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## VALENCIA/AEROPUERTO, Spain

WMO#: **082840**

Lat: **39.50N** Long: **0.47W** Elev: **62** StdP: **100.58** Time Zone: **1.00 (EUW)** Period: **86-10** WBAN: **99999**

### Annual Heating and Humidification Design Conditions

| | Coldest Month | Heating DB | | Humidification DP/MCDB and HR | | | | | | Coldest month WS/MCDB | | | | MCWS/PCWD to 99.6% DB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 99.6% | | | 99% | | | 0.4% | | 1% | | | | |
| | | 99.6% | 99% | DP | HR | MCDB | DP | HR | MCDB | WS | MCDB | WS | MCDB | MCWS | PCWD | |
| | (a) | (b) | (c) | (d) | (e) | (f) | (g) | (h) | (i) | (j) | (k) | (l) | (m) | (n) | (o) | |
| (1) | **1** | **0.9** | **2.2** | **-7.5** | **2.0** | **7.6** | **-5.1** | **2.5** | **8.5** | **14.6** | **14.6** | **12.7** | **13.5** | **2.3** | **280** | (1) |

### Annual Cooling, Dehumidification, and Enthalpy Design Conditions

| | Hottest Month | Hottest Month DB Range | Cooling DB/MCWB | | | | | | Evaporation WB/MCDB | | | | | | MCWS/PCWD to 0.4% DB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 0.4% | | 1% | | 2% | | 0.4% | | 1% | | 2% | | | | |
| | | | DB | MCWB | DB | MCWB | DB | MCWB | WB | MCDB | WB | MCDB | WB | MCDB | MCWS | PCWD | |
| | (a) | (b) | (c) | (d) | (e) | (f) | (g) | (h) | (i) | (j) | (k) | (l) | (m) | (n) | (o) | (p) | |
| (2) | **8** | **9.4** | **33.1** | **21.2** | **31.8** | **21.7** | **30.5** | **21.8** | **24.9** | **29.3** | **24.2** | **28.5** | **23.7** | **27.9** | **5.0** | **120** | (2) |

| Dehumidification DP/MCDB and HR | | | | | | | | | Enthalpy/MCDB | | | | | | Hours 8 to 4 & 12.8/20.6 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.4% | | | 1% | | | 2% | | | 0.4% | | 1% | | 2% | | | |
| DP | HR | MCDB | DP | HR | MCDB | DP | HR | MCDB | Enth | MCDB | Enth | MCDB | Enth | MCDB | | |
| (a) | (b) | (c) | (d) | (e) | (f) | (g) | (h) | (i) | (j) | (k) | (l) | (m) | (n) | (o) | (p) | |
| **23.6** | **18.5** | **27.5** | **22.9** | **17.8** | **27.2** | **22.1** | **16.9** | **26.6** | **76.0** | **29.1** | **73.3** | **28.7** | **71.0** | **28.0** | **1185** | (3) |

### Extreme Annual Design Conditions

| Extreme Annual WS | | | Extreme Max WB | Extreme Annual DB | | | | n-Year Return Period Values of Extreme DB | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Mean | | Standard deviation | | n=5 years | | n=10 years | | n=20 years | | n=50 years | | |
| 1% | 2.5% | 5% | | Min | Max | Min | Max | Min | Max | Min | Max | Min | Max | Min | Max | |
| (a) | (b) | (c) | (d) | (e) | (f) | (g) | (h) | (i) | (j) | (k) | (l) | (m) | (n) | (o) | (p) | |
| **10.8** | **9.2** | **7.8** | **30.4** | **-1.8** | **38.0** | **1.7** | **2.4** | **-3.0** | **39.8** | **-4.0** | **41.2** | **-4.9** | **42.5** | **-6.1** | **44.3** | (4) |

### Monthly Climatic Design Conditions

| | | | | Annual (d) | Jan (e) | Feb (f) | Mar (g) | Apr (h) | May (i) | Jun (j) | Jul (k) | Aug (l) | Sep (m) | Oct (n) | Nov (o) | Dec (p) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (5) | Temperatures, Degree-Days and Degree-Hours | Tavg | | **17.5** | **10.4** | **11.3** | **13.4** | **15.3** | **18.7** | **22.6** | **25.4** | **26.0** | **22.9** | **18.8** | **14.1** | **11.1** | (5) |
| (6) | | Sd | | | **2.90** | **2.97** | **2.93** | **2.47** | **2.60** | **2.31** | **1.68** | **1.68** | **2.33** | **2.52** | **2.98** | **3.03** | (6) |
| (7) | | HDD10.0 | | **78** | **28** | **17** | **4** | **1** | **0** | **0** | **0** | **0** | **0** | **0** | **4** | **23** | (7) |
| (8) | | HDD18.3 | | **1102** | **247** | **198** | **155** | **96** | **27** | **1** | **0** | **0** | **1** | **23** | **130** | **225** | (8) |
| (9) | | CDD10.0 | | **2826** | **41** | **53** | **111** | **159** | **269** | **377** | **476** | **495** | **386** | **274** | **127** | **57** | (9) |
| (10) | | CDD18.3 | | **806** | **0** | **1** | **3** | **4** | **37** | **128** | **218** | **237** | **137** | **39** | **2** | **0** | (10) |
| (11) | | CDH23.3 | | **6861** | **1** | **6** | **33** | **44** | **244** | **997** | **2071** | **2331** | **938** | **186** | **11** | **0** | (11) |
| (12) | | CDH26.7 | | **2174** | **0** | **1** | **4** | **4** | **44** | **276** | **714** | **868** | **233** | **28** | **1** | **0** | (12) |
| (13) | Precipitation | PrecAvg | | **480** | **36** | **34** | **37** | **41** | **34** | **23** | **16** | **20** | **48** | **87** | **62** | **41** | (13) |
| (14) | | PrecMax | | **1112** | **95** | **137** | **195** | **240** | **192** | **168** | **63** | **85** | **338** | **357** | **232** | **235** | (14) |
| (15) | | PrecMin | | **371** | **1** | **2** | **3** | **6** | **15** | **5** | **1** | **2** | **15** | **1** | **3** | **1** | (15) |
| (16) | | PrecSD | | **221.1** | **30.6** | **36.0** | **42.0** | **50.4** | **48.4** | **45.5** | **17.5** | **24.9** | **88.5** | **97.7** | **59.1** | **63.3** | (16) |
| (17) | Monthly Design Dry Bulb and Mean Coincident Wet Bulb Temperatures | 0.4% | DB | | **21.7** | **24.0** | **26.8** | **26.9** | **30.3** | **34.0** | **35.1** | **36.8** | **33.1** | **29.6** | **24.9** | **21.5** | (17) |
| (18) | | | MCWB | | **13.8** | **13.9** | **15.3** | **15.9** | **17.7** | **19.4** | **21.1** | **20.5** | **20.0** | **18.4** | **15.3** | **14.2** | (18) |
| (19) | | 2% | DB | | **19.0** | **20.9** | **23.7** | **24.5** | **27.6** | **31.1** | **32.6** | **33.4** | **30.7** | **27.0** | **22.6** | **19.6** | (19) |
| (20) | | | MCWB | | **12.4** | **12.7** | **14.4** | **14.8** | **17.5** | **19.8** | **21.6** | **21.7** | **20.3** | **18.3** | **14.9** | **13.3** | (20) |
| (21) | | 5% | DB | | **17.2** | **18.9** | **21.3** | **22.7** | **25.8** | **29.4** | **31.1** | **31.9** | **29.1** | **25.2** | **20.9** | **18.0** | (21) |
| (22) | | | MCWB | | **11.2** | **11.8** | **13.1** | **14.0** | **16.9** | **20.0** | **21.9** | **22.6** | **21.0** | **18.1** | **14.4** | **12.2** | (22) |
| (23) | | 10% | DB | | **15.9** | **17.0** | **19.3** | **21.0** | **24.2** | **28.1** | **30.1** | **30.7** | **27.9** | **23.9** | **19.2** | **16.5** | (23) |
| (24) | | | MCWB | | **10.7** | **11.1** | **12.5** | **13.6** | **16.6** | **19.8** | **22.0** | **22.8** | **20.9** | **17.6** | **13.9** | **11.5** | (24) |
| (25) | Monthly Design Wet Bulb and Mean Coincident Dry Bulb Temperatures | 0.4% | WB | | **14.5** | **14.9** | **16.7** | **17.5** | **20.5** | **24.0** | **25.5** | **26.2** | **24.6** | **21.6** | **17.7** | **15.4** | (25) |
| (26) | | | MCDB | | **19.9** | **21.2** | **24.1** | **23.6** | **26.3** | **28.3** | **30.3** | **30.5** | **28.4** | **24.8** | **21.2** | **19.8** | (26) |
| (27) | | 2% | WB | | **13.2** | **13.5** | **15.1** | **16.1** | **19.3** | **22.6** | **24.5** | **25.2** | **23.6** | **20.5** | **16.6** | **14.2** | (27) |
| (28) | | | MCDB | | **17.3** | **19.0** | **21.4** | **21.3** | **24.4** | **27.3** | **29.0** | **29.6** | **27.1** | **23.9** | **19.8** | **17.9** | (28) |
| (29) | | 5% | WB | | **12.3** | **12.6** | **14.1** | **15.3** | **18.5** | **21.7** | **23.8** | **24.7** | **22.7** | **19.6** | **15.7** | **13.2** | (29) |
| (30) | | | MCDB | | **16.0** | **17.4** | **19.5** | **20.2** | **23.2** | **26.7** | **28.4** | **29.0** | **26.4** | **23.2** | **18.9** | **16.6** | (30) |
| (31) | | 10% | WB | | **11.4** | **11.7** | **13.2** | **14.6** | **17.8** | **21.0** | **23.2** | **24.1** | **22.1** | **18.7** | **14.9** | **12.3** | (31) |
| (32) | | | MCDB | | **14.9** | **15.6** | **17.7** | **19.4** | **22.3** | **25.9** | **27.9** | **28.3** | **25.8** | **22.4** | **18.3** | **15.5** | (32) |
| (33) | Mean Daily Temperature Range | | MDBR | | **9.9** | **10.3** | **10.7** | **10.5** | **10.2** | **9.9** | **9.5** | **9.4** | **9.4** | **9.5** | **9.8** | **9.6** | (33) |
| (34) | | 5% DB | MCDBR | | **11.8** | **13.6** | **14.1** | **13.3** | **12.5** | **12.2** | **11.5** | **11.9** | **11.2** | **11.5** | **11.8** | **11.0** | (34) |
| (35) | | | MCWBR | | **6.9** | **7.4** | **7.0** | **6.4** | **5.4** | **5.2** | **5.3** | **5.7** | **5.4** | **5.7** | **6.5** | **6.4** | (35) |
| (36) | | 5% WB | MCDBR | | **9.7** | **11.9** | **11.8** | **11.3** | **10.2** | **9.9** | **9.4** | **9.3** | **9.2** | **9.5** | **9.3** | **9.2** | (36) |
| (37) | | | MCWBR | | **6.2** | **7.1** | **6.7** | **6.1** | **5.0** | **4.9** | **5.0** | **5.1** | **5.0** | **5.3** | **5.8** | **5.8** | (37) |
| (38) | Clear Sky Solar Irradiance | taub | | | **0.347** | **0.356** | **0.378** | **0.383** | **0.398** | **0.407** | **0.418** | **0.413** | **0.403** | **0.382** | **0.352** | **0.349** | (38) |
| (39) | | taud | | | **2.540** | **2.490** | **2.384** | **2.319** | **2.263** | **2.240** | **2.221** | **2.284** | **2.351** | **2.451** | **2.560** | **2.559** | (39) |
| (40) | | Ebn,noon | | | **821** | **863** | **877** | **892** | **882** | **870** | **857** | **852** | **838** | **820** | **808** | **790** | (40) |
| (41) | | Edh,noon | | | **76** | **90** | **110** | **125** | **134** | **138** | **139** | **128** | **112** | **92** | **74** | **70** | (41) |

Nomenclature: See separate page