

**Es 1 Rankine**

Tmin °C	45
Pmax bar	150
Tmax °C	500
etaPpomp:	92%
etaTurb	100%

	T °C	P kPa	x	h	s	ideale	reale
1=LiqSat	45	9.593	0	188.5	0.6387	Qin	3061.03
2	45	15000	nd (<0)	<b>203.5</b>	"	L_nu_Tid	1255.10
2re				204.8		<b>eta1</b>	<b>41.0%</b>
5	500	15000	nd (>1)	3264.5	6.3143	etaC	58.9%
6	45	9.593	<b>0.754</b>	<b>1994.4</b>	6.3143	<b>eta2</b>	<b>69.7%</b>
6re			<b>0.754</b>	1994.4	6.3		<b>69.8%</b>
VapSat	45	9.593	1	2583.2	8.1648		

**Esercizio 2**

	flusso	punti 4	in	out-isoS	politropica
R, Cp	286.69	1003.414	T °C	20	236.2
deltaT/delt	70%		T K	293	509.2
l, L' in	201582	1500	P_ass Pa	101325	701325
delta h, H	151887	<b>1130</b>	ro kg/m3	1.206	<b>5.505</b>
m'	<b>0.0074</b>		v	0.829016	0.181651
q, Q' in	-49695	<b>-370</b>	n		1.274
delta_s, S	-136.7	<b>-1.02</b>			
amb	169.6	1.3			
tot	32.9	0.2			

**es 3 condizionatore**

	K	°C
Q'inf W	6000	Tsup 331
<b>COPid</b>	<b>5.49</b>	deltaTcond 24
<b>COPre</b>	<b>3.29</b>	T esterno 34
<b>Lin</b>	<b>1821</b>	deltaT 51
<b>Q'sup W</b>	<b>7821</b>	T locali 25
euro/kWh	0.15	deltaTevap 18
		Tinf 280
		7

**Es 4 aria umida**

	1	2	liq_ev	3
T	6	50.0	10	<b>38.9</b>
UR	75%			20%
Psat	943.2			7005.3
Pvap	707.4	= 707.4		1415
x	0.0044	= 0.0044	0.0044	0.0088
h	17.0	44.6	<b>61.6</b>	0.2

  

Tsat°C	Psat_Pa
5	872.1
6.0	943.2
10	1227.6
0.01	611.3
5	872.1

**Es 5 cemento**

	5pt	
q	kCal/kg	200
tempo	giorni	20
q'	W/kg	0.968519
Q'	W/m2	217.9
h		15.0
deltaT_aria		<b>14.5</b>

ro_cemento		1800	lambda_legno		0.12
lambda_cemento		1.2	spessore legno		0.03
Cp cemento		880	delta_T_legno		<b>54.5</b>
q'	W/m3	1743.333	delta_T cemento		<b>11.35</b>
semi-spessore		0.125	q_aTmax	kJ	71
A	m2	1	q_20gg	kJ	800

Es 6 Parete semi-infinita					
spessore	0.5	Bi	2.173913	sup	5cm
ro	2400	tempo s	3600	Prof L	0 0.05
Cp	800	Fo	0.0173	csi	0 0.380693
lambda	2.3			teta	0.6 0.12
alfa	1.2E-06	To	20	T(L)	158 47.6
h	10	Tinf	250		

es 7 Aletta					
Tfilm	75	w m/s	10	lambda_al	236
ro_aria	1	L_Re	0.300	Tambiente	25
Cp	1007	Spessore	0.005	perim	0.61
lambda	0.0268	Re	<b>144231</b>	Area	0.0015
mu	2.08E-05	Nu	225.1	m	5.89
Pr	0.711	h	<b>20.1</b>	1/m	0.170
				L_inf	<b>0.849</b>
				Tbase	120
				Tsicura	35
				<b>Lsicura</b>	<b>0.382</b>
				efficacia	69.1
				Q'_base>fi	<b>198.0</b>

Es 8 irragg					
hcam	0.8			T K	A m2
Lcam	1.2			eps	
Prof_cam	0.6			Fittizia	0.96
Tcam °C	150			Cam	423 3.36
L1_stanza	5			Sta	293 99.04
L2_stanza	5				
H_stanza	2.5	F_cs	<b>0.286</b>	F_sc	0.009693
Area stanz	100	Q'	<b>1275</b>		
Tstanza_°C	20				

es 9 condotto			
Diam	0.24	T	12
P m	0.7536	ro	1.240
Area	0.045216	m'	0.2243
w	4	Cp	1005
h	8	NTUreq	0.288
		L	<b>10.76</b>