

# NET ZERO DOUBLE STUD - DETAIL SET

## U-values of building assemblies

Passive House with PHPP Version 10.6 EN

/ Climate: PHPP-Standard / TFA: 0 m² / Overheating: % / PER: 0 kWh/(m²a)

Show special cases and secondary calculations on the right ->

Description of building assembly		Assembly no.	
Net Zero Retrofit - Wall		01ud	
Orientation of building assembly (or R <sub>adj</sub> )	2-Wall	Interior insulation?	
Adjacent to (or R <sub>sep</sub> )	3-Ventilated	U-value supplement [W/(m²K)]	
Area section 1	λ [W/(mK)]	Area section 2 (optional)	λ [W/(mK)]
1/2" Drywall	0.180		
3-1/2" Old cavity insulation	0.055	2x4 framing @ 16" o.c.	0.130
1/2" Wood slat sheathing	0.130		
1-1/2" Cellulose	0.039	1-1/2" exterior frame	0.130
4-1/2" Cellulose	0.039		
1-1/2" Cellulose	0.039	1-1/2" exterior frame	0.130
Percentage of sec. 1:	91%	Percentage of sec. 2:	9.4%
Heat transmission resistance coefficients			
Interior R <sub>si</sub> :	0.13	m²K/W	
Exterior R <sub>se</sub> :	0.13	m²K/W	
Total thickness [cm]:		30.5	
U-value [W/(m²K)]:		0.154	

Description of building assembly		Assembly no.	
Net Zero Retrofit - Foundation		02ud	
Orientation of building assembly (or R <sub>adj</sub> )	2-Wall	Interior insulation?	
Adjacent to (or R <sub>sep</sub> )	2-Ground	U-value supplement [W/(m²K)]	
Area section 1	λ [W/(mK)]	Area section 2 (optional)	λ [W/(mK)]
1/2" Drywall	0.180		
3-1/2" Fibreglass batt insulation	0.054	2x4 framing @ 24" o.c.	0.130
2" EPS type ii	0.036		
2" EPS type ii	0.036		
8" Concrete foundation	2.300		
Percentage of sec. 1:	94%	Percentage of sec. 2:	6.3%
Heat transmission resistance coefficients			
Interior R <sub>si</sub> :	0.13	m²K/W	
Exterior R <sub>se</sub> :	0.00	m²K/W	
Total thickness [cm]:		40.7	
U-value [W/(m²K)]:		0.214	

### ASSEMBLY VALUES

	U - Value	R - Value	RSI
Wall Assembly	0.154	36.87	6.494
Foundation	0.214	26.53	4.673
Window Header	0.170	33.40	5.882
Slab	0.310	18.32	3.226
Roof	0.124	45.79	8.065

Description of building assembly		Assembly no.	
Net Zero Retrofit - Header		03ud	
Orientation of building assembly (or R <sub>adj</sub> )	2-Wall	Interior insulation?	
Adjacent to (or R <sub>sep</sub> )	3-Ventilated	U-value supplement [W/(m²K)]	
Area section 1	λ [W/(mK)]	Area section 2 (optional)	λ [W/(mK)]
1/2" Drywall	0.180		
1/2" Old cavity insulation	0.055		
3" Wood header	0.130		
1/2" Wood slat sheathing	0.130		
1-1/2" Cellulose	0.039	1-1/2" exterior frame	0.130
4-1/2" Cellulose	0.039		
1-1/2" Cellulose	0.039	1-1/2" exterior frame	0.130
Percentage of sec. 1:	91%	Percentage of sec. 2:	9.4%
Heat transmission resistance coefficients			
Interior R <sub>si</sub> :	0.13	m²K/W	
Exterior R <sub>se</sub> :	0.13	m²K/W	
Total thickness [cm]:		30.5	
U-value [W/(m²K)]:		0.170	

Description of building assembly		Assembly no.	
Net Zero Retrofit - Slab		04ud	
Orientation of building assembly (or R <sub>adj</sub> )	3-Floor	Interior insulation?	
Adjacent to (or R <sub>sep</sub> )	2-Ground	U-value supplement [W/(m²K)]	
Area section 1	λ [W/(mK)]	Area section 2 (optional)	λ [W/(mK)]
3/4" Plywood	0.130		
3/4" EPS between strips	0.036	3/4x3 embeded plywood	0.130
3-1/4" EPS	0.036		
4" Concrete slab	2.300		
Percentage of sec. 1:	100%	Percentage of sec. 2:	
Heat transmission resistance coefficients			
Interior R <sub>si</sub> :	0.17	m²K/W	
Exterior R <sub>se</sub> :	0.00	m²K/W	
Total thickness [cm]:		22.5	
U-value [W/(m²K)]:		0.310	

Description of building assembly		Assembly no.	
Net Zero Retrofit - Roof		05ud	
Orientation of building assembly (or R <sub>adj</sub> )	1-Roof	Interior insulation?	
Adjacent to (or R <sub>sep</sub> )	3-Ventilated	U-value supplement [W/(m²K)]	
Area section 1	λ [W/(mK)]	Area section 2 (optional)	λ [W/(mK)]
1/2" Drywall	0.180		
Empty attic cavity - average	0.000		
1/2" Plywood sheathing	0.130		
1-3/4" Cellulose	0.039	1-3/4" i-joint cord	0.130
8-3/8" Cellulose	0.039		
1-3/4" Cellulose	0.039	1-3/4" i-joint cord	0.130
Percentage of sec. 1:	100%	Percentage of sec. 2:	
Heat transmission resistance coefficients			
Interior R <sub>si</sub> :	0.10	m²K/W	
Exterior R <sub>se</sub> :	0.10	m²K/W	
Total thickness [cm]:		93.7	
U-value [W/(m²K)]:		0.124	



Revisions

1.	
2.	
3.	

Notes

1.	
2.	
3.	

NOT FOR CONSTRUCTION

