

 Region:
 Piedmont
 Archetype code:

 Building category:
 Residential buildings - Single family houses
 RES_SINGLE_1961-1970-1970_E_PIE

 Climatic zone:
 E
 Number of records:
 4181

Description (the codes associated with walls and slabs refer to the structures described in UNI/TR 11552:2014): <u>External walls</u>: hollow brick masonry with air gap (cod. MCV01) or solid brick masonry (cod. MLP01). <u>Roof slabs</u>: 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	Hg	m	-	-	-	-	-	
	Footprint area	A _{footprint}	m²	-	-	-	-	-	
	Heated gross floor area	A _{H;g}	m ²	-	-	-	-	-	
	Heated net floor area	A _{H;n}	m ²	138.7	99.2	87.2	116.9	166.7	
	Heated gross volume	V _{H;g}	m³	557.9	374.3	358.2	483.1	670.4	
	Heated net volume	V _{H;n}	m³	-	-	-	-	-	
و	Compactness ratio	A _{env} /V _{H;g}	m ⁻¹	0.81	0.22	0.68	0.82	0.96	
	WWR – North orientation	WWR _N	-	-	-	-	-	-	
E	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}	-	0.18	0.06	0.14	0.17	0.21	
	Roof type				-				
	<i>U</i> -value of the roof	U _{fl;up}	W/(m ² ·K)	-	-	-	-	-	
	External walls type	Hollow brick masonry: 59%; Solid Brick masonry: 36%; Unknown: 5%							
) PE	<i>U</i> -value of the wall	$U_{ m wl}$	W/(m ² ·K)	-	-	-	-	-	
ŒĽĊ	Slab on ground floor type				-				
ENVELOPE	<i>U</i> -value of the floor	U _{fl;lw}	W/(m ² ·K)	-	-	-	-	-	
	Windows type	-							
	<i>U</i> -value of the windows	U _W	W/(m ² ·K)	2.90	1.32	1.70	2.81	3.96	
	Shading system type	-							
z	Occupancy density *	O _C	O _C person/m ² UNI EN 16798-1 - Table A.19						
and TIO	Lighting power density *	W∟	W/m²	W/m ² UNI EN 16798-1 - A.8.3					
NS ILA	Equipment power density *	W _A	W _A W/m ² UNI EN 16798-1 - A.8.3						
GAINS and VENTILATION	Type of ventilation	Natural: 100%							
>	Air exchange rate *	n	h⁻¹	0.30	0.00	0.30	0.30	0.30	
	Heating system type	Autonomous: 100%							
	Heating generator	-							
THERMAL SYSTEMS	Daily operating time of the heating system *	t _H	h	14.00	0.00	14.00	14.00	14.00	
	Energy carrier	Natural Gas: 84%; Electricity: 7%; Solid biomass: 4%; LPG: 2%; District heating: 2%; Gas Oil: 1%							
	Heating emission sub-system	-							
	Cooling system type				-				
	Daily operating time of the cooling system *	t _C	h	-	-	-	-	-	
Ē	Cooling emission sub-system				-				
	DHW system type	Autonomous, coupled with heating: 72%; Autonomous, detached from heating: 19%; Centralized, coupled with heating: 8%; Centralized, detached from heating: 1%							
	DHW generator	-							
	* These values are derived from UNI EN ISO Standards								

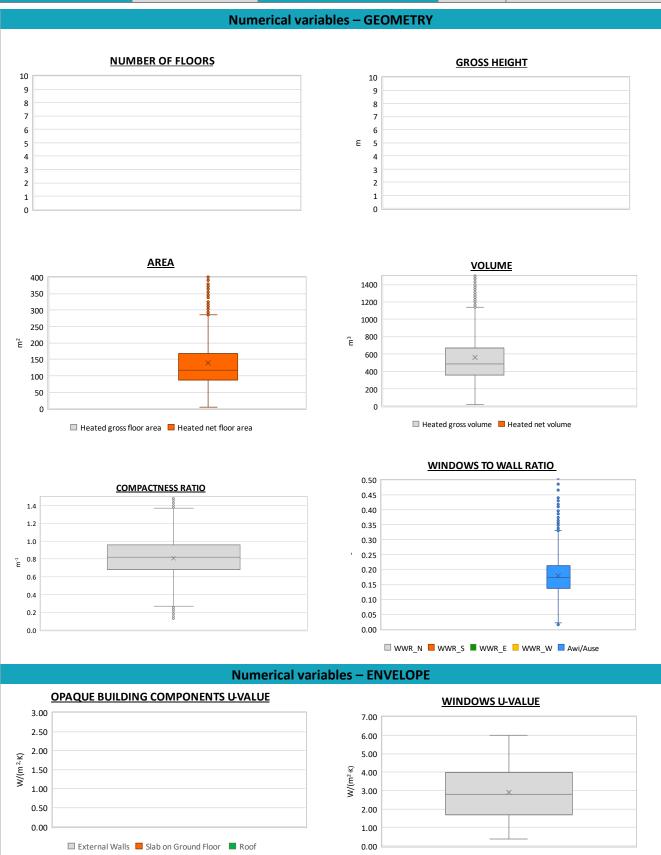


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 Period of construction:
 1961-1970
 1970_E_PIE

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The data can be used for analysis, modeling, and research purposes, as long as it remains unaltered in its original form. Users are free to publish results based on the data, provided they credit the original source.



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	η _{H;gen} or <i>COP</i> _{H;gen}	-	This value has to be retrieved from suitable datasheets				
	Total heating power	P _{H;gen}	kW	51.0	286.7	24.0	26.4	31.5
	Cooling efficiency or EER	$\eta_{C;gen}$ or $\mathit{EER}_{C;gen}$	-	This value has to be retrieved from suitable datasheets				
	Total cooling power	P _{C;gen}	kW	6.9	6.0	3.5	5.3	8.7
	Temperature of DHW	ϑ_{W}	°C	40.0	0.0	40.0	40.0	40.0
Ė	DHW system power	P _{W;gen}	kW	29.3	96.7	22.8	24.7	30.0

Numerical variables - GAINS, VENTILATION and SYSTEMS USAGE **AIR EXCHANGE RATE OCCUPACY DENSITY** 0.30 5.00 4.50 0.25 4.00 3.50 0.20 3.00 2.50 0.15 2.00 0.10 1.50 1.00 0.05 0.50 0.00 0.00 **DAILY OPERATING TIME INTERNAL GAINS POWER DENSITY** 14 10 12 9 8 10 5 6 4 3 2 2 1 0 ☐ Heating ☐ Cooling



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