**ANNEX II**

**TECHNICAL SPECIFICATIONS AND MAX AVAILABLE PRICE PER ITEM**

**ANNEX 2: Technical specifications**

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| --- | --- | --- | --- | --- |
| **Item** | **Technical specification** | **Quantity** | MaxUnit price **(€)**  | MaxTotal price **(€)** |
| **Weather station**  | **1** | **7000** | **7000** |
| * Air Temperature sensor
 | Measuring range - 20 to 60 °C Accuracy: < 0.5 °C | 1 |  |  |
| * Air Relative Humidity sensor
 | Measuring range Accuracy : 5% | 1 |  |  |
| * Solar radiation sensor
 | Measuring range 0 .to 1500 W/m²spectral range 350 to 2 500 nmAccuracy : 5% | 1 |  |  |
| * Wind speed sensor
 | Measuring range 0 .to 40 m/sAccuracy : 5% | 1 |  |  |
| * Rainfall sensor
 | Funnel Area : ≥ 200 cm2 Accuracy : 5%With protection from bird | 1 |  |  |
| * Accessories
 | This station must be equipped with mat(s), anchoring system and all accessories for fixing the various sensors and the power system. | 1 |  |  |
| **Soil moisture and temperature multilayers probe** | **24** |  **1035** |  **24840** |
|  | Measuring range : 0 – 0.80 Vwater/VsoilMinimum 6 depth : 0 to 60 cmAccuracy : 0.03  | 19 |  |  |
|  | Measuring range : 0 – 0.80 Vwater/VsoilMinimum 6 depth : 0 to 80 cmAccuracy : 0.03  | 5 |  |  |
| **Pulse water flowmeter**  | **12** | **500**  | **6000**  |
|  | Diameter range : DN40 to DN 50Measuring range 0 to 25 m3/h (nominal)Operating Pressure: 0.5 - 15 BarAccuracy : 5% | 12 |  |  |
|  **Solenoid valve for irrigation water** | **12** | **175**  | **2100**  |
|  | Diameter range: DN40 to DN 50Operating Pressure: 0.5 - 10 Bar | 12 |  |  |
| **Gateways** | **15** |  | **8800** |
| * Indoor Gateways
 | 1 gateway on-site1 gateway can support 4-8 sensorsCompliance to LoRaWAN | 13 | 400 |  |
| * Outdoor Gateways
 |  | 2 | 1800 |  |
| **IoT Platform (for reading, viewing, downloading, configuring data upload, etc.)** | **1** | **1660** | **1660** |
|  | All fields Sensor data (sensors Network) to be synchronized with [the](https://ng.fieldclimate.com/) IoT platformFields station/Sensors configurationMaps & Geolocation ServicesData Processing & AlertingDashboards & ReportsOpen API for Easy Integration | 1 |  |  |

**Additional Specifications:**

1. All sensors must have an operating temperature range between -20 ºC and +60 ºC.
2. Energy supply for each equipment must be done by battery or solar panel
3. The sensors / devices must be equipped with all necessary accessories for installation and operation: protective case, mat(s), support(s), an anchoring system, etc.
4. All sensor/device enclosures and accessories must be resistant to water, dust and radiations.
5. Alert system regarding sensor/devices malfunction is required.
6. Access to raw sensor data (in direct or indirect form) is required for validation of field data.
7. All sensors have to be connected and operate on LoRaWAN® platform with a connectivity of 1 year.
8. Within the 1 year following the contract signature, the connection of all sensors will be transferred to a Local LoRaWAN®. To this end, the company is requested to provide technical support to facilitate the transfer.
9. In each plot, a flowmeter and two multi-depth soil water content sensors will be installed.
10. Documentation of the Technical specifications of all the proposed material is required.
11. Adequacy of the proposed material to the requested technical specifications is required.
12. If the addition of an equipment or an accessory is deemed necessary for the correct functioning of the system, the price must be indicated with the mention EXTRA.