Region:	Piedmont			**Archetype code:**
Building category:	Non-residential buildings - Offices			OFF_1951-1980_F_PIE
Period of construction:	1951-1980			
Climatic zone:	F	**Number of records:**	26	

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 for non-walkable flat roof (cod. COP01) or for pitched roof (cod. CIN04).

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	907.5	1850.8	127.8	266.9	691.6
	Heated gross volume	$V_{H;g}$	m^3	3848.2	7142.5	554.2	1285.9	3038.7
	Heated net volume	$V_{H;n}$	m^3	-	-	-	-	-
	Compactness ratio	$A_{env}/V_{H;g}$	m^{-1}	0.66	0.22	0.53	0.60	0.82
	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}	-	0.19	0.06	0.16	0.18	0.23
ENVELOPE	Roof type	-						
	U-value of the roof	$U_{fl;up}$	$W/(m^2 \cdot K)$	-	-	-	-	-
	External walls type	Hollow brick masonry: 54%; Solid Brick masonry: 31%; Unknown: 15%						
	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	$W/(m^2 \cdot K)$	2.95	1.41	1.69	3.00	3.66
	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	-						
	Air exchange rate *	n	h^{-1}	-	-	-	-	-
THERMAL SYSTEMS	Heating system type	Autonomous: 100%						
	Heating generator	-						
	Daily operating time of the heating system *	t_H	h	No limitation				
	Energy carrier	Natural Gas: 61%; District heating: 11%; LPG: 11%; Solid biomass: 8%; Electricity: 5%; Gas Oil: 4%						
	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, detached from heating: 54%; Autonomous, coupled with heating: 27%; Centralized, detached from heating: 15%; Centralized, coupled with heating: 4%						
	DHW generator	-						

* These values are derived from UNI EN ISO Standards

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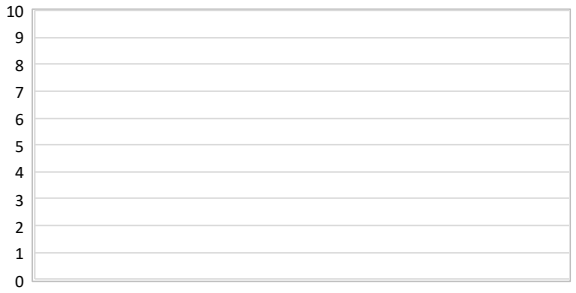
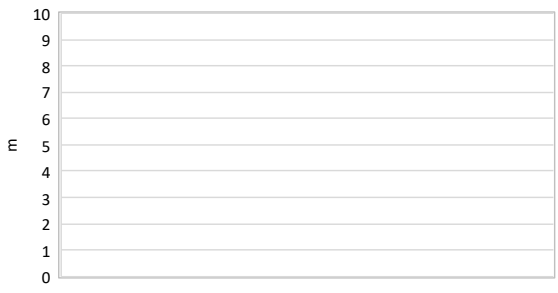
Numerical variables – GEOMETRY

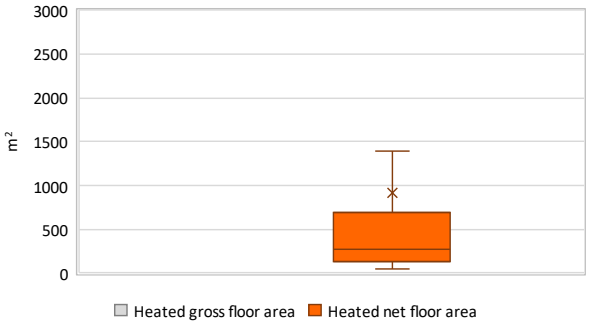
NUMBER OF FLOORS



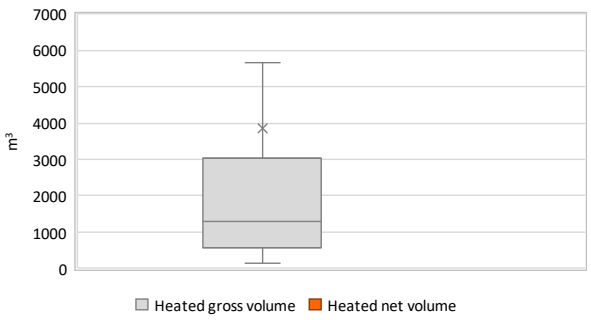
GROSS HEIGHT



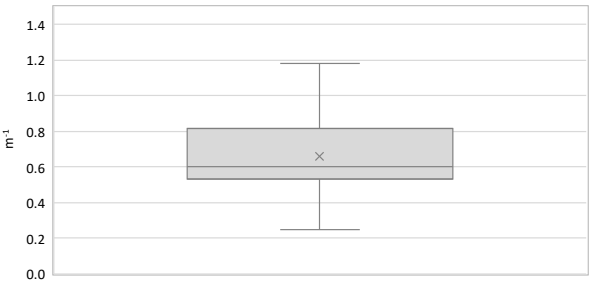
AREA



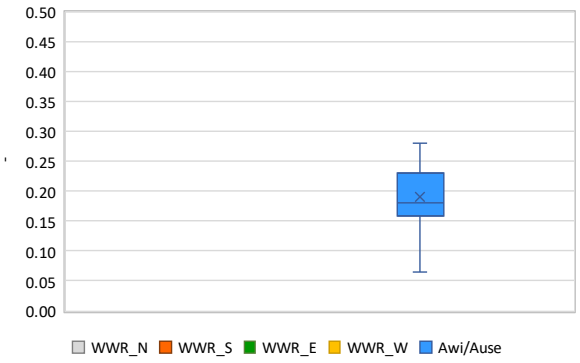
VOLUME



COMPACTNESS RATIO

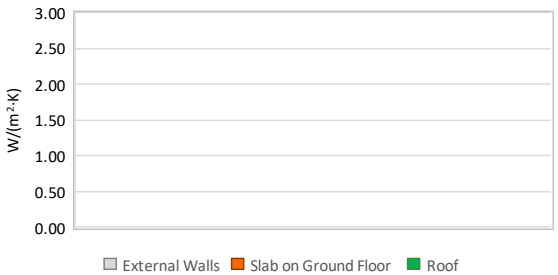


WINDOWS TO WALL RATIO

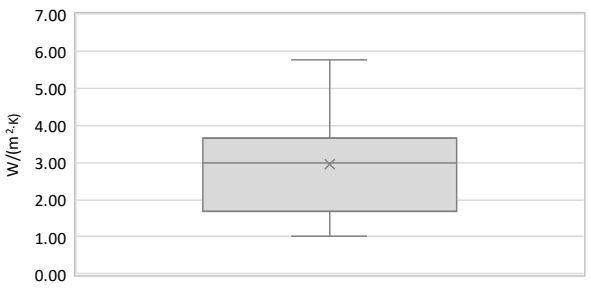


Numerical variables – ENVELOPE

OPAQUE BUILDING COMPONENTS U-VALUE



WINDOWS U-VALUE



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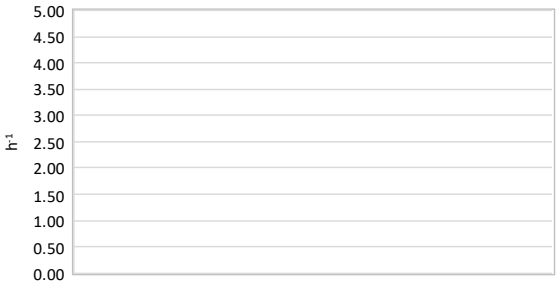
Building category:	Non-residential buildings - Offices			OFF_1951-1980_F_PIE
Period of construction:	1951-1980			
Climatic zone:	F	**Number of records:**	26	

ADDITIONAL DATA

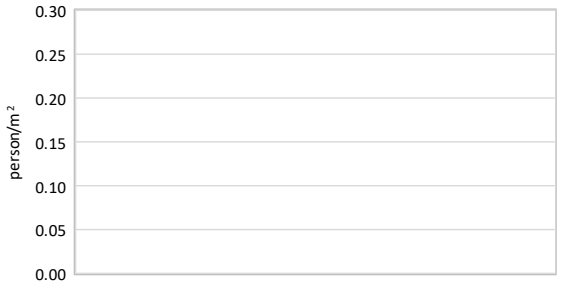
	Data	Symbol	Unit of measure	Mean value	Standard deviation	Q1 (first quartile)	Median value	Q3 (third quartile)
THERMAL SYSTEMS	Heating efficiency or *COP*	$\eta_{H;gen}$ or $COP_{H;gen}$	-	This value has to be retrieved from suitable datasheets				
	Total heating power	$P_{H;gen}$	kW	209.0	285.0	30.5	67.3	292.5
	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	104.5	116.9	12.8	41.0	196.8
	Temperature of DHW	ϑ_W	°C	40.0	0.0	40.0	40.0	40.0
	DHW system power	$P_{W;gen}$	kW	43.5	147.2	1.2	8.4	23.8

Numerical variables – GAINS, VENTILATION and SYSTEMS USAGE

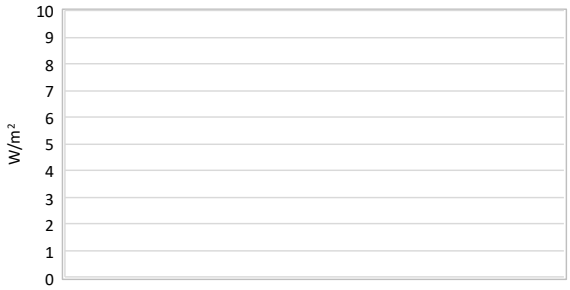
AIR CHANGE RATE



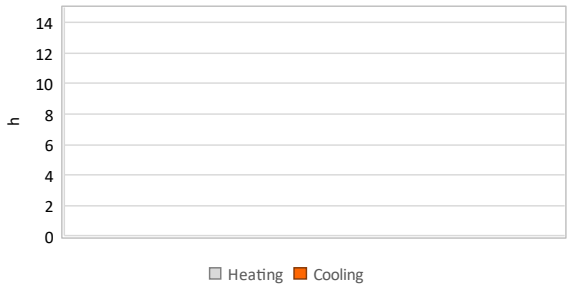
OCCUPACY DENSITY



INTERNAL GAINS POWER DENSITY



DAILY OPERATING TIME



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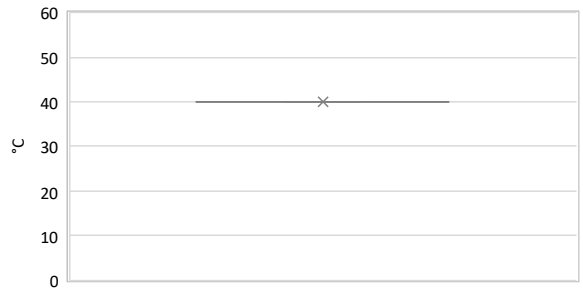
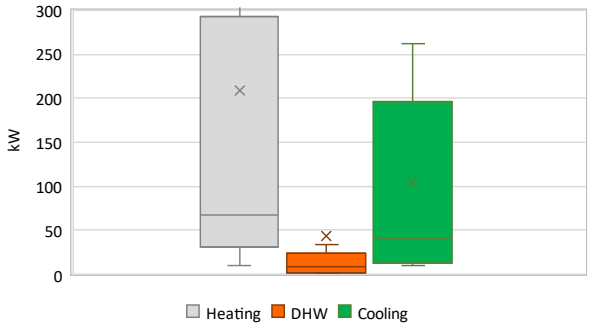
Period of construction:	1951-1980			
Climatic zone:	F	**Number of records:**	26	

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

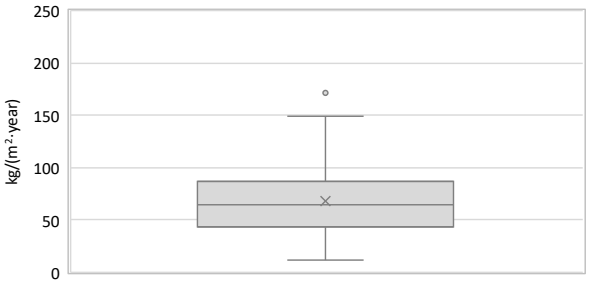
DHW SUPPLY TEMPERATURE



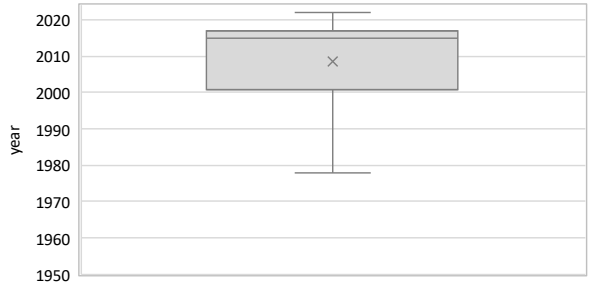
SYSTEM POWER



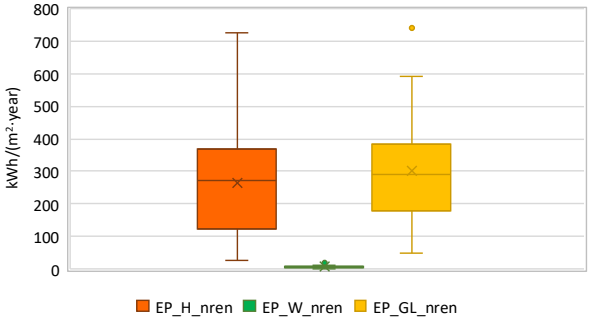
CO_2 EMISSION



HEATING SYSTEM INSTALLATION YEAR



NON-RENEWABLE PRIMARY ENERGY USE



RENEWABLE PRIMARY ENERGY USE