

Vertical Lift Door

Counterweight Doors



Vertical Lift counterweight Doors are typically used for residential, commercial and industrial applications such as, car parks, workshops, warehouses, reception areas etc. They are also widely used as thermal or acoustic barriers in loading docks, drier rooms and cool rooms. Vertical Lift Doors can be designed as a single or multiple panel door and operate by travelling up or down on vertical steel tracks. Vertical Lift Doors can be glazed or clad in a wide range of cladding materials.

FEATURES

- Counterweight balance
- Wide range of cladding options
- Ideal for acoustic and temperature control
- Ease of operation
- Minimal maintenance
- Long lasting
- Minimal side room and back room requirements

DOOR DIMENSIONS

- Maximum Height: 4000mm
- Maximum Width: 10000mm

NOTE: Maximum door dimensions are a guide only and may vary due to wind loading and cladding. Due to variations in design for this type of door, Technical Sales should be consulted on all types of applications. Larger sizes of up to 10000mm high or 20000mm wide may be available.

RECOMMENDED SPECIFICATION

Vertical Lift Door, comprising single or multiple steel framed panels, selected cladding, and inclusive of all hardware, as manufactured by Airport Doors. Balanced by means of a counterweight system, the door travels directly up above the lintel to provide full opening height.

NOTE: Vertical Lift Doors require sufficient headroom and are custom-made to suit the door opening and specific application. The client's design and specification requirements must be clearly stipulated.

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DOOR OPENING

Vertical Lift Doors are ideal for applications where there is ample headroom and little sideroom or backroom. The door operates behind fix as standard, or where required and specified, it can be installed externally of the opening.

FIXING REQUIREMENTS

It is the responsibility of the architect/builder to provide structurally adequate columns/walls to carry all design loads. Refer to Technical Specifications for clearance information.

DOOR FRAME AND HARDWARE

The door frame is constructed using Dual Grade C350L0/C450L0 DuraGal® RHS rectangular hollow steel sections, braced and trussed as required and designed in accordance with AS4100 (Steel Structures) and to comply with the provisions of AS/NZS 4505:2012 (Garage doors and other large access doors) and AS1170 Part 1-2 (Wind Loads). Unless otherwise specified, the minimum design wind load is Region A5, Category 3. The counterweight system is subject to the SAA Crane Code. A minimum Safety Factor of 5 applies to the wire rope sizing and a minimum ratio of 22:1 applies to the pulleys. Sealed ball bearings or bushings are used at the load points.

All exposed steel work is prepared and shop primed before the application of any specified coatings. The steel frame, tracks and fittings can be finished prime painted or powder coated. (NOTE: Large doors may not be available in powder coat finish). Other steelwork finishes or specified paint systems can also be supplied when specified.

CLADDING

The Vertical Lift Door can be designed to accommodate and match various cladding materials including glass (single or double glazed), steel or aluminium sheet, timber, mesh, acoustic insulation, thermal insulation etc. NOTE: Depending on the weight, size, or application of materials, restrictions may apply. See also Cladding Options and Technical Specifications.

DOOR SEALS

Vertical Lift Doors are designed to overlap the opening. Standard door seals consist of brush seals to the top and sides of the door, and a PVC bulb seal fitted to the bottom of door. NOTE: Standard seals reduce draughts and exposure to weather, however they are not watertight. Seals with increased thermal or acoustic insulation performance are available when specified.

COUNTERWEIGHT COVERS

Steel counterweights are enclosed and protected using heavy gauge pressed steel covers to approximately two-thirds of the door height as standard. Counterweight covers are finished as per the frame specification and are custom-made and designed to suit the site dimensions.

PERSONAL ACCESS (PA) DOORS (OPTIONAL)

Where there is no other entrance into the building, PA Entry Doors (opening inwards) can be built into the Vertical Lift Door. Restrictions apply. **NOTE:** PA Doors have a stepover threshold

and do not comply as fire exits. PA Doors must be kept shut when operating the main door. Optional 'door closer' and/or 'door monitoring switch' are available and highly recommended.

LOCKING

Manually operated Vertical Lift Doors are fitted with pad bolts on the inside as standard. Padlocks not included. When specified, key lockable bolts, or similar, are available as an alternative. **NOTE:** Motorised doors are self-locking and are not fitted with additional locks.

OPERATION

Balanced by counterweights, the Vertical Lift Door has guide rollers on each side that travel up vertical tracks allowing the door to lift up to provide full opening clearance. See also Method of Operation.

HAND OPERATION

The Vertical Lift Door can be manually operated up to 600kg total door weight. It is highly recommended, however, that doors which are either; high, large, subject to high wind loads, or are in frequent use, are motorised for convenience and ease of operation.

MOTORISATION

Motorisation is via a geared electric motor and incorporates a standard reversing starter push-button station (control box). The standard push-button station offers 'Up', 'Down' and 'Stop' functions.

Operator selection is dependent on availability of power, door usage and door access requirements. Motorisation is available in three-phase (415v) as standard, single-phase (240v) or 24DC/240v. Residential applications are supplied as standard with 24DC/240v automated operator. Motorised doors incorporate a manual release mechanism for manual operation (in case of a power outage).

The provision of adequate mains power supply and isolator or GPO (as required) to motor location is the responsibility of the client. Wiring from the isolator and commissioning of the door, motor controllers and any ancillary hardware is by client, unless otherwise stated in writing.

Optional extras, such as high cycle motorisation, battery back-up and access control accessories are available upon specification. **NOTE:** For safety, Photoelectric Beams (PE Beams) are highly recommended on all counterweight doors. Where doors are automated by a radio control, PE Beams are a requirement. A Through-Beam must be used on all government installations (e.g. ambulance, police, CFA stations).

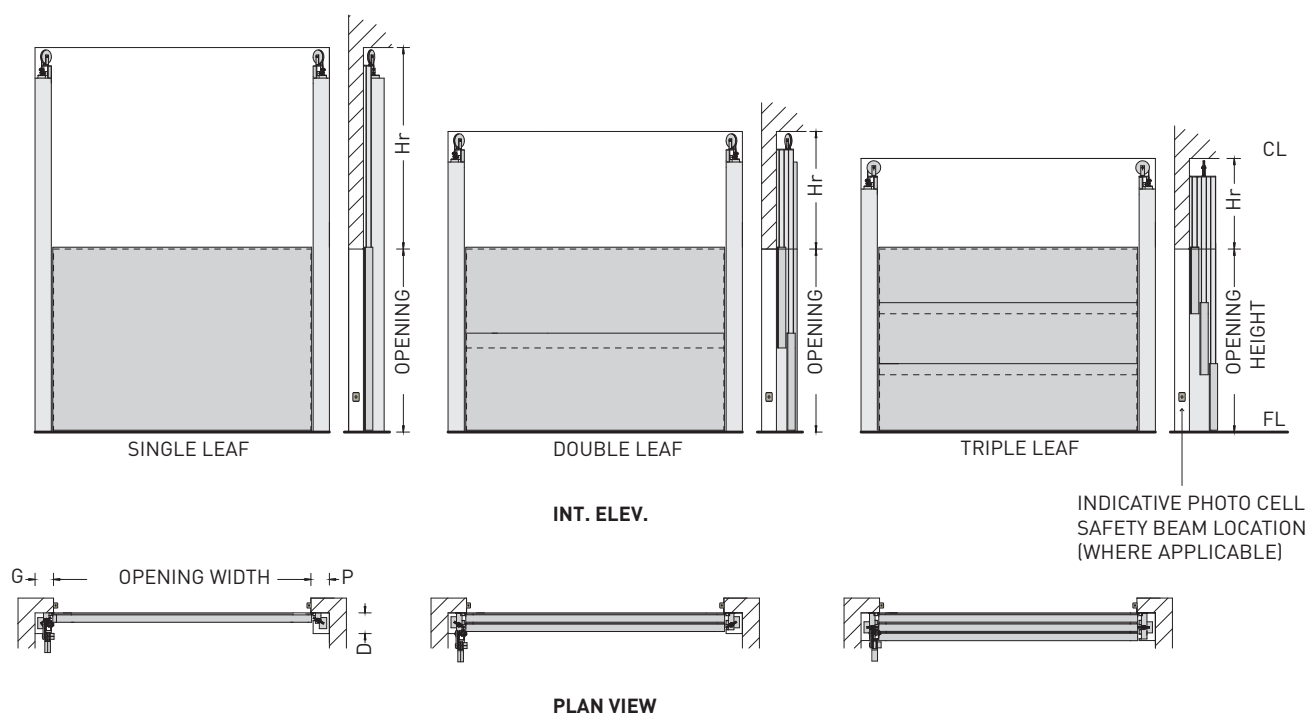
For further information see Door Operators & Accessories.

OPTIONS

- High usage
- Fast opening (up to 300mm per second)

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Technical Specs: Counterweight Doors



CLEARANCE DETAILS																	
HEIGHT UP TO	TYPE	WIDTH UP TO 3m				5m				7m				10m			
		G	P	Hr	D	G	P	Hr	D	G	P	Hr	D	G	P	Hr	D
2.5 m	S	P	200	A	260	P	250	A	260	P	250	A	350	P	300	A	450
	GL	P	250	A	280	P	250	A	280	P	300	A	350	P	300	A	450
	EL	250	250	A	280	250	250	A	280	300	300	A	350	300	300	A	450
4 m	S	P	200	A	260	P	250	A	280	P	300	A	350	P	300	A	450
	GL	P	250	A	280	P	250	A	280	P	300	A	350	P	400	A	450
	EL	250	250	A	280	250	250	A	280	300	300	A	350	400	400	A	450

For larger door sizes consult Technical Sales.

KEY

A = Opening Height + 250. (Single-leaf Door Headroom)

A = (Opening Height / 2) + 350. (Double-leaf Door Headroom)

A = (Opening Height / 3) + 400. (Triple-leaf Door Headroom)

C = 'G' or 'P' - 20mm (in most cases). (Counterweight Cover Width)

S: Manual Sheeted Door

GL: Manual Glazed Door

EL: Electrically Operated Door

For full KEY reference, see 'Technical Specs and Clearance Details KEY' in the Product Selection Guide section.