

Fold-Up Door

Counterweight Doors



Fold-Up Doors are typically glazed and are widely used in commercial and industrial applications such as fire and ambulance stations, workshops, transport depots, aircraft hangars, showrooms, etc. Fold-Up Doors are also ideal for large or uniquely clad garage doors on architecturally designed homes. Fold-Up Doors are a two-panel counterweighted door specifically designed so that its performance is not impaired by increased weight (or size), thus making it ideal for even the largest of openings and also a wide variety of cladding types.

FEATURES

- Counterweight balance
- Wide range of cladding options
- Ideal for large openings
- Ease of operation
- Minimal maintenance
- Long lasting
- High usage

DOOR DIMENSIONS

- Maximum Height: 7000mm
- Maximum Width: 24000mm

NOTE: Maximum dimensions are a guide only and may vary due to wind loading and cladding. Larger sizes of up to 10m high or 30m wide may be available. Consult Technical Sales for further information.

RECOMMENDED SPECIFICATIONS

Fold-Up Door, consisting of two steel framed hinged panels, with selected cladding, and inclusive of all hardware, as manufactured by Airport Doors. Balanced by a counterweight system, the panels rotate, folding up under the lintel. The open door projects inwards and outwards of the opening.

NOTE: Fold-Up Doors are custom-made to suit the door opening and specific application. Client's design and specification requirements must be clearly stipulated.

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DOOR OPENING

The door operates within the opening; therefore all sides must be plumb and true. **IMPORTANT:** Allowance for the thickness of the folded door and working clearance must be made when designing the opening to give the required drive through clearance. Refer to Technical Specifications for clearance information.

FIXING REQUIREMENTS

It is the responsibility of the architect/builder to provide structurally adequate columns/walls to carry all design loads. See also Technical Specifications.

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 Fold-Up 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: Some restrictions may apply. See also Cladding Options and Technical Specifications.

DOOR SEALS

Fold-Up Doors are designed to fit within the opening as standard, therefore a typical working clearance of 15mm on each side and at the top of the door is required, as well as a

typical working clearance of 25mm at the bottom of the door. As standard, brush seals are fitted at the top and to each side of the door, and a PVC bulb seal is fitted to the bottom of the door. NOTE: Standard seals reduce draughts and exposure to weather, however they are not watertight. Alternative sealing such as seals combined with thresholds may be 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. They 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 bottom panel of a Fold-Up 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 Fold-Up 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: Electric operated (motorised) doors are secured by the motor and its controls.

HOLD OPEN LATCH (OPTIONAL)

Manually operated counterweight doors can be fitted with a spring loaded Hold Open Latch, to ensure they stay open in windy areas.

OPERATION

Fold-Up Doors consist of two hinged panels, which fold together as the door is being opened. Using a counterweight system, the bottom panel swings in and the door (in the open position) rests folded horizontally under the lintel, projecting internally and externally of the building. See also Method of Operation.



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HAND OPERATION

A practical feature of the Fold-Up Door is its capacity to be manually operated at weights of up to 1000kg. It is 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. In the advent of power outage, all doors are capable of hand 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).

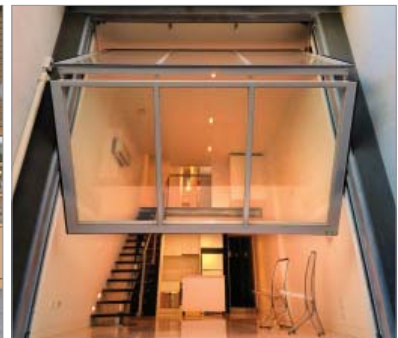
The provision of adequate mains power supply and isolator or GPO (as required) to motor location is the responsibility of the client. Wiring from the isolator and commissioning of the door, motor controllers and any ancillary hardware is by client, unless otherwise stated in writing.

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).

See also Door Operators & Accessories. For further Fold-Up Door information, download the Fold-Up Door Technical Data Sheet PDF.

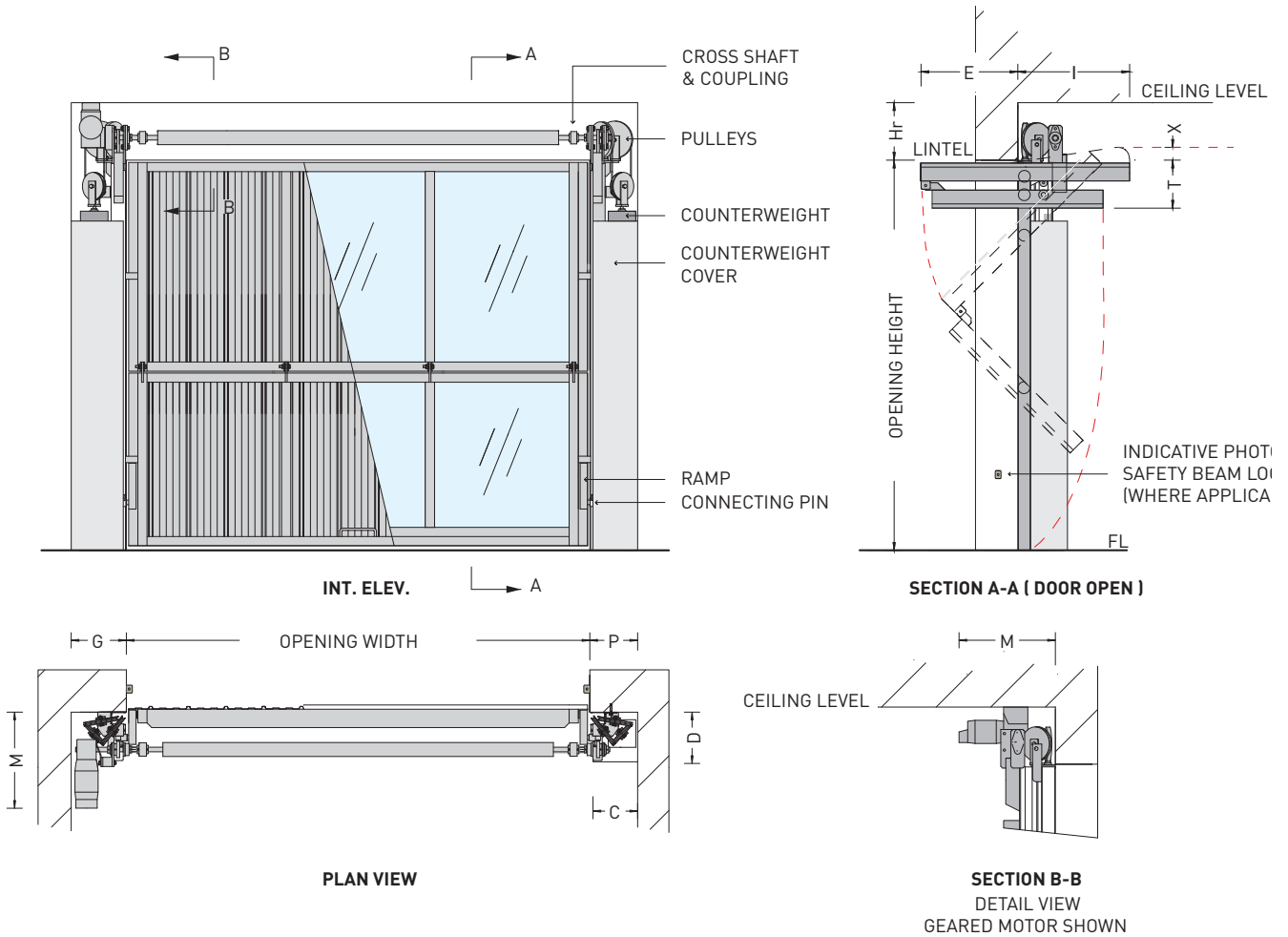
OPTIONS

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



Fold-Up Door

Technical Specs: Counterweight Doors



Note:
See Fold-Up Door Clearance Details overleaf

Fold-Up Door

Technical Specs: Counterweight Doors

CLEARANCE DETAILS (Based on W/Load- Reg A Cat 3 (Melb.) Ws - 0.5kPa, Vs- 38m/s, Wu- 0.8kPa, Vu- 50M/s.)

CLEARANCE DETAILS																								
HEIGHT UP TO	X	E	I	TYPE	WIDTH UP TO 4m				5m				6m				7m				8m			
					G	Hr	D	T	G	Hr	D	T	G	Hr	D	T	G	Hr	D	T	G	Hr	D	T
3m	150	630	965	S	160	350	290	280	160	350	325	280	210	350	270	300	210	350	270	300	230	250	325	345
				GL	210	350	270	260	210	350	270	260	210	350	270	280	230	250	325	280	230	250	325	325
				EL	280	300	270		280	300	270		280	300	270		300	350	270		300	350	270	
4m	170	960	1215	S	160	350	290	280	160	350	325	280	210	350	270	300	210	350	270	300	230	250	325	345
				GL	160	350	325	260	210	350	270	260	210	350	270	280	230	250	325	280	230	250	325	325
				EL	280	300	270		280	300	270		280	300	270		280	300	270		300	350	270	
5m	220	1150	1450	S	160	350	290	280	160	350	325	350	160	350	325	350	210	350	270	350	280	350	270	365
				GL	160	350	325	260	210	350	270	330	210	350	270	330	210	350	270	330	280	280	325	345
				EL	280	300	270		280	300	270		280	300	270		280	300	270		300	350	270	
6m	240	1450	1800	S	160	350	290	350	160	350	325	350	160	350	325	450	260	350	270	450	210	350	270	400
				GL	160	350	325	330	210	350	270	330	210	350	270	430	260	250	325	430	230	250	325	380
				EL	280	300	270		280	300	270		280	300	270		280	300	270		300	350	270	
7m	250	1750	2100	S	160	350	290	450	160	350	325	450	260	350	325	450	210	350	270	450	210	350	270	450
				GL	160	350	325	430	210	350	270	430	260	350	270	430	230	250	325	430	230	250	325	430
				EL	300	400	270		300	400	270		350	400	270		350	400	270		350	420	270	

CLEARANCE DETAILS (Continued)																								
HEIGHT UP TO	X	E	I	TYPE	Width up to 9m				10m				12m				14m				16m			
					G	Hr	D	T	G	Hr	D	T	G	Hr	D	T	G	Hr	D	T	G	Hr	D	T
3m	150	630	965	S	260	350	325	345	300	350	325	365	300	350	350	430	300	350	350	490	300	350	350	530
				GL	280	350	345	325	280	350	345	345	300	420	350	410	300	420	350	470	300	420	350	510
				EL	350	400	345		350	400	345		400	420	350		400	420	350		400	450	350	
4m	170	960	1215	S	300	250	325	365	230	250	325	405	280	350	350	450	350	350	400	610	350	350	400	700
				GL	300	350	345	345	350	400	345	385	300	420	350	430	350	350	400	590	380	580	520	680
				EL	350	350	345		350	400	345		350	420	350		400	420	400		400	580	520	
5m	220	1150	1450	S	280	350	270	385	280	350	345	425	350	350	400	580	350	350	400	650	380	580	520	700
				GL	280	250	325	365	280	350	345	405	380	580	520	560	380	580	520	630	450	580	520	680
				EL	350	350	270		350	400	345		380	580	520		380	580	520		450	580	520	
6m	240	1450	1800	S	210	350	270	400	300	420	340	410	350	350	400	550	350	350	400	610	350	350	400	700
				GL	230	250	325	380	300	420	340	390	380	580	520	530	380	580	520	590	380	580	520	680
				EL	350	350	270		350	420	340		380	580	520		380	580	520		380	580	520	
7m	250	1750	2100	S	230	250	325	430	300	420	340	430	350	350	400	580	350	350	400	610	350	350	400	700
				GL	300	420	340	410	300	420	340	410	380	580	520	560	380	580	520	590	450	580	520	680
				EL	350	420	340		350	420	340		380	580	520		380	580	520		450	580	520	

NOTES: P = G for all Manual doors.

M varies with motor location, type and size. See Industrial Operators.

I (Internal Projection) increases with truss height, ie, span, therefore it should be verified.

For doors larger than this chart range refer to Manufacturer.

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Technical Specs: Counterweight Doors

CLEARANCE DETAILS (Based on W/Load- Reg A Cat 3 (Melb.) Ws - 0.5kPa, Vs- 38m/s, Wu- 0.8kPa, Vu- 50M/s.)

CLEARANCE DETAILS (Continued)																					
HEIGHT UP TO	X	E	I	TYPE	WIDTH UP TO 18m				20m				22m				24m				
					G	Hr	D	T	G	Hr	D	T	G	Hr	D	T	G	Hr	D	T	
3m	150	630	965	S	300	350	350	620													
				GL	300	420	350	600													
				EL	450	580	350														
4m	170	960	1215	S	350	350	400	750	380	580	520	840									
				GL	450	580	520	730	450	580	520	820									
				EL	450	580	520		450	580	520										
5m	220	1150	1450	S	380	580	520	780	380	580	520	840	380	580	520	940	380	580	520	1000	
				GL	450	580	520	760	450	580	520	820	550	600	650	920	550	600	650	980	
				EL	450	580	520		450	580	520		550	600	650		550	600	650		
6m	240	1450	1800	S	380	580	520	750	380	580	520	840	380	580	520	890	380	580	520	940	
				GL	450	580	520	730	450	580	520	820	550	600	650	870	550	600	650	920	
				EL	450	580	520		450	580	520		550	600	650		550	600	650		
7m	250	1750	2100	S	380	580	520	780	380	580	520	840	380	580	520	940	380	580	520	1000	
				GL	450	580	520	760	450	580	520	820	550	600	650	920	550	600	650	980	
				EL	450	580	520		450	580	520		550	600	650		550	600	650		

For larger door sizes consult Technical Sales.

KEY

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

E = Opening Height - 'I'. (Nominal External Projection)

I: Nominal Internal Projection dimension. This dimension increases with door width (due to truss height), therefore this dimension is a guide only and should be confirmed.

M: Dimension varies with motor location, type and size.

P = 'G' for all Manual Doors.

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.