SPECIFICATIONS

PART 1  GENERAL

1.1  SECTION INCLUDES

1.1.1  (Manual) or (electric) operation rolling aluminum shutters.

1.2  RELATED SECTIONS

1.2.1  Section 05500 - Metal Fabrications. Door opening jamb and head members.

1.2.2  Section 06100 - Rough Carpentry. Door opening jamb and head members.

1.2.3  Section 08700 - Door Hardware. Master keyed cylinder.

1.2.4  Division 16. Electrical wiring and conduit, fuses, disconnect, switches, connection of operator to power supply, and installation of control station and wiring.

1.3  SYSTEM DESCRIPTION

1.3.1  Manual Tape Operation: Manual strap attached to internal tape disk which is connected to axle. Complete with tape reel box assembly.

1.3.2  Manual Push-up Operation: Manual push up unit with overhead counter balance device, requiring 14 Kg nominal force to operate.

1.3.3  Manual Crank Operation: Hoist operator including crank gear box, steel crank drive shaft and geared reduction unit. Removable crank handle.

1.3.4  Motor operated, internal tubular motor within the winding axle with progressive limit switch. Single phase 110V - 60Hz.

1.4  SUBMITTALS

1.4.1  Section 01330 Submittal Procedures.

1.4.2  Product Data: Provide general construction, component connections and details, electrical connections.

1.4.3  Shop Drawings: Indicate pertinent dimensioning, anchorage methods, hardware location, and installation details.

1.4.4  Samples: Submit two shutter slats, 200mm x 200mm in size illustrating shape, colour and finish texture.

1.4.5  Manufacturers Instructions: Indicate installation sequence and procedures, adjustment and alignment procedures.

1.4.6  Maintenance Data: Indicate lubrication requirements and frequency, and periodic adjustments required.

PART 2  PRODUCTS

2.1  .

2.2  MODEL

2.2.1  .1  Pentagon Series 400

2.2.2  .1  Pentagon Series 420

2.2.3  .1  Pentagon Series 450

2.2.4  .1  Pentagon Series 500

2.3  CONSTRUCTION

2.3.1  Curtain:

2.3.1.1  .1  Pentagon Series 400 - Aluminum rollformed foam-filled slats, Aluminum 3005 H26 alloy with polyurethane foam insulation core. Colour: Arctic White, Medium Brown, Ivory Tusk, Aluminum Grey.

2.3.1.2  OR .1  Pentagon Series 420 - Aluminum rollformed High Density foam-filled slats, Aluminum 3005 H26 alloy with high density polyurethane foam insulation core. Colour: Arctic White, Medium Brown, Ivory Tusk, Aluminum Grey.

2.3.2  BOTTOM BAR: Extruded double walled extruded 6063-T5 aluminum alloy bar with black compressible rubber insert. Colour: To match slats.

2.3.3  Guide Rails: Heavy gauge extruded 6063-T5 aluminum alloy rails with two high grade brush inserts. Colour: To match slats.

2.3.4  Hood Enclosure: 3005-H27 aluminum alloy box section, detachable for future servicing. Colour: To match slats.

2.3.5  Roller Shaft Counterbalance: Steel pipe and tension steel spring system, capable of producing torque sufficient to ensure smooth operation of curtain from any position and with adjustable spring tension.

2.3.6  Locking:

2.3.6.1  .1  Bottom bar slide bolt locking operated by knobs at each end, OR .1  Slide bolt locking operated by center mounted thumb turn, OR .1  Centre mounted 1 1/8" mortise cylinder lock operable from one side or both sides. Master keyable cylinder available on request.

2.3.7  LONGITUDINAL OR DIAGONAL WEAR: Plus or minus 3mm per 3m straight edge.

2.4  ADJUSTING

2.4.1  Adjust door and shutter, hardware and operating assemblies for smooth and noiseless operation.

2.5  CLEANING

2.5.1  Section 01001: Cleaning installed work.

2.6  DEMONSTRATION

2.6.1  Demonstrate proper operation to Owners Representative.

2.6.2  Instruct Owners Representative in maintenance procedures.
DETAIL SHEET • SERIES 400
Prefinished Aluminum Slat filled with polyurethane foam

POSITION

FACE OF WALL

BETWEEN JAMB

BOX SIZING

<table>
<thead>
<tr>
<th>Height</th>
<th>D</th>
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<tbody>
<tr>
<td>Up to 60&quot; (1524 mm)</td>
<td>6 1/2&quot; (165 mm)</td>
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<tr>
<td>60&quot; to 108&quot; (1524 mm to 2743 mm)</td>
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</tr>
<tr>
<td>108&quot; to 144&quot; (2743 mm to 3657 mm)</td>
<td>10&quot; (250 mm)</td>
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DIMENSIONS

SLAT PROFILE
Roll formed aluminum slat.

1 9/16" (40 mm)

21/64" (8.5 mm)

BOTTOM BAR
Extruded aluminum with rubber seal

2" (51 mm)

9/32" (7.5 mm)

GUIDE RAIL
Extruded aluminum guide rail with brush insert

7/8" (22 mm)

2 1/8" (53 mm)

COLOURS

COLOURS AVAILABLE:
Arctic White
Medium Brown
Ivory Tusk
Aluminum Grey
Custom Finish

OPERATION

CRANK ROD
ELECTRIC MOTOR
COUNTER BALANCE
TAPE COILER

SECURITY

SLIDE BOLT LOCKS
CENTER MOUNTED KEY LOCK
ELECTRIC TOGGLE SWITCH
ELECTRIC KEY SWITCH
DETAIL SHEET • SERIES 420
Prefinished Aluminum Slat filled with High Density polyurethane foam

**POSITION**

**FACE OF WALL**

**BETWEEN JAMB**

**BOX SIZING**

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**DIMENSIONS**

**SLAT PROFILE**
Roll formed aluminum slat.
1 5/16" (40 mm)
21/64" (8.5 mm)

**BOTTOM BAR**
Extruded aluminum with rubber seal
2" (51 mm)
9/32" (7.5 mm)

**GUIDE RAIL**
Extruded aluminum guide rail with brush insert
7/8" (22 mm)
2 1/8" (53 mm)

**COLOURS AVAILABLE:**
Arctic White
Medium Brown
Ivory Tusk
Aluminum Grey
Custom Finish

**OPERATION**

**CRANK ROD**

**ELECTRIC MOTOR**

**COUNTER BALANCE**

**TAPE COILER**

**SECURITY**

**SLIDE BOLT LOCKS**

**CENTER MOUNTED KEY LOCK**

**ELECTRIC TOGGLE SWITCH**

**ELECTRIC KEY SWITCH**
DETAIL SHEET - SERIES 450
Double Wall Extruded Aluminum Slat

POSITION

FACE OF WALL

BETWEEN JAMB

BOX SIZING

<table>
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<tr>
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<td>10&quot; (250 mm)</td>
</tr>
</tbody>
</table>

DIMENSIONS

SLAT PROFILE

Extruded aluminum slat.

1 9/16" (40 mm)

21/64" (8.5 mm)

BOTTOM BAR

Extruded aluminum with rubber seal

2" (51 mm)

9/32" (7.5 mm)

GUIDE RAIL

Extruded aluminum guide rail with brush insert

7/8" (22 mm)

2 1/8" (53 mm)

COLOURS

COLOURS AVAILABLE:

Clear Anodized

Aluminum Finish

Custom Finish

OPERATION

CRANK ROD

ELECTRIC MOTOR

COUNTER BALANCE

TAPE COILER

SECURITY

SLIDE BOLT LOCKS

CENTER MOUNTED KEY LOCK

ELECTRIC TOGGLE SWITCH

ELECTRIC KEY SWITCH
DETAIL SHEET • SERIES 500

Prefinished Aluminum Slat filled with polyurethane foam

POSITION

FACE OF WALL

BETWEEN JAMB

BOX SIZING

<table>
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<td>Up to 58&quot; (1473 mm)</td>
<td>8&quot; (205 mm)</td>
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<tr>
<td>58&quot; to 108&quot; (1473 mm to 2743 mm)</td>
<td>10&quot; (250 mm)</td>
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<tr>
<td>108&quot; to 144&quot; (2743 mm to 3657 mm)</td>
<td>12&quot; (300 mm)</td>
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DIMENSIONS

SLAT PROFILE

Roll formed aluminum slat.

2 1/8" (55 mm)

9/16" (14 mm)

BOTTOM BAR

Extruded aluminum with rubber seal

2" (51 mm)

1/2" (12 mm)

GUIDE RAIL

Extruded aluminum guide rail with brush insert

1 1/16" (27 mm)

3" (75 mm)

COLOURS

COLOURS AVAILABLE:

Arctic White

Custom Finish

OPERATION

CRANK ROD

ELECTRIC MOTOR

COUNTER BALANCE

TAPE COILER

SECURITY

SLIDE BOLT LOCKS

CENTER MOUNTED KEY LOCK

ELECTRIC TOGGLE SWITCH

ELECTRIC KEY SWITCH

1 2 3 4