

VOLTRA COMPANY TRAINING – 1 DAY

(standard program, can be tailored on request)

Prerequisites for VOLTRA training (1 day):

- Prior use of the software TRISCO (steady-state 3D heat transfer)

It is possible to combine the VOLTRA company training with the TRISCO company training.
The standard total training time for VOLTRA & TRISCO training is 1.5 day.

1. Introduction to heat transfer theory

- Concepts of conduction – convection – IR and short wave radiation – dynamic heat transfer
- Implementation in the Physibel software (Physibel Types)

2. 3D Geometrical modelling

- See TRISCO training

3. Dynamic heat transfer exercises

- Material properties – Boundary conditions
- Exercise 1: Dynamic building component properties according to EN ISO 13786
- Exercise 2: Cooling of a thermobox

4. VOLTRA input Functions

- User defined input functions (e.g. climate functions, power functions...)
- Creating climate files as input for VOLTRA
- Selecting warmest day from yearly climate data file

5. Solar processor

- Solar processor functionalities
- Defining glazing properties
- Exercise 1: defining IGU
- Exercise 2: opaque element behind glass
- Exercise 3: ΔT_{max} calculation for a shadow box in line with principles of the standard DTU 39

6. Ventilation flows

- Exercise 1: ventilated basement vs. non-ventilated basement
- Exercise 2: ventilation in double-skin facade section

7. Fire calculations

- Material properties and boundary conditions for fire calculations – fire curves
- Exercise 1: concrete column
- Exercise 2: glazed facade

8. Exercises (on files delivered by company): DXF and/or TRC/VRT files sent by company (week in advance)

9. VOLTRA miscellaneous topics:

- Material template maintenance: Colour database
- Parameter variations – batch calculations
- Calculation parameters

10. Questions, conclusions & File transfers.