Overfit®
Gearless
Machine
Room-Less lift
**Key features**

Overfit-Gearless traction lifts are characterised by:

- machine room-less models;
- machine inside the shaft, in the headroom;
- hoist machine with permanent magnet motor gearless;
- control panel located in the door frame at the highest landing;
- alternatively, the control panel can be located inside the shaft, next to the machinery.

In the highest landing door a small sized service cabinet is incorporated, containing power supply and lighting switches, components needed for putting into service and adjust the installation and those needed to rescue passengers trapped in the car. In this case, control panel and machine maintenance operations are carried out inside the shaft, standing on the car top.


**Strong points**

Reduced dimensions thanks to the machine room-less solution.

The machinery is fully contained in the shaft, supported by guide rails.

All the lift load bears on the car guide rails and counterweight, there is no need neither for bearing beams to be fixed to shaft walls, nor for any other special masonry works.

The service cabinet adjacent to the door at the highest landing has a reduced depth and therefore has a minimum aesthetic impact.

In the load range up to 630 kg, the suspension is directed towards the car sling on one side and to the counterweight frame on the other. The assembly procedure is very easy and similar to the assembly of a standard lift with machine over the shaft. This layout allows to manufacture cars with two opposite entrances or two adjacent entrances.

Thanks to the gearless motor and to a high quality inverter, the system offers:

- great travel comfort;
- great noiselessness in the car and in the building;
- enhanced system performance with reduction of installed power and energy consumption, allowing energy saving (both consumption and fixed cost rates);
- reduction of mechanical stress and electric motor temperature.

**Safety**

Besides standard safeties, this type of system without machine room offers specific devices.

Rescue operation for trapped passengers is carried out from outside the shaft, after opening the front panel of the service cabinet located in the door frame of the highest landing.

An auxiliary electric operation can be carried out, whenever a safety contact has been released, which the same operation can disconnect (safety gear, limit switch, buffers, over travel switch). This way the car movement is operated at a reduced speed, upwards or downwards, up to the selected floor for the alighting of passengers. The landing door is opened manually by means of the emergency triangular key.

This electrical auxiliary operation can be carried out in case of breakdown of the brake coil, by opening it using a mechanical system.

The mechanical opening of the brake also allows the spontaneous car movement in the direction of the unbalanced load, at a reduced speed controlled by the motor windings.

A camera allows to see the machinery and especially the traction pulley, informing about the car movement direction.

Optionally, the automatic operation of the car is provided to bring the car at landing level and to open the doors, in case of power failure. This same option allows to carry out the electrical auxiliary operation even in case of black-out, and inverter, contactors, microprocessor card failure.

The machine is fixed in the headroom, resting on a relevant frame connected to car and counterweight guide rails; its position is therefore extremely stable.

Maintenance operations to machine are carried out inside the shaft, standing on the car roof. The control and stability of the car position are guaranteed by a mechanical stop system on the guide rails.

In the model with electric panel inside the shaft and service cabinet at landing, the maintenance of the electric panel is carried out while standing on the car top.
Shaft and car size examples

<table>
<thead>
<tr>
<th>Load (kg)</th>
<th>Car dimensions [mm]</th>
<th>Opening door [mm]</th>
<th>Shaft dimensions [mm]</th>
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<tbody>
<tr>
<td></td>
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<td>CD</td>
<td>DO</td>
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<tr>
<td>630</td>
<td>1100</td>
<td>1400</td>
<td>900</td>
</tr>
</tbody>
</table>

Also available different car and load sizes.