3.3 Internal Timber Framed Walls

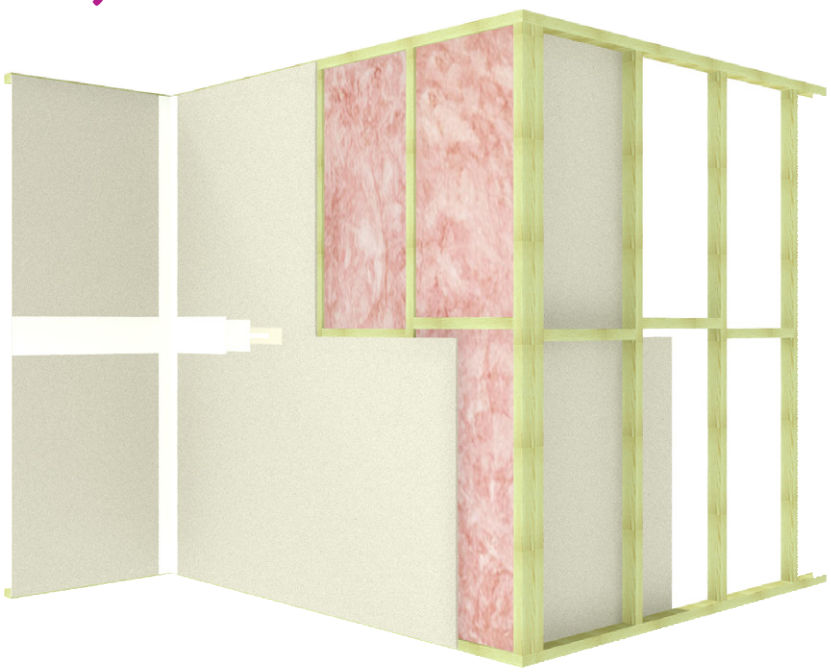
Internal timber walls are a common form of construction for low rise residential and commercial buildings. Applications range from standard residential walls to home theatres and inter-tenancy separation.

This section contains wall systems, installation instructions and construction details for general and fire rated internal timber walls.

For separating wall construction details, refer to Section 3.9.

For Siniat Interhome systems and installation, refer to the latest Interhome manual on the website.

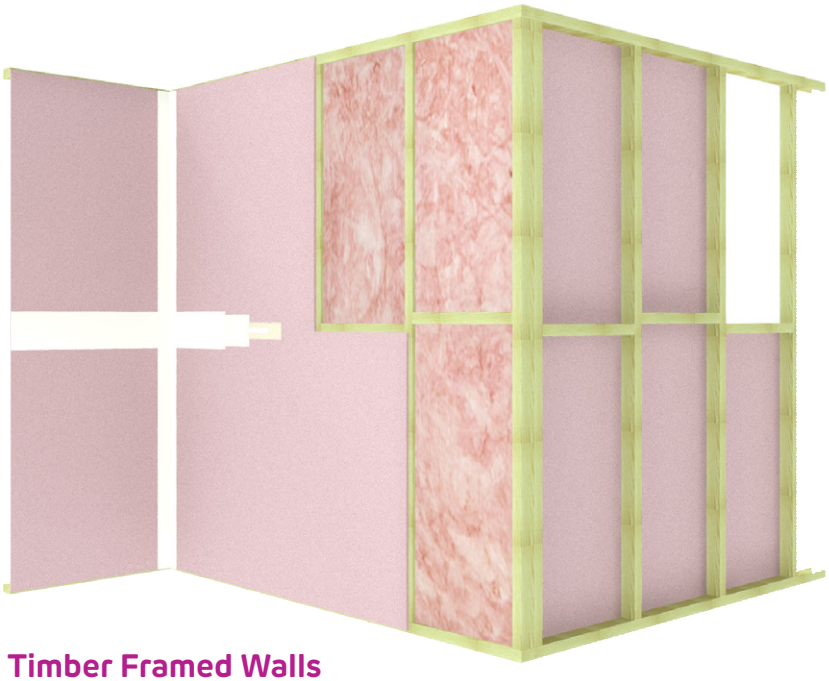
System Directory



Non-fire Rated Internal Timber Framed Walls

System	Side 1	Side 2	Frame	FRL	Acoustics[1]	
					Rw	Rw+Ctr
TSW10	1 x 10mm **masta**shield	1 x 10mm **masta**shield	Stud	-	37	28
TSW11	1 x 10mm **masta**shield	2 x 10mm **masta**shield	Stud	-	41	33
TSW12	2 x 10mm **masta**shield	2 x 10mm **masta**shield	Stud	-	44	36
TSW210	1 x 10mm **sound**shield	1 x 10mm **sound**shield	Stud	-	42	31
TSW211	1 x 10mm **sound**shield	2 x 10mm **sound**shield	Stud	-	44	35
TSW212	2 x 10mm **sound**shield	2 x 10mm **sound**shield	Stud	-	46	39
TSW250	1 x 10mm **sound**shield	1 x 10mm **sound**shield	Stud + Resilient Mounts	-	46	35
TSW251	1 x 10mm **sound**shield	2 x 10mm **sound**shield	Stud + Resilient Mounts	-	51	41
TSW15	1 x 13mm **masta**shield	1 x 13mm **masta**shield	Stud	-	39	30
TSW16	1 x 13mm **masta**shield	2 x 13mm **masta**shield	Stud	-	43	34
TSW17	2 x 13mm **masta**shield	2 x 13mm **masta**shield	Stud	-	46	39
TSW215	1 x 13mm **sound**shield	1 x 13mm **sound**shield	Stud	-	41	33
TSW216	1 x 13mm **sound**shield	2 x 13mm **sound**shield	Stud	-	44	39
TSW217	2 x 13mm **sound**shield	2 x 13mm **sound**shield	Stud	-	47	42
TSW255	1 x 13mm **sound**shield	1 x 13mm **sound**shield	Stud + Resilient Mounts	-	49	41
TSW256	1 x 13mm **sound**shield	2 x 13mm **sound**shield	Stud + Resilient Mounts	-	54	46
TSW20	1 x 10mm **masta**shield	1 x 10mm **masta**shield	Staggered stud	-	41	33
TSW21	1 x 10mm **masta**shield	2 x 10mm **masta**shield	Staggered stud	-	45	36
TSW22	2 x 10mm **masta**shield	2 x 10mm **masta**shield	Staggered stud	-	50	41
TSW220	1 x 10mm **sound**shield	1 x 10mm **sound**shield	Staggered stud	-	43	34
TSW221	1 x 10mm **sound**shield	2 x 10mm **sound**shield	Staggered stud	-	48	40
TSW222	2 x 10mm **sound**shield	2 x 10mm **sound**shield	Staggered stud	-	52	46
TSW25	1 x 13mm **masta**shield	1 x 13mm **masta**shield	Staggered stud	-	43	37
TSW26	1 x 13mm **masta**shield	2 x 13mm **masta**shield	Staggered stud	-	48	40
TSW27	2 x 13mm **masta**shield	2 x 13mm **masta**shield	Staggered stud	-	52	45
TSW225	1 x 13mm **sound**shield	1 x 13mm **sound**shield	Staggered stud	-	47	40
TSW226	1 x 13mm **sound**shield	2 x 13mm **sound**shield	Staggered stud	-	51	45
TSW227	2 x 13mm **sound**shield	2 x 13mm **sound**shield	Staggered stud	-	54	50

1. Acoustic values determined using 70mm timber stud and R1.5 glasswool insulation.



Fire Rated Internal Timber Framed Walls

System	Side 1	Side 2	Frame	Fire Resistance Level		Acoustics[1]	
						Rw	Rw+Ctr
TSW301	2 x 13mm fireshield	-	Stud	-/30/30	30/30/30	34	31
TSW302	3 x 13mm fireshield	-	Stud	-/90/90	90/90/90	37	35
TSW310	1 x 13mm fireshield	1 x 13mm fireshield	Stud	-/60/60	30/30/30	41	32
TSW311	1 x 13mm fireshield	2 x 13mm fireshield	Stud	-/90/90	30/30/30	44	37
TSW312	2 x 13mm fireshield	2 x 13mm fireshield	Stud	-/120/120	90/90/90	47	41
TSW314	3 x 13mm fireshield	3 x 13mm fireshield	Stud	-/180/180	120/120/120	51	45
TSW350	1 x 13mm fireshield	Resilient Mount and 1 x 13mm fireshield	Stud	-/60/60	30/30/30	47	36
TSW352	2 x 13mm fireshield	Resilient Mount and 2 x 13mm fireshield	Stud	-/120/120	90/90/90	56	47
TSW510	1 x 13mm fireshield	1 x 13mm fireshield + 1 x 6mm Duraliner	Stud	-/60/60	30/30/30	44	37
TSW512	1 x 13mm fireshield + 1 x 6mm Duraliner	1 x 13mm fireshield + 1 x 6mm Duraliner	Stud	-/90/90	60/60/60	47	41
TSW304	2 x 16mm fireshield	-	Stud	-/60/60	60/60/60	35	32
TSW305	3 x 16mm fireshield	-	Stud	-/120/120	120/120/120	38	36
TSW315	1 x 16mm fireshield	1 x 16mm fireshield	Stud	-/90/90	60/60/60	41	33
TSW316	1 x 16mm fireshield	2 x 16mm fireshield	Stud	-/120/120	60/60/60	44	39
TSW317	2 x 16mm fireshield	2 x 16mm fireshield	Stud	-/120/120	120/120/120	47	42
TSW319	3 x 16mm fireshield	3 x 16mm fireshield	Stud	-/240/240	120/120/120	51	46
TSW355	1 x 16mm fireshield	Resilient Mount and 1 x 16mm fireshield	Stud	-/90/90	60/60/60	50	41
TSW357	2 x 16mm fireshield	Resilient Mount and 2 x 16mm fireshield	Stud	-/120/120	120/120/120	57	49
TSW514	1 x 16mm fireshield	1 x 16mm fireshield + 1 x 6mm Duraliner	Stud	-/90/90	60/60/60	44	38
TSW516	1 x 16mm fireshield + 1 x 6mm Duraliner	1 x 16mm fireshield + 1 x 6mm Duraliner	Stud	-/120/120	60/60/60	47	42

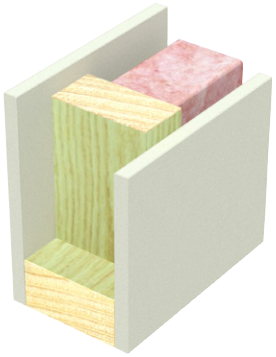
1. Acoustic values determined using 70mm timber stud and R1.5 glasswool insulation.

Fire Rated Internal Timber Framed Walls

System	Side 1	Side 2	Frame[1,2]	Fire Resistance Level		Acoustics[1,2]	
						Rw	Rw+Ctr
TSW330	1 x 13mm fireshield	1 x 13mm fireshield	Double stud	-/60/60	30/30/30	52	42
TSW331	1 x 13mm fireshield	2 x 13mm fireshield	Double stud	-/90/90	30/30/30	57	**50***
TSW332	2 x 13mm fireshield	2 x 13mm fireshield	Double stud	-/120/120	90/90/90	62	**54**
TSW380	1 x 13mm fireshield + 1 x 10mm mastashield	1 x 13mm fireshield + 1 x 10mm mastashield	Double stud	-/90/90	60/60/60	61	**52**
TSW531	2 x 13mm fireshield	1 x 13mm fireshield + 1 x 6mm Duraliner	Double stud	-/90/90	30/30/30	61	**53**
TSW532	1 x 13mm fireshield + 1 x 6mm Duraliner	1 x 13mm fireshield + 1 x 6mm Duraliner	Double stud	-/90/90	60/60/60	61	**52**
TSW335	1 x 16mm fireshield	1 x 16mm fireshield	Double stud	-/90/90	60/60/60	59	**50***
TSW336	1 x 16mm fireshield	2 x 16mm fireshield	Double stud	-/120/120	60/60/60	59	**51**
TSW337	2 x 16mm fireshield	2 x 16mm fireshield	Double stud	-/120/120	120/120/120	64	**56**
TSW381	1 x 16mm fireshield	1 x 16mm fireshield + 1 x 10mm mastashield	Double stud	-/90/90	60/60/60	58	**50***
TSW382	1 x 16mm fireshield + 1 x 10mm mastashield	1 x 16mm fireshield + 1 x 10mm mastashield	Double stud	-/120/120	60/60/60	59	**51**
TSW534	1 x 16mm fireshield	1 x 16mm fireshield + 1 x 6mm Duraliner	Double stud	-/90/90	60/60/60	59	**51***
TSW535	2 x 16mm fireshield	1 x 16mm fireshield + 1 x 6mm Duraliner	Double stud	-/120/120	60/60/60	63	**55**
TSW536	1 x 16mm fireshield + 1 x 6mm Duraliner	1 x 16mm fireshield + 1 x 6mm Duraliner	Double stud	-/120/120	60/60/60	62	**54**
TSW320	1 x 13mm fireshield	1 x 13mm fireshield	Staggered stud	-/60/60	30/30/30	46	40
TSW321	1 x 13mm fireshield	2 x 13mm fireshield	Staggered stud	-/90/90	30/30/30	51	45
TSW322	2 x 13mm fireshield	2 x 13mm fireshield	Staggered stud	-/120/120	90/90/90	54	**50**
TSW520	1 x 13mm fireshield	1 x 13mm fireshield + 1 x 6mm Duraliner	Staggered stud	-/60/60	30/30/30	51	45
TSW522	1 x 13mm fireshield + 1 x 6mm Duraliner	1 x 13mm fireshield + 1 x 6mm Duraliner	Staggered stud	-/90/90	60/60/60	56	**50**
TSW325	1 x 16mm fireshield	1 x 16mm fireshield	Staggered stud	-/90/90	60/60/60	47	42
TSW326	1 x 16mm fireshield	2 x 16mm fireshield	Staggered stud	-/120/120	60/60/60	52	47
TSW327	2 x 16mm fireshield	2 x 16mm fireshield	Staggered stud	-/120/120	120/120/120	55	**51**
TSW524	1 x 16mm fireshield	1 x 16mm fireshield + 1 x 6mm Duraliner	Staggered stud	-/90/90	60/60/60	51	46
TSW526	1 x 16mm fireshield + 1 x 6mm Duraliner	1 x 16mm fireshield + 1 x 6mm Duraliner	Staggered stud	-/120/120	60/60/60	54	**50**

1. Double stud acoustic values determined using 160mm cavity with glasswool insulation.
2. Staggered stud acoustic values determined using 120mm cavity with glasswool insulation.
3. * using 200mm frame cavity

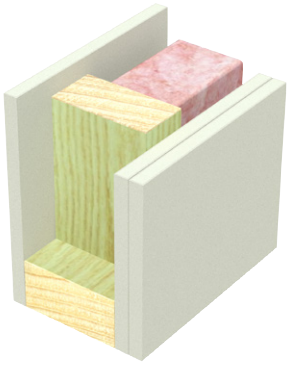
TSW10



- 1 layer of 10mm **masta**shield or **water**shield
- Timber stud framing at maximum 600mm centres
- 1 layer of 10mm **masta**shield or **water**shield

Stud Depth (mm)	Wall Width (mm)	Sound Insulation Rw (Rw + Ctr)				
		No insulation	Pink® Batts Wall R1.5	Pink® Batts Wall R2.0	Polyester R1.5	
70	90	33 (25)	37 (28)	-	37 (28)	Report Day Design 3094-45
90	110	34 (25)	38 (28)	39 (30)	39 (28)	

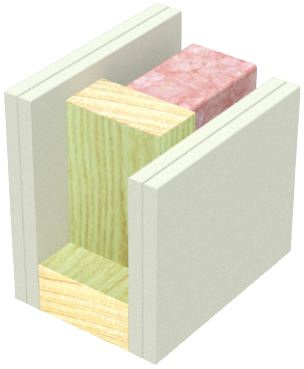
TSW11



- 1 layer of 10mm **masta**shield or **water**shield
- Timber stud framing at maximum 600mm centres
- 2 layers of 10mm **masta**shield or **water**shield

Stud Depth (mm)	Wall Width (mm)	Sound Insulation Rw (Rw + Ctr)				
		No insulation	Pink® Batts Wall R1.5	Pink® Batts Wall R2.0	Polyester R1.5	
70	100	37 (30)	41 (33)	-	41 (33)	Report Day Design 3094-45
90	120	38 (30)	42 (33)	43 (34)	42 (33)	

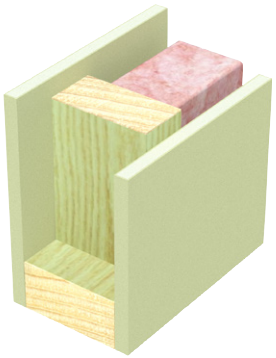
TSW12



- 2 layers of 10mm **masta**shield or **water**shield
- Timber stud framing at maximum 600mm centres
- 2 layers of 10mm **masta**shield or **water**shield

Stud Depth (mm)	Wall Width (mm)	Sound Insulation Rw (Rw + Ctr)				
		No insulation	Pink® Batts Wall R1.5	Pink® Batts Wall R2.0	Polyester R1.5	
70	110	41 (33)	44 (36)	-	44 (36)	Report Day Design 3094-45
90	130	41 (33)	45 (37)	47 (38)	45 (37)	

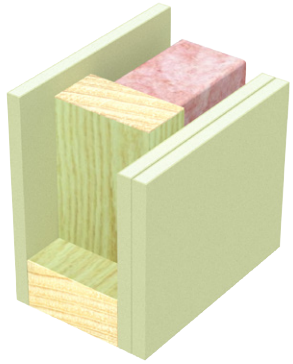
TSW210



- 1 layer of 10mm **sound**shield or **opal**
- Timber stud framing at maximum 600mm centres
- 1 layer of 10mm **sound**shield or **opal**

Stud Depth (mm)	Wall Width (mm)	Sound Insulation Rw (Rw + Ctr)				
		No insulation	Pink® Batts Wall R1.5	Pink® Batts Wall R2.0	Polyester R1.5	
70	90	34 (27)	42 (31)	-	41 (41)	Report Day Design 3094-45
90	110	36 (28)	42 (32)	43 (33)	42 (32)	

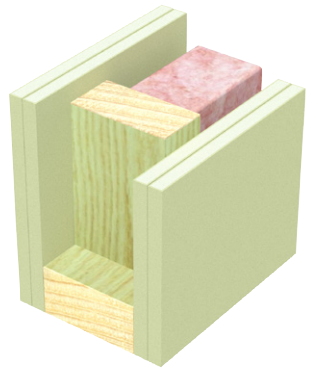
TSW211



- 1 layer of 10mm **sound**shield or **opal**
- Timber stud framing at maximum 600mm centres
- 2 layers of 10mm **sound**shield or **opal**

Stud Depth (mm)	Wall Width (mm)	Sound Insulation Rw (Rw + Ctr)				
		No insulation	Pink® Batts Wall R1.5	Pink® Batts Wall R2.0	Polyester R1.5	
70	100	39 (32)	44 (35)	-	44 (35)	Report Day Design 3094-45
90	120	40 (32)	44 (37)	45 (38)	44 (37)	

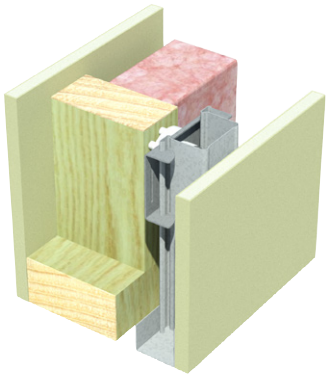
TSW212



- 2 layers of 10mm **sound**shield or **opal**
- Timber stud framing at maximum 600mm centres
- 2 layers of 10mm **sound**shield or **opal**

Stud Depth (mm)	Wall Width (mm)	Sound Insulation Rw (Rw + Ctr)				
		No insulation	Pink® Batts Wall R1.5	Pink® Batts Wall R2.0	Polyester R1.5	
70	110	42 (35)	46 (39)	-	46 (39)	Report Day Design 3094-45
90	110	43 (36)	47 (40)	48 (41)	47 (40)	

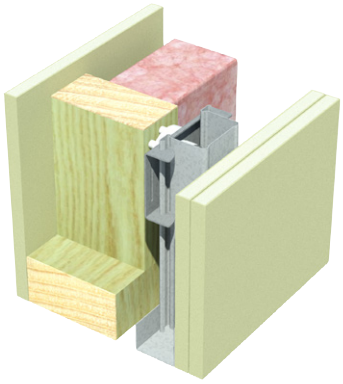
TSW250



- 1 layer of 10mm **sound**shield or **opal**
- Timber stud framing at maximum 600mm centres
- Resilient Mounts and minimum 18mm Furring Channel
- 1 layer of 10mm **sound**shield or **opal**

Stud Depth (mm)	Wall Width (mm)	Sound Insulation Rw (Rw + Ctr)				
		No insulation	Pink® Batts Wall R1.5	Pink® Batts Wall R2.0	Polyester R1.5	
70	127	37 (29)	46 (35)	47 (36)	46 (35)	Report Day Design 3094-45 Note: Impact Sound Resistant
90	147	38 (29)	47 (37)	48 (37)	47 (36)	

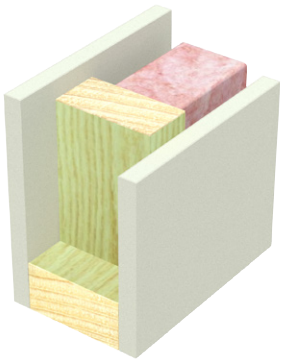
TSW251



- 1 layer of 10mm **sound**shield or **opal**
- Timber stud framing at maximum 600mm centres
- Resilient Mounts and minimum 18mm Furring Channel
- 2 layers of 10mm **sound**shield or **opal**

Stud Depth (mm)	Wall Width (mm)	Sound Insulation Rw (Rw + Ctr)				
		No insulation	Pink® Batts Wall R1.5	Pink® Batts Wall R2.0	Polyester R1.5	
70	137	42 (33)	51 (41)	53 (42)	51 (40)	Report Day Design 3094-45 Note: Impact Sound Resistant
90	157	42 (34)	52 (42)	53 (43)	52 (42)	

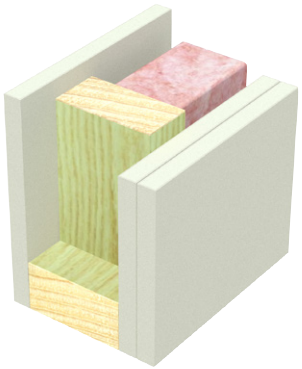
TSW15



- 1 layer of 13mm **masta**shield or **water**shield
- Timber stud framing at maximum 600mm centres
- 1 layer of 13mm **masta**shield or **water**shield

Stud Depth (mm)	Wall Width (mm)	Sound Insulation Rw (Rw + Ctr)				
		No insulation	Pink® Batts Wall R1.5	Pink® Batts Wall R2.0	Polyester R1.5	
70	96	34 (27)	39 (30)	-	39 (30)	Report Day Design 3094-45
90	116	35 (27)	39 (31)	40 (32)	39 (31)	

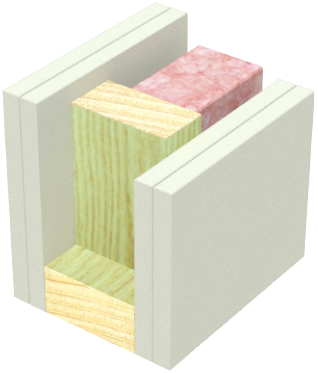
TSW16



- 1 layer of 13mm **masta**shield or **water**shield
- Timber stud framing at maximum 600mm centres
- 2 layers of 13mm **masta**shield or **water**shield

Stud Depth (mm)	Wall Width (mm)	Sound Insulation Rw (Rw + Ctr)				
		No insulation	Pink® Batts Wall R1.5	Pink® Batts Wall R2.0	Polyester R1.5	
70	109	39 (31)	43 (34)	-	43 (34)	Report Day Design 3094-45
90	129	39 (32)	43 (36)	44 (37)	43 (36)	

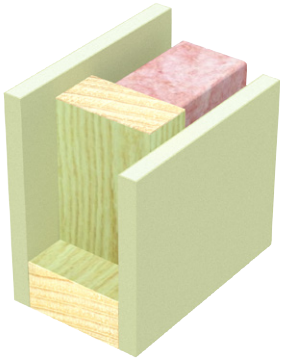
TSW17



- 2 layers of 13mm **masta**shield or **water**shield
- Timber stud framing at maximum 600mm centres
- 2 layers of 13mm **masta**shield or **water**shield

Stud Depth (mm)	Wall Width (mm)	Sound Insulation Rw (Rw + Ctr)				
		No insulation	Pink® Batts Wall R1.5	Pink® Batts Wall R2.0	Polyester R1.5	
70	122	42 (35)	46 (39)	-	46 (39)	Report Day Design 3094-45
90	142	43 (36)	47 (40)	48 (41)	47 (40)	

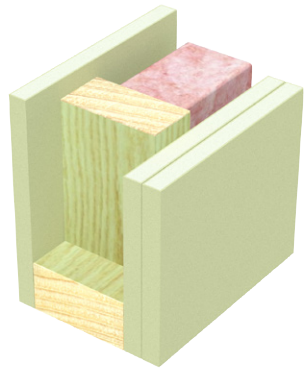
TSW215



- 1 layer of 13mm **sound**shield
- Timber stud framing at maximum 600mm centres
- 1 layer of 13mm **sound**shield

Stud Depth (mm)	Wall Width (mm)	Sound Insulation Rw (Rw + Ctr)				
		No insulation	Pink® Batts Wall R1.5	Pink® Batts Wall R2.0	Polyester R1.5	
70	96	37 (30)	41 (33)	-	41 (33)	Report Day Design 3094-45
90	116	38 (30)	42 (34)	42 (36)	42 (34)	

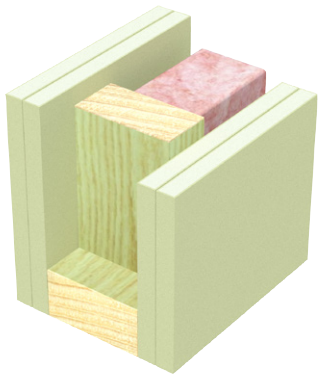
TSW216



- 1 layer of 13mm **sound**shield
- Timber stud framing at maximum 600mm centres
- 2 layers of 13mm **sound**shield

Stud Depth (mm)	Wall Width (mm)	Sound Insulation Rw (Rw + Ctr)				
		No insulation	Pink® Batts Wall R1.5	Pink® Batts Wall R2.0	Polyester R1.5	Report
70	109	42 (34)	44 (39)	-	44 (39)	Day Design 3094-45
90	129	42 (35)	45 (40)	46 (41)	45 (39)	

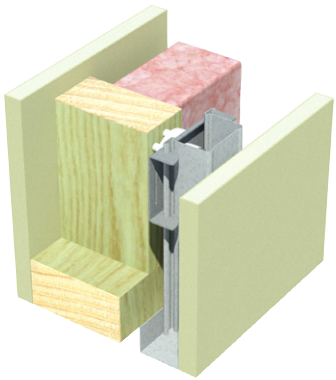
TSW217



- 2 layers of 13mm **sound**shield
- Timber stud framing at maximum 600mm centres
- 2 layers of 13mm **sound**shield

Stud Depth (mm)	Wall Width (mm)	Sound Insulation Rw (Rw + Ctr)				
		No insulation	Pink® Batts Wall R1.5	Pink® Batts Wall R2.0	Polyester R1.5	Report
70	122	45 (39)	47 (42)	-	47 (42)	Day Design 3094-45
90	142	46 (39)	47 (43)	48 (44)	47 (43)	

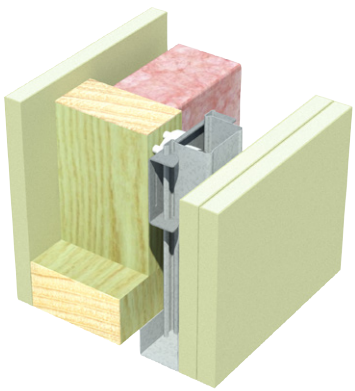
TSW255



- 1 layer of 13mm **sound**shield
- Timber stud framing at maximum 600mm centres
- Resilient Mounts and minimum 18mm Furring Channel
- 1 layer of 13mm **sound**shield

Stud Depth (mm)	Wall Width (mm)	Sound Insulation Rw (Rw + Ctr)				
		No insulation	Pink® Batts Wall R1.5	Pink® Batts Wall R2.0	Polyester R1.5	Report
70	133	41 (32)	49 (41)	51 (42)	49 (40)	Day Design 3094-45 Note: Impact Sound Resistant
90	153	42 (33)	50 (42)	51 (43)	50 (42)	

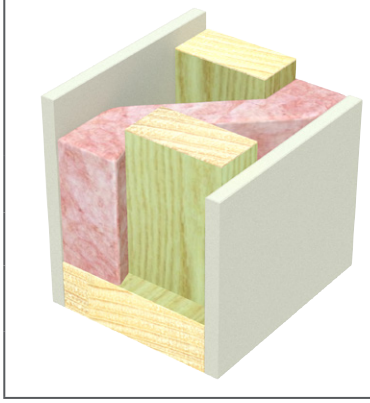
TSW256



- 1 layer of 13mm **sound**shield
- Timber stud framing at maximum 600mm centres
- Resilient Mounts and minimum 18mm Furring Channel
- 2 layers of 13mm **sound**shield

Stud Depth (mm)	Wall Width (mm)	Sound Insulation Rw (Rw + Ctr)				
		No insulation	Pink® Batts Wall R1.5	Pink® Batts Wall R2.0	Polyester R1.5	Report
70	146	46 (37)	54 (46)	55 (47)	54 (46)	Day Design 3094-45 Note: Impact Sound Resistant
90	166	47 (38)	54 (47)	56 (48)	54 (47)	

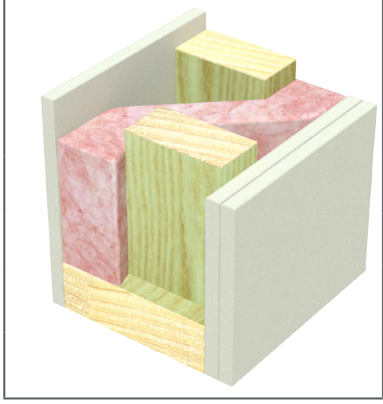
TSW20



- 1 layer of 10mm **masta**shield or **water**shield
- Staggered timber studs at maximum 600mm centres (300mm staggered)
- 1 layer of 10mm **masta**shield or **water**shield

Stud Depth (mm)	Wall Width (mm)	Sound Insulation Rw (Rw + Ctr)				
		No insulation	Pink® Batts Wall R1.5	Pink® Batts Wall R2.0	Polyester R1.5	Report
70 on 90mm plate	110	34 (27)	41 (33)	42 (34)	40 (32)	Day Design 3094-45
90 on 120mm plate	140	35 (29)	42 (33)	43 (34)	42 (32)	Note: Impact Sound Resistant

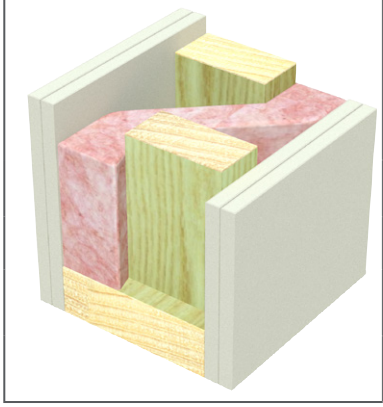
TSW21



- 1 layer of 10mm **masta**shield or **water**shield
- Staggered timber studs at maximum 600mm centres (300mm staggered)
- 2 layers of 10mm **masta**shield or **water**shield

Stud Depth (mm)	Wall Width (mm)	Sound Insulation Rw (Rw + Ctr)				
		No insulation	Pink® Batts Wall R1.5	Pink® Batts Wall R2.0	Polyester R1.5	Report
70 on 90mm plate	120	38 (33)	45 (36)	47 (37)	45 (36)	Day Design 3094-45
90 on 120mm plate	150	38 (33)	47 (38)	48 (39)	47 (38)	Note: Impact Sound Resistant

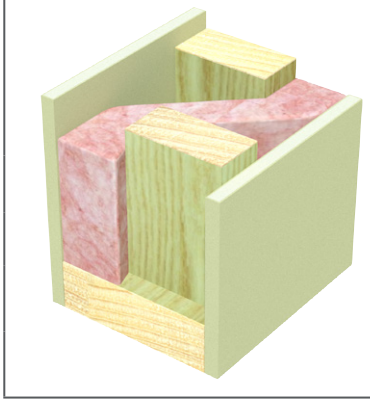
TSW22



- 2 layers of 10mm **masta**shield or **water**shield
- Staggered timber studs at maximum 600mm centres (300mm staggered)
- 2 layers of 10mm **masta**shield or **water**shield

Stud Depth (mm)	Wall Width (mm)	Sound Insulation Rw (Rw + Ctr)				
		No insulation	Pink® Batts Wall R1.5	Pink® Batts Wall R2.0	Polyester R1.5	Report
70 on 90mm plate	130	41 (35)	50 (41)	52 (45)	50 (41)	Day Design 3094-45
90 on 120mm plate	160	42 (36)	51 (44)	53 (45)	51 (43)	Note: Impact Sound Resistant

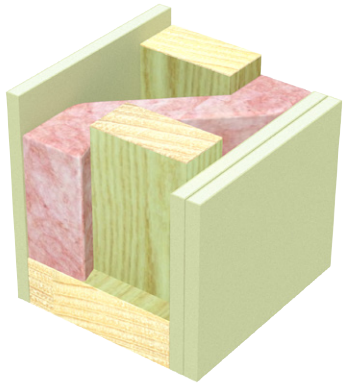
TSW220



- 1 layer of 10mm **sound**shield or **opal**
- Staggered timber studs at maximum 600mm centres (300mm staggered)
- 1 layer of 10mm **sound**shield or **opal**

Stud Depth (mm)	Wall Width (mm)	Sound Insulation Rw (Rw + Ctr)				
		No insulation	Pink® Batts Wall R1.5	Pink® Batts Wall R2.0	Polyester R1.5	Report
70 on 90mm plate	110	36 (29)	43 (34)	45 (36)	43 (34)	Day Design 3094-45
90 on 120mm plate	140	37 (32)	45 (37)	46 (38)	44 (37)	Note: Impact Sound Resistant

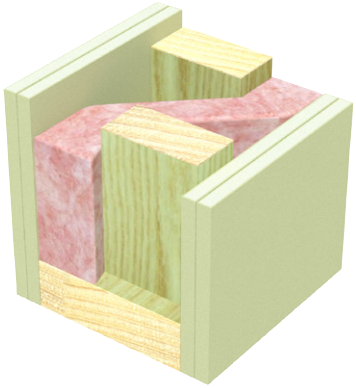
TSW221



- 1 layer of 10mm **sound**shield or **opal**
- Staggered timber studs at maximum 600mm centres (300mm staggered)
- 2 layers of 10mm **sound**shield or **opal**

Stud Depth (mm)	Wall Width (mm)	Sound Insulation Rw (Rw + Ctr)				
		No insulation	Pink® Batts Wall R1.5	Pink® Batts Wall R2.0	Polyester R1.5	Report
70 on 90mm plate	120	40 (36)	48 (40)	50 (41)	48 (40)	Day Design 3094-45
90 on 120mm plate	150	41 (36)	49 (42)	51 (43)	49 (42)	Note: Impact Sound Resistant

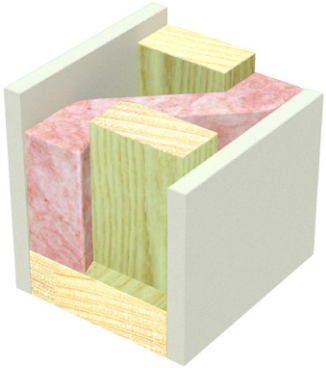
TSW222



- 2 layers of 10mm **sound**shield or **opal**
- Staggered timber studs at maximum 600mm centres (300mm staggered)
- 2 layers of 10mm **sound**shield or **opal**

Stud Depth (mm)	Wall Width (mm)	Sound Insulation Rw (Rw + Ctr)				
		No insulation	Pink® Batts Wall R1.5	Pink® Batts Wall R2.0	Polyester R1.5	Report
70 on 90mm plate	130	44 (38)	52 (46)	54 (47)	52 (45)	Day Design 3094-45
90 on 120mm plate	160	45 (39)	53 (47)	54 (49)	53 (47)	Note: Impact Sound Resistant

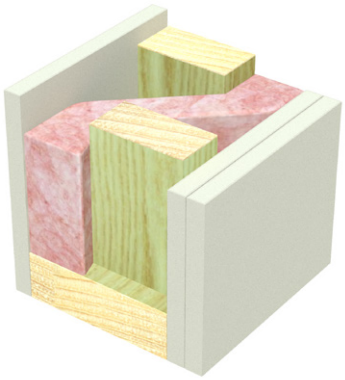
TSW25



- 1 layer of 13mm **masta**shield or **water**shield
- Staggered timber studs at maximum 600mm centres (300mm staggered)
- 1 layer of 13mm **masta**shield or **water**shield

Stud Depth (mm)	Wall Width (mm)	Sound Insulation Rw (Rw + Ctr)				
		No insulation	Pink® Batts Wall R1.5	Pink® Batts Wall R2.0	Polyester R1.5	Report
70 on 90mm plate	116	36 (29)	43 (37)	45 (36)	40 (34)	Day Design 3094-45
90 on 120mm plate	146	37 (32)	45 (37)	46 (38)	44 (36)	Note: Impact Sound Resistant

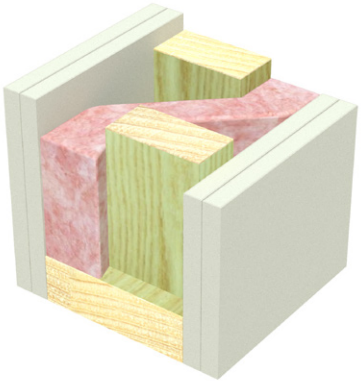
TSW26



- 1 layer of 13mm **masta**shield or **water**shield
- Staggered timber studs at maximum 600mm centres (300mm staggered)
- 2 layers of 13mm **masta**shield or **water**shield

Stud Depth (mm)	Wall Width (mm)	Sound Insulation Rw (Rw + Ctr)				
		No insulation	Pink® Batts Wall R1.5	Pink® Batts Wall R2.0	Polyester R1.5	Report
70 on 90mm plate	129	40 (35)	48 (40)	50 (41)	48 (40)	Day Design 3094-45
90 on 120mm plate	159	41 (35)	49 (42)	51 (43)	49 (42)	Note: Impact Sound Resistant

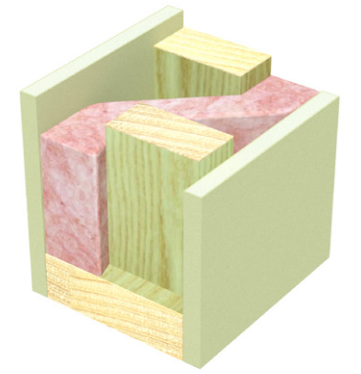
TSW27



- 2 layers of 13mm **masta**shield or **water**shield
- Staggered timber studs at maximum 600mm centres (300mm staggered)
- 2 layers of 13mm **masta**shield or **water**shield

Stud Depth (mm)	Wall Width (mm)	Sound Insulation Rw (Rw + Ctr)				
		No insulation	Pink® Batts Wall R1.5	Pink® Batts Wall R2.0	Polyester R1.5	Report
70 on 90mm plate	142	44 (38)	52 (45)	54 (47)	52 (45)	Day Design 3094-45
90 on 120mm plate	172	45 (39)	53 (47)	54 (49)	53 (47)	Note: Impact Sound Resistant

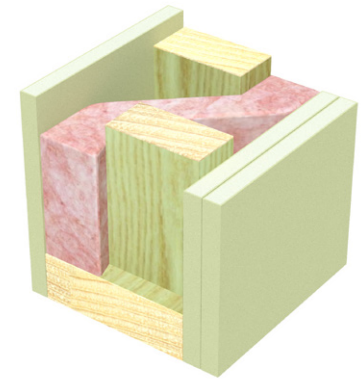
TSW225



- 1 layer of 13mm **sound**shield
- Staggered timber studs at maximum 600mm centres (300mm staggered)
- 1 layer of 13mm **sound**shield

Stud Depth (mm)	Wall Width (mm)	Sound Insulation Rw (Rw + Ctr)				
		No insulation	Pink® Batts Wall R1.5	Pink® Batts Wall R2.0	Polyester R1.5	Report
70 on 90mm plate	116	39 (32)	47 (40)	48 (41)	46 (40)	Day Design 3094-45
90 on 120mm plate	146	41 (35)	47 (42)	49 (43)	47 (42)	Note: Impact Sound Resistant

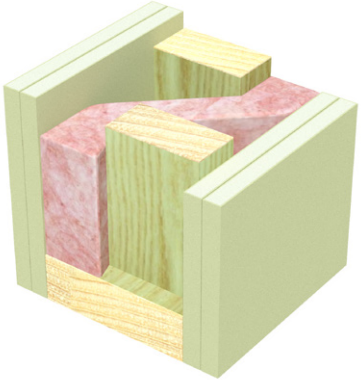
TSW226



- 1 layer of 13mm **sound**shield
- Staggered timber studs at maximum 600mm centres (300mm staggered)
- 2 layers of 13mm **sound**shield

Stud Depth (mm)	Wall Width (mm)	Sound Insulation Rw (Rw + Ctr)				
		No insulation	Pink® Batts Wall R1.5	Pink® Batts Wall R2.0	Polyester R1.5	Report
70 on 90mm plate	129	44 (39)	51 (45)	52 (47)	51 (45)	Day Design 3094-45
90 on 120mm plate	159	45 (39)	52 (47)	53 (48)	51 (47)	Note: Impact Sound Resistant

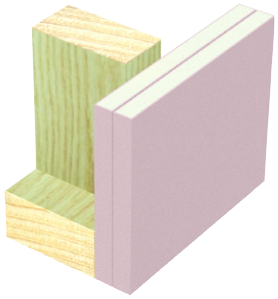
TSW227



- 2 layers of 13mm **sound**shield
- Staggered timber studs at maximum 600mm centres (300mm staggered)
- 2 layers of 13mm **sound**shield

Stud Depth (mm)	Wall Width (mm)	Sound Insulation Rw (Rw + Ctr)				
		No insulation	Pink® Batts Wall R1.5	Pink® Batts Wall R2.0	Polyester R1.5	Report
70 on 90mm plate	142	48 (42)	54 (50)	55 (51)	54 (50)	Day Design 3094-45
90 on 120mm plate	172	50 (43)	55 (51)	56 (52)	55 (51)	Note: Impact Sound Resistant

TSW301



- Timber stud framing at maximum 600mm centres
- 2 layers of 13mm **fire**shield or **multi**shield or **impact**shield or **tru**rock

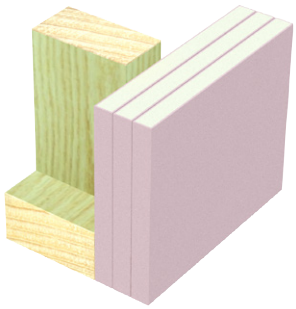
Fire Resistance Level

-/30/30 and **30/30/30** from the lined side only

Report FC14351

Stud Depth (mm)	Wall Width (mm)	Sound Insulation Rw (Rw + Ctr)	
		No insulation	Report
70	96	34 (31)	Day Design 3094-45
90	116	34 (31)	

TSW302



- Timber stud framing at maximum 600mm centres
- 3 layers of 13mm **fire**shield or **multi**shield or **impact**shield or **tru**rock

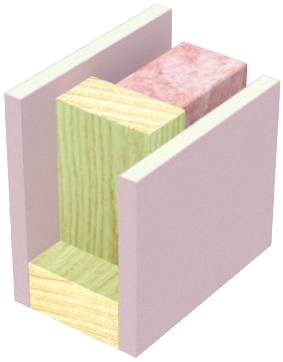
Fire Resistance Level

-/90/90 and **90/90/90** from the lined side only

Report FC14351

Stud Depth (mm)	Wall Width (mm)	Sound Insulation Rw (Rw + Ctr)	
		No insulation	Report
70	109	37 (35)	Day Design 3094-45
90	129	37 (35)	

TSW310



- 1 layer of 13mm **fire**shield or **multi**shield or **impact**shield or **tru**rock
- Timber stud framing at maximum 600mm centres
- 1 layer of 13mm **fire**shield or **multi**shield or **impact**shield or **tru**rock

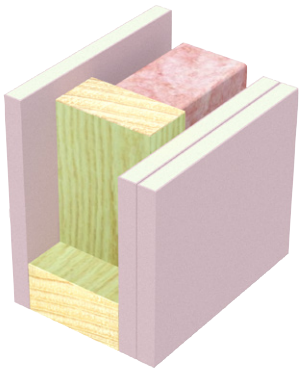
Fire Resistance Level

-/60/60 and **30/30/30** from either side

Report FC14351

Stud Depth (mm)	Wall Width (mm)	Sound Insulation Rw (Rw + Ctr)				
		No insulation	Pink® Batts Wall R1.5	Pink® Batts Wall R2.0	Polyester R1.5	Report
70	96	36 (38)	41 (32)	-	41 (32)	Day Design 3094-45
90	116	37 (29)	41 (33)	42 (34)	41 (33)	

TSW311



- 1 layer of 13mm **fire**shield or **multi**shield or **impact**shield or **tru**rock
- Timber stud framing at maximum 600mm centres
- 2 layers of 13mm **fire**shield or **multi**shield or **impact**shield or **tru**rock

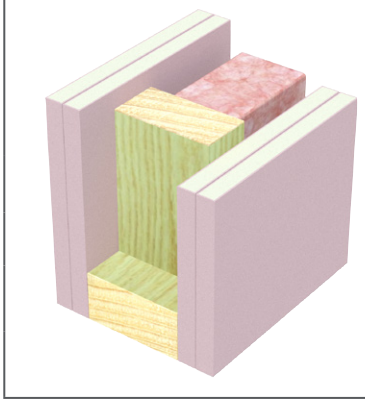
Fire Resistance Level

-/90/90 and **30/30/30** from either side

Report FC14351

Stud Depth (mm)	Wall Width (mm)	Sound Insulation Rw (Rw + Ctr)				
		No insulation	Pink® Batts Wall R1.5	Pink® Batts Wall R2.0	Polyester R1.5	Report
70	109	40 (34)	44 (37)	-	44 (37)	Day Design 3094-45
90	129	41 (34)	44 (38)	45 (39)	44 (38)	

TSW312



- 2 layers of 13mm **fire**shield or **multi**shield or **impact**shield or **tru**rock
- Timber stud framing at maximum 600mm centres
- 2 layers of 13mm **fire**shield or **multi**shield or **impact**shield or **tru**rock

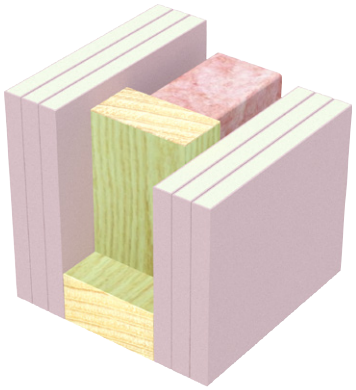
Fire Resistance Level

-/120/120 and **90/90/90** from either side

Report FC14351

Stud Depth (mm)	Wall Width (mm)	Sound Insulation Rw (Rw + Ctr)				
		No insulation	Pink® Batts Wall R1.5	Pink® Batts Wall R2.0	Polyester R1.5	
70	122	44 (37)	47 (41)	-	47 (41)	Report Day Design 3094-45
90	142	45 (38)	47 (42)	48 (43)	47 (42)	

TSW314



- 3 layers of 13mm **fire**shield or **multi**shield or **impact**shield or **tru**rock
- Timber stud framing at maximum 600mm centres
- 3 layers of 13mm **fire**shield or **multi**shield or **impact**shield or **tru**rock

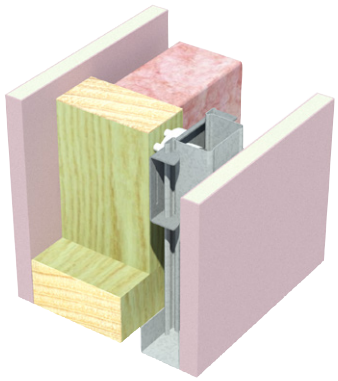
Fire Resistance Level

-/180/180 and **120/120/120** from either side

Report FC14351

Stud Depth (mm)	Wall Width (mm)	Sound Insulation Rw (Rw + Ctr)				
		No insulation	Pink® Batts Wall R1.5	Pink® Batts Wall R2.0	Polyester R1.5	
70	148	49 (42)	51 (45)	-	51 (46)	Report Day Design 3094-50
90	168	50 (43)	51 (47)	52 (48)	51 (47)	

TSW350



- 1 layer of 13mm **fire**shield or **multi**shield or **impact**shield or **tru**rock
- Timber stud framing at maximum 600mm centres
- Resilient Mounts and minimum 18mm Furring Channel
- 1 layer of 13mm **fire**shield or **multi**shield or **impact**shield or **tru**rock

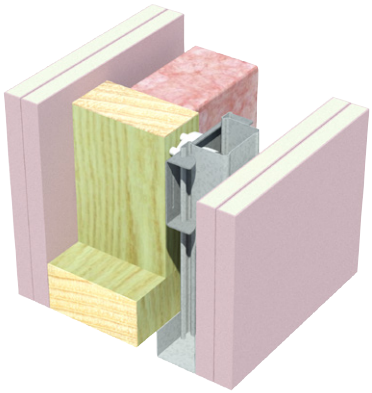
Fire Resistance Level

-/60/60 and **30/30/30** from either side

Report FC14351

Stud Depth (mm)	Wall Width (mm)	Sound Insulation Rw (Rw + Ctr)				
		No insulation	Pink® Batts Wall R1.5	Pink® Batts Wall R2.0	Polyester R1.5	
70	133	37 (29)	47 (36)	47 (36)	46 (36)	Report Day Design 3094-50 Note: Impact Sound Resistant
90	153	38 (31)	48 (36)	48 (36)	47 (36)	

TSW352



- 2 layers of 13mm **fire**shield or **multi**shield or **impact**shield or **tru**rock
- Timber stud framing at maximum 600mm centres
- Resilient Mounts and minimum 18mm Furring Channel
- 2 layers of 13mm **fire**shield or **multi**shield or **impact**shield or **tru**rock

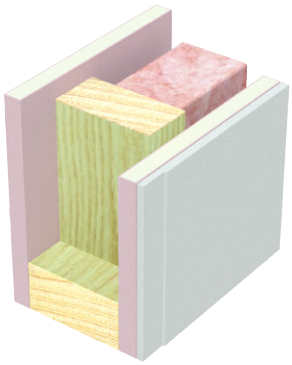
Fire Resistance Level

-/120/120 and **90/90/90** from either side

Report FC14351

Stud Depth (mm)	Wall Width (mm)	Sound Insulation Rw (Rw + Ctr)				
		No insulation	Pink® Batts Wall R1.5	Pink® Batts Wall R2.0	Polyester R1.5	
70	159	48 (38)	56 (47)	57 (48)	56 (47)	Report Day Design 3094-45 [1]TL554-6 Note: Impact Sound Resistant
90	179	49 (40)	56 (48)	58 (**51**)[1]	56 (48)	

TSW510



- 1 layer of 13mm **fire**shield or **multi**shield or **impact**shield or **tru**rock
- Timber stud framing at maximum 600mm centres
- 1 layer of 13mm **fire**shield or **multi**shield or **impact**shield or **tru**rock + 1 layer of 6mm Duraliner

The order of wall linings can be reversed

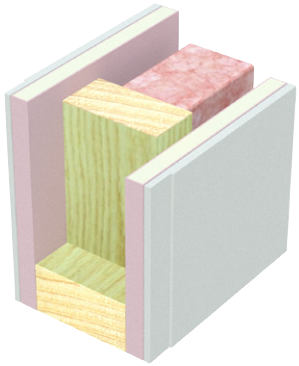
Fire Resistance Level

-/60/60 and **30/30/30** from either side

Report FC14351

Stud Depth (mm)	Wall Width (mm)	Sound Insulation Rw (Rw + Ctr)				
		No insulation	Pink® Batts Wall R1.5	Pink® Batts Wall R2.0	Polyester R1.5	
70	102	40 (33)	44 (37)	-	44 (36)	Report Day Design 3094-45
90	122	41 (33)	44 (38)	45 (39)	44 (38)	

TSW512



- 1 layer of 13mm **fire**shield or **multi**shield or **impact**shield or **tru**rock + 1 layer of 6mm Duraliner
- Timber stud framing at maximum 600mm centres
- 1 layer of 13mm **fire**shield or **multi**shield or **impact**shield or **tru**rock + 1 layer of 6mm Duraliner

The order of wall linings can be reversed

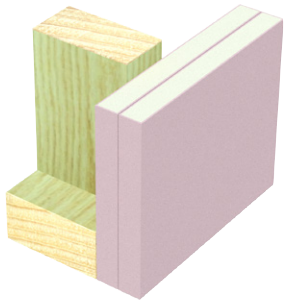
Fire Resistance Level

-/90/90 and **60/60/60** from either side

Report FC14351

Stud Depth (mm)	Wall Width (mm)	Sound Insulation Rw (Rw + Ctr)				
		No insulation	Pink® Batts Wall R1.5	Pink® Batts Wall R2.0	Polyester R1.5	
70	108	44 (36)	47 (41)	-	47 (41)	Report Day Design 3094-45
90	128	44 (37)	48 (42)	49 (43)	48 (42)	

TSW304



- Timber stud framing at maximum 600mm centres
- 2 layers of 16mm **fire**shield or **multi**shield or **tru**rock

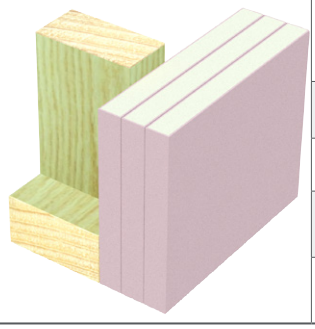
Fire Resistance Level

-/60/60 and **60/60/60**
from the lined side only

Report
FC14351

Stud Depth (mm)	Wall Width (mm)	Sound Insulation Rw (Rw + Ctr)	
		No insulation	Report Day Design 3094-45
70	102	35 (32)	
90	122	35 (32)	

TSW305



- Timber stud framing at maximum 600mm centres
- 3 layers of 16mm **fire**shield or **multi**shield or **tru**rock

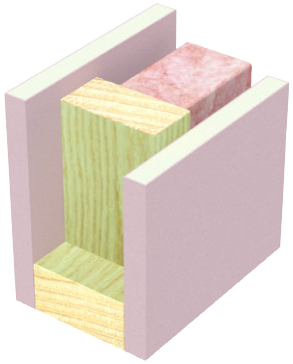
Fire Resistance Level

-/120/120 and **120/120/120**
from the lined side only

Report
FC14351

Stud Depth (mm)	Wall Width (mm)	Sound Insulation Rw (Rw + Ctr)	
		No insulation	Report Day Design 3094-45
70	118	38 (36)	
90	138	38 (36)	

TSW315



- 1 layer of 16mm **fire**shield or **multi**shield or **tru**rock
- Timber stud framing at maximum 600mm centres
- 1 layer of 16mm **fire**shield or **multi**shield or **tru**rock

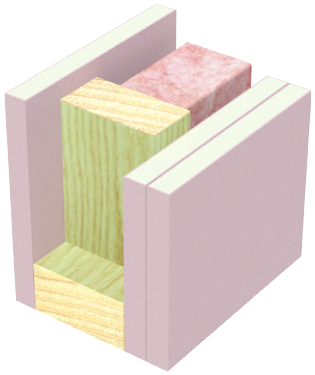
Fire Resistance Level

-/90/90 and **60/60/60**
from either side

Report
FC14351

Stud Depth (mm)	Wall Width (mm)	Sound Insulation Rw (Rw + Ctr)				
		No insulation	Pink® Batts Wall R1.5	Pink® Batts Wall R2.0	Polyester R1.5	Report Day Design 3094-45
70	102	38 (30)	41 (33)	-	41 (33)	
90	122	38 (30)	42 (34)	42 (36)	42 (34)	

TSW316



- 1 layer of 16mm **fire**shield or **multi**shield or **tru**rock
- Timber stud framing at maximum 600mm centres
- 2 layers of 16mm **fire**shield or **multi**shield or **tru**rock

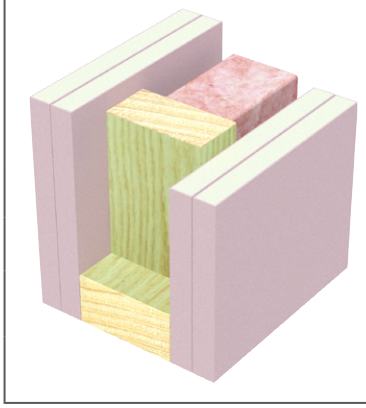
Fire Resistance Level

-/120/120 and **60/60/60**
from either side

Report
FC14351

Stud Depth (mm)	Wall Width (mm)	Sound Insulation Rw (Rw + Ctr)				
		No insulation	Pink® Batts Wall R1.5	Pink® Batts Wall R2.0	Polyester R1.5	Report Day Design 3094-45
70	118	42 (34)	44 (39)	-	44 (39)	
90	138	43 (35)	44 (40)	46 (41)	44 (40)	

TSW317



- 2 layers of 16mm **fire**shield or **multi**shield or **tru**rock
- Timber stud framing at maximum 600mm centres
- 2 layers of 16mm **fire**shield or **multi**shield or **tru**rock

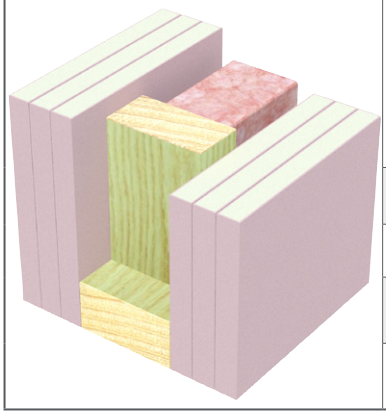
Fire Resistance Level

-/120/120 and **120/120/120** from either side

Report FC14351

Stud Depth (mm)	Wall Width (mm)	Sound Insulation Rw (Rw + Ctr)				
		No insulation	Pink® Batts Wall R1.5	Pink® Batts Wall R2.0	Polyester R1.5	Report
70	134	45 (39)	47 (42)	-	47 (42)	Day Design 3094-45
90	154	46 (39)	47 (43)	48 (44)	47 (43)	

TSW319



- 3 layers of 16mm **fire**shield or **multi**shield or **tru**rock
- Timber stud framing at maximum 600mm centres
- 3 layers of 16mm **fire**shield or **multi**shield or **tru**rock

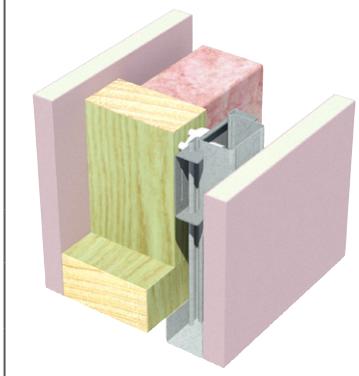
Fire Resistance Level

-/240/240 and **120/120/120** from either side

Report FC14351

Stud Depth (mm)	Wall Width (mm)	Sound Insulation Rw (Rw + Ctr)				
		No insulation	Pink® Batts Wall R1.5	Pink® Batts Wall R2.0	Polyester R1.5	Report
70	166	50 (43)	51 (46)	-	51 (46)	Day Design 3094-50
90	186	50 (44)	51 (47)	52 (48)	51 (47)	

TSW355



- 1 layer of 16mm **fire**shield or **multi**shield or **tru**rock
- Timber stud framing at maximum 600mm centres
- Resilient Mounts and minimum 18mm Furring Channel
- 1 layer of 16mm **fire**shield or **multi**shield or **tru**rock

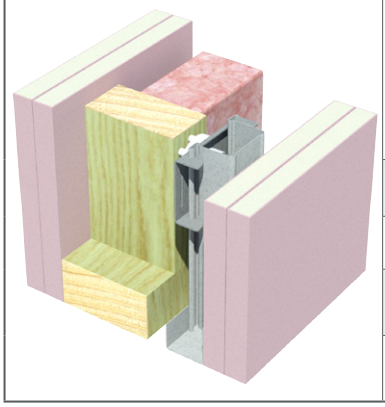
Fire Resistance Level

-/90/90 and **60/60/60** from either side

Report FC14351

Stud Depth (mm)	Wall Width (mm)	Sound Insulation Rw (Rw + Ctr)				
		No insulation	Pink® Batts Wall R1.5	Pink® Batts Wall R2.0	Polyester R1.5	Report
70	139	41 (32)	50 (41)	51 (42)	49 (41)	Day Design 3094-50 Note: Impact Sound Resistant
90	159	42 (33)	50 (42)	51 (43)	50 (42)	

TSW357



- 2 layers of 16mm **fire**shield or **multi**shield or **tru**rock
- Timber stud framing at maximum 600mm centres
- Resilient Mounts and minimum 18mm Furring Channel
- 2 layers of 16mm **fire**shield or **multi**shield or **tru**rock

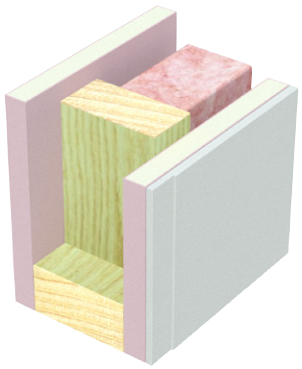
Fire Resistance Level

-/120/120 and **120/120/120** from either side

Report FC14351

Stud Depth (mm)	Wall Width (mm)	Sound Insulation Rw (Rw + Ctr)				
		No insulation	Pink® Batts Wall R1.5	Pink® Batts Wall R2.0	Polyester R1.5	Report
70	171	50 (40)	57 (49)	58 (**50**)	57 (49)	Day Design 3094-45 Note: Impact Sound Resistant
90	191	51 (42)	57 (**50**)	58 (**51**)	57 (**50**)	

TSW514



- 1 layer of 16mm **fire**shield or **multi**shield or **tru**rock
- Timber stud framing at maximum 600mm centres
- 1 layer of 16mm **fire**shield or **multi**shield or **tru**rock + 1 layer of 6mm Duraliner

The order of wall linings can be reversed

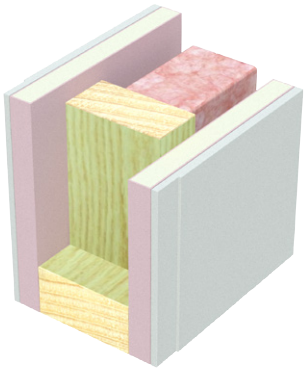
Fire Resistance Level

-/90/90 and **60/60/60** from either side

Report FC14351

Stud Depth (mm)	**Wall Width (mm)**	**Sound Insulation Rw (Rw + Ctr)**				
		No insulation	Pink® Batts Wall R1.5	Pink® Batts Wall R2.0	Polyester R1.5	
70	108	41 (33)	44 (38)	-	44 (38)	Report Day Design 3094-45
90	128	42 (33)	44 (39)	45 (40)	44 (39)	

TSW516



- 1 layer of 16mm **fire**shield or **multi**shield or **tru**rock + 1 layer of 6mm Duraliner
- Timber stud framing at maximum 600mm centres
- 1 layer of 16mm **fire**shield or **multi**shield or **tru**rock + 1 layer of 6mm Duraliner

The order of wall linings can be reversed

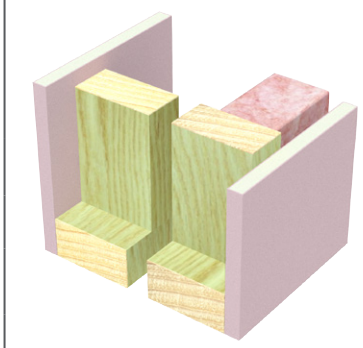
Fire Resistance Level

-/120/120 and **60/60/60** from either side

Report FC14351

Stud Depth (mm)	**Wall Width (mm)**	**Sound Insulation Rw (Rw + Ctr)**				
		No insulation	Pink® Batts Wall R1.5	Pink® Batts Wall R2.0	Polyester R1.5	
70	114	44 (37)	47 (42)	-	47 (42)	Report Day Design 3094-45
90	134	45 (38)	48 (43)	49 (44)	48 (43)	

TSW330



- 1 layer of 13mm **fire**shield or **multi**shield or **impact**shield or **tru**rock
- Timber stud framing at maximum 600mm centres
- Minimum 20mm air gap
- Timber stud framing at maximum 600mm centres
- 1 layer of 13mm **fire**shield or **multi**shield or **impact**shield or **tru**rock

Insulation in one frame only

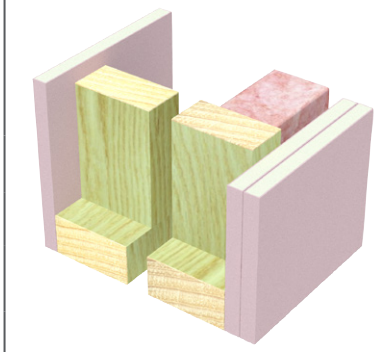
Fire Resistance Level

-/60/60 and **30/30/30** from either side

Report FC14351

Stud Depth (mm)	Wall Width (mm)	Sound Insulation Rw (Rw + Ctr)				
		No insulation	Pink® Batts Wall R1.5	Pink® Batts Wall R2.0	Polyester R1.5	Report
70 160mm cavity	186	43 (37)	52 (42)	53 (43)	51 (42)	Day Design 3094-45 Note: Impact Sound Resistant - Discontinuous Construction
90 200mm cavity	226	45 (38)	52 (44)	54 (44)	52 (43)	

TSW331



- 1 layer of 13mm **fire**shield or **multi**shield or **impact**shield or **tru**rock
- Timber stud framing at maximum 600mm centres
- Minimum 20mm air gap
- Timber stud framing at maximum 600mm centres
- 2 layers of 13mm **fire**shield or **multi**shield or **impact**shield or **tru**rock

Insulation in one frame only

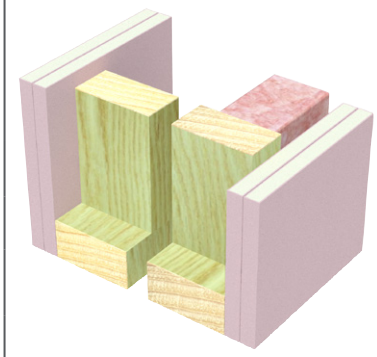
Fire Resistance Level

-/90/90 and **30/30/30** from either side

Report FC14351

Stud Depth (mm)	Wall Width (mm)	Sound Insulation Rw (Rw + Ctr)				
		No insulation	Pink® Batts Wall R1.5	Pink® Batts Wall R2.0	Polyester R1.5	Report
70 160mm cavity	199	48 (41)	57 (48)	58 (49)	56 (48)	Day Design 3094-45 Note: Impact Sound Resistant - Discontinuous Construction
90 200mm cavity	239	50 (42)	57 (**50**)	59 (**50**)	57 (49)	

TSW332



- 2 layers of 13mm **fire**shield or **multi**shield or **impact**shield or **tru**rock
- Timber stud framing at maximum 600mm centres
- Minimum 20mm air gap
- Timber stud framing at maximum 600mm centres
- 2 layers of 13mm **fire**shield or **multi**shield or **impact**shield or **tru**rock

Insulation in one frame only

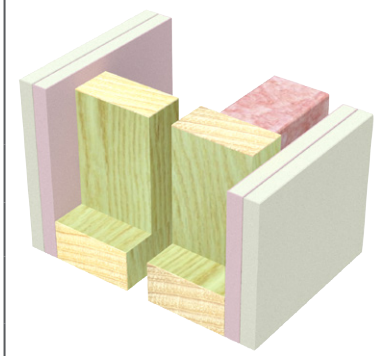
Fire Resistance Level

-/120/120 and **90/90/90** from either side

Report FC14351

Stud Depth (mm)	Wall Width (mm)	Sound Insulation Rw (Rw + Ctr)				
		No insulation	Pink® Batts Wall R1.5	Pink® Batts Wall R2.0	Polyester R1.5	Report
70 160mm cavity	212	53 (45)	62 (**54**)	63 (**55**)[1]	61 (**53**)	Day Design 3094-45 [1]ATF1537 Note: Impact Sound Resistant - Discontinuous Construction
90 200mm cavity	252	55 (46)	62 (**55**)	64 (**55**)	62 (**55**)	

TSW380



- 1 layer of 13mm **fire**shield or **multi**shield or **tru**rock + 1 layer of 13mm **masta**shield or **water**shield
- Timber stud framing at maximum 600mm centres
- Minimum 20mm air gap
- Timber stud framing at maximum 600mm centres
- 1 layer of 13mm **fire**shield or **multi**shield or **tru**rock + 1 layer of 13mm **masta**shield or **water**shield

Insulation in one frame only

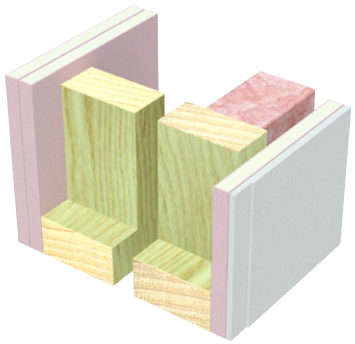
Fire Resistance Level

-/90/90 and **60/60/60** from either side

Report FC14351

Stud Depth (mm)	Wall Width (mm)	Sound Insulation Rw (Rw + Ctr)				
		No insulation	Pink® Batts Wall R1.5	Pink® Batts Wall R2.0	Polyester R1.5	Report
70 160mm cavity	212	52 (44)	61 (**52**)	62 (**53**)	60 (**52**)	Day Design 3094-45 Note: Impact Sound Resistant - Discontinuous Construction
90 200mm cavity	252	53 (45)	61 (**54**)	63 (**54**)	61 (**53**)	

TSW531



- 2 layers of 13mm **fire**shield or **multi**shield or **impact**shield or **tru**rock
- Timber stud framing at maximum 600mm centres
- Minimum 20mm air gap
- Timber stud framing at maximum 600mm centres
- 1 layer of 13mm **fire**shield or **multi**shield or **impact**shield or **tru**rock + 1 layer of 6mm Duraliner

The order of wall linings can be reversed
Insulation in one frame only

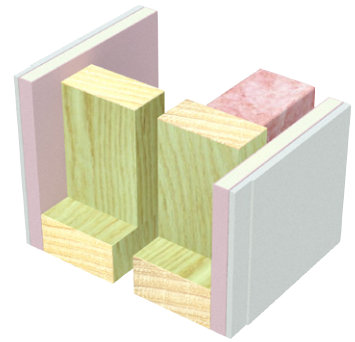
Fire Resistance Level

-/90/90 and **30/30/30** from either side

Report FC14351

Stud Depth (mm)	Wall Width (mm)	Sound Insulation Rw (Rw + Ctr)				
		No insulation	Pink® Batts Wall R1.5	Pink® Batts Wall R2.0	Polyester R1.5	Report
70 160mm cavity	205	53 (45)	61 (**53**)	63 (**54**)	61 (**53**)	Day Design 3094-45 Note: Impact Sound Resistant - Discontinuous Construction
90 200mm cavity	245	54 (45)	62 (**55**)	64 (**55**)	61 (**54**)	

TSW532



- 1 layer of 13mm **fire**shield or **multi**shield or **impact**shield or **tru**rock + 1 layer of 6mm Duraliner
- Timber stud framing at maximum 600mm centres
- Minimum 20mm air gap
- Timber stud framing at maximum 600mm centres
- 1 layer of 13mm **fire**shield or **multi**shield or **impact**shield or **tru**rock + 1 layer of 6mm Duraliner

The order of wall linings can be reversed
Insulation in one frame only

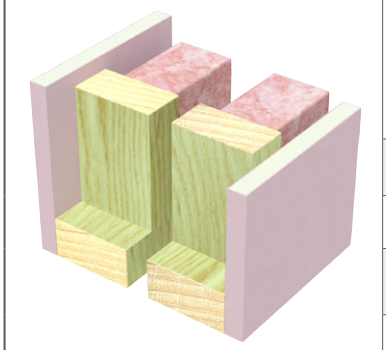
Fire Resistance Level

-/90/90 and **60/60/60** from either side

Report FC14351

Stud Depth (mm)	Wall Width (mm)	Sound Insulation Rw (Rw + Ctr)				
		No insulation	Pink® Batts Wall R1.5	Pink® Batts Wall R2.0	Polyester R1.5	Report
70 160mm cavity	199	52 (44)	61 (**52**)	62 (**53**)	60 (**52**)	Day Design 3094-45 Note: Impact Sound Resistant - Discontinuous Construction
90 200mm cavity	239	53 (45)	61 (**54**)	63 (**54**)	61 (**53**)	

TSW335



- 1 layer of 16mm **fire**shield or **multi**shield or **tru**rock
- Timber stud framing at maximum 600mm centres
- Minimum 20mm air gap
- Timber stud framing at maximum 600mm centres
- 1 layer of 16mm **fire**shield or **multi**shield or **tru**rock

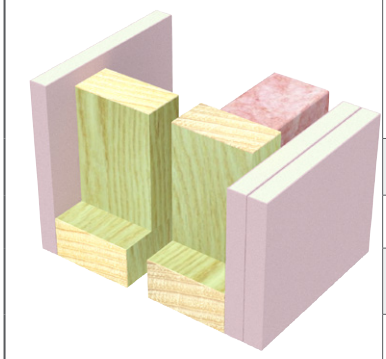
Fire Resistance Level

-/90/90 and **60/60/60** from either side

Report FC14351

Stud Depth (mm)	Wall Width (mm)	Sound Insulation Rw (Rw + Ctr)					
		No insulation	Pink® Batts Wall R1.5	2 x Pink® Batts Wall R1.5	Pink® Batts Wall R2.0	2 x Pink® Batts Wall R2.0	Report
70 160mm cavity	192	46 (39)	54 (45)	58 (48)	55 (45)	59 (49)	Day Design 3094-45 4738-17 Note: Impact Sound Resistant - Discontinuous Construction
90 200mm cavity	232	47 (39)	55 (46)	59 (**50**)	56 (47)	60 (**51**)	

TSW336



- 1 layer of 16mm **fire**shield or **multi**shield or **tru**rock
- Timber stud framing at maximum 600mm centres
- Minimum 20mm air gap
- Timber stud framing at maximum 600mm centres
- 2 layers of 16mm **fire**shield or **multi**shield or **tru**rock

Insulation in one frame only

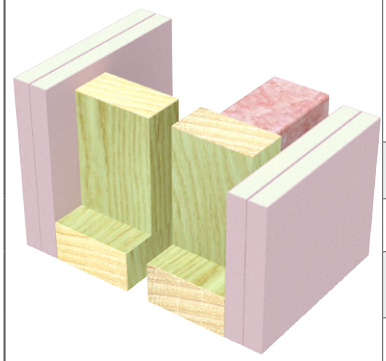
Fire Resistance Level

-/120/120 and **60/60/60** from either side

Report FC14351

Stud Depth (mm)	Wall Width (mm)	Sound Insulation Rw (Rw + Ctr)				
		No insulation	Pink® Batts Wall R1.5	Pink® Batts Wall R2.0	Polyester R1.5	Report
70 160mm cavity	208	51 (43)	59 (**51**)	60 (**51**)	58 (**50**)	Day Design 3094-45 Note: Impact Sound Resistant - Discontinuous Construction
90 200mm cavity	248	52 (44)	60 (**52**)	61 (**53**)	59 (**52**)	

TSW337



- 2 layers of 16mm **fire**shield or **multi**shield or **tru**rock
- Timber stud framing at maximum 600mm centres
- Minimum 20mm air gap
- Timber stud framing at maximum 600mm centres
- 2 layers of 16mm **fire**shield or **multi**shield or **tru**rock

Insulation in one frame only

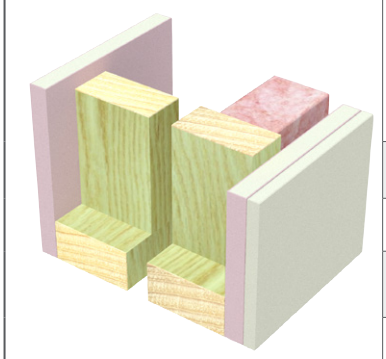
Fire Resistance Level

-/120/120 and **120/120/120** from either side

Report FC14351

Stud Depth (mm)	Wall Width (mm)	Sound Insulation Rw (Rw + Ctr)				
		No insulation	Pink® Batts Wall R1.5	Pink® Batts Wall R2.0	Polyester R1.5	Report
70 160mm cavity	224	56 (47)	64 (**56**)	66 (**57**)	63 (**56**)	Day Design 3094-45 Note: Impact Sound Resistant - Discontinuous Construction
90 200mm cavity	264	57 (48)	65 (**58**)	66 (**59**)	64 (**58**)	

TSW381



- 1 layer of 16mm **fire**shield or **multi**shield or **tru**rock
- Timber stud framing at maximum 600mm centres
- Minimum 20mm air gap
- Timber stud framing at maximum 600mm centres
- 1 layer of 16mm **fire**shield or **multi**shield or **tru**rock plus 1 layer of 10mm **masta**shield or **water**shield

Insulation in one frame only

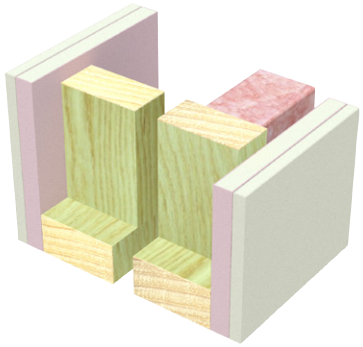
Fire Resistance Level

-/90/90 and **60/60/60** from either side

Report FC14351

Stud Depth (mm)	Wall Width (mm)	Sound Insulation Rw (Rw + Ctr)				
		No insulation	Pink® Batts Wall R1.5	Pink® Batts Wall R2.0	Polyester R1.5	Report
70 160mm cavity	202	49 (41)	57 (48)	58 (49)	56 (48)	Day Design 3094-45 Note: Impact Sound Resistant - Discontinuous Construction
90 200mm cavity	242	50 (42)	58 (**50**)	59 (**51**)	57 (49)	

TSW382



- 1 layer of 16mm **fire**shield or **multi**shield or **tru**rock + 1 layer of 10mm **masta**shield or **water**shield
- Timber stud framing at maximum 600mm centres
- Minimum 20mm air gap
- Timber stud framing at maximum 600mm centres
- 1 layer of 16mm **fire**shield or **multi**shield or **tru**rock + 1 layer of 10mm **masta**shield or **water**shield

Insulation in one frame only

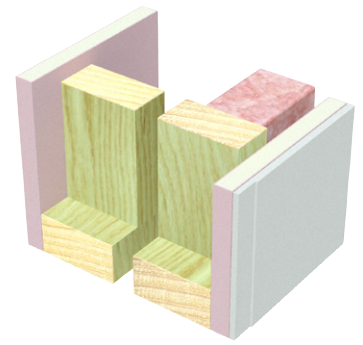
Fire Resistance Level

-/120/120 and **60/60/60** from either side

Report FC14351

Stud Depth (mm)	Wall Width (mm)	Sound Insulation Rw (Rw + Ctr)				
		No insulation	Pink® Batts Wall R1.5	Pink® Batts Wall R2.0	Polyester R1.5	Report
70 160mm cavity	212	51 (43)	59 (**51**)	61 (**52**)	59 (**51**)	Day Design 3094-45 Note: Impact Sound Resistant - Discontinuous Construction
90 200mm cavity	252	53 (44)	60 (**53**)	62 (**54**)	59 (**52**)	

TSW534



- 1 layer of 16mm **fire**shield or **multi**shield or **tru**rock
- Timber stud framing at maximum 600mm centres
- Minimum 20mm air gap
- Timber stud framing at maximum 600mm centres
- 1 layer of 16mm **fire**shield or **multi**shield or **tru**rock + 1 layer of 6mm Duraliner

The order of wall linings can be reversed
Insulation in one frame only

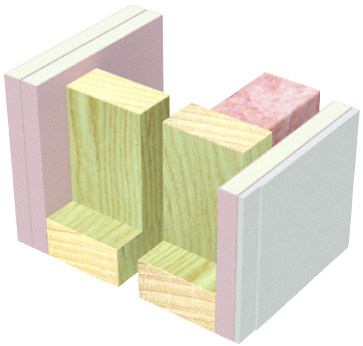
Fire Resistance Level

-/90/90 and **60/60/60** from either side

Report FC14351

Stud Depth (mm)	Wall Width (mm)	Sound Insulation Rw (Rw + Ctr)				
		No insulation	Pink® Batts Wall R1.5	Pink® Batts Wall R2.0	Polyester R1.5	Report
70 160mm cavity	198	50 (42)	58 (49)	60 (**50**)	57 (49)	Day Design 3094-45 Note: Impact Sound Resistant - Discontinuous Construction
90 200mm cavity	238	51 (43)	59 (**51**)	61 (**52**)	58 (**50**)	

TSW535



- 2 layers of 16mm **fire**shield or **multi**shield or **tru**rock
- Timber stud framing at maximum 600mm centres
- Minimum 20mm air gap
- Timber stud framing at maximum 600mm centres
- 1 layer of 16mm **fire**shield or **multi**shield or **tru**rock + 1 layer of 6mm Duraliner

The order of wall linings can be reversed
Insulation in one frame only

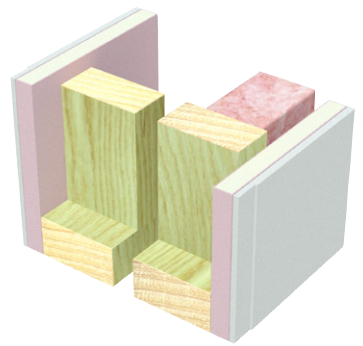
Fire Resistance Level

-/120/120 and **60/60/60** from either side

Report FC14351

Stud Depth (mm)	Wall Width (mm)	Sound Insulation Rw (Rw + Ctr)				
		No insulation	Pink® Batts Wall R1.5	Pink® Batts Wall R2.0	Polyester R1.5	Report
70 160mm cavity	214	55 (46)	63 (**55**)	65 (**56**)	63 (**55**)	Day Design 3094-45 Note: Impact Sound Resistant - Discontinuous Construction
90 200mm cavity	254	56 (47)	64 (**57**)	66 (**58**)	63 (**56**)	

TSW536



- 1 layer of 16mm **fire**shield or **multi**shield or **tru**rock + 1 layer of 6mm Duraliner
- Timber stud framing at maximum 600mm centres
- Minimum 20mm air gap
- Timber stud framing at maximum 600mm centres
- 1 layer of 16mm **fire**shield or **multi**shield or **tru**rock + 1 layer of 6mm Duraliner

The order of wall linings can be reversed
Insulation in one frame only

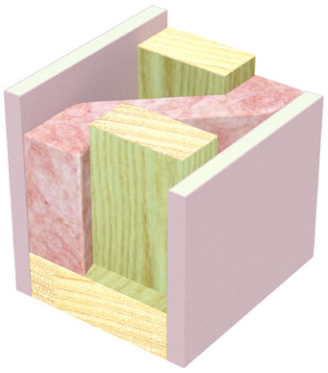
Fire Resistance Level

-/120/120 and **60/60/60** from either side

Report FC14351

Stud Depth (mm)	Wall Width (mm)	Sound Insulation Rw (Rw + Ctr)				
		No insulation	Pink® Batts Wall R1.5	Pink® Batts Wall R2.0	Polyester R1.5	Report
70 160mm cavity	204	54 (45)	62 (**54**)	63 (**54**)	61 (**53**)	Day Design 3094-45 Note: Impact Sound Resistant - Discontinuous Construction
90 200mm cavity	244	55 (46)	62 (**55**)	64 (**56**)	62 (**55**)	

TSW320



- 1 layer of 13mm **fire**shield or **multi**shield or **impact**shield or **tru**rock
- Staggered timber studs at maximum 600mm centres (300mm staggered)
- 1 layer of 13mm **fire**shield or **multi**shield or **impact**shield or **tru**rock

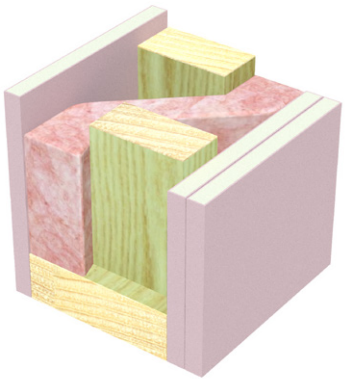
Fire Resistance Level

-/60/60 and **30/30/30** from either side

Report FC14351

Stud Depth (mm)	Wall Width (mm)	Sound Insulation Rw (Rw + Ctr)				
		No insulation	Pink® Batts Wall R1.5	Pink® Batts Wall R2.0	Polyester R1.5	Report
70 on 90mm plate	116	37 (31)	45 (38)	47 (39)	45 (38)	Day Design 3094-45
90 on 120mm plate	146	38 (33)	46 (40)	48 (41)	46 (40)	Note: Impact Sound Resistant

TSW321



- 1 layer of 13mm **fire**shield or **multi**shield or **impact**shield or **tru**rock
- Staggered timber studs at maximum 600mm centres (300mm staggered)
- 2 layers of 13mm **fire**shield or **multi**shield or **impact**shield or **tru**rock

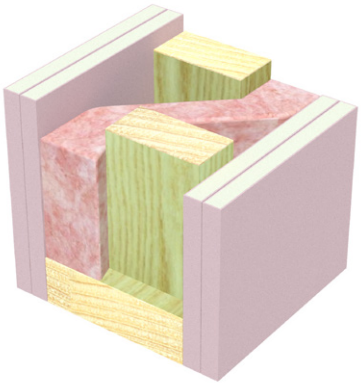
Fire Resistance Level

-/90/90 and **30/30/30** from either side

Report FC14351

Stud Depth (mm)	Wall Width (mm)	Sound Insulation Rw (Rw + Ctr)				
		No insulation	Pink® Batts Wall R1.5	Pink® Batts Wall R2.0	Polyester R1.5	Report
70 on 90mm plate	129	42 (37)	50 (43)	54 (45)	50 (43)	Day Design 3094-45
90 on 120mm plate	159	43 (38)	51 (45)	52 (46)	51 (45)	Note: Impact Sound Resistant

TSW322



- 2 layers of 13mm **fire**shield or **multi**shield or **impact**shield or **tru**rock
- Staggered timber studs at maximum 600mm centres (300mm staggered)
- 2 layers of 13mm **fire**shield or **multi**shield or **impact**shield or **tru**rock

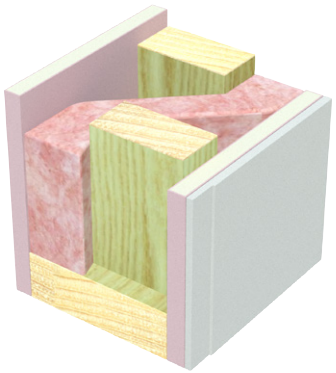
Fire Resistance Level

-/120/120 and **90/90/90** from either side

Report FC14351

Stud Depth (mm)	Wall Width (mm)	Sound Insulation Rw (Rw + Ctr)				
		No insulation	Pink® Batts Wall R1.5	Pink® Batts Wall R2.0	Polyester R1.5	Report
70 on 90mm plate	142	46 (41)	54 (49)	55 (**50**)	54 (48)	Day Design 3094-45
90 on 120mm plate	172	48 (42)	54 (**50**)	55 (**51**)	54 (**50**)	Note: Impact Sound Resistant

TSW520



- 1 layer of 13mm **fire**shield or **multi**shield or **impact**shield or **tru**rock
- Staggered timber studs at maximum 600mm centres (300mm staggered)
- 1 layer of 13mm **fire**shield or **multi**shield or **impact**shield or **tru**rock + 1 layer of 6mm Duraliner

The order of wall linings can be reversed

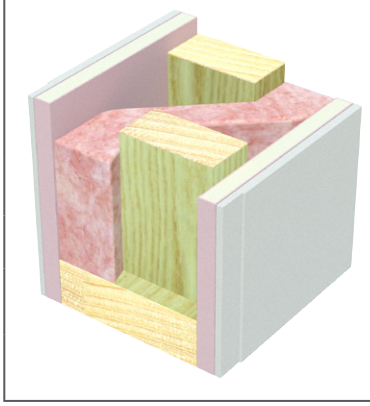
Fire Resistance Level

-/60/60 and **30/30/30** from either side

Report FC14351

Stud Depth (mm)	Wall Width (mm)	Sound Insulation Rw (Rw + Ctr)				
		No insulation	Pink® Batts Wall R1.5	Pink® Batts Wall R2.0	Polyester R1.5	Report
70 on 90mm plate	122	42 (36)	50 (43)	51 (44)	50 (43)	Day Design 3094-45
90 on 120mm plate	152	43 (37)	51 (45)	52 (46)	51 (44)	Note: Impact Sound Resistant

TSW522



- 1 layer of 13mm **fire**shield or **multi**shield or **impact**shield or **tru**rock + 1 layer of 6mm Duraliner
- Staggered timber studs at maximum 600mm centres (300mm staggered)
- 1 layer of 13mm **fire**shield or **multi**shield or **impact**shield or **tru**rock + 1 layer of 6mm Duraliner

The order of wall linings can be reversed

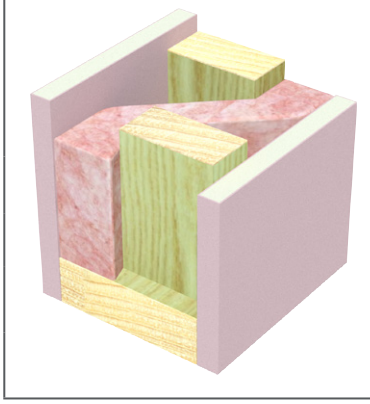
Fire Resistance Level

-/90/90 and **60/60/60** from either side

Report FC14351

Stud Depth (mm)	Wall Width (mm)	Sound Insulation Rw (Rw + Ctr)				
		No insulation	Pink® Batts Wall R1.5	Pink® Batts Wall R2.0	Polyester R1.5	Report
70 on 90mm plate	128	46 (39)	54 (47)	55 (48)	54 (47)	Day Design 3094-45
90 on 120mm plate	158	47 (40)	54 (49)	56 (**50**)	54 (49)	Note: Impact Sound Resistant

TSW325



- 1 layer of 16mm **fire**shield or **multi**shield or **tru**rock
- Staggered timber studs at maximum 600mm centres (300mm staggered)
- 1 layer of 16mm **fire**shield or **multi**shield or **tru**rock

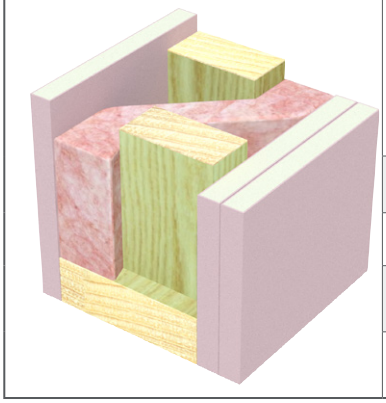
Fire Resistance Level

-/90/90 and **60/60/60** from either side

Report FC14351

Stud Depth (mm)	Wall Width (mm)	Sound Insulation Rw (Rw + Ctr)				
		No insulation	Pink® Batts Wall R1.5	Pink® Batts Wall R2.0	Polyester R1.5	Report
70 on 90mm plate	122	39 (32)	47 (40)	48 (41)	47 (40)	Day Design 3094-45
90 on 120mm plate	152	41 (35)	47 (42)	49 (43)	47 (42)	Note: Impact Sound Resistant

TSW326



- 1 layer of 16mm **fire**shield or **multi**shield or **tru**rock
- Staggered timber studs at maximum 600mm centres (300mm staggered)
- 2 layers of 16mm **fire**shield or **multi**shield or **tru**rock

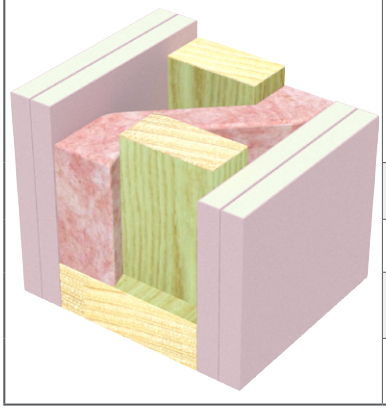
Fire Resistance Level

-/120/120 and **60/60/60** from either side

Report FC14351

Stud Depth (mm)	Wall Width (mm)	Sound Insulation Rw (Rw + Ctr)				
		No insulation	Pink® Batts Wall R1.5	Pink® Batts Wall R2.0	Polyester R1.5	Report
70 on 90mm plate	138	44 (39)	51 (46)	52 (47)	51 (45)	Day Design 3094-45
90 on 120mm plate	168	45 (40)	52 (47)	53 (48)	51 (47)	Note: Impact Sound Resistant

TSW327



- 2 layers of 16mm **fire**shield or **multi**shield or **tru**rock
- Staggered timber studs at maximum 600mm centres (300mm staggered)
- 2 layers of 16mm **fire**shield or **multi**shield or **tru**rock

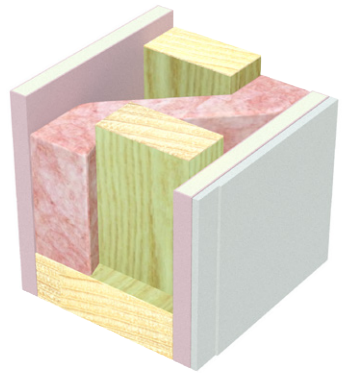
Fire Resistance Level

-/120/120 and **120/120/120** from either side

Report FC14351

Stud Depth (mm)	Wall Width (mm)	Sound Insulation Rw (Rw + Ctr)				
		No insulation	Pink® Batts Wall R1.5	Pink® Batts Wall R2.0	Polyester R1.5	Report
70 on 90mm plate	154	48 (42)	54 (**50**)	55 (**51**)	54 (**50**)	Day Design 3094-45
90 on 120mm plate	184	50 (43)	55 (**51**)	56 (**53**)	55 (**51**)	Note: Impact Sound Resistant

TSW524



- 1 layer of 16mm **fire**shield or **multi**shield or **tru**rock
- Staggered timber studs at maximum 600mm centres (300mm staggered)
- 1 layer of 16mm **fire**shield or **multi**shield or **tru**rock + 1 layer of 6mm Duraliner

The order of wall linings can be reversed

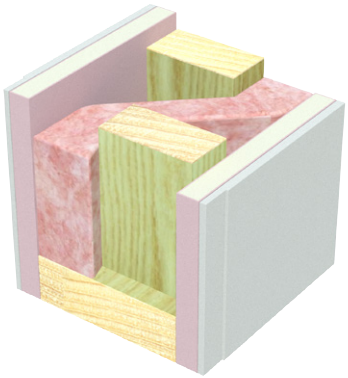
Fire Resistance Level

-/90/90 and **60/60/60** from either side

Report FC14351

Stud Depth (mm)	Wall Width (mm)	Sound Insulation Rw (Rw + Ctr)				
		No insulation	Pink® Batts Wall R1.5	Pink® Batts Wall R2.0	Polyester R1.5	Report
70 on 90mm plate	128	43 (38)	50 (44)	52 (46)	50 (44)	Day Design 3094-45
90 on 120mm plate	158	45 (39)	51 (46)	52 (47)	51 (46)	Note: Impact Sound Resistant

TSW526



- 1 layer of 16mm **fire**shield or **multi**shield or **tru**rock + 1 layer of 6mm Duraliner
- Staggered timber studs at maximum 600mm centres (300mm staggered)
- 1 layer of 16mm **fire**shield or **multi**shield or **tru**rock + 1 layer of 6mm Duraliner

The order of wall linings can be reversed

Fire Resistance Level

-/120/120 and **60/60/60** from either side

Report FC14351

Stud Depth (mm)	Wall Width (mm)	Sound Insulation Rw (Rw + Ctr)				
		No insulation	Pink® Batts Wall R1.5	Pink® Batts Wall R2.0	Polyester R1.5	Report
70 on 90mm plate	134	47 (40)	54 (48)	55 (**50**)	54 (48)	Day Design 3094-45
90 on 120mm plate	164	48 (41)	54 (**50**)	56 (**51**)	54 (**50**)	Note: Impact Sound Resistant

General Requirements

	Non-Fire Rated	Fire Rated
Install control joints in internal timber framed walls: > With plasterboard at 12m maximum intervals > With fibre cement at 7.2m maximum intervals > With tiles at 4.2m maximum intervals (plasterboard or fibre cement) > At all movement joints in the building > At any change in the substrate > At the floor line in stairwells. Cover the gap with a moulding fastened to one edge.	✓	✓
Only joint the face layer. As a minimum, use paper tape with any Siniat jointing compound applied in one or two coats to the thickness of two coats. Alternatively, use **bindex** fire and acoustic sealant according to the Product Data Sheet.		✓
Use approved fire rated penetration details. Fire penetrations may require fire collars or other devices to maintain fire performance.		✓
Load bearing structural steel members in wall cavities have the Structural Adequacy component of the system's Fire Resistance Level.		✓
Wall systems with a Structural Adequacy component to their Fire Resistance Level (eg: 60/60/60) may be built with any steel framing provided it is designed according to the relevant Australian Standards, has a minimum 51mm cavity and maximum 600mm horizontal or vertical framing centres for the fixing of linings. As an example, a wall could be comprised of steel studs and an additional layer of furring channels, with or without resilient mounts.		✓
Use **bindex** fire and acoustic sealant on all gaps and around perimeter.		✓
Attach all fixtures to studs or purpose installed noggings/blocking. Wall anchors must not be fixed only to the plasterboard of fire rated walls.		✓
fireshield may be substituted with **multi**shield, **impact**shield, **tru**rock and **tru**rock HD of the same or greater thickness and maintain fire performance.		✓

For acceptable modifications or variations to fire rated systems, refer to Section 2.3 fire Resistance

Framing

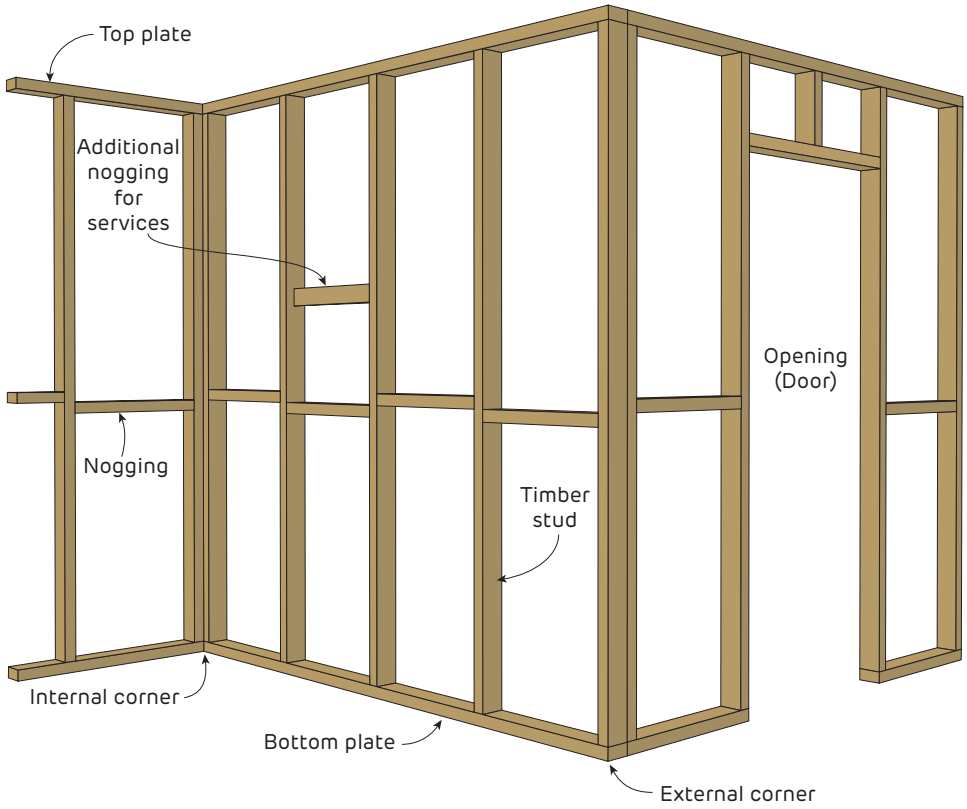


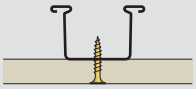
FIGURE 1 Internal Timber Frame Wall Layout

	Non-Fire Rated	Fire Rated
Framing members as per framing table or structural design up to 600mm maximum.	✓	✓
Use minimum 70x45mm or 90x35mm timber studs for load bearing walls.		✓

> Noggings are permitted to assist the fixing of services.
> Plumbing and electrical services must not protrude beyond the face of the studs.

Table 1 Wall Furring Channel Span Table

Refer to Section 2.3 for assistance determining the relevant wind pressures for a specific project.

Furring Channels at 600mm maximum centres						
Wind Region	Ultimate W_u (kPa)	Serviceability W_s (kPa) Deflection limited to Span/360	18mm Furring Channel (FC18)		28mm Furring Channel (FC28)	
			Span (mm)	Anchor Pull-out and Clip Demand (kN)	Span (mm)	Anchor Pull-out and Clip Demand (kN)
REGION A	0.39	0.25	800	0.24	1140	0.32
	0.47	0.3	750	0.27	1070	0.38
	0.54	0.35	710	0.29	1030	0.42
REGION B	0.59	0.25	740	0.33	1010	0.45
	0.71	0.3	710	0.38	960	0.51
	0.83	0.35	680	0.42	920	0.57

1. Table based upon self weight and lateral pressures, intended for internal use only. Other loads such as shelf loads, loads from ceilings, or live loads have not been considered.
2. Table refers to Siniat Furring Channel of Base Metal Thickness (BMT) 0.42mm of grade G550 steel with Zincalume™ AM150 corrosion protection.
3. Framing calculations based upon 2-or-more spans and designed in accordance with *AS/NZS 4600:2018 Cold Formed Steel Structures*.
4. Wind pressures determined in accordance with *AS/NZS 1170.2 Wind Actions*.
5. Connections to clips must be checked with the *Wall Clip Capacity Table*.
6. Ultimate Limit State Load Case 1: 1.2G + Wu
7. Serviceability Limit State Load Case 1: G + Ws, with deflection limited to Span/360.
8. Anchors for head and base tracks at 600mm maximum centres and 100mm maximum from ends with minimum 0.5 kN shear capacity.
9. Clips may need to be spaced at closer intervals for impact applications.
10. Furring channels cannot be spliced, therefore the maximum wall height using furring channels is 6.0m. Maximum production lengths available are 6.0m.
11. The nominated lateral pressures and deflection limits must be checked for suitability for a specific project.

Siniat Internal Wind Load Calculator

Plasterboard Layout

	Non-Fire Rated	Fire Rated
Vertical joints must be 200mm minimum from the edge of any opening such as windows and doorways to minimise cracking at the joints.	✓	✓
Horizontal Layout		
Stagger butt joints in single layer systems by 300mm minimum on adjoining sheets and on opposite sides of the wall.	✓	✓
Stagger butt joints in multilayer systems by 300mm minimum on adjoining sheets and between layers.	✓	✓
First layer butt joints must be backed by a stud or back-blocked.	✓	✓
Stagger recessed edges by 300mm minimum between layers.	✓	✓
Stagger recessed edges in single layer systems by 300mm minimum on opposite sides of the wall or alternatively, back by a nogging.		✓
Vertical Layout		
Stagger butt joints in single layer systems by 300mm minimum on adjoining sheets and on opposite sides of the wall.	✓	✓
Stagger butt joints by 300mm minimum on adjoining sheets and between layers.	✓	✓
First layer butt joints must be backed by a nogging or back-blocked.	✓	
First layer butt joints must be backed by a nogging.		✓
Stagger recessed edges by 300mm minimum between layers.	✓	✓
Stagger recessed edges by 300mm minimum on opposite sides of the wall for single layer systems	✓	✓

> Install plasterboard sheets horizontally when practical to reduce the effect of glancing light.

> Minimise butt joints by using long sheets.

Plasterboard Fixing

	Non-Fire Rated	Fire Rated
Drive screws to just below the sheet surface, taking care not to break the paper linerboard. For over-driven screws, install another screw 20mm away. Leave or remove the over-driven screw and patch.	✓	✓
Laminating screws can be used to fix butt joints in the second and third layer.	✓	✓
Fastener and Adhesive Method		
Apply masta**grip** Stud Adhesive after the frame is clean, dry, and free from grease, dust and other contaminants.	✓	
Apply masta**grip** daubs 200mm minimum from screws and plasterboard edges.	✓	
Fastener Only Method		
Use the 'Screw Only Method' in tiled or fire rated areas.	✓	✓

The 'Fastener and Adhesive Method' is recommended for non-fire rated applications. masta**grip** will:

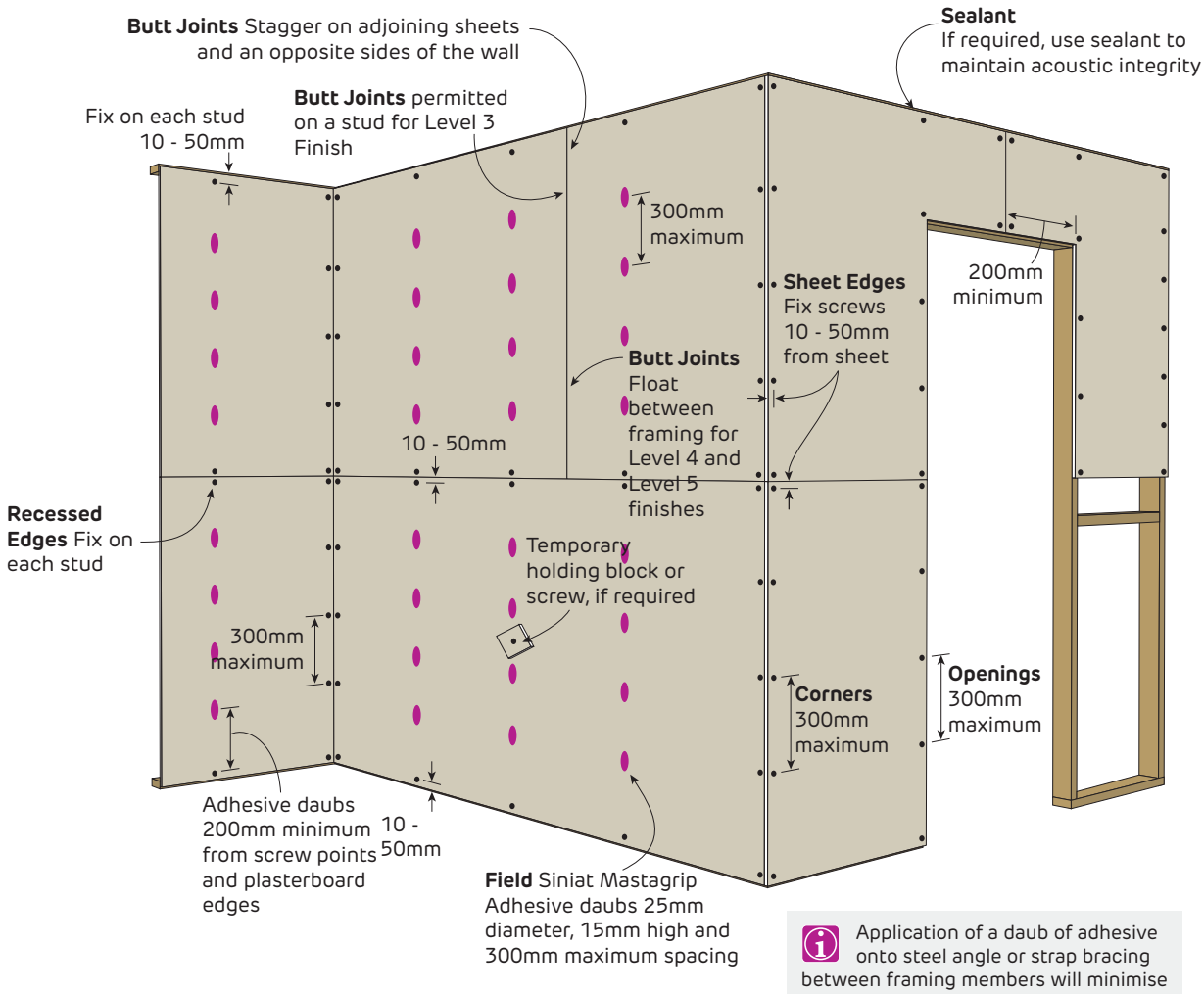
- Minimise screw popping
- Reduce the number of screw heads that may show in glancing light
- Assist in compensating for frame irregularities
- Reduce rattle noise when applied to bracing straps.

Fastener Type and Minimum Size for the Installation of Plasterboard to Softwood Timber

Plasterboard Thickness	1st Layer	2nd Layer	3rd Layer
6.5mm	2.8 x 30mm nail or 2.8 x 25mm ring shank nail or 6g x 25mm screw	2.8 x 40mm nail or 2.8 x 30mm ring shank nail or 6g x 32mm screw	-
10mm	2.8 x 40mm nail or 2.8 x 30mm ring shank nail or 6g x 25mm screw for walls or 6g x 32mm screw for ceilings	2.8 x 50mm nail or 6g x 41mm screw *	-
13mm	2.8 x 40mm nail or 2.8 x 30mm ring shank nail or 6g x 41mm screw	2.8 x 50mm nail or 7g x 50mm screw *	3.75 x 75mm nail or 8g x 65mm screw *
16mm	2.8 x 50mm nail or 7g x 45mm screw	2.8 x 65mm nail or 8g x 60mm screw *	3.75 x 75mm nail or 8g x 75mm screw *

*10g x 38mm Laminating screws may be used as detailed in installation diagrams.
Also refer to the Siniat Plasterboard installation Guide for minimum screw lengths for non-fire rated walls.

FIGURE 2 Internal Non-Fire Rated - 1 Layer Horizontal
Fastener and Adhesive Method



Application of a daub of adhesive onto steel angle or strap bracing between framing members will minimise the risk of the bracing rattling against the back of the plasterboard linings.

Fixing Pattern Table

Sheet Width	Fixing Pattern
600mm	F A A F
900mm	F A A A F
1200mm	F A A A A F
1350mm	F A A A A A F
1400mm	F A A A A A F

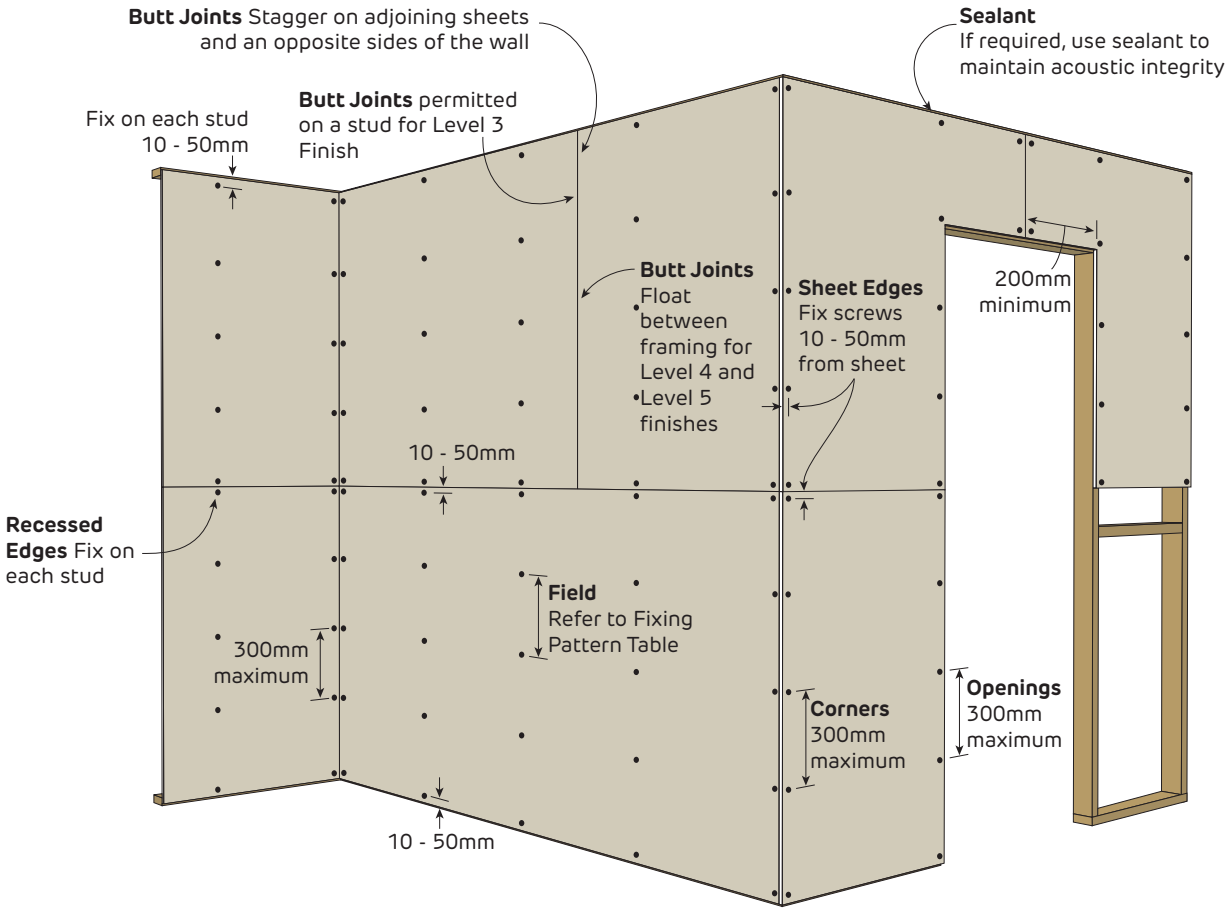
F = Screw or nail
A = Adhesive daub

Maximum Ultimate Limit State Wind Load Table (kPa)

Plasterboard Thickness	Maximum Wall Stud Spacing			
	600mm	450mm	400mm	300mm
10mm	1.00	1.33	1.50	2.00
13mm	1.00	1.33	1.50	2.00
16mm	1.00	1.33	1.50	2.00

1. Calculations do not include the framing which must be independently designed to suit the desired loads.
2. Calculated over 3-or-more spans.
3. If higher internal wind pressures are expected, please contact Siniat for specific design.

FIGURE 3 Internal Non-Fire Rated - 1 Layer Horizontal
Fastener Only Method



Fixing Pattern Table

Sheet Width	Fixing Pattern	Nail Fixing Pattern	Double Nail Fixing Pattern
600mm	S S S (3)	N N N N (4)	N Dn N (3)
900mm	S S S S (4)	N N N N N (5)	N Dn Dn N (4)
1200mm	S S S S (4)	N N N N N N (6)	N Dn Dn N (4)
1350mm	S S S S S (5)	N N N N N N N (7)	N Dn Dn Dn N (5)
1400mm	S S S S S (5)	N N N N N N N (7)	N Dn Dn Dn N (5)

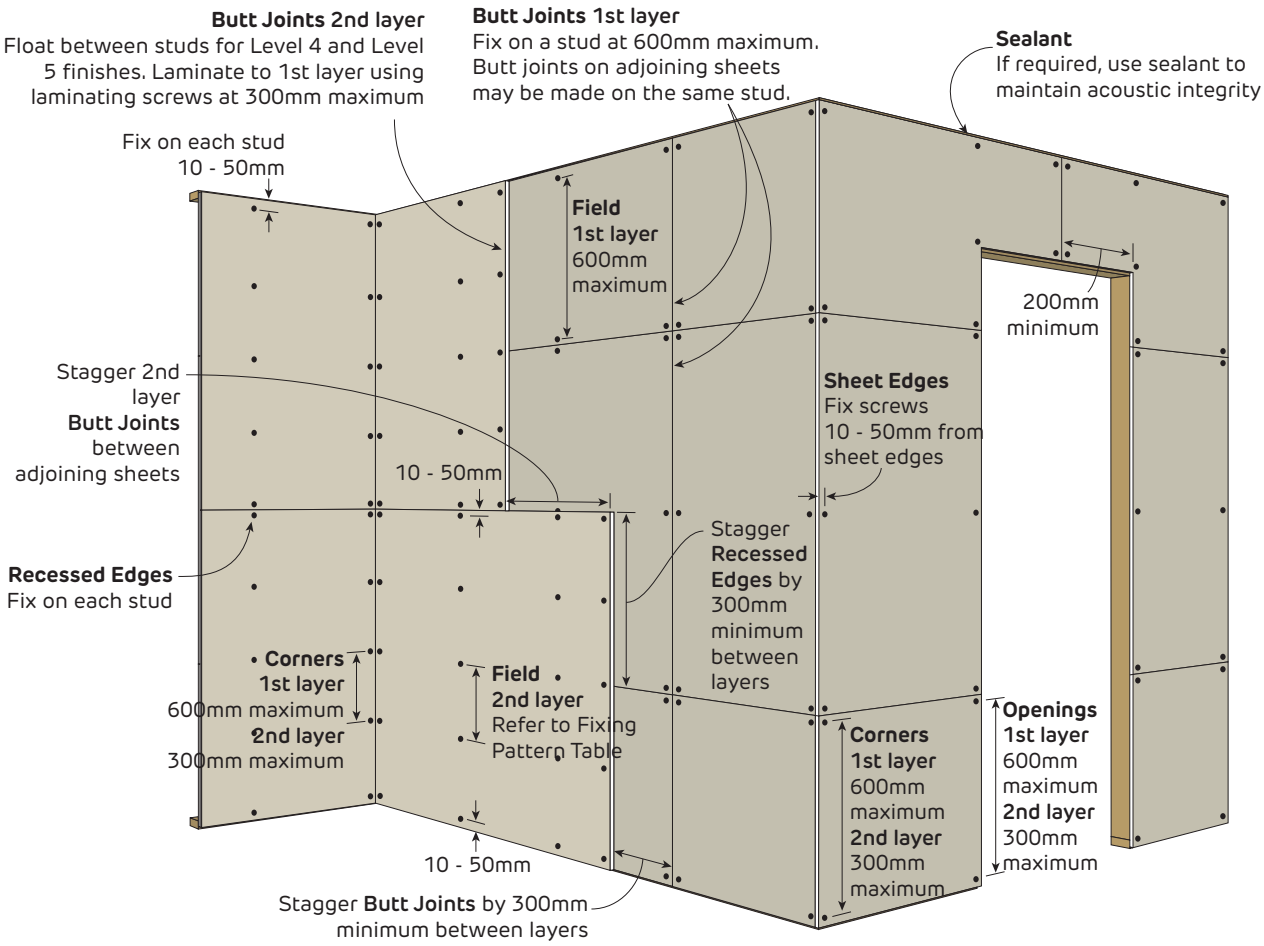
S = Screw
N = Nail
Dn = Double nail

Maximum Ultimate Limit State Wind Load Table (kPa)

Plasterboard Thickness	Maximum Wall Stud Spacing			
	600mm	450mm	400mm	300mm
10mm	0.65	0.86	0.97	1.30
13mm	0.72	0.96	1.08	1.44

1. Calculations do not include the framing which must be independently designed to suit the desired loads.
2. Calcuated over 3-or-more spans.
3. If higher internal wind pressures are expected, please contact Siniat for specific design.

FIGURE 4 Internal Non-Fire Rated - 2 Layers Horizontal + Horizontal
Fastener Only Method



Fixing Pattern Table for 2nd Layer

Sheet Width	Fixing Pattern	Nail Fixing Pattern	Double Nail Fixing Pattern
600mm	S S S (3)	N N N N (4)	N Dn N (3)
900mm	S S S S (4)	N N N N N (5)	N Dn Dn N (4)
1200mm	S S S S (4)	N N N N N N (6)	N Dn Dn N (4)
1350mm	S S S S S (5)	N N N N N N N (7)	N Dn Dn Dn N (5)
1400mm	S S S S S (5)	N N N N N N N (7)	N Dn Dn Dn N (5)

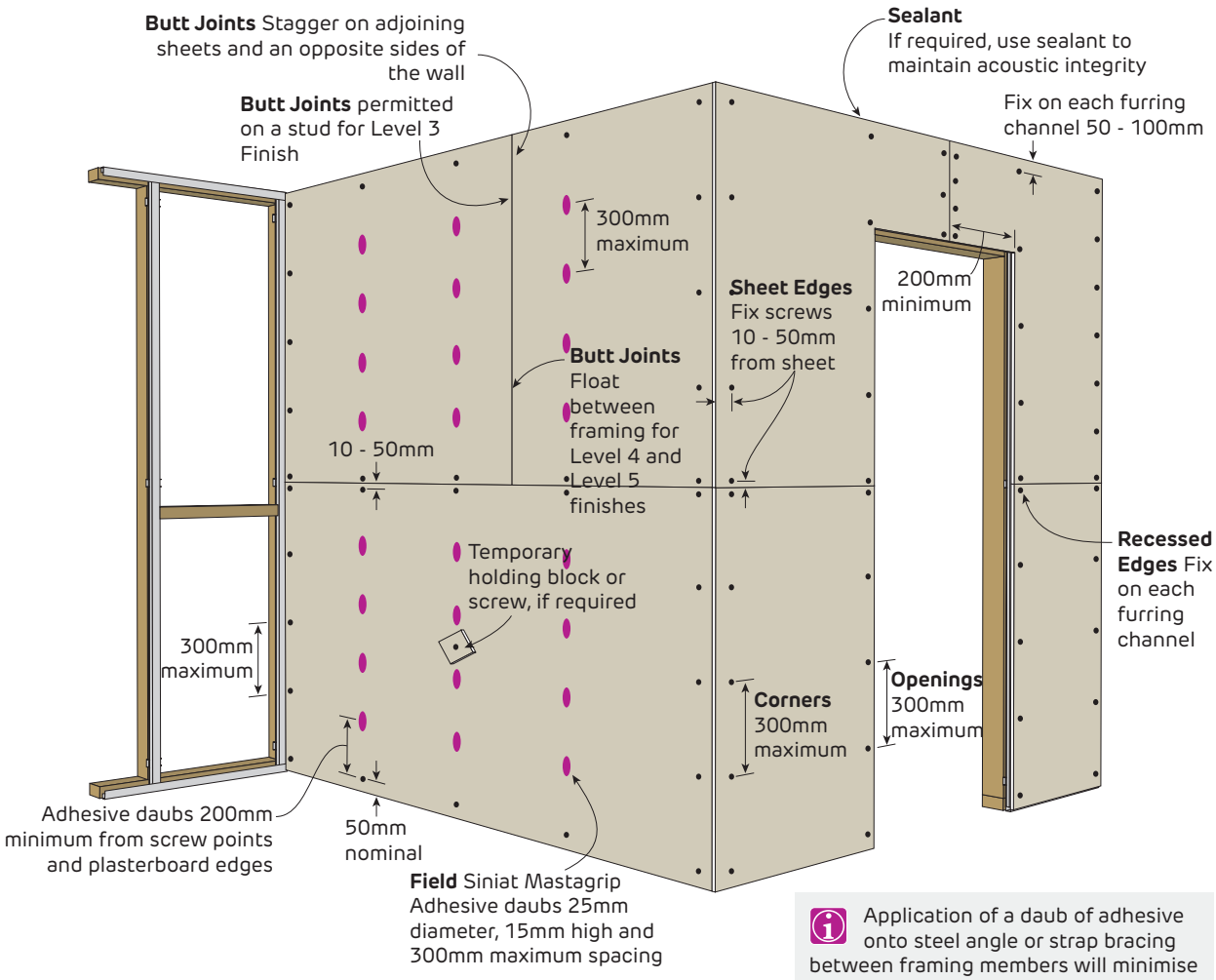
S = Screw
N = Nail
Dn = Double nail

Maximum Ultimate Limit State Wind Load Table (kPa)

Plasterboard Thickness	Maximum Wall Stud Spacing			
	600mm	450mm	400mm	300mm
10mm	0.65	0.86	0.97	1.30
13mm	0.72	0.96	1.08	1.44

1. Calculations do not include the framing which must be independently designed to suit the desired loads.
2. Calcuated over 3-or-more spans.
3. If higher internal wind pressures are expected, please contact Siniat for specific design.

FIGURE 5 Internal Non-Fire Rated - 1 Layer Horizontal
Screw and Adhesive Method over furring channels



Application of a daub of adhesive onto steel angle or strap bracing between framing members will minimise the risk of the bracing rattling against the back of the plasterboard linings.

Fixing Pattern Table

Sheet Width	Fixing Pattern
600mm	S A A S
900mm	S A A A S
1200mm	S A A A A S
1350mm	S A A A A A S
1400mm	S A A A A A S

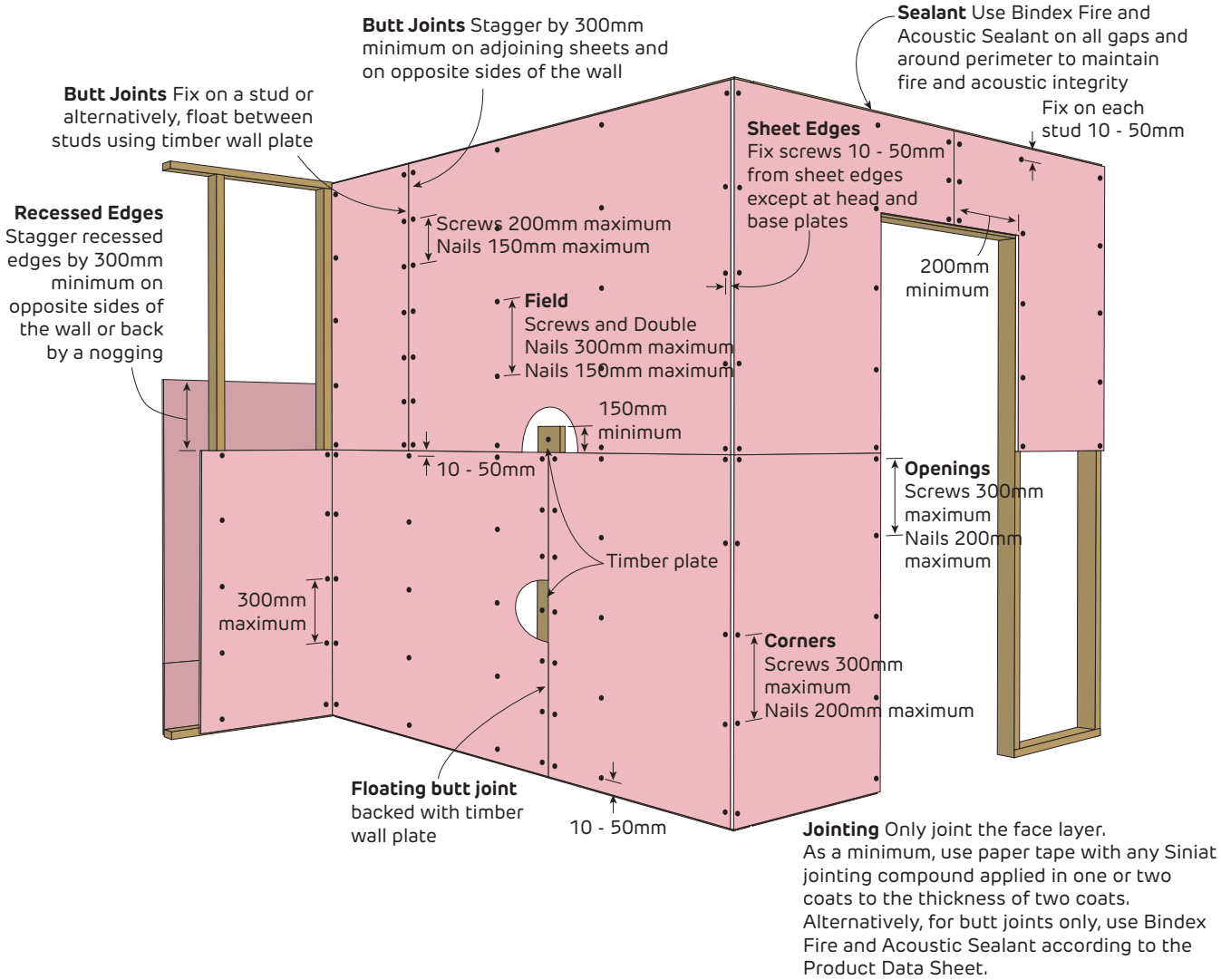
S = Screw
A = Adhesive daub

Maximum Ultimate Limit State Wind Load Table (kPa)

Plasterboard Thickness	Maximum Wall Stud Spacing			
	600mm	450mm	400mm	300mm
10mm	1.00	1.33	1.50	2.00
13mm	1.00	1.33	1.50	2.00

1. Calculations do not include the framing which must be independently designed to suit the desired loads.
2. Calcuated over 3-or-more spans.
3. If higher internal wind pressures are expected, please contact Siniat for specific design.

FIGURE 6 Fire Rated 1 Layer - Horizontal
Fastener Only Method



Jointing Only joint the face layer. As a minimum, use paper tape with any Siniat jointing compound applied in one or two coats to the thickness of two coats. Alternatively, for butt joints only, use Bindex Fire and Acoustic Sealant according to the Product Data Sheet.

Fixing Pattern Table

Sheet Width	Fixing Pattern	Nail Fixing Pattern	Double Nail Fixing Pattern
600mm	S S S (3)	N N N N N (5)	N Dn N (3)
900mm	S S S S (4)	N N N N N N N (7)	N Dn Dn N (4)
1200mm	S S S S S (5)	N N N N N N N N N (9)	N Dn Dn Dn N (5)
1350mm	S S S S S S (6)	N N N N N N N N N N (10)	N Dn Dn Dn Dn N (6)
1400mm	S S S S S S (6)	N N N N N N N N N N N (11)	N Dn Dn Dn Dn N (6)

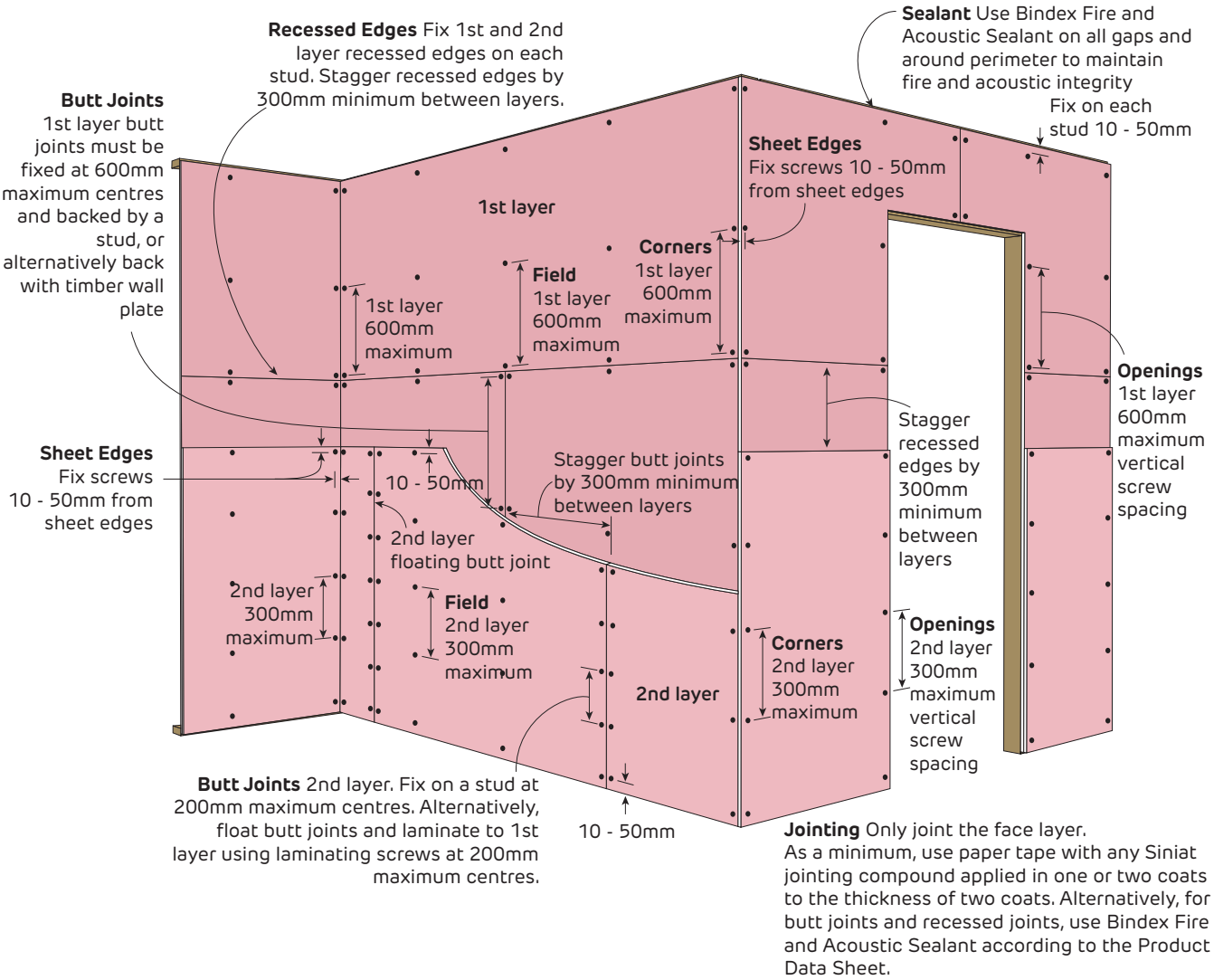
S = Screw
N = Nail
Dn = Double nail

Maximum Ultimate Limit State Wind Load Table (kPa)

Plasterboard Thickness	Maximum Wall Stud Spacing			
	600mm	450mm	400mm	300mm
13mm	0.96	1.28	1.44	1.92
16mm	0.96	1.28	1.44	1.92

1. Calculations do not include the framing which must be independently designed to suit the desired loads.
2. Calcuated over 3-or-more spans.
3. If higher internal wind pressures are expected, please contact Siniat for specific design.

FIGURE 7 Fire Rated 2 Layers - Horizontal + Horizontal
Screw Only Method



Fixing Pattern Table for 2nd Layer

Sheet Width	Fixing Pattern
600mm	S S S (3)
900mm	S S S S (4)
1200mm	S S S S S (5)
1350mm	S S S S S S (6)
1400mm	S S S S S S (6)

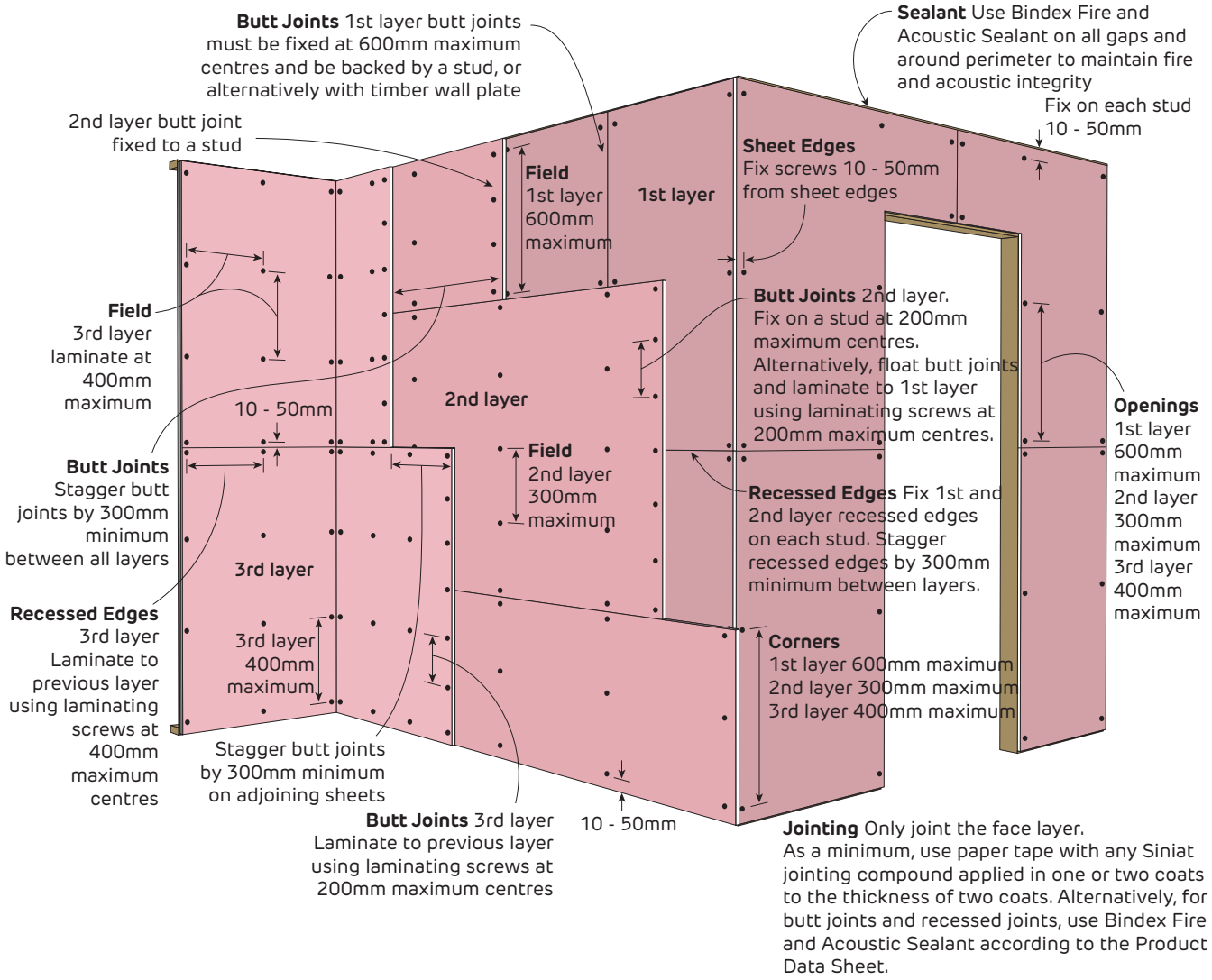
S = Screw

Maximum Ultimate Limit State Wind Load Table (kPa)

Plasterboard Thickness	Maximum Wall Stud Spacing			
	600mm	450mm	400mm	300mm
13mm	0.96	1.28	1.44	1.92
16mm	0.96	1.28	1.44	1.92

1. Calculations do not include the framing which must be independently designed to suit the desired loads.
2. Calcuated over 3-or-more spans.
3. If higher internal wind pressures are expected, please contact Siniat for specific design.

FIGURE 8 Fire Rated 3 Layers - Horizontal + Horizontal + Horizontal
Screw Only Method



Fixing Pattern Table for 2nd Layer

Sheet Width	Fixing Pattern
600mm	S S S (3)
900mm	S S S S (4)
1200mm	S S S S S (5)
1350mm	S S S S S S (6)
1400mm	S S S S S S (6)

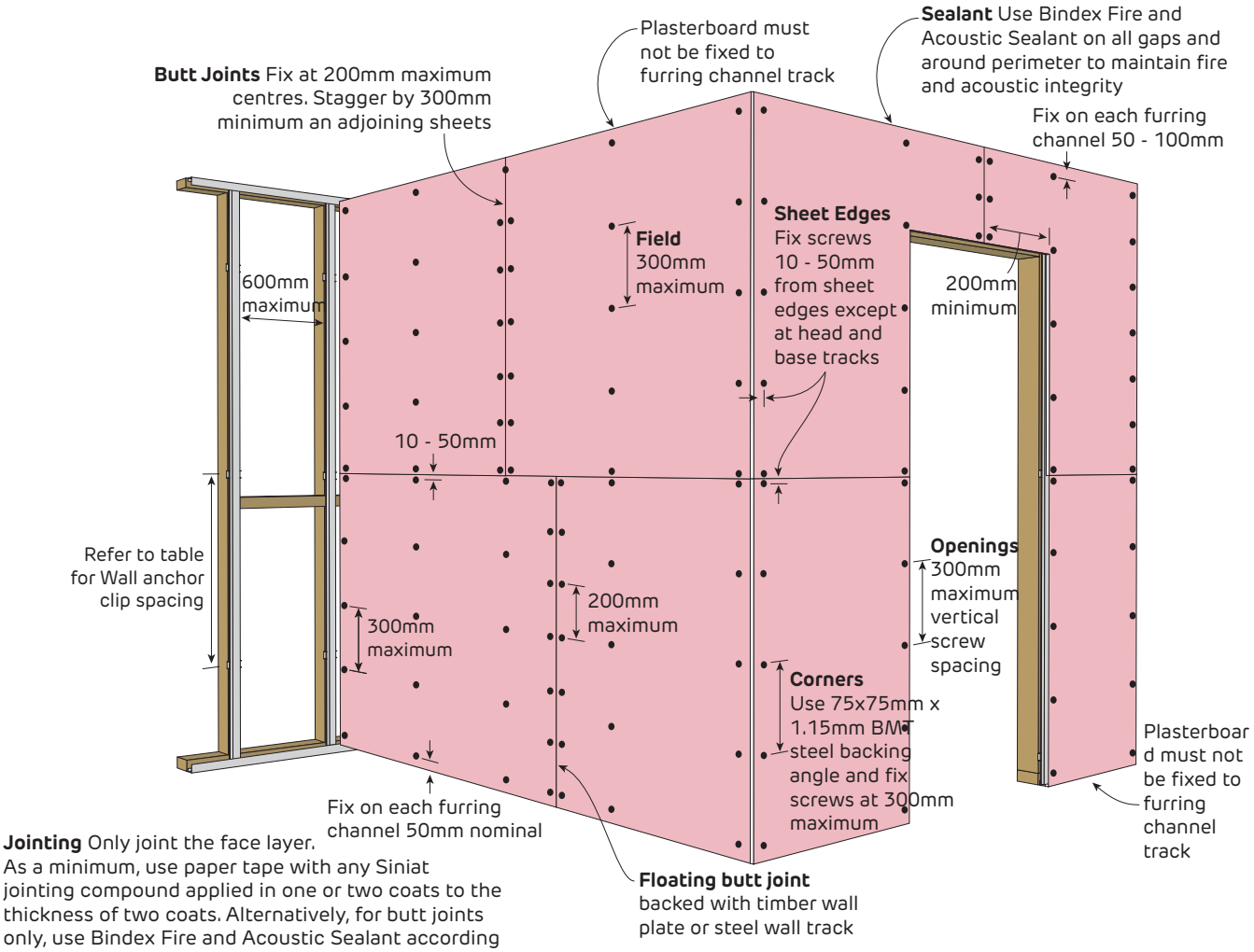
S = Screw

Maximum Ultimate Limit State Wind Load Table (kPa)

Plasterboard Thickness	Maximum Wall Stud Spacing			
	600mm	450mm	400mm	300mm
13mm	0.96	1.28	1.44	1.92
16mm	0.96	1.28	1.44	1.92

1. Calculations do not include the framing which must be independently designed to suit the desired loads.
2. Calcuated over 3-or-more spans.
3. If higher internal wind pressures are expected, please contact Siniat for specific design.

FIGURE 9 Fire Rated - 1 Layer Horizontal
Screw Only Method over furring channels



Jointing Only joint the face layer. As a minimum, use paper tape with any Siniat jointing compound applied in one or two coats to the thickness of two coats. Alternatively, for butt joints only, use Bindex Fire and Acoustic Sealant according to the Product Data Sheet.

Fixing Pattern Table

Sheet Width	Fixing Pattern
600mm	S S S (3)
900mm	S S S S (4)
1200mm	S S S S S (5)
1350mm	S S S S S S (6)
1400mm	S S S S S S (6)

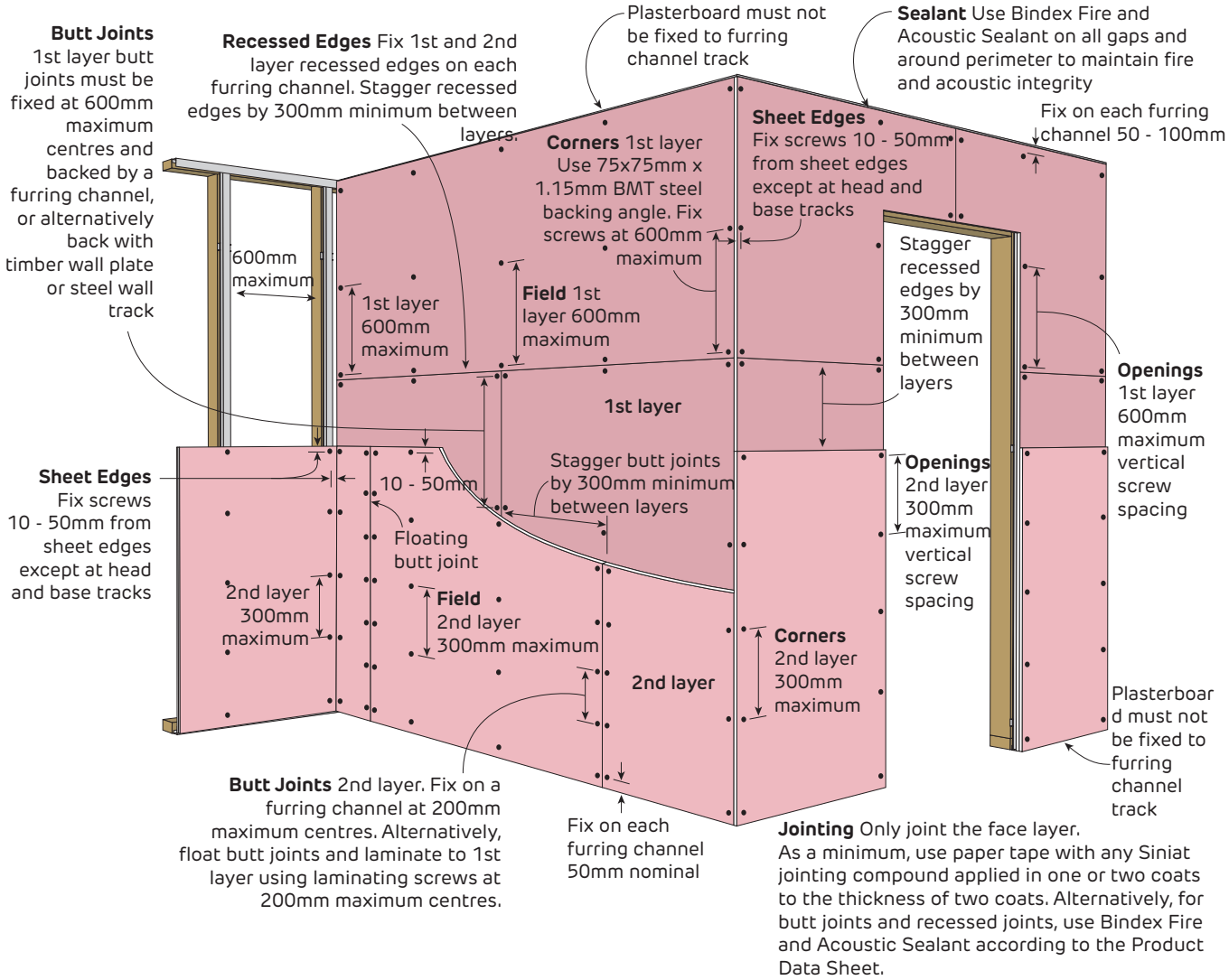
S = Screw

Maximum Ultimate Limit State Wind Load Table (kPa)

Plasterboard Thickness	Maximum Wall Stud Spacing			
	600mm	450mm	400mm	300mm
13mm	0.96	1.28	1.44	1.92
16mm	0.96	1.28	1.44	1.92

1. Calculations do not include the framing which must be independently designed to suit the desired loads.
2. Calcuated over 3-or-more spans.
3. If higher internal wind pressures are expected, please contact Siniat for specific design.

FIGURE 10 Fire Rated 2 Layers - Horizontal + Horizontal
Screw Only Method over furring channels



Fixing Pattern Table

Sheet Width	Fixing Pattern
600mm	S S S (3)
900mm	S S S S (4)
1200mm	S S S S S (5)
1350mm	S S S S S S (6)
1400mm	S S S S S S (6)

S = Screw

Maximum Ultimate Limit State Wind Load Table (kPa)

Plasterboard Thickness	Maximum Wall Stud Spacing			
	600mm	450mm	400mm	300mm
13mm	0.96	1.28	1.44	1.92
16mm	0.96	1.28	1.44	1.92

1. Calculations do not include the framing which must be independently designed to suit the desired loads.
2. Calcuated over 3-or-more spans.
3. If higher internal wind pressures are expected, please contact Siniat for specific design.

Non-Fire Rated
Head and Base Details for Timber Stud Walls

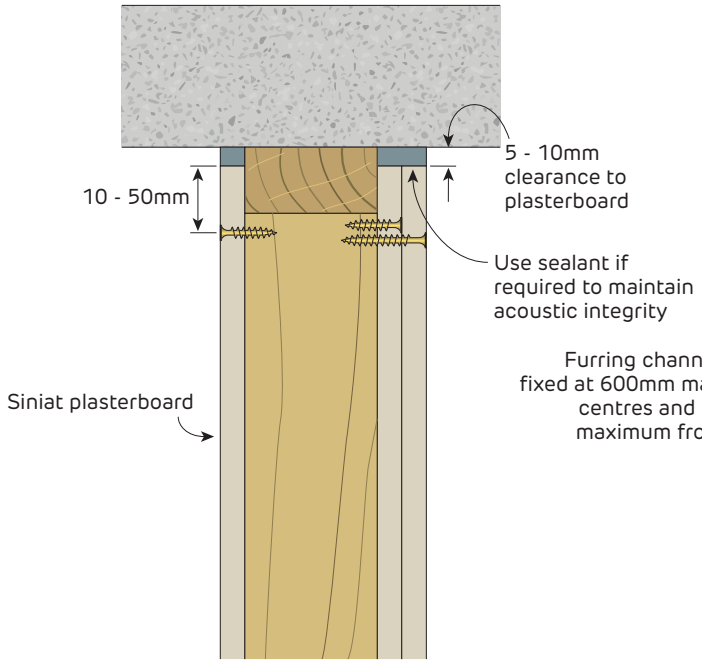


FIGURE 11 Wall Head
Section

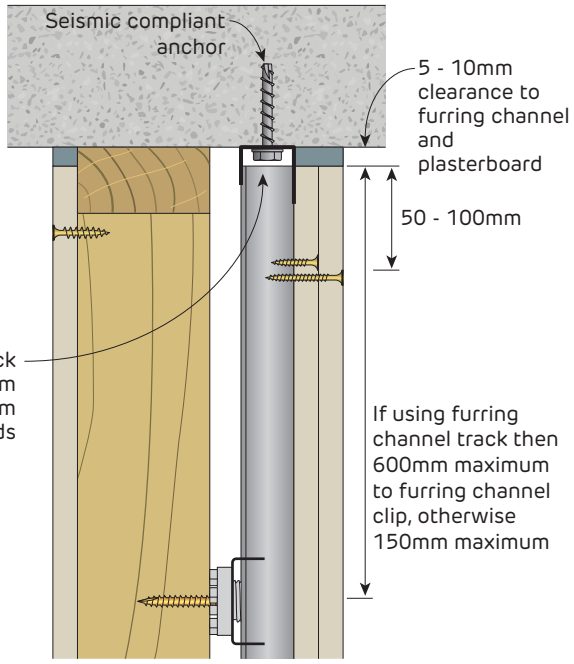


FIGURE 12 Wall Head with Furring Channel
Section

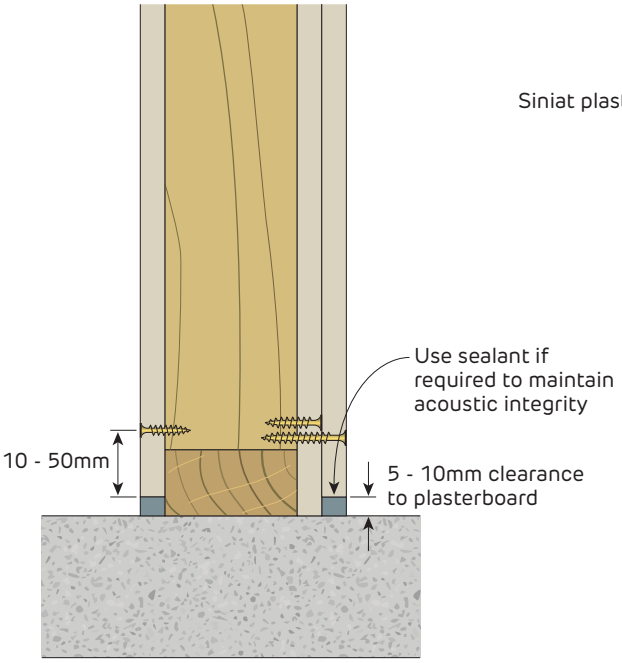


FIGURE 13 Wall Base
Section

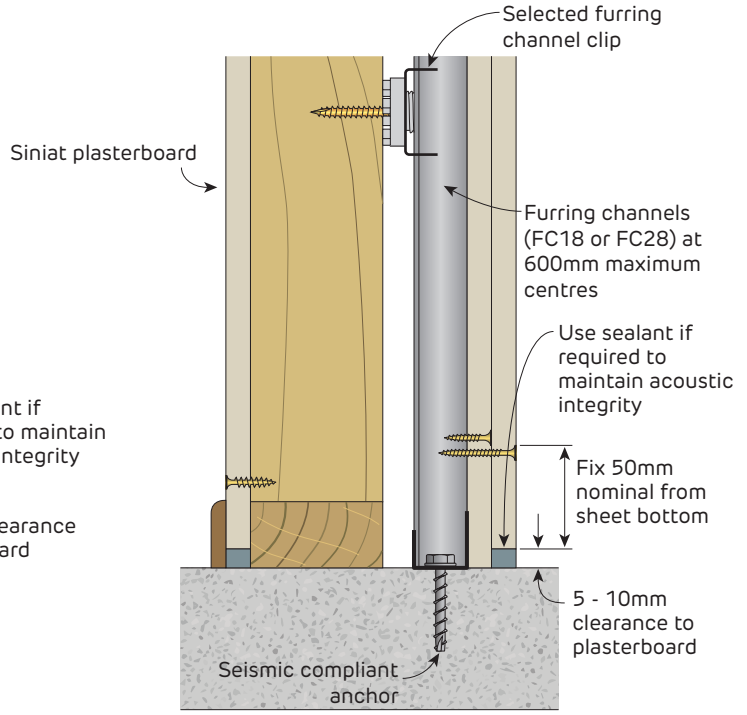


FIGURE 14 Wall Base with Furring Channel
Section

Fire Rated
Head and Base Details for Timber Stud Walls

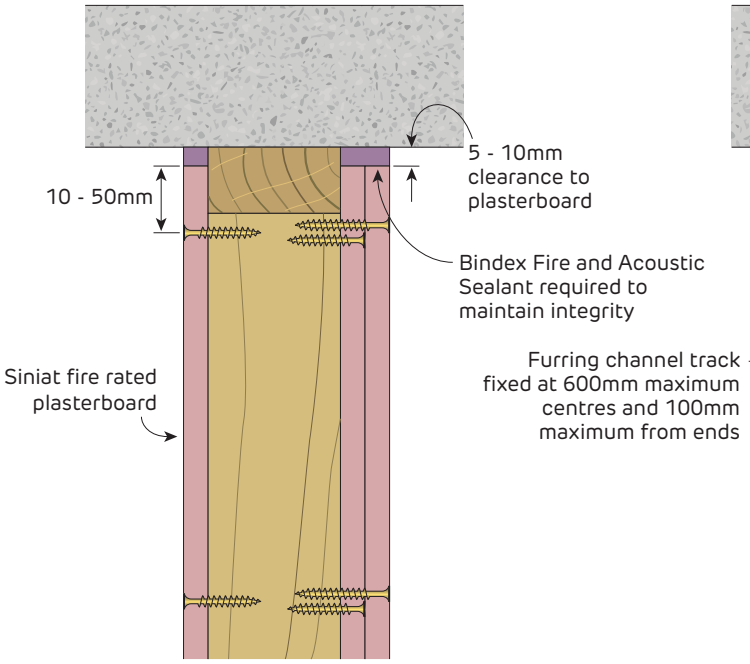


FIGURE 15 Wall Head
Section

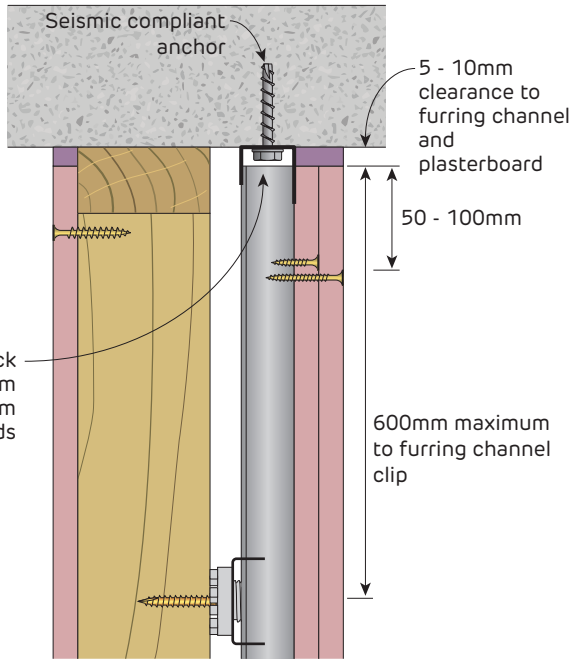


FIGURE 16 Wall Head with Furring Channel
Section

Fill any gaps with Bindex Fire and Acoustic Sealant to maintain integrity

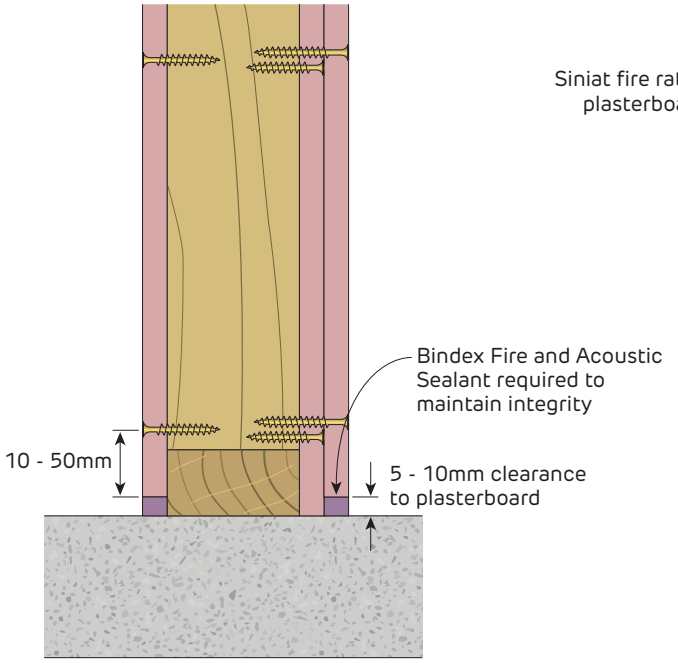


FIGURE 17 Wall Base
Section

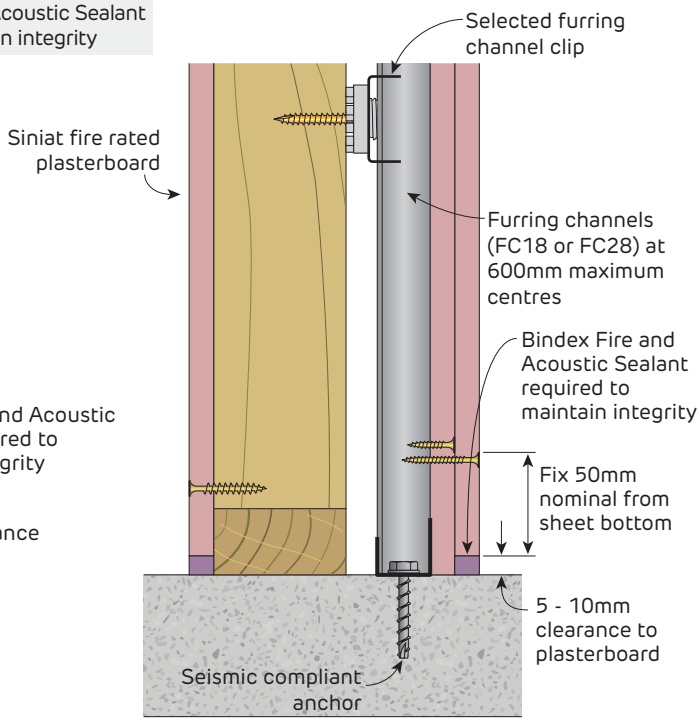


FIGURE 18 Wall Base with Furring Channel
Section

Fire Rated
Internal Stud Walls

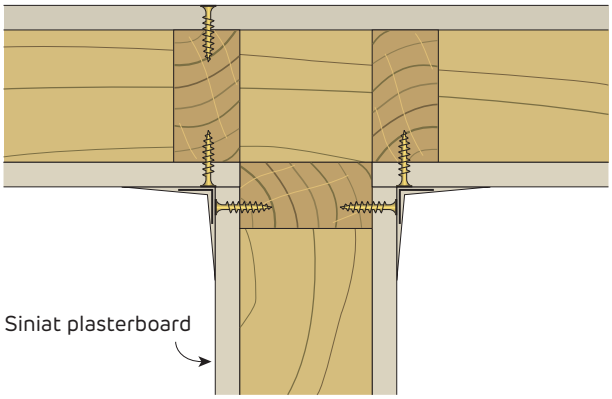


FIGURE 19 Intersecting Wall
Plan

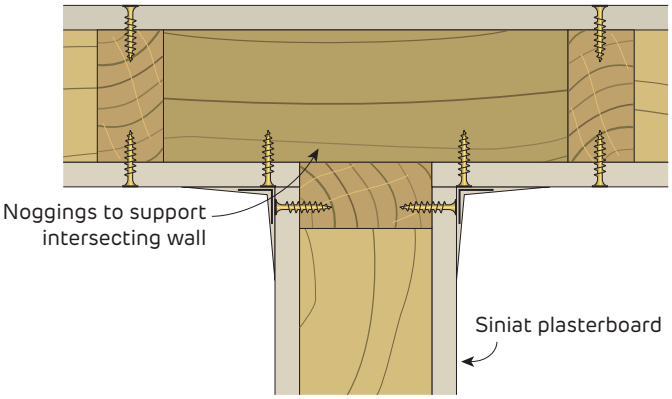


FIGURE 20 Intersecting Wall
Plan

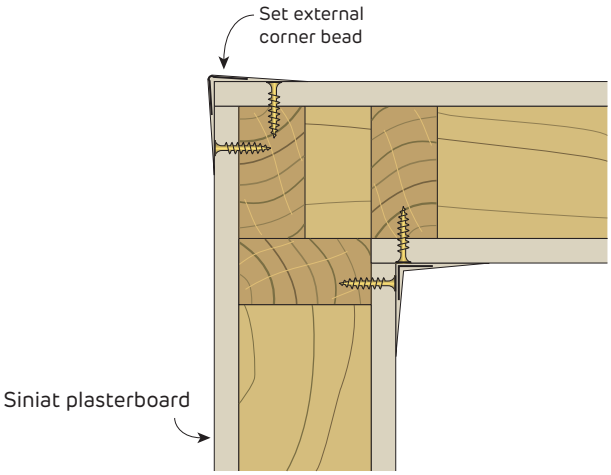


FIGURE 21 Corner
Plan

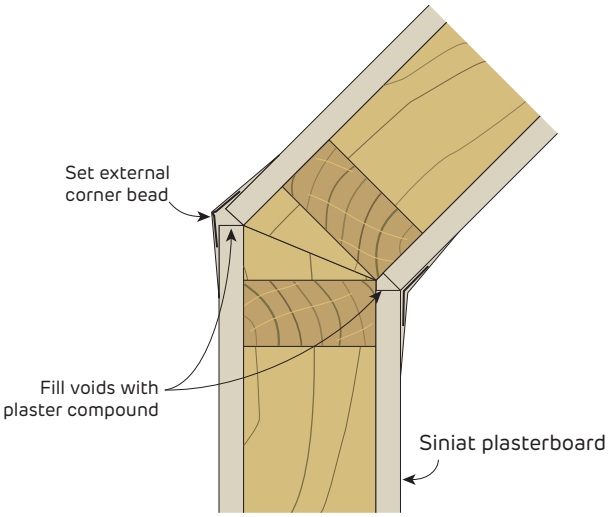


FIGURE 22 Angled Corner
Plan

Fire Rated
Internal Stud Walls

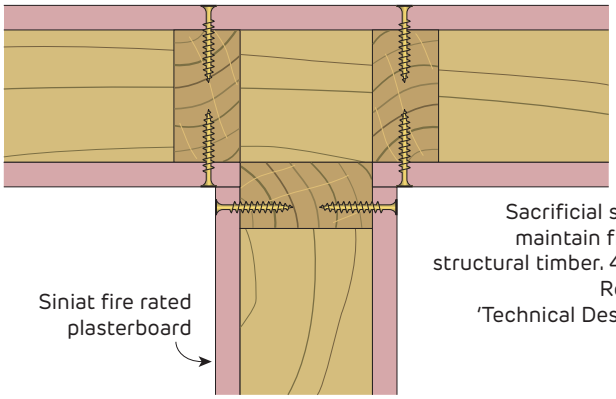


FIGURE 23 Intersecting Wall
Plan

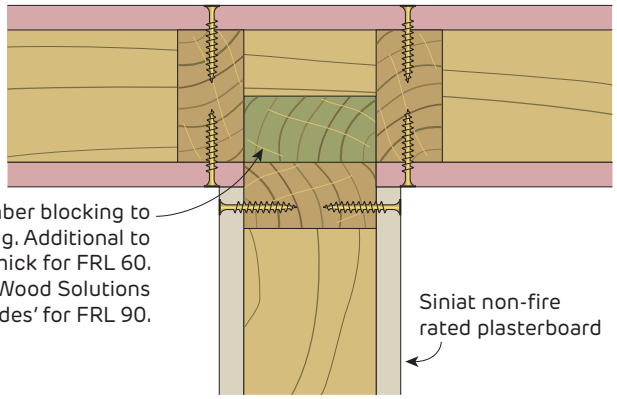


FIGURE 24 Intersecting Wall
Plan

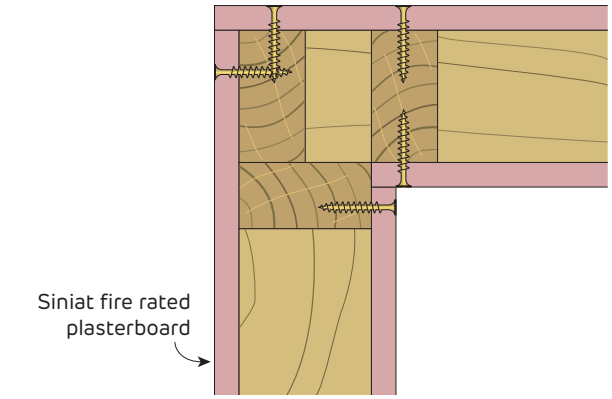


FIGURE 25 Corner
Plan

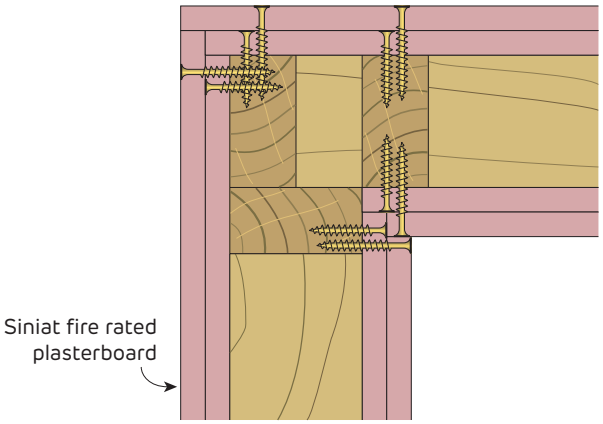


FIGURE 26 Corner
Plan

Fill any gaps with Bindex Fire and Acoustic Sealant to maintain integrity

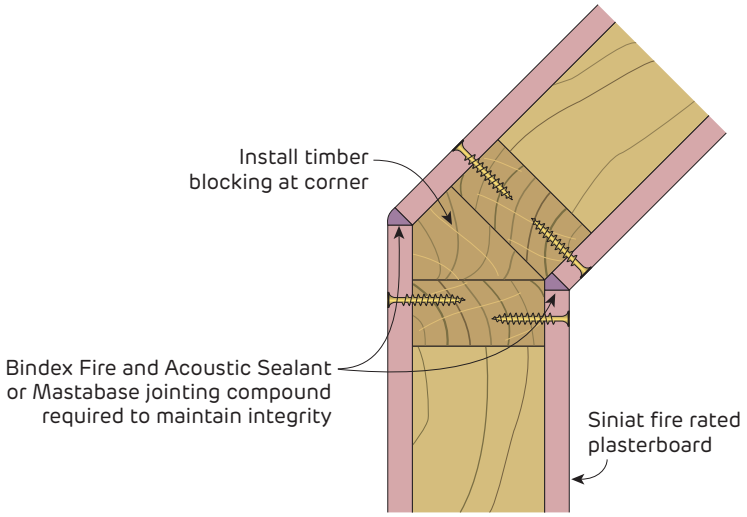


FIGURE 27 Angled Corner
Plan

Fire Rated and Non-Fire Rated Control Joints in Stud Walls

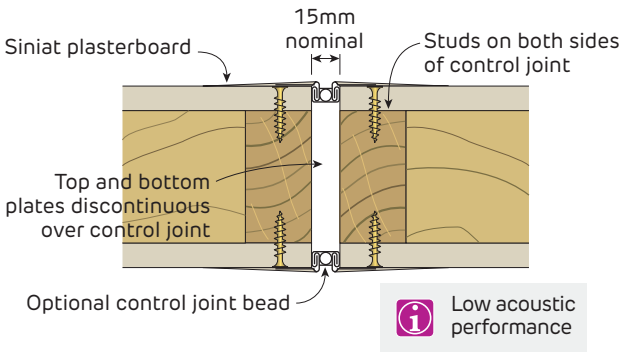


FIGURE 28 Control Joint
Plan

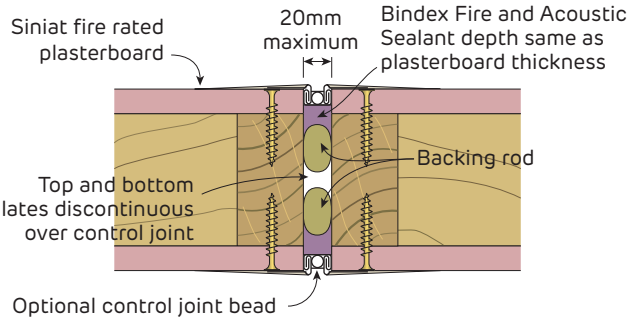


FIGURE 29 Control Joint
Fire rated - 1 to 4 layers with control joint bead
Plan

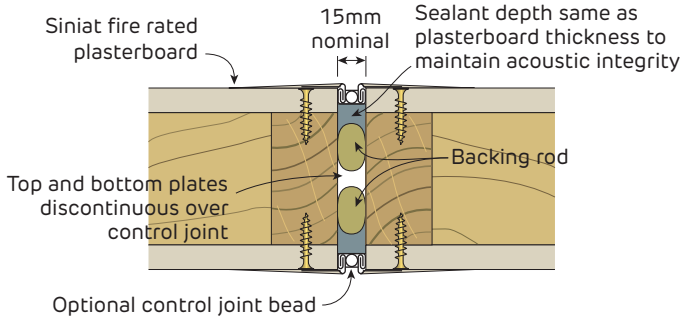


FIGURE 30 Control Joint
Plan

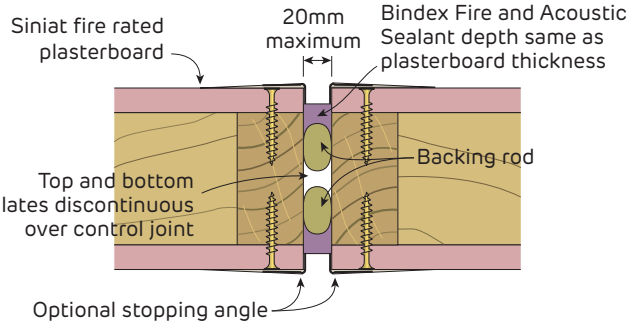


FIGURE 31 Control Joint
Fire rated - 1 to 4 layers with stopping angle
Plan

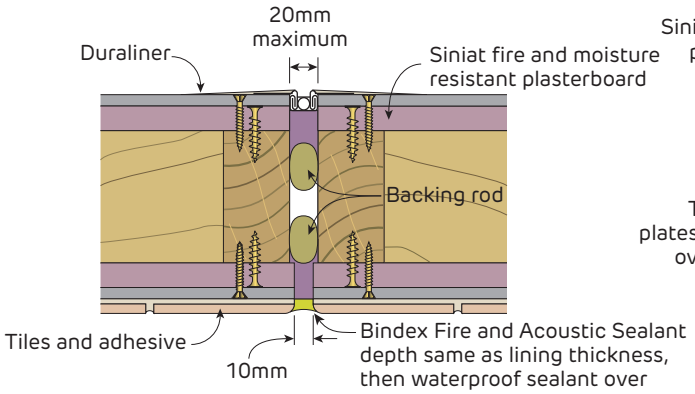


FIGURE 32 Control Joint
Fire rated for wet area - 1 to 4 layers
Plan

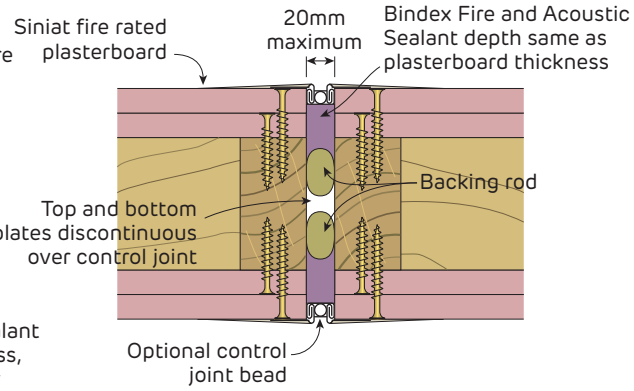


FIGURE 33 Control Joint
Fire rated - 1 to 4 layers
Plan

Fire Rated and Non-Fire Rated
Typical Door Jamb Details

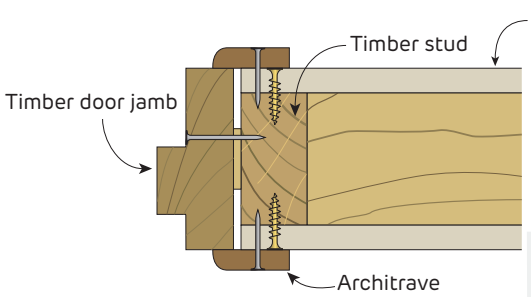


FIGURE 34 Typical Timber Door Jamb
Plan

Refer to door jamb manufacturer for specific installation details

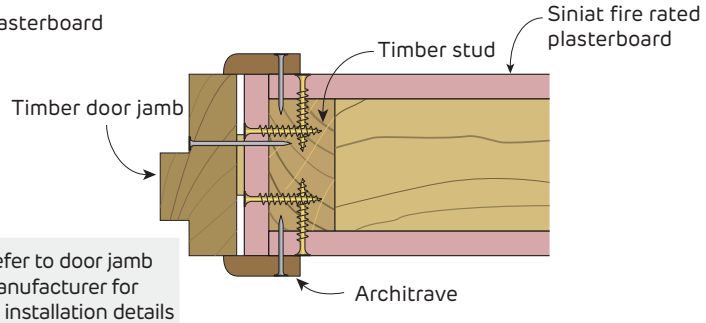


FIGURE 35 Typical Fire Rated Door Jamb
Example only
Plan

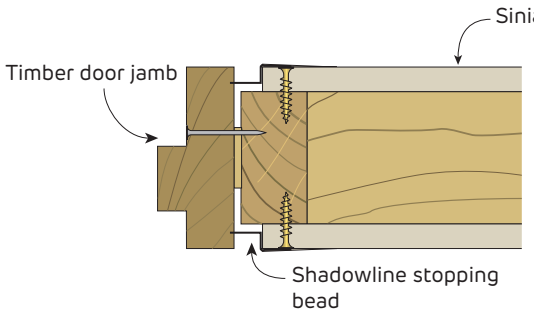


FIGURE 36 Typical Timber Door Jamb
With shadowline stopping bead
Plan

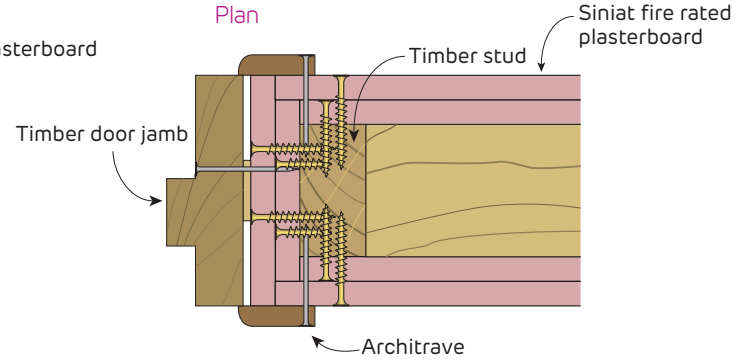


FIGURE 37 Typical Fire Rated Door Jamb
Example only
Plan

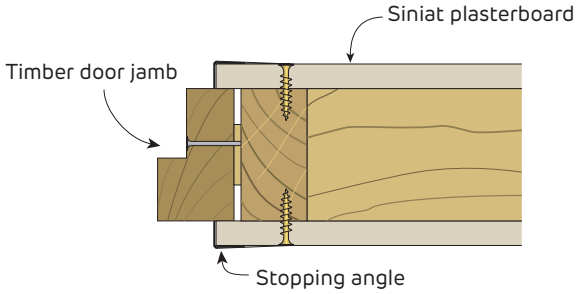


FIGURE 38 Typical Timber Door Jamb
With stopping angle
Plan

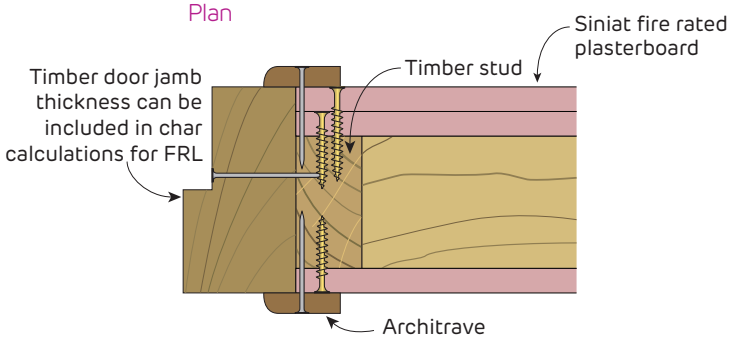
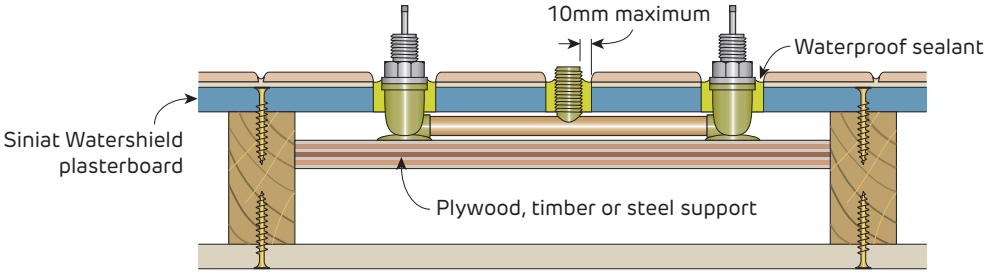


FIGURE 39 Typical Fire Rated Door Jamb
Example only
Plan

Fill any gaps with Bindex Fire and Acoustic Sealant to maintain integrity

Fire Rated and Non-Fire Rated
Plumbing Penetration Details Timber Stud Walls



Isolate copper and brass fitting from steel framing.

FIGURE 40 Plumbing Penetrations
Plan

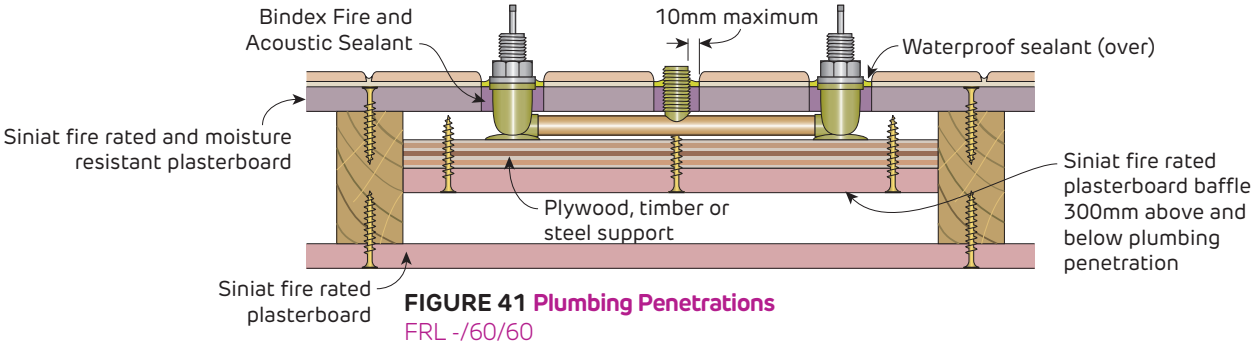


FIGURE 41 Plumbing Penetrations
FRL -/60/60
Fire rated single layer systems - Plan

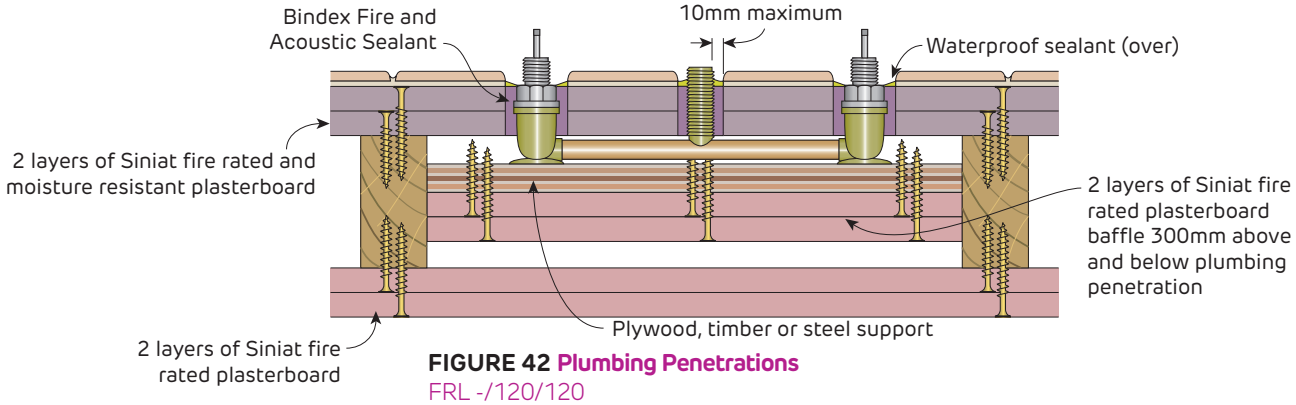


FIGURE 42 Plumbing Penetrations
FRL -/120/120
Fire rated double layer system - Plan

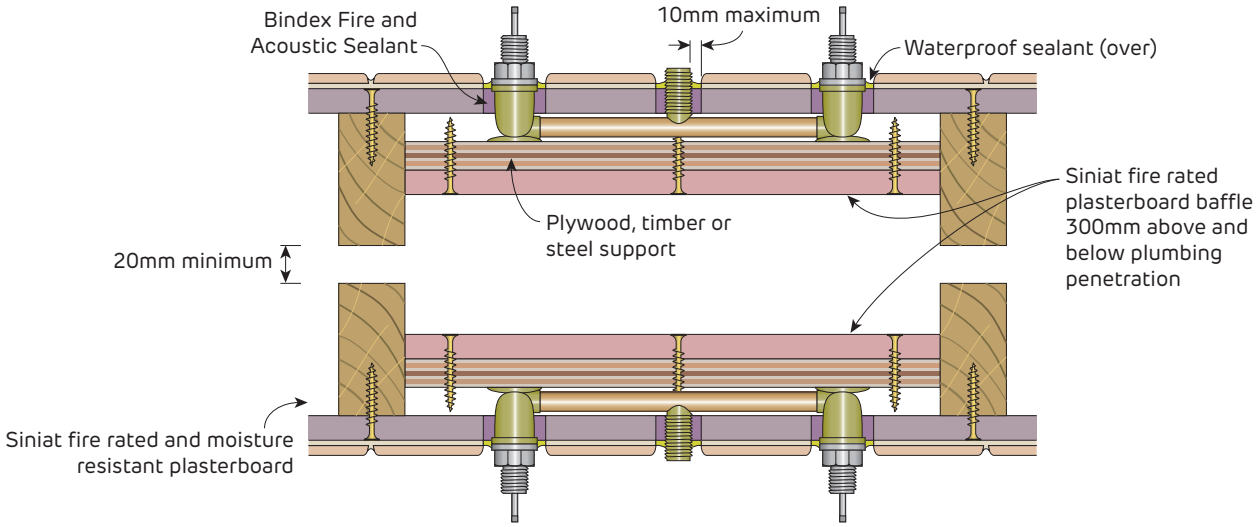


FIGURE 43 Plumbing Penetrations
FRL -/60/60
Fire rated single layer systems - Plan

Fire Rated
Plumbing Penetration Details Timber Stud Walls

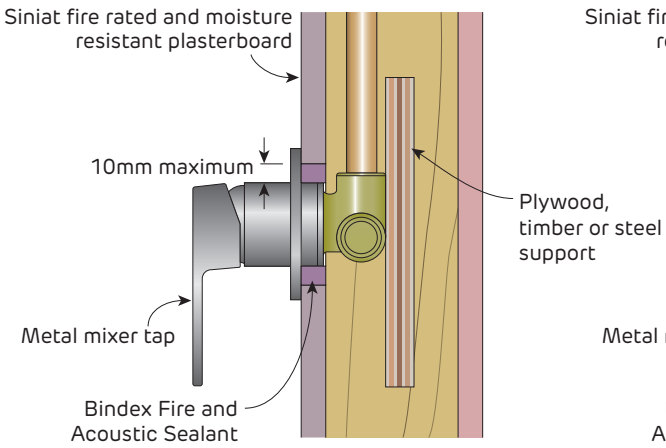


FIGURE 44 Plumbing Penetration
FRL -/60/-
Fire rated single layer systems - Section

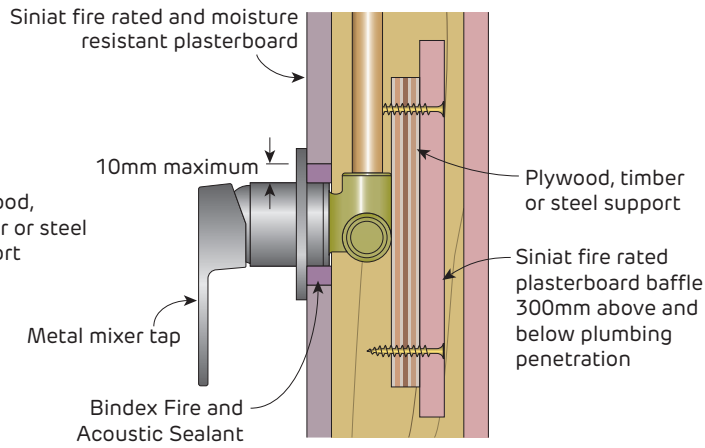


FIGURE 45 Plumbing Penetration
FRL -/60/60
Fire rated single layer systems - Section

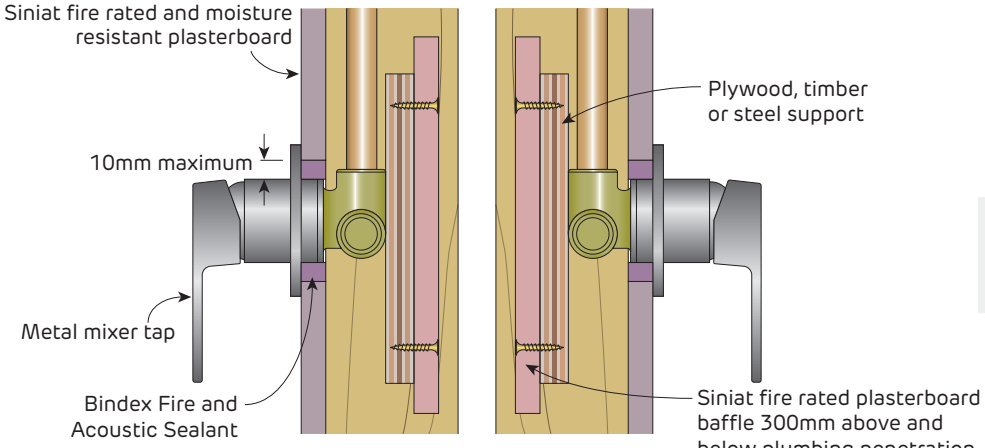


FIGURE 46 Back-to-back Plumbing Penetration
FRL -/60/60
Fire rated single layer systems - Section

Fire rated details on this page only apply to brass, copper, and steel mixer taps and tap sets.

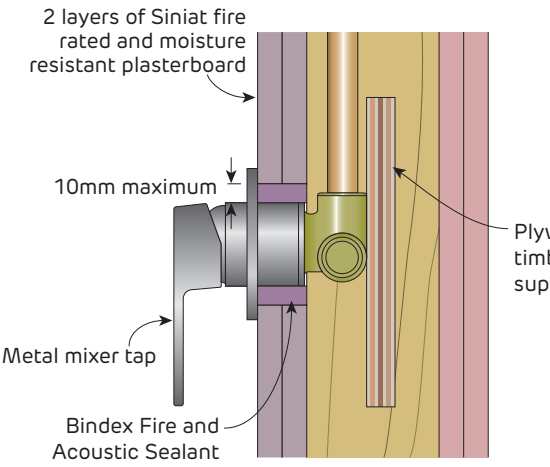


FIGURE 47 Plumbing Penetration
FRL -/120/-
Fire rated double layer systems - Section

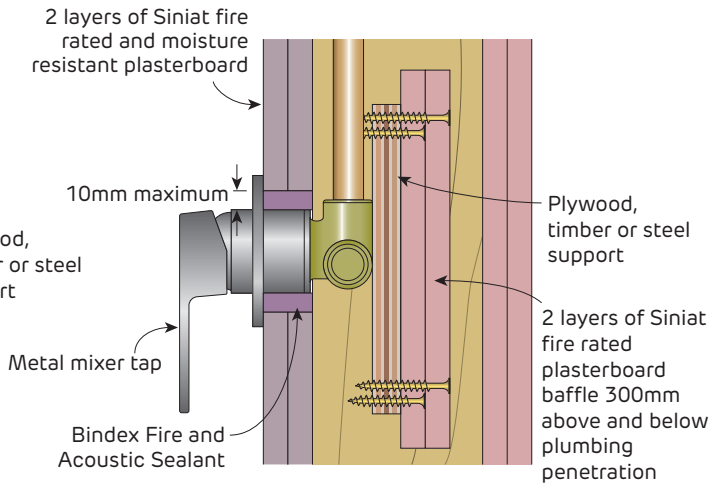


FIGURE 48 Plumbing Penetration
FRL -/120/120
Fire rated double layer systems - Section