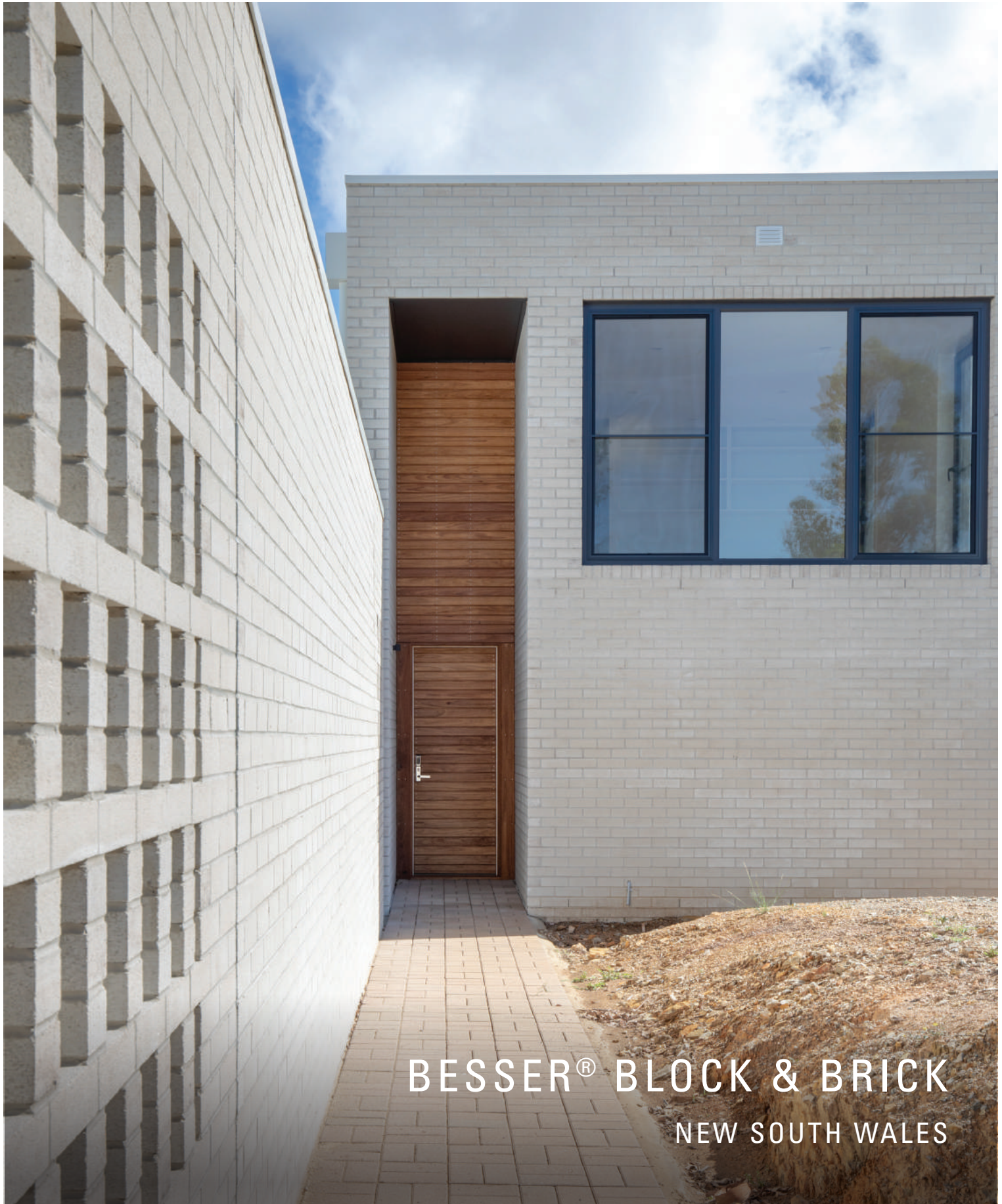


adbri MASONRY

an ADBRI company



BESSER® BLOCK & BRICK
NEW SOUTH WALES

Technical Information

Standards - All Adbri Masonry concrete blockwork is manufactured to AS/NZS4455.1 - Masonry Units and tested to AS/NZS4456 - Masonry Units and Segmental Pavers: Methods of Test. For more information on design and construction refer to CMAA document MA55.

Fire Resistance - AS3700 - Masonry Structures sets out the method for determining fire resistance of walls based on test data. It is recommended that designers calculate or check the structural adequacy, integrity and insulation for each wall configuration to ensure conformance to the National Construction Code (NCC). Adbri Masonry have an extensive range of bricks and blocks meeting the requirements of the NCC. Refer to the Adbri Masonry NSW Fire and Sound brochure for more information. All fire rating values provided in this document relate to non-loadbearing applications for hollow masonry unless noted otherwise. Refer to the Adbri Masonry NSW Fire and Sound brochure for fire ratings for reinforced and loadbearing applications.

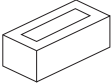
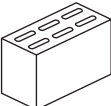
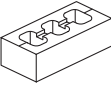
Acoustics - The statutory requirements for sound attenuation are set out in Section F5 of the NCC. Adbri Masonry have a number of high performance wall systems which have been developed to accommodate the new stringent requirements imposed by the NCC, to satisfy all acoustic needs. Refer to the Adbri Masonry NSW Fire and Sound Brochure for more information.

Compressive Strength - Adbri Masonry manufacture all masonry units to meet or exceed the minimum characteristic compressive strengths for masonry units nominated in AS4773.1.

Control Joints - Control Joints must be incorporated in masonry as necessary to control and limit the movements referred to in AS3700 clause 2.5.2. Control joints should extend the full height of the wall and be spaced at no greater than 8m centre for concrete units where walls are unreinforced and are not interrupted by full height doorways or window openings for unreinforced applications.

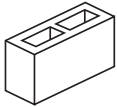
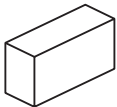
General Guidelines - All concrete blockwork should be laid dry, so protective covering on site is recommended. Whenever work is stopped, the tops of walls should be covered to prevent moisture entering the cores of the blocks and/or cavity. All mortar joints should be allowed to set to "thumb print" hardness before tooling. Brush away excess mortar with semi stiff brush at the end of each days work.

Cleaning - Care should be taken to keep bricks and blocks as clean as possible during laying. There are various methods of general cleaning from dry brushing, water washing and also using chemicals. For a complete listing refer to the CMAA Guide CM03. When using a weak acid mixture it is recommended for cleaning down at no stronger than 1 part acid to 20 parts water. Walls should be wet thoroughly before application and washed thoroughly with water after application. High water pressure is not recommended. Note - Always trial solution in a small area which is not highly visible.

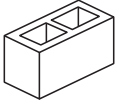
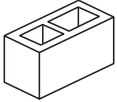
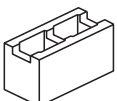
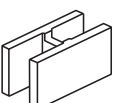
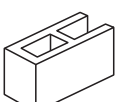
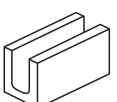
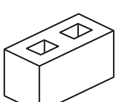
Products	Type	Description	Size (mm) L x H x W	f _{uc} (MPa)	Fire Rating Insulation (mins)	Qty. per pallet	Unit Weight (kg)	Unit per m ²
Common Bricks - AS4773 requires a minimum characteristic compressive strength (f _{uc}) of 5MPa for all loadbearing bricks.								
	11.076 Common	Render Brick (Solid)	230 x 76 x 110	≥5	180	500	3.4	48.4
	11.162	Twin Height Brick	230 x 162 x 110	≥5	180	300	6.3	24.3
	11.076 Colour	Coloured Face Brick	230 x 76 x 110	≥8	180	450 (300 for ivory)	6.3	48.4

Blockwork

All Adbri Masonry Litec® masonry products are lightweight products produced using concrete mixes that incorporate lightweight industrial by-products. This leads to a reduced carbon footprint from the manufacturing process and from transport of the product. Being 25 to 30% lighter than traditional masonry products, Litec® masonry products increase productivity, reduces design dead loads as a result of lighter unit weight and reduces handling issues. Pallets contain more square metres reducing material handling movements and storage requirements. All Litec® masonry products have improved fire resistance and a durability grade of Exposure as per AS4455.1.

Products	Type	Description	Size (mm) L x H x W	f'_{uc} (MPa)	Fire Rating Insulation (mins)	Qty. per pallet	Unit Weight (kg)	Unit per m ²
Litec® 100 Standard Series - AS4773 requires a minimum characteristic compressive strength of 10MPa for all unreinforced hollow masonry units.								
	10.01	Full Length Hollow	390 x 190 x 90	≥10	120	180	9.5	12.5
	10.04	1/4 Length Solid	90 x 190 x 90	≥10	120	576	2	-
	10.31	Full Length Solid	390 x 190 x 90	≥10	120	108	11.9	12.5

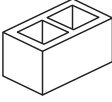
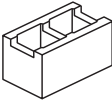
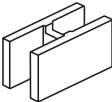
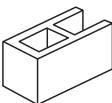
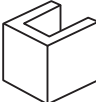
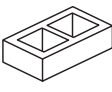
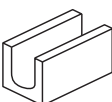
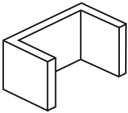
For basic compressive capacity f'_o please refer to table on page 10. For all FRL values relating to structural adequacy, please refer to the NSW Fire and Sound brochure.

Products	Type	Description	Size (mm) L x H x W	f'_{uc} (MPa)	Fire Rating Insulation (mins)	Qty. per pallet	Unit Weight (kg)	Unit per m ²
Litec® 150 Standard Series - AS4773 requires a minimum characteristic compressive strength of 10MPa for all unreinforced hollow masonry units and 15MPa for all units that may be corefilled and reinforced.								
	15.01 2hr	Full Length Hollow	390 x 190 x 140	≥15	120*	144	11.9	12.5
	15.22	340mm Corner Block Hollow	340 x 190 x 140	≥10	180*	135	10.9	-
	15.42	140mm Top Groove Full Length	390 x 190 x 140	≥15	120*	144 (1 in 4 full ends)	10.6	12.5
	15.48	Single web H Block	390 x 190 x 140	≥15	120** Corefilled	144	10.6	12.5
	15.49	Full Length Open End	390 x 190 x 140	≥15	120*	144	9.9	12.5
	15.12	Lintel Bond Beam	390 x 190 x 140	N/A	120*	120	13.1	-
	15.01 4hr	4 Hour Full Length Hollow	390 x 190 x 140	≥10	240*	120	13.9	12.5
	15.03	1/2 Length Hollow	190 x 190 x 140	≥10	180*	144	5.8	-

For basic compressive capacity f'_c please refer to table on page 10. For all FRL values relating to structural adequacy, please refer to the NSW Fire and Sound brochure.

*Values provided for hollow non loadbearing masonry, refer to the NSW Fire and Sound Brochure for reinforced or loadbearing applications

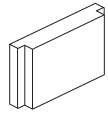
**Values for corefilled

Products	Type	Description	Size (mm) L x H x W	f'_{uc} (MPa)	Fire Rating Insulation (mins)	Qty. per pallet	Unit Weight (kg)	Unit per m ²
Litec® 200 Standard Series - AS4773 requires a minimum characteristic compressive strength of 10MPa for all unreinforced hollow masonry units and 15MPa for all units that may be corefilled and reinforced.								
	20.01	Full Length Hollow	390 x 190 x 190	≥15	120*	108	12.2	12.5
	20.02	3/4 Length Hollow	290 x 190 x 190	≥15	120*	144	8.7	-
	20.42	190mm Top Groove Full Length	390 x 190 x 190	≥15	120*	108 (1 in 6 is full end)	12	12.5
	20.48	Single Web H Block	390 x 190 x 190	≥15	240 corefilled	108	11.5	12.5
	20.49	Open End Block Full Length	390 x 190 x 190	≥15	120*	108	11.2	-
	20.93	Half Block	190 x 190 x 190	≥15	240 corefilled	180	5.7	-
	20.71	Full Length 1/2 Height Hollow	390 x 90 x 190	≥15	120*	216	5.8	-
	20.12	Full Length Lintel Bond Beam	390 x 190 x 190	N/A	120*	72	18.5	-
	20.61	Clean Out Full Length Block	390 x 190 x 190	≥15	240 corefilled	108	13.1	-
	D20.45	Clean Out Block	390 x 190 x 190	≥15	240 corefilled	108	16.1	12.5

For basic compressive capacity f'_c , please refer to table on page 10. For all FRL values relating to structural adequacy, please refer to the NSW Fire and Sound brochure.
 *Values provided for hollow non loadbearing masonry, refer to the NSW Fire and Sound brochure for reinforced or loadbearing applications.

Products	Type	Description	Size (mm) L x H x W	f'_{uc} (MPa)	Fire Rating Insulation (mins)	Qty. per pallet	Unit Weight (kg)	Unit per m ²
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Litec® 200 Standard Series - AS4773 requires a minimum characteristic compressive strength of 10MPa for all unreinforced hollow masonry units and 15MPa for all units that may be corefilled and reinforced.



D20.45A

Clean Out Block Tile

325 x 30 x 190

≥15

N/A

288

4.1

12.5
when used
with 20.45
unit



20.03

1/2 Length
Hollow

190 x 190 x 190

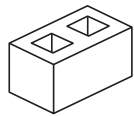
≥10

180*

180

7.5

-



20.01 4hr

Full Length
4 Hour
Hollow

390 x 190 x 190

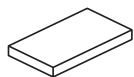
≥10

240*

90

14.5

12.5



D50.31

190mm
Capping Unit

390 x 190 x 40

≥10

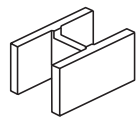
240*

144

7.0

-

300 Series Litec® Standard Series Retaining Wall - AS4773 requires a minimum characteristic compressive strength of 15MPa for units that can be corefilled and reinforced.



30.48

Single Web
H Block

390 x 190 x 290

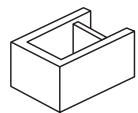
≥15

240
corefilled

72

15 / 14.7
TBC

12.5



30.92

Closed End Full Length
Block

390 x 190 x 290

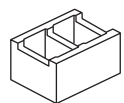
≥15

240
corefilled

72

16.5

-



30.42

290mm Top Groove Full
Length

390 x 190 x 290

≥15

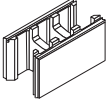
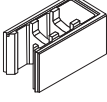
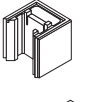
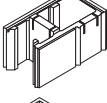
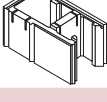
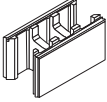
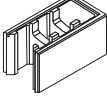
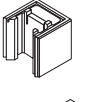
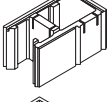
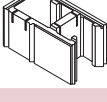
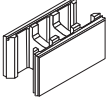
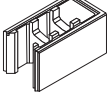
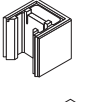
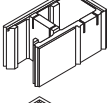
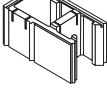
120*

72

15.6

-

For basic compressive capacity f'_c please refer to table on page 10. For all FRL values relating to structural adequacy, please refer to the NSW Fire and Sound brochure.
*Values provided for hollow non loadbearing masonry, refer to the NSW Fire and Sound brochure for reinforced or loadbearing applications.

Products	Type	Description	Size (mm) L x H x W	f'_{uc} (MPa)	Fire Rating Insulation (mins)	Qty. per pallet	Unit Weight (kg)	Unit per m ²
Versaloc® Mortarless Masonry System - 150 Series - Versaloc® is manufactured to a minimum characteristic compressive strength of 20MPa.								
	BV5991	150mm Versaloc® Standard Block	400 x 200 x 150	≥20	120	96	15.1	12.5
	BV5992	150mm Versaloc® End Block*	400 x 200 x 150	≥20	120	96	14.41	
	BV5993	150mm Versaloc® Half End Block*	200 x 200 x 150	≥20	120	192	8	25
	BV5995R	150mm Versaloc® Righthand Corner Block*	350 x 200 x 150	≥20	120	84	13.11	
	BV5995L	150mm Versaloc® Lefthand Corner Block*	350 x 200 x 150	≥20	120	84	13.11	
Versaloc® Mortarless Masonry System - 200 Series								
	BV2991	190mm Versaloc® Standard Block	400 x 200 x 190	≥20	240	72	15.65	
	BV2992	190mm Versaloc® End Block*	400 x 200 x 190	≥20	240	96 (48 of each Block)	17.5	
	BV2993	190mm Versaloc® Half End Block*	200 x 200 x 190	≥20	240	96 (48 of each Block)	9	
	BV2995R	190mm Versaloc® Righthand Corner Block*	390 x 200 x 190	≥20	240	72 (36 of each Corner)	15.35	
	BV2995L	190mm Versaloc® Lefthand Corner Block*	390 x 200 x 190	≥20	240	72 (36 of each Corner)	15.35	
Versaloc® Mortarless Masonry System - 300 Series								
	BV3991	290mm Versaloc® Standard Block	400 x 200 x 290	≥20	240	60	19.25	12.5
	BV3992	290mm Versaloc® End Block*	400 x 200 x 290	≥20	240	48	21.06	
	BV3993	290mm Versaloc® Half End Block*	200 x 200 x 290	≥20	240	96	12.48	25
	BV3995R	290mm Versaloc® Righthand Corner Block*	490 x 200 x 290	≥20	240	40	21.06	
	BV3995L	290mm Versaloc® Lefthand Corner Block*	490 x 200 x 290	≥20	240	40	21.06	

For basic compressive capacity f'_c , please refer to table on page 10. For all FRL values relating to structural adequacy, please refer to the NSW Fire and Sound brochure.

*Sold as pairs only.

100 400 400 400 400

20.93

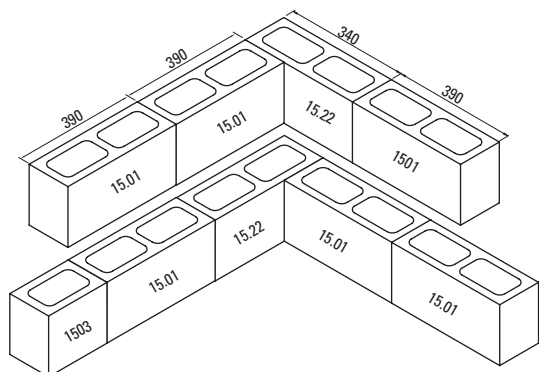
10.04, optional

Reinforcement

20.61

Use 20.61 unit for corner return walls

Block Type	Cubic Metres per sq. Metre of Wall	Block Filled per Cubic Metre of Grout
15.42	0.078	160
20.42	0.114	110
20.48	0.114	110
30.48	0.18	69



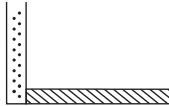
adbri masonry

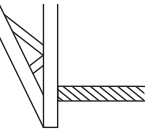


Property	Wall Thickness, t_w (mm) 90		Wall Thickness, t_w (mm) 110		Wall Thickness, t_w (mm) 140		Wall Thickness, t_w (mm) 190			Wall Thickness, t_w (mm) 290	
	Unit Code 10.01	Unit Code 10.31	Unit Code 11.076	Unit Code 11.162	Unit Code 15.01	150 Series Grout filled	Unit Code 20.01	Unit Code 20.01 4hr	200 Series Grout filled	Unit Code 30.42	300 Series Grout filled
Basic Compressive Capacity											
$\emptyset$	0.50	0.75	0.75	0.75	0.50	0.60	0.50	0.50	0.60	0.50	0.60
h_u (mm)	190.00	190.00	76.00	162.00	190.00	190.00	190.00	190.00	190.00	190.00	190.00
A_b (m ² /m)	0.06	0.09	0.11	0.11	0.056	0.056	0.056	0.104	0.056	0.06	0.06
f'_{uc} (MPa)	10.00	10.00	5	5	15.00	15.00	15.00	10.00	15.00	15.00	15.00
f'_{mb} (MPa)	5.10	4.40	3.1	3.1	6.20	6.20	6.20	5.10	6.20	6.20	6.20
K_n	1.30	1.30	1.00	1.24	1.30	1.30	1.30	1.30	1.30	1.30	1.30
f'_m (MPa)	6.63	5.72	3.1	3.84	8.06	8.06	8.06	6.63	8.06	8.06	8.06
f'_o (kN/m)	198.9	386.10	255.75	317.1	225.7	645.3	225.7	344.76	841	241.8	1268.9

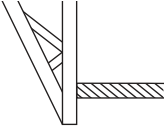
Wall Loading Condition	Wall Design Height, H (mm)	Wall Thickness, t_w (mm) 90		Wall Thickness, t_w (mm) 110		Wall Thickness, t_w (mm) 140		Wall Thickness, t_w (mm) 190			Wall Thickness, t_w (mm) 290		
		Unit Code 10.01	Unit Code 10.31	Unit Code 11.076	Unit Code 11.162	Unit Code 15.01	150 Series Grout filled	Unit Code 20.01	Unit Code 20.01 4hr	200 Series Grout filled	Unit Code 30.42	300 Series Grout filled	
Wall Compressive Load Capacity, Fd (kN/m)													
Concrete slab on wall 	2400	83.54	162.16	130.43	161.74	135.41	387.17	151.21	230.99	563.5	162.01	850.16	
	2700	69.62	135.14	117.65	145.88	126.38	361.36	151.21	230.99	563.5	162.01	850.16	
	3000	55.69	108.11	102.3	126.85	117.35	335.55	142.18	217.20	529.85	162.01	850.16	
	3300	41.77	81.08	89.51	111	108.33	309.74	135.41	206.86	504.62	162.01	850.16	
	3600			74.17	91.97	97.04	277.47	128.64	196.51	479.39	162.01	850.16	
	3900			61.38	76.11	88.02	251.66	121.87	186.17	454.16	162.01	850.16	
	4200					78.99	225.85	115.10	175.83	428.93	159.59	837.47	
	4500					69.96	200.04	106.07	162.04	395.29	154.75	812.1	
	4800					58.68	167.78	101.56	155.14	378.47	149.92	786.72	
	5100					49.65	141.96	92.53	141.35	344.83	145.08	761.34	
5400								85.76	131.01	319.59	140.24	735.96	
5700								78.99	120.67	294.36	135.41	710.58	
6000								72.22	110.32	269.13	128.15	672.52	

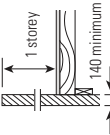
Concrete slab on wall

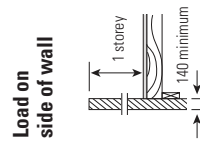


Wall Loading Condition	Wall Design Height, H (mm)	Wall Thickness, t_w (mm) 90		Wall Thickness, t_w (mm) 110		Wall Thickness, t_w (mm) 140		Wall Thickness, t_w (mm) 190			Wall Thickness, t_w (mm) 290		
		Unit Code 10.01	Unit Code 10.31	Unit Code 11.076	Unit Code 11.162	Unit Code 15.01	150 Series Grout filled	Unit Code 20.01	Unit Code 20.01 4hr	200 Series Grout filled	Unit Code 30.42	300 Series Grout filled	
Wall Compressive Load Capacity, Fd (kN/m) - Continued													
Other loads on wall 	2400	53.7	104.25	97.19	120.51	112.84	322.64	137.66	210.30	513.03	162.01	850.16	
	2700	35.8	69.50	81.84	101.48	101.56	290.38	130.89	199.96	487.8	162.01	850.16	
	3000	17.9	34.75	61.38	76.11	90.27	258.12	119.61	182.72	445.75	159.59	837.47	
	3300	3.98	7.72	46.04	57.08	76.73	219.4	112.84	172.38	420.52	154.75	812.1	
	3600			28.13	34.88	63.19	180.68	103.81	158.59	386.88	149.92	786.72	
	3900			10.23	12.69	51.91	148.42	94.79	144.80	353.24	142.66	748.65	
	4200					40.62	116.15	85.76	131.01	319.59	137.83	723.27	
	4500					29.34	83.89	76.73	117.22	285.95	130.57	685.21	
	4800					18.05	51.62	67.7	103.43	252.31	125.74	659.83	
	5100					4.51	12.91	58.68	89.64	218.67	118.48	621.76	
5400							49.65	75.85	185.03	113.65	596.38		
5700							40.62	62.06	151.39	103.97	545.63		
6000							31.6	48.27	117.75	99.14	520.25		

Other loads on wall



Wall Loading Condition	Wall Design Height, H (mm)	Wall Thickness, t_w (mm) 90		Wall Thickness, t_w (mm) 110		Wall Thickness, t_w (mm) 140		Wall Thickness, t_w (mm) 190			Wall Thickness, t_w (mm) 290		
		Unit Code 10.01	Unit Code 10.31	Unit Code 11.076	Unit Code 11.162	Unit Code 15.01	150 Series Grout filled	Unit Code 20.01	Unit Code 20.01 4hr	200 Series Grout filled	Unit Code 30.42	300 Series Grout filled	
Wall Compressive Load Capacity, Fd (kN/m) - Continued													
Load on side of wall 	2400					13.77	39.36	15.12	23.10	56.35	16.2	85.02	
	2700					12.86	36.78	15.12	23.10	56.35	16.2	85.02	
	3000					11.28	32.26	14.22	21.72	52.99	16.2	85.02	
	3300					10.83	30.97	13.54	20.69	50.46	16.2	85.02	
	3600					9.93	28.39	12.86	19.65	47.94	16.2	85.02	
	3900					8.8	25.17	12.19	18.62	45.42	16.2	85.02	
	4200					7.9	22.59	11.51	17.58	42.89	15.96	83.75	
	4500					7	20	10.83	16.55	40.37	15.48	81.21	
	4800					6.32	18.07	9.93	15.17	37.01	14.99	78.67	
	5100					4.96	14.2	9.25	14.14	34.48	14.51	76.13	
5400							8.58	13.10	31.96	14.02	73.6		
5700							7.9	12.07	29.44	13.54	71.06		
6000								7.22	11.03	26.91	13.06	68.52	



Greater capacity can be achieved using reinforced masonry.

Brick Strength

All Adbri Masonry bricks are tested for compressive strength. Bricks with less than 30% coring are tested as full bed units. This is defined as the units being installed with a full layer of mortar covering the entire upper surface of the brick unit.

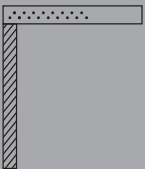
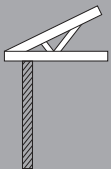
The Australian Standard for Masonry in Small Buildings requires loadbearing bricks to be manufactured to a minimum characteristic compressive strength of 5MPa.

Adbri Masonry concrete masonry bricks are all manufactured to achieve a minimum characteristic compressive strength of 8MPa for coloured face brick and 5MPa for natural coloured bricks.

Design Tables are provided to supply the compressive design capacity for the different brick types.

There are two calculations undertaken for unreinforced masonry acting in compression. F_o is the compressive capacity of the masonry wall, whereas F_d is the actual design compressive capacity of the wall. F_d is a factored value of F_o . The factor applied to determine the design compressive capacity F_d is calculated based on the restraint conditions of the wall and how the load is applied to the wall ie does it apply an eccentricity and therefore introduce bending forces.

The below is included to provide the value of F_o for the Adbri Masonry brick range, and the F_d values for two different forms of installation. Bricks are not suitable for the attachment of a load to the face of the units.

Products	Wall Height (mm)	Slenderness Ratio	K_{sl}	K_u	F_d		F_o (kN/m)
					Supporting concrete slab (kN/m) 	Supporting timber framing (kN/m) 	
Coloured face brick Architectural brick	2400	21.82	0.51	0.37	165.26	120.51	321.75
	2600	23.64	0.48	0.33	153.56	105.89	
	2800	25.45	0.44	0.28	141.86	91.26	
	3000	27.27	0.40	0.24	130.16	76.64	
	3200	29.09	0.37	0.19	118.46	62.01	
	3400	30.91	0.33	0.15	106.76	47.39	
	3600	32.73	0.30	0.10	95.05	32.76	
	3800	34.55	0.26	0.06	83.36	18.14	
	4000	36.36	0.22	0.01	71.66	3.51	
Twin height brick	2400	21.82	0.51	0.37	161.74	120.51	317.13
	2600	23.64	0.48	0.33	152.22	107.82	
	2800	25.45	0.44	0.28	139.54	85.63	
	3000	27.27	0.40	0.24	126.85	76.11	
	3200	29.09	0.37	0.19	117.34	66.6	
	3400	30.91	0.33	0.15	104.65	50.74	
	3600	32.73	0.30	0.10	91.97	34.88	
	3800	34.55	0.26	0.06	82.45	22.2	
	4000	36.36	0.22	0.01	72.94	9.5	

Basic Compressive Capacity and Design Compressive Capacity of Bricks using simplified method (AS3700-2108 Clause 7.3.3)

The values in the table should be considered in addition to the slenderness ratio limitations for FRL values. In many instances it will be necessary for external walls to use a cavity or veneer system, or to utilise engaged piers.

In terms of the values above, the design capacity F_d is the maximum load that can be applied to the wall and the wall maintains structural adequacy.

The ultimate loads applied to the wall should be calculated based on the dimensions and detailing of the structure.

For example, a 2 storey home with a tiled roof, 3m high walls and a 175 thick slab for the upper floor, bedrooms to the upper floors and a structure width of 10m that subjects your walls to a 5m load width, would be roughly calculated as follows:

DEAD LOADS

Roof - 5m load width x 1.2 load factor x 0.4kPa for roof sheeting, timber framing, ceiling & insulation = 2.4kN/m

Upper Wall - 3m high x 0.11m wide x 21kN/m³ density x 1.2 load factor = 8.3kN/m

Slab - 5m load width x 1.2 load factor x 0.175m deep slab x 24kN/m³ density = 25.2kN/m

Lower Wall - 3m high x 0.11m wide x 21kN/m³ density x 1.2 load factor = 8.3kN/m

LIVE LOADS

Roof - Allow 1.5kPa for maintenance x 1.5 load factor x 5m load width = 11.25kN/m

Slab - Allow 3kPa for bedroom x 1.5 load factor x 5m load width = 22.5kN/m

Total Load applied to base course of brick = 2.4 + 8.3 + 25.2 + 8 + 11.25 + 22.5 = **77.65kN/m**

Face Bricks have a design capacity of 130.16kN/m for a 3m high wall restrained at the top by a concrete slab, therefore would be structurally sound in this type of application.

Twin height brick has a design capacity of 126.85kN/m for a 3m high wall restrained at the top by a concrete slab, therefore would be structurally sound in this type of application.

Timber framing attached to the top of the wall will give you a lower design capacity, but will also impose less dead load than a reinforced concrete slab.

The load width carried by a wall will have a great impact on the design force applied to the wall. The wall height will also determine the factor applied to the wall to determine design capacity. The greater the wall height, the lower that factor will be, timber framing attached to the top of the wall offers virtually no capacity at all when walls get to 3.5m in height or higher.

External walls or internal walls where loads are applied with an eccentricity should be calculated independently using the refined method provided in Clause 7.3.4 of AS3700-2018.

The design capacity of the Adbri Masonry concrete masonry bricks will permit multi storey structures up to 15m in height to be constructed, as long as earthquake loading is adequately provided for, the load widths and wall heights are within reason, and engaged piers are used to assist in carrying loads where required.



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NSW - August 2022

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