Sr. No.	Description	Qty. (No.)
1.	Motors with Encoder & Gearhead Along with necessary components and compatible accessories Make: Maxon OR Equivalent Proposed Model: EC-4 Pole DC Brushless Motor or Equivalent (Specification Sheet: Annexure C attached).	04
2.	High Performance Motor Drives (Compatible with Item 1) Along with necessary components and compatible accessories Make: Maxon OR Equivalent (Specification Sheet: Annexure C attached).	04
3.	Positioning Programmable Controllers Along with necessary components and compatible accessories Make: Maxon OR Equivalent Proposed Model: EPOS-4 (Easy Positioning System) or Equivalent. (Specification Sheet: Annexure C attached).	04

SURVEILLANCE ROBOT COMPONENTS

1. MOTORS WITH ENCODER & GEARHEAD

Description:

Maxon technology is widely used in robotics, where high power density and precision are pre-requisites. Within a compact unit, Maxon motors can provide a continuous torque rating and this can be further increased with the addition of a Maxon gear head. Maxon Sensors allow for relative position signal suitable for positioning tasks along with rotation direction recognition as well. Further-more many robotic applications are portable and are operated by battery power and Maxon motors are specially designed with greater efficiencies in a battery powered application.

TYPE: Brushless DC motor with Encoder & Gear head.

Essential Components; Specifications/Features:

- Operational Voltage;
 - 24 V
- Power Requirement;
 - 150 400 W
- Operational Temperature Range;
 - -20 °C to 100 °C
- Minimum Torque Requirement;
 - 14 Nm or higher
- Output Speed Requirement (Range);
 - 80-110 rpm

Accessories:

- Compatible Digital Incremental Encoder (Sensor)
- Compatible Gear Head
- Brakes, Front Plates, Motor Chokes
- Cables, Adapters and Shunt Regulators
- All further necessary accessories

Make:

MAXON

Proposed Model

EC- 4 Pole Brushless DC Motor or Equivalent.

2. HIGH PERFORMANCE MOTOR DRIVES

Description:

Maxon motor drive stands out for their high torque density. The Maxon drive is compact such that it delivers a wide output speed range and has an extremely high overload capacity.

TYPE: High Performance Drive (compatible with Item 1).

Essential Components; Specifications/Features:

- High Torque Density;
- <u>Compact Size;</u>
- Integrated Protective Functions;
 - 30 mm
- Nominal Voltage;
 - 24/48 VDC
- Operational Temperature Range;
 - -20 °C to 100 °C

Accessories:

All Necessary Accessories;

Make:

MAXON

3. POSITIONING PROGRAMMABLE CONTROLLERS

Description:

All the Maxon controllers are specifically designed for the Maxon Brushless DC motors. The high performance range of positioning controllers enables the execution of the processes with complex trajectories.

<u>TYPE</u>: EPOS - 4 (Easy Positioning System) Controller Compatible with Motor & Gear head.

Essential Components; Specifications/Features:

- <u>High Power Density;</u>
- <u>Compact Size;</u>
- Fast Communication;
- Superior Dynamics with Latest Generation Interfacing;
- Operational Temperature Range;
 - -20 °C to 100 °C

Accessories:

All Necessary Compatible Software & Cables;

Make:

MAXON

Proposed Model

EPOS - 4 (Easy Positioning System) or Equivalent.