

Schedule A

Quantity schedule of components (Equipments) for one set of laundry

SL. No.	Description of store	Qty/Set	Technical Details
1	Industrial washer cum extractor capacity 100-120 kgs	02 Nos.	Annexure-I
2	Industrial washer cum extractor capacity 50-60 kgs	01 Nos.	Annexure-II
3	Tumbler Dryer Capacity 50 -60Kgs	01 Nos.	Annexure-III
4	Flat work Ironer (Calendaring machine) Capacity 800 x 3000 mm double roll.	03 Nos.	Annexure-IV
5	Steam boiler (HSD fired) capacity minimum 850 kgs of steam/hr	02 Nos.	Annexure-V
6	Water feed pump of minimum-3 HP	02 Nos.	Annexure-VI
7	Air compressor of minimum-3 HP	02 Nos.	Annexure-VII

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Annexure-I

Technical specification of Industrial washer cum extractor capacity 100-120 kgs


	Railway Requirement	Firm's offer compliance along with model No.
IA	Major Parameter	a) "G" Force at final extract: 300 G. (Minimum) b) Washing cycle – Desirable 45 minute but not more than 55 minute c) Inner/Outer drum:- Made of S S 304 d) Cabinet: Stainless Steel of S S 304 e) Auto dosing facility: Auto & Manual facilities should be available. f) Soap dispenser - 5 compartment (minimum) g) Capacity: Minimum 100 kg dry weight of 100% cotton per charge. h) Machines should be equipped with a separate overdrive panel with buttons for manual operation in case of PLC failure. i) Drum volume to weight ratio min 1:10 j) Machine should be soft mounted.
1B	Major Parameter Operation	a) The machine should be equipped with two inlet facility – <ul style="list-style-type: none"> • Hot water supply arrangement • Normal water supply arrangement b) The machine should be equipped with Viton seal. c) All valves should be pneumatic controlled. d) The machine should be steam operated and have steam supply inlet e) Automatic mechanism to maintain set temperature by mixing hot and normal water supplies.
2	Minor Parameter -	Programmable microprocessor controller with standard and custom base programming facility.

Annexure-II
 Technical specification of Industrial washer cum extractor capacity 50-60 kgs

Railway Requirement		Firm's offer compliance along with model No.
IA	Major Parameter	i) "G" Force at final extract: 300 G. (Minimum) ii) Washing cycle – Desirable 45 minute but not more than 55 minute. iii) Inner/Outer drum:- Made of S S 304 iv) Cabinet: Stainless Steel 304 v) Auto dosing facility: Auto & Manual facilities should be available. vi) Soap dispenser - 5 compartment (minimum) vii) Capacity: Minimum 50 kg dry weight of 100% cotton per charge. viii) The machine should be equipped with separate over drive panel with buttons for manual operation in case of PLC failure ix) Drum volume to weight ratio min 1:10 x) Machine should be soft mounted.
1B	Major Parameter Operation	a) The machine should be equipped with two inlet facility – <ul style="list-style-type: none"> • Hot water supply arrangement • Normal water supply arrangement b) The machine should be equipped with Viton seal. c) All valves should be pneumatic controlled. d) The machine should be steam operated and have steam supply inlet e) Automatic mechanism to maintain set temperature by mixing hot and normal water supplies.
2	Minor Parameter	Programmable microprocessor controller with standard and custom base programming facility.

Annexure-III
Technical specification of Tumbler drier capacity 50-60 kgs

	Railway Requirement	Firm's offer compliance along with model No.	
1	Major Parameter	a) Capacity: Minimum 50 kg dry weight of 100% cotton per charge. b) Inner & outer cylinder & body : made of SS 304 grade c) Drive motor: 1.1 KW (min), three phase d) Blower motor : 1.1 KW (min), three phase e) Operation : Steam operated f) Cycle : 50 kg (min) per cycle in maximum one hour g) Programmable microprocessor controller h) Pneumatic valve for steam inlet i) Noise level: less than 85 db j) Double direction rotation – forward & reverse k) Drum volume to weight ratio: -1:20	
2	Minor Parameter	NIL	


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Annexure-IV

Technical specification of Flat Work Ironer (Calendaring Machine)

	Railway Requirement	Firm's offer compliance along with model No.
1	Major Parameter	<p>a) No. of Roll: - Two Nos. (Two Pass).</p> <p>b) Roller Speed: 10 to 25 meter per minute (Maximum) variable speed.</p> <p>c) Roller length : minimum 3000 mm</p> <p>d) Roller Dia: 800 mm(Diameter tolerance $\pm 5\%$ of 800 mm max)</p> <p>e) Evaporation rate: Min (170 kg/hr)</p> <p>f) Finger safety guard: Auto cut off by swing guard for false feeding & finger safety.</p> <p>g) Moisture suction blower to be available on each roller.</p> <p>h) Power of operation : Three phase</p> <p>i) Ironing Roller : made of carbon steel with hard chrome plating.</p> <p>j) Front feed and rear return</p> <p>k) Vibration/noise level: Less than 70 db</p> <p>l) Flat work ironer shall be roller heated</p>
2	Minor Parameter	NIL

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Annexure-V

Technical specification of Steam Boiler (HSD Fired) Capacity 850 kg of steam/hour

	Railway Requirement		Firm's offer compliance along with model No.
1	Major Parameter	a) Fuel: HSD b) Steam out put: 850 kg per hr (Minimum) c) Steam pressure: 10 kg per cm ² (minimum) d) Boiler: Vertical coil type e) Thermal efficiency: 85% (minimum) f) Diesel storage tank: 800 ltrs (minimum) g) Soft water storage tank – 2000 ltrs (minimum). h) M.S. Chimney: Required height connected to MS exhaust duct of the boiler. i) Outer body: Insulated, top plate with ceramic wool refractory, Air pre-heater, Vent for de-aerated gases. j) Boiler should be compatible for interconnection with another boiler of similar capacity. k) Legal conformity and requirement of Boiler shall be as per extant Rule & regulations.	
2	Minor Parameter	Compatible with water softener with Braine tank. Necessary water softener plant with braine tank of adequate capacity will be supplied and installed by the contractor at their own cost.	

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Annexure-VI

Technical specification of Water Feed Pumps

	Railway Requirement		Firm's offer compliance along with model No.
1	Major Parameter	a) Head : Min 30 mtrs b) Motor capacity : 3 HP Min	
2	Purpose	Capable of charging soft water at high pressure along with plumbing/pipeline etc.	
3	Minor Parameter	NIL	

Annexure-VII

Technical specification of Air compressor

	Railway Requirement		Firm's offer compliance along with model No.
1	Major Parameter	1. Motor power – 3 H.P.(minimum) 2. Free Air delivery 08 – 14 CFM at –7 bar or as per IS: 5456 3. Max – pressure – 09 bar	
2	Minor Parameter	1. Air Receiver – 160-200 litre	

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