

# ISI KAYBI ÇİZELGESİ

Proje no :  
Proje adı : 3-4 HEKİMLİ ASM  
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°)	tr-to dt(°C)	Kxdt	Q Kısmi	ZD (% W)	Z (% W)	ZH (% W)	Z (% W)	Toplam Q(Kcal/h)
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### Z01

### 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

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

241  
824

### Z02

### 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

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

241  
824

### Z03

### 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

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

241  
824

### Z04

### 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					

486 15 0 5 1.20 583

# ISI KAYBI ÇİZELGESİ

Proje no :  
Proje adı : 3-4 HEKİMLİ ASM  
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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$$Q_{fuga} = (axl) \times R \times H \times (ti - td) \times Ze$$
$$26.4 \times 0.9 \times 0.58 \times 35 \times 1$$

834 15 0 5 1.20 1,001  
482  
1,483

### Z05

### GİRİŞ HOLÜ

20 °C

Ça1	0.40	0.00	0.00	0.00	1	125.00	0.260	35	9.27	1,159	
Tdö1	0.36	0.00	0.00	0.00	1	125.00	0.300	15	4.45	556	
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	

4,337 15 0 5 1.20 5,204  
1,348  
6,552

### Z06

### 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  
100

### Z07

### 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

### Z08

### WC

18 °C

Ça1	0.40	0.00	0.00	0.00	1	5.00	0.260	33	8.74	44	
Tdö1	0.36	0.00	0.00	0.00	1	5.00	0.300	13	3.86	19	
Dd1 K	0.34	2.00	3.40	6.80	1	1.04	5.76	0.310	33	10.23	59
Dd2 K	0.26	2.00	0.60	1.20	1	1.20	0.400	33	13.17	16	
Dp1 K		0.80	1.30	1.04	1	1.04	1.980	33	65.27	68	

206 15 0 5 1.20 247

$$Q_{fuga} = (axl) \times R \times H \times (ti - td) \times Ze$$

# ISI KAYBI ÇİZELGESİ

Proje no :  
Proje adı : 3-4 HEKİMLİ ASM  
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°)	tr-to dt(°C)	Kxdt	Q Kısmi	ZD (% W)	Z (% W)	ZH (% W)	Z (% W)	Toplam Q(Kcal/h)
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6.6 x 0.9 x 0.58 x 33 x 1

114

361

Z09

WC

18 °C

Ça1		0.40	0.00	0.00	0.00	1		5.00	0.260	33	8.74	44					
Tdö1		0.36	0.00	0.00	0.00	1		5.00	0.300	13	3.86	19					
Dd1	K	0.34	2.00	3.40	6.80	1	1.04	5.76	0.310	33	10.23	59					
Dd2	K	0.26	2.00	0.60	1.20	1		1.20	0.400	33	13.17	16					
Dp1	K		0.80	1.30	1.04	1		1.04	1.980	33	65.27	68					

206 15 0 5 1.20 247

Qfuga = (axl) x R x H x (ti-td) x Ze  
6.6 x 0.9 x 0.58 x 33 x 1

114

361

Z10

WC

18 °C

Ça1		0.40	0.00	0.00	0.00	1		5.00	0.260	33	8.74	44					
Tdö1		0.36	0.00	0.00	0.00	1		5.00	0.300	13	3.86	19					
Dd1	K	0.34	2.00	3.40	6.80	1	1.04	5.76	0.310	33	10.23	59					
Dd2	K	0.26	2.00	0.60	1.20	1		1.20	0.400	33	13.17	16					
Dp1	K		0.80	1.30	1.04	1		1.04	1.980	33	65.27	68					

206 15 0 5 1.20 247

Qfuga = (axl) x R x H x (ti-td) x Ze  
6.6 x 0.9 x 0.58 x 33 x 1

114

361

Z11

WC

18 °C

Ça1		0.40	0.00	0.00	0.00	1		5.00	0.260	33	8.74	44					
Tdö1		0.36	0.00	0.00	0.00	1		5.00	0.300	13	3.86	19					
Dd1	K	0.34	2.00	3.40	6.80	1	1.04	5.76	0.310	33	10.23	59					
Dd2	K	0.26	2.00	0.60	1.20	1		1.20	0.400	33	13.17	16					
Dp1	K		0.80	1.30	1.04	1		1.04	1.980	33	65.27	68					

206 15 0 5 1.20 247

Qfuga = (axl) x R x H x (ti-td) x Ze  
6.6 x 0.9 x 0.58 x 33 x 1

114

361

Z12

WC

18 °C

Ça1		0.40	0.00	0.00	0.00	1		5.00	0.260	33	8.74	44					
Tdö1		0.36	0.00	0.00	0.00	1		5.00	0.300	13	3.86	19					
Dd1	K	0.34	2.00	3.40	6.80	1	1.04	5.76	0.310	33	10.23	59					
Dd2	K	0.26	2.00	0.60	1.20	1		1.20	0.400	33	13.17	16					
Dp1	K		0.80	1.30	1.04	1		1.04	1.980	33	65.27	68					

# ISI KAYBI ÇİZELGESİ

Proje no :  
Proje adı : 3-4 HEKİMLİ ASM  
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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$Q_{fuga} = (axl) \times R \times H \times (ti - td) \times Ze$   
 $6.6 \times 0.9 \times 0.58 \times 33 \times 1$   
206 15 0 5 1.20 247  
114  
361

### Z13

### 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	6.50	3.40	22.10	1	2.08	20.02	0.310	35	10.85	217
Dd2 K	0.26	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
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

$Q_{fuga} = (axl) \times R \times H \times (ti - td) \times Ze$   
 $26.4 \times 0.9 \times 0.58 \times 35 \times 1$   
969 15 0 5 1.20 1,163  
482  
1,645

### Z14

### 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

$Q_{fuga} = (axl) \times R \times H \times (ti - td) \times Ze$   
 $13.2 \times 0.9 \times 0.58 \times 35 \times 1$   
486 15 0 5 1.20 583  
241  
824

### Z15

### 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

$Q_{fuga} = (axl) \times R \times H \times (ti - td) \times Ze$   
 $13.2 \times 0.9 \times 0.58 \times 35 \times 1$   
486 15 0 5 1.20 583  
241  
824

### Z16

### ACİL MÜDAHALE

20 °C

# ISI KAYBI ÇİZELGESİ

Proje no :  
Proje adı : 3-4 HEKİMLİ ASM  
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)	Kxdt	Q Kısmi	ZD (% W)	Z (% W)	ZH (% W)	Z (% W)	Toplam Q(Kcal/h)
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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

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

Z17

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  
482  
1,483

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