

1 3p

2	3p
L1	0.2 T1 293
L2	0.1 T3 373
L3	0.3 eps1 0.8
L23	0.4 eps3 0.9
D12	0.223607 Q' 13 -24.45
D1-23	0.447214
F1-2	0.190983
F1-23	0.381966
F1-3	0.190983

4 6p

Lpar	0.5
Lperp	1
aree	1
spessore	0.02
Tlastra	200
Tamb	20
Tfilm	383
ro	0.92
Cp	1010
lambda	0.031
mi	2.19E-05
Pr	0.704
w m/s	10
Re	210046
Nu	270.7
h	16.8
Biot	0.00146
tau	2895.2 48.25326
tempo s	5187
tempo min	86.5

5	4p
IS1	IS2
h_int	2000 2000
r_int	0.03 0.03
r_est	0.035 0.035
r_max	0.055 0.075
RconvInt	0.002654 0.0026539
Rtubo	0.000409 0.0004091
Ris	19.45 16.40
Rconv	0.362 0.265
Rtot	19.8 16.7
Q'	3.53 4.20
deltaTconv	0.009 0.011
deltaTtubo	0.001 0.002
deltaTis	68.71 68.88
deltaTconv	1.28 1.11
deltaTtot	70.00 70.00

3	6p
A	m2 0.12
w	m/s 4
T	1 27 15
Psat	3599.8 1705
Pvap	2339.87 1705
UR	65% 100%
Pair	99619
ro as	1.207
x	0.0147 0.0106 0.0041
h	64.6 42.0 0.254659
m'	kg/s 0.579134
Q'	kW -12.96
condensa	kg/s 0.00235
	kg/h 8.46

6	3p
m_birra	0.5 0.5
Cp_birra	4184 4184
T1 birra	5 278
H1 birra	10460 581576
m vetro	0.3 0.3
Cp vetro	840 840
T1 vetro	25 298
H1 vetro	6300 75096
Htot	16760 656672
Tfin	7.150 280.2
deltaSbirra	16.118
deltaSvetro	-15.565
deltaStot	0.553

7	5p
T°C	T K P
1	30 303 1.01
2id	341.5 614.5 12
diffT12id/re	311.5 366.5
2re	396.5 669.5 12
3	1200 1473 12
4id	453.3 726.3 1.01
diffT34id/re	746.7 634.7
4re	565.3 838.3 1.01
eta comp	0.85 0.85 1
ln out	269.5
P	150000
m'	556.5

8	3p
Qin_inf	3000
Tloc	25 298
deltaTev	15
Test	33 306
deltaTcond	24
Tmax	57 330
Tmin	10 283
deltaT	47 47
COPid	6.02
COP re	3.61
Qout_sup	3830
Lin	830

Es	R2	tutto
1	3	
2	3	
3	6	6
4	6	6
5	4	4
6		3
7		5
8		3
tot	22	27
	11	13.5
corretto	18.0	18.0