Region:	Piedmont			**Archetype code:** RES_APPBLOCK_-1930_F_PIE
Building category:	Residential buildings - Apartments (in multifamily blocks)			
Period of construction:	< 1930			
Climatic zone:	F	**Number of records:**	7739	

Description (the codes associated with walls and slabs refer to the structures described in UNI/TR 11552:2014):

External walls: solid brick masonry (cod. MLP01).
Roof slabs: concrete floor slab (cod. SOL06).

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	$A_{footprint}$	m^2	-	-	-	-	-
	Heated gross floor area	$A_{H;g}$	m^2	-	-	-	-	-
	Heated net floor area	$A_{H;n}$	m^2	-	-	-	-	-
	Heated gross volume	$V_{H;g}$	m^3	-	-	-	-	-
	Heated net volume	$V_{H;n}$	m^3	-	-	-	-	-
	Compactness ratio	$A_{env}/V_{H;g}$	m^{-1}	0.73	0.29	0.55	0.71	0.88
	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}	-	0.16	0.20	0.11	0.15	0.19
ENVELOPE	Roof type	-						
	U-value of the roof	$U_{fl;up}$	$W/(m^2 \cdot K)$	-	-	-	-	-
	External walls type	Solid Brick masonry: 89%; Unknown: 6%; Hollow brick masonry: 5%						
	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	$W/(m^2 \cdot K)$	3.33	1.24	2.42	3.14	4.41
	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}	0.30	0.00	0.30	0.30	0.30
THERMAL SYSTEMS	Heating system type	Autonomous: 89%; Centralized: 11%						
	Heating generator	-						
	Daily operating time of the heating system *	t_H	h	No limitation				
	Energy carrier	Natural Gas: 72%; Solid biomass: 14%; LPG: 6%; Gas Oil: 4%; Electricity: 3%; District heating: 1%						
	Heating emission sub-system	-						
	Cooling system type	-						
	Daily operating time of the cooling system *	t_C	h	-	-	-	-	-
	Cooling emission sub-system	-						
	DHW system type	Autonomous, coupled with heating: 41%; Autonomous, detached from heating: 32%; Centralized, coupled with heating: 24%; Centralized, detached from heating: 3%						
	DHW generator	-						
	* These values are derived from UNI EN ISO Standards							

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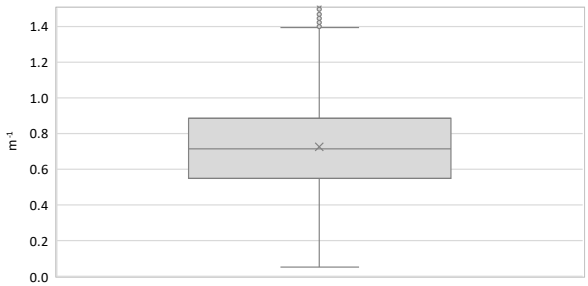
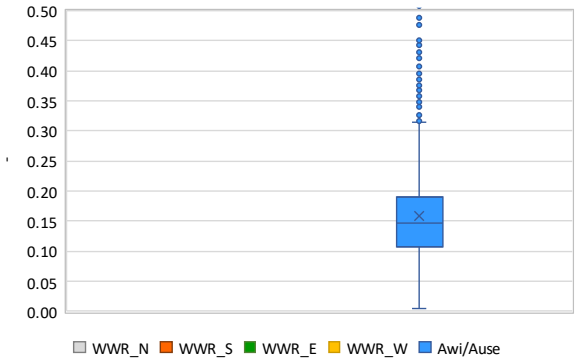
Building category:	Residential buildings - Apartments (in multifamily blocks)			RES_APPBLOCK_-1930_F_PIE
Period of construction:	< 1930			
Climatic zone:	F	**Number of records:**	7739	

Numerical variables – GEOMETRY

COMPACTNESS RATIO

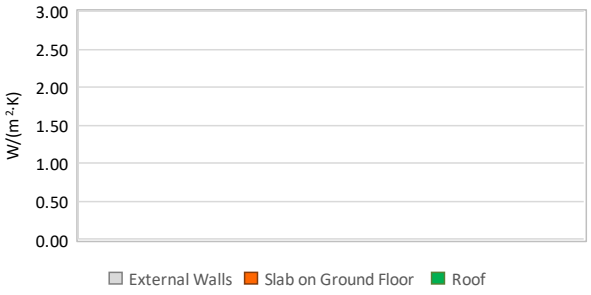


WINDOWS TO WALL RATIO

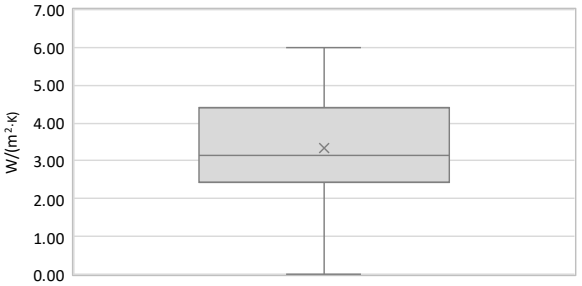


Numerical variables – ENVELOPE

OPAQUE BUILDING COMPONENTS U-VALUE



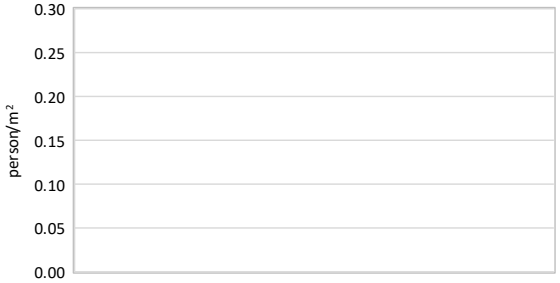
WINDOWS U-VALUE



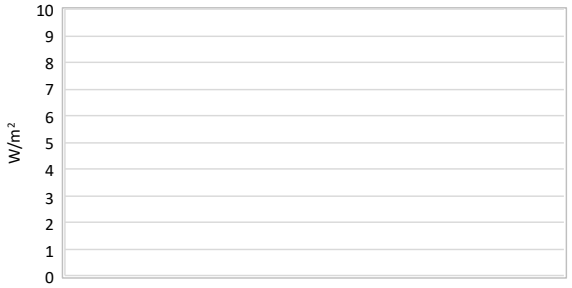
Numerical variables – GAINS, VENTILATION and SYSTEMS USAGE

AIR EXCHANGE RATE

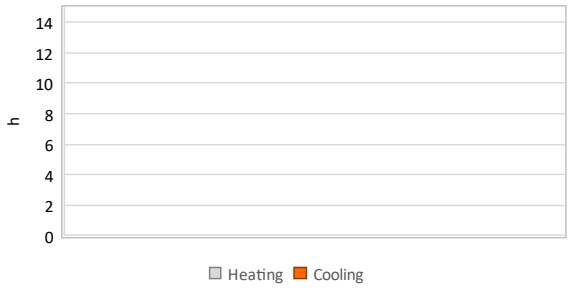
OCCUPACY DENSITY



INTERNAL GAINS POWER DENSITY



DAILY OPERATING TIME



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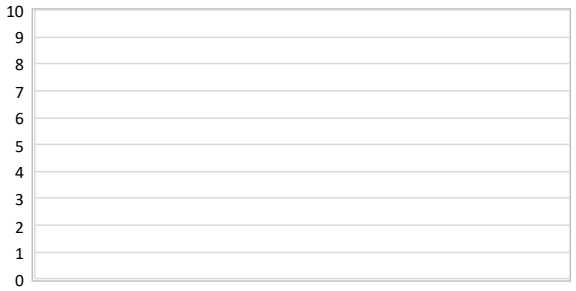
Climatic zone:	F	**Number of records:**	7739	

ADDITIONAL DATA

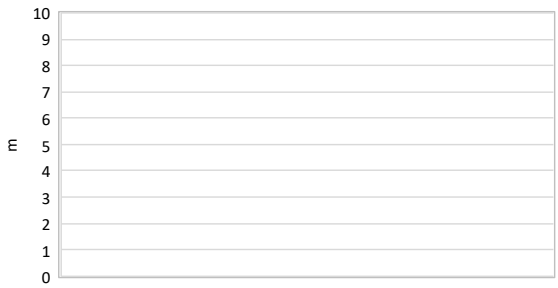
	Data	Symbol	Unit of measure	Mean value	Standard deviation	Q1 (first quartile)	Median value	Q3 (third quartile)
GEOMETRY: apartments	Inter-storey height	H_n	m	-	-	-	-	-
	Heated gross floor area	$A_{H;g}$	m^2	-	-	-	-	-
	Heated net floor area	$A_{H;n}$	m^2	71.6	46.4	42.1	60.3	88.0
	Heated gross volume	$V_{H;g}$	m^3	293.9	198.6	170.1	245.4	358.0
	Heated net volume	$V_{H;n}$	m^3	-	-	-	-	-
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	21.7	8.1	19.0	24.0	26.0
	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	5.6	3.0	3.5	4.9	7.0
	Temperature of DHW	ϑ_W	°C	40.0	0.0	40.0	40.0	40.0
	DHW system power *	$P_{W;gen}$	kW	16.2	11.8	1.5	23.3	24.6
	* These values refer to the apartment scale							

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

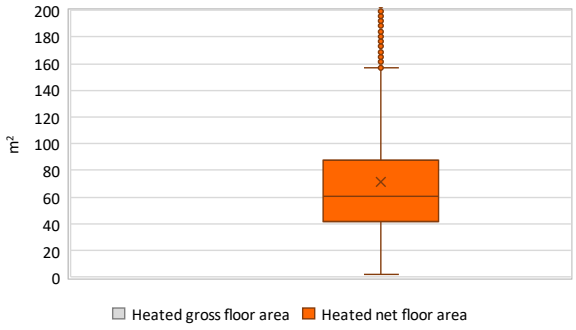
NUMBER OF FLOORS



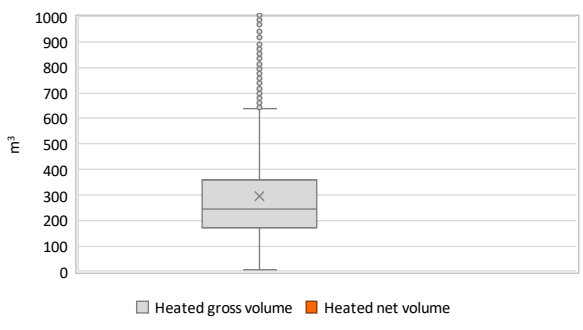
GROSS HEIGHT



AREA



VOLUME



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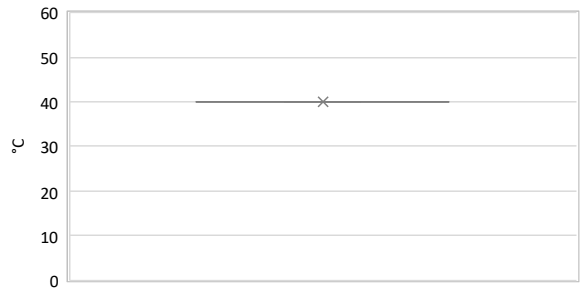
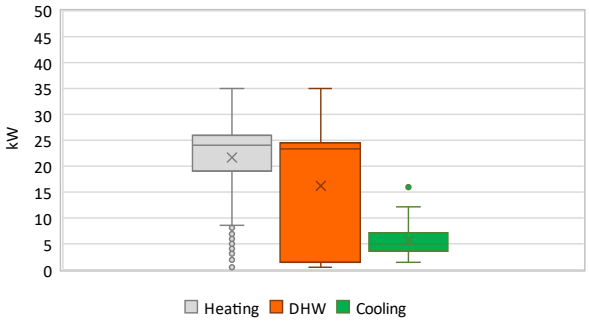
Additional data: other numerical variables that are not included in the archetype

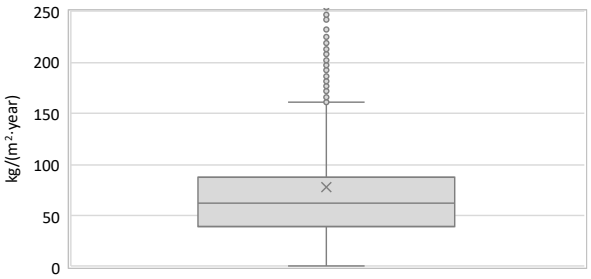
DHW SUPPLY TEMPERATURE



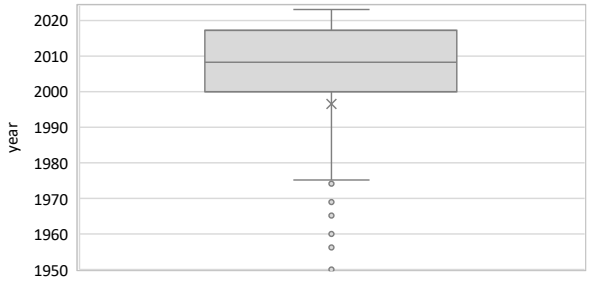
SYSTEM POWER



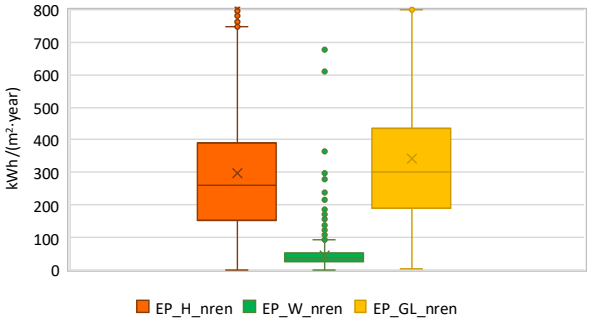
CO_2 EMISSION



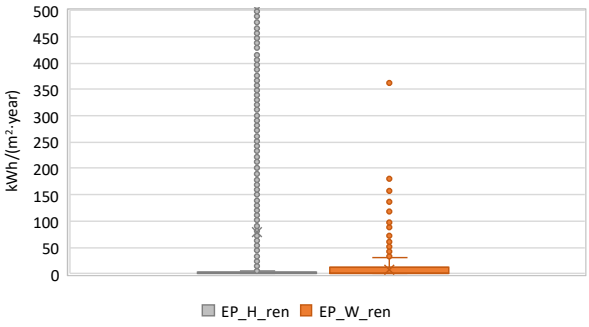
HEATING SYSTEM INSTALLATION YEAR



NON-RENEWABLE PRIMARY ENERGY USE



RENEWABLE PRIMARY ENERGY USE



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