

## Section 7. Technical Specifications

### Procurement of GT Air Intake Coalescer Filter & Pre Filter for 225MW CCPP of APSCL.

#### Guaranteed technical specification for the required filter.

Filter Name	Description as per APSCL Requirement	Tender Data	
<b>1st Stage - Coalescer Filter</b>	Filter Type	: Coalescer Filter	
	Filter Class	: EN 779:2012-G4	
	Material of Media	: Hydrophobic Synthetic Fiber (Non-Woven & Washable)	
	Dimensions (mm)	:595×595×335 (Nominal/without frame-300 mm, with frame & gasket - 335 mm)	
	Frame	: Plastic.	
	Gasket	: 6 mm continuous gasket on downstream and upstream sides both.	
	No. of pockets	: 6	
	Filter effective medium area	: $\geq 2.1 \text{ m}^2$	
	Operating temperature	+3 °C - +70 °C	
	Weather condition	: Relative Humidity > 100% Rainy, Dirty, Foggy and Dusty, Insects, flies, Mosquitoes etc.	
	Type of dust	: Dry, Moistured, Corrosive, Sooty-Oily, Erosive, Carbon etc.	
	Flow-rate per element	: $\geq 3400 \text{ m}^3/\text{h}$	
	Service Life Time	: $\geq 4000$ hours	
	<b>According to standard EN 779:2012</b>		
	Initial pressure drop	: $\leq 50 \text{ Pa}$	
	Final pressure drop	: $\geq 250 \text{ Pa}$	
	Burst pressure drop	: $> 6000 \text{ Pa}$	
	Degree of separation	: 100 % water droplets	
	Initial arrestance	: $\geq 83 \%$	
	Average arrestance	: $\geq 91 \%$	
Dust holding capacity for ASHRAE-Dust	: $\geq 750 \text{ g @ } 250 \text{ Pa}$		

<b>2nd Stage - Pre- Filter</b>	Filter Type	: Pre filter		
	Filter Class	: EN 779:2012-M6		
	Brand	: FSP-M6-360/6 or Equivalent		
	Material	: Synthetic Fiber ( Non-Woven & Washable)		
	Dimensions	: 592 × 592 × 360 (±5% for Depth) mm		
	Frame	: Plastic. High strength ABS molded profile with horizontal truss to ensure robustness and integrity. Frame Depth= 25mm		
	No. of pockets	: 6		
	Filter effective medium area	: ≥ 2.6 m <sup>2</sup>		
	Operating temperature	: +3 °C - +70 °C		
	Weather condition	: Relative Humidity ≥ 100% Rainy, Dirty, Foggy and Dusty, Insects, flies, Mosquitoes etc.		
	Type of dust	: Dry, Moistured, Corrosive, Sooty-Oily, Erosive, Carbon etc.		
	Flow-rate per element	: ≥ 3400 m <sup>3</sup> /h		
	Service Life Time	: > 5000 hours		
	<b>According to standard EN 779:2012</b>			
	Initial pressure drop	: ≤ 87 Pa		
	Final pressure drop	: ≥ 450 Pa		
	Initial arrestance	: ≥ 93 %		
Average arrestance	: ≥ 98 %			
Initial efficiency (0.4µm)	: ≥ 8.3 %			
Average efficiency (0.4µm)	: ≥ 60 %			
Dust holding capacity for ASHRAE-Dust	: ≥ 362 g @ 450 Pa			

**N.B.:**

1. Tenderer/Supplier must submit original Printed Catalogue from the manufacturer including products description/technical specification along with the offer.
2. Tenderer/Supplier must submit at least 1 (One) End-User certificate mentioning that offered filters were used in SGT5-2000E and performance of the filters were satisfactory for minimum one (01) year. End-User Name,

address, phone no, fax no, email address etc. must be mentioned in End-User's official pad.

3. Tenderer/Supplier must submit the following Third Party Test Report as per EN779:2012 from independent European Standard Testing Laboratory for each filter stage during bid documents submission:

- a. Efficiency (%) Vs Dust Feed, (gm)
- b. Initial Pressure Drop (Pa) Vs Air Flow Rate (m<sup>3</sup>/h) at 25% to 125% of nominal air flow and Final Pressure Drop (Pa) Vs Nominal Air Flow Rate (m<sup>3</sup>/h)
- c. Collection Efficiency (%) Vs Particle Size (µm) [Efficiency after different dust loading phases]

4. For Coalescer Filter, Tenderer has to submit " Resistance to water penetration- Hydrostatic pressure test report (The pressure at which the water penetrates the fabric at the third place has to be  $\geq 490$  Pa) as per EN 20811 from independent European Standard Testing Laboratory and Water leakage test report (Differential pressure, Pa Vs. Time, Min) during bid document submission to ensure no water droplet will carry over the Coalescer filter. The water leakage test has to be performed as "Ultra-fine droplets of normal city water or salt water, generated with an array of atomizing swirl spray nozzles, will be sprayed with an intensity of 0.4 L/min in 300 min @ 4250 m<sup>3</sup>/h airflow. Acceptance criteria: amount of loaded water  $\geq 120$  L, amount of leakage water=0.0 L, Pressure drop  $\leq 500$  Pa during the full test.

5. The test reports should be original one. If photocopy of test report is submitted, that should be certified by Notary Public.

6. Tenderer/Supplier must provide Original Filter Manufacturer's authorization letter to confirm that the offer originated from original filter Manufacturer. Authorization letter from dealer will not be accepted. Trading house will not be accepted if not supported by manufacturer's Authorization Letter. Authorization Letter from manufacturer's Sales office located in other country (not in the country of origin) may be allowed if supported by manufacturer's letter in this regard.

7. Manufacturer should have proven experience to supply those filters at least one time to SGT5 2000E and provide that proofness with purchase order copy.

8. Warranty: The warranty period is 6 months for Coalescer filter & 7 months for Pre filter from installation at APSCL 225 MW CCPP site condition or 18 months from the date of delivery at APSCL store & its weather condition.

9. Delivery: The filters must be supplied to APSCL's store by the tenderer. Customs duty in Chittagong Port will be borne by APSCL.

10. One piece filter of each filter stage must be submitted as sample during bid documents submission. Submitted sample Physical Verification Test will be considered during evaluation.

11. Country of origin: European Union (EU) / G7. Certificate of origin issued by Chamber of commerce or government authority, shall be submitted during delivery of the materials

12. In case of any mismatch of materials/size detected, the supplier shall have to take back the mismatched items at their own cost and replace the same with appropriate items without claim of additional cost to the purchaser.

