



Section B Applications

Logicwall® Applications, External & internal Walls, Corridor Walls, Party Walls, Balustrades, Blade Walls, Lift Shafts, Retaining Walls, Service Shafts and Stair Shafts.



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B1. Applications

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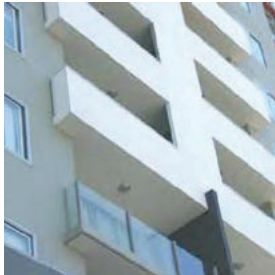
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Building Type Applications

AFS Logicwall® is a permanent formwork for reinforced concrete walls. So wherever there is an application for reinforced concrete walls up to 250mm thick, AFS Logicwall® is likely to be applicable. The particular application will be subject to engineering assessment. The best applications for AFS Logicwall® are for building structures which utilise load bearing wall construction and call for high levels of fire and acoustic performance.

For external applications, AFS Logicwall® must be protected by an appropriate water proofing system. The applications outlined in this chapter, including all charts, are based upon AFS Logicwall’s most common applications in multi-residential medium rise buildings.

Balustrades



Blade Column



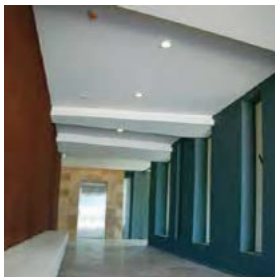
External Blade Walls



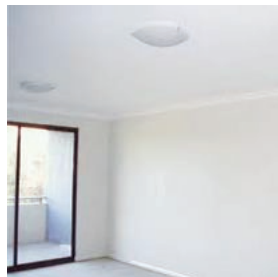
External Facade Walls



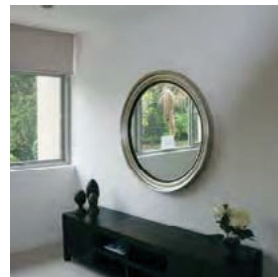
Internal Corridor Walls



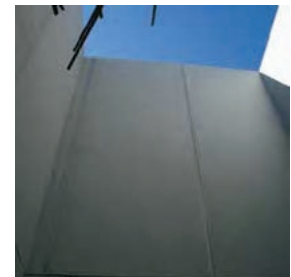
Internal Partition Walls



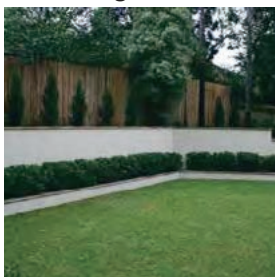
Internal Party Walls



Lift Shafts



Retaining Walls



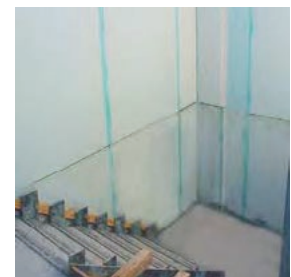
Basement Walls*



Service Shafts



Stair Shafts



*Alternative basement walls can be constructed using afs rediwall®, another product by afs.



**Logicwall®
Party walls**

**Logicwall®
Boundary walls**

**Logicwall®
Corridor walls**

**Logicwall®
Balustrades**

**Logicwall®
Garden/Landscape
walls**

**Logicwall®
Basement walls**



**Logicwall®
Façade walls**

**Logicwall®
Balustrades**

**Logicwall®
Blade walls**

**Logicwall®
Lift & Stair shafts**

**Logicwall®
Retaining walls**

**Logicwall®
Blade Columns**

Typical Multi-Residential Panel Layout



Application Systems

The AFS Logicwall® systems shown relate to the typical applications shown for a multi-residential 3D layout on page 6 of this chapter.

In the following tables of this chapter, the FRL values for Logicwall® LW120 and LW150 are noted in accordance with the CSIRO tests conducted as per the Australian Standard AS1530.4. For LW162, LW200D

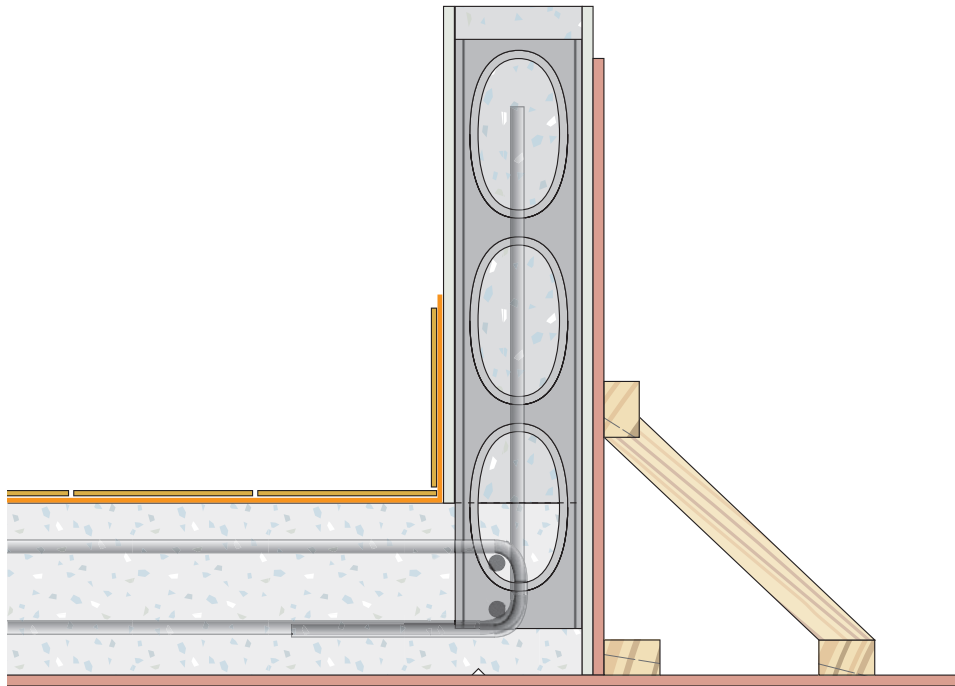
and LW262D the FRL values shown are based on the CSIRO report FC0-3084 titled “Likely performance of AFS Logicwall® systems”.

For Logicwall® configurations outside the limits of the CSIRO fire tests and assessment, the FRL may be determined in accordance with AS3600-2018.

Balustrades

AFS Product Code	Application	Composition
LW120 LW150	Walls Serving as a solid upstand or hand rail	120mm or 150mm AFS Logicwall®

Diagram

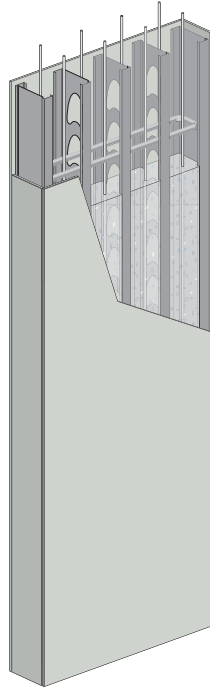


AFS Product Code	Acoustic		Fire
	R_w	$R_w + C_{tr}$	(FRL)
LW120	51	46	240/240/180
LW150	54	50	240/240/180

Blade Columns

AFS Product Code	Application	Composition
LW200D LW262D	A building element or wall section serving as a loadbearing element	200mm or 262mm AFS Logicwall®

Diagram

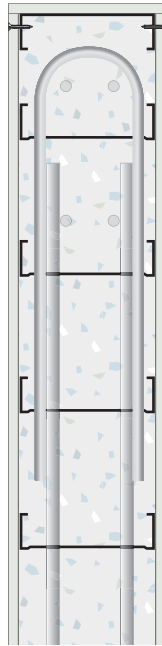


AFS Product Code	Acoustic		Fire (FRL)
	R_w	$R_w + C_{tr}$	
LW200D	58	53	240/240/240
LW262D	62	57	240/240/240

External Blade Walls

AFS Product Code	Application	Composition
LW150 LW162 LW200 LW200D LW262D	External wall serving as an architectural, load bearing blade wall	150mm, 162mm, 200mm or 262mm AFS Logicwall®

Diagram



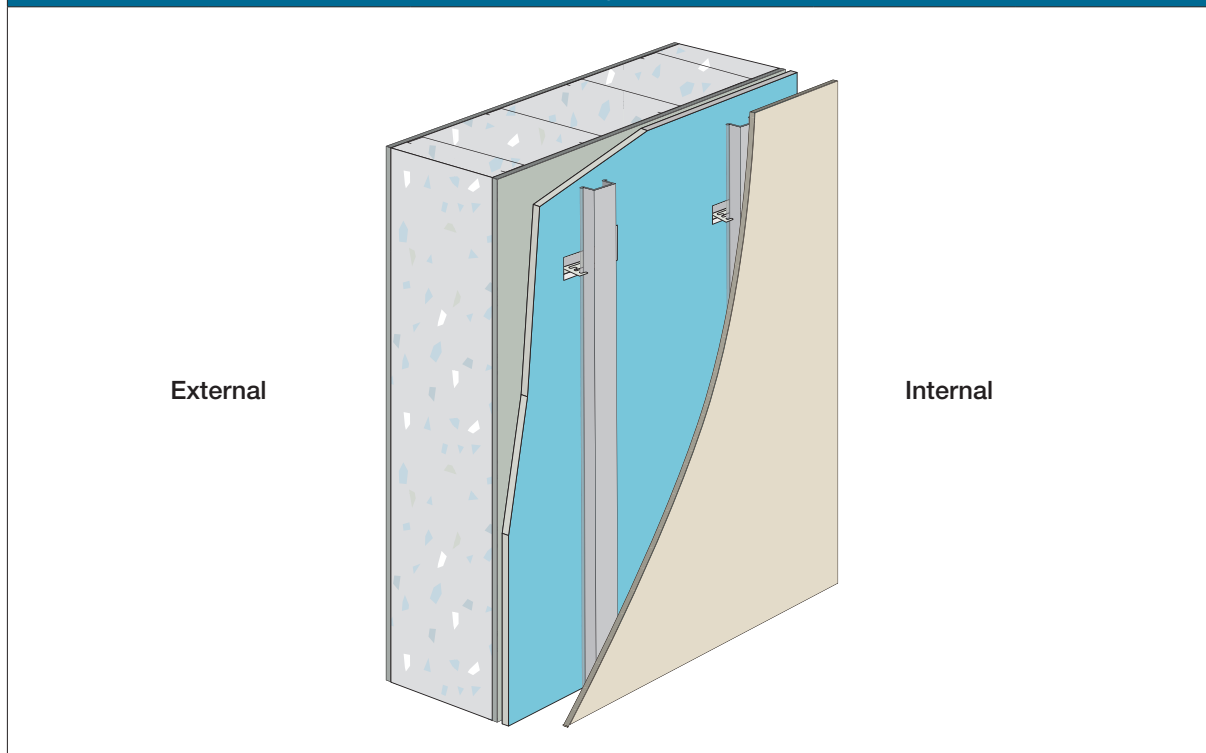
AFS Product Code	Acoustic		Fire
	R_w	$R_w + C_{tr}$	(FRL)
LW150	54	50	240/240/180
LW162	55	50	240/240/240
LW200D	58	53	240/240/240
LW262D	62	57	240/240/240

External Facade Walls

External walls serving as building envelope.

AFS Product Code	Application	Composition
LW120 LW150	External facade walls	120mm or 150mm AFS Logicwall® with 10mm foil board insulation or equivalent furring channel and plaster board

Diagram



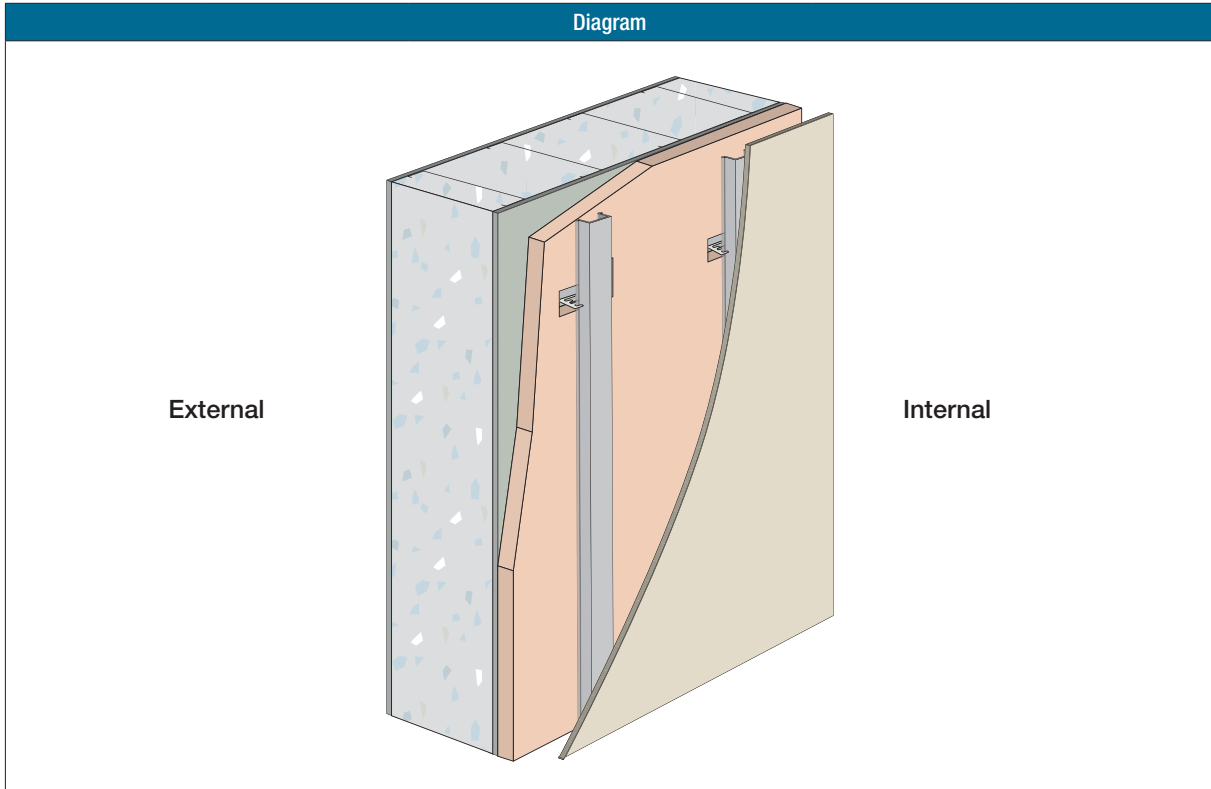
AFS Product Code	Acoustic		Fire (FRL)	Thermal	
	R_w	$R_w + C_{tr}$		$R_{(win)}$	$R_{(sum)}$
LW120	51	43	240/240/180	1.28	1.20
LW150	53	44	240/240/180	1.30	1.23

External Facade Walls (continued)

External walls serving as building envelope.

AFS Product Code	Application	Composition
LW120 LW150	External facade walls	120mm or 150mm AFS Logicwall® with 30mm foil board insulation, furring channel and plasterboard

Diagram

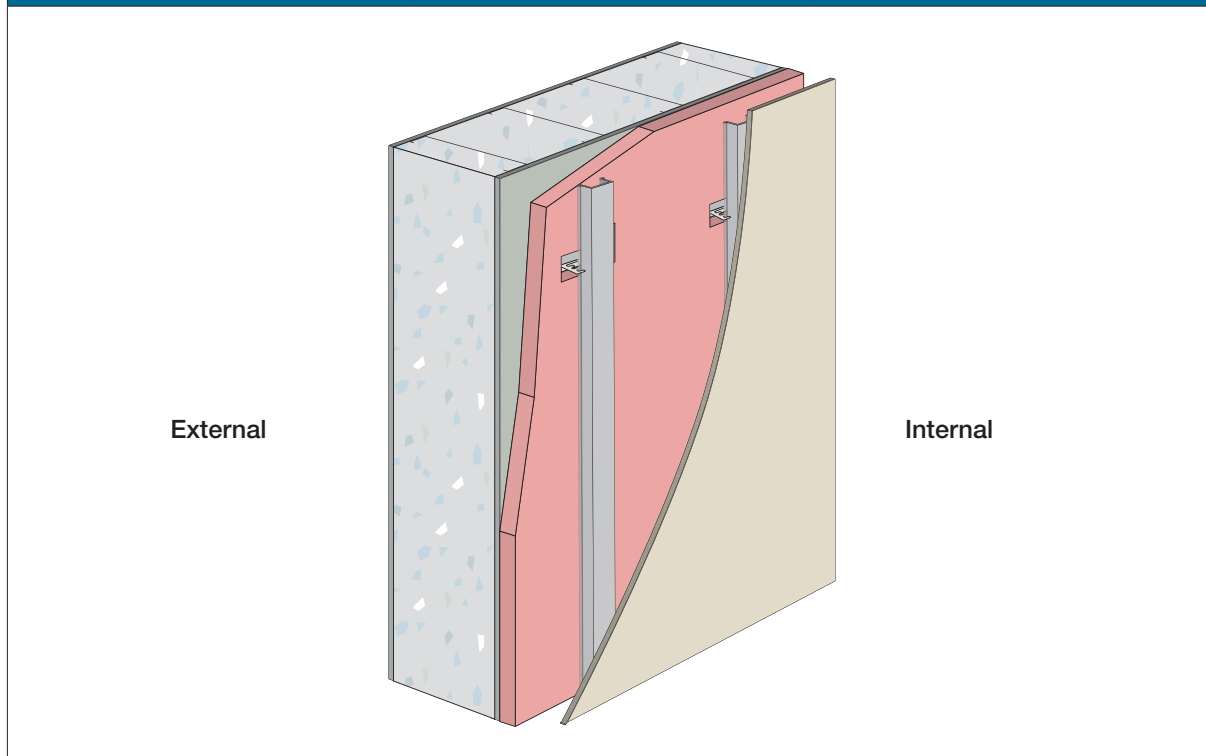


AFS Product Code	Acoustic		Fire (FRL)	Thermal	
	R_w	$R_w + C_{tr}$		$R_{(win)}$	$R_{(sum)}$
LW120	51	43	240/240/180	1.78	1.72
LW150	53	44	240/240/180	1.80	1.74

External Facade Walls (continued)

AFS Product Code	Application	Composition
LW120 LW150	External facade walls	120mm or 150mm AFS Logicwall® with 40mm foil board insulation, furring channel and plasterboard

Diagram

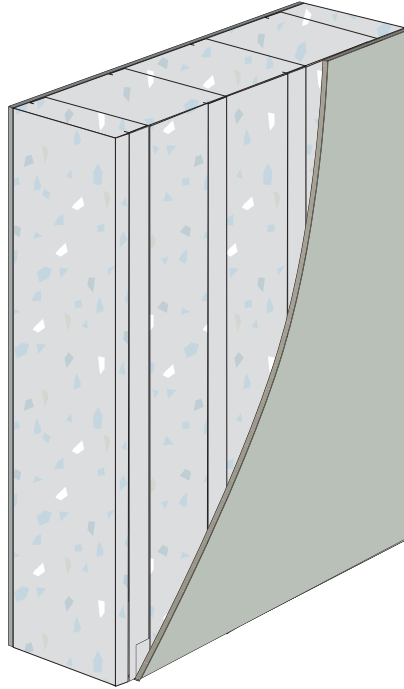


AFS Product Code	Acoustic		Fire	Thermal	
	R_w	$R_w + C_{tr}$	(FRL)	$R_{(win)}$	$R_{(sum)}$
LW120	51	43	240/240/180	2.04	1.96
LW150	53	44	240/240/180	2.06	1.95

Internal Corridor Walls

AFS Product Code	Application	Composition
LW150 LW162	Walls separating sole occupancy units from common areas, lobbies and stair shafts.	150mm or 162mm Logicwall®

Diagram

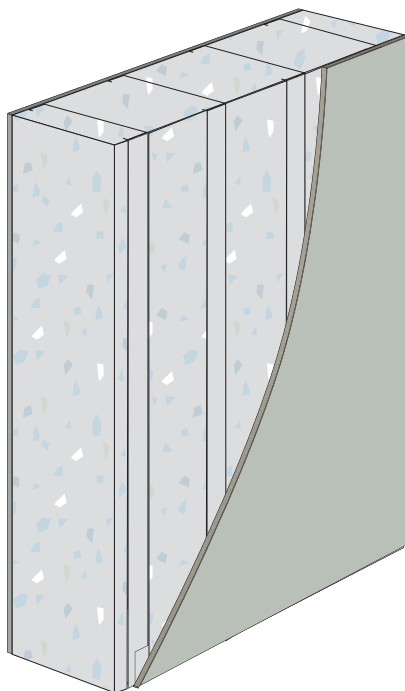


AFS Product Code	Acoustic		Fire
	R_w	$R_w + C_{tr}$	(FRL)
LW150	54	50	240/240/180
LW162	55	50	240/240/240

Internal Partition Walls

AFS Product Code	Application	Composition
LW120 LW150	Load bearing walls within sole occupancy units	120mm or 150mm Logicwall®

Diagram

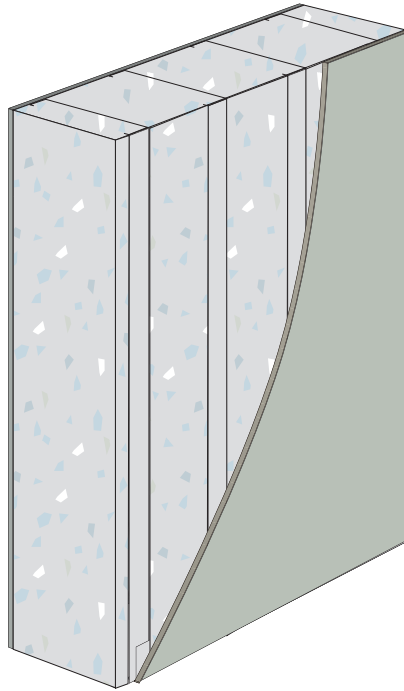


AFS Product Code	Acoustic		Fire
	R_w	$R_w + C_{tr}$	(FRL)
LW120	51	46	240/240/180
LW150	54	50	240/240/180

Internal Party Walls

AFS Product Code	Application	Composition
LW162 LW200 LW200D	Wall separating sole occupancy units - Habitable to Habitable	162mm or 200mm Logicwall®

Diagram

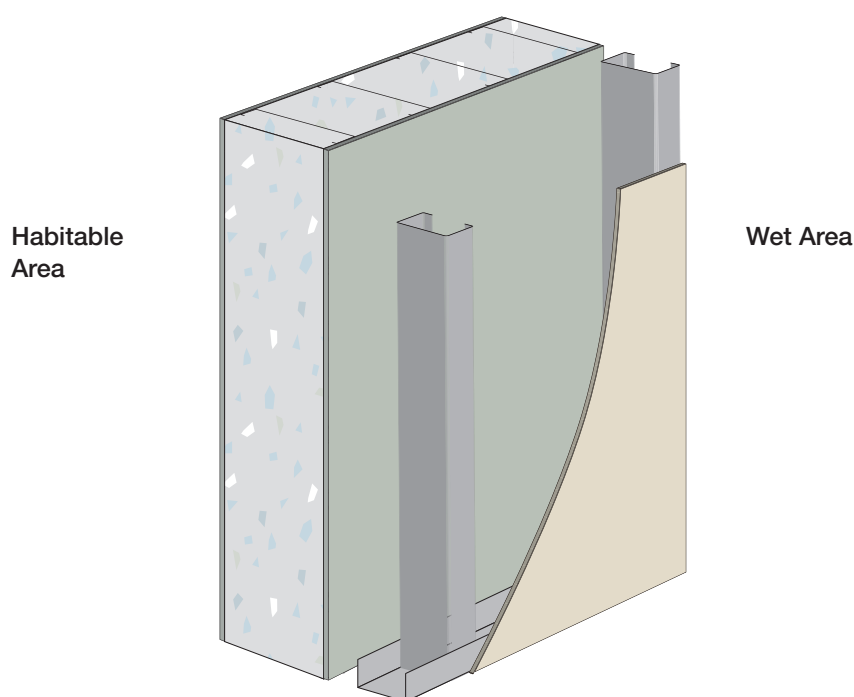


AFS Product Code	Acoustic		Fire
	R_w	$R_w + C_{tr}$	(FRL)
LW162	55	50	240/240/240
LW200D	58	53	240/240/240

Internal Party Walls (continued)

AFS Product Code	Application	Composition
LW150 LW162 LW200 LW200D	Wall separating sole occupancy units - Habitable to Wet Area	150mm, 162mm or 200mm AFS Logicwall® with additional discontinuous wall construction - i.e. 64mm stud wall with 20mm cavity and sheeted with a suitable wet area lining board (not less than 10kg/m ² where there is no insulation in the cavity). Plumbing services must be installed within the discontinuous steel stud frame on wet area side of AFS Logicwall®.

Diagram

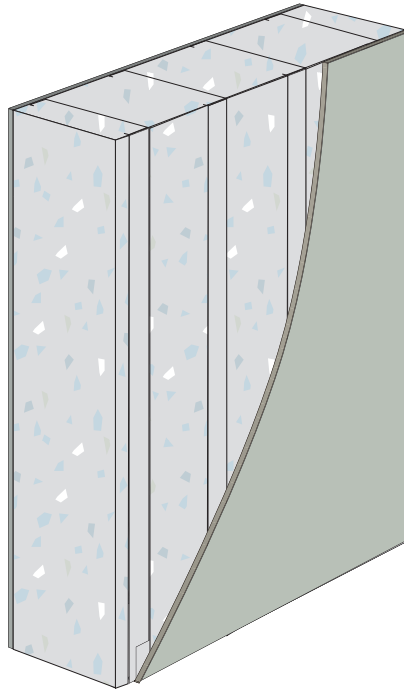


AFS Product Code	Acoustic		Fire
	R_w	$R_w + C_{tr}$	(FRL)
LW150	64	56	240/240/180
LW162	64	56	240/240/240
LW200D	70	62	240/240/240

Internal Party Walls (continued)

AFS Product Code	Application	Composition
LW162 LW200 LW200D	Wall separating sole occupancy units - Wet Area to Wet Area with no services	162mm or 200mm AFS Logicwall®

Diagram

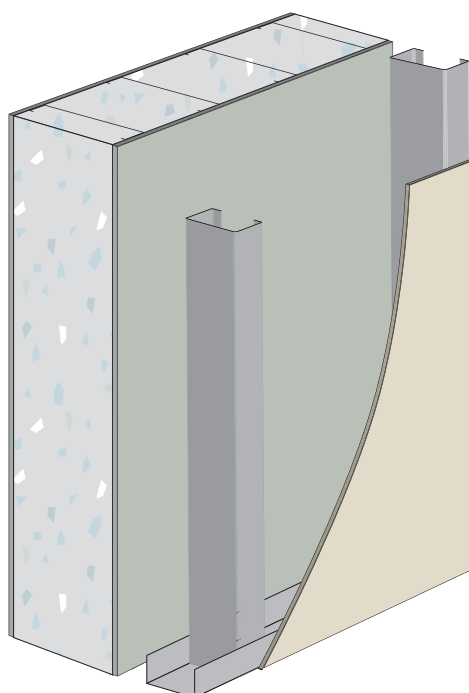


AFS Product Code	Acoustic		Fire
	R_w	$R_w + C_{tr}$	(FRL)
LW162	55	50	240/240/240
LW200D	58	53	240/240/240

Lift Shafts

AFS Product Code	Application	Composition
LW162 LW200 LW200D LW262D	Walls separating lift shafts from sole occupancy units	162mm, 200mm or LW262 AFS Logicwall® with additional discontinuous wall construction - ie. 64mm stud wall with 20mm cavity and sheeted with a suitable lining board (not less than 10kg/m ² where there is no insulation in the cavity).

Diagram



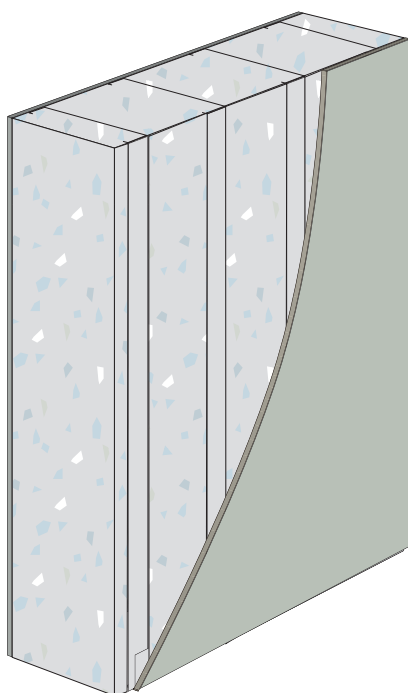
Habitable Area

AFS Product Code	Acoustic		Fire
	R_w	$R_w + C_{tr}$	(FRL)
LW162	64	56	240/240/240
LW200D	70	62	240/240/240
LW262D	71	63	240/240/240

Lift Shafts (continued)

AFS Product Code	Application	Composition
LW150 LW162 LW200 LW200D LW262D	Walls separating lift shafts from common areas and stair shafts	150mm, 162mm, 200mm or 262mm AFS Logicwall®

Diagram

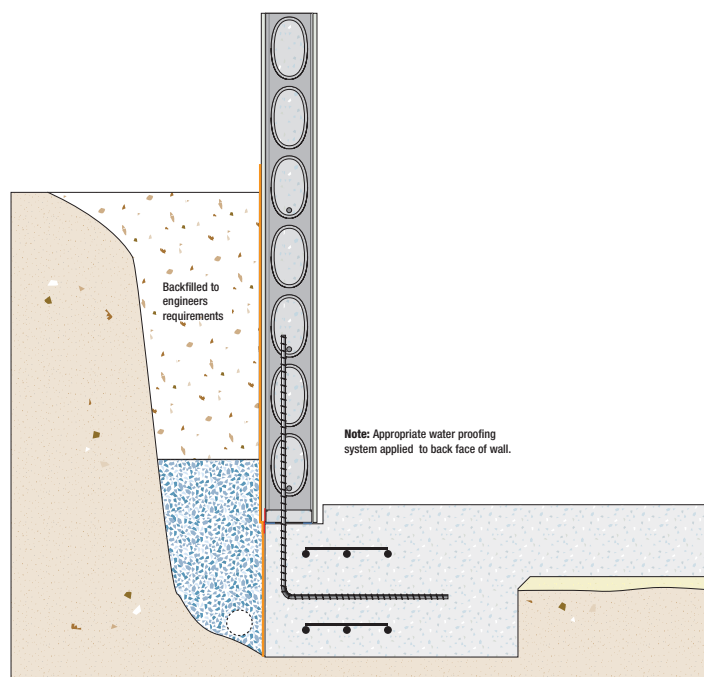


AFS Product Code	Acoustic		Fire
	R_w	$R_w + C_{tr}$	(FRL)
LW150	54	50	240/240/180
LW162	55	50	240/240/240
LW200D	58	53	240/240/240
LW262D	62	57	240/240/240

Retaining Walls and Basement Walls

AFS Product Code	Application	Composition
LW120 LW150 LW162 LW200 LW200D LW262D	A wall serving to retain earth or similar elements e.g - where a deep excavation has occurred or in a basement situation.	120mm, 150mm 162mm, 200mm or 262mm AFS Logicwall®

Diagram



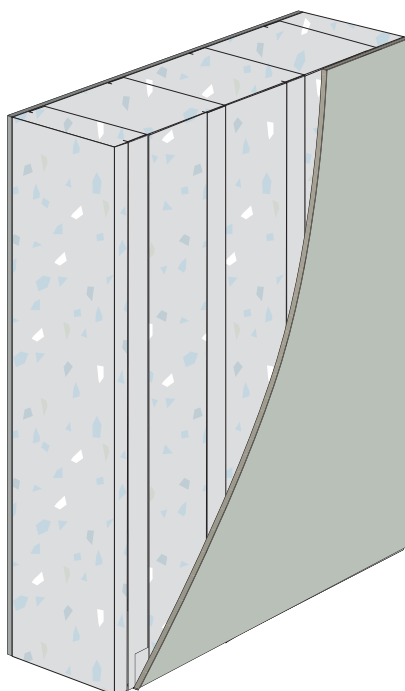
AFS Product Code	Acoustic		Fire
	R_w	$R_w + C_{tr}$	(FRL)
LW120	51	46	240/240/180
LW150	54	50	240/240/180
LW162	55	50	240/240/240
LW200D	58	53	240/240/240
LW262D	62	57	240/240/240

Alternatively basement or retaining walls can be constructed using Rediwall®, another product of AFS.

Service Shafts

AFS Product Code	Application	Composition
LW120 LW150	Walls separating ventilation/ service risers from sole occupancy units or common areas	120mm, 150mm AFS Logicwall®

Diagram

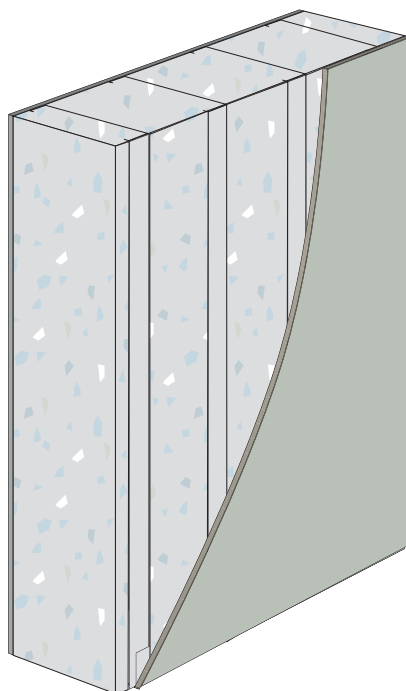


AFS Product Code	Acoustic		Fire
	R_w	$R_w + C_{tr}$	(FRL)
LW120	51	46	240/240/180
LW150	54	50	240/240/180

Stair Shafts

AFS Product Code	Application	Composition
LW150 LW162 LW200 LW200D	Walls separating stair shafts from sole occupancy units or common areas	150mm, 162mm, 200mm AFS Logicwall®

Diagram



AFS Product Code	Acoustic		Fire
	R_w	$R_w + C_{tr}$	(FRL)
LW150	54	50	240/240/180
LW162	55	50	240/240/240
LW200D	58	53	240/240/240