

Technical Specification for Tender no.2020-21/06

2020-21/06/01. SORTING & SEPARATION EQUIPMENT (equipment from a to d as a complete package)			
a. Zig zag Air Classifier			
1	Blower Motor	KW	5.5 or Lower preferred.
2	Rotary Valve Motor	KW	Please specify
3	Rotary Valve Diameter	mm	Please specify
4	Rotary Valve Rotating Speed	rpm	Please specify
5	Cyclone Separator Volume	Litres	Please specify
6	Output	KG/Hr	700 and above
b. Film Grabber with belt conveyor			
7	Rotary drumwith i.panel control		Please specify
8	ii. Frame		Please specify
9	iii. Inverter for speed control		Please specify
10	iv. Retractable spikes		Please specify
11	Gear motors with 4-pole electric motor	hp	Please specify
12	Installed electrical power	KW	5 – 7 (lower Preferred)
13	Steel structure realized		Full core type
14	Centrifugal fan with		
15	i. Electric motor		Please specify
16	ii. Inverter for speed control		Please specify
17	iii. Installed Power	KW	4– 6(lower Preferred)
18	iv. Feeding hopper		Please specify
19	v. Discharge hopper and Piping output	Kg/Hr	700 and above
20	belt conveyor for input feed of waste material		
21	i . Belt Type	-	Flat Belt/Cleated Belt (Polyester – Nylon, Nylon – Nylon type)
22	ii . Drive Locations	-	End Drive
23	iii . Construction	-	Zinc coated Epoxy painted Steel
24	Belt Widths	mm	Please specify
25	Conveyor Lengths	mm	Please specify
26	Max Belt Speed (Variable from 0 to maximum with suitable electronic speed control)	Meter/min	Please specify
27	Maximum Load	Kgs.	100 kgs
28	Frame Configuration	-	Straight or Z type as required at site for input feed of material to film grabber as integral part of equipment
29	Frame Height (suitable forfeeding)	mm	Please specify
30	Pulley Diameter	mm	Please specify
31	Output	Kg/Hr	Please specify
32	Motor power rating	KW	Please specify
33	Speed	MPM	Adjustable Please Specify range
34	Built in Safety Features		Please Specify
C. Ballistic separator double-stage equipment with belt conveyor			
35	Number blades first stage	Nos.	6 or more
36	Number shovels second stage	Nos.	6 or more
37	Length blades first and second stage	mm	Please specify
38	Width blades first and second stage	mm	Please specify
39	Screening decks	mm	50 x 50
40	Inclination screening decks	degree	0 – 15
41	Number of engines	Nos.	2
42	Gear motors with 4-pole electric motor	hp	Please specify

43	Installed electrical power	KW	15 Kw (No 2 x 7.5 Kw/cad.) (lower Preferred)
44	Output	Kg/Hr	700 and above
45	belt conveyor for input feed of waste material		
46	i . Belt Type	-	Flat Belt/Cleated Belt (Polyester – Nylon, Nylon – Nylon type)
47	ii . Drive Locations	-	End Drive
48	iii . Construction	-	Zinc coated Epoxy painted Steel
49	Belt Widths	mm	Please specify
50	Conveyor Lengths	mm	Please specify
51	Max Belt Speed (Variable from 0 to maximum with suitable electronic speed control)	Meter/min	Please specify
52	Maximum Load	Kgs.	100 kgs
53	Frame Configuration	-	Straight or Z type as required at site for input feed of material to film grabber as integral part of equipment
54	Frame Height (suitable for feeding)	mm	Please specify
55	Pulley Diameter	mm	Please specify
56	Output	Kg/Hr	Please specify
57	Motor power rating	KW	Please specify
58	Speed	MPM	Adjustable Please Specify range
59	Built in Safety Features		Please Specify

d. Manual Sorting Equipment

60	Belt Type	-	Flat Belt/Cleated Belt (Polyester – Nylon, Nylon – Nylon type)
61	Drive Locations	-	End Drive
62	Construction	-	Stainless steel
63	Belt Widths	mm	600 mm or higher (Please specify)
64	Conveyor Lengths (suitable for approximate 5 manual sorters /workers at both side)	mm	10000 mm or higher (Please specify)
65	Max Belt Speed (Variable from 0 to maximum with suitable electronic speed control)	Meter/min	Please specify
66	Maximum Load	Kgs.	100 kgs
67	Frame Configuration	-	Straight as required at site
68	Frame Height (suitable for manual sorting)	mm	Please specify
69	Pulley Diameter	mm	Please specify
70	Output	Kg/Hr	700 and above
71	Motor	KW	Please Specify
72	Speed	MPM	Adjustable Please Specify range
73	Built in Safety Features		Please Specify

2020-21/06/02. Automatic Inline Washing & size reduction Machinery (Equipments from “a to n” as a complete package)

a. Dust Remover

1	Body Material	--	Zinc coated Epoxy painted Steel for structure & S.S for structure or other part for water contact area
2	Rotor	--	Aero Type
3	Motor	KW	specify
4	Panel Board:-	--	Synchronized with other equipments

5	Output	Kg/hr	700-800
6	Machine Dimensions & Weight	--	Please Specify
7	Materials to be used	--	All type of materials
8	Built in Safety Features		Please Specify
b. Belt Conveyor - I (for input feeding to film shradder (grinder))			
9	i . Belt Type	-	Flat Belt/Cleated Belt (Polyester – Nylon, Nylon – Nylon type)
10	ii . Drive Locations	-	End Drive
11	iii . Construction	-	Zinc coated Epoxy painted Steel for structure & S.S for structure or other part for water contact area
12	Belt Widths	mm	Please specify
13	Conveyor Lengths	mm	Please specify
14	Max Belt Speed (Variable from 0 to maximum with suitable electronic speed control)	Meter/min	Please specify
15	Maximum Load	Kgs.	100 kgs
16	Frame Configuration	-	Straight or Z type as required at site for input feed of material to film grabber as integral part of equipment
17	Frame Height (suitable for feeding)	mm	Please specify
18	Pulley Diameter	mm	Please specify
19	Output	Kg/Hr	Please specify
20	Motor power rating	KW	Please specify
21	Speed	MPM	Adjustable Please Specify range
22	Built in Safety Features		Please Specify
c. Film Shradder (Grinder - suitable for films Raffia bags, T-shirts bags, etc., of various shapes and sizes)			
23	Body Material	--	Epoxy painted steel for structure Robust structure or better
24	Motor	KW	Please Specify
25	Material Cutting Size	mm	80 - 100
26	Output	kg/hr	700-800
27	Throat Size	mm	1200x700 & Above
28	Number of blades-(Rotating & fixed & cutting blade material)	--	Please Specify
29	Hopper size	--	must suit the belt conveyor
30	Machine Dimensions & Weight	--	Please Specify
31	Built in Safety Features		Please Specify
d. Belt Conveyor - II (for input feeding to continuous pressure washer)			
32	i . Belt Type	-	Flat Belt/Cleated Belt (Polyester – Nylon, Nylon – Nylon type)
33	ii . Drive Locations	-	End Drive
34	iii . Construction	-	Zinc coated Epoxy painted Steel for structure & S.S for structure or other part for water contact area
35	Belt Widths	mm	Please specify
36	Conveyor Lengths	mm	Please specify
37	Max Belt Speed (Variable from 0 to maximum with suitable electronic speed control)	Meter/min	Please specify
38	Maximum Load	Kgs.	100 kgs
39	Frame Configuration	-	Straight or Z type as required at site for input feed of material to film grabber as integral part of equipment
40	Frame Height (suitable for feeding)	mm	Please specify
41	Pulley Diameter	mm	Please specify

42	Output	Kg/Hr	Please specify
43	Motor power rating	KW	Please specify
44	Speed	MPM	Adjustable Please Specify range
45	Built in Safety Features		Please Specify
e. Continues Pressure Washer			
46	Body Material	--	Please Specify (Should be made of Epoxy painted steel heavy duty robust structure) , all water contact parts should be of stainless steel
47	Motor	KW	Specify
48	Rotor RPM	--	Specify
49	Output	kg/hr	700-800
50	Operating System		Specify
51	Washing & Pumping System		Specify (Dirt removal)
52	Machine Dimensions & Weight	--	Please Specify
53	Built in Safety Features		Please Specify
f. Screw Conveyor - I (for sludge removal of floating tank)			
54	Body and conveyor Material	--	Please Specify (Should be made of Epoxy painted steel heavy duty robust structure & all water contact parts should be of stainless steel)
55	Output	kg/hr	700-800
56	Speed	--	synchronized with upstream and downstream
57	Screw Diameter and length	mm	Please Specify
58	Motor capacity	KW	Please Specify
59	Machine Dimensions & Weight	--	Please Specify
60	Built in Safety Features		Please Specify
g. Friction Washer			
61	Body construction	--	Please Specify (Should be made of Epoxy painted steel heavy duty robust structure) , all water contact parts should be of stainless steel
62	Screen and support Frame material	--	SS or better
63	Capacity	kg/hr	700-800
64	Speed	RPM	synchronized with upstream and downstream
65	Main Motor capacity	KW	Please specify
66	Main Rotar System		Material of construction-specify
67	Screen Material mesh etc		Specify
68	Machine Dimensions & Weight	--	Please Specify
69	Built in Safety Features		Please Specify
h. Floating washing Tank			
70	Body Material	--	Please Specify (Should be made of Epoxy painted steel heavy duty robust structure) , all water contact parts should be of stainless steel
71	Output	kg	700-800
72	System for push of floating material	--	Please Specify
73	Exit system for unfloat Material	--	Please Specify
74	a. Sludge remover using screw conveying		
75	Machine Dimensions & Weight	--	Please Specify
76	Pump System for water circulation	--	Please Specify
77	Operating System includes paddel, exit for float & unfloat materials		Please Specify
78	Motor & Gear	KW	Please Specify

79	Built in Safety Features		Please Specify
i. Screw Conveyor - II			
80	Body and conveyor Material	--	Please Specify (Should be made of Epoxy painted steel heavy duty robust structure), all water contact parts should be of stainless steel
81	Output	kg/hr	700-800
82	Speed	--	synchronized with upstream and downstream
83	Screw Diameter and length	mm	Please Specify
84	Motor capacity	KW	Please Specify
85	Machine Dimensions & Weight	--	Please Specify
86	Built in Safety Features		Please Specify
j. Squeezer cum Densifier			
87	Body Material	--	Please Specify (Should be made of Epoxy painted steel heavy duty robust structure) , all water contact parts should be of stainless steel
88	Motor	KW	Please Specify
89	Gear box type	--	Please Specify
90	Output	kg/hr	700-800
91	Heater	--	Please Specify
92	Material Squezzing	%	Please Specify
93	Machine Dimensions & Weight	--	Please Specify
94	Built in Safety Features		Please Specify
k. Cutter compactor (extruder mounted agglomerator) for extruder with belt conveyor			
95	Body and conveyor Material	--	Please Specify (Should be made of Epoxy painted steel heavy duty robust structure) , all water contact parts should be of stainless steel
96	Output	kg/hr	700-800
97	Speed	--	synchronised with upstream and downstream
98	Drum Diameter and length	mm	Please Specify
99	Motor capacity	KW	Please Specify
100	Machine Dimensions & Weight	--	Please Specify
101	Built in Safety Features		Please Specify
l. Pelletizing machine			
1. Inline two stage recycling plant with die face cutter (Mother-baby type)			
102	Body and conveyor Material	--	Please Specify (Should be made of Epoxy painted steel heavy duty robust structure) , all water contact parts should be of stainless steel
103	Screw diameter (mother barrel)	mm	140-170
104	a . Seamless bimetallic Barrel having resistance to both abrasive wear and corrosion,Material Composition for inner layer : tungsten carbide particles uniformly dispersed in a corrosion-resistant nickel alloy matrix (Certificate of material composition required with supplied equipment)		
105	b. Screw material Composition: tungsten carbide particles uniformly dispersed in a corrosion-resistant nickel alloy matrix (Certificate of material composition required with supplied equipment)		
106	L/D ratio		Please Specify
107	Output	kg/hr	500-550
108	Barrel & Screw material- EN-41B Nitro alloy steel duly gas nitrate	--	Please Specify
109	Vanted provision for barrel	--	Please Specify

110	Continious online Hydraulic plate type Screen changer		
111	Extruder Main motor	KW	Please Specify
112	Microprocessor based Temperature Controller	--	Please Specify
113	Gear boxes & types	--	Please Specify
114	Panel Board	--	Please Specify
115	Built in Safety Features		Please specify
116	Screw speed	RPM	maximum Up to 100
2. Baby			
117	Body and conveyor Material	--	Please Specify (Should be made of Epoxy painted steel heavy duty robust structure) , all water contact parts should be of stainless steel
118	Screw diameter (Baby barrel)	mm	140-170
119	a . Seamless bimetallic Barrel having resistance to both abrasive wear and corrosion,Material Composition for inner layer : tungsten carbide particles uniformly dispersed in a corrosion-resistant nickel alloy matrix (Certificate of material composition required with supplied equipment)		
120	b. Screw material Composition: tungsten carbide particles uniformly dispersed in a corrosion-resistant nickel alloy matrix (Certificate of material composition required with supplied equipment)		
121	L/D ratio		Please Specify
122	Output	kg/hr	500-550
123	Barrel & Screw material- EN-41B Nitro alloy steel duly gas nitrade	--	Please Specify
124	Vanted provision for barrel	--	Please Specify
125	Continious online Hydraulic plate type Screen changer (Change over time : 20 sec)	--	Please Specify
126	Extruder Main motor	KW	Please Specify
127	Microprocessor based Temperature Controller	--	Please Specify
128	Die face cutter system (with centrifugal Drier)	kg/hr	500-550
129	Gear boxes, Oil & types	--	Please Specify
130	Panel Board	--	Please Specify
131	Water Pump	--	Please Specify
132	Built in Safety Features		Please specify
m. Centrifugal Dryer			
133	Body and conveyor Material	--	Please Specify (Should be made of Epoxy painted steel heavy duty robust structure) , all water contact parts should be of stainless steel
134	Output	kg/hr	700-800
135	Water Pump	--	Please Specify
136	Motor capacity	KW	Please Specify
137	Machine Dimensions & Weight	--	Please Specify
138	Material Coveyer from dryer to silo if required	--	Please Specify
139	Built in Safety Features		Please specify
140	Overall Total connected load for washing and recycling Plant	KW	Please Specify
n. Thermal dryer for Rigid Plastics			
141	Body Material	--	Please Specify (Should be made of Epoxy painted steel heavy duty robust structure) , all water contact parts should be of stainless steel
142	Blower Power	Hp	Please Specify
143	Heating Power	Kw	Please Specify

144	Output	Kgs/hr	700-800
145	Application	-	Drying of washed Small Cut pieces of rigid plastics
146	Approx weight	Kgs	Please Specify
147	Approx. Dimensions	Mtr	Please specify

2020-21/06/03. Waste Water treatment Plant for 100 KLD

1	Plant capacity	KLD	100
2	Operating Hours (22-24 hrs required)	Hrs	Please Specify
3	Flow Rate	Cum/Hr	Please Specify
4	Waste Water (only process water non sewage type)		
5	pH value-Treated Water (In-let)	-	6.5 - 8.5
6	BOD	mg/l	Upto 3000
7	COD	mg/l	10000-30000
8	TSS	mg/l	Upto 800
9	Oil & Grease	mg/l	Upto 50
10	Treated Water		
11	pH value-Treated Water (In-let)		6.5 - 7.5
12	BOD	mg/l	As per CPCB Guideline
13	COD	mg/l	As per CPCB Guideline
14	TSS	mg/l	As per CPCB Guideline
15	Oil & Grease	mg/l	As per CPCB Guideline
16	Pre fabricated structure at different site: Plant Process flow reuse/recirculation of water such as Screen, Oil and Grease Trap etc. pH, effluent tank, Mixture, Reactor, Treated water collection tank, Sludge collection tank etc. shall be mentioned clearly with support of catalogue/brochure.	-	Please Specify
17	Panel boards, suitable Motor and Pumping systems to handle waste water, Sludge and Treated water shall be clearly mentioned for the scope of supply.	-	Please specify

2020-21/06/04. Microprocessor based Automatic Injection Moulding Machine 450-500 T

S. no.	Items	Unit	Specification
a. Injection Unit			
1	Shot Capacity (in GPPS)	G	1600 and above
2	SCREW DIAMETER	mm	70-90
3	SCREW L/D RATIO	--	Specify
4	INJECTION PRESSURE	bar	1400 and above
5	INJECTION Speed	mm/sec	100 and above
6	INJECTION RATE	cc/sec	300 and above
7	PLASTICIZING RATE (GPPS)	gm/sec	60 and above
8	Max. SCREW SPEED	rpm	140 and above
9	Heating Capacity	kw	Specify
b. Clamping Unit			
10	CLAMP FORCE	ton	450-500
11	Mould Opening Stroke	mm	800 and above

12	MAXIMUM DAYLIGHT	mm	1600 and above
13	MINIMUM MOULD HEIGHT	mm	Specify
14	Maximum Mould Height	mm	800 and above
15	PLATEN SIZE	mm	1000 X 1000 and above
16	DISTANCE BETWEEN TIE ROD	mm	800 X 800 and above
17	EJECTOR STROKE	mm	150 and above (Multi point and Multi Stage)
18	EJECTOR FORCE	Kn	Min. 100
19	MOULD WEIGHT CAPACITY	kg	Specify
20	Hydraulic Multiple core pulling unit	-	specify and quote (Minimum 2 core pulling)
21	Multi stage Air Ejection	-	Specify and Quote (Minimum 5 point)
22	Clamping Mechanism	-	Toggle

c. General

23	T Slot Platen	-	T Slot is Preferred
24	Injection unit on LM guides	-	Specify and Quote
25	Robot Interface	-	Specify and Quote
26	Hot Runner Inerface	-	Specify and Quote (Minimum 4 Zones)
27	Interface for Gas Assisted Injection	-	Specify and Quote
28	Water inlet & outlet manifold for Mould cooling	-	Min. 12/12 Channel
29	Computer connectivity	-	Specify
30	Hopper loader cum drier	-	Specify and Quote for suitable capacity
31	Essential/Standard spares	-	Specify and Quote (Standard Tool Kit, NRV, Thermocouple, Band Heater, Short/Extended Nozzle, SSR, Proximity Switch, Limit Switch, Mould Clamps, T-Nut and Studs, Etc.,)
32	Safety	-	Specify the Special safety provisions
33	Motor / Pump Type	-	Servo
34	Motor load	-	Specify
35	Machine Dimensions (LxWxH)	-	Specify
36	Total connected load	-	Specify
37	Max. Power consumption @ full machine capacity	-	Specify (lower power consumption will be preferred)

2020-21/06/05. Air Compressor

S. no.	Items	Unit	Specification
1	Discharge Pressure	Bar	30
2	Air Flow	CFM	Up to 140
3	Motor Rating	HP	Specify
4	Compressor Technology	--	Specify
5	Auto power cut off	--	Specify and Quote
6	Lubrication	--	Specify
7	No. of Stages	--	Specify
8	Cooling Technology	--	Specify
9	Receiver Tank Capacity	litre	500 and above

2020-21/06/06. Chiller 10 TR

S. no.	Items	Unit	Specification
1	Cooling Capacity	TR	10
2	Temperature Range	°C	5 to 35

3	Process Flow	LPM	100
4	Pump Rating	HP	Specify
5	Compressor Motor rating	HP	Specify
6	Reservoir capacity	Ltr	Specify

2020-21/06/07. Cooling Tower- 100 TR (CTI Certified)

	Model	Type	FRP Induced draft COUNTER FLOW type with basin
1	Capacity	TR	100
2	Water flow rate	LPM	Min 1000
3	Hot water temperature	°C	35-50
4	Cold water temperature	°C	30-32
5	Wet bulb temperature	°C	27-28
6	Inlet, outlet connection size	mm	75-100
7	Motor Power	KW	Max. 15
8	Material for All fastners, nut, bolts etc.		Stainless Steel
9	Machine dimensions (LxWxH)	mtrs	specify
10	construction materials		FRP (Fiberglass Reinforced Plastic) casing, basin/sump, fan deck & fan cylinder; HDG (Hot Dipped Galvanized) steel structure; SS hardware; direct driven fan; fixed type water distribution system & splash cups; PVC honeycomb fill; PVC extruded 'C' section drift eliminators; and, 415 Volt/50 Hz/3 Phase fan motor with extended shaft
11	Nozzles		Engineering Plastic – Nylon – 6 OR Delrene OR Polycarbonate

<p>• Technical catalogue / Brochure shall be enclosed for every equipment with detailed description Make/ Model, Type of controllers, Motor Capacity, Material used for construction etc., and others specifications if any.</p> <ul style="list-style-type: none"> • All Electrical motor should be of ISI mark (high efficiency) type Totally enclosed weather proof with IP-55 protection of reputed make only. Bidders need to specify. • Electrical Drives, controllers, switchgears should be ISI make of reputed manufacturers only. • All structural parts of equipment should be built with zinc coated epoxy painted heavy steel section material for non water contact application. • Parts and assembly should be made of polished stainless steel preferably of Grade SS316 (with 2 to 3 percent molybdenum) or better for water contact application. <p>Scope of Work :SUPPLY, INSTALLATION, TESTING & COMMISSIONING at different Site at various location in the country.</p>
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