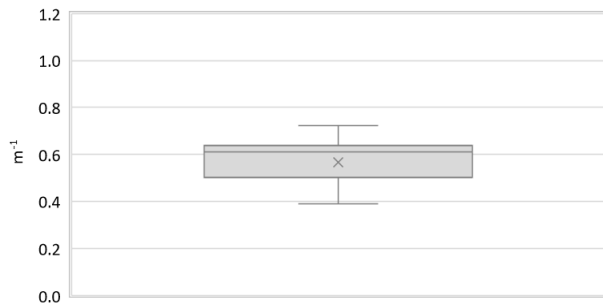


Region:	Trentino Alto Adige						Archetype code: RES_APPBLOCK_1981-1990_E_TN	
Building category:	Residential buildings – Apartments (in multifamily blocks)							
Period of construction:	1981-1990							
Climatic zone:	E	Number of records:				2341		
Description (the codes associated with walls and slabs 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 <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>	1273	762	531	1055	1981
	Heated gross volume	$V_{H,g}$	m <sup>3</sup>	-	-	-	-	-
	Heated net volume	$V_{H,n}$	m <sup>3</sup>	4396	2978	1669	3436	7062
	Compactness ratio	$A_{\text{env}}/V_{H,g}$	m <sup>-1</sup>	0.57	0.09	0.50	0.61	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>	0.30	-	0.30	0.30	0.30
THERMAL SYSTEMS	Heating system type	Autonomous: 38%, Centralized: 32%, Unknown: 30%						
	Heating generator	Boiler (unknown type): 70%, Traditional boiler: 14%; DHC: 9%, Condensing boiler: 6%, Air source heat pump: 1%						
	Daily operating time of the heating system *	$t_H$	h	14	-	14	14	14
	Energy carrier	Natural gas: 96%, District heating: 1%, Gas Oil: 1%, Electricity from PV, wind turbines, hydraulic turbines: 1%, Solid biomass: 1%						
	Heating emission sub-system	-						
	Cooling system type	Unknown: 98%, Air-cooled chiller: 2%						
	Daily operating time of the cooling system *	$t_C$	h	-	-	-	-	-
	Cooling emission sub-system	-						
	DHW system type	Autonomous – coupled with heating: 42%, Centralized – coupled with heating: 30%, Unknown: 19%, District heating: 7%, Autonomous - detached from heating: 2%						
	DHW generator	Natural gas boiler: 77%, Unknown: 20%, Electric heat pump: 2%, Electric boiler: 1%						
* These values were not available in the considered sources, and are thus derived from UNI EN Standards								

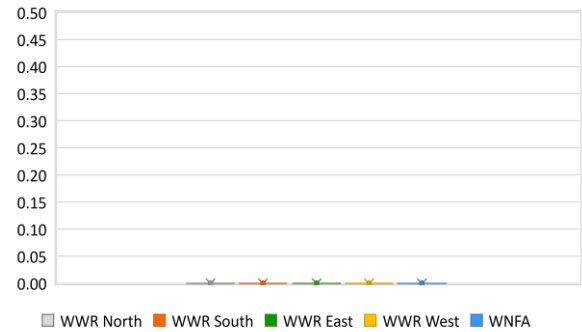
<b>Region:</b>	Trentino Alto Adige	<b>Archetype code:</b> RES_APPBLOCK_1981-1990_E_TN
<b>Building category:</b>	Residential buildings – Apartments (in multifamily blocks)	
<b>Period of construction:</b>	1981-1990	
<b>Climatic zone:</b>	E	
<b>Number of records:</b>		2341

### Numerical variables – GEOMETRY

**COMPACTNESS RATIO**

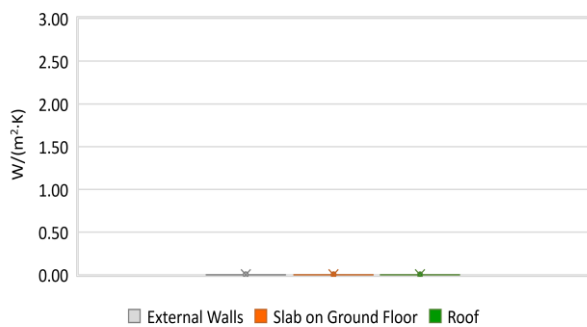


**WINDOWS TO WALL RATIO**

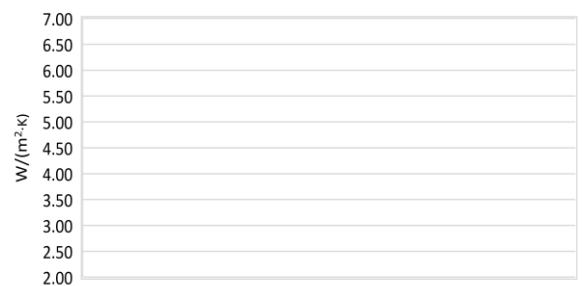


### Numerical variables – ENVELOPE

**OPAQUE BUILDING COMPONENTS U-VALUE**



**WINDOWS U-VALUE**



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

**AIR EXCHANGE RATE**



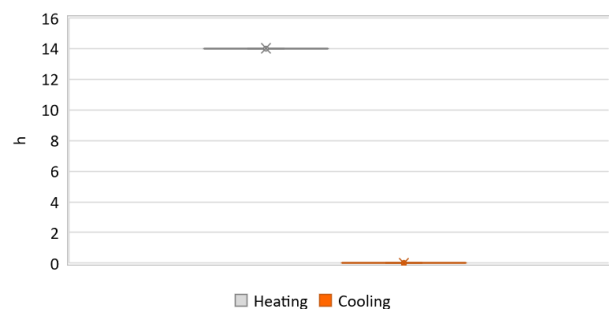
**OCCUPANCY DENSITY**



**INTERNAL GAINS POWER DENSITY**



**DAILY OPERATING TIME**



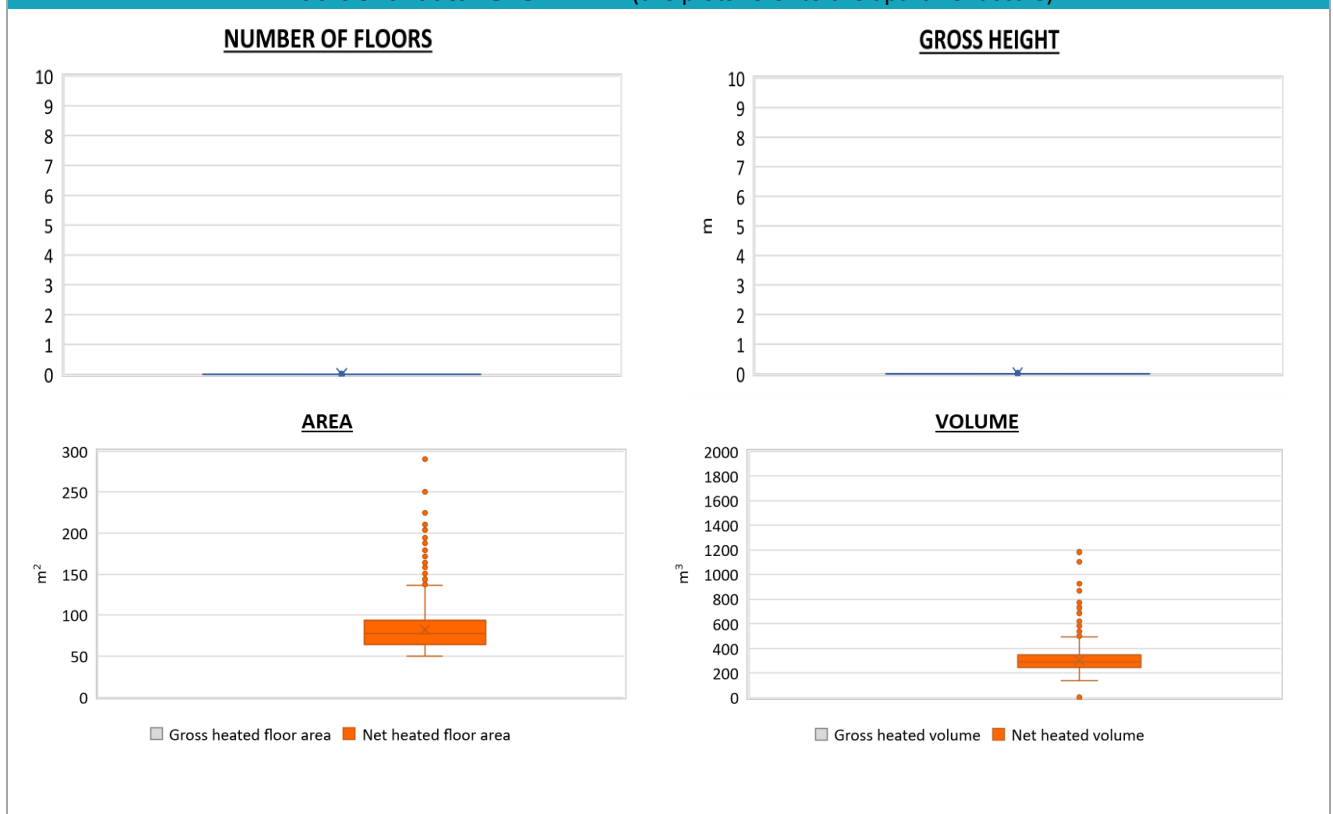
The data can be used for analysis, modeling, and research purposes, as long as it remains unaltered in its original form. Users are free to publish results based on the data, provided they credit the original source.

Region:	Trentino Alto Adige			Archetype code: RES_APPBLOCK_1981- 1990_E_TN
Building category:	Residential buildings – Apartments (in multifamily blocks)			
Period of construction:	1981-1990			
Climatic zone:	E	Number of records:	2341	

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>	82	26	65	78	94
	Heated gross volume	$V_{H,g}$	m <sup>3</sup>	-	-	-	-	-
	Heated net volume	$V_{H,n}$	m <sup>3</sup>	308	128	243	288	346
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	81	100	24	29	108
	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	10	24	3	4	6
	Temperature of DHW	$\vartheta_w$	°C	40	-	40	40	40
	DHW system power *	$P_{W,gen}$	kW	80	100	24	28	108

\* These values refer to the apartment scale

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



Region:	Trentino Alto Adige			Archetype code: RES_APPBLOCK_1981- 1990_E_TN
Building category:	Residential buildings – Apartments (in multifamily blocks)			
Period of construction:	1981-1990			
Climatic zone:	E	Number of records:	2341	

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

