

 Region:
 Liguria
 Archetype code:

 Building category:
 Residential buildings – Apartments in multi-family block
 RES_APPBLOCK_

 Period of construction:
 1951-1960
 1951-1960_D_LIG

 Climatic zone:
 D
 Number of records:
 16083

Description: Data sources:

External walls: no data available

EPC databases (100%)

Roof sla	<u>bs:</u> no data available										
	Data	Symbol	Unit of measure	Mean value	Standard deviation	Q1 (first quartile)	Q2 (Median value)	Q3 (third quartile)			
BUILDING GEOMETRY	Number of floors	n _f	-	-	-	-	-	-			
	Gross height	Hg	m	-	-	-	-	-			
	Footprint area	A _{footprint}	m ²	-	-	-	-	-			
	Heated gross floor area	A _{H;g}	m²	-	-	-	-	-			
	Heated net floor area	A _{H;n}	m ²	-	-	-	-	-			
	Heated gross volume	V _{H;g}	m³	-	-	-	-	-			
	Heated net volume	V _{H;n}	m³	-	-	-	-	-			
	Compactness ratio	A _{env} /V _{H;g}	m ⁻¹	0.47	0.55	0.30	0.39	0.61			
	WWR – North orientation	WWR _N	-	-	-	-	-	-			
Ē	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}	-	0.11	0.04	0.09	0.10	0.11			
	Roof type				-						
	<i>U</i> -value of the roof	U _{fl;up}	W/(m²⋅K)	1.40	0.56	1.21	1.56	1.72			
	External walls type				-						
)PE	<i>U</i> -value of the wall	U_{wl}	W/(m²⋅K)	1.20	0.39	1.03	1.14	1.32			
ÆĽ	Slab on ground floor type				-						
ENVELOPE	<i>U</i> -value of the floor	U _{fl;lw}	W/(m²⋅K)	1.60	0.46	1.42	1.61	1.74			
	Windows type				-						
	<i>U</i> -value of the windows	U_{W}	W/(m²⋅K)	4.15	1.19	3.29	4.32	5.09			
	Shading system type				-						
_ z	Occupancy density *	<i>O</i> _C	person/m²	person/m ² UNI EN 16798-1 - Table A.19							
and TIO	Lighting power density *	W_{L}	W/m²	UNI EN 16798-1 - A.8.3							
SN ₹	Equipment power density *	W _A	W/m²	UNI EN 16798-1 - A.8.3							
GAINS and VENTILATION	Type of ventilation			Natural: 99%; Mechanical: 1%							
	Air exchange rate *	n	h ⁻¹	0.30	0.00	0.30	0.30	0.30			
	Heating system type			Unkn	own: 97%; Aı	utonomous: 3	%				
	Heating generator	Traditional	boiler: 42%; l	Jnknown:	36%; Conder	sing boiler: 2	0%; Air-source h	eat pump: 2%			
THERMAL SYSTEMS	Daily operating time of the heating system *	t _H	h	12	0	12	12	12			
	Energy carrier	Natural gas: 42%; Unknown: 36%; Electricity and natural gas: 19%; Electricity: 2%; Gas Oil: 1%									
	Heating emission sub-system	Radiators: 60%; Unknown: 36%; Radiant panels: 2%; Air Ducts: 1%; Fan-coil: 1%									
	Cooling system type	Unknown: 94%; Heat pump air-air: 6%									
	Daily operating time of the cooling system *	tc	h	-	-	-	-	-			
	Cooling emission sub-system	-									
	DHW system type	-									
	DHW generator	Unknown: 60%; Natural gas boiler: 16%; Electric boiler: 10%; Condensing boiler: 10%; Electric heat pump: 4%									
	* These values were not available in the considered sources, and are thus derived from UNI EN Standards										



Region: Liguria Archetype code: **Building category:** Residential buildings - Apartments in multi-family block RES APPBLOCK 1951-1960_D_LIG **Period of construction:** 1951-1960 **Climatic zone:** D **Number of records: Numerical variables – GEOMETRY COMPACTNESS RATIO** WINDOWS TO WALL RATIO 1.6 0.50 0.45 1.4 0.40 1.2 0.35 1.0 0.30 0.8 0.25 0.20 0.6 0.15 0.4 0.10 0.2 0.05 0.0 0.00 ■ WWR_N ■ WWR_S ■ WWR_E ■ WWR_W ■ Awi/Ause **Numerical variables – ENVELOPE OPAQUE BUILDING COMPONENTS UVALUE WINDOWS U-VALUE** 7.00 3.00 6.00 2.50 5.00 2.00 4.00 W·m⁻²·K⁻³ 1.50 3.00 1.00 2.00 0.50 1.00 0.00 0.00 ■ External walls ■ Slab on ground floor ■ Roof Numerical variables - GAINS, VENTILATION and SYSTEMS USAGE (Standard Values) **AIR EXCHANGE RATE OCCUPANCY DENSITY** 1.00 0.30 0.90 0.25 0.80 0.70 0.20 0.60 0.50 0.15 0.40 0.10 0.30 0.20 0.05 0.10 0.00 0.00 **INTERNAL GAINS POWER DENSITY DAILY OPERATING TIME** 10 20 9 18 8 16 7 14 6 5 10 4 8 3 6 2 4 1 2

The data can be used for analysis, modeling, and research purposes, as long as it remains unaltered in its



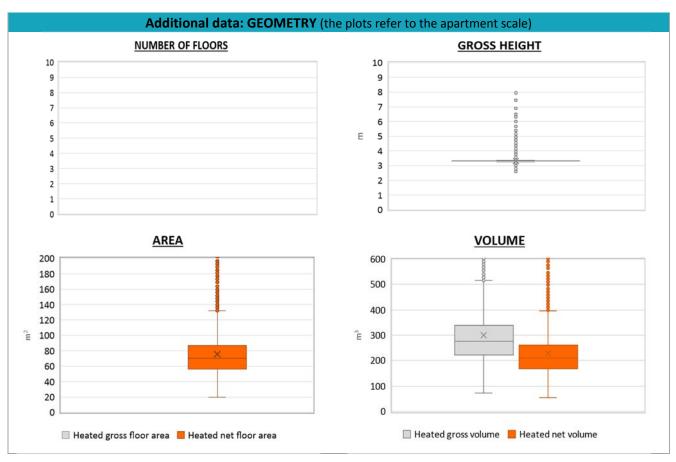
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ADDITIONAL DATA										
	Data	Symbol	Unit of measure	Mean value	Standard deviation	Q1 (first quartile)	Median value	Q3 (third quartile)		
GEOMETRY: apartments	Inter-storey height	H_{n}	m	3.3	0.2	3.3	3.3	3.3		
	Heated gross floor area	$A_{H;g}$	m²	-	-	-	-	-		
	Heated net floor area	$A_{H;n}$	m²	75.5	35.6	56.2	70.2	86.6		
	Heated gross volume	V _{H;g}	m³	301.2	157.8	222.0	277.0	340.3		
	Heated net volume	$V_{H;n}$	m³	229.3	121.0	169.3	210.9	260.8		
THERMAL SYSTEMS	Heating efficiency or COP	$\eta_{ ext{H}; ext{gen}}$ or $ ext{ extit{COP}}_{ ext{H}; ext{gen}}$	-	This value has to be retrieved from suitable datasheets						
	Total heating power *	P _{H;gen}	kW	21.4	7.8	20.2	24.0	24.0		
	Cooling efficiency or EER	η _{C;gen} or <i>EER</i> _{C;gen}	-	This value has to be retrieved from suitable datasheets						
	Total cooling power *	$P_{C;gen}$	kW	-	-	-	-	-		
	Temperature of DHW	$ heta_{W}$	°C	-	-	-	-	-		
	DHW system power *	P _{W;gen}	kW	18.3	9.1	17.0	23.0	24.0		
* These values refer to the apartment scale										







NOTE: Sample size of the analysed data.

Compactness ratio: 16083; Window to useful floor area ratio: 1477; U-value of the roof: 2087; U-value of the wall: 13754; U-value of the floor: 677; U-value of the windows: 16083; Inter-storey height: 16083; Heated net floor area: 16083; Heated gross volume: 16082; Heated net volume: 16083; Total heating power: 4480; DHW system power: 10888; CO2 Emission: 15903; EP_H_nren: 16043; EP_W_nren: 15547; EP_GL_nren: 15999; EP_H_ren: 12879; EP_W_ren: 9610