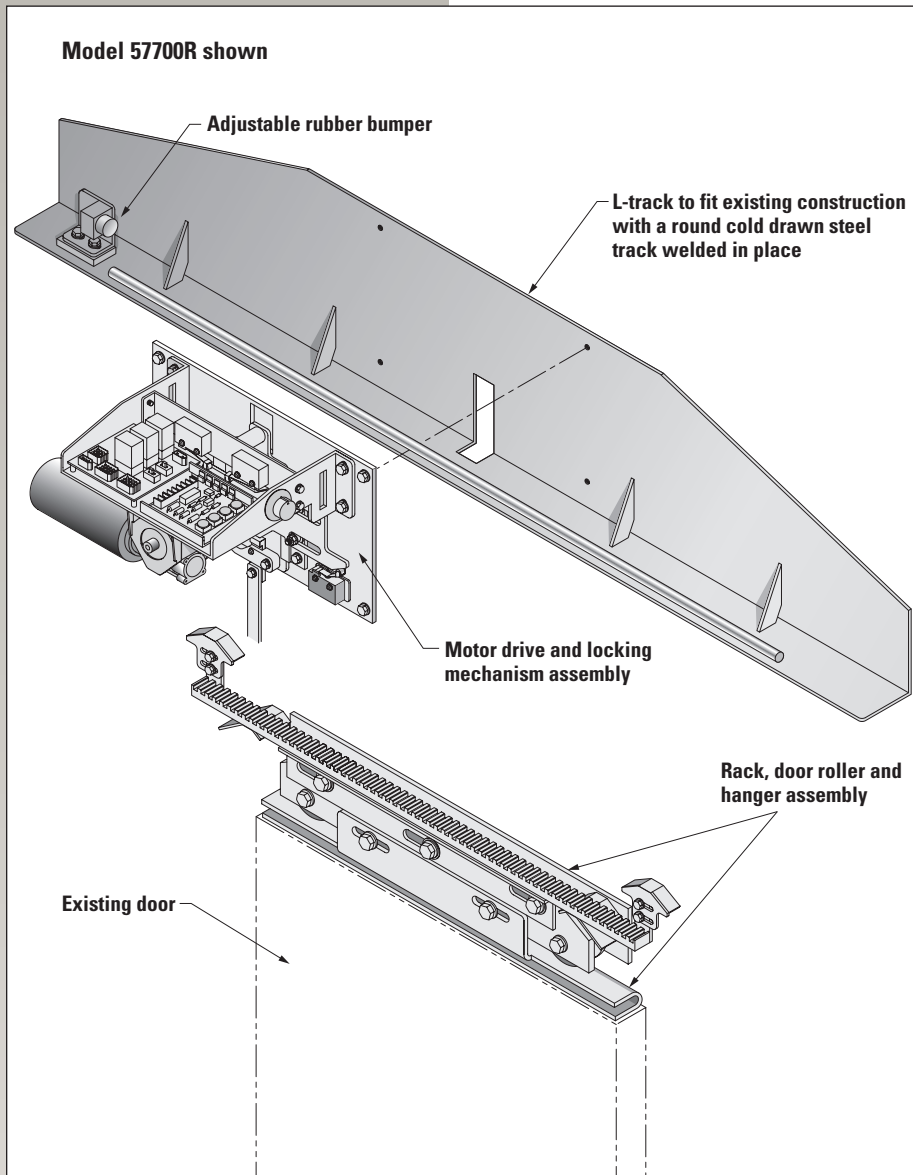


57700R

Sliding Door Operator for Retrofit Installations

A High-Security Locking and Operating System for Correctional Facilities



Two point, concealed deadlocking is effected at the edge of the door – top and bottom – in both the open and closed positions. An adjustable rubber bumper fixes the open door position.

Built for Durability

All functional components of the 57700R are designed/selected to provide a long life cycle consistent with the frequent use and infrequent maintenance typical in many correctional facility installations. Stamped steel parts are electroplated for corrosion resistance. The door rollers are of hardened steel and turn on permanently lubricated ball bearings.

An R.R. Brink Locking Systems proprietary, solid state, electronic circuit board and off-the-shelf mechanical relays serve to control door travel direction, speed, and force applied to an obstruction. The drive train is clutchless and door travel speed is adjustable electronically by a mechanism plate dial. When a door is blocked intentionally during travel, there is no potential for motor/drive train damage. The force that a moving door exerts on an object (e.g. a body part) can be limited via a trimpot setting. It is possible to reverse door travel direction continuously and instantly without mechanism damage.

The motor, plug-in relays and switches are standard products of domestic manufacturers and are recognized by independent testing laboratories. They are factory wired to quick-disconnect plugs or terminal strips allowing ease of replacement. The standard 57700R unit operates on 115VAC line voltage (230VAC is optional). The gearmotor is a direct current, permanent magnet type with right angle reducer utilizing permanently lubricated bearings and gearbox. The gearhead power output is 1/8 HP, which is sufficient to unlock and move the weight of standard sized detention type doors (higher power output motors are available for heavier doors).

Remote Operation

Typically, individual door remote electrical operation of the 57700R is activated from a control room switch console. A key switch can be provided for electric control at the door. Cell door rows can be controlled simultaneously or in a pre-selected group. Limit switches located on the mechanism plate serve to signal door condition (i.e. closed and deadlocked or open/unlocked) by pilot lights at the control panel).

Manual Override

A manual means is always provided to enable unlocking without electric power. Normally, the existing manual unlocking method is adapted for the retrofit installation. With a corridor or passage door, it is customary to provide a cable linkage from a hip-high paracentric key lock located in a front door receiver pilaster. For cell doors, a remote manual group release and/or individual door unlocking from the horizontal housing via key or tool are typical. When manually unlocked, the door is not disconnected from the drive train and, therefore, is never in a frictionless or free-wheeling condition whose slam force can inflict bodily injury to a person in the doorway.

Application

The 57700R is designed to upgrade most manufacturers' sliding door locking and operating devices* without replacing the existing door and mechanism housing. The motor drive and locking mechanism is located on a right angle steel L-track. A round cold drawn steel door track is welded in place to match the existing construction. The 57700R is self-contained and mounts in the existing horizontal housing which has been stripped of the original mechanism.

Unitary Design

Electrical and mechanical parts associated with the locking and movement of a door are contained on a single plate that is non-handed and, thus, easily replaced irrespective of door travel direction. (This feature allows the user to stock one spare mechanism plate as a precaution against a breakdown.)

* Consult factory for dimension questionnaire and feasibility opinion.



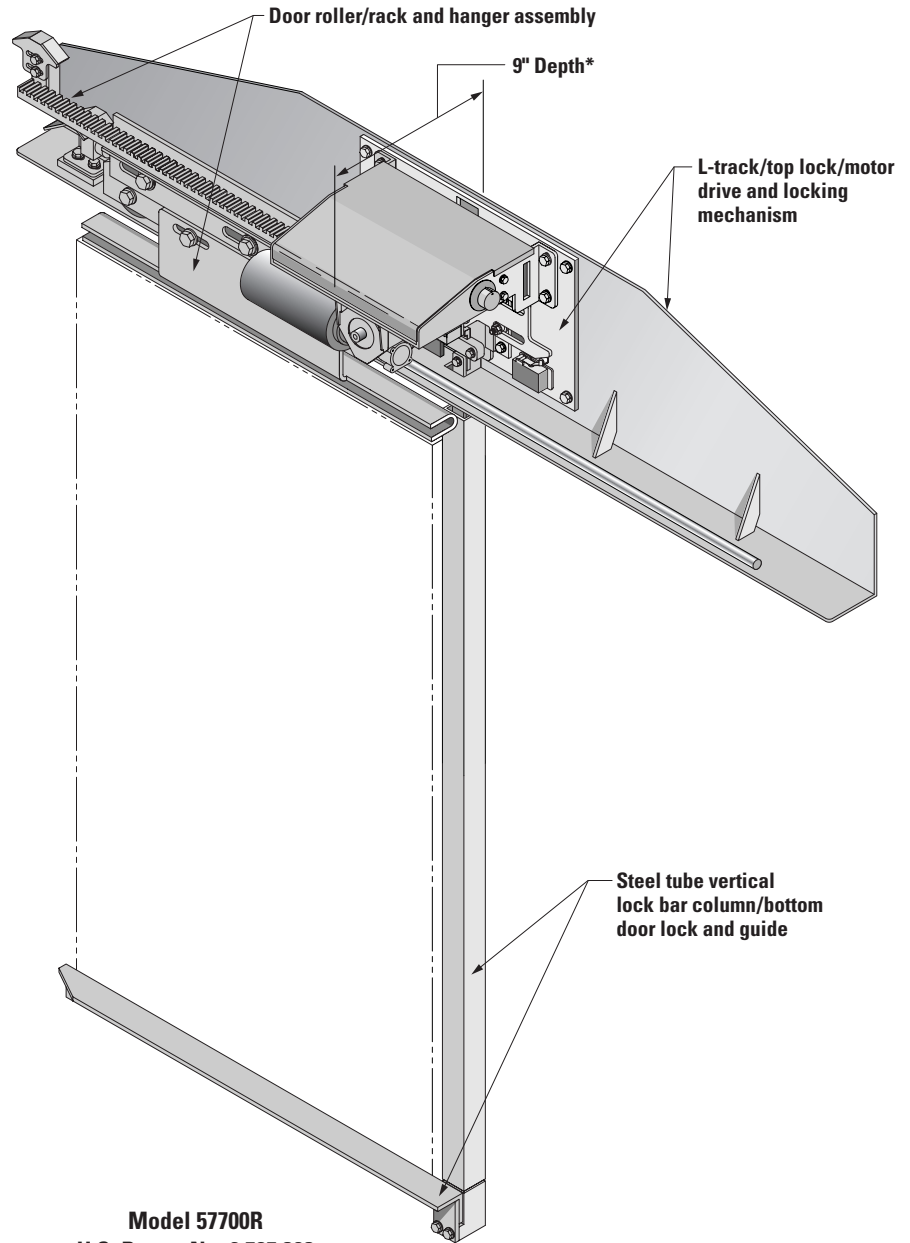
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57700R

Component Specification

Standard (and optional) Door Locking and Operating Mechanism Components

- Mechanism Plate – steel plate (9" x 15" x 1/4") contains all functional components for locking, operating and indicating status of a door. The assembly is non-handed and is easily accessible and removable.
- Gearmotor – standard 115VAC & 5 amp (for ≤ 500 lb. door). Optional – (230VAC & 3 amp available)
- Rack and pinion drive standard.
- Electric door controls – Door movement speed is adjustable via a mechanism plate knob (controlpot). Trimpots are provided to improve motor speed regulation and to set motor torque (i.e. a door's pressing force). An electro-mechanical clutch and/or mechanical torque limiter are not employed.
- Track – cold drawn steel round (9/16" diameter) welded in place to a right angle steel angle.
- Door hanger – 1/4" formed steel construction with 3/16" vertical adjustment via eccentric bushings (2) and 1" horizontal slotted adjustment to compensate for field misalignments.
- Door rollers – two turned steel wheels (2-3/4" O.D.) fitted with double shielded, permanently lubricated ball bearings. Attachment to door carriage via a high tensile strength steel bolt/lock washer/hex nut.
- Bottom door guide – 1/4" thick steel construction.
- Top lock bolt – 7/8" diameter stainless steel
- Bottom lock – cast iron body encloses 13/16" diameter stainless steel locking ball.
- Vertical lock bar enclosure – 10 gauge x 1-1/2" square steel tube
- Door status indication switch – 15 amp @ 125/250VAC



Model 57700R
U.S. Patent No. 6,585,303

*** When required, the depth of an existing horizontal housing can be augmented to accommodate the 9" depth of the 57700R drive mechanism. An opening can be cut in the existing housing and a boxed shaped protrusion can be welded in place.**

Ordering Information:

1. Consult R.R. Brink Locking Systems, Inc. (RRBLS) technical service personnel when planning a 57700R installation. The inquirer will be asked to complete a field dimension questionnaire consisting of door construction details, door size and approximate door weight. Unless otherwise agreed, it is the responsibility of the RRBLS customer (e.g. contractor, end user) to provide accurate field dimensions. Upon acceptance of an order, and prior to fabrication, RRBLS will prepare and issue a setting plan drawing for customer approval prior to initial fabrication.
2. When ordering or specifying the 57700R, indicate line voltage (115VAC standard – 230VAC optional).
3. The standard RRBLS product warranty is the earliest of one (1) year from the project turnover date or eighteen months from shipment date inclusive of defects in factory supplied labor and material only and excludes operational failure due to faulty installation labor by others and/or abusive use (see the RRBLS *Product Warranty Policy* catalog page).



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