Schindler Varidor 50A Door Operator
Advanced features. Safer operation.

Schindler V50A door operator

Proper door operation is essential to maintaining elevator passenger satisfaction and safety. The Schindler Varidor 50A has been developed to address this key issue by delivering a wide range of advanced features to elevator door operation while enhancing passenger comfort, convenience, and safety. Benefits include the ability to:

- uniformly operate elevator doors of different weights (i.e. heavy lobby doors vs. light upper level doors in the same hoistway)
- control the "stack" effect resulting from strong air currents in the elevator hoistway
- provide constant door closing force for improved passenger safety.

Advanced design

The Schindler V50A door operator is a linear belt design that is optimized for modernization projects. It can accommodate a range of elevator door heights, widths and weights for door systems weighing 700 pounds or less. The V50A utilizes a timing belt on the door drive to which the moving carriers are connected mechanically for smooth operation. As an added benefit, the Schindler V50A is a complete package including new door tracks and hangers as well as new door panels.

Schindler

Simplified installation
Schindler V50A door operators are pre-engineered for easy assembly and adjustability, with each unit accommodating a full range of cab mounting requirements. A handheld device, or SSM (Small Service Module), facilitates system setup (speed, acceleration etc.). These features help reduce overall installation time, thus returning the car back into service faster.

Smooth, quiet performance
Through careful design, Schindler V50A door operators provide smooth, steady motion at all times. The system incorporates closed-loop operation so that doors open and close without the jerking and unnecessary noise that sometimes occur in older systems.

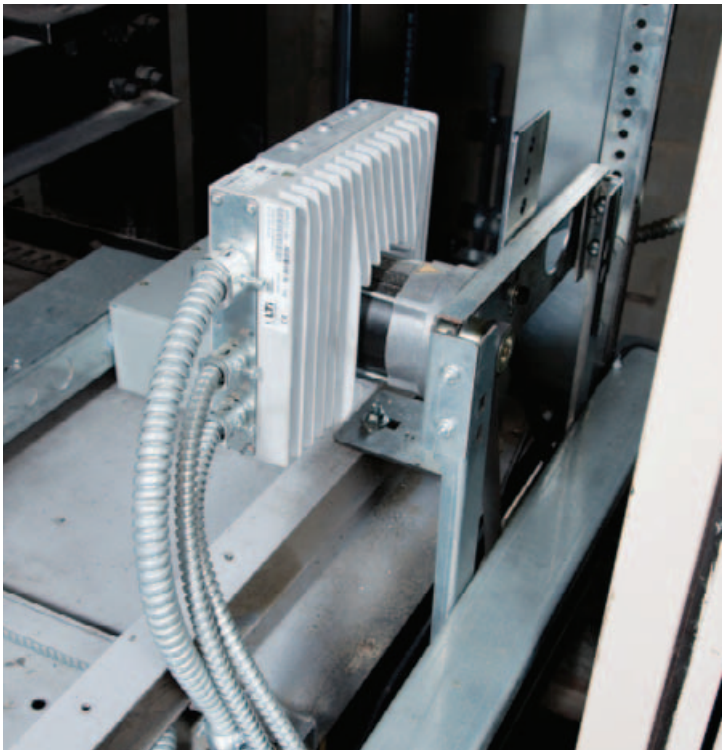
Minimal downtime and reduced maintenance costs
V50A door operators feature solid-state technology and strong, durable components for a minimum of wear and extended system life. When maintenance is required, all V50A door operator elements have been engineered for quick access and easy servicing.

Enhanced passenger safety
With Schindler V50A door operators, doors react quickly to safety sensors, and door-closing speed and force are maintained within applicable safety standards.

Linear door drive
The V50A drive system provides smooth operation using a standard rotary motor where a belt-gear system translates the rotation into a linear movement of the timing belt and connected parts. The actuation of the clutch is designed to work with this linear belt system through a ramp and linkage arms for precise operation.

Enhanced closed-loop servo control
To achieve constant door closing force, the V50A door drive motion is provided by a 1/3 horsepower AC motor, and a variable frequency AC drive (ACVF). This allows the door system to obtain different speeds and accelerations in the opening and closing directions. The Schindler IDD (Integrated Door Drive) unit controls the door motion, speed, acceleration, position and closing force limitation via a closed-loop system that includes an internal encoder for position and velocity reference.

Regulation of door closing forces
Because lobby elevator doors are often heavier than upper-level doors, each V50A door operator is designed to handle these different weights in the same hoistway. The Schindler V50A closed-loop servo control maintains a constant door closing force that is within current standards for passenger safety. This force is adjusted to compensate for floor-to-floor variations due to "stack" effect, in which strong air currents rise through elevator hoistways.



Schindler V50A door operator, IDD unit and motor

Adjustment of door opening and closing profiles

The V50A control provides continuous, reliable, easily-monitored door position information. Door operating times are field adjustable to meet or exceed industry standards. And, door-opening speed is consistent, regardless of door weight and friction changes. Door closing speed can be adjusted to allow for different door weights and code requirements.

Quiet, compact master operator

The V50A door operator utilizes a small, quiet, AC motor with an encoder and inverter drive. The drive is packaged into a single unit for quiet, accurate performance. The Schindler IDD unit is a closed-loop system that includes everything needed for position, velocity and torque control. It interfaces to the elevator control system through connectors on the side of the IDD. Also, a manual control interface integrates into the top of the unit.

V50A door operator comparison

Typical harmonic	V50A linear
Nonlinear door position feedback	Linear door position feedback
Open loop control	True closed loop servo
Car track and hangers not included	Integral track and hangers
Doors not included	New doors provided
Top of car mounting only	Transom or top of car mounting available
Mechanical linkages	No mechanical linkages belt driven

Specifications

SSCO Doors	Min.	Max.
Door height	80″	108″
Door width	40″	54″
Transom height	8″	24″
SSSO Doors	**Min.**	**Max.**
Door height	80″	108″
Door width	32″	42″
Transom height	8″	24″
2SSO Doors	**Min.**	**Max.**
Door height	80″	108″
Door width	40″	54″
Transom height	12″	24″

Schindler Varidor 50A
Additional door upgrade option

Door clutch mounting kit
When existing door interlocks can be retained, clutch-mounting kits are available. These kits will interface with many common door interlocks. This option retains components that are in good working condition or that may have been recently upgraded.

V50A door clutch mounting kit