Rotary Latching Systems
When selecting the appropriate Rotary Latching System for an application, there are a variety of design factors that must be considered, including strength, materials and operating environment.

**PHYSICAL REQUIREMENTS**
- What are the load requirements?
- Are there noise or vibration concerns?
- How many cycles are required?
- Is sealing or corrosion resistance required?

**SECURITY REQUIREMENTS**
- Does the application require key locking?
- Are vandalism and theft concerns?

**APPLICATION CONSIDERATIONS**
- How should the latch be actuated?
- Is remote actuation required?
- How many latch points will be required?
- Is the door or panel flexible or rigid?

**INDUSTRIAL DESIGN**
- Does the application require flush or surface mount actuation?
- Will the actuator need to be hidden or concealed?

**REGULATORY REQUIREMENTS**
- Does the application require FMVSS 206 compliance?
- Does the application require that rotary latches meet EN-45545-3 European Fire regulations?
- Are there any additional safety requirements?
Southco’s Rotary Latching Solutions offer proven mechanical technology as a platform for the integration of new design features and enhancements. Designed for a range of interior and exterior applications, Southco’s Rotary Latching System includes a variety of rotary latches, actuators, and cables, which connect latches to actuators for remote release.

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<tr>
<th>FEATURES</th>
<th>BENEFITS</th>
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<tbody>
<tr>
<td>Push-to-close operation</td>
<td>Intuitive, simplified operation</td>
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<tr>
<td>Concealed latching</td>
<td>Higher security and improved aesthetics</td>
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<tr>
<td>Remote actuation</td>
<td>Flexibility in actuator placement</td>
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<tr>
<td>Integral vibration damper</td>
<td>Eliminates noise and vibration</td>
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<tr>
<td>Diverse actuator options</td>
<td>Flexible security from hand to key operation</td>
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<td>Proven rotary latch mechanism</td>
<td>Greater resistance to accidental opening</td>
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<tr>
<td>Low closing force</td>
<td>Positive latching for rigid door applications</td>
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Overview
Rotary Latching Systems

Multiple actuation options:
Push-to-close convenience
Custom cable lengths

Variety of size options:
- R4-05
- R4-10
- R4-20
- R4-30
- R4-50
- R4-75
- R4-8X
Southco’s Rotary Latch Systems have three distinct components: Rotary Latch, Cable and Actuator. Southco uses these three components to enable remote or manual actuation to suit a variety of applications.

**1 Rotary Latch**
- Holds the panel secure and provides the strength for the system
- Electronic and mechanical access options
- Rugged steel construction to meet high strength needs
- Stainless steel versions offer maximum corrosion resistance
- Heavy-duty styles comply with FMVSS standards
- Two-stage engagement for added protection against false latching

**2 Rotary Latch Actuators**
The touch point that determines the level of system security
- Key lock, electronic and pneumatic release
- Single point and multi-point actuation
- Multiple actuation styles including push button, pull handle and squeeze to open
- Cable splitter available for added actuation points and timed release

**3 Rotary Latch Cables & Mounting Hardware**
Connects the latch to the actuator for remote release
- Enable remote operation and flexible actuator placement
- Mounting hardware to support installation flexibility
Southco offers a variety of rotary latches that feature secure latching and simple push-to-close operation. These concealed latches mount inside the enclosure to hide latch points, improving security and industrial design.

- Mechanical and electronic latching mechanisms available
- Variety of sizes to suit application strength requirements
- Multiple material and finish options to meet environmental needs
- FMVSS-compliant versions; two-stage actuation

### SINGLE VS. TWO STAGE LATCHING

<table>
<thead>
<tr>
<th>Single Stage</th>
<th>Two Stage</th>
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<tr>
<td>Single stage has one stage</td>
<td>Dual stage offers positive latching at low closing forces. This prevents false latching and ensures the latch is engaged and door will not open</td>
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Unlatched Position | Fully Latched Position | Unlatched Position | Secondary Latched Position | Fully Latched Position

### SINGLE VS. DUAL ROTOR

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<tr>
<th>Dual Rotor Heavy-duty</th>
<th>Single Rotor Medium and Large</th>
<th>Single Rotor Light-Duty</th>
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<td>Maximum accommodation for misalignment</td>
<td>Allow for considerable misalignment</td>
<td>Best for rigid door applications with minimal misalignment concerns</td>
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</table>

Dual Rotor Heavy-duty | Single Rotor Medium and Large | Single Rotor Light-Duty

Unlatched Position | Unlatched Position | Unlatched Position

Fully Latched Position | Secondary Latched Position | Fully Latched Position
**Rotary Latch Selection**

**R4-05**
Concealed, light weight latching for applications with extremely limited space and weight requirements
- Integral vibration damper option
- Steel and stainless steel construction
- Single and two-stage latching
- Electronic actuator available
- Dimension: 46 x 22 mm

**R4-10**
Concealed, light weight latching for applications with significant space and weight limitations
- Integral vibration damper option
- Steel and stainless steel construction
- Single and two-stage latching
- Electronic actuator available
- Dimension: 69 x 28 mm

**R4-20**
Medium-duty with minimal protrusion within the enclosure
- Rugged performance for compact spaces
- Steel and stainless steel construction
- Single and two-stage latching
- Dimension: 73 x 60 mm, 73 x 113 mm
**Rotary Latch Selection**

**R4-30**
Heavy duty, concealed latching in a lightweight compact package
- Rugged performance in a compact space
- Steel and stainless steel construction
- Single and two-stage latching
- FMVSS 206 compliant with optional support plate
- Dimension: 77 x 36 mm

**R4-50**
Heavy duty latching for larger applications requiring a high strength solution
- Double rotor
- Steel construction
- Two-stage latching
- FMVSS 206 compliant
- Dimension: 109 x 47 mm
**Rotary Latch Selection**

**R4-81 / R4-82**

All-in-one solution for simplified Rotary Latching System installation

- Integral vibration damper option
- Combines a compact rotary latch with a heavy duty paddle actuator
- Single or two-stage latching
- Stud and through hole mounting configurations
- Variety of finish options available

**R4-75**

Medium duty latching for interior or exterior use

- Steel construction
- Design allows the rotary mechanism to be concealed, providing protection against dirt and debris
- Dimension: 97 x 44 mm
Southco offers a wide variety of actuator options that improve ergonomic operation and provide a convenient handgrip for opening a door or panel, including slide, push-to-open, squeeze and pull-handle styles.

**Flush / Low Profile Mount**
Improves industrial design and limits potential snag points

**Surface Mount**
Minimizes interior protrusion, reducing internal footprint

**Single-Point**
When only one latching point is required in the application

**Multi-Point**
When more than one latching point is required in the application

**Key Locking**
Mechanical access control solutions

**Electronic Actuators**
Combines with mechanical latches for electronic access control
Actuator Selection

**AC-70 / AC-75 / AC-M1**
Flush and low profile, finger pull actuators
- For applications needing a mechanical advantage
- Locking and non-locking alternatives
- Plastic, aluminum or stainless steel solutions
- Compact size for smaller spaces

**AC-10 / AC-11 / AC-15**
Large handle flush and surface mount actuators for reliable performance in heavy duty applications
- Allows release of one or more connected rotary latches
- Electronic locking version available
- Rectangular and oval options
- Large handle area allows firm grip with gloved hand

**AC-20 / R3-22 / R3-20 / 64-40**
Large paddle pull actuators
- High strength corrosion resistant construction for rugged, high cycle life environments
- High ultimate load for heavy duty applications
- Allows release of one or more connected rotary latches
- Locking and non-locking versions
- Large paddle area allows firm grip even with gloved hand
Actuator Selection

AC-30 / AC-40 / AC-80
Push button actuation for heavy or light duty applications
- Ergonomic design accommodates a wide range of panel thicknesses
- Allows release of one or more connected rotary latches
- NEMA 4 / IP54 sealed options

AC-60
Lighter duty, pull to activate design
- Simple, surface mount installation
- Easy one-handed actuation with a bare or gloved hand
- Corrosion resistant construction
- Single point actuation

AC-B1 / AC-B3
Large push button actuator for rugged exterior environments
- Allows release of one or more connected rotary latches
- Options for pneumatic central locking system
- Single or multi-point actuation options
- Fixed, low-profile handle provides a secure grip
AC-50
Squeeze to operate design provides simple mounting to tubular construction or rounded mounting surface
- Easy one-handed actuation with a bare or gloved hand
- Improves aesthetics and complements industrial design
- Corrosion resistant construction

Cable Splitter

Southco’s AC Cable Splitter provides flexibility of the actuation point, allowing two connected rotary latches to be activated by one actuator, or one rotary latch to be activated by two actuators. Additionally, the Cable Splitter provides timed release, allowing one connected rotary latch to be triggered before another, or both rotary latches to be released at the same time.

One Actuator to Two Rotary Latches
Open two doors with a single pull of the actuator

Two Actuators to One Rotary Latch
Allows both an interior and exterior actuator to unlatch the same latch
Choosing cables and mounting hardware is the last step in designing a complete Rotary Latching System. Cables are available in various options to suit specific application requirements.

**Straight Line of Sight**
When cable is routing in a direct pull line with no bends or concerns for accidental opening

- **Cable Type 1** - Bare Cable
- **Cable Type 2** - Coated Cable for Appearance

**Protected Cable Routing**
When cable routing requires bending, cable management brackets, spring assist or to protect against accidental opening

- **Cable Type 7** - Jacketed Cable

Please contact Southco for assistance in selecting the appropriate cable for your Rotary Latching System.
Southco offers Electronic Rotary Latching Systems that facilitate the upgrade from mechanical to electromechanical access control. When combined, electronic rotary latches and access controllers enable the remote control and monitoring of enclosures and equipment for enhanced access control.

- Convenience of electronic access control with the security of a proven, robust, rotary latch
- Easy push-to-close operation and electronic actuation simplify access across a wide variety of application
- Easily integrates into existing access control systems

**Electronic Rotary Latches**

- **R4-EM 1 & 2** All-metal construction
- **R4-EM 4 & 6** Compact & lightweight
- **R4-EM 5 & 7** Outdoor use
- **R4-EM 8** Basic functionality
- **R4-EM 9** Full-featured

**Access Controller Options**

- PIN pad
- RFID card reader
- Biometric reader
- BLUETOOTH® controller
- Electronic key fob reader

*Please contact Southco for a copy of our comprehensive Electronic Access Solutions Design Guide when building your Rotary Latching System.*
Southco, Inc. is the leading global designer and manufacturer of engineered access solutions. From quality and performance to aesthetics and ergonomics, we understand that first impressions are lasting impressions in product design. For over 70 years, Southco has helped the world’s most recognized brands create value for their customers with innovative access solutions designed to enhance the touch points of their products in transportation and industrial applications, medical equipment, data centers and more.