1. **Estimation for Components**

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| **SR.NO** | **Name of Item** | **Description** | **Qty.** | **Remarks** |
| 1. | Centrifugal pump | * Power: 1HP (0.75 kW) * Rated voltage: 220V (single phase) * Rated Frequency: 50Hz * Voltage range: 180V-260V (1PH) * Pipe size: 1 inch outlet * Head: Up to 50 meters * Max. discharge: Up to 5000 LPH. | 1 |  |
| 2 | Solenoid valve | * Temperature: -5°C +100°C * Range: 0 to 100°C * Signal: 24VDC * Pipe Size: 1 inch * All Normally open | 4 |  |
| 3 | Control valve | * Output range : 4 to 20mA * Pneumatic operator * I to P converter * 1 inch installation * Normally Open | 2 |  |
| 4 | Flow Indicator and Transmitter | * Turbine Type (Optional) * Input: 24 VDC * Signal : 4 to 20 mA * Range: 0 to 10000+ LPH * Service water * There should be display and configuration buttons | 1 |  |
| 5 | Level Indicator and Transmitter | * No. of Inputs: Single * Output Signal: 4-20mA DC * Inductive type * Input: 24VDC * 1 inch NPT * Service water * There should be display and configuration buttons | 1 |  |
| 6 | Temperature Transmitter | * Input Type: Universal Input (RTD PT100) * Range: 0 to 100 c * Signal:4-20mA DC Isolated * Input : 24VDC * ½ or 1 inch NPT * Service water | 1 |  |
| 7 | Pressure Indicator and transmitter | * Output Signal: 4-20mA DC * Range: 0 to 10 bar * Service water | 1 |  |
| 8 | Level switch | * Switching action: NO & NC both * Max. temperature: 100°C * Connection Type: ½ BSP * Signal: Contact or 0/24 VDC | 6 |  |
| 9 | Push Button | * 22mm Flat Electrical Circuit Control Industrial Push button | 2 |  |
| 10 | Emergency stop push button | * 30 mm or 40 mm | 1 |  |
| 11 | Compressor | * 10 bar | 1 |  |
| 12 | Pipe | * SS or PVC * Line Size 1 inch |  |  |
| 13 | Heater | * Heating Coil 2KW * Installation Bottom of tank | 1 |  |
| 17 | Rotameter | * Range: 0 to 10000+ LPH * Pipe size: 1 inch * Outlet: 1.5 inch | 1 |  |
| 18 | Motor | * Single phase * 230V AC * ¼ HP motor * High torque |  |  |

**Tank Description:**

* Tank 1- Volume:100ltrs

Height: 80 cm

Diameter: 40 cm

* Tank 2- Volume: 25ltrs

Height: 50 cm

Diameter: 25 cm

* Reservoir (Tank 3)- Rectangular

Volume: 200ltrs

Length: 80 cm

Width: 40 cm

Height: 60 cm

**Manual Valve:** Quantity- 5

* Manual Valve 1,2: Normally open for continuous flow
* Manual Valve 3(at outlet): Normally close to prevent accidental drainage
* Manual Valve 4,5: Should be NC

**Solenoid Valve:** Quantity- 4

* Solenoid Valve 1,2: 1 inch
* Solenoid Valve 3,4: 2 inches

**Control Valve:** Quantity- 2

* Control valve 1: 1 inch
* Control valve 2(Outlet): 1.5/2 inch
* Distance between Control Valve 1 and FIT should be minimum 10 inch
* Distance between FIT and Manual Valve 3 curve should be min. 10 inch