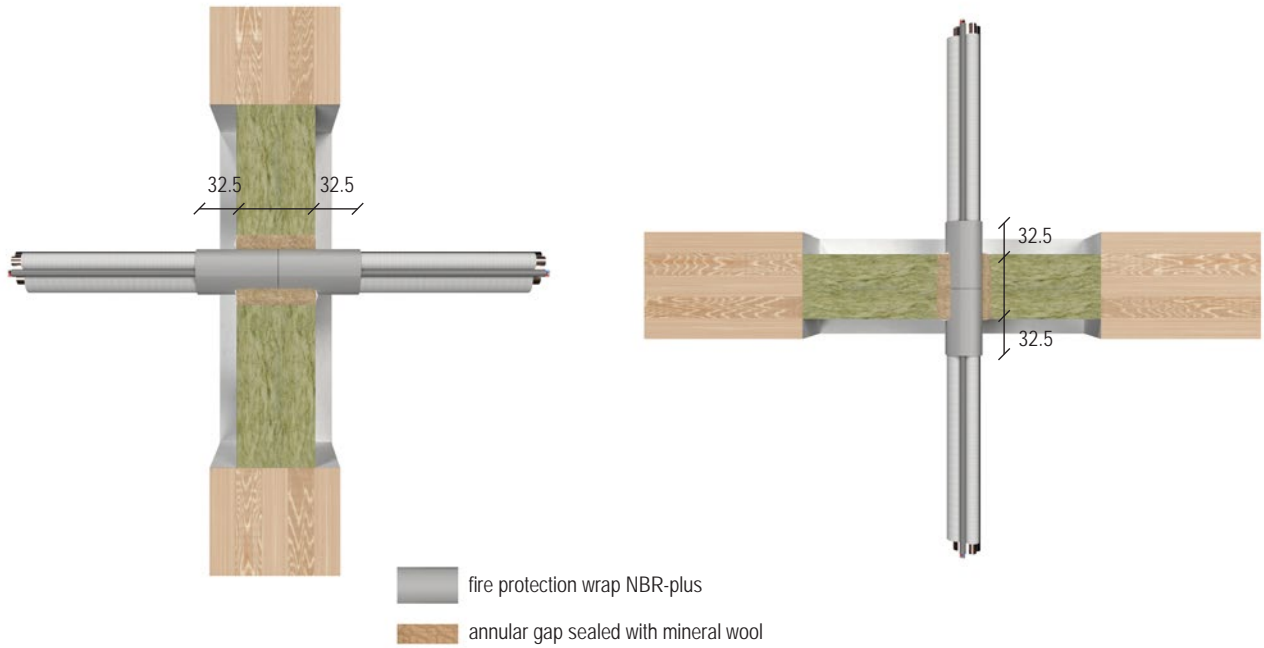
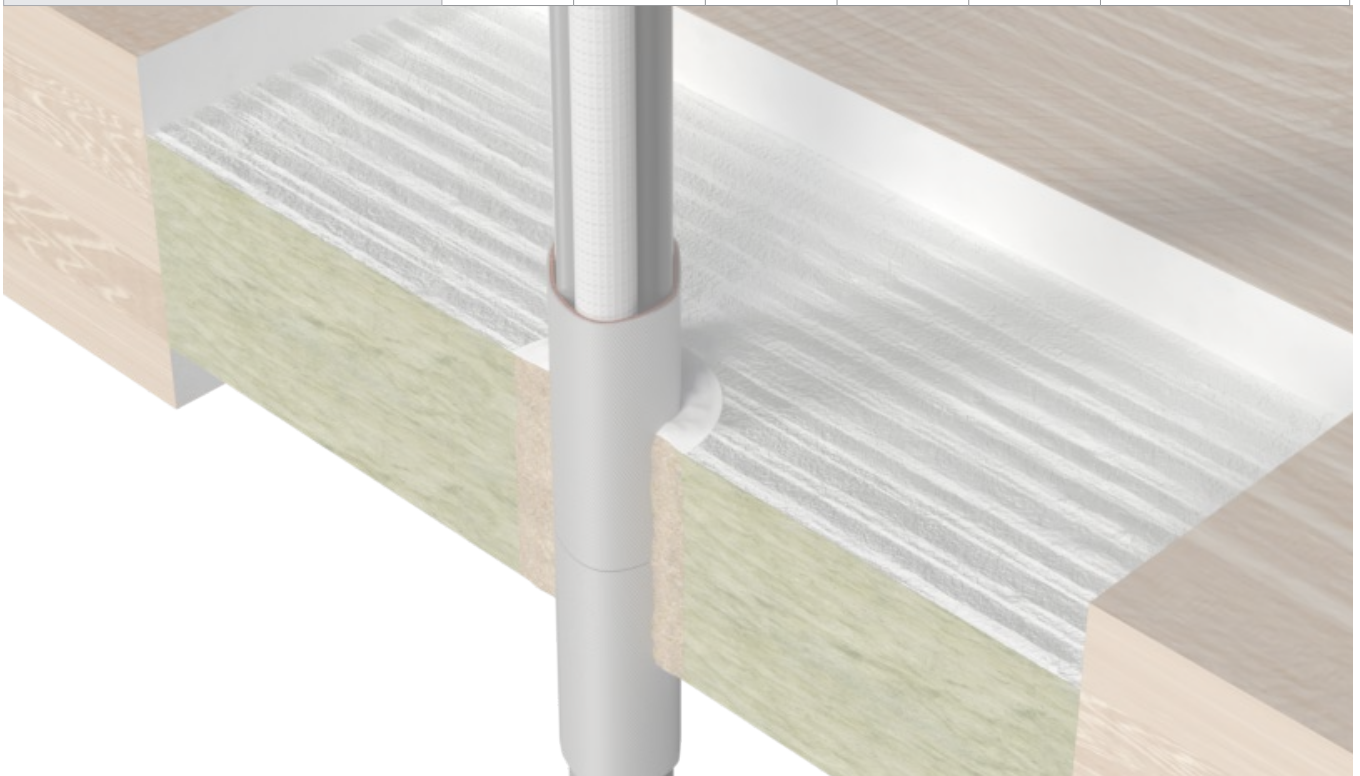


HVAC split line combinations in wall and floor seals

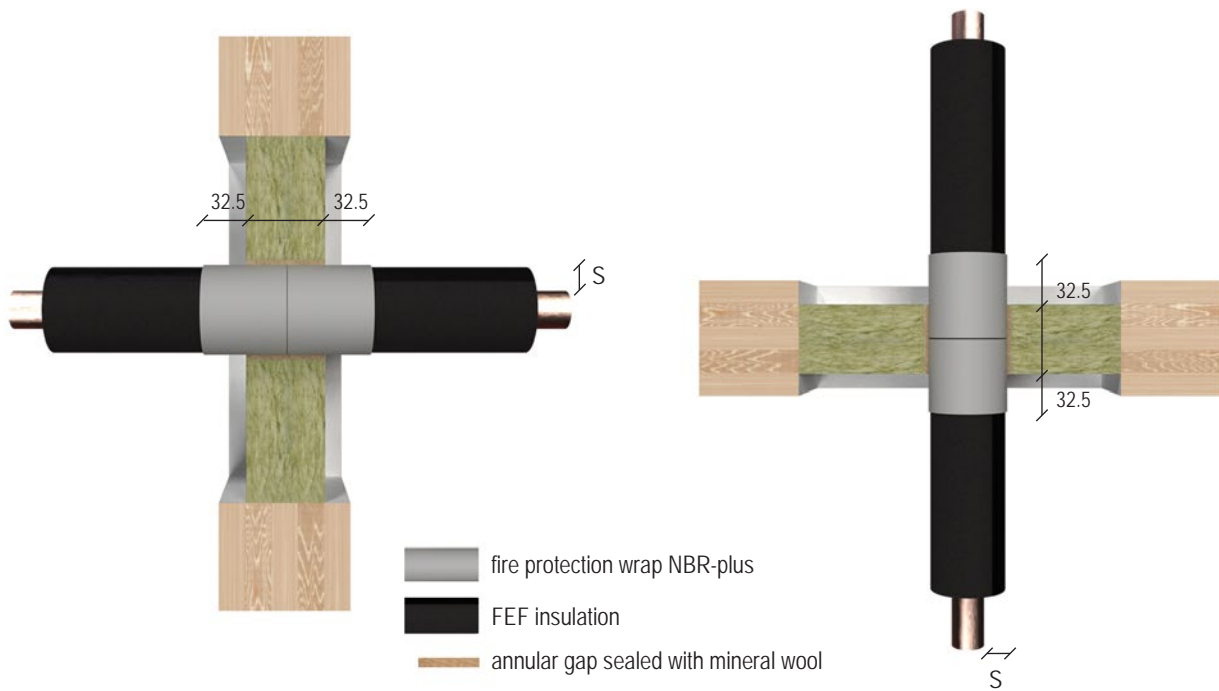


All specifications in mm

Wall/floor						
Services	NBR-plus					Fire resistance class
	Wrap width [mm]	Overlap [mm]	Inside seal [mm]	Outside seal [mm]	Number of layers [n]	
up to 2 copper pipes $\varnothing \leq 18.0$ mm, pipe wall thickness 1.0–14.2 mm, 9 mm PE foam, + 1 pipe PVC-U/PVC-C $\varnothing \leq 25.0$ mm, pipe wall thickness 1.5 mm, + up to 3 cables $\varnothing \leq 14.0$ mm	2 × 62.5 or 1 × 125	0	2 × 30 or 1 × 60	2 × 32.5	2	EI 60



Non-combustible pipes with fire protection wrap in wall and floor seals



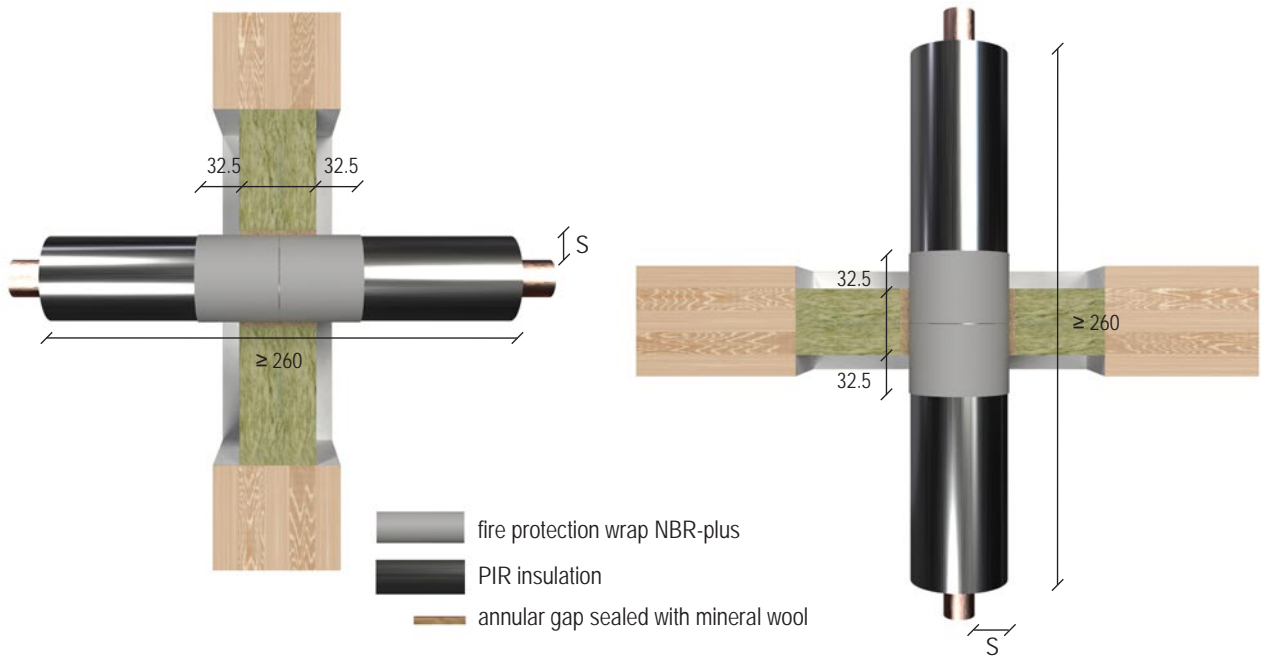
All specifications in mm

Wall

Pipe material	Outer diameter [mm]	Pipe wall thickness [mm]	Section insulation		Protective insulation		NBR-plus					Fire resistance class
			Insulation length	Insulation thickness [mm]	Insulation length [mm]	Insulation thickness [mm]	Wrap width [mm]	Overlap [mm]	Inside seal [mm]	Outside seal [mm]	Number of layers [n]	
60 minutes												
Copper, steel, stainless steel, cast iron	≤ 15.0	0.6–14.2	CS	10.0–38.0	–	–	2 × 62.5 or 1 × 125	0	2 × 30 or 1 × 60	2 × 32.5	2	EI 60 U/C
	≤ 42.0			12.0–38.0	–	–					2	
	≤ 60.0			19.0–38.0	–	–					2	
	≤ 88.9			22.5–38.0	–	–					2	
Steel, stainless steel, cast iron	≤ 88.9			15.5–38.0	–	–					2	
	≤ 114.3			15.0–38.0	–	–					2	
	≤ 159.0			25.0–38.0	250.0	19.0					2	
	≤ 219.1			25.0–38.0	250.0	38.0					2	

Wall												
Pipe material	Outer diameter [mm]	Pipe wall thickness [mm]	Section insulation		Protective insulation		NBR-plus					Fire resistance class
			Insulation length	Insulation thickness [mm]	Insulation length [mm]	Insulation thickness [mm]	Wrap width [mm]	Overlap [mm]	Inside seal [mm]	Outside seal [mm]	Number of layers [n]	
30 minutes												
Copper, steel, stainless steel, cast iron	≤ 42.0	0.6–14.2	CS	10.0–38.0	–	–	2 × 62.5 or 1 × 125	0	2 × 30 or 1 × 60	2 × 32.5	2	EI 30 U/C
	≤ 88.9			18.0–38.0	–	–					2	
Floor												
Pipe material	Outer diameter [mm]	Pipe wall thickness [mm]	Section insulation		Protective insulation		NBR-plus					Fire resistance class
			Insulation length	Insulation thickness [mm]	Insulation length [mm]	Insulation thickness [mm]	Wrap width [mm]	Overlap [mm]	Inside seal [mm]	Outside seal [mm]	Number of layers [n]	
60 minutes												
Copper, steel, stainless steel, cast iron	≤ 15.0	0.6–14.2	CS	10.0–38.0	–	–	2 × 62.5 or 1 × 125	0	2 × 30 or 1 × 60	2 × 32.5	2	EI 60 U/C
	≤ 42.0			12.0–38.0	–	–					2	
	> 42.0 – ≤ 88.9			19.0	–	–					2	
	≤ 88.9			22.5–38.0	–	–					2	
Steel, stainless steel, cast iron	≤ 15.0	3.2–14.2	CS	10.0–38.0	–	–	2 × 62.5 or 1 × 125	0	2 × 30 or 1 × 60	2 × 32.5	2	EI 60 U/C
	≤ 42.0			15.0–38.0	–	–					2	
	≤ 88.9			18.5–38.0	–	–					2	
	≤ 114.3	18.5–38.0		–	–	2						
	≤ 159.0	4.0–14.2		25.0–38.0	250	19					2	
	≤ 219.1	4.5–14.2		25.0–38.0	250	38					2	
30 minutes												
Copper, steel, stainless steel, cast iron	≤ 42.0	0.6–14.2	CS	10.0–38.0	–	–	2 × 62.5 oder 1 × 125	0	2 × 30 or 1 × 60	2 × 32.5	2	EI 30 U/C
	≤ 88.9			19.0–38.0	–	–					2	

Non-combustible pipes with PIR insulation and fire protection wrap in wall and floor seals



All specifications in mm

Wall									
Pipe material	Outer diameter [mm]	Pipe wall thickness [mm]	PIR insulation	NBR-plus					Fire resistance class
			Thickness S [mm]	Wrap width [mm]	Number of layers [n]	Overlap [mm]	Inside seal [mm]	Outside seal [mm]	
60 minutes									
Copper, steel, stainless steel, cast iron	≤ 15.0	0.6–14.2	20–80	2 × 62.5 or 1 × 125	2	0	2 × 30 or 1 × 60	2 × 32.5	EI 60 U/C
	> 15 – ≤ 88.9		30–80						
	108.0	40–80							
Steel, stainless steel, cast iron	≤ 15.0	0.6–14.2	20–80						
	> 15.0 – ≤ 88.9		30–80						
	> 88.9 – ≤ 108.0	2.5–14.2	40–80						
	> 108.0 – ≤ 168.3	4.0–14.2	50						
> 168.3 – ≤ 219.1	4.5–14.2	50							
45 minutes									
Copper, steel, stainless steel, cast iron	≤ 42.0	0.6–14.2	20–80	2 × 62.5 or 1 × 125	2	0	2 × 30 or 1 × 60	2 × 32.5	EI 45 U/C
	> 42 – ≤ 88.9		30–80						
	108.0	50							
Steel, stainless steel, cast iron	≤ 42.0	0.6–14.2	20–80						
	> 42.0 – ≤ 88.9		30–80						
	> 88.9 – ≤ 108.0	2.5–14.2	50						
	> 108.0 – ≤ 168.3	4.0–14.2	50						
> 168.3 – ≤ 219.1	4.5–14.2	50							

Wall									
Pipe material	Outer diameter [mm]	Pipe wall thickness [mm]	PIR insulation	NBR-plus					Fire resistance class
			Thickness S [mm]	Wrap width [mm]	Number of layers [n]	Overlap [mm]	Inside seal [mm]	Outside seal [mm]	
30 minutes									
Copper, steel, stainless steel, cast iron	≤ 88.9	0.6–14.2	20–80	2 × 62.5 or 1 × 125	2	0	2 × 30 or 1 × 60	2 × 32.5	EI 30 U/C
	108.0	2.5–14.2	30–80						
Steel, stainless steel, cast iron	≤ 88.9	0.6–14.2	20–80						
	> 88.9 – ≤ 108.0	2.5–14.2	30						
	> 108.0 – ≤ 168.3	4.0–14.2	50						
	> 168.3 – ≤ 219.1	4.5–14.2	50						

Floor									
Pipe material	Outer diameter [mm]	Pipe wall thickness [mm]	PIR insulation	NBR-plus					Fire resistance class
			Thickness S [mm]	Wrap width [mm]	Number of layers [n]	Overlap [mm]	Inside seal [mm]	Outside seal [mm]	
60 minutes									
Copper, steel, stainless steel, cast iron	≤ 15.0	0.6–14.2	20–80	2 × 62.5 or 1 × 125	2	0	2 × 30 or 1 × 60	2 × 32.5	EI 60 U/C
	> 15 – < 88.9		30–80						
	> 88.9 – ≤ 108.0	2.5–14.2	20–80						
Steel, stainless steel, cast iron	≤ 15.0	0.6–14.2	20–80						
	> 15.0 – ≤ 88.9	2.5–14.2	30–80						
	> 88.9 – ≤ 108.0	4.0–14.2	100						
	> 108.0 – ≤ 168.3	4.5–14.2							
	> 168.3 – ≤ 219.1								
45 minutes									
Copper, steel, stainless steel, cast iron	≤ 42.0	0.6–14.2	20–80	2 × 62.5 or 1 × 125	2	0	2 × 30 or 1 × 60	2 × 32.5	EI 45 U/C
	> 42 – ≤ 88.9		30–80						
	> 88.9 – ≤ 108.0	2.5–14.2							
30 minutes									
Copper, steel, stainless steel, cast iron	≤ 88.9	0.6	20–80	2 × 62.5 or 1 × 125	2	0	2 × 30 or 1 × 60	2 × 32.5	EI 30 U/C
	> 88.9 – ≤ 108.0	2.5–14.2	30–80						