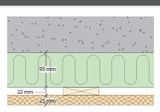
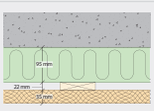
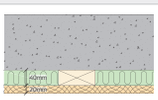
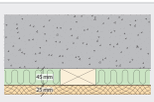
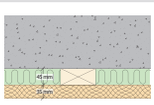
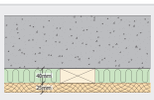
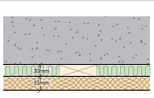
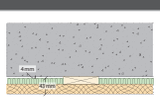
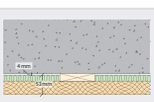
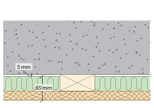
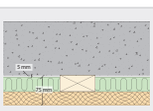
Troldtekt®
Natural acoustic solutions

Sound absorption values – Ceilings

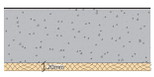
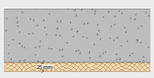
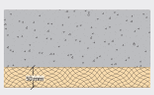
Constructions with Troldtekt and Troldtekt Plus tested according to DS/ISO 354

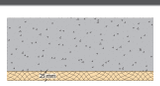
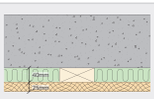
Troldtekt installed on concrete

Constructions with Troldtekt and mineral wool installed directly on concrete		Frequency [Hz]						Specifications		
		125	250	500	1000	2000	4000	α_w	NRC	Class
	Concrete 95 mm mineral wool 22 mm wooden battens 25 mm Troldtekt	0,65	1,00	0,95	0,90	0,85	1,00	0,90	0,95	A
	Concrete 95 mm mineral wool 22 mm wooden battens 35 mm Troldtekt	0,65	1,00	0,90	0,90	0,90	1,00	0,90	0,95	A
	Concrete 40 mm mineral wool 40 mm wooden battens 20 mm Troldtekt	0,20	0,55	1,00	1,00	0,85	0,90	0,85	0,85	B
	Concrete 45 mm mineral wool 45 mm wooden battens 25 mm Troldtekt	0,20	0,60	1,00	0,90	0,85	1,00	0,85	0,85	B
	Concrete 45 mm mineral wool 45 mm wooden battens 35 mm Troldtekt	0,25	0,65	1,00	0,90	0,90	1,00	0,90	0,85	A
	Concrete 40 mm mineral wool 40 mm wooden battens 25 mm Troldtekt	0,25	0,60	1,00	0,90	0,80	0,95	0,85	0,85	B
	Concrete 30 mm mineral wool 30 mm wooden battens 35 mm Troldtekt	0,20	0,50	1,00	0,85	0,80	0,95	0,80	0,80	B

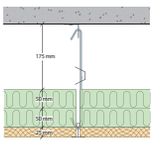
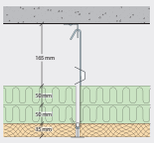
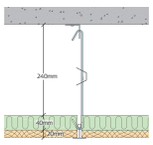
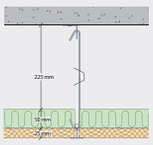
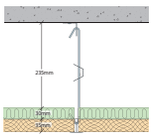
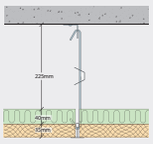
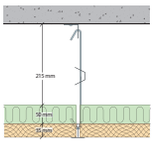
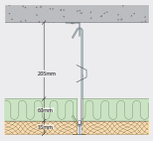
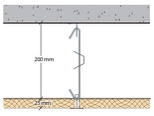
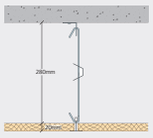
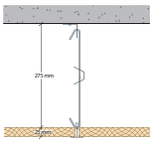
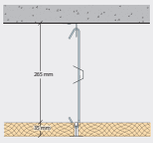
Constructions with Troldtekt Plus installed directly on concrete		Frequency [Hz]						Specifications		
		125	250	500	1000	2000	4000	α_w	NRC	Class
	Concrete 22 mm wooden battens 25+18 mm Troldtekt Plus	0,10	0,30	0,75	1,00	0,85	0,95	0,60	0,75	C
	Concrete 22 mm wooden battens 35+18 mm Troldtekt Plus	0,15	0,30	0,80	1,00	0,90	1,00	0,60	0,75	C
	Concrete 45 mm wooden battens 25+40 mm Troldtekt Plus	0,20	0,60	1,00	0,95	0,90	0,95	0,90	0,85	A
	Concrete 45 mm wooden battens 35+40 mm Troldtekt Plus	0,25	0,65	1,00	0,95	0,95	1,00	0,95	0,90	A

Troldtekt installed on concrete

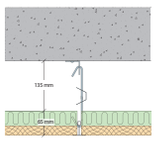
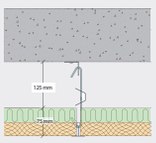
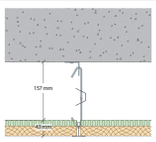
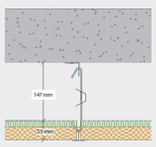
Constructions with Troldtekt installed directly on concrete		Frequency [Hz]						Specifications		
		125	250	500	1000	2000	4000	α_w	NRC	Class
	Concrete 20 mm Troldtekt	0,07	0,11	0,18	0,32	0,64	0,70	0,30	0,30	D
	Concrete 25 mm Troldtekt	0,10	0,15	0,25	0,40	0,75	0,60	0,30	0,40	D
	Concrete 35 mm Troldtekt	0,10	0,20	0,35	0,70	0,80	0,70	0,30	0,35	D
	Concrete 50 mm Troldtekt	0,15	0,25	0,50	0,85	0,70	0,85	0,50	0,55	D

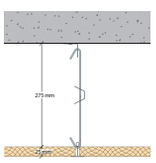
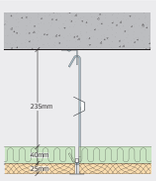
Constructions with Troldtekt A2 with and without mineral wool installed directly on concrete		Frequency [Hz]						Specifications		
		125	250	500	1000	2000	4000	α_w	NRC	Class
	Concrete 25 mm Troldtekt A2	0,10	0,15	0,25	0,45	0,80	0,70	0,35	0,40	D
	Concrete 40 mm mineral wool 25 mm Troldtekt A2	0,25	0,60	1,00	0,95	0,85	1,00	0,85	0,85	B

Troldtekt installed as suspended ceiling

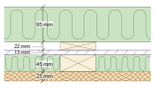
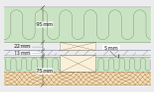
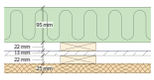
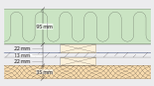
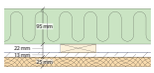
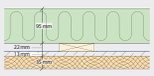
Constructions with Troldtekt		Frequency [Hz]						Specifications		
		125	250	500	1000	2000	4000	α_w	NRC	Class
	Concrete 275 mm space 50 mm mineral wool 50 mm mineral wool 25 mm Troldtekt	0,75	1,00	0,95	0,90	0,80	0,90	0,90	0,90	A
	Concrete 265 mm space 50 mm mineral wool 50 mm mineral wool 35 mm Troldtekt	0,80	0,95	0,90	0,85	0,85	0,95	0,90	0,90	A
	Concrete 280 mm space 40 mm mineral wool 20 mm Troldtekt	0,60	0,90	0,95	0,95	0,90	0,90	0,95	0,90	A
	Concrete 275 mm space 50 mm mineral wool 25 mm Troldtekt	0,60	0,90	0,85	0,85	0,80	0,90	0,85	0,85	B
	Concrete 265 mm space 30 mm mineral wool 35 mm Troldtekt	0,60	0,85	0,80	0,85	0,85	1,00	0,85	0,85	B
	Concrete 265 mm space 40 mm mineral wool 35 mm Troldtekt	0,65	0,90	0,85	0,85	0,90	1,00	0,90	0,90	A
	Concrete 265 mm space 50 mm mineral wool 35 mm Troldtekt	0,70	0,90	0,90	0,90	0,90	0,95	0,90	0,90	A
	Concrete 265 mm space 60 mm mineral wool 35 mm Troldtekt	0,70	0,90	0,90	0,90	0,90	0,95	0,90	0,90	A
	Concrete 200 mm space 25 mm Troldtekt	0,20	0,45	0,45	0,35	0,50	0,60	0,45	0,45	C
	Concrete 280 mm space 20 mm Troldtekt	0,25	0,45	0,35	0,45	0,55	0,65	0,45	0,45	D
	Concrete 275 mm space 25 mm Troldtekt	0,30	0,40	0,30	0,40	0,45	0,60	0,40	0,40	D
	Concrete 265 mm space 35 mm Troldtekt	0,30	0,55	0,45	0,55	0,70	0,80	0,55	0,55	D

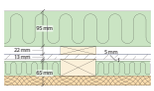
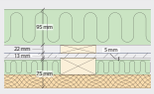
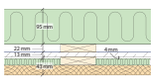
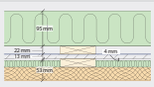
Troldtekt installed as suspended ceiling

Constructions with Troldtekt Plus		Frequency [Hz]						Specifications		
		125	250	500	1000	2000	4000	α_w	NRC	Class
	Concrete 200 mm space 25+40 mm Troldtekt Plus	0,50	0,90	1,00	1,00	0,90	1,00	1,00	0,95	A
	Concrete 200 mm space 35+40 mm Troldtekt Plus	0,55	0,90	1,00	1,00	0,90	1,00	1,00	0,95	A
	Concrete 200 mm space 25+18 mm Troldtekt Plus	0,45	0,80	1,00	1,00	0,90	1,00	1,00	0,90	A
	Concrete 200 mm space 35+18 mm Troldtekt Plus	0,50	0,85	1,00	1,00	0,90	1,00	1,00	0,95	A

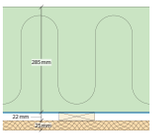
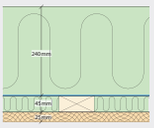
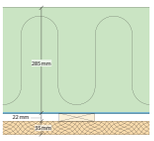
Constructions with Troldtekt A2		Frequency [Hz]						Specifications		
		125	250	500	1000	2000	4000	α_w	NRC	Class
	Concrete 275 mm space 25 mm Troldtekt A2	0,30	0,45	0,40	0,50	0,60	0,75	0,50	0, 50	D
	Concrete 275 mm space 40 mm mineral wool 25 mm Troldtekt A2	0,60	0,85	0,95	1,00	0,95	1,00	1,00	0,90	A

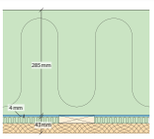
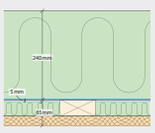
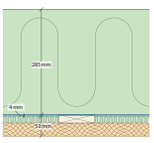
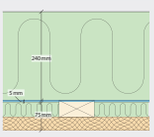
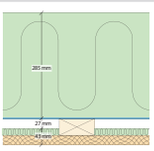
Troldtekt installed on gypsum

Constructions with Troldtekt installed on gypsum		Frequency [Hz]						Specifications		
		125	250	500	1000	2000	4000	α_w	NRC	Class
	95 mm mineral wool 22 mm wooden battens 13 mm gypsum 45 mm wooden battens 45 mm mineral wool 25 mm Troldtekt	0,30	0,60	1,00	0,95	0,85	1,00	0,85	0,85	B
	95 mm mineral wool 22 mm wooden battens 13 mm gypsum 45 mm wooden battens 45 mm mineral wool 35 mm Troldtekt	0,35	0,60	1,00	0,90	0,90	1,00	0,90	0,85	A
	95 mm mineral wool 22 mm wooden battens 13 mm gypsum 22 mm wooden battens 25 mm Troldtekt	0,25	0,20	0,35	0,70	0,65	0,70	0,40	0,50	D
	95 mm mineral wool 22 mm wooden battens 13 mm gypsum 22 mm wooden battens 35 mm Troldtekt	0,25	0,20	0,35	0,70	0,65	0,70	0,40	0,50	D
	95 mm mineral wool 22 mm wooden battens 13 mm gypsum 25 mm Troldtekt	0,20	0,15	0,25	0,50	0,85	0,65	0,35	0,45	D
	95 mm mineral wool 22 mm wooden battens 13 mm gypsum 35 mm Troldtekt	0,25	0,20	0,35	0,60	0,75	0,75	0,40	0,50	D

Constructions with Troldtekt Plus installed on gypsum		Frequency [Hz]						Specifications		
		125	250	500	1000	2000	4000	α_w	NRC	Class
	95 mm mineral wool 22 mm wooden battens 13 mm gypsum 45 mm wooden battens 25+40 mm Troldtekt Plus	0,30	0,55	1,00	1,00	0,95	0,95	0,85	0,90	B
	95 mm mineral wool 22 mm wooden battens 13 mm gypsum 45 mm wooden battens 35+40 mm Troldtekt Plus	0,30	0,60	1,00	1,00	1,00	1,00	0,90	0,90	A
	95 mm mineral wool 22 mm wooden battens 13 mm gypsum 45 mm wooden battens 25+18 mm Troldtekt Plus	0,25	0,30	0,70	1,00	0,90	0,95	0,60	0,75	C
	95 mm mineral wool 22 mm wooden battens 13 mm gypsum 45 mm wooden battens 35+18 mm Troldtekt Plus	0,25	0,35	0,80	1,00	0,90	1,00	0,65	0,75	C

Troldtekt and mineral wool installed over purlins and rafters

Constructions with Troldtekt		Frequency [Hz]						Specifications		
		125	250	500	1000	2000	4000	α_w	NRC	Class
	285 mm mineral wool Vapour barrier 22 mm wooden battens 25 mm Troldtekt	0,75	0,90	0,95	0,85	0,90	0,80	0,90	0,90	A
	240 mm mineral wool Vapour barrier 45 mm wooden battens 45 mm mineral wool 25 mm Troldtekt	0,70	0,90	1,00	1,00	0,85	1,00	0,95	0,95	A
	285 mm mineral wool Vapour barrier 22 mm wooden battens 35 mm Troldtekt	0,70	0,95	0,95	0,90	0,85	0,85	0,90	0,90	A

Constructions with Troldtekt Plus		Frequency [Hz]						Specifications		
		125	250	500	1000	2000	4000	α_w	NRC	Class
	285 mm mineral wool Vapour barrier 22 mm wooden battens 25+18 mm Troldtekt Plus	0,70	0,85	1,00	1,00	0,95	1,00	1,00	0,95	A
	240 mm mineral wool Vapour barrier 45 mm wooden battens 25+40 mm Troldtekt Plus	0,65	0,85	1,00	1,00	0,95	1,00	1,00	0,95	A
	285 mm mineral wool Vapour barrier 22 mm wooden battens 35+18 mm Troldtekt Plus	0,65	0,85	1,00	1,00	0,95	1,00	1,00	0,95	A
	240 mm mineral wool Vapour barrier 45 mm wooden battens 35+40 mm Troldtekt Plus	0,70	0,85	1,00	1,00	1,00	1,00	1,00	1,00	A
	285 mm mineral wool Vapour barrier 22 mm wooden battens 25+18 mm Troldtekt Plus	0,70	0,85	1,00	1,00	1,00	1,00	1,00	0,95	A

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