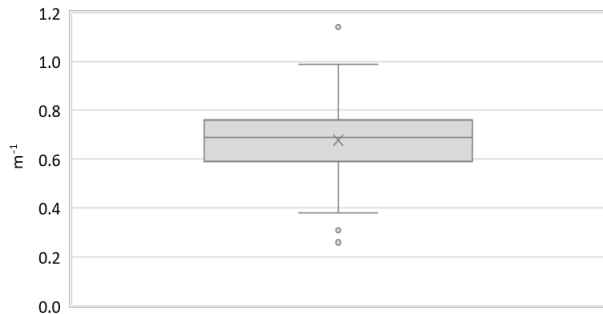


Region:	Trentino Alto Adige						Archetype code: RES_SINGLE_1991-2020_E		
Building category:	Residential buildings - Single family								
Period of construction:	1991-2020								
Climatic zone:	E	Number of records:				418			
Description (the codes associated with walls and slabs refer to the structures described in UNI/TR 11552:2014): External walls: no data available Roof slabs: no data available							Data sources: APE (100%)		
	Data	Symbol	Unit of measure	Mean value	Standard deviation	Q1 (first quartile)	Median value	Q3 (third quartile)	
BUILDING GEOMETRY	Number of floors	n_f	-	-	-	-	-	-	
	Gross height	H_g	m	-	-	-	-	-	
	Footprint area	$A_{\text{footprint}}$	m ²	-	-	-	-	-	
	Heated gross floor area	$A_{H,g}$	m ²	-	-	-	-	-	
	Heated net floor area	$A_{H,n}$	m ²	350.27	478.51	156.61	207.33	317.73	
	Heated gross volume	$V_{H,g}$	m ³	-	-	-	-	-	
	Heated net volume	$V_{H,n}$	m ³	1528.69	1939.01	713.75	943.52	1506.47	
	Compactness ratio	$A_{\text{env}}/V_{H,g}$	m ⁻¹	0.68	0.15	0.59	0.69	0.76	
	WWR – North orientation	WWR_N	-	-	-	-	-	-	
	WWR – South orientation	WWR_S	-	-	-	-	-	-	
	WWR – East orientation	WWR_E	-	-	-	-	-	-	
	WWR – West orientation	WWR_W	-	-	-	-	-	-	
	Window to useful floor area ratio	A_{wi}/A_{use}	-	-	-	-	-	-	
	ENVELOPE	Roof type	-						
U-value of the roof		$U_{f,up}$	W/(m ² ·K)	-	-	-	-	-	
External walls type		-							
U-value of the wall		U_{wl}	W/(m ² ·K)	0.21	0.05	0.17	0.20	0.24	
Slab on ground floor type		-							
U-value of the floor		$U_{f,lfw}$	W/(m ² ·K)	-	-	-	-	-	
Windows type		-							
U-value of the windows		U_w	W/(m ² ·K)	-	-	-	-	-	
Shading system type		-							
GAINS and VENTILATION	Occupancy density *	O_c	person/m ²	UNI EN 16798-1 - Table A.19					
	Lighting power density *	W_L	W/m ²	UNI EN 16798-1 - A.8.3					
	Equipment power density *	W_A	W/m ²	UNI EN 16798-1 - A.8.3					
	Type of ventilation	Natural: 10%, Mechanical: 87%, Mixed: 3%							
	Air exchange rate *	n	h ⁻¹	0.3	-	0.3	0.3	0.3	
THERMAL SYSTEMS	Heating system type	Autonomous: 100%							
	Heating generator	Air source heat pump: 84%, Condensing boiler: 9%, Traditional boiler: 5%, DHC: 2%							
	Daily operating time of the heating system *	t_H	h	14	-	14	14	14	
	Energy carrier	Electricity: 84%, Natural gas: 12%, Solid biomass: 3%, DHC: 1%							
	Heating emission sub-system	Air Heaters: 54%, Fan coil: 31%, Radiators: 13%, Convectors: 2%							
	Cooling system type	Air-cooled chiller: 52%, Unknown: 48%							
	Daily operating time of the cooling system *	t_C	h	-	-	-	-	-	
	Cooling emission sub-system	Radiant panels: 62%, Fan coil: 38%							
	DHW system type	Autonomous - coupled with heating: 80%, Autonomous - detached from heating: 20%							
	DHW generator	Solar thermal: 76%, Natural gas: 18%, Electric boiler: 6%							
	* These values were not available in the considered sources, and are thus derived from UNI EN Standards								

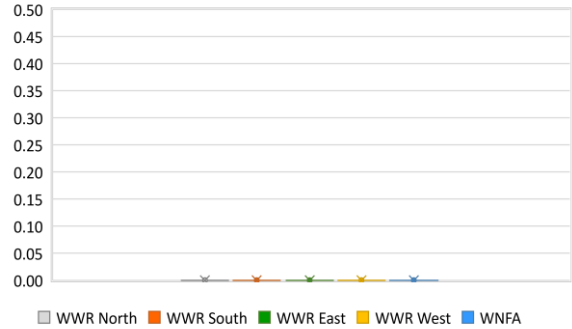
Region:	Trentino Alto Adige	Archetype code: RES_SINGLE_1991-2020_E
Building category:	Residential buildings - Single family	
Period of construction:	1991-2020	
Climatic zone:	E	
Number of records:		418

Numerical variables – GEOMETRY

COMPACTNESS RATIO

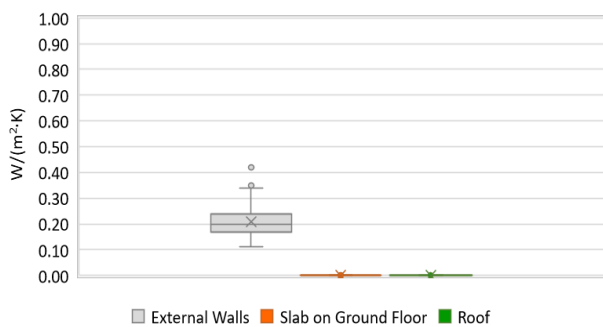


WINDOWS TO WALL RATIO

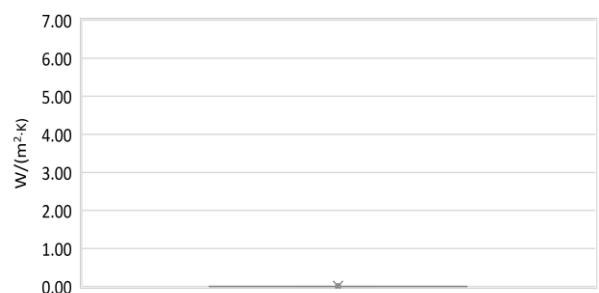


Numerical variables – ENVELOPE

OPAQUE BUILDING COMPONENTS U-VALUE



WINDOWS U-VALUE

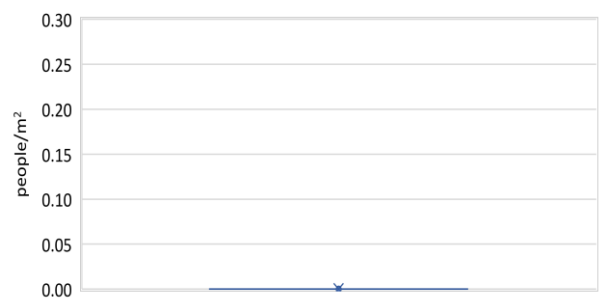


Numerical variables – GAINS, VENTILATION and SYSTEMS USAGE

AIR EXCHANGE RATE



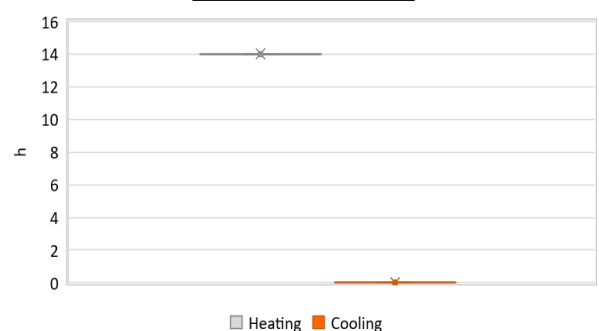
OCCUPANCY DENSITY



INTERNAL GAINS POWER DENSITY



DAILY OPERATING TIME

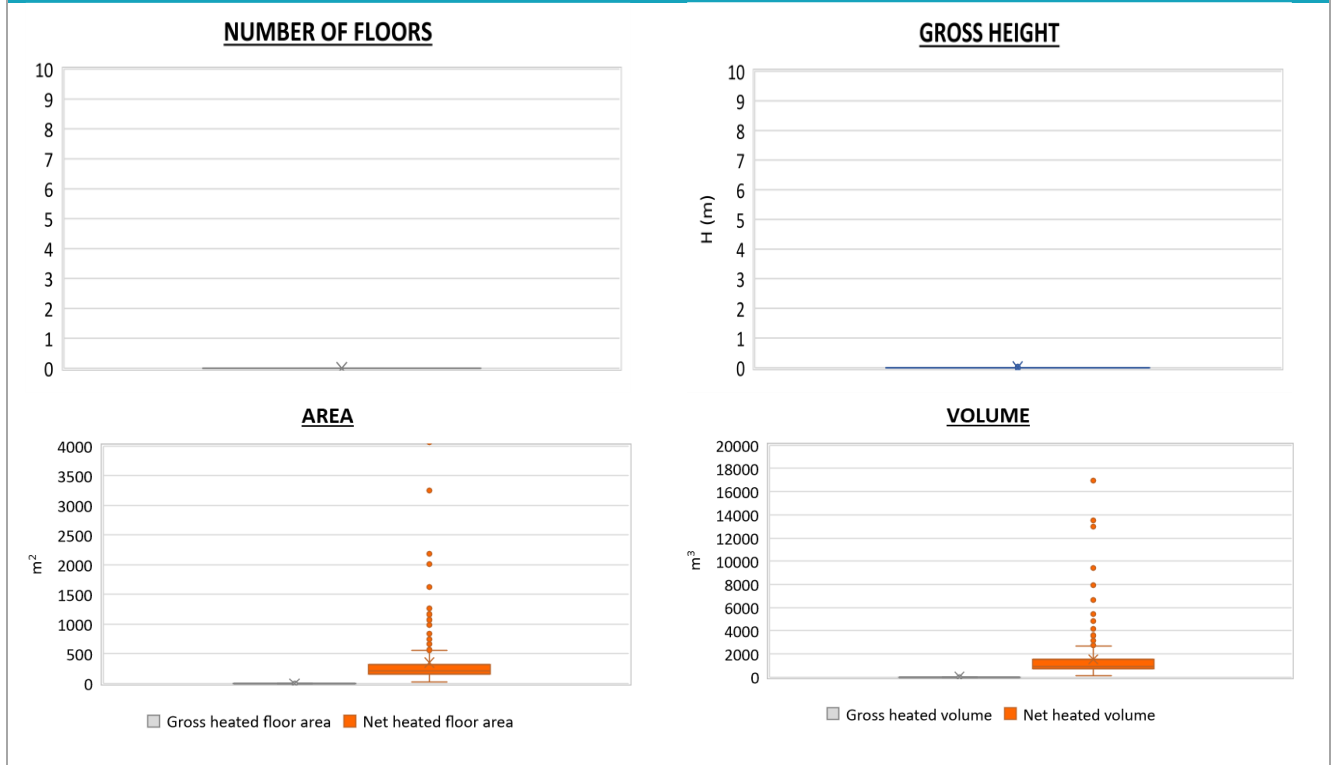


The data can be used for analysis, modeling, and research purposes, as long as it remains unaltered in its original form. Users are free to publish results based on the data, provided they credit the original source.

Region:	Trentino Alto Adige			Archetype code: RES_SINGLE_1991-2020_E
Building category:	Residential buildings - Single family			
Period of construction:	1991-2020			
Climatic zone:	E	Number of records:	418	

ADDITIONAL DATA								
	Data	Symbol	Unit of measure	Mean value	Standard deviation	Q1 (first quartile)	Median value	Q3 (third quartile)
THERMAL SYSTEMS	Heating efficiency or <i>COP</i>	$\eta_{H,gen}$ or $COP_{H,gen}$	-	This value has to be retrieved from suitable datasheets				
	Total heating power	$P_{H,gen}$	kW	28	66	8	11	24
	Cooling efficiency or <i>EER</i>	$\eta_{C,gen}$ or $EER_{C,gen}$	-	This value has to be retrieved from suitable datasheets				
	Total cooling power	$P_{C,gen}$	kW	15	18	7	10	15
	Temperature of DHW	ϑ_W	°C	40	-	40	40	40
	DHW system power	$P_{W,gen}$	kW	11	38	2	3	5

Additional data: GEOMETRY (the plots refer to the apartment scale)



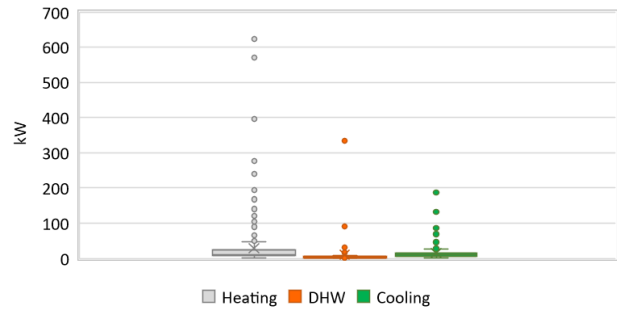
Region:	Trentino Alto Adige			Archetype code: RES_SINGLE_1991-2020_E
Building category:	Residential buildings - Single family			
Period of construction:	1991-2020			
Climatic zone:	E	Number of records:	418	

Additional data: other numerical variables that are not included in the archetype

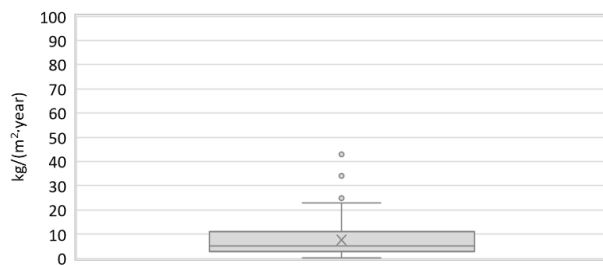
DHW SUPPLY TEMPERATURE



SYSTEM POWER



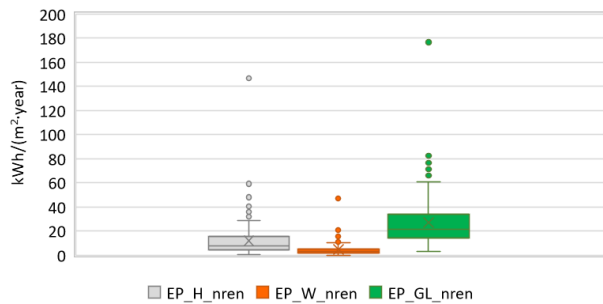
CO₂ EMISSION



HEATING SYSTEM INSTALLATION YEAR



NON-RENEWABLE PRIMARY ENERGY USE



RENEWABLE PRIMARY ENERGY USE

