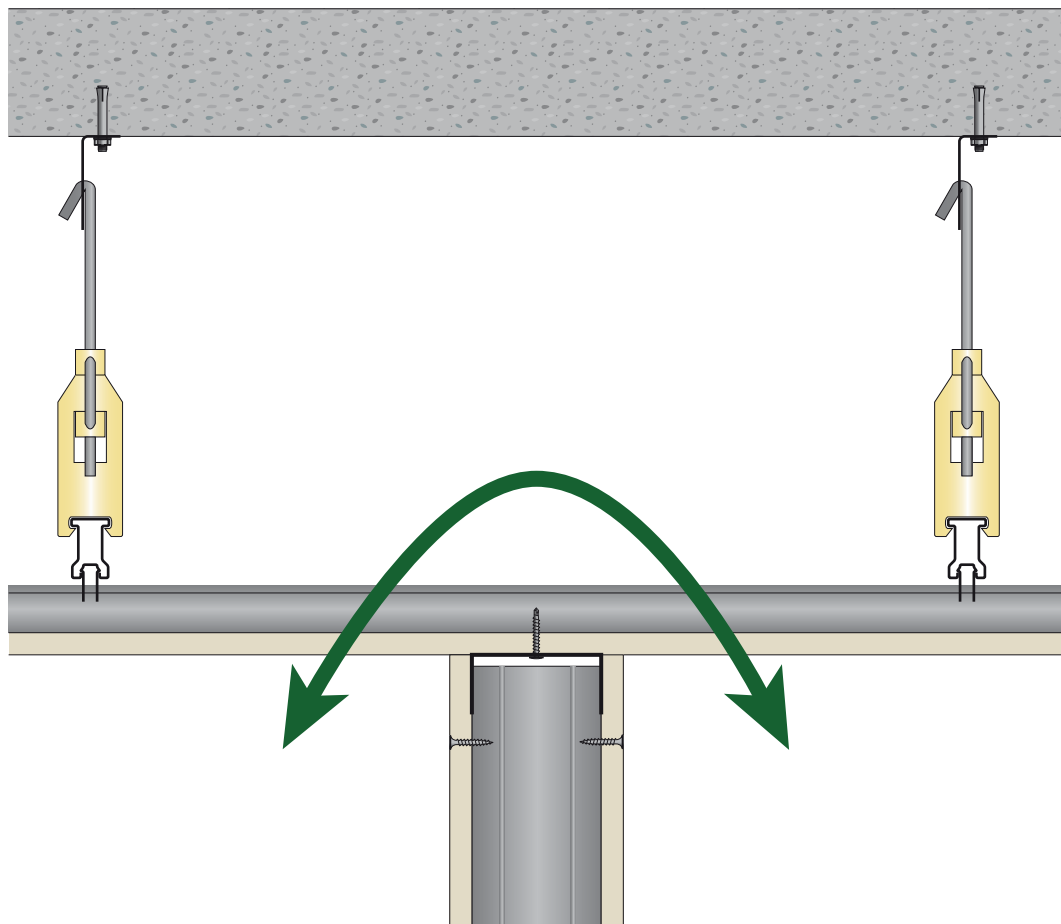


## CEILING ATTENUATION CLASS SYSTEMS

SYSTEMS

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Ceiling Attenuation Class (CAC) ceiling systems display the resistance to sound passing up and over a wall. The acoustic rating given for the ceiling system indicates the sound reduction from one room to the next via the two ceilings and the above-ceiling plenum.

Rather than introduce another term to building designers such as CAC, the more familiar terms  $R_w$  and  $R_w + C_{tr}$  are used.

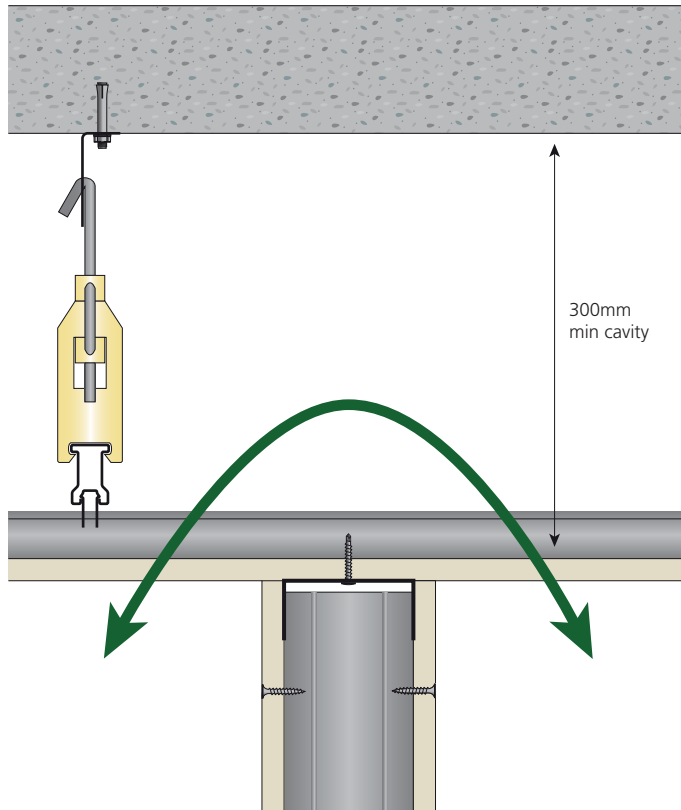
When sound isolation is important, the  $R_w$  of the CAC ceiling system should equal the  $R_w$  rating of the dividing wall plus 5.

























[REFER TO SECTION 4.1.1 CONSTRUCTION DETAILS FOR WALL TO CEILING FINISHING DETAILS].

# LCAC10-LCAC28

CEILING: [OPTION 1] Suspended ceiling frame with set plasterboard ceiling  
 [OPTION 2] T-bar exposed grid frame with ceiling tiles for system LCAC1

[All systems are suitable under a concrete slab, timber roof framing or steel roof framing]  
 [Acoustic numbers based on minimum 300mm cavity]  
 [Penetrations in ceiling lining may degrade acoustic performance]



SYSTEM	PLASTERBOARD CEILING LINING	ACOUSTICS - AIRBORNE Rw (Rw + Ctr)		
		No Insulation	50mm Glasswool (min density 11 kg/m <sup>3</sup> ) or 65mm Polyester ISB3 insulation above ceiling to 1200mm both sides of wall	50mm Glasswool or 65mm Polyester ISB3 over entire ceiling
LCAC1	1 layer of 10mm <b>SpanGrid</b> ceiling tiles in exposed grid	36 (32)	41 (35)	44 (37)
LCAC10	1 layer of 10mm <b>MastaShield</b> or <b>SpanShield</b>	37 (30)	42 (35)	45 (36)
LCAC11	2 layers of 10mm <b>MastaShield</b> or <b>SpanShield</b>	42 (36)	45 (40)	48 (42)
LCAC14	1 layer of 13mm <b>MastaShield</b>	39 (30)	44 (36)	47 (38)
LCAC16	1 layer of 10mm <b>SoundShield</b> 	39 (31)	43 (36)	45 (38)
LCAC17	2 layers of 10mm <b>SoundShield</b> 	42 (38)	46 (43)	50 (45)
LCAC18	1 layer of 13mm <b>SoundShield</b> 	41 (37)	48 (41)	50 (43)
LCAC19	2 layers of 13mm <b>SoundShield</b> 	48 (40)	53 (44)	56 (46)
LCAC20	1 layer of 13mm <b>FireShield</b>  	40 (35)	45 (40)	48 (42)
LCAC21	2 layers of 13mm <b>FireShield</b>  	46 (39)	52 (43)	54 (45)
LCAC22	1 layer of 16mm <b>FireShield</b>  	43 (37)	48 (42)	51 (45)
LCAC23	1 layer of 13mm <b>FireShield</b>   plus 1 layer of 16mm <b>FireShield</b>  	47 (40)	52 (44)	55 (46)
LCAC24	2 layers of 16mm <b>FireShield</b>  	48 (40)	53 (44)	56 (46)
LCAC26	3 layers of 13mm <b>FireShield</b>  	52 (42)	57 (47)	60 (49)
LCAC27	1 layer of 13mm <b>FireShield</b>   plus 2 layers of 16mm <b>FireShield</b>  	54 (43)	59 (48)	61 (50)
LCAC28	3 layers of 16mm <b>FireShield</b>  	54 (43)	59 (48)	61 (50)

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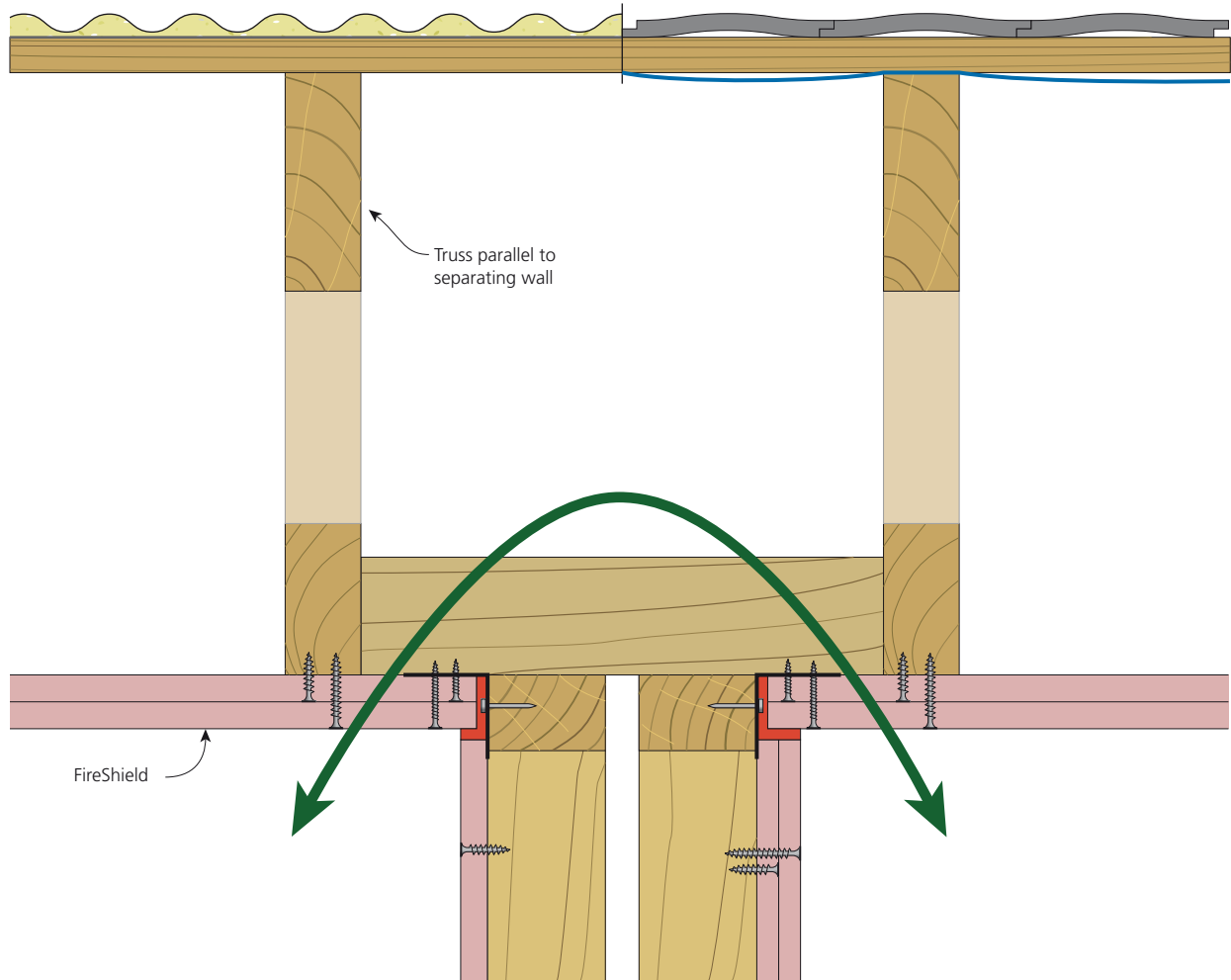
# LCAC120-LCAC128











CEILING: Suspended ceiling frame with set plasterboard ceiling that is dis-continuous from wall frame

[All systems are suitable under timber roof framing or steel roof framing]

[Acoustic numbers based on minimum 300mm cavity]

[Penetrations in ceiling lining may degrade acoustic performance]



SYSTEM	PLASTERBOARD CEILING LINING	ACOUSTICS - AIRBORNE Rw (Rw + Ctr)		
		No Insulation	50mm Glasswool (min density 11 kg/m <sup>3</sup> ) or 65mm Polyester ISB3 insulation above ceiling to 1200mm both sides of wall	50mm Glasswool or 65mm Polyester ISB3 over entire ceiling
LCAC120	1 layer of 13mm <b>FireShield</b> 	42 (38)	47 (40)	50 (42)
LCAC121	2 layers of 13mm <b>FireShield</b> 	51 (48)	56 ( <b>50</b> )	59 ( <b>53</b> )
LCAC122	1 layer of 16mm <b>FireShield</b> 	43 (39)	47 (42)	50 (44)
LCAC123	1 layer of 13mm <b>FireShield</b>  plus 1 layer of 16mm <b>FireShield</b> 	52 (49)	57 ( <b>52</b> )	60 ( <b>54</b> )
LCAC124	2 layers of 16mm <b>FireShield</b> 	53 ( <b>50</b> )	58 ( <b>53</b> )	61 ( <b>55</b> )
LCAC126	3 layers of 13mm <b>FireShield</b> 	57 ( <b>54</b> )	62 ( <b>57</b> )	65 ( <b>59</b> )
LCAC127	1 layer of 13mm <b>FireShield</b>  plus 2 layers of 16mm <b>FireShield</b> 	59 ( <b>56</b> )	63 ( <b>59</b> )	66 ( <b>61</b> )
LCAC128	3 layers of 16mm <b>FireShield</b> 	59 ( <b>56</b> )	64 ( <b>59</b> )	67 ( <b>61</b> )

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# LCAC30-LCAC48

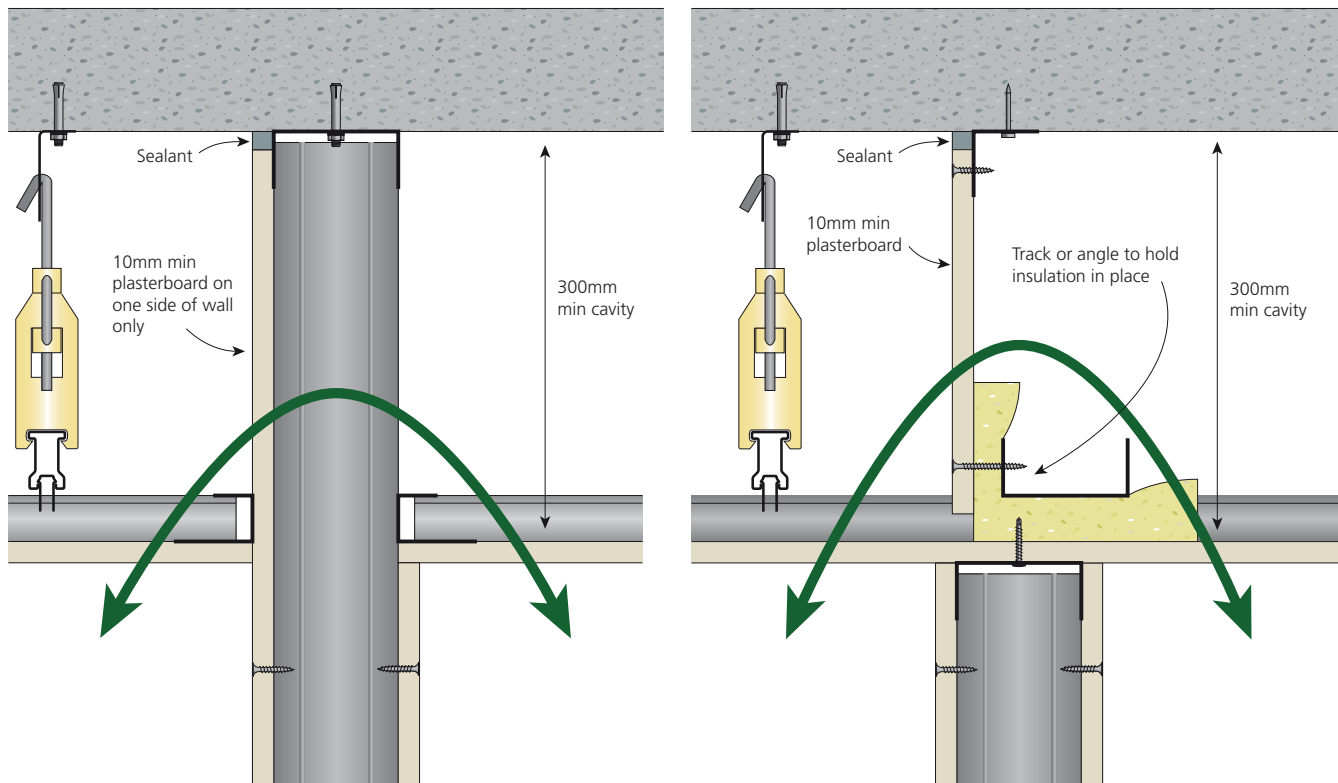
CEILING: [OPTION 1] Suspended ceiling frame with set plasterboard ceiling  
 [OPTION 2] T-bar exposed grid frame with ceiling tiles for system LCAC3

ABOVE CEILING: [OPTION 1] 10mm minimum plasterboard on one side of stud only, continued up to concrete slab or roof lining  
 [OPTION 2] 10mm minimum plasterboard fixed to concrete slab or roof lining with track or angle. Insulation placed above ceiling lining and held in place using track or angle.

[All systems are suitable under a concrete slab, timber roof framing or steel roof framing]

[Acoustic numbers based on minimum 300mm cavity]

[Penetrations in ceiling lining may degrade acoustic performance]



SYSTEM	PLASTERBOARD CEILING LINING	ACOUSTICS - AIRBORNE Rw (Rw + Ctr)		
		No Insulation	50mm Glasswool (min density 11kg/m³) or 65mm Polyester ISB3 insulation above ceiling to 1200mm both sides of wall	50mm Glasswool or 65mm Polyester ISB3 over entire ceiling
LCAC3	1 layer of 10mm <b>SpanGrid</b> ceiling tiles in exposed grid	45 (39)	50 (44)	52 (46)
LCAC30	1 layer of 10mm <b>MastaShield</b> or <b>SpanShield</b>	45 (37)	50 (42)	52 (44)
LCAC31	2 layers of 10mm <b>MastaShield</b> or <b>SpanShield</b>	55 (48)	58 (51)	60 (53)
LCAC34	1 layer of 13mm <b>MastaShield</b>	48 (40)	53 (45)	55 (47)
LCAC36	1 layer of 10mm <b>SoundShield</b>	48 (41)	53 (46)	55 (48)
LCAC37	2 layers of 10mm <b>SoundShield</b>	55 (48)	60 (53)	62 (55)
LCAC38	1 layer of 13mm <b>SoundShield</b>	52 (47)	57 (52)	59 (55)
LCAC39	2 layers of 13mm <b>SoundShield</b>	58 (52)	63 (58)	65 (60)
LCAC40	1 layer of 13mm <b>FireShield</b>	52 (45)	57 (50)	59 (52)
LCAC41	2 layers of 13mm <b>FireShield</b>	56 (50)	61 (55)	63 (57)
LCAC42	1 layer of 16mm <b>FireShield</b>	52 (47)	67 (52)	69 (55)
LCAC43	1 layer of 13mm <b>FireShield</b> plus 1 layer of 16mm <b>FireShield</b>	57 (51)	62 (56)	64 (58)
LCAC44	2 layers of 16mm <b>FireShield</b>	58 (53)	63 (58)	65 (60)
LCAC46	3 layers of 13mm <b>FireShield</b>	59 (57)	64 (62)	66 (64)
LCAC47	1 layer of 13mm <b>FireShield</b> plus 2 layers of 16mm <b>FireShield</b>	59 (57)	64 (62)	66 (64)
LCAC48	3 layers of 16mm <b>FireShield</b>	60 (58)	65 (63)	67 (65)

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**LCAC50-LCAC68**

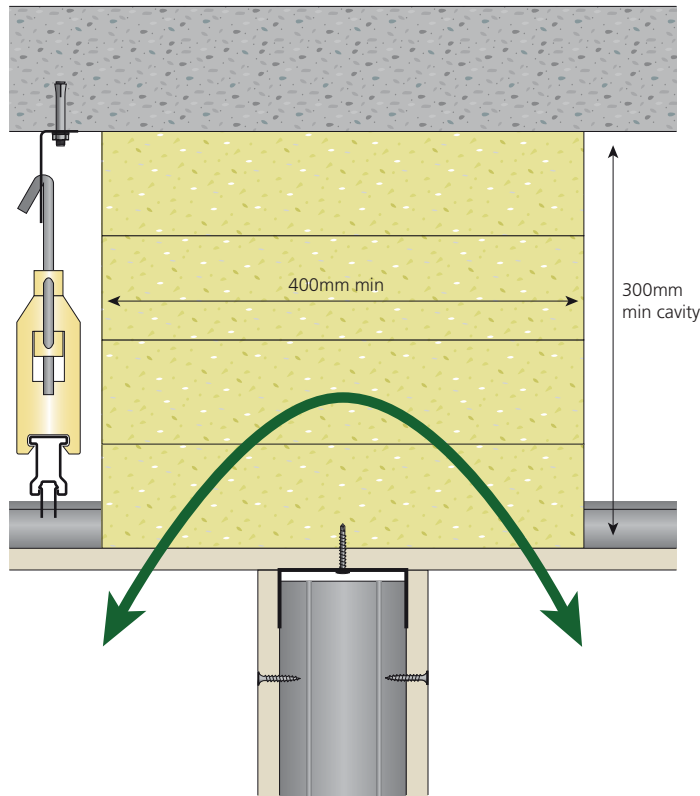
CEILING: [OPTION 1] Suspended ceiling frame with set plasterboard ceiling  
 [OPTION 2] T-bar exposed grid frame with ceiling tiles for system LCAC5

ABOVE CEILING: Glasswool or Polyester (minimum density 14 kg/m<sup>3</sup>) insulation baffle in 400mm wide strips to extend from ceiling to concrete slab or roof lining with no gaps or holes.

[All systems are suitable under a concrete slab, timber roof framing or steel roof framing]

[Acoustic numbers based on minimum 300mm cavity]

[Penetrations in ceiling lining may degrade acoustic performance]



SYSTEM	PLASTERBOARD CEILING LINING	ACOUSTICS - AIRBORNE Rw (Rw + Ctr)
		Glasswool or Polyester insulation (minimum density 14 kg/m <sup>3</sup> ) above ceiling lining in 400mm minimum wide strips continued up to concrete slab or roof lining
LCAC5	1 layer of 10mm <b>SpanGrid</b> ceiling tiles in exposed grid	43 (38)
LCAC50	1 layer of 10mm <b>MastaShield</b> or <b>SpanShield</b>	48 (40)
LCAC51	2 layers of 10mm <b>MastaShield</b> or <b>SpanShield</b>	53 (48)
LCAC54	1 layer of 13mm <b>MastaShield</b>	51 (43)
LCAC56	1 layer of 10mm <b>SoundShield</b>	51 (44)
LCAC57	2 layers of 10mm <b>SoundShield</b>	54 (50)
LCAC58	1 layer of 13mm <b>SoundShield</b>	52 (48)
LCAC59	2 layers of 13mm <b>SoundShield</b>	55 (55)
LCAC60	1 layer of 13mm <b>FireShield</b>	52 (48)
LCAC61	2 layers of 13mm <b>FireShield</b>	51 (47)
LCAC62	1 layer of 16mm <b>FireShield</b>	52 (48)
LCAC63	1 layer of 13mm <b>FireShield</b> plus 1 layer of 16mm <b>FireShield</b>	52 (48)
LCAC64	2 layers of 16mm <b>FireShield</b>	54 (51)
LCAC66	3 layers of 13mm <b>FireShield</b>	57 (54)
LCAC67	1 layer of 13mm <b>FireShield</b> plus 2 layers of 16mm <b>FireShield</b>	58 (55)
LCAC68	3 layers of 16mm <b>FireShield</b>	59 (56)

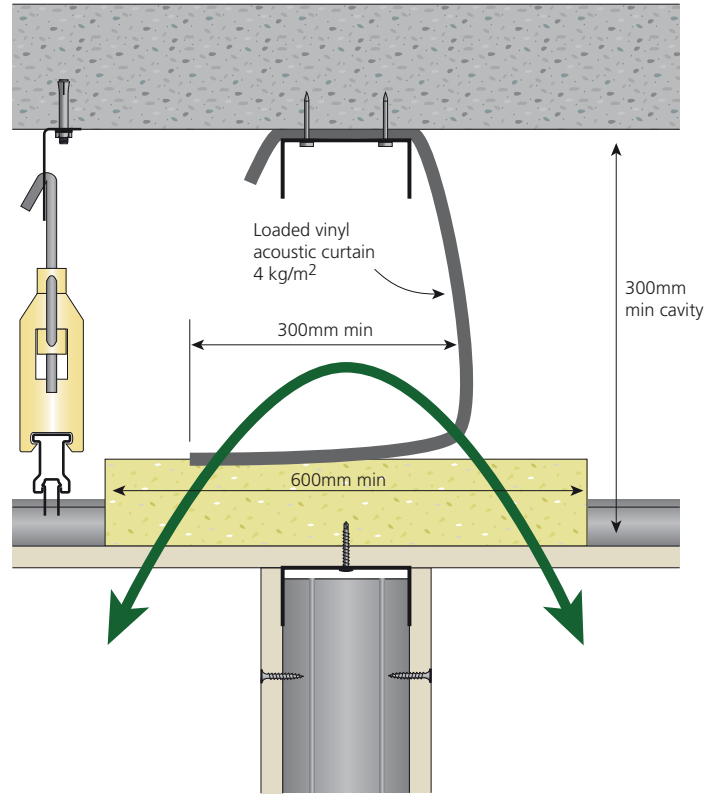
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# LCAC70-LCAC88

CEILING: [OPTION 1] Suspended ceiling frame with set plasterboard ceiling  
 [OPTION 2] T-bar exposed grid frame with ceiling tiles for system LCAC7

ABOVE CEILING: Loaded vinyl acoustic curtain (4kg/m<sup>2</sup>) above wall to extend from ceiling to concrete slab or roof with no gaps or holes.  
 50mm Glasswool (minimum density 11 kg/m<sup>3</sup>) or 65mm Polyester ISB3 insulation placed above ceiling lining

[All systems are suitable under a concrete slab, timber roof framing or steel roof framing]  
 [Acoustic numbers based on minimum 300mm cavity]  
 [Penetrations in ceiling lining may degrade acoustic performance]



SYSTEM	PLASTERBOARD CEILING LINING	ACOUSTICS - AIRBORNE Rw (Rw + Ctr)
		Loaded vinyl acoustic curtain 4kg/m <sup>2</sup> with 50mm Glasswool (minimum density 11 kg/m <sup>3</sup> ) or 65mm Polyester ISB3 insulation above ceiling lining in a 600mm min wide strip
LCAC7	1 layer of 10mm <b>SpanGrid</b> ceiling tiles in exposed grid	43 (38)
LCAC70	1 layer of 10mm <b>MastaShield</b> or <b>SpanShield</b>	48 (40)
LCAC71	2 layers of 10mm <b>MastaShield</b> or <b>SpanShield</b>	53 (48)
LCAC74	1 layer of 13mm <b>MastaShield</b>	51 (43)
LCAC76	1 layer of 10mm <b>SoundShield</b>	51 (44)
LCAC77	2 layers of 10mm <b>SoundShield</b>	54 (50)
LCAC78	1 layer of 13mm <b>SoundShield</b>	52 (48)
LCAC79	2 layers of 13mm <b>SoundShield</b>	55 (55)
LCAC80	1 layer of 13mm <b>FireShield</b>	52 (48)
LCAC81	2 layers of 13mm <b>FireShield</b>	51 (47)
LCAC82	1 layer of 16mm <b>FireShield</b>	52 (48)
LCAC83	1 layer of 13mm <b>FireShield</b> plus 1 layer of 16mm <b>FireShield</b>	52 (48)
LCAC84	2 layers of 16mm <b>FireShield</b>	54 (51)
LCAC86	3 layers of 13mm <b>FireShield</b>	57 (54)
LCAC87	1 layer of 13mm <b>FireShield</b> plus 2 layers of 16mm <b>FireShield</b>	58 (55)
LCAC88	3 layers of 16mm <b>FireShield</b>	59 (56)

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