Soil and Waste Pipe Acoustic Systems

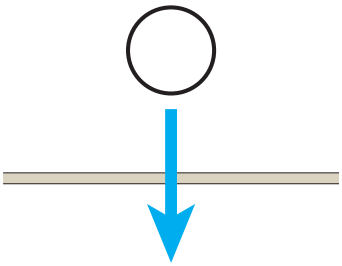
Soil and waste pipe systems provide sound insulation ratings for hydraulic services in a ceiling cavity, bulkhead or a duct. These systems have been designed to comply with National Construction Code (NCC) requirements for each state.

The soil and waste pipe systems cover a range of situations including where soil, waste or water supply pipes and ducts pass through ceilings, riser ducts or bulkheads in bathrooms, kitchens, bedrooms and lounge rooms. Certain systems may require the pipes to be lagged but alternative systems exist that include covering the pipes in plasterboard or the use of a double ceiling when wrapping is not practical.

This section includes only the system tables for soil and waste pipe acoustic systems. For installation requirements, refer to the relevant wall or ceiling section.

KAS2-KAS15

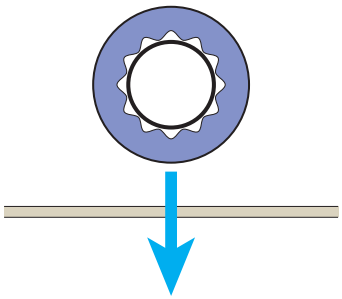
[Soil and waste pipe systems can be a ceiling, wall, bulkhead or duct]
[Number of downlights per 5 m² area]
[Downlights should be evenly distributed and no closer than 900mm apart]



System	Plasterboard Lining	Sound Insulation Rw (Rw + Ctr)				
		No insulation		With either 50mm EarthWool 11 kg/m³ or 60mm Polyester ASB3		
KAS2	2 layers of 10mm MastaShield	32 (27)	28 (25) with 2 downlights	35 (30)	27 (26) with 4 downlights	Acoustic Report Day Design 3094-35 Note: Pipes must not be in contact with insulation or plasterboard
KAS3	1 layer of 13mm MastaShield	29 (25)	–	32 (28)	26 (25) with 3 downlights	
KAS5	1 layer of 10mm SpanShield	28 (24)	–	31 (27)	27 (25) with 2 downlights	
KAS6	2 layers of 10mm SpanShield	32 (28)	26 (25) with 3 downlights	35 (31)	27 (27) with 4 downlights	
KAS8	2 layers of 10mm Opal	33 (30)	25 (25) with 4 downlights	36 (33)	28 (28) with 4 downlights	
KAS9	1 layer of 13mm SoundShield	30 (27)	26 (25) with 2 downlights	33 (30)	25 (25) with 4 downlights	
KAS12	2 layers of 10mm WaterShield	32 (28)	26 (25) with 3 downlights	35 (31)	27 (27) with 4 downlights	
KAS13	1 layer of 13mm WaterShield	29 (26)	27 (25) with 1 downlight	32 (29)	26 (26) with 3 downlights	
KAS15	1 layer of 13mm FireShield	30 (26)	28 (25) with 1 downlight	33 (29)	25 (25) with 4 downlights	

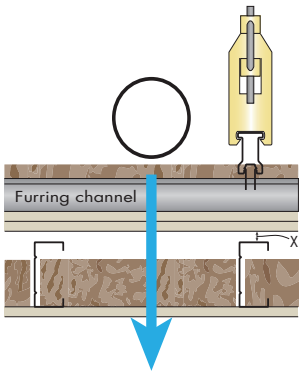
KAS20-KAS35

PIPE WRAPPING: Pyrotek Soundlag 4525C (5 kg/m²)
[Soil and waste pipe systems can be a ceiling, wall, bulkhead or duct]
[Number of downlights per 5 m² area]
[Downlights should be evenly distributed and no closer than 900mm apart]



System	Plasterboard Lining	Sound Insulation Rw (Rw + Ctr)			
		No insulation	With either 50mm EarthWool 11 kg/m³ or 60mm Polyester ASB3		
KAS20	1 layer of 10mm MastaShield	45 (35)	(40)*		Acoustic Report Day Design 3094-35 3094-38 Note: Pipes must not be in contact with insulation or plasterboard * Soundlag 4525C Brochure
KAS21	2 layers of 10mm MastaShield	48 (38)	51 (41)	49 (40) with 1 downlight	
KAS22	1 layer of 13mm MastaShield	–	(40)*	–	
KAS25	2 layers of 10mm SpanShield	48 (39)	51 (42)	47 (40) with 2 downlights	
KAS28	1 layer of 13mm SoundShield	46 (38)	49 (41)	47 (40) with 1 downlight	
KAS31	2 layers of 10mm WaterShield	48 (39)	51 (42)	47 (40) with 2 downlights	
KAS32	1 layer of 13mm WaterShield	45 (37)	48 (40)	–	
KAS34	1 layer of 13mm FireShield	46 (37)	49 (40)	–	
KAS35	1 layer of 16mm FireShield	–	50 (41)	–	

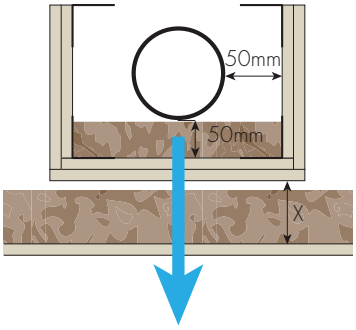
KAS143-KAS151



INNER LINING: 2 layers of 10mm **SpanShield** attached to a concealed frame
FRAME: 64mm steel stud minimum, refer to *Section 3.5.1 - Horizontal Steel Stud and Top Hat Ceilings*
INSULATION: 50mm EarthWool 11 kg/m³ or 60mm Polyester ASB3 in both ceiling cavities
[Soil and waste pipe systems can be a ceiling, wall, bulkhead or duct]
[Number of downlights per 5 m² area]
[Downlights should be evenly distributed and no closer than 900mm apart]

System	Outer Plasterboard Lining	Sound Insulation Rw (Rw + Ctr)		
		X = 0mm	X = 10mm	Acoustic Report Day Design 5008-1
KAS143	2 layer of 13mm MastaShield	54 (41) with 4 downlights	55 (42) with 4 downlights	Note: Pipes must not be in contact with insulation or plasterboard
KAS145	2 layers of 10mm SpanShield	54 (40)	55 (40) with 4 downlights	
KAS148	1 layer of 13mm SoundShield	51 (39)	54 (40)	
KAS151	2 layers of 10mm WaterShield	54 (40)	55 (40) with 4 downlights	

KAS163-KAS174



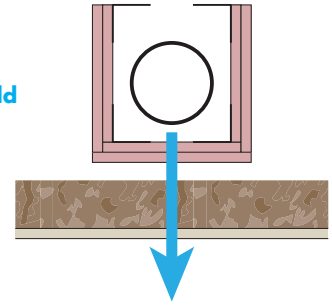
PLASTERBOARD BOX ENCASING PIPE: One layer of 13mm **MastaShield** when X=100mm
Two layers of 13mm **MastaShield** when X=50mm
INSULATION: 50mm EarthWool 11 kg/m³ or 60mm Polyester ASB3
[Soil and waste pipe systems can be a ceiling, wall, bulkhead or duct]
[Number of downlights per 5 m² area]
[Insulation to minimum 1200mm both sides of pipe in both cavities]

System	Outer Plasterboard Lining	Sound Insulation Rw (Rw + Ctr)		
		X = 50mm	X = 100mm	Acoustic Report Day Design 5008-1
KAS163	2 layers of 13mm MastaShield	53 (40) with 4 downlights	54 (41) with 4 downlights	Note: Pipes must not be in contact with insulation or plasterboard
KAS165	2 layers of 10mm SpanShield	53 (39)	54 (40)	
KAS168	1 layer of 13mm SoundShield	51 (37)	53 (39)*	
KAS174	1 layer of 13mm FireShield	51 (36)	51 (38)*	

* Rw + Ctr 40 will be achieved with 1 layer of 13mm SoundShield, WaterShield or FireShield instead of 1 layer of 13mm MastaShield for the plasterboard box

KAS83-KAS95

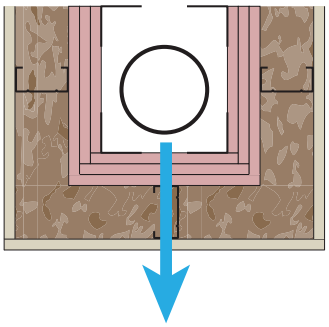
PLASTERBOARD BOX ENCASING PIPE: 2 layers of 13mm WaterShield, FireShield or SoundShield
[Soil and waste pipe systems can be a ceiling, wall, bulkhead or duct]
[Number of downlights per 5 m² area]
[Downlights should be evenly distributed and no closer than 900mm apart]
[Insulation to minimum 1200mm both sides of box]



System	Outer Plasterboard Lining	Cavity (mm)	Sound Insulation Rw (Rw + Ctr)		
			With either 50mm EarthWool 11 kg/m³ or 60mm Polyester ASB3		Acoustic Report Day Design 5008-1 Note: Pipes must not be in contact with insulation or plasterboard
KAS83	2 layers of 13mm MastaShield	75	55 (43)	49 (40) with 3 downlights	
KAS85	2 layers of 10mm SpanShield	75	53 (42)	49 (40) with 2 downlights	
KAS88	1 layer of 13mm SoundShield	100	55 (45)	53 (43) with 4 downlights	
KAS91	2 layers of 10mm WaterShield	100	51 (40)	49 (40) with 1 downlights	
KAS95	2 layers of 13mm FireShield	100	52 (41)	50 (40) with 4 downlights	

KAS182-KAS194

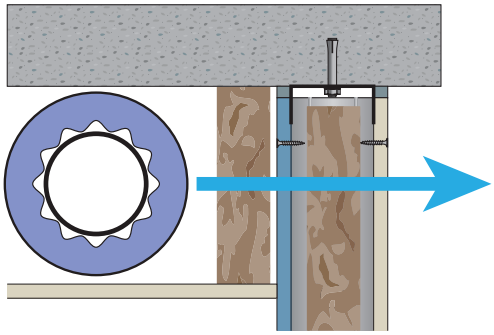
PLASTERBOARD BOX ENCASING PIPE: 3 layers of 13mm FireShield
[Minimum 51mm steel stud]
[Number of downlights per 5 m² area]
[Downlights should be evenly distributed and no closer than 900mm apart]



System	Outer Plasterboard Lining	Sound Insulation Rw (Rw + Ctr)		
		With either 50mm EarthWool 11 kg/m³ or 60mm Polyester ASB3		Acoustic Report Day Design 5008-1 Note: Pipes must not be in contact with plasterboard
KAS182	1 layers of 13mm MastaShield	49 (40)	47 (39) with 4 downlights	
KAS194	1 layer of 13mm FireShield	50 (41)	48 (40) with 4 downlights	

KAS120

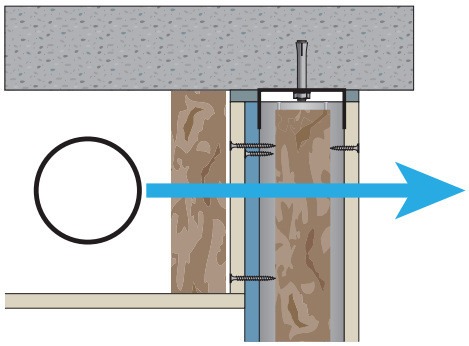
PIPE WRAPPING: Pyrotek Soundlagg 4525C (5 kg/m²) or equivalent
INNER LINING: [Habitable Room Side] 1 layer of 10mm **MastaShield**
[Bathroom Room Side] 1 layer of 10mm **WaterShield**
FRAME: 64mm minimum steel stud
WALL INSULATION: 50mm EarthWool or 60mm Polyester ASB3 to minimum 500mm below ceiling



System	Sound Insulation Rw (Rw + Ctr)		
	With no insulation along wall above ceiling	With either 50mm EarthWool 11 kg/m³ or 60mm Polyester ASB3 along wall or above ceiling	Acoustic Report Day Design 3094-35 Note: Pipes must not be in contact with insulation or plasterboard
KAS120	57 (43)	59 (44)	

KAS101- KAS212

LINING: As per table
FRAME: 64mm minimum steel stud
WALL INSULATION: 50mm EarthWool 11 kg/m³ or 60mm Polyester ASB3 to minimum 500mm below ceiling



System	Additional Plasterboard Strip Along Wall Above Ceiling Only	Bathroom Side Lining	Habitable Room Side Lining	Acoustics Rw (Rw + Ctr)	
				With either 50mm EarthWool 11 kg/m³ or 60mm Polyester ASB3 along wall or above ceiling	
KAS101	2 x 10mm MastaShield	10mm WaterShield	10mm MastaShield	50 (39)	Acoustic Report Day Design 5008-1 5008-23. 1L Note: Pipes must not be in contact with insulation or plasterboard
KAS103	2 x 13mm MastaShield	10mm WaterShield	10mm MastaShield	50 (40)	
KAS107	2 x 10mm Opal	10mm WaterShield	10mm MastaShield	51 (40)	
KAS108	1 x 13mm SoundShield	10mm WaterShield	10mm MastaShield	49 (39)*	
KAS111	2 x 10mm WaterShield	10mm WaterShield	10mm MastaShield	50 (40)	
KAS114	1 x 13mm FireShield	10mm WaterShield	10mm MastaShield	48 (38)*	
KAS210	1 x 16mm FireShield	10mm WaterShield	13mm MastaShield	50 (40)	
KAS212	1 x 16mm FireShield	13mm WaterShield	10mm MastaShield	50 (40)	

*Rw + Ctr = 40 dB can be achieved with 92mm steel studs