

 Region:
 Piedmont
 Archetype code:

 Building category:
 Residential buildings - Apartments (in multifamily blocks)
 RES\_APPBLOCK\_1961-1970\_E\_PIE

 Period of construction:
 1961-1970
 1970\_E\_PIE

 Climatic zone:
 E
 Number of records:
 76504

 $\textbf{Description} \ (\text{the codes associated with walls and slabs refer to the structures described in UNI/TR 11552:2014}):$ 

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	Mean	Standard	Q1 (first	Median	Q3 (third		
BUILDING GEOMETRY			measure	value	deviation	quartile)	value	quartile)		
	Number of floors	nf	-	-	-	-	-	-		
	Gross height	Hg	m	-	-	-	-	-		
	Footprint area	A <sub>footprint</sub>	m²	-	-	-	-	-		
	Heated gross floor area	$A_{H;g}$	m²	-	-	-	-	-		
	Heated net floor area	A <sub>H;n</sub>	m²	-	-	-	-	-		
	Heated gross volume	$V_{H;g}$	m³	-	-	-	-	-		
GE(	Heated net volume	V <sub>H;n</sub>	m³	-	-	-	-	-		
٩	Compactness ratio	$A_{ m env}/V_{ m H;g}$	m <sup>-1</sup>	0.50	0.38	0.30	0.42	0.66		
⊴	WWR – North orientation	WWR <sub>N</sub>	-	-	-	-	-	-		
BUI	WWR – South orientation	<i>WWR</i> s	-	-	-	-	-	-		
	<i>WWR</i> – 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	0.13	0.14	0.17	0.20		
ENVELOPE	Roof type				-					
	<i>U</i> -value of the roof	$U_{fl;up}$	W/(m²·K)	-	-	-	-	-		
	External walls type	Hollow	brick masonry: 8	80%; Solid E	Brick masonry:	17%; Unknown	: 2%; Prefabricate	ed panels: 1%		
	<i>U</i> -value of the wall	$U_{ m wl}$	W/(m <sup>2</sup> ·K)	-	-	-	-	-		
	Slab on ground floor type	-								
	<i>U</i> -value of the floor	$U_{fl;lw}$	W/(m <sup>2</sup> ·K)	-	-	-	-	-		
	Windows type				-					
	<i>U</i> -value of the windows	$U_{W}$	W/(m <sup>2</sup> ·K)	3.38	1.31	2.32	3.16	4.58		
	Shading system type			-						
z	Occupancy density *	O <sub>C</sub>	person/m²	UNI EN 16798-1 - Table A.19						
and TIO	Lighting power density *	W∟	W/m²	UNI EN 16798-1 - A.8.3						
NS .	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	Centralized: 73%; Autonomous: 27%								
	Heating generator	-								
THERMAL SYSTEMS	Daily operating time of the heating system *	t <sub>H</sub>	h	14.00	0.00	14.00	14.00	14.00		
	Energy carrier	Natural Gas: 80%; Electricity: 7%; District heating: 6%; Solid biomass: 4%; LPG: 2%; Gas Oil: 2%								
	Heating emission sub-system	-								
	Cooling system type				-					
	Daily operating time of the cooling system *	t <sub>C</sub>	h	-	-	-	-	-		
	Cooling emission sub-system	-								
	DHW system type	Autonomous, detached from heating: 66%; Autonomous, coupled with heating: 20%; Centralized, coupled with heating: 10%; Centralized, detached from heating: 4%								
	DHW generator	-								
	* These values are derived from UNI EN	N ISO Standards								



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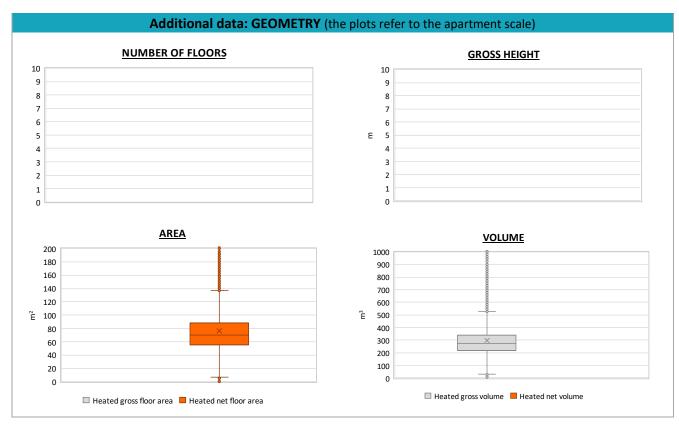


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ADDITIONAL DATA								
	Data	Symbol	Unit of measure	Mean value	Standard deviation	Q1 (first quartile)	Median value	Q3 (third quartile)
GEOMETRY: apartments	Inter-storey height	H <sub>n</sub>	m	-	-	-	-	-
	Heated gross floor area	A <sub>H;g</sub>	m <sup>2</sup>	-	-	-	-	-
	Heated net floor area	A <sub>H;n</sub>	m <sup>2</sup>	76.7	34.6	55.4	70.4	88.0
	Heated gross volume	V <sub>H;g</sub>	m³	297.3	143.5	215.8	271.7	339.4
	Heated net volume	V <sub>H;n</sub>	m³	-	-	-	-	-
S	Heating efficiency or COP	$\eta_{\sf H;gen}$ or $COP_{\sf H;gen}$	-	This value has to be retrieved from suitable datasheets				
THERMAL SYSTEMS	Total heating power *	P <sub>H;gen</sub>	kW	22.9	7.5	22.0	24.0	27.0
	Cooling efficiency or EER	η <sub>C;gen</sub> or <i>EER</i> <sub>C;gen</sub>	-	This value has to be retrieved from suitable datasheets				
	Total cooling power *	P <sub>C;gen</sub>	kW	4.6	3.3	2.7	3.5	5.2
	Temperature of DHW	$\vartheta_{W}$	°C	40.0	0.0	40.0	40.0	40.0
	DHW system power *	P <sub>W;gen</sub>	kW	15.0	10.3	1.5	19.2	24.0
	* These values refer to the apartment scale							





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