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# DASHKHOVUZ, Turkmenistan

WMO#: **383920**

Lat: **41.75N** Long: **59.82E** Elev: **82** StdP: **100.34** Time Zone: **5.00 (ASW)** 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** | **-16.1** | **-12.7** | **-20.0** | **0.6** | **-14.2** | **-17.0** | **0.8** | **-10.8** | **9.5** | **-0.2** | **8.7** | **1.2** | **2.5** | **110** | (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) | **7** | **12.7** | **39.4** | **23.0** | **37.8** | **22.4** | **36.3** | **21.9** | **24.8** | **36.4** | **23.7** | **35.2** | **22.9** | **34.3** | **4.3** | **0** | (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) | |
| (3) | **20.8** | **15.6** | **33.3** | **19.7** | **14.5** | **32.0** | **18.6** | **13.6** | **30.9** | **75.8** | **36.4** | **71.5** | **35.3** | **68.1** | **34.3** | **508** | (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% | WB | 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) | |
| (4) | **9.3** | **8.4** | **7.7** | **30.0** | **-18.3** | **42.3** | **4.7** | **1.1** | **-21.7** | **43.1** | **-24.5** | **43.8** | **-27.1** | **44.5** | **-30.6** | **45.3** | (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 | | **13.9** | **-2.1** | **0.4** | **7.0** | **15.4** | **21.9** | **27.4** | **28.9** | **27.0** | **20.7** | **13.1** | **5.6** | **0.2** | (5) |
| (6) | | Sd | | | **5.60** | **5.45** | **5.08** | **5.05** | **4.14** | **3.29** | **2.69** | **3.24** | **3.98** | **4.75** | **5.25** | **4.53** | (6) |
| (7) | | HDD10.0 | | **1253** | **374** | **271** | **121** | **12** | **1** | **0** | **0** | **0** | **0** | **23** | **147** | **304** | (7) |
| (8) | | HDD18.3 | | **2753** | **632** | **503** | **352** | **113** | **16** | **0** | **0** | **0** | **21** | **170** | **382** | **563** | (8) |
| (9) | | CDD10.0 | | **2663** | **0** | **1** | **28** | **175** | **369** | **521** | **585** | **528** | **321** | **119** | **15** | **0** | (9) |
| (10) | | CDD18.3 | | **1122** | **0** | **0** | **1** | **27** | **126** | **272** | **327** | **270** | **92** | **8** | **0** | **0** | (10) |
| (11) | | CDH23.3 | | **14630** | **0** | **0** | **16** | **289** | **1408** | **3729** | **4596** | **3461** | **1011** | **118** | **2** | **0** | (11) |
| (12) | | CDH26.7 | | **7952** | **0** | **0** | **3** | **98** | **604** | **2146** | **2712** | **1947** | **417** | **25** | **0** | **0** | (12) |
| (13) | Precipitation | PrecAvg | | **102** | **9** | **9** | **19** | **15** | **11** | **4** | **2** | **1** | **2** | **5** | **9** | **12** | (13) |
| (14) | | PrecMax | | **309** | **40** | **28** | **46** | **32** | **57** | **42** | **53** | **38** | **75** | **55** | **54** | **34** | (14) |
| (15) | | PrecMin | | **130** | **4** | **1** | **1** | **2** | **1** | **1** | **1** | **1** | **1** | **2** | **1** | **1** | (15) |
| (16) | | PrecSD | | **51.7** | **11.1** | **7.5** | **12.9** | **8.9** | **13.4** | **12.9** | **17.2** | **11.2** | **17.5** | **13.3** | **14.5** | **9.6** | (16) |
| (17) | Monthly Design Dry Bulb and Mean Coincident Wet Bulb Temperatures | 0.4% | DB | | **12.1** | **17.4** | **25.8** | **33.2** | **36.5** | **40.9** | **41.7** | **40.7** | **36.4** | **29.6** | **21.8** | **13.6** | (17) |
| (18) | | | MCWB | | **7.1** | **10.2** | **16.1** | **20.5** | **21.6** | **23.5** | **24.0** | **22.3** | **21.3** | **16.8** | **13.5** | **8.8** | (18) |
| (19) | | 2% | DB | | **8.6** | **12.9** | **21.2** | **29.5** | **33.9** | **38.8** | **39.5** | **38.4** | **33.4** | **26.3** | **18.2** | **10.5** | (19) |
| (20) | | | MCWB | | **5.4** | **7.7** | **13.3** | **18.2** | **20.0** | **22.8** | **23.5** | **22.0** | **19.7** | **15.6** | **11.6** | **6.9** | (20) |
| (21) | | 5% | DB | | **6.1** | **10.1** | **18.1** | **26.7** | **32.1** | **37.1** | **37.8** | **36.7** | **31.1** | **24.1** | **15.8** | **8.0** | (21) |
| (22) | | | MCWB | | **3.7** | **5.9** | **11.3** | **16.1** | **19.0** | **22.0** | **22.9** | **21.8** | **18.6** | **14.4** | **10.2** | **5.3** | (22) |
| (23) | | 10% | DB | | **4.3** | **7.4** | **15.2** | **24.0** | **30.2** | **35.6** | **36.2** | **34.9** | **28.9** | **21.7** | **13.2** | **6.1** | (23) |
| (24) | | | MCWB | | **2.4** | **4.2** | **9.3** | **14.7** | **18.0** | **21.5** | **22.2** | **21.1** | **17.6** | **13.3** | **8.8** | **3.9** | (24) |
| (25) | Monthly Design Wet Bulb and Mean Coincident Dry Bulb Temperatures | 0.4% | WB | | **7.7** | **10.5** | **16.7** | **21.0** | **22.8** | **25.9** | **27.3** | **25.1** | **22.7** | **17.7** | **14.3** | **9.1** | (25) |
| (26) | | | MCDB | | **11.6** | **16.9** | **25.1** | **31.4** | **34.3** | **38.5** | **38.5** | **36.6** | **33.8** | **27.2** | **20.7** | **12.8** | (26) |
| (27) | | 2% | WB | | **5.7** | **8.1** | **13.6** | **18.8** | **21.2** | **24.4** | **25.2** | **23.7** | **20.7** | **16.2** | **12.2** | **7.2** | (27) |
| (28) | | | MCDB | | **8.3** | **12.6** | **20.4** | **28.6** | **32.4** | **36.4** | **36.5** | **35.4** | **31.7** | **25.1** | **17.2** | **9.9** | (28) |
| (29) | | 5% | WB | | **4.0** | **6.2** | **11.7** | **17.0** | **19.8** | **23.3** | **24.1** | **22.7** | **19.2** | **14.9** | **10.6** | **5.6** | (29) |
| (30) | | | MCDB | | **5.9** | **9.8** | **17.6** | **25.3** | **30.3** | **35.0** | **35.3** | **34.4** | **29.7** | **23.1** | **15.1** | **7.8** | (30) |
| (31) | | 10% | WB | | **2.6** | **4.5** | **9.8** | **15.3** | **18.7** | **22.3** | **23.1** | **21.7** | **17.9** | **13.6** | **9.1** | **4.1** | (31) |
| (32) | | | MCDB | | **4.2** | **7.2** | **14.7** | **22.8** | **28.5** | **33.9** | **34.3** | **33.4** | **27.9** | **21.1** | **12.9** | **5.8** | (32) |
| (33) | Mean Daily Temperature Range | | MDBR | | **7.6** | **9.0** | **10.5** | **11.4** | **12.1** | **13.0** | **12.7** | **13.5** | **13.6** | **13.2** | **9.7** | **7.6** | (33) |
| (34) | | 5% DB | MCDBR | | **10.0** | **13.3** | **14.7** | **14.6** | **14.6** | **15.3** | **14.8** | **15.3** | **16.0** | **16.2** | **13.3** | **10.6** | (34) |
| (35) | | | MCWBR | | **7.2** | **8.7** | **8.6** | **7.0** | **6.5** | **6.4** | **6.0** | **6.1** | **7.5** | **8.5** | **8.3** | **7.8** | (35) |
| (36) | | 5% WB | MCDBR | | **9.5** | **12.4** | **14.1** | **13.6** | **13.3** | **13.7** | **13.5** | **14.0** | **15.2** | **14.9** | **12.3** | **10.0** | (36) |
| (37) | | | MCWBR | | **7.0** | **8.4** | **8.5** | **7.0** | **6.6** | **6.9** | **6.4** | **6.4** | **7.9** | **8.2** | **8.0** | **7.5** | (37) |
| (38) | Clear Sky Solar Irradiance | taub | | | **0.427** | **0.437** | **0.536** | **0.640** | **0.617** | **0.601** | **0.586** | **0.524** | **0.485** | **0.473** | **0.454** | **0.424** | (38) |
| (39) | | taud | | | **2.105** | **2.031** | **1.800** | **1.605** | **1.611** | **1.657** | **1.715** | **1.858** | **1.961** | **2.008** | **2.101** | **2.171** | (39) |
| (40) | | Ebn,noon | | | **671** | **737** | **701** | **661** | **694** | **707** | **713** | **744** | **740** | **688** | **636** | **639** | (40) |
| (41) | | Edh,noon | | | **110** | **137** | **194** | **252** | **257** | **246** | **230** | **193** | **162** | **138** | **110** | **96** | (41) |

Nomenclature: See separate page