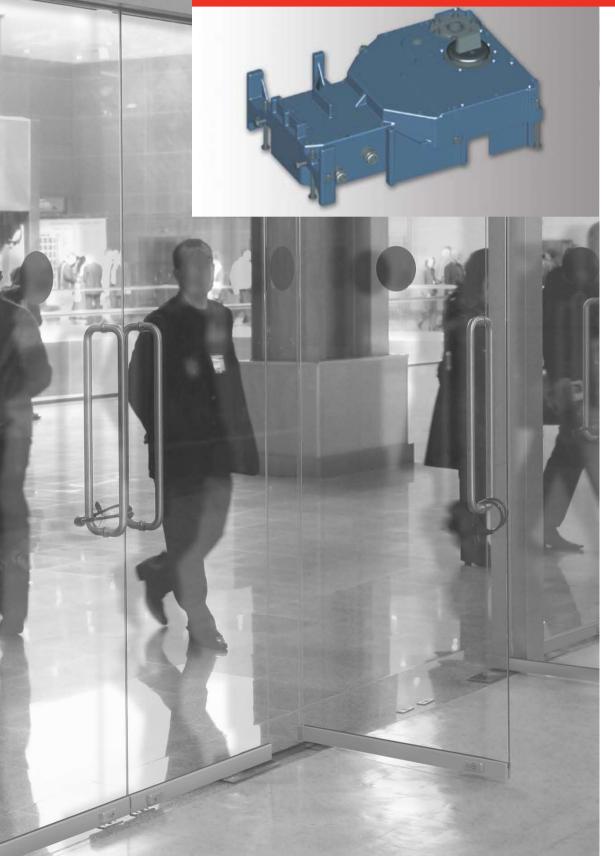
# i Motion® the passion to drive doors

## Swing Door Drive iMotion<sup>®</sup> TN 110 In-Floor Swing Door Operator



## World Class Entrance Systems

## **Ideal For:**

- Transportation
- Financial
- Historic Building
- Retail
- Office Buildings
- Institutions
- Churches
- Health Care Facilities
- Government Buildings
- Education
- Hospitality
- ADA Approved



# POWERFULLY IN



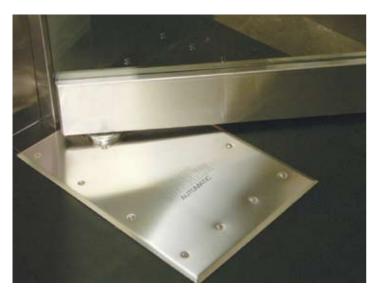
TORMAX iMotion<sup>®</sup> TN 110 In-Floor Swing Door Operator: a culmination of intelligent design, modularity, ecosensitivity, reliability, and economical efficiency. Designed for the rigorous conditions of commercial use for doors weighing up to 1000 pounds. With a fully concealed, in-floor operator, the drive offers invisible power that is dependable and adaptable. Surpassing the competitors, TORMAX has designed an eco-friendly, electro-mechanical

operator that employs advanced technology. The iMotion® TN 110 is self-governing, self-adjusting, and offers unmeasured functionality.

Modular design combined with state-of-the-art technology establishes this system as ADA compatible, conforming to contemporary regulations and standards. Architecturally and aesthetically pleasing, the iMotion<sup>®</sup> TN 110 In-Floor Swing Door Operator opens doors without interrupting exterior design, making it ideal for use with beautiful tempered glass doors, monumental doors, large doors, and heavy doors. Its versatility connects with modern structural design, as well as, providing effortless automation to glass entrances and arched doorways.

The drive's functionality allows for single door or double door configurations for all types of materials: solid glass, wood, metal, or fiberglass. The elevated design can be used in any structure and provides not only pragmatic value, but also artistic value, equating to a convenient, comfortable, and safe swing door operator.

## **The Operator System**



This low-maintenance operator can be used with center-pivoted, offset pivoted, or butt hung doors. Built-in, automated monitoring features electronic reversing upon detecting obstructions in both the opening and closing directions. Fine-tuned, precision programming encompasses internal and external peripherals (such as safety sensors) that monitor swing-areas and allow the end user independent adjustment capabilities, making this system compliant with ANSI A156.10 and ANSI A156.19 standards. Tormax iMotion<sup>®</sup> TN 110 In-Floor Swing Door Operator has an unlimited lifetime, which is due to its wear-free AC synchronous motor technology.



# VISIBLE



The TORMAX iMotion® TN 110 offers a user-friendly Function Control Panel, which boasts Six-Operating Mode capabilities and convenient programming options, such as variable opening and closing speeds, opening and closing force, hold-open times, and many more. This smart technology provides easy, personalized programming, exceptional safety monitoring features, resulting in barrier-free access to assist the physically challenged.

For buildings that meet the Historic Preservation Society guidelines, specify the Tormax iMotion<sup>®</sup> TN 110 In-Floor Swing Door Operator. The TN 110 Swing Door Operator meets ADA requirements for any entranceway.

#### First Class with Universal iMotion<sup>®</sup> Processor



Registration of door position back to the controller is determined via linear potentiometer. Signals from the linear potentiometer define door position without use of position magnets or mechanical switches.

For added convenience and accessibility the door operator can be activated by a push button switch, a manual push or pull of the door "Push-and-Pull" activation, a remote control, or simply use it as a manual door. These options create barrier free access to assist the physically challenged.



#### Manual Controls

- Push Plate
- Push Pads
- Push Buttons







Wireless Manual Controls

Hand Held Transmitters

Push Plate

Push Buttons

### Mechanical Operator Feature Benefits

- Concealed, In-Floor, Self-Contained Operator Meets Guidelines for Preserving Historic Buildings
- Non-Handed Electro-Mechanical Operator Reduces On-Hand Inventory
- Power-Open, Spring-Close Operator Functions as a Manual Door During Loss of Power
- Smooth and Silent Operation (< 70 db) Unlimited Application Opportunities
- AC Synchronous 1/3 HP Motor Wear-Free Drive Principle
- Floor Sealing Stainless Steel Surface Cover or Flush Mount Box for Flooring up to 3/4" Thick
- Two Part Serrated Output Shaft Provides Application Flexibility and Ease of Service
- Operator Provides High Performance, Lower Door Bearing - No External Door Bearing Required
- Internal Adjustable End-Stop in Closing Direction Provides Clean Solution for All-Glass Doors without Side Jambs
- Internal Adjustable End-Stop in Opening Direction No External Floor Stop Required, Eliminates Tripping Hazard
- Protective Class NEMA 6 Allows 7 Days Water to Upper Edge of Housing
- No Visible Linkage Drive Arms Available for Offset, Butt Hung, and Center Pivot Doors with or without Breakaway
- Motor Power Boost Close Ensures Doors Close in Harsh and Windy Environments
- Motor Hold Close Assists in Holding Doors Closed in Unbalanced Buildings
- Adjustable Closing Spring-Force Allows for Doors to be Fine-Tuned to the Environment
- No Mechanical Switches and/or Magnets Used for Door Position – Eliminates Costly Service and Down Time
- Power-Open and Hold-Open Capabilities Excellent Option for Smoke Evacuation Doors
- Large Door Opening Maximum 100 Degrees
- ANSI/UL-325 Listed United States and Canada
- Dual-Purpose Operator Meets ANSI Standards A156.10 and ANSI A156.19

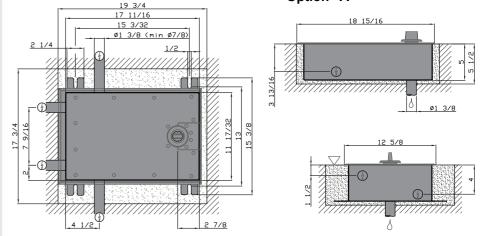
#### iMotion<sup>®</sup> Microprocessor Controller Feature Benefits

- Universal iMotion<sup>®</sup> Microprocessor Controller One Common Controller for All iMotion<sup>®</sup> Drives
- Controller is Separate From Operator Provides for Optimal Mounting Location
- Programmable iMotion<sup>®</sup> Controller Provides Flexibility During System Configuration, No Special Tools Required
- Illuminated Seven-Segmented Function Control Panel Provides for Six Operating Modes, System Configuration, and Auto-Diagnostics.
- Electronic Components are Contained within a NEMA 12 Enclosure – Dust-Tight and Drip-Tight – Indoor Use
- "Teach-In" Self-Learning Door Commissioning Program Establish Door Opening and Closing Movements without the Use of Cams and Switches
- Fine-Tune Door Motion Elements Independently After "Teach-In" – Provides for Optimal Performance
- System Provides for Two Independent Types of Door Movement Sequences – Optimal Door Behavior for Different Users
- Selectable (on/off) "Push-and-Pull" Operation Automatic Operation Available for All Users
- Sequential Operation Available as Standard (push to open/push to close) Operational Flexibility
- Obstruction Detection During Opening and Closing Safety Reverse on Obstruction Provides for Safe Environment without External Safety Sensors
- On-Board Power Supply (24VDC .75A max) No Auxiliary Power Supply Required for Sensors and Activators
- On-Board Programmable Lock Output Power Supply (24VDC 1A max) – No Auxiliary Power Supply Required for Magnetic Lock or Electric Strike (fail-safe or fail-secure)
- Two On-Board Programmable Outputs (24 VDC) Provides Door Position Status, Alarm, etc.
- Four On-Board Programmable Inputs For Activators, Mode of Operation, Key Switch, etc.
- Four On-Board Inputs For Safety Sensors
- Self-Configuring, Swing-Side, Door-Mounted Safety Sensor – No Cutoff Switch or Manual Adjustment Required
- Built-In Safety Circuit with Stall Logic No Auxiliary Modules Required
- Reversing Sensitivity Adjustment Program Door to the Environment
- Integrated Access Code Inhibits Unauthorized Personnel from Making Door Adjustments
- Optional Battery Back-Up Module Door Continues to Operate During Loss of Power
- Selectable Power Supply 115VAC/230VAC 50-60 HZ Single Phase – Global Power Supply

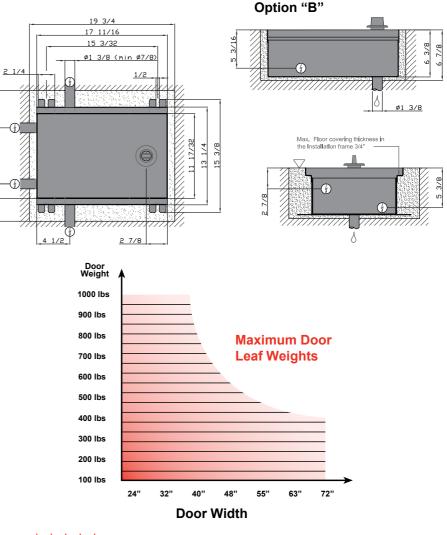
#### iMotion® TN 110 In-Floor Swing Door Operator

(Standard Stainless Steel Cover)





#### • iMotion<sup>®</sup> TN 110 In-Floor Swing Door Operator (Flush Mount Box)





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