

Modular Gearless Machines

For mid-rise elevators



Schindler's gearless machine upgrade is the next logical step when modernising your older mid-rise elevators. This modular package replaces your older geared machines with Schindler's proven gearless machines, creating an unbeatable value that delivers significant benefits.

With Schindler modular gearless machines for mid-rise elevators you can expect:

- Modular design means machine is delivered unassembled, easing installation into an existing machine room.
- Smoother, quieter ride performance
- More efficient energy usage from Schindler's Power Factor 1 regenerative drives
- Space saving design. Schindler's suspension traction media (STM) replace conventional cables and require a significantly smaller sheave.
- Fast, reliable operation.

Subsection on modular

Schindler modular gearless machine for mid-rise buildings is specifically designed to be used in existing machine rooms, while maintaining optimised ride quality. It's compact design and minimum dimensions allow the parts to fit through standard machine room doors, and be assembled in the machine room.

KT
Kits

AC
Accessories

CW
Counter-weights

SA
Safeties

FI
Fixtures

CA
Cars

DO
Doors

MM
Mechanical material

CO
Controls

DR
Drives



Schindler gearless machines save energy, space and time

Suspension Traction Media (STM)

The STM consists of thin metal cables sheathed in a non-circular EPDM (Ethylene Propylene Diene Monomer) jacket. Schindler gearless machines for mid-rise elevators use three to five STM depending on system requirements. STM design is inherently strong, lightweight and compact.

- Replaces conventional steel cables
- Requires no petroleum-based lubricants
- Smooth, quiet, precise operation
- More flexible than inelastic steel cables, providing space savings.



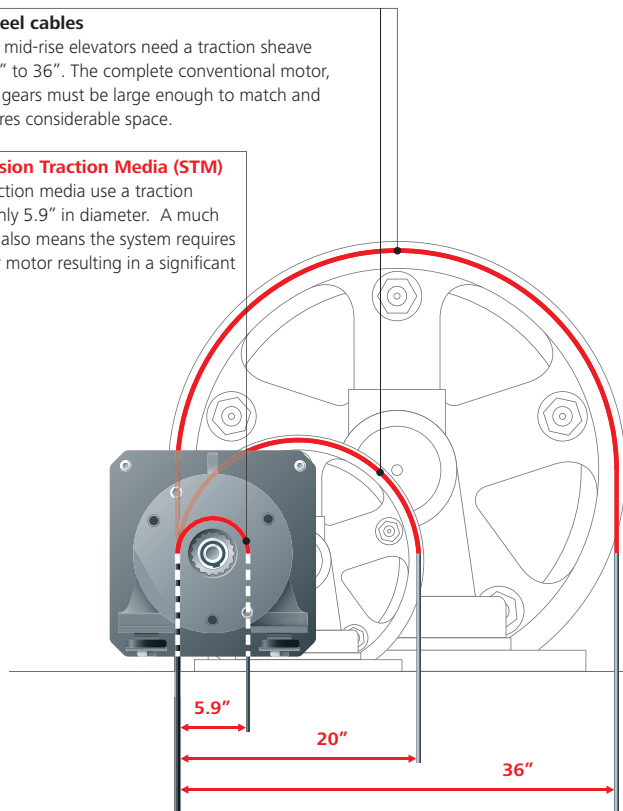
The STM advantage

Previously: steel cables

Steel cables on mid-rise elevators need a traction sheave diameter of 20" to 36". The complete conventional motor, including drive gears must be large enough to match and therefore requires considerable space.

New: Suspension Traction Media (STM)

Suspension traction media use a traction pulley that is only 5.9" in diameter. A much smaller sheave also means the system requires a much smaller motor resulting in a significant space savings.



Energy-efficient drive system

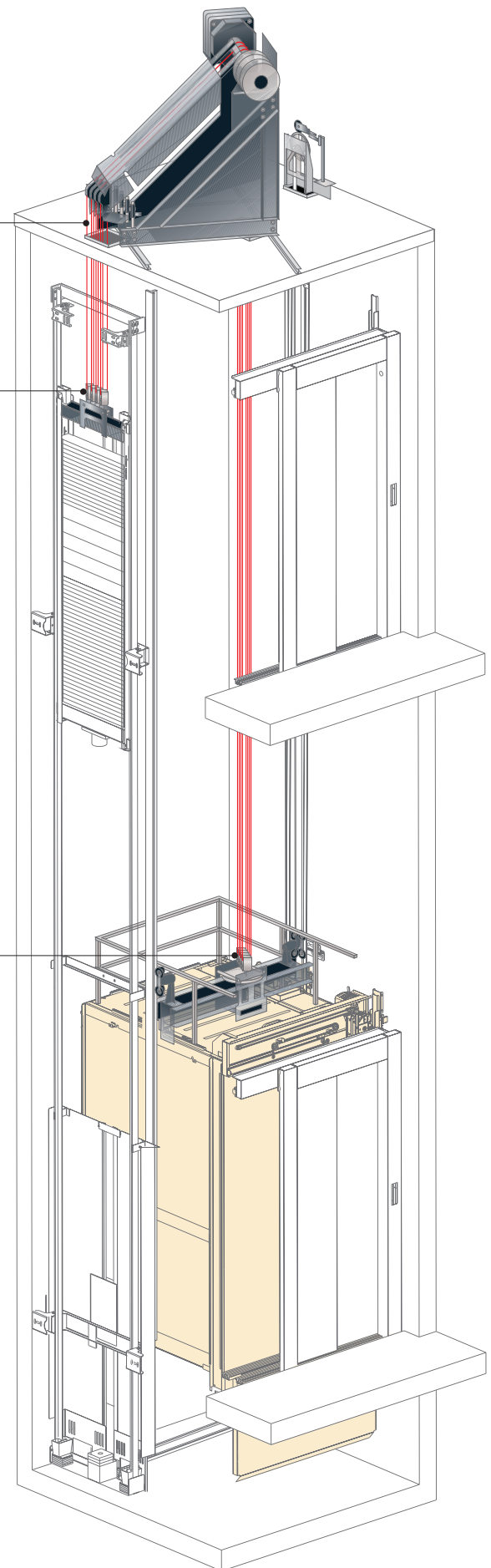
The Schindler mid-rise gearless package is designed to complement Schindler's Power Factor 1 drives. Power Factor 1 energy-efficient, regenerative drives are designed to return energy to your electrical grid instead of wasting it as heat. The mid-rise gearless machine helps users realize the full benefits of the PF1 drive technology. These gearless machines, using suspension traction media, utilise a sheave whose diameter is three to six times smaller than conventional geared systems. They deliver smooth, quiet, gearless operation.

- Less net power usage means lower monthly utility bills
- Possibility of rebates from government-sponsored and local utility programs
- Potential to earn points toward LEED certification for existing buildings
- Dual brakes for added safety
- Modular design allows easier delivery and faster installation
- Replaces inefficient geared machines.

STM leave the gearless machine in a staggered configuration to align precisely with the STM adapter on the counter weight.

STM adapter connects STM to counter weight frame.

STM adapter connects STM to the car top. Adapter is adjustable to accommodate machine placement.



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Main specification

Travel height	≤ 250 ft, 76 m*
Rated speed	200 to 500 ft/min, 1.0 to 2.54 m/sec
Rated load (car)	≤ 5500 lb, 2500 kg
Roping	2:1
Code compliance	Global

* Maximim travel height according to drive calculation.

Application range

Travel height	33 to 250 ft, 10 to 76 m
Actual car weight	1800 to 8500 lbs, 816.5 to 3856 kg
Rated car load	1100 to 5500 lbs, 500 to 2500 kg
Rated car speed	200 to 500 fpm, 1 to 2.54 m/sec

Note:

The chart above represents the general application range. The selection of the correct machine must be determined for each case. The gross weight of the car and the speed have to be taken into account.

Characteristics

Number of starts per hour	240
Degree of protection	IP 21
Rated motor output	Max. 49.3 kW
Rated voltage of motor	415 V / 460 V
Rated frequency	15 Hz
Sound level of machine	≤ 65 dba (at nominal speed)
Traction sheave	
– Wrapping	Single
– Diameter	150 mm
Width of suspension STM	60 mm
Distance between rope falls	1000 mm – 1525 mm
Number of STM	3 to 5
Reviewing Factor	2:1

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