

SECTION 08330 ROLLING GRILLE SPECIFICATION

"Lexan Panel" ROLLING SECURITY CLOSURE SYSTEM

PART ONE-GENERAL

3.01 SUMMARY:

- A. WORK INCLUDES:** Furnishing and installing factory fabricated and finished rolling security closure system (s).
1. Aluminum overhead coiling security grilles.
 2. Related sections; Section 08332: Coiling grilles. Section: 16000 Electrical.
- B. SUBMITTALS**
1. Submit manufacturer's product data, specifications, installation instructions, shop drawings with layout, fabrication and installation details; and samples, including finish.
- C. QUALITY ASSURANCE**
1. Provide components from a single manufacturer with resources to provide consistent quality in appearance.
 2. Field measure before fabrication.
 3. Use manufacturer approved installers.

PART TWO: PRODUCTS

Commercial Repairs & Sales
P.O. Box 3379
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Fax: 1-813-342-7928
Email: service@commercialrepairs.com
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4.02 ROLLING SECURITY CLOSURE SYSTEM:

Rolling Security Closure System:

Curtain Design:

“Lexan Panel”

2. Constructed of 3” on center extruded aluminum sections. Each section framed with continuous, double “C” hinge with 2-1/2” wide 1/16” thick clear polycarbonate panels at 16” horizontal intervals. Each panel is 1/16” thick full width lexan panel.

N. Support Structure:

1. Supports: 3 inch X 3 inch or 4 inch X 4 inch structural tubes with 0.120 wall thickness furnished to be pre-drilled and tapped for guides and endplates. Tubes to be attached to the floor slab and joists above. Attachment at top is for lateral support only. Provide 2 inch X 3 inch steel angles for face of wall installations.

O. End Plates: Furnish steel plates not less than 3/16” thick (with dimensions appropriate to coil size) to support the ends of the barrel assembly with sealed, self-aligning shaft bearings. End plates bolted to support tubes.

P. Barrel: Minimum 6-5/8” diameter X 0.156” wall steel pipe barrel will be designed to carry curtain load with a maximum allowable deflection of 0.03” per foot of closure width. Barrel to house a torsion spring counter-balance assembly to counter-balance the curtain.

Q. Counter Balance: Oil tempered, helical torsion spring(s) pre-lubricated and secured around a continuous, solid, cold rolled steel inner shaft will act as counter balance within barrel. Shaft will bear on self aligning, permanently lubricated ball bearing assemblies. Counterbalance assembly to be designed for a minimum life of 20,000 cycles. Spring to be site tensioned by attached, accessible charging wheel.

- R. Manually Operated: Standard closure to be manually operated push up, pull down with removable retrieval rod as standard. The effort to raise or lower the grille shall not exceed 15 pounds force. Optional hand chain hoist, hand crank (with removable crank handle) or electric motor operation is available. Closures over 16 feet wide will be electrically operated.
- S. Electric Motor Operator: Motor operator shall be industrial duty, jackshaft hoist type. Primary reduction shall be heavy-duty belt drive with chain-and-sprocket secondary reduction. Mechanism is to be self-locking when torque is applied to output shaft. Operator shall have an adjustable, torque limiting friction clutch.
1. Motor: Shall be a continuous-duty, high starting torque motor with instant reverse and current sensing or thermal type overloads protection. Standard motor shall require 115 VAC., single phase, 60 Hz. Motor controller shall be a heavy duty, full voltage, across-the-line, magnetic reversing contactor that is mechanically and electrically interlocked. Electrical components shall be installed in NEMA 1 enclosure integral to the operator. A transformer shall provide 24 VAC. secondary power to the control station (s).. Positive chain drive, rotary type limit switches shall be provided to limit full open and close travel of the door. *A manual hand chain is provided to enable the grille to opened and closed in case of power outage.* The operator shall be capable of right or left hand mounting.
 2. Built-in Interlock: The motor operator shall have a built-in interlock that will prevent the grille from being damaged if operated electrically when in the locked position.
 3. Electric Key Switch: Control station (when applicable) shall be two position, open/close, constant pressure type for flush mounting, housed in a tamper-proof enclosure.
 4. Emergency Egress Device: If required, supply a manually activated emergency egress device to facilitate egress from the space.
- T. Guides: Vertical curtain guides are to be of extruded aluminum 1 3/4" wide x 2-1/2" deep.
- U. Bottom Bar: Heavy duty extruded aluminum section, tubular shaped to provide reinforcement. Bottom bar to house lock mechanism. Underside of bottom bar shall be removable to allow service or replacement of lock mechanism.
- V. Locking: Center lock mechanism to be Adams-Rite 2-point deadlock which activates 3/8" steel lock bars at each end. Standard mortise cylinders operable from both sides,

mall side only, or tenant side only. Removal of bottom bar not necessary to change the cylinders.

- W. Cylinders: Locking bottom bar (when applicable) to be equipped with standard 1", 5 pin mortise cylinder.
- X. Aluminum Extrusion Finish: Standard anodized finish shall be clear natural anodized. Special anodized and painted finishes are available upon request. Consult manufacturer for pricing and lead times.

PART THREE EXECUTION

5.01 INSPECTION:

- A. Verify that the rolling security closure system will not disrupt other trades. The installer shall verify that the installation area is dry, clean, and free of foreign matter. Verify that the opening dimensions are as shown on shop drawing(s) prior to proceeding with the installation. Check condition of pre-installed vertical grille guides for damage or pinching by recessing materials or other trade's fasteners driven into guide extrusions.

5.02 INSTALLATION OF ROLLING SECURITY CLOSURE SYSTEM:

- A. Installation shall be by an installer approved and trained by the manufacturer in strict accordance with installation guide.
- B. Explain and review the correct locking, operation and maintenance of the rolling security closure system.
- C. Installation of any motor operators, control switches and related wiring shall be by a locally certified electrician and shall be in strict accordance with local building codes.

END OF SECTION 08330

SECTION 08330 ROLLING GRILLE SPECIFICATION

"Perforated Panel" ROLLING SECURITY CLOSURE SYSTEM

PART ONE-GENERAL

4.01 SUMMARY:

- A. WORK INCLUDES:** Furnishing and installing factory fabricated and finished rolling security closure system(s).
1. Aluminum overhead coiling security grilles.
 2. Related sections; Section 08332: Coiling grilles. Section: 16000 Electrical.
- B. SUBMITTALS**
1. Submit manufacturer's product data, specifications, installation instructions, shop drawings with layout, fabrication and installation details; and samples, including finish.
- C. QUALITY ASSURANCE**
1. Provide components from a single manufacturer with resources to provide consistent quality in appearance.
 2. Field measure before fabrication.
 3. Use manufacturer approved installers.

PART TWO: PRODUCTS

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5.02 ROLLING SECURITY CLOSURE SYSTEM:

Rolling Security Closure System:

D Curtain Design:

“Perforated Panel”

3. Constructed of 3” on center extruded aluminum sections. Each section framed with continuous, double “C” hinge with 2-1/2” wide 16 gauge perforated metal panels at 16” horizontal intervals.

T. Support Structure:

1. Supports: 3 inch X 3 inch or 4 inch X 4 inch structural tubes with 0.120 wall thickness furnished to be pre-drilled and tapped for guides and endplates. Tubes to be attached to the floor slab and joists above. Attachment at top is for lateral support only. Provide 2 inch X 3 inch steel angles for face of wall installations.

U. End Plates: Furnish steel plates not less than 3/16” thick (with dimensions appropriate to coil size) to support the ends of the barrel assembly with sealed, self-aligning shaft bearings. End plates bolted to support tubes.

V. Barrel: Minimum 6-5/8” diameter X 0.156” wall steel pipe barrel will be designed to carry curtain load with a maximum allowable deflection of 0.03” per foot of closure width. Barrel to house a torsion spring counter-balance assembly to counter-balance the curtain.

W. Counter Balance: Oil tempered, helical torsion spring(s) pre-lubricated and secured around a continuous, solid, cold rolled steel inner shaft will act as counter balance within barrel. Shaft will bear on self aligning, permanently lubricated ball bearing assemblies. Counterbalance assembly to be designed for a minimum life of 20,000 cycles. Spring to be site tensioned by attached, accessible charging wheel.

X. Manually Operated: Standard closure to be manually operated push up, pull down with removable retrieval rod as standard. The effort to raise or lower the grille shall not exceed 15 pounds force. Optional hand chain hoist, hand crank (with removable crank handle) or

electric motor operation is available. Closures over 16 feet wide will be electrically operated.

Y. Electric Motor Operator: Motor operator shall be industrial duty, jackshaft hoist type. Primary reduction shall be heavy-duty belt drive with chain-and-sprocket secondary reduction. Mechanism is to be self-locking when torque is applied to output shaft. Operator shall have an adjustable, torque limiting friction clutch.

1. Motor: Shall be a continuous-duty, high starting torque motor with instant reverse and current sensing or thermal type overloads protection. Standard motor shall require 115 VAC., single phase, 60 Hz. Motor controller shall be a heavy duty, full voltage, across-the-line, magnetic reversing contactor that is mechanically and electrically interlocked. Electrical components shall be installed in NEMA 1 enclosure integral to the operator. A transformer shall provide 24 VAC. secondary power to the control station (s). Positive chain drive, rotary type limit switches shall be provided to limit full open and close travel of the door. *A manual hand chain is provided to enable the grille to opened and closed in case of power outage.* The operator shall be capable of right or left hand mounting.
2. Built-in Interlock: The motor operator shall have a built-in interlock that will prevent the grille from being damaged if operated electrically when in the locked position.
3. Electric Key Switch: Control station (when applicable) shall be two position, open/close, constant pressure type for flush mounting, housed in a tamper-proof enclosure.
4. Emergency Egress Device: If required, supply a manually activated emergency egress device to facilitate egress from the space.

Z. Guides: Vertical curtain guides are to be of extruded aluminum 1 3/4" wide x 2-1/2" deep.

AA. Bottom Bar: Heavy duty extruded aluminum section, tubular-shaped to provide reinforcement. Bottom bar to house lock mechanism. Underside of bottom bar shall be removable to allow service or replacement of lock mechanism.

BB. Locking: Center lock mechanism to be Adams-Rite 2-point deadlock which activates 3/8" steel lock bars at each end. Standard mortise cylinders operable from both sides, mall side only, or tenant side only. Removal of bottom bar not necessary to change the cylinders.

- CC. Cylinders: Locking bottom bar (when applicable) to be equipped with standard 1", 5 pin mortise cylinder.
- DD. Aluminum Extrusion Finish: Standard anodized finish shall be clear natural anodized. Special anodized and painted finishes are available upon request. Consult manufacturer for pricing and lead times.

PART THREE EXECUTION

6.01 INSPECTION:

- A. Verify that the rolling security closure system will not disrupt other trades. The installer shall verify that the installation area is dry, clean, and free of foreign matter. Verify that the opening dimensions are as shown on shop drawing(s) prior to proceeding with the installation. Check condition of pre-installed vertical grille guides for damage or pinching by recessing materials or other trade's fasteners driven into guide extrusions.

6.02 INSTALLATION OF ROLLING SECURITY CLOSURE SYSTEM:

- A. Installation shall be by an installer approved and trained by the manufacturer in strict accordance with installation guide.
- B. Explain and review the correct locking, operation and maintenance of the rolling security closure system.
- C. Installation of any motor operators, control switches and related wiring shall be by a locally certified electrician and shall be in strict accordance with local building codes.

END OF SECTION 08330

SECTION 08330 ROLLING GRILLE SPECIFICATION

"Solid Panel" ROLLING SECURITY CLOSURE SYSTEM

PART ONE-GENERAL

5.01 SUMMARY:

- A. WORK INCLUDES:** Furnishing and installing factory fabricated and finished rolling security closure system(s).
1. Aluminum overhead coiling security grilles.
 2. Related sections; Section 08332: Coiling grilles. Section: 16000 Electrical.
- B. SUBMITTALS:**
1. Submit manufacturer's product data, specifications, installation instructions, shop drawings with layout, fabrication and installation details; and samples, including finish.
- C. QUALITY ASSURANCE:**
1. Provide components from a single manufacturer with resources to provide consistent quality in appearance.
 2. Field measure before fabrication.
 3. Use manufacturer approved installers.

PART TWO: PRODUCTS

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6.02 ROLLING SECURITY CLOSURE SYSTEM:

Rolling Security Closure System:

E Curtain Design:

“Solid Panel”

4. Constructed of 3” on center extruded aluminum sections. Each section framed with continuous, double “C”. Each panel is 1/16” thick full width aluminum panel.

Z. Support Structure:

1. Supports: 3 inch X 3 inch or 4 inch X 4 inch structural tubes with 0.120 wall thickness furnished to be pre-drilled and tapped for guides and endplates. Tubes to be attached to the floor slab and joists above. Attachment at top is for lateral support only. Provide 2 inch X 3 inch steel angles for face of wall installations.
- AA. End Plates: Furnish steel plates not less than 3/16” thick (with dimensions appropriate to coil size) to support the ends of the barrel assembly with sealed, self-aligning shaft bearings. End plates bolted to support tubes.
- BB. Barrel: Minimum 6-5/8” diameter X 0.156” wall steel pipe barrel will be designed to carry curtain load with a maximum allowable deflection of 0.03” per foot of closure width. Barrel to house a torsion spring counter-balance assembly to counter-balance the curtain.
- CC. Counter Balance: Oil tempered, helical torsion spring(s) pre-lubricated and secured around a continuous, solid, cold rolled steel inner shaft will act as counter balance within barrel. Shaft will bear on self aligning, permanently lubricated ball bearing assemblies. Counterbalance assembly to be designed for a minimum life of 20,000 cycles. Spring to be site tensioned by attached, accessible charging wheel.
- DD. Manually Operated: Standard closure to be manually operated push up, pull down with removable retrieval rod as standard. The effort to raise or lower the grille shall not exceed 15 pounds force. Optional hand chain hoist, hand crank (with removable crank

handle) or electric motor operation is available. Closures over 16 feet wide will be electrically operated.

EE. Electric Motor Operator: Motor operator shall be industrial duty, jackshaft hoist type. Primary reduction shall be heavy-duty belt drive with chain-and-sprocket secondary reduction. Mechanism is to be self-locking when torque is applied to output shaft. Operator shall have an adjustable, torque limiting friction clutch.

1. Motor: Shall be a continuous-duty, high starting torque motor with instant reverse and current sensing or thermal type overloads protection. Standard motor shall require 115 VAC., single phase, 60 Hz. Motor controller shall be a heavy duty, full voltage, across-the-line, magnetic reversing contactor that is mechanically and electrically interlocked. Electrical components shall be installed in NEMA 1 enclosure integral to the operator. A transformer shall provide 24 VAC. secondary power to the control station (s).. Positive chain drive, rotary type limit switches shall be provided to limit full open and close travel of the door. *A manual hand chain is provided to enable the grille to open and close in case of power outage.* The operator shall be capable of right or left hand mounting.
2. Built-in Interlock: The motor operator shall have a built-in interlock that will prevent the grille from being damaged if operated electrically when in the locked position.
3. Electric Key Switch: Control station (when applicable) shall be two position, open/close, constant pressure type for flush mounting, housed in a tamper-proof enclosure.
4. Emergency Egress Device: If required, supply a manually activated emergency egress device to facilitate egress from the space.

FF. Guides: Vertical curtain guides are to be of extruded aluminum 1 3/4" wide x 2-1/2" deep.

GG. Bottom Bar: Heavy duty extruded aluminum section, tubular-shaped to provide reinforcement. Bottom bar to house lock mechanism. Underside of bottom bar shall be removable to allow service or replacement of lock mechanism.

HH. Locking: Center lock mechanism to be Adams-Rite 2-point deadlock which activates 3/8" steel lock bars at each end. Standard mortise cylinders operable from both sides, mall side only, or tenant side only. Removal of bottom bar not necessary to change the cylinders.

- II. Cylinders: Locking bottom bar (when applicable) to be equipped with standard 1", 5 pin mortise cylinder.
- JJ. Aluminum Extrusion Finish: Standard anodized finish shall be clear natural anodized. Special anodized and painted finishes are available upon request. Consult manufacturer for pricing and lead times.

PART THREE EXECUTION

7.01 INSPECTION:

- A. Verify that the rolling security closure system will not disrupt other trades. The installer shall verify that the installation area is dry, clean, and free of foreign matter. Verify that the opening dimensions are as shown on shop drawing(s) prior to proceeding with the installation. Check condition of pre-installed vertical grille guides for damage or pinching by recessing materials or other trade's fasteners driven into guide extrusions.

7.02 INSTALLATION OF ROLLING SECURITY CLOSURE SYSTEM:

- A. Installation shall be by an installer approved and trained by the manufacturer in strict accordance with installation guide.
- B. Explain and review the correct locking, operation and maintenance of the rolling security closure system.
- C. Installation of any motor operators, control switches and related wiring shall be by a locally certified electrician and shall be in strict accordance with local building codes.

END OF SECTION 08330

SECTION 08330

**ALUMINUM SHUTTER
ROLLING SECURITY CLOSURE SYSTEM**

PART ONE:

1.01 GENERAL

- A. Aluminum overhead coiling security grilles.
- B. Related sections; Section 08332: Coiling grilles. Section: 16000 Electrical.

1.02 SUBMITTALS

- A. Submit manufacturer's product data, specifications, installation instructions, shop drawings with layout, fabrication and installation details; and samples, including finish.

1.03 QUALITY ASSURANCE

- A. Provide components from a single manufacturer with resources to provide consistent quality in appearance.
- B. Field measure before fabrication.
- C. Use manufacturer approved installers.

PART TWO: PRODUCTS

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2.02 ROLLING SECURITY CLOSURE SYSTEM:

- A. Rolling Security Closure System: Shall be Aluminum Shutter model.
- B. Curtain: Constructed of 2-1/2" on center interlocking extruded aluminum horizontal slats, 1/2" deep with centered "V" shaped grooves. Fit both ends of each slat with retaining washers to ensure curtain alignment in guides.
- C. Support Structure:

3" x 3" or 4" x 4" steel structural tubes with 14 gauge or greater wall for between jamb site conditions or 2" x 3" steel angles for face-of-wall site conditions are to be provided.
- D. End Plates: Furnish steel plates not less than 3/16 thick (with dimensions appropriate to coil size) to support the ends of the barrel assembly with sealed, self-aligning shaft bearings. End plates bolted to support tubes.
- E. Barrel: Minimum 6-5/8" diameter x 0.156" wall steel pipe barrel will be designed to carry curtain load with a maximum allowable deflection of 0.03" per foot of closure width. Barrel to house a torsion spring counter-balance assembly to counter-balance the curtain.
1. Counter Balance: Oil tempered, helical torsion spring(s) pre-lubricated and secured around a continuous, solid, cold rolled steel inner shaft will act as counter balance within barrel. Shaft will bear on self aligning, permanently lubricated ball bearing assemblies. Counterbalance assembly to be designed for a minimum life of 20,000 cycles. Spring to be site tensioned by attached, accessible charging wheel.
- F. Manually Operated: Standard closure to be manually operated push up, pull down with removable retrieval rod as standard. The effort to raise or lower the grille shall not exceed 15 pounds force. Optional hand chain hoist, hand crank (with removable crank handle) or electric motor operation is available. Closures over 16 feet wide will be electrically operated.
- G. Electric Motor Operator: Motor operator shall be industrial duty, jackshaft hoist type. Primary reduction shall be heavy-duty belt drive with chain-and-sprocket secondary reduction. Mechanism is to be self-locking when torque is applied to output shaft. Operator shall have an adjustable, torque limiting friction clutch.

1. Motor: Shall be a continuous-duty, high starting torque motor with instant reverse and current sensing or thermal type overloads protection. Standard motor shall require 115 VAC., single phase, 60 Hz. Motor controller shall be a heavy duty, full voltage, across-the-line, magnetic reversing contactor that is mechanically and electrically interlocked. Electrical components shall be installed in NEMA 1 enclosure integral to the operator. A transformer shall provide 24 VAC. secondary power to the control station (s).. Positive chain drive, rotary type limit switches shall be provided to limit full open and close travel of the door. *A manual hand chain is provided to enable the grille to opened and closed in case of power outage.* The operator shall be capable of right or left hand mounting.
 2. Built-in Interlock: The motor operator shall have a built-in interlock that will prevent the grille from being damaged if operated electrically when in the locked position.
 3. Electric Key Switch: Control station (when applicable) shall be two position, open/close, constant pressure type for flush mounting, housed in a tamper-proof enclosure.
 4. Emergency Egress Device: If required, supply a manually activated emergency egress device to facilitate egress from the space.
- H. Guides: Vertical curtain guides are to be of extruded aluminum 1 3/4” wide x 2-1/2” deep.
- I. Bottom Bar: Heavy duty extruded aluminum section, tubular-shaped to provide reinforcement. Bottom bar to house lock mechanism. Underside of bottom bar shall be removable to allow service or replacement of lock mechanism.
- J. Locking: Center lock mechanism to be Adams-Rite 2-point deadlock which activates 3/8” steel lock bars at each end. Standard mortise cylinders operable from both sides, mall side only, or tenant side only. Removal of bottom bar not necessary to change the cylinders.
- K. Cylinders: Locking bottom bar (when applicable) to be equipped with standard 1”, 5 pin mortise cylinder.
- L. Aluminum Extrusion Finish: Standard anodized finish shall be clear natural anodized. Special anodized and painted finishes are available upon request. Consult manufacturer for pricing and lead times.

III. PART THREE EXECUTION

3.01 INSPECTION:

- A. Verify that the rolling security closure system will not disrupt other trades. The installer shall verify that the installation area is dry, clean, and free of foreign matter. Verify that the opening dimensions are as shown on shop drawing(s) prior to proceeding with the installation. Check condition of pre-installed vertical grille guides for damage or pinching by recessing materials or other trade's fasteners driven into guide extrusions.

3.02 INSTALLATION OF ROLLING SECURITY CLOSURE SYSTEM:

- A. Installation shall be by an installer approved and trained by the manufacturer in strict accordance with installation guide.
- B. Explain and review the correct locking, operation and maintenance of the rolling security closure system.
- C. Installation of any motor operators, control switches and related wiring shall be by a locally certified electrician and shall be in strict accordance with local building codes.

END OF SECTION 08330

SECTION 08330

ROLLING SECURITY CLOSURE SYSTEM

PART ONE:

1.03 GENERAL

- E. Aluminum overhead coiling security grilles.
- F. Related sections; Section 08332: Coiling grilles. Section: 16000 Electrical.

1.02 SUBMITTALS

- C. Submit manufacturer's product data, specifications, installation instructions, shop drawings with layout, fabrication and installation details; and samples, including finish.

1.03 QUALITY ASSURANCE

- G. Provide components from a single manufacturer with resources to provide consistent quality in appearance.
- H. Field measure before fabrication.
- I. Use manufacturer approved installers.

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2.02 ROLLING SECURITY CLOSURE SYSTEM:

J. Rolling Security Closure System:

K. Curtain: Constructed of 2-1/2" high on center horizontal sections of full width, concealed 5/16" diameter rods spaced at 9" intervals by 5/8" x 3-1/8" vertical links. All horizontal rods are covered by 0.45" diameter aluminum horizontal spacer tubes.

L. Support Structure:

3" x 3" or 4" x 4" steel structural tubes with 14 gauge or greater wall for between jamb site conditions or 2" x 3" steel angles for face-of-wall site conditions are to be provided.

M. End Plates: Furnish steel plates not less than 3/16" thick (with dimensions appropriate to coil size) to support the ends of the barrel assembly with sealed, self-aligning shaft bearings. End plates bolted to support tubes.

N. Barrel: Minimum 6-5/8" diameter x 0.156" wall steel pipe barrel will be designed to carry curtain load with a maximum allowable deflection of 0.03" per foot of closure width. Barrel to house a torsion spring counter-balance assembly to counter-balance the curtain.

2. Counter Balance: Oil tempered, helical torsion spring(s) pre-lubricated and secured around a continuous, solid, cold rolled steel inner shaft will act as counter balance within barrel. Shaft will bear on self aligning, permanently lubricated ball bearing assemblies. Counterbalance assembly to be designed for a minimum life of 20,000 cycles. Spring to be site tensioned by attached, accessible charging wheel.

O. Manually Operated: Standard closure to be manually operated push up, pull down with removable retrieval rod as standard. The effort to raise or lower the grille shall not exceed 15 pounds force. Optional hand chain hoist, hand crank (with removable crank handle) or electric motor operation is available. Closures over 16 feet wide will be electrically operated.

P. Electric Motor Operator: Motor operator shall be industrial duty, jackshaft hoist type. Primary reduction shall be heavy-duty belt drive with chain-and-sprocket secondary reduction. Mechanism is to be self-locking when torque is applied to output shaft. Operator shall have an adjustable, torque limiting friction clutch.

1. Motor: Shall be a continuous-duty, high starting torque motor with instant reverse and current sensing or thermal type overloads protection. Standard motor shall require 115 VAC., single phase, 60 Hz. Motor controller shall be a

heavy duty, full voltage, across-the-line, magnetic reversing contactor that is mechanically and electrically interlocked. Electrical components shall be installed in NEMA 1 enclosure integral to the operator. A transformer shall provide 24 VAC. secondary power to the control station (s).. Positive chain drive, rotary type limit switches shall be provided to limit full open and close travel of the door. A manual hand chain is provided to enable the grille to opened and closed in case of power outage. The operator shall be capable of right or left hand mounting.

2. Built-19in Interlock The motor operator shall have a built-in interlock that will prevent the grille from being damaged if operated electrically when in the locked position.
 3. Electric Key Switch: Control station (when applicable) shall be two position, open/close, constant pressure type for flush mounting, housed in a tamper-proof enclosure.
 4. Emergency Egress Device: If required, supply a manually activated emergency egress device to facilitate egress from the space.
- Q. Guides: Vertical curtain guides are to be of extruded aluminum 1 3/4" wide x 2-1/2" deep.
- R. Bottom Bar: Heavy duty extruded aluminum section, tubular-shaped to provide reinforcement. Bottom bar to house lock mechanism. Underside of bottom bar shall be removable to allow service or replacement of lock mechanism.
- S. Locking: Center lock mechanism to be Adams-Rite 2-point deadlock which activates 3/8" steel lock bars at each end. Standard mortise cylinders operable from both sides, mall side only, or tenant side only. Removal of bottom bar not necessary to change the cylinders.
- T. Cylinders: Locking bottom bar (when applicable) to be equipped with standard 1", 5 pin mortise cylinder.
- U. Aluminum Extrusion Finish: Standard anodized finish shall be clear natural anodized. Special anodized and painted finishes are available upon request. Consult manufacturer for pricing and lead times.

III. PART THREE EXECUTION

3.01 INSPECTION:

- B. Verify that the rolling security closure system will not disrupt other trades. The installer shall verify that the installation area is dry, clean, and free of foreign matter. Verify that the opening dimensions are as shown on shop drawing(s)

prior to proceeding with the installation. Check condition of pre-installed vertical grille guides for damage or pinching by recessing materials or other trade's fasteners driven into guide extrusions.

3.02 INSTALLATION OF ROLLING SECURITY CLOSURE SYSTEM:

- D. Installation shall be by an installer approved and trained by the manufacturer in strict accordance with installation guide.
- E. Explain and review the correct locking, operation and maintenance of the rolling security closure system.
- F. Installation of any motor operators, control switches and related wiring shall be by a locally certified electrician and shall be in strict accordance with local building codes.

END OF SECTION 08330