





LIFTING AT THE LOUVRE

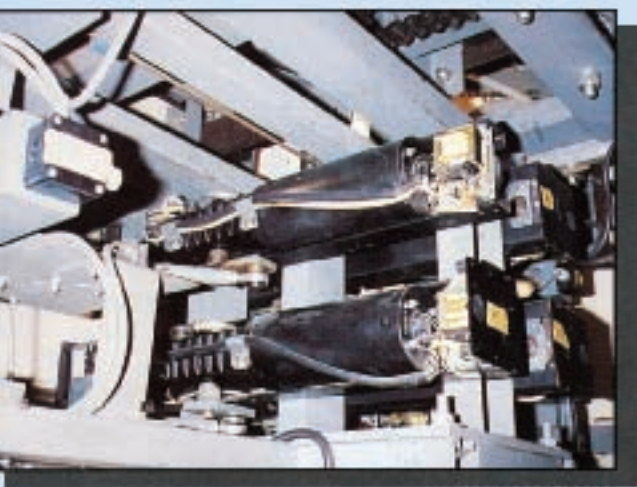
by Ricia Sturgeon-Hendrick

It is an important work of art, completely at home in the center of a famous museum in Paris. It's not the Mona Lisa, but without it many would never see that famous lady!

The first piece of art one encounters in the Louvre museum is a lift – a very unique handicapped platform lift. Encased in a spiral sculpture, it descends inside architect I.M. Pei's famous glass pyramid to the museum's central entrance below ground level. In France, descending to an entrance is common, making escalators a staple in heavy traffic arenas. Access for the physically challenged, however, is sometimes difficult, and almost always away from the mainstream. Not so in the new Louvre; its platform lift is a central element of the design, an art form completely at home within the environment.

The Louvre has just celebrated a 200th anniversary with a facelift and ten years of reconstructive surgery (see "Culture Shock", page 47). Expansion has brought many collections out of mothballs for the first time in this century, and modern vertical transportation assures that thousands now have easy access to visit. Schindler Elevator (France) maintains 90 devices in the museum – elevators, escalators and handicapped lifts – with a team of

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This page, clockwise from top left: cams to drive glass gates, positioned under platform; bridge locked in place with glass gate barriers; car controls for attendant; under car controller for bridge and gates; bridge motor unit located under platform; bridge extending to suspended floor, and bridge retracting

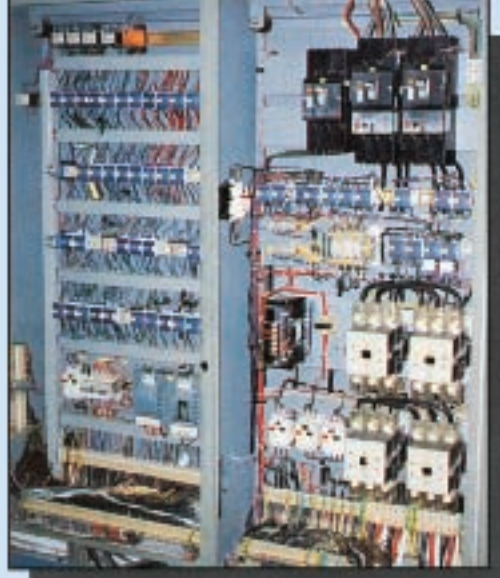
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five technicians on site fourteen hours a day, seven days a week. Chief of the maintenance team is Pierre Kuperfarb, who arranged and guided ELEVATOR WORLD's tour. On a Tuesday, when the museum is closed to visitors, Kuperfarb, with Schindler's Installation Specialist Guy Cuignet, Communications Director Jean Paillard, and Marketing Director Arnaud Eckenschwiller, opened the world's most famous museum to your publisher.

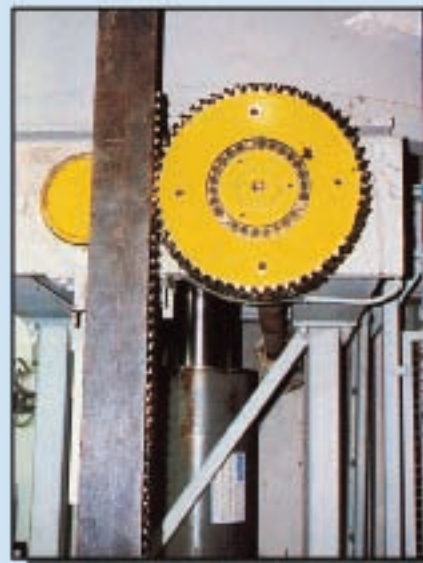
From the pyramid entrance, the handicapped lift is off to the left, out of the direct traffic flow to the escalators. It is surrounded by a graceful spiral staircase opposite the escalators.

Most striking upon approach; truly free-standing — no part touches the upper level floor. A space between the floor and lift prevents access as surely as do the waist-high glass gates. Once activated, however, the lift extends a stainless steel shelf out (675 mm) and up to bridge the gap. The glass gates (four on the lift and four on the suspended floor level) open automatically when the bridge is locked securely to the floor. Each set of panels with its own motor turns in to form a safety barrier across the bridge. Cuignet notes that leveling too, is "very special," with an auxiliary pump motor unit of 4 kW. Leveling tolerance is ± 5 mm and lateral tolerance ± 1 cm.

The hydraulic platform lift can only be operated by an attendant with a special code, and during museum hours, is always



This page, clockwise from top left in machine room: motor unit for cylinder locking system; controller; tank with heat exchanger; rack and pinion stabilization units; hydraulic pump unit; safety sensors around cylinder and under car controls, and access shaft to plunger.



attended. It serves two levels – entrance and main hall – a travel of 8.85 meters (29 ft). While primarily for wheelchair users, 23 standing passengers can ride at a leisurely pace of 0.43 m/s (86 fpm). The capacity is 1725 kg (3800 lbs). Safety sensors surround the cylinder on floor levels; micro-contacts stop the lift if the cylinder is touched or disturbed in any way. In the event of fire, fireman's control returns the lift automatically to the top level, where it can be operated manually by firemen or attendant.

In the machine room, two 500 liter pump units, working under 24 bar pressure, are coupled to the piston. A heat exchanger runs ice water past the oil, while overhead blowers operate constantly, assuring correct temperature. Special

valves control the oil speed and shut down the lift when speed is excessive.

The plunger shaft runs about 12 m (39.3 ft) below the level of the river Seine (directly adjacent to the Louvre), protected by a special cladding of concrete, plastic and another layer of concrete. Surrounding the platform cylinder are four rack and pinion stabilization units and a motorized cylinder locking system. The single direct jack is 280 mm (11 in.) in diameter. The shaft, with an inside diameter of 2150 mm (84 1/2 in.), provides access from within to the platform devices. A climb up the narrow shaft reveals a world of miniaturization in the recess beneath the platform (space for one maintenance person to perform service on the retractable access bridge

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This page, clockwise from top left: platform lift retracted at lower level; Hermes leather handrails and "glass-blasted" stainless steel cladding; delicate glass gates; Schindler guides - Cugnet Kupertarb, Eckenschueller and Dawlard; and panoramic view of lift, staircase and opposing escalators descending from pyramid entrance.



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motor, the hydro-electric door drives and a small controller housed there).

What seems an architectural element at the pyramid entrance and a mechanical marvel in the machine room reveals its true beauty only when seen in use from the main hall. The grey cylinder is a graceful pylon rising from the floor to the delicate glass panels above. Its movement is virtually silent. When retracted it disappears, and the surrounding staircase hangs suspended from the floor above. The cladding on the cylinder and in the lift is TG3 mirror stainless steel, "glass-blasted" to create a pebble finish resistant to fingerprints.

Each panel of the round platform skirt is only 45° of the circle, soldered from the inside with silver to create an undistorted ring. The platform handrails of leather (Hermes, we're told) is a soft dove grey and sloped to prevent sitters.

The genius involved in this art is truly international: the Chinese American I.M. Pei, to whom no detail is too small; the Swiss, Alex Gebauer, noted for designing "unusual elevators" for unique applications; the Swiss Schindler group, building to exacting architectural and design specification; and the creative French Schindler team, installers and maintainers.

For the new Grande Louvre, such teamwork is very "nouvelle Française" – a new French art form.