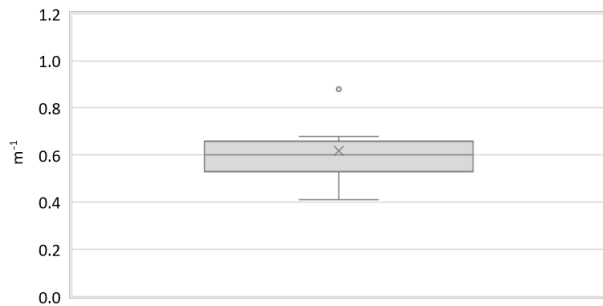


Region:	Trentino Alto Adige						Archetype code: COMM_1991-2020_D	
Building category:	Commercial buildings							
Period of construction:	1991-2020							
Climatic zone:	D	Number of records:				18		
Description (the codes associated with walls and slabs refer to the structures described in UNI/TR 11552:2014): External walls: no data available Roof slabs: no data available							Data sources: APE (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	$A_{\text{footprint}}$	m ²	-	-	-	-	-
	Heated gross floor area	$A_{H,g}$	m ²	-	-	-	-	-
	Heated net floor area	$A_{H,n}$	m ²	405.71	437.07	145.00	378.00	450.00
	Heated gross volume	$V_{H,g}$	m ³	-	-	-	-	-
	Heated net volume	$V_{H,n}$	m ³	2961.18	2380.29	2100.00	2200.00	2500.00
	Compactness ratio	$A_{\text{env}}/V_{H,g}$	m ⁻¹	0.62	0.13	0.53	0.60	0.66
	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}	-	-	-	-	-	-
ENVELOPE	Roof type	-						
	U-value of the roof	$U_{f,up}$	W/(m ² ·K)	-	-	-	-	-
	External walls type	-						
	U-value of the wall	U_{wl}	W/(m ² ·K)	0.29	0.07	0.25	0.25	0.37
	Slab on ground floor type	-						
	U-value of the floor	$U_{f,lfw}$	W/(m ² ·K)	-	-	-	-	-
	Windows type	-						
	U-value of the windows	U_w	W/(m ² ·K)	-	-	-	-	-
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	Natural: 45%, mechanical: 55%						
	Air exchange rate *	n	h ⁻¹	UNI EN 16798-1 - A.3.1				
THERMAL SYSTEMS	Heating system type	Autonomous: 100%						
	Heating generator	Unknown: 46%, Air source heat pump: 44%, Condensing boiler: 10%						
	Daily operating time of the heating system *	t_H	h	12	-	12	12	12
	Energy carrier	Electricity: 80%, Natural gas: 17%, Solid biomass: 3%						
	Heating emission sub-system	Convectors: 82%, Air Heater: 8%, Radiators: 5%, Fan coil: 5%						
	Cooling system type	Unknown: 61%, Air-cooled chiller: 39%						
	Daily operating time of the cooling system *	t_C	h	-	-	-	-	-
	Cooling emission sub-system	Fan coil: 55%, Radiant panels: 45%						
	DHW system type	Unknown: 45%, Autonomous - detached from heating: 32%, Autonomous – coupled with heating: 23%						
	DHW generator	Unknown: 55%, Solar thermal: 36%, Natural gas boiler: 7%, Electric boiler: 2%						
	* These values were not available in the considered sources, and are thus derived from UNI EN Standards							

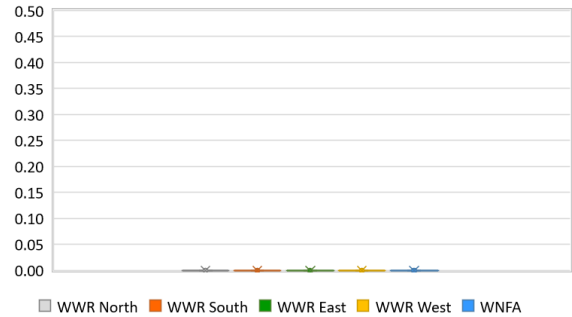
Region:	Trentino Alto Adige			Archetype code: COMM_1991-2020_D
Building category:	Commercial buildings			
Period of construction:	1991-2020			
Climatic zone:	D	Number of records:	18	

Numerical variables – GEOMETRY

COMPACTNESS RATIO

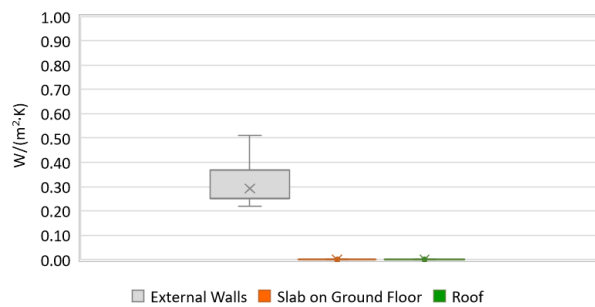


WINDOWS TO WALL RATIO



Numerical variables – ENVELOPE

OPAQUE BUILDING COMPONENTS U-VALUE

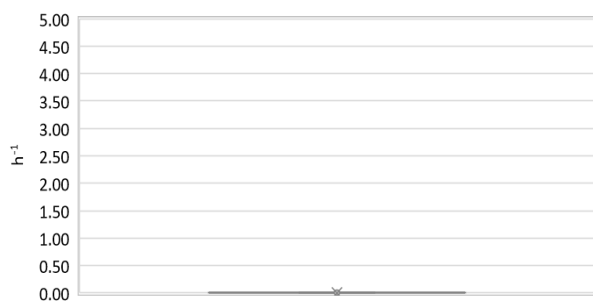


WINDOWS U-VALUE



Numerical variables – GAINS, VENTILATION and SYSTEMS USAGE

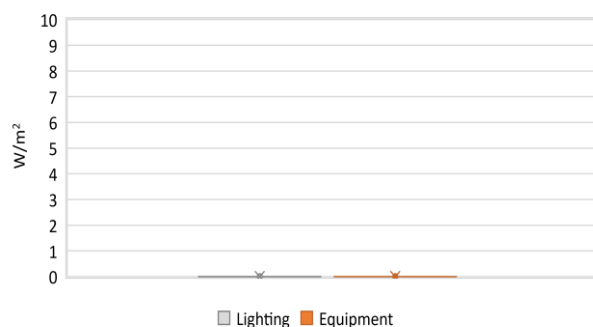
AIR EXCHANGE RATE



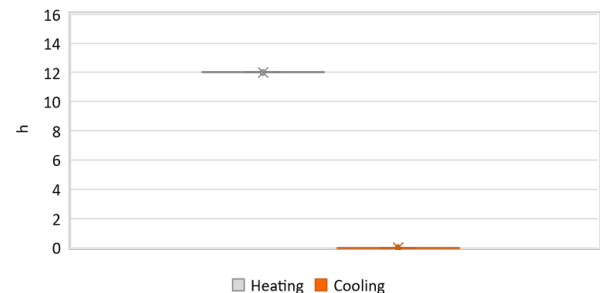
OCCUPANCY DENSITY



INTERNAL GAINS POWER DENSITY

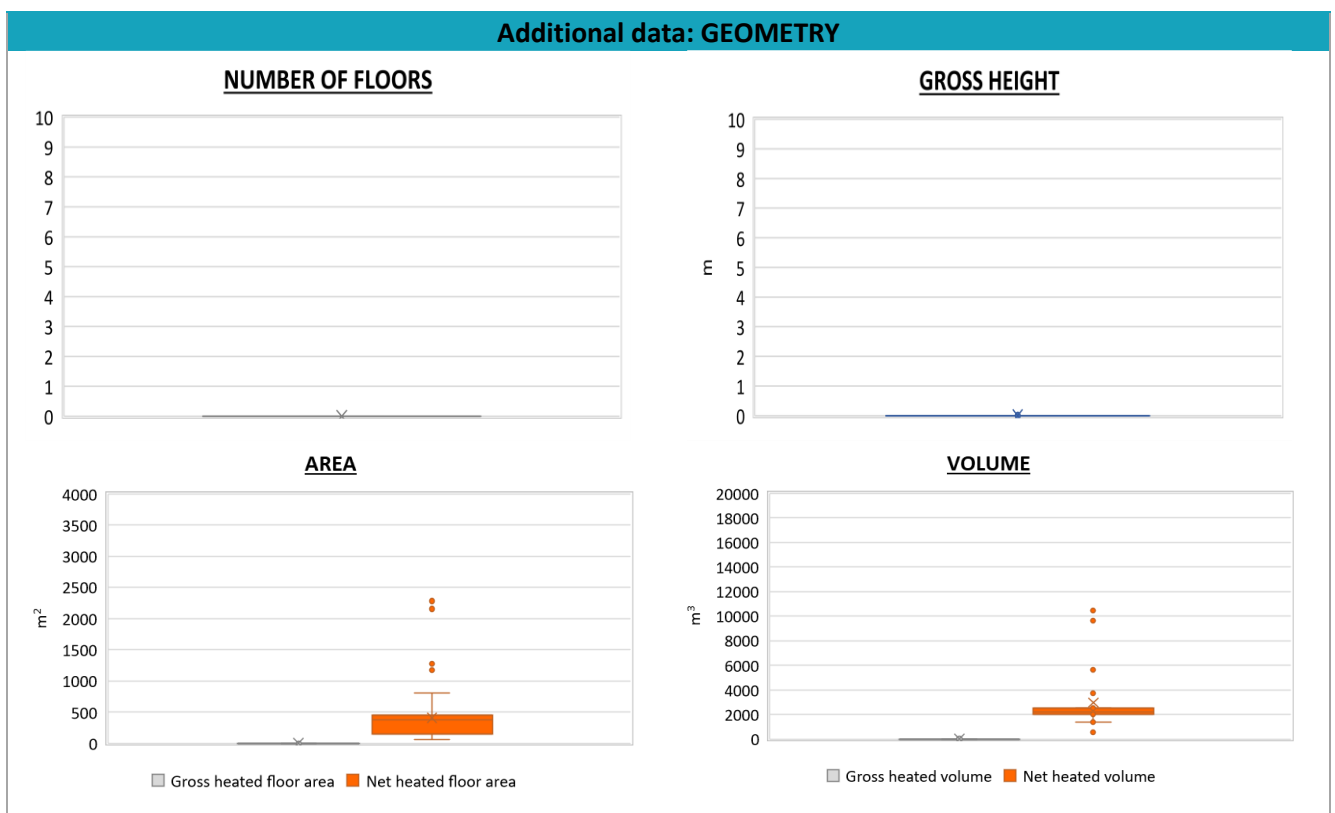


DAILY OPERATING TIME



Region:	Trentino Alto Adige	Archetype code: COMM_1991-2020_D
Building category:	Commercial buildings	
Period of construction:	1991-2020	
Climatic zone:	D	
Number of records:		18

ADDITIONAL DATA								
	Data	Symbol	Unit of measure	Mean value	Standard deviation	Q1 (first quartile)	Median value	Q3 (third quartile)
THERMAL SYSTEMS	Heating efficiency or <i>COP</i>	$\eta_{H,gen}$ or $COP_{H,gen}$	-	This value has to be retrieved from suitable datasheets				
	Total heating power	$P_{H,gen}$	kW	136	164	22	103	120
	Cooling efficiency or <i>EER</i>	$\eta_{C,gen}$ or $EER_{C,gen}$	-	This value has to be retrieved from suitable datasheets				
	Total cooling power	$P_{C,gen}$	kW	152	142	69	70	203
	Temperature of DHW	ϑ_W	°C	40	-	40	40	40
	DHW system power	$P_{W,gen}$	kW	51	33	4	7	17



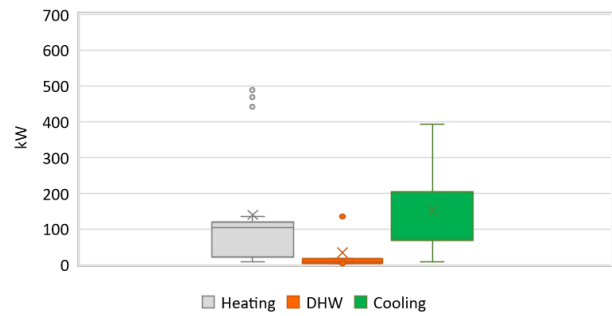
Region:	Trentino Alto Adige	Archetype code: COMM_1991-2020_D
Building category:	Commercial buildings	
Period of construction:	1991-2020	
Climatic zone:	D	
Number of records:		18

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

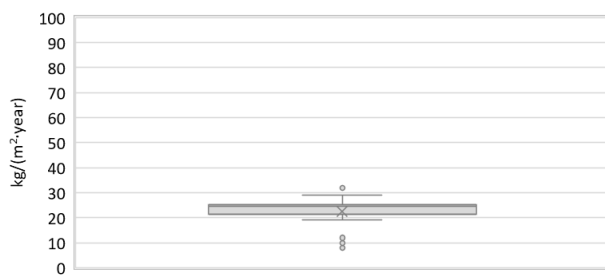
DHW SUPPLY TEMPERATURE



SYSTEM POWER



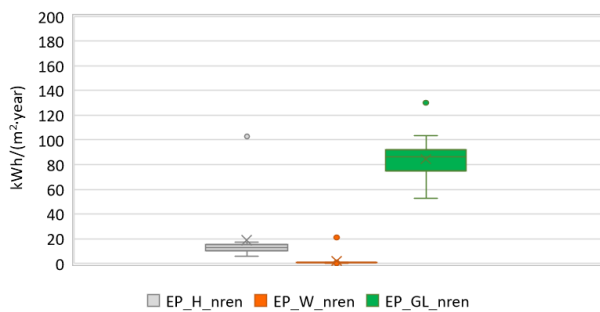
CO₂ EMISSION



HEATING SYSTEM INSTALLATION YEAR



NON-RENEWABLE PRIMARY ENERGY USE



RENEWABLE PRIMARY ENERGY USE

