

General Technical Specifications of the items:

Item No.	Item	Technical Specification
1.	<b>Poly house Naturally Ventilated (NVPH) 576 sq. Mtr</b>	<p>Commissioning of Polyhouse Naturally Ventilated, supply, Installation and civil work include</p> <ol style="list-style-type: none"> <li>1. Height of NVPH - 6 m to 7 m (Normally 6.5 m)</li> <li>2. Height of Gutter- 4 m to 4.5 m (Normally 4.5 m)</li> <li>3. Height of Top Vent- 1m (or 10% area of covered area whichever is higher)</li> <li>4. Bay Size- 8 m x 4 m. as per requirement</li> <li>5. Corridors - Maximum 2 m all sides for area calculation.</li> <li>6. Type -Saw tooth design.</li> <li>7. Shape - Aero dynamic</li> <li>8. Structure -Hot Dip Galvanized structure. Galvanization of the structural members of BIS standards and should not be less than 300 GSM.</li> <li>9. Stability of Structure - Structure should with stand minimum wind speed of 80 km/hr.</li> <li>10. Structure: Galvanized tubular structure.</li> <li>11. Grid Size: 8m x 4m with 2m balcony/canopy on all sides.</li> <li>12. Gutter Height: 4.5m.</li> <li>13. Gutter Slope: 1-2% slope to be provided in civil structural work.</li> <li>14. Apron Height: 1.2 to 1.5m on all four sides with GI fixing; poly film embedded in soil.</li> <li>15. Curtain: Manual side roll-up curtains (2m) with</li> </ol>









# Maharaja Ranjit Singh Punjab Technical University

Badal Road, Bathinda -151001

(Established by Govt. of Punjab vide Punjab Act No. 5 of 2015)

ਮਹਾਰਾਜਾ ਰਣਜੀਤ ਸਿੰਘ ਪੰਜਾਬ ਟੈਕਨੀਕਲ ਯੂਨੀਵਰਸਿਟੀ ਬਾਦਲ ਰੋਡ, ਬਠਿੰਡਾ

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Date-

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handle; 40-mesh insect net below with a fixing mechanism.

16. Ridge Height: 6.5m with an overlapping open vent (0.9 to 1.05m) for ventilation.

17. Columns: 76mm OD/2mm thick GI pipe.

18. Trusses: Bottom - 60mm OD/2mm thick GI pipe; Top chords & members - 48mm/42mm OD/2mm thick; Bracing - 42mm OD/2mm thick GI pipe.

19. Purlins: 42mm OD/2mm thick GI pipe.

20. Balcony: 60mm OD/2mm thick GI pipe.

21. Foundation Depth: 1000-1200mm; 3mm, 60 OD pipes; PCC 1:2:4 mix with proper filling for structural stability.

22. Gutter: 1.2mm thick GI sheet with 500mm perimeter trapezoidal section, bolted to purlins.

23. Fasteners: M6-M10 bolts & nuts (15-110mm length) with corrosion-resistant plating.

24. Polyfilm: 200-micron thick UV-stabilized, diffused, anti-fog/drip multilayer poly film (Ginegar/Suncool).

25. Poly Fixing: GI locking profiles with smooth GI wire spring for single/double poly fixing.

26. Gables: Two-way GI poly lock for securing poly sheets along with curtain tops.

27. Doors: GI frame doors, 1m x 2m.

28. Aerodynamic Shape: Curvature-shaped balcony pipes (48mm OD/2mm thick GI) for wind resistance.

29. Shade Net: 50% white/black collapsible shading net below gutter

30. Insect Net: White 40-mesh insect net below roll-up curtains and ridge ventilation

## Drip System

1. Main & Sub-main Line: PVC 63mm x 4 kg/cm<sup>2</sup> - more than 36m

2. 16mm LLDPE Lateral Line CL-2: more than 60m

3. In-line 16mm, 1.3 to 2.4 LPH @ 20-40cm CL2: more than 750m

4. Ball Valve 63mm (Moulded Seal, Plain): 2 Nos.

5. Sub-main Flush Valve 40mm: 2 Nos.

## Fogging System

1. Main & Sub-main Line: PVC 63mm x 4 kg/cm<sup>2</sup> - more than 36m

2. 16mm LLDPE Lateral Line: more than 200m

3. 4-way Fogger Assembly with HPLPD: more than 50 Nos.

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4. Ball Valve 50mm (Teflon Seal, Plain): 2 Nos.
5. Sub-main Flush Valve 40mm: 2 Nos.
6. GI Wire 2mm Thick: more than 200m

## Filtration Unit

1. Disc Filter 25 m<sup>3</sup>/hr: 1 No.
2. Sand Filter/Hydrocyclone 10 m<sup>3</sup>/hr: 1 No.
3. Manifold GI+GMV/HDPE: 1 No.
4. Venture Assembly Complete: 1 No.
5. Air Release Valve Assembly 1": 1 No.

## Delivery & Integration:-

All features must be integrated system with unified control and commissioning must be completed 8 weeks from award date. Training for operating personnel must be provided.

## Warranty & Support

Minimum 3 year warranty for all hardware components, covering defects in materials and workmanship.

On-site service response must be within 48 business hours of fault reporting.

All replacements parts and labour during the warranty period shall be provided at no additional cost.

Free training for operation and maintenance of 1 year.

