

MRL Elevators

The MRL: A New Approach

The Machine Room-Less (MRL) elevator was developed in Europe, where space constraints for elevators are more severe than in North America.

Traditional elevators require a separate machine room, either for the pumping unit in a hydraulic application or for the machine in a traction application.

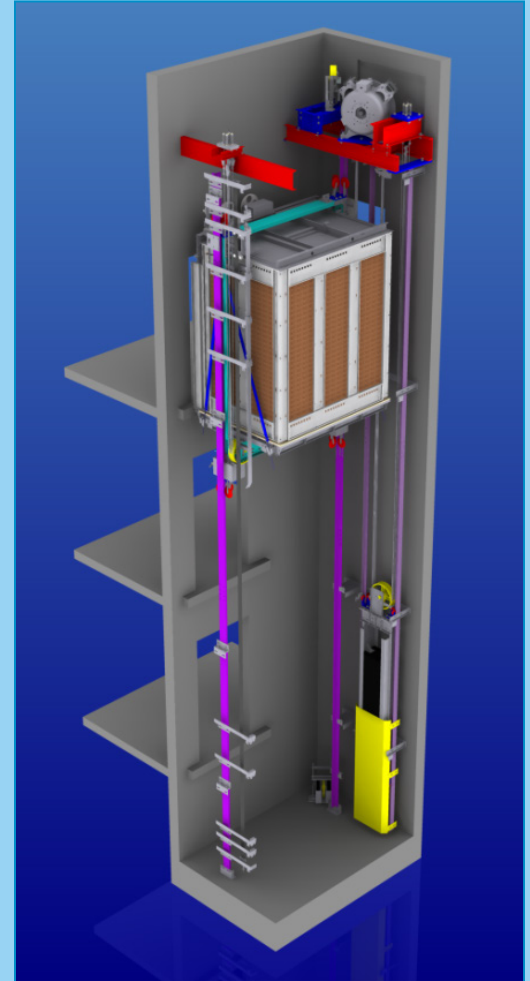
The key initial benefit of the MRL elevator was that these machine room spaces were no longer required since the machine was placed directly in the elevator shaft.

It is important to note that MRL elevators still require a secure space for the controller and associated components, as current regulations do not allow these to be located in the shaft.

However, the ancillary benefits of this new drive configuration – savings in time, money, and energy - has led to a growing market share in North America and worldwide.

The heart of the MRL is the compact gearless machine that is sized to fit directly in the elevator shaft.

Gearless technology combines a smooth, quiet ride, extremely accurate levelling ability, and energy efficiency through the use of counterweights and regenerative drives.



The MRL Advantage

Save Space

MRL elevators save space by placing the machine in the elevator shaft. This allows for more space efficient building designs.

Save Energy

MRLs are a good solution to the relatively high level of energy consumption of elevators. The MRL machines use counterweights, direct drives, and regeneration to reduce energy use.

Save Money

There is no need to build a machine room on top of the roof, saving both initial installation costs and ongoing building maintenance costs.

Save Time

When compared with traditional mid-rise hydraulic applications, the MRL can achieve higher speeds. This translates directly into shorter flight times for riders.

MRL Passenger Elevator Specifications

Capacity (kg)	910	950	1134	1200	1365	1587	1587	1815	2050
Orientation	Wide	Deep	Wide	Deep	Wide	Deep	Wide	Deep	Deep
Cab Size									
Width (mm)	1726	1370	2032	1406	2023	1610	2032	1598	1598
Depth (mm)	1300	1726	1300	2032	1406	2032	1610	2364	2554
Height (mm)	2286	2286	2286	2286	2286	2286	2286	2286	2286
Door Width (mm)	914	914	1067	1067	1067	1067	1067	1219	1219
Hoistway - Front Door Only	Side Counterweight								
Depth (mm)	1800	2302	1800	2608	1906	2608	2110	2940	3130
Width (mm)	2540	2185	2845	2221	2845	2425	2845	2448	2448
Hoistway - Front Door Only	Rear Counterweight								
Depth (mm)	2036		2036		2142		2346		
Width (mm)	2264		2540		2540		2540		
Hoistway - Front & Rear Doors									
Depth (mm)	2036	2614	2036	2920	2142	2920	2346	3252	3442
Width (mm)	2540	2185	2845	2221	2845	2425	2845	2448	2448
Speed of 0.75 - 1.00 m/s									
Pit Depth (mm)	1626	1626	1626	1626	1626	1626	1626	1676	1676
Overhead (mm)*	4750	4750	4750	4750	4750	4750	4750	5100	5100
Speed of >1.00 - 1.75 m/s									
Pit Depth (mm)	1676	1676	1676	1676	1676	1676	1676	1750	1750
Overhead (mm)*	5250	5250	5250	5250	5250	5250	5250	5400	5400

* Overhead is based on 2438 mm cab height. For taller cabs, please contact Delta.

Control Room Details

	Simplex		Duplex	
Control Room Type	Room with 914 mm door swinging outward	Closet with 1829 mm double swing doors	Room with 914 mm door swinging outward	Closet with 1829 mm double swing doors
Located Beside Hoistway	Hoistway depth x 1524 mm	Hoistway depth x 914 mm	Hoistway depth x 1829 mm	N/A
Located Behind Hoistway	Hoistway depth x 1524 mm	Hoistway depth x 914 mm	Total hoistway width x 1524 mm	Total hoistway width x 914 mm (2 sets of double doors)
Height	2400 mm (208V, 480V Power Supply), 3000 mm (600V Power Supply)			

Features

- Governed by the CSA-B44 Elevator Code
- Capacity: 910 – 2050 kg
- Speed: 0.75 – 1.75 m/s
- Non-proprietary configuration and components
- Safety features:
 - Infra-red door curtain
 - Emergency cab lighting
 - Emergency phone

The Delta MRL includes a rope gripper to prevent unintended motion. Talk to us about this important safety feature!

Applications

MRL passenger elevators are ideal for mid-rise buildings with higher speed requirements and where the presence of a rooftop machine room is not desirable or possible.

In addition to the standard designs listed above, Delta's in-house engineering department has the ability to meet your unique MRL needs.

Please call us to discuss other MRL elevator capacities, hoistway dimensions, or control room configurations.