

# Hydraulic Elevators

by

**DELTA**  
**ELEVATOR**



## Proven Technology

Hydraulic elevators have been in service in Canada and around the world for many decades. They use proven, oil-based lifting technology in low to mid-rise buildings to provide a robust and reliable elevating device.

## Affordability

Hydraulic elevators are relatively simple in design compared to traction elevators. This makes them a cost effective choice when the entire product life cycle is considered, from the initial installation phase through to regular maintenance once a building is operational.

## Durability

In a normal application with regular preventative maintenance, many hydraulic elevators have a lifespan of over 20 years before requiring major upgrades. This results in less down time for riders and simpler long term planning for owners.

## Serviceability

Hydraulic elevators generally have fewer parts than traction elevators, which makes them easier to maintain and to service. In addition, there are relatively few proprietary parts, which means they can be serviced by the owner's choice of elevator contractor, instead of being tied to a sole supplier.

	<b>In-ground Hydraulic</b>	<b>Dual Upright Hydraulic</b>	<b>Dual Telescopic Hydraulic</b>	<b>Dual Roped Hydraulic</b>
<b>Initial Cost</b>	Low – Medium	Low – Medium	Medium	Medium – High
<b>Floors Served</b>	Up to 7	Up to 3	Up to 4	Up to 7
<b>Maximum Travel</b>	18.2 m / 60 ft	4.2 m <sup>1</sup> / 13 ft 9 in	7.7 m <sup>1</sup> / 25 ft	18.2 m / 60 ft
<b>Cylinder</b>	Below ground	Elevator Shaft	Elevator Shaft	Elevator Shaft
<b>Drive Type</b>	Direct Acting	Direct Acting	Direct Acting	1:2 Roping
<b>Service Costs</b>	Low	Low	Low	Medium
<b>Advantages</b>	<ul style="list-style-type: none"> <li>• Cost effective for new construction</li> <li>• Robust design</li> <li>• Low maintenance costs</li> </ul>	<ul style="list-style-type: none"> <li>• Cost effective for both retrofit sites and new construction</li> </ul>	<ul style="list-style-type: none"> <li>• Cost effective for both retrofit sites and new construction</li> </ul>	<ul style="list-style-type: none"> <li>• Cost effective for both retrofit sites and new construction</li> <li>• Higher travel than other above ground hydraulics</li> </ul>
<b>Disadvantages</b>	<ul style="list-style-type: none"> <li>• Not suitable for bedrock or groundwater sites</li> <li>• Requires third party hole drilling at construction</li> <li>• Cylinder replacement is expensive</li> </ul>	<ul style="list-style-type: none"> <li>• Limited travel distance</li> </ul>	<ul style="list-style-type: none"> <li>• More expensive to install than an in-ground elevator</li> </ul>	<ul style="list-style-type: none"> <li>• More expensive to install and maintain than an in-ground elevator</li> <li>• More susceptible to vandalism</li> </ul>

<sup>1</sup> Some increases are possible with deeper pits and/or increased overhead.

## Features

Delta's hydraulic passenger elevators share a common design basis even though they use different drive configurations:

- Governed by the CAN/CSA-B44 Elevator Code
- Capacity: 910 – 2500 kg
- Speed: 0.50 – 0.75 m/s
- Safety features:
  - Infra-red door curtain
  - Emergency cab lighting
  - Emergency phone

## Typical Applications

Hydraulic passenger elevators are ideal for low to mid-rise applications with moderate speed requirements. Typical uses include:

- Malls and plazas
- Apartment buildings
- Commercial developments
- Schools & Hospitals
- Universities & Colleges
- Parking garages
- Churches

Delta also has expertise in accessibility lifts, LULAs freight elevators, traction elevators and MRLs.

# Hydraulic Passenger Elevator Specifications

Capacity (kg)	910	950	1160	1200	1365	1587	1587	1815	2050	2275
Orientation	Wide	Deep	Wide	Deep	Wide	Deep	Wide	Deep	Deep	Deep
<b>Inside Cab Size</b>										
Width (mm)	1726	1370	2032	1406	2032	1610	2032	1598	1598	1726
Depth (mm)	1300	1726	1300	2032	1406	2032	1610	2361	2554	2554
Height (mm)	2286	2286	2286	2286	2286	2286	2286	2286	2286	2286
Door Width (mm)	914	914	1067	1067	1067	1067	1067	1219	1219	1372
<b>Hoistway Depth</b>										
Front Doors (mm)	1800	2312	1800	2608	1906	2608	2110	2940	3130	3130
Front & Rear Doors (mm)	2036	2614	2036	2920	2142	2920	2346	3252	3442	3442

<b>In-ground</b>										
Hoistway width (mm)	2264	1908	2540	1980	2540	2148	2540	2240	2240	2540
Pit Depth (mm)	1525	1525	1525	1525	1525	1525	1525	1525	1525	1525
Overhead (mm)	3800	3800	3800	3800	3800	3800	3800	3800	3800	3800

<b>Dual Upright</b>										
Hoistway width (mm)	2334	1980	2640	2032	2640	2236	2674	2240	2240	2540
Travel < 3750 mm, Pit Depth = 1525 mm										
Overhead (mm)	3800	3800	3800	3800	3800	3800	3800	3800	3800	3800
Travel < 4200 mm, Pit Depth = 1676 mm										
Overhead (mm)	4050	4050	4050	4050	4050	4100	4100	4100	4100	4100

<b>Dual Telescopic</b>										
Hoistway width (mm)	2334	1980	2640	2032	2640	2236	2674	2240	2240	2540
Travel < 6800 mm, Pit Depth = 1525 mm										
Overhead (mm)	4050	4050	4050	4050	4050	4100	4100	4100	4100	4100
Travel < 7700 mm, Pit Depth = 1829 mm										
Overhead (mm)	4200	4200	4200	4200	4200	4250	4250	4250	4250	4250

<b>Dual Roped</b>										
Hoistway width (mm)	2438	2134	2743	2134	2743	2324	2743	2438	2438	2590
Pit Depth (mm)	1525	1525	1525	1525	1525	1525	1525	1525	1525	1525
Overhead (mm)	4200	4200	4200	4200	4200	4200	4200	4200	4200	4200

**Notes:**

- Other capacities and door configurations are available. See [www.delta-elevator.com](http://www.delta-elevator.com) or call for details.
- Applications with a single rear door should use a pocket at the rear door to reduce the hoistway depth required. Please call for details.
- Dual upright and dual telescopic overhead requirements can be reduced in some circumstances by increasing pit depth.
- Some slight increases in travel are possible with dual upright and dual telescopic designs on a case by case basis.

### Who We Are

Delta has been in business since 1967, and has offices in the GTA, in Peterborough, in Owen Sound, and in Kitchener, servicing Southwest and Central Ontario. With proven experience in construction, maintenance, repairs, and modernizations, Delta's products and services are high quality and field-tested.

Delta's commitment to **Integrity, Service, and Quality** results in elevator products and services with superior reliability.



### Quality Design, Manufacture, Installation, and Service

As a leader in the elevator industry, Delta provides clients with:

✓ **Coverage throughout Southwest and Central Ontario**

Delta has mechanics permanently stationed in Woodstock, Owen Sound, Kitchener, Mississauga, and Peterborough. This allows customers to single source Delta as their elevator supplier for all properties located within this extensive coverage area. The result is a uniformly superior quality level as well as easier project management.

✓ **Design consultation and specification writing and reviews**

Delta's sales staff are qualified to assist with design consultation from the earliest part of your building project. Our staff can also help create a new elevator specification or provide feedback on existing specifications. **We believe that it is more important for you to have the right elevator even when it may not be a Delta elevator.**

✓ **In-house construction crews registered with the TSSA**

Delta achieves high quality installations through the use of its own mechanics, as opposed to contracting this important function out to others. Delta's carefully screened staff are licensed mechanics or enrolled in the apprenticeship program. All employees undergo rigorous on-the-job and in-the-classroom technical training, as well as thorough safety training.

✓ **40+ years of elevator industry experience on all styles of elevating devices in Ontario**

Delta has career elevator staff in all areas of its operation: Sales, engineering, manufacturing, maintenance, and construction. This means Delta can meet virtually all of your elevator needs, and provide a solution to even the most challenging problem. **If a standard elevator is not a viable solution, Delta has the resources and experience to design, manufacture, and install a custom unit.**

Delta continues to lead the way in providing clients with products and services that exceed expectations.