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	
Description (the codes associated with walls and slabs refer to the structures described in UNI/TR 11552:2014): External walls: hollow brick masonry with air gap (cod. MCV01). Roof slabs: reinforced concrete floor slab (cod. SOL04).				**Data sources:** EPC databases (100%)

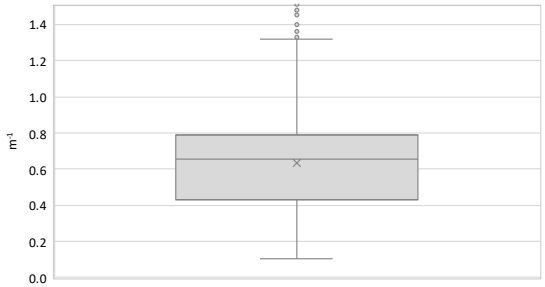
	Data	Symbol	Unit of measure	Mean value	Standard deviation	Q1 (first quartile)	Median value	Q3 (third quartile)
BUILDING GEOMETRY	Number of floors	n_f	-	-	-	-	-	-
	Gross height	H_g	m	-	-	-	-	-
	Footprint area	$A_{footprint}$	m^2	-	-	-	-	-
	Heated gross floor area	$A_{H;g}$	m^2	-	-	-	-	-
	Heated net floor 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}	0.63	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 **	$U_{fl;up}$	$W/(m^2 \cdot K)$	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_{wl}	$W/(m^2 \cdot K)$	0.99	0.44	0.73	1.01	1.21
	Slab on ground floor type	-						
	U-value of the floor **	$U_{fl;lw}$	$W/(m^2 \cdot K)$	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	$W/(m^2 \cdot K)$	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.)

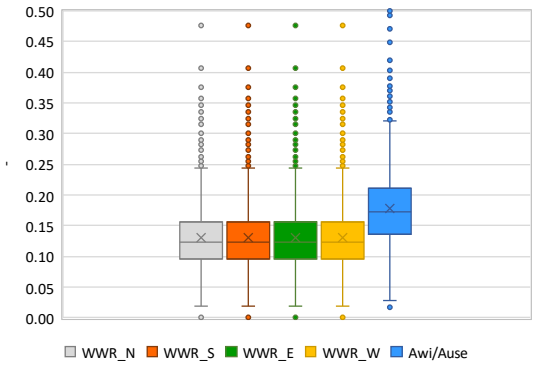
Region:	Aosta Valley			**Archetype code:**
Building category:	Residential buildings - Apartments (in multifamily blocks)			RES_APPBLOCK_1962-1971_E-F_VAL
Period of construction:	1962 - 1971			
Climatic zone:	E-F	**Number of records:**	2450	

Numerical variables – GEOMETRY

COMPACTNESS RATIO

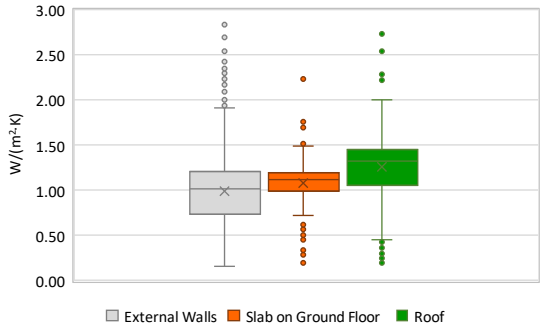


WINDOWS TO WALL RATIO

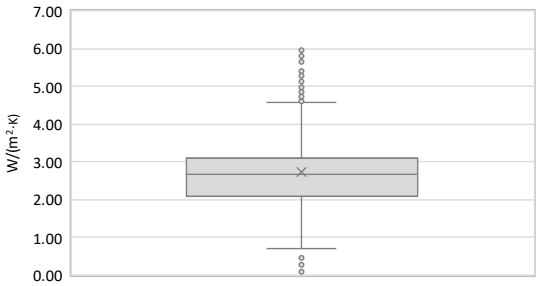


Numerical variables – ENVELOPE

OPAQUE BUILDING COMPONENTS U-VALUE



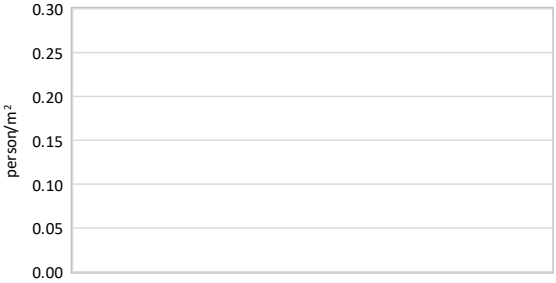
WINDOWS U-VALUE



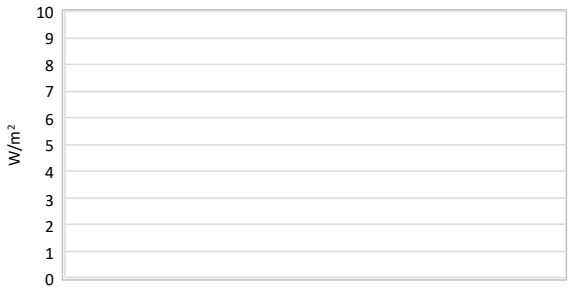
Numerical variables – GAINS, VENTILATION and SYSTEMS USAGE

AIR EXCHANGE RATE

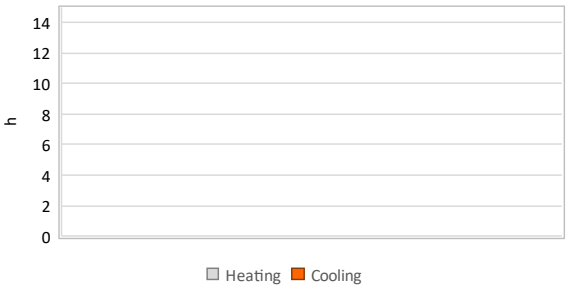
OCCUPACY DENSITY



INTERNAL GAINS POWER DENSITY



DAILY OPERATING TIME



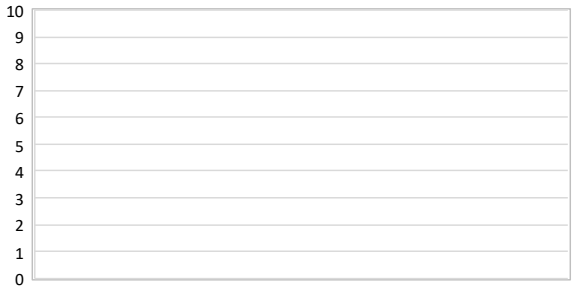
Region:	Aosta Valley			**Archetype code:**
Building category:	Residential buildings - Apartments (in multifamily blocks)			RES_APPBLOCK_1962-1971_E-F_VAL
Period of construction:	1962 - 1971			
Climatic zone:	E-F	**Number of records:**	2450	

ADDITIONAL DATA

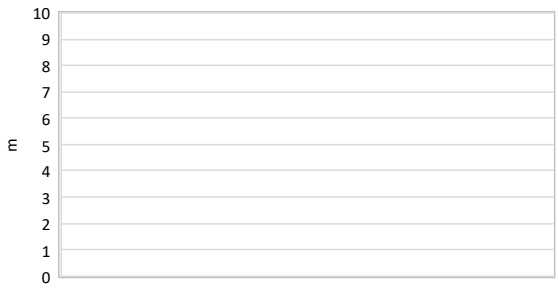
	Data	Symbol	Unit of measure	Mean value	Standard deviation	Q1 (first quartile)	Median value	Q3 (third quartile)
GEOMETRY: apartments	Inter-storey height	H_n	m	2.6	0.3	2.4	2.5	2.7
	Heated gross floor area	$A_{H;g}$	m^2	-	-	-	-	-
	Heated net floor area	$A_{H;n}$	m^2	64.8	30.3	44.0	60.5	79.0
	Heated gross 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 *COP*	$\eta_{H;gen}$ 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 *EER*	$\eta_{C;gen}$ 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)

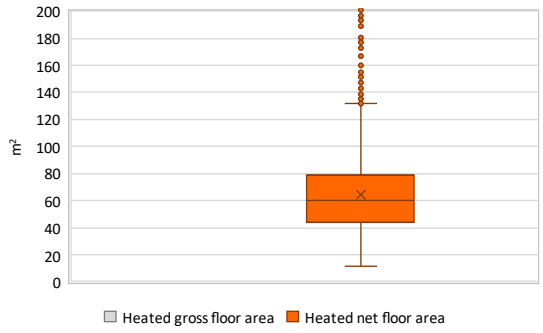
NUMBER OF FLOORS



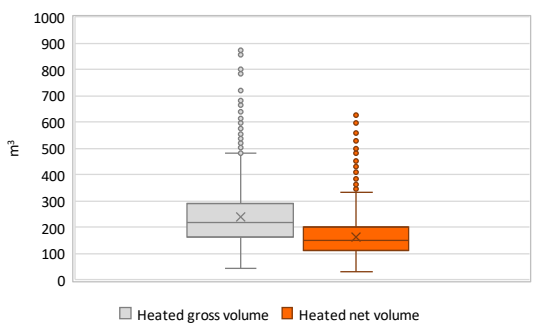
GROSS HEIGHT



AREA



VOLUME

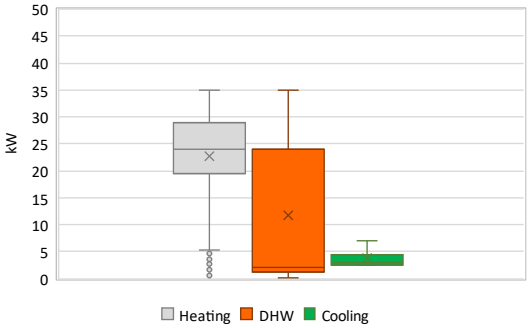


Region:	Aosta Valley			**Archetype code:**
Building category:	Residential buildings - Apartments (in multifamily blocks)			RES_APPBLOCK_1962-1971_E-F_VAL
Period of construction:	1962 - 1971			
Climatic zone:	E-F	**Number of records:**	2450	

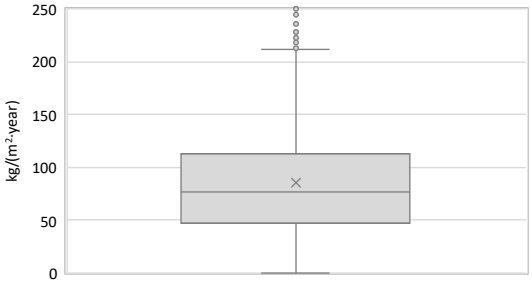
Additional data: other numerical variables that are not included in the archetype

DHW SUPPLY TEMPERATURE

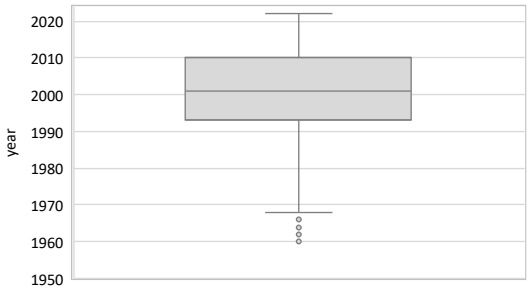
SYSTEM POWER



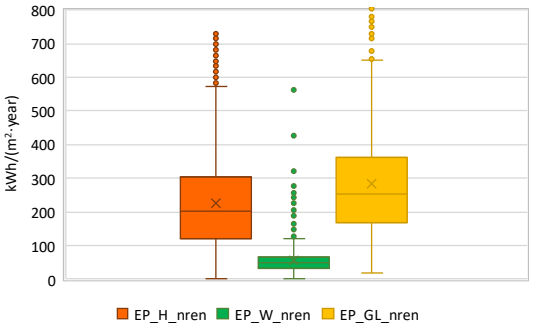
CO_2 EMISSION



HEATING SYSTEM INSTALLATION YEAR



NON-RENEWABLE PRIMARY ENERGY USE



RENEWABLE PRIMARY ENERGY USE