

ISI KAYBI ÇİZELGESİ

Proje no :
Proje adı : 4-5 HEKİMLİ ASM+112
Konu : ISI KAYBI HESAPLARI

Sayfa no : 1
Revizyon : 0
Tarih : Salı, 18 Kasım, 2014
Hesaplayan : --
Kontrol : --

DİZAYN BİLGİLERİ

Şehir adı
Bolu

Dış hava sıcaklığı (°C)
-15 °C

Rüzgar durumu
Normal

İşletme durumu
2. işletme

HESAP DEĞERLERİ

İşr.	Yö n	Gen. W(m)	Uzn. L(m)	Yük. H(m)	Alan A(m2)	Adet	Çıkan A(m2)	Net Alan	K (Kcal/hm2° dt(°C)	tr-to dt(°C)	Kxdt	Q Kısmi	ZD (% W	Z (% W	ZH (% W	Z (% W	Toplam Q(Kcal/h)
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Z01

ÇALIŞMA ODASI

20 °C

Ça1	0.29	0.00	0.00	0.00	0.00	1		12.00	0.260	35	9.27	111					
Tdö1	0.24	0.00	0.00	0.00	0.00	1		12.00	0.300	15	4.45	53					
Dd1	K	0.34	4.10	3.40	13.94	1	2.08	11.86	0.310	35	10.85	129					
Dd2	K	0.24	4.10	0.60	2.46	1		2.46	0.400	35	13.96	34					
Dp1	K		0.80	1.30	1.04	2		2.08	1.980	35	69.23	144					
İd1	K	0.20	3.00	4.00	12.00	1		12.00	1.030	14	14.42	173					
İd1	K	0.20	1.50	4.00	6.00	1		6.00	1.030	14	14.42	87					

731 15 0 5 1.20 877

$$Q_{fuga} = (axl) \times R \times H \times (ti - td) \times Ze$$
$$13.2 \times 0.9 \times 0.58 \times 35 \times 1$$

241
1,118

Z02

KORİDOR

20 °C

Ça1	0.29	0.00	0.00	0.00	0.00	1		30.00	0.260	35	9.27	278					
Tdö1	0.24	0.00	0.00	0.00	0.00	1		30.00	0.300	15	4.45	134					
Dp3	K		2.50	3.00	7.50	1	4.80	2.70	1.980	35	69.23	187					
Dk1	K		1.60	3.00	4.80	1		4.80	3.440	35	120.36	578					
Dp3	K		2.50	3.00	7.50	1	4.80	2.70	1.980	35	69.23	187					
Dk1	K		1.60	3.00	4.80	1		4.80	3.440	35	120.36	578					

1,942 15 0 5 1.20 2,330

$$Q_{fuga} = (axl) \times R \times H \times (ti - td) \times Ze$$
$$60.6 \times 0.9 \times 0.58 \times 35 \times 1$$

1,107
3,437

Z03

KOORDİNASYON ODA

20 °C

Ça1	0.29	0.00	0.00	0.00	0.00	1		13.00	0.260	35	9.27	121					
Tdö1	0.24	0.00	0.00	0.00	0.00	1		13.00	0.300	15	4.45	58					
Dd1	K	0.34	4.80	3.40	16.32	1	2.08	14.24	0.310	35	10.85	155					
Dd2	K	0.24	4.80	0.60	2.88	1		2.88	0.400	35	13.96	40					
Dp1	K		0.80	1.30	1.04	2		2.08	1.980	35	69.23	144					
Dd1	K	0.34	2.80	3.40	9.52	1	2.08	7.44	0.310	35	10.85	81					
Dd2	K	0.24	2.80	0.60	1.68	1		1.68	0.400	35	13.96	23					
Dp1	K		0.80	1.30	1.04	2		2.08	1.980	35	69.23	144					
İd1	K	0.20	1.50	4.00	6.00	1		6.00	1.030	14	14.42	87					

853 15 0 5 1.20 1,024

$$Q_{fuga} = (axl) \times R \times H \times (ti - td) \times Ze$$
$$26.4 \times 0.9 \times 0.58 \times 35 \times 1$$

482
1,506

Z04

PERSONEL ODASI

20 °C

Ça1	0.29	0.00	0.00	0.00	0.00	1		29.00	0.260	35	9.27	269					
Tdö1	0.24	0.00	0.00	0.00	0.00	1		29.00	0.300	15	4.45	129					

ISI KAYBI ÇİZELGESİ

Proje no :
Proje adı : 4-5 HEKİMLİ ASM+112
Konu : ISI KAYBI HESAPLARI

Sayfa no : 2
Revizyon : 0
Tarih : Salı, 18 Kasım, 2014
Hesaplayan : --
Kontrol : --

DİZAYN BİLGİLERİ

Şehir adı
Bolu

Dış hava sıcaklığı (°C)
-15 °C

Rüzgar durumu
Normal

İşletme durumu
2. işletme

HESAP DEĞERLERİ

İşr.	Yö n	Gen. W(m)	Uzn. L(m)	Yük. H(m)	Alan A(m2)	Adet	Çıkan A(m2)	Net Alan	K (Kcal/hm2°)	tr-to dt(°C)	Kxdt	Q Kısmi	ZD (% W	Z (% W	ZH (% W	Z (% W	Toplam Q(Kcal/h)
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Dd1	K	0.34	6.50	3.40	22.10	1	9.58	12.52	0.310	35	10.85	136					
Dd2	K	0.24	6.50	0.60	3.90	1		3.90	0.400	35	13.96	54					
Dp1	K		0.80	1.30	1.04	2		2.08	1.980	35	69.23	144					
Dp3	K		2.50	3.00	7.50	1		7.50	1.980	35	69.23	519					

1,251 15 0 5 1.20 1,501

Qfuga = (axl) x R x H x (ti-td) x Ze
29.7 x 0.9 x 0.58 x 35 x 1

543
2,044

Z05

BAY DUŞ-WC

24 °C

Ça1		0.29	0.00	0.00	0.00	1		10.00	0.260	39	10.33	103					
Tdö1		0.24	0.00	0.00	0.00	1		10.00	0.300	19	5.64	56					
İd1	K	0.20	3.50	4.00	14.00	1		14.00	1.030	6	6.18	87					
İd1	K	0.20	3.00	4.00	12.00	1	1.98	10.02	1.030	4	4.12	41					
İk1	K		0.90	2.20	1.98	1		1.98	1.720	6	10.32	20					
İd1	K	0.20	3.00	4.00	12.00	1		12.00	1.030	4	4.12	49					

356 20 0 5 1.25 445

Qfuga = (axl) x R x H x (ti-td) x Ze
13.6 x 0.9 x 0.58 x 39 x 1

277
722

Z06

BAYAN DUŞ-WC

24 °C

Ça1		0.29	0.00	0.00	0.00	1		10.00	0.260	39	10.33	103					
Tdö1		0.24	0.00	0.00	0.00	1		10.00	0.300	19	5.64	56					
İd1	K	0.20	3.50	4.00	14.00	1		14.00	1.030	6	6.18	87					
İd1	K	0.20	3.00	4.00	12.00	1	1.98	10.02	1.030	4	4.12	41					
İk1	K		0.90	2.20	1.98	1		1.98	1.720	6	10.32	20					
İd1	K	0.20	3.00	4.00	12.00	1		12.00	1.030	4	4.12	49					

356 20 0 5 1.25 445

Qfuga = (axl) x R x H x (ti-td) x Ze
13.6 x 0.9 x 0.58 x 39 x 1

277
722

Z07

İLAÇ DEPOSU

18 °C

Ça1		0.40	0.00	0.00	0.00	1		10.00	0.260	33	8.74	87					
Tdö1		0.36	0.00	0.00	0.00	1		10.00	0.300	13	3.86	39					
Dd1	K	0.34	4.00	3.40	13.60	1		13.60	0.310	33	10.23	139					
Dd2	K	0.26	4.00	0.60	2.40	1		2.40	0.400	33	13.17	32					

297 20 0 5 1.25 371

371

ISI KAYBI ÇİZELGESİ

Proje no :
Proje adı : 4-5 HEKİMLİ ASM+112
Konu : ISI KAYBI HESAPLARI

Sayfa no : 3
Revizyon : 0
Tarih : Salı, 18 Kasım, 2014
Hesaplayan : --
Kontrol : --

DİZAYN BİLGİLERİ

Şehir adı
Bolu

Dış hava sıcaklığı (°C)
-15 °C

Rüzgar durumu
Normal

İşletme durumu
2. işletme

HESAP DEĞERLERİ

İşr.	Yö n	Gen. W(m)	Uzn. L(m)	Yük. H(m)	Alan A(m2)	Adet	Çıkan A(m2)	Net Alan	K (Kcal/hm2° dt(°C)	tr-to dt(°C)	Kxdt	Q Kısmi	ZD (% W	Z W	ZH (% W	Z W	Toplam Q(Kcal/h)
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Z08

DEPO

20 °C

Ça1	0.40	0.00	0.00	0.00	1			13.00	0.260	35	9.27	121					
Tdö1	0.36	0.00	0.00	0.00	1			13.00	0.300	15	4.45	58					
												179	20	0	0	1.20	215
																	215

Z09

LABORATUAR

20 °C

Ça1	0.40	0.00	0.00	0.00	1			15.00	0.260	35	9.27	139					
Tdö1	0.36	0.00	0.00	0.00	1			15.00	0.300	15	4.45	67					
Dd1	K	0.34	3.50	3.40	11.90	1	2.08	9.82	0.310	35	10.85	107					
Dd2	K	0.26	3.50	0.60	2.10	1		2.10	0.400	35	13.96	29					
Dp1	K		0.80	1.30	1.04	2		2.08	1.980	35	69.23	144					
												486	15	0	5	1.20	583
																	241
																	824

Qfuga = (axl) x R x H x (ti-td) x Ze
13.2 x 0.9 x 0.58 x 35 x 1

Z10

AŞI BEBEK İZLEME

20 °C

Ça1	0.40	0.00	0.00	0.00	1			15.00	0.260	35	9.27	139					
Tdö1	0.36	0.00	0.00	0.00	1			15.00	0.300	15	4.45	67					
Dd1	K	0.34	3.50	3.40	11.90	1	2.08	9.82	0.310	35	10.85	107					
Dd2	K	0.26	3.50	0.60	2.10	1		2.10	0.400	35	13.96	29					
Dp1	K		0.80	1.30	1.04	2		2.08	1.980	35	69.23	144					
												486	15	0	5	1.20	583
																	241
																	824

Qfuga = (axl) x R x H x (ti-td) x Ze
13.2 x 0.9 x 0.58 x 35 x 1

Z11

MUAYENE ODASI

20 °C

Ça1	0.40	0.00	0.00	0.00	1			15.00	0.260	35	9.27	139					
Tdö1	0.36	0.00	0.00	0.00	1			15.00	0.300	15	4.45	67					
Dd1	K	0.34	3.50	3.40	11.90	1	2.08	9.82	0.310	35	10.85	107					
Dd2	K	0.26	3.50	0.60	2.10	1		2.10	0.400	35	13.96	29					
Dp1	K		0.80	1.30	1.04	2		2.08	1.980	35	69.23	144					
												486	15	0	5	1.20	583
																	241
																	824

Qfuga = (axl) x R x H x (ti-td) x Ze
13.2 x 0.9 x 0.58 x 35 x 1

ISI KAYBI ÇİZELGESİ

Proje no :
Proje adı : 4-5 HEKİMLİ ASM+112
Konu : ISI KAYBI HESAPLARI

Sayfa no : 4
Revizyon : 0
Tarih : Salı, 18 Kasım, 2014
Hesaplayan : --
Kontrol : --

DİZAYN BİLGİLERİ

Şehir adı
Bolu

Dış hava sıcaklığı (°C)
-15 °C

Rüzgar durumu
Normal

İşletme durumu
2. işletme

HESAP DEĞERLERİ

İşr.	Yö n	Gen. W(m)	Uzn. L(m)	Yük. H(m)	Alan A(m2)	Adet	Çıkan A(m2)	Net Alan	K (Kcal/hm2°)	tr-to dt(°C)	Kxdt	Q Kısmi	ZD (% W)	Z W	ZH (% W)	Z W	Toplam Q(Kcal/h)
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Z12

EĞİTİMCİ ODASI

20 °C

Ça1	0.40	0.00	0.00	0.00	1		15.00	0.260	35	9.27	139
Tdö1	0.36	0.00	0.00	0.00	1		15.00	0.300	15	4.45	67
Dd1 K	0.34	3.50	3.40	11.90	1	2.08	9.82	0.310	35	10.85	107
Dd2 K	0.26	3.50	0.60	2.10	1		2.10	0.400	35	13.96	29
Dp1 K		0.80	1.30	1.04	2		2.08	1.980	35	69.23	144

486 15 0 5 1.20 583

$$Q_{fuga} = (axl) \times R \times H \times (ti - td) \times Ze$$
$$13.2 \times 0.9 \times 0.58 \times 35 \times 1$$

241
824

Z13

EĞİTİM ODASI

20 °C

Ça1	0.40	0.00	0.00	0.00	1		15.00	0.260	35	9.27	139
Tdö1	0.36	0.00	0.00	0.00	1		15.00	0.300	15	4.45	67
Dd1 K	0.34	5.00	3.40	17.00	1	2.08	14.92	0.310	35	10.85	162
Dd2 K	0.26	5.00	0.60	3.00	1		3.00	0.400	35	13.96	42
Dp1 K		0.80	1.30	1.04	2		2.08	1.980	35	69.23	144
Dd1 K	0.34	3.50	3.40	11.90	1	2.08	9.82	0.310	35	10.85	107
Dd2 K	0.26	3.50	0.60	2.10	1		2.10	0.400	35	13.96	29
Dp1 K		0.80	1.30	1.04	2		2.08	1.980	35	69.23	144

834 15 0 5 1.20 1,001

$$Q_{fuga} = (axl) \times R \times H \times (ti - td) \times Ze$$
$$26.4 \times 0.9 \times 0.58 \times 35 \times 1$$

482
1,483

Z14

GİRİŞ HOLÜ

20 °C

Ça1	0.40	0.00	0.00	0.00	1		160.00	0.260	35	9.27	1,483
Tdö1	0.36	0.00	0.00	0.00	1		160.00	0.300	15	4.45	712
Dp3 K		2.50	3.00	7.50	2		15.00	1.980	35	69.23	1,038
Dp6 K		6.00	3.00	18.00	1	4.80	13.20	1.980	35	69.23	914
Dk1 K		1.60	3.00	4.80	1		4.80	3.440	35	120.36	578
Dd2 K	0.26	11.00	0.60	6.60	1		6.60	0.400	35	13.96	92

4,817 15 0 5 1.20 5,780

$$Q_{fuga} = (axl) \times R \times H \times (ti - td) \times Ze$$
$$73.8 \times 0.9 \times 0.58 \times 35 \times 1$$

1,348
7,128

Z15

EMZİRME ODASI

20 °C

Ça1	0.40	0.00	0.00	0.00	1		6.00	0.260	35	9.27	56
Tdö1	0.36	0.00	0.00	0.00	1		6.00	0.300	15	4.45	27

83 20 0 0 1.20 100

ISI KAYBI ÇİZELGESİ

Proje no :
Proje adı : 4-5 HEKİMLİ ASM+112
Konu : ISI KAYBI HESAPLARI

Sayfa no : 5
Revizyon : 0
Tarih : Salı, 18 Kasım, 2014
Hesaplayan : --
Kontrol : --

DİZAYN BİLGİLERİ

Şehir adı
Bolu

Dış hava sıcaklığı (°C)
-15 °C

Rüzgar durumu
Normal

İşletme durumu
2. işletme

HESAP DEĞERLERİ

İşr.	Yö n	Gen. W(m)	Uzn. L(m)	Yük. H(m)	Alan A(m2)	Adet	Çıkan A(m2)	Net Alan	K (Kcal/hm2°)	tr-to dt(°C)	Kxd	Q Kısmi	ZD (% W)	Z (% W)	ZH (% W)	Z (% W)	Toplam Q(Kcal/h)
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100

Z16

KAT OFİSİ

20 °C

Ça1	0.40	0.00	0.00	0.00	1	6.00	0.260	35	9.27	56
Tdö1	0.36	0.00	0.00	0.00	1	6.00	0.300	15	4.45	27

83 20 0 0 1.20 100

100

Z17

GEBE İZLEME

20 °C

Ça1	0.40	0.00	0.00	0.00	1	20.00	0.260	35	9.27	185	
Tdö1	0.36	0.00	0.00	0.00	1	20.00	0.300	15	4.45	89	
Dd1 K	0.34	3.50	3.40	11.90	1	2.08	9.82	0.310	35	10.85	107
Dd2 K	0.26	3.50	0.60	2.10	1	2.10	0.400	35	13.96	29	
Dp1 K	0.80	1.30	1.04	2	2.08	1.980	35	69.23	144		

554 15 0 5 1.20 665

Qfuga = (axl) x R x H x (ti-td) x Ze
13.2 x 0.9 x 0.58 x 35 x 1

241

906

Z18

MUAYENE ODASI

20 °C

Ça1	0.40	0.00	0.00	0.00	1	15.00	0.260	35	9.27	139	
Tdö1	0.36	0.00	0.00	0.00	1	15.00	0.300	15	4.45	67	
Dd1 K	0.34	3.50	3.40	11.90	1	2.08	9.82	0.310	35	10.85	107
Dd2 K	0.26	3.50	0.60	2.10	1	2.10	0.400	35	13.96	29	
Dp1 K	0.80	1.30	1.04	2	2.08	1.980	35	69.23	144		

486 15 0 5 1.20 583

Qfuga = (axl) x R x H x (ti-td) x Ze
13.2 x 0.9 x 0.58 x 35 x 1

241

824

Z19

MUAYENE ODASI

20 °C

Ça1	0.40	0.00	0.00	0.00	1	15.00	0.260	35	9.27	139	
Tdö1	0.36	0.00	0.00	0.00	1	15.00	0.300	15	4.45	67	
Dd1 K	0.34	3.50	3.40	11.90	1	2.08	9.82	0.310	35	10.85	107
Dd2 K	0.26	3.50	0.60	2.10	1	2.10	0.400	35	13.96	29	
Dp1 K	0.80	1.30	1.04	2	2.08	1.980	35	69.23	144		

486 15 0 5 1.20 583

Qfuga = (axl) x R x H x (ti-td) x Ze

ISI KAYBI ÇİZELGESİ

Proje no :
Proje adı : 4-5 HEKİMLİ ASM+112
Konu : ISI KAYBI HESAPLARI

Sayfa no : 6
Revizyon : 0
Tarih : Salı, 18 Kasım, 2014
Hesaplayan : --
Kontrol : --

DİZAYN BİLGİLERİ

Şehir adı
Bolu

Dış hava sıcaklığı (°C)
-15 °C

Rüzgar durumu
Normal

İşletme durumu
2. işletme

HESAP DEĞERLERİ

İşr.	Yö n	Gen. W(m)	Uzn. L(m)	Yük. H(m)	Alan A(m2)	Adet	Çıkan A(m2)	Net Alan	K (Kcal/hm2°)	tr-to dt(°C)	Kxdt	Q Kısmi	ZD (% W)	Z (% W)	ZH (% W)	Z (% W)	Toplam Q(Kcal/h)
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13.2 x 0.9 x 0.58 x 35 x 1

241
824

Z20

MUAYENE ODASI

20 °C

Ça1	0.40	0.00	0.00	0.00	1		15.00	0.260	35	9.27	139
Tdö1	0.36	0.00	0.00	0.00	1		15.00	0.300	15	4.45	67
Dd1 K	0.34	3.50	3.40	11.90	1	2.08	9.82	0.310	35	10.85	107
Dd2 K	0.26	3.50	0.60	2.10	1		2.10	0.400	35	13.96	29
Dp1 K		0.80	1.30	1.04	2		2.08	1.980	35	69.23	144

486 15 0 5 1.20 583

Qfuga = (axl) x R x H x (ti-td) x Ze
13.2 x 0.9 x 0.58 x 35 x 1

241
824

Z21

ACİL MÜDAHALE

20 °C

Ça1	0.40	0.00	0.00	0.00	1		15.00	0.260	35	9.27	139
Tdö1	0.36	0.00	0.00	0.00	1		15.00	0.300	15	4.45	67
Dd1 K	0.34	3.50	3.40	11.90	1	2.08	9.82	0.310	35	10.85	107
Dd2 K	0.26	3.50	0.60	2.10	1		2.10	0.400	35	13.96	29
Dp1 K		0.80	1.30	1.04	2		2.08	1.980	35	69.23	144

486 15 0 5 1.20 583

Qfuga = (axl) x R x H x (ti-td) x Ze
13.2 x 0.9 x 0.58 x 35 x 1

241
824

Z22

MUAYENE ODASI

20 °C

Ça1	0.40	0.00	0.00	0.00	1		15.00	0.260	35	9.27	139
Tdö1	0.36	0.00	0.00	0.00	1		15.00	0.300	15	4.45	67
Dd1 K	0.34	5.00	3.40	17.00	1	2.08	14.92	0.310	35	10.85	162
Dd2 K	0.26	5.00	0.60	3.00	1		3.00	0.400	35	13.96	42
Dp1 K		0.80	1.30	1.04	2		2.08	1.980	35	69.23	144
Dd1 K	0.34	3.50	3.40	11.90	1	2.08	9.82	0.310	35	10.85	107
Dd2 K	0.26	3.50	0.60	2.10	1		2.10	0.400	35	13.96	29
Dp1 K		0.80	1.30	1.04	2		2.08	1.980	35	69.23	144

834 15 0 5 1.20 1,001

Qfuga = (axl) x R x H x (ti-td) x Ze
26.4 x 0.9 x 0.58 x 35 x 1

482
1,483