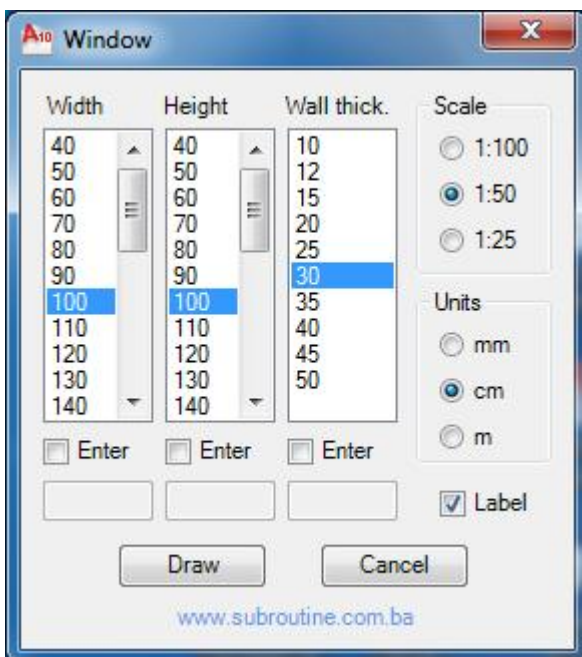
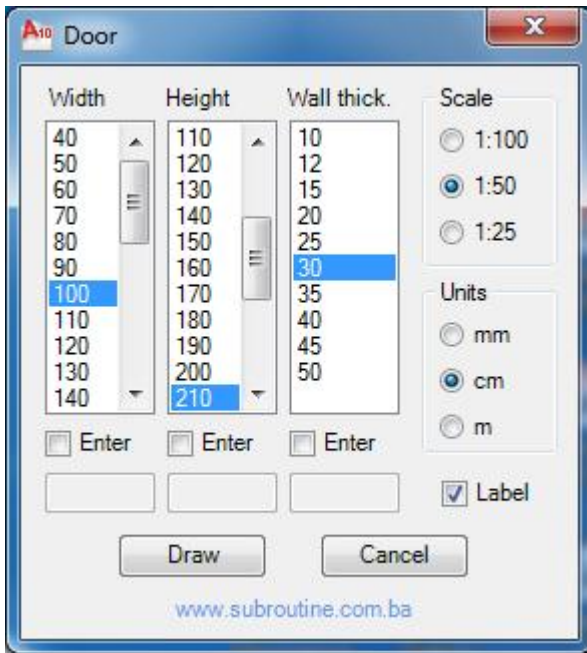


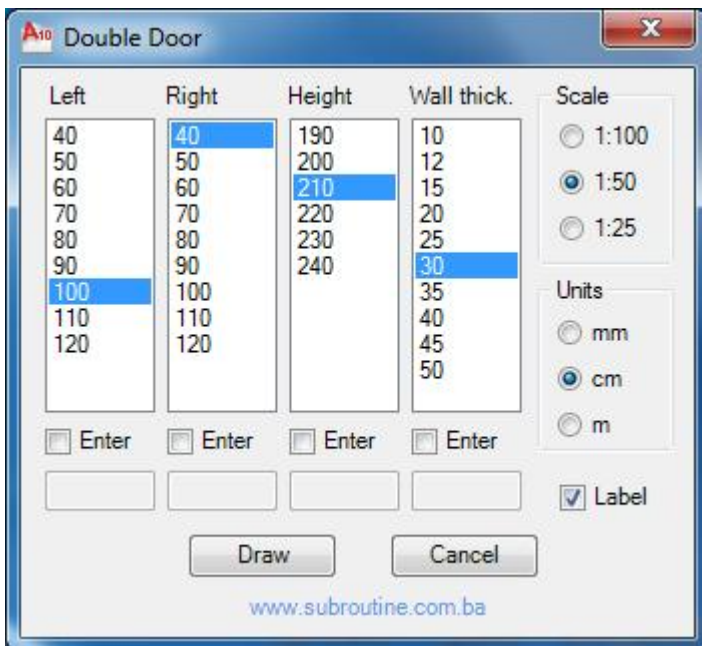
This tool draws windows.



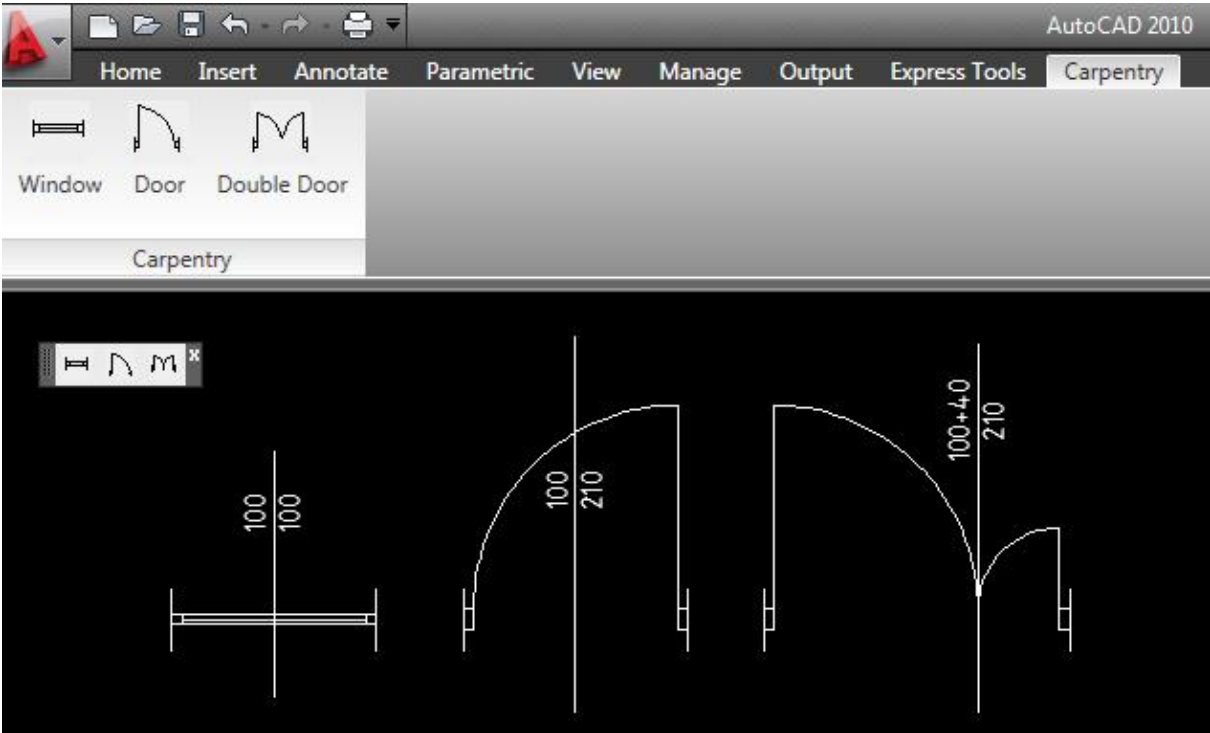
This tool draws doors.



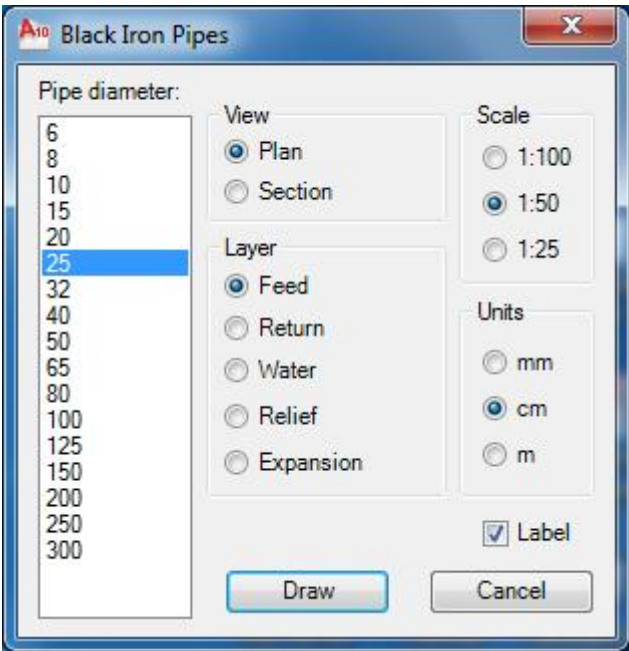
This tool draws double doors.

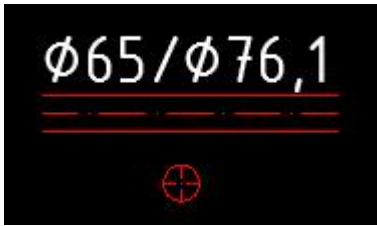


This shows the result: drawn doors and window.

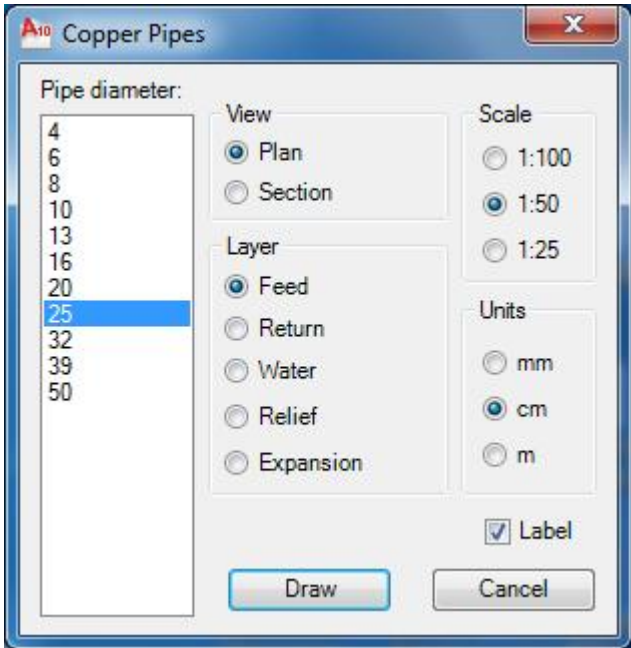


This tool draws black pipes.





This tool draws copper pipes.



This tool draws air diffusers for ventilation.

A10 Air Diffusers

Type	Size	Vol. cont. damper	Air changes	Number of diffusers
ANK	1 [244]	no damper	10	10
	2 [300]	L		
	3 [356]	KL		
	4 [412]	KNU		
	5 [468]			
	6 [498]			
	7 [598]			
	8 [623]			

Room volume: 454 m³ Airflow per diffuser: 454 m³

Volume flow per second: 0,1261 m³ Airflow speed: 2,008 m/s

Scale: 1:100 1:50 1:25

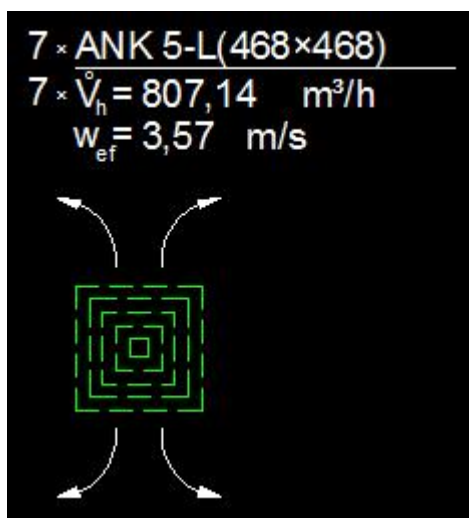
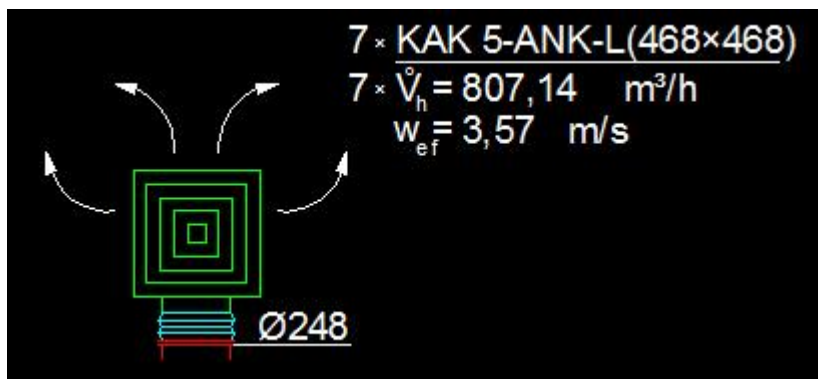
Units: mm cm m

Label: ANK 5-L(468×468) Crossbeam: T1

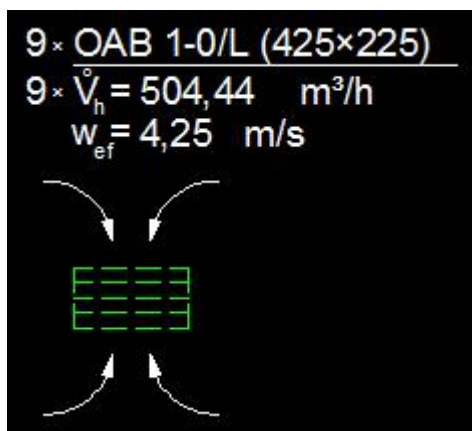
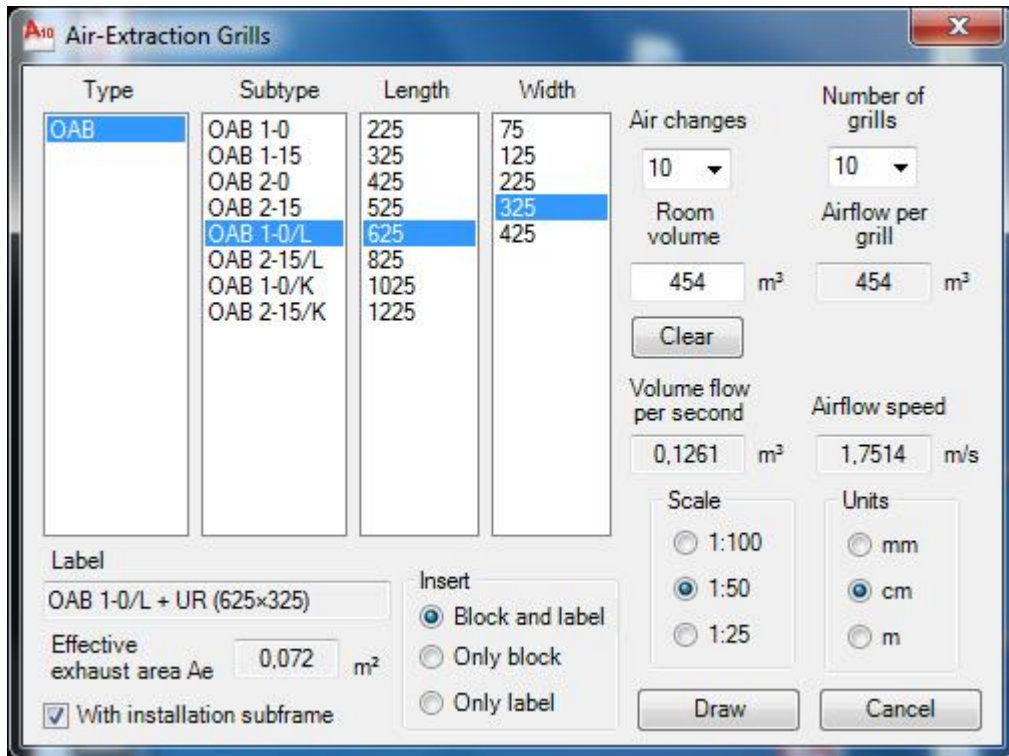
Effective outlet area A_{ef}: 0,0628 m²

With sound insulation

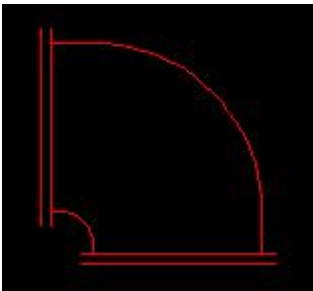
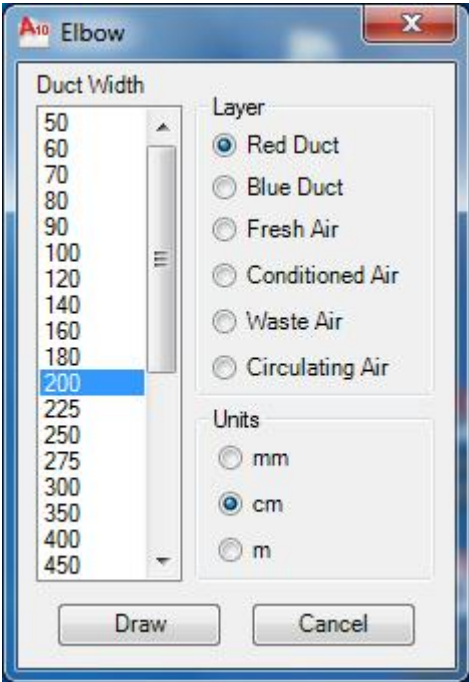
Buttons: Draw, Cancel



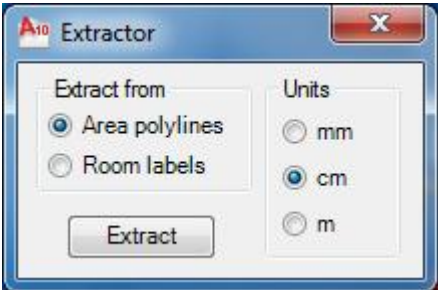
This tool draws air-extraction grills for ventilation.



This draws duct elbows.



This tool saves me a lot of time. It extracts surface areas, volumes and circumference of rooms and sums them up. Used for central heating design.



Book1 - Microsoft Excel

Menus Acrobat

All File Edit View Insert Format Tools Data Window Help

Calibri 14 B I U

Toolbars

A1 Room List

Room List			
Room Title	Area[m ²]	Volume[m ³]	Circumf.[m]
Kitchen	13,68	43,77	14,80
Sleeping room	13,02	41,66	14,60
Living room	29,50	94,40	21,80
Bathroom	13,20	42,24	16,40
	69,40	222,07	

Book1 - Microsoft Excel

Menus Acrobat

All File Edit View Insert Format Tools Data Window Help

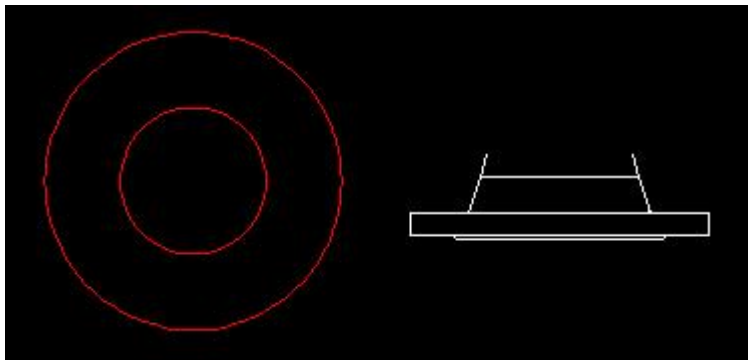
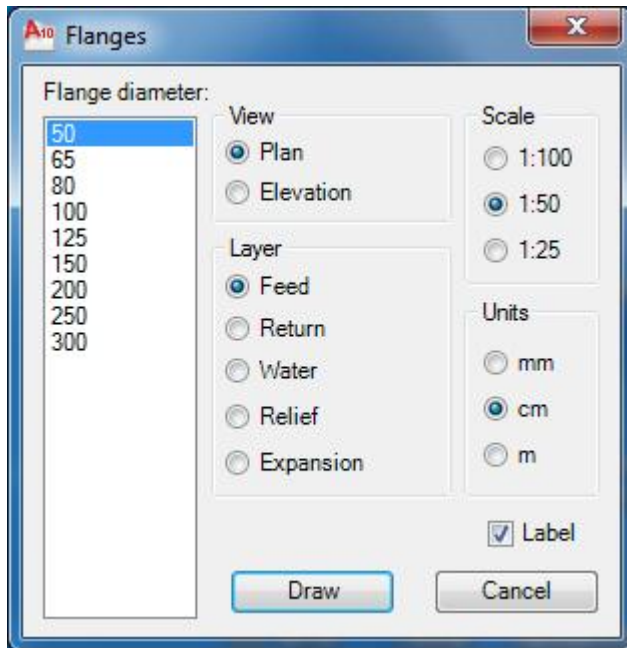
Calibri 14 B I U

Toolbars

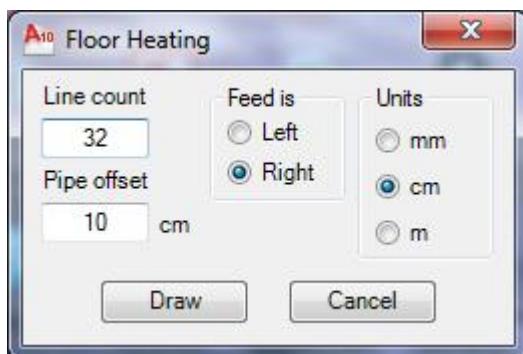
A1 Room List

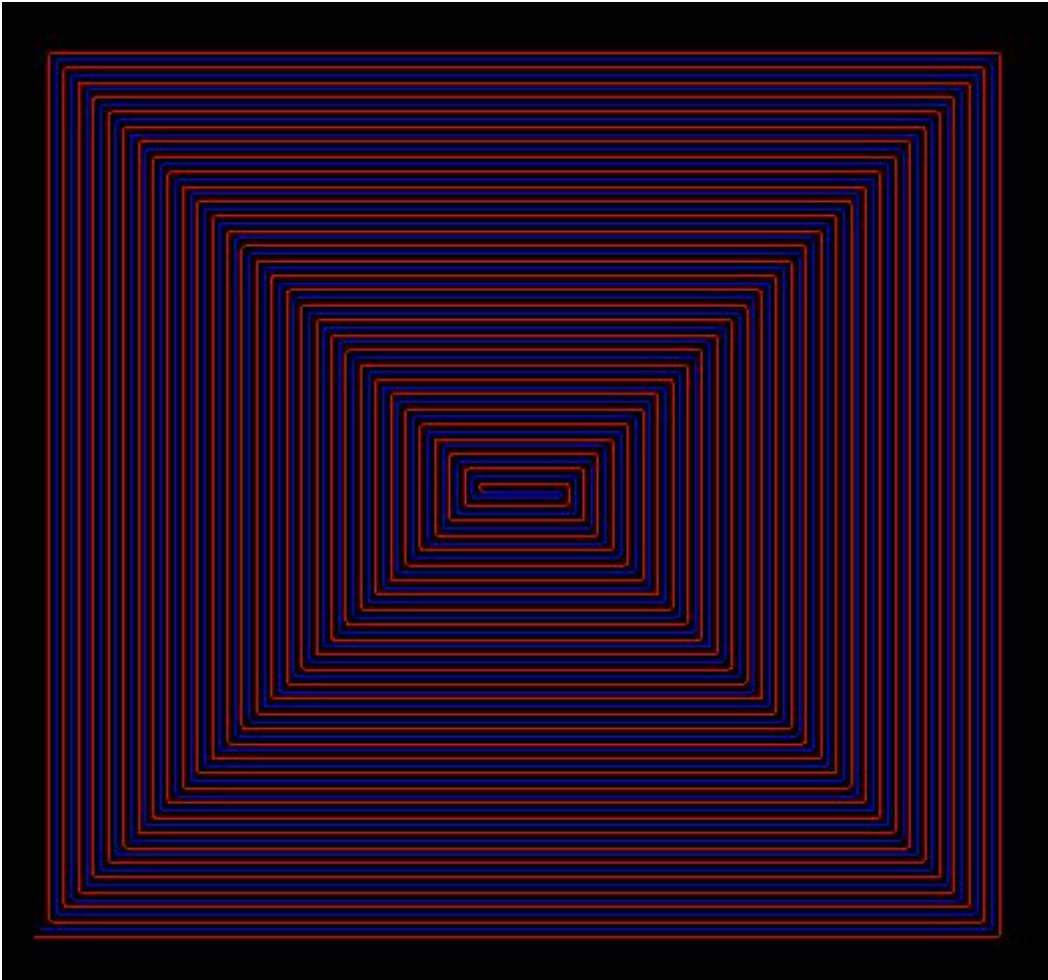
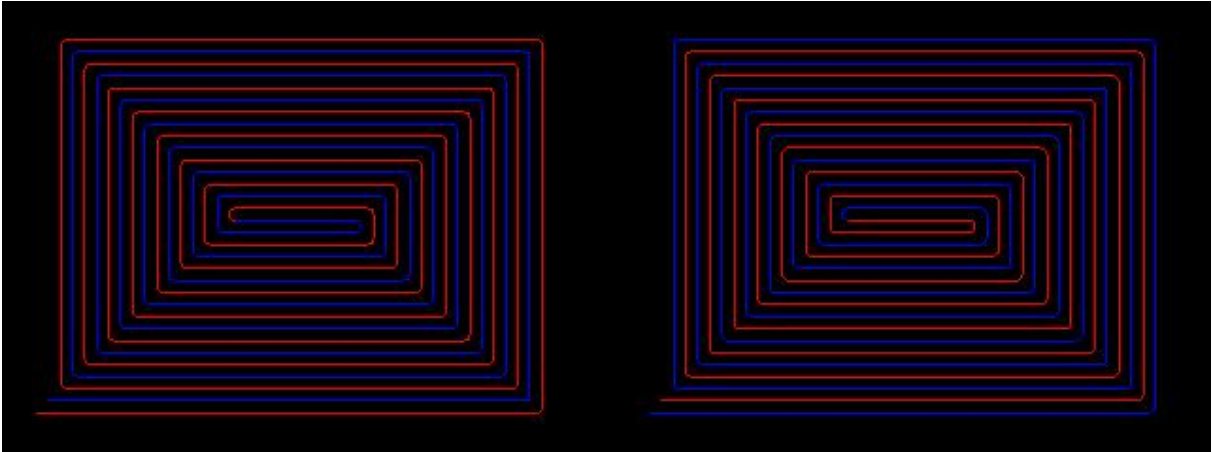
Room List			
Room Title	Area[m ²]	Volume[m ³]	Circumf.[m]
	29,50		21,80
	13,20		16,40
	13,02		14,60
	13,68		14,80
	69,40		

This tool draws flanges.

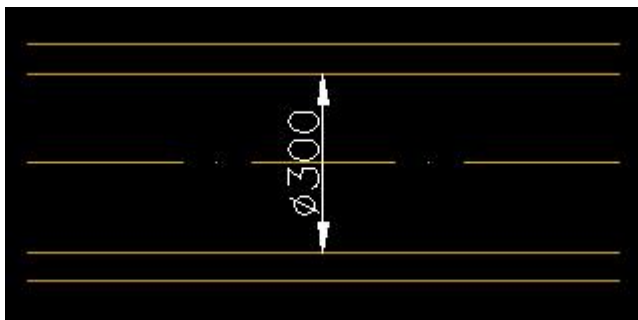
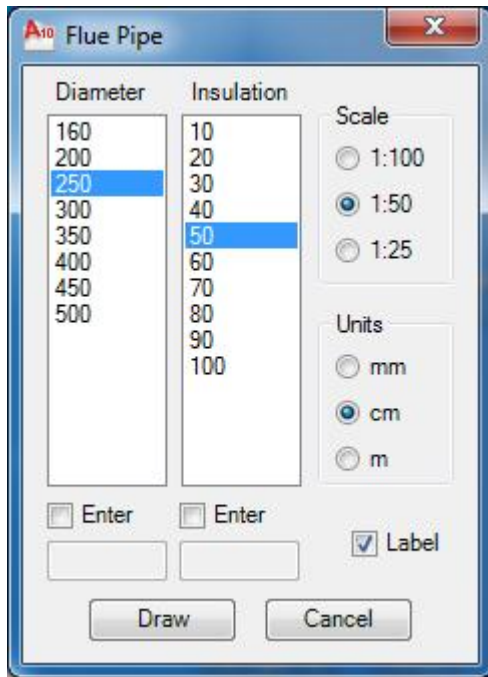


This tool draws floor heating. Saves a lot of time too.

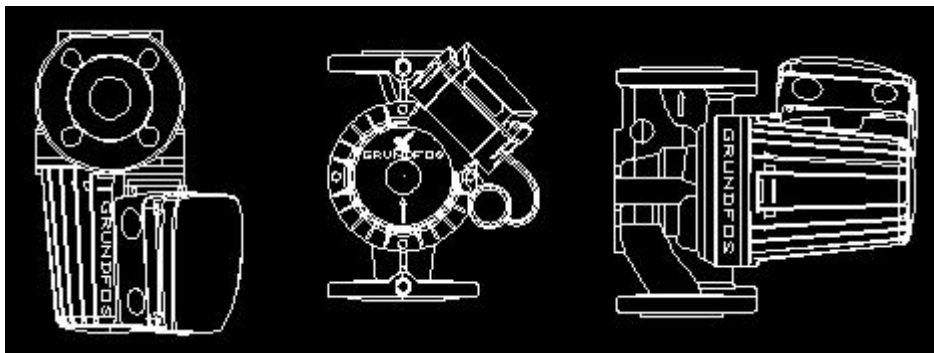
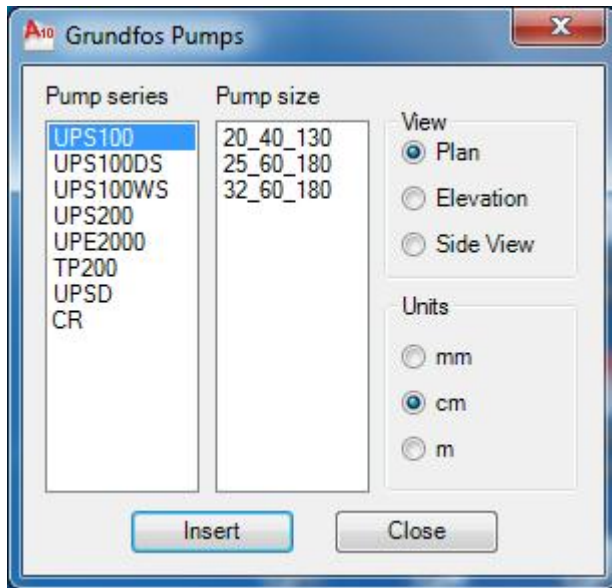




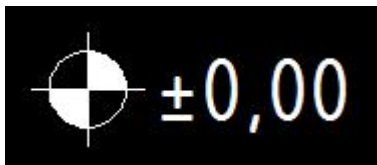
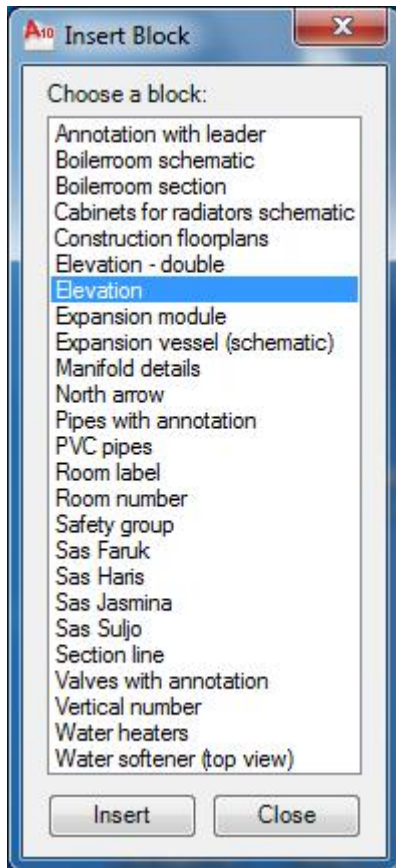
This tool draws flue pipes



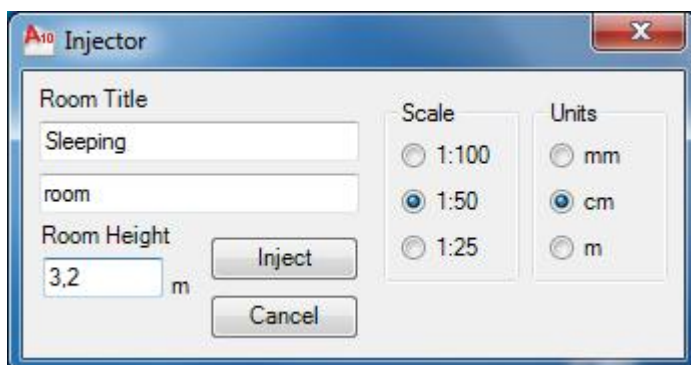
This tool is used for automatic creation of AutoCAD layouts for printing of drawings.



This tool inserts blocks (small drawings) into drawing.

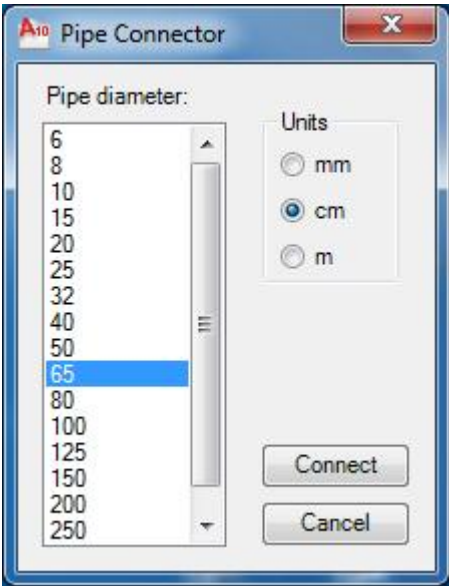


This tool creates room labels. This saves me a lot of time. It extracts area and circumference from bounding lines drawn around rooms, calculates volume, and injects finished block into the drawing. It takes only a fraction of time spent when working manually.



Sleeping room
 $A=64,00\text{m}^2$
 $V=204,80\text{m}^3$
 $O=32,00\text{m}$

This tool connects two pipes with an elbow. Time saver.



This tool inserts radiator blocks from several different manufacturers.

A10 Radiators [X]

Manufacturer

- Aklimat
- Lipovica
- Korad

Valve

- Straight
- Angled (pipes from floor)
- Angled (pipes from wall)
- HERZ connect. system

Section Type

- MS 200
- MS 350
- MS 500
- MS 524
- MS 570
- MS 600**
- MS 650
- MS 900
- MS 930
- MS 1024
- MS 1200
- MS 1400
- MS 1600
- MS 1800
- MS 2000
- MS 2200
- MS 250
- MS 400
- MS 450
- MS 700
- MS 750
- MS 800
- MS 850

Sections

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15**
- 16
- 17
- 18
- 19
- 20
- 21
- 22
- 23

Scale

- 1:100
- 1:50
- 1:25

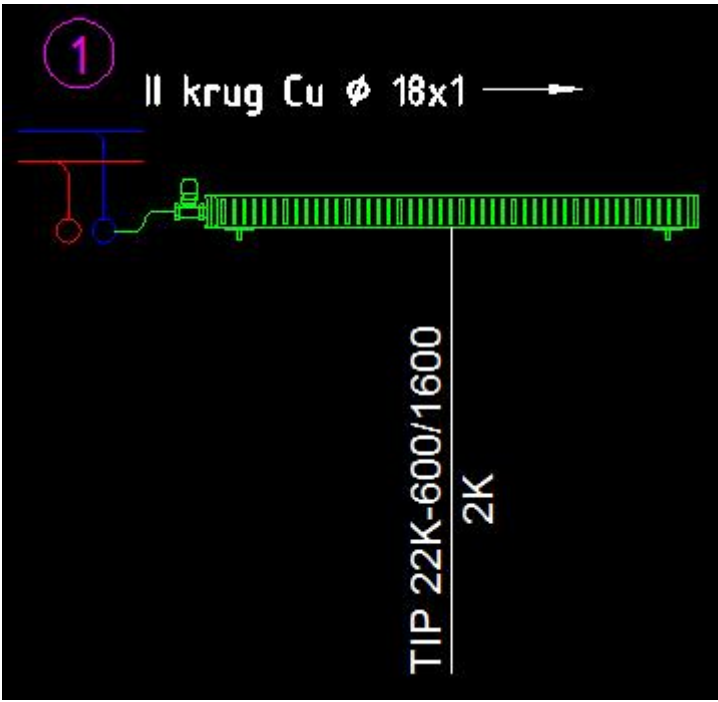
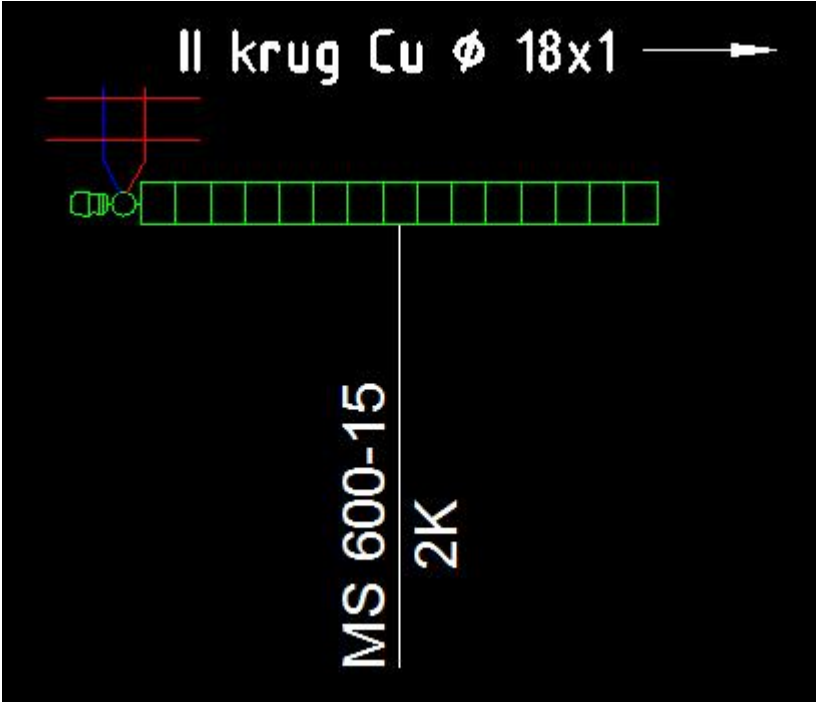
Korad radiator height

- 300
- 400
- 500
- 600
- 900

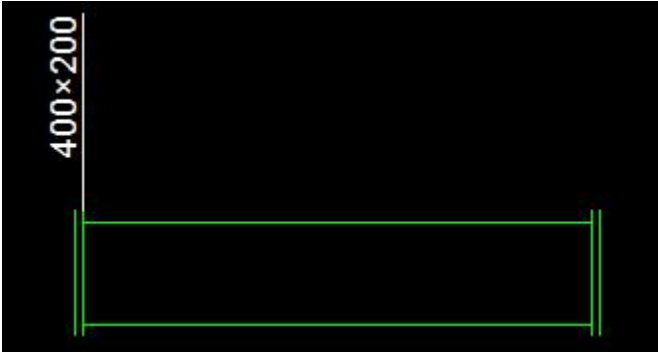
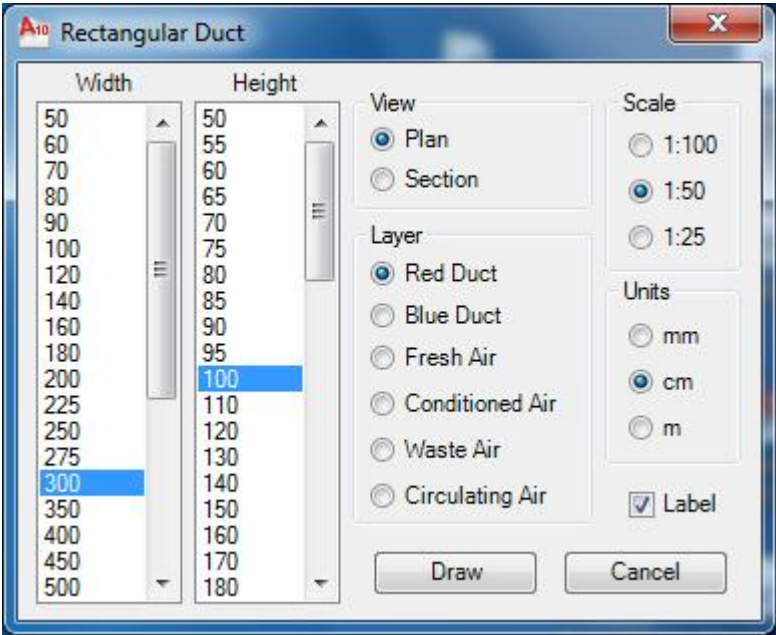
Korad radiator length

1600

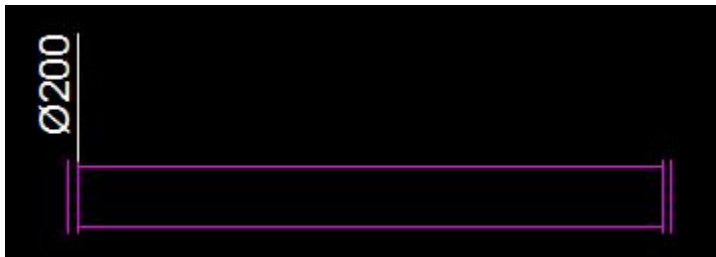
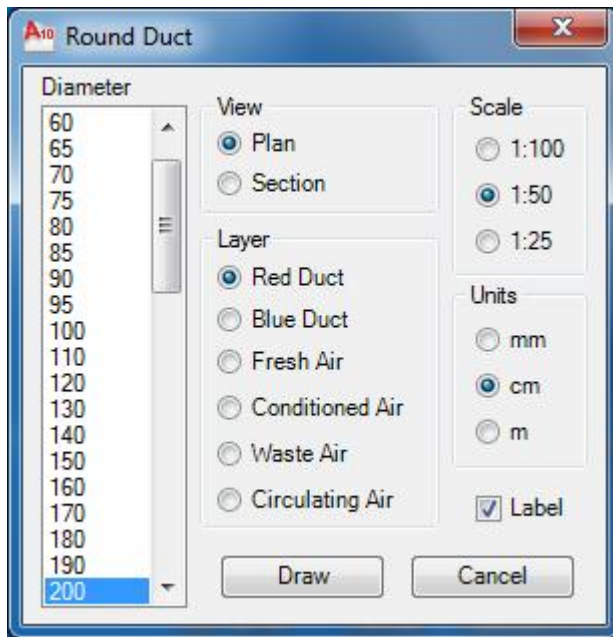
Insert Cancel



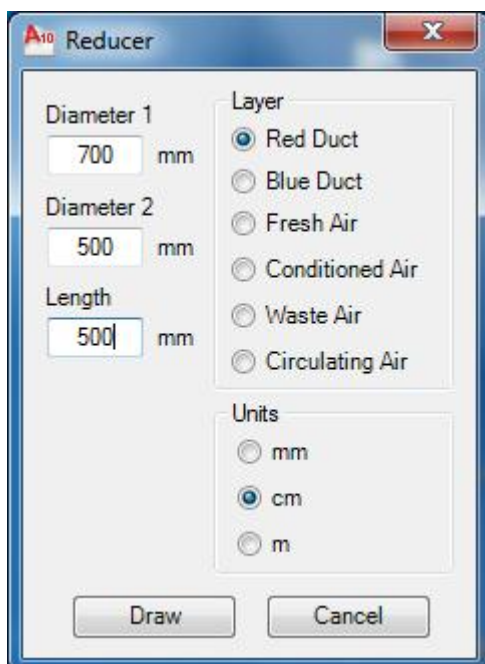
This draws rectangular ventilation ducts.

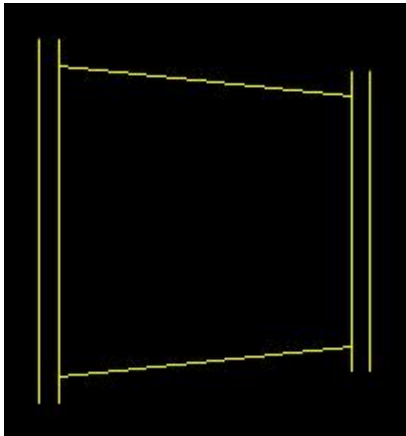


This tool draws round ventilation ducts.

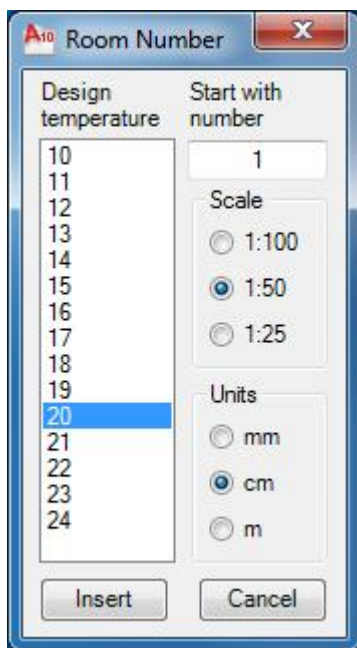


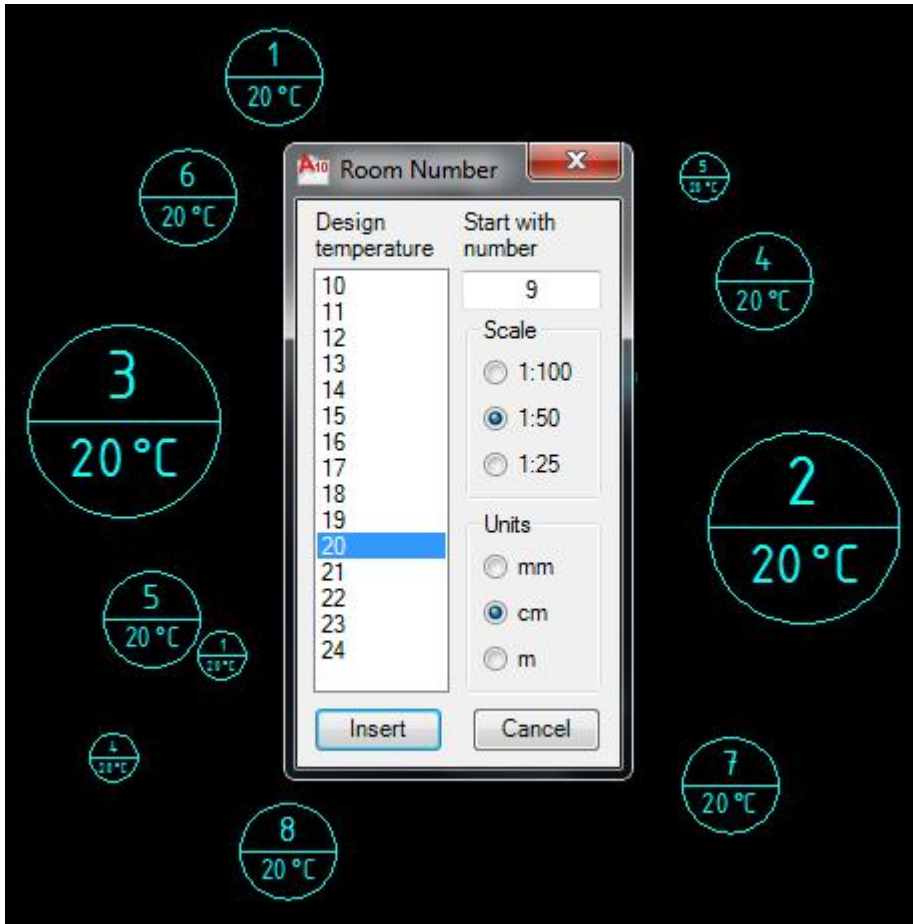
This tool draws reducers for ventilation ducts.



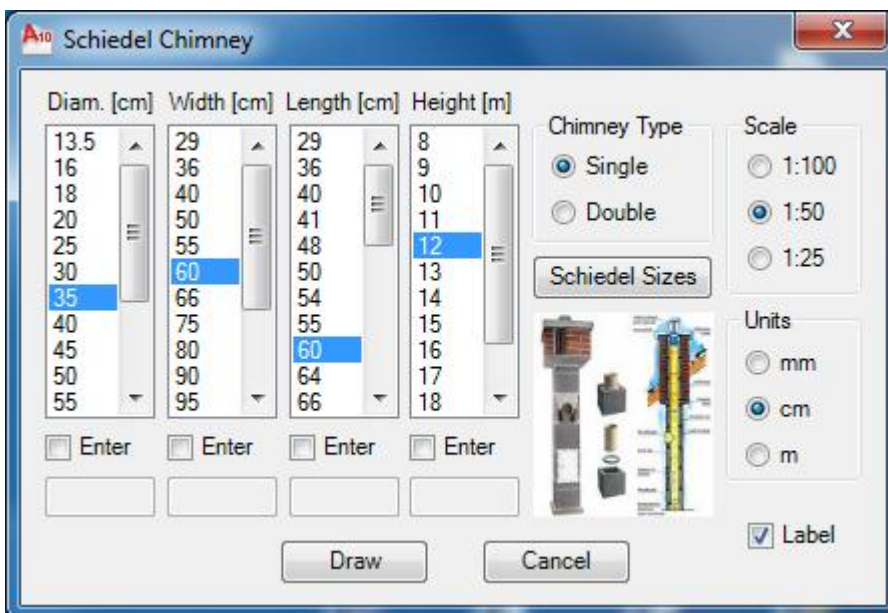


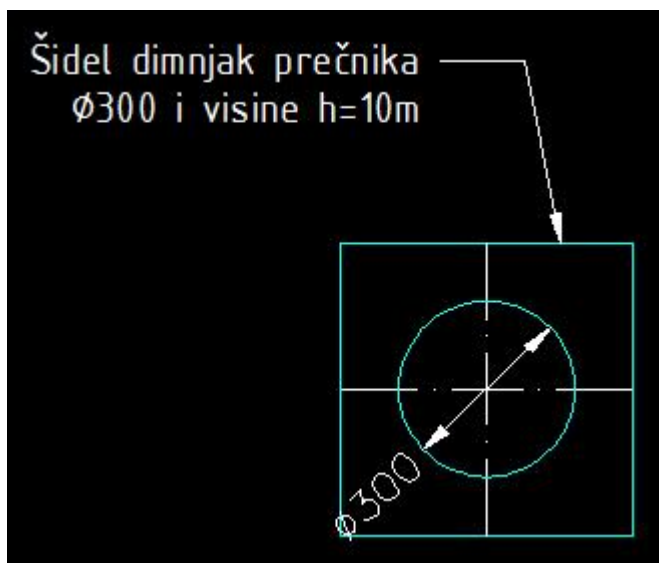
This tool inserts room number blocks. This block also contains design temperature for the room.



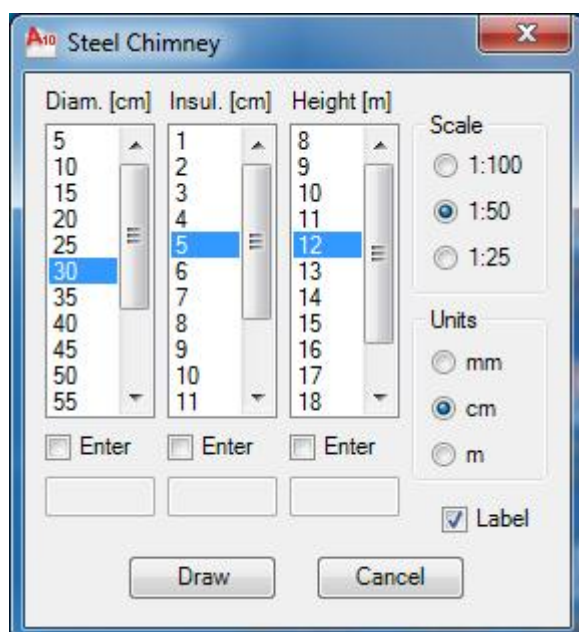


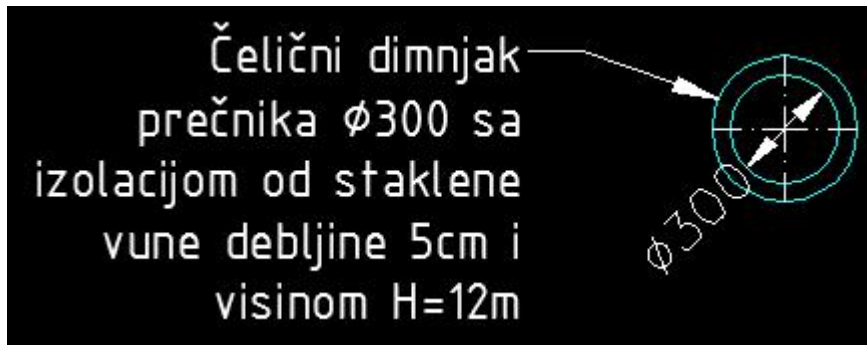
This tool draws Schiedel chimneys.





This tool draws steel chimneys.



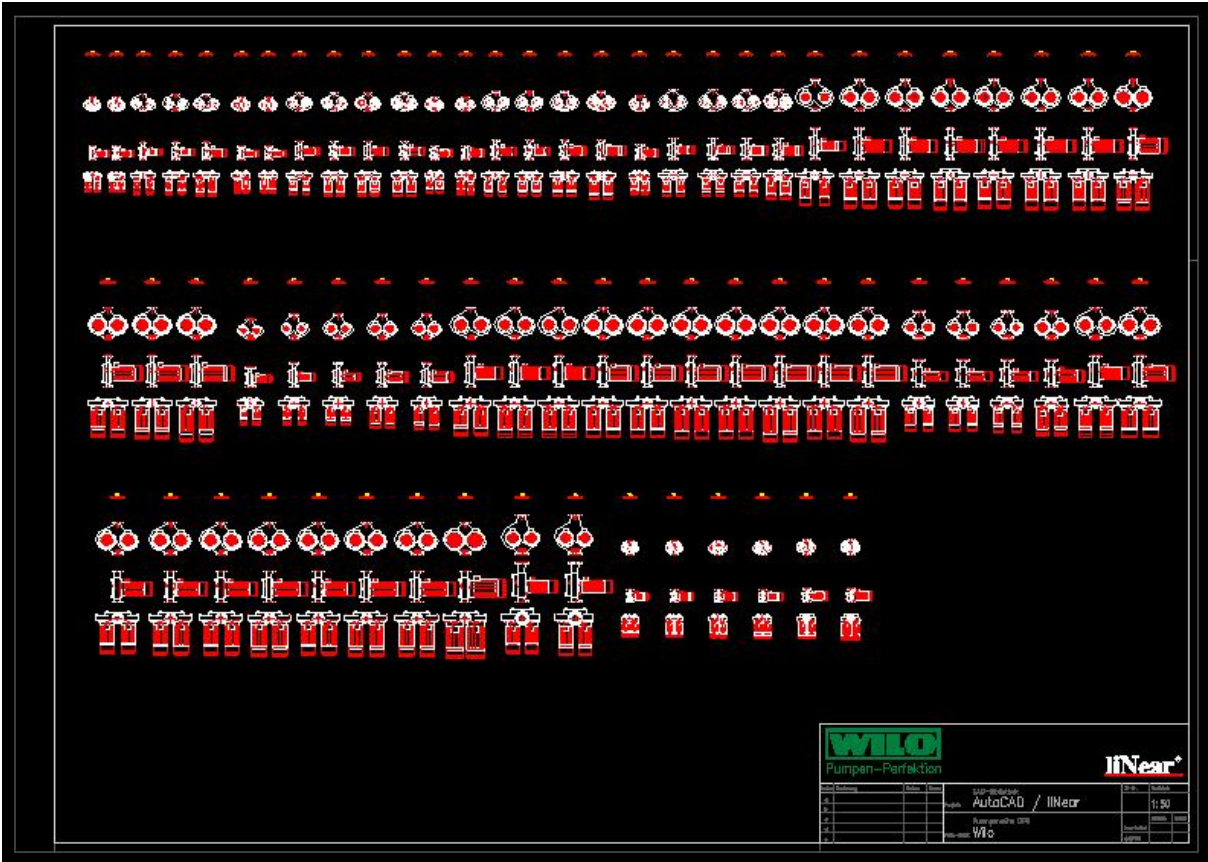
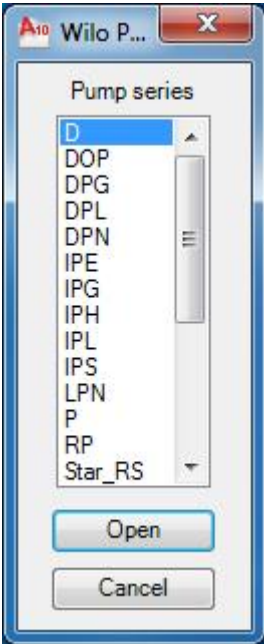


This tool is used to automatically change data on all titleblocks of all drawings, and also renumbers automatically all the drawings if we insert a drawing in the middle of the drawing set. Really saves a lot of time and energy.

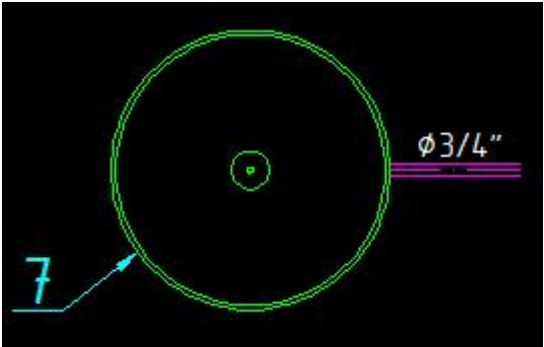
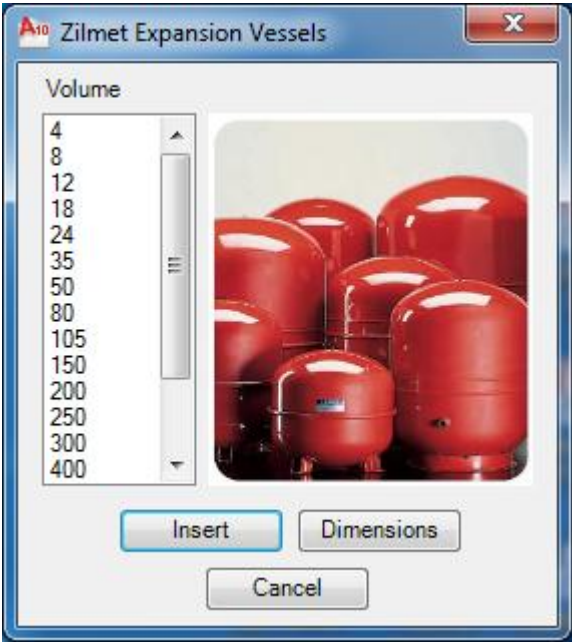


Field	Value	Value	Action
Investor	Investitor	2.8	Extract data
	Lokacija	2.8	
Building	Objekat	2.8	Update and renumber
	Lokacija	2.8	
Project No.	24/2008		Cancel
Date	august 2008.		

This tool is used to open drawings that contain Wilo pump blocks.



This tool draws expansion vessels.



This is an Excel VBA application used for Heat Load calculation.

OŠ Ponjevići - Cazin - TP.xlsm - Microsoft Excel

File Home Insert Page Layout Formulas Data Review View Developer Add-Ins Load Test Acrobat Team TP

Nova prostorija Mnogo prostorija Ukloni prostoriju Snimi Odstampaj Zatvori

Komande

F3 TD-15/2011 / Područna škola "Ponjevići" - Ponjevići, Cazin

1	Obrazac G1					EN 12831						
2												
3	Broj projekta / Naziv projekta					TD-15/2011 / Područna škola "Ponjevići" - Ponjevići, Cazin						
4												
5	PODACI O OBJEKTU					Datum	15.12.2011.		Stranica	G 1		
6												
7	PONOVRNO ZAGRIJAVANJE											
8	Tip građevine					Polozicija građevine						
9	<input type="checkbox"/> jednorodna kuća					<input type="checkbox"/> dobro zaklonjena						
10	<input checked="" type="checkbox"/> višerodna kuća, nestambena građ.					<input type="checkbox"/> srednje zaklonjena						
11						<input checked="" type="checkbox"/> izložena						
12												
13	Dimenzije zgrade / sposobnost akumulacije					Zračna zaptivenost ljuske zgrade						
14	<input type="checkbox"/> lagana C_{wirk} 35,0 Wh/m ³ K					<input type="checkbox"/> vrlo zaptivena						
15	<input checked="" type="checkbox"/> srednja opcionalan navod iz DIN V 4108-6					<input checked="" type="checkbox"/> zaptivena						
16	<input type="checkbox"/> teška					<input type="checkbox"/> malo zaptivena						
17												
18												
19	TEMPERATURE											
20	Spoljna normna temperatura Θ_e -21,0 °C					Unutrašnja temperatura određena prema:						
21	Srednja godišnja spoljna temp. $\Theta_{m,e}$ 10,6 °C					<input checked="" type="checkbox"/> Normi <input type="checkbox"/> Sporazumu (obrazac V)						
22												
23	DIMENZIJE OBJEKTA											
24	Širina b_{Geb}					Broj spratova n			2		-	
25	Dužina l_{Geb}					Visina zgrade h_{Geb}			7,50		m	
26	Površina tla A_{Geb}			324,68							m ²	
27												
28	TLO											
29	Dubina podne ploče* z			0,00		Dubina podzemne vode			5,00		m	
30	Obim u dotiru sa tlom* P			77,93		Faktor period. variranja f_{g1}			1,45		-	
31	Parametar* B'			8,33		Faktor utjecaja podz.vode G_W			1,00		-	
32	* Vrijednosti mogu varirati po prostorijama											
33												
34	PROVJETRANJE											
35	Vrijednost propusnosti zraka zavisno od tipa građevine i zaptivenosti ljuske građevine					n_{50}			4,00		h ⁻¹	
36	Istovremeno djelotvoran udio toplote provjetranja					ζ_v			0,50		-	
37	Stepen djelotvornosti sistema za povrat gubitka toplote (navod proizvođača opreme)					η_v			-		-	
38												
39	PONOVRNO ZAGRIJAVANJE											
40	Proračun					Faza spuštanja temperature						
41	<input type="checkbox"/> po prostorijama					Trajanje spuštanja t_{Abs} 8,0 h						
42	<input checked="" type="checkbox"/> centralan					Izmjene zraka n_{Abs} 0,5 h ⁻¹						
43	grijani volumen $V_{N,Geb}$ 1.124,9 m ³					Pad temperature						
44	koef. gubitka toplote $\Sigma H_{T,e}$ 554,0 W/K					<input type="checkbox"/> procjenjen $\Delta\Theta_{RH}$ 5,8 K						
45												
46						Faza zagrijavanja						
47						Vrijeme ponovnog zagrijavanja t_{RH} 2,0 h						
48						Izmjene zraka n_{RH} 0,5 h ⁻¹						
49						Faktor ponovnog zagrijavanja f_{RH} 107,0 W/m ²						

Podaci_G1 Sporazumi 1 2 3 4 5 6 7 8 9 10 11

Ready 100%

OŠ Ponjevići - Cazin - TP.xlsm - Microsoft Excel

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Nova prostorija Mnogo prostorija Ukloni prostoriju Snimi Odstampaj Zatvori

Komande

D7

Broj projekta / Naziv projekta		TD-15/2011 / Područna škola "Ponjevići" - Ponjevići, Cazin					
TERMIČKO OPTEREĆENJE PROSTORIJE		Datum		15.12.2011.		Stranica R 1	
7 Stambena jedin.		Etaža	Suteran		Broj prost.	1	
					Naziv prost.	Prostor za osoblje	
8 Unutrašnja temper.	Θ_{int}	20 °C		Provjetravanje			
9 Dimenzije prostorije					Min. broj izmjena zraka	n_{min}	0,50 h ⁻¹
Širina prostorije	b_R	2,27 m	$b_{Rbrutto}$	2,48 m	Broj izmjena zraka	n_{50}	4,00 h ⁻¹
Dužina prostorije	l_R	4,45 m	$l_{Rbrutto}$	4,80 m	Koeficijent zaštitne klase	e	0,05 -
Površina prostorije	A_R	10,10 m ²	$A_{Rbrutto}$	11,90 m ²	Visina iznad tla	h	0,00 m
Visina sprata	h_G	3,30 m			Korekturni faktor visine	ε	1,00 -
Debljina stropa	d	0,31 m			Dovodni protok zraka	V_{su}	m ³ /h
Visina prostorije	h_R	2,99 m			- temperatura	Θ_{su}	°C
Volumen prostorije	V_R	30,20 m ³	$V_{Rbrutto}$	39,28 m ³	- reduk. faktor temp.	$f_{v,su}$	0,5 -
17 Tlo					Odvodni protok zraka	V_{ex}	m ³ /h
Površina na tlu	A_g	11,90 m ²			- temperatura	$\Theta_{mech,inf}$	°C
Dubina ispod tla	z	0,00 m			- reduk. faktor temp.	$f_{v,mech,inf}$	0,5 -
Obim u dodiru sa tlom	P	2,27 m			Dodatno grijanje		
B'-vrijednost <input checked="" type="checkbox"/> po prostor.	B'	10,48 m			Faktor ponovnog zagr.	f_{RH}	107,0 W/m ²

Orientacija	Građevinski dio	Količina	Širina	Dužina / visina	Površina bruto	Odbitak	Površina neto	graniči sa	Susjedna temperatura	Korekturni faktori	U-vrijednost	Korekciona vrijednost za toplotne mostove	Korigovana U-vrijednost	Koeficijent gubitka toplote	Transmisioni gubitak toplote
H	PO	1	2,48	4,80	11,9	0,0	11,9	g	0,23	0,23	0,60	0,10	0,23	0,91	37
Jl	UZ	1	2,75	3,30	9,1	0,0	9,1	b	15,0	0,12	2,10	0,10	2,10	2,32	95
Sl	SZ	1	2,48	3,30	8,2	1,4	6,8	e			0,50	0,10	0,60	4,07	167
-	SP	1	1,20	1,20	1,4	0,0	1,4	e			1,90	0,10	2,00	2,88	118
31					0,0		0,0					0,10	0,10	0,00	0
32					0,0		0,0					0,10	0,10	0,00	0
33					0,0		0,0					0,10	0,10	0,00	0
34					0,0		0,0					0,10	0,10	0,00	0
35					0,0		0,0					0,10	0,10	0,00	0
36					0,0		0,0					0,10	0,10	0,00	0
37					0,0		0,0					0,10	0,10	0,00	0
38					0,0		0,0					0,10	0,10	0,00	0
39					0,0		0,0					0,10	0,10	0,00	0
40					0,0		0,0					0,10	0,10	0,00	0
41					0,0		0,0					0,10	0,10	0,00	0
42					0,0		0,0					0,10	0,10	0,00	0
43					0,0		0,0					0,10	0,10	0,00	0
44					0,0		0,0					0,10	0,10	0,00	0
45					0,0		0,0					0,10	0,10	0,00	0

Podaci_G1 Sporazumi 1 2 3 4 5 6 7 8 9 10 11 12

Ready 90%

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Nova prostorija Mnogo prostorija Ukloni prostoriju Snimi Odstampaj Zatvori

Komande

A10 Suteran

1 **Obrazac G2** EN 12831

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3 Broj projekta / Naziv projekta TD-15/2011 / Područna škola "Ponjevići" - Ponjevići, Cazin

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5 **LISTA PROSTORIJA** Datum 15.12.2011. Stranica G 2

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7 Sortiranje prema Etaži Stambenoj jedinici

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9	Etaža / St. jed.	Br. pr.	Naziv prostorije	Φ_{int}	A_R	V_R	$\Phi_{T,e}$	Φ_T	$\Phi_{V,min}$	$\Phi_{V,inf}$	$\Phi_{V,su}$	$\Phi_m V,inf$	$\Phi_{HL,netto}$	Φ_{RH}	Φ_{HL}	
10	Suteran	1	Prostor za osoblje	20	10,1	30,2	322	418	211	168			628	1.081	1.709	
11	Suteran	2	Ostava učila	15	7,6	22,8	18	18	140				158	817	974	
12	Suteran	3	Hol sa garderobom	18	37,0	110,7	1.495	1.495	2.203	1.175			3.698	3.963	7.661	
13	Suteran	4	Biblioteka s čitaon	20	46,3	138,4	3.040	3.147	3.860	2.316			7.007	4.954	11.961	
14	Prizemlje	5	Zbornica	20	11,3	28,8	957	999	802	160			1.801	1.212	3.012	
15	Prizemlje	6	Vjetrobran	15	8,2	23,8	1.273	1.273	582	116			1.856	877	2.733	
16	Prizemlje	7	Hol	18	85,5	261,6	4.184	4.184	3.468	6.937			11.121	9.146	20.267	
17	Prizemlje	8	Sanitarije za učitel	18	3,5	8,9	237	237	177	47			414	373	788	
18	Prizemlje	9	Sanitarije za učitel	18	3,5	8,9	237	237	177	47			414	373	788	
19	Prizemlje	10	Sanitarije za učen	18	3,8	9,6	250	250	191	51			440	403	844	
20	Prizemlje	11	Sanitarije za učen	18	3,8	9,6	446	446	191	51			636	403	1.040	
21	Prizemlje	12	Učionica	20	56,0	214,5	4.570	4.570	5.980	1.196			10.550	5.992	16.542	
22	Prizemlje	13	Stepenište	18	11,3	42,7	555	555	566	226			1.121	1.213	2.334	
23	Prizemlje	14	Učionica	20	56,0	214,5	4.568	4.568	5.980	1.196			10.547	5.992	16.539	
24	Građevina ukupno					343,9	1.124,9	22.153	22.397	24.525	13.687			50.390	36.801	87.191

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Nova prostorija Mnogo prostorija Ukloni prostoriju Snimi Odstampaj Zatvori		Komande													
D22															
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1	Obrazac G3										EN 12831				
2															
3	Broj projekta / Naziv projekta			D-15/2011 / Područna škola "Ponjevići" - Ponjevići, Cazin											
4															
5	REKAPITULACIJA GRADEVINE			Datum	15.12.2011.	Stranica G	3								
6															
7	KOEFICIJENTI GUBITKA TOPLOTE										W/K				
8	Koeficijent transmisijskog gubitka toplote			$\Sigma H_{T,e}$				554,0							
9	Koeficijent gubitka toplote provjetranjem			ΣH_V				698,3							
10	Koeficijent gubitka toplote građevine			ΣH_{Geb}				1.252,2							
11															
12	GUBICI TOPLOTE										W				
13	Transmisioni gubici toplote (prema vani)			$\Phi_{T,Geb}$				22.153							
14	minimalna promjena zraka			$\Phi_{V,min,Geb}$				24.525							
15	prirodna infiltracija			$\Phi_{V,inf,Geb} = \zeta \times \Sigma \Phi_{V,inf}$				6.843							
16	mehanički dovodni protok zraka			$\Phi_{V,su,Geb} = (1-\eta_V) \times \Sigma \Phi_{V,su}$				0							
17	višak odvodnog protoka zraka			$\Phi_{V,mach,inf,Geb}$				0							
18	Gubici toplote provjetranjem			$\Phi_{V,Geb}$				24.525							
19															
20	TOPLOTNO OPTEREĆENJE GRADEVINE										W				
21	Toplotno opterećenje neto			$\Phi_{N,Geb}$				46.678							
22	Dodatno toplotno opterećenje			$\Phi_{RH,Geb}$				36.801							
23	Toplotno opterećenje prema normi			$\Phi_{HL,Geb}$				83.479							
24															
25	SPECIFIČNE VRIJEDNOSTI														
26	Toplotno opterećenje / grijana površina objekta			$\Phi_{HL,Geb} / A_{N,Geb}$	343,9	m ²	242,7 W/m ²								
27	Toplotno opterećenje / grijani volumen objekta			$\Phi_{HL,Geb} / V_{N,Geb}$	1.124,9	m ³	74,2 W/m ³								
28	Toplotno-prenoseća obuhvatna površina			A	927,0	m ²									
29	Specifični transmisioni gubitak toplote			H_T'				0,60 W/m²K							
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I can also do basic 3DS Max 3D modelling and effects. These are two logos that I made for my web sites: www.coderhythmics.com and www.cadisland.com.

