Besam Automatic Door Opener Shade or Equal

1. **General**

   New automatic door openers will be installed at various doors throughout Building 500 – Polytrauma Rehabilitation at VA Palo Alto Division, 3801 Miranda Ave, Palo Alto CA 94304.

   The door openers will be controlled by a wireless door control system that is impervious to interference from other wireless devices and the wireless signals should pass through small openings in building materials. Door Operator should be retrofittable and backwards compatible, alternative sensors should include mats, wired push plates and motions sensors. The unit should be configurable to low energy applications with low audible noise, will interface with existing installed products and is field adjustable to overcome environment or facility changes. The automatic swing door opener should be ADA compliant and will have manual operation without power applied.

2. **Compatibility**
   a. The automatic swing door openers will be installed and should be compatible on a variety of existing doors. e.g. wooden door, glass door and double doors. All materials and installation should be ADA complaint.
   b. Double Egress Doors: a pair of doors that swing with the two doors moving in opposite directions with no mullion between them.
   c. Activation Device: Device that, when actuated, sends an electrical signal to the door operator to activate the operation of the door.
      i. Knowing act: Consciously initiating the powered opening of a low energy door using acceptable methods including wall mounted switches such as push plates and controlled access devices such as keypads, card readers and key switches.
   d. Safety Device: A device that detects the presence of an object or person within a zone where contact could occur and provides a signal to stop the movement of the door.

3. **Warranty and Testing Requirements**
   a. Automatic Door Operators shall be free of detects in material and workmanship for a period of one (1) year from the date of substantial completion.
   b. During the warranty period a factory-trained technician shall perform service and affect repairs. An inspection shall be performed after each adjustment or repair.
   c. During the warranty period all warranty work, including but not limited to emergency service, shall be performed during normal business hours.
   d. Manufacturer shall have in place a dispatch procedure that shall be available 24 hours a day, 7 days a week of emergency call back service.

4. **Environmental Features**
   a. Product must be designed and constructed of materials that do not present a significant environmental and human health risk.
   b. Materials to be recyclable
   c. Meets Greenguard requirement.

5. **Dimensions and Features**
   a. Besam SW200i: Low energy automatic door operator
      i. Configuration: Operator to control single swing doors and pairs of swinging doors as indicated on the drawings and specified below:
         - Traffic Pattern: One way or Two way
         - Pairs of Doors: Simultaneous swing

ii. Automatic Operator: Electro-mechanical, non-handed operator, powered by 24 volt, ¼ hp moto. Operator shall be adjustable to comensate for different manual push forces as required.

- Automatic operator shall be capable of operating and controlling up to a 700 pound door, 48 inches in width.
- Surface Mounted Operator
  - Bottom load operator housing: Operator is contained in a 6 inch x 6 inch high, extruded aluminum housing with removable bottom cover.
  - Surface Mounted Housing: Continuous for full width of door.
  - Connecting Hardware: Surface mounted operators to have a steel arm from the operator, mounted to the top face of the swing door.
  - UL Listed R-9469 Fire Door Operator with Automatic Closer (surface mounted operator).
- Operator can be filed upgraded to a full energy operator by the addition of the required safety sensors, and guard rails to comply with ANSI/BHMA A156.10 American national Standard for Power Operated Pedestrian Doors.
- Electrical Characteristics: Maximum power consumption is 300 watts (2.5 amps at 120 VAC), 50/60 hz, built-in thermal overload protection.
- Battery Convenience Mode: Operator to maintain continuous operation by battery power during power failure. Battery is continuously monitored and provides a warning signal if battery is not working properly.
- Digital Cycle Counter: Battery powered, 7 digital LCD cycle counter with a reset feature to track door usage cycles.

iii. Door Operation:

- Opening Cycle: The adjustable speed operator mechanically powers the drive shaft and the torque control maintains constant speed throughout the opening cycle regardless of stack pressure or wind speed. Operator shall allow manual door operation with operational forces as indicated to fully open the door applied at 1” from the latch edge of the door.
- Hold Open: The operator shall stop and hold the door open at the selected door opening angle for an adjustable period of time (1.5 seconds to 30 seconds)
- Closing Cycle: Spring close with speed controlled power assist.
  - Upon loss of power, dynamic braking will control the door insuring controlled closing.
  - Selectable Torque Control: Automatically adjusts torque without changing the closing speed of the operator.
    - Upon loss of power, dynamic braking will control the door insuring controlled closing.
    - Selectable Torque Control: automatically adjusts torque without changing the closing speed of the operator
- Wind Force Dampening: The operator electromechanically counteracts wind forces, slowing down the door movement to safely open or close the door.
- Stack Pressure Compensation: Operator shall counteract positive stack pressures, negative stack pressures, and sudden changes of stack pressure. The operator never allows the door to open or close faster than the speed control settings, regardless of pressure.
- Obstruction Control: The operator will stop and reverse the door movement.
- Electric Lock Management:
  - Internal module of electrified locking integration.

- Electric Lock Output: Selectable 12 VDC, maximum 1200 mA/24 VDC, maximum 600 mA.
- Lock monitoring prevents operator(s) from opening door(s) until release of electrified lock.
- Operator pulls door closed before opening, automatically unjamming electric latch hardware.
- Sequenced operation between operators for pairs of doors allowing lock release and astragal coordination.

- Lock Retry Circuit: If attempt to fully close the door is unsuccessful, the operator will automatically reverse open 10 degrees and reclose in an attempt to successfully close the door.
- Selectable Alarm Reset: The operator can be field set so that after receiving an alarm signal, the operator will not accept any activation impulses and will operate only as a manual door closer until manually reset.
- Electronic Controls: Solid state integrated circuit controls the operation and switching of the swing power operator. The electronic control provides low voltage power supply for all means of actuation. The controls include time delay (1 to 30 seconds) for normal cycle.
- Control Switch: Automatic door operators shall be equipped with the following type of multi-position function switch:
  - 3 position toggle switch remotely mounted (on-auto-hold)
- Operator Interface:Control Switch: Automatic door operators shall be equipped with the following type of multi-position function switch:

b. Activation and Safety Devices:

i. General: Provide activation and safety devices in accordance with ANSI/BHMA standards, for condition of exposure and for long-term, maintenance-free operation under normal traffic load for type of occupancy indicated. Coordinate activation and safety devices with door operation and door operator mechanisms.

ii. Activation: Smoke evacuation system and/or fire detection system shall provide activation of the operator by means of a normally open maintained contact to control the opening and closing of the door systems in the event of an alarm condition. Doors are to be held open until the smoke evacuation/fire detection system is reset.

c. Activation and Safety Devices:

i. General: Provide activation and safety devices in accordance with ANSI/BHMA standards, for condition of exposure and for long-term, maintenance-free operation under normal traffic load for type of occupancy indicated. Coordinate activation and safety devices with door operation and door operator mechanisms.

ii. Knowing Act Activation Device:
- Push Plate: Radio controlled, wireless, either 4-1/2 inch square or 6 inch round stainless steel push plate switches engraved with “Push to Open” with a blue handicap logo with braille along with lettering and markings.

iii. Manual Operation:
- Operator shall allow manual door operation (without power assist) with operational forces adjustable from 5 lbf to 15lbf maximum.

iv. Safety Devices:
- Door Mounted Presence Sensor shall be the Besam door mounted infrared presence safety device (mounted at top of each door); adjustable to provide detection field sizes and functions required by ANSI/BHMA A156.10
  - Unit to provide detection during the travel of the door.

- Upon detection the sensor shall provide a signal to stop or reverse the door action.

- Door Mounted Safety Sensor Devices; Safety sensor devices shall be door mounted as specified.
  - The door mounted safety sensor devices shall be mounted on both the swing (pull) side and the approach (push) side of the door (2) safety sensors per leaf), providing detection on sides of the door.

6. <u>Surface Materials</u>

a. Automatic Operator Enclosure: Anodized Finish – Clear, AA-M12C22A41, Class I, 0.018mm.