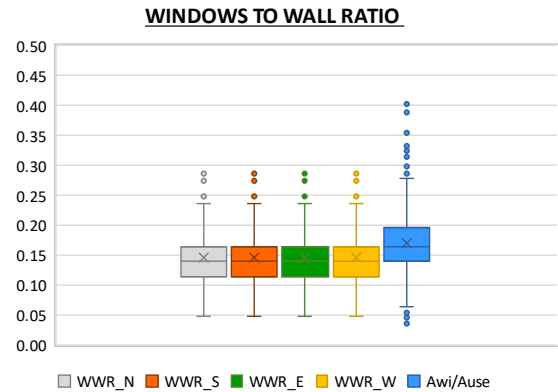
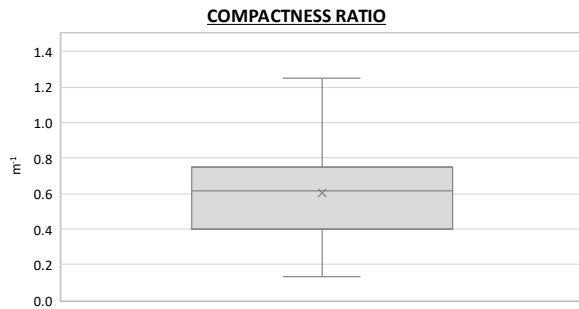


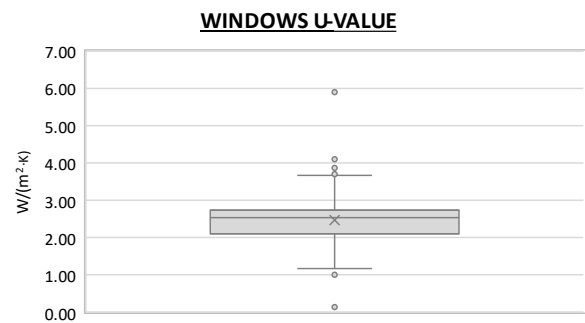
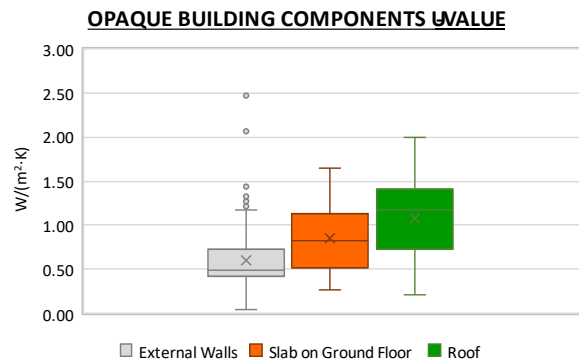
Region:	Aosta Valley (Aosta, Quart, Saint-Christophe, and Sarre)						Archetype code: RES_APPBLOCK_1992-2005_E_VAL	
Building category:	Residential buildings - Apartments (in multifamily blocks)							
Period of construction:	1992 - 2005							
Climatic zone:	E	Number of records:		534				
Description (the codes associated with walls and slabs refer to the structures described in UNI/TR 11552:2014): External walls: hollow brick masonry with thermal insulation (cod. MCV02) or solid brick masonry with thermal insulation (cod. MCV04). Roof slabs: reinforced concrete floor slab (cod. SOL04).							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 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	0.60	0.23	0.40	0.61	0.75
	WWR – North orientation	WWR_N	-	0.14	0.05	0.11	0.14	0.16
	WWR – South orientation	WWR_S	-	0.14	0.05	0.11	0.14	0.16
	WWR – East orientation	WWR_E	-	0.14	0.05	0.11	0.14	0.16
	WWR – West orientation	WWR_W	-	0.14	0.05	0.11	0.14	0.16
	Window to useful floor area ratio	A_{wi}/A_{use}	-	0.17	0.05	0.14	0.16	0.20
	ENVELOPE	Roof type	-					
U-value of the roof **		$U_{fi,up}$	W/(m ² ·K)	1.08	0.52	0.72	1.17	1.42
External walls type		Hollow brick masonry: 67%; Solid Brick masonry: 29%; Unknown: 2%; Concrete wall: 1%; Masonry with local stones: 1%						
U-value of the wall		U_{wl}	W/(m ² ·K)	0.60	0.32	0.41	0.49	0.72
Slab on ground floor type		-						
U-value of the floor **		$U_{fi,lw}$	W/(m ² ·K)	0.84	0.38	0.51	0.83	1.13
Windows type		Double glazing, wooden frame: 67%; Double glazing, PVC frame: 31%; Single glazing, wooden frame: 1%; Triple glazing, PVC frame: 1%						
U-value of the windows		U_W	W/(m ² ·K)	2.47	0.62	2.08	2.52	2.72
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: 55%; Centralized: 45%						
	Heating generator	Heat exchanger of district heating/cooling: 30%; Boiler (unknown type): 29%; Traditional Boiler: 25%; Condensing Boiler: 14%; Unknown: 1%; Fireplace: 1%						
	Daily operating time of the heating system *	t_H	h	14.0	0.0	14.0	14.0	14.0
	Energy carrier	Natural Gas: 46%; District heating: 28%; LPG: 13%; Gas Oil: 10%; Solid biomass: 3%						
	Heating emission sub-system	-						
	Cooling system type	Absent: 99%; Air-cooled chiller: 1%						
	Daily operating time of the cooling system *	t_C	h	-	-	-	-	-
	Cooling emission sub-system	-						
	DHW system type	Autonomous, coupled with heating: 53%; Autonomous, detached from heating: 36%; Centralized, coupled with heating: 10%; Centralized, detached from heating: 1%						
	DHW generator	Natural gas boiler: 44%; Unknown: 33%; Electric boiler: 22%; 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 (Aosta, Quart, Saint-Christophe, and Sarre)	Archetype code: RES_APPBLOCK_1992- 2005_E_VAL
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Climatic zone:	E	
Number of records:		534

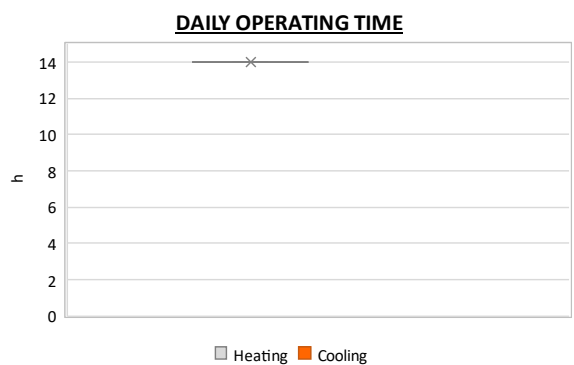
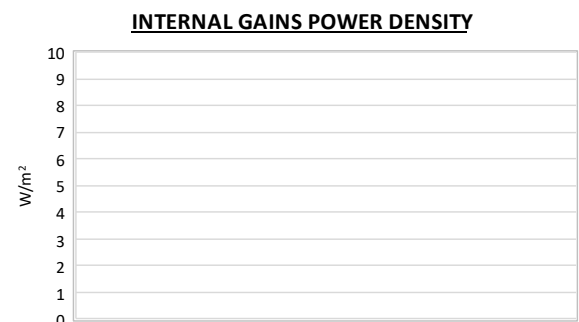
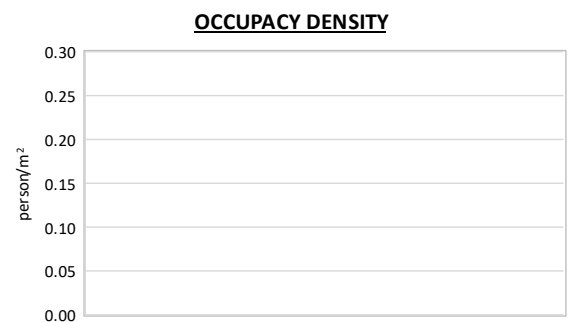
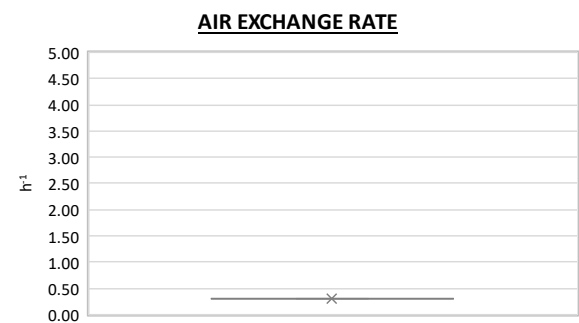
Numerical variables – GEOMETRY



Numerical variables – ENVELOPE



Numerical variables – GAINS, VENTILATION and SYSTEMS USAGE



Region:	Aosta Valley (Aosta, Quart, Saint-Christophe, and Sarre)			Archetype code: RES_APPBLOCK_1992- 2005_E_VAL
Building category:	Residential buildings - Apartments (in multifamily blocks)			
Period of construction:	1992 - 2005			
Climatic zone:	E	Number of records:	534	

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	2.7	0.2	2.6	2.7	2.7
	Heated gross floor area	$A_{H,g}$	m ²	-	-	-	-	-
	Heated net floor area	$A_{H,n}$	m ²	73.3	39.2	47.2	65.1	88.4
	Heated gross volume	$V_{H,g}$	m ³	273.4	145.7	179.7	244.6	326.4
	Heated net volume	$V_{H,n}$	m ³	195.0	81.2	134.5	188.4	252.3
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	25.3	4.5	23.5	24.4	27.9
	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	1.3	3.3	3.5	5.0
	Temperature of DHW	ϑ_w	°C	40.0	0.0	40.0	40.0	40.0
	DHW system power *	$P_{W,gen}$	kW	18.2	11.4	1.5	23.6	26.0

* These values refer to the apartment scale

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



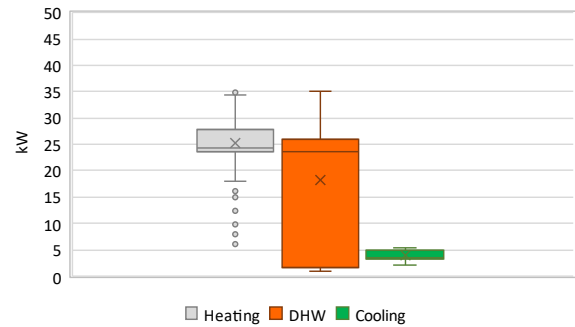
Region:	Aosta Valley (Aosta, Quart, Saint-Christophe, and Sarre)	Archetype code: RES_APPBLOCK_1992- 2005_E_VAL
Building category:	Residential buildings - Apartments (in multifamily blocks)	
Period of construction:	1992 - 2005	
Climatic zone:	E	
Number of records:		534

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

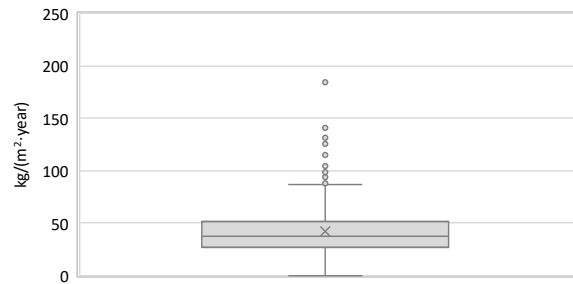
DHW SUPPLY TEMPERATURE



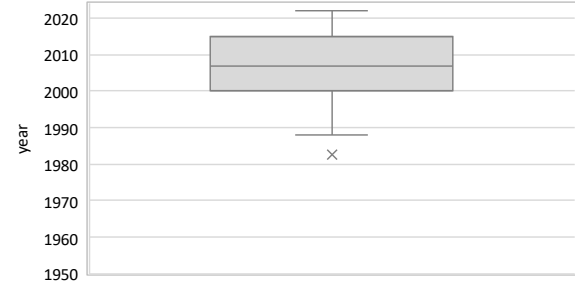
SYSTEM POWER



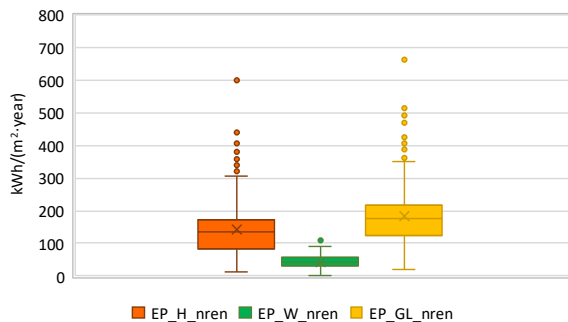
CO₂ EMISSION



HEATING SYSTEM INSTALLATION YEAR



NON-RENEWABLE PRIMARY ENERGY USE



RENEWABLE PRIMARY ENERGY USE

