Crane Revolving Doors

We make access in life smart and secure.

Crane SS6000-M
One World Trade Center, New York, NY
Architect: Skidmore, Owings & Merrill
With more than 100 years of experience and subsidiaries in more than 130 countries worldwide, dormakaba is the preferred choice of leading architects, specifiers, and general contractors and your source for complete access solutions and services.

Crane by dormakaba is the premier global manufacturer of revolving doors. Our attention to detail is unsurpassed. Virtually every component of the door—push bars, canopies, glass panels, and more—can be customized to complement the building’s exterior and interior design theme.

For over 70 years, highly skilled Crane engineers and dedicated craftsmen have created beautiful, state-of-the-art revolving doors for projects all around the world.

dormakaba is a national member of the United States Green Building Council (USGBC). We understand the importance of LEED certification and welcome the challenge to build safe and sustainable buildings by aligning our products with standards set by the USGBC.
Underpinning all dormakaba access solutions are key values that drive us as a company:

- Innovation
- Engineering quality
- Sustainability
- Quality customer experience
- Dependable service and maintenance

Adhering to these key values enables dormakaba to provide premium access solutions backed by a breadth of available services—from writing specifications to ongoing customer and technical service; from installation support to service and maintenance.

- Crane Revolving Doors are powerful examples of dormakaba’s complete, holistic solutions. We provide an arc of essential products and services stretching from design and specification all the way through ongoing performance and service.

- When you choose dormakaba products for the reliable, secure, and attractive entrances your project demands, we become your partner for the life of those access solutions.

- Experienced consultants are on staff to assist in building design and in writing specifications to identify the best dormakaba access solutions for your project.

- AAADM-certified dormakaba technicians can install your entrances, as well as service and maintain them once they are in place.

- Our Customer and Technical Services teams are on hand to answer your questions and help with any difficulties you encounter.

- We stand behind dormakaba product warranties, the best in the industry.

- dormakaba products are the perfect choice when the time comes for product replacements or upgrades.

By focusing on the life cycle of your building, dormakaba access solutions ensure your projects will succeed beyond expectations, now and into the future.
Manual revolving doors
Designed to fulfill your vision

- Manual revolving doors allow both greater traffic volume and quicker traffic flow compared to automatic or manual swing doors.
- Crane manual doors are the most customizable revolving doors on the market.
- Tested to exceed UL standards E783 and E283 for air infiltration, our manual revolving doors provide the most sustainable entrance possible—allowing continuous traffic flow and blocking air infiltration at the same time.
- With a 6’ to 10’ diameter range and multiple attachment plans, Crane manual revolving doors can be fit into virtually any entrance.
- Our commitment to quality starts with a 10-year warranty on every revolving door manual speed control and optional floor grille.
- The industry’s widest selection of finishes is available to meet your project needs, including oak and other types of wood.

Crane revolving doors are suitable for both new and retrofit construction.
Crane manual revolving doors are available as 1000, 2000, 3000, or 4000 Series revolving doors. (See pages 12-13 for descriptions of each Series.) Our dormakaba representatives and engineers will gladly review your design and specification requirements with the goal of transforming your vision into a safe and reliable entrance.

Standard features of Crane manual revolving doors include the industry’s most reliable manual speed control; a heavy-duty bookfold mechanism; a weather-tight and smooth surface canopy without pie wedges or visible supports; and a rubber and felt weather sweep that provides a superior air seal.

All Crane manual revolving doors use the same 100:1 gear ratio manual speed control—a steel-cast, precision machined, sealed unit mounted in the canopy or in the floor. The centrifugal force brake slowly engages as the door reaches the maximum allowable RPM set by code. The brake shoes can be easily adjusted or replaced. Crane’s proven speed control design allows us to provide the industry’s best 10 Year Warranty.

Note
dormakaba offers automatic doors for ADA compliance. For information, visit our web site at www.dormakaba.com.
Automatic revolving doors
Designed without compromise

- Crane automatic revolving doors can be customized to provide accessibility while maintaining the entrance’s design aesthetics.
- The revolving door canopy houses the Modular Drive System (MDS), which includes an advanced microprocessor control and is torque driven for safety.
- These automatic doors can range in size from a minimum 8’ outside diameter up to 12’.
- Crane automatic doors are designed to meet or exceed all safety and code requirements.
- Automatic doors are available as 1000, 2000, or 3000 Series revolving doors and KTC large diameter revolving doors.
- The industry’s widest selection of finishes is available to meet the needs of your project.
Crane automatic revolving doors are designed to monitor the door itself and its occupants to ensure safe operation. Standard features for Crane automatic revolving doors include an advanced microprocessor control; a safety sensor system that monitors the door and its occupants; a heavy-duty bookfold mechanism finished to match the door; and a weather tight and smooth surface canopy without pie wedges or visible supports.

Large diameter, perimeter-driven KTC Series doors are the safest and most reliable revolving doors available. Perfect for hospitality and transportation venues where customers are accompanied by luggage, strollers, and large items, KTC doors are eye-catching, functional, and practical—meeting a wide range of applications. Summer configurations enable doors to open for unobstructed flow or passage of bulky items. Offered in outside diameters up to 18’—among the widest in North America—dormakaba KTC doors are available in configurations of two, three, or four wings.
Security revolving doors
Meeting both security & design goals

A Crane security revolving door can be precisely fabricated to meet your security goals, seamlessly interface with your building’s security system, as well as match your budget.

Crane 1000, 2000, and 3000 Series are available in three increasingly secure variants. Each level can be set up with one-way or two-way security and integrated into a security system. Various operating modes can be combined or customized per your project’s specific security requirements. Be assured that your Crane Security door will be beautiful as well as secure.

Service and maintenance
Servicing and maintaining your Crane Security door is vital to ensuring your entrance is fully functional and secure at all times. We offer a variety of service plans to meet your needs. To find out more, visit go.dormakaba.com/ServiceAMER

Crane SS3000-S2 Security Door
Crane AL1000-S2 Security Door
Lucent Technology, Lisle, IL
Architect: Kevin Roche John Dinkeloo and Associates LLC
S1 Security door
The entry-level solution for a secure entrance, the S1 Security door is a manually operated revolving door with access control features (electromagnetic lock). The S1 Security door is the only one of its kind on the market.

S2 Security door with anti-tailgating
A technology-driven, automatically operated revolving door that prevents unauthorized access and minimizes impact on traffic flow. Anti-tailgating prevents unauthorized access in the opposite direction and in the next chamber. The S2 Security door provides a strong solution for projects demanding both highly secure entrances and high traffic flow.

S3 Security door with anti-piggybacking
A sophisticated automatic security revolving door with automatic anti-piggybacking, a feature that restricts access to a single confirmed person. The S3 door also features anti-tailgating. The S3 Security door utilizes cutting edge, highly accurate technology to provide the most secure entrance possible.

Comparing security levels

<table>
<thead>
<tr>
<th>Security level / Operation</th>
<th>S1 Manual</th>
<th>S2 Auto</th>
<th>S3 Auto</th>
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<tbody>
<tr>
<td>Access control flow</td>
<td>1-way and 2-way</td>
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<tr>
<td>Interface to security system</td>
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<td>✓ ✓ ✓</td>
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<td>Anti-tailgating</td>
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<td>✓ ✓ ✓</td>
<td></td>
</tr>
<tr>
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</tr>
<tr>
<td>Optional battery backup</td>
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<td>✓ ✓ ✓</td>
<td></td>
</tr>
<tr>
<td>Optional annunciator</td>
<td>✓ ✓ ✓</td>
<td>✓ ✓ ✓</td>
<td></td>
</tr>
<tr>
<td>Optional lighting</td>
<td>LED or Florescent 8” Circline, or LED Spotlights</td>
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<td></td>
</tr>
<tr>
<td>Power requirements</td>
<td>120VAC, 20A breaker</td>
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</table>
Complete entrances
Custom-fabricated entrance systems

• dormakaba is the single source for complete, custom-fabricated entrance systems for both new construction and renovations. For a seamlessly elegant entrance façade, we are able to match finishes across the range of dormakaba doors and hardware.

• A Crane complete entrance is a truly integrated entry system. Most building fronts consist of parts sourced from different manufacturers. In contrast, dormakaba is a single source for all the parts that may go into a Crane complete entrance, including Crane revolving doors, dormakaba automatic doors, manual door hardware, complementary architectural hardware, and custom work—all in matching finishes to create a uniform entrance.

• dormakaba offers consultation at the design phase to plan an entrance that matches your vision and your budget.
Complete entrances

Crane SS4000-M (Complete Entrance)
155 North Wacker Drive, Chicago, IL
Architect: Geottsch Partners

Crane B23000-A (Complete Entrance)
JW Marriott, Chicago, IL
Architect: Lucien Lagrange & Associates

Crane SS4000-M (Complete Entrance)
333 West Wacker Drive
Chicago, IL
Architect: Perkins+Will
LEED Silver Certified
Crane 1000 Series
The Crane 1000 Series door sets the industry standard for revolving door design, construction, operation, and reliability and provides the energy savings and traffic flow that you expect from a revolving door. Fabricated with rigid aluminum construction, the 1000 Series offers many options: different sizes, canopy designs, wing configurations, and finishes (anodized, painted, or clad in stainless steel or bronze). The Crane 1000 is an excellent choice for a budget conscious entrance or for a project that requires a fast lead time.

Crane produces 1000 Series revolving doors from .125 thickness aluminum extrusions and sheet material. Each piece is carefully cut and fitted and connections are tightly bolted together. After fabrication, all exposed surfaces are mechanically finished to eliminate marks caused by rolling and forming. The anodized, painted, or clad finish is then applied; standard colors, as well as most exotics and metallics are available.

Crane 2000 Series
The Crane 2000 Series door is a cut above the already high standards set by the Crane 1000. Available in a variety of sizes, finishes, and canopy designs, the 2000 Series is a robust, reliable entrance that catches the eye. The highly customizable 2000 Series beats other manufacturer’s products in construction quality and design options. The façade attachments are fully customizable.

Constructed of fully formed and welded aluminum, bronze, or steel, the Crane 2000 Series revolving door’s enclosure and canopy are by far the best in the industry. The Crane 2000 Series enclosure and canopy are fully formed and welded from rolled bronze or steel, or from true .125 thick aluminum extrusions and sheet material. After fabrication, all exposed surfaces are mechanically finished to eliminate marks caused by rolling and forming. The anodized, painted, or clad finish is then applied; standard colors, as well as most exotics and metallics are available.

The Crane 2000’s door wings are equally well built—fabricated from aluminum, bolted together with heavy-duty fasteners, then clad with stainless steel or bronze for a sleek appearance. The door wings are made from heavy-duty aluminum extrusions, carefully cut, fitted, and tightly bolted together. dormakaba’s meticulous fabrication process makes these door wings the strongest in the industry.
Crane 3000 Series

The only fully formed and welded revolving door in the industry, the Crane 3000 Series combines premium construction with unmatched custom design, using materials such as mahogany or oak, stainless steel, or bronze. Wooden doors are hand-crafted by skilled mill workers to meet your specification meticulously. For a smooth, beautiful appearance, the surface material is welded to a steel or stainless steel subframe, eliminating seams caused by cladding pre-finished materials to an aluminum subframe.

Crane 3000 Series revolving doors are cut, formed, and precisely welded from heavy USS 16 gauge stainless steel or 14 B&S gauge bronze sheet and compatible bar stock to create the sturdiest structural elements possible. The exterior surface metal is fully welded to the interior reinforcing substructure. The four door wing corners and the interior enclosure-post-to-base connections are all welded. Canopy fascia are visually seamless and attached to the ceiling soffit with concealed welds. All exposed surfaces are ground and polished to eliminate blemishes from rolling, forming, and welding.

Fully customizable 3000 Series door wings can be fabricated from wood (e.g. mahogany or oak), welded stainless steel or bronze, or some other custom material. dormakaba’s meticulous fabrication process makes Crane door wings the strongest in the industry.

Crane 4000 Series

The manually operated Crane 4000 Series is the original all glass revolving door. It provides a spectacular first impression with its elegant and sophisticated design. Rich styling and sleek lines reinforce the exclusive image desired more and more for exquisite high end store fronts and building entrances. The 4000 Series door is fully customizable, including push bars and attachment options to the store front, and the connection between the enclosure wall and exposed ceiling glass.

The four Crane Series are differentiated by their construction and level of customization. All are above the industry standard for design, construction, operation, and reliability of revolving doors.
Industry best fabrication & finishes

Custom and standard finishes

The best fabrication in the industry
dormakaba couples modern technology
with old world craftsmanship to manufac-
ture the best architectural finishes of any
manufacturer, bar none. In our factory in
Lake Bluff, IL, experienced craftsmen
fabricate welded and cladded revolving
doors in stainless steel and bronze using
skills honed over many years. Other
manufacturers hand off this type of
finishing to subcontractors, whereas every
Crane revolving door is 100% manufac-
tured by dormakaba.

Unparalled choice of finishes
Crane doors can be customized to match
virtually any design because dormakaba
offers such an extensive range of finishes:
wet paint, powder coat, special anodized,
and metal finishes—in stock, standard, and
custom colors. The base package standard
finish is Clear or Dark Bronze Anodized.

Every revolving door is
designed, engineered,
and fabricated by
union craftsmen in our
Chicago factory.
Energy savings
Sealed barrier/reduced air infiltration

The most energy-efficient entrance
Crane revolving doors provide your building with the most energy-efficient entrance possible, allowing continuous traffic flow while at the same time creating a barrier to prevent air infiltration. All our revolving doors are furnished with Crane factory-made door seals, which are essential for creating the barrier that blocks inside from outside environments. The resulting air infiltration block enhances comfort for everyone inside and ensures the owner’s return on investment.

Our manual revolving doors are tested to meet the most stringent air-infiltration standards: UL ASTM E283 and ASTM E783. ASTM E283 defines air infiltration requirements in a lab setting. dormakaba takes the extra step of testing Crane manual doors to ASTM E783, a standard that requires real world testing within an actual building.

Revolving doors vs. swing or sliding doors
Revolving doors create a sealed barrier between inside and outside environments. In contrast, open swing or sliding doors provide no protection, creating hot or cold bursts on entry and exit, wasting valuable energy, and making HVAC systems work harder, increasing cost of ownership.

A study conducted by MIT* showed that opening a swing door causes, on average, 8× more air to be exchanged than a revolving door because open swing doors provide no barrier from the elements.

The clear indication is that a revolving door’s sealed barrier can dramatically reduce the load on HVAC systems, saving energy in the process, and helping your building achieve LEED certification.

Since traffic rate, building height, and outdoor temperatures are uncontrolled, entrance infiltration can be lessened by reducing the entrance pressure differential. This is done by sealing or tightening the building envelope, pressurizing with outdoor air, or sealing with proper doors.

Net outdoor air supply over exhaust reduces the entrance pressure differential, decreasing the infiltration rate. The use of outdoor air in excess of ventilation needs, merely to pressurize entire buildings and reduce infiltration problems, may add an economically unjustified heating load. Pressurizing only the ground floor requires much less outdoor air. But this may cause excessive pressure differentials across stair and elevator doors on the ground floor.

A revolving door mitigates stack effect by allowing traffic while sealing air flow. Infiltration through a revolving door (except for a small amount passing through the door seals) is virtually not affected by building height, indoor-outdoor pressure difference, and fan operation.

Infiltration rates through a swing door are about 900 cubic feet (25.5 cubic meters) per person for a single-bank entrance, and 550 cubic feet (15.6 cubic meters) per person for a vestibule entrance. But it is only about 60 cubic feet (1.7 cubic meters) per person for a manually operated revolving door, and 32 cubic feet (0.9 cubic meters) per person for an automatic revolving door.

* Cullum, B.A.
"Modifying Habits Towards Sustainability: A Study of Revolving Door Usage on the MIT Campus". Massachusetts Institute of Technology
Safety
dormakaba attention to detail

Attention to detail goes beyond the aesthetics of a revolving door. To ensure dependable operation with minimum maintenance, we developed and perfected our own operating hardware. All operating hardware used in Crane revolving doors is manufactured by us or under our direct control.

For example, our bookfold mechanism features machined cast bronze discs and hangers that are finished to match your door. Required by revolving door construction standards within the United States, a bookfold mechanism provides emergency egress. The pressure to engage the bookfold mechanism is adjustable to meet local conditions—for example, stack conditions, negative pressure, and wind conditions.

Likewise, our speed control has a precision-machined, cast-steel gear train mounted in the ceiling canopy or floor. The speed control is set to ensure that the revolving door does not exceed the revolutions per minute set by governing building codes.

Safety is paramount. All Crane automatic revolving doors exceed the ANSI 156.27 standard for automatic revolving doors. The drive and safety sensor system continuously monitors the door and its occupants. Standard safety features include:

- Enclosure wall safety bumper (2 per door)
- Heel guards (1 per wing)
- Wing sensors (1 per wing)
- Breakout detection
- Torque-limited drive system
- Handicap door speed reduction switches (2)
- Emergency stop button (2)
- Activation
- Force detection

**Bookfold mechanism**

Aesthetically subtle and code-compliant

1. During normal operation, spring tension holds ball in socket maintaining proper wing configuration.
2. Panic pressure on wing compresses spring and releases ball.
3. Minimal pressure is required to continue bookfolding. Wings bookfold either way, providing a clear passage on both sides.
4. Release spring tension is adjustable.

**Revolving door rehab kit**

Make your old revolving door better than new

Crane offers Rehab Kits to replace the wings and hardware of an existing revolving door no matter who originally manufactured the door. Made from aluminum, stainless steel, bronze, or wood, each kit is designed to match the original door as closely as possible or to bring fresh new style to an outdated entrance without replacing the entire door.

A Rehab Kit includes everything needed to properly mount and fit into the existing enclosure and canopy, such as:
- Speed control
- Center shaft with cover
- Bookfold mechanism
- Hanger discs
- Hangers
- Pivot bearing
- Pre-glazed wings with weathersweeps
- Push bars
- Bumpers
- Lock cases
Options

Welded floor grilles
Floor grilles can be integrated into the revolving door design to ensure a working system and proper aesthetics. Fabricated from concentrically rolled bars of stainless steel, the grilles are curved to the radius of the revolving door, which allows the door to spin properly and minimizes damage to the bottom door sweep. The heavy-duty floor grilles are welded and formed from 304 or 316 solid stainless steel, 1/4" x 1" solid bars polished to a #4 satin finish. The recessed grille pan is welded from 12 gauge stainless steel and can have a drainage fitting added. Tolerances for the grilles aligning concentrically are to a 1/64" variance. dormakaba welded floor grilles come with a 10 year warranty.

Self-positioning closer “return to quarter-point”
An add-on feature that automatically resets the revolving door to its home (X) position after every use and provides an optimal weather seal while the door is idle. The Self-Positioning Closer requires a minimum 6-1/2" canopy, uses 110VAC, and does not require any additional safety sensors. This feature is compliant with ANSI 156.27. The closer works in conjunction with the Manual Speed Control and spins the door in a counter-clockwise direction. The Self-Positioning Closer functions independently from the Manual Speed Control, assuring the revolving door’s safe and compliant operation at all times even if the closer is turned off or removed.

Custom push bars
Standard push bars are the same material and finish as the door. Formed from 1/2" x 1-1/2" rectangular bar or 1" diameter round bar. Mounted with through-bolts or concealed fasteners. Custom push bars are available with a 1-1/4" maximum projection from face of door stile.

Ceiling light options
• 8" Circline style with florescent bulb
• 8" Circline style with LED light, or
• LED spotlights.

Wing designs

Attachment plans
# Product selector guide

<table>
<thead>
<tr>
<th>Model</th>
<th>Mtrl</th>
<th>Finishes</th>
<th>Op mode</th>
<th>Attachment plan*</th>
<th>Diameter</th>
<th>Door opening height</th>
<th>Enclosure glass</th>
<th>Enclosure base sightline</th>
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<tr>
<td>AL1000</td>
<td>AL</td>
<td>All</td>
<td>All</td>
<td>A,B,C,D,F</td>
<td>6'-6&quot;, 7&quot; (ID) 8', 9', 10', 12&quot; (OD)</td>
<td>7' up to 9'</td>
<td>Glass</td>
<td>7/16&quot; clear or tinted*</td>
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<td>All</td>
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<td>1&quot; to 36&quot;</td>
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<td>6&quot; to 36&quot;</td>
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*See Attachment Plans, page 17

**Center post required

### Key

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<th>Mtrl (Material)</th>
<th>Finishes</th>
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<td>Clear Anodized, #7 Mirror</td>
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<td>SS</td>
<td>Dk BZ Anodized, #8 Mirror</td>
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<tr>
<td>BZ</td>
<td>Custom Anodized, Non-Directional</td>
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<td>WD</td>
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<td>#4 Satin, Custom</td>
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<td>#6 Fine Satin, Stain</td>
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### Op (Operational Mode)

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<tr>
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### Questions?

Please contact the Crane factory by phone or email for any questions or clarifications:
800-942-7263
salescranedoor@dorma.com

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### Note

Per code, for automatic operation, the smallest diameter is 8'-0" (OD).
dormakaba provides quality support at all stages of a project, from design and specification all the way through installation and maintenance. In-house Consultants are available to help with design and specifications. Our Customer and Technical Service teams provide exceptional ordering and product support, while our network of Service and Installation providers can help you protect your investment from installation through on-going maintenance.

Experienced on-staff consultants provide comprehensive specification writing services—including consultation on the complete range of access solutions: automatic door systems (sliding, swinging, and revolving doors); glass systems and hardware; architectural hardware; and operable walls.

Consultant services include:
• Developing code-compliant access solution specifications and schedules
• Developing detailed specifications for all other product groups
• Meeting with the Design Professional and/or Owner to discuss project requirements and security coordination
• Assisting with development of a professional key system
• Preparing budgets
• Reviewing substitution requests
• Reviewing submittals
• Responding to RFIs, Owner’s comments, and comments from other entities
• Assisting with punch list development and administration

With an emphasis on customer service, dormakaba is committed to selling, installing, and servicing automatic, revolving, and manual doors and hardware for commercial applications.

dormakaba’s nationwide service and maintenance network provides responsive, professional, and comprehensive sales, technical, project management, and maintenance support. With over 28 offices throughout North America, dormakaba has hundreds of dedicated professionals available to respond to your individual needs.

Committed to the highest level of customer service possible, all our service technicians are American Association of Automatic Door Manufacturers (AAADM) certified.

Visit go.dormakaba.com/ServiceAMER to learn more about dormakaba service and installation.