

Example: Calculation for calculating indoor operative temperature range in April month for project situated in Delhi via Indian Adaptive Thermal Comfort Model.

Assumed Value

- Outdoor mean temperature for April 2020: 27.85 °C

Calculation

- Indoor Operative Temperature (°C) = $0.54 \times \text{Outdoor Temperature } ^\circ\text{C} + 12.38$
- Indoor Operative Temperature (°C) = $0.54 \times 27.85 \text{ } ^\circ\text{C} + 12.38 = 27.42 \text{ } ^\circ\text{C}$
- Indoor Operative Temperature (°C) range = $27.42 \text{ } ^\circ\text{C} \pm 2.38 \text{ } ^\circ\text{C}$ (i.e. from 25.04 °C to 29.80 °C)

As per Indian Adaptive Thermal Comfort Model the Indoor Operative Temperature should be lies in between 24.90 °C to 29.66 °C. Therefore, project will meet the requirement.

Note: Project team need to submit the thermal analysis that temperature has been maintained within the aforementioned bandwidth of Indoor operative Temperature.

| April | Maximum | Average | Minimum |
|-----------|---------|---------|---------|
| 01-Apr-20 | 32.78 | 25.61 | 18.89 |
| 02-Apr-20 | 30.56 | 24.78 | 20.00 |
| 03-Apr-20 | 29.44 | 23.11 | 16.67 |
| 04-Apr-20 | 32.22 | 24.06 | 16.11 |
| 05-Apr-20 | 32.78 | 25.61 | 17.78 |
| 06-Apr-20 | 35.56 | 28.11 | 19.44 |
| 07-Apr-20 | 33.33 | 26.67 | 19.44 |
| 08-Apr-20 | 32.22 | 25.78 | 21.11 |
| 09-Apr-20 | 32.78 | 24.61 | 13.33 |
| 10-Apr-20 | 35.00 | 27.00 | 18.33 |
| 11-Apr-20 | 36.67 | 29.39 | 21.11 |
| 12-Apr-20 | 36.11 | 28.67 | 21.11 |
| 13-Apr-20 | 37.78 | 30.83 | 22.22 |
| 14-Apr-20 | 39.44 | 31.11 | 25.00 |
| 15-Apr-20 | 39.44 | 31.11 | 25.00 |
| 16-Apr-20 | 38.89 | 30.22 | 23.33 |
| 17-Apr-20 | 36.67 | 31.33 | 28.33 |
| 18-Apr-20 | 36.11 | 28.22 | 21.11 |
| 19-Apr-20 | 34.44 | 27.39 | 20.56 |
| 20-Apr-20 | 32.22 | 26.39 | 21.67 |
| 21-Apr-20 | 34.44 | 27.17 | 20.00 |
| 22-Apr-20 | 35.56 | 28.06 | 20.00 |
| 23-Apr-20 | 34.44 | 28.28 | 23.33 |
| 24-Apr-20 | 36.67 | 29.67 | 21.67 |
| 25-Apr-20 | 37.22 | 30.28 | 25.00 |
| 26-Apr-20 | 30.00 | 24.50 | 20.56 |
| 27-Apr-20 | 33.33 | 27.00 | 19.44 |
| 28-Apr-20 | 33.33 | 28.83 | 23.33 |
| 29-Apr-20 | 35.56 | 30.17 | 23.89 |
| 30-Apr-20 | 37.78 | 31.67 | 26.67 |
| Mean | 34.76 | 27.85 | 21.15 |