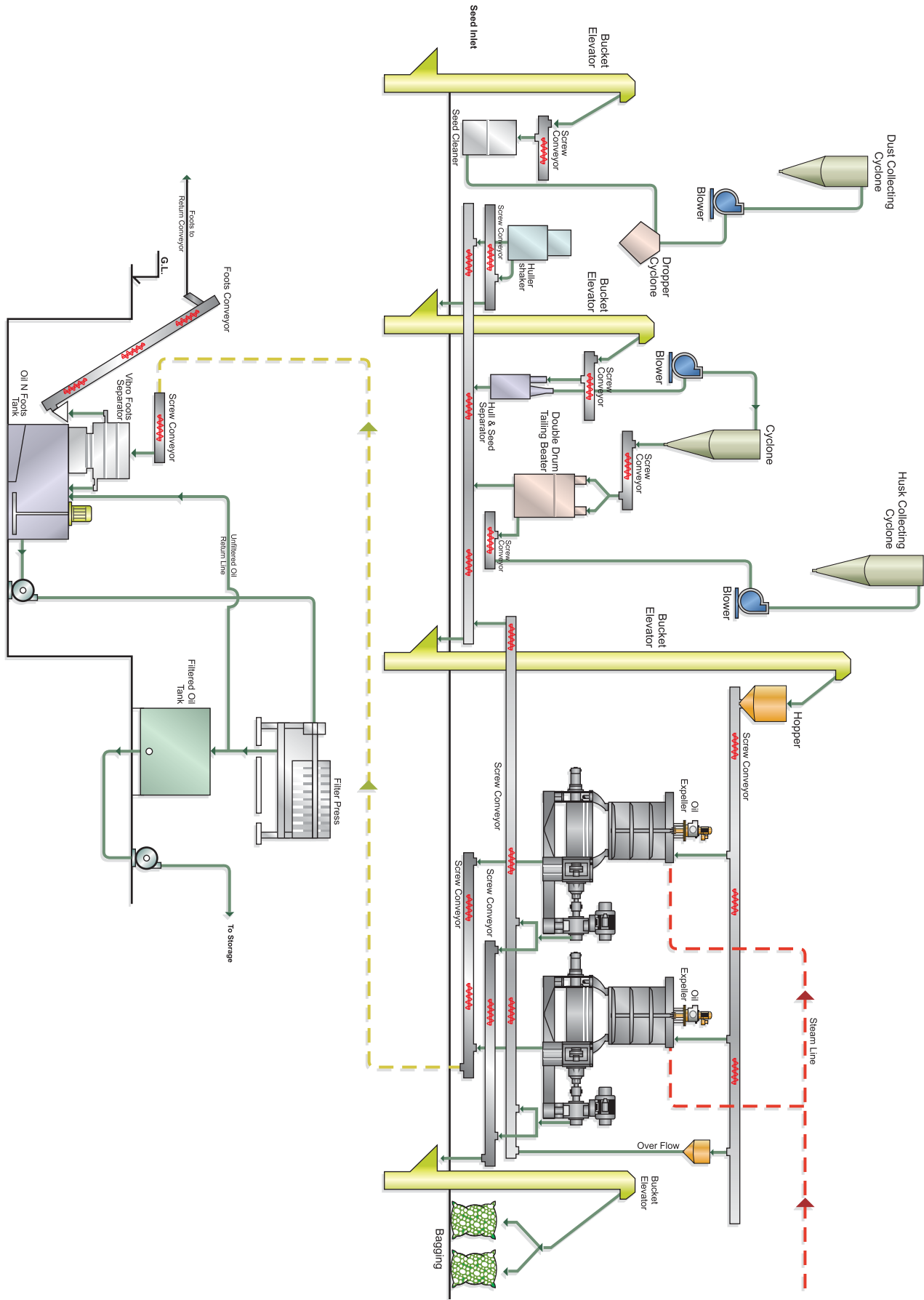


DIMENSIONS (APPROX.)	UNIT	PK-15	PK-25
A	mm	3400	3400
B	mm	2762	2762
C (Can vary as per layout)	mm.	655	655
D	mm.	1375	1375
E	mm.	1000	1000
F	mm.	1300	1300
G (for shaft removal)	mm.	2000	2000

\*Capacities, residual oil contents in cake and required power ratings vary with the type, composition, quality and preparation of seed to be processed.

TECHNICAL DATA	UNIT	PRE-PRESS		FULL -PRESS	
Type		PK-15	PK-15	PK-25	PK-25
Chamber size	mm.	Ø178 x 640 L	Ø178 x 640 L	Ø209 x 640 L	Ø209 x 640 L
Capacity	MT/24h	15 T.P.D.	9-10	16-18	25 T.P.D.
Residual oil in cake	%	18-20	8-10	8-10	18-20
Required power rating	KW/HP	37/50	37/50	55/75	55/75
Approx.Wt.	MT	4.5	4.5	4.8	4.8

# OIL MILL PLANT





# KUMAR EXPELLER

## SALIENT FEATURES:

- All expellers are supplied with a high efficiency External Gear Box.
- Pressure worms are hard faced with special welding electrodes to achieve desired hardness.
- Sturdy Construction, low Investment and easy installation.
- Maximum Oil yield at low operating costs.
- Can crush all type of edible and non-edible oil seeds.
- Easy and time saving main worm shaft removal without disturbing the gear box assembly.
- Vertical split hinged main cages provided with cage lifting for safe, quick and effortless maintenance.
- Special designed locking type clamping bars & bolts to enable easy tightening & removal of the cage.
- Fully enclosed cage with a built in screw conveyor at the base for conveying oil and foots which keeps the shop floor neat and clean.
- Steel cast hobbing cut helical gears. Induction hardened, completely assembled on a single piece hollow driving sleeve with heavy duty roller and taper roller bearing to acquire perfect alignment and friction free for energy saving.
- Multistage vertical stack cooker for proper conditioning of the seeds.
- All the bearings are lubricated with the help of a special motorized pump to increase bearing life.

# PREPARATORY SECTION



## SEED CLEANER

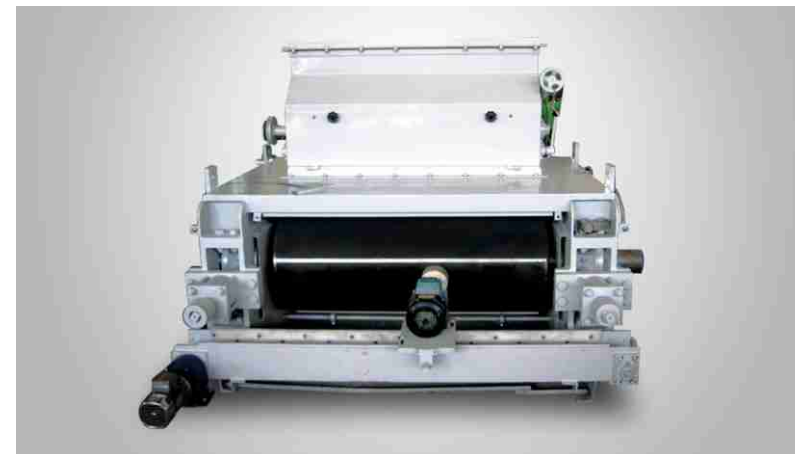
Seeds are cleaned to remove unwanted material like dust, leafs, etc. They are then sent to the destoner to remove stones and sand. This removal of unwanted material increases the life of machines & reduces the down time.

## HULLER SHAKER

Huller Shaker is a machine where the kernel is separated from the seed & the hulls are separated from the kernel. One can increase the capacity of the machine by doing de-hulling. This process is mainly used in case of Cotton Seed / Sunflower.

## HULL & SEED SEPARATOR

In this process the hulls are separated from the seeds & unbroken seeds are again subjected to Huller Shaker.



## DOUBLE DRUM HULL BEATER

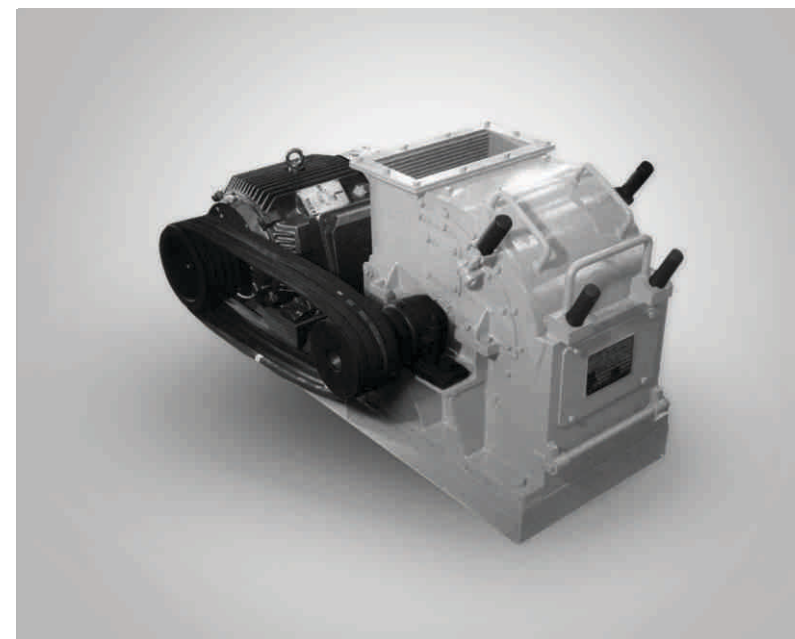
Double Drum Hull Beater is used to separate the remaining kernel portion from hulls. This reduces the wastage of kernel going with hulls.

## FLAKER

Flaker is normally used in case of Rape Seed to increase the capacity of expeller as well it reduces the wear & tear of the Expeller Machines.

## HAMMER MILL

Hammer Mills are mainly used to disintegrate the product to a desired size ensuring proper expelling. Hammer Mill is mainly used in case of Copra, Palm Kernel & Soya bean processing.



MODEL	CAPACITY / 24 HRS	H / P POWER
HM - A1	500 Kgs	5/7.5 HP
HM - 1	1000 Kgs	20 HP
HM - 2	2000 Kgs	30/40 HP
HM - 3	3000 Kgs	40/50 HP
HM - 5	5000 Kgs	50/75 HP
HM - 8	8000 Kgs	75/100 HP



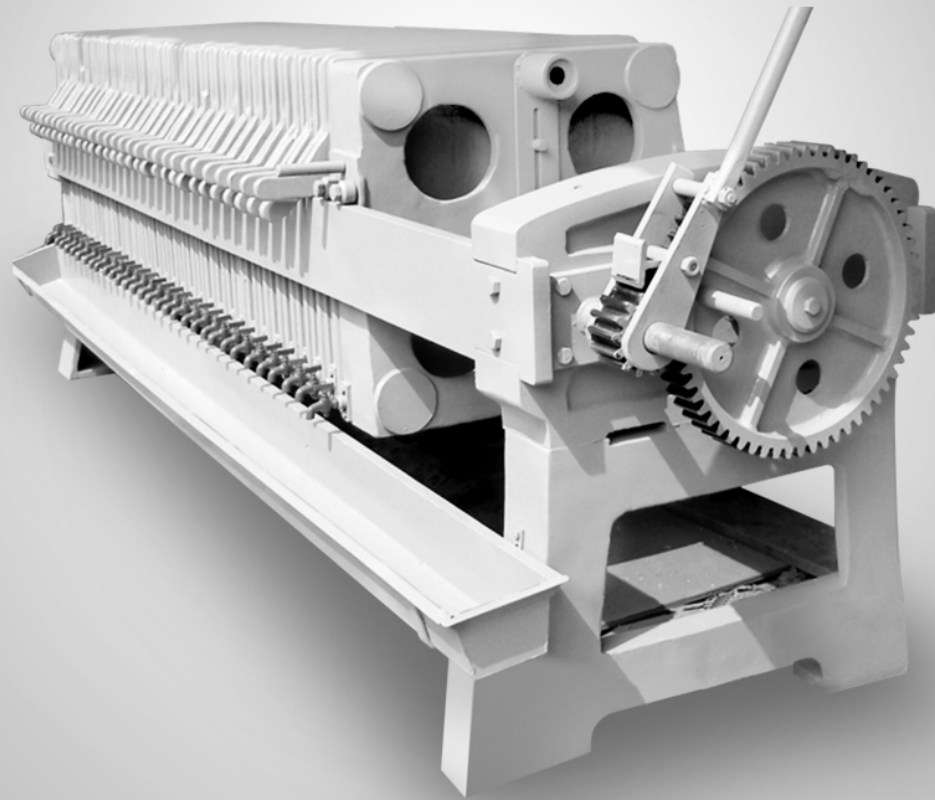
# FILTRATION SECTION

Oil from the expeller comes to the Vibro Separator, where the core particles are separated by vibration. The oil is then sent to the tank where it is pumped for final Filtration via plate type filters.

## FILTER PRESS

### Salient Features:

- Raised rim around the edges to form a chamber between 2 plates
- High rate of filtration
- Powerful pump & accurate assembly
- Leak proof joints to withstand operating pressure
- High grade CI casting & shot blasted for smooth finish



### PLATE TYPE

SIZE INCHES	CAKE HOLDING CAPACITY CU. FT.	FILTERING AREA	PUMP HP REQUIRED
30" X 30" X 40 Plates	10	360	7.5
30" X 30" X 30 Plates	7.5	240	5
30" X 30" X 25 Plates	6.5	200	5
25" X 25" X 36 Plates	5	140	3
25" X 25" X 30 Plates	4	120	3
25" X 25" X 25 Plates	3	100	3
18" X 18" X 18 Plates	1.5	40	2
15" X 15" X 15 Plates	0.75	25	2
12" X 12" X 12 Plates	0.04	12	1

### FRAME TYPE

SIZE INCHES	CAKE HOLDING CAPACITY CU. FT.	FILTERING AREA	PUMP HP REQUIRED
25" X 25" X 25F/24P	11	180	3
30" X 30" X 20F/19P	12	200	5
30" X 30" X 25F/24P	15	240	5
30" X 30" X 30F/25P	18	280	5
8" X 8" X 13F/12P	0.04	12	1

# VIBRO SEPARATOR



The Vibro Separator is a separating machine which includes a vertical type special motor to facilitate three dimensional composed circular and elliptic motions in horizontal, vertical & inclinational faces. The vibro separator achieves superior performance as the feed (Crude Oil) is dispersed from the centre equally; hence all parts of screen cloth are fully utilized.

SCREEN DIAMETER	POWER
24"	0.5 HP
30"	0.5 HP
36"	0.5 HP
48"	1.5 HP
60"	1.5 HP

# PRESSURE LEAF FILTER POLISH FILTER



Pressure Leaf Filters are available in horizontal & vertical cylindrical vessels with leafs made of Stainless Steel. It is provided with a Vibrator & a butterfly valve. These filters are also used in Oil Mills.

CAPACITY M2
10
20
30
50
70



# MATERIAL HANDLING SECTION

## SCREW & REDLER CONVEYOR



### Salient Features:

- Available in different sizes & construction
- Easy erection & correct tensioning of chain
- Double row self aligning ball bearings
- Fabricated elevator chains
- Extended top shaft for drive purpose
- Removable plates

SCREW DIAMETER	CAPACITY
6"	2-3 Tons / Hr
9"	3-5 Tons / Hr
10"	3-5 Tons / Hr
12"	5-7.5 Tons / Hr

## BUCKET ELEVATORS

### Salient Features:

- Available in different sizes & construction
- Easy erection & correct tensioning of chain
- Double row self aligning ball bearings
- Fabricated elevator chains
- Extended top shaft for drive purpose
- Removable plates



BUCKET SIZE	CAPACITY
6" x 4" x 3 1/4"	1 Tons / Hr
8" x 4" x 3 1/4"	3 Tons / Hr
10" x 6" x 5"	8 Tons / Hr
10" x 6" x 5"	5 Tons / Hr

# A COMPLETE PACKAGE

Kumar is a global company. Not only do we serve customers around the world, we also use the best technology and supply resources to ensure that only the best is delivered to our customers. We have installed and commissioned several oil mills, solvent extraction plants and refineries around the world. Our vast experiences and expertise to design, engineer and install complete process plants on turkey basis has given us the competitive edge. We have our presence in over 30 countries and serve more than 500 clients.

**Process Control:** The control, operation and supervision of the plant can be handled by minimal staff. All main process parameters for example flow rates, temperatures, liquid levels etc. are automatically maintained from a control panel or, as an option, with the help of **PID/PC** based controls.

### OUR SERVICES ALSO INCLUDE:

- Installation design in compliance with international standards
- Complete process automation
- Skilled manpower for supervision of installation and commissioning
- Technical and manpower assistance to bring your new installation online in minimum possible time.
- We provide skilled operational staff and also train the local staff

## YOUR PARTNER IN THE OIL INDUSTRY

SEED PREPARATION	PRESSING	EXTRACTION	REFINING	ENGINEERING SERVICES
Cleaning	Pre Pressing	Solvent Extraction	Degumming Neutralizing	Process Technology
Breaking	Final Pressing	Desolventising Toasting	Pre treatment Bleaching	Project Management
Conditioning	Full Pressing	Drying Cooling	Deacidification Deodorization	Process Automation
Flaking	Cold Pressing	Solvent Recovery	Crystallization Fractionation	Installation & Commissioning
Processed Seed	Crude Oil Press Cake	Crude Oil Meals	Edible Oil, Edible fats Fatty Acids	After Sales Service