

Statistics for IRN_Tehran.Mehrabad_ITMY

Location -- Tehran - Iran

{N 35° 40'} {E 51° 19'} {GMT +3.5 Hours}

Elevation -- 1191m above sea level

Standard Pressure at Elevation -- 87814Pa

Data Source -- ITMY-407540

WMO Station *unknown*

- Using Design Conditions calculated from this weather file.

- The following design temperature statistics are calculated based on THIS weather file ONLY

- and may not be representative of a long-term period of record normally used for

- design temperatures. Also, note that dew point temperatures are listed where

- wet-bulb temperatures are normally presented.

Design Stat	Coldest Month	HDB 99.6%	HDB 99%
Units	{}	{C}	{C}
Heating	3	-2.3	-1.7

Design Stat	Hottest Month	CDB .4%	CDB 1%	CDB 2%	CDP .4%	CDP 1%	CDP 2%
Units	{}	{C}	{C}	{C}	{C}	{C}	{C}
Cooling	7	39.5	38.9	38.1	15.0	14.7	14.3

Design Stat	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Units	{m/s}	{m/s}	{m/s}	{m/s}	{m/s}	{m/s}	{m/s}	{m/s}	{m/s}	{m/s}	{m/s}	{m/s}
Max WS	9.5	12.4	14.7	16.0	10.9	18.4	8.1	7.0	8.9	11.0	10.4	11.2

- Monthly Statistics for Dry Bulb temperatures °C

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Maximum	11.9	14.4	19.0	26.2	32.7	35.9	40.5	37.6	34.9	30.0	23.2	13.6
Day:Hour	30:14	8:15	25:16	30:15	29:15	29:16	14:16	24:16	7:15	1:15	11:15	7:15
Minimum	-1.2	-2.6	-4.5	7.7	9.5	15.3	20.2	20.5	16.8	8.7	3.5	-1.9
Day:Hour	22:06	18:06	2:06	24:06	7:06	23:04	7:04	30:06	21:06	27:03	29:07	27:07
Daily Avg	5.3	7.0	10.2	17.3	22.2	26.7	32.3	30.6	25.9	20.1	12.8	6.5

- Maximum Dry Bulb temperature of 40.5°C on Jul 14

- Minimum Dry Bulb temperature of -4.5°C on Mar 2

- Average Hourly Statistics for Dry Bulb temperatures °C

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0:01- 1:00	4.0	5.8	8.4	15.1	19.4	23.5	29.6	28.1	23.5	17.8	11.3	5.3
1:01- 2:00	3.8	5.5	8.2	14.7	18.9	22.7	28.7	27.4	22.9	17.5	11.1	5.0
2:01- 3:00	3.6	5.3	8.0	14.3	18.4	22.0	27.8	26.8	22.2	17.1	10.8	4.8
3:01- 4:00	3.4	5.0	7.7	14.0	18.2	21.7	27.3	26.4	21.8	16.9	10.6	4.5
4:01- 5:00	3.2	4.8	7.4	13.8	18.4	21.8	27.1	26.0	21.5	16.6	10.4	4.3
5:01- 6:00	2.9	4.6	7.0	13.5	18.6	22.0	26.9	25.7	21.1	16.4	10.2	4.1
6:01- 7:00	3.3	4.9	7.6	14.3	19.6	23.1	27.9	26.8	22.2	17.3	10.7	4.4
7:01- 8:00	3.8	5.4	8.4	15.4	20.7	24.5	29.3	28.3	23.7	18.4	11.6	5.0
8:01- 9:00	4.6	6.1	9.5	16.7	22.0	26.1	31.0	30.1	25.4	19.9	12.7	5.7
9:01-10:00	5.5	6.9	10.4	17.9	23.1	27.4	32.3	31.2	26.7	21.0	13.7	6.6
10:01-11:00	6.4	7.8	11.3	18.9	24.0	28.5	33.5	32.2	27.7	22.1	14.6	7.5
11:01-12:00	7.3	8.6	12.1	19.8	24.8	29.4	34.5	32.9	28.6	22.9	15.3	8.3
12:01-13:00	8.0	9.3	12.6	20.5	25.5	30.3	35.5	33.7	29.4	23.8	15.8	9.0
13:01-14:00	8.3	9.7	12.9	20.9	25.9	31.0	36.3	34.3	29.9	24.2	15.9	9.4
14:01-15:00	8.4	9.9	13.0	21.1	26.1	31.5	36.9	34.7	30.3	24.4	15.8	9.4
15:01-16:00	7.9	9.5	12.9	20.8	26.0	31.6	37.2	34.7	30.1	23.8	15.3	9.0
16:01-17:00	7.3	9.0	12.6	20.3	25.6	31.3	37.2	34.5	29.7	23.0	14.6	8.4
17:01-18:00	6.5	8.3	12.1	19.6	25.0	30.7	36.8	34.1	29.0	22.0	13.8	7.6
18:01-19:00	6.0	7.8	11.6	18.9	24.2	29.7	36.1	33.3	28.1	21.3	13.3	7.1
19:01-20:00	5.5	7.3	11.0	18.2	23.3	28.6	34.9	32.3	27.1	20.5	12.8	6.7
20:01-21:00	5.1	6.9	10.4	17.4	22.4	27.3	33.8	31.2	26.1	19.8	12.3	6.4
21:01-22:00	4.8	6.6	9.9	16.8	21.5	26.2	32.7	30.3	25.3	19.2	11.9	6.1
22:01-23:00	4.5	6.2	9.6	16.3	20.9	25.4	31.6	29.5	24.7	18.6	11.6	5.8
23:01-24:00	4.2	5.9	9.2	15.7	20.2	24.5	30.5	28.7	24.1	18.0	11.3	5.6
Max Hour	15	15	15	15	15	16	17	16	15	15	14	15
Min Hour	6	6	6	6	4	4	6	6	6	6	6	6

- Monthly Statistics for Extreme temperatures °C

#Days	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Max >= 32					2	15	31	28	13			
Max <= 0												
Min <= 0	6	4	2									
Min <=-18												2

- Monthly Statistics for Dew Point temperatures °C

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Maximum	5.5	4.5	10.3	11.5	12.7	12.8	15.4	15.2	11.9	11.3	10.1	5.8
Day:Hour	18:11	25:18	26:13	23:24	16:11	16:06	21:03	16:24	14:06	23:06	2:22	2:11
Minimum	-11.0	-8.8	-15.9	-9.8	-9.8	-1.9	1.3	3.1	-6.7	-8.1	-6.7	-7.4
Day:Hour	4:17	12:18	30:14	16:18	3:10	24:18	2:21	6:09	30:09	22:03	24:15	28:14
Daily Avg	-2.3	-2.3	-1.5	3.4	3.4	7.3	10.1	9.8	5.9	4.0	1.3	0.6

- Maximum Dew Point temperature of 15.4°C on Jul 21
 - Minimum Dew Point temperature of -15.9°C on Mar 30

- Monthly Statistics for Relative Humidity %

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Maximum	97	96	92	96	95	68	68	67	63	79	94	95
Day:Hour	16:24	14:01	5:05	24:01	6:03	23:04	7:04	31:06	22:06	29:06	29:06	1:05
Minimum	21	18	10	10	9	11	12	14	12	10	15	31
Day:Hour	30:16	8:14	30:14	16:18	11:15	30:12	2:15	7:12	6:14	7:14	10:15	28:14
Daily Avg	59	54	47	42	32	31	27	29	30	37	49	67

- Average Hourly Relative Humidity %

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0:01- 1:00	65	59	53	48	41	38	32	34	36	43	55	72
1:01- 2:00	67	60	53	49	42	41	34	36	36	44	55	73
2:01- 3:00	68	60	54	51	44	43	36	37	37	45	56	75
3:01- 4:00	69	60	55	52	44	45	38	38	38	45	57	76
4:01- 5:00	70	60	56	53	44	45	39	38	39	46	58	77
5:01- 6:00	70	61	57	54	43	45	40	39	40	46	58	78
6:01- 7:00	68	60	55	52	40	42	37	36	37	43	55	76
7:01- 8:00	66	59	52	49	36	38	33	32	33	40	52	73
8:01- 9:00	62	57	49	45	33	34	29	29	30	37	49	70
9:01-10:00	58	53	45	41	30	30	27	27	27	34	45	66
10:01-11:00	55	50	42	37	27	27	25	25	25	32	43	62
11:01-12:00	51	47	39	34	25	25	23	24	24	31	40	59
12:01-13:00	49	44	38	32	23	23	21	23	23	29	38	56
13:01-14:00	47	43	37	31	21	22	20	22	22	28	37	54
14:01-15:00	47	43	37	30	21	21	19	22	21	27	37	53
15:01-16:00	48	45	37	31	21	20	18	21	21	28	39	55
16:01-17:00	50	47	38	33	22	20	18	21	22	30	41	58
17:01-18:00	53	50	40	35	23	20	18	22	23	33	43	62
18:01-19:00	55	51	41	38	26	22	20	24	25	35	46	66
19:01-20:00	57	53	44	40	28	25	22	26	27	37	48	67
20:01-21:00	59	54	47	43	32	28	24	28	30	39	51	69
21:01-22:00	61	56	48	45	35	31	26	30	33	41	53	70
22:01-23:00	62	57	49	46	37	33	28	32	34	42	54	70
23:01-24:00	63	59	51	47	39	35	31	33	35	43	55	71
Max Hour	6	6	6	6	4	5	6	6	6	6	6	6
Min Hour	15	15	15	15	15	17	17	16	16	15	14	15

- Monthly Indicators for Precipitation/Moisture (kPa)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	0.5	0.5	0.5	0.7	0.7	0.9	1.2	1.2	0.9	0.8	0.6	0.6

- Monthly Statistics for Wind Chill/Heat Index temperatures °C **

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Minimum WC		-10	-10	-11	-1						3	0
Day:Hour	1:22	17:07	14:06	6:07						27:01	25:16	27:07
Average WC	2	1	1	4						5	5	3
Avg Del WC		3	5	5	5						4	2
# Hours WC		264	329	192	14						6	90
Maximum HI								29	29			
Day:Hour							20:24	17:11				
Average HI							28	28				
Avg Del HI							0	0				
# Hours HI							22	10				

- **WindChill/HeatIndex Temps -- statistics...only those different from Air Temps

- Monthly Wind Direction % {N=0 or 360,E=90,S=180,W=270}

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
North	60	36	31	43	43	28	25	45	42	47	55	56
NorthEast	1	4	4	5	3	3	4	4	1	2	4	1
East	0	2	5	2	3	2	6	0	2	1	2	0
SouthEast	3	4	5	5	4	8	16	12	11	4	2	3
South	6	7	10	10	9	10	14	17	15	8	6	8
SouthWest	5	3	5	1	4	5	4	6	4	6	4	7
West	18	32	29	26	26	30	24	12	13	20	19	17
NorthWest	6	11	10	8	9	15	7	4	12	12	8	6

- Monthly Statistics for Wind Speed m/s

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Maximum	9.5	12.4	14.7	16.0	10.9	18.4	8.1	7.0	8.9	11.0	10.4	11.2
Day:Hour	30:13	12:13	27:10	14:16	15:24	7:21	15:15	29:19	13:16	21:12	11:13	30:16
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Day:Hour	2:13	1:01	2:22	1:01	1:01	1:01	2:01	1:04	1:01	1:01	1:16	1:07
Daily Avg	1.6	2.8	3.4	3.1	2.8	3.4	2.9	2.1	2.1	2.3	1.8	1.6

- Maximum Wind Speed of 18.4 m/s on Jun 7
 - Minimum Wind Speed of 0.0 m/s on Jan 2

- Monthly Statistics for Solar Radiation (Direct Normal, Diffuse, Global Horizontal) Wh/m°

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Direct Avg	2509	3136	4721	5644	7619	8382	8216	7319	6308	5413	3370	2067
Direct Max	6785	8487	10434	10492	10547	11558	11330	9967	8529	7746	8150	5700
Day	30	12	30	18	2	26	18	11	2	20	11	30
Diffuse Avg	314	724	1352	2505	3346	3751	3560	2726	1570	558	345	338
Global Avg	2086	2932	4490	5913	7421	8110	7944	6989	5687	4261	2617	1770

- Maximum Direct Normal Solar of 11558 Wh/m° on Jun 26

- Average Hourly Statistics for Direct Normal Solar Radiation Wh/m°

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0:01- 1:00	0	0	0	0	0	0	0	0	0	0	0	0
1:01- 2:00	0	0	0	0	0	0	0	0	0	0	0	0
2:01- 3:00	0	0	0	0	0	0	0	0	0	0	0	0
3:01- 4:00	0	0	0	0	0	0	0	0	0	0	0	0
4:01- 5:00	0	0	0	0	0	0	0	0	0	0	0	0
5:01- 6:00	0	0	0	10	126	163	100	19	0	0	0	0
6:01- 7:00	0	0	63	186	338	366	332	304	187	97	1	0
7:01- 8:00	34	93	293	365	487	566	551	554	454	382	169	23
8:01- 9:00	189	233	474	533	625	746	743	767	689	599	344	140
9:01-10:00	267	322	556	592	700	818	826	812	755	676	411	217
10:01-11:00	351	413	585	634	784	829	854	792	768	704	477	301
11:01-12:00	394	452	563	635	792	793	807	696	699	675	492	344
12:01-13:00	411	464	544	617	808	804	774	701	697	683	495	364
13:01-14:00	388	456	521	600	790	798	775	689	671	644	457	339
14:01-15:00	315	392	459	567	729	777	744	670	618	571	369	257
15:01-16:00	157	262	397	492	657	701	694	605	479	352	156	81
16:01-17:00	2	49	260	349	526	618	621	505	285	30	0	0
17:01-18:00	0	0	6	63	257	398	393	204	7	0	0	0
18:01-19:00	0	0	0	0	0	4	3	0	0	0	0	0
19:01-20:00	0	0	0	0	0	0	0	0	0	0	0	0
20:01-21:00	0	0	0	0	0	0	0	0	0	0	0	0
21:01-22:00	0	0	0	0	0	0	0	0	0	0	0	0
22:01-23:00	0	0	0	0	0	0	0	0	0	0	0	0
23:01-24:00	0	0	0	0	0	0	0	0	0	0	0	0
Max Hour**		13	13	11	12	13	11	11	10	11	11	13
Min Hour	1	1	1	1	1	1	1	1	1	1	1	1

- Monthly Calculated "undisturbed" Ground Temperatures** °C

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.5 m	16.6	10.6	7.0	5.9	8.1	13.0	19.2	25.2	29.3	30.2	27.9	23.0
2.0 m	19.2	14.5	11.0	9.4	9.6	12.4	16.7	21.4	25.3	27.1	26.5	23.7
4.0 m	20.3	17.0	14.3	12.8	11.9	13.2	15.7	18.9	21.9	23.8	24.2	22.9

- **These ground temperatures should NOT BE USED in the GroundTemperatures object to compute building floor losses.

- The temperatures for 0.5 m depth can be used for GroundTemperatures:Surface.

- The temperatures for 4.0 m depth can be used for GroundTemperatures:Deep.

- Calculations use a standard soil diffusivity of 2.3225760E-03 {m**2/day}

- Monthly Heating/Cooling Degree Days/Hours

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
HDD base 10C		144	87	34	0	0	0	0	0	0	0	13
HDD base 18C		392	309	243	39	8	0	0	0	0	13	156
CDD base 10C		0	2	39	219	378	501	692	637	477	313	97
CDD base 18C		0	0	0	18	138	261	444	389	237	78	1
CDH base 20C		0	0	0	358	2447	4898	9161	7852	4336	1231	25
CDH base 23C		0	0	0	55	1170	3040	6947	5640	2539	399	0
CDH base 27C		0	0	0	0	256	1191	4167	2900	904	30	0

- 3355 annual cooling degree-days (10°C baseline)

- 387 annual heating degree-days (10°C baseline)

- 1565 annual cooling degree-days (18°C baseline)

- 1517 annual heating degree-days (18°C baseline)

- Climate type "BSh" (K°ppen classification)**

- Hot subtropical steppe (lat. 15-30°N)

- Unbearably hot dry periods in summer, but passive cooling is possible

- **Note that the K°ppen classification shown here is derived algorithmically from the source weather data.

- It may not be indicative of the long term climate for this location.

- Climate type "4B" (ASHRAE Standards 90.1-2004 and 90.2-2004 Climate Zone)**

- Mixed - Dry, Probable K°ppen classification=BSk/BWh/H, Semiarid Mid Latitude/Arid Subtropical/Highlands

- **Note that the ASHRAE classification shown here is derived algorithmically from the source weather data.

- It may not be indicative of the long term climate for this location.

- Typical/Extreme Period Determination

- No discernible wet period.....

Week closest to average annual temperature selected for Typical Period

Typical Week Period selected: Apr 9:Apr 15, Average Temp= 18.13°C, Deviation=0.046°C

- Summer is Jun:Aug

Extreme Summer Week (nearest maximum temperature for summer)
 Extreme Hot Week Period selected: Jul 13:Jul 19, Maximum Temp= 40.50°C, Deviation=| 7.299|°C
 Typical Summer Week (nearest average temperature for summer)
 Typical Week Period selected: Jul 6:Jul 12, Average Temp= 29.89°C, Deviation=| 0.570|°C

- Winter is Dec:Feb
 Extreme Winter Week (nearest minimum temperature for winter)
 Extreme Cold Week Period selected: Dec 22:Jan 5, Minimum Temp= -2.60°C, Deviation=| 6.286|°C
 Typical Winter Week (nearest average temperature for winter)
 Typical Week Period selected: Jan 6:Jan 12, Average Temp= 6.24°C, Deviation=| 0.416|°C

- Autumn is Sep:Nov
 Typical Autumn Week (nearest average temperature for autumn)
 Typical Week Period selected: Oct 20:Oct 26, Average Temp= 19.60°C, Deviation=| 0.424|°C

- Spring is Mar:May
 Typical Spring Week (nearest average temperature for spring)
 Typical Week Period selected: Apr 5:Apr 11, Average Temp= 16.54°C, Deviation=| 0.099|°C

