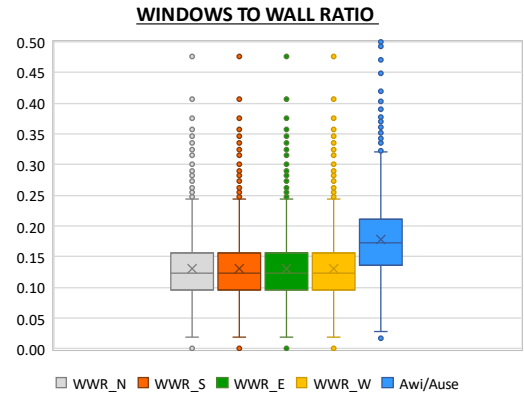
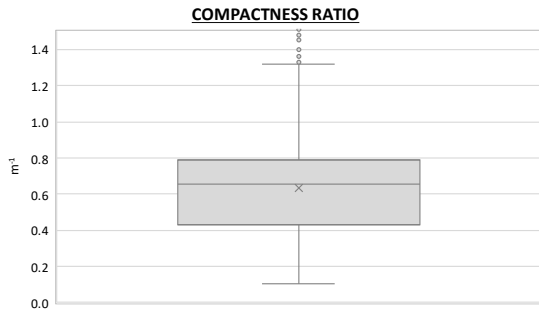


Region:		Aosta Valley					Archetype code:		
Building category:		Residential buildings - Apartments (in multifamily blocks)					RES_APPBLOCK_1962-1971_E-F_VAL		
Period of construction:		1962 - 1971							
Climatic zone:		E-F	Number of records:		2450				
Description (the codes associated with walls and slabs refer to the structures described in UNI/TR 11552:2014):							Data sources:		
External walls: hollow brick masonry with air gap (cod. MCV01). Roof slabs: reinforced concrete floor slab (cod. SOLO4).							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 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	$A_{\text{env}}/V_{H;g}$	m ⁻¹	0.63	0.24	0.43	0.66	0.79	
	WWR – North orientation	WWR_N	-	0.13	0.06	0.10	0.12	0.16	
	WWR – South orientation	WWR_S	-	0.13	0.06	0.10	0.12	0.16	
	WWR – East orientation	WWR_E	-	0.13	0.06	0.10	0.12	0.16	
	WWR – West orientation	WWR_W	-	0.13	0.06	0.10	0.12	0.16	
	Window to useful floor area ratio	A_{wi}/A_{use}	-	0.18	0.07	0.14	0.17	0.21	
ENVELOPE	Roof type	-							
	U-value of the roof **	$U_{fi;up}$	W/(m ² ·K)	1.26	0.47	1.05	1.32	1.46	
	External walls type	Hollow brick masonry: 58%; Solid Brick masonry: 29%; Masonry with local stones: 6%; Concrete wall: 4%; Unknown: 3%							
	U-value of the wall	U_{wi}	W/(m ² ·K)	0.99	0.44	0.73	1.01	1.21	
	Slab on ground floor type	-							
	U-value of the floor **	$U_{fi;lw}$	W/(m ² ·K)	1.07	0.26	0.99	1.11	1.19	
	Windows type	Double glazing, wooden frame: 67%; Single glazing, wooden frame: 22%; Double glazing, PVC frame: 9%; Triple glazing, wooden frame: 1%; Triple glazing, PVC frame: 1%							
U-value of the windows	U_W	W/(m ² ·K)	2.74	0.99	2.08	2.67	3.09		
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	Centralized: 54%; Autonomous: 46%							
	Heating generator	Boiler (unknown type): 50%; Traditional Boiler: 29%; Condensing Boiler: 9%; Heat exchanger of district heating/cooling: 5%; Fireplace: 4%; Unknown: 2%; Air-source heat pump: 1%							
	Daily operating time of the heating system *	t_H	h	-					
	Energy carrier	Gas Oil: 56%; Natural Gas: 19%; LPG: 13%; Solid biomass: 8%; District heating: 4%							
	Heating emission sub-system	-							
	Cooling system type	Absent: 100%							
	Daily operating time of the cooling system *	t_C	h	-	-	-	-	-	
	Cooling emission sub-system	-							
	DHW system type	Autonomous, detached from heating: 49%; Autonomous, coupled with heating: 31%; Centralized, coupled with heating: 19%; Centralized, detached from heating: 1%							
	DHW generator	Unknown: 61%; Natural gas boiler: 22%; Electric boiler: 16%; Electric Heat Pump: 1%							

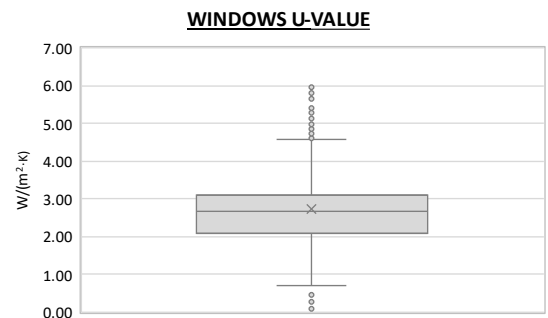
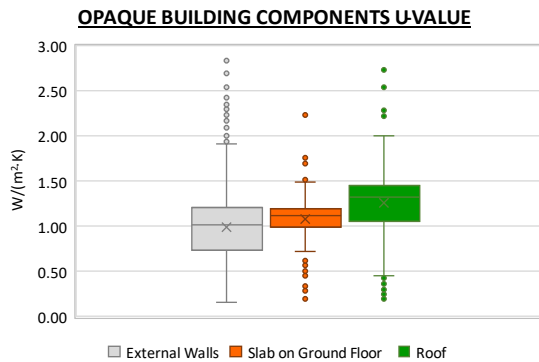
* These values are derived from UNI EN ISO Standards; ** U-values of the upper and lower slabs face unconditioned spaces (i.e., attic, basement, etc.)

Region:	Aosta Valley		Archetype code: RES_APPBLOCK_1962- 1971_E-F_VAL
Building category:	Residential buildings - Apartments (in multifamily blocks)		
Period of construction:	1962 - 1971		
Climatic zone:	E-F	Number of records: 2450	

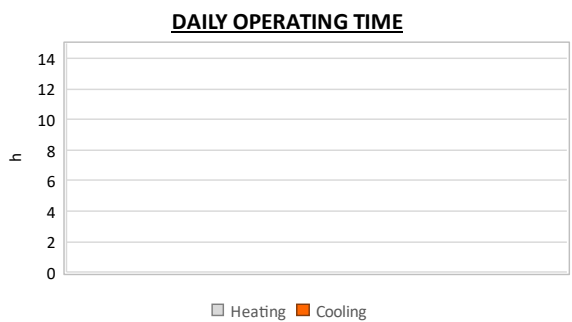
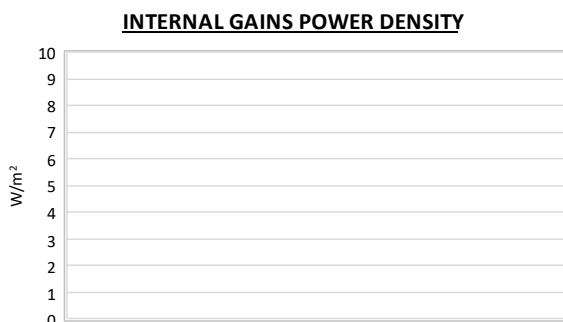
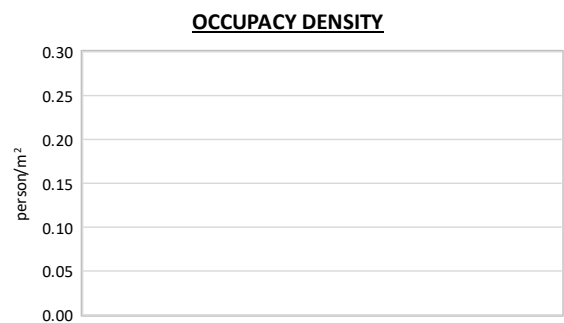
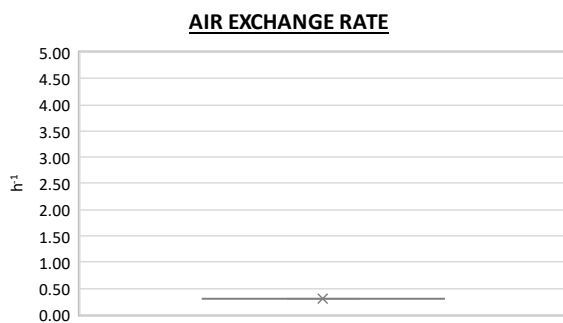
Numerical variables – GEOMETRY



Numerical variables – ENVELOPE



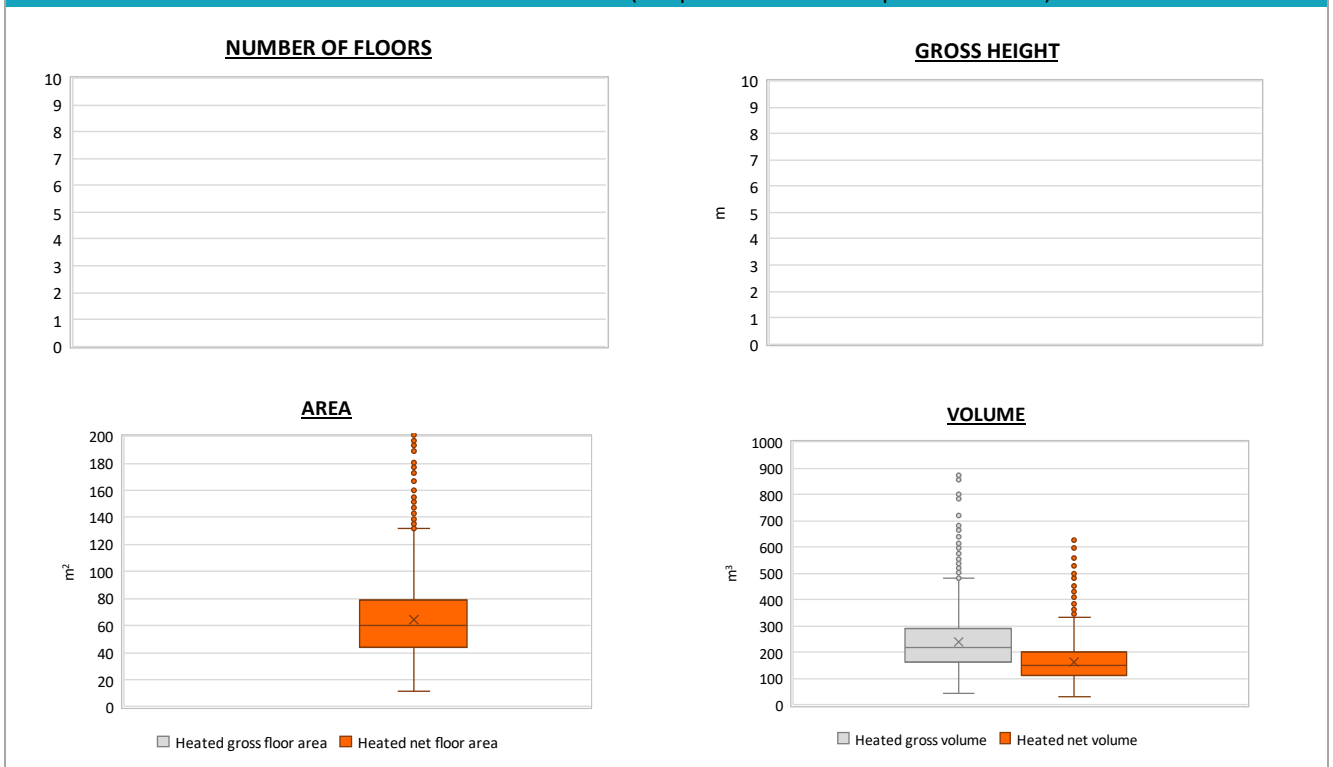
Numerical variables – GAINS, VENTILATION and SYSTEMS USAGE



Region:	Aosta Valley		Archetype code: RES_APPBLOCK_1962- 1971_E-F_VAL
Building category:	Residential buildings - Apartments (in multifamily blocks)		
Period of construction:	1962 - 1971		
Climatic zone:	E-F	Number of records: 2450	

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	2.6	0.3	2.4	2.5	2.7
	Heated gross floor area	$A_{H,g}$	m ²	-	-	-	-	-
	Heated net floor area	$A_{H,n}$	m ²	64.8	30.3	44.0	60.5	79.0
	Heated gross volume	$V_{H,g}$	m ³	237.2	115.5	160.0	218.2	289.2
	Heated net volume	$V_{H,n}$	m ³	162.6	76.5	111.6	150.7	200.0
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	22.8	8.5	19.5	24.1	29.0
	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	3.9	2.1	2.5	3.0	4.4
	Temperature of DHW	ϑ_w	°C	40.0	0.0	40.0	40.0	40.0
	DHW system power *	$P_{W,gen}$	kW	11.8	12.4	1.2	2.0	24.0

* These values refer to the apartment scale

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


Region:	Aosta Valley		Archetype code: RES_APPBLOCK_1962- 1971_E-F_VAL
Building category:	Residential buildings - Apartments (in multifamily blocks)		
Period of construction:	1962 - 1971		
Climatic zone:	E-F	Number of records: 2450	

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