

## **INVITATION TO QUOTE**

### **Project Title:**

Smart Technological Upgrade for Dim Sum Production Line

### **RFQ Ref:**

RFQ-xx-xxx

### **Introduction and Background:**

[Company Name] is a small-scale food processing company based in Hong Kong, specializing in the production of traditional dim sum products such as dumplings, buns, and spring rolls. Our facility currently operates a production line that processes and packages up to 1,000 kilograms of dim sum products daily. We wish to implement smart technology solutions to enhance operational efficiency, reduce costs, and improve product quality while maintaining compliance with food safety regulations.

### **Scope of Work:**

We are seeking proposals for solutions that include:

- **IoT Sensors:** Integration of IoT sensors to monitor temperature and humidity levels in real-time, ensuring consistent product quality.
- **Automated Dough Mixers:** Two units capable of handling up to 50 kg of dough per batch, featuring programmable settings for mixing speed and duration.
- **Automated Filling Machines:** Three units designed for precise filling of dumplings and buns, with adjustable settings for filling volume and speed.
- **Data Analytics Tools:** Basic software for analyzing production data, optimizing workflow, and generating reports.

### **Technical Specifications:**

- **IoT Sensors:**
  - Type: Digital temperature and humidity sensors
  - Quantity: 20 units
  - Measurement Range:
    - Temperature: -40°C to 125°C
    - Humidity: 0% to 100% RH
  - Accuracy:
    - Temperature: ±0.2°C
    - Humidity: ±2% RH
  - Response Time:
    - Temperature: <2 seconds
    - Humidity: <5 seconds
- **Automated Dough Mixers:**

Capacity: 50 kg per batch  
Quantity: 2 units  
Mixing Speeds: Adjustable from 10 RPM to 100 RPM  
Mixing Duration: Programmable from 1 minute to 60 minutes  
Motor Power: 5 HP (3.7 kW)  
Control Panel: Touchscreen interface with PLC control  
Safety Features: Emergency stop button, overload protection, and safety interlock  
Material: Food-grade stainless steel (AISI 304)  
Dimensions: 1500 mm (L) x 800 mm (W) x 1200 mm (H)  
Power Supply: 220V/380V, 50/60 Hz  
Compliance: CE and ISO 9001 certified

- **Automated Filling Machines**

Quantity: 3 units  
Filling Volume: Adjustable from 5g to 100g  
Filling Speed: Adjustable from 30 to 120 pieces per minute  
Control System: PLC with HMI for easy operation  
Accuracy:  $\pm 1$ g  
Material: Food-grade stainless steel (AISI 304)  
Dimensions: 1200 mm (L) x 900 mm (W) x 1600 mm (H)  
Power Supply: 220V, 50/60 Hz, single phase  
Hopper Capacity: 15 liters  
Nozzle Types: Interchangeable nozzles for different product types  
Cleaning: Easy disassembly for cleaning and maintenance

- **Data Analytics Tools**

Software Type: Cloud-based or on-premise  
Data Integration: Compatible with existing ERP and SCADA systems  
Key Features:  
Real-time data monitoring and visualization  
Historical data analysis and trend reporting  
Workflow optimization recommendations  
Customizable dashboards and reports  
Alerts and notifications for critical events  
User Interface: Web-based with mobile app support  
Security: End-to-end encryption, user authentication, and role-based access control

- **Integration:** Solutions must integrate seamlessly with existing PLC systems.
- Solutions must adhere to Hong Kong's Centre for Food Safety (CFS) guidelines.

**Project Timeline:**

- Expected Start Date: dd/mm/yyyy
- Project Duration: x months
- Expected Delivery Date: dd/mm/yyyy

## **RFQ Example 2 : New material manufacturing**

### **INVITATION TO QUOTE**

#### **Project Title:**

Energy Efficiency and Waste Reduction Upgrade for New Material Manufacturing

#### **RFQ Ref:**

RFQ-xx-xxx

#### **Introduction and Background:**

[Company Name] is manufacturing company based in Hong Kong, specializing in the production of eco-friendly packaging materials made from biodegradable polymers. Our facility currently operates a production line that produces up to 500 kilograms of packaging materials daily. We wish to implement smart technology solutions to enhance energy efficiency, reduce waste, and improve overall sustainability while maintaining compliance with environmental regulations.

#### **Scope of Work:**

We are seeking proposals for solutions that include:

- **Energy Management System:** Installation of an energy management system (EMS) to monitor and optimize energy usage throughout the production process.
- **Waste Reduction Technology:** Implementation of waste reduction technology, including automated cutting and trimming machines to minimize material waste.
- **Recycling Systems:** Integration of recycling systems to reprocess and reuse production scrap and off-cuts.
- **Data Analytics Tools:** Basic software for analyzing energy consumption and waste data, optimizing workflow, and generating sustainability reports.
- Solutions must adhere to Hong Kong's Environmental Protection Department (EPD) guidelines.

#### **Technical Specifications:**

- **Energy Management System (EMS):** The EMS should include sensors and meters capable of real-time monitoring of energy consumption across different production stages. It should provide detailed analytics and reporting features, and allow remote access for monitoring.
- **Automated Cutting and Trimming Machines:** These machines should have high precision to minimize material waste, with programmable settings for different material types and thicknesses. They should be capable of handling up to 100 kg of material per hour.

- **Recycling Systems:** The recycling systems should be able to process and reintroduce up to 80% of production scrap back into the production line. They should include shredders, granulators, and reprocessing units.
- **Data Analytics Tools:** The software should offer user-friendly interfaces for data visualization, real-time alerts, and predictive analytics to optimize energy and material usage. It should be compatible with existing IT infrastructure.
- **Integration:** Solutions must integrate seamlessly with existing PLC systems and other industrial control systems.
- **Connectivity:** Devices should offer wireless connectivity and basic remote monitoring capabilities.
- **Energy Efficiency:** All equipment must be designed for high energy efficiency and low environmental impact.
- **Compliance:** Compliance with ISO 14001 standards is mandatory.

**Project Timeline:**

- Expected Start Date: dd/mm/yyyy
- Project Duration: x months
- Expected Delivery Date: dd/mm/yyyy