

PRODUCT : MINI SUGAR PRESSURE PAN PLANT**LIST OF MACHINERY 'A'**

S.No.	DESCRIPTION	QTY.
1.	CANE CRUSHER: Roller Size 406mm dia X 610mm long (16 inch X 24 inch) X 9 Roller Mill Heavy Duty Hydraulic Cane Crusher having 3 Mills with 3 Rollers each, and consisting of the following:	1 Set
(a)	CANE CARRIER: Main Cane Carrier of steel construction 610mm (24 inch) width frame strands made of section with MS plates bolted. Consists of 2 strands chain of 4" inch (102mm) pitch with double corrugated steel slates of MS plate. Complete with sprockets, idler pulley etc.	1 Set
(b)	CANE CUTTER: Cane cutting knives set, for cane cutting keyed over MS shaft mounted on roller bearings and heavy-duty Plummer blocks. Complete with flywheel and pulley. The cutter knives edges are hard faced.	2 Sets
(c)	FEED CARRIER WITH DRUM: The feed drum with special type of teeth profile is provided before the 1st Mill to provide a positive feed mechanism along with the feed carrier. The feed drum is driven by chain & sprocket from the 1st Mill.	1 Set
(d)	FRICTION CLUTCH: The clutch is provided for the main carrier, Feed Carrier & further Inter Carrier. It is a specially designed clutch, which can be easily engaged and disengaged.	4 Nos.
(e)	MILL: Each mill having three rollers of size 406mm dia X 610mm long (16 inch X 24 inch) having V-Groove and made of C.I. The roller is shrunk fit on MS Axle and truly machined. Each mill is complete with:- <ul style="list-style-type: none">- Base Frame made of MS having provision for bolting the mill,- Juice Collection Tray,- Side Cheeks bolted on frame,- Trash Plate with grooves mounted on square beam with the rod adjustment for scrapping the feed C.I. Roller,- Scrapper for Top & Discharge roller with grooves, bolted on square beam with suitable side spring loaded lever with adjusting bolt,- The bottom rollers are tightened by means of taper wedge arrangement.- Mill Roller Pinion - 3 Nos., made of steel	3 Set

- Journal bearing – All the roller ends supported on phosphor bronze bushes housed in their respective C.I. housings and accurately machined to suit roller journal dia & lubrication grooves are provided in the bushes.
- Hydraulic head – 2 Nos., to exert constant pressure on both ends of the top roller.
- Water cooling arrangement for Top Roller

(f)	TAIL BAR: of forged mild steel square	3 Nos.
(g)	Mechanical Lubricating System	1 No.
(h)	COUPLING: made of C.I. with square bore to house the tail bar	6 Nos.
(i)	INTER CARRIER: With strand of chain of 2.25 inch (57mm) pitch with slates made of MS. The inter carrier is driven by their corresponding immediate Mill.	2 Set
(j)	SPEED REDUCTION GEARBOX (Common for I & II Mill): Open type gear box having three stages with spur gears and with a central input shaft and two output shaft for both the mills. The train of gears are fitted on the shafts mounted on phosphor bronze bushes which are housed in plumber blocks of C.I. These are mounted on fabricated MS base frame and is complete with Drive & Driven V-belt pulley of C.I. and V-belts.	1 No.
(k)	SPEED REDUCTION GEAR BOX (For IIIrd Mill)	1 No.
(l)	HYDRAULIC ACCUMULATOR: Dead weight type pre-charged hydraulic accumulator cylinder mounted on MS frame. One for each Mill complete with oil tank, plunger pump & inter connecting pipelines, C.I. weights.	1 Set
2.	SUGAR DRYER: Size 750mm, Made of MS with flue gas Air Heater & Centrifugal Blower.	1
3.	SULPHUR OVEN: made of C.I.	2
4.	CENTRIFUGAL MACHINE: Size 12 inch X 24 inch with Motor of 10 HP	4
5.	SUGAR GRADER: Size 1200mm X 2400mm vibrating type	1
6.	JUICE STAINER: With Cush-Cush Elevator for juice filtration	1

7	JUICE HEATERS: M.S fabricated and welded construction High Velocity, Vertical Juice Heaters each of 48m ² Heating Surface. One for Raw Juice, One for Sulphited juice. one for each under cleaning.	4
8.	ROTARY VACUUM FILTER Size 6 Ft dia x 8 Ft length with receiver, Vacuum pump (Water ring Type) & its Motor, complete with drive and accessories	1 set
10	EVAPORATORS: Set of M.S. fabricated and welded construction Evaporators comprising 4 bodies having following Heating surfaces:- 1) 1st Body-280 m ² 2) 2 nd Body-230 m ² 3) 3 rd Body- 160 m ² 4) 4 th Body –160 m ² as standby of 3 rd Body	1 No. 1 No. 1 NO. 1 NO.
11	CONCENTRATORS: M.S. fabricated and welded construction Open body, Tubular calandria Conc. suitable for concentrating 50 to 55 Brix Syrup from Evaporators to 80 Brix. Heating Surface of each Concentrator –36 m ²	3 Nos.
12	CLARIFIER (SETTLER) M.S. fabricated and welded construction Circular, Vertical Continuous type, Tray less Clarifier having conical bottom, Slow speed mud scrapper attached to hollow shaft driven from Top. Capacity : 580 H.L.	1 NO.
13	DSM SCREEN . Made of MS and screen of SS304 with slot opening.	1 No.
14	FILTER PRESS MADE OF CI – SIZE 30 INCH X 30 INCH	1 NO.
15	BAGACILLO HANDLING SYSTEM WITH MUD MIXTURE- Provided with fan , pipping , with blower and Motor of 3 HP	1 No.
16	SUGAR ELEVATOR :Chain and bucket type made of MS sheet with geared motor	1 No.

LIST OF MACHINERY 'B'

S.No.	DESCRIPTION	QTY.
1.	RAW JUICE TANK: Size 2400mm X 1200mm X 1200mm	1
2.	SULPHITATION TANK: Made of Ms with conical bottom, Size 900mm Dia X 3000mm Ht.	6
3.	SCRUBBER: Size 900mm Dia X 1200mm Ht.	2
6.	CRYSTALLIZERS: U Shaped 2400mm X 1500mm X 1600mm, Trough made of 3 mm & Ends made of 5 mm with central Agitator Arms mounted on the square shaft. Consists of Worm & Worm Wheel made of C.I.	40
7.	Counter shaft, Pulleys, Belts & Bearings for a battery of 10 Crystallizers.	4 Set
9.	MOLASSES BOILING BELS: (a) Round Pan 1200mm dia. - 2 Nos. (b) Round Pan 1050mm dia - 1 No. (c) Gutter Pan 1800X 1200 X 600mm - 1 No. (d) Fire Bars - 1 Lot.	8 Set
10.	PUG MILL: With Motor & Gear Box	4 Nos.

LIST OF MACHINERY 'C'

S.No.	DESCRIPTION	QTY.
1.	PUMP - For RAW JUICE: Size 2 inch X 2.5 inch with Motor of 5 HP.	2
2.	AIR TWIN LOBE BLOWER: For Sulphur Oven – with Motor of 15 HP	2
3.	PUMP - For SULPHITED JUICE: with Motor of 7.5 HP.	1
4.	PUMP - For MUDDY JUICE: Size 4 inch, Plunger pump with Motor of 5 HP.	2
5.	PUMP - For MOLASSES: Gear Pump 50mm with Motor of 5 HP.	6
6.	PUMP-MAGMA For HOT MASSECUTE: With Motor of 5 HP.	6
7.	PUMP-MAGMA For COLD MASSECUTE: With Motor of 7.5 HP.	2
8.	PUMP FOR WATER INJECTION TO CONDENSOR OF RVF WITH MOTOR OF 5 HP	1
9.	PUMP FOR FILTRATE FROM RVF WITH MOTOR OF 5 HP	2
10.	PUMP FOR CLARIFIED JUICE WITH MOTOR OF 7.5 HP	1
11.	VACUUM PUMP FOR RVF WITH MOTOR OF 20 HP	1
12.	LIME PUMP FOR MILK OF LIME PUMPING WITH MOTOR OF 5 HP	1
13.	CONDENSATE PUMPS – USED FOR PUMPING CONDENSATE TO STORAGE TANK WITH MOTOR OF 3 HP	6
14.	CONDENSATE PUMP TO BOILER FEED WATER TANK WITH MOTOR OF 5 HP	1

LIST OF MACHINERY 'D'

S.No.	DESCRIPTION	QTY.
1.	DRIVE FOR Ist CUTTER: Electric Motor of 60 HP, 1440/1500 RPM, 415 V, AC, 50 Hz, SPDP with base frame.	1
2.	DRIVE FOR IIInd CUTTER: Electric Motor of 50 HP, 1440/1500 RPM, 415 V, AC, 50 Hz, SPDP with base frame.	1
3.	DRIVE FOR CANE CRUSHER (For 1 & II Mill) : Electric Motor of 135 HP, 960/1000 RPM, 415 V, AC, 50 Hz, SPDP, Slip Ring with base frame.	1
4.	DRIVE FOR CANE CRUSHER (For III Mill) : Electric Motor of 75 HP, 960/1000 RPM, 415 V, AC, 50 Hz, SPDP, Slip Ring with base frame.	1
5.	DRIVE FOR CRYSTALLIZER: Electric Motor of 10 HP, 1440/1500 RPM, 415 V, AC, 50 Hz, SPDP with base frame.	4

LIST OF MACHINERY 'E'

S.No.	DESCRIPTION	QTY.
1.	FOUNDATION BOLTS	1 Lot.
2.	PIPE AND PIPE FITTING	1 Lot.
3.	LORRY WEIGH BRIDGE – Steel Yard type, Capacity 25 tons, Platform size 25 Feet x 8 Feet.	1 No.
4.	SUGAR WEIGHING MACHINE–300 Kgs. Capacity	1 No.
5.	LAB EQUIPMENTS	1 Lot
6.	BAG STICHING MACHINE	1 No.
7.	ELECTRICALS: Consisting of Cables, MCC, Local Control Panel with Motor Starters (The line up to MCC shall be under client's scope)	1 Lot.