Region:	Trentino Alto Adige			**Archetype code:**
Building category:	Commercial buildings			COMM_1981-1990_E_TN
Period of construction:	1981-1990			
Climatic zone:	E	**Number of records:**	320	

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%)

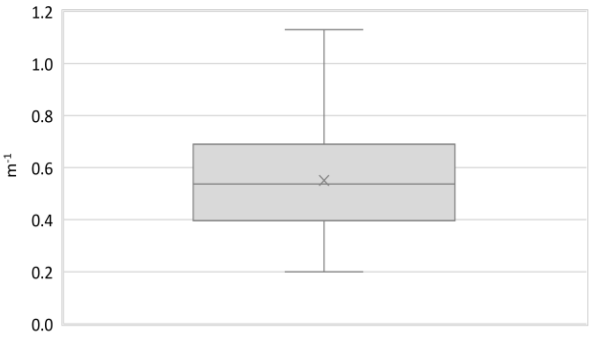
	Data	Symbol	Unit of measure	Mean value	Standard deviation	Q1 (first quartile)	Median value	Q3 (third quartile)
BUILDING GEOMETRY	Number of floors	n_f	-	-	-	-	-	-
	Gross height	H_g	m	-	-	-	-	-
	Footprint area	$A_{footprint}$	m^2	-	-	-	-	-
	Heated gross floor area	$A_{H;g}$	m^2	-	-	-	-	-
	Heated net floor area	$A_{H;n}$	m^2	411	776	78	131	343
	Heated gross volume	$V_{H;g}$	m^3	-	-	-	-	-
	Heated net volume	$V_{H;n}$	m^3	2104	4756	333	544	1655
	Compactness ratio	$A_{env}/V_{H;g}$	m^{-1}	0.55	0.20	0.40	0.54	0.69
	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	$U_{fl;up}$	$W/(m^2 \cdot K)$	-	-	-	-	-
	External walls type	-						
	U-value of the wall	U_{wl}	$W/(m^2 \cdot K)$	-	-	-	-	-
	Slab on ground floor type	-						
	U-value of the floor	$U_{fl;lw}$	$W/(m^2 \cdot K)$	-	-	-	-	-
	Windows type	-						
	U-value of the windows	U_W	$W/(m^2 \cdot K)$	-	-	-	-	-
	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: 100%						
	Air exchange rate *	n	h^{-1}	UNI EN 16798-1				
THERMAL SYSTEMS	Heating system type	Unknown: 45%, Autonomous: 31%, Centralized: 24%						
	Heating generator	Boiler (unknown type): 51%, Traditional boiler: 23%, Condensing boiler: 11%, Air source heat pump: 7%, DHC: 4%, Unknown: 4%						
	Daily operating time of the heating system *	t_H	h	14	-	14	14	14
	Energy carrier	Natural gas: 90%, Gas Oil: 5%, Electricity: 2%, District heating: 1%, Electricity from PV, wind turbines, hydraulic turbines: 1%, Solid biomass: 1%						
	Heating emission sub-system	-						
	Cooling system type	Unknown: 87%, Air-cooled chiller:12%, Water-cooled chiller: 1%						
	Daily operating time of the cooling system *	t_C	h	-	-	-	-	-
	Cooling emission sub-system	-						
	DHW system type	Unknown: 37%, Autonomous - detached from heating: 31%, Autonomous – coupled with heating: 22%, Centralized – coupled with heating: 9%, District heating: 1%						
	DHW generator	Unknown: 38%, Natural gas boiler: 31%, Electric heat pump: 22%, Electric boiler: 9%						

* These values were not available in the considered sources, and are thus derived from UNI EN Standards

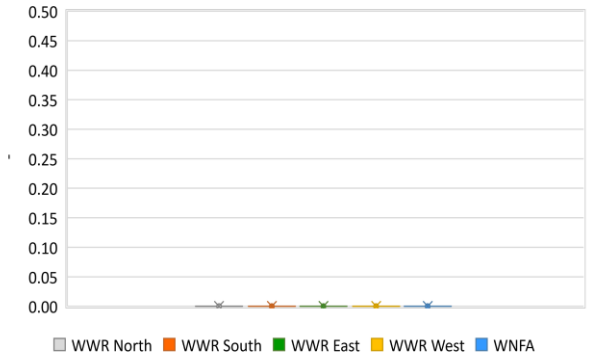
Region:	Trentino Alto Adige			**Archetype code:**
Building category:	Commercial buildings			COMM_1981-1990_E_TN
Period of construction:	1981-1990			
Climatic zone:	E	**Number of records:**	320	

Numerical variables – GEOMETRY

COMPACTNESS RATIO

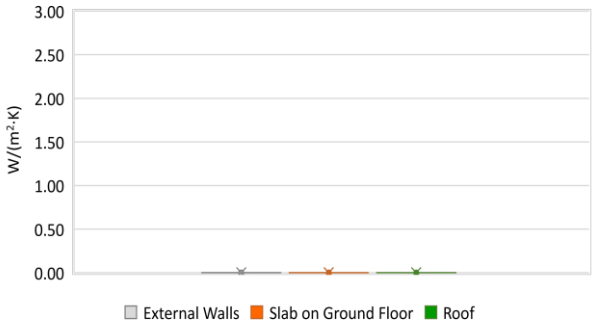


WINDOWS TO WALL RATIO



Numerical variables – ENVELOPE

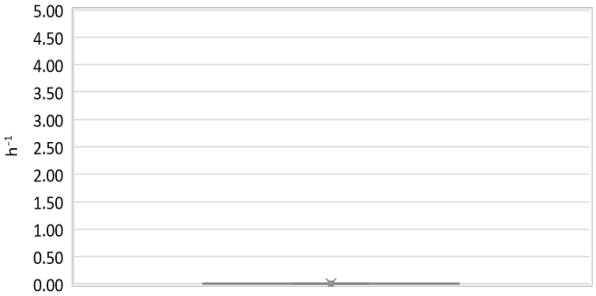
OPAQUE BUILDING COMPONENTS U-VALUE



WINDOWS U-VALUE

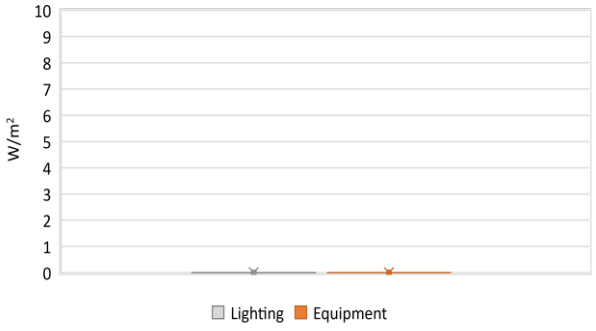
Numerical variables – GAINS, VENTILATION and SYSTEMS USAGE

AIR EXCHANGE RATE

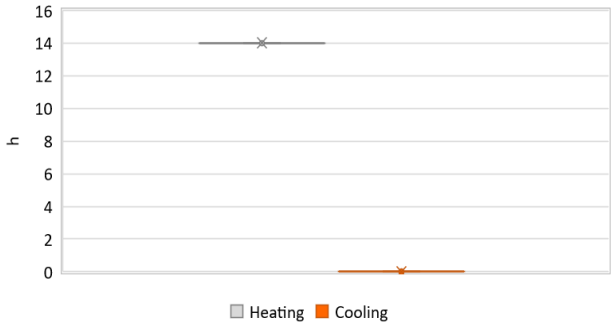


OCCUPANCY DENSITY

INTERNAL GAINS POWER DENSITY



DAILY OPERATING TIME

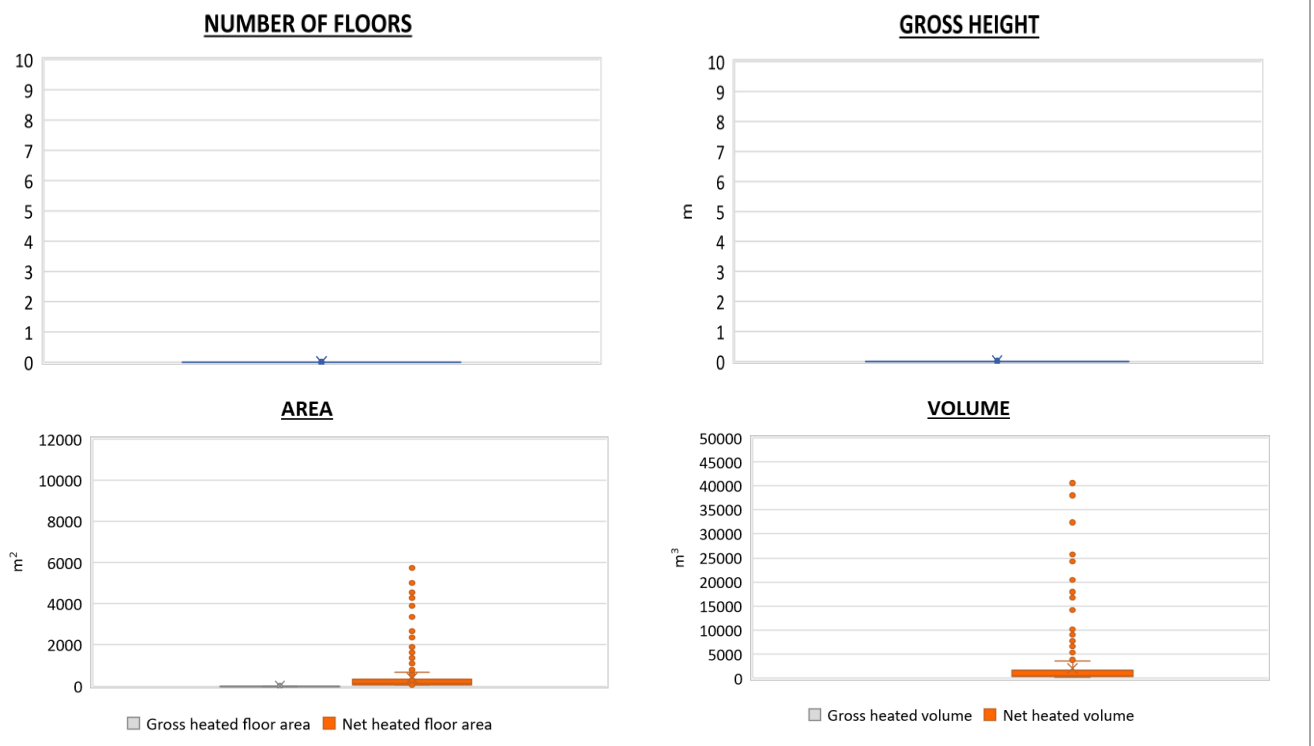


Region:	Trentino Alto Adige			**Archetype code:**
Building category:	Commercial buildings			COMM_1981-1990_E_TN
Period of construction:	1981-1990			
Climatic zone:	E	**Number of records:**	320	

ADDITIONAL DATA

	Data	Symbol	Unit of measure	Mean value	Standard deviation	Q1 (first quartile)	Median value	Q3 (third quartile)
THERMAL SYSTEMS	Heating efficiency or *COP*	$\eta_{H;gen}$ or $COP_{H;gen}$	-	This value has to be retrieved from suitable datasheets				
	Total heating power	$P_{H;gen}$	kW	72	150	24	28	50
	Cooling efficiency or *EER*	$\eta_{C;gen}$ or $EER_{C;gen}$	-	This value has to be retrieved from suitable datasheets				
	Total cooling power	$P_{C;gen}$	kW	192	257	7	34	600
	Temperature of DHW	ϑ_W	°C	40	-	40	40	40
	DHW system power	$P_{W;gen}$	kW	-	-	-	-	-

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

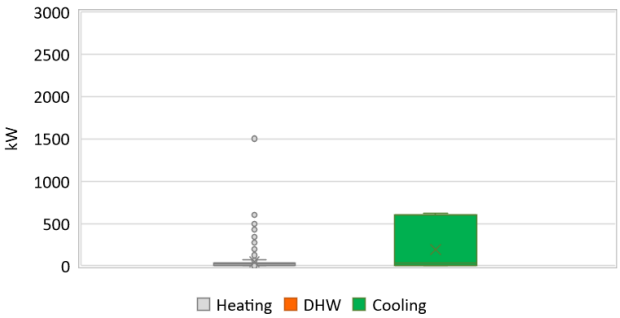


Region:	Trentino Alto Adige			**Archetype code:**
Building category:	Commercial buildings			COMM_1981-1990_E_TN
Period of construction:	1981-1990			
Climatic zone:	E	**Number of records:**	320	

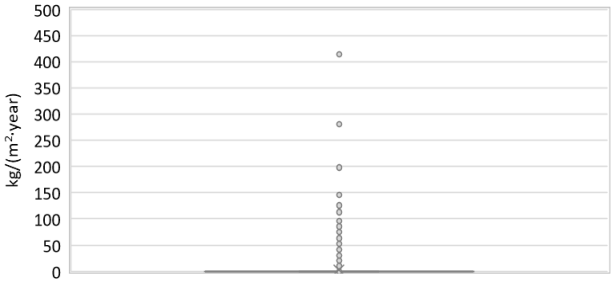
Additional data: other numerical variables that are not included in the archetype

DHW SUPPLY TEMPERATURE

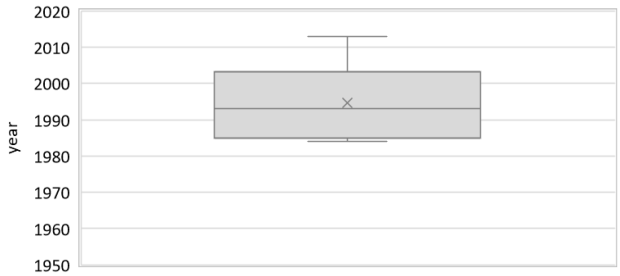
SYSTEM POWER



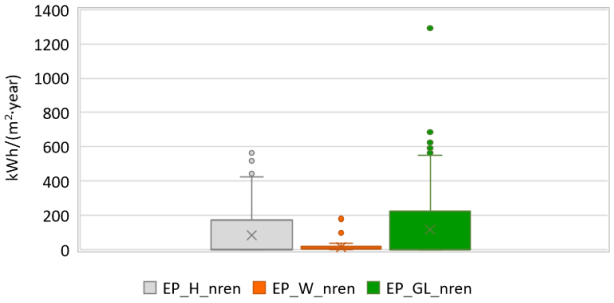
CO_2 EMISSION



HEATING SYSTEM INSTALLATION YEAR



NON-RENEWABLE PRIMARY ENERGY USE



RENEWABLE PRIMARY ENERGY USE