

 Region:
 Piedmont
 Archetype code:

 Building category:
 Residential buildings - Single family houses
 RES\_SINGLE\_1951-1960 - 1960\_E\_PIE

 Climatic zone:
 E
 Number of records:
 3174

**Description** (the codes associated with walls and slabs refer to the structures described in UNI/TR 11552:2014): <u>External walls</u>: solid brick masonry (cod. MLP01) or hollow brick masonry with air gap (cod. MCV01). <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	Mean	Standard	Q1 (first	Median	Q3 (third	
BUILDING GEOMETRY	Number of floors	n <sub>f</sub>	measure	value	deviation	quartile)	value	quartile)	
	Gross height	H <sub>g</sub>		_					
	Footprint area	A <sub>footprint</sub>	m <sup>2</sup>	_			-		
	Heated gross floor area	A <sub>H;g</sub>	m <sup>2</sup>	_	_	_	_		
	Heated net floor area	Ан;g Ан;n	m <sup>2</sup>	124.8	84.9	77.4	108.3	152.0	
	Heated gross volume	V <sub>H;g</sub>	m <sup>3</sup>	509.4					
	Heated net volume	V <sub>H;g</sub>	m <sup>3</sup>	509.4	335.0	318.9	443.0	620.9	
	Compactness ratio		m <sup>-1</sup>	0.81	0.28	0.68	0.81	0.97	
Ž	WWR – North orientation	A <sub>env</sub> /V <sub>H;g</sub>	-	- 0.81	0.26	-	- 0.01	0.57	
불		WWR <sub>N</sub>	<u>-</u>	_	-	-	-	-	
표	WWR – South orientation	WWR <sub>S</sub>	-	-	-	-	-	-	
	WWR – East orientation	WWR <sub>E</sub>	-	-	-	-	-	-	
	WWR – West orientation	WWR <sub>W</sub>	-	-	-	-	-	-	
	Window to useful floor area ratio	A <sub>wi</sub> /A <sub>use</sub>	-	0.17	0.06	0.13	0.16	0.20	
	Roof type	-							
E C	<i>U</i> -value of the roof	U <sub>fl;up</sub>	W/(m <sup>2</sup> ·K)	-	-	-	-	-	
	External walls type	Solid Brick masonry: 56%; Hollow brick masonry: 39%; Unknown: 5%							
	<i>U</i> -value of the wall	$U_{ m wl}$	W/(m <sup>2</sup> ·K)	-	-	-	-	-	
ELC	Slab on ground floor type				-				
ENVELOPE	<i>U</i> -value of the floor	U <sub>fl;lw</sub>	W/(m <sup>2</sup> ·K)	-	-	-	-	-	
	Windows type	· · · · · ·			-				
	<i>U</i> -value of the windows	U <sub>W</sub>	W/(m <sup>2</sup> ·K)	2.96	1.30	1.84	2.86	4.04	
	Shading system type	-							
7	Occupancy density *	O <sub>C</sub> person/m <sup>2</sup> UNI EN 16798-1 - Table A.19							
필	Lighting power density *	W∟	W/m <sup>2</sup>			UNI EN 16798	-1 - A.8.3		
S E	Equipment power density *	W <sub>A</sub>	W/m <sup>2</sup>	UNI EN 16798-1 - A.8.3					
GAINS and VENTILATION	Type of ventilation			Natural: 100%					
~ >	Air exchange rate *	n	h <sup>-1</sup>	0.30	0.00	0.30	0.30	0.30	
	Heating system type	Autonomous: 100%							
	Heating generator	-							
	Daily operating time of the heating system *	t <sub>H</sub>	h	14.00	0.00	14.00	14.00	14.00	
MS	Energy carrier	Natural Gas: 85%; Electricity: 5%; Solid biomass: 4%; LPG: 2%; District heating: 2%; Gas Oil: 2%							
THERMAL SYSTEMS	Heating emission sub-system	-							
	Cooling system type								
	Daily operating time of the cooling system *	t <sub>C</sub>	h	-	-	-	-	-	
	Cooling emission sub-system	I			-				
	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								

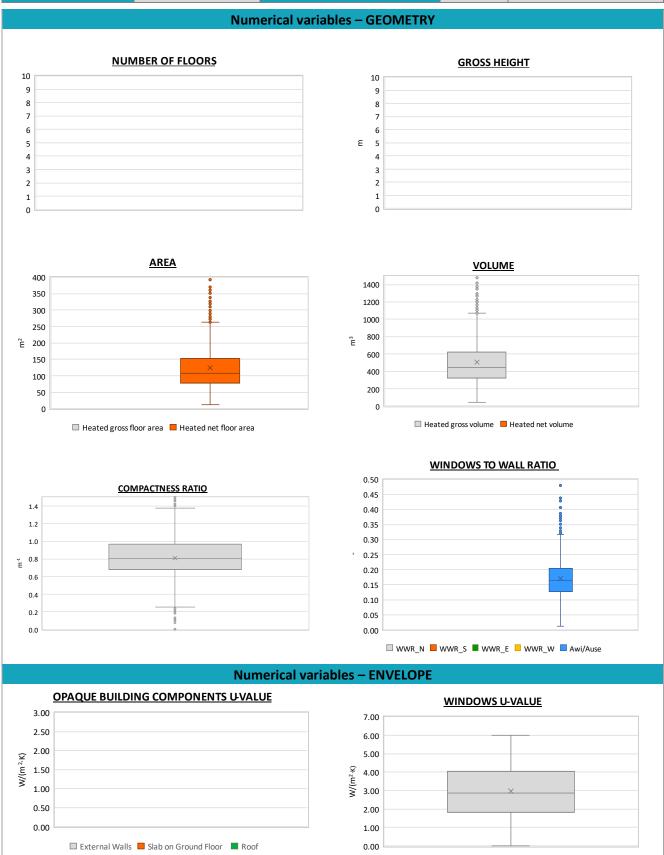


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The data can be used for analysis, modeling, and research purposes, as long as it remains unaltered in its original form. Users are free to publish results based on the data, provided they credit the original source.



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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	$\eta_{\sf H;gen}$ or $COP_{\sf H;gen}$	-	This value has to be retrieved from suitable datasheets				
	Total heating power	P <sub>H;gen</sub>	kW	36.5	170.8	23.9	25.0	30.0
	Cooling efficiency or EER	$\eta_{ extsf{C}; extsf{gen}}$ or $ extsf{\textit{EER}}_{ extsf{C}; extsf{gen}}$	-	This value has to be retrieved from suitable datasheets				
	Total cooling power	P <sub>C;gen</sub>	kW	6.2	4.2	3.4	5.0	8.0
	Temperature of DHW	$\vartheta_{W}$	°C	40.0	0.0	40.0	40.0	40.0
É	DHW system power	P <sub>W;gen</sub>	kW	24.7	28.1	22.5	24.3	28.7

## 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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