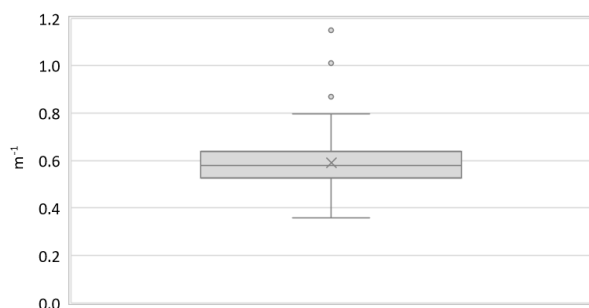


Region:		Trentino					Archetype code: RES_APPBLOCK_ 2011-_F_TN	
Building category:		Residential multifamily buildings						
Period of construction:		>2011						
Climatic zone:		F	Number of records:		2419			
Description (the codes associated with walls and slabs refer to the structures described in UNI/TR 11552:2014): External walls: no data available Roof slabs: no data available							Data sources: EPC databases (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 <sup>2</sup>	-	-	-	-	-
	Heated gross floor area	$A_{H,g}$	m <sup>2</sup>	-	-	-	-	-
	Heated net floor area	$A_{H;n}$	m <sup>2</sup>	543	278	372	459	590
	Heated gross volume	$V_{H,g}$	m <sup>3</sup>	-	-	-	-	-
	Heated net volume	$V_{H;n}$	m <sup>3</sup>	2188	1248	1486	1794	2347
	Compactness ratio	$A_{\text{env}}/V_{H,g}$	m <sup>-1</sup>	0.59	0.11	0.53	0.58	0.64
	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	$A_{wi}/A_{\text{use}}$	-	-	-	-	-	-
	ENVELOPE	Roof type	-					
U-value of the roof		$U_{fi;up}$	W/(m <sup>2</sup> ·K)	-	-	-	-	-
External walls type		-						
U-value of the wall		$U_{wl}$	W/(m <sup>2</sup> ·K)	-	-	-	-	-
Slab on ground floor type		-						
U-value of the floor		$U_{fi;lw}$	W/(m <sup>2</sup> ·K)	-	-	-	-	-
Windows type		-						
U-value of the windows		$U_W$	W/(m <sup>2</sup> ·K)	-	-	-	-	-
Shading system type		-						
GAINS and VENTILATION	Occupancy density *	$O_C$	person/m <sup>2</sup>	UNI EN 16798-1 - Table A.19				
	Lighting power density *	$W_L$	W/m <sup>2</sup>	UNI EN 16798-1 - A.8.3				
	Equipment power density *	$W_A$	W/m <sup>2</sup>	UNI EN 16798-1 - A.8.3				
	Type of ventilation	Natural: 100%						
	Air exchange rate *	$n$	h <sup>-1</sup>	0.3	-	0.3	0.3	0.3
THERMAL SYSTEMS	Heating system type	Autonomous: 48%; Centralized: 29%; Unknown 23%						
	Heating generator	Boiler (unknown type): 93%; Fireplace: 4%; Air-source heat pump: 3%						
	Daily operating time of the heating system *	$t_H$	h	No limitation				
	Energy carrier	Electricity: 62%; Electricity from PV, wind turbines, hydraulic turbines: 28%; District heating: 10%						
	Heating emission sub-system	-						
	Cooling system type	Unknown: 99%; Air-cooled chiller: 1%						
	Daily operating time of the cooling system *	$t_C$	h	No limitation				
	Cooling emission sub-system	-						
	DHW system type	Autonomous – coupled with heating: 50%; Centralized – coupled with heating: 25%; Autonomous - detached from heating: 14%; Unknown: 9%; District heating: 2%						
	DHW generator	Natural gas boiler: 79%; Electric Heat Pump: 10%; Unknown 6%; Solar thermal: 4%; Electric boiler: 1%						
* These values were not available in the considered sources, and are thus derived from UNI EN Standards								

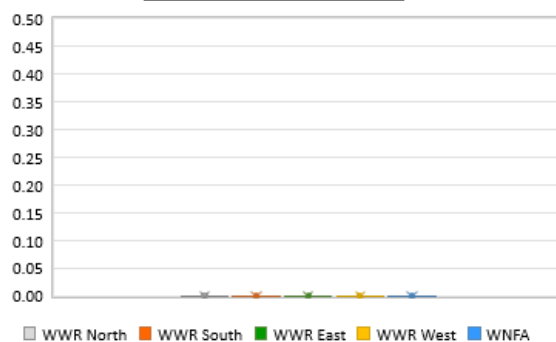
Region:	Trentino	Archetype code: RES_APPBLOCK_ 2011-_F_TN
Building category:	Residential multifamily buildings	
Period of construction:	>2011	
Climatic zone:	F	
Number of records:		2419

### Numerical variables – GEOMETRY

**COMPACTNESS RATIO**

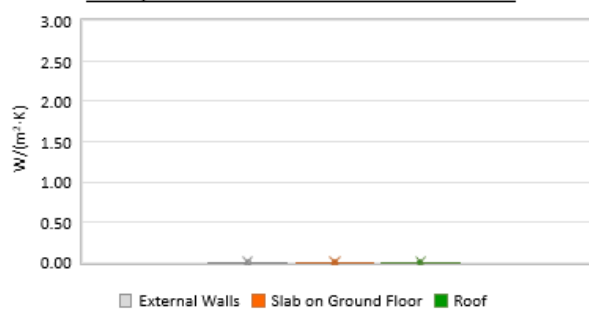


**WINDOWS TO WALL RATIO**

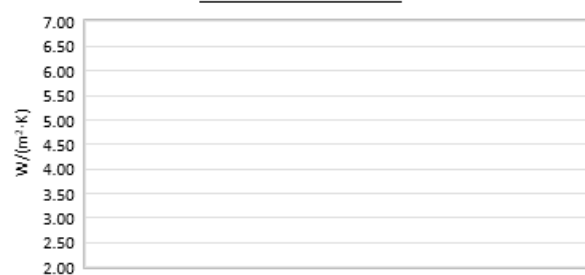


### Numerical variables – ENVELOPE

**OPAQUE BUILDING COMPONENTS U-VALUE**



**WINDOWS U-VALUE**



### Numerical variables – GAINS, VENTILATION and SYSTEMS USAGE

**AIR EXCHANGE RATE**



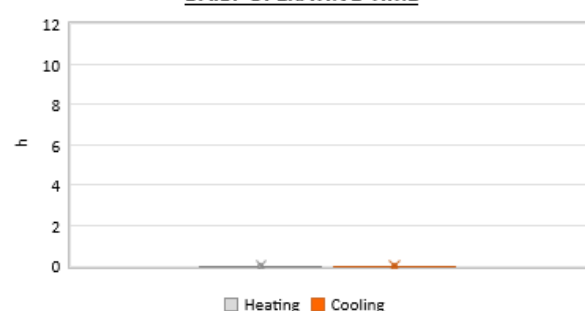
**OCCUPANCY DENSITY**



**INTERNAL GAINS POWER DENSITY**



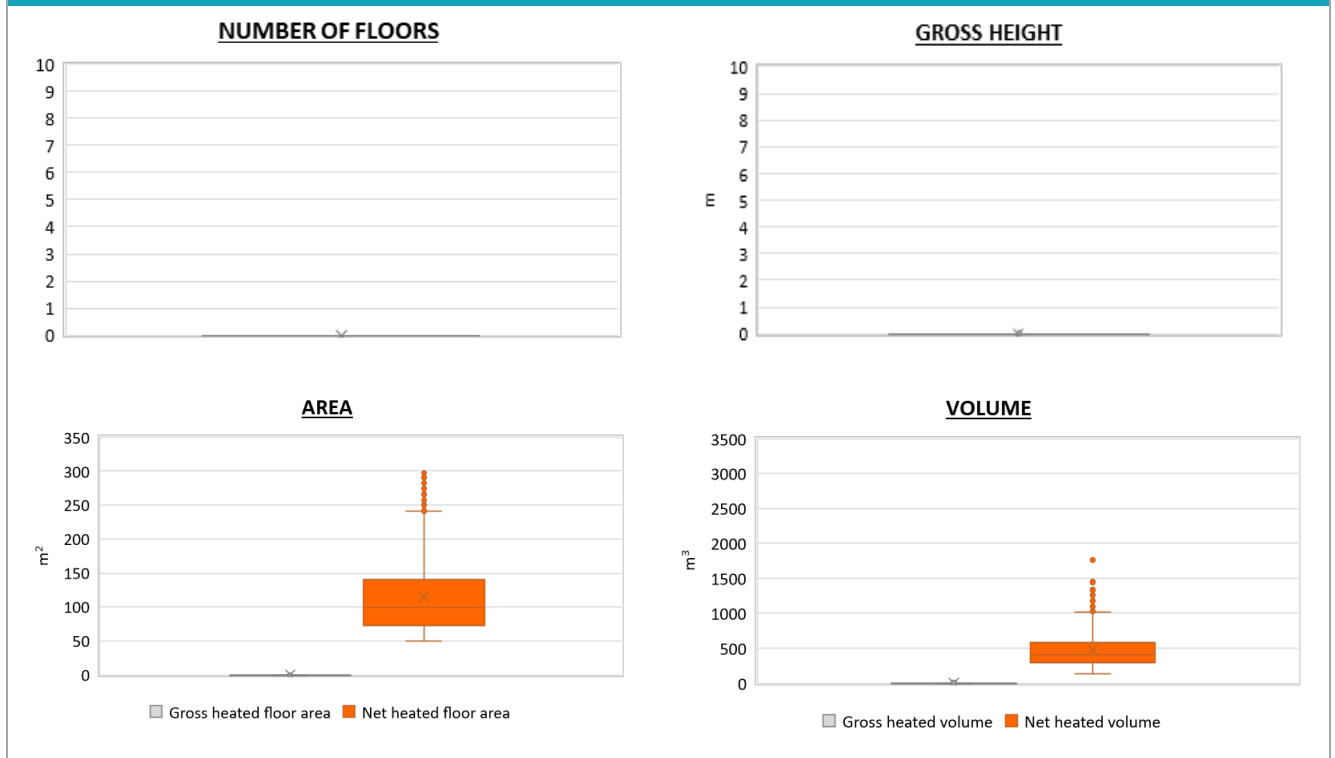
**DAILY OPERATING TIME**



Region:	Trentino	Archetype code: RES_APPBLOCK_ 2011-_F_TN
Building category:	Residential multifamily buildings	
Period of construction:	>2011	
Climatic zone:	F	
Number of records:		2419

ADDITIONAL DATA								
	Data	Symbol	Unit of measure	Mean value	Standard deviation	Q1 (first quartile)	Median value	Q3 (third quartile)
GEOMETRY: apartments	Inter-storey height	$H_n$	m	-	-	-	-	-
	Heated gross floor area	$A_{H,g}$	m <sup>2</sup>	-	-	-	-	-
	Heated net floor area	$A_{H,n}$	m <sup>2</sup>	115	55	73	99	140
	Heated gross volume	$V_{H,g}$	m <sup>3</sup>	-	-	-	-	-
	Heated net volume	$V_{H,n}$	m <sup>3</sup>	469	300	291	403	583
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	30	28	20	25	30
	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	11	10	6	8	13
	Temperature of DHW	$\vartheta_W$	°C	40	-	40	40	40
	DHW system power	$P_{W,gen}$	kW	30	34	20	25	30

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



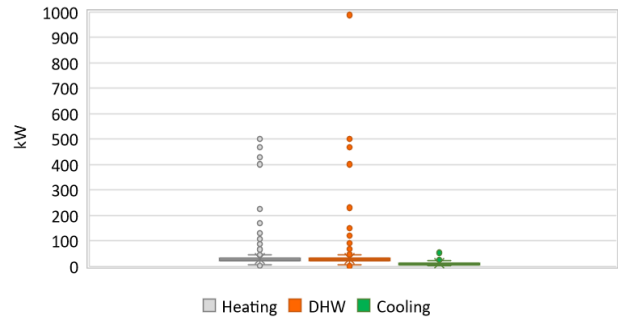
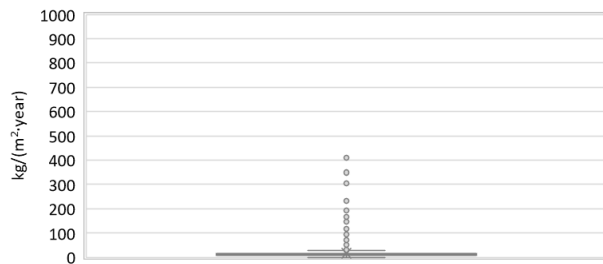
Region:	Trentino	Archetype code: RES_APPBLOCK_ 2011-_F_TN
Building category:	Residential multifamily buildings	
Period of construction:	>2011	
Climatic zone:	F	
Number of records:		2419

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

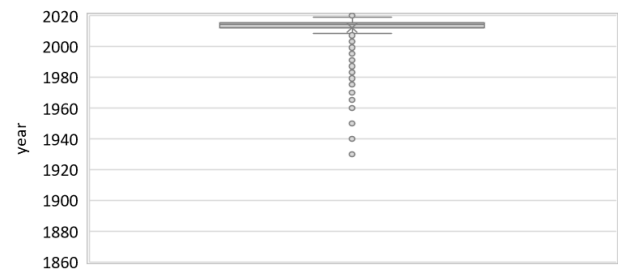
DHW SUPPLY TEMPERATURE



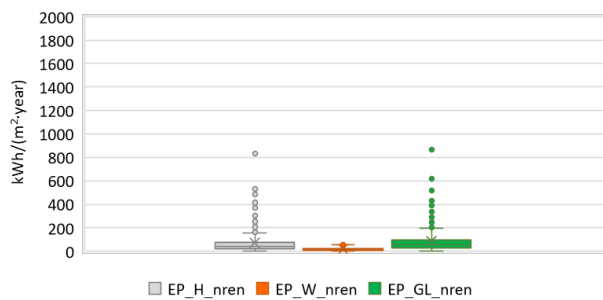
SYSTEM POWER


CO<sub>2</sub> EMISSION


HEATING SYSTEM INSTALLATION YEAR



NON-RENEWABLE PRIMARY ENERGY USE



RENEWABLE PRIMARY ENERGY USE

