



Personal Interlocks

We make access in life smart and secure.

Personal Interlocks

For maximum security.



dormakaba Personal Interlocks meet the highest security demands and provide optimal protection for sensitive building areas.

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Entrance solutions by dormakaba

Security. Sustainability. Reliability.

dormakaba stands for security, sustainability and reliability. Our mission is to make the lives of our customers smart and secure. Holding true to our mission, we invest in innovation to develop entrance solutions that exceed your demands and expectations.

The commitment to develop innovative yet practical products is what differentiates dormakaba. Our Personal Interlocks are powerful examples of our dedication to providing premium physical access systems that perform as designed throughout the life of your building.

"The commitment to develop innovative yet practical solutions is what differentiates dormakaba."

To ensure our entrance solutions perform at the highest level, we provide the most comprehensive offering of services in the industry. You can trust dormakaba for exceptional product support, including installation, retrofit, replacement and maintenance.

We will continue to deliver systems that define security and convenience. Together with first class service, on-going training and aftermarket sales support, our priority will always be adding value for our customers and esteem to our brands.



Personal interlocks

Maximum security for sensitive areas.

High security is not just a matter of checking whether a user has authorization to enter sensitive or restricted areas in a secure facility. The highest degree of separation and access control must be achieved. dormakaba's electronically, monitored security Personal Interlocks meet the highest security demands and provide optimal protection for sensitive building areas.

Versatility

The dormakaba Personal Interlock product series comprises a variety of shapes, including round or rectangular Personal Interlocks for single passage, or interlocks with a set of doors arranged in a row, allowing passage in one direction.

Round or cubic PIL Personal Interlocks

The degree of separation can be accomplished by means of body weight, sensors or an additional check point for identification in the middle of the interlock. Depending on the security requirements, the interlock may be equipped with contact mats, scales or internal monitoring. Alternative versions for high

security areas include bullet- and burglar-resistant designs. The different versions are certified from RC2/WK2 up to WK4.

Advantages of dormakaba PIL round or cubic Personal Interlocks

- High level of security when equipped with contact mats.
- Additional security through installation of scales with weight limit or actual weight.
- Resistance classes RC2/WK2, WK3, and up to WK4 for cubic interlocks.
- Optional wings and folding wing doors and automatic locking.
- Optional fire door.
- Optional emergency exit function.
- Optional bullet and burglary resistance.
- Elegant glass units.
- Quiet, low noise operation.
- Minimal space requirement.

| | |
|-----------------|---------------------|
| Throughput rate | = 3 to 5 per minute |
| Security level | = ●●●●● |
| Comfort | = ●●●○○ |



Interlocks with automatic drives and an appropriate passage width offer a barrier-free solution.





The compact design of the PIL-S01 round interlock is the ideal solution for access points having minimal space requirements.



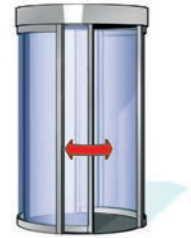
The cubic design of the PIL-M01 offers maximum security and highest degree of separation when integrated with biometric reader to allow access to authorized personnel.



dormakaba Personal Interlocks are furnished powder-coated RAL color standard. Optional finishes can be specified. All-glass multiple unit in polished stainless steel finish.

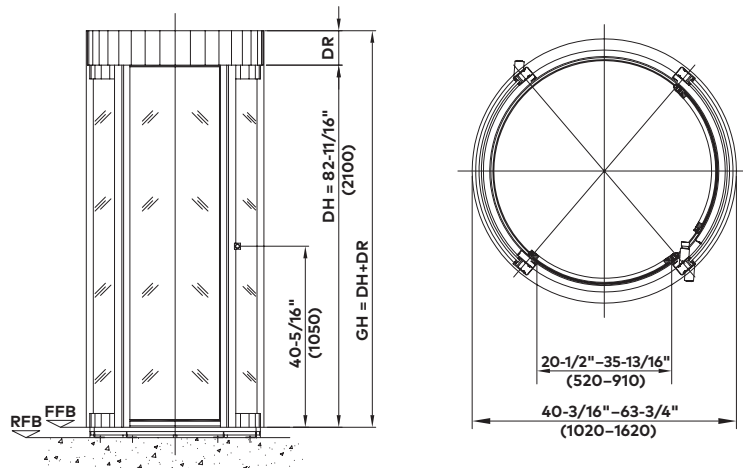
PIL-S01

Personal Interlock



| Standard units | PIL-S01 | | | |
|-----------------------------|--|--|--|--------------------|
| Construction | | | | |
| Outside diameter | 40-3/16" (1020 mm) 52" (1320 mm) | 44-1/16" (1120 mm) 55-5/16" (1420 mm) | 48" (1220 mm) 59-13/16" (1520 mm) | 63-3-4" (1620 mm) |
| Passage width | 20-1/2" (520 mm) 27-15/16" (710 mm) | 22-13/16" (580 mm) 30-11/16" (780 mm) | 25-9/16" (650 mm) 33-1/16" (840 mm) | 35-13/16" (910 mm) |
| Total height | 90-9/16" (2300 mm) | | | |
| Passage height | 82-11/16" (2100 mm) | | | |
| Upper part of body | 7-7/8" (200 mm) | | | |
| Body | | | | |
| Resistance class | RC2 or without available. | | | |
| Side panels | With glass panel, alternatively metal-clad. | | | |
| Interior | Including black rubber floor covering. | | | |
| Sliding doors | Made of light metal profiles with curved glass, flush-mounted outside. | | | |
| Finish | Powder-coated in RAL color. | | | |
| Function | | | | |
| | Door leaves with locking system. | | | |
| | Default position inside and outside closed. | | | |
| | Automatic opening and closing of both door leaves consecutively. | | | |
| | PMA emergency release switch inside the interlock opens the outer door. | | | |
| | Interior with surface light scanner for relaying, including 1-zone contact mat with black rubber floor covering. | | | |
| | Light curtain for contactless protection. Integrated in the faceplate of the outside radius on both sides. | | | |
| | Behavior of the sliding doors in the event of a power failure can be freely selected. Standard setting: inside closed and locked, outside open. | | | |
| | Behavior of the sliding doors in the event of a power failure for burglary-resistant option: outside closed and locked, inside open. | | | |
| | PMA is replaced by a manual unlocking device inside the interlock. | | | |
| Electrical equipment | | | | |
| | Network-compatible ETS 21 CAN bus control unit integrated in the unit. | | | |
| | Power supply 230 VAC, 50 Hz. | | | |
| Installation | | | | |
| | On stainless steel floor element with guide rail for sub floor level SFL, measure X = 2-3/4" -3-1/8" (70-79 mm). | | | |
| | The ambient conditions must be checked for outdoor installation. | | | |

Note: In illustrations, measurements are shown as inches followed by millimeters; for example, 1" (25).



PIL-S01 options

Note: Increase access security using a 2-zone contact mat. Biometric verification and weight detection are possible.

| Construction | |
|---|---|
| Increase passage height. | ○ |
| Increase upper part of body. | ○ |
| Thermal separation of body side panels in axis. | ○ |
| Wall connection. | ○ |
| T30 fire protection, two leaves. | ○ |
| Manual unlocking devices for inner or outer door, installed on outer side of body. | – |
| Monitoring of sliding door for notification of status closed and locked. | ○ |
| Finish | |
| Stainless steel satin finish. | ○ |
| Electrical equipment | |
| Consoles (1, 2 and 3) made of plastic or aluminum in color of unit or in RAL 9006, also available as semi-gloss stainless steel with a smooth finish. | ○ |
| Consoles 4 and 5 made of semi-gloss stainless steel with a smooth finish. | ○ |
| Push button for manual single release. | ○ |
| Electric key-operated push button to release unit. | ○ |
| OPL 05 operating panel, functions can be chosen freely. | ○ |
| Magnetic contact for monitoring maintenance openings or ceiling plate. | ○ |
| Signal device consisting of 2 lights red/green. | ○ |
| Contact mats including rubber flooring with studded surface. | ○ |
| Light curtain for contactless protection (see project-specific risk assessment). | ● |
| PIB emergency release button, PMI, PMB emergency release switch. | ○ |
| Various scales for access control (actual weight or weight limits). | ○ |
| Lighting by 2 to 4 LEDs. | ○ |
| Additional board to expand the existing inputs and outputs. | ○ |
| Installation | |
| Wall frame for pre-installation. | – |
| Base frame for raised floor. | – |
| Floor element made of stainless steel for pre-installation. | ● |

● standard ○ optional – not available

Notes

- Optional component drawings, see page 10.
- Security level according to equipment, see page 11.
- ETS 21: customizable voice messaging to be processed on site, see page 11.
- Passage sequence, see page 12.

PIL-M01

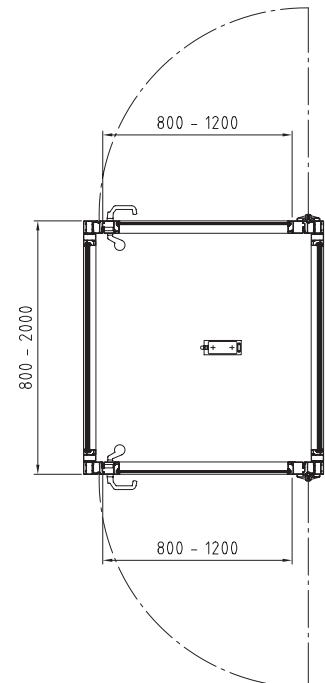
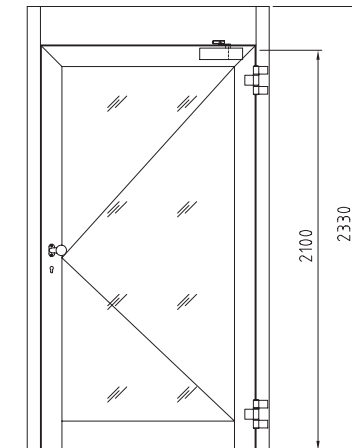
Personal Interlock



| Standard units | PIL-S01 |
|----------------------|---|
| Construction | |
| Upper section length | 31-1/2" - 78-3/4" (800-2000 mm) |
| Passage width | 31-1/2" - 47-1/4" (800-1200 mm) |
| Outer dimension | Depends on combination. |
| Total height | 91-3/4" (2330 mm) |
| Passage height | 82-11/16" (2100 mm) |
| Upper part of body | 9-1/16" (230 mm) |
| Body | Upper part of the body with dustproof covering and ceiling plate house the control and surveillance elements. |
| Outer door | Optional (hinge door, folding wing, sliding door, fire protection door) or on-site door. |
| Inner door | Optional (hinge door, folding wing, sliding door, fire protection door) or on-site door. |
| Finish | Powder-coated in RAL color. |
| Function | Default position inside and outside closed. Release signals to activate the door from inside or outside provided on site. Release of the first door in entrance or exit direction. Release of the second door in entrance and exit direction, as soon as the first door has been automatically closed and locked. Interior with surface light scanner for relaying. Lighting can be installed. |
| Electrical equipment | Network-compatible ETS 21 CAN bus control unit integrated in the unit. |
| Installation | With side walls on finished floor level FFL. The ambient conditions must be checked for outdoor installation. |



Note: Interlocks with automatic drives and a passage width of 36" (915 mm) and upwards offer a barrier-free solution.



Note: In illustrations, measurements are shown as inches followed by millimeters; for example, 1" (25).

PIL-M01 options

Note: Level of access security can be increased using a 2-zone contact mat, additional light barriers, biometric verification, Quattrovision (optical separation), and weight detection. Increase convenience using swing door drives.

! Safety device

Notes

- Optional component drawings, see page 10.
- Security level according to equipment, see page 11.
- ETS 21: customizable voice messaging to be processed on site, see page 11.
- Passage sequence, see page 12.

Construction

Increase upper part of body.

Side wall consisting of aluminium profile with 5/16" (8 mm) laminated safety glass.

Side wall consisting of aluminium profile in WK2 with P4A glazing.

Swing door consisting of aluminium profile with 5/16" (8 mm) laminated safety glass.

Swing door consisting of aluminium profile in WK2 with P4A glazing.

Smokeproof swing door with 5/16" (8 mm) laminated safety glass.

Magnetic clamp (locking force 5000 N) in addition to electrical door opener for outer or inner door.

Fire door, T30 (EI-30) or T90 (EI-90) made of primed steel plate with viewing window in F30 or F90.

Folding wing door with continuous dormakaba profile system and sealing.
3/8" (10 mm) toughened safety glass.

Floor element made of stainless steel for pre-installation.

Base frame for raised floor.

Floor covering with green or grey round zone marking Ø11-13/16" (Ø300 mm) in center of interlock.

Watertight wooden base plate for floor covering, height = 3/8" (10 mm).

Black rubber flooring with studded surface, height 3/16" (5 mm) , to be glued to prepared floor or concrete.

Function

Electromechanical dormakaba FD20 drive (with return spring) for swing door (not suitable for fire doors).

Electromechanical dormakaba FD20 F drive (with return spring) for swing door. Suitable for fire doors.

Pre-assembled finger protection textile to be used in the swing door hinge (with self-retraction). !

Sensor strip (light curtain) on inside and outside of door leaf that moves with the door. !

Fixed light curtain on folding wing door. !

Integrated door closer hidden within the frame of swing door instead of lintel installation.

Emergency and escape route module.

Emergency exit functions for swing door and folding wing door (FFM).

Electrical equipment

Installation preparation for on-site components.

Consoles 4 and 5 made of semi-gloss stainless steel with a smooth finish.

Emergency release button with various functions (PMB, PIB, PMA, PMI).

Push button for manual single release.

Key-operated push button or switch prepared for on-site profile half cylinder to install in flush-mounted box/surface mount housing or console.

OPL 05 operating panel, functions can be chosen freely.

Various surface mount housings and installation frames.

Door glass pane with alarm function (trip wire alarm system, alarm wire, glass breakage detector).

Magnetic contact message «closed» according to VDS «C» or bolt contact message «locked» for on-site processing of the swing door.

Magnetic contacts for monitoring the maintenance openings.

Signal device consisting of 2 lights red/green.

Surface light scanner integrated in upper part of the body for additional monitoring of complete interlock interior.

Contact mats including rubber flooring with studded surface.

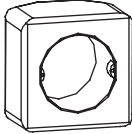
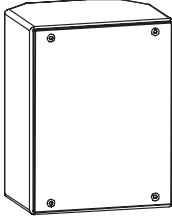

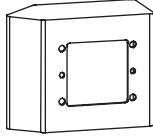
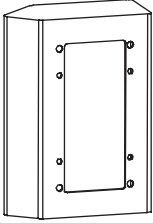
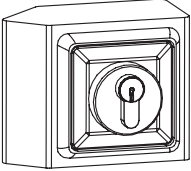

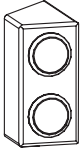
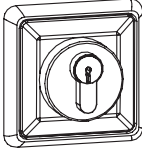
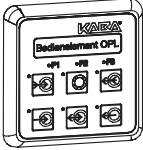
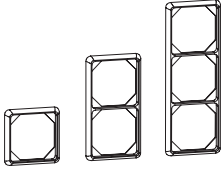

Ramp rail for contact mat on finished floor level FFL, on entrance and exit side.

Various scales for access control (actual weight or weight limit).

Lighting by 2 or 3 LEDs.

Additional boards to expand the existing inputs/outputs.

PIL-S01/PIL-M01 optional components

| Console 1 | Console 2 | Console 3 | Console 4 | Console 5 |
|--|---|--|---|--|
|  |  |  |  |  |
| <p>Plastic in color of unit or in RAL 9006</p> <p>Width 3-11/16" (94 mm)</p> <p>Height 3-11/16" (94 mm)</p> <p>Depth 2-9/16" (65 mm)</p> | <p>Aluminum in color of unit or in RAL 9006</p> <p>Width 5-1/2" (140 mm)</p> <p>Height 7-1/8" (180 mm)</p> <p>Depth 4-3/8" (110 mm)</p> | <p>Aluminum in color of unit or in RAL 9006</p> <p>Width 5-1/2" (140 mm)</p> <p>Height 14-3/8" (365 mm)</p> <p>Depth 4-3/8" (110 mm)</p> | <p>Stainless steel semi-gloss smooth finish</p> <p>Width 4-11/16" (118 mm)</p> <p>Height 3-11/16" (93 mm)</p> <p>Depth 2-3/8" (60 mm)</p> | <p>Stainless steel satin finish</p> <p>Width 4-11/16" (118 mm)</p> <p>Height 6-1/2" (164 mm)</p> <p>Depth 2-3/8" (60 mm)</p> |
| Electric key-operated push button in console | Release button | Signal device | Key switch | OPL 05 |
|  |  |  |  |  |
| Frame for flush-mounting | Emergency egress terminal | | | |
|  |  <p>(For PIL-M01 only)</p> | | | |

Security level according to equipment

| Element | Degree of separation |
|---|----------------------|
| Contact mat (1 zone) | -- |
| Contact mat (2 zones) | low |
| Additional light barriers and light scanner | enhanced |
| Scales, actual weight | very high |
| Scales, actual weight and biometrics | highest |

ETS 21: Customizable voice messaging to be processed on site

There are five potential-free feedback messages in the mother board:

- Ready for entry
- Passage entry
- Ready for exit
- Passage exit
- Error

Optional audio feedback messages can be added by using additional I/O boards.
Max. 6 customizable voice messages for each additional I/O board.

For example:

- Blocked
- Released
- Emergency release switch
- Single release entry
- Single release exit
- Continuous release entry
- Continuous release exit
- Blocked release entry
- Blocked release exit
- Random generator on/off
- Random generator alarm
- Passage message entry
- Passage message exit
- Setup after power failure
- Setup from known position
- Ready for entry/exit
- Ready
- Home position
- Pulse for electromechanical counter
- Message service
- General error
- Error bus
- Cleaning inside
- Cleaning outside
- Single-door mode
- Sabotage inner door leaf
- Sabotage outer door leaf
- Interlock occupied
- Interlock occupied, both doors closed
- Inner door locked
- Outer door locked
- Pre-alarm
- Alarm
- Alarm suppression

Passage sequence

PIL-S01

Passage sequence with card reader outside (biometric check possible)

Default position: interlock is closed and locked.

- Person granted authorization from card reader.
- Door is opened for authorized person.
- Entrance into the cabin.
- Door closes automatically.
- Inside the cabin, additional identification and measuring systems will be activated if installed.
- Second door opens or person is rejected (leaves the interlock through the first door).
- The last opened door closes automatically (starting position).

Other passage sequences can be used

(functions individually activated by ID card)

- Automatic mode without center reader.
- Automatic mode with center reader.
- Comfort mode for disabled persons without center reader.
- Comfort mode for disabled persons with center reader.
- Material interlock.
- Preferential mode entry or exit.
- Single-door mode entry or exit.



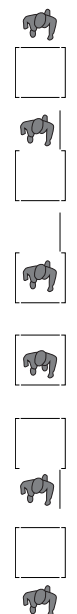
PIL-M01

With two hinge doors in basic version or with WK2, WK3, or T30/T90 (EI-30/EI-90) outer door

Passage sequence with card reader outside (biometric check possible)

- Default position: interlock is closed and locked.
- Person granted authorization from card reader.
- Authorized person opens door.
- Entrance into the cabin.

- Door closes automatically.
- Inside the cabin additional identification and measuring systems will be activated if installed.
- Person opens second door or is rejected (leaves the interlock through the first door).
- The last opened door closes automatically (starting position).



With hinge door outside and folding wing inside, suitable for egress

Passage sequence with card reader outside (biometric check possible)

Default position: interlock is closed and locked.

- Person granted authorization from card-reader.
- Authorized person opens door.
- Entrance into the cabin.
- Door closes automatically.
- Inside the cabin, additional identification and measuring systems will be activated if installed.
- Second door opens automatically and the person leaves the interlock or the person is rejected (leaves the interlock through the first door).

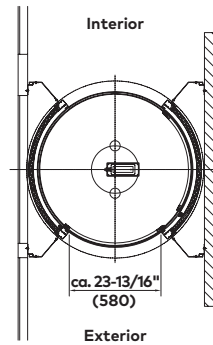
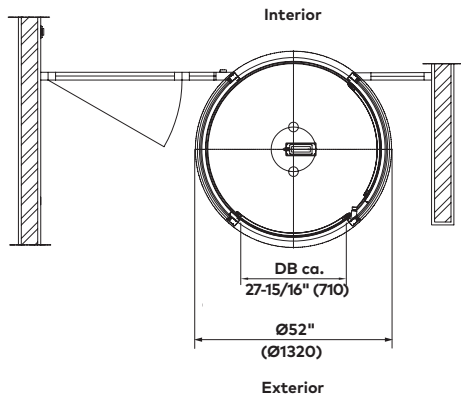
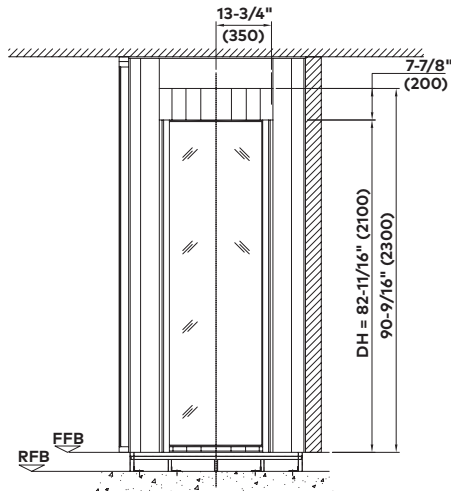
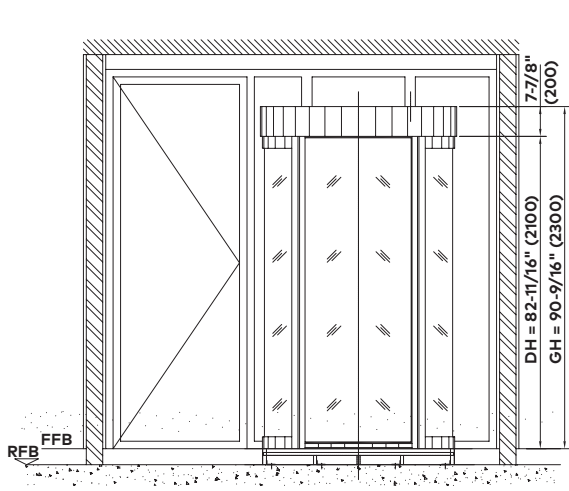
Emergency egress

Triggered by emergency escape route terminal according to EltVTR or by fire alarm/hazard alert system. Inner folding wing door opens, outer hinge door has to be opened manually. The customer or constructor has to apply for an "individual authorization" from the highest building authority.

Other passage sequences can be used (functions individually activated by ID card)

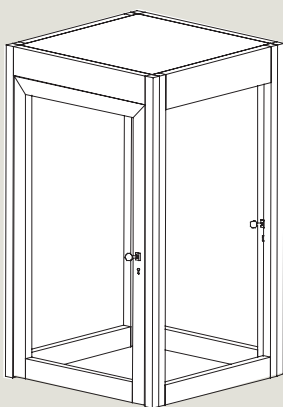
- Automatic mode without center reader.
- Automatic mode with center reader.
- Comfort mode for disabled persons without center reader.
- Comfort mode for disabled persons with center reader.
- Material interlock.
- Preferential mode entry or exit.
- Single-door mode entry or exit.

PIL-S01 installation examples

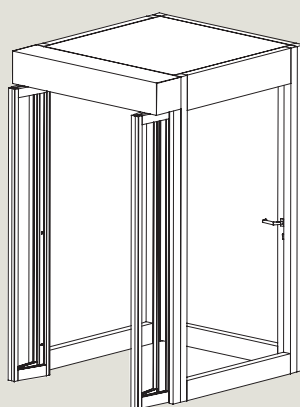


Note: In illustrations, measurements are shown as inches followed by millimeters; for example, 1" (25).

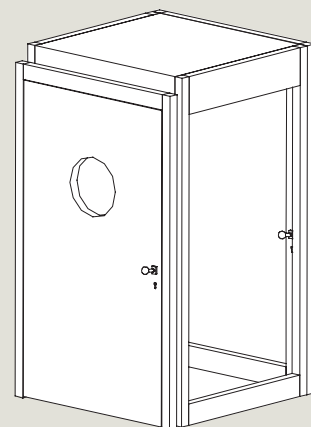
PIL-M01 combination examples



PIL-M01 with hinge door, basic version



PIL-M01 with folding wing and hinge door, suitable for escape routes



PIL-M01 with hinge door, T30 (EI 30) outer door

Architectural and design consultation

Project support at every phase.



We provide the most comprehensive project support services in the industry. From specification and new installation to dependable maintenance, our goal is your satisfaction.

For comprehensive project support, call dormakaba at **844-SPECNOW (844-773-2669)**

We provide unparalleled support at every phase of your project—from design consultation and specifications to installation and maintenance.

Our in-house consultants are here to assist you from the start of your project with design and writing non-proprietary specifications and schedules. Next, you can rely on our customer service team to provide exceptional product support, while our nationwide network of service professionals can help with the final phases of installation and proper maintenance.

Our comprehensive specification writing services include consultation on our complete range of entrance solutions:

- Automatic door systems (sliding, swinging, and revolving doors)
- Glass systems and hardware
- Architectural hardware
- Operable walls

Consulting 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.

Service and installation

A commitment to excellence.

Our nationwide network of service professionals is certified by the American Association of Automatic Door Manufacturers.

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

dormakaba's nationwide network of service professionals provides responsive and comprehensive sales, technical, project management, and maintenance support. Dedicated to the highest level of expertise, all our service technicians are certified by the American Association of Automatic Door Manufacturers (AAADM).

With more than 28 offices throughout North America, our certified professionals are ready to respond to your service needs.

Visit go.dormakaba.com/ServiceAMER to learn more about dormakaba Service and Installation.





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